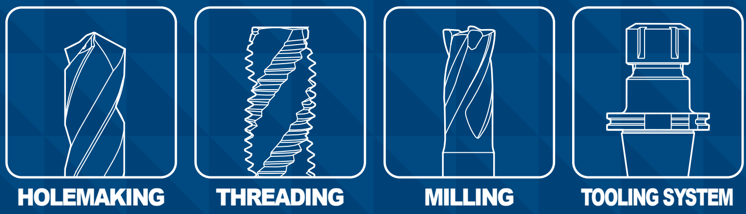
YU24 AMERICA
2024

CUTTING TOOLS

HOLEMAKING | THREADING | MILLING | TOOLING SYSTEM

www.yg1usa.com

YG-1 CO., LTD.



Guide Line to Icons

YG-1 CO., LTD.

GUIDE LINE TO ICONS

Tool Material

CBN	Cubic Boron Nitride
CARBIDE	Carbide
HSS PM	YG-1 Premium Powder Metallurgy HSS
PM 60	Powder Metallurgy HSS
HSS Co8	8% Cobalt HSS
HSS-E	5% Cobalt HSS
HSS	High Speed Steel

Standard of Tools

YG STD	YG-1 Standard
ANSI	ANSI Standard
DIN 338	DIN Standard

No. of Flute

2 3 3&4 4·6

Cutting Condition

Milling

Drills

Reamers

Countersinks

Taps

Helix Angle

30° 30°	End mills
30° N 20~30°	Drills
R40 R45	Taps
LH7° LH45°	Reamers

The Type of Shank

PLAIN	Plain shank
FLAT	Flat shank
1 ~ 5	Range of Morse Taper Shank

Tolerance of Radius

R ±.0002 R ±.0004	Tolerance of Ball Radius ±.0002″, ±.0004″
R ±.0002	Tolerance of Corner Radius ±.0002″

Tolerance of Dimension

h6 h8	Tolerance of Outside Diameter
h6 h8	Tolerance of Shank Diameter

Point Angle

120° 135° 140° 180°

Chamfer Angle

15° 45°	Reamers

GUIDE LINE TO ICONS

Surface Treatment

BLUE	YG-1 Blue-Coating
AlTiN	Aluminum Titanium Nitride Coating
X-Coating	YG-1 X-Coating
Z-Coating	YG-1 Z-Coating
Y-Coating	YG-1 Y-Coating
Diamond	Diamond Coating
TiAlN	Titanium Aluminum Nitride Coating
DLC	Diamond-Like Carbon Coating
Uncoated	Non-coated
Hardslick	TiAlN + WC/C Coating
TiN	Titanium Nitride Coating
TiCN	Titanium Carbon Nitride Coating
Homo	Steam Tempered (Black Oxide finish)
Nitride	Nitride Coating
Bright	Bright Finish

Chamfer Lead

1.5P ~ 2P | 2P ~ 3P | 4P ~ 5P

Class of Thread

6H | 6H+0.1 | 6HX | 7G | 4H

Thread Angle

60° | 55°

Coolant Supply Pressure

45 bar	Internal Coolant Suppy at 45 bar average pressure
20 bar	Internal Coolant Suppy at 20 bar average pressure

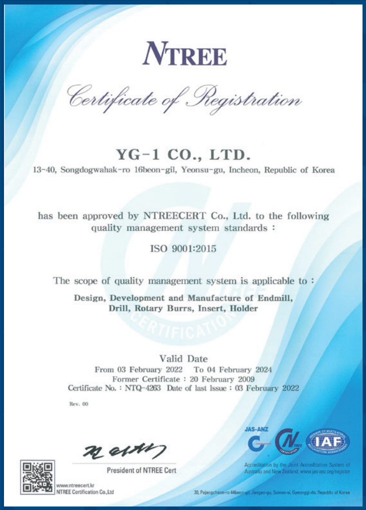
The Type of Periphery

COARSE	Roughing, Coarse Pitch
FINE	Roughing, Fine Pitch
ALU	Roughing for Aluminium
NF	Roughing & Finishing Type

Working Material

Material groups GS	Steels with good machinability Rm<850N/mm^2
Material groups VG	Heat treated and heat-resistant steels 850N/mm^2 $\leq$Rm$\leq$1,200N/mm^2
Material groups HR	High alloyed steels Rm>1,200N/mm^2
Material groups VA	Stainless steels
Material groups NW	Carbon steels with low contents of alloys Rm<700N/mm^2
Material groups Ti	Titanium alloys
Material groups Ni	Nickel alloys
Material groups GV	Any material with at least 8~10% elongation
Material groups Al	Aluminum & Aluminum alloys
Material groups GG	Grey Cast Iron
Material groups Ms	Brass
Material groups MU	Multi-Purpose

CUTTING TOOLS


NTREE

Certificate of Registration

YG-1 CO., LTD.

13-40, Songdogwahak-ro 16beon-gil, Yeonsu-gu, Incheon, Republic of Korea

has been approved by NTREECERT Co., Ltd. to the following quality management system standards :

ISO 9001:2015

The scope of quality management system is applicable to :

Design, Development and Manufacture of Endmill, Drill, Rotary Burrs, Insert, Holder

Valid Date

From 03 February 2022 To 04 February 2024

Former Certificate : 20 February 2009

Certificate No. : NTQ-4263 Date of last Issue : 03 February 2022

Rev. 00

President of NTREE Cert

JAS-ANZ

IAF

Accreditation by the Joint Accreditation System of Australia and New Zealand, www.jas-anz.org/register

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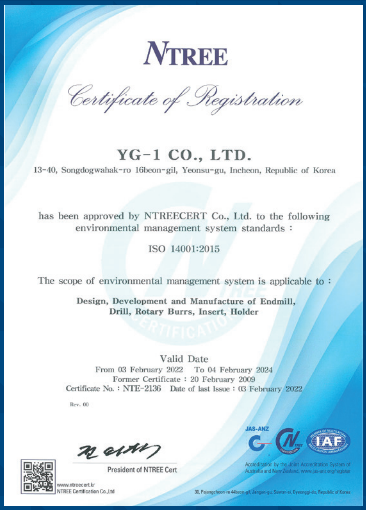
NTREE Certification Co.,Ltd

30, Pajangcheon-ro 44beon-gil, Jangan-gu, Suwon-si, Gyeonggi-do, Republic of Korea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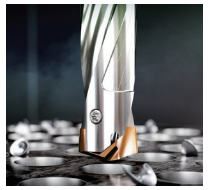
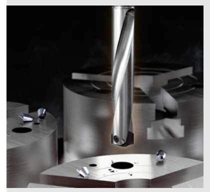
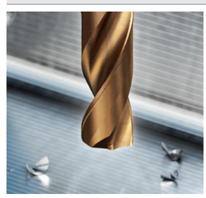
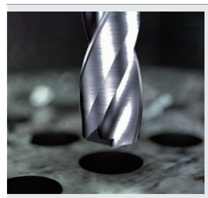
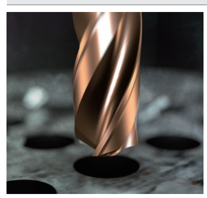
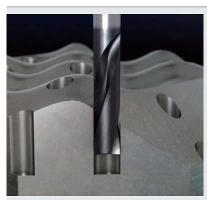
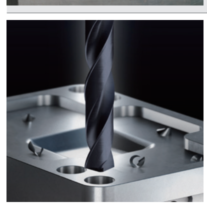
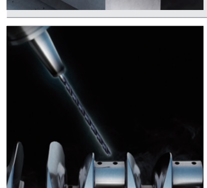
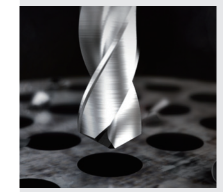
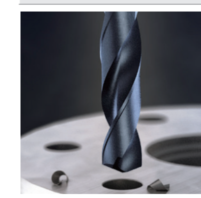
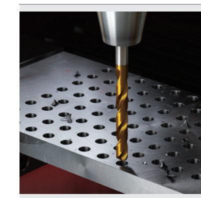
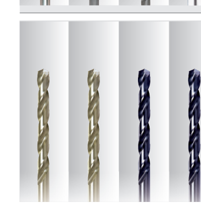
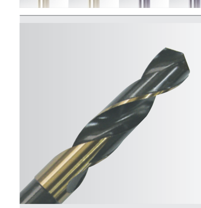
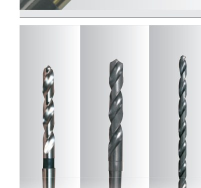
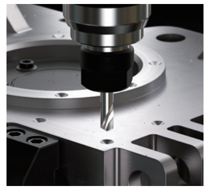
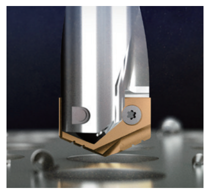
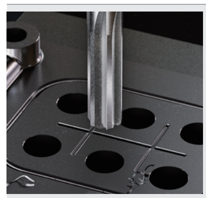
PRODUCTS		DESCRIPTION	PAGE
	i-ONE DRILLS, CARBIDE INSERTS & HOLDERS	High Performance Exchangeable for General Steels and Cast Iron	A27
	i-DREAM DRILLS,CARBIDE INSERTS & HOLDERS	For General Steels and Stainless Steels	A47
	SOLID CARBIDE DREAM DRILLS - PRO (with & without Coolant Holes)	For General Purpose (HRc30 to HRc50) Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology	A61
	SOLID CARBIDE DREAM DRILLS - GENERAL (with & without Coolant Holes)	For General Purpose(HRc30 to HRc45)	A73
	SOLID CARBIDE DREAM DRILLS - HIGH FEED (with Coolant Holes)	1.5 to 2 Times Faster Feeding Speed than 2-Flute Drill for Carbon Steels, Alloy Steels (up to HRc35) and Cast Iron	A109
	SOLID CARBIDE DREAM DRILLS - FLAT BOTTOM	For Holes on Various Angled Surfaces	A121
	SOLID CARBIDE DREAM DRILLS - INOX (with Coolant Holes)	For Tough Materials like Stainless Steels, Nickel Alloys and Titanium	A129
	SOLID CARBIDE DREAM DRILLS - ALU (with Coolant Holes)	For Aluminum and Aluminum Alloys	A149
	SOLID CARBIDE DREAM DRILLS - MQL TYPE (with Coolant Holes)	Minimum Quantity Lubrication Drilling Deep Holes (10×D ~ 30×D)	A157

PRODUCTS		DESCRIPTION	PAGE
	SOLID CARBIDE DREAM DRILLS for HIGH HARDENED STEELS (without Coolant Holes)	For High Hardened Steels (HRc50 to HRc70)	A177
	STANDARD SOLID CARBIDE DRILLS (JOBBER & STUB LENGTH)	For General Purpose, 118° Point	A183
	HSS-PM MULTI-1 DRILLS	Premium HSS-PM Drills For Wide Range of Applications Particularly Stainless Steels and Titanium	A189
	HSSCo8 & HSS-E HPD STRAIGHT SHANK DRILLS	High Precision Drilling for General Steels & Stainless Steels	A195
	HSS & HSS-E GOLD-P DRILLS	Same Performance as Full TiN-coated Drills	A203
	HSS, HSS-E & HSSCo8 STRAIGHT SHANK DRILLS	For General Purpose (Soft & Tough Materials)	A225
	AIRCRAFT DRILLS	6 and 12 inch Length Drills	A245
	SILVER & DEMING DRILLS	118° Split Point, 3 Flats Black and Gold	A257
	HSS & HSS-E MORSE TAPER SHANK DRILLS	Morse Taper Shank Drills for Wide Applications	A261

HOLEMAKING TOOLS

PRODUCTS		DESCRIPTION	PAGE
	SOLID CARBIDE & HSSCo8 NC-SPOTTING DRILLS	For Centering and Chamfering of Holes	A267
	SOLID CARBIDE & HSS COMBINATION DRILLS & COUNTERSINK / CENTER DRILLS	For Centering and Chamfering of Holes	A273
	SPADE DRILLS, INSERTS & HOLDERS	Carbide for Long Tool Life and HSS-PM for General Machines and Large Diameters Higher Productivity than Other Drilling Tools	A279
	SOLID CARBIDE & HSS REAMERS	Straight Shank Chucking Reamers Straight Flute	A351

THREADING TOOLS

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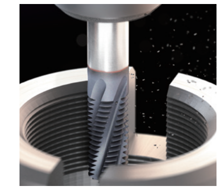
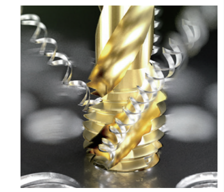
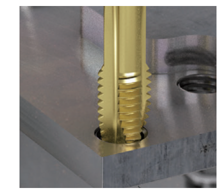
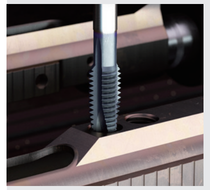
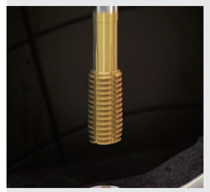
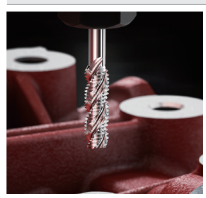
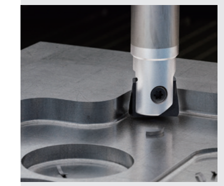
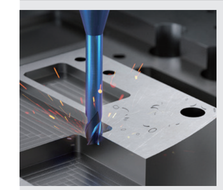
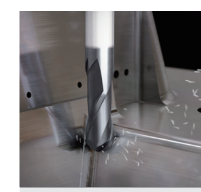
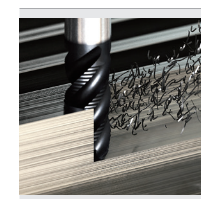
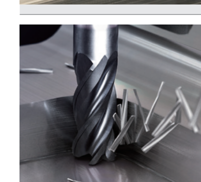
	SOLID CARBIDE THREAD MILLS (with & without Coolant Holes)	Threading Large Diameter in High Quality Available with Chamfer	B45
	HSS-PM SYNCHRO TAPS (Spiral Flute, Spiral Point, Straight Flute & Cold Forming)	Spiral Point and Spiral Flute Taps For High Speed Tapping on Rigid CNC Machine	B65
	HSS-E COMBO TAPS (Spiral Flute & Spiral Point Tap)	For Multi-Purpose	B81
	HSS-PM YG TAP BLUE RING	For Steels & Stainless Steels up to 35HRc	B113
	HSS-E YG TAP STEEL	For Steel Materials but also other Long Chip Forming Materials	B131
	HSS-PM & HSS-E YG TAP INOX	For Stainless Steels with Lamellar, Irregular Chip Formation where the Cutting Forces are Higher	B149
	SOLID CARBIDE & HSS-PM YG TAP CAST IRON	For Cast Iron or Similar Work Materials	B171
	HSS-E YG TAP ALU	For long-chipping Aluminum Wrought Alloys with Large Chip Gullets to Avoid Clogging in the Threading Operations	B179
	HSS-PM YG TAP Ti Ni	For Heat Resistent Super Alloys and Titanium Alloys Applied with Cutting Edge Rake Angles and Thread Relief	B185

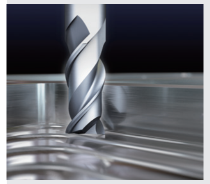
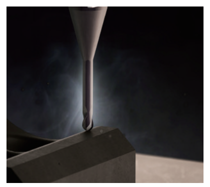
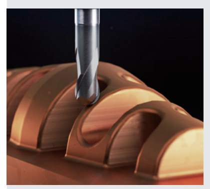
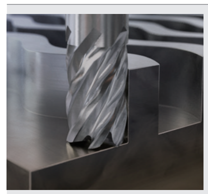
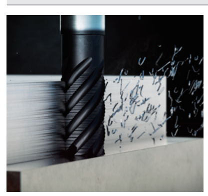
THREADING TOOLS

	PRODUCTS	DESCRIPTION	PAGE
	HSS-E YG TAP HARDENED STEEL	For Hardened Steels Applications to Control the Continuous and Red-glowing Chips	B191
	HSS-E & HSS YG TAP GENERAL	Suitable for Tapping Blind / Through Holes due to Flute Geometry and Excellent Chip Evacuation	B199
	HSS-PM, HSS-E & HSS YG TAP FORMING	Tapping by Forming Soft Materials	B261
	HSS-E & HSS SCREW THREAD INSERT TAPS	Tapping by Forming Soft Materials (No Chips)	B277
	HSS-E PIPE TAPS	Tapping Whitworth Pipe threads	B291

MILLING TOOLS

	PRODUCTS	DESCRIPTION	PAGE
	CBN END MILLS	CBN(Cubic Boron Nitride) Machining High Hardened Steels up to HRc70 Mirror Finish	C43
	i-Xmills, CARBIDE INSERT END MILLS	Various Applications Type of Inserts Available for General Steels, Pre-Hardened Steels, High Hardened Steels, Stainless Steels and Graphite	C49
	i-SMART, MODULAR TYPE END MILLS	For General Steels, Hardened Steels and Cast Iron	C67
	X5070 SOLID CARBIDE END MILLS	For High Hardened Steels (HRc45 to HRc70)	C83
	4G Mill SOLID CARBIDE END MILLS	High Speed Cutting for Pre-Hardened Steels up to HRc55	C125
	X-POWER PRO SOLID CARBIDE END MILLS	For Pre-Hardened Steels up to HRc55	C391
	TitaNox-POWER SOLID CARBIDE END MILLS	High Speed Machining for Exotic Materials: Titanium and Stainless Steels	C471
	JET-POWER SOLID CARBIDE & HSS-PM END MILLS	For Exotic materials like Stainless Steels, Nickel Alloys and Titanium	C493
	V7 PLUS SOLID CARBIDE END MILLS	Silent Cutting of Stainless Steels up to HRc 40 Designed as Variable Leads, YG-1's Patent	C527

MILLING TOOLS

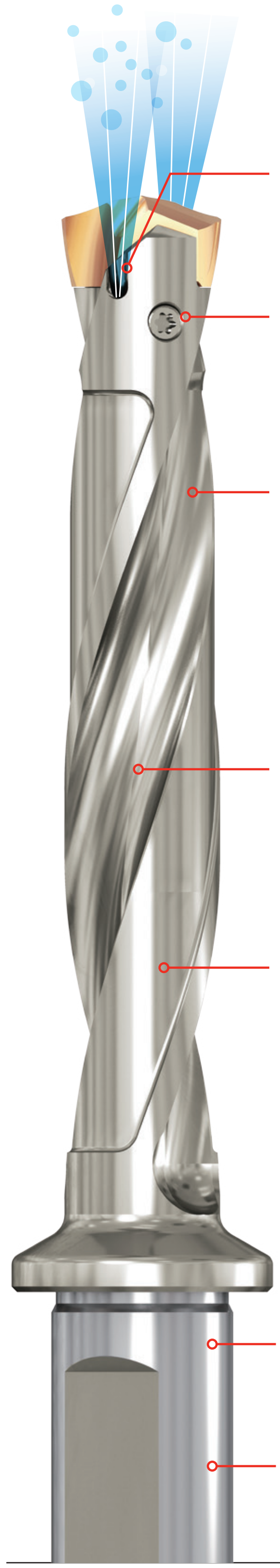
PRODUCTS		DESCRIPTION	PAGE
	ALU-POWER HPC SOLID CARBIDE END MILLS	For Aluminium, Aluminum Die Cast, Non-ferrous Alloys and Plastics	C587
	ALU-POWER END MILLS	Aluminium Alloys and Silent Cutting	C603
	D-POWER GRAPHITE SOLID CARBIDE END MILLS	For Graphites	C647
	STANDARD SOLID CARBIDE END MILLS	General Purpose	C663
	ONLY ONE COATED PM60 END MILLS	Perfect Solution of Carbide Chipping under Vibrations	C723
	SINE POWER HSS END MILLS	Perfect Solution of Carbide Chipping under Vibrations	C739
	TANK-POWER HSS-PM END MILLS	High Toughness for Stainless Steels, Carbon steels and Alloy Steels for General Application, Roughing & Finishing	C743
	COBALT & HSS END MILLS	General Purpose / Coating Available	C763

Global Cutting Tool Leader YG-1

i - ONE DRILLS

Micro Grain Carbide Inserts and Premium Tool Steel Holder with Coolant Holes

Cost Efficient High Performance Exchangeable Drilling Tools



Internal cooling channel for higher drilling performance

Torx Plus Screw for clamping insert

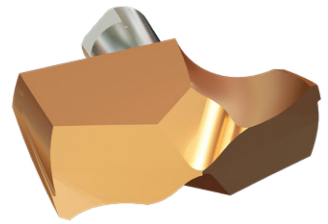
Optimized flute shape for better chip evacuation

Nickel-plated Steel holder for corrosion resistance and wear resistance

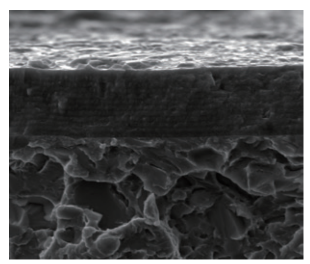
Body Clearance for elimination of undesirable contact with work piece

Ground bright finished shank for more precise clamping

Cylindrical shank with a parallel flat according to ISO9766 Plain shank and Whistle notch shank are available on request



- **Secure & Quick clamping system**
- **Multi layered 'H'-coating** reduces the cracking and provides higher shear strength while achieving excellent oxidation resistance and hot hardness



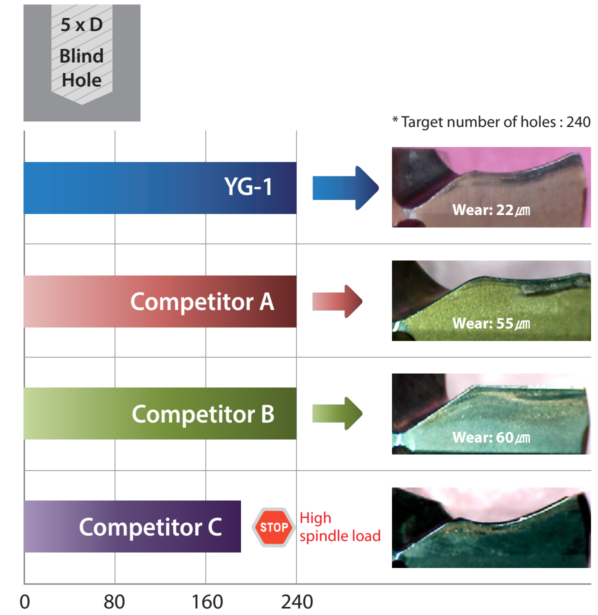
- **Optimized point geometry** of i-ONE Drills ensures centering ability and smoother cutting
- **Self Centering and Chip Breaking** by Radius Thinning
- **Ground Negative land** on cutting edge for Reliable Tool Life

i - ONE DRILLS

CASE STUDY

▶ Ø14.0mm, Alloy Steel

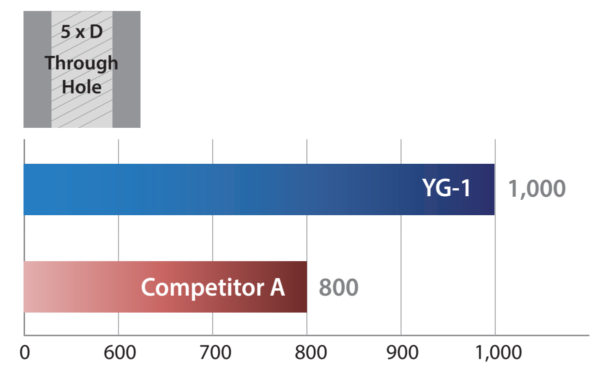
Tool	Y141H1400	Competitors
O.D Size (mm)	Ø14.0 (0.5512 inch)	
Work Material	-DIN: 42CrMo4 -AISI: 4140 -JIS: SCM440(HRc30)	
Cutting Speed	80 m/min. (262.5 ft/min.)	
RPM	1,819 rev./min.	
Feed	0.18 mm/rev. (0.0071 in/rev.)	
Drilling Depth	65.0 mm (5XD / Blind)	
Cooling Method	Internal Cooling (35 bar) Water Soluble (9% Emulsion)	
Machine	Machining Center	



Drilling Holes

▶ Ø16.0mm, Pre-Hardened

Tool	YG-1	Competitor A
O.D Size (mm)	Ø16.0 (0.6299 inch)	
Work Material	-DIN: CK45 -AISI: 1045 -JIS: S45C(HRc20)	
Cutting Speed	75 m/min. (246.1 ft/min.)	
RPM	1,493 rev./min.	
Feed	0.3 mm/rev. (0.0118 in/rev.)	
Drilling Depth	35.0 mm (Through)	
Cooling Method	Internal Cooling (10 bar) Water Soluble (9% Emulsion)	
Machine	Machining Center	

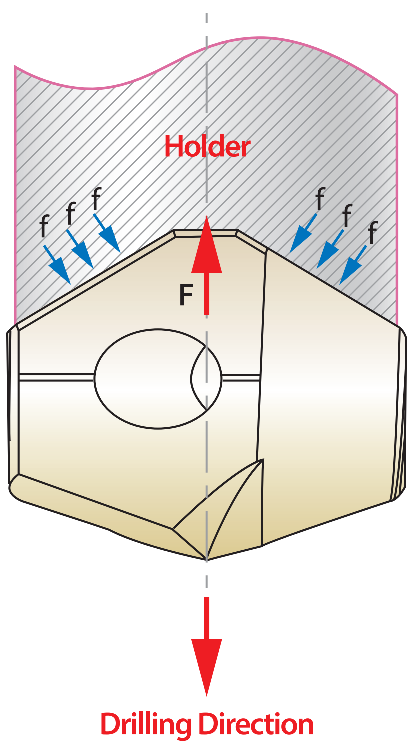


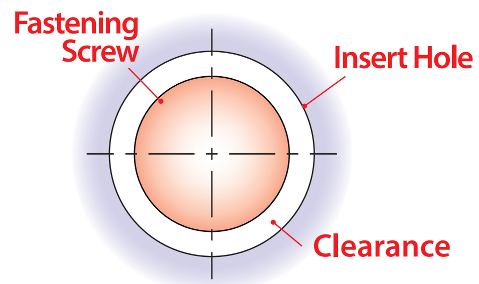
Drilling Holes

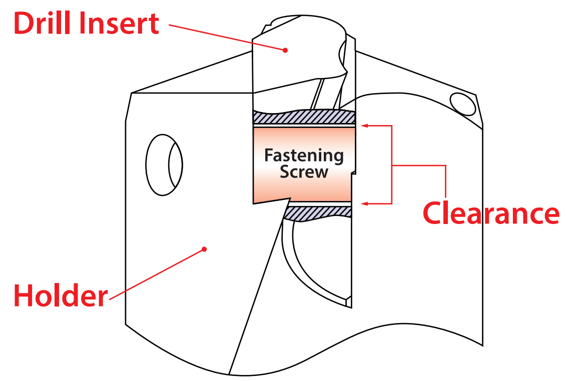
i - DREAM DRILLS

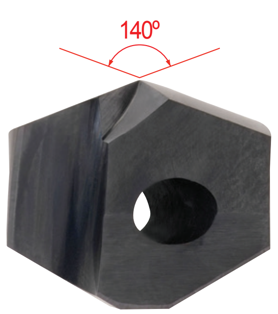
Stable Insert locking System

- V type locking system allowed for stabilized drilling
- Design that fastening screw doesn't touch insert to protect the insert locking system from the vibration during the drilling cycle









Self-Centering 140˚ Point & Helical Thinning

- Excellent Centering
- Minimized cutting resistance
- Design for maximum toughness, hardness and chip evacuation
- High penetration rate
- Reduced heat from cutting edge processing to allow long tool life
- Lower required torque and horsepower

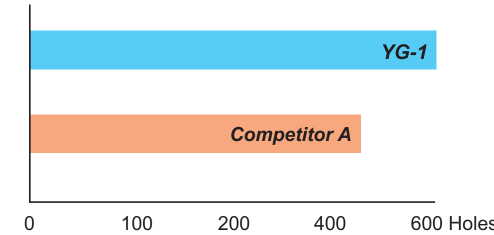
i - DREAM DRILLS

TEST I GENERAL

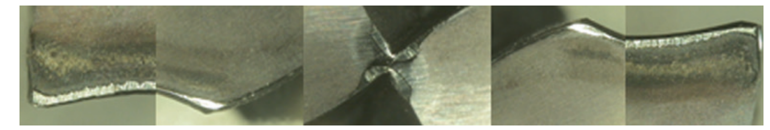
Cutting Condition

HOLDER	ZB0302
INSERT	Y03B07
Work Material	- ASTM : A36 - DIN : St37-2 - JIS : SS400
Cutting Speed	262 ft/min.
Feed	.0094 inch/rev.
Feedrate	16.59 inch/min.
RPM	1756 rev./min.
Drilling	1.89˝
Coolant	Internal
Machine type	Vertical Machining Center

RESULT



▶ YG-1 (Total Drilling 600 Holes)



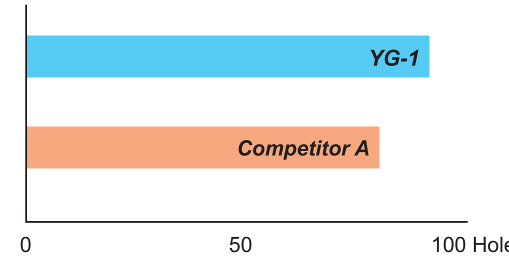
▶ Competitor A (Total Drilling 470 Holes)

TEST II INOX

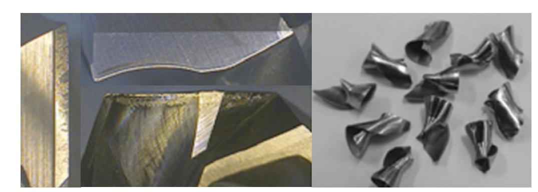
Cutting Condition

HOLDER	ZB0301
INSERT	YI3B01
Work Material	- AISI : 304 - DIN : X5CrNi189 - JIS : SUS304
Cutting Speed	180 ft/min.
Feed	.0059 inch/rev.
Feedrate	7.402 inch/min.
RPM	1,250 rev./min.
Drilling	1.97˝
Coolant	Internal
Machine type	Vertical Machining Center

RESULT



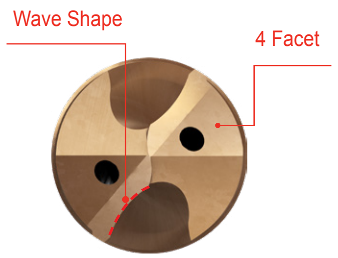
▶ YG-1 (Total Drilling 100 Holes)



▶ Competitor A (Total Drilling 80 Holes)

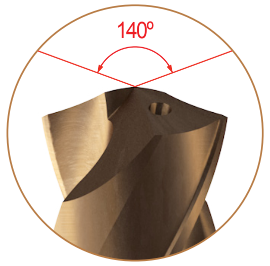
DREAM DRILLS PRO

Performance Upgrade with Faster Cutting Speed



Wave Shape Cutting Edge

- Improve chip formation
- Low Cutting Force

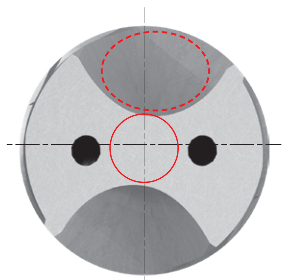


140 Degree Point Angle

- Provides edge strength and Exceptional tool life
- Good Self Centering
- Low Torque

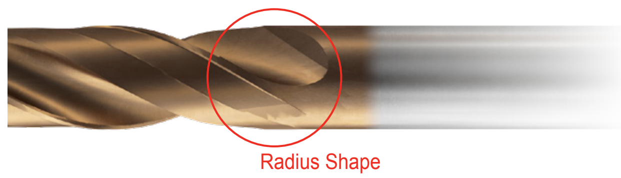
Micro-grained Carbide

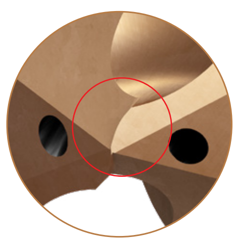
- Achieving Excellent Wear Resistance
- Maximum Tool Life and High Performance



Optimized wide flute design

The unique flute structure provides good surface finish, longer tool life and requires less cutting force





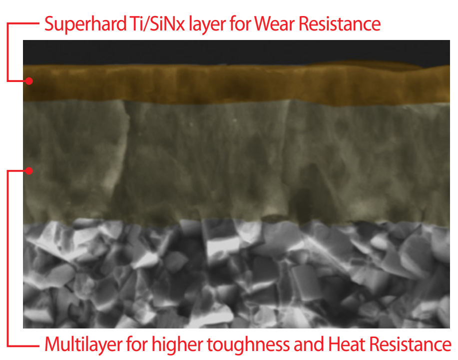
Helical Thinning

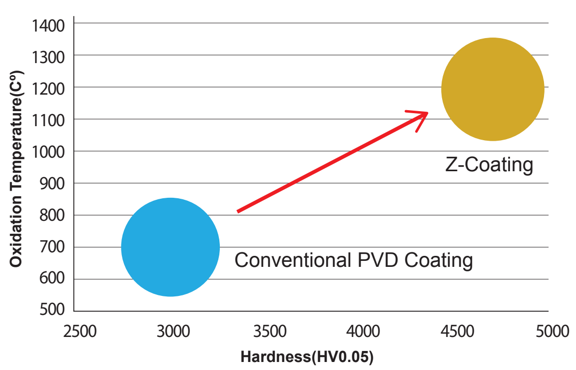
- Low Thrust
- Stable Torque
- Good Chip Breakage

Higher & Improved cutting conditions due to YG-1 Special Z-Coating Technology

(YG-1's Unique Silicon Based Coating: Nano-Layer Coating)

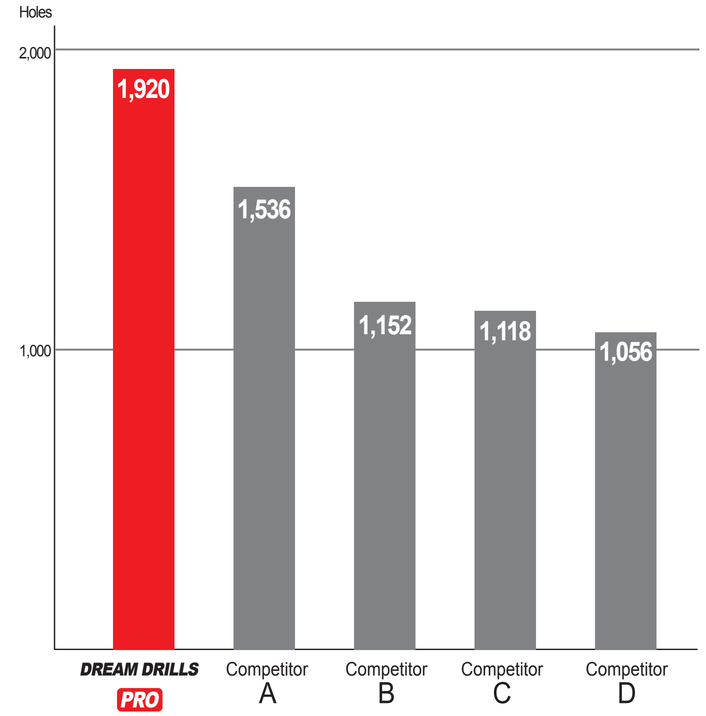
- Extremely High Hardness and Heat Resistance





DREAM DRILLS PRO

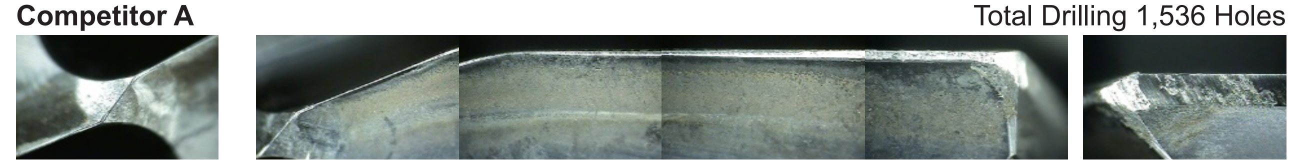
▶ SOLID CARBIDE DREAM DRILLS - PRO with Coolant Holes



Work Material	- ANSI: 4140 - DIN: 42CrMo4 - JIS: SCM440 Hardness: HRc30 (HB286)
O.D Size	Ø10.0 (.3937 inch)
RPM	4,458 rev./min.
Cutting Speed	140 ft/min.
Feed	0.012 inch/rev.
Drilling Depth	1.77" (4.5xD)
Coolant	Internal Cooling (20 bar) Water Soluble (9% Emulsion)
Machine	Machining Center

DREAM DRILLS PRO Total Drilling 1,920 Holes

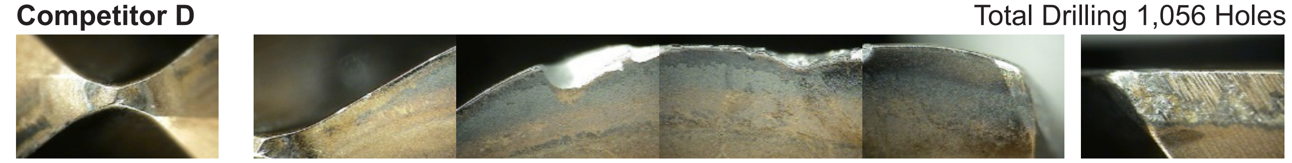
Competitor A Total Drilling 1,536 Holes



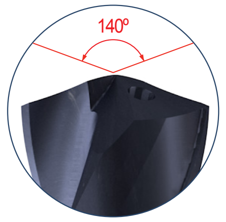
Competitor B Total Drilling 1,152 Holes

Competitor C Total Drilling 1,118 Holes

Competitor D Total Drilling 1,056 Holes

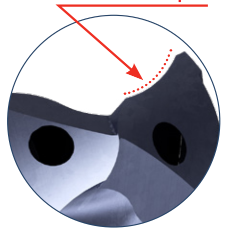


DREAM DRILLS - GENERAL



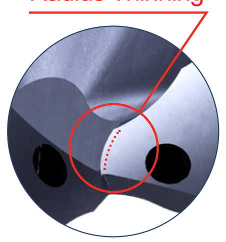
140 Degree Point Angle
for good centering and low thrust

Wave Shape

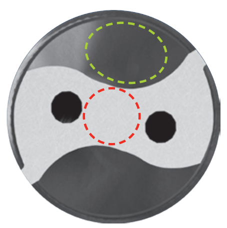


Wave shape Cutting Edge
will allow low thrust , stable torque and long tool life

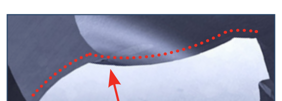
Radius Thinning



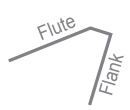
Radius Thinning
for Self Centering and Chip Breaking



Optimized flute shape
for strength of drill and smooth chip evacuation



Negative Land (Honing)



Negative land on the cutting edge
for Reliable Tool Life

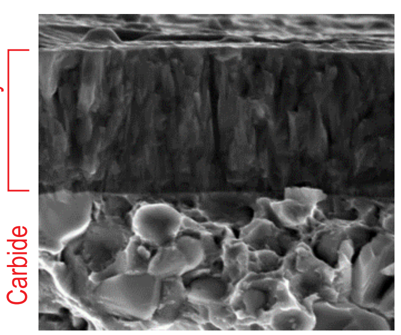
TiAlN Coating (Upgraded **Ti**tanium **Al**uminum **N**itride : **nano-Layer coating)**

- Higher wear resistance and Lower friction
- Higher Cutting Speed and Feed
- Improved drill Hole Quality

Special surface treatment after coating
to reduce friction and better chip flow.

Nano Layer

Carbide



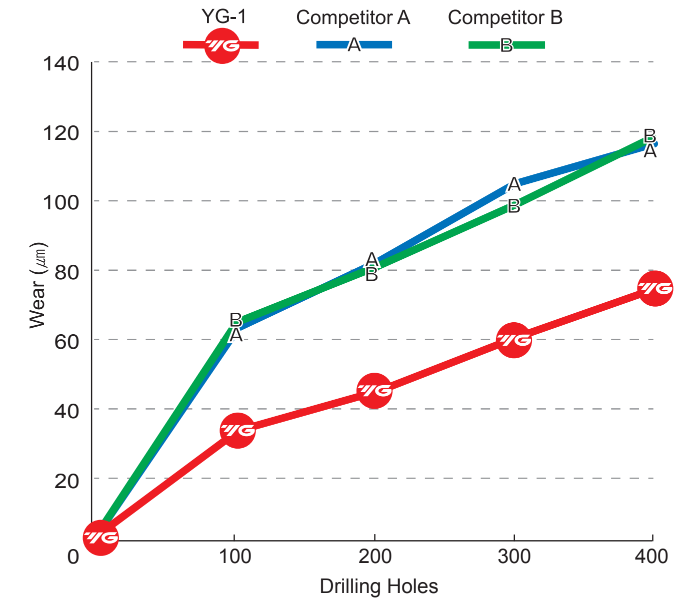
Micro-grained carbide for wear resistance and longer tool life

DREAM DRILLS - GENERAL

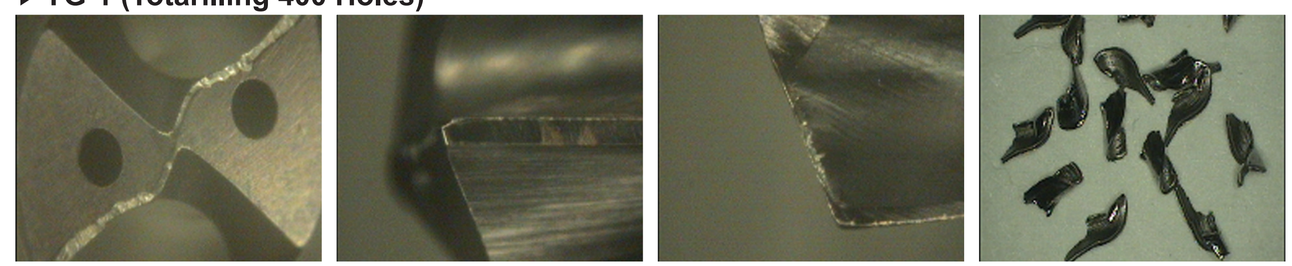
▶ SOLID CARBIDE DREAM DRILLS - GENERAL with Coolant Holes

Cutting Condition

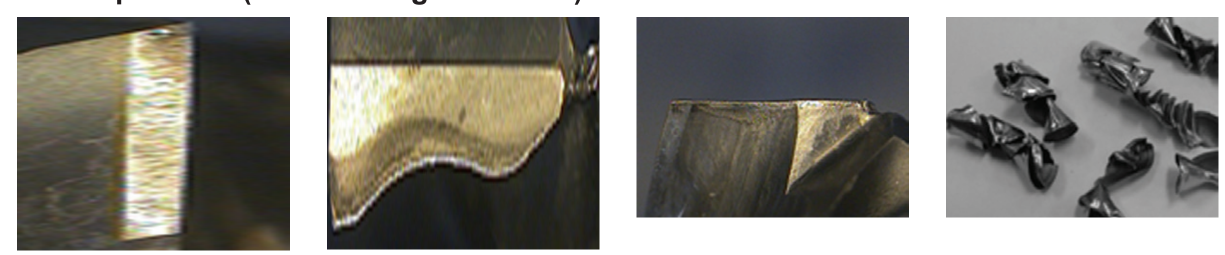
Tool	DH408015 (Dream Drill with Coolant Holes)
Size	Ø1.5 × 3 × 15 × 55
Work Material	- AISI : H13 - DIN : X40GrMoV51 - JIS : SKD61 - WR : 1.2344 (HRc30)
RPM	14,856 rev./min.
Feed	.0019 inch/rev.
Drilling Depth	.29" (5xD)
Coolant	Wet Cut



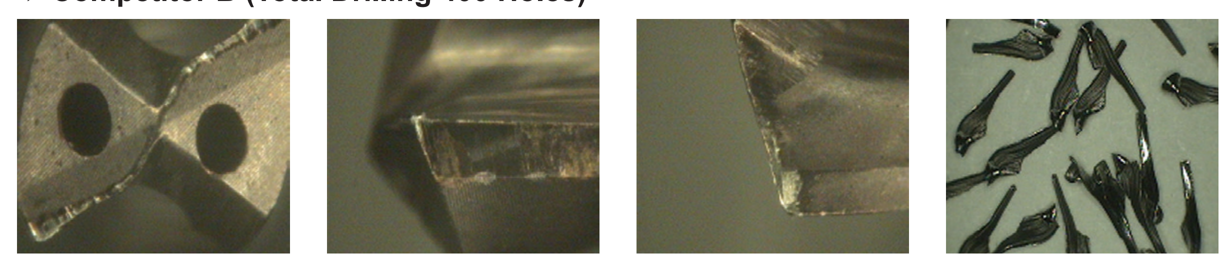
▶ YG-1 (Totarilling 400 Holes)



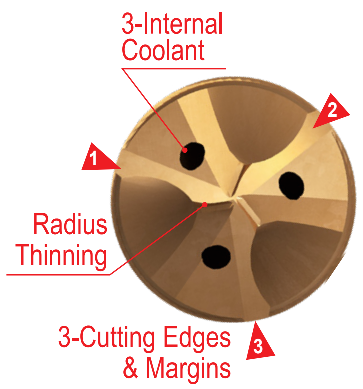
▶ Competitor A (Total Drilling 400 Holes)



▶ Competitor B (Total Drilling 400 Holes)

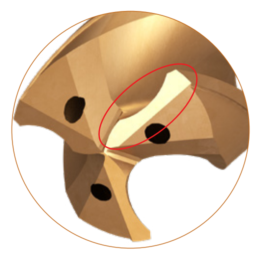


DREAM DRILLS - HIGH FEED



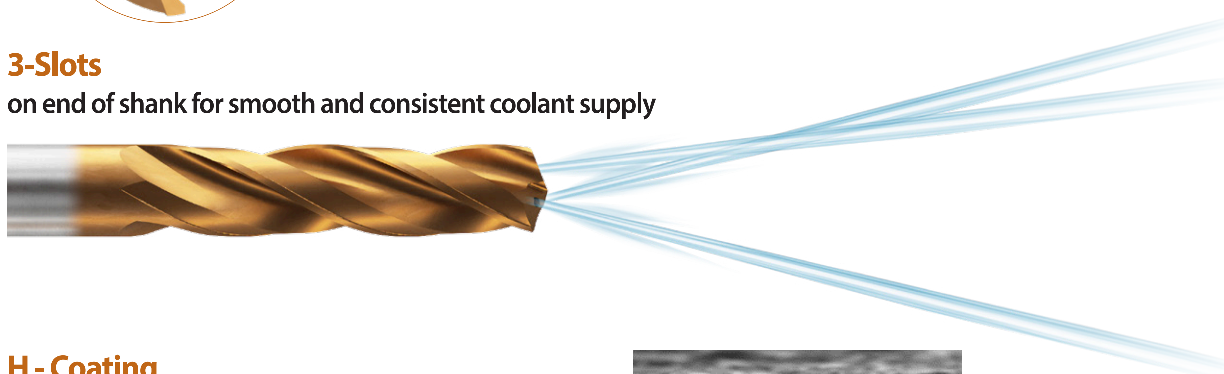
3-Cutting Edges & Margins
will allow high penetration rate, accurate holelocation and good surface finish

Radius Thinning for
Self Centering and Chip Breaking

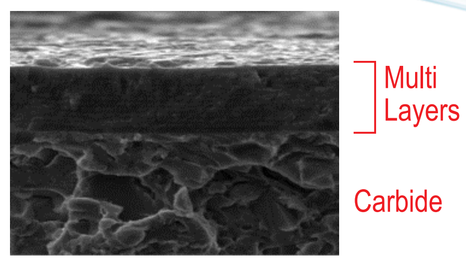


Ground Negative land
on cutting edge for Reliable Tool Life

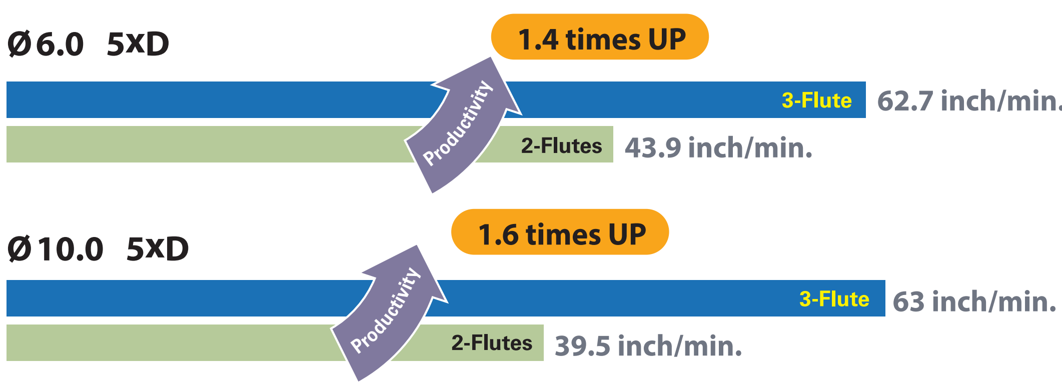
3-Slots
on end of shank for smooth and consistent coolant supply



H-Coating
(Upgraded AlCrN-Based : **Multi-Layer coating**)
- Higher worn-out resistance and Lower friction
- Higher Cutting Speed and Feed
- Improved drill Hole Quality



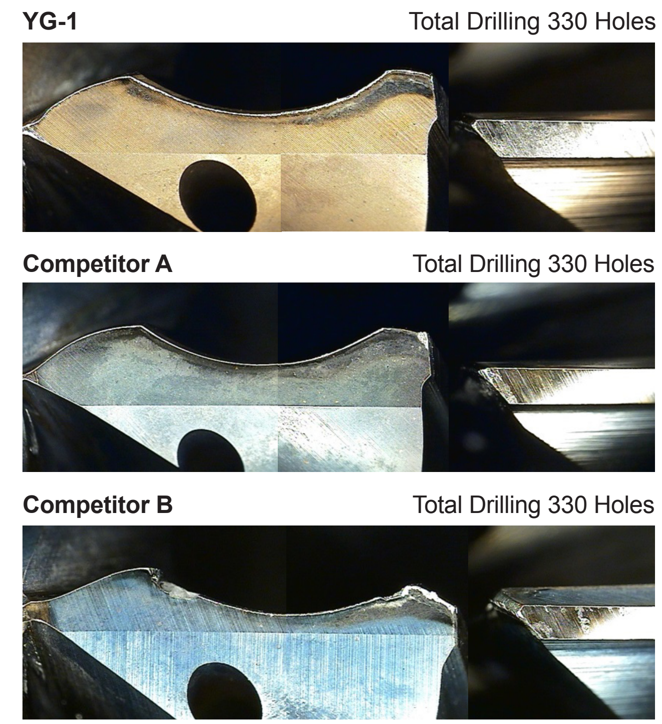
Productivity (Carbon Steel)



DREAM DRILLS - HIGH FEED

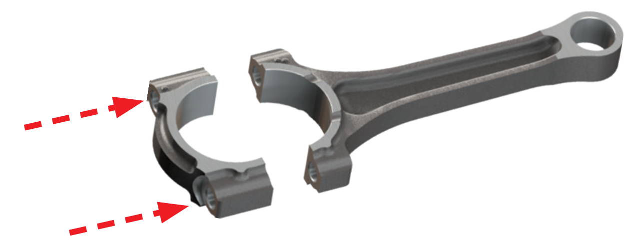
▶ SOLID CARBIDE DREAM DRILLS - High Feed with Coolant Holes

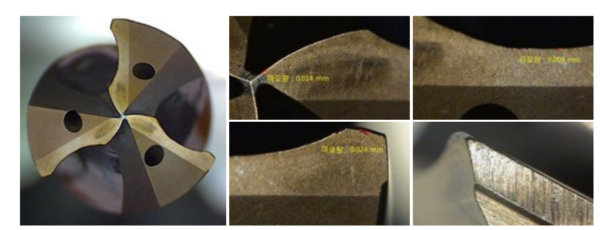
Tool	DGR495100 (Dream Drills High Feed)
Size	Ø10 x Ø10 x 61 x 103
Work Material	• AISI : 1045 • JIS : S45C • DIN : C45 (HRc20)
RPM	3,200 rev./min.
Feed	.0197 inch/rev.
Drilling Depth	1.97" (5xD)
Drilling Method	Blind Hole
Coolant	Wet Cut
Machine	Machining Center



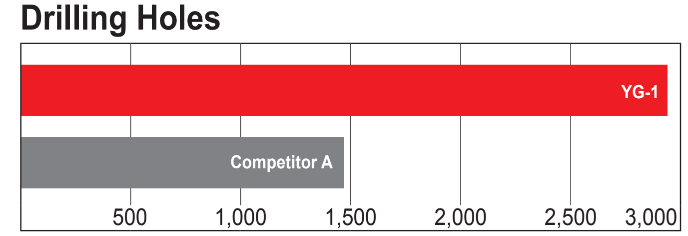
▶ SOLID CARBIDE DREAM DRILLS - High Feed with Coolant Holes

Tool	DGR495080 (Dream Drills High Feed)
Size	Ø8 x Ø8 x 53 x 91
Work Material	Connecting rod
RPM	2,000 rev./min.
Feed	0.009inch/rev.
Drilling Depth	1.58" (5xD)
Drilling Method	Internal Cooling, Water Soluble
Coolant	Wet Cut
Machine	Machining Center





Drilling Holes



DREAM DRILLS - FLAT BOTTOM

DREAM DRILLS FLAT BOTTOM

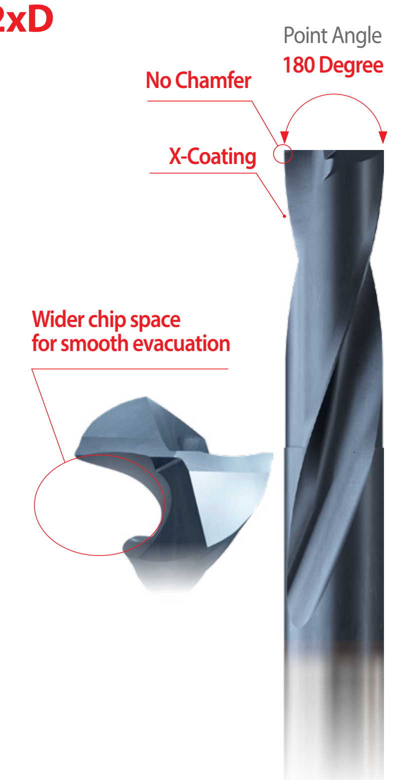
Advantages for Flat Bottom 2xD

180 Degree Point Angle enables drilling of Horizontal Surface and Sloped Surface

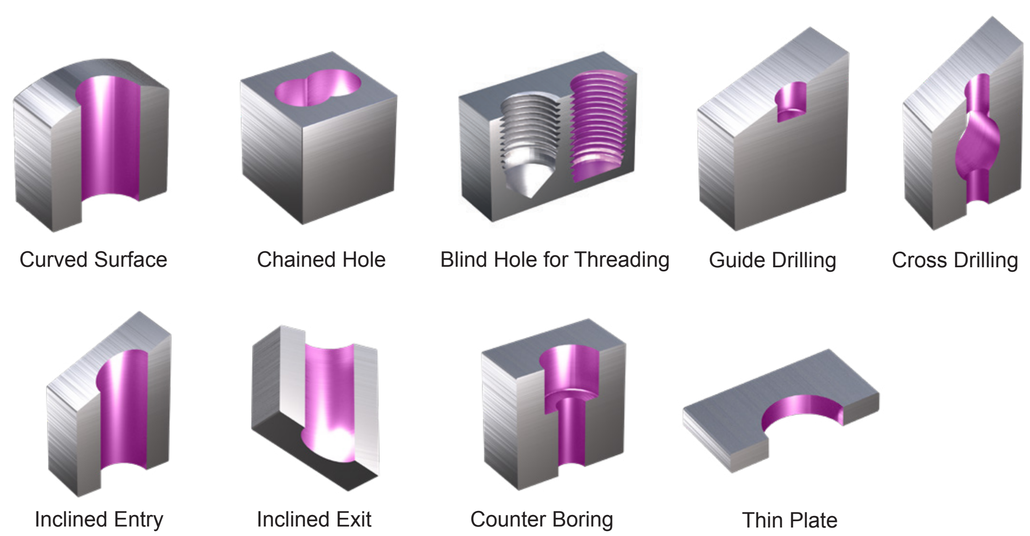
180 Degree Point Angle enables drilling of Horizontal Surface and Sloped Surface

Optimized flute shape for **Excellent Chip Evacuation**

High **Strength Cutting Edge** to improve tool life and versatility drilling



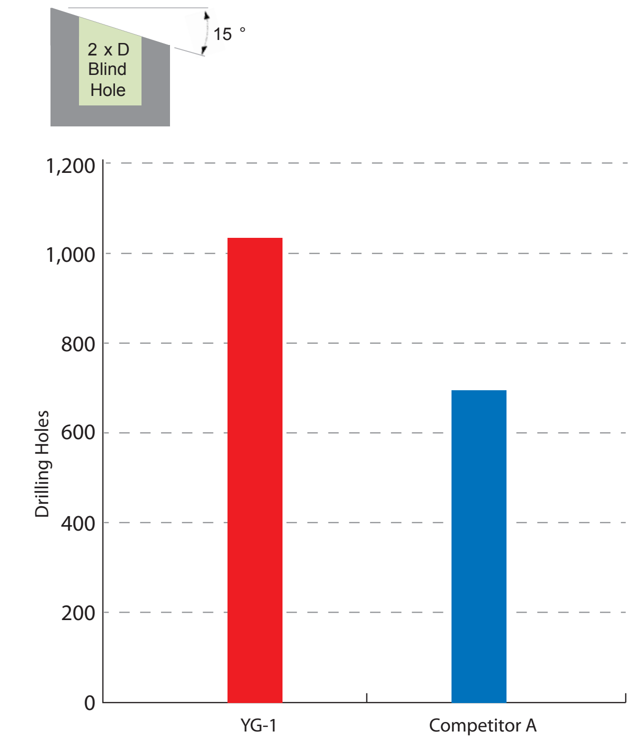
VARIETY OF DRILLING



DREAM DRILLS - FLAT BOTTOM

▶ SOLID CARBIDE DREAM DRILLS - Flat Bottom without Coolant Holes

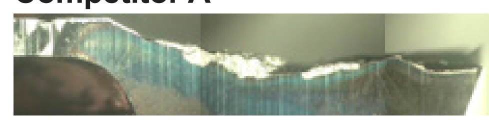
CUTTING CONDITION	
Drill Diameter (mm)	Ø6.0 (.2362 inch)
Work Material	• AISI : 1045 • JIS : S45C • DIN : C45 (HRc 20)
Cutting Speed	244.4 ft/min.
RPM	4,000 rev/min
Feed	.0039 in/rev.
Drilling Depth	12.0 mm (2XD) Blind Hole / without Pecking
Coolant	External Cooling Water Soluble (9% Emulsion)
Machine	Machining Center



YG-1

Small Chipping

Competitor A

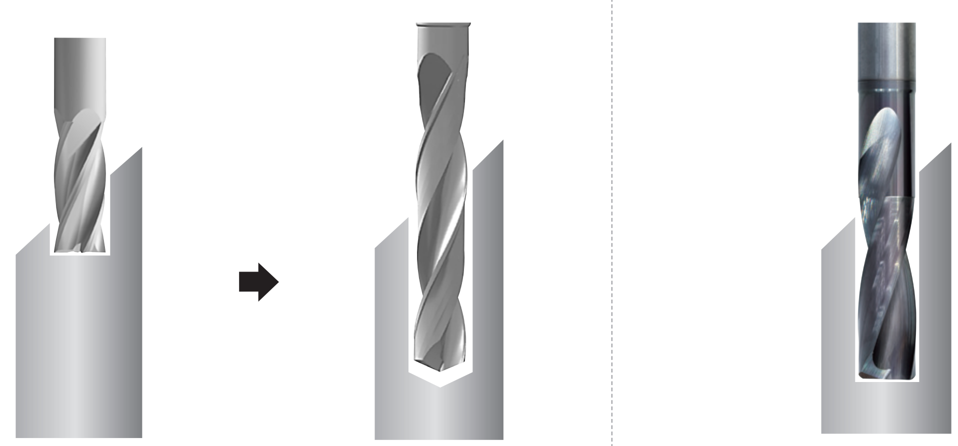


Big Chipping

Only One Operation for Angled Surface

For angled surfaces, two operations are required to drill in a conventional Process

For angled surfaces, only one operation can complete the drilling with Dream Drill Flat Bottom

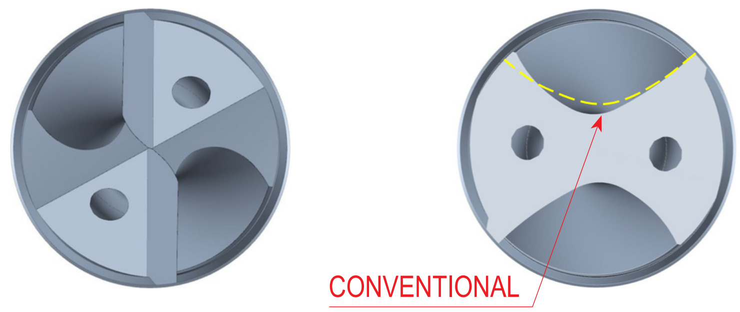


1st operation(End mill)
Counter boring to make flat surface and guide hole

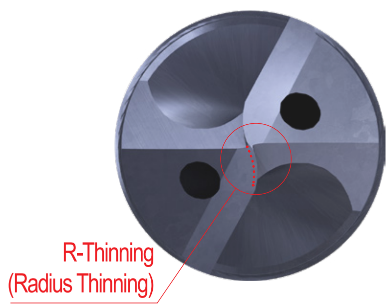
2nd operation(Drill)
Drilling to required depth of hole

One operation(Dream Drill Flat Bottom)
One Drill does it all
without using both an end mill and a drill

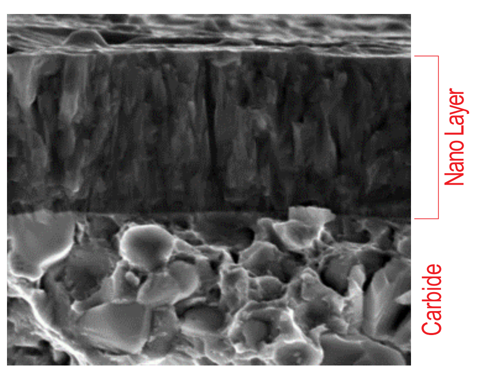
DREAM DRILLS - INOX



- Special Flute geometry and Chip pocket to help Chip evacuation and proper Chip Curl.
- strong rigidity from **Cutting Edge**
- high Performance on Stainless Steel and pre hardend Steel



- Positive Axial **Rake Angle** and cutting force, with **R-Thinning** enhance centering and Chip Breaking.



TiAlN Coating
(Upgraded **Ti**tanium **Al**uminum **N**itride : **nano-Layer coating)**
- Higher wear resistance and Lower friction
- Higher Cutting Speed and Feed
- Improved drill Hole Quality

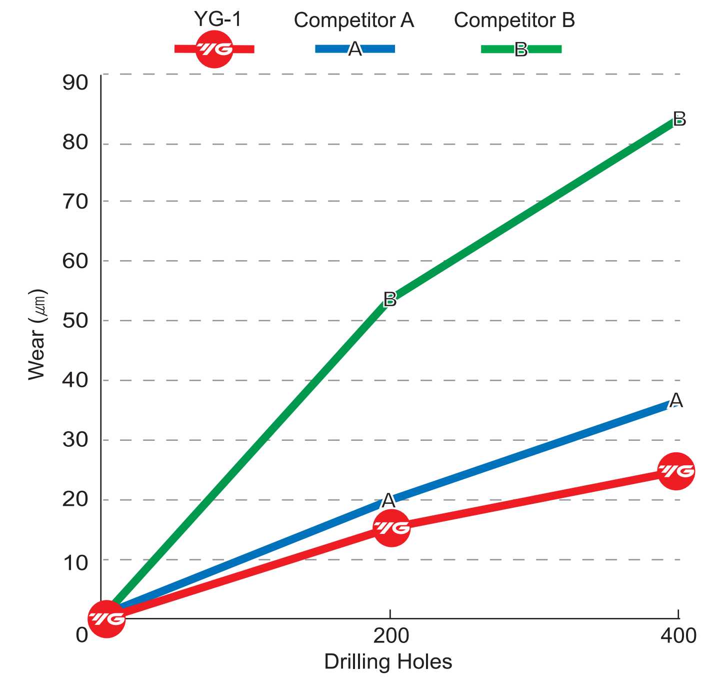
Special surface treatment after coating
to reduce friction and better chip flow.

DREAM DRILLS - INOX

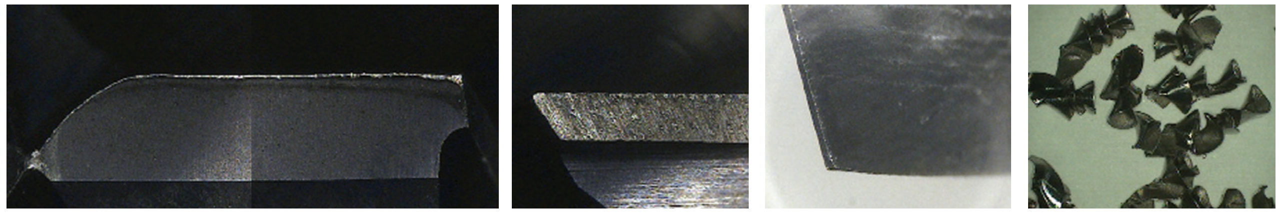
▶ SOLID CARBIDE DREAM DRILLS - INOX with Coolant Holes

Cutting Condition

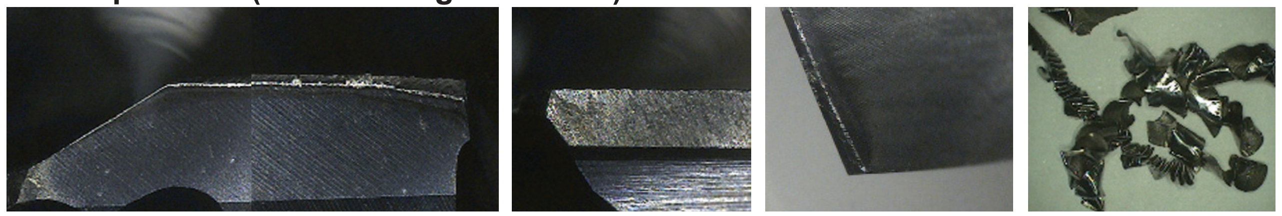
Tool	DH452060 (DREAM DRILL-INOX)
Size	Ø6 × Ø6 × 44 × 82
Work Material	- AISI : 304 - DIN : X5CrNi1810 (X4CrNi18-10)(HRc10) - JIS : SUS304
RPM	14,856 rev./min.
SFM	.229 ft/min
Feed	.0028 inch/rev
Drilling Depth	94˝ (4xD)
Coolant	Wet Cut



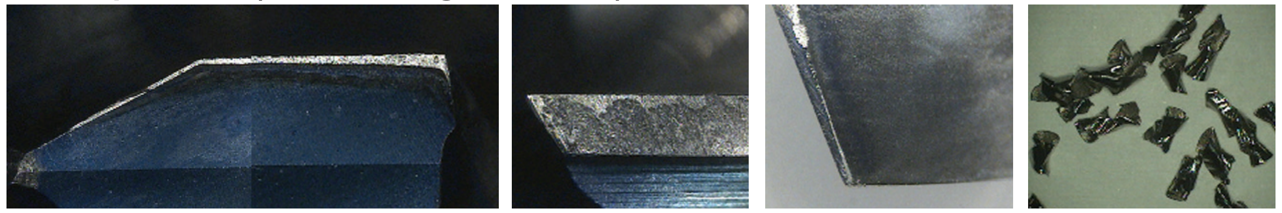
▶ YG-1 (Total Drilling 400 Holes)



▶ Competitor A (Total Drilling 400 Holes)



▶ Competitor B (Total Drilling 400 Holes)



DREAM DRILLS - ALU

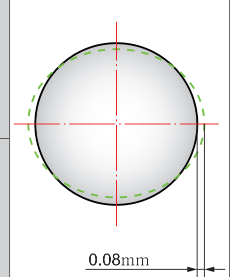
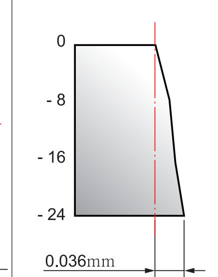
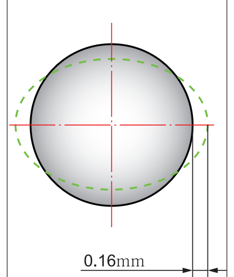
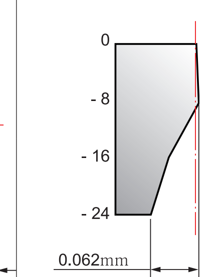
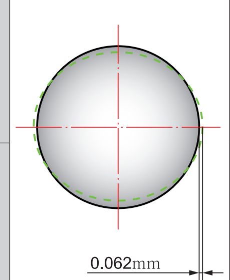
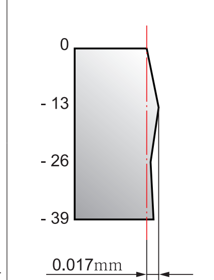
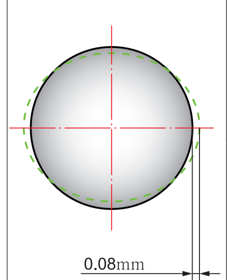
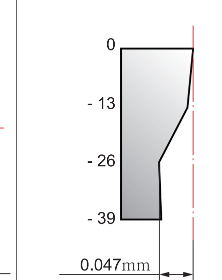
Design that optimized flute shape and geometry suitable **for Aluminum, Aluminum alloy.**

Optimized point thinning to prevent any **chip-clogging from chip welding.**

Polished flutes improve **chip control and evacuation.**

The Drilling of High Speed is possible while maintaining **the excellent surface roughness of workpiece.**

Ø6.0 & Ø10.0 TEST, Aluminum(6061)

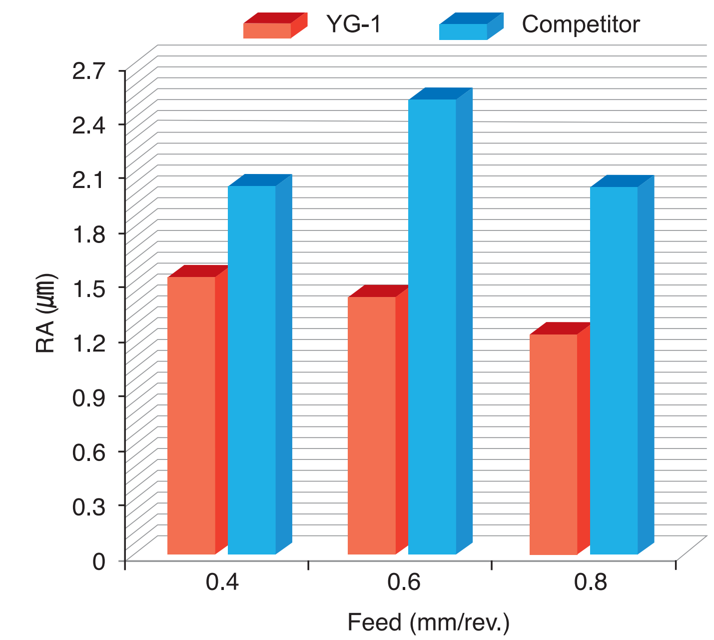
CUTTING CONDITION	DREAM DRILL-ALU		COMPETITOR A	
	Roundness	Straightness	Roundness	Straightness
SIZE Ø 6.0 Drilling Holes 1200 Holes	 0.08mm	 0.036mm	 0.16mm	 0.062mm
SIZE Ø10.0 Drilling Holes 820 Holes	 0.062mm	 0.017mm	 0.08mm	 0.047mm

DREAM DRILLS - ALU

▶ SOLID CARBIDE DREAM DRILLS - ALU with Coolant Holes

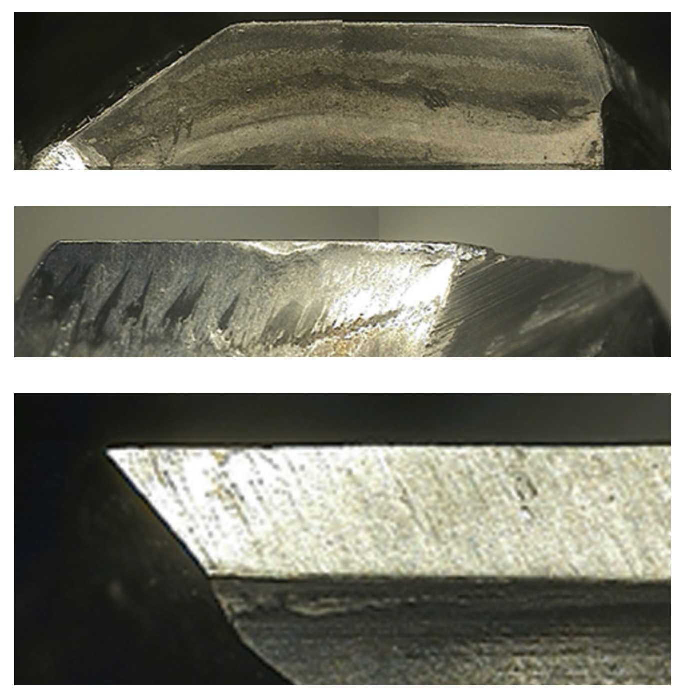
Cutting Condition

Tool	DREAM DRILLS-ALU
Size	Ø10.0×Ø10×61×103
Work Material	- AISI : 6061 - DIN : AlMgSiCu (HB75) - JIS : A6061
RPM	6,367 rev./min.
SFM	656 ft/min.
Feed	.0157 ~ .0315 inch/rev.
Drilling Depth	1.77˝ (4.5xD)
Coolant	Wet Cut
Machine	Machining Center

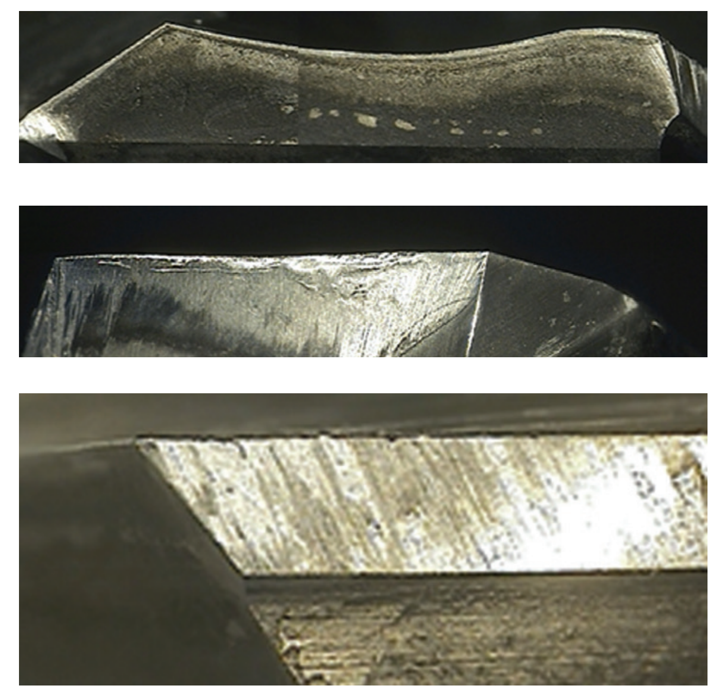


Surface Roughness of Work Piece

▶ YG-1 (Total Drilling 820 Holes)



▶ Competitor (Total Drilling 820 Holes)

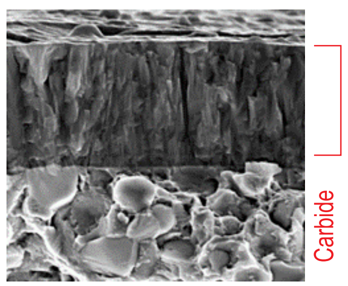


DREAM DRILLS - MQL TYPE

4-Facet point for good **centering capability**

Polished flute for enhanced **chip evacuation**

Optimized special **flutes** are ideal for removing chips and for productive drilling



Upgraded **TiAlN nano Layer Full Coating**

Compatible with the MQL (Minimum Quantity Lubrication) system.

- Reduction of Coolant related costs such as preparing, maintaining, disposal of emulsion
- Avoids additional efforts associated with part cleaining
- Allows for secure machining process ensuring predictable lubrication

Compare with Gun drills

- Used on conventional machining center (**MQL Drills**)
- **Higher productivity** than conventional HSS deep hole drills and Gun drills

Gun drill:
- Size Range : Ø2~Ø25
- Drilling Depth : 25xD ~ over 100xD
- * Need Gun drilling machine

MQL Drill:
- Size Range : Ø3~Ø14
- Drilling Depth : 10xD ~ 40xD
- * Need enough machine stroke on machining center

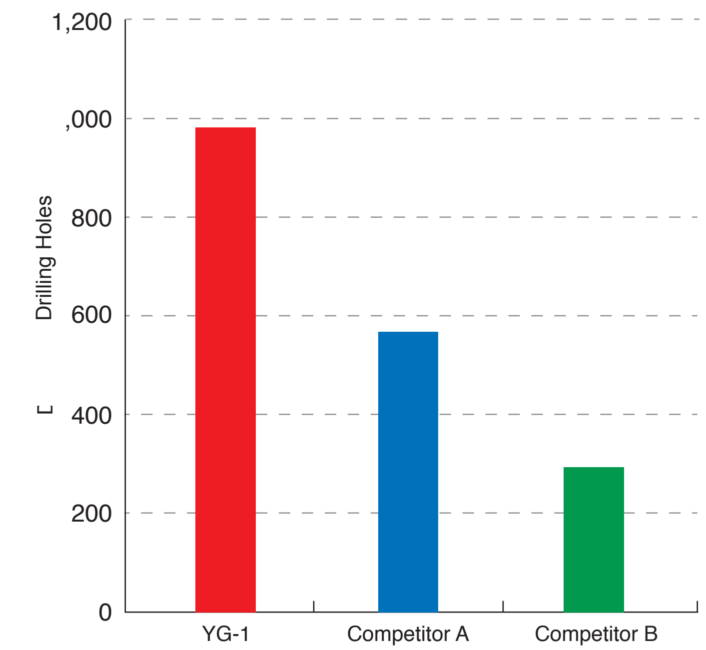
DREAM DRILLS - MQL TYPE

- Flute Shape and Point Shape allowing better chip evacuation in deep hole drilling
- Excellent Coating and Surface Treatment for better performance and chip evacuation

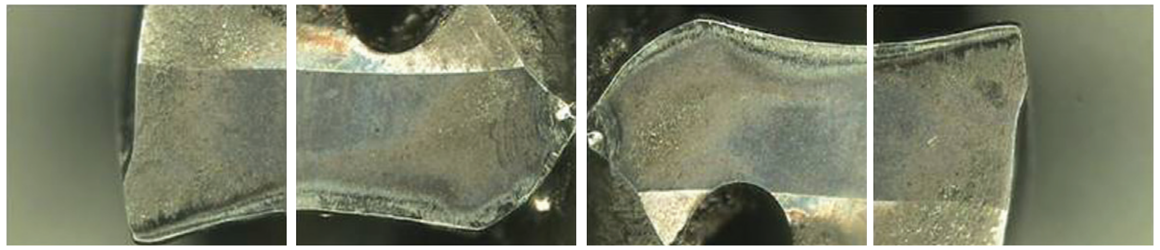
▶ SOLID CARBIDE DREAM DRILLS - MQL Type with Coolant Holes

Cutting Condition

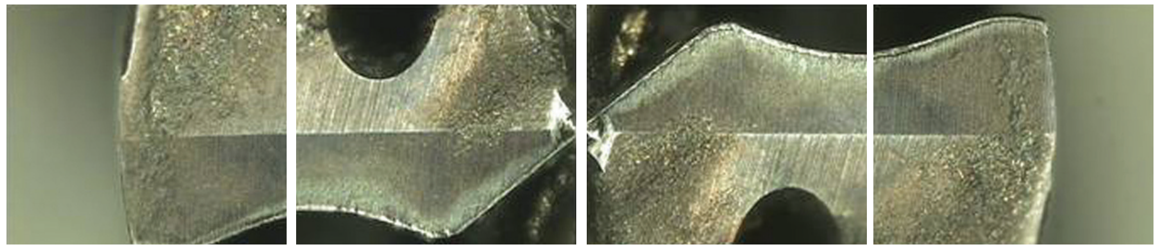
Tool	DH520060 (DREAM DRILL- MQL TYPE, 20×D)
Size	Ø6×Ø6×138×193
Work Material	- AISI : 1045 - DIN : C45(HRc25) - JIS : S45C
RPM	3,528 rev./min.
SFM	218 ft/min.
Feed	.0075 inch/rev.
Drilling Depth	3.15˝
Coolant	Wet Cut
Machine	Machining Center



▶ YG-1 (After Drilling 1,000 Holes)



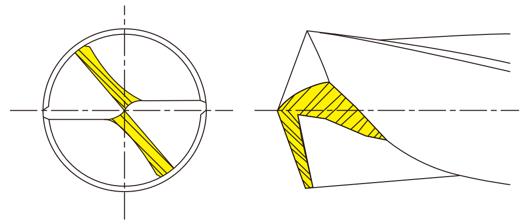
▶ Competitor A (After Drilling 546 Holes)



DREAM DRILLS for HIGH HARDENED STEEL

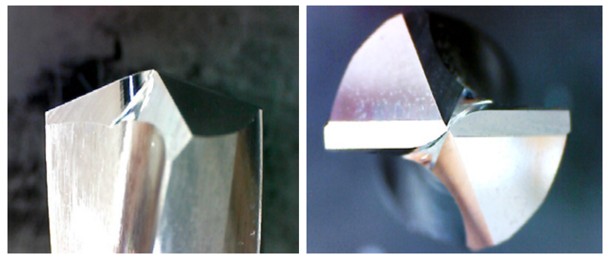
Low Helix
The low Helix angle maximizes tools' rigidity and stability with less deflection

Special Thinning (R+U Thinning)
Unique drill point geometry with special thinning to minimize cutting workload, axial thrust loading and heat generation.



Coating
TiAlN nano coating combines high hardness with high thermal stability against oxidation, allows machining the upper level of hardened steels HRc 50-70.

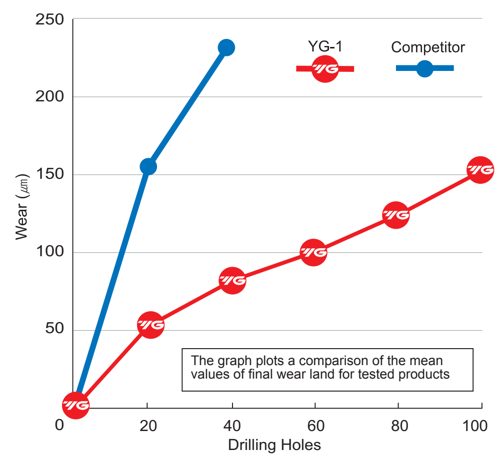
Point Shape



Polished Flutes
Polished flutes improve coating addition, with better chip control and evacuation.

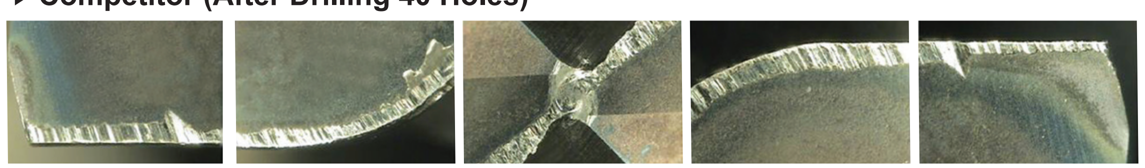
Cutting Condition

Tool	Dream Drills for High Hardened Steels
Size	Ø10×Ø10×63×111
Work Material	- AISI : H13 - DIN : X155CrV-Mo12-1(HRc60) - JIS : SKD11
RPM	380 rev./min..
SFM	39 ft/min.
Feed	.0016 inch/rev.
Drilling Depth	.98˝ (2.5xD)
Coolant	Wet Cut

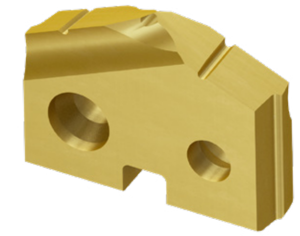


▶ YG-1 (After Drilling 100 Holes)

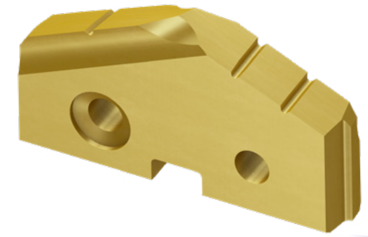
▶ Competitor (After Drilling 40 Holes)



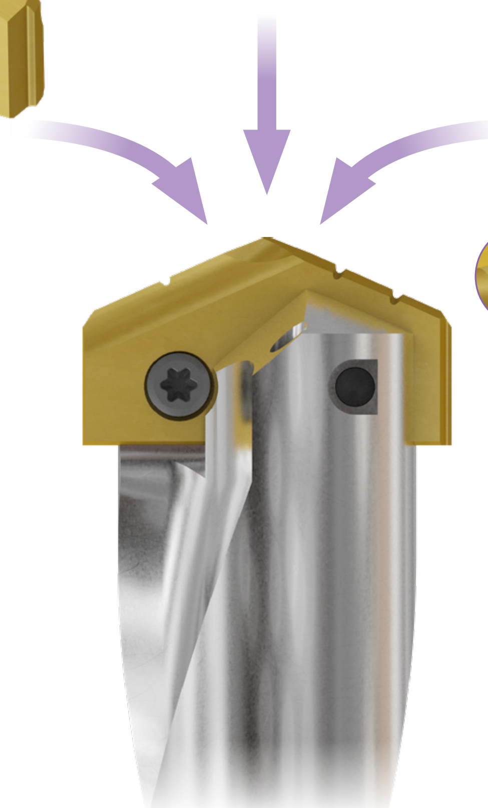
SPADE DRILLS (Standard, SM-Point)

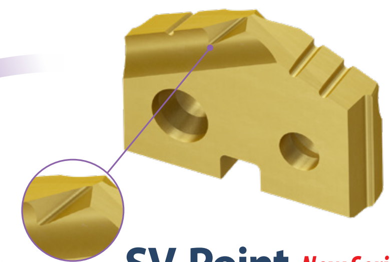


SM-Point
Multiple Web Thinning for and Radius Back Face for Increased Cutting Speed and Feed
Wide Chip Space
Good Self-Centering
Less Tool Lead-off
Reduction in bell mouthing

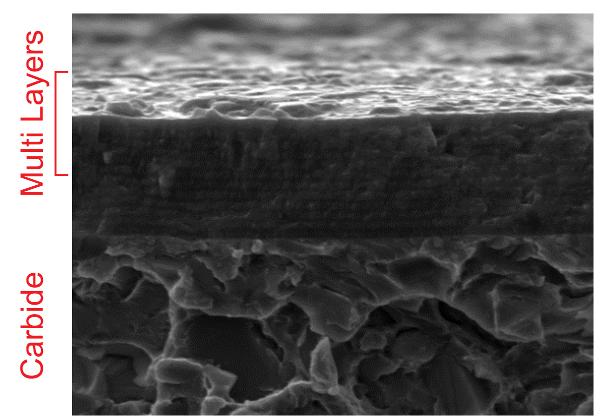


Standard-Point
Standard Point and Neutral Rake Angle for
Stable Cutting
Self Centering
Chip Breaking
Rigidity on Center





SV-Point *New Series*
Improved stability and hole straightness
- Smooth cutting
- Breaks chips
- Low thrust
- Stable torque
- Self centering - Long tool life



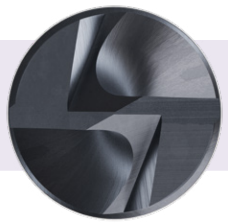
Multi layered H-coating
Micro Grain Carbide Insert
Outstanding Productivity & Reliability

H - Coating
(Upgraded AlCrN-Based : Multi-Layer coating)
• Higher worn-out resistance and Lower friction
• Higher Cutting Speed and Feed
• Improved drill Hole Quality

MULTI-1 DRILLS

Wide range of work materials;
Carbon Steels, Alloy Steels, Structural Steels, Hardened Steels(up to HRc45), Cast Iron, Stainless Steels, Aluminum and Titanium

P M K N S

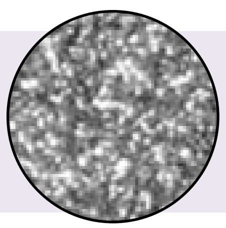


Point Shape to Maximize Self-centering

▶ Excellent positioning - bush is not necessary

Flute Design for the Best Chip Evacuation

▶ Prevent chip clogging and reduce axial thrust

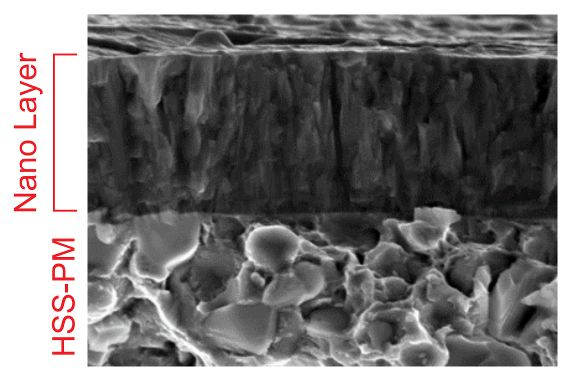


Premium Powder Material with Excellent Toughness

▶ Improve cutting edge strength with higher stability and rigidity

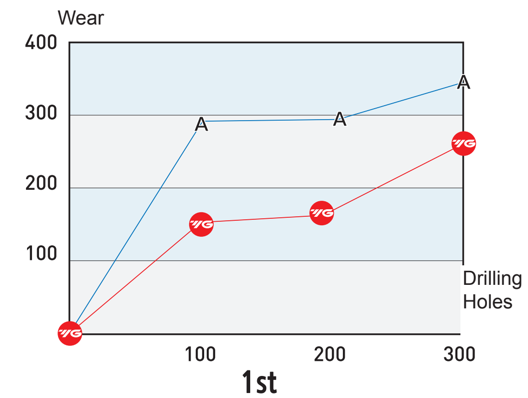
TiAlN Coating
(Upgraded Titanium Aluminum Nitride : **nano-Layer coating)**
- Higher wear resistance and Lower friction
- Higher Cutting Speed and Feed
- Improved drill Hole Quality

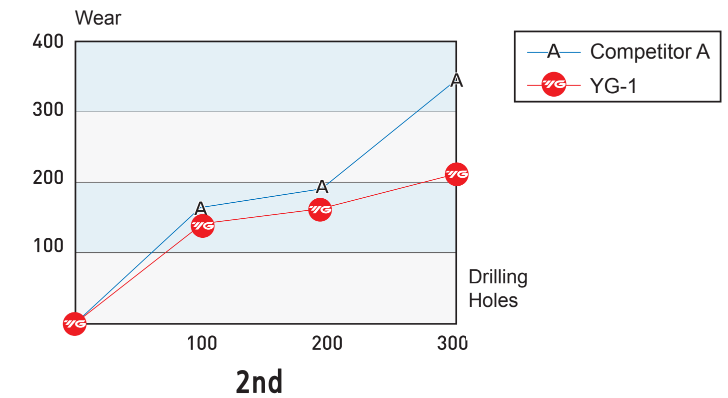
Special surface treatment after coating
to reduce friction and better chip flow.



MULTI-1 DRILLS

TEST I Comparison of edge wear



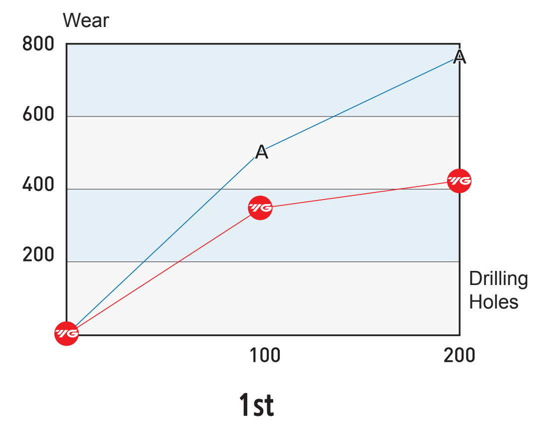


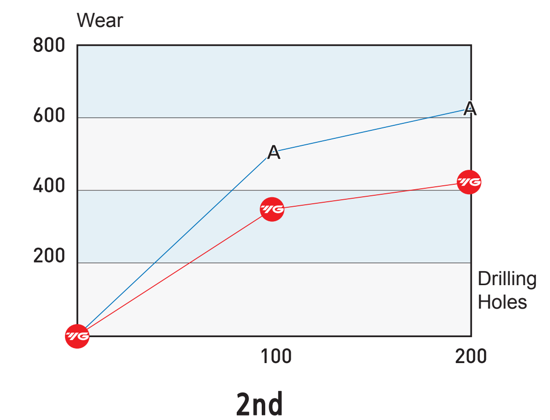
Cutting Condition

Work Material	- AISI : 316 - JIS : SUS316 - DIN : X3CrNiMo17-13-3

Drilling Depth	.94″
Total Drilling (hole)	300 Holes
RPM	600 rev./min.
Feed	4.3307 inch/min.

TEST II Comparison of edge wear



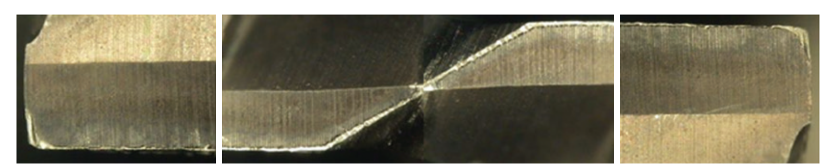


Cutting Condition

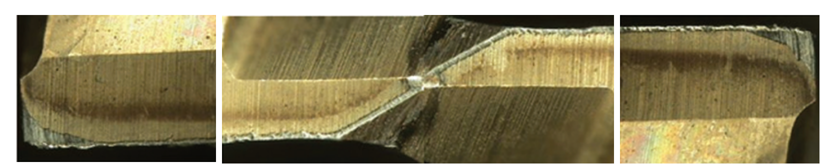
Work Material	- AISI : D2 - JIS : SKD11 - DIN : X155CrVMo12-1

Drilling Depth	.94″
Total Drilling (hole)	300 Holes
RPM	600 rev./min.
Feed	4.3307 inch/min.

▶ YG-1



▶ Competitor



SYNCHRO TAPS

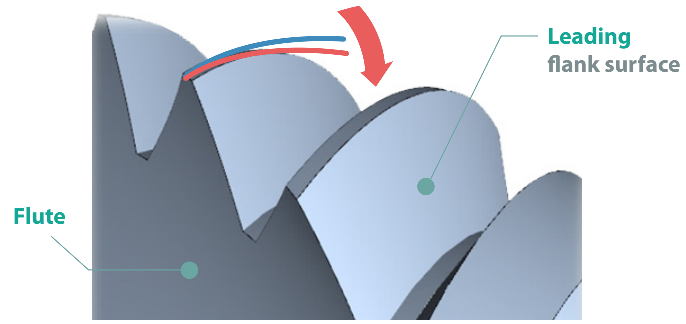
FEATURES OF GEOMETRY

▶ Shorter thread length will reduce chip problems at higher speed tapping conditions

▶ Shank Tolerance 'h7' for precision clamping and rigid tapping

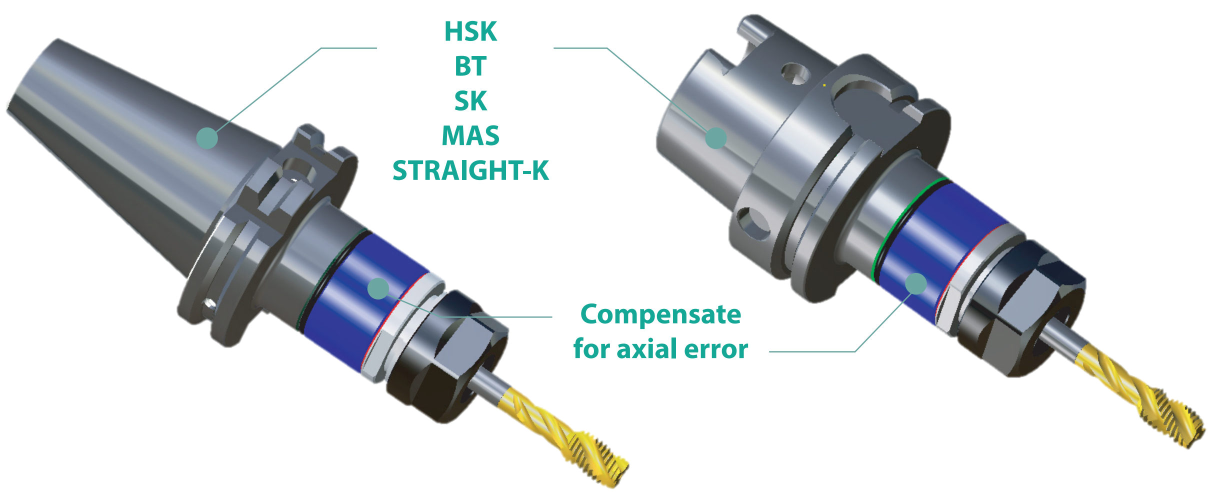
▶ More thread relief allows high speed cutting

▶ HSS-PM (Powder Metallurgy) for more reliable performance and wear resistance



SYNCHRO TAPPING CHUCK (ER TYPE)

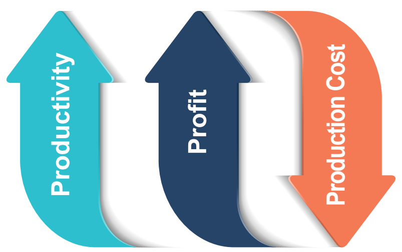
▶ When using Synchro taps, YG-1 strongly recommends SYNCHRO Tapping Chuck for the best thread quality and superior tool life



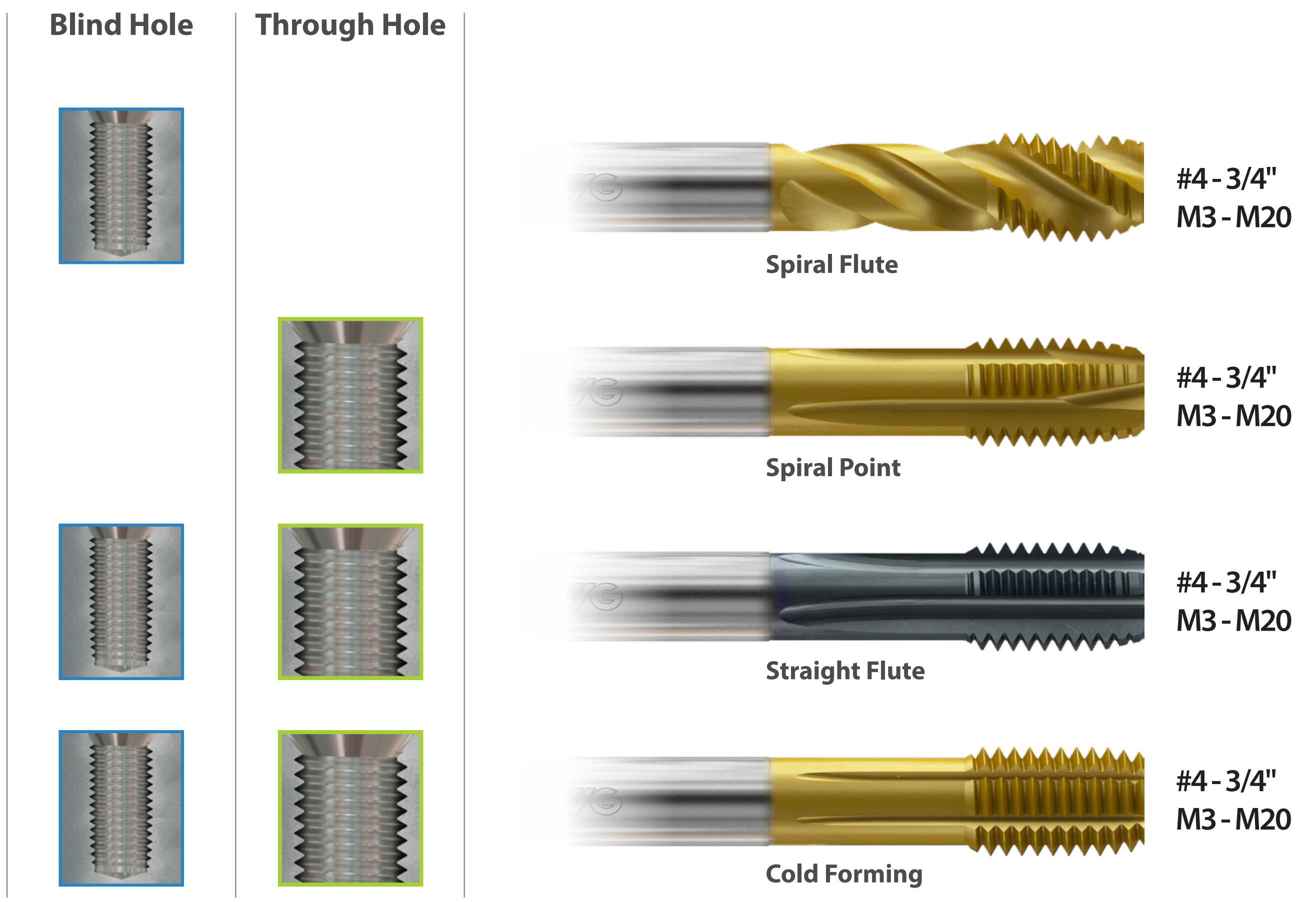
SYNCHRO TAPS

ADVANTAGES

▶ PRODUCTIVITY
Up to 3 times Faster
in tapping compared to conventional taps (General Steel)



▶ 4 kinds of taps are available



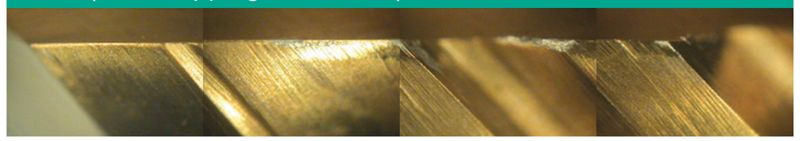
SYNCHRO TAPS

TEST Ⅰ SPIRAL FLUTE

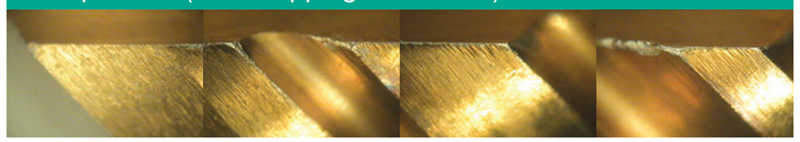
Cutting Condition

Tool	HSS-PM Synchro Spiral Flute Tap
Size	M10×1.5
Work Material	- AISI : 1045 - DIN : C45 - JIS : S45C (HRc35)
Cutting Speed	98.4 ft/min.
SFM	2500 rev./min.
Feed	1.5 mm/rev.
Tapping Depth	.9843″ (2.5xD / Blind Hole)
Tapping Holes	330
Tapping Method	External Cooling Water Soluble (9% Emulsion)
Machine	Machining Center

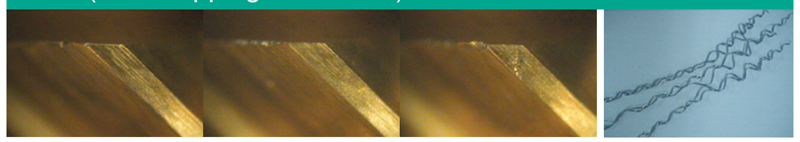
YG-1(Total Tapping 330 Holes)-Chamfer



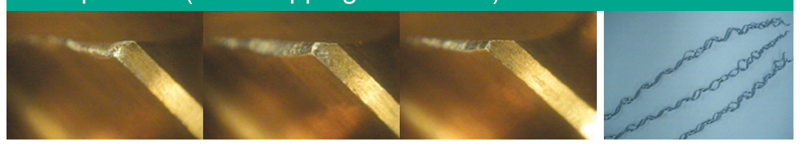
Competitor A(Total Tapping 330 Holes)-Chamfer



YG-1(Total Tapping 330 Holes)-Thread



Competitor A(Total Tapping 330 Holes)-Thread

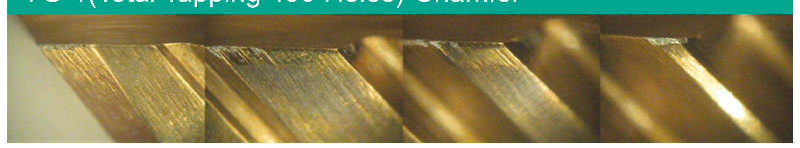


TEST Ⅱ SPIRAL FLUTE

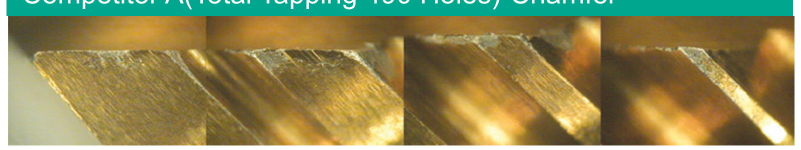
Cutting Condition

Tool	HSS-PM Synchro Spiral Flute Tap
Size	M6×1.0
Work Material	- AISI : 4140 - DIN : 42CrMo4 - JIS : SCM440 (HRc20)
Cutting Speed	98.4 ft/min.
SFM	2500 rev./min.
Feed	1.0 mm/rev.
Tapping Depth	.5906″ (2.5xD / Through Hole)
Tapping Holes	400
Tapping Method	External Cooling Water Soluble (9% Emulsion)
Machine	Machining Center

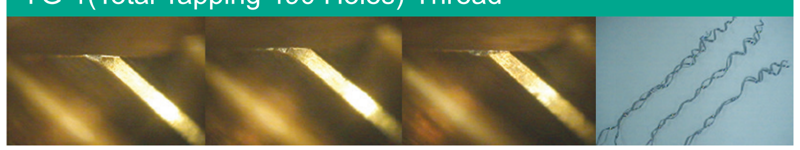
YG-1(Total Tapping 490 Holes)-Chamfer



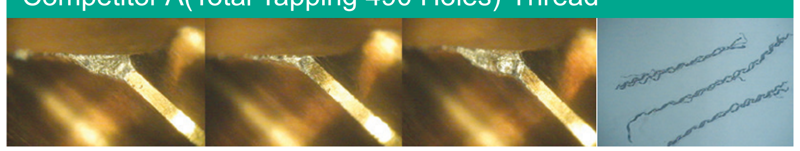
Competitor A(Total Tapping 490 Holes)-Chamfer



YG-1(Total Tapping 490 Holes)-Thread



Competitor A(Total Tapping 490 Holes)-Thread

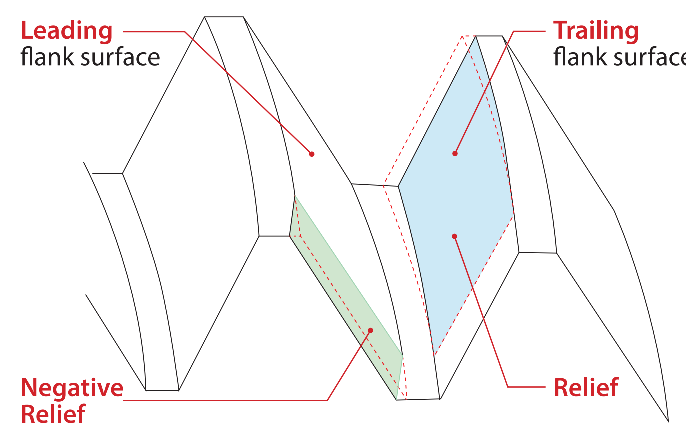


COMBO TAPS

General Use for Various Materials

Combo Tap's geometry provides enough flute space resulting in smooth chip evacuation and therefore a continuous production process. Guarantee a high level of process reliability even under unfavorable conditions.

- ▶ For Steels, Stainless Steels, Cast Iron and Non-Ferrous Materials
- ▶ Prevents over & under feeding by its optimized flank geometry
- ▶ Constant threading quality preventing oversized threading



- Optimized flank geometry to prevent over & under feeding
- Enables smoother tapping with better chip evacuation
- Compensation of cutting force, which reduces tap wear and extends tool life.

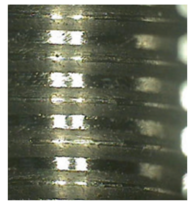
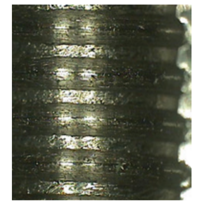
COMBO TAPS

TEST I SPIRAL FLUTE

Cutting Condition

Tool	Combo Spiral Flute Tap
Size	M8×1.25
Work Material	- AISI : 1045 - DIN : C45 - JIS : S45C(HRc35)
Tapping Depth	.79˝
Coolant	Water Soluble Oil
Vc(Tapping Speed)	33 ft/min.

Surface Roughness of Work Piece

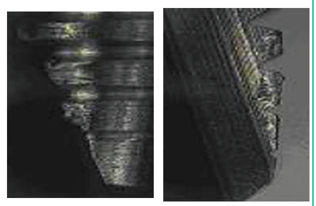
YG-1 Total Tapping 204 Holes	Competitor A Total Tapping 159 Holes	Competitor B Total Tapping 204 Holes
		

TEST II SPIRAL POINT

Cutting Condition

Tool	Combo Spiral Point Tap
Size	M2×0.4
Work Material	- AISI : 1045 - DIN : C45 - JIS : S45C(HRc35)
Tapping Depth	.24˝
Coolant	Tapping Oil
Vc (Tapping Speed)	33 ft/min.

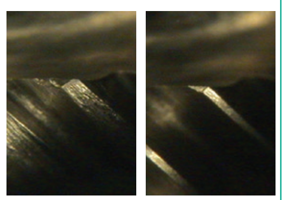
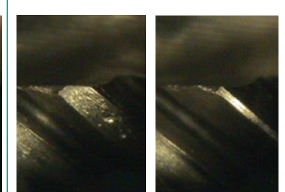
Surface Roughness of Work Piece

YG-1 Total Tapping 450 Holes	Competitor A Total Tapping 318 Holes	Competitor B Total Tapping 103 Holes
	Tool broke after tapping 318 holes	Tool broke after tapping 103 holes

TEST I SPIRAL FLUTE

Cutting Condition

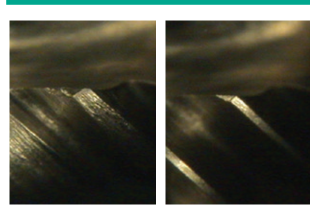
Tool	Combo tap for Stainless Steels (TQ744246)
Size	M4×0.7
Work Material	- DIN : X5CrNi18 10(X 4 CrNi18-10) - WR : 1.4303 - JIS : SUS304
Tapping Depth	.39"
Coolant	Wet Cut
Vc (Tapping Speed)	26 ft/min

YG-1 Total Tapping 170 Holes	Competitor A Total Tapping 170 Holes	Competitor B Total Tapping 83 Holes
		Tool broke after tapping 83 holes

TEST II SPIRAL FLUTE

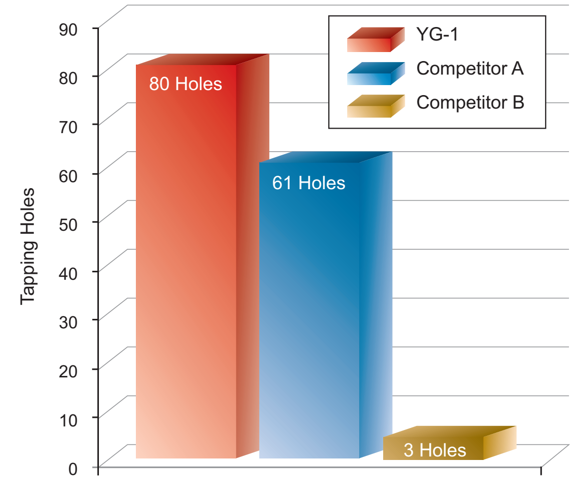
Cutting Condition

Tool	Combo tap for Stainless Steels (TQ744316)
Size	M6×1.0
Work Material	- DIN : X5CrNi18 10(X 4 CrNi18-10) - WR : 1.4303 - JIS : SUS304
Tapping Depth	.59"
Coolant	Wet Cut
Vc (Tapping Speed)	26 ft/min

YG-1 Total Tapping 230 Holes	Competitor A Total Tapping 92 Holes	Competitor B Total Tapping 98 Holes
	Tool broke after tapping 92 holes	Tool broke after tapping 98 holes

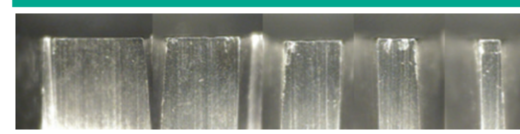
YG TAP HARDENED

TEST I STRAIGHT FLUTE TAPS

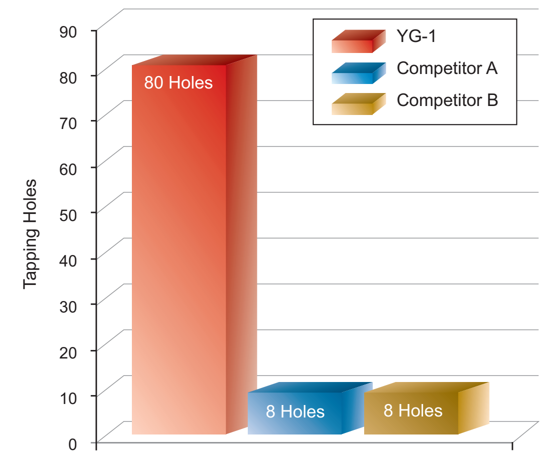


Cutting Condition

Tool	Straight flute tap
Size	M6×1.0
Work Material	- AISI : H13 - DIN : X40GrMoV51(1.2344) - JIS : SKD61 (HRc50)
SFM	188 rev./min.
Feed	1.0 mm/rev.
Tapping Depth	.39" (1.5×D)
Coolant	Wet Cut

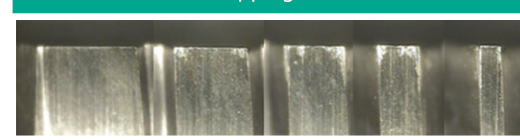
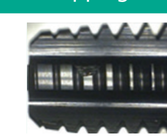
YG-1 Total Tapping 80 Holes	Competitor A Total Tapping 61 Holes	Competitor B Total Tapping 3 Holes
	Tool broke after tapping 61 holes	Tool broke after t apping 3 holes

TEST II STRAIGHT FLUTE TAPS

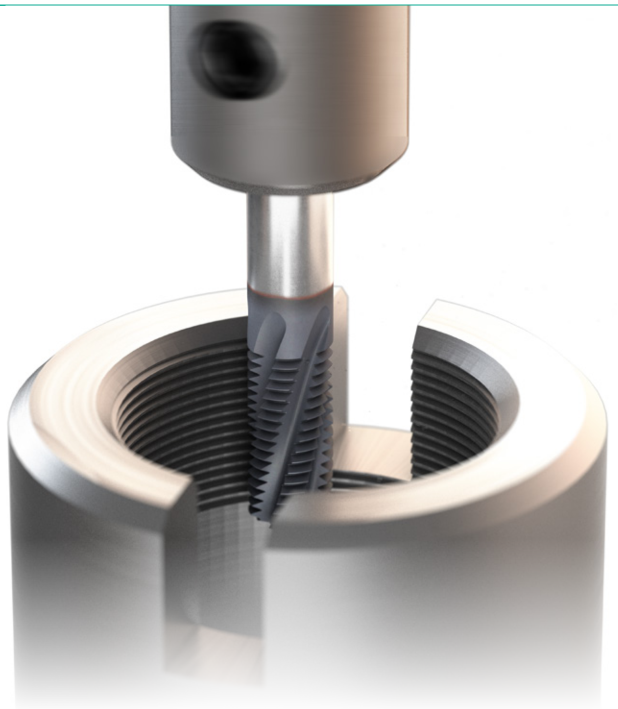


Cutting Condition

Tool	Straight flute tap
Size	M6×1.0
Work Material	- AISI : H13 - DIN : X40GrMoV51(1.2344) - JIS : SKD61 (HRc50)
SFM	188 rev./min.
Feed	1.0 mm/rev.
Tapping Depth	.35" (1.5×D)
Coolant	Wet Cut

YG-1 Total Tapping 80 Holes	Competitor A Total Tapping 8 Holes	Competitor B Total Tapping 8 Holes
		Tool broke after tapping 8 holes

THREAD MILLS

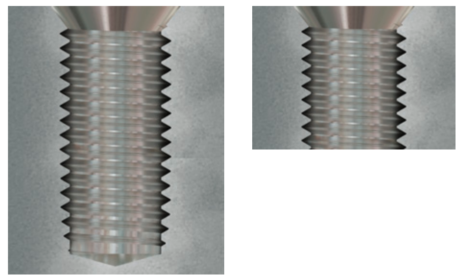


A Thread mill can produce various thread diameters with the same pitch

Disadvantage of tapping is that a different size tap is required for each size hole

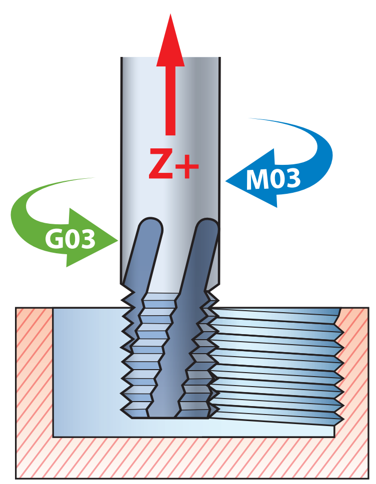
One Thread mill for blind-holes and through-holes

Thanks to short chips, No chip problems with tapping No problems removing broken tools from the workpiece

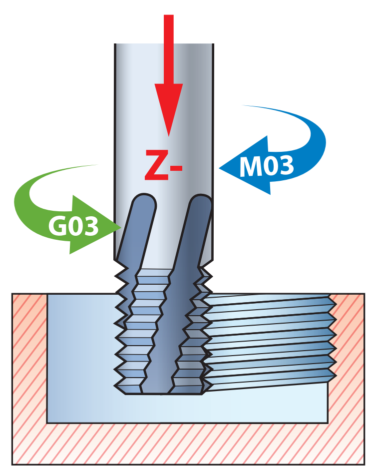


One Thread mill for right- and left-hand threads

Right-hand and left-hand threads can be produce with the same tooling just by adjusting CNC commands.



Right-hand thread



left-hand thread

Higher Cutting Speed than tapping.
Higher Reliable Process than tapping, because of short chips

Thread Milling takes much less torque than tapping

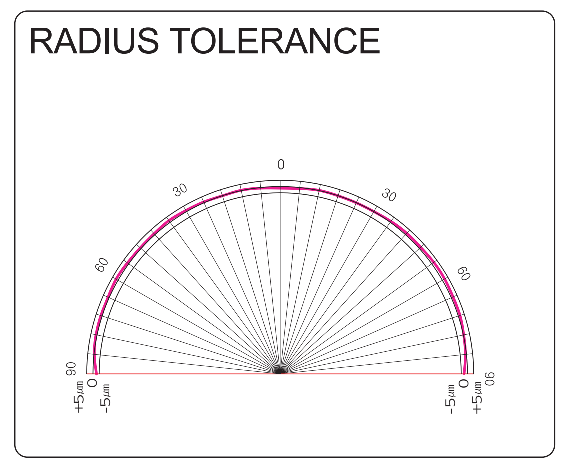
CBN End mills

Applications

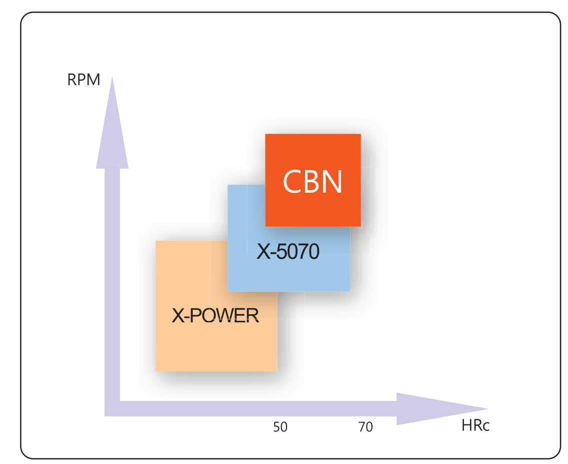
- ▶ Applicable for high hardened steel (HRc 50 ~ HRc 70)
- ▶ Applicable for finishing operation with high spindle speed (RPM 20,000 ~ 50,000)
  - * Achieve mirror-like surface of work materials

Features

- ▶ Premium tool substrate CBN(Cubic Boron Nitride)
  - * Superior tool life compared with carbide end mills
  - * Execllent heat resistance
- ▶ Achieve stable machining and higher accuracy for the duration
  - Save the setting time and cost due to reducing frequent tool changes
  - Improve repeatability in performance
- ▶ Specially designed geometry improves tool rigidity at high speed cutting



Tighter Radius Tolerance ±0.005mm
higher accuracy and longer tool life.

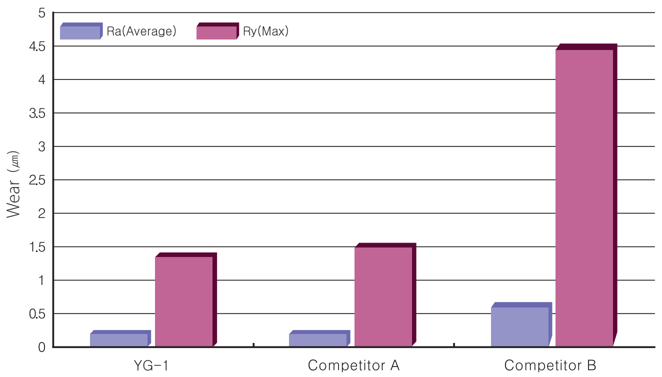


High Speed & Finishing

CBN End mills

TEST Ⅰ Total Milling Length : 787 ft

Surface Roughness of Work Piece

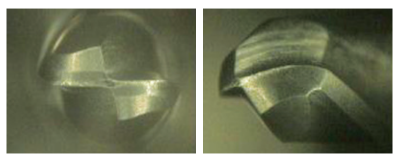


Cutting Condition (Ø1mm)

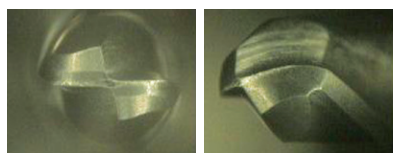
Tool	2Flute, CBN Ball Nose End mill
Size	Ø1×Ø4×0.6×50
Work Material	- AISI : D2 - DIN : X155CrV-Mo12-1 - JIS : SKD11(HRc60)
SFM (ft/min.)	309
RPM (rev./min.)	30,000
IPM (inch/min.)	59.06
Milling Depth (inch)	.0004˝
Coolant	Oil Mist
Machine	Machining Center

Maximum Wear (㎛)

YG CBN (19.611㎛)



Competitor A (32.249㎛)

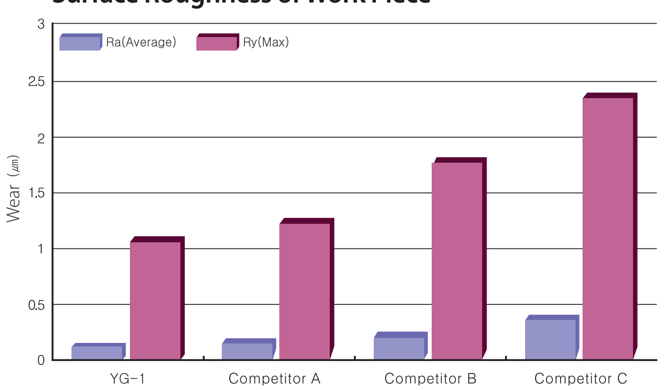


Competitor B

Tool was broken after 328 ft milling

TEST Ⅱ Total Milling Length : 2,460 ft

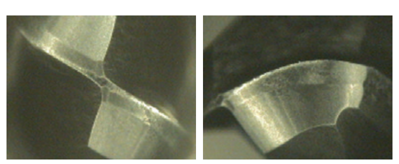
Surface Roughness of Work Piece



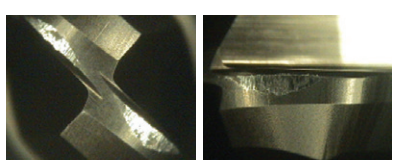
Cutting Condition (Ø2mm)

Tool	2Flute, CBN Ball Nose End mill
Size	Ø2×Ø4×1.8×50
Work Material	- AISI : D2 - DIN : X155CrV-Mo12-1 - JIS : SKD11(HRc60)
SFM (ft/min.)	618
RPM (rev./min.)	30,000
IPM (inch/min.)	78.74
Milling Depth (inch)	.0004˝
Coolant	Oil Mist
Machine	Machining Center

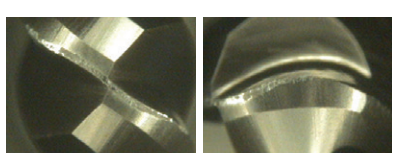
Maximum Wear(㎛)



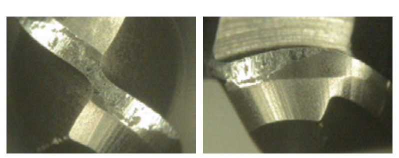
YG CBN
57.630㎛



Competitor A
100.314㎛



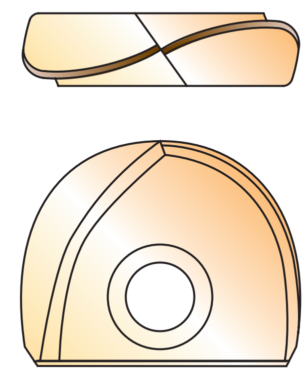
Competitor B
71.471㎛



Competitor C
170.200㎛

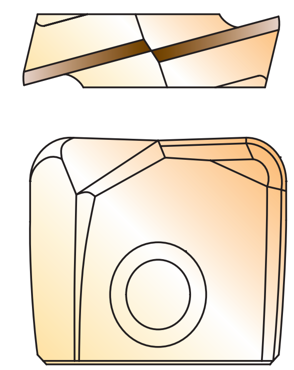
i-Xmill End mills

i-Xmill BALL INSERT



1. Helical end gash ("S" gash) geometry
   - Low milling torque
   - Prevents chattering
   - Improves chip ejection
   - Prolong tool life
2. Polished cutting edges
   - Better wear resistance and tool life
   - Improves repeatability in performance
   - Improves surface roughness on work-piece
   - Improves coating
3. Special coating
   - Combine high hardness with high thermal stability against oxidation
   - Superior wear resistance
   - Faster feeds and speeds

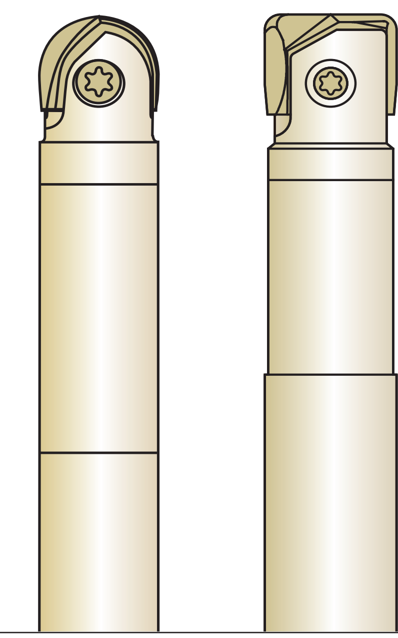
i-Xmill CORNER RADIUS INSERT



1. The optimized tool geometry achieves better reliability and reduces vibration and cutting load.
2. Corner radius insert can be used with the ball holder, but for a better precision in cutting. It is recommended to use the corner radius holder.
3. The various and wide cutting range allows machining in both roughing and finishing.
4. Special coating makes high hardness with high thermal stability against oxidation.

i-Xmill CARBIDE HOLDER

1. As rigid as a solid carbide end mill for stable machining with reduced vibration and enhanced finish
2. Allows a high quality of finishing even when machining the deeper part of a mold
3. Longer tool life than a steel holder
4. Shrink Fit Holding system can be applied
5. Upon request, the broken holder is able to be regenerated
6. Your carbide holder can be regenerated as YG-1 type upon request

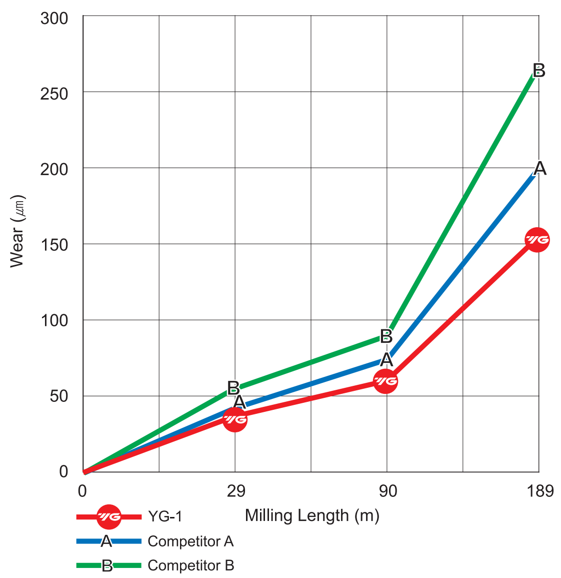


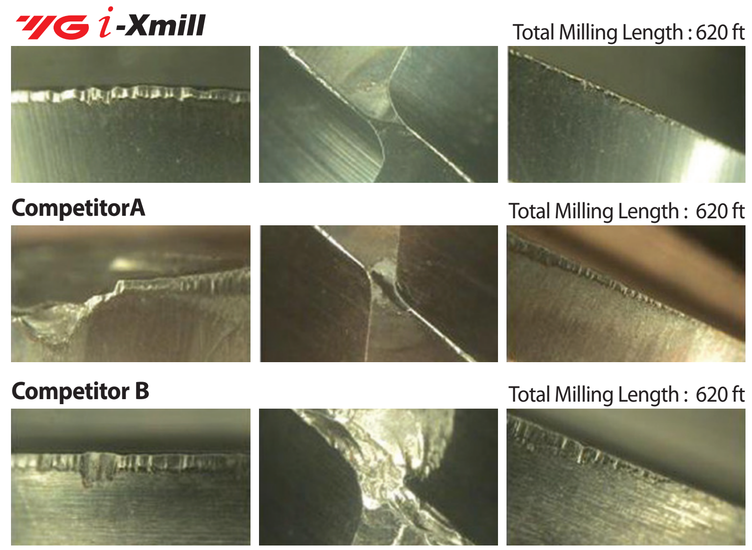
i-Xmill STEEL HOLDER

1. Premium alloy steel with excellent strength
2. Precise shank tolerance (h6)
3. Nickel plated, to prevent corrosion and improve lubricity

i-Xmill End mills

TEST Ⅰ i-Xmill Ball Nose





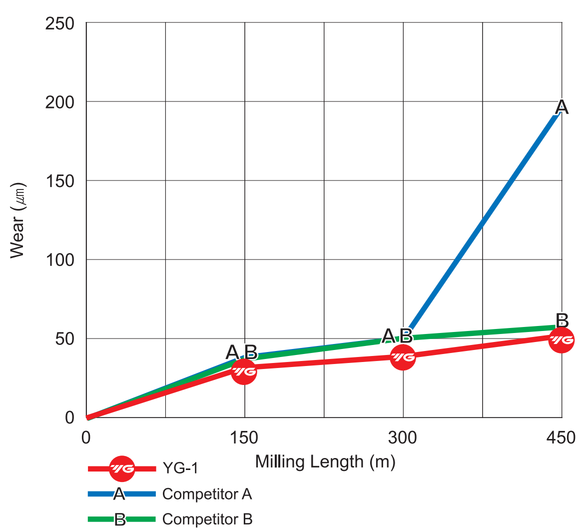
Cutting Condition (Side Cutting)

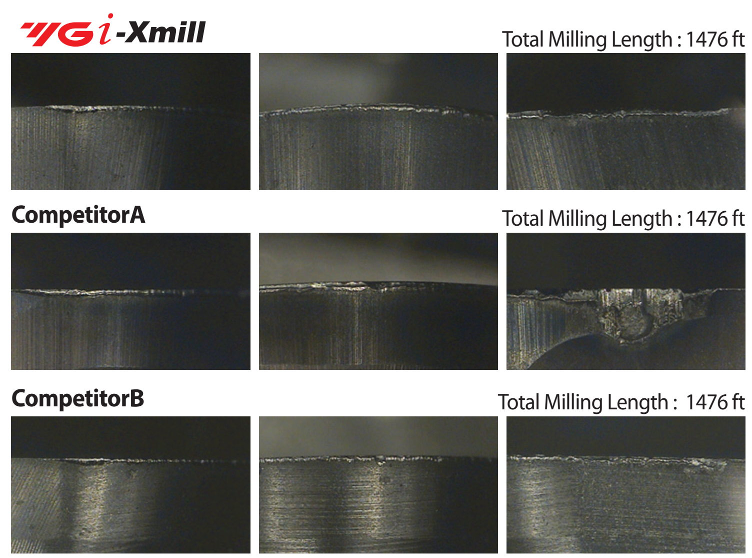
Tool	i-Xmill Ball
Size	Ø16×R8.0
Work Material	- JIS : SKD61 (HRc50), - DIN : X40GrMoV51(1.2344) - AISI : H13

SFM (ft/min.)	264
RPM (rev./min.)	1,600
IPM (inch/min.)	15.35
IPT (inch/tooth)	.0047

Milling Depth(inch)	Axial : .0315˝, Radial : .0630˝
Coolant	Oil Mist
Overhang	YG-1, Competitor B : 1.89˝ / Competitor A : 2.20˝
Machine	Machining Center

TEST Ⅱ i-Xmill Corner Radius





Cutting Condition (Side Cutting)

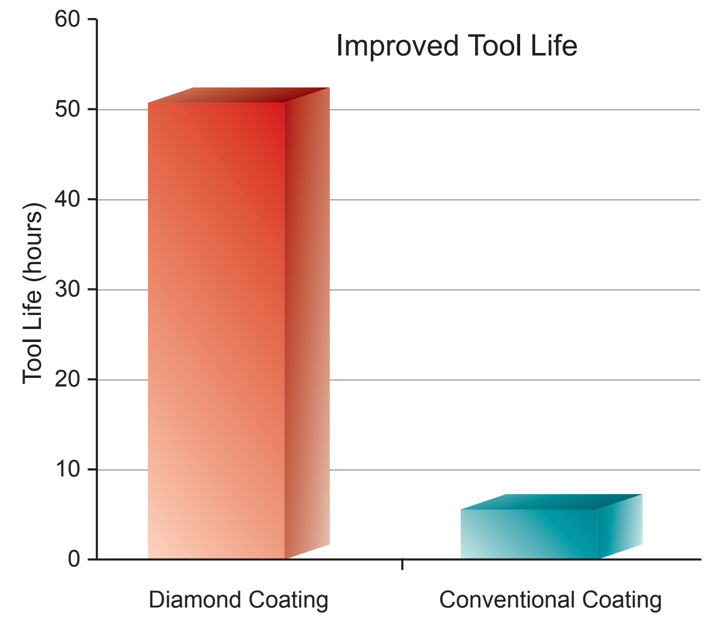
Tool	i-Xmill Corner Radius
Size	Ø16×R2.0
Work Material	- KS : KP4M (Mold steels HRc35) - DIN : 40CrMnNiMo8-6-4(1.2738) - AISI : P20+Ni

SFM (ft/min.)	918
RPM (rev./min.)	5,570
IPM (inch/min.)	87.80
IPT (inch/tooth)	.0079

Milling Depth(inch)	Axial : .1181˝, Radial : .0079˝
Coolant	Oil Mist
Overhang	2.76˝
Machine	Machining Center

i-Xmill End mills

TEST Ⅲ i-Xmill with Diamond Coating



Cutting Condition

Tool	i-Xmill Corner Radius (XMR110D17010)
Size	Ø17 x R1.0
Work Material	Graphite
SFM (ft/min.)	1052
RPM (rev./min)	108
Feed (mm/min)	2,800
Feed per tooth (mm/tooth)	.009
Milling Depth (inch)	Axial : .008
Coolant	Air

Coating properties

This coating generation features a good crystalline structure. It protects tools perfectly against abrasive wear and is unsurpassed in graphite cutting.

Feature

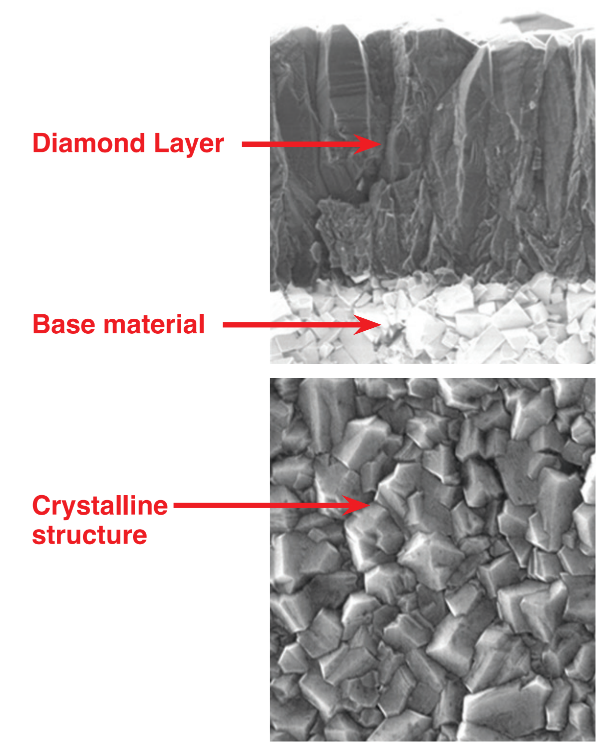
1. High Abrasive wear resistance.
2. Good Coefficient of friction.(against Al)
3. High Precision.

Advantages

Diamond coated i-Xmill possible to cut graphite workpieces with substantially greater speeds and in significantly better quality.

Applications

1. Precision-structured graphite electrodes.
2. Micro-Electromechanical Systems. (MEMS)
3. Printed Circuit Boards. (PCBs)
4. Ceramics (greens, sintered) Dental, machinery.



i-SMART Modular Type End mills

Modular Type, Y-Coated Exchangeable Carbide Milling Heads for machining Pre-Hardened Steels

- Avoids expensive investments by using existing Copy Milling adaptor technology
- Proven performance transferred to cost effective modular system
- Optimal solution for large size or long reach Die&Mold applications

Seven different selections of modular heads fit in different holders.

Carbide Holder
Straight Neck Type

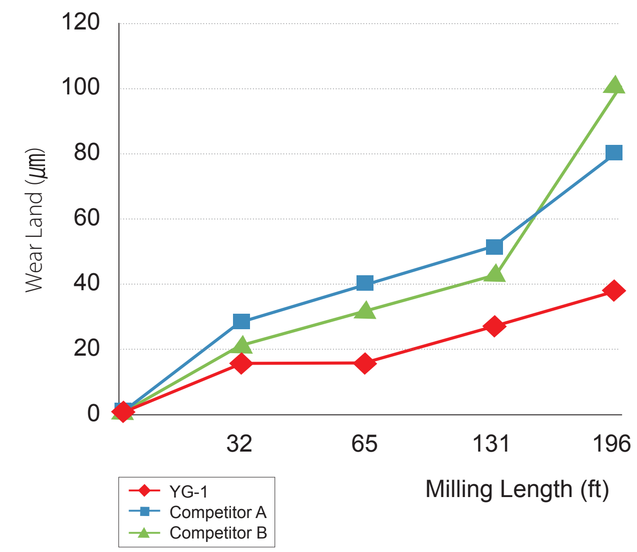
Steel Holder
Straight & Taper Neck Type

YG-1 Tool Holder
COPY MILL ARBOR

Excellent flexibility by using copy milling coupling

i-SMART Modular Type End mills

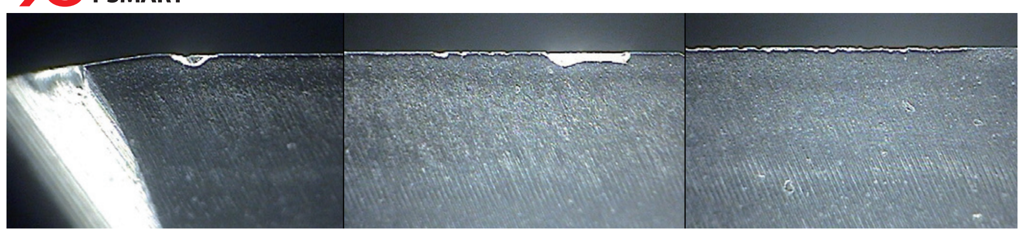
TEST Total Milling Length : 196 ft



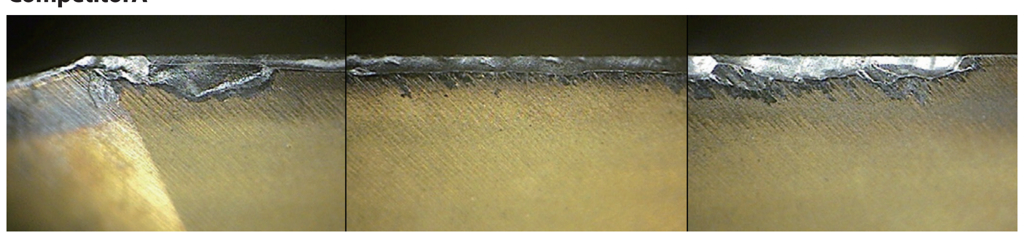
Cutting Condition (Down & Side Cutting)

Tool	4Flute Corner Radius
Size	Ø16 x R1.0
Work Material	- AISI P20+Ni - DIN 1.2738 Improved - KP4M (HRc35)
SFM (ft/min.)	511
RPM (rev./min.)	3,100
IPM (inch/min.)	11.02
IPT (inch/tooth)	.0656
Milling Depth (inch)	Axial : .4724″ Radial : .0314″
Overhang (inch)	3.03″
Coolant	Wet Cut
Machine	Machining Center

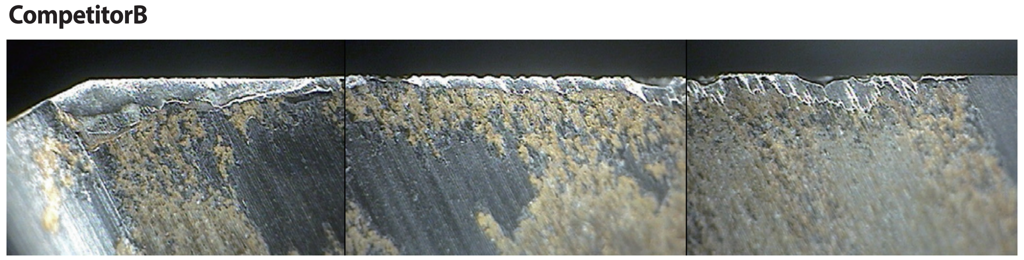
YG i-SMART



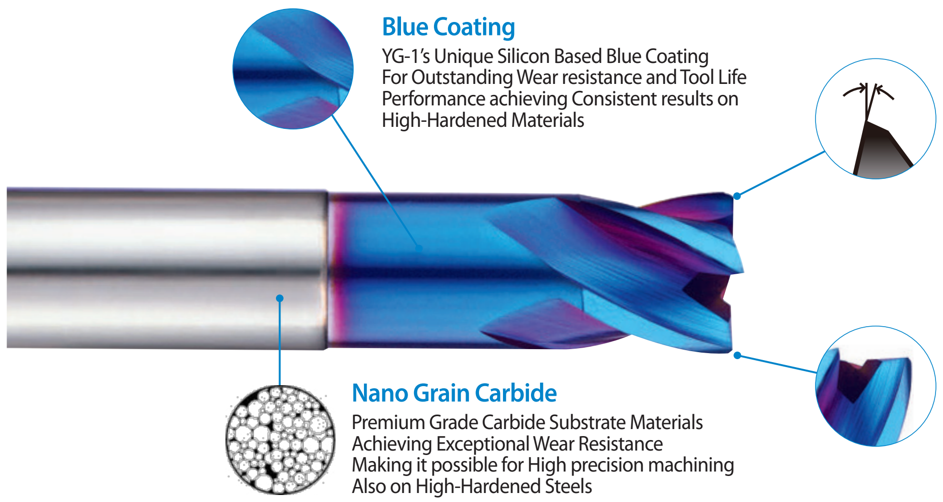
CompetitorA



CompetitorB



X5070 End mills



Blue Coating
YG-1's Unique Silicon Based Blue Coating For Outstanding Wear resistance and Tool Life Performance achieving Consistent results on High-Hardened Materials

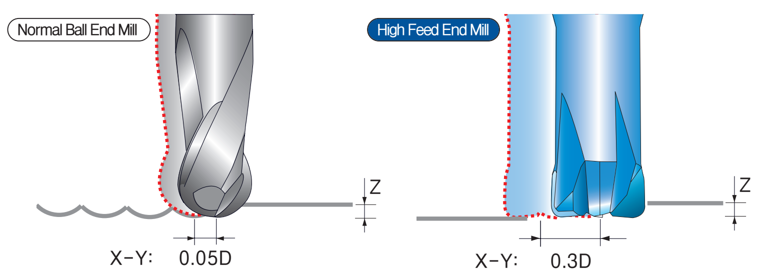
Negative Rake Angle
Exclusively Designed to Resist High-Hardened materials Preventing Chipping and also achieving Superb performance specially On High-Hardened Materials

Nano Grain Carbide
Premium Grade Carbide Substrate Materials Achieving Exceptional Wear Resistance Making it possible for High precision machining Also on High-Hardened Steels

Corner Geometries
High Performance Corner Radius Applied to Prevent Chipping and Higher Cutting Speed with longer Tool life

High Feed End Mill Capabilities :

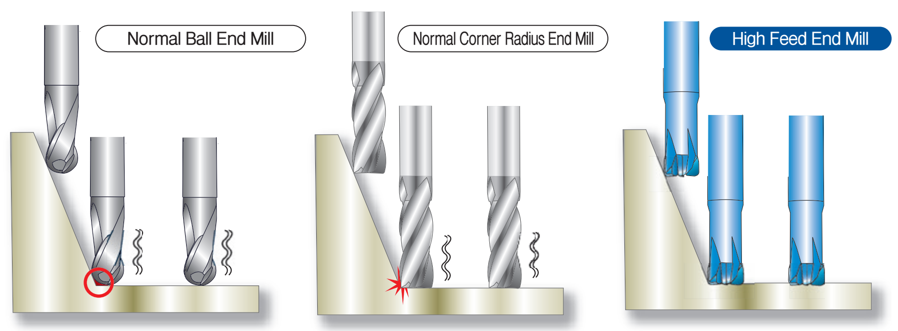
- ☑ High speed roughing
- ☑ High speed finishing... Mirror-like surface



▶ More number of flutes than the normal 2F ball E/M results in high-feed cutting.
For X - Y wide cutting pitch, high effective cutting performs in short tool working time.
(Example of performance : for the material HRc 50~55)

ITEM	SIZE	RPM	IPM	DEPTH OF CUT	
				Z(mm)	X-Y(mm)
HIGH FEED END MILL	4F Ø10 X R2	5,400	433	0.2	3.0
NORMAL BALL END MILL	2F Ø10 X R5	7,500	98	0.2	0.5

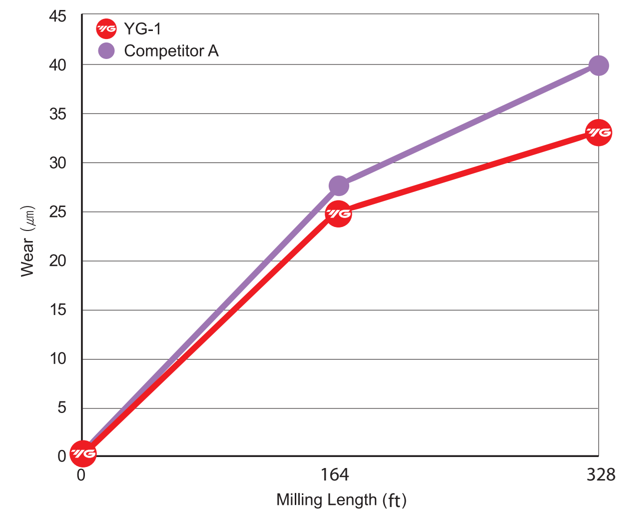
▶ For cutting on slopes and corners, the remaining part to be cut is smaller than one that remains after working with normal ball End Mill. It saves the time and cost



▶ By using straight flute, the rigidity of corner radius is improved. And it's also possible to get less damage to end teeth and radius than normal radius End Mill.

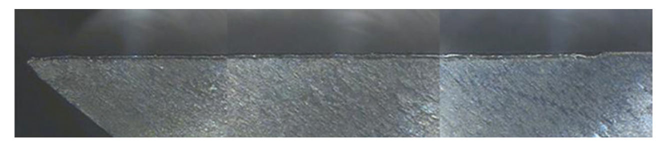
X5070 End mills

TEST I Carbide 6 Flute 45° Helix End mill for Hardened Steel

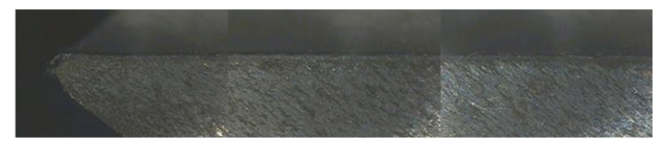


Cutting Condition (Down & Side Cutting)

Tool	6Flute 45° Helix
Size	Ø16×Ø16×40×110
Work Material	- AISI : H13 - DIN : X40CrMoV5-1(1.2344) - JIS : SKD61(HRc50)
SFM (ft/min.)	317
RPM (rev./min.)	1,920
Milling Depth (inch)	Axial : .9449˝ Radial : .0378˝
Coolant	Dry Cut
Overhang (inch)	2.05˝
Machine	Machining Center

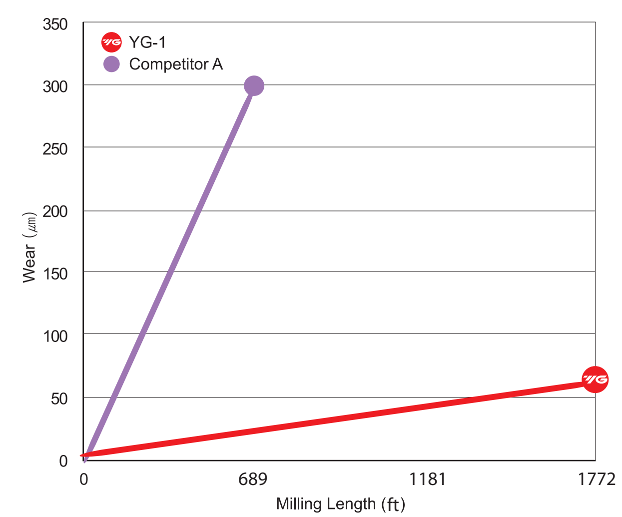


YG X5070
Total Milling Length : 328 ft



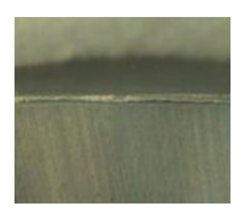
CompetitorA
Total Milling Length : 328 ft

TEST II Carbide 4 Flute Center match Ball Nose End mill for Hardened Steel

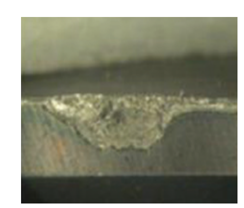


Cutting Condition (Side Cutting)

Tool	4Flute Ball Nose
Size	Ø10×Ø10×18×100
Work Material	- AISI : D2 - DIN : X155CrVMo12-1(1.2379) - JIS : SKD11(HRc60)
SFM (ft/min.)	691
RPM (rev./min.)	6,700
IPM (inch/min.)	110
Milling Depth (inch)	Axial : .008" / Radial : .020"
Coolant	Oil Mist
Overhang (inch)	1.26"
Machine	Machining Center



YG X5070
Total Milling Length : 1,772 ft

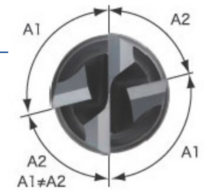


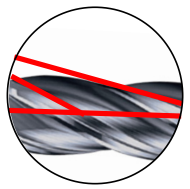
CompetitorA
Total Milling Length : 689 ft

4G Mills End mills

High Speed Cutting for Pre-Hardened Steels up to HRc55

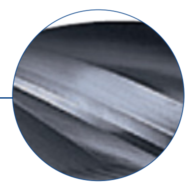
Suitable for wide range of work material, specifically for increasing tool life
when machining pre-hardened materials, low hardness materials and cast iron, etc.
High speed cutting, dry and wet cut recommended together.





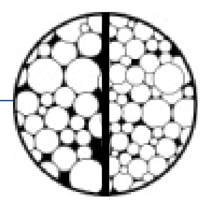
Unequal Index & Multiple Helix

4G Mills, 4 Flute Multiple Helix End Mills exclusively designed to reduce vibration and also to achieve excellent chip evacuation



Optimal Edge Preparation

All 4G Mills products contain an Optimal Edge Preparation to prevent chipping, also obtaining an excellent surface finish with a longer tool life in High Speed Cutting



Ultra Micro Grain & Nano Grain Carbide

Premium Grade Carbide Substrate Materials
achieving exceptional wear resistance
making it possible for High Precision Machining

High Technology Y-Coating

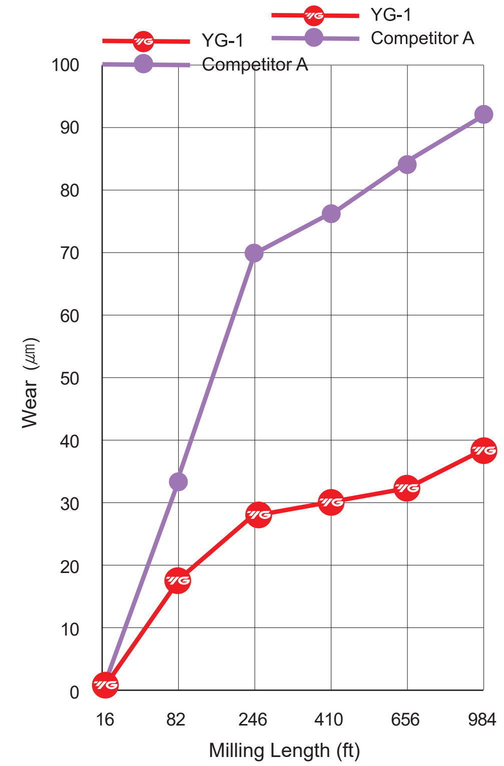
AlCr Based, YG-1`s High Technology
In-house coating for maximum tool life and high performance
Excellent quality coating developed by YG-1

Holds a Large Variety of Product Range for Multiple Use

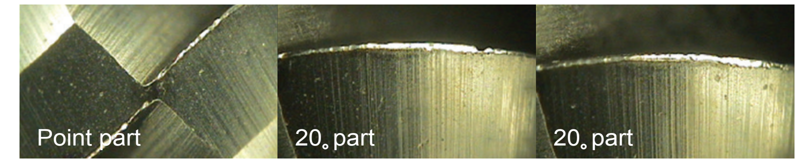
Large Variety of Products
For Several Different Applications with Different Size and Lengths
▶ Size : .004" ~ 1"

4G Mills End mills

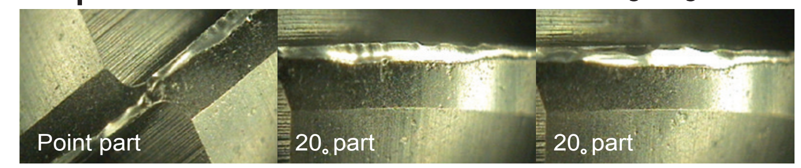
TEST I - Ball Nose



4G Mills — Total Milling Length : 984 ft



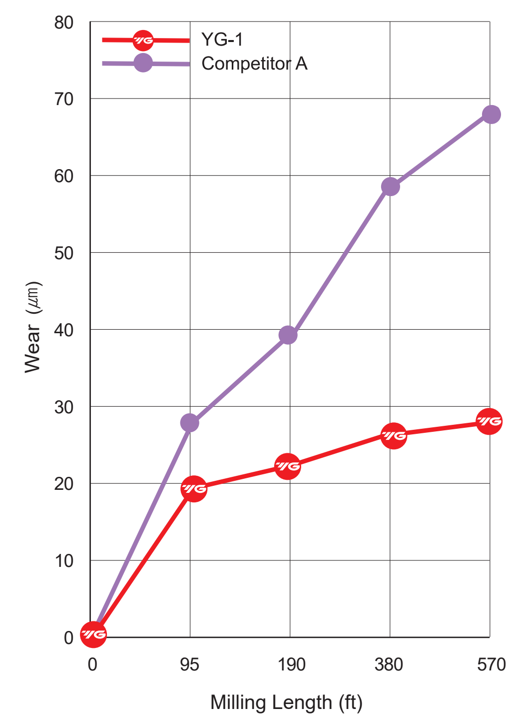
CompetitorA — Total Milling Length : 984 ft



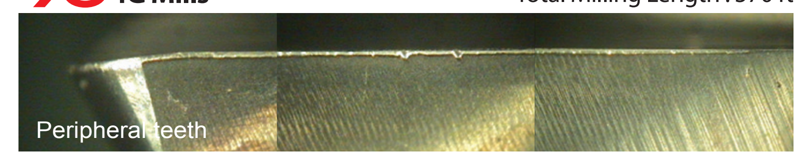
Cutting Condition (Profile Cutting)

Tool	2Flute, Carbide Ball End Mill
Size	Ø6×6×12×90
Work Material	KP4M (HRc35 / DIN 1.2738 Improved)
SFM (ft/min.)	426.7
RPM (rev./min.)	6,900
IPM (inch/min.)	32.68
IPT (inch/tooth)	.0024
Milling Depth (inch)	Axial : .0079˝ / Radial : .0472˝
Coolant	Oil Mist
Overhang (inch)	1.024˝
Machine	Machining Center

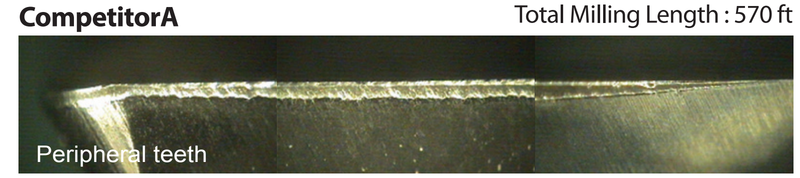
TEST II - Corner Radius



4G Mills — Total Milling Length : 570 ft



CompetitorA — Total Milling Length : 570 ft



Cutting Condition (Down & Side Cutting)

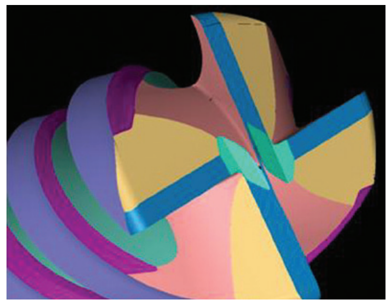
Tool	4Flute, Carbide Corner Radius End Mil
Size	Ø10(R0.5)×10×25×100
Work Material	KP4M (HRc35 / DIN 1.2738 Improved)
SFM (ft/min.)	169
RPM (rev./min.)	1,640
IPM (inch/min.)	7.09
IPT (inch/tooth)	.0011
Milling Depth (inch)	Axial : .9842″ / Radial : .0197″
Coolant	Oil Mist
Overhang (inch)	1.614″
Machine	Machining Center

X-SPEED ROUGHER End mills

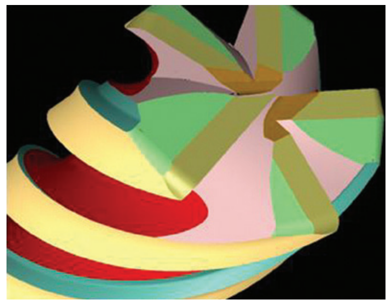
Characteristics

- Unique flute design for excellent chip evacuation and vibration reduction.
- Optimal roughing tooth profile to reduce cutting forces.
- Special tool geometry for high feed rate and heavy cutting.
- Strong end tooth design for plunge and pocket milling.
- Custom engineered coating to allow long tool life and excellent chip evacuation.

▶ **4 FLUTE**



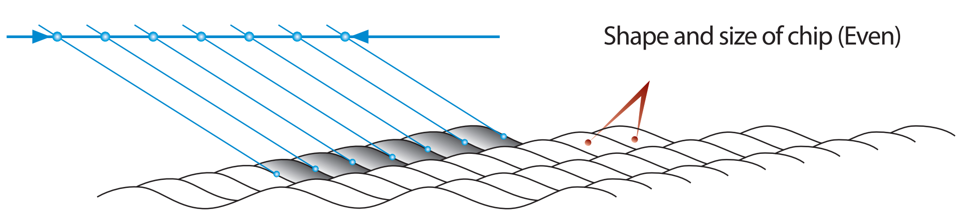
▶ **5 FLUTE**



Chip Thickness and Shape

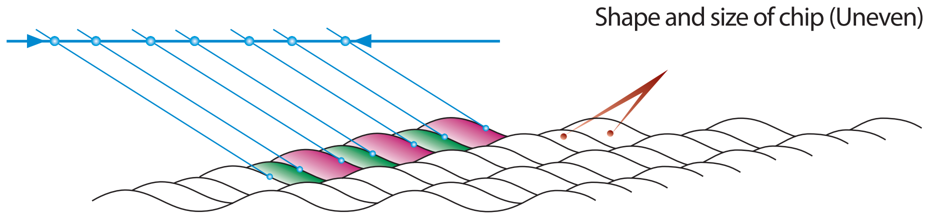
▶ **Conventional Roughing End Mills**

Even chip thickness and shape



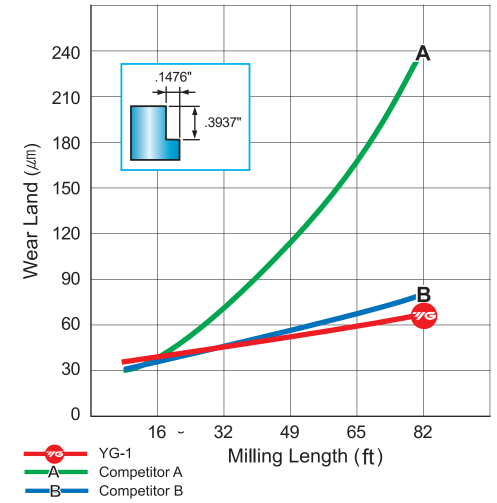
▶ **X-SPEED Rougher**

Uneven chip thickness and shape

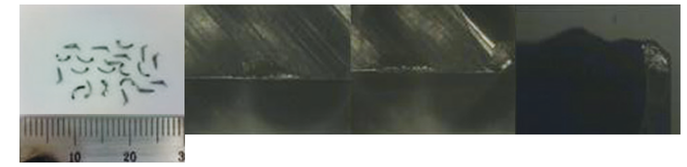


X-SPEED ROUGHER End mills

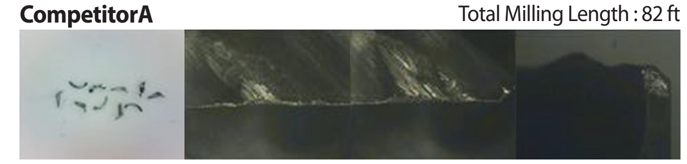
TEST I 4 Flute Multuple Helix



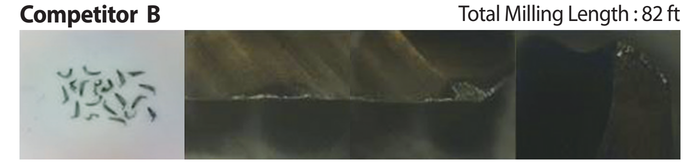
X-SPEED ROUGHER Total Milling Length : 82 ft



CompetitorA Total Milling Length : 82 ft



Competitor B Total Milling Length : 82 ft

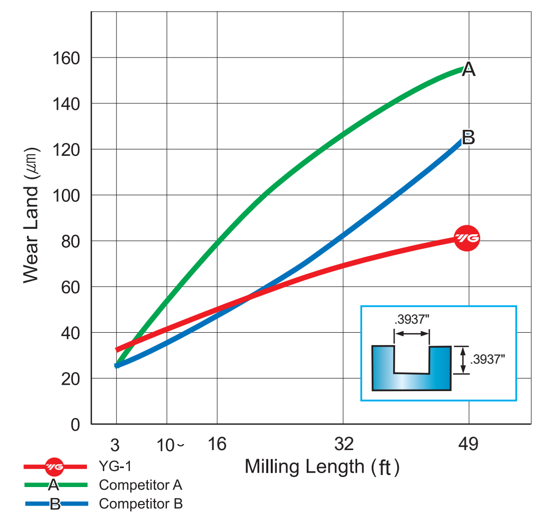


Cutting Condition (Down & Side Cutting)

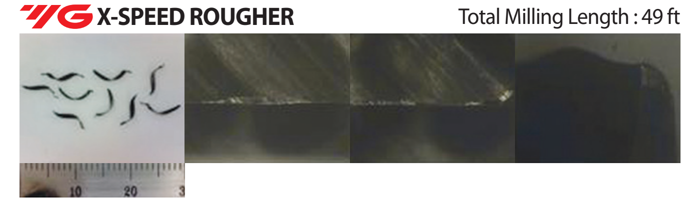
Size	X-SPEED ROUGHER	Ø10×10×15×72
	Competitor A	Ø10×10×20×72
	Competitor B	Ø10×10×15×80
Work Material		- DIN : X40CrMoV51(1.2344) - JIS : SKD61 (HRc30) - AISI : H13

RPM (rev./min.)	5,000 (515 ft/min.)
IPM (inch/min.)	51
Coolant	Wet Cut
Overhang (inch)	1.26"
Machine	Machining Center

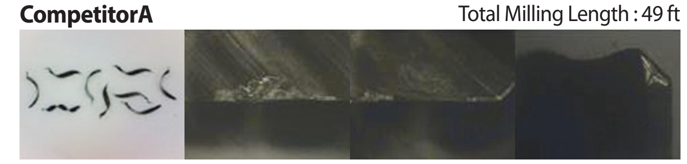
TEST II 4 Flute Multuple Helix



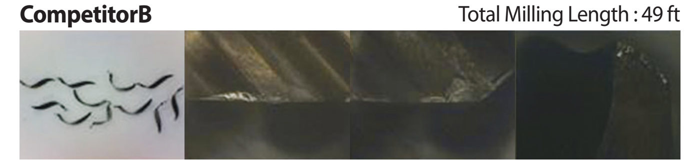
X-SPEED ROUGHER Total Milling Length : 49 ft



CompetitorA Total Milling Length : 49 ft



CompetitorB Total Milling Length : 49 ft



Cutting Condition (Down & Side Cutting)

Size	X-SPEED ROUGHER	Ø10×10×15×72
	Competitor A	Ø10×10×20×72
	Competitor B	Ø10×10×15×80
Work Material		- DIN : X40CrMoV51(1.2344) - JIS : SKD61 (HRc30) - AISI : H13

RPM (rev./min.)	4,000 (412 ft/min.)
IPM (inch/min.)	39
Coolant	Wet Cut
Overhang (inch)	1.26"
Machine	Machining Center

X-POWER PRO End mills

Performance Upgrade

- Achieved from several tests to apply the most optimal technology
- New coating, raw material, honing technology

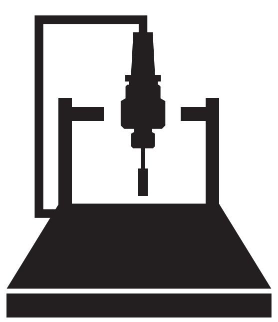
Work Material

- Pre-Hardened Steels up to HRc 55, and Cast Iron

P	K

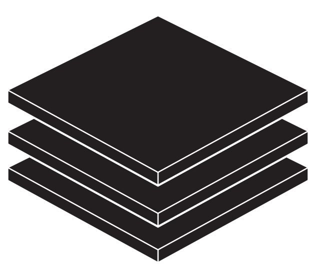
For Mold & Die Industries

- Plastic injection, die casting, military parts, automotive parts, electronic parts, etc.



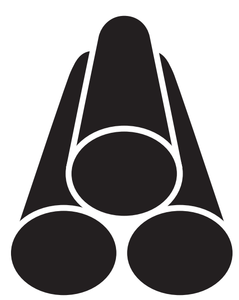
Honing

Advanced honing technology system made from YG-1



Coating

The optimal coating applied, chosen by several tests of different coating technologies

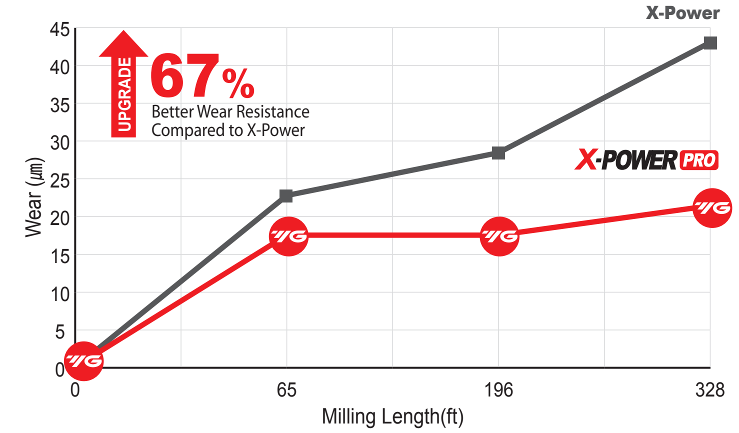


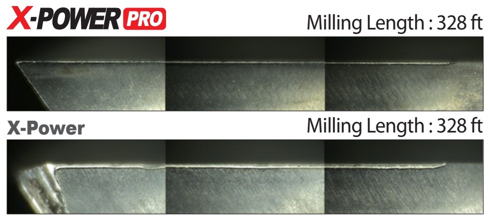
Raw Material

Made from high performance raw material with better quality

X-POWER PRO End mills

TEST I 2 Flute Square End mills

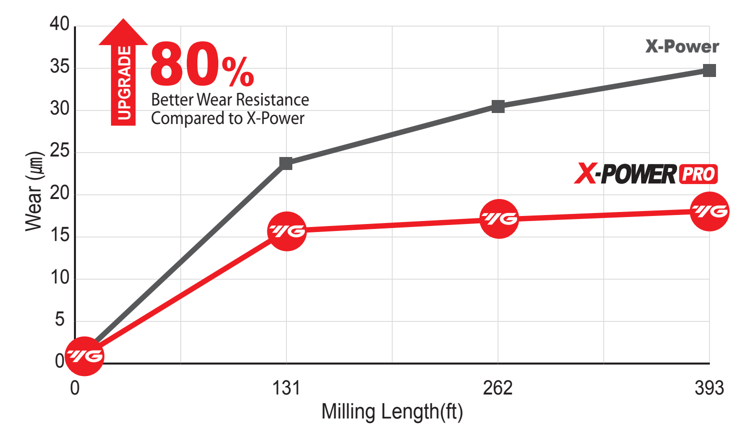


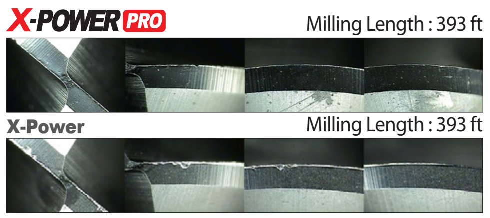


Cutting Condition (Down & Side Cutting)

Tool	X-POWER PRO	X-Power
Milling Length (ft)	328	
Size	Ø10.0 x Ø10.0 x 22 x 70	
Work Material	KP4M(HRc35) / DIN 1.2311, ANSI P20+Ni	
SFM (ft/min.)	206	
IPM (inch/min.)	12	
Milling Depth (inch)	Ap : .394", Ae : .020"	
Coolant	Oil Mist	

TEST II 2 Flute Ball End mills

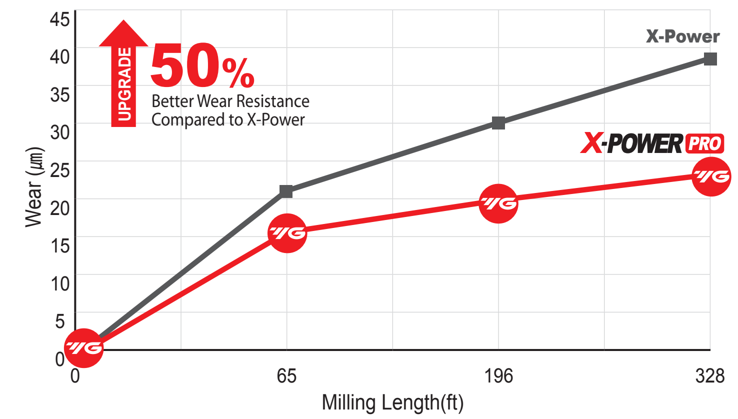


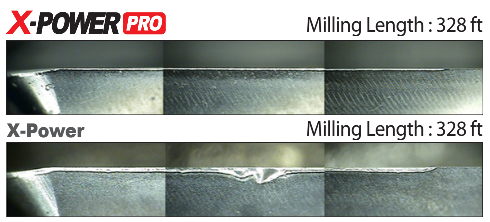


Cutting Condition (Profile Cutting)

Tool	X-POWER PRO	X-Power
Milling Length (ft)	393	
Size	Ø6.0 x Ø6.0 x 12 x 90	
Work Material	KP4M(HRc35) / DIN 1.2311, ANSI P20+Ni	
SFM (ft/min.)	427	
IPM (inch/min.)	32	
Milling Depth (inch)	Ap : .008", Ae : .047"	
Coolant	Oil Mist	

TEST III 4 Flute Corner Radius End mills





Cutting Condition (Down & Side Cutting)

Tool	X-POWER PRO	X-Power
Milling Length (ft)	328	
Size	Ø10.0(R0.5) x Ø10.0 x 30 x 90	
Work Material	KP4M(HRc35) / DIN 1.2311, ANSI P20+Ni	
SFM (ft/min.)	171	
IPM (inch/min.)	7	
Milling Depth (inch)	Ap : .984", Ae : .020"	
Coolant	Oil Mist	

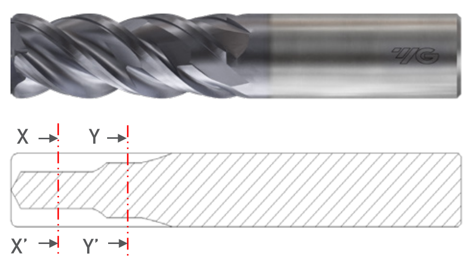
TitaNox-POWER End mills

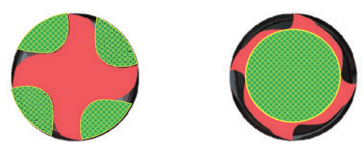
High Speed Machining for Exotic Materials: Titanium and Stainless Steels

- Excellent tools for Aerospace Industries, Energy & Power generations.
- For Roughing and Semi-finishing of universal use, also for Finishing difficult-to-machine materials.
- YG-1's advanced coating technology makes it possible to maintain an excellent Wear resistance, Oxidation resistance and better Thermal stability.

Offers a high performance metal removal rate with secured and chatter free machining in semi-finishing and finishing.

I Y-Coated Solid Carbide 4 Flute End Mills with Double Core



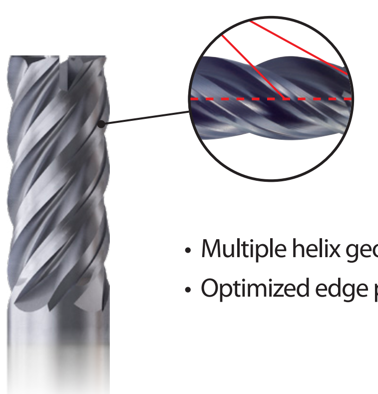


<SECTION X-X'>
Excellent chip evacuation

<SECTION Y-Y'>
Higher rigidity

- Double core geometry reduces tool deflection and improves dimensional stability.
- Optimized edge preparation protects chipping problems in high speed machining.
- Variable flute design brings out perfect performance in both slotting and side milling operations.

II Y-Coated Solid Carbide 5 Flute End Mills with Multiple helix

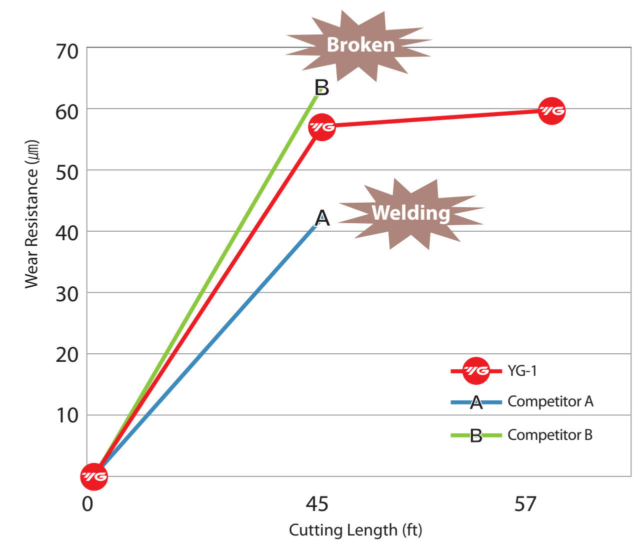


- Multiple helix geometry delivers silent cutting and reduces chattering.
- Optimized edge preparation increases tool life and makes heavy cutting possible.

Y-Coated / 5 Flutes

TitaNox-POWER End mills

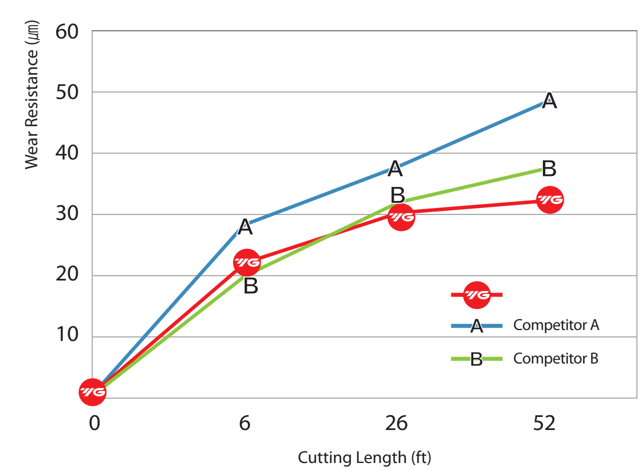
TEST I Y-Coated Solid Carbide 4 Flutes with Double Core End mills

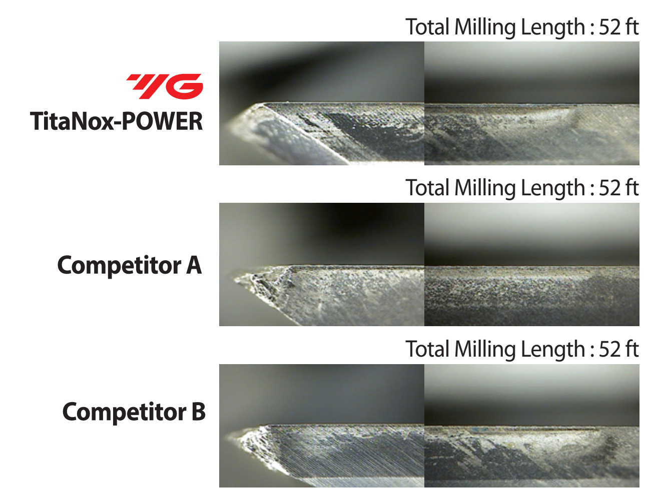


Cutting Condition (Slotting)

Tool	4Flute, with Double Core	IPM (inch/min.)	10
Size	Ø12(R1) x Ø12 x 26 x 80	IPT (inch/tooth)	.0016
Work Material	DIN : TiAV6V4 (Titanium)	Coolant	Wet Cut
Cutting Depth (ft)	.470" (Axial Depth)	Overhang (inch)	1.41"
RPM (rev./min.)	1,591	Machine	Machining Center

TEST II Y-Coated Solid Carbide 5 Flutes End Mills





Cutting Condition (Down & Side Cutting)

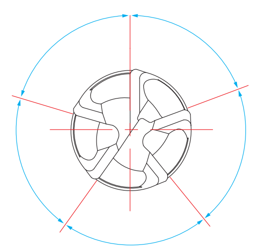
Tool	5Flute	IPM (inch/min.)	16
Size	Ø12 × Ø12 × 26 × 83	Milling Depth (inch)	Axial : .710" / Radial : .141"
Work Material	DIN : TiAV6V4 (Titanium)	Coolant	Wet Cut
RPM (rev./min)	1,591	Machine	Machining Center

TitaNox-POWER HPC

NEW 5 FLUTE DESIGN for
HEAVY CUTTING APPLICATIONS
SLOTTING & HIGH EFFICIENCY MILLING

Features

- New design enhances chip space in heavy cuts, while still maintaining rigidity in peel milling.
- Full eccentric relief for edge strength.
- YG-1 advanced coating for better wear resistance
- Unequal index design for Chatter-Free cutting



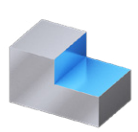
Unequal Index

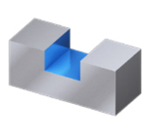
Exclusively Designed Unique Geometry applied to Reduce Vibration and also to achieve Excellent surface finish

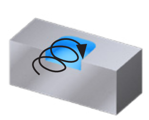
Core Design

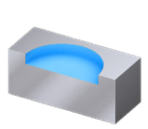
YG-1's High Performance Core Geometries is designed for superior chip evacuation.
It's excellent at Slotting & Heavy Profiling.

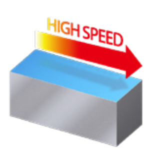
Applications


Side Cutting

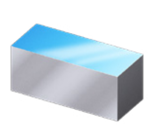

Slotting


Trochoidal Milling And Peel Milling


Circular Interpolation



HSM


Finishing

Work Materials

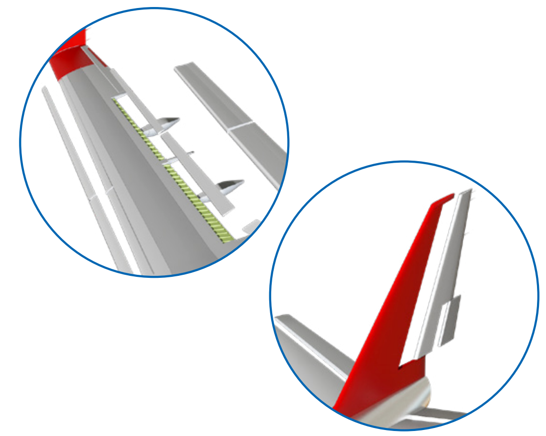
M **S**

Recommended for high performance milling of Stainless Steel, Titanium, and Heat-Resistant Super Alloys

TitaNox-POWER HPC

Part Description

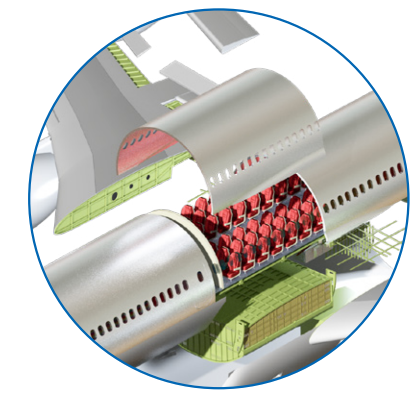
Hydraulic Valve



Size(inch)	1/2(R.03") x 1/2 x 1-1/4 x 3-1/2
Work Material	15-5PH (HRc 34-42 / HB 320-400)
Tool Holder	Shrink fit
SFM	420 ft/min.
IPM	80 inch/min.
RPM	3,200 rev./min.
Milling Method	Trochoidal Cutting
Ap	1.000"
Ae	.025"
Coolant	Water-Based
Machine	Machining Center

Part Description

Aerospace Structure part



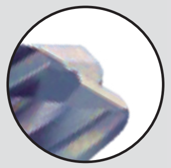
Size(inch)	5/8(R.12") x 5/8 x 1-1/2(2") x 4"
Work Material	Ti6Al4V (HRc 36 / HB 336)
Tool Holder	Shrink Fit
SFM	275-375 ft/min.
IPM	20-45 inch/min.
RPM	1680-2292 rev./min.
Milling Method	Helical Ramping, Pocket, Ramping, Profile and Slotting
Ap	.300" - 1.500"
Ae	.050" - .625"
Ramping	1°- 1-1/2°
Helical Interpolation	0.5°
Coolant	Water-Based
Machine	Machining Center

V7 PLUS A End mills

- Chatter and Harmonics Reduced for Improved Stability and Better Finishing
- Special Design of Flute Geometry for Optimal Chip Formation and Chip Evacuation
- Engineered Coating Technology to Reduced Wear and Increase Heat Resistance
- Enhanced Corner Geometry for Longer Tool Life

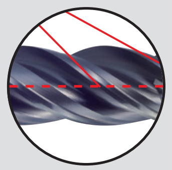
Unequal Index

Exclusively Designed Unique Geometry applied to Reduce Vibration and also to achieve Excellent Chip Evacuation with Better Surface Finish



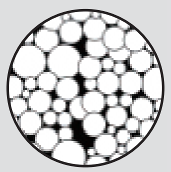
Corner Geometries

YG-1's High Performance Corner Geometries Including Corner Radius, applied for Longer Tool Life with Higher Cutting Speed and Heavy Cutting



Multiple Helix

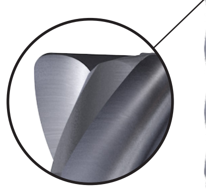
Multiple Helix Designed for Optimal Chip Formation and Chip Evacuation Concluding Faster and Heavier Cutting making Higher Productivity

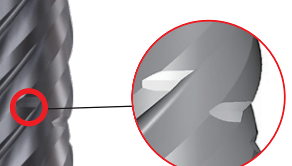


Ultra Micro grain Carbide

Premium Carbide Substrate Achieving Exceptional Wear Resistance

6 FLUTE CHIP SPLITTER





Unequal Index

Exclusively Designed Unique Geometry applied to Reduce Vibration and also to achieve Excellent Surface Finish

Corner Geometries

YG-1's High Performance Corner Geometries Including Corner Radius, applied for Longer Tool Life with Higher Cutting Speed

Chip Splitters

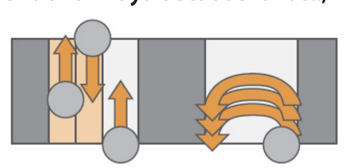
Special Chip Splitter Design Shorter Chip Length at High Axial Machining, improving Chip Removal from both the Component and the Machine

6 FLUTE END MILLS

The Best Chatter Free Tool For High Speed

- Unique geometry of the variable pitch provides the best chatter free tool for high speed and also trochoidal milling
- Several slot widths can be used with the same tool diameter in an efficient way
- Provides longer tool life and higher productivity on most materials
- Trochoidal milling is a programming technique applying a small radial width of cut with also higher cutting speed and feed per tooth

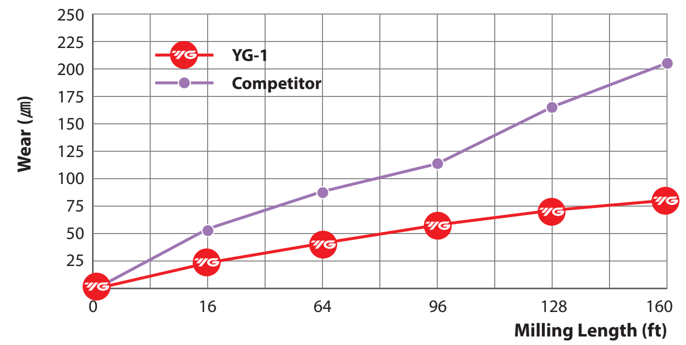
Trochoidal Milling performs better than conventional ways because it has..,



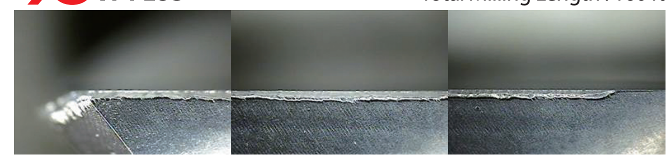
- Lower Cutting Force from smaller arc engagement
- Longer Tool Life from more flutes, and deeper cutting depth
- Higher Stability, Lower Vibration and Excellent Chip Evacuation

V7 PLUS A End mills

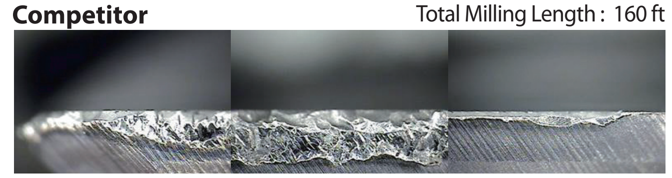
TEST I 4 Flute



V7 PLUS Total Milling Length : 160 ft



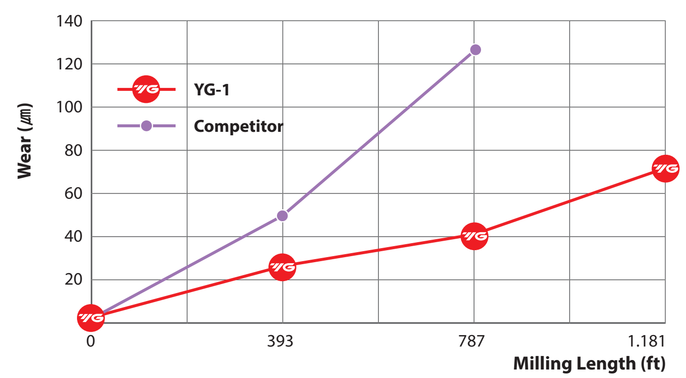
Competitor Total Milling Length : 160 ft



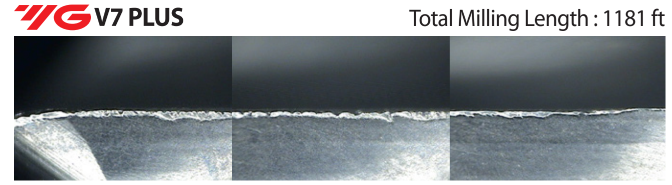
Cutting Condition (Side Cutting)

Tool	V7 Plus	4Flute
Size	Ø10 x Ø10 x 22 x 72	
Work Material	- JIS : S45C(HRc30) - DIN : C45 - AISI : 1045	
SFM (ft/min.)	754	
RPM (rev./min.)	7,324	
IPM (inch/min.)	57.64	
IPT (inch/tooth)	.002	
Milling Depth (inch)	Axial : .394" / Radial : .118"	
Coolant	Wet Cut	
Overhang (inch)	1.339"	
Machine	Machining Center	

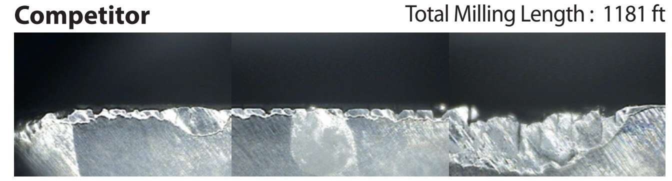
TEST II 6 Flute



V7 PLUS Total Milling Length : 1181 ft



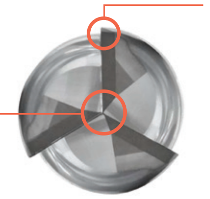
Competitor Total Milling Length : 1181 ft



Cutting Condition (Trochoidal Cutting)

Tool	V7 Plus	6Flute
Size	Ø12(R1) x Ø12 x 26 x 83	
Work Material	- JIS : S45C(HRc30) - DIN : C45 - AISI : 1045	
SFM (ft/min.)	914	
RPM (rev./min.)	7,392	
IPM (inch/min.)	295.08	
IPT (inch/tooth)	.007	
Milling Depth (inch)	Axial : .945" / Radial : .024"	
Coolant	Wet Cut	
Overhang (inch)	1.417"	
Machine	Machining Center	

ALU-POWER HPC End mills

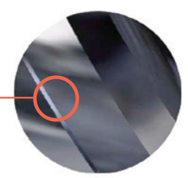


Available in a Wide Variety of Sizes and Corner Radii Ideal Symmetrical Shape

- 3-flute design "to the center" (all 3 flutes come to center)
- Designed with high spindle speeds in mind
- Highly effective in vertical ramping up to 20 degrees and step-over plunging applications

Specialized Design of Corner Gash

- Unique flute design and superior corner protection enhance both tool life and protection against catastrophic failure in high feed applications
- Polished flutes for excellent chip flow



Cylindrical Land

- Increased performance in a variety of cutting conditions
- Helps reduce vibration and chatter

Engineered Flute Design

- Effective chip evacuation at high feed rates
- with lower cutting forces than competitive products

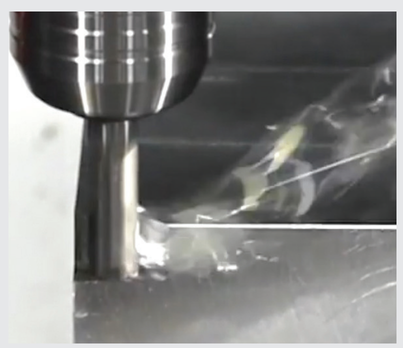
From Side Cuts to Rough Cuts to Aggressive Ramping, No One Withstands Extreme Radial Forces Better-or Longer.

▲ Rough Cutting

Ultra-micrograin carbide supplies the rigidity to keep the chips flying. Highly polished 3-flute design ensures they'll keep flying – cut after cut.

▲ Ramping

In steep, aggressive ramping conditions, the ALU-POWER HPC holds its own to resist the torsional stress from extreme helical output.



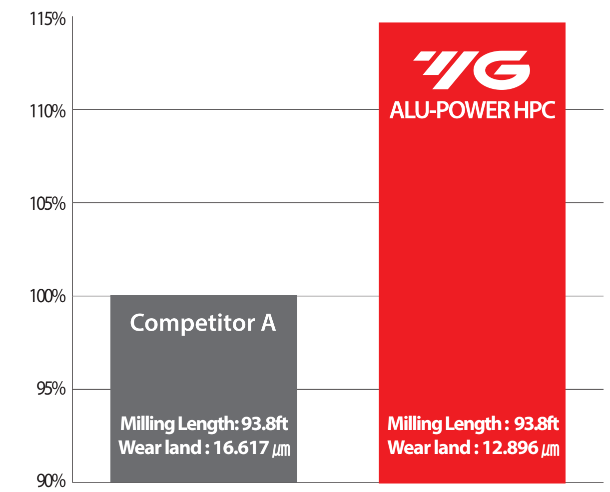
▲ Side cutting

No one offers a cooler-running super high-speed End mill.
While others melt down the materials they're cutting, ALU-POWER HPC keeps machining cool in aluminum and soft alloys, to boot.

ALU-POWER HPC End mills

TEST I Slotting Application

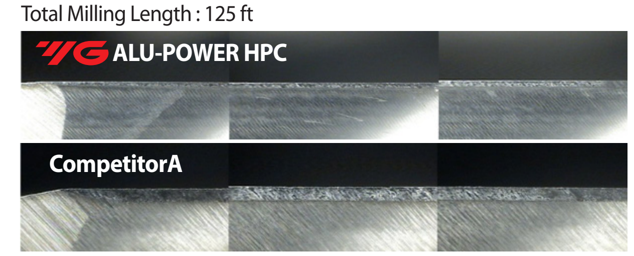
Ø1/2(R.090) 3 Flute Corner radius End Mill, Alu-Power HPC



Cutting Condition (Slotting)

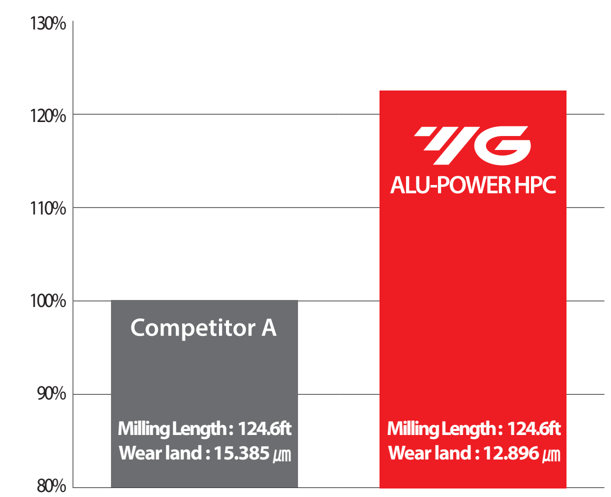
Tool	Ø1/2(R.090) x Ø1/2 x 1-1/4 x 3-1/2
Work Material	AL7075
R.P.M (rev./min.)	12,224
IPM (inch/min.)	.500"
Cutting Depth (inch)	Axial : .5
Coolant	Wet Cut (9% emulsion)
Overhang (inch)	1.89"
Milling Method	Slotting
Machine	Machining Center

Total Milling Length : 125 ft



TEST II Pocketing Application

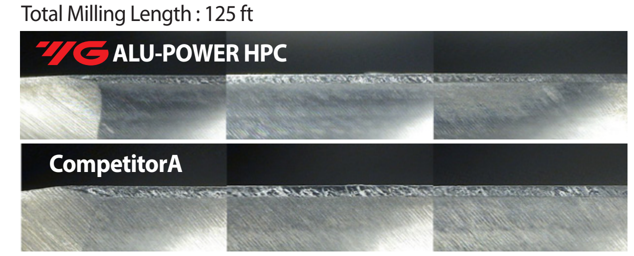
Ø1/2(R.090) 3 Flute Corner radius End Mill, Alu-Power HPC

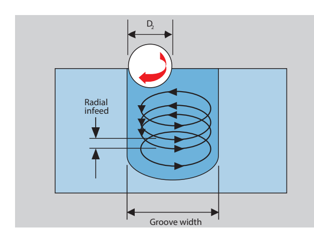


Cutting Condition (Pocketing)

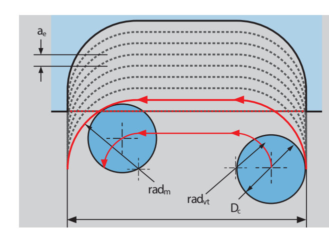
Tool	Ø1/2(R.090) x Ø1/2 x 1-1/4 x 3-1/2
Work Material	AL7075
R.P.M (rev./min.)	12,224
Feed (inch/min.)	220
Cutting Depth (inch)	Axial : .500" Radial : .480"
Coolant	Wet Cut (9% emulsion)
Overhang (inch)	1.89"
Milling Method	Pocketing
Machine	Machining Center

Total Milling Length : 125 ft

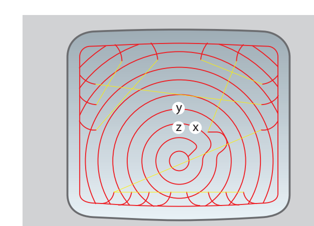




In trochoidal milling applications, the cutter follows a spiral path by moving radially as it rotates providing faster machining times, lower tooling costs and reduced loads on machine components.



Peel milling applications benefit from ALU-POWER HPC's super sharp high-speed milling ability.

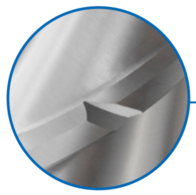


Outstanding chip evacuation through deep gullet design coupled with high speed milling leaves **a well-defined clean cutter path.**

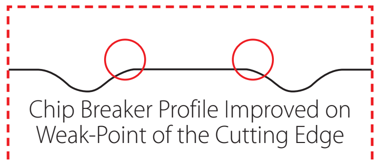
ALU-POWER HPC CHIP BREAKER

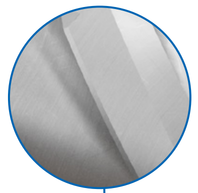
3-FLUTE END MILLS

- Unique Geometry provides the Balance cutting with less vibration during the High Speed Machining.
- Provides long tool life and high productivity on aluminum by Chip breaker releasing stresses on the tool and prevents acceleration rate of wear on the cutting edge.
- Chip Breaker Improves chip evacuation by shortening the chip length during the High Speed Machining.

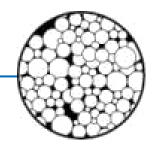


Chip Breakers
- Through Special Chip Breaker Design, the length of the chip is formed short to improve chip evacuation performance.





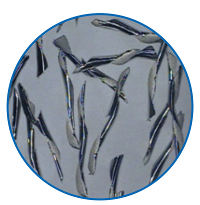
Cylindrical Land
- Improves tool performance by reducing vibration and chattering in high-speed processing.



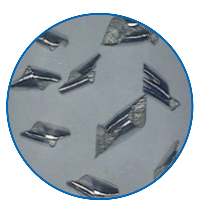
Premium Tungsten Carbide
- Excellent wear resistance by using Premium Carbide material.

DLC Diamond-Like Carbon
- Excellent in high-speed processing in the Aluminum area.
- Superior tool life by complementing rigidity to cutting edge.

Optimized Chip Breaker Profile Design
- Optimized Chip Breaker Profile design boasts the best performance in Aluminum high-speed processing.



General End mill Chip Geometry



Chip Breaker End mill Chip Geometry

Unique Geometries
- Applied suitable Flute Design for Aluminum high speed machining to have an effective chip evacuation effect.
- Excellent Corner Protect Design improves tool life.

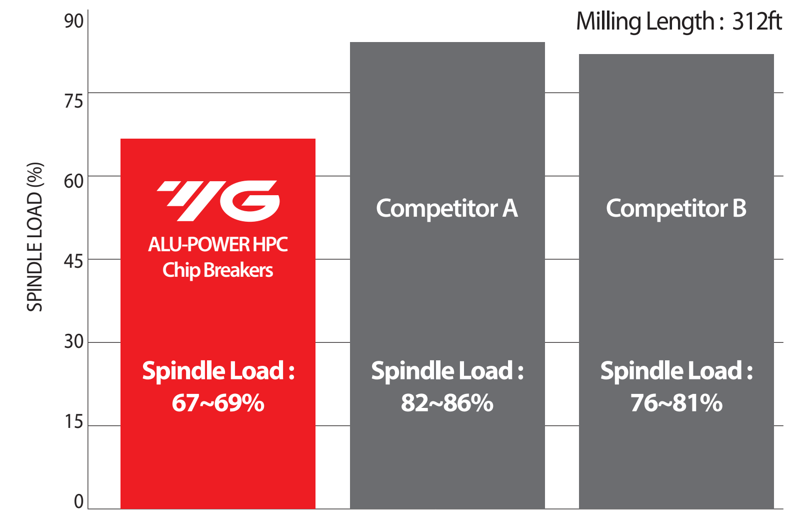
ALU-POWER HPC CHIP BREAKER

TEST Chip Breakers - Side Cutting Application

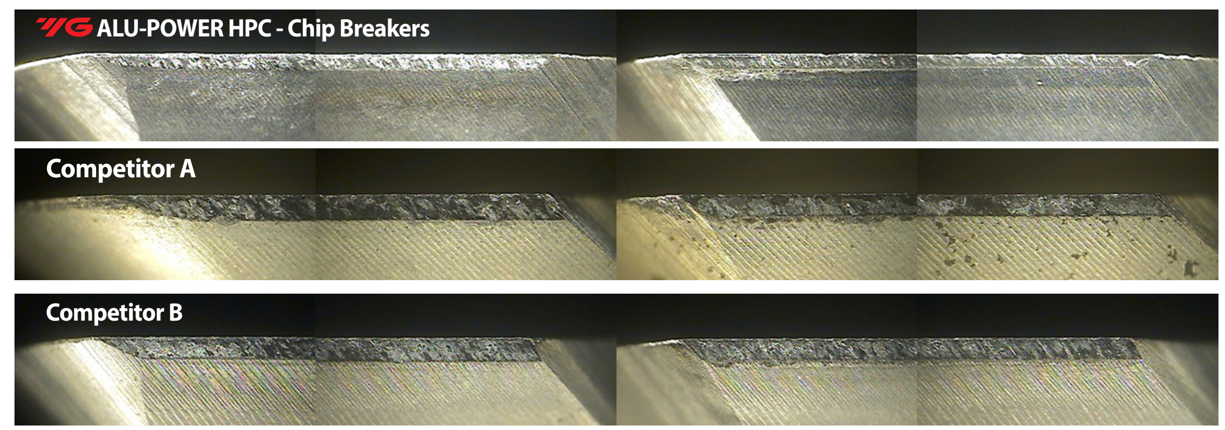
Ø1/2(R.03") 3 Flute Chip Breakers

Cutting Conditions	
Tool	1/2(R.03) x 1/2 x 1-1/4 x 3
Work Material	Al7075
R.P.M (rev./min.)	16,800
IPM (Feed, in/min.)	151
Cutting Depth (in)	.750 (Axial=1.5D) .175 (Radial=0.35D)
Coolant	Wet Cut
Holder	BT40 - High Feed Milling Chuck
Milling Method	Profiling
Machine	Machining Center

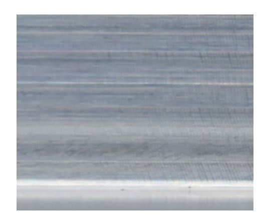
Cutting Resistance



Cutting Edge (Total Milling Length : 312ft)



Surface Roughness



ALU-POWER HPC Chip Breakers
Milling Length = 312ft
(Ra : 13μin)

Competitor A
Milling Length = 312ft
(Ra : 49μin)

Competitor B
Milling Length = 312ft
(Ra : 26μin)

ONLY ONE Coated PM60 End Mills

ADVANTAGES OF CARBIDE	ADVANTAGES OF HSS

Exceptional Wear Resistance

The ONLY ONE holds an Exceptional Wear Resistance Which is an advantage of the micro-grain carbide tools.

The ONLY ONE performs better without Causing chipping than Normal coated carbide End mills under the same carbide cutting conditions.

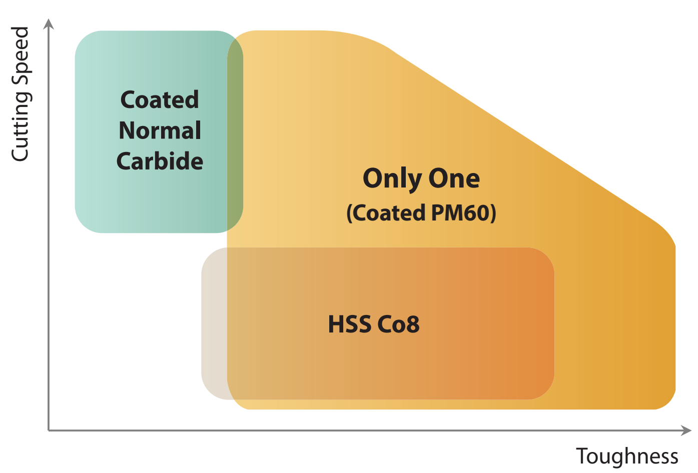
High Toughness

ONLY ONE is based on Powder Metallurgy that ensures High Toughness which is one of the advantages of Cobalt HSS

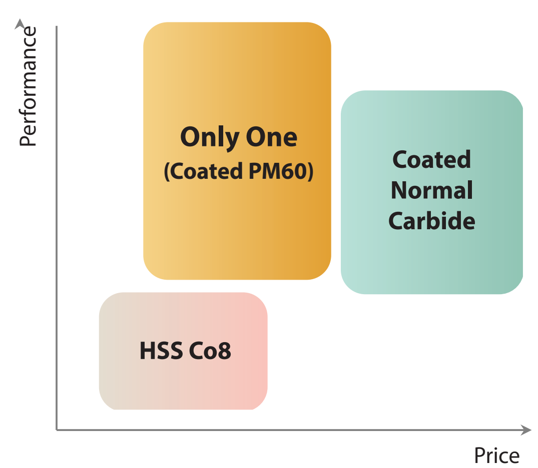
The ONLY ONE holds a very Strong Toughness which can bring out Higher performances also on Machines with unstable conditions such as Vibration and irregular composition of materials

Both Advantages of Solid Carbide & HSS

To protect chipping problems under the unstable machining conditions with vibration



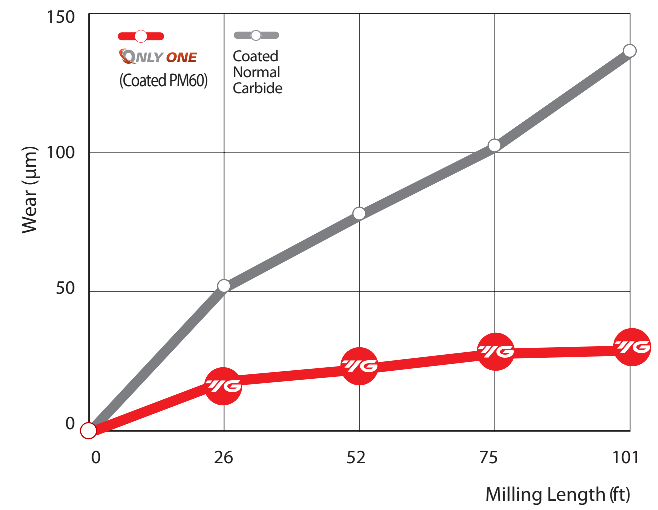
Higher Toughness than HSS Co8,
Cutting Speed (Vc) is as high as Coated Normal Carbide.



Better performance than HSS Co8,
Better price than Coated Normal Carbide.

ONLY ONE Coated PM60 End Mills

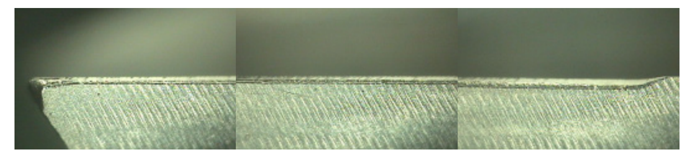
TEST I 4 Flute Square End mill



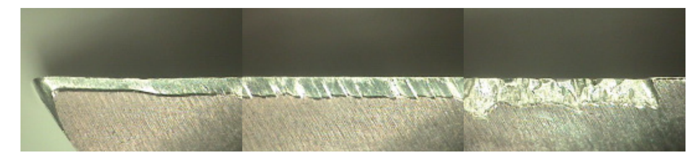
Cutting Condition (Down & Side Cutting)

Tool	Only One Coated PM60 / Coated Normal Carbide
Size	Ø10xØ10x22x72/Ø10xØ10x22x70
Work Material	- JIS : S45C - KS : SM45C - DIN : C45 - AISI : 1045
RPM (rev./min.)	2,750
IPM (inch/min.)	20.47
Milling Method (inch)	Axial : 12˝ / Radial : .04˝
Coolant	Wet Cut
Machine	Machining Center

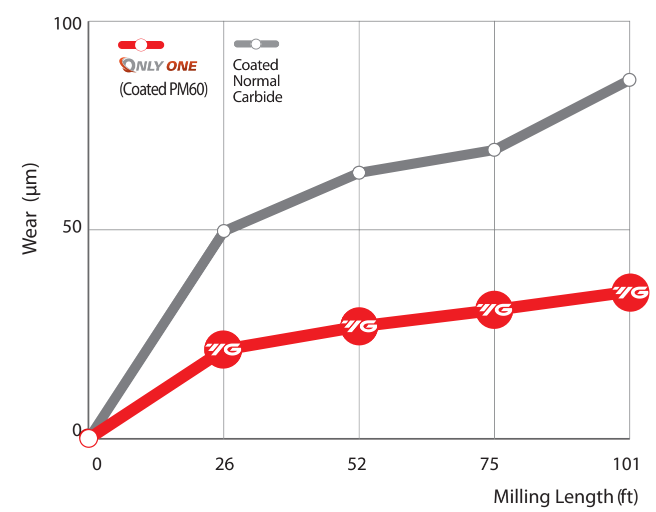
ONLY ONE Coated PM60



Coated Normal Carbide



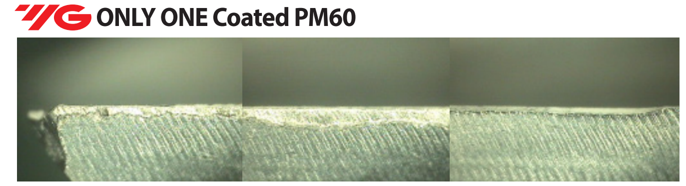
TEST II 4 Flute Square End mill



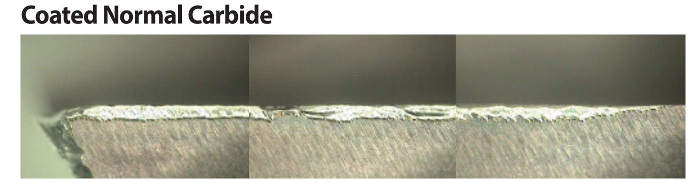
Cutting Condition (Down & Side Cutting)

Tool	Only One Coated PM60 / Coated Normal Carbide
Size	Ø10xØ10x22x72/Ø10xØ10x22x70
Work Material	- JIS : S45C - KS : SM45C - DIN : C45 - AISI : 1045
RPM (rev./min.)	2,750
IPM (inch/min.)	20.47
Milling Method (inch)	Axial : .39˝ / Radial : .04˝
Coolant	Wet Cut
Machine	Machining Center

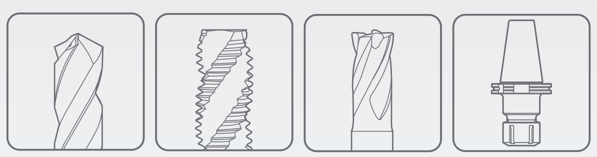
ONLY ONE Coated PM60



Coated Normal Carbide



Global Cutting Tool Leader **YG-1**



YG-1 COATING TECHNOLOGIES

Coating (Icon) Beschichtung (Ikone)	Coating Color Beschichtungsfarbe	Coating Type Beschichtungsart	Hardness (Hv) härtegrad	Max. Usage Temperature (℃) Max. Arbeitstemperatur	Friction Coefficient (dry) Reibungskoeffizient für stahl (trocken)	Coating Thickness (㎛) Beschichtungsdicke	General Information Allgemeine Informationen
TiN Coating TiN	Gold 	Titanium Nitride	2,300	600	0.40	1 ~ 5	• Making it possible to higher performance in comparison to traditional non-coated tools • Recommended for the general application
TiCN Coating TiCN	Blue grey 	Titanium Carbon Nitride	3,400	400	0.25	1 ~ 5	• Characterized by high hardness and good toughness • Providing tools with effective protection against cold-welding from especially wear resistant and its low coefficient of friction
TiAlN Coating TiAlN	Violet grey 	Titanium Alumium Nitride	3,100	900	0.50	1 ~ 5	• Increase in hardness and an exceptional increase in resistance to oxidation at high temperature, compared to conventional coatings • Application to drilling with severe thermal stress on cutting edges when continuous non-step feed, dry cutting or high speed cutting
AlTiN Coating AlTiN	Blue grey 	Alumium Titanium Nitride	3,300	900	0.40	1 ~ 5	• Optimised coating for use in hard and high-speed machining with the high hardness, oxidation resistance and thermal stability • Protection against abrasion and adhesion over the whole range of cutting speeds with high-strength and hard-to-machine materials • The good frictional properties reduce cutting forces

Coating (Icon) Beschichtung (ikone)	Coating Color Beschichtungsfarbe	Coating Type Beschichtungsart	Hardness (Hv) härtegrad	Max. Usage Temperature (℃) Max. Arbeitstemperatur	Friction Coefficient (dry) Reibungskoeffizient für stahl (trocken)	Coating Thickness (㎛) Beschichtungsdicke	General Information Allgemeine Informationen
X Coating X Coating	Blue grey 	AlCrN Based	3,200	1,100	0.35	1 ~ 5	• Coating with low hardness drop at high temperatures and stability against thermal oxidation • Coating for superior dry and wet machining performance at high cutting speed • Wide range of application field with stable layer structure
Y Coating Y Coating	Bright grey 	AlCrN Based	3,200	1,100	0.35	1 ~ 5	• Optimized coating adhesion results in high-level reliability • High thermal shock stability and oxidation resistance for wet and dry machining • Significantly lengthened tool lifetimes as compared to common high-performance coatings • Good chip removal and minimization of built-up edge formation
H Coating H Coating	Copper 	AlCrN Based	3,000	1,100	0.25	1 ~ 5	• Improved wear resistance compared to TiAl-based, and superior high temperature hardness • Superior adhesion and surface roughness, and uniform tool wear characteristics with multi-layer coating • Possible machining with minimum quantity of coolant and dry machining to reduce production costs
Hardslick Coating Hardslick	Black grey 	TiAlN Based	3,000	800	0.20	1 ~ 5	• Reduced the coefficient of friction, and enhance the corrosion resistance of anodic coating • Ideal for applications requiring fast chip evacuation, such as molds, or additional chemical and corrosion resistance

Coating (Icon) Beschichtung (ikone)	Coating Color Beschichtungsfarbe	Coating Type Beschichtungsart	Hardness (Hv) härtegrad	Max. Usage Temperature (℃) Max. Arbeitstemperatur	Friction Coefficient (dry) Reibungskoeffizient für stahl (trocken)	Coating Thickness (㎛) Beschichtungsdicke	General Information Allgemeine Informationen
Blue Coating BLUE	Blue violet 	Si Based	3,700	1,200	0.40	1 ~ 5	• Nanocomposite with Si Content for high hardness steel • Extraordinary high temperature stability • Excellent adhesion and good performace even for more unusual applications
Z Coating Z Coating	Copper 	Si Based	4,000	900	0.40	1 ~ 5	• Nanocomposite optimized among coatings for high hardness steel machining with Si grade coating • Superior machinability at high temperatures and used in milling and drilling finishing processes • Superior physical properties of hardness, adhesion and oxidation resistance at high temperatures
DLC (Diamond Like Carbon) **Coating** DLC	Black 	Carbon	4,000 ~ 5,000	500	0.01~0.1	0.5 ~ 1.5	• Suitable coating for extreme wear conditions and fast cutting speeds without use of coolant • Possible coating with high-speed machining and superior wear resistance
Diamond Coating Diamond	Grey 	Carbon	10,000	600	~ 0.1	5 ~ 15	• Possible to cut graphite workpieces with high-speed cutters at greater speeds and in significantly better quality • Making it possible to produce sophisticated workpieces from a single clamping to a single cutter • Enable controlled coating structures and compliance with the most stringent tolerance limits

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	Examples
P	1	Non-alloyed steel	About 0.15% C	Annealed	125		S15C, C15, 1015
	2		About 0.45% C	Annealed	190	13	S45C, C45, 1045
	3		About 0.45% C	Quenched & Tempered	250	25	
	4		About 0.75% C	Annealed	270	28	SK5, Ck75, 1080
	5		About 0.75% C	Quenched & Tempered	300	32	
	6	Low-alloyed Steel		Annealed	180	10	SCM440, 42CrMo4, 410
	7			Quenched & Tempered	275	29	
	8			Quenched & Tempered	300	32	
	9			Quenched & Tempered	350	38	
	10	High-alloyed steel, and tool steel		Annealed	200	15	SKD, D2
	11			Quenched & Tempered	325	35	SKH, SUH, M42
M	12	Stainless Steel	Ferritic / Martensitic	Annealed	200	15	SUS 420, X40Cr13, 420
	13		Martensitic	Quenched & Tempered	240	23	
	14		Austenitic		180	10	SUS 316, 316, X5CrNiMo 17 12 2
K	15	Grey cast iron	Pearlitic / Ferritic		180	10	FC, GG, EN-GJL-250
	16		Pearlitic (Martensitic)		260	26	
	17	Nodular cast iron	Ferritic		160	3	FCD, GGG, EN-GJS-500-7
	18		Pearlitic		250	25	
	19	Malleable cast iron	Ferritic		130		FCMW, FCMP, GTS, GJMB350-10
	20		Pearlitic		230	21	
N	21	Aluminum-wrought alloy	Not Curable		60		SAE 1000, AlMg 1, 3.3315
	22		Curable	Hardened	100		SAE 7050, AlCuMg 1, 3.1325
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		ADC12, G-AlSi12, 3.2581
	24		≤ 12% Si, Curable	Hardened	90		C4BS, G-AlSi10Mg, 3.2381
	25		> 12% Si, Not Curable		130		
	26	Copper and copper alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		CuZn36Pb 3, 2.0375
	27		CuZn, CuSnZn (Brass)		90		CuZn 15, 2.0240
	28		CuSn, lead-free copper and electrolytic copper		100		G-CuZn40Fe, 2.0590
	29	Non-metallic materials	Duroplastic, Fiber Reinforced Plastic				CFRP
	30		Rubber, Wood, etc.				
S	31	Heat resistant super alloys	Fe Based	Annealed	200	15	X12 NiCrSi 36-16, 1.4864
	32			Aged	280	30	
	33		Ni or Co Based	Annealed	250	25	Inconel 718, NiCr20TiAl, 2.4631
	34			Aged	350	38	NiCu30Al, 2.4375
	35			Cast	320	34	G-X120Mn12, 1.3401
	36	Titanium alloys	Pure Titanium		400 Rm		
	37		Alpha + Beta Alloys	Hardened	1050Rm		TiAl6V4, 3.7165
H	38	Hardened steel		Hardened	550	55	SK3
	39			Hardened	630	60	
	40	Chilled cast iron		Cast	400	42	
	41	Hardened cast iron		Hardened	550	55	

MATERIAL GROUPS

P	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
	1	Non-alloyed steel	About 0.15% C, Annealed	125	

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.0037	STKM 12 C	St 37-2	-	4360 40 B	S235JR	E24-2	1311	Fe 360 B			16D	
1.0038	STKM 12 A	St 37-3	A570.36	4360 40 C	S275J2G3	E28-3	1312	Fe 360 D FF			ST14KP	
1.0045	SM 490 YA	S 355 JR	-	-	S 1207	E36-2	-	Fe 510 BFN				
1.0050	SS 50	St 50-2	A570 Gr. 50	4360 50 B	E 295	A50-2	2172	Fe 490			ST5PS	
1.0060	SM 58	St 60-2	A572 Gr. 65	4360 55 E	-	A60-2	1650	Fe 60-2			ST6PS	
1.0114		S 235 J0	-	En 40C	S 235 J0	E24-3		Fe 360 CFN				
1.0143		S 275 J0	-	-	S 275 J0	E28-3	1414	Fe 430 C				
1.0144	SM41C, SM400	St 44-3 N	A573 Gr. 81	4360 43C	S 275 J2 G3	E28-3	1412	Fe 430 D FF			ST14KP	
1.0149		Ro St 44-2	-	43C	S 275 J0 H	-	1412	Fe430C				
1.0301	S10C	C10	1010	045M10	C10	34C10, XC10		C10	F.1511	G10100	10	
1.0330	SPCC	St 12	-	DC 01	Fe P01	DC 01/Fe P01	1142	Fe P01			15KP	
1.0335	SPHE	D D 13 (StW 24)	A622(1008)	H S 3	D D 13	3C		FeP13			08KP	
1.0338	SPCE	St 4	A620(1008)	14491CR	Fe P04	Fe 14	1147	DC04/FeP04			08JU	
1.0345	SPV 50	P235 GH	A516 Gr. 65	P 235 GH	P 235 GH	A 37 CP	1330	Fe E 235		K02503		
1.0401	S15C	C15	1015	080M15	-	C18RR, XC18	1350	C15, C16	F.1110	G10170	15	
1.0402	S20C	C22	1020	050 A 20	1 C 22	C20	1450	C 20	F.1120	G10200	20	
1.0425	SPV315	P265GH/HII				A42CP	1430	Fe4101KW		K02801	16K	
1.0443	SC 450	GS-45	A2765-35	A1		E23-45M	1305					
1.0539		S355NH				TSE355-4	2134	Fe510B				
1.0545		S355N		4360-50E		E355R	2334	FeE355KG				
1.0546		S355NL		4360-50EE		E355FP	2135	FeE355KT				
1.0547		S355J0H		4360-50C		TSE355-3	2172	Fe510C				
1.0549		S355NLH					2135	Fe510D				
1.0553	SM 520 M	St52-3U	A14880-40	4360-50C		320-560M	1606	Fe510C				
1.0562	SM490A	St E 355	A633 Gr. C	P 355 N		FeE355KGN	2132	Fe E 355 KG		K12000	15GF	
1.0565		W St E 355		P 355 NH		P 355 NH	2106	Fe E 355 KW		K01600		
1.0566	SLA 37	T St E 355		P 355 NL1		P 355 NL1	2107	Fe E 355 KT				
1.0570	SM 50 YA	St 52-3	1	4360-50 C	S355JR	E36-3	2172	Fe 510 B			17G1S	
1.0715	SUM22	9SMn28	1213	230M07		S250	1912	CFSMn28	F.2111	G12130		
1.0718	SUM22L	9SMnPb28	12L13			S250Pb	1914	CF9SMnPb28	F.2112	G12134		
1.0721		10S20	1108	10S20		10S20		CF10S20	F.2121	G11080		
1.0722		10SPb20	11L08			10PbF2		CF10SPb20		G11084		
1.0736	SUM25	9SMn36	1215			S300		CF9Mn36	F.2113	G12150		
1.0737		9SMnPb36	12L14			S300Pb	1926	CF9SMnPb36	F.2114	G12144		
1.0972		S315MC		1501-40F30		E315D						
1.0976		S355MC		1501-43F35		E355D	2642	FeE355TM				
1.0982		S460MC		1501-50F45								
1.0984		S500MC				E490D	2662	FeE490TM				
1.0986		S500MC		1501-60F55		E560D		FeE560TM				
1.1121	S10C	Ck10	1010	040A10		XC10	1265	C10	F.1510	G10100	10	
1.1141	S15	Ck15	1015	040A15	32C	XC15	1370	C15	F.1110	G10150	15	
1.1151	S20C	C22E	1020	055M15		2C22	1450	C20	F.1120	G10230	20	
1.8900	S25C	StE380	A572-60	436055E			2145	FeE390KG				
		St44-2	A36	436043A		NFA35-501E28	1411					
		StE320-3Z		1501160			1421					

P	VDI 3323 2	Material Description	Composition / Structure / Heat Treatment	HB	HRc
		Non-alloyed steel	About 0.45% C, Annealed	190	13

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.0501	S35C	C35	1035	080A32		1C35	1572	C35	F.113	G10350	35	
1.0503	S45C	C45	1045	060A47		XC42H1TS	1672	C45	F.114	G10450	45	
1.0511	S40C	C40	1040	080M40		1C40		C40	F.114.A	G10400	40	
1.0540	S 50 C	C50					1674	C50		G10500		
1.0551		GS-52	A2770-36	A2		280-480M	1505					
1.0553	SM 520 M	St52-3U	A14880-40	4360-50C		320-560M	1606	Fe510C				
1.0577		S 355 J 2 G 4	A738	Fe 510 D 2 FF		A52FP	2107					
1.0726		35S20	1140	212M36	8M	35MF6	1957			G11400	40	
1.0727		45S20	1146			45MF4	1973			G11460		
1.1157		40Mn4	1039	150M36	15	40M5				G10390	40G	
1.1158	S25C	C25E	1025	070M25		XC25		C25	F.1120	G10250	25	
1.1166	SMn433H	34Mn5	1536						TOB	G15360		
1.1167	SMn438(H)	36Mn5	1335	150M36		40M5	2120	36Mn6	F.1203	G13350	35G2	
1.1170	SCMn1	28Mn6	1330	150M28	14A	20M5		C28Mn	28Mn6	G13300	30G	
1.1178	S 30 C	C30E		080M30		XC32		C30	2C30	G10300		
1.1180		C35R	1035	080A35		3C35	1572		F.1135	G10350		
1.1181	S35C	C35E	1035	080A35		XC38	1572	C36	F.1130	G10340	35	
1.1191	S45C	Ck45	1045	080A46		XC45	1672	C45	F.1140		45	
1.1206	S 50 C	C50E	1050	080M50		2C50	1674	C50		G10500	50	
1.1213	S50C	Cf53	1050	070M55		XC48HTS	1674	C53		G10500	50	

P	VDI 3323 3	Material Description	Composition / Structure / Heat Treatment	HB	HRc
		Non-alloyed steel	About 0.45% C, Annealed	250	25

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.0481	SG365	17 Mn 4/P 295 GH	A516 Gr. 70	224-460B	P 295 GH	A 48 CP	2102	Fe E 295	A47RCI	K03501	14G2	
1.0501	S35C	C35	1035	080A32		1C35	1572	C35	F.1130	G10350	35	
1.0503	S45C	C45	1045	060A47		XC42H1TS	1672	C45	F.1140	G10450	45	
1.0614		C76D	1074			XC75				G10750		
1.0616		C86D	1086			XC80		C85		G10860		
1.0618		C92D	1095			XC90				G10950		
1.0726		35S20	1140	212M36	8M	35MF6	1957			G11400	40	
1.1157		40Mn4	1039	150M36	15	40M5				G10390	40G	
1.1165	SMn433H	30Mn5	1036	120M36		35M5		30Mn5	F.8211	K13300	30G2	
1.1167	SMn438(H)	36Mn5	1335	150M36		40M5	2120	36Mn6	F.1203	G13350	35G2	
1.1186	S40C	C40E	1040	060A40		2C40		C40		G10400		
1.1191	S45C	Ck45	1045	080M46		2C45	1672	C45	F.1140		45	
1.1201	S50C	C45R	1049	080M46		3C45	1660	C45	F.1145		38HM	
1.1213	S50C	Cf53	1050	070M55		XC48HTS	1674	C53		G10500	50	
1.7242	SCM 418 H	18CrMo4										
1.7337		16CrMo4-4	A387 Gr.12					A18CrMo45KW		K11564	15C M	
1.7362	SCMV 6	12CrMo195		3606-625		Z10CD5-05		16CrMo205		K41545		
		17MnV6	A572-60	436055E		NFA35-501E36	2142					

MATERIAL GROUPS

P	VDI 3323 4	Material Description	Composition / Structure / Heat Treatment	HB	HRc
		Non-alloyed steel	About 0.75% C, Annealed	270	28

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.0603	S 70 C -CSP	C67	107	080A67		XC65		C67		G10700		
1.0605		C75	1075	144980HS				C75		G10740	75	
1.1203	S55C	Ck55	1055	060A57		2C55	1655	C55	F.1150	G10550	55	
1.1209		C55R	1055	070M55		3C55		C55	F.1155	G10550		
1.1221	S58C	Ck60	1060	060A62	43D	2C60	1678	C60	F.1150	G10640	60	
1.1231	S 70 C-CSP	C67E	1070	060A67		XC68	1770	C70	F.5103	G10700	65GA	
1.1248	C 75	C75E	1074	060A78		XC75	1774	C75	F.5107	G10800	75(A)	
1.1269	SK 5 -CSP	C85E	1086			XC90		C90		G10900	85(A)	
1.1274	SUP4	Ck 101	1095	060 A 96	C 100S	XC100	1870	C100	F.5117	G10950		
1.1545	SK 3	C 105 W1	W1	BW 2	C 105U	Y1 105	1880	C 100 KU	F.5118		U10A	
1.1663	SK 2	C125W	W112			Y2120					U13	

P	VDI 3323 5	Material Description	Composition / Structure / Heat Treatment	HB	HRc
		Non-alloyed steel	About 0.75% C, Quenched & Tempered	300	32

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.0070		St 70-2	1055	Fe690-2FN	-	A70-2	1655	Fe 690	F.1150		55	
1.0535	S55C	C55	1055	070M55		1C55	1655	C55		J05000	55	
1.0601	S58C	C60	1060	060A62	43D	1C60		C60		G10600	60(G)	
1.1203	S55C	Ck55	1055	060A57		2C55	1655	C55	F.1150	G10550	55	
1.1221	S58C	Ck60	1060	060A62	43D	2C60	1678	C60	F.1150	G10640	60	
1.1274	SUP4	Ck 101	1095	060 A 96	C 100S	XC100	1870	C100	F.5117	G10950		
1.1545	SK 3	C 105 W1	W1	BW 2	C 105U	Y1 105	1880	C 100 KU	F.5118		U10A	
1.1663	SK 2	C125W	W112			Y2120					U13	
1.5120		38MnSi4										
1.5710	SNC236	36NiCr6	3135	640A35	111A	35NC6						
1.7701		51CrMoV4						51CrMoV4				

P	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
	6	Low-alloyed Steel	Annealed	180	10

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.0116		St 37-3	A570 Gr. 36	4360-40C	S 235 J2 G3	E24-3	1312	Fe 360 D1(2)	AE235D		ST3KP	
1.0904	SKH 1, SKT 4	55Si7	9255	250A53	45	55S7	2085	55Si8	56Si7	G92550	55S2	
1.0961	SUP 7	60SiCr7	9262			60SC6		60SiCr8	60SiCr8	G92620		
1.2067		100Cr6	L3	BL3		Y100C6			100Cr6			
1.2108		90CrSi5	L1				2092	105WCR5				
1.2210		115CrV3	L2			100C3		107CrV3KU	F.520L		11KHF	
1.2241		51CrV4										
1.2330	SCM435TK	35CrMo4	4135	708A37		34CD4	2234	35CrMo4			35KHM	
1.2419	SKS31	105WCr6		105WC13		105WC13	2140	10WCr6			CWG	
1.2510	SKS3	100MnCrW4	O1	BO1		90 MWCV 5	2140	95 MnWCr 5 KU	F.5220		9KHVG	
1.2542		45WCrV7	S1	BS1			2710	45WCrV8KU			5C W25F	
1.2550		60WCrV7	S1			55WC20	2710	58WCr9KU			5KHV2SF	
1.2713	SKT4	55NiCrMoV6	L6			55NCDV7			F.520S		5C NM	
1.2721		50NiCr13	L6			55NCV6	2550		F.528			
1.2842		90MnCrV8	O2	BO2		90MV8				T31502	9G2F	
1.3501		100Cr2	E50100									
1.3505	SUJ2	100Cr6	52100	2S135	31	100C6	2258	100Cr6	F.1310		SC C 15	
1.5024		46Si7				45S7		46SI7	F.1451			
1.5025		51Si7	9259H		50Si7	51S7	2090	50Si7	F.1450			
1.5026		55Si7			56Si7	55S7	2085	55Si7	F.1440	G92550	55S2	
1.5027		60Si7	9260	251A60	60Si7	60S7		60Si7	F.1441	G92600	60S2	
1.5028	SUP7	65Si7	9260H									
1.5415	STFA 12	15Mo3	A204Gr.A	1503-243B		15D3	2912	16Mo3(KG)	F.2601	K11820		
1.5419	SCPH11	20Mo4	4419	1503-243-430			2512	G20Mo5		G44190		
1.5423	SB450M	16Mo5	4520	1503-245-420				16Mo5(KG)	F.2602	K11522		
1.5622		14Ni6	A350-LF5			16N6		14Ni6(KG)	F.2641			
1.5732	SNC415(H)	14NilCr10	3415			14NC11		16NiCr11				
1.5752	SNC815(H)	14NiCr14	3310	655M13	36A	12NC15					20X2H4A	
1.6511	SUP10	36CrNiMo4	9840	816M40	110	40NCD3		36NiCrMo4(KB)			40C N2MA	
1.6523	SNCM220(H)	21NiCrMo2	8620	805M20	362	20NCD2	2506	20NiCrMo2			20C GNM	
1.6546	SNCM240	40NiCrMo2-2	8740	311-Tyre7				40NiCrMo2(KB)			38C GNM	
1.6566		17NiCrMo6-4										
1.6587		17CrNiMo6		820A16		18NCD6		14NiCrMo13				
1.6657		10NiCrMo13-4						14NiCrMo131				
1.7015	SCr415(H)	10Cr3	5015	523M15		12C3				G50150	15C	
1.7033	SCr430(H)	34Cr4	5132	530A32	18B	32C4		34Cr4(KB)		G51300	35C	
1.7035	SCr440(H)	41Cr4	5140	530M40	18	42C4	2245	41Cr4		G51400	40H	
1.7131	SCR 415	16MnCr5	5115	527M17		16MC5	2511	16MnCr5		G51150	12KHN2	
1.7139		16MnCrS5					2127				18HG	
1.7176	SUP9(A)	55Cr3	5155	527A60	48	55C3	2253	55Cr3			50C GA	
1.7218	SCM420	25CrMo4	4130	CDS110		25CD4	2225	25CrMo4(KB)			20C M	
1.7220	SCM432	34CrMo4	4135	708 A 37		35CD4	2234	34CrMo4			35C M	
1.7223	SNB22-1	41CrMo4	4142					41CrMo4			40C FA	
1.7225	SCM 440 (H)	42CrMo4	4140	708 M 40	42 CrMo 4	42 CD 4	2244	42 CrMo 4	F.1252		38HM	
1.7228		55NiCrMoV6G		823M30	33		2512	653M31				
1.7262	SCM415(H)	15CrMo5				12CD4	2216	12CrMo4				
1.7321		20mOcR4					2625					
1.7335	SCM415(H)	13CrMo4-4	A182-F11	1501-620		15CD4-5	2216	14CrMo45			12C M	
1.7361		32CrMo12		722M24	40B	30CD12	2240	30CrMo12	F.124A			
1.7380		10CrMo9-10	A182F22	1501-622		12CD9-10	2218	12CrMo9			12KH8	

P	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
	6	Low-alloyed Steel	Annealed	180	10

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.7715		14MoV6-3		1503-660-440				13MoCrV6				
1.8159	SUP 10	50CrV4	6150	735A50	47	50CrV4	2230	50CrV4		G61500	50C GFA	
1.8161		58CrV4										
1.8509	SACM 645	41CrAlMo7	A355A	905M39	41B	40CAD6-12	2940	41CrAlMo7				
1.8523		39CrMoV13-9		897M39	40C			36CrMoV12				

P	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
	7	Low-alloyed Steel	Quenched & Tempered	275	29

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.5415	STFA 12	15Mo3	A204Gr.A	1503-243B		15D3	2912	16Mo3(KG)	F.2601	K11820		
1.5423	SB450M	16Mo5	4520	1503-245-420				16Mo5(KG)	F.2602	K11522		
1.5622		14Ni6	A350-LF5			16N6		14Ni6(KG)	F.2641			
1.5732	SNC415(H)	14NilCr10	3415			14NC11		16NiCr11				
1.5752	SNC815(H)	14NiCr14	3310	655M13	36A	12NC15					20X2H4A	
1.5755	SNC236	31NiCr14		653M31		18NC13	2534		F.1270			
1.6565	SNCM447	40NiCrMo6	4340	817M40	24	35NCD6	2541	35NiCrMo6(KB)			38C 2N2MA	
1.6587		17CrNiMo6		820A16		18NCD6		14NiCrMo13				
1.6657		10NiCrMo13-4						14NiCrMo131				
1.6957		26NiCrMoV14-5										
1.7015	SCr415(H)	10Cr3	5015	523M15		12C3				G50150	15C	
1.7262	SCM415(H)	15CrMo5				12CD4	2216	12CrMo4				
1.7335	SCM415(H)	13CrMo4-4	A182-F11	1501-620		15CD4-5	2216	14CrMo45			12C M	
1.7380		10CrMo9-10	A182F22	1501-622		12CD9-10	2218	12CrMo9			12KH8	
1.7715		14MoV6-3		1503-660-440				13MoCrV6				
1.7733		24CrMoV55				20CDV6		21CrMoV511				
1.7755		GS-45CrMoV10-4										
1.8070		21CrMoV511						35NiCr9				

P	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
	8	Low-alloyed Steel	Quenched & tempered	300	32

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.1730		C45W3	C45W			XC48						
1.2332	SCM(440)	47CrMo4	4142	708M40	19A	42CD4	2244	42CrMo4				
1.5736	SNC 631 (H)	36NiCr10	3435			30NC11						
1.6523	SNCM220(H)	21NiCrMo2	8620	805M20	362	20NCD2	2506	20NiCrMo2			20C GNM	
1.7033	SCr430(H)	34Cr4	5132	530A32	18B	32C4		34Cr4(KB)		G51300	35C	
1.7218	SCM420	25CrMo4	4130	CDS110		25CD4	2225	25CrMo4(KB)			20C M	
1.8515		32CrMo12		722M24	40B	30CD12	2240	32CrMo12	F.124A			

P	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
P	9	Low-alloyed Steel	Quenched & Tempered	350	38

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.0904	SKH 1, SKT 4	55Si7	9255	250A53	45	55S7	2085	55Si8		G92550	55S2	
1.0961	SUP 7	60SiCr7	9262			60SC6		60SiCr8		G92620		
1.2067		100Cr6	L3	BL3		Y100C6		100Cr6				
1.2419	SKS31	105WCr6		105WC13		105WC13	2140	10WCr6			C WG	
1.2542		45WCrV7	S1	BS1			2710	45WCrV8KU			5C W25F	
1.2713	SKT4	55NiCrMoV6	L6			55NCDV7			F.520S		5C NM	
1.4882		X50CrMnNiNbN219				Z50CMNNb21-09						
1.5120		38MnSi4										
1.5710	SNC236	36NiCr6	3135	640A35	111A	35NC6						
1.5755	SNC236	31NiCr14		830m31		18NC13	2534		F.1270			
1.6511	SUP10	36CrNiMo4	9840	816M40	110	40NCD3		36NiCrMo4(KB)			40C N2MA	
1.6546	SNCM240	40NiCrMo2-2	8740	311-Tyre7				40NiCrMo2(KB)			38C GNM	
1.7035	SCr440(H)	41Cr4	5140	530M40	18	42C4	2245	41Cr4		G51400	40H	
1.7176	SUP9(A)	55Cr3	5155	527A60	48	55C3	2253	55Cr3			50C GA	
1.7220	SCM432	34CrMo4	4135	708Aa37		35CD4	2234	34CrMo4			35C M	
1.7223	SNB22-1	41CrMo4	4142					41CrMo4			40C FA	
1.7225	SCM 440 (H)	42CrMo4	4140	708 M 40	42 CrMo 4	42 CD 4	2244	42 CrMo 4	F.1252		38HM	
1.7361		32CrMo12		722M24	40B	30CD12	2240	30CrMo12	F.124A			
1.8159	SUP 10	50CrV4	6150	735A50	47	50CrV4	2230	50CrV4	51CrV4	G61500	50C GFA	
1.8161		58CrV4										
1.8509	SACM 645	41CrAlMo7	A355A	905M39	41B	40CAD6-12	2940	41CrAlMo7				
1.8523		39CrMoV13-9		897M39	40C			36CrMoV12				

P	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
P	10	High-alloyed steel, and tool steel	Annealed	200	15

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.0347	SPCD	RR St 3	A619	CR 3	Fe P03	F 13		DC03/FeP03			08JU	
1.0723	SUM32	15S22		210A15			1922		F.210F			
1.2080	SKD1	X210Cr12	D3	BD3	X210Cr12	Z200C12		X205Cr12KU		T30403	KH12	
1.2162	SCR 420 H	21MnCr5				20MC5						
1.2311		40CrMnMo7				40CMD8		35cRmO8KU				
1.2312		40CrMnMoS8.6	P20+S			40CMD8S						
1.2316		X36CrMo17			X38CrMo16							
1.2343	SKD 6	X38CrMoV5-1	H11	BH11		Z38CDV5		X37CrMoV51KU		T20811	4C 5MFS	
1.2344	SKD61	X40CrMoV5-1	H13	BH13		Z40CDV5	2242	X40CrMoV511KU	F.5318	T20813	4C 5MF1S	
1.2363	SKD12	X100CrMoV5-1	A2	BA2		Z100CDV5	2260	X100CrMoV51KU	F.5227		9KH5VF	
1.2379	SKD11	X155CrVMo121	D2	BD2		Z160CDV12	2310	X165CrMoW12KU		T30402	KH12MF	KRUPP2379
1.2436	SKD 2	X210CrW12	D4(D6)	BD6		Z200CD12	2312	X215CrW121KU	F.5213		KH12	

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MATERIAL GROUPS

P	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
P	10	High-alloyed steel, and tool steel	Annealed	200	15

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.2510	SKS3	100MnCrW4	O1	BO1		90 MWCV 5	2140	95 MnWCr 5 KU	F.5220		9KHVG	
1.2581	SKD5	X30WCrV9-3	H21	BH21		Z30WCV9		X30WCrV93KU	F.526	T20821	3C 2W8F	
1.2601		X165CrMoV12					2310	X160CrMoV12			KH12MF	
1.2606	SKD 62	X37CrMoW51	H12	BH12		Z35CWDV5		X35CrMoW05KU	F.537	T20812	5C NM	
1.2764		X19NiCrMo4										
1.2767		X45NiCrMo4				45NCD16		40NiCrMoV8KU				
1.2842		90MnCrV8	O2	B02		90MV8		90MnVCr8KU		T31502	9G2F	
1.3243	SKH55	S6-5-2-5	T15			KCV06-05-05-04-02	2723	HS6-5-2-5			R6M5K5	
1.3249	SKH 3	S18-1-2-5	T4	BT4		Z80WKCV18-05-04					R18K5F2	
1.3343	SKH51, SKH9	S6-5-2	M2	BM2		Z85WDCV	2722	HS652	F.5604		R6M5	
1.3348	SKH 58	S2-9-2	M7			Z100DCWV09-04-02	2782	HS292	F.5607			
1.3355	SKH 2	S18-0-1	T1	BT1		Z80WCV18-4-01					R18	
1.4718	SUH1	X45CrSi9-3	HNV3	401S45	52	Z45CS9		X45CrSi8	F.322		40C 9S2	
1.5662	SL9N60(53)	X8Ni9	ASMA353	502-650		9Ni		X10Ni9	F.2645			
1.5680		12Ni19	2515	12Ni19		Z18N5						

P	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
P	11	High-alloyed steel, and tool steel	Quenched & Tempered	325	35

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.2080	SKD1	X210Cr12	D3	BD3	X210Cr12	Z200C12		X205Cr12KU		T30403	KH12	
1.2344	SKD61	X40CrMoV5-1	H13	BH13		Z40CDV5	2242	X40CrMoV511KU	F.5318	T20813	4C 5MF1S	
1.2363	SKD12	X100CrMoV5-1	A2	BA2		Z100CDV5	2260	X100CrMoV51KU	F.5227		9KH5VF	
1.2436	SKD 2	X210CrW12	D4(D6)	BD6		Z200CD12	2312	X215CrW121KU	F.5213		KH12	
1.2581	SKD5	X30WCrV9-3	H21	BH21		Z30WCV9		X30WCrV93KU	F.526	T20821	3C 2W8F	
1.2601		X165CrMoV12					2310	X160CrMoV12			KH12MF	
1.2714	SKT 4	55NiCrMoV7	6F3/L6			55NiCrMoV7			F.520S		5KHNV	
1.3202		S12-1-4-5		BT15				HS12-1-5-5				
1.3207		S10-4-3-10		BT42		Z130WKCDV						
1.3243	SKH55	S6-5-2-5	T15			KCV06-05-05-04-02	2723	HS6-5-2-5			R6M5K5	
1.3246		S7-4-2-5	M35			Z110WKCDV07-05-04		HS7-4-2-5				
1.3247	SKH 51	S2-10-1-8	M42	BM42		Z110DKCWV09-08-04		HS2-9-1-8			R2AM9K5	
1.3255	SKH 3	S18-1-2-5	T4	BT4		Z80WKCV18-05-04					R18K5F2	
1.3343	SKH51, SKH9	S6-5-2	M2	BM2		Z85WDCV	2722	HS652	F.5604		R6M5	
1.3348	SKH 58	S2-9-2	M7			Z100DCWV09-04-02	2782	HS292	F.5607			
1.3355	SKH 2	S18-0-1	T1	BT1		Z80WCV18-4-01					R18	
1.4718	SUH1	X45CrSi9-3	HNV3	401S45	52	Z45CS9		X45CrSi8	F.322		40C 9S2	
1.4935	SUH 616	X20CrMoWV121	422							S42200		
1.5680		12Ni19	2515	12Ni19		Z18N5						

M	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
	12	Stainless steel	Ferritic / Martensitic, Annealed	200	15

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.4000	SUS403	X6Cr13	403	403S17		Z6C13	2301	X6Cr13	F.3110	S40300	08C 13	ATI 410S
1.4001		X7Cr14	410 S	403S7		Z8C13	2301		F.8401		08C 13	
1.4002	SUS 405	X6CrAl13	405	405S17		Z6CA13	2302	X6CrAl13		S40500		
1.4005	SUS416	X12CrS13	416	416S21		Z11CF13	2380	X12CrSC13	F.3411	S41600		ATI 416
1.4006	SUS410	X12Cr13	410	410S21	56A	Z10C13	2302	X12Cr13	F.3401	S41000	12C 13	ATI 410
1.4016	SUS430	X6Cr17	430	430S15	X8Cr17	Z8C17	2320	X8Cr17	F3113	S43000	12C 17	ATI 430
1.4027	SCS 2	GX20Cr14		420C29		Z20C13M					20C 13L	
1.4028	SUS420J2	X30Cr13	420	420S45		Z30C13	2304			S42020	20C 13	
1.4034	SUS420J2	X46Cr13		420S45		Z40C14		X40Cr14	F.3405			
1.4057	SUS431	X19CrNi17-2	431	431S29	57	Z15CN16-02	2321	X16CrNi16	F.3427	S43100	20C 17N2	431 (HT)
1.4086		GX120Cr29		452C11								
1.4104	SUS430F	X12CrMoS17	430F	420S37		Z10CF17	2383	X10CrS17	F.3117	S43020		
1.4112	SUS 440 B	X90CrMoV18	440B							S44003	95KH18	
1.4113	SUS434	X6CrMo17	434	434S17		Z8CD17-01	2325	X8CrMo17		S43400		AL 434
1.4313	SCS5	X3CrNi13-4	CA6-NM	425C11		Z4CND13-04M	2385	(G)X6CrNi304		J91540		
1.4340		GX40CrNi274								J92615		
1.4417		X2CrNiM0Si195	S31500				2376			S39215		
1.4418		X4CrNiMo165				Z6CND16-04-01	2387					APX4
1.4510	SUS430LX	X6CrTi17	XM8			Z4CT17		X6CrTi17	F.3115	S43035	08C 17T	430 Ti
1.4511	SUS430LK	X6CrNb17				Z4CNb17		X6CrNb17	F.3122			AXC525
1.4512	SUH409	X6CrTi12	409	LW19		Z3CT12		X6CrTi12		S40900		
1.4720		X20CrMo13										
1.4724	SUS 405	X10CrA113	405	403S17		Z10C13		X10CrA112	F.311		10C 13SJU	
1.4742	SUS430	X10CrA118	430	439S15	60	Z10CAS18		X8Cr17	F.3113	S43000	15C 13SJU	
1.4747	SUH4	X80CrNiSi20	HNV6	443S65	59	Z80CSN20-02		X80CrSiNi20	F.320B	S65006		
1.4749		X18CrN28	446								15KH28	
1.4762	SUH446	X10CrA124	446			Z10CAS24	2322	X16Cr26		S44600		
1.4871	SUH35,SUH36	X53CrMnNiN21-9	EV8	349S54		Z52CMN21-09		X53CrMnNiN219		S63008	55C 20G9AN4	
		X10CrNi15	429									
		X12CrNi18-9	302	302S31		Z10CN18-09	2330					

M	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
	13	Stainless steel	Martensitic, Quenched & Tempered	240	23

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.4000	SUS403	X6Cr13	403	403S17		Z6C13	2301	X6Cr13	F.3110	S40300	08C 13	ATI 410S
1.4001		X7Cr14	410 S	403S7		Z8C13	2301		F.8401		08C 13	
1.4006	SUS410	X12Cr13	410	410S21	56A	Z10C13	2302	X12Cr13	F.3401	S41000	12C 13	ATI 410
1.4016	SUS430	X6Cr17	430	430S15	X8Cr17	Z8C17	2320	X8Cr17	F.3113	S43000	12C 17	ATI 430
1.4021	SUS 420J1	X20Cr13	420	420S37		Z20C13	2303	14210	F.5261	S42000	20C 13	ATI 420
1.4027	SCS 2	GX20Cr14		420C29		Z20C13M					20C 13L	
1.4031	SUS 420 J2	X40Cr13	420			Z40C14	-2304		F.3404	S42080	40C 13	
1.4034	SUS420J2	X46Cr13		420S45		Z40C14		X40Cr14	F.3405			
1.4057	SUS431	X19CrNi17-2	431	431S29	57	Z15CN16-02	2321	X16CrNi16	F.3427	S43100	20C 17N2	431 (HT)
1.4104	SUS430F	X12CrMoS17	430F	420S37		Z10CF17	2383	X10CrS17	F.3117	S43020		
1.4113	SUS434	X6CrMo17	434	434S17		Z8CD17-01	2325	X8CrMo17		S43400		AL 434
1.4313	SCS5	X3CrNi13-4	CA6-NM	425C11		Z4CND13-04M	2385	(G)X6CrNi304		J91540		
1.4544		A 700	321	S.524		Z 10 CNT 18 11		X6CrNiTi1811		J92630	08C 18N12T	
1.4546		X5CrNiNb18-10	348	347S31				X6CrNiNb1811		J92640		ATI 348
1.4871	SUH35,SUH36	X53CrMnNiN21-9	EV8	349S54		Z52CMN21-09		X53CrMnNiN219		S63008	55C 20G9AN4	
1.4922		X20cRmV12-1					2317	x20cRmOnl1201				
1.4923		X22CrMoV121										Jethete X20

M	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
	14	Stainless steel	Austenitic	180	10

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.4301	SUS 304	X5CrNi18-10	304	304S15		Z5CN18-09	2332		F.3551	S30409	08C 18N10	
1.4305	SUS303	X10CrNiS18-10	303	303S21	58M	Z8CNF18-09	2346	X10CrNiS18.09	F.3508	S30300	30C 18N11	ATI 303
1.4306	SCS19	X2CrNi1911	304L	304C12	X3CrNi1810KD	Z2CN18-09	2352	GX2CrNi1910	F.3503	S30403	03KH18N11	ATI 304L
1.4308	SUS304L	GX6CrNi18-9	CF-8	304C15	58E	Z6CN18-10M	2333					CF-8
1.4310	SUS 301	X10CrNi18-8	301	301S21		Z12CN17-07	2331	X2CrNi1807	F.3517	S30100	07KH16N6	ATI 301
1.4311	SUS304LN	X2CrNiN18 10	304LN	304S62		Z2CN18-10	2371	X2CrNiN1810	F.3541	S30453	03KH18N11	
1.4312	SCS12	GX10CrNi188	305	302C25		Z10CN18-9M					10C 18N9L	ATI 305
1.4350	SUS304	X5CrNi18-9	304	304S15	58E	Z6CN18-09	2332	X5CrNi1810	F.3551	S30400		ATI 304
1.4362		X2CrNiN234	S32304			Z2CN23-04AZ	2327			S32304		ATI 2304TM
1.4371		X3CrMnNiN18887	202	284S16		Z8CMN18-08-05						
1.4401	SUS316	X5CrNiMo17-12-2	316	316S13		Z3CND17-11-01	2347	X5CrNiMo17 12 2	F.3534	S31600	08KH17H13M2T	ATI 316
1.4404	SUS316L	X2CrNiMo17-13-2	316L	316S11		Z2CND17-12	2348	X2CrNiMo1712	F.3533	S31603		ATI 316L
1.4406	SUS316LN	X2CrNiMoN17122	316LN	316S61		Z2CND17-12AZ		X2CrNiMoN1712	F.3542	S31653	07C 18N	ATI 316LN
1.4408	SCS14	GX6CrNiMo18-10	CF-8M	316C16			2343	X7CrNiMo2010	F.8414	J92900	10G2S2MSL	
1.4410	SCS 14 A	GX10CrNiMo18-9				Z5CND20-12M	2328			S32750		
1.4429	SUS316LN	X2CrNiMoN17-13-3	316Ln	316S62		Z2CND17-13AZ	2375	X2CrNiMoN17133	F.3543		03KH16N15M3	
1.4435	SUS316L	X2CrNiMo18143	316L	316S11		Z3CND17-12-03	2375	X2CrNiMo17 13 2	F.3533	S31603	O3C 17N14M3	
1.4436	SUS316	X3CrNiMo17-13-3	316	316S19		Z6CND18-12-03	2343	X5CrNiMo17 12 2	F.3543	S31600		
1.4438	SUS317L	X2CrNiMo18164	317L	317S12		Z2CND19-15-04	2367	X2CrNiMo18 16 4	F.3539	S31703		ATI 317L
1.4439		X2CrNiMoN17135	(s31726)			Z3CND18-14-06AZ						
1.4440		X2CrNiMo18-16										
1.4449	SUS317	X5CrNiMo17133	317	317S16				X5CrNiMo1815		S31700		ATI 317
1.4460	SUS 329 J1	X8CrNiMo275	329				2324			S32900		10RE51
1.4462	SUS329J3L	X2CrNiMoN2253		318S13		Z3CND22-05Az	2377			S31803		ATI 2205TM
1.4500		X7NiCrMoCuNb2520				23NCDU25-20M				J95150		
1.4521	SUS444	X2CrMoTi18-2	443444				2326	X2CrMoTiNb18 2	F.3123			
1.4539		X1NiCrMoCuN25205				Z2NCDU25-20	2562			N08904		ATI 904L
1.4541	SUS321	X14CrNiTi18-10	321	321S31		Z6CNT18-10	2337	X6CrNiTi18 11	F.3523	S32100	06C 18N10T	ATI 321
1.4542	SUS630	X5CrNiCuNb174	630			Z7CNU15-05						UGIMA 4542
1.4545		Z7CNU15.05	15-5PH							S15500		ATI 15-5
1.4547		X1CrNiMoN20187	S31254				2378			S31254		Uranus B25 6Mo
1.4550	SUS347	X6CrNiNb18-10	347	347S17	58F	Z6CNNb18-10	2338	X6CrNiNb18 11	F.3552	S34700	08C 18N12B	ATI 347
1.4552	SCS 21	GX7CrNiNb18-9				Z4CNNb19-10M				J92710		
1.4568	SUS 631	X 7 CrNiAl 17 7		316S111		Z 9 CAN 17-7	2388	Z8CNA17-07		S17700	09C 17NJU1	17-7PH
1.4571	SUS 316Ti	X6CrNiMoTi17-12-2	316Ti	320S31	58J	Z6NDT17-12	2350	X6CrNiMoTi17 12	F.3535		10C 17N13M2T	ATI 316Ti
1.4581	SCS 22	GX5CrNiMoNb18		318C17		Z4CNDNb18-12M						
1.4583		X6CrNiMoNB18-12	318	303S21		Z15CNS20-12		X15CrNiSi2 12				
1.4585		GX7CrNiMoCuNb1818						X6CrNiMoTi17 12		J94651		
1.4821		X20CrNiSi254				Z20CNS25-04				S44635		
1.4823		GX40CrNiSi274								J92605		
1.4828	SCS17	X15CrNiSi20-12	309	309S24	58C	Z15CNS20-12			F.8414	S30900	20C 20N14S2	ATI 309
1.4833	SUS 309 S	X6CrNi2213	309S	309S13		Z15CN24-13				J93400		
1.4845	SUH310	X12CrNi25-21	310S	310S24		Z12CN25-20	2361	X6CrNi2520	F.331	S31008	20C 23N18	ATI 310S
1.4878	SUS321	X12CrNiTi18-9	321	321S20	58B	Z6CNT18-12(B)	2337	X6CrNiTi1811	F.3553	S32100		ACX315
1.4891		X5CrNiNb18-10	Ss30415				2372					
1.4893		X8CrNiNb11	S30815				2368					
1.4948		X6CrNi1811	304H	304S51		Z5CN18-09	2333			S30480		
1.4980		X5NiCrTi2515	660				2570			S66286		Incoloy A 286
		X5NiCrN3525										
		X2CrNiMoN18134	S31753									
		X2CrNiMoN25227										

K	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
K	15	Grey cast iron	Pearlitic / Ferritic	180	10

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
0.6010	FC100	GG10	A48 20 B	Grade 100	GJL-100	Ft 10 D	0100	G10	FG10		Sc 10	
0.6015	FC150	GG15	A48 25 B	Grade 150	GJL-150	Ft 15 D	0115	G15	FG15		Sc 15	
0.6020	FC200	GG20	A48 30 B	Grade 220	GJL-200	Ft 20 D	0120	G20	FG20	W06020	Sc 20	
0.6025	FC250	GG25	A48 40 B	Grade 260	GJL-250	Ft 25 D	0125	G25	FG25		Sc 25	
0.6660		GGL-NiCr 20 2	1050/700/7	Grade F2	GJLA-XNiCr 20-2	L-NC 202	0523	-		F41002		Ni-Resist 2
1.4449	SUS317	X5CrNiMo17133	317	317S16				X5CrNiMo1815		S31700		ATI 317

K	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
K	16	Grey cast iron	Pearlitic (Martensitic)	260	26

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
0.6025	FC250	GG25	A48 40 B	Grade 260	GJL-250	Ft 25 D	0125	G25	FG25		Sc 25	
0.6030	FC300	GG30	A48 45 B	Grade 300	GJL-300	Ft 30 D	0130	G30	FG30		Sc 30	
0.6035	FC350	GG35	A48 50 B	Grade 350	GJL-350	Ft 35 D	0135	G35	FG35		Sc 35	
0.6040	FC400	GG40	A48 60 B	Grade 400	GJL-400	Ft 40 D	0140	G40	FC40		Sc 40	

K	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
K	17	Nodular cast iron	Ferritic	160	3

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
0.7033	FCD350-22L	GGG35.3	-	350/22L40	GJS-350-22-LT	FGS 370-17	0717-15	-				
0.7040	FCD400	GGG40	60-40-18	SNG 420-12	GJS-400-15	FCS 400-12	0717-02	GS 400-12	FG E38-17	F32800	Vc 42-12	
0.7043	FCD 370	GGG40.3	60-40-18	SNG 370-17	GJS-400-18-LT	FGS 370-17	0717-12	GSO 42-17			Vc 42-12	
0.6040	FC400	GG40	A48 60 B	Grade 400	GJL-400	Ft 40 D	0140	G40	FC40		Sc 40	

K	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
K	18	Nodular cast iron	Pearlitic	250	25

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
0.7050	FCD500	GGG50	80-55-06	SNG 500-7	GJS-500-7	FGS 500-7	0727-02	GS 500-7	FG E50-7	F33100	Vc 50-2	
0.7060	FCD600	GGG60	80-55-06	SNG 600-3	GJS-600-3	FGS 600-3	0732-03	GS 600-3	FG E60-2		Vc 60-2	
0.7070	FCD700	GGG70	100-70-03	SNG 700-2	GJS-700-2	FGS 700-2	0737-01	GS 700-2	FG S70-2	F34800	Vc 70-2	
0.7652	FCDA-NiMn 13 7	GGG NiMn 13-7	-	Grade S6	GJSA-XNiMn 13-7	FGS Ni13 Mn7	0772	-				Nodumag
0.7660		GGG NiCr 20-2	A436 D2	Grade S2	GJSA-XNiCr 20-2	FGS Ni20 Cr2	0776	-				Ni-Resist D-2

MATERIAL GROUPS

K	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
K	19	Malleable cast iron	Ferritic	130	

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
0.8135	FCMW330	GTS-35	32510	B 340-12	GJMB350-10	MN 35-10	0815	GMN 35	GTS35		Kc 35-10	

K	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
K	20	Malleable cast iron	Pearlitic	230	21

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
0.8145	FCMW370	GTS-45	A220-40010	P 440-7	GJMB450-6	MN 450	0852	GMN 45				
0.8155	FCMP490	GTS-55	50005	P 510-4	GJMB-550-4	MP 50-5	0854	GMN 55			Kc 60-3	
0.8165	FCMP590	GTS-65	70003	P 570-3	GJMB-650-2	MN 650-3	0856	GMN 65				
0.8170	FCMP690	GTS-70	90001	P 690-2	GJMB-700-2	MN 700-2	0862	GMN 70			Kc 70-2	

N — VDI 3323 21

Material Description	Composition / Structure / Heat Treatment	HB	HRc
Aluminum-wrought alloy	Not Curable	60	

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
3.0205		Al99	Al99									
3.0255	(A1050)	Al99.5	1000	L31		A59050C					D1	
3.3315		AlMg1										

N — VDI 3323 22

Material Description	Composition / Structure / Heat Treatment	HB	HRc
Aluminum-wrought alloy	Curable, Hardened	100	

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
3.1325		AlCuMg1									AD35	
3.1655	A2011	AlCuSiPb										
3.2315		AlMgSi1									AK9	
3.4345		AlZnMgCuO,5	7050	L86		AZ4GU/9051		811-04				
3.4365	7075	AlZnMgCu1,5	7075	7075		7075		AlZn5.8MgCuCr			B95	

N — VDI 3323 23

Material Description	Composition / Structure / Heat Treatment	HB	HRc
Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75	

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
3.2163		G-AlSi9Cu3									VAL8	
3.2382		GD-AlSi10Mg										
3.2383		G-AlSi0Mg(Cu)	A360.2	LM9			4253					
3.2581		G-AlSi12										
3.3561		G-AlMg5										
3.5101		G-MgZn4sE1Zr1	ZE41	MAG5								
3.5103		MgSE3Zn27r1	EZ33	MAG6		G-TR3Z2						
3.5812		G-MgAl8Zn1	AZ81	NMAG1								
3.5912		G-MgAl9Zn1	AZ91	MAG7								
			A356-72	2789		NFA32-201						
	A5052		356.1	LM25			4244				AK7	
		G-AlSi12	A413.2	LM6			4261					
	ADC12	G-AlSi12(Cu)	A413.1	LM20			4260				AK12	
	A6061	GD-AlSi12	A413.0				4247					
	A7075	GD-AlSi8Cu3	A380.1	LM24			4250					

MATERIAL GROUPS

N — VDI 3323 24

Material Description	Composition / Structure / Heat Treatment	HB	HRc
Aluminum-cast, alloyed	≤ 12% Si, Curable, Hardened	90	

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
2.1871		G-AlCu4TiMg										
3.1754		G-AlCu5Ni1,5										
3.2371		G-AlSi7Mg	4218B								AK8	
3.2373	C4BS	G-AlSI9MGWA	SC64D			A-S7G	4251				AK9	
3.2381		G-AlSi10Mg									AK12	
3.5106		G-MgAg3SE2Zr1	QE22	mag12								
		G-ALMG5	GD-AISI12	LM5		A-SU12	4252					

N — VDI 3323 26

Material Description	Composition / Structure / Heat Treatment	HB	HRc
Copper and Copper Alloys (Bronze / Brass)	Cutting alloys, PB>1%	110	

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
2.0375		CuZn36Pb3									LS60-2	
2.1090		G-CuSn75pb	C93200			U-E7Z5pb4						
2.1096		G-CuSn5ZnPb	c83600	LG2								
2.1098		G-CuSn2Znpb	C83600									
2.1182		G-CuPb15Sn	C23000	LB1		U-pb15E8						

N — VDI 3323 27

Material Description	Composition / Structure / Heat Treatment	HB	HRc
Copper and copper alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)	90	

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
2.0240	C2300	CuZn15									L90	
2.0321		CuZn37	C27200	cz108		CuZn36,CuZn37		C2700			L63	
2.0590		G-CuZn40Fe										
2.0592		G-CuZn35Al1	C86500	U-Z36N3		HTB1						
2.0596		G-CuZn34Al2	C86200	HTB1		U-Z36N3					LTs23AD	
2.1293		CuCrZr	C18200	CC102		U-Cr0-8Zr						

N — VDI 3323 28

Material Description	Composition / Structure / Heat Treatment	HB	HRc
Copper and copper alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper	100	

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
2.0060		E-Cu57										
2.0966		CuAl10Ni5Fe4	C63000	Ca104		U-A10N					BrAD	
2.0975		G-CuAl10Ni	B-148-52									
2.1050		G-CuSn10	c90700	CT1								
2.1052		G-CuSn12	C90800	pb2		UE12P						
2.1292		G-CuCrF35	C81500	CC1-FF								

S	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
S	31	Heat resistant super alloys	Fe Based, Annealed	200	15

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.4558	NCF 800 TB	X2NiCrAlTi3220	N08800	NA15								
1.4562		X1NiCrMoCu32287	N08031									
1.4563		X1NiCrMoCuN31274	N08028			Z1NCDU31-27-03	2584				EK77	
1.4864	SUH330	X12NiCrSi36-16	330	NA17		Z12NCS37-18				N08330		
1.4865	SCH15	GX40NiCrSi38-18		330C40				XG50NiCr3919		J94605		
1.4958		X5NiCrAlTi3120										

S	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
S	32	Heat resistant super alloys	Fe Based, Aged	280	30

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.4977		X40CoCrNi2020				Z42CNKDWNb						

S	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
S	33	Heat resistant super alloys	Ni or Co Based, Annealed	250	25

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
2.4360		NiCu30Fe		NA13		NU30				N04400		Monel400
2.4603		NiCr 30 FeMo	5390A			NC22FeD						Hastelloy G-30
2.4610		NiMo16cR16Ti								N26455		HastelloyC-4
2.4630		NiCr20Ti		HR5,203-4		NC20T				N06075		Nimonic75
2.4631	NCF 80A	NiCr20TiAl		Hr40		NC20TA				N07080	KHN77TYuR	Nimonic 80A
2.4642	NCF 690	NiC29Fe				Nnc30Fe				N06690		Inconel 690
2.4856		NiCr22Mo9Nb		NA21		NC22FeDNb				N06625		Inconel 625
2.4858		NiCr21Mo		NA16		NC21FeDU				N08825	KHN38VT	Incoloy 825

S	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
S	34	Heat resistant super alloys	Ni or Co Based, Aged	350	38

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
2.4375		NiCu30Al	4676	NA18		NU30AT				N05500		Monelk500
2.4662		NiFe35Cr14MoTi	5660			ZSNCDT42				N09901		Incoloy 901
2.4668		NiCr19Fe19NbMo	5383	HR8		NC19eNB				N07718		Inconel 718
2.4670		S-NiCr13A16MoNb	5391	Mar-46		NC12AD						Nimocast 713
2.4694		NiCr16fE7TiAl								N07751		Inconel 751
2.4955		NiFe25Cr20NbTi										
2.4964		CoCr20W15Ni	5772			KC20WN						Haynes 25
		CoCr22W14Ni	AMS 5772			KC22WN						

MATERIAL GROUPS

S	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
S	35	Heat resistant super alloys	Ni or Co Based, Cast	320	34

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
2.4669		NiCr15Fe7TiAl				NC15TNbA				N07750		Inconel X750
2.4685		G-NiMo28								N10665		Hastelloy B
2.4810		G-NiMo30										Hastelloy C
2.4973		NiCr19Co11MoTi	AMS 5399			NC19KDT					VT5-1	
3.7115		TiAl5Sn2								R54520	VT1-00	ATI Grade 6

S	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
S	36	Titanium alloys	Pure Titanium	400 Rm	

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
2.4674		NiCo15Cr10MoAlTi	AMS 5397							N13100		IN 100
3.7025		Ti1	R50250	2TA1						R50250		ATI 30 CP Gr. 1
3.7225		Ti1pd	R52250	TP1						R52250		

S	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc
S	37	Titanium alloys	Alpha + Beta Alloys, Hardened	1050 Rm	

Mat'l No.	JIS	DIN	AISI/ASTM/ SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
3.7124		TiCu2		2TA21-24								
3.7145		TiAl6Sn2Zr4Mo2Si	R54620							R54620		
3.7165		TiAl6V4	AMS R56400	TA10-13		T-A6V					VT6	
3.7185		TiAl4Mo4Sn2		TA45-51								
3.7195		TiAl3V2.5								R56320		ATI 3-2.5
		TiAl4Mo4Sn4Si0.5										
		TiAl5Sn2.5	AMS R54520	TA14/17		T-A5E						
		Ti6Al4VELI	AMS R56401	TA11								

H	VDI 3323 38	Material Description	Composition / Structure / Heat Treatment	HB	HRc
		Hardened steel	Hardened	550	55

Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.1231	S 70 C-CSP	Ck 67	1070	060 A 67	C 67S	XC 68	1770	C 70	F.5103		70	
1.1248	C 75	Ck 75	1078, 1080	060 A 78	C 75S	XC 75	1774	C 75	F.5107		75	
1.1274	SUP 4	Ck 101	1095	060 A 96	C 100S	XC100	1870	C100	F.5117			
1.1545	SK 3	C 105 W1	W1	BW 2	C 105U	Y1 105	1880	C 100 KU	F.5118		U10A	
1.2762		75CrMoNiW67	-	-	-	-	-	-				
1.3401	SCMnH1	GX120Mn12	A128(A)			Z120M12	2183	GX120Mn12	F.8251		110G13L	
1.4021	SUS 420 J1	X 20 Cr 13	420	420 S 37	X 20 Cr 13	Z 20 C 13	2303	X 20 Cr 13	F.5261		20KH13	ATI 420
1.4109	SUS 440 A	X 65 CrMo 14	440 A	-	X 70 CrMo 15	Z 70 D 14	-	-				ATI 440A
1.4112	SUS 440 B	X 90 CrMoV 18	440 B	409 S 19	X 90 CrMoV 18	Z 2 CND 18 05	2327	X CrTi 12				
1.4125	SUS 440 C	X 105 CrMo 17	440 C	-	X 105 CrMo 17	Z 100 CD 17	-	X 105 CrMo 17			95KH18	ATI 440C
1.6746		32NiCrMo14-5	-	832M31	32nlcRmO145	35NCD14	-	-				
1.7176	SUP9(A)	55Cr3	5155	527A60	48	55C3	2253	55Cr3				
1.7225	SCM 440 (H)	42CrMo4	4140	708 M 40	42 CrMo 4	42 CD 4	2244	42 CrMo 4	F.1252		38HM	

H	VDI 3323 40	Material Description	Composition / Structure / Heat Treatment	HB	HRc
		Chilled cast iron	Cast	400	42

Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
0.9620		GX260NiCr42	A532 IB	Grade 2 A	GJN-HV520	FB Ni4 Cr2 BC	0512	-		F45001		Ni-Hard2
0.9625		GX330NiCr42	A532 IA	Grade 2 B	GJN-HV550	FB Ni4 Cr2 HC	0513	-		F45000		Ni-Hard1
0.9630		GX300 CrNiSi 9 5 2	A532 ID	Grade 2 C	GJN-HV600	FB Cr9 Ni5	0457	-		F45003		Ni-Hard 4
0.9640		GX300CrMoNi1521	-	-	-	-	-	-		F45005		
0.9650		GX260Cr27	-	Grade 3 D		-	0466	-				
0.9655		GX300CrNMo271	-	Grade 3 E		-	-	-			20C 25N20S2	
1.4841	SUH 310	X15CrNiSi25-20	310	314S31	X 15 CrNiSi 25 20	Z15CNS25-20	-	-		S31400		Cronifer 2520

H	VDI 3323 41	Material Description	Composition / Structure / Heat Treatment	HB	HRc
		Hardened cast iron	Hardened	550	55

Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
0.9635		GX300 CrMo 15 3	-	-	-	-	-	-				
0.9645		GX260 CrMoNi 20 21	-	-	-	-	-	-		F45007		

COMPARISON CHART SCALE FOR HARDNESS

Rockwell Hardness C Scale 150kg Brale (HRc)	Diamond Pyramid Hardness Number. Vickers (HV)	Brinell Hardness Standard 10mm Ball 29.42kN (HB)	Rockwell Hardness A Scale 60kg Brale (HRA)	Shore Scleroscope Hardness Number (HS)	Approx. Tensile Strength N/mm^2
68	940	-	85.6	97	-
67	900	-	85.5	95	-
66	865	-	84.5	92	-
65	832	-	83.9	91	-
64	800	-	83.4	88	-
63	772	-	82.8	87	-
62	746	-	82.3	85	-
61	720	-	81.8	83	-
60	697	-	81.2	81	-
59	674	-	80.7	80	-
58	653	-	80.1	78	-
57	633	-	79.6	76	-
56	613	-	79.0	75	-
55	595	-	78.5	74	2079
54	577	-	78.0	72	2010
53	560	-	77.4	71	1952
52	544	500	76.8	69	1883
51	528	487	76.3	68	1824
50	513	475	75.9	67	1755
49	498	464	75.2	66	1687
48	484	451	74.7	64	1639
47	471	442	74.1	63	1578
46	458	432	73.6	62	1530
45	446	421	73.1	60	1481
44	434	409	72.5	58	1432
43	423	400	72.0	57	1383
42	412	390	71.5	56	1334
41	402	381	70.9	55	1294
40	392	371	70.4	54	1245
39	382	362	69.9	52	1216
38	372	353	69.4	51	1177
37	363	344	68.9	50	1157
36	354	336	68.4	49	1118
35	345	327	67.9	48	1079
34	336	319	67.4	47	1059
33	327	311	66.8	46	1030
32	318	301	66.3	44	1000
31	310	294	65.8	43	981
30	302	286	65.3	42	952
29	294	279	64.7	41	932
28	285	271	64.3	41	912
27	279	264	63.8	40	883
26	272	258	63.3	38	863
25	266	253	62.8	38	843
24	260	247	62.4	37	824
23	254	243	62.0	36	804
22	248	237	61.5	35	785
21	243	231	61.0	35	775
20	238	226	60.5	34	755
(18)	230	219	-	33	736
(16)	222	212	-	32	706
(14)	213	203	-	31	677
(12)	204	194	-	29	647
(10)	196	187	-	28	618
(8)	188	179	-	27	598
(6)	180	171	-	26	579
(4)	173	165	-	25	549
(2)	166	158	-	24	530
(0)	160	152	-	24	520

Global Cutting Tool Leader **YG-1**

HOLEMAKING TOOLS

i-ONE DRILLS, CARBIDE INSERTS & HOLDERS
i-DREAM DRILLS, CARBIDE INSERTS & HOLDERS
SOLID CARBIDE DREAM DRILLS - PRO (with & without Coolant Holes)
SOLID CARBIDE DREAM DRILLS - GENERAL (with & without Coolant Holes)
SOLID CARBIDE DREAM DRILLS - HIGH FEED (with Coolant holes)
SOLID CARBIDE DREAM DRILLS - FLAT BOTTOM
SOLID CARBIDE DREAM DRILLS - INOX (with Coolant Holes)
SOLID CARBIDE DREAM DRILLS - ALU (with Coolant Holes)
SOLID CARBIDE DREAM DRILLS - MQL TYPE (with Coolant Holes)
SOLID CARBIDE DREAM DRILLS for HIGH HARDENED STEELS (without Coolant Holes)
STANDARD SOLID CARBIDE DRILLS (JOBBER & STUB LENGTH)
HSS-PM MULTI-1 DRILLS
HSSCo8 & HSS-E HPD STRAIGHT SHANK DRILLS
HSS & HSS-E GOLD-P DRILLS
HSS, HSS-E & HSSCo8 STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
HSS & HSS-E MORSE TAPER SHANK DRILLS
SOLID CARBIDE & HSSCo8 NC-SPOTTING DRILLS
SOLID CARBIDE & HSS COMBINATION DRILLS & COUNTERSINK
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SOLID CARBIDE & HSS REAMERS
TECHNICAL DATA

YG-1 CO., LTD.

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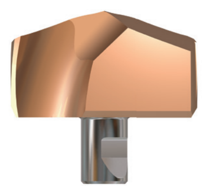
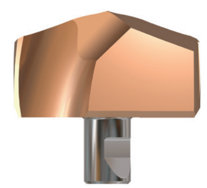
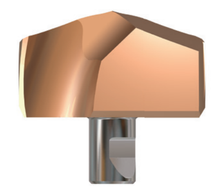
	I-ONE DRILLS (INSERTS)					
SERIES	Y101H	Y121H	Y141H	Y161H	Y181H	Y201H
POINT ANGLE	140°	140°	140°	140°	140°	140°
TOOL MATERIAL	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE
SIZE MIN	.3937	.4724	.5512	.6299	.7087	.7874
SIZE MAX	.4688	.5472	.6260	.7047	.7835	.8622
PAGE	A30	A31	A32	A33	A34	A35
SURFACE TREATMENT	H-Coating					

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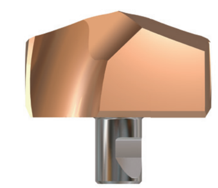
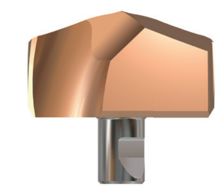
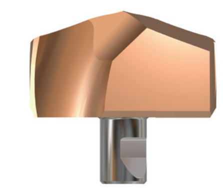
◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	Y101H	Y121H	Y141H	Y161H	Y181H	Y201H
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎	◎
	2		190	13	◎	◎	◎	◎	◎	◎
	3		250	25	◎	◎	◎	◎	◎	◎
	4		270	28	◎	◎	◎	◎	◎	◎
	5		300	32	◎	◎	◎	◎	◎	◎
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎
	7		275	29	◎	◎	◎	◎	◎	◎
	8		300	32	◎	◎	◎	◎	◎	◎
	9		350	38	◎	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel	200	15	◎	◎	◎	◎	◎	◎
	11		325	35	◎	◎	◎	◎	◎	◎
M	12	Stainless steel	200	15						
	13		240	23						
	14		180	10						
K	15	Grey cast iron	180	10	○	○	○	○	○	○
	16		260	26	○	○	○	○	○	○
	17	Nodular cast iron	160	3	○	○	○	○	○	○
	18		250	25	○	○	○	○	○	○
	19	Malleable cast iron	130		○	○	○	○	○	○
	20		230	21	○	○	○	○	○	○
N	21	Aluminum-wrought alloy	60							
	22		100							
	23	Aluminum-cast, alloyed	75							
	24		90							
	25		130							
	26	Copper and Copper Alloys (Bronze / Brass)	110							
	27		90							
	28		100							
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.								
	30									
S	31	Heat Resistant Super Alloys	200	15						
	32		280	30						
	33		250	25						
	34		350	38						
	35		320	34						
	36	Titanium Alloys	400 Rm							
	37		1050 Rm							
H	38	Hardened steel	550	55						
	39		630	60						
	40	Chilled Cast Iron	400	42						
	41	Hardened Cast Iron	550	55						

I-ONE DRILLS (INSERTS)						I-ONE DRILLS (HOLDER)		
Y221H	Y241H	Y261H	Y281H	Y301H	Y321H	ZD*3	ZD*5	ZD*8
140°	140°	140°	140°	140°	140°			
CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE			
.8661	.9449	1.0236	1.1024	1.1811	1.2598			
.9409	1.0197	1.0984	1.1772	1.2559	1.3346			
A36	A37	A38	A39	A30	A31			
						3XD	5XD	8XD


ISO	VDI 3323	Y221H	Y241H	Y261H	Y281H	Y301H	Y321H	ZD*3	ZD*5	ZD*8
P	1	◎	◎	◎	◎	◎	◎			
	2	◎	◎	◎	◎	◎	◎			
	3	◎	◎	◎	◎	◎	◎			
	4	◎	◎	◎	◎	◎	◎			
	5	◎	◎	◎	◎	◎	◎			
	6	◎	◎	◎	◎	◎	◎			
	7	◎	◎	◎	◎	◎	◎			
	8	◎	◎	◎	◎	◎	◎			
	9	◎	◎	◎	◎	◎	◎			
	10	◎	◎	◎	◎	◎	◎			
	11	◎	◎	◎	◎	◎	◎			
M	12									
	13									
	14									
K	15	○	○	○	○	○	○			
	16	○	○	○	○	○	○			
	17	○	○	○	○	○	○			
	18	○	○	○	○	○	○			
	19	○	○	○	○	○	○			
	20	○	○	○	○	○	○			
N	21									
	22									
	23									
	24									
	25									
	26									
	27									
	28									
	29									
	30									
S	31									
	32									
	33									
	34									
	35									
	36									
	37									
H	38									
	39									
	40									
	41									

CARBIDE
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DREAM DRILLS -GENERAL
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HOLEMAKING TOOLS

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○ : Good

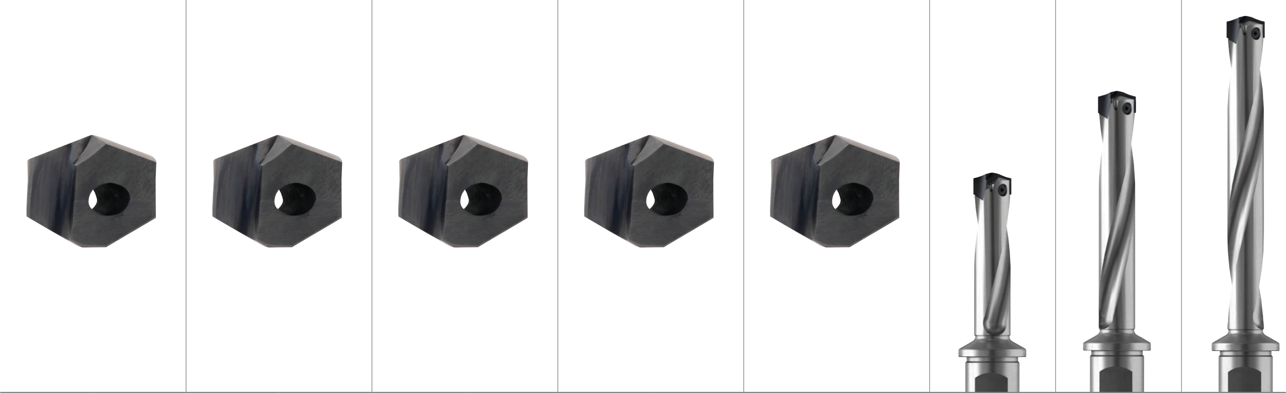
I-DREAM DRILLS (INSERTS)

SERIES	Y03A	YI3A	Y03B	YI3B	Y03C	YI3C	Y03D	YI3D	Y03E	YI3E
TYPE	A		B		C		D		E	
TOOL MATERIAL	CARBIDE		CARBIDE		CARBIDE		CARBIDE		CARBIDE	
SIZE MIN	12.00		14.00		16.00		18.00		20.00	
SIZE MAX	35/64		5/8		45/64		25/32		55/64	
PAGE	A50		A50~A52				A50~A52		A53	
SURFACE TREATMENT	TiAlN	TiCN	TiAlN	TiCN	TiAlN	TiCN	TiAlN	TiCN	TiAlN	TiCN

ISO	VDI 3323	Material Description	HB	HRc	Y03A	YI3A	Y03B	YI3B	Y03C	YI3C	Y03D	YI3D	Y03E	YI3E
P	1	Non-alloy steel	125		◎	○	◎	○	◎	○	◎	○	◎	○
	2		190	13	◎	○	◎	○	◎	○	◎	○	◎	○
	3		250	25	◎	○	◎	○	◎	○	◎	○	◎	○
	4		270	28	◎	○	◎	○	◎	○	◎	○	◎	○
	5		300	32	◎		◎		◎		◎		◎	
	6	Low alloy steel	180	10	◎	○	◎	○	◎	○	◎	○	◎	○
	7		275	29	◎	○	◎	○	◎	○	◎	○	◎	○
	8		300	32	◎		◎		◎		◎		◎	
	9		350	38	◎		◎		◎		◎		◎	
	10	High alloyed steel, and tool steel	200	15	◎	○	◎	○	◎	○	◎	○	◎	○
	11		325	35	◎		◎		◎		◎		◎	
M	12	Stainless steel	200	15		◎		◎		◎		◎		◎
	13		240	23		◎		◎		◎		◎		◎
	14		180	10		◎		◎		◎		◎		◎
K	15	Grey cast iron	180	10	○		○		○		○		○	
	16		260	26	○		○		○		○		○	
	17	Nodular cast iron	160	3	○		○		○		○		○	
	18		250	25	○		○		○		○		○	
	19	Malleable cast iron	130		○		○		○		○		○	
	20		230	21										
N	21	Aluminum-wrought alloy	60			○		○		○		○		○
	22		100			○		○		○		○		○
	23	Aluminum-cast, alloyed	75			○		○		○		○		○
	24		90			○		○		○		○		○
	25		130			○		○		○		○		○
	26	Copper and Copper Alloys (Bronze / Brass)	110			○		○		○		○		○
	27		90			○		○		○		○		○
	28		100			○		○		○		○		○
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.												
	30													
S	31	Heat Resistant Super Alloys	200	15										
	32		280	30										
	33		250	25										
	34		350	38										
	35		320	34										
	36	Titanium Alloys	400 Rm											
	37		1050 Rm											
H	38	Hardened steel	550	55										
	39		630	60										
	40	Chilled Cast Iron	400	42										
	41	Hardened Cast Iron	550	55										

I-DREAM DRILLS (INSERTS) / I-DREAM DRILLS (HOLDER)

SERIES	Y03F	YI3F	Y03G	YI3G	Y03H	YI3H	Y03I	YI3I	Y03J	YI3J	Z*03	Z*05	Z*07
TYPE	F		G		H		I		J				
TOOL MATERIAL	CARBIDE		CARBIDE		CARBIDE		CARBIDE		CARBIDE				
SIZE MIN	22.00		24.00		26.00		28.00		30.00				
SIZE MAX	15/16		1-1/64		1-3/32		1-11/64		1-1/4				
PAGE	A53		A54				A55						
SURFACE TREATMENT	TiAlN	TiCN	TiAlN	TiCN	TiAlN	TiCN	TiAlN	TiCN	TiAlN	TiCN	3XD	5XD	7XD



ISO	VDI 3323	Y03F	YI3F	Y03G	YI3G	Y03H	YI3H	Y03I	YI3I	Y03J	YI3J	Z*03	Z*05	Z*07
P	1	◎	○	◎	○	◎	○	◎	○	◎	○			
	2	◎	○	◎	○	◎	○	◎	○	◎	○			
	3	◎	○	◎	○	◎	○	◎	○	◎	○			
	4	◎	○	◎	○	◎	○	◎	○	◎	○			
	5	◎		◎		◎		◎		◎				
	6	◎	○	◎	○	◎	○	◎	○	◎	○			
	7	◎	○	◎	○	◎	○	◎	○	◎	○			
	8	◎		◎		◎		◎		◎				
	9	◎		◎		◎		◎		◎				
	10	◎	○	◎	○	◎	○	◎	○	◎	○			
	11	◎		◎		◎		◎		◎				
M	12		◎		◎		◎		◎		◎			
	13		◎		◎		◎		◎		◎			
	14		◎		◎		◎		◎		◎			
K	15	○		○		○		○		○				
	16	○		○		○		○		○				
	17	○		○		○		○		○				
	18	○		○		○		○		○				
	19	○		○		○		○		○				
	20													
N	21		○		○		○		○		○			
	22		○		○		○		○		○			
	23		○		○		○		○		○			
	24		○		○		○		○		○			
	25		○		○		○		○		○			
	26		○		○		○		○		○			
	27		○		○		○		○		○			
	28		○		○		○		○		○			
	29													
	30													
S	31													
	32													
	33													
	34													
	35													
	36													
	37													
H	38													
	39													
	40													
	41													

CARBIDE
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SPADE DRILLS

SERIES	1~8	Y,Z,0,1~8	Y,Z,0,1,2	Y,Z,0,1~3	Y,Z,0,1~3
POINT	STANDARD				
TOOL MATERIAL	HSS(M4)	SUPER COBALT(T15)	PREMIUM COBALT(M48)	CARBIDE(K20)	CARBIDE(P40)
SIZE MIN	.3740 (#1)	.3740 (#Y)	.3740 (#Y)	.3740 (#Y)	.3740 (#Y)
SIZE MAX	4.5000 (#8)	4.5000 (#8)	1.3780 (#2)	1.8750 (#3)	1.3780 (#3)
PAGE	A282~A285	A286~A292	A293~A295	A296~A300	
SURFACE TREATMENT	TiN/TiAlN/Hardslick			TiN/TiAlN	

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◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	1~8	Y,Z,0,1~8	Y,Z,0,1,2	Y,Z,0,1~3 (K20)	Y,Z,0,1~3 (P40)
P	1	Non-alloy steel	125		○	◎	◎	○	◎
	2		190	13	○	◎	◎	○	◎
	3		250	25	○	◎	◎	○	◎
	4		270	28	○	◎	◎	○	◎
	5		300	32					
	6	Low alloy steel	180	10	○	◎	◎	○	◎
	7		275	29	○	◎	◎	○	◎
	8		300	32		○	◎	○	◎
	9		350	38		○	◎	○	◎
	10	High alloyed steel, and tool steel	200	15		○	◎	○	◎
	11		325	35		○	◎	○	◎
M	12	Stainless steel	200	15		○	○	◎	○
	13		240	23		○	○	◎	○
	14		180	10		○	○	◎	○
K	15	Grey cast iron	180	10	◎	○	○	○	○
	16		260	26	○	◎	◎	○	○
	17	Nodular cast iron	160	3	◎	○	○	○	○
	18		250	25	○	◎	◎	○	○
	19	Malleable cast iron	130		◎	○	○	○	○
	20		230	21	○	◎	◎	○	○
N	21	Aluminum-wrought alloy	60		◎	○	○	◎	○
	22		100		◎	○	○	◎	○
	23	Aluminum-cast, alloyed	75						
	24		90						
	25		130						
	26	Copper and Copper Alloys (Bronze / Brass)	110						
	27		90		◎	○	○	◎	○
	28		100						
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.							
	30								
S	31	Heat Resistant Super Alloys	200	15		◎	◎	◎	○
	32		280	30		○	◎	◎	○
	33		250	25		○	◎	◎	○
	34		350	38		○	◎	◎	○
	35		320	34		○	◎	◎	○
	36	Titanium Alloys	400 Rm						
	37		1050 Rm						
H	38	Hardened steel	550	55		○	◎	○	◎
	39		630	60					
	40	Chilled Cast Iron	400	42					
	41	Hardened Cast Iron	550	55					

SPADE DRILLS

SERIES	Y,Z,0,1~2	Y,Z,0,1~8	Y,Z,0,1~3	Y,Z,0,1,2	Y,Z,0,1~8	Y,Z,0,1~8	Y,Z,0,1~3
POINT	STANDARD	SM-POINT	SM-POINT	FLAT BOTTOM	SV-POINT	SV-POINT	SV-POINT
TOOL MATERIAL	CARBIDE(K10)	SUPER COBALT(T15)	CARBIDE(P40)	SUPER COBALT(T15)	SUPER COBALT(T15)	PREMIUM COBALT(M48)	CARBIDE(P40)
SIZE MIN	.3740 (#Y)	.3740(#Y)	.3740(#Y)	.3740(#Y)	.3740(#Y)	.3740(#Y)	.3740(#Y)
SIZE MAX	1.3780 (#2)	4.5000 (#8)	1.8750 (#3)	1.3780 (#2)	4.5000 (#8)	4.5000 (#8)	1.8750 (#3)
PAGE	A296~A300	A302~A307		A308	A310~A320	A321~A331	A332~336
SURFACE TREATMENT	TiN/TiAlN	TiAlN		TiN/TiAlN	Hardslick/H-Coating		

VDI 3323	Y,Z,0,1~2 STANDARD	Y,Z,0,1~8 SM-POINT	Y,Z,0,1~3 SM-POINT	Y,Z,0,1,2 FLAT BOTTOM	Y,Z,0,1~8 SV-POINT (T15)	Y,Z,0,1~8 SV-POINT (M48)	Y,Z,0,1~3 SV-POINT	ISO
1		◎	◎	◎	◎	◎	◎	P
2		◎	◎	◎	◎	◎	◎	
3		◎	◎	◎	◎	◎	◎	
4		◎	◎	◎	◎	◎	◎	
5								
6		◎	◎	◎	◎	◎	◎	
7		◎	◎	◎	◎	◎	◎	
8		○	◎	○	○	◎	◎	
9		○	◎	○	○	◎	◎	
10		○	◎	○	○	◎	◎	
11		○	◎	○	○	◎	◎	
12		○	○	○	○	○	○	M
13		○	○	○	○	○	○	
14		○	○	○	○	○	○	
15	◎	○	○	○	○	○	○	K
16	◎	◎	○	◎	◎	◎	○	
17	◎	○	○	○	○	○	○	
18	◎	◎	○	◎	◎	◎	○	
19	◎	○	○	○	○	○	○	
20	◎	◎	○	◎	◎	◎	○	
21		○	○	○	○	○	○	N
22		○	○	○	○	○	○	
23								
24								
25								
26								
27		○	○	○	○	○	○	
28								
29								
30								
31		◎	○	◎	◎	◎	○	S
32		○	○	○	○	◎	○	
33		○	○	○	○	◎	○	
34		○	○	○	○	◎	○	
35		○	○	○	○	◎	○	
36								
37								
38		○	◎	○	○	◎	◎	H
39-1								
40								
41								

CARBIDE
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i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
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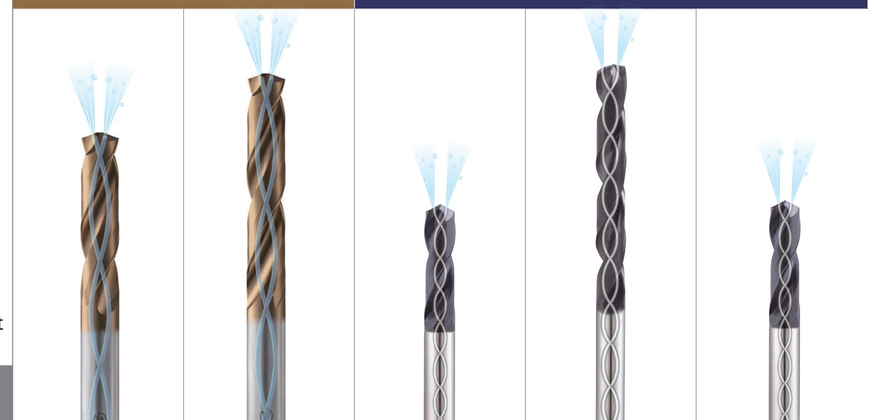
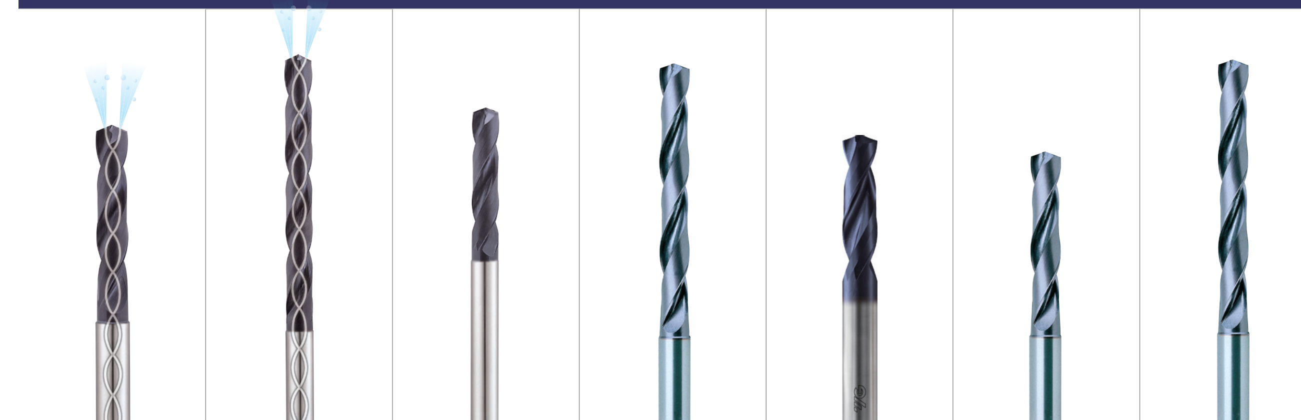
HOLEMAKING TOOLS

	DREAM DRILLS PRO		DREAM DRILLS GENERAL			DREAM DRILLS GENERAL						
SERIES	DGN506	DGN508	DH416 DH711	DH418 DH712	DH406	DH408	DH421	DH414	DH722	DH404	DH423	DH424
DRILLING DEPTH	3XD	3XD	3XD	5XD	3XD	5XD	8×D	3XD	5XD	3XD	3XD	5XD
TOOL MATERIAL	SOLID CARBIDE					SOLID CARBIDE						
LENGTH	SHORT	LONG	SHORT	LONG	SHORT	LONG	EXTRA LONG	STUB	LONG	STUB	SHORT	LONG
SIZE MIN	D3.0	D1.0	D1/8	D13/64	D3.0	D1.0	D3.0	D1/8	D13/64	D3.0	D3.0	D1.0
SIZE MAX	D20.0	D20.0	D5/8	D1/2	D20.0	D20.0	D20.0	D5/8	D1/2	D20.0	D20.0	D20.0
PAGE	A63	A67	A76	A78	A79	A83	A87	A91	A92	A93	A95	A99
SURFACE TREATMENT	Z-Coating		TiAlN			TiAlN						





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◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	DGN506	DGN508	DH416 DH711	DH418 DH712	DH406	DH408	DH421	DH414	DH722	DH404	DH423	DH424
P	1	Non-alloy steel	125													
	2		190	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3		250	25	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	4		270	28	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5		300	32	○	○	○	○	○	○	○	○	○	○	○	○
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7		275	29	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8		300	32	○	○	○	○	○	○	○	○	○	○	○	○
	9		350	38	○	○	○	○	○	○	○	○	○	○	○	○
	10	High alloyed steel, and tool steel	200	15	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	11		325	35	○	○	○	○	○	○	○	○	○	○	○	○
M	12	Stainless steel	200	15	○	○	○	○	○	○	○	○	○	○	○	○
	13		240	23	○	○	○	○	○	○	○	○	○	○	○	○
	14		180	10												
K	15	Grey cast iron	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	16		260	26	○	○	○	○	○	○	○	○	○	○	○	○
	17	Nodular cast iron	160	3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	18		250	25	○	○	○	○	○	○	○	○	○	○	○	○
	19	Malleable cast iron	130		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	20		230	21	○	○	○	○	○	○	○	○	○	○	○	○
N	21	Aluminum-wrought alloy	60													
	22		100													
	23	Aluminum-cast, alloyed	75													
	24		90													
	25		130													
	26	Copper and Copper Alloys (Bronze / Brass)	110													
	27		90													
	28		100													
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.														
	30															
S	31	Heat Resistant Super Alloys	200	15												
	32		280	30												
	33		250	25												
	34		350	38												
	35		320	34												
	36	Titanium Alloys	400 Rm													
	37		1050 Rm													
H	38	Hardened steel	550	55												
	39		630	60	○			○	○	○		○	○	○	○	○
	40	Chilled Cast Iron	400	42												
	41	Hardened Cast Iron	550	55												

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HOLEMAKING TOOLS

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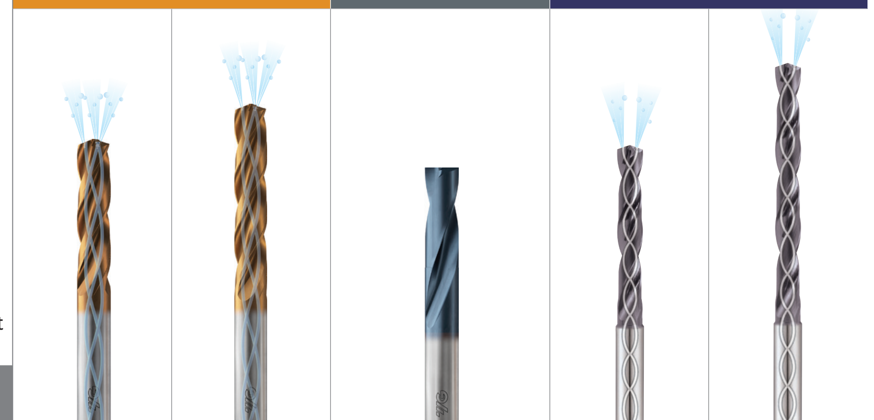
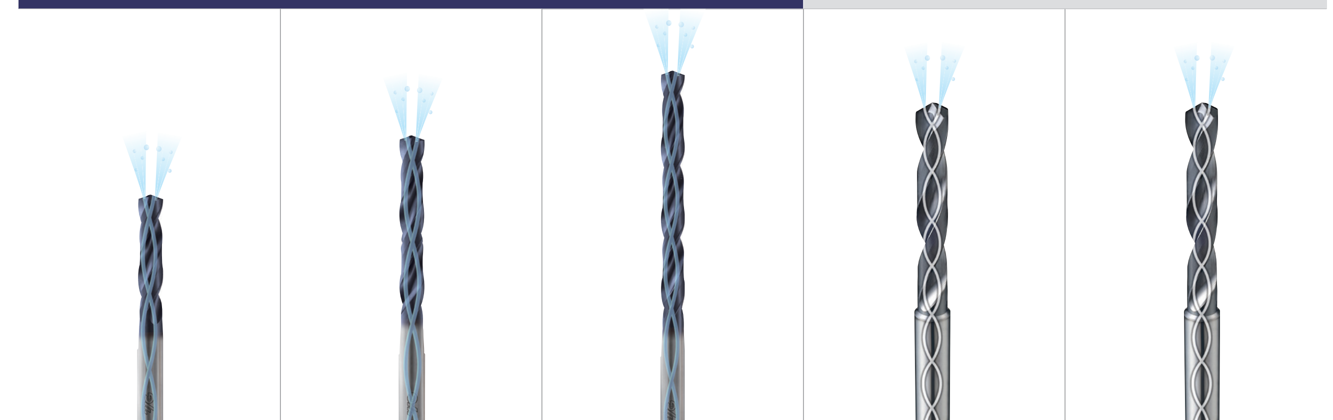
◎ : Excellent
○ : Good

	DREAM DRILLS HIGH FEED		DREAM DRILLS FLAT BOTTOM	DREAM DRILLS INOX		DREAM DRILLS INOX			DREAM DRILLS ALU	
SERIES	DGR493 DGR496	DGR495 DGR497	DPP447	DH463 DH714	DH464 DH715	DH451	DH452	DH453	DGE466 DGE718	DGE433
DRILLING DEPTH	3XD	5XD	2XD	3xD	5xD	3xD	5xD	8xD	5XD	
TOOL MATERIAL	SOLID CARBIDE		SOLID CARBIDE	SOLID CARBIDE		SOLID CARBIDE			SOLID CARBIDE	
LENGTH	SHORT	LONG	SHORT	STUB	LONG	SHORT	LONG	EXTRA LONG	LONG	
SIZE MIN	D13/64, D4.0	D13/64, D4.0	D3.0	D1/8	D13/64	D3.0	D1.0	D2.0	D13/64	D3.0
SIZE MAX	D3/4, D20.0	D3/4, D20.0	D20.0	D5/8	D1/2	D20.0	D20.0	D20.0	D1/2	D20.0
PAGE	A111	A115	A123	A131	A133	A134	A138	A143	A151	A152
SURFACE TREATMENT	H-Coating		X-Coating	TiAlN		TiAlN			DLC	





ISO	VDI 3323	Material Description	HB	HRc	DGR493 DGR496	DGR495 DGR497	DPP447	DH463 DH714	DH464 DH715	DH451	DH452	DH453	DGE466 DGE718	DGE433
P	1	Non-alloy steel	125				◎							
	2		190	13	◎	◎	◎	◎	◎	◎	◎	◎		
	3		250	25	◎	◎	◎	○	○	○	○	○		
	4		270	28	◎	◎	○							
	5		300	32	○	○	○							
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎	◎	◎		
	7		275	29	◎	◎	○	○	○	○	○	○		
	8		300	32	○	○	○							
	9		350	38	○	○	○							
	10	High alloyed steel, and tool steel	200	15	◎	◎								
	11		325	35	○	○								
M	12	Stainless steel	200	15			○	◎	◎	◎	◎	◎		
	13		240	23				◎	◎	◎	◎	◎		
	14		180	10				◎	◎	◎	◎	◎		
K	15	Grey cast iron	180	10	◎	◎	◎							
	16		260	26	○	○	○							
	17	Nodular cast iron	160	3	◎	◎								
	18		250	25	○	○								
	19	Malleable cast iron	130		◎	◎								
	20		230	21	○	○								
N	21	Aluminum-wrought alloy	60				○	◎	◎	◎	◎	◎	◎	◎
	22		100				○	◎	◎	◎	◎	◎	◎	◎
	23	Aluminum-cast, alloyed	75					○	○	○	○	○	◎	◎
	24		90					○	○	○	○	○	◎	◎
	25		130					○	○	○	○	○		
	26	Copper and Copper Alloys (Bronze / Brass)	110											
	27		90											
	28		100											
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.												
	30													
S	31	Heat Resistant Super Alloys	200	15										
	32		280	30										
	33		250	25										
	34		350	38										
	35		320	34										
	36	Titanium Alloys	400 Rm											
	37		1050 Rm					○	○	○	○	○		
H	38	Hardened steel	550	55										
	39		630	60										
	40	Chilled Cast Iron	400	42										
	41	Hardened Cast Iron	550	55										

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
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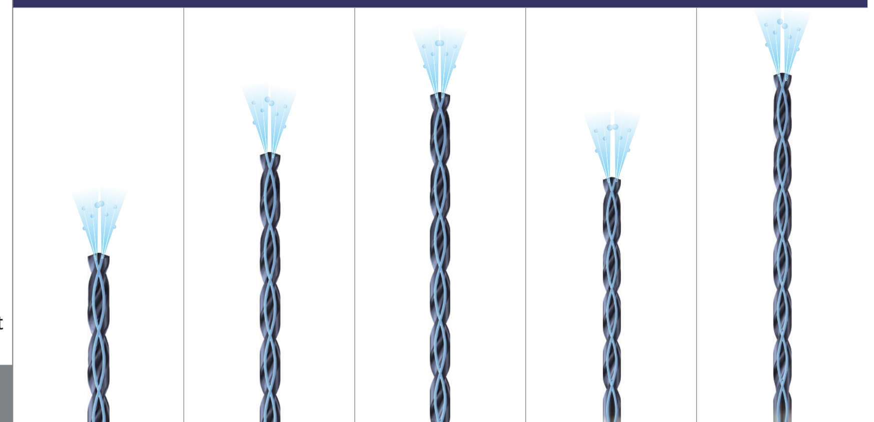
	DREAM DRILLS MQL TYPE				
SERIES	DH510	DH515	DH520	DHM10	DHM15
DRILLING DEPTH	10XD	15XD	20XD	10XD	15XD
TOOL MATERIAL	SOLID CARBIDE				
LENGTH	EXTRA LONG				
SIZE MIN	D3.0	D3.0	D3.0	D3.0	D3.0
SIZE MAX	D14.0	D14.0	D12.0	D14.0	D12.0
PAGE	A160	A163	A166	A168	A168
SURFACE TREATMENT	TiAlN				



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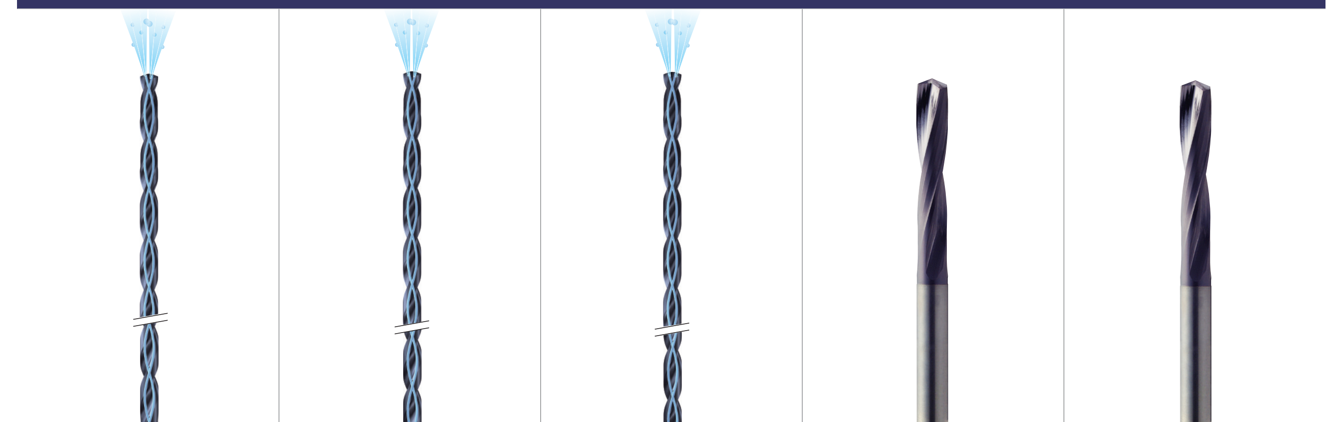
◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	DH510	DH515	DH520	DHM10	DHM15
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎
	2		190	13	◎	◎	◎	◎	◎
	3		250	25	○	○	○	○	○
	4		270	28					
	5		300	32					
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎
	7		275	29	○	○	○	○	○
	8		300	32	○	○	○	○	○
	9		350	38					
	10	High alloyed steel, and tool steel	200	15	○	○	○	○	○
	11		325	35	○	○	○	○	○
M	12	Stainless steel	200	15					
	13		240	23					
	14		180	10					
K	15	Grey cast iron	180	10	◎	◎	◎	◎	◎
	16		260	26	○	○	○	○	○
	17	Nodular cast iron	160	3	◎	◎	◎	◎	◎
	18		250	25	○	○	○	○	○
	19	Malleable cast iron	130		◎	◎	◎	◎	◎
	20		230	21	○	○	○	○	○
N	21	Aluminum-wrought alloy	60						
	22		100						
	23	Aluminum-cast, alloyed	75						
	24		90						
	25		130						
	26	Copper and Copper Alloys (Bronze / Brass)	110						
	27		90						
	28		100						
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.							
	30								
S	31	Heat Resistant Super Alloys	200	15					
	32		280	30					
	33		250	25					
	34		350	38					
	35		320	34					
	36	Titanium Alloys	400 Rm						
	37		1050 Rm						
H	38	Hardened steel	550	55					
	39		630	60					
	40	Chilled Cast Iron	400	42					
	41	Hardened Cast Iron	550	55					

	DREAM DRILLS MQL TYPE			DREAM DRILLS for HIGH HARDENED STEELS	
SERIES	DHM20	DHM25	DHM30	DH501	DH500
DRILLING DEPTH	20XD	25XD	30XD	3XD	
TOOL MATERIAL	SOLID CARBIDE			SOLID CARBIDE	
LENGTH	EXTRA LONG			SHORT	
SIZE MIN	D3.0	D3.0	D3.0	D1/8	D1.0
SIZE MAX	D12.0	D10.0	D8.0	D3/4	D14.0
PAGE	A169	A170	A172	A179	A181
SURFACE TREATMENT	TiAlN				



ISO	VDI 3323	DHM20	DHM25	DHM30	DH501	DH500
P	1	◎	◎	◎		
	2	◎	◎	◎		
	3	○	○	○		
	4					
	5					
	6	◎	◎	◎		
	7	○	○	○		
	8	○	○	○		
	9					
	10	○	○	○		
	11	○	○	○		
M	12					
	13					
	14					
K	15	◎	◎	◎		
	16	○	○	○		
	17	◎	◎	◎		
	18	○	○	○		
	19	◎	◎	◎		
	20	○	○	○		
N	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
S	31					
	32					
	33					
	34					
	35					
	36					
	37					
H	38				◎	◎
	39				◎	◎
	40					
	41					

CARBIDE
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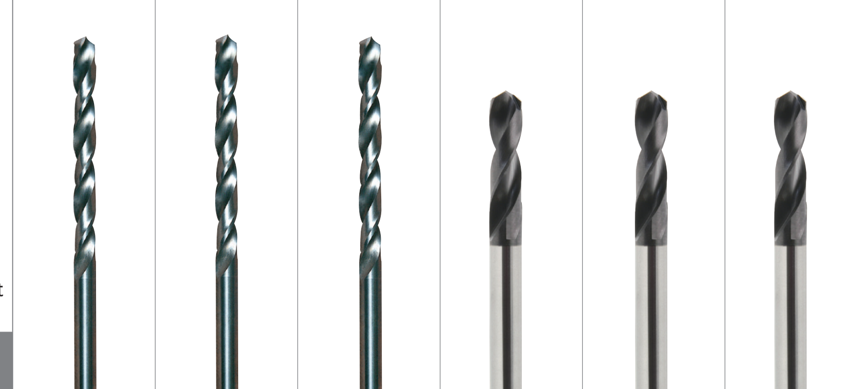
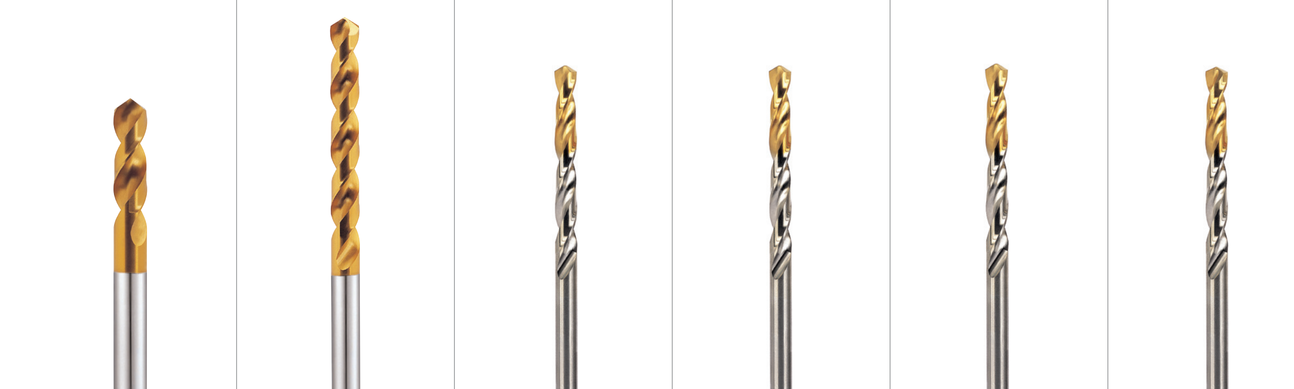
HOLEMAKING TOOLS

	STANDARD CARBIDE DRILLS			MULTI-1 DRILLS			HPD DRILLS		GOLD-P DRILLS			
SERIES	D5412 DH412	D5413 DH413	D5417 DH417	CDRA05	CDRA06	CDRA07	DJ543	DJ544	D1GP182 D8182	D1GP139	D1GP138	D2GP185
STANDARD	-	-	-	-	-	-	-	-	ANSI			
TOOL MATERIAL	SOLID CARBIDE			HSS-PM			HSS-E		HSS			HSSCo8
LENGTH	JOBBER			STUB			STUB	JOBBER	JOBBER			
SIZE MIN	#1	A	D3/64	D3/32	#45	B	D2.0	D2.0	D3/64	A	#56	D3/64
SIZE MAX	#60	Z	D1/2	D1/2	#1	Z	D13.0	D20.0	D3/4	Z	#1	D1/2
PAGE	A185	A186	A187	A191	A192	A193	A197	A199	A206	A208	A209	A210
SURFACE TREATMENT	Bright / TiAlN			TiAlN			TiN					





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◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	D5412 DH412	D5413 DH413	D5417 DH417	CDRA05	CDRA06	CDRA07	DJ543	DJ544	D1GP182 D8182	D1GP139	D1GP138	D2GP185
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎	◎	○	○	◎	◎	◎	◎
	2		190	13	○	○	○	◎	◎	◎			◎	◎	◎	◎
	3		250	25				○	○	○			◎	◎	◎	◎
	4		270	28									○	○	○	○
	5		300	32												
	6	Low alloy steel	180	10	○	○	○	◎	◎	◎			◎	◎	◎	◎
	7		275	29				○	○	○			○	○	○	○
	8		300	32				○	○	○			○	○	○	○
	9		350	38				○	○	○						
	10	High alloyed steel, and tool steel	200	15									○	○	○	○
	11		325	35												
M	12	Stainless steel	200	15	○	○	○	○	○	○	◎	◎	◎	◎	◎	◎
	13		240	23							○	○	○	○	○	○
	14		180	10				◎	◎	◎	◎	◎	○	○	○	○
K	15	Grey cast iron	180	10	○	○	○						○	○	○	○
	16		260	26									○	○	○	○
	17	Nodular cast iron	160	3									○	○	○	○
	18		250	25												
	19	Malleable cast iron	130										○	○	○	○
	20		230	21												
N	21	Aluminum-wrought alloy	60		◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○
	22		100		◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○
	23	Aluminum-cast, alloyed	75		◎	◎	◎	○	○	○			○	○	○	○
	24		90		◎	◎	◎	○	○	○						
	25		130													
	26	Copper and Copper Alloys (Bronze / Brass)	110								○	○				
	27		90													
	28		100													
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.											○	○	○	○
	30															
S	31	Heat Resistant Super Alloys	200	15												
	32		280	30												
	33		250	25												
	34		350	38												
	35		320	34												
	36	Titanium Alloys	400 Rm		○	○	○	○	○	○			○	○	○	○
	37		1050 Rm													
H	38	Hardened steel	550	55												
	39		630	60												
	40	Chilled Cast Iron	400	42												
	41	Hardened Cast Iron	550	55												

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
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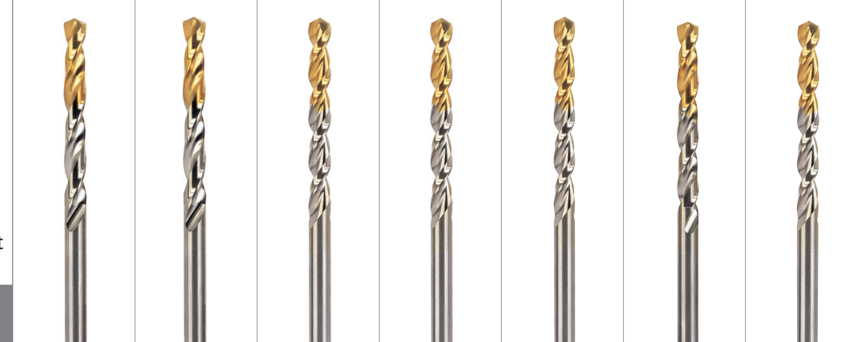
HOLEMAKING TOOLS

GOLD-P DRILLS

SERIES	D2GP186	D2GP187	DLGP195	DLGP511	DLGP512	DLGP513	DLGP506
STANDARD	ANSI		DIN338	ANSI			DIN338
TOOL MATERIAL	HSSCo8	HSSCo8	HSSCo5	HSSCo5	HSSCo5	HSSCo5	HSSCo5
LENGTH	JOBBER	JOBBER	JOBBER	JOBBER	JOBBER	JOBBER	JOBBER
SIZE MIN	A	#56	D5/64	A	#47	D1.0	D2.0
SIZE MAX	Z	#1	D1/2	Z	#1	D13.0	D13.0
PAGE	A211	A211	A214	A217	A218	A219	A220
SURFACE TREATMENT	TiN						



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◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	D2GP186	D2GP187	DLGP195	DLGP511	DLGP512	DLGP513	DLGP506
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎	◎	◎
	2		190	13	◎	◎	◎	◎	◎	◎	◎
	3		250	25	◎	◎	◎	◎	◎	◎	◎
	4		270	28	○	○	○	○	○	○	○
	5		300	32							
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎	◎
	7		275	29	○	○	○	○	○	○	○
	8		300	32	○	○	○	○	○	○	○
	9		350	38							
	10	High alloyed steel, and tool steel	200	15	○	○	○	○	○	○	○
	11		325	35							
M	12	Stainless steel	200	15	◎	◎	◎				
	13		240	23	○	○	○				
	14		180	10	○	○	○				
K	15	Grey cast iron	180	10	○	○	○	○	○	○	○
	16		260	26	○	○	○	○	○	○	○
	17	Nodular cast iron	160	3	○	○	○	○	○	○	○
	18		250	25				○	○	○	○
	19	Malleable cast iron	130		○	○	○	○	○	○	○
	20		230	21				○	○	○	○
N	21	Aluminum-wrought alloy	60		○	○	○				
	22		100		○	○	○				
	23	Aluminum-cast, alloyed	75		○	○	○				
	24		90								
	25		130								
	26	Copper and Copper Alloys (Bronze / Brass)	110								
	27		90								
	28		100								
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.			○	○	○				
	30										
S	31	Heat Resistant Super Alloys	200	15							
	32		280	30							
	33		250	25							
	34		350	38							
	35		320	34							
	36	Titanium Alloys	400 Rm		○	○	○				
	37		1050 Rm								
H	38	Hardened steel	550	55							
	39		630	60							
	40	Chilled Cast Iron	400	42							
	41	Hardened Cast Iron	550	55							

STRAIGHT SHANK DRILLS

	D1118	D1115	D1119	D2146 D4146		D2147 D4147		D2148 D4148	
STANDARD	ANSI								
TOOL MATERIAL	HSS			HSSCo8					
LENGTH	SCREW MACHINE								
SIZE MIN	D3/64	A	#60	D3/64		A		#60	
SIZE MAX	D1/2	Z	#1	D1/2		Z		#1	
PAGE	A228	A229	A230	A231		A232		A233	
SURFACE TREATMENT	Coloring			Bright	TiN	Bright	TiN	Bright	TiN

VDI 3323	D1118	D1115	D1119	D2146 D4146	D2147 D4147	D2148 D4148	ISO
1	◎	◎	◎	◎	◎	◎	P
2	◎	◎	◎	◎	◎	◎	
3	◎	◎	◎	◎	◎	◎	
4	○	○	○	○	○	○	
5							
6	◎	◎	◎	◎	◎	◎	
7	○	○	○	○	○	○	
8	○	○	○	○	○	○	
9							
10	○	○	○	○	○	○	
11							
12	◎	◎	◎	◎	◎	◎	M
13	○	○	○	○	○	○	
14	○	○	○	○	○	○	
15	○	○	○	○	○	○	K
16	○	○	○	○	○	○	
17	○	○	○	○	○	○	
18					○	○	
19	○	○	○	○	○	○	
20					○	○	
21	○	○	○	○	○	○	N
22	○	○	○	○	○	○	
23	○	○	○	○	○	○	
24							
25							
26							
27							
28							
29	○	○	○	○	○	○	
30							
31							S
32							
33							
34							
35							
36	○	○	○	○	○	○	
37							
38							H
39							
40							
41							

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
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AIRCRAFT DRILLS
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STRAIGHT SHANK DRILLS

SERIES	DN514	DN516	DN515	DL517 DX517	D4107
STANDARD	ANSI				DIN897
TOOL MATERIAL	HSSCo5	HSSCo5	HSSCo5	HSSCo5	HSSCo8
LENGTH	SCREW MACHINE	SCREW MACHINE	SCREW MACHINE	TAPER	STUB
SIZE MIN	D3/32	A	#47	D5/64	D1.0
SIZE MAX	D1/2	Z	#1	D1/2	D31.0
PAGE	A235	A236	A237	A238	A239
SURFACE TREATMENT	TiN	TiN	TiN	Bright / TiCN	TiN

AIRCRAFT DRILLS

SERIES	DL601 DL604	DL602 DL605	DL603 DL606	D1631 D1634	D1632 D1635	D1633 D1636
STANDARD	NAS907					
TOOL MATERIAL	HSSCo5	HSSCo5	HSSCo5	HSS	HSS	HSS
LENGTH	EXTENTION					
SIZE MIN	D5/64	A	#43	D3/32	A	#47
SIZE MAX	D1/2	Z	#1	D1/2	Z	#1
PAGE	A248	A249	A250	A251	A252	A253
SURFACE TREATMENT	Coloring	Coloring	Coloring	Steam Oxide	Steam Oxide	Steam Oxide

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◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	DN514	DN516	DN515	DL517 DX517	D4107	DL601 DL604	DL602 DL605	DL603 DL606	D1631 D1634	D1632 D1635	D1633 D1636
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	2		190	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3		250	25	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	4		270	28	○	○	○	○	○	○	○	○	○	○	○
	5		300	32											
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7		275	29	○	○	○	○	○	○	○	○	○	○	○
	8		300	32	○	○	○	○	○	○	○	○	○	○	○
	9		350	38											
	10	High alloyed steel, and tool steel	200	15	○	○	○	○	○	○	○	○	○	○	○
	11		325	35											
M	12	Stainless steel	200	15					◎	◎	◎	◎	◎	◎	◎
	13		240	23					○	○	○	○	○	○	○
	14		180	10					○	○	○	○	○	○	○
K	15	Grey cast iron	180	10	○	○	○	○	○	○	○	○	○	○	○
	16		260	26	○	○	○	○	○	○	○	○	○	○	○
	17	Nodular cast iron	160	3	○	○	○	○	○	○	○	○	○	○	○
	18		250	25	○	○	○	○	○						
	19	Malleable cast iron	130		○	○	○	○	○	○	○	○	○	○	○
	20		230	21	○	○	○	○	○						
N	21	Aluminum-wrought alloy	60						○	○	○	○	○	○	○
	22		100						○	○	○	○	○	○	○
	23	Aluminum-cast, alloyed	75						○	○	○	○	○	○	○
	24		90												
	25		130												
	26	Copper and Copper Alloys (Bronze / Brass)	110												
	27		90												
	28		100												
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.							○	○	○	○	○	○	○
	30														
S	31	Heat Resistant Super Alloys	200	15											
	32		280	30											
	33		250	25											
	34		350	38											
	35		320	34											
	36	Titanium Alloys	400 Rm						○	○	○	○	○	○	○
	37		1050 Rm												
H	38	Hardened steel	550	55											
	39		630	60											
	40	Chilled Cast Iron	400	42											
	41	Hardened Cast Iron	550	55											

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
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◎ : Excellent
○ : Good

					SILVER & DEMING DRILLS	MORSE TAPER SHANK DRILLS	NC SPOTTING DRILLS				COMBINATION DRILL & COUNTER SINK		
				SERIES	D1191	D1211	D5321	D5322	D2N90		D1C90	D5331	D5332
				STANDARD	ANSI	ANSI	-	-	-	-	-	-	-
				TOOL MATERIAL	HSS	HSS	CARBIDE	CARBIDE	HSSCo8	HSSCo8	HSS	CARBIDE	
				POINT ANGLE/LENGTH/FORM TYPE	118°	JOBBER	90°	120°	90°	120°	FORM A	FORM A	FORM B
				SIZE MIN	D1/2	D1/2	D1/8	D1/8	D1/8	D1/8	D3/64	D3/64	D3/64
				SIZE MAX	D1-1/2	D2-1/2	D3/4	D3/4	D1"	D1"	D7/32	D5/16	D5/16
				PAGE	A259	A263	A269		A270		A275	A276	
				SURFACE TREATMENT	BLACK & GOLD	Steam Tempered	Bright						
ISO	VDI 3323	Material Description	HB	HRc									
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎	◎	◎	◎	◎
	2		190	13	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3		250	25	◎	◎	◎	◎	◎	◎	○	○	○
	4		270	28	○	○							
	5		300	32									
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7		275	29	○	○	○	○	○	○	○	○	○
	8		300	32	○	○					○	○	○
	9		350	38							○	○	○
	10	High alloyed steel, and tool steel	200	15	○	○							
	11		325	35									
M	12	Stainless steel	200	15	◎	◎	○	○	○	○	○	○	○
	13		240	23	○	○							
	14		180	10							◎	◎	◎
K	15	Grey cast iron	180	10	○	○	◎	◎	◎	◎			
	16		260	26	○	○	○	○	○	○			
	17	Nodular cast iron	160	3	○	○	○	○	○	○			
	18		250	25	○								
	19	Malleable cast iron	130		○	○	○	○	○	○			
	20		230	21	○								
N	21	Aluminum-wrought alloy	60		○	○	○	○	○	○	◎	◎	◎
	22		100		○	○	○	○	○	○	◎	◎	◎
	23	Aluminum-cast, alloyed	75		○	○	○	○	○	○	○	○	○
	24		90								○	○	○
	25		130										
	26	Copper and Copper Alloys (Bronze / Brass)	110										
	27		90										
	28		100										
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.			○	○							
	30												
S	31	Heat Resistant Super Alloys	200	15									
	32		280	30									
	33		250	25									
	34		350	38									
	35		320	34									
	36	Titanium Alloys	400 Rm		○	○			○	○	○	○	○
	37		1050 Rm										
H	38	Hardened steel	550	55									
	39		630	60									
	40	Chilled Cast Iron	400	42									
	41	Hardened Cast Iron	550	55									

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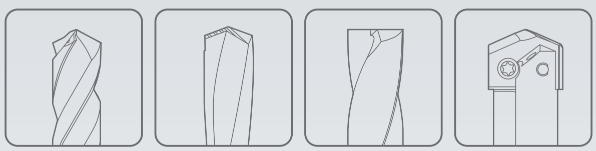
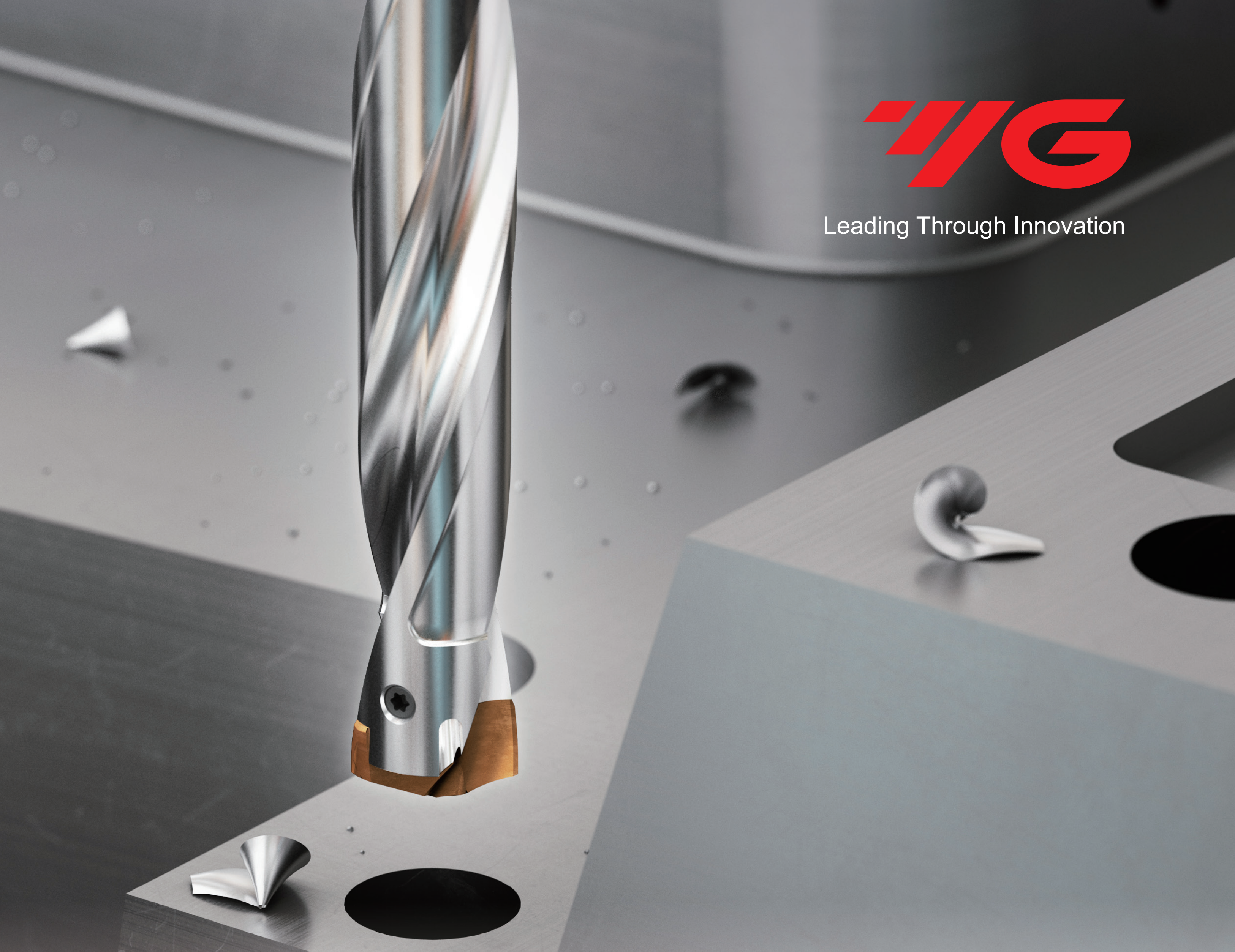
◎ : Excellent
○ : Good

					REAMERS				REAMERS					
				SERIES	K6106	K6101/K6105	K6103	K6102	K9106	K9101	K9103	K9102	K9104	K9107
				FLUTE TYPE	Straight Flute				Straight Flute					
				TOOL MATERIAL	HSS	HSS	HSS	HSS	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE
				CUTTING DIRECTION	Right Hand Cut				Right Hand Cut					
				SIZE MIN	.0135				.0280					.0355
				SIZE MAX	.7500				.6299					.5020
				PAGE	A354~A362				A363~A368					A369~A389
				SURFACE TREATMENT	Bright				Bright					
ISO	VDI 3323	Material Description	HB	HRc										
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	2		190	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3		250	25	○	○	○	○	◎	◎	◎	◎	◎	◎
	4		270	28	○	○	○	○	○	○	○	○	○	○
	5		300	32					○	○	○	○	○	○
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7		275	29	○	○	○	○	◎	◎	◎	◎	◎	◎
	8		300	32					○	○	○	○	○	○
	9		350	38										
	10	High alloyed steel, and tool steel	200	15	○	○	○	○	○	○	○	○	○	○
	11		325	35										
M	12	Stainless steel	200	15	○	○	○	○	○	○	○	○	○	○
	13		240	23	○	○	○	○	○	○	○	○	○	○
	14		180	10	○	○	○	○	○	○	○	○	○	○
K	15	Grey cast iron	180	10	○	○	○	○	◎	◎	◎	◎	◎	◎
	16		260	26	○	○	○	○	○	○	○	○	○	○
	17	Nodular cast iron	160	3	○	○	○	○	◎	◎	◎	◎	◎	◎
	18		250	25	○	○	○	○	○	○	○	○	○	○
	19	Malleable cast iron	130		○	○	○	○	◎	◎	◎	◎	◎	◎
	20		230	21	○	○	○	○	○	○	○	○	○	○
N	21	Aluminum-wrought alloy	60		○	○	○	○	○	○	○	○	○	○
	22		100		○	○	○	○	○	○	○	○	○	○
	23	Aluminum-cast, alloyed	75		○	○	○	○	○	○	○	○	○	○
	24		90		○	○	○	○	○	○	○	○	○	○
	25		130											
	26	Copper and Copper Alloys (Bronze / Brass)	110		○	○	○	○	○	○	○	○	○	○
	27		90		○	○	○	○	○	○	○	○	○	○
	28		100		○	○	○	○	○	○	○	○	○	○
	29	Non Metallic Materials												
	30													
S	31	Heat Resistant Super Alloys	200	15										
	32		280	30										
	33		250	25										
	34		350	38										
	35		320	34										
	36	Titanium Alloys	400 Rm											
	37		1050 Rm											
H	38	Hardened steel	550	55										
	39		630	60										
	40	Chilled Cast Iron	400	42										
	41	Hardened Cast Iron	550	55										

Global Cutting Tool Leader YG-1



HOLEMAKING



Leading Through Innovation

CARBIDE INSERTS & HOLDERS

i- ONE DRILLS

- High Performance Exchangeable for General Steels and Cast Iron

SELECTION GUIDE

YG HOLEMAKING TOOLS

CARBIDE INSERTS & HOLDERS

i-ONE DRILLS

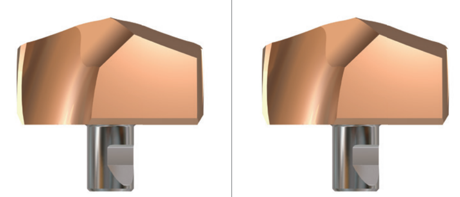
- High Performance Exchangeable for General Steels and Cast Iron

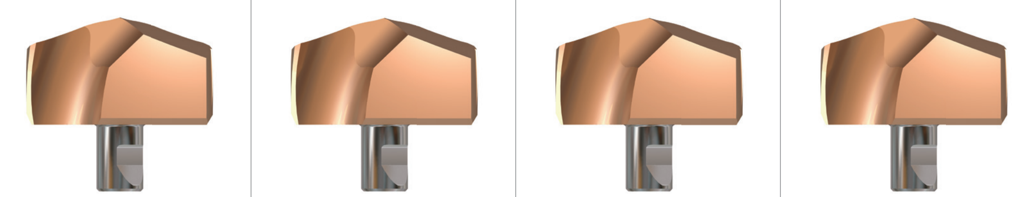
Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A42

SERIES	Y101H	Y121H	Y141H	Y161H	Y181H	Y201H	Y221H	Y241H	Y261H	Y281H	Y301H	Y321H	ZD*3	ZD*5	ZD*8
POINT ANGLE	140°	140°	140°	140°	140°	140°	140°	140°	140°	140°	140°	140°			
TOOL MATERIAL	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE			
SIZE MIN	.3937	.4724	.5512	.6299	.7087	.7874	.8661	.9449	1.0236	1.1024	1.1811	1.2598			
SIZE MAX	.4688	.5472	.6260	.7047	.7835	.8622	.9409	1.0197	1.0984	1.1772	1.2559	1.3346			
PAGE	A30	A31	A32	A33	A34	A35	A36	A37	A38	A39	A30	A31			
SURFACE TREATMENT	H-Coating				H-Coating								3XD	5XD	8XD





ISO	VDI 3323	Material Description	Composition / Structure	Heat Treatment	HB	HRc	Y101H	Y121H	Y141H	Y161H	Y181H	Y201H	Y221H	Y241H	Y261H	Y281H	Y301H	Y321H	ZD*3	ZD*5	ZD*8
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			
P	2		About 0.45% C	Annealed	190	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			
P	3		About 0.45% C	Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			
P	4		About 0.75% C	Annealed	270	28	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			
P	5		About 0.75% C	Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			
P	6	Low alloy steel		Annealed	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			
P	7			Quenched & Tempered	275	29	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			
P	8			Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			
P	9			Quenched & Tempered	350	38	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			
P	10	High alloyed steel, and tool steel		Annealed	200	15	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			
P	11			Quenched & Tempered	325	35	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15															
M	13		Martensitic	Quenched & Tempered	240	23															
M	14		Austenitic		180	10															
K	15	Grey cast iron	Pearlitic / ferritic		180	10	○	○	○	○	○	○	○	○	○	○	○	○			
K	16		Pearlitic (Martensitic)		260	26	○	○	○	○	○	○	○	○	○	○	○	○			
K	17	Nodular cast iron	Ferritic		160	3	○	○	○	○	○	○	○	○	○	○	○	○			
K	18		Pearlitic		250	25	○	○	○	○	○	○	○	○	○	○	○	○			
K	19	Malleable cast iron	Ferritic		130		○	○	○	○	○	○	○	○	○	○	○	○			
K	20		Pearlitic		230	21	○	○	○	○	○	○	○	○	○	○	○	○			
N	21	Aluminum-wrought alloy	Not Curable		60																
N	22		Curable	Hardened	100																
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75																
N	24		≤ 12% Si, Curable	Hardened	90																
N	25		> 12% Si, Not Curable		130																
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110																
N	27		CuZn, CuSnZn (Brass)		90																
N	28		CuSn, lead-free copper and electrolytic copper		100																
N	29	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)	Duroplastic, Fiber Reinforced Plastic																		
N	30		Rubber, Wood, etc.																		
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15															
S	32			Cured	280	30															
S	33		Ni or Co Based	Annealed	250	25															
S	34			Cured	350	38															
S	35			Cast	320	34															
S	36	Titanium Alloys	Pure Titanium		400 Rm																
S	37		Alpha + Beta Alloys	Hardened	1050 Rm																
H	38	Hardened steel		Hardened	550	55															
H	39			Hardened	630	60															
H	40	Chilled Cast Iron		Cast	400	42															
H	41	Hardened Cast Iron		Hardened	550	55															

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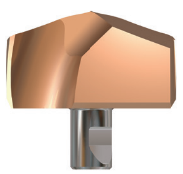
YG *i*-ONE DRILLS

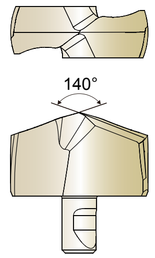
Y101H SERIES

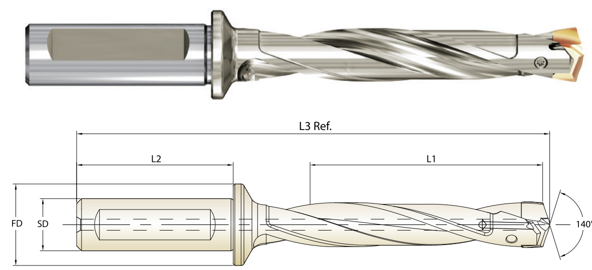
i-ONE DRILL INSERTS & HOLDERS

▶ Applications
- For carbon steels, alloy steels and cast iron
- Holder length: 3xD, 5xD, 8xD

▶ Benefits
- Secure and quick clamping system
- High performance with cost efficiency
- Multi-layered coating delivers outstanding productivity and reliability



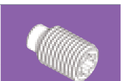




p.A42

Unit : Inch

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D. h7 dec.	frac.	mm	Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1		Overall Length L3 Ref.	Screw No.
S10 Ø10.00 TO Ø11.99	Y101H1000	.3937		10.00	ZD10003063 ZD10005063 ZD10008063	5/8	1-7/8	29/32	3D 5D 8D	1-15/64 2-1/16 3- 5/16	4-3/64 4-53/64 6-1/64	TX1011P5
	Y101H1010	.3976		10.10								
	Y101H1020	.4016		10.20								
	Y101H1030	.4055		10.30								
	Y101H1032	.4063	13/32	10.32								
	Y101H1040	.4094		10.40								
	Y101H1050	.4134		10.50	ZD10503063 ZD10505063 ZD10508063	5/8	1-7/8	29/32	3D 5D 8D	1-19/64 2-11/64 3-15/32	4-5/64 4-29/32 6-9/64	
	Y101H1060	.4173		10.60								
	Y101H1070	.4213		10.70								
	Y101H1072	.4219	27/64	10.72								
	Y101H1080	.4252		10.80								
	Y101H1090	.4291		10.90								
	Y101H1100	.4331		11.00	ZD11003063 ZD11005063 ZD11008063	5/8	1-7/8	29/32	3D 5D 8D	1-23/64 2-17/64 3-5/8	4-1/8 4-63/64 6-9/32	
	Y101H1110	.4370		11.10								
	Y101H1111	.4375	7/16	11.11								
	Y101H1120	.4409		11.20								
	Y101H1130	.4449		11.30								
	Y101H1140	.4488		11.40								
	Y101H1150	.4528		11.50	ZD11503063 ZD11505063 ZD11508063	5/8	1-7/8	29/32	3D 5D 8D	1-27/64 2-23/64 3-25/32	4-5/32 5-1/16 6-27/64	
	Y101H1151	.4531	29/64	11.51								
	Y101H1160	.4567		11.60								
	Y101H1170	.4606		11.70								
	Y101H1180	.4646		11.80								
	Y101H1190	.4685		11.90								
	Y101H1191	.4688	15/32	11.91								



▶ Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

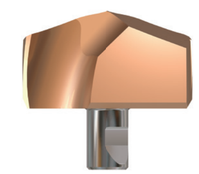
YG *i*-ONE DRILLS

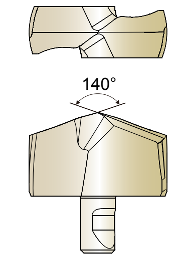
Y121H SERIES

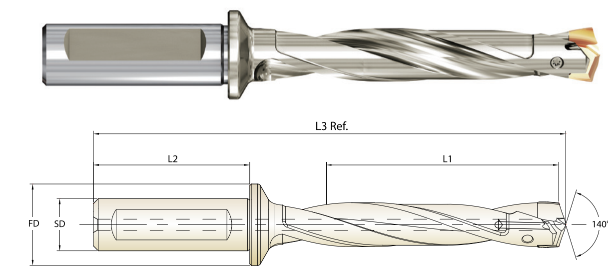
i-ONE DRILL INSERTS & HOLDERS

▶ Applications
- For carbon steels, alloy steels and cast iron
- Holder length: 3XD, 5XD, 8XD

▶ Benefits
- Secure and quick clamping system
- High performance with cost efficiency
- Multi-layered coating delivers outstanding productivity and reliability



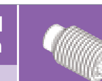




p.A42

Unit : Inch

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D. h7 dec.	frac.	mm	Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1		Overall Length L3 Ref.	Screw No.
S12 Ø12.00 TO Ø13.99	Y121H1200	.4724		12.00	ZD12003063 ZD12005063 ZD12008063	5/8	1-7/8	29/32	3D 5D 8D	1-15/32 2-29/64 3-15/16	4-5/16 5-8/32 6-43/64	TX1213P5
	Y121H1210	.4764		12.10								
	Y121H1220	.4803		12.20								
	Y121H1230	.4844	31/64	12.30								
	Y121H1240	.4882		12.40								
	Y121H1250	.4921		12.50	ZD12503063 ZD12505063 ZD12508063	5/8	1-7/8	29/32	3D 5D 8D	1-17/32 2-9/16 4-3/32	4-11/32 6-33/64 6-13/16	
	Y121H1260	.4961		12.60								
	Y121H1270	.5000	1/2	12.70								
	Y121H1280	.5039		12.80								
	Y121H1290	.5079		12.90								
	Y121H1300	.5118		13.00	ZD13003063 ZD13005063 ZD13008063	5/8	1-7/8	29/32	3D 5D 8D	1-19/32 2-21/32 4-1/4	4-27/64 5-29/64 6-63/64	
	Y121H1310	.5156	33/64	13.10								
	Y121H1320	.5197		13.20								
	Y121H1330	.5236		13.30								
	Y121H1340	.5276		13.40								
	Y121H1349	.5313	17/32	13.49								
	Y121H1350	.5315		13.50	ZD13503063 ZD13505063 ZD13508063	5/8	1-7/8	29/32	3D 5D 8D	1-21/32 2-3/4 4-13/32	4-15/32 5-17/32 7-1/8	
	Y121H1360	.5354		13.60								
	Y121H1370	.5394		13.70								
	Y121H1380	.5433		13.80								
	Y121H1389	.5469	35/64	13.89								
	Y121H1390	.5472		13.90								



▶ Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

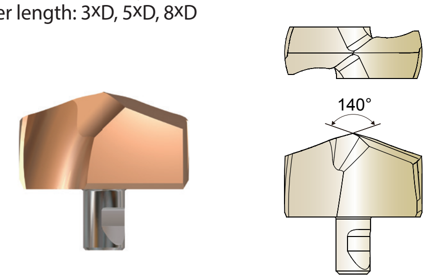
YG *i*-ONE DRILLS

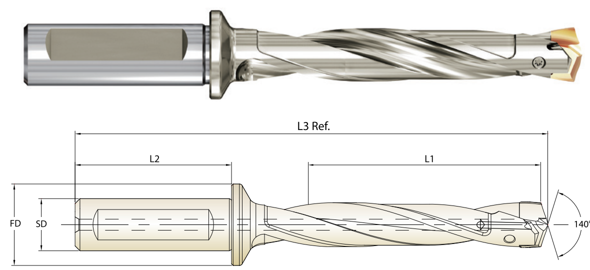
Y141H SERIES

i-ONE DRILL INSERTS & HOLDERS

▶ Applications
- For carbon steels, alloy steels and cast iron
- Holder length: 3XD, 5XD, 8XD

▶ Benefits
- Secure and quick clamping system
- High performance with cost efficiency
- Multi-layered coating delivers outstanding productivity and reliability





CARBIDE | ISO 9766 | h7 | 140° | H Coating | p.A42

Unit : Inch

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D. h7 dec.	frac.	mm	Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1		Overall Length L3 Ref.	Screw No.
S14 Ø14.00 TO Ø15.99	Y141H1400	.5512		14.00	ZD14003063 ZD14005063 ZD14008063	5/8	1-7/8	29/32	3D 5D 8D	1-23/32 2-55/64 4-9/16	4-9/16 5-43/64 7-5/16	TX1415P7
	Y141H1410	.5551		14.10								
	Y141H1420	.5591		14.20								
	Y141H1429	.5625	9/16	14.29								
	Y141H1430	.5630		14.30								
	Y141H1440	.5669		14.40								
	Y141H1450	.5709		14.50	ZD14503063 ZD14505063 ZD14508063	5/8	1-7/8	29/32	3D 5D 8D	1-49/64 2-61/64 4-23/32	4-41/64 5-25/32 7-1/2	
	Y141H1460	.5748		14.60								
	Y141H1468	.5781	37/64	14.68								
	Y141H1470	.5787		14.70								
	Y141H1480	.5827		14.80								
	Y141H1490	.5866		14.90								
	Y141H1500	.5906		15.00	ZD15003063 ZD15005063 ZD15008063	5/8	1-7/8	29/32	3D 5D 8D	1-53/64 3-3/64 4-7/8	4-23/32 5-29/32 7-43/64	
	Y141H1508	.5938	19/32	15.08								
	Y141H1510	.5945		15.10								
	Y141H1520	.5984		15.20								
	Y141H1530	.6024		15.30								
	Y141H1540	.6063		15.40								
	Y141H1548	.6094	39/64	15.48	ZD15503063 ZD15505063 ZD15508063	5/8	1-7/8	29/32	3D 5D 8D	1-57/64 3-5/32 5-3/64	4-49/64 5-63/64 7-13/16	
	Y141H1550	.6102		15.50								
	Y141H1560	.6142		15.60								
	Y141H1570	.6181		15.70								
	Y141H1580	.6220		15.80								
	Y141H1588	.6250	5/8	15.88								
	Y141H1590	.6260		15.90								

▶ Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

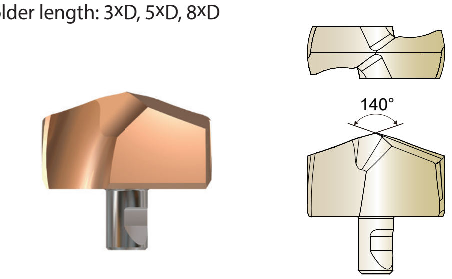
YG *i*-ONE DRILLS

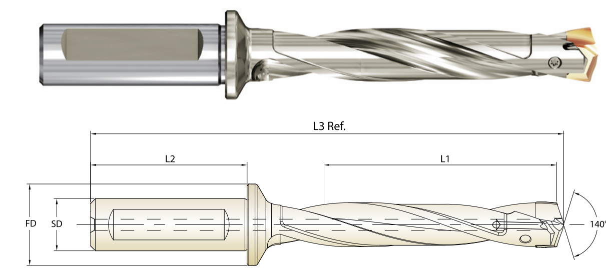
Y161H SERIES

i-ONE DRILL INSERTS & HOLDERS

▶ Applications
- For carbon steels, alloy steels and cast iron
- Holder length: 3XD, 5XD, 8XD

▶ Benefits
- Secure and quick clamping system
- High performance with cost efficiency
- Multi-layered coating delivers outstanding productivity and reliability





CARBIDE | ISO 9766 | h7 | 140° | H Coating | p.A42

Unit : Inch

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D. h7 dec.	frac.	mm	Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1		Overall Length L3 Ref.	Screw No.
S16 Ø16.00 TO Ø17.99	Y161H1600	.6299		16.00	ZD16003075 ZD16005075 ZD16008075	3/4	2	1	3D 5D 8D	2-1/64 3-11/32 5-23/64	5-1/32 6-21/64 8-9/32	TX1617P7
	Y161H1609	.6335		16.09								
	Y161H1610	.6339		16.10								
	Y161H1620	.6378		16.20								
	Y161H1627	.6406	41/64	16.27								
	Y161H1630	.6417		16.30								
	Y161H1640	.6457		16.40								
	Y161H1650	.6496		16.50								
	Y161H1660	.6535		16.60								
	Y161H1667	.6563	21/32	16.67								
	Y161H1670	.6575		16.70								
	Y161H1680	.6614		16.80								
	Y161H1690	.6654		16.90								
	Y161H1700	.6693		17.00	ZD17003075 ZD17005075 ZD17008075	3/4	2	1	3D 5D 8D	2-1/8 3-35/64 5-43/64	5-5/32 6-17/32 8-19/32	TX1718P7
	Y161H1707	.6719	43/64	17.07								
	Y161H1710	.6732		17.10								
	Y161H1720	.6772		17.20								
	Y161H1730	.6811		17.30								
	Y161H1740	.6850		17.40								
	Y161H1746	.6875	11/16	17.46								
	Y161H1750	.6890		17.50								
	Y161H1760	.6929		17.60								
	Y161H1770	.6969		17.70								
	Y161H1780	.7008		17.80								
	Y161H1786	.7031	45/64	17.86								
	Y161H1790	.7047		17.90								

▶ Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

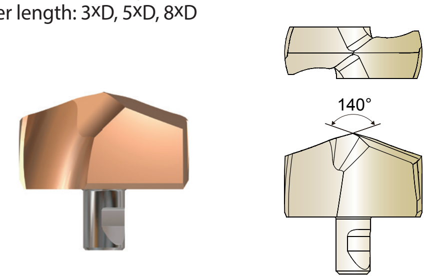
YG *i*-ONE DRILLS

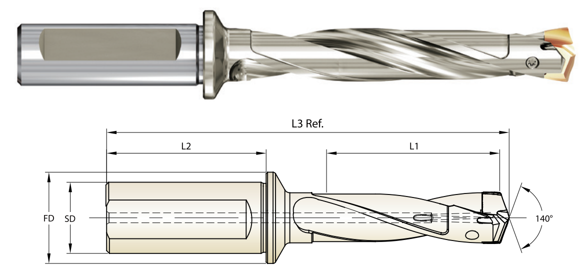
Y181H SERIES

i-ONE DRILL INSERTS & HOLDERS

▶ Applications
- For carbon steels, alloy steels and cast iron
- Holder length: 3×D, 5×D, 8×D

▶ Benefits
- Secure and quick clamping system
- High performance with cost efficiency
- Multi-layered coating delivers outstanding productivity and reliability





CARBIDE | ISO 9766 | h7 | 140° | H Coating

p.A42

FULL-FLAT SHANK

Unit : Inch

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D. h7 dec.	frac.	mm	Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1		Overall Length L3 Ref.	Screw No.
S18 Ø18.00 TO Ø19.99	**Y181H1800**	.7087		18.00	ZD18003100 ZD18005100 ZD18008100	1	2-3/16	1-1/4	3D 5D 8D	2-1/4 3-47/64 5-63/64	5-35/64 7 9-3/16	TX1819P9
	Y181H1810	.7126		18.10								
	Y181H1820	.7165		18.20								
	Y181H1826	.7188	23/32	18.26								
	Y181H1830	.7205		18.30								
	Y181H1840	.7244		18.40								
	Y181H1850	.7283		18.50								
	Y181H1860	.7323		18.60								
	Y181H1865	.7344	47/64	18.65								
	Y181H1870	.7362		18.70								
	Y181H1880	.7402		18.80								
	Y181H1890	.7441		18.90								
	Y181H1900	.7480		19.00	ZD19003100 ZD19005100 ZD19008100	1	2-3/16	1-1/4	3D 5D 8D	2-23/64 3-15/16 6-19/64	5-45/64 7-15/64 9-35/64	TX1920P9
	Y181H1905	.7500	3/4	19.05								
	Y181H1910	.7520		19.10								
	Y181H1920	.7559		19.20								
	Y181H1927	.7587		19.27								
	Y181H1930	.7598		19.30								
	Y181H1940	.7638		19.40								
	Y181H1945	.7656	49/64	19.45								
	Y181H1950	.7677		19.50								
	Y181H1960	.7717		19.60								
	Y181H1970	.7756		19.70								
	Y181H1980	.7795		19.80								
	Y181H1984	.7813	25/32	19.84								
	Y181H1990	.7835		19.90								

▶ Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

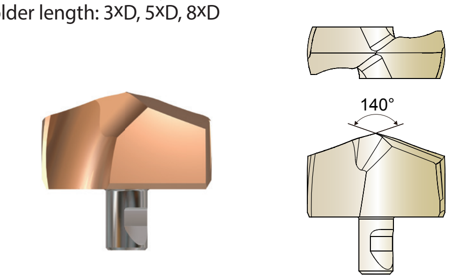
YG *i*-ONE DRILLS

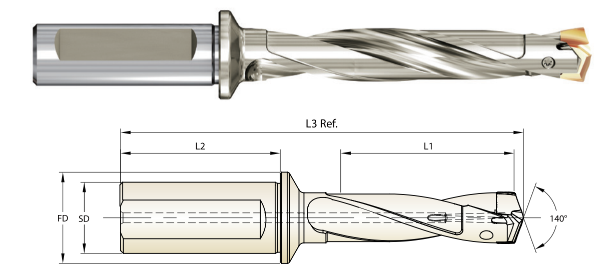
Y201H SERIES

i-ONE DRILL INSERTS & HOLDERS

▶ Applications
- For carbon steels, alloy steels and cast iron
- Holder length: 3×D, 5×D, 8×D

▶ Benefits
- Secure and quick clamping system
- High performance with cost efficiency
- Multi-layered coating delivers outstanding productivity and reliability





CARBIDE | ISO 9766 | h7 | 140° | H Coating

p.A42

FULL-FLAT SHANK

Unit : Inch

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D. h7 dec.	frac.	mm	Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1		Overall Length L3 Ref.	Screw No.
S20 Ø20.00 TO Ø21.99	**Y201H2000**	.7874		20.00	ZD20003100 ZD20005100 ZD20008100	1	2-3/16	1-1/4	3D 5D 8D	2-31/64 4-9/64 6-39/64	5-51/64 7-13/32 9-53/64	TX2021P9
	Y201H2010	.7913		20.10								
	Y201H2020	.7953		20.20								
	Y201H2024	.7969	51/64	20.24								
	Y201H2030	.7992		20.30								
	Y201H2040	.8031		20.40								
	Y201H2050	.8071		20.50								
	Y201H2060	.8110		20.60								
	Y201H2064	.8125	13/16	20.64								
	Y201H2070	.8150		20.70								
	Y201H2080	.8189		20.80								
	Y201H2090	.8228		20.90								
	Y201H2100	.8268		21.00	ZD21003100 ZD21005100 ZD21008100	1	2-3/16	1-1/4	3D 5D 8D	2-19/32 4-21/64 6-59/64	5-29/32 7-19/32 10-9/64	TX2122P9
	Y201H2103	.8281	53/64	21.03								
	Y201H2110	.8307		21.10								
	Y201H2120	.8346		21.20								
	Y201H2130	.8386		21.30								
	Y201H2140	.8425		21.40								
	Y201H2143	.8438	27/32	21.43								
	Y201H2150	.8465		21.50								
	Y201H2160	.8504		21.60								
	Y201H2170	.8543		21.70								
	Y201H2180	.8583		21.80								
	Y201H2183	.8594	55/64	21.83								
	Y201H2190	.8622		21.90								

▶ Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

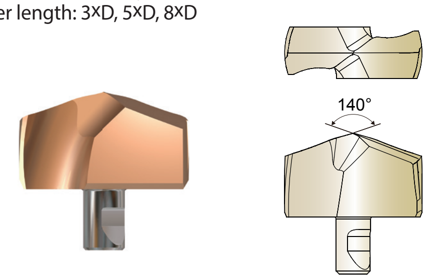
YG *i*-ONE DRILLS

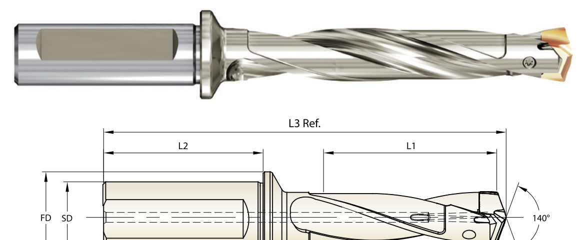
Y221H SERIES

i-ONE DRILL INSERTS & HOLDERS

▶ Applications
- For carbon steels, alloy steels and cast iron
- Holder length: 3xD, 5xD, 8xD

▶ Benefits
- Secure and quick clamping system
- High performance with cost efficiency
- Multi-layered coating delivers outstanding productivity and reliability





CARBIDE | ISO 9766 | h7 | 140° | H Coating | p.A42

FULL-FLAT SHANK

Unit : Inch

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D. h7 dec.	frac.	mm	Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1		Overall Length L3 Ref.	Screw No.
S22 Ø22.00 TO Ø23.99	**Y221H2200**	.8661		22.00	**ZD22003100** **ZD22005100** **ZD22008100**	1	2-3/16	1-1/4	3D 5D 8D	2-23/32 4-34/64 7-1/4	6-1/32 7-51/64 10-29/64	TX2223P9
	Y221H2210	.8701		22.10								
	Y221H2220	.8740		22.20								
	Y221H2223	.8750	7/8	22.23								
	Y221H2230	.8780		22.30								
	Y221H2240	.8819		22.40								
	Y221H2250	.8858		22.50								
	Y221H2260	.8898		22.60								
	Y221H2262	.8906	57/64	22.62								
	Y221H2270	.8937		22.70								
	Y221H2280	.8976		22.80								
	Y221H2290	.9016		22.90								
	Y221H2300	.9055		23.00	**ZD23003100** **ZD23005100** **ZD23008100**	1	2-3/16	1-1/4	3D 5D 8D	2-53/64 4-23/32 7-9/16	6-3/16 8-1/32 10-13/16	TX2223P9
	Y221H2302	.9063	29/32	23.02								
	Y221H2310	.9094		23.10								
	Y221H2320	.9134		23.20								
	Y221H2330	.9173		23.30								
	Y221H2340	.9213		23.40								
	Y221H2342	.9219	59/64	23.42								
	Y221H2350	.9252		23.50								
	Y221H2360	.9291		23.60								
	Y221H2370	.9331		23.70								
	Y221H2380	.9370		23.80								
	Y221H2381	.9375	15/16	23.81								
	Y221H2390	.9409		23.90								

▶ Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

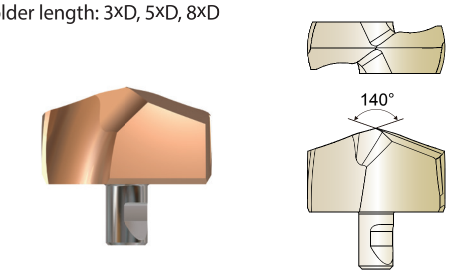
YG *i*-ONE DRILLS

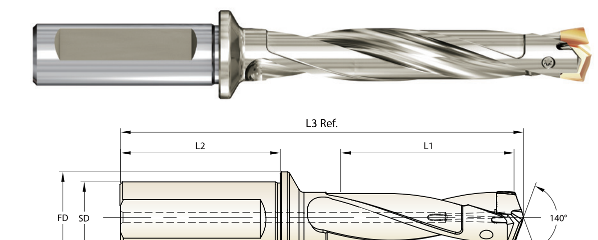
Y241H SERIES

i-ONE DRILL INSERTS & HOLDERS

▶ Applications
- For carbon steels, alloy steels and cast iron
- Holder length: 3xD, 5xD, 8xD

▶ Benefits
- Secure and quick clamping system
- High performance with cost efficiency
- Multi-layered coating delivers outstanding productivity and reliability





CARBIDE | ISO 9766 | h7 | 140° | H Coating | p.A42

FULL-FLAT SHANK

Unit : Inch

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D. h7 dec.	frac.	mm	Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1		Overall Length L3 Ref.	Screw No.
S24 Ø24.00 TO Ø25.99	**Y241H2400**	.9449		24.00	**ZD24003125** **ZD24005125** **ZD24008125**	1-1/4	2-3/8	1-15/32	3D 5D 8D	2-61/64 4-59/64 7-7/8	6-17/32 8-15/32 11-23/64	TX2425P10
	Y241H2410	.9488		24.10								
	Y241H2420	.9528		24.20								
	Y241H2421	.9531	61/64	24.21								
	Y241H2430	.9567		24.30								
	Y241H2440	.9606		24.40								
	Y241H2450	.9646		24.50								
	Y241H2460	.9685		24.60								
	Y241H2461	.9688	31/32	24.61								
	Y241H2470	.9724		24.70								
	Y241H2480	.9764		24.80								
	Y241H2490	.9803		24.90								
	Y241H2500	.9844	63/64	25.00	**ZD25003125** **ZD25005125** **ZD25008125**	1-1/4	2-3/8	1-15/32	3D 5D 8D	3-5/64 5-1/8 8-3/16	6-47/64 8-47/64 11-3/4	TX2526P10
	Y241H2510	.9882		25.10								
	Y241H2520	.9921		25.20								
	Y241H2530	.9961		25.30								
	Y241H2540	1.0000	1	25.40								
	Y241H2550	1.0039		25.50								
	Y241H2560	1.0079		25.60								
	Y241H2567	1.0106		25.67								
	Y241H2570	1.0118		25.70								
	Y241H2580	1.0156	1-1/64	25.80								
	Y241H2590	1.0197		25.90								

▶ Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

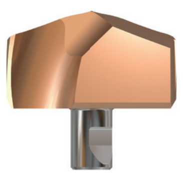
YG *i*-ONE DRILLS

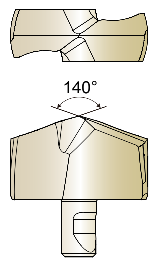
Y261H SERIES

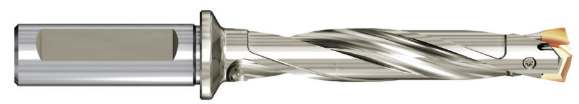
i-ONE DRILL INSERTS & HOLDERS

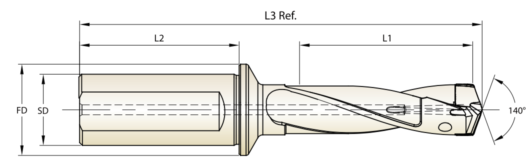
▶ Applications
- For carbon steels, alloy steels and cast iron
- Holder length: 3XD, 5XD, 8XD

▶ Benefits
- Secure and quick clamping system
- High performance with cost efficiency
- Multi-layered coating delivers outstanding productivity and reliability









p.A42

FULL-FLAT SHANK

Unit : Inch

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D. h7 dec.	frac.	mm	Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth	L1	Overall Length L3 Ref.	Screw No.
S26 Ø26.00 TO Ø27.99	Y261H2600	1.0236		26.00	ZD26003125 ZD26005125 ZD26008125	1-1/4	2-3/8	1-15/32	3D 5D 8D	3-3/16 5-5/16 8-1/2	6-51/64 8-7/8 12-1/64	TX2627P10
	Y261H2619	1.0311	1-1/32	26.19								
	Y261H2620	1.0315		26.20								
	Y261H2650	1.0433		26.50								
	Y261H2659	1.0469	1-3/64	26.59								
	Y261H2660	1.0472		26.60								
	Y261H2670	1.0512		26.70								
	Y261H2680	1.0551		26.80								
	Y261H2690	1.0591		26.90								
	Y261H2699	1.0626	1-1/16	26.99								
	Y261H2700	1.0630		27.00	ZD27003125 ZD27005125 ZD27008125	1-1/4	2-3/8	1-15/32	3D 5D 8D	3-5/16 5-33/64 8-13/16	6-29/32 9-5/64 12-21/64	TX2728P10
	Y261H2710	1.0669		27.10								
	Y261H2720	1.0709		27.20								
	Y261H2730	1.0748		27.30								
	Y261H2738	1.0780	1-5/64	27.38								
	Y261H2740	1.0787		27.40								
	Y261H2750	1.0827		27.50								
	Y261H2760	1.0866		27.60								
	Y261H2770	1.0906		27.70								
	Y261H2778	1.0937	1-3/32	27.78								
	Y261H2780	1.0945		27.80								
	Y261H2790	1.0984		27.90								

▶ Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

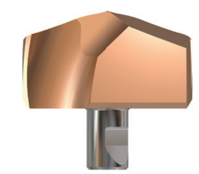
YG *i*-ONE DRILLS

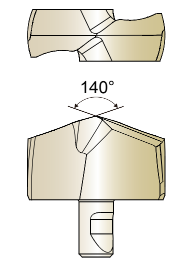
Y281H SERIES

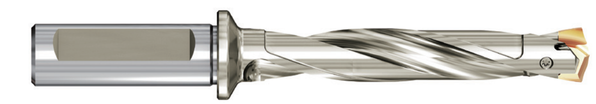
i-ONE DRILL INSERTS & HOLDERS

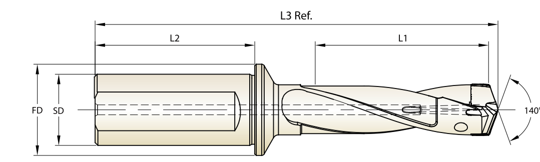
▶ Applications
- For carbon steels, alloy steels and cast iron
- Holder length: 3XD, 5XD, 8XD

▶ Benefits
- Secure and quick clamping system
- High performance with cost efficiency
- Multi-layered coating delivers outstanding productivity and reliability









p.A42

FULL-FLAT SHANK

Unit : Inch

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D. h7 dec.	frac.	mm	Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth	L1	Overall Length L3 Ref.	Screw No.
S28 Ø28.00 TO Ø29.99	Y281H2800	1.1024		28.00	ZD28003125 ZD28005125 ZD28008125	1-1/4	2-3/8	1-15/32	3D 5D 8D	3-27/64 5-45/64 9- 9/64	7-1/16 9-5/16 12-43/64	TX2830P10
	Y281H2810	1.1063		28.10								
	Y281H2818	1.1094	1-7/64	28.18								
	Y281H2820	1.1102		28.20								
	Y281H2830	1.1142		28.30								
	Y281H2840	1.1181		28.40								
	Y281H2850	1.1220		28.50								
	Y281H2858	1.1252	1-1/8	28.58								
	Y281H2860	1.1260		28.60								
	Y281H2870	1.1299		28.70								
	Y281H2880	1.1339		28.80								
	Y281H2890	1.1378		28.90								
	Y281H2900	1.1417		29.00	ZD29003125 ZD29005125 ZD29008125	1-1/4	2-3/8	1-15/32	3D 5D 8D	3-35/64 5-29/32 9-29/64	7-7/32 9-35/64 13-1/32	TX2930P10
	Y281H2910	1.1457		29.10								
	Y281H2920	1.1496		29.20								
	Y281H2930	1.1535		29.30								
	Y281H2937	1.1563	1-5/32	29.37								
	Y281H2940	1.1575		29.40								
	Y281H2950	1.1614		29.50								
	Y281H2960	1.1654		29.60								
	Y281H2970	1.1693		29.70								
	Y281H2977	1.1720	1-11/64	29.77								
	Y281H2980	1.1732		29.80								
	Y281H2990	1.1772		29.90								

▶ Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

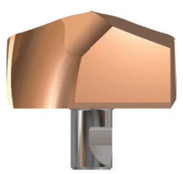
YG *i*- ONE DRILLS

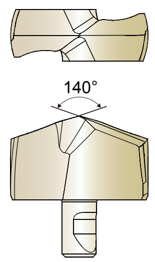
Y301H SERIES

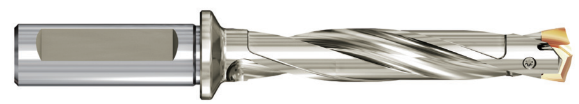
i-ONE DRILL INSERTS & HOLDERS

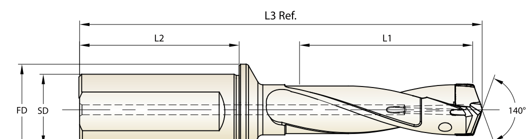
▶ Applications
- For carbon steels, alloy steels and cast iron
- Holder length: 3×D, 5×D, 8×D

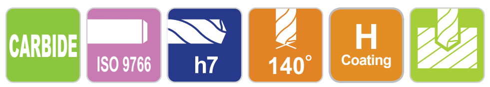
▶ Benefits
- Secure and quick clamping system
- High performance with cost efficiency
- Multi-layered coating delivers outstanding productivity and reliability











p.A42

FULL-FLAT SHANK

Unit : Inch

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D. h7 dec.	frac.	mm	Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1	Overall Length L3 Ref.	Screw No.
	Y301H3000	1.1811		30.00							
	Y301H3010	1.1850		30.10							
	Y301H3016	1.1874	1-3/16	30.16							
	Y301H3020	1.1890		30.20							
	Y301H3030	1.1929		30.30							
	Y301H3040	1.1969		30.40	ZD30003125				3D 3-21/32	7- 3/8	
	Y301H3050	1.2008		30.50	ZD30005125	1-1/4	2-3/8	1-15/32	5D 6- 7/64	9-25/32	TX3031P15
	Y301H3056	1.2031	1-13/64	30.56	ZD30008125				8D 9-49/64	13- 3/8	
	Y301H3060	1.2047		30.60							
	Y301H3070	1.2087		30.70							
S30	Y301H3080	1.2126		30.80							
Ø30.00	Y301H3090	1.2165		30.90							
TO	Y301H3096	1.2189	1-7/32	30.96							
Ø31.99	Y301H3100	1.2205		31.00							
	Y301H3110	1.2244		31.10							
	Y301H3120	1.2283		31.20							
	Y301H3130	1.2323		31.30							
	Y301H3140	1.2362		31.40	ZD31003125				3D 3-25/32	7-17/32	
	Y301H3150	1.2402		31.50	ZD31005125	1-1/4	2-3/8	1-15/32	5D 6-19/64	10- 1/64	TX3132P15
	Y301H3160	1.2441		31.60	ZD31008125				8D 10- 5/64	13-47/64	
	Y301H3170	1.2480		31.70							
	Y301H3175	1.2500	1-1/4	31.75							
	Y301H3180	1.2520		31.80							
	Y301H3190	1.2559		31.90							

▶ Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

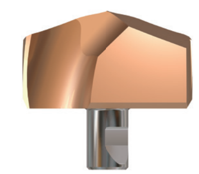
YG *i*- ONE DRILLS

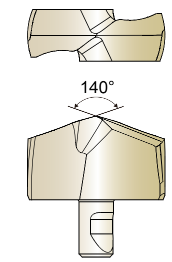
Y321H SERIES

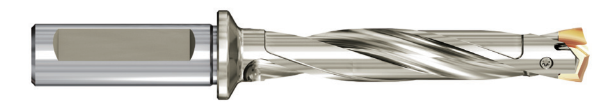
i-ONE DRILL INSERTS & HOLDERS

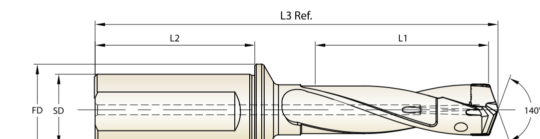
▶ Applications
- For carbon steels, alloy steels and cast iron
- Holder length: 3×D, 5×D, 8×D

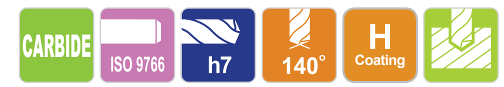
▶ Benefits
- Secure and quick clamping system
- High performance with cost efficiency
- Multi-layered coating delivers outstanding productivity and reliability











p.A42

FULL-FLAT SHANK

Unit : Inch

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D. h7 dec.	frac.	mm	Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1	Overall Length L3 Ref.	Screw No.
	Y321H3200	1.2598		32.00							
	Y321H3210	1.2638		32.10							
	Y321H3215	1.2657	1-17/64	32.15							
	Y321H3220	1.2677		32.20							
	Y321H3230	1.2717		32.30							
	Y321H3240	1.2756		32.40	ZD32003125				3D 3-57/64	7-25/32	
	Y321H3250	1.2795		32.50	ZD32005125	1-1/4	2-3/8	1-15/32	5D 6-1/2	10-21/64	TX3233P15
	Y321H3254	1.2811	1-9/32	32.54	ZD32008125				8D 10-25/64	14-11/64	
	Y321H3260	1.2835		32.60							
	Y321H3270	1.2874		32.70							
	Y321H3280	1.2913		32.80							
S32	Y321H3290	1.2953		32.90							
Ø32.00	Y321H3294	1.2969	1-19/64	32.94							
TO	Y321H3300	1.2992		33.00							
Ø33.99	Y321H3310	1.3031		33.10							
	Y321H3320	1.3071		33.20							
	Y321H3330	1.3110		33.30							
	Y321H3334	1.3126	1-5/16	33.34	ZD33003125				3D 4-1/64	7-15/16	
	Y321H3340	1.3150		33.40	ZD33005125	1-1/4	2-3/8	1-15/32	5D 6-11/16	10-37/64	TX3334P15
	Y321H3350	1.3189		33.50	ZD33008125				8D 10-45/64	14-17/32	
	Y321H3360	1.3228		33.60							
	Y321H3370	1.3268		33.70							
	Y321H3373	1.3280	1-21/64	33.73							
	Y321H3380	1.3307		33.80							
	Y321H3390	1.3346		33.90							

▶ Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

YG *i*-ONE DRILLS

RECOMMENDED CUTTING CONDITIONS

SFM = FT/MIN.
FEED(IPR) = INCH/REV.

ISO	VDI 3323	Material Description	Cutting Speed SFM	Feed Ø10.0~11.99	Ø12.09~14.99	Ø15.00~17.99	Ø18.00~21.99	Ø22.0~26.99	Ø27.0~33.99
P	1	Non-alloy steel	260~440	.005~.011	.007~0.013	.009~.015	.011~.017	.013~.020	.014~.020
	2		230~400	.005~.011	.007~0.013	.009~.015	.011~.017	.013~.020	.014~.020
	3		230~300	.005~.011	.007~0.013	.009~.015	.011~.017	.013~.020	.014~.020
	4		230~300	.005~.011	.007~0.013	.009~.015	.011~.017	.013~.020	.014~.020
	5		130~260	.005~.011	.007~0.013	.009~.015	.011~.017	.013~.020	.014~.020
	6	Low alloy steel	260~330	.005~.011	.007~0.013	.009~.014	.011~.015	.013~.018	.014~.019
	7		230~295	.005~.011	.007~0.013	.009~.014	.011~.015	.013~.018	.014~.019
	8		200~260	.005~.011	.007~0.013	.009~.014	.011~.015	.013~.018	.014~.019
	9		165~200	.005~.011	.007~0.013	.009~.014	.011~.015	.013~.018	.014~.019
	10	High alloyed steel, and tool steel	150~260	.005~.009	.006~0.011	.008~.013	.010~.015	.011~.015	.013~.016
	11		115~230	.005~.009	.006~0.011	.008~.013	.010~.015	.011~.015	.013~.016
K	15	Grey cast iron	330~460	.006~.014	.008~.016	.010~.018	.012~.022	.014~.024	.016~.024
	16		295~400	.006~.014	.008~.016	.010~.018	.012~.022	.014~.024	.016~.024
	17	Nodular cast iron	330~445	.006~.014	.008~.016	.010~.018	.012~.022	.014~.024	.016~.024
	18		295~400	.006~.014	.008~.016	.010~.018	.012~.022	.014~.024	.016~.024
	19	Malleable cast iron	330~445	.006~.014	.008~.016	.010~.018	.012~.022	.014~.024	.016~.024
	20		295~400	.006~.014	.008~.016	.010~.018	.012~.022	.014~.024	.016~.024

▶ The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.
Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.

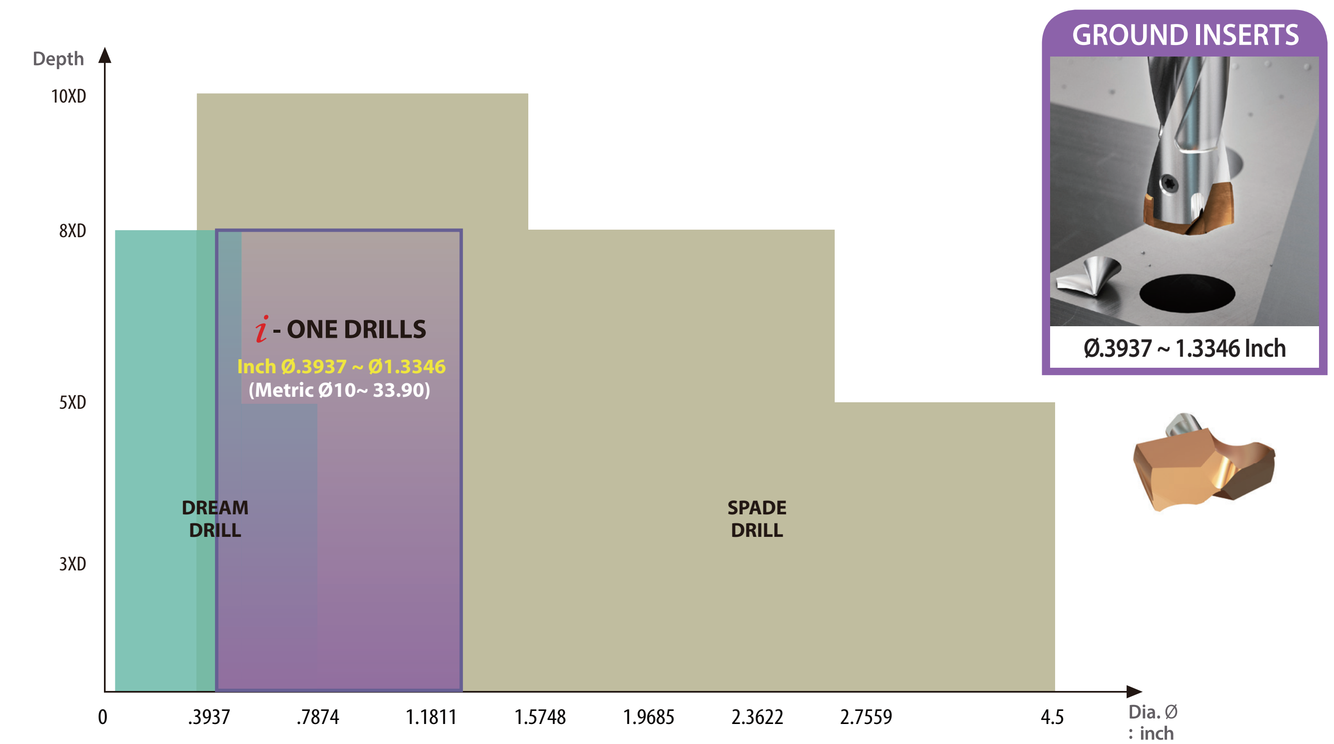
▶ Recommend you to reduce the feed rate to 85%, 70% when you use 5xD, 8xD holders.

▶ For use of 8xD holder, we recommend to use a pilot drill with equal to or larger than 140º point angle (0.5xD ~ 1.5xD).
The use of the centering pre-hole improves hole location, roundness and surface finish.

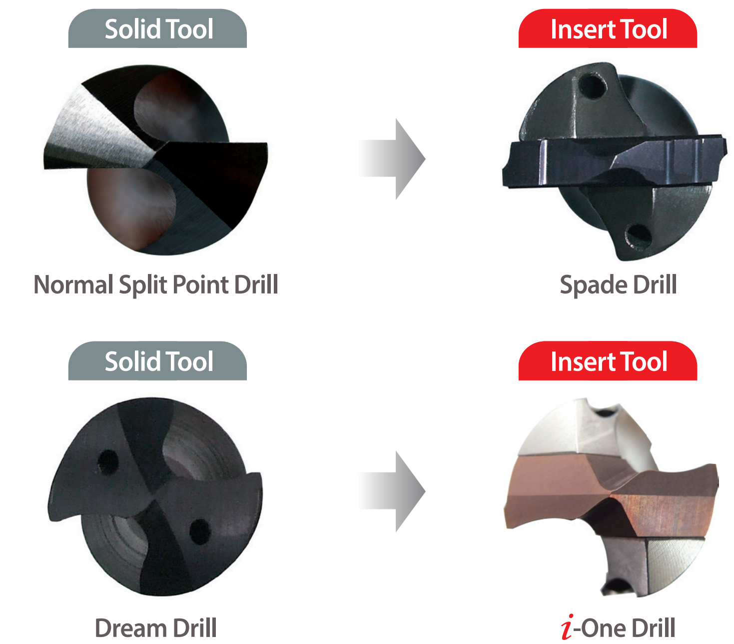
YG *i*-ONE DRILLS

RECOMMENDED CUTTING CONDITIONS

YG-1 EXCHANGEABLE RANGE OF DRILLS - POSITIONING MAP

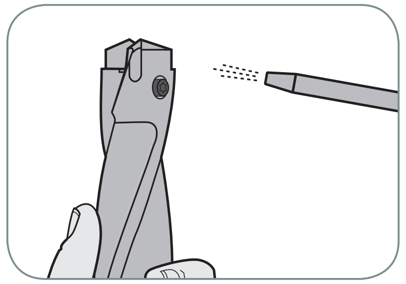
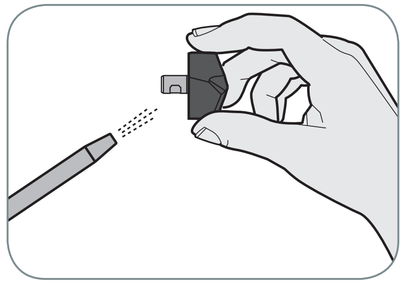


COMPARISON WITH SPLIT POINT DRILL - SPADE DRILL & DREAM DRILL

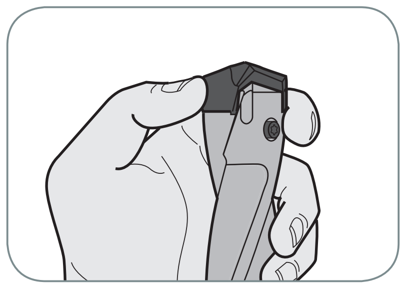


CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

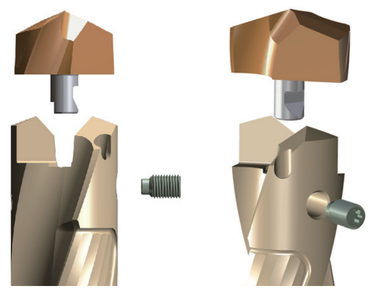
ASSEMBLY OF *i*-ONE DRILLS

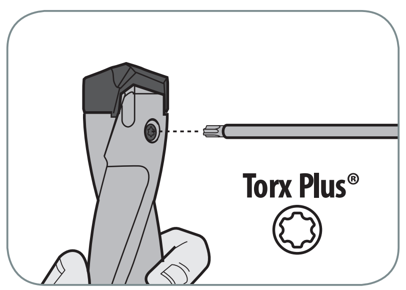



Make sure to clean the insert and insert seat.



Slide the drill insert into the slot of the holder and press down the insert to touch the bottom of the slot.





After confirming the insert is pressed down to the bottom of the slot, tighten the screw using anti-seize compound.

Wrench Type	Product No.	Series (Insert Size)	Torx Plus®	Torque (lbs-in)
	TWFP05	S10 ~ S12 Inch: Ø.3937~ Ø.5472 Metric: Ø10.00~ Ø13.90	5IP	5.5
	TWDP07	S14 ~ S16 Inch: Ø.5512~ Ø.7047 Metric: Ø14.00~ Ø17.90	7IP	9.0
	TWDP09	S18 ~ S22 Inch: Ø.7087~ Ø.9409 Metric: Ø18.00~ Ø23.90	9IP	13.5
	TWDP10	S24 ~ S28 Inch: Ø.9449 ~ Ø1.1772 Metric: Ø24.00 ~ Ø29.90	10IP	20.0
	TWDP15	S30 ~ S32 Inch: Ø1.1811~ Ø1.3346 Metric: Ø30.00~ Ø33.90	15IP	28.5

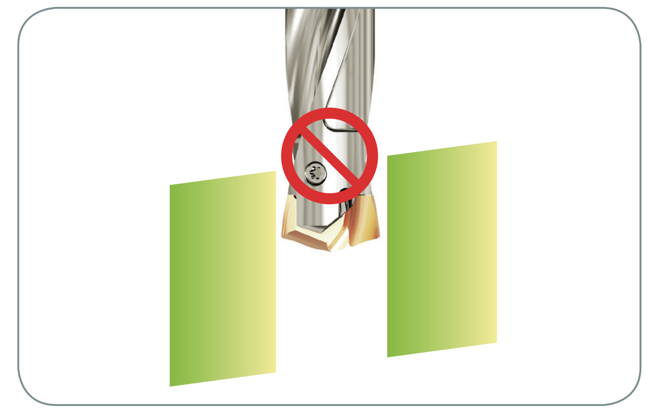
Use the Torx Plus® wrench

- ▶ Need to use appropriate wrenches and screws as indicated.
- ▶ It's important to tighten up the screw properly.

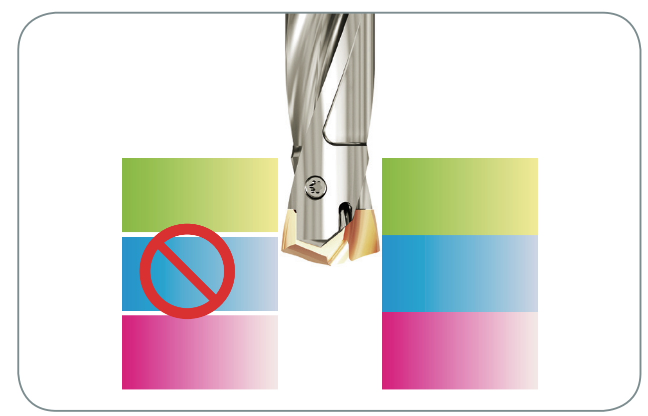
YG i- ONE DRILLS RECOMMENDED CUTTING CONDITIONS

CAUTION-NOT RECOMMENDABLE APPLICATION

Intersecting cross hole is bigger than the drill insert's Margin Length.

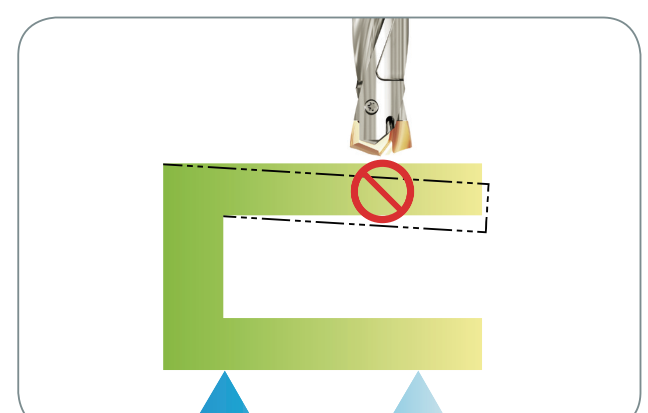


Material with slanting entrance and exit over 7 degree. (If drilling 7 degree or under slanting surface, reduce the feed about 30-50%)



For drilling stacked plates, minimize the space between the plates.

The space stacked plates can cause insert breakage or poor chip control.



The material needs to be fixtured securely before drilling.

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
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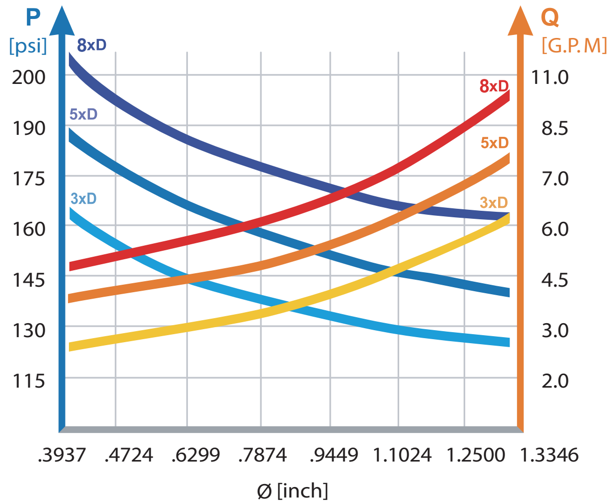
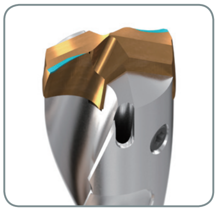
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

RECOMMENDED COOLANT PRESSURE AND FLOW RATE ON VERTICAL DRILLING

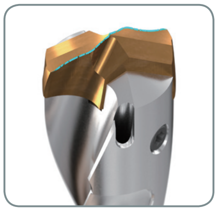


- Recommended emulsion mix is 6 - 8%.
- For Drilling in Stainless and High Strength steels, a mix of 10% is recommended.
- For horizontal drilling, 30% reduction on the coolant pressure and flow rate is possible.
- Dry drilling is possible for 1 - 2xD drilling. But not recommended.

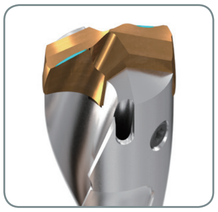
TROUBLE SHOOTING



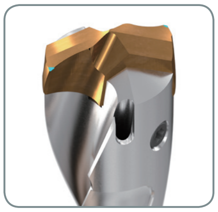
1) Heavy flank wear / Fast flank wear
   - Reduce cutting speed
   - Increase feed



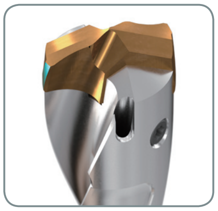
2) Chipping on cutting edge
   - Reduce feed
   - Check the rigidity of spindle and chuck
   - Rigid clamping of workpiece



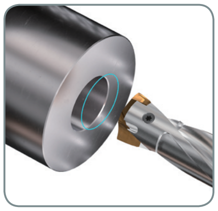
3) Build up on cutting edge
   - Increase cutting speed
   - Use a coated insert



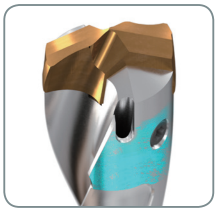
4) Chipping or break down on outer corner
   - Reduce feed
   - Rigid clamping of workpiece



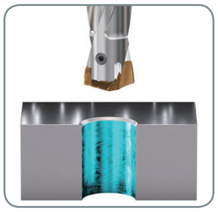
5) Wear of land margin
   - Rigid clamping of workpiece
   - Reduce cutting speed
   - Increase coolant flow



6) Unsatisfactory positioning of the hole
   - Rigid clamping of workpiece
   - Reduce feed during entrance or exit



7) Scratching on holder
   - Rigid clamping of workpiece
   - Reduce feed
   - Increase coolant flow



8) Unsatisfactory surface finish
   - Rigid clamping of workpiece
   - Increase coolant flow and pressure

Leading Through Innovation

CARBIDE INSERTS & HOLDERS

i-DREAM DRILLS

- For Steels and Stainless Steel Alloys

SELECTION GUIDE

YG HOLEMAKING TOOLS

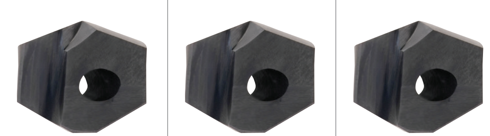
CARBIDE INSERTS & HOLDERS
i-DREAM DRILLS

- For General Steels and Stainless Steels

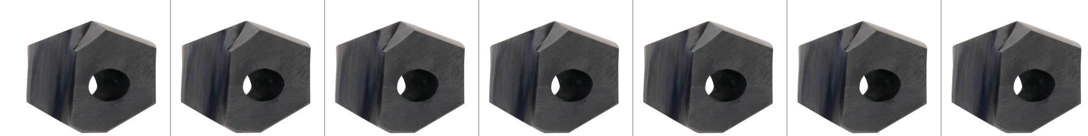
Please visit globalyg1.com/mat for material search

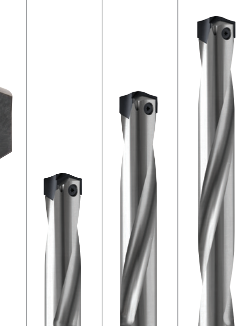
◎ : Excellent ○ : Good

Recommended cutting conditions : p.A56



ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	Y03A	YI3A	Y03B	YI3B	Y03C	YI3C
				POINT ANGLE			A		B		C	
				TOOL MATERIAL			CARBIDE		CARBIDE		CARBIDE	
				SIZE MIN			12.00		14.00		16.00	
				SIZE MAX			35/64		5/8		45/64	
				PAGE			A50		A50~A52			
				SURFACE TREATMENT			TiAlN	TiCN	TiAlN	TiCN	TiAlN	TiCN
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	○	◎	○	◎	○
	2		About 0.45% C	Annealed	190	13	◎	○	◎	○	◎	○
	3		About 0.45% C	Quenched & Tempered	250	25	◎	○	◎	○	◎	○
	4		About 0.75% C	Annealed	270	28	◎	○	◎	○	◎	○
	5		About 0.75% C	Quenched & Tempered	300	32	◎		◎		◎	
	6	Low alloy steel		Annealed	180	10	◎	○	◎	○	◎	○
	7			Quenched & Tempered	275	29	◎	○	◎	○	◎	○
	8			Quenched & Tempered	300	32	◎		◎		◎	
	9			Quenched & Tempered	350	38	◎		◎		◎	
	10	High alloyed steel, and tool steel		Annealed	200	15	◎	○	◎	○	◎	○
	11			Quenched & Tempered	325	35	◎		◎		◎	
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15		◎		◎		◎
	13		Martensitic	Quenched & Tempered	240	23		◎		◎		◎
	14		Austenitic		180	10		◎		◎		◎
K	15	Grey cast iron	Pearlitic / ferritic		180	10	○		○		○	
	16		Pearlitic (Martensitic)		260	26	○		○		○	
	17	Nodular cast iron	Ferritic		160	3	○		○		○	
	18		Pearlitic		250	25	○		○		○	
	19	Malleable cast iron	Ferritic		130		○		○		○	
	20		Pearlitic		230	21						
N	21	Aluminum-wrought alloy	Not Curable		60			○		○		○
	22		Curable	Hardened	100			○		○		○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75			○		○		○
	24		≤ 12% Si, Curable	Hardened	90			○		○		○
	25		> 12% Si, Not Curable		130			○		○		○
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110			○		○		○
	27		CuZn, CuSnZn (Brass)		90			○		○		○
	28		CuSn, lead-free copper and electrolytic copper		100			○		○		○
	29	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)	Duroplastic, Fiber Reinforced Plastic									
	30		Rubber, Wood, etc.									
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15						
	32			Cured	280	30						
	33		Ni or Co Based	Annealed	250	25						
	34			Cured	350	38						
	35			Cast	320	34						
	36	Titanium Alloys	Pure Titanium		400 Rm							
	37		Alpha + Beta Alloys	Hardened	1050 Rm							
H	38	Hardened steel		Hardened	550	55						
	39			Hardened	630	60						
	40	Chilled Cast Iron		Cast	400	42						
	41	Hardened Cast Iron		Hardened	550	55						





ISO	VDI 3323	Y03D	YI3D	Y03E	YI3E	Y03F	YI3F	Y03G	YI3G	Y03H	YI3H	Y03I	YI3I	Y03J	YI3J	Z*03	Z*05	Z*07
POINT ANGLE		D		E		F		G		H		I		J				
TOOL MATERIAL		CARBIDE		CARBIDE		CARBIDE		CARBIDE		CARBIDE		CARBIDE		CARBIDE				
SIZE MIN		18.00		20.00		22.00		24.00		26.00		28.00		30.00				
SIZE MAX		25/32		55/64		15/16		1-1/64		1-3/32		1-11/64		1-1/4				
PAGE		A50~A52		A53				A54				A55						
SURFACE TREATMENT		TiAlN	TiCN	TiAlN	TiCN	TiAlN	TiCN	TiAlN	TiCN	TiAlN	TiCN	TiAlN	TiCN	TiAlN	TiCN	3XD	5XD	7XD
P	1	◎	○	◎	○	◎	○	◎	○	◎	○	◎	○	◎	○			
	2	◎	○	◎	○	◎	○	◎	○	◎	○	◎	○	◎	○			
	3	◎	○	◎	○	◎	○	◎	○	◎	○	◎	○	◎	○			
	4	◎	○	◎	○	◎	○	◎	○	◎	○	◎	○	◎	○			
	5	◎		◎		◎		◎		◎		◎		◎				
	6	◎	○	◎	○	◎	○	◎	○	◎	○	◎	○	◎	○			
	7	◎	○	◎	○	◎	○	◎	○	◎	○	◎	○	◎	○			
	8	◎		◎		◎		◎		◎		◎		◎				
	9	◎		◎		◎		◎		◎		◎		◎				
	10	◎	○	◎	○	◎	○	◎	○	◎	○	◎	○	◎	○			
	11	◎		◎		◎		◎		◎		◎		◎				
M	12		◎		◎		◎		◎		◎		◎		◎			
	13		◎		◎		◎		◎		◎		◎		◎			
	14		◎		◎		◎		◎		◎		◎		◎			
K	15	○		○		○		○		○		○		○				
	16	○		○		○		○		○		○		○				
	17	○		○		○		○		○		○		○				
	18	○		○		○		○		○		○		○				
	19	○		○		○		○		○		○		○				
	20																	
N	21		○		○		○		○		○		○		○			
	22		○		○		○		○		○		○		○			
	23		○		○		○		○		○		○		○			
	24		○		○		○		○		○		○		○			
	25		○		○		○		○		○		○		○			
	26		○		○		○		○		○		○		○			
	27		○		○		○		○		○		○		○			
	28		○		○		○		○		○		○		○			
	29																	
	30																	
S	31																	
	32																	
	33																	
	34																	
	35																	
	36																	
	37																	
H	38																	
	39																	
	40																	
	41																	

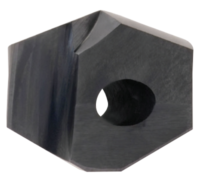
i -DREAM DRILL INSERTS & HOLDERS

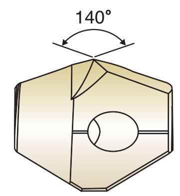
- Features of *i-Dream Drill* Inserts
  - ▶ Secure and accurate seating resulting in accurate repeatability and concentricity.

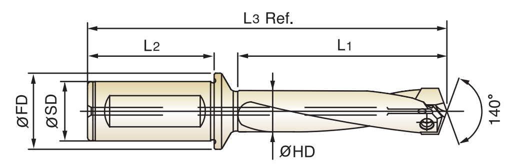
i-Dream Drill *General*
- ▶ For most steel materials

i-Dream Drill *INOX*
- ▶ For tough, ductile materials and stainless steels
- ▶ Light, sharp cutting edge
- ▶ Minimize cutting forces
- ▶ Reduce built-up edge

- Features of *i-Dream Drill* Holders
  - ▶ Special Alloy Steels that maintains its hardness and toughness under high temperatures with generous coolant holes for effective coolant flow.
  - ▶ Innovative surface treatment that improves wear resistance and reduces corrosion.
  - ▶ High Performance flute design allowing maximum chip evacuation and minimum interference.







Cutting Conditions : p.A56~A57

Unit : Inch

Series Range (mm)	Insert EDP No. TiAlN General	Insert EDP No. TiCN INOX	Insert O.D. h7 dec.	Insert O.D. h7 inch / mm
A Ø12.00 to Ø13.99	Y03A01	YI3A01	.4724	12.00
	Y03A02	YI3A02	.4764	12.10
	Y03A03	YI3A03	.4803	12.20
	Y03A04	YI3A04	.4844	31/64
	Y03A05	YI3A05	.4921	12.50
	Y03A06	YI3A06	.4961	12.60
	Y03A07	YI3A07	.5000	1/2
	Y03A08	YI3A08	.5039	12.80
	Y03A09	YI3A09	.5079	12.90
	Y03A10	YI3A10	.5118	13.00
	Y03A11	YI3A11	.5156	33/64
	Y03A12	YI3A12	.5197	13.20
	Y03A13	YI3A13	.5312	17/32
	Y03A14	YI3A14	.5315	13.50
	Y03A15	YI3A15	.5354	13.60
	Y03A16	YI3A16	.5394	13.70
	Y03A17	YI3A17	.5433	13.80
	Y03A18	YI3A18	.5469	35/64
B Ø14.00 to Ø15.99 4mm Thick	Y03B01	YI3B01	.5512	14.00
	Y03B02	YI3B02	.5551	14.10
	Y03B03	YI3B03	.5591	14.20
	Y03B04	YI3B04	.5625	9/16
	Y03B05	YI3B05	.5630	14.30
	Y03B06	YI3B06	.5669	14.40

Length	Holder EDP No.	Diameter HD	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1	Overall Length L3 Ref.	Torx Screw No.
3D	ZA0301	.4528	3/4	2	1	1-27/64	4-29/64	TA1213
5D	ZA0501					2-23/64	5-13/32	
7D	ZA0701					3-5/16	6-11/32	
3D	ZA0302	.4724	3/4	2	1	1-15/32	4-1/2	
5D	ZA0502					2-29/64	5-31/64	
7D	ZA0702					3-7/16	6-15/32	
3D	ZA0303	.4921	3/4	2	1	1-17/32	4-37/64	TA1314
5D	ZA0503					2-9/16	5-19/32	
7D	ZA0703					3-37/64	6-5/8	
3D	ZA0304	.5118	3/4	2	1	1-19/32	4-39/64	
5D	ZA0504					2-21/32	5-43/64	
7D	ZA0704					3-23/32	6-47/64	
3D	ZB0301	.5315	3/4	2	1	1-21/32	4-23/32	TB1415
5D	ZB0501					2-3/4	5-13/16	
7D	ZB0701					3-55/64	6-59/64	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Y03A / YI3A	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				○	○	○	○	○	
Y03B / YI3B	○	○	○	○		○	○			○		◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Y03A / YI3A																					
Y03B / YI3B	○	○	○	○	○	○	○	○													

i -DREAM DRILL INSERTS & HOLDERS

- Features of *i-Dream Drill* Inserts
  - ▶ Secure and accurate seating resulting in accurate repeatability and concentricity.

i-Dream Drill *General*
- ▶ For most steel materials

i-Dream Drill *INOX*
- ▶ For tough, ductile materials and stainless steels
- ▶ Light, sharp cutting edge
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  - ▶ Special Alloy Steels that maintains its hardness and toughness under high temperatures with generous coolant holes for effective coolant flow.
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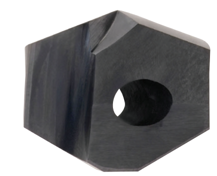

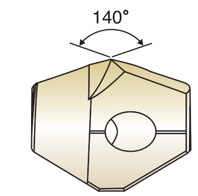

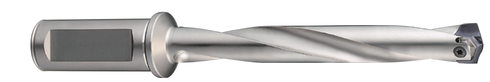

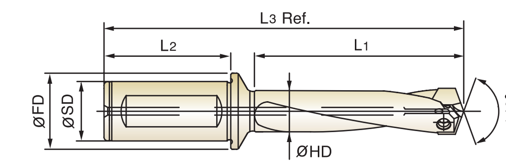

Cutting Conditions : p.A56~A57

Unit : Inch

Series Range (mm)	Insert EDP No. TiAlN General	Insert EDP No. TiCN INOX	Insert O.D. h7 dec.	Insert O.D. h7 inch / mm
B Ø14.00 to Ø15.99	Y03B07	YI3B07	.5709	14.50
	Y03B08	YI3B08	.5748	14.60
	Y03B09	YI3B09	.5781	37/64
	Y03B10	YI3B10	.5827	14.80
	Y03B11	YI3B11	.5906	15.00
	Y03B12	YI3B12	.5938	19/32
	Y03B13	YI3B13	.5945	15.10
	Y03B14	YI3B14	.5984	15.20
	Y03B15	YI3B15	.6024	15.30
	Y03B16	YI3B16	.6094	39/64
	Y03B17	YI3B17	.6102	15.50
	Y03B18	YI3B18	.6142	15.60
	Y03B19	YI3B19	.6181	15.70
	Y03B20	YI3B20	.6220	15.80
	Y03B21	YI3B21	.6250	5/8
C Ø16.00 to Ø17.99 4.5mm Thick	Y03C01	YI3C01	.6299	16.00
	Y03C02	YI3C02	.6335	16.09
	Y03C03	YI3C03	.6378	16.20
	Y03C04	YI3C04	.6406	41/64
	Y03C05	YI3C05	.6417	16.30
	Y03C06	YI3C06	.6496	16.50
	Y03C07	YI3C07	.6562	21/32
	Y03C08	YI3C08	.6614	16.80

Length	Holder EDP No.	Diameter HD	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1	Overall Length L3 Ref.	Torx Screw No.
3D	ZB0302	.5512	3/4	2	1	1-23/32	4-51/64	TB1415
5D	ZB0502					2-55/64	5-15/16	
7D	ZB0702					4	7-5/64	
3D	ZB0303	.5709	3/4	2	1	1-49/64	4-7/8	TB1516
5D	ZB0503					2-61/64	6-3/64	
7D	ZB0703					4-9/64	7-15/64	
3D	ZB0304	.5906	3/4	2	1	1-53/64	4-29/32	
5D	ZB0504					3-3/64	6-1/8	
7D	ZB0704					4-17/64	7-11/32	
3D	ZC0301	.6102	3/4	2	1	1-57/64	4-61/64	TC1617
5D	ZC0501					3-5/32	6-7/32	
7D	ZC0701					4-13/32	7-15/32	
3D	ZC0302	.6299	3/4	2	1	1-61/64	5-1/32	
5D	ZC0502					3-1/4	6-21/64	
7D	ZC0702					4-35/64	7-5/8	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Y03B / YI3B	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				○	○	○	○	○	
Y03C / YI3C	○	○	○	○		○	○			○		◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Y03B / YI3B																					
Y03C / YI3C	○	○	○	○	○	○	○	○													

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

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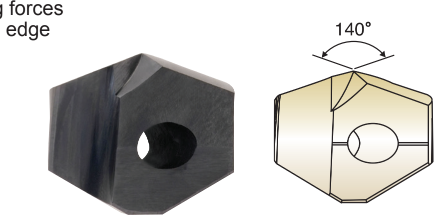

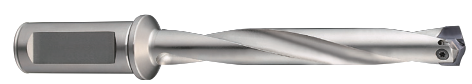

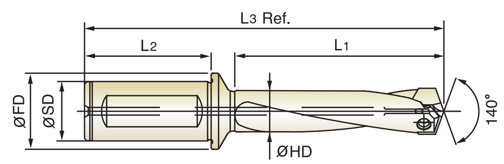

Cutting Conditions : p.A56~A57

Unit : Inch

Series Range (mm)	Insert EDP No. TiAlN General	Insert EDP No. TiCN INOX	Insert O.D. h7 dec.	Insert O.D. h7 inch / mm
C Ø16.00 to Ø17.99	Y03C09	YI3C09	.6693	17.00
	Y03C10	YI3C10	.6919	43/64
	Y03C11	YI3C11	.6875	11/16
	Y03C12	YI3C12	.6890	17.50
	Y03C13	YI3C13	.7008	17.80
	Y03C14	YI3C14	.7031	45/64
D Ø18.00 to Ø19.99 5mm Thick	Y03D01	YI3D01	.7087	18.00
	Y03D02	YI3D02	.7188	23/32
	Y03D03	YI3D03	.7283	18.50
	Y03D04	YI3D04	.7344	47/64
	Y03D05	YI3D05	.7402	18.80
	Y03D06	YI3D06	.7480	19.00
	Y03D07	YI3D07	.7500	3/4
	Y03D08	YI3D08	.7587	19.27
	Y03D09	YI3D09	.7656	49/64
	Y03D10	YI3D10	.7677	19.50
	Y03D11	YI3D11	.7795	19.80
	Y03D12	YI3D12	.7812	25/32

Length	Holder EDP No.	Diameter HD	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1	Overall Length L3 Ref.	Torx Screw No.
3D	ZC0303	.6496	3/4	2	1	2-1/64	5-5/64	TC1718
5D	ZC0503					3-11/32	6-13/32	
7D	ZC0703					4-11/16	7-3/4	
3D	ZC0304	.6693	3/4	2	1	2-1/16	5-5/32	
5D	ZC0504					3-7/16	6-17/32	
7D	ZC0704					4-53/64	7-29/32	
3D	ZD0301	.6890	1	2-3/16	1-1/4	2-1/8	5-1/2	TD1819
5D	ZD0501					3-35/64	6-59/64	
7D	ZD0701					4-61/64	8-11/32	
3D	ZD0302	.7087	1	2-3/16	1-1/4	2-3/16	5-35/64	
5D	ZD0502					3-41/64	7	
7D	ZD0702					5-3/32	8-29/64	
3D	ZD0303	.7283	1	2-3/16	1-1/4	2-1/4	5-43/64	TD1920
5D	ZD0503					3-47/64	7-5/32	
7D	ZD0703					5-15/64	8-21/32	
3D	ZD0304	.7480	1	2-3/16	1-1/4	2-19/64	5-45/64	
5D	ZD0504					3-27/32	7-15/64	
7D	ZD0704					5-3/8	8-25/32	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Y03C / YI3C	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				○	○	○	○	○	
Y03D / YI3D	○	○	○	○		○	○			○		◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Y03C / YI3C																					
Y03D / YI3D	○	○	○	○	○	○	○	○													

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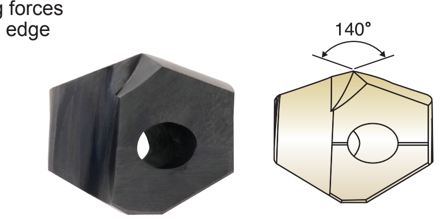

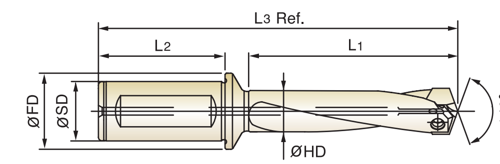

Cutting Conditions : p.A56~A57

Unit : Inch

Series Range (mm)	Insert EDP No. TiAlN General	Insert EDP No. TiCN INOX	Insert O.D. h7 dec.	Insert O.D. h7 inch / mm
E Ø20.00 to Ø21.99	Y03E01	YI3E01	.7874	20.00
	Y03E02	YI3E02	.7969	51/64
	Y03E03	YI3E03	.8071	20.50
	Y03E04	YI3E04	.8125	13/16
	Y03E05	YI3E05	.8150	20.70
	Y03E06	YI3E06	.8268	21.00
	Y03E07	YI3E07	.8281	53/64
	Y03E08	YI3E08	.8438	27/32
	Y03E09	YI3E09	.8465	21.50
	Y03E10	YI3E10	.8543	21.70
	Y03E11	YI3E11	.8594	55/64
F Ø22.00 to Ø23.99 6mm Thick	Y03F01	YI3F01	.8661	22.00
	Y03F02	YI3F02	.8750	7/8
	Y03F03	YI3F03	.8858	22.50
	Y03F04	YI3F04	.8906	57/64
	Y03F05	YI3F05	.8937	22.70
	Y03F06	YI3F06	.9055	23.00
	Y03F07	YI3F07	.9062	29/32
	Y03F08	YI3F08	.9219	59/64
	Y03F09	YI3F09	.9252	23.50
	Y03F10	YI3F10	.9331	23.70
	Y03F11	YI3F11	.9375	15/16

Length	Holder EDP No.	Diameter HD	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1	Overall Length L3 Ref.	Torx Screw No.
3D	ZE0301	.7638	1	2-3/16	1-1/4	2-23/64	5-23/32	TE2021
5D	ZE0501					3-15/16	7-9/32	
7D	ZE0701					5-33/64	8-55/64	
3D	ZE0302	.7835	1	2-3/16	1-1/4	2-27/64	5-51/64	
5D	ZE0502					4-1/32	7-13/32	
7D	ZE0702					5-21/32	9-1/64	
3D	ZE0303	.8031	1	2-3/16	1-1/4	2-31/64	5-7/8	TE2122
5D	ZE0503					4-9/64	7-33/64	
7D	ZE0703					5-25/32	9-11/64	
3D	ZE0304	.8228	1	2-3/16	1-1/4	2-35/64	5-29/32	
5D	ZE0504					4-15/64	7-19/32	
7D	ZE0704					5-59/64	9-19/64	
3D	ZF0301	.8425	1	2-3/16	1-1/4	2-19/32	5-63/64	TF2223
5D	ZF0501					4-21/64	7-23/32	
7D	ZF0701					6-1/16	9-29/64	
3D	ZF0302	.8622	1	2-3/16	1-1/4	2-21/32	6-1/32	
5D	ZF0502					4-27/64	7-51/64	
7D	ZF0702					6-13/64	9-9/16	
3D	ZF0303	.8819	1	2-3/16	1-1/4	2-23/32	6-7/64	TF2324
5D	ZF0503					4-17/32	7-29/32	
7D	ZF0703					6-11/32	9-23/32	
3D	ZF0304	.9016	1	2-3/16	1-1/4	2-25/32	6-3/16	
5D	ZF0504					4-5/8	8-1/32	
7D	ZF0704					6-15/32	9-7/8	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Y03E / YI3E	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				○	○	○	○	○	
Y03F / YI3F	○	○	○	○		○	○			○		◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Y03E / YI3E																					
Y03F / YI3F	○	○	○	○	○	○	○	○													

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

i-DREAM DRILL INSERTS & HOLDERS

- Features of *i-Dream Drill* Inserts
  - ▶ Secure and accurate seating resulting in accurate repeatability and concentricity.

i-Dream Drill *General*
- ▶ For most steel materials

i-Dream Drill *INOX*
- ▶ For tough, ductile materials and stainless steels
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- ▶ Minimize cutting forces
- ▶ Reduce built-up edge

- Features of *i-Dream Drill* Holders
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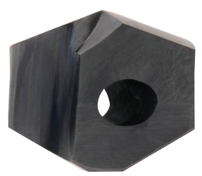
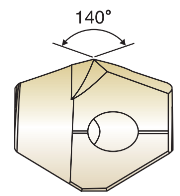
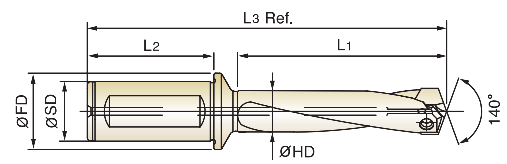
  - ▶ High Performance flute design allowing maximum chip evacuation and minimum interference.

Cutting Conditions : p.A56~A57

Unit : Inch

Series Range (mm)	Insert EDP No. TiAlN General	Insert EDP No. TiCN INOX	Insert O.D. h7 dec.	Insert O.D. h7 inch / mm
G Ø24.00 to Ø25.99	Y03G01	YI3G01	.9449	24.00
	Y03G02	YI3G02	.9531	61/64
	Y03G03	YI3G03	.9646	24.50
	Y03G04	YI3G04	.9688	31/32
	Y03G05	YI3G05	.9724	24.70
	Y03G06	YI3G06	.9843	63/64
	Y03G07	YI3G07	1.0000	1
	Y03G08	YI3G08	1.0039	25.50
	Y03G09	YI3G09	1.0106	25.67
	Y03G10	YI3G10	1.0118	25.70
	Y03G11	YI3G11	1.0156	1-1/64
H Ø26.00 to Ø27.99 7.1mm Thick	Y03H01	YI3H01	1.0236	26.00
	Y03H02	YI3H02	1.0312	1-1/32
	Y03H03	YI3H03	1.0433	26.50
	Y03H04	YI3H04	1.0469	1-3/64
	Y03H05	YI3H05	1.0625	1-1/16
	Y03H06	YI3H06	1.0630	27.00
	Y03H07	YI3H07	1.0827	27.50
	Y03H08	YI3H08	1.0938	1-3/32

Length	Holder EDP No.	Diameter HD	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1	Overall Length L3 Ref.	Torx Screw No.
3D	ZG0301	.9213	1-1/4	2-3/8	1-15/32	2-53/64	6-1/2	TG2425
5D	ZG0501	.9213	1-1/4	2-3/8	1-15/32	4-23/32	8-25/64	TG2425
7D	ZG0701	.9213	1-1/4	2-3/8	1-15/32	6-39/64	10-9/32	TG2425
3D	ZG0302	.9409	1-1/4	2-3/8	1-15/32	2-57/64	6-17/32	TG2425
5D	ZG0502	.9409	1-1/4	2-3/8	1-15/32	4-53/64	8-15/32	TG2425
7D	ZG0702	.9409	1-1/4	2-3/8	1-15/32	6-3/4	10-25/64	TG2425
3D	ZG0303	.9606	1-1/4	2-3/8	1-15/32	2-61/64	6-39/64	TG2526
5D	ZG0503	.9606	1-1/4	2-3/8	1-15/32	4-59/64	8-37/64	TG2526
7D	ZG0703	.9606	1-1/4	2-3/8	1-15/32	6-57/64	10-35/64	TG2526
3D	ZG0304	.9803	1-1/4	2-3/8	1-15/32	3-1/64	6-47/64	TG2526
5D	ZG0504	.9803	1-1/4	2-3/8	1-15/32	5-1/64	8-47/64	TG2526
7D	ZG0704	.9803	1-1/4	2-3/8	1-15/32	7-1/32	10-3/4	TG2526
3D	ZH0301	1.0000	1-1/4	2-3/8	1-15/32	3-5/64	6-3/4	TH2627
5D	ZH0501	1.0000	1-1/4	2-3/8	1-15/32	5-1/8	8-51/64	TH2627
7D	ZH0701	1.0000	1-1/4	2-3/8	1-15/32	7-11/64	10-27/32	TH2627
3D	ZH0302	1.0197	1-1/4	2-3/8	1-15/32	3-1/8	6-51/64	TH2627
5D	ZH0502	1.0197	1-1/4	2-3/8	1-15/32	5-7/32	8-7/8	TH2627
7D	ZH0702	1.0197	1-1/4	2-3/8	1-15/32	7-19/64	10-31/32	TH2627
3D	ZH0303	1.0394	1-1/4	2-3/8	1-15/32	3-3/16	6-7/8	TH2728
5D	ZH0503	1.0394	1-1/4	2-3/8	1-15/32	5-5/16	9	TH2728
7D	ZH0703	1.0394	1-1/4	2-3/8	1-15/32	7-7/16	11-1/8	TH2728
3D	ZH0304	1.0591	1-1/4	2-3/8	1-15/32	3-1/4	6-29/32	TH2728
5D	ZH0504	1.0591	1-1/4	2-3/8	1-15/32	5-13/32	9-5/64	TH2728
7D	ZH0704	1.0591	1-1/4	2-3/8	1-15/32	7-37/64	11-15/64	TH2728

◎ : Excellent ◯ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Y03G / YI3G	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◯	◯	◯	◯	◯	
Y03H / YI3H	◯	◯	◯	◯		◯	◯			◯		◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Y03G / YI3G																					
Y03H / YI3H	◯	◯	◯	◯	◯	◯	◯	◯													

i-DREAM DRILL INSERTS & HOLDERS

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  - ▶ Secure and accurate seating resulting in accurate repeatability and concentricity.

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- ▶ Minimize cutting forces
- ▶ Reduce built-up edge

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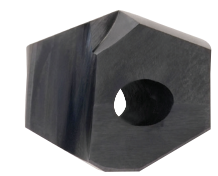
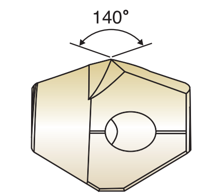
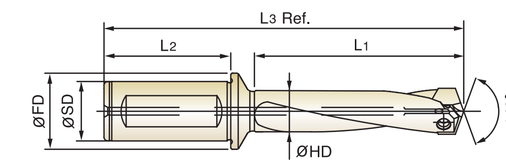
  - ▶ Innovative surface treatment that improves wear resistance and reduces corrosion.
  - ▶ High Performance flute design allowing maximum chip evacuation and minimum interference.

Cutting Conditions : p.A56~A57

Unit : Inch

Series Range (mm)	Insert EDP No. TiAlN General	Insert EDP No. TiCN INOX	Insert O.D. h7 dec.	Insert O.D. h7 inch / mm
I Ø28.00 to Ø29.99	Y03I01	YI3I01	1.1024	28.00
	Y03I02	YI3I02	1.1094	1-7/64
	Y03I03	YI3I03	1.1220	28.50
	Y03I04	YI3I04	1.1250	1-1/8
	Y03I05	YI3I05	1.1417	29.00
	Y03I06	YI3I06	1.1562	1-5/32
	Y03I07	YI3I07	1.1614	29.50
	Y03I08	YI3I08	1.1719	1-11/64
J Ø30.00 to Ø31.99 8mm Thick	Y03J01	YI3J01	1.1811	30.00
	Y03J02	YI3J02	1.1875	1-3/16
	Y03J03	YI3J03	1.2008	30.50
	Y03J04	YI3J04	1.2031	1-13/64
	Y03J05	YI3J05	1.2188	1-7/32
	Y03J06	YI3J06	1.2205	31.00
	Y03J07	YI3J07	1.2402	31.50
	Y03J08	YI3J08	1.2500	1-1/4

Length	Holder EDP No.	Diameter HD	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1	Overall Length L3 Ref.	Torx Screw No.
3D	ZI0301	1.0748	1-1/4	2-3/8	1-15/32	3-5/16	7	TI2829
5D	ZI0501	1.0748	1-1/4	2-3/8	1-15/32	5-33/64	9-15/64	TI2829
7D	ZI0701	1.0748	1-1/4	2-3/8	1-15/32	7-23/32	11-7/16	TI2829
3D	ZI0302	1.0945	1-1/4	2-3/8	1-15/32	3-23/64	7-1/16	TI2829
5D	ZI0502	1.0945	1-1/4	2-3/8	1-15/32	5-39/64	9-5/16	TI2829
7D	ZI0702	1.0945	1-1/4	2-3/8	1-15/32	7-55/64	11-9/16	TI2829
3D	ZI0303	1.1142	1-1/4	2-3/8	1-15/32	3-27/64	7-3/16	TI2930
5D	ZI0503	1.1142	1-1/4	2-3/8	1-15/32	5-45/64	9-15/32	TI2930
7D	ZI0703	1.1142	1-1/4	2-3/8	1-15/32	7-63/64	11-3/4	TI2930
3D	ZI0304	1.1339	1-1/4	2-3/8	1-15/32	3-31/64	7-7/32	TI2930
5D	ZI0504	1.1339	1-1/4	2-3/8	1-15/32	5-13/16	9-35/64	TI2930
7D	ZI0704	1.1339	1-1/4	2-3/8	1-15/32	8-1/8	11-7/8	TI2930
3D	ZJ0301	1.1535	1-1/4	2-3/8	1-15/32	3-35/64	7-21/64	TJ2831
5D	ZJ0501	1.1535	1-1/4	2-3/8	1-15/32	5-29/32	9-45/64	TJ2831
7D	ZJ0701	1.1535	1-1/4	2-3/8	1-15/32	8-17/64	12-1/16	TJ2831
3D	ZJ0302	1.1732	1-1/4	2-3/8	1-15/32	3-39/64	7-3/8	TJ2831
5D	ZJ0502	1.1732	1-1/4	2-3/8	1-15/32	6	9-25/32	TJ2831
7D	ZJ0702	1.1732	1-1/4	2-3/8	1-15/32	8-13/32	12-11/64	TJ2831
3D	ZJ0303	1.1929	1-1/4	2-3/8	1-15/32	3-21/32	7-13/32	TJ3132
5D	ZJ0503	1.1929	1-1/4	2-3/8	1-15/32	6-7/64	9-55/64	TJ3132
7D	ZJ0703	1.1929	1-1/4	2-3/8	1-15/32	8-35/64	12-19/64	TJ3132
3D	ZJ0304	1.2126	1-1/4	2-3/8	1-15/32	3-23/32	7-17/32	TJ3132
5D	ZJ0504	1.2126	1-1/4	2-3/8	1-15/32	6-13/64	10-1/64	TJ3132
7D	ZJ0704	1.2126	1-1/4	2-3/8	1-15/32	8-11/16	12-31/64	TJ3132

◎ : Excellent ◯ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Y03I / YI3I	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◯	◯	◯	◯	◯	
Y03J / YI3J	◯	◯	◯	◯		◯	◯			◯		◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Y03I / YI3I																					
Y03J / YI3J	◯	◯	◯	◯	◯	◯	◯	◯													

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG i-DREAM DRILLS

RECOMMENDED CUTTING CONDITIONS

Y03A, Y03B, Y03C, Y03D, Y03E, Y03F, Y03G, Y03H, Y03I, Y03J SERIES

i-DREAM DRILLS - GENERAL

RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	Cutting Speed	Feed				
			SFM	Ø12.0-14.9	Ø15.0-17.9	Ø18.0-21.9	Ø22.0-26.9	Ø27.0-31.9
P	1	Non-alloy steel	312~394	0.006~0.011	0.008~0.014	0.011~0.016	0.013~0.020	0.015~0.022
	2		262~344	0.006~0.009	0.008~0.014	0.011~0.016	0.013~0.020	0.015~0.022
	3		197~262	0.005~0.008	0.007~0.011	0.009~0.013	0.012~0.018	0.013~0.019
	4		180~230	0.004~0.006	0.006~0.010	0.008~0.012	0.010~0.015	0.011~0.017
	5		180~230	0.004~0.006	0.006~0.010	0.008~0.012	0.010~0.015	0.011~0.017
	6	Low alloy steel	230~295	0.005~0.008	0.007~0.011	0.009~0.013	0.012~0.018	0.013~0.020
	7		197~262	0.005~0.008	0.006~0.010	0.009~0.013	0.012~0.018	0.013~0.020
	8		180~230	0.004~0.006	0.005~0.008	0.008~0.012	0.010~0.015	0.011~0.017
	9		148~197	0.003~0.005	0.005~0.008	0.008~0.012	0.010~0.015	0.011~0.017
	10	High alloyed steel, and tool steel	164~213	0.004~0.006	0.005~0.008	0.007~0.010	0.008~0.012	0.009~0.014
	11		131~180	0.004~0.006	0.004~0.007	0.008~0.012	0.008~0.012	0.009~0.014
K	15	Grey cast iron	328~410	0.006~0.010	0.008~0.015	0.011~0.017	0.014~0.020	0.016~0.022
	16		246~312	0.004~0.008	0.006~0.011	0.008~0.012	0.010~0.014	0.011~0.016
	17	Nodular cast iron	312~394	0.005~0.009	0.007~0.012	0.008~0.013	0.011~0.016	0.013~0.017
	18		246~312	0.004~0.008	0.006~0.010	0.007~0.011	0.010~0.014	0.011~0.016
	19	Malleable cast iron	328~410	0.005~0.009	0.007~0.012	0.008~0.013	0.011~0.016	0.013~0.017
	20		246~312	0.004~0.007	0.006~0.010	0.007~0.011	0.010~0.014	0.011~0.016

▶ The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.
Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.
▶ Recommend you to reduce the feed rate to 85%, 70% when you use 5xD, 7xD holders.
▶ For use of 7xD holder, we recommend to drill a centering pre-hole with equal to or larger than 140° point angle to min. 2/3 cutting diameter.
The use of the centering pre-hole improves hole location, roundness and surface finish.

YG i-DREAM DRILLS

RECOMMENDED CUTTING CONDITIONS

YI3A, YI3B, YI3C, YI3D, YI3E, YI3F, YI3G, YI3H, YI3I, YI3J SERIES

i-DREAM DRILLS - INOX

RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	Cutting Speed	Feed				
			SFM	Ø12.0-14.9	Ø15.0-17.9	Ø18.0-21.9	Ø22.0-26.9	Ø27.0-31.9
P	1	Non-alloy steel	312~394	0.006~0.011	0.008~0.014	0.011~0.016	0.013~0.020	0.015~0.022
	2		262~344	0.006~0.009	0.008~0.014	0.011~0.016	0.013~0.020	0.015~0.022
	3		197~262	0.005~0.008	0.007~0.011	0.009~0.013	0.012~0.018	0.013~0.019
	4		180~230	0.004~0.006	0.006~0.010	0.008~0.012	0.010~0.015	0.011~0.017
	6	Low alloy steel	230~295	0.005~0.008	0.007~0.011	0.009~0.013	0.012~0.018	0.013~0.020
	7		197~262	0.005~0.008	0.006~0.010	0.009~0.013	0.012~0.018	0.013~0.020
	10	High alloyed steel, and tool steel	164~213	0.004~0.006	0.005~0.008	0.007~0.010	0.008~0.012	0.009~0.014
M	12	Stainless steel	98~148	0.003~0.006	0.004~0.006	0.004~0.006	0.005~0.008	0.006~0.009
	13		98~148	0.003~0.006	0.004~0.006	0.004~0.006	0.005~0.008	0.006~0.009
	14		148~197	0.004~0.006	0.005~0.007	0.006~0.008	0.006~0.010	0.007~0.011
N	21	Aluminum-wrought alloy	820~1082	0.012~0.016	0.014~0.018	0.016~0.020	0.018~0.022	0.020~0.024
	22		656~820	0.012~0.016	0.014~0.018	0.016~0.020	0.018~0.022	0.020~0.024
	23	Aluminum-cast, alloyed	656~820	0.010~0.014	0.012~0.016	0.014~0.018	0.016~0.020	0.018~0.022
	24		492~722	0.010~0.014	0.012~0.016	0.014~0.018	0.016~0.020	0.018~0.022
	25		328~656	0.008~0.012	0.010~0.014	0.012~0.016	0.014~0.018	0.016~0.020
	26	Copper and Copper Alloys (Bronze / Brass)	377~476	0.006~0.011	0.009~0.014	0.011~0.014	0.015~0.018	0.016~0.019
	27		476~607	0.007~0.011	0.009~0.015	0.012~0.015	0.015~0.018	0.017~0.019
	28		312~394	0.002~0.004	0.004~0.005	0.004~0.005	0.006~0.007	0.007~0.009

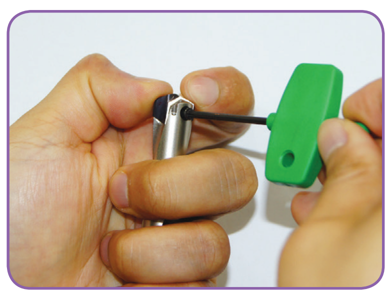
▶ The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.
Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.
▶ Recommend you to reduce the feed rate to 85%, 70% when you use 5xD, 7xD holders.
▶ For use of 7xD holder, we recommend to drill a centering pre-hole with equal to or larger than 140° point angle to min. 2/3 cutting diameter.
The use of the centering pre-hole improves hole location, roundness and surface finish.

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

Assembly of *i*-Dream Drills


Make sure to clean the insert and insert seat.

Slide the drill insert into the slot of the holder and press down the insert to touch the bottom of the slot.

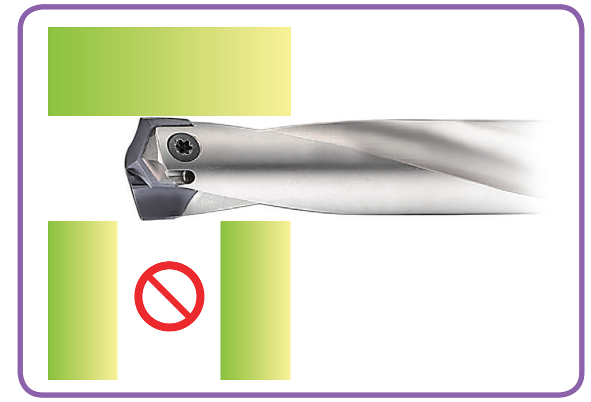


After confirming the insert is pressed down to the bottom of the slot, tighten the screw using anti-seize compound.

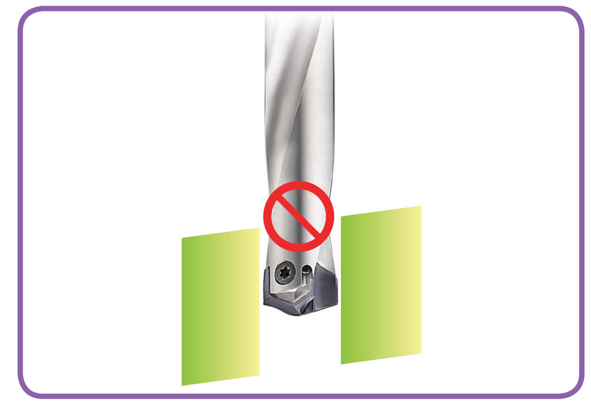
WRENCH TYPE	PRODUCT No.	T-HANDLE No.	SERIES
WING TYPE 	TWWT08	—	A
			B
			C
TORX BIT TYPE 	TWBT15	TWH600 	D
	TWBT20		E, F, G
	TWBT25		H, I, J

Use the wing type or T-type wrench.
▶ Need to use appropriate wrenches and screws as indicated.
▶ It's important to tighten up the screw properly.

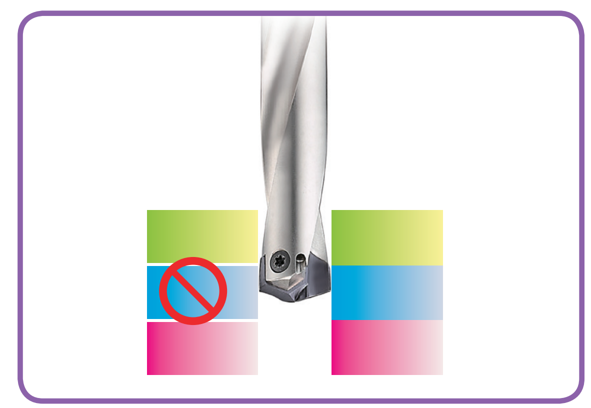
CAUTION-NOT RECOMMENDABLE APPLICATION



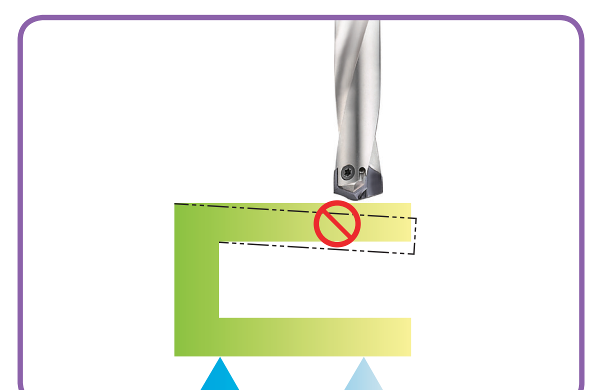
Intersecting cross hole is bigger than the drill insert's Margin Length.



Material with slanting entrance and exit over 7 degree. (If drilling 7 degree or under slanting surface, reduce the feed about 30-50 %)



For drilling stacked plates, minimize the space between the plates.
The space stacked plates can cause insert breakage or poor chip control.



The material needs to be fixtured securely before drilling.

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
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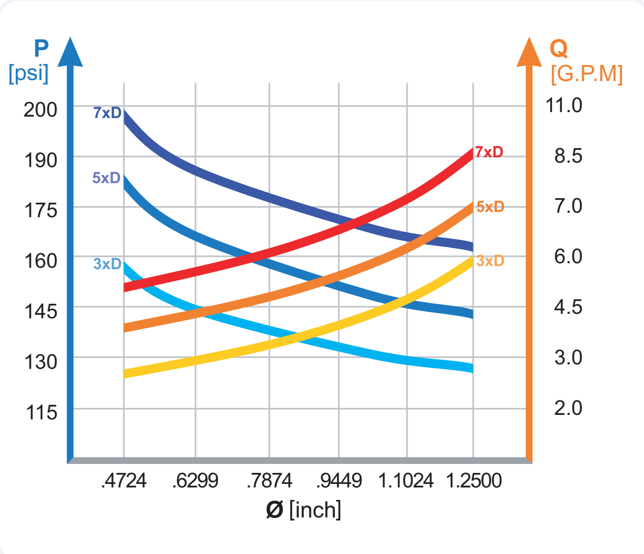
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

RECOMMENDED COOLANT PRESSURE AND FLOW RATE ON VERTICAL DRILLING



- Recommended emulsion mix is 6% - 8%.
- For Drilling in Stainless and High Strength steels, a mix of 10% is recommended.
- For horizontal drilling, 30% reduction on the coolant pressure and flow rate is possible.
- Dry drilling is possible for 1-2xD drilling. But not recommended.

TROUBLE SHOOTING

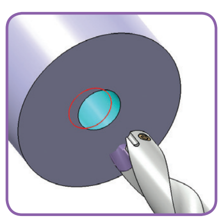
1) Heavy flank wear / Fast flank wear
- Reduce cutting speed
- Increase feed

2) Chipping on cutting edge
- Reduce feed
- Check the rigidity of spindle and chuck
- Rigid clamping of workpiece

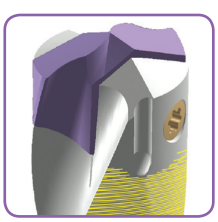
3) Build up on cutting edge
- Increase cutting speed
- Use a coated insert

4) Chipping or break down on outer corner
- Reduce feed
- Rigid clamping of workpiece

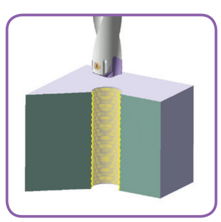
5) Wear of land margin
- Rigid clamping of workpiece
- Reduce cutting speed
- Increase coolant flow



6) Unsatisfactory positioning of the hole
- Rigid clamping of workpiece
- Reduce feed during entrance or exit



7) Scratching on holder
- Rigid clamping of workpiece
- Reduce feed
- Increase coolant flow



8) Unsatisfactory surface finish
- Rigid clamping of workpiece
- Increase coolant flow and pressure

SOLID CARBIDE

DREAM DRILLS - PRO

- For General Purpose (HRc30 to HRc50)
- Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology

SELECTION GUIDE

YG HOLEMAKING TOOLS

SERIES	DGN506	DGN508
DRILLING DEPTH	3XD	5XD
TOOL MATERIAL	SOLID CARBIDE	
LENGTH	SHORT	LONG
SIZE MIN	D3.0	D1.0
SIZE MAX	D20.0	D20.0
PAGE	A63	A67
SURFACE TREATMENT	Z-Coating	

SOLID CARBIDE
DREAM DRILLS PRO

- For General Purpose (HRc30 to HRc50)
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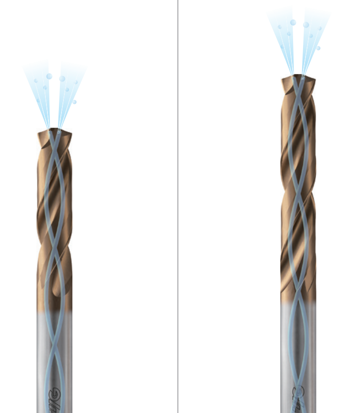


Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A71

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	DGN506	DGN508
P	1	Non-alloy steel	About 0.15% C	Annealed	125			
	2		About 0.45% C	Annealed	190	13	◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	◎	◎
	4		About 0.75% C	Annealed	270	28	◎	◎
	5		About 0.75% C	Quenched & Tempered	300	32	○	○
	6	Low alloy steel		Annealed	180	10	◎	◎
	7			Quenched & Tempered	275	29	◎	◎
	8			Quenched & Tempered	300	32	○	○
	9			Quenched & Tempered	350	38	○	○
	10	High alloyed steel, and tool steel		Annealed	200	15	◎	◎
	11			Quenched & Tempered	325	35	○	○
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○	○
	13		Martensitic	Quenched & Tempered	240	23	○	○
	14		Austenitic		180	10		
K	15	Grey cast iron	Pearlitic / ferritic		180	10	◎	◎
	16		Pearlitic (Martensitic)		260	26	○	○
	17	Nodular cast iron	Ferritic		160	3	◎	◎
	18		Pearlitic		250	25	○	○
	19	Malleable cast iron	Ferritic		130		◎	◎
	20		Pearlitic		230	21	○	○
N	21	Aluminum-wrought alloy	Not Curable		60			
	22		Curable	Hardened	100			
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75			
	24		≤ 12% Si, Curable	Hardened	90			
	25		> 12% Si, Not Curable		130			
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110			
	27		CuZn, CuSnZn (Brass)		90			
	28		CuSn, lead-free copper and electrolytic copper		100			
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic					
	30	Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.	Rubber, Wood, etc.					
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15		
	32			Cured	280	30		
	33		Ni or Co Based	Annealed	250	25		
	34			Cured	350	38		
	35			Cast	320	34		
	36	Titanium Alloys	Pure Titanium		400 Rm			
	37		Alpha + Beta Alloys	Hardened	1050 Rm			
H	38	Hardened steel		Hardened	550	55		
	39			Hardened	630	60	○	
	40	Chilled Cast Iron		Cast	400	42		
	41	Hardened Cast Iron		Hardened	550	55		

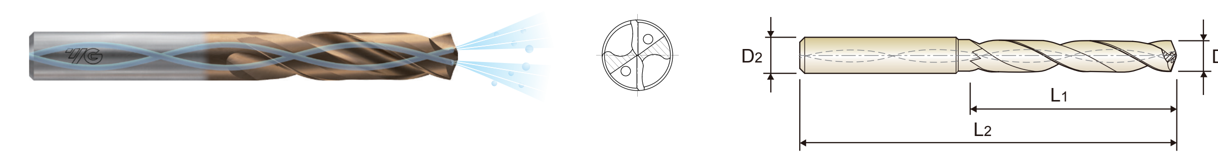
YG DREAM DRILLS -PRO

DGN506 SERIES

CARBIDE, DREAM DRILLS PRO with COOLANT HOLES

SHORT

- ▶ Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30~50), Cast Iron
- ▶ Wave shape cutting edge to improve chip formation for low cutting force
- ▶ Helical thinning for low thrust, stable torque and good chip breakage
- ▶ Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology



DIN 6537 | CARBIDE | 30° | h6 | m7 | 140° | 20 bar | Z Coating | p.A71~A72

3 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN506030	3.0		0.1181	6	20	62
DGN506031	3.1		0.1220	6	20	62
DGN506008F	3.175	1/8	0.1250	6	20	62
DGN506032	3.2		0.1260	6	20	62
DGN506033	3.3		0.1299	6	20	62
DGN5060336	3.36		0.1323	6	20	62
DGN506034	3.4		0.1339	6	20	62
DGN5060344	3.44		0.1356	6	20	62
DGN506035	3.5		0.1378	6	20	62
DGN5060352	3.52		0.1387	6	20	62
DGN5060357	3.57		0.1405	6	20	62
DGN506036	3.6		0.1417	6	20	62
DGN506037	3.7		0.1457	6	20	62
DGN5060377	3.77		0.1484	6	24	66
DGN506038	3.8		0.1496	6	24	66
DGN5060386	3.86		0.1521	6	24	66
DGN506039	3.9		0.1535	6	24	66
DGN506010F	3.969	5/32	0.1563	6	24	66
DGN506040	4.0		0.1575	6	24	66
DGN5060405	4.05		0.1596	6	24	66
DGN506020G	4.09	#20	0.1610	6	24	66
DGN506041	4.1		0.1614	6	24	66
DGN5060416	4.16		0.1636	6	24	66
DGN506042	4.2		0.1654	6	24	66
DGN5060427	4.27		0.1681	6	24	66
DGN506043	4.3		0.1693	6	24	66

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN506011F	4.366	11/64	0.1719	6	24	66
DGN506044	4.4		0.1732	6	24	66
DGN5060446	4.46		0.1754	6	24	66
DGN506045	4.5		0.1772	6	24	66
DGN506046	4.6		0.1811	6	24	66
DGN5060466	4.66		0.1835	6	24	66
DGN506047	4.7		0.1850	6	24	66
DGN506012F	4.763	3/16	0.1875	6	28	66
DGN506048	4.8		0.1890	6	28	66
DGN506049	4.9		0.1929	6	28	66
DGN506050	5.0		0.1969	6	28	66
DGN506051	5.1		0.2008	6	28	66
DGN5060515	5.15		0.2029	6	28	66
DGN506013F	5.159	13/64	0.2031	6	28	66
DGN506052	5.2		0.2047	6	28	66
DGN5060526	5.26		0.2070	6	28	66
DGN506053	5.3		0.2087	6	28	66
DGN506054	5.4		0.2126	6	28	66
DGN506003G	5.41	#3	0.2130	6	28	66
DGN5060547	5.47		0.2152	6	28	66
DGN506055	5.5		0.2165	6	28	66
DGN506014F	5.556	7/32	0.2188	6	28	66
DGN506056	5.6		0.2205	6	28	66
DGN506057	5.7		0.2244	6	28	66
DGN506058	5.8		0.2283	6	28	66
DGN506059	5.9		0.2323	6	28	66

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630		400	550
Recommended																		○				

YG DREAM DRILLS -PRO

DGN506 SERIES

CARBIDE, DREAM DRILLS PRO with COOLANT HOLES

SHORT

- ▶ Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30~50), Cast Iron
- ▶ Wave shape cutting edge to improve chip formation for low cutting force
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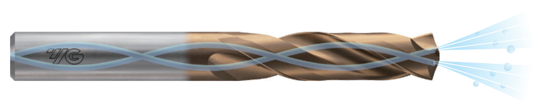
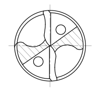
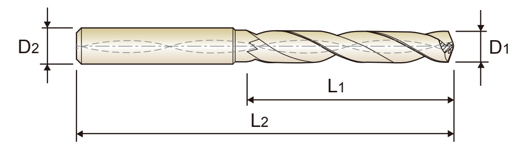






p.A71~A72

3 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN506015F	5.953	15/64	0.2344	6	28	66
DGN506060	6.0		0.2362	6	28	66
DGN506061	6.1		0.2402	8	34	79
DGN506003L	6.147	C	0.2420	8	34	79
DGN506062	6.2		0.2441	8	34	79
DGN506063	6.3		0.2480	8	34	79
DGN506016F	6.350	1/4	0.2500	8	34	79
DGN506064	6.4		0.2520	8	34	79
DGN506065	6.5		0.2559	8	34	79
DGN506006L	6.528	F	0.2570	8	34	79
DGN506066	6.6		0.2598	8	34	79
DGN5060665	6.65		0.2620	8	34	79
DGN506067	6.7		0.2638	8	34	79
DGN506017F	6.747	17/64	0.2656	8	34	79
DGN506068	6.8		0.2677	8	34	79
DGN5060686	6.86		0.2701	8	34	79
DGN506069	6.9		0.2717	8	34	79
DGN506070	7.0		0.2756	8	34	79
DGN506010L	7.036	J	0.2770	8	41	79
DGN506071	7.1		0.2795	8	41	79
DGN506018F	7.144	9/32	0.2812	8	41	79
DGN506072	7.2		0.2835	8	41	79
DGN506073	7.3		0.2874	8	41	79
DGN506074	7.4		0.2913	8	41	79
DGN506075	7.5		0.2953	8	41	79
DGN506019F	7.541	19/64	0.2969	8	41	79

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN506076	7.6		0.2992	8	41	79
DGN506077	7.7		0.3031	8	41	79
DGN506078	7.8		0.3071	8	41	79
DGN506079	7.9		0.3110	8	41	79
DGN506020F	7.938	5/16	0.3125	8	41	79
DGN506080	8.0		0.3150	8	41	79
DGN506081	8.1		0.3189	10	47	89
DGN5060815	8.15		0.3210	10	47	89
DGN506082	8.2		0.3228	10	47	89
DGN506083	8.3		0.3268	10	47	89
DGN506021F	8.334	21/64	0.3281	10	47	89
DGN506084	8.4		0.3307	10	47	89
DGN506017L	8.430	Q	0.3320	10	47	89
DGN506085	8.5		0.3346	10	47	89
DGN5060856	8.56		0.3371	10	47	89
DGN506086	8.6		0.3386	10	47	89
DGN5060864	8.64		0.3402	10	47	89
DGN506087	8.7		0.3425	10	47	89
DGN506022F	8.731	11/32	0.3438	10	47	89
DGN506088	8.8		0.3465	10	47	89
DGN5060886	8.86		0.3488	10	47	89
DGN506089	8.9		0.3504	10	47	89
DGN506090	9.0		0.3543	10	47	89
DGN506091	9.1		0.3583	10	47	89
DGN506023F	9.128	23/64	0.3594	10	47	89
DGN506092	9.2		0.3622	10	47	89

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
Recommended																		○				

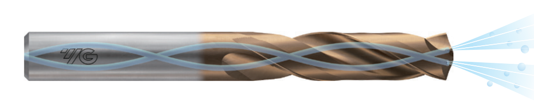
YG DREAM DRILLS -PRO

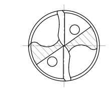
DGN506 SERIES

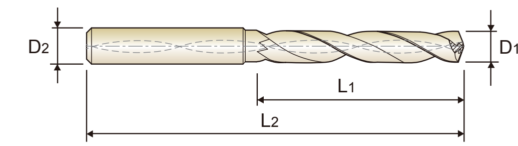
CARBIDE, DREAM DRILLS PRO with COOLANT HOLES

SHORT

- ▶ Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30~50), Cast Iron
- ▶ Wave shape cutting edge to improve chip formation for low cutting force
- ▶ Helical thinning for low thrust, stable torque and good chip breakage
- ▶ Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology







p.A71~A72

3 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN506093	9.3		0.3661	10	47	89
DGN506094	9.4		0.3701	10	47	89
DGN506095	9.5		0.3740	10	47	89
DGN506024F	9.525	3/8	0.3750	10	47	89
DGN506096	9.6		0.3780	10	47	89
DGN506097	9.7		0.3819	10	47	89
DGN506098	9.8		0.3858	10	47	89
DGN506099	9.9		0.3898	10	47	89
DGN506025F	9.922	25/64	0.3906	10	47	89
DGN506100	10.0		0.3937	10	47	89
DGN506101	10.1		0.3976	12	55	102
DGN506102	10.2		0.4016	12	55	102
DGN506103	10.3		0.4055	12	55	102
DGN506026F	10.319	13/32	0.4062	12	55	102
DGN506104	10.4		0.4094	12	55	102
DGN506105	10.5		0.4134	12	55	102
DGN506106	10.6		0.4173	12	55	102
DGN506107	10.7		0.4212	12	55	102
DGN506027F	10.716	27/64	0.4219	12	55	102
DGN506108	10.8		0.4252	12	55	102
DGN5061086	10.86		0.4276	12	55	102
DGN506109	10.9		0.4291	12	55	102
DGN506110	11.0		0.4330	12	55	102
DGN506111	11.1		0.4370	12	55	102
DGN506028F	11.113	7/16	0.4375	12	55	102
DGN506112	11.2		0.4409	12	55	102

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN506113	11.3		0.4448	12	55	102
DGN506114	11.4		0.4488	12	55	102
DGN506115	11.5		0.4527	12	55	102
DGN506029F	11.509	29/64	0.4531	12	55	102
DGN506116	11.6		0.4566	12	55	102
DGN506117	11.7		0.4606	12	55	102
DGN506118	11.8		0.4645	12	55	102
DGN506119	11.9		0.4685	12	55	102
DGN506030F	11.906	15/32	0.4688	12	55	102
DGN506120	12.0		0.4724	12	55	102
DGN506121	12.1		0.4764	14	60	107
DGN506122	12.2		0.4803	14	60	107
DGN506123	12.3		0.4843	14	60	107
DGN506031F	12.303	31/64	0.4844	14	60	107
DGN506124	12.4		0.4882	14	60	107
DGN506125	12.5		0.4921	14	60	107
DGN506126	12.6		0.4961	14	60	107
DGN506032F	12.7	1/2	0.5000	14	60	107
DGN506129	12.9		0.5079	14	60	107
DGN506130	13.0		0.5118	14	60	107
DGN506131	13.1		0.5157	14	60	107
DGN506132	13.2		0.5197	14	60	107
DGN506133	13.3		0.5236	14	60	107
DGN506134	13.4		0.5276	14	60	107
DGN506034F	13.49	17/32	0.5312	14	60	107
DGN506135	13.5		0.5314	14	60	107

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
Recommended																		○				

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG DREAM DRILLS -PRO

DGN506 SERIES

CARBIDE, DREAM DRILLS PRO with COOLANT HOLES

SHORT

- ▶ Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30~50), Cast Iron
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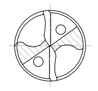

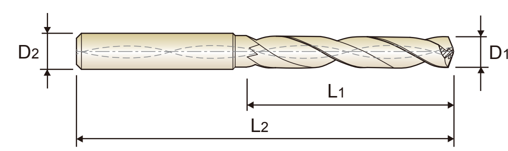

DIN 6537 | CARBIDE | 30° | h6 | m7 | 140° | 20 bar | Z Coating | p.A71~A72

3 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN506136	13.6		0.5354	14	60	107
DGN506137	13.7		0.5394	14	60	107
DGN506138	13.8		0.5433	14	60	107
DGN506139	13.9		0.5472	14	60	107
DGN506140	14.0		0.5512	14	60	107
DGN506141	14.1		0.5551	16	65	115
DGN506142	14.2		0.5591	16	65	115
DGN506036F	14.288	9/16	0.5625	16	65	115
DGN506143	14.3		0.5630	16	65	115
DGN506144	14.4		0.5669	16	65	115
DGN506145	14.5		0.5708	16	65	115
DGN506146	14.6		0.5748	16	65	115
DGN506037F	14.68	37/64	0.5781	16	65	115
DGN506147	14.7		0.5787	16	65	115
DGN506148	14.8		0.5827	16	65	115
DGN506149	14.9		0.5866	16	65	115
DGN506150	15.0		0.5905	16	65	115
DGN506151	15.1		0.5945	16	65	115
DGN506152	15.2		0.5984	16	65	115
DGN506153	15.3		0.6024	16	65	115
DGN506154	15.4		0.6063	16	65	115
DGN506155	15.5		0.6102	16	65	115
DGN506156	15.6		0.6142	16	65	115
DGN506157	15.7		0.6181	16	65	115
DGN506158	15.8		0.6220	16	65	115
DGN506040F	15.875	5/8	0.6250	16	65	115
DGN506159	15.9		0.6260	16	65	115
DGN506160	16		0.6299	16	65	115
DGN506165	16.5		0.6495	18	73	123
DGN506042F	16.67	21/32	0.6563	18	73	123
DGN506170	17.0		0.6692	18	73	123
DGN506175	17.5		0.6889	18	73	123
DGN5061761	17.61		0.6932	18	73	123
DGN5061773	17.73		0.6980	18	73	123
DGN506180	18.0		0.7087	18	73	123
DGN506185	18.5		0.7283	20	79	131
DGN5061864	18.64		0.7339	20	79	131
DGN506190	19.0		0.7480	20	79	131
DGN506048F	19.05	3/4	0.7500	20	79	131
DGN506195	19.5		0.7676	20	79	131
DGN5061966	19.66		0.7740	20	79	131
DGN5061973	19.73		0.7766	20	79	131
DGN506200	20.0		0.7874	20	79	131

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
Recommended																		○				

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG DREAM DRILLS -PRO

DGN508 SERIES

CARBIDE, DREAM DRILLS PRO with COOLANT HOLES

LONG

- ▶ Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30~50), Cast Iron
- ▶ Wave shape cutting edge to improve chip formation for low cutting force
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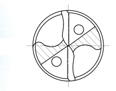

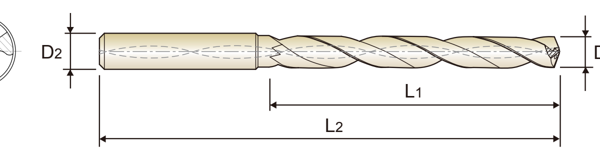

DIN 6537 | CARBIDE | 30° | h6 | m7 | 140° | 20 bar | Z Coating | p.A71~A72

5 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN508010	1.0		0.0394	3	8	55
DGN508011	1.1		0.0433	3	12	55
DGN508012	1.2		0.0472	3	12	55
DGN508013	1.3		0.0512	3	12	55
DGN508014	1.4		0.0551	3	12	55
DGN508015	1.5		0.0591	3	16	55
DGN508004F	1.588	1/16	0.0625	3	16	55
DGN508016	1.6		0.0630	3	16	55
DGN508017	1.7		0.0669	3	16	55
DGN508018	1.8		0.0709	3	16	55
DGN508019	1.9		0.0748	3	16	55
DGN508005F	1.984	5/64	0.0781	3	16	55
DGN508020	2.0		0.0787	4	21	57
DGN508021	2.1		0.0827	4	21	57
DGN508022	2.2		0.0866	4	21	57
DGN508023	2.3		0.0906	4	21	57
DGN508006F	2.381	3/32	0.0938	4	21	57
DGN508024	2.4		0.0945	4	21	57
DGN508025	2.5		0.0984	4	21	57
DGN508026	2.6		0.1024	4	21	57
DGN508027	2.7		0.1063	4	21	57
DGN508007F	2.778	7/64	0.1094	4	21	57
DGN508028	2.8		0.1102	4	21	57
DGN508029	2.9		0.1142	4	21	57
DGN508030	3.0		0.1181	6	28	66
DGN508031	3.1		0.1220	6	28	66
DGN508008F	3.175	1/8	0.1250	6	28	66
DGN508032	3.2		0.1260	6	28	66
DGN508033	3.3		0.1299	6	28	66
DGN508034	3.4		0.1339	6	28	66
DGN508035	3.5		0.1378	6	28	66
DGN508009F	3.572	9/64	0.1406	6	28	66
DGN508036	3.6		0.1417	6	28	66
DGN508037	3.7		0.1457	6	28	66
DGN508038	3.8		0.1496	6	36	74
DGN508039	3.9		0.1535	6	36	74
DGN508010F	3.969	5/32	0.1563	6	36	74
DGN508040	4.0		0.1575	6	36	74
DGN508020G	4.09	#20	0.1610	6	36	74
DGN508041	4.1		0.1614	6	36	74
DGN508042	4.2		0.1654	6	36	74
DGN508043	4.3		0.1693	6	36	74
DGN508011F	4.366	11/64	0.1719	6	36	74
DGN508044	4.4		0.1732	6	36	74
DGN508045	4.5		0.1772	6	36	74
DGN508046	4.6		0.1811	6	36	74
DGN508047	4.7		0.1850	6	36	74
DGN508012F	4.763	3/16	0.1875	6	44	82

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
Recommended																		○				

YG DREAM DRILLS -PRO

DGN508 SERIES

CARBIDE, DREAM DRILLS PRO with COOLANT HOLES

LONG

- ▶ Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30~50), Cast Iron
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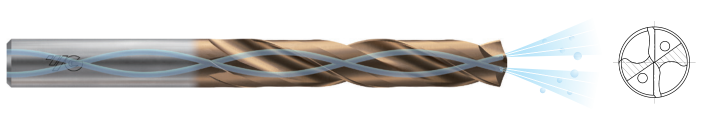
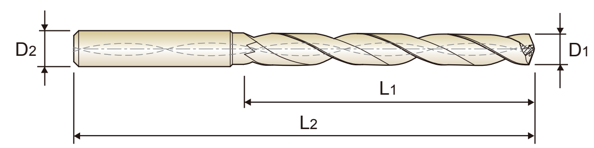




DIN 6537 | CARBIDE | 30° | h6 | m7 | 140° | 20 bar | Z Coating | p.A71~A72

5 × D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
Z-Coating	D1			D2	L1	L2
DGN508048	4.8		0.1890	6	44	82
DGN508049	4.9		0.1929	6	44	82
DGN508050	5.0		0.1969	6	44	82
DGN508051	5.1		0.2008	6	44	82
DGN508013F	5.159	13/64	0.2031	6	44	82
DGN508052	5.2		0.2047	6	44	82
DGN508053	5.3		0.2087	6	44	82
DGN508054	5.4		0.2126	6	44	82
DGN508003G	5.41	#3	0.2130	6	44	82
DGN508055	5.5		0.2165	6	44	82
DGN508014F	5.556	7/32	0.2188	6	44	82
DGN508056	5.6		0.2205	6	44	82
DGN508057	5.7		0.2244	6	44	82
DGN508058	5.8		0.2283	6	44	82
DGN508059	5.9		0.2323	6	44	82
DGN508015F	5.953	15/64	0.2344	6	44	82
DGN508060	6.0		0.2362	6	44	82
DGN508061	6.1		0.2402	8	53	91
DGN508062	6.2		0.2441	8	53	91
DGN508063	6.3		0.2480	8	53	91
DGN508016F	6.350	1/4	0.2500	8	53	91
DGN508064	6.4		0.2520	8	53	91
DGN508065	6.5		0.2559	8	53	91
DGN508006L	6.528	F	0.2570	8	53	91

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
Z-Coating	D1			D2	L1	L2
DGN508066	6.6		0.2598	8	53	91
DGN508067	6.7		0.2638	8	53	91
DGN508017F	6.747	17/64	0.2656	8	53	91
DGN508068	6.8		0.2677	8	53	91
DGN508069	6.9		0.2717	8	53	91
DGN508070	7.0		0.2756	8	53	91
DGN508071	7.1		0.2795	8	53	91
DGN508018F	7.144	9/32	0.2812	8	53	91
DGN508072	7.2		0.2835	8	53	91
DGN508073	7.3		0.2874	8	53	91
DGN508074	7.4		0.2913	8	53	91
DGN508075	7.5		0.2953	8	53	91
DGN508019F	7.541	19/64	0.2969	8	53	91
DGN508076	7.6		0.2992	8	53	91
DGN508077	7.7		0.3031	8	53	91
DGN508078	7.8		0.3071	8	53	91
DGN508079	7.9		0.3110	8	53	91
DGN508020F	7.938	5/16	0.3125	8	53	91
DGN508080	8.0		0.3150	8	53	91
DGN508081	8.1		0.3189	10	61	103
DGN508082	8.2		0.3228	10	61	103
DGN508083	8.3		0.3268	10	61	103
DGN508021F	8.334	21/64	0.3281	10	61	103
DGN508084	8.4		0.3307	10	61	103

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
Recommended																		○				

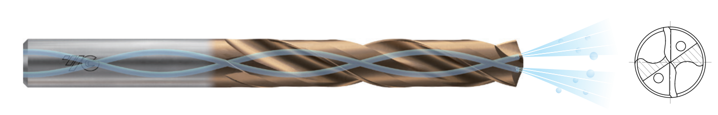
YG DREAM DRILLS -PRO

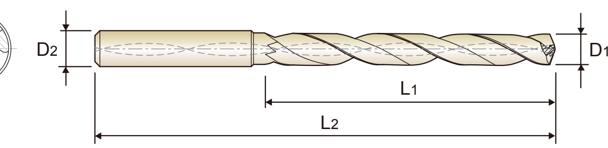
DGN508 SERIES

CARBIDE, DREAM DRILLS PRO with COOLANT HOLES

LONG

- ▶ Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30~50), Cast Iron
- ▶ Wave shape cutting edge to improve chip formation for low cutting force
- ▶ Helical thinning for low thrust, stable torque and good chip breakage
- ▶ Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology





DIN 6537 | CARBIDE | 30° | h6 | m7 | 140° | 20 bar | Z Coating | p.A71~A72

5 × D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
Z-Coating	D1			D2	L1	L2
DGN508017L	8.430	Q	0.3320	10	61	103
DGN508085	8.5		0.3346	10	61	103
DGN508086	8.6		0.3386	10	61	103
DGN508087	8.7		0.3425	10	61	103
DGN508022F	8.731	11/32	0.3438	10	61	103
DGN508088	8.8		0.3465	10	61	103
DGN508089	8.9		0.3504	10	61	103
DGN508090	9.0		0.3543	10	61	103
DGN508091	9.1		0.3583	10	61	103
DGN508023F	9.128	23/64	0.3594	10	61	103
DGN508092	9.2		0.3622	10	61	103
DGN508093	9.3		0.3661	10	61	103
DGN508094	9.4		0.3701	10	61	103
DGN508095	9.5		0.3740	10	61	103
DGN508024F	9.525	3/8	0.3750	10	61	103
DGN508096	9.6		0.3780	10	61	103
DGN508097	9.7		0.3819	10	61	103
DGN508098	9.8		0.3858	10	61	103
DGN508099	9.9		0.3898	10	61	103
DGN508025F	9.922	25/64	0.3906	10	61	103
DGN508100	10.0		0.3937	10	61	103
DGN508101	10.1		0.3976	12	71	118
DGN508102	10.2		0.4016	12	71	118
DGN508103	10.3		0.4055	12	71	118

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
Z-Coating	D1			D2	L1	L2
DGN508026F	10.319	13/32	0.4062	12	71	118
DGN508104	10.4		0.4094	12	71	118
DGN508105	10.5		0.4134	12	71	118
DGN508106	10.6		0.4173	12	71	118
DGN508107	10.7		0.4212	12	71	118
DGN508027F	10.716	27/64	0.4219	12	71	118
DGN508108	10.8		0.4252	12	71	118
DGN508109	10.9		0.4291	12	71	118
DGN508110	11.0		0.4330	12	71	118
DGN508111	11.1		0.4370	12	71	118
DGN508028F	11.113	7/16	0.4375	12	71	118
DGN508112	11.2		0.4409	12	71	118
DGN508113	11.3		0.4448	12	71	118
DGN508114	11.4		0.4488	12	71	118
DGN508115	11.5		0.4527	12	71	118
DGN508029F	11.509	29/64	0.4531	12	71	118
DGN508116	11.6		0.4566	12	71	118
DGN508117	11.7		0.4606	12	71	118
DGN508118	11.8		0.4645	12	71	118
DGN508119	11.9		0.4685	12	71	118
DGN508030F	11.906	15/32	0.4688	12	71	118
DGN508120	12.0		0.4724	12	71	118
DGN508121	12.1		0.4764	14	77	124
DGN508123	12.3		0.4843	14	77	124

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
Recommended																		○				

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

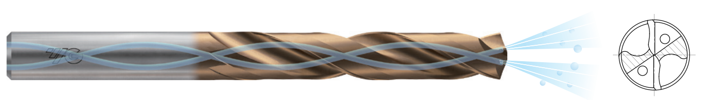
YG DREAM DRILLS -PRO

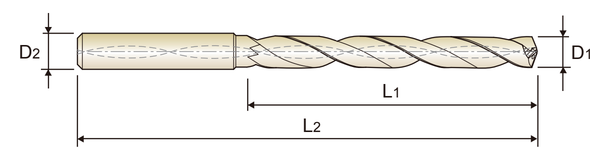
DGN508 SERIES

CARBIDE, DREAM DRILLS PRO with COOLANT HOLES

LONG

- ▶ Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30~50), Cast Iron
- ▶ Wave shape cutting edge to improve chip formation for low cutting force
- ▶ Helical thinning for low thrust, stable torque and good chip breakage
- ▶ Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology





p.A71~A72

5 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN508031F	12.303	31/64	0.4844	14	77	124
DGN508124	12.4		0.4882	14	77	124
DGN508125	12.5		0.4921	14	77	124
DGN508126	12.6		0.4961	14	77	124
DGN508032F	12.7	1/2	0.5000	14	77	124
DGN508129	12.9		0.5079	14	77	124
DGN508130	13.0		0.5118	14	77	124
DGN508132	13.2		0.5197	14	77	124
DGN508133	13.3		0.5236	14	77	124
DGN508134	13.4		0.5276	14	77	124
DGN508034F	13.49	17/32	0.5312	14	77	124
DGN508135	13.5		0.5314	14	77	124
DGN508140	14.0		0.5512	14	77	124
DGN508141	14.1		0.5551	16	83	133
DGN508036F	14.288	9/16	0.5625	16	83	133
DGN508143	14.3		0.5630	16	83	133
DGN508144	14.4		0.5669	16	83	133
DGN508145	14.5		0.5708	16	83	133
DGN508146	14.6		0.5748	16	83	133
DGN508149	14.9		0.5866	16	83	133
DGN508150	15.0		0.5905	16	83	133
DGN508153	15.3		0.6024	16	83	133
DGN508154	15.4		0.6063	16	83	133
DGN508155	15.5		0.6102	16	83	133
DGN508156	15.6		0.6142	16	83	133
DGN508157	15.7		0.6181	16	83	133
DGN508040F	15.875	5/8	0.6250	16	83	133
DGN508159	15.9		0.6260	16	83	133
DGN508160	16.0		0.6299	16	83	133
DGN508165	16.5		0.6495	18	93	143
DGN508042F	16.67	21/32	0.6563	18	93	143
DGN508170	17.0		0.6692	18	93	143
DGN508175	17.5		0.6889	18	93	143
DGN508180	18.0		0.7087	18	93	143
DGN508185	18.5		0.7283	20	101	153
DGN508190	19.0		0.7480	20	101	153
DGN508048F	19.05	3/4	0.7500	20	101	153
DGN508195	19.5		0.7676	20	101	153
DGN508200	20.0		0.7874	20	101	153

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630		400	550
Recommended																		○				

YG DREAM DRILLS -PRO

RECOMMENDED CUTTING CONDITIONS

DGN506, DGN508 SERIES with COOLANT HOLES

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter			SFM	Drill Diameter					
				METRIC	1.0	2.0		METRIC	3.0 / -	4.0	- / 5.0	6.0 / -	- / 8.0
				FRACTIONAL	-	-		FRACTIONAL	- / 1/8	-	3/16 / -	- / 1/4	5/16 / -
				DECIMAL	.0394	.0787		DECIMAL	.1181 / .1250	.1575	.1875 / .1969	.2362 / .2500	.3125 / .3150
P	2	Non-alloy steel	312	RPM	30240	15120	427	RPM	13790	10350	8280	6900	5170
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0024 - .0047	.0031 - .0055	.0055 - .0079	.0063 - .0087	.0071 - .0094
	3		312	RPM	30240	15120	427	RPM	13790	10350	8280	6900	5170
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0024 - .0047	.0031 - .0055	.0055 - .0079	.0063 - .0087	.0071 - .0094
	4		312	RPM	30240	15120	427	RPM	13790	10350	8280	6900	5170
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0016 - .0039	.0028 - .0051	.0039 - .0063	.0047 - .0071	.0055 - .0079
	5		279	RPM	27060	13530	361	RPM	11670	8750	7000	5840	4380
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0016 - .0039	.0028 - .0051	.0039 - .0063	.0047 - .0071	.0055 - .0079
	6	Low alloy steel	312	RPM	30240	15120	427	RPM	13790	10350	8280	6900	5170
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0024 - .0047	.0031 - .0055	.0055 - .0079	.0063 - .0087	.0071 - .0094
	7		279	RPM	27060	13530	361	RPM	11670	8750	7000	5840	4380
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0024 - .0047	.0031 - .0055	.0039 - .0079	.0047 - .0094	.0063 - .0110
	8		312	RPM	30240	15120	361	RPM	11670	8750	7000	5840	4380
				FEED	.0008 - .0016	.0012 - .0020		FEED	.0016 - .0039	.0028 - .0051	.0039 - .0063	.0047 - .0071	.0055 - .0079
	9		164	RPM	15920	7960	197	RPM	6370	4770	3820	3180	2390
				FEED	.0008 - .0016	.0012 - .0020		FEED	.0012 - .0031	.0020 - .0043	.0031 - .0055	.0039 - .0063	.0047 - .0071
	10	High alloyed steel, and tool steel	230	RPM	22280	11140	295	RPM	9550	7160	5730	4770	3580
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0016 - .0039	.0028 - .0051	.0039 - .0063	.0047 - .0071	.0055 - .0079
	11		148	RPM	14320	7160	164	RPM	5310	3980	3180	2650	1990
				FEED	.0008 - .0016	.0012 - .0020		FEED	.0012 - .0031	.0020 - .0043	.0031 - .0055	.0039 - .0063	.0047 - .0071
M	12	Stainless steel	246	RPM	23870	11940	311	RPM	10080	7560	6050	5040	3780
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0024 - .0047	.0031 - .0055	.0055 - .0079	.0063 - .0087	.0071 - .0094
	13		180	RPM	17510	8750	213	RPM	6900	5170	4140	3450	2590
				FEED	.0008 - .0016	.0012 - .0020		FEED	.0016 - .0039	.0028 - .0051	.0039 - .0063	.0047 - .0071	.0055 - .0079
K	15	Grey cast iron	312	RPM	30240	15120	427	RPM	13790	10350	8280	6900	5170
				FEED	.0016 - .0024	.0016 - .0024		FEED	.0031 - .0055	.0047 - .0071	.0059 - .0087	.0079 - .0102	.0087 - .0110
	16		295	RPM	28650	14320	377	RPM	12200	9150	7320	6100	4580
				FEED	.0016 - .0024	.0016 - .0024		FEED	.0024 - .0047	.0031 - .0055	.0055 - .0079	.0063 - .0087	.0071 - .0094
	17	Nodular cast iron	361	RPM	35010	17510	475	RPM	15380	11540	9230	7690	5770
				FEED	.0016 - .0024	.0016 - .0024		FEED	.0031 - .0055	.0047 - .0071	.0059 - .0087	.0079 - .0102	.0087 - .0110
	18		246	RPM	23870	11940	312	RPM	10080	7560	6050	5040	3780
				FEED	.0016 - .0024	.0016 - .0024		FEED	.0024 - .0047	.0031 - .0055	.0055 - .0079	.0063 - .0087	.0071 - .0094
	19	Malleable cast iron	279	RPM	27060	13530	361	RPM	11670	8750	7000	5840	4380
				FEED	.0016 - .0024	.0016 - .0024		FEED	.0031 - .0055	.0047 - .0071	.0059 - .0087	.0079 - .0102	.0087 - .0110
	20		246	RPM	23870	11940	312	RPM	10080	7560	6050	5040	3780
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0024 - .0047	.0031 - .0055	.0055 - .0079	.0063 - .0087	.0071 - .0094
H	38	Hardened steel	98	RPM	9,550	4,770	115	RPM	3,710	2,790	2,230	1,860	1,390
				FEED	.0004 - .0008	.0004 - .0012		FEED	.0004- .0012	.0004- .0016	.0008- .0020	.0012- .0024	.0012- .0024

▶ Recommend to reduce the feed rate as following

Feed 100% : DGN506(3×D) **Feed 80%** : DGN508(5×D)

▶ NEXT PAGE

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG DREAM DRILLS -PRO

RECOMMENDED CUTTING CONDITIONS

DGN506, DGN508 SERIES

with COOLANT HOLES

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter								
				METRIC	- / 10.0	12.0	-	14.0 / -	- / 16.0	18.0	-	20.0
				FRACTIONAL	3/8 / -	-	1/2	- / 9/16	5/8 / -	-	3/4	-
				DECIMAL	.3750 / .3937	.4724	.5000	.5512 / .5625	.6250 / .6299	.7087	.7500	.7874
P	2	Non-alloy steel	427	RPM	4140	3450	3270	2960	2590	2300	2180	2070
				FEED	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
	3		427	RPM	4140	3450	3270	2960	2590	2300	2180	2070
				FEED	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
	4		427	RPM	4140	3450	3270	2960	2590	2300	2180	2070
				FEED	.0059 - .0091	.0067 - .0098	.0067 - .0098	.0071 - .0102	.0075 - .0106	.0079 - .0118	.0079 - .0118	.0087 - .0126
	5		361	RPM	3500	2920	2760	2500	2190	1950	1840	1750
				FEED	.0059 - .0091	.0067 - .0098	.0067 - .0098	.0071 - .0102	.0075 - .0106	.0079 - .0118	.0079 - .0118	.0087 - .0126
	6	Low alloy steel	427	RPM	4140	3450	3270	2960	2590	2300	2180	2070
				FEED	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
	7		361	RPM	3500	2920	2760	2500	2190	1950	1840	1750
				FEED	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
	8		361	RPM	3500	2920	2760	2500	2190	1950	1840	1750
				FEED	.0059 - .0091	.0067 - .0098	.0067 - .0098	.0071 - .0102	.0075 - .0106	.0079 - .0118	.0079 - .0118	.0087 - .0126
	9		197	RPM	1910	1590	1510	1360	1190	1060	1010	950
				FEED	.0051 - .0075	.0055 - .0079	.0055 - .0079	.0059 - .0083	.0063 - .0087	.0067 - .0098	.0063 - .0102	.0071 - .0110
	10	High alloyed steel, and tool steel	295	RPM	2860	2390	2260	2050	1790	1590	1510	1430
				FEED	.0059 - .0091	.0067 - .0098	.0067 - .0098	.0071 - .0102	.0075 - .0106	.0079 - .0118	.0079 - .0118	.0087 - .0126
	11		164	RPM	1590	1330	1260	1140	990	880	840	800
				FEED	.0051 - .0075	.0055 - .0079	.0055 - .0079	.0059 - .0083	.0063 - .0087	.0067 - .0098	.0063 - .0102	.0071 - .0110
M	12	Stainless steel	311	RPM	3020	2520	2380	2160	1890	1680	1590	1510
				FEED	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
	13		213	RPM	2070	1720	1630	1480	1290	1150	1090	1030
					.0059 - .0091	.0067 - .0098	.0067 - .0098	.0071 - .0102	.0075 - .0106	.0079 - .0118	.0079 - .0118	.0087 - .0126
K	15	Grey cast iron	427	RPM	4140	3450	3270	2960	2590	2300	2180	2070
				FEED	.0098 - .0130	.0106 - .0138	.0106 - .0138	.0114 - .0146	.0122 - .0154	.0126 - .0165	.0126 - .0165	.0134 - .0173
	16		377	RPM	3660	3050	2890	2610	2290	2030	1930	1830
				FEED	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
	17	Nodular cast iron	475	RPM	4620	3850	3630	3300	2880	2560	2420	2310
				FEED	.0098 - .0130	.0106 - .0138	.0106 - .0138	.0114 - .0146	.0122 - .0154	.0126 - .0165	.0126 - .0165	.0134 - .0173
	18		312	RPM	3020	2520	2390	2160	1890	1680	1590	1510
				FEED	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
	19	Malleable cast iron	361	RPM	3500	2920	2760	2500	2190	1950	1840	1750
				FEED	.0098 - .0130	.0106 - .0138	.0106 - .0138	.0114 - .0146	.0122 - .0154	.0126 - .0165	.0126 - .0165	.0134 - .0173
	20		312	RPM	3020	2520	2390	2160	1890	1680	1590	1510
				FEED	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
H	38	Hardened steel	115	RPM	1,100	930	880	800	700	620	590	560
				FEED	.0016 - .0028	.0016 - .0031	.0016 - .0031	.0020 - .0035	.0020 - .0035	.0020 - .0039	.0020 - .0039	.0020 - .0039

▶ Recommend to reduce the feed rate as following
Feed 100% : DGN506(3×D) **Feed 120%** : DGN508(5×D)

Leading Through Innovation

SOLID CARBIDE

DREAM DRILLS GENERAL

- For General Purpose (HRc30a to HRc50)

SELECTION GUIDE

YG HOLEMAKING TOOLS

SOLID CARBIDE DREAM DRILLS GENERAL

- For General Purpose (Hrc30a to Hrc50)

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A104

SERIES	DH416 DH711	DH418 DH712	DH406	DH408	DH421	DH414	DH722	DH404	DH423	DH424
DRILLING DEPTH	3XD	5XD	3XD	5XD	8×D	3XD	5XD	3XD	3XD	5XD
TOOL MATERIAL	SOLID CARBIDE			SOLID CARBIDE						
LENGTH	SHORT	LONG	SHORT	LONG	EXTRA LONG	STUB	LONG	STUB	SHORT	LONG
SIZE MIN	D1/8	D13/64	D3.0	D1.0	D3.0	D1/8	D13/64	D3.0	D3.0	D1.0
SIZE MAX	D5/8	D1/2	D20.0	D20.0	D20.0	D5/8	D1/2	D20.0	D20.0	D20.0
PAGE	A76	A78	A79	A83	A87	A91	A92	A93	A95	A99
SURFACE TREATMENT	TiAlN			TiAlN						

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	DH416 DH711	DH418 DH712	DH406	DH408	DH421	DH414	DH722	DH404	DH423	DH424
P	1	Non-alloy steel	About 0.15% C	Annealed	125											
	2		About 0.45% C	Annealed	190	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	4		About 0.75% C	Annealed	270	28	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5		About 0.75% C	Quenched & Tempered	300	32	○	○	○	○	○	○	○	○	○	○
	6	Low alloy steel		Annealed	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7			Quenched & Tempered	275	29	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8			Quenched & Tempered	300	32	○	○	○	○	○	○	○	○	○	○
	9			Quenched & Tempered	350	38	○	○	○	○	○	○	○	○	○	○
	10	High alloyed steel, and tool steel		Annealed	200	15	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	11			Quenched & Tempered	325	35	○	○	○	○	○	○	○	○	○	○
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○	○	○	○	○	○	○	○	○	○
	13		Martensitic	Quenched & Tempered	240	23	○	○	○	○	○	○	○	○	○	○
	14		Austenitic		180	10										
K	15	Grey cast iron	Pearlitic / ferritic		180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	16		Pearlitic (Martensitic)		260	26	○	○	○	○	○	○	○	○	○	○
	17	Nodular cast iron	Ferritic		160	3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	18		Pearlitic		250	25	○	○	○	○	○	○	○	○	○	○
	19	Malleable cast iron	Ferritic		130		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	20		Pearlitic		230	21	○	○	○	○	○	○	○	○	○	○
N	21	Aluminum-wrought alloy	Not Curable		60											
	22		Curable	Hardened	100											
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75											
	24		≤ 12% Si, Curable	Hardened	90											
	25		> 12% Si, Not Curable		130											
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110											
	27		CuZn, CuSnZn (Brass)		90											
	28		CuSn, lead-free copper and electrolytic copper		100											
	29	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)	Duroplastic, Fiber Reinforced Plastic													
	30		Rubber, Wood, etc.													
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15										
	32			Cured	280	30										
	33		Ni or Co Based	Annealed	250	25										
	34			Cured	350	38										
	35			Cast	320	34										
	36	Titanium Alloys	Pure Titanium		400 Rm											
	37		Alpha + Beta Alloys	Hardened	1050 Rm											
H	38	Hardened steel		Hardened	550	55										
	39			Hardened	630	60		○	○	○		○	○	○	○	○
	40	Chilled Cast Iron		Cast	400	42										
	41	Hardened Cast Iron		Hardened	550	55										

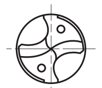
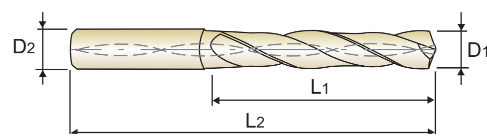
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

DREAM DRILLS -GENERAL

DH416 SERIES
DH711 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (3XD)

- ▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶Self centering and chip breaking by R-thinning
- ▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶Optimized flute shape for strength of drilling and smooth chip evacuation
- ▶Tolerance : Dia. Tolerance ØD1: See page A405

CARBIDE | h6 | 140° | 20 bar | TiAlN | p.A104~A105

SHORT
3×D

DH416 *1BTF

Unit : inch

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH711008	1/8	.1250	3/16	1.102	2.992
0081BTF	1/8	.1250	15/64	1.102	2.992
DH711011	11/64	.1719	3/16	1.417	3.386
0111BTF	11/64	.1719	15/64	1.417	3.386
DH711012	3/16	.1875	3/16	1.575	3.543
0121BTF	3/16	.1875	15/64	1.575	3.543
0131BTF	13/64	.2031	15/64	1.082	3.228
DH711013	13/64	.2031	1/4	1.082	3.228
0141BTF	7/32	.2188	15/64	1.181	3.228
DH711014	7/32	.2188	1/4	1.181	3.228
0151BTF	15/64	.2344	15/64	1.181	3.228
DH711015	15/64	.2344	1/4	1.181	3.228
DH711016	1/4	.2500	1/4	1.279	3.465
0161BTF	1/4	.2500	17/64	1.279	3.465
2061BTF	F	.2570	17/64	1.279	3.465
DH711206	F	.2570	5/16	1.279	3.465
0171BTF	17/64	.2656	17/64	1.378	3.465
DH711017	17/64	.2656	5/16	1.378	3.465
2091BTF	I	.2720	.2720	1.378	3.465
DH711209	I	.2720	5/16	1.378	3.465
0181BTF	9/32	.2812	5/16	1.476	3.701
0191BTF	19/64	.2969	5/16	1.476	3.701
0201BTF	5/16	.3125	5/16	1.575	3.701
0211BTF	21/64	.3281	11/32	1.673	3.937
DH711021	21/64	.3281	3/8	1.673	3.937
2171BTF	Q	.3320	11/32	1.673	3.937

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH711217	Q	.3320	3/8	1.673	3.937
0221BTF	11/32	.3438	11/32	1.772	3.937
DH711022	11/32	.3438	3/8	1.772	3.937
DH711023	23/64	.3594	3/8	1.87	4.174
0231BTF	23/64	.3594	25/64	1.870	4.174
DH711221	U	.3680	3/8	1.87	4.174
2211BTF	U	.3680	25/64	1.870	4.174
DH711024	3/8	.3750	3/8	1.969	4.174
0241BTF	3/8	.3750	25/64	1.969	4.174
0251BTF	25/64	.3906	25/64	1.969	4.174
DH711025	25/64	.3906	7/16	1.969	4.174
0261BTF	13/32	.4062	27/64	2.067	4.567
DH711026	13/32	.4062	7/16	2.067	4.567
0271BTF	27/64	.4219	27/64	2.165	4.567
DH711027	27/64	.4219	7/16	2.165	4.567
DH711028	7/16	.4375	7/16	2.264	4.803
0281BTF	7/16	.4375	15/32	2.264	4.803
0291BTF	29/64	.4531	15/32	2.264	4.803
DH711029	29/64	.4531	1/2	2.264	4.803
0301BTF	15/32	.4688	15/32	2.362	4.803
DH711030	15/32	.4688	1/2	2.362	4.803
0311BTF	31/64	.4844	1/2	2.461	5.039
0321BTF	1/2	.5000	1/2	2.559	5.039
0331BTF	33/64	.5156	35/64	2.657	5.276
DH711033	33/64	.5156	9/16	2.657	5.276
0341BTF	17/32	.5312	35/64	2.756	5.276

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

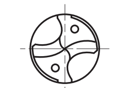
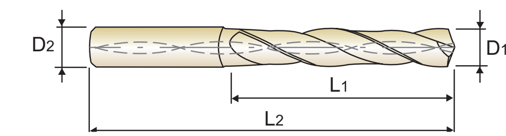
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

DREAM DRILLS -GENERAL

DH416 SERIES
DH711 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (3XD)

- ▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶Self centering and chip breaking by R-thinning
- ▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶Optimized flute shape for strength of drilling and smooth chip evacuation
- ▶Tolerance : Dia. Tolerance ØD1: See page A405

CARBIDE | h6 | 140° | 20 bar | TiAlN | p.A104~A105

SHORT
3×D

DH416 *1BTF

Unit : inch

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH711034	17/32	.5312	9/16	2.756	5.276
0351BTF	35/64	.5469	35/64	2.756	5.276
DH711035	35/64	.5469	9/16	2.756	5.276
DH711036	9/16	.5625	9/16	2.854	5.512
0361BTF	9/16	.5625	37/64	2.854	5.512

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
0371BTF	37/64	.5781	37/64	2.953	5.512
DH711037	37/64	.5781	5/8	2.953	5.512
0381BTF	19/32	.5937	5/8	3.051	5.709
0391BTF	39/64	.6094	5/8	3.051	5.709
0401BTF	5/8	.6250	5/8	3.150	5.709

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

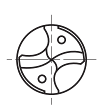
YG DREAM DRILLS -GENERAL

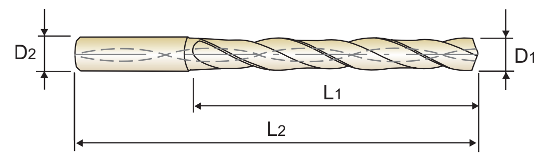
DH418 SERIES
DH712 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS

General with Coolant Holes (5XD)

- ▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶Self centering and chip breaking by R-thinning
- ▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶Optimized flute shape for strength of drilling and smooth chip evacuation
- ▶Tolerance : Dia. Tolerance ØD1: See page A405
  Shank Tolerance ØD2: -.0001 -.0005





CARBIDE | h6 | 140° | 20 bar | TiAlN

p.A104~A105

LONG
5×D

DH418 *1CTF — Unit : inch

EDP No.	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1		D2	L1	L2
0131CTF	13/64	.2031	15/64	1-3/4	3-15/16
DH712013	13/64	.2031	1/4	1-3/4	3-15/16
0141CTF	7/32	.2188	15/64	1-57/64	3-15/16
DH712014	7/32	.2188	1/4	1-57/64	3-15/16
0151CTF	15/64	.2344	15/64	1-57/64	3-15/16
DH712015	15/64	.2344	1/4	1-57/64	3-15/16
DH712016	1/4	.2500	1/4	2-3/64	4-19/64
0161CTF	1/4	.2500	17/64	2-3/64	4-19/64
2061CTF	F	.2570	17/64	2-13/64	4-19/64
DH712206	F	.2570	5/16	2-13/64	4-19/64
0171CTF	17/64	.2656	17/64	2-13/64	4-19/64
DH712017	17/64	.2656	5/16	2-13/64	4-19/64
2091CTF	I	.2720	.2720	2-13/64	4-19/64
DH712209	I	.2720	5/16	2-13/64	4-19/64
0181CTF	9/32	.2812	5/16	2-23/64	4-41/64
0191CTF	19/64	.2969	5/16	2-33/64	4-41/64
0201CTF	5/16	.3125	5/16	2-33/64	4-41/64
0211CTF	21/64	.3281	11/32	2-43/64	5
DH712021	21/64	.3281	3/8	2-43/64	5
2171CTF	Q	.3320	11/32	2-43/64	5
DH712217	Q	.3320	3/8	2-43/64	5
0221CTF	11/32	.3438	11/32	2-27/32	5
DH712022	11/32	.3438	3/8	2-27/32	5
DH712023	23/64	.3594	3/8	3	5-23/64
0231CTF	23/64	.3594	25/64	3	5-23/64
DH712221	U	.3680	3/8	3	5-23/64
2211CTF	U	.3680	25/64	3	5-23/64
DH712024	3/8	.3750	3/8	3-5/32	5-23/64
0241CTF	3/8	.3750	25/64	3-5/32	5-23/64
0251CTF	25/64	.3906	25/64	3-5/32	5-23/64
DH712025	25/64	.3906	7/16	3-5/32	5-23/64
0261CTF	13/32	.4062	27/64	3-5/16	5-7/8
DH712026	13/32	.4062	7/16	3-5/16	5-7/8
0271CTF	27/64	.4219	27/64	3-15/32	5-7/8
DH712027	27/64	.4219	7/16	3-15/32	5-7/8
DH712028	7/16	.4375	7/16	3-5/8	6-7/32
0281CTF	7/16	.4375	15/32	3-5/8	6-7/32
0291CTF	29/64	.4531	15/32	3-25/32	6-7/32
DH712029	29/64	.4531	1/2	3-25/32	6-7/32
0301CTF	15/32	.4688	15/32	3-25/32	6-7/32
DH712030	15/32	.4688	1/2	3-25/32	6-7/32
0311CTF	31/64	.4844	1/2	3-15/16	6-37/64
0321CTF	1/2	.5000	1/2	4-3/32	6-37/64

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P										M			K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

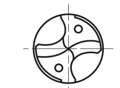
YG DREAM DRILLS -GENERAL

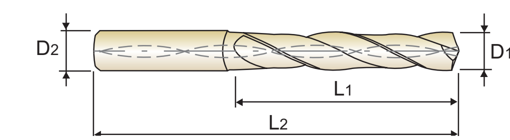
DH406 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS

General with Coolant Holes (3XD)

- ▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶Self centering and chip breaking by R-thinning
- ▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶Optimized flute shape for strength of drilling and smooth chip evacuation





DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN

p.A104~A105

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH406030	3.0		.1181	6	20	62
DH406031	3.1		.1220	6	20	62
DH406008F	3.175	1/8	.1250	6	20	62
DH406032	3.2		.1260	6	20	62
DH406033	3.3		.1299	6	20	62
DH406034	3.4		.1339	6	20	62
DH406035	3.5		.1378	6	20	62
DH406009F	3.572	9/64	.1406	6	20	62
DH406036	3.6		.1417	6	20	62
DH406037	3.7		.1457	6	20	62
DH406038	3.8		.1496	6	24	66
DH406039	3.9		.1535	6	24	66
DH406010F	3.969	5/32	.1563	6	24	66
DH406040	4.0		.1575	6	24	66
DH406041	4.1		.1614	6	24	66
DH406042	4.2		.1654	6	24	66
DH406043	4.3		.1693	6	24	66
DH406011F	4.366	11/64	.1719	6	24	66
DH406044	4.4		.1732	6	24	66
DH406045	4.5		.1772	6	24	66
DH406046	4.6		.1811	6	24	66
DH406047	4.7		.1850	6	24	66
DH406012F	4.763	3/16	.1875	6	24	66
DH406048	4.8		.1890	6	28	66
DH406049	4.9		.1929	6	28	66
DH406050	5.0		.1969	6	28	66
DH406051	5.1		.2008	6	28	66
DH406013F	5.159	13/64	.2031	6	28	66
DH406052	5.2		.2047	6	28	66
DH406053	5.3		.2087	6	28	66
DH406054	5.4		.2126	6	28	66
DH406055	5.5		.2165	6	28	66
DH406014F	5.556	7/32	.2188	6	28	66
DH406056	5.6		.2205	6	28	66
DH406057	5.7		.2244	6	28	66
DH406058	5.8		.2283	6	28	66
DH406059	5.9		.2323	6	28	66
DH406015F	5.953	15/64	.2344	6	28	66
DH406060	6.0		.2362	6	28	66
DH406061	6.1		.2402	8	34	79
DH406062	6.2		.2441	8	34	79
DH406063	6.3		.2480	8	34	79
DH406016F	6.350	1/4	.2500	8	34	79
DH406064	6.4		.2520	8	34	79
DH406065	6.5		.2559	8	34	79
DH406006L	6.528	F	.2570	8	34	79
DH406066	6.6		.2598	8	34	79
DH406067	6.7		.2638	8	34	79
DH406017F	6.747	17/64	.2656	8	34	79
DH406068	6.8		.2677	8	34	79
DH406069	6.9		.2717	8	34	79
DH406009L	6.909	I	.2720	8	34	79

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

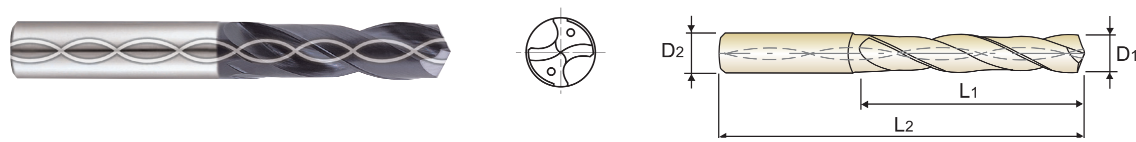
DREAM DRILLS -GENERAL

DH406 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS

General with Coolant Holes (3XD)

- ▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶Self centering and chip breaking by R-thinning
- ▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN

p.A104~A105

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH406070	7.0		.2756	8	34	79
DH406071	7.1		.2795	8	41	79
DH406018F	7.144	9/32	.2812	8	41	79
DH406072	7.2		.2835	8	41	79
DH406073	7.3		.2874	8	41	79
DH406074	7.4		.2913	8	41	79
DH406075	7.5		.2953	8	41	79
DH406019F	7.541	19/64	.2969	8	41	79
DH406076	7.6		.2992	8	41	79
DH406077	7.7		.3031	8	41	79
DH406078	7.8		.3071	8	41	79
DH406079	7.9		.3110	8	41	79
DH406020F	7.938	5/16	.3125	8	41	79
DH406080	8.0		.3150	8	41	79
DH406081	8.1		.3189	10	47	89
DH406082	8.2		.3228	10	47	89
DH406083	8.3		.3268	10	47	89
DH406021F	8.334	21/64	.3281	10	47	89
DH406084	8.4		.3307	10	47	89
DH406017L	8.433	Q	.3320	10	47	89
DH406085	8.5		.3346	10	47	89
DH406086	8.6		.3386	10	47	89
DH406087	8.7		.3425	10	47	89
DH406022F	8.731	11/32	.3438	10	47	89
DH406088	8.8		.3465	10	47	89
DH406089	8.9		.3504	10	47	89

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH406090	9.0		.3543	10	47	89
DH406091	9.1		.3583	10	47	89
DH406023F	9.128	23/64	.3594	10	47	89
DH406092	9.2		.3622	10	47	89
DH406093	9.3		.3661	10	47	89
DH406021L	9.347	U	.3680	10	47	89
DH406094	9.4		.3701	10	47	89
DH406095	9.5		.3740	10	47	89
DH406024F	9.525	3/8	.3750	10	47	89
DH406096	9.6		.3780	10	47	89
DH406097	9.7		.3819	10	47	89
DH406098	9.8		.3858	10	47	89
DH406099	9.9		.3898	10	47	89
DH406025F	9.922	25/64	.3906	10	47	89
DH406100	10.0		.3937	10	47	89
DH406101	10.1		.3976	12	55	102
DH406102	10.2		.4016	12	55	102
DH406103	10.3		.4055	12	55	102
DH406026F	10.319	13/32	.4062	12	55	102
DH406104	10.4		.4094	12	55	102
DH406105	10.5		.4134	12	55	102
DH406106	10.6		.4173	12	55	102
DH406107	10.7		.4212	12	55	102
DH406027F	10.716	27/64	.4219	12	55	102
DH406108	10.8		.4252	12	55	102
DH406109	10.9		.4291	12	55	102

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

DREAM DRILLS -GENERAL
DH406 SERIES
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (3XD)
▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
▶Self centering and chip breaking by R-thinning
▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
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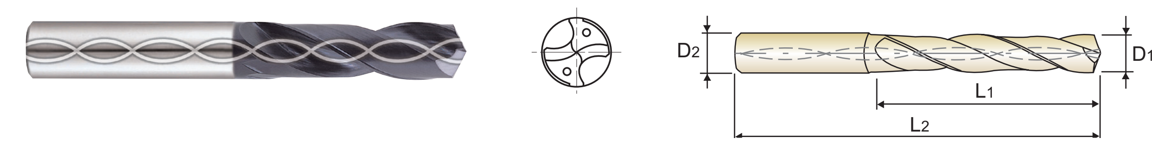


DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN
p.A104~A105
SHORT
3×D

Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH406110	11.0		.4330	12	55	102
DH406111	11.1		.4370	12	55	102
DH406028F	11.113	7/16	.4375	12	55	102
DH406112	11.2		.4409	12	55	102
DH406113	11.3		.4448	12	55	102
DH406114	11.4		.4488	12	55	102
DH406115	11.5		.4527	12	55	102
DH406029F	11.509	29/64	.4531	12	55	102
DH406116	11.6		.4566	12	55	102
DH406117	11.7		.4606	12	55	102
DH406118	11.8		.4645	12	55	102
DH406119	11.9		.4685	12	55	102
DH406030F	11.906	15/32	.4688	12	55	102
DH406120	12.0		.4724	12	55	102
DH406121	12.1		.4764	14	60	107
DH406122	12.2		.4803	14	60	107
DH406123	12.3		.4843	14	60	107
DH406031F	12.303	31/64	.4844	14	60	107
DH406124	12.4		.4882	14	60	107
DH406125	12.5		.4921	14	60	107
DH406126	12.6		.4961	14	60	107
DH406032F	12.7	1/2	.5000	14	60	107
DH406128	12.8		.5039	14	60	107
DH406129	12.9		.5079	14	60	107
DH406130	13.0		.5118	14	60	107
DH406131	13.1		.5157	14	60	107

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH406132	13.2		.5197	14	60	107
DH406133	13.3		.5236	14	60	107
DH406134	13.4		.5276	14	60	107
DH406135	13.5		.5314	14	60	107
DH406136	13.6		.5354	14	60	107
DH406137	13.7		.5394	14	60	107
DH406138	13.8		.5433	14	60	107
DH406139	13.9		.5472	14	60	107
DH406140	14.0		.5512	14	60	107
DH406141	14.1		.5551	16	65	115
DH406142	14.2		.5591	16	65	115
DH406036F	14.288	9/16	.5625	16	65	115
DH406143	14.3		.5630	16	65	115
DH406144	14.4		.5669	16	65	115
DH406145	14.5		.5708	16	65	115
DH406146	14.6		.5748	16	65	115
DH406147	14.7		.5787	16	65	115
DH406148	14.8		.5827	16	65	115
DH406149	14.9		.5866	16	65	115
DH406150	15.0		.5905	16	65	115
DH406151	15.1		.5945	16	65	115
DH406152	15.2		.5984	16	65	115
DH406153	15.3		.6024	16	65	115
DH406154	15.4		.6063	16	65	115
DH406155	15.5		.6102	16	65	115
DH406156	15.6		.6142	16	65	115

▶ Other shank types are available on your request.
▶ NEXT PAGE
◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

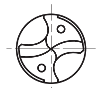
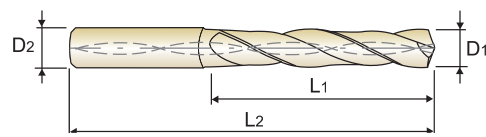
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

YG DREAM DRILLS -GENERAL

DH406 SERIES

TiAIN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (3XD)

- ▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶Self centering and chip breaking by R-thinning
- ▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶Optimized flute shape for strength of drilling and smooth chip evacuation

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A104~A105

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH406157	15.7		.6181	16	65	115
DH406158	15.8		.6220	16	65	115
DH406040F	15.875	5/8	.6250	16	65	115
DH406159	15.9		.6260	16	65	115
DH406160	16.0		.6299	16	65	115
DH406161	16.1		.6339	18	73	123
DH406162	16.2		.6378	18	73	123
DH406163	16.3		.6417	18	73	123
DH406164	16.4		.6457	18	73	123
DH406165	16.5		.6495	18	73	123
DH406166	16.6		.6535	18	73	123
DH406167	16.7		.6575	18	73	123
DH406168	16.8		.6614	18	73	123
DH406169	16.9		.6654	18	73	123
DH406170	17.0		.6692	18	73	123
DH406171	17.1		.6732	18	73	123
DH406172	17.2		.6772	18	73	123
DH406173	17.3		.6811	18	73	123
DH406174	17.4		.6850	18	73	123
DH406044F	17.463	11/16	.6875	18	73	123
DH406175	17.5		.6889	18	73	123
DH406176	17.6		.6929	18	73	123
DH406177	17.7		.6968	18	73	123
DH406178	17.8		.7008	18	73	123

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH406179	17.9		.7047	18	73	123
DH406180	18.0		.7087	18	73	123
DH406181	18.1		.7126	20	79	131
DH406182	18.2		.7165	20	79	131
DH406183	18.3		.7205	20	79	131
DH406184	18.4		.7244	20	79	131
DH406185	18.5		.7283	20	79	131
DH406186	18.6		.7323	20	79	131
DH406187	18.7		.7362	20	79	131
DH406188	18.8		.7402	20	79	131
DH406189	18.9		.7441	20	79	131
DH406190	19.0		.7480	20	79	131
DH406048F	19.050	3/4	.7500	20	79	131
DH406191	19.1		.7520	20	79	131
DH406192	19.2		.7559	20	79	131
DH406193	19.3		.7598	20	79	131
DH406194	19.4		.7638	20	79	131
DH406195	19.5		.7676	20	79	131
DH406196	19.6		.7717	20	79	131
DH406197	19.7		.7756	20	79	131
DH406198	19.8		.7795	20	79	131
DH406199	19.9		.7835	20	79	131
DH406200	20.0		.7874	20	79	131

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

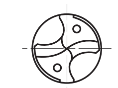
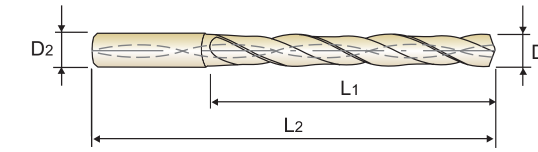
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

YG DREAM DRILLS -GENERAL

DH408 SERIES

TiAIN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (5XD)

- ▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶Self centering and chip breaking by R-thinning
- ▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶Optimized flute shape for strength of drilling and smooth chip evacuation

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A104~A105

LONG
5×D

Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH408010	1.0		.0394	3	8	55
DH408011	1.1		.0433	3	12	55
DH408012	1.2		.0472	3	12	55
DH408013	1.3		.0512	3	12	55
DH408014	1.4		.0551	3	12	55
DH408015	1.5		.0591	3	16	55
DH408004F	1.588	1/16	.0625	3	16	55
DH408016	1.6		.0630	3	16	55
DH408017	1.7		.0669	3	16	55
DH408018	1.8		.0709	3	16	55
DH408019	1.9		.0748	3	16	55
DH408005F	1.984	5/64	.0781	3	16	55
DH408020	2.0		.0787	4	21	57
DH408021	2.1		.0827	4	21	57
DH408022	2.2		.0866	4	21	57
DH408023	2.3		.0906	4	21	57
DH408006F	2.381	3/32	.0938	4	21	57
DH408024	2.4		.0945	4	21	57
DH408025	2.5		.0984	4	21	57
DH408026	2.6		.1024	4	21	57
DH408027	2.7		.1063	4	21	57
DH408007F	2.778	7/64	.1094	4	21	57
DH408028	2.8		.1102	4	21	57
DH408029	2.9		.1142	4	21	57
DH408030	3.0		.1181	6	28	66
DH408031	3.1		.1220	6	28	66
DH408008F	3.175	1/8	.1250	6	28	66
DH408032	3.2		.1260	6	28	66

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH408033	3.3		.1299	6	28	66
DH408034	3.4		.1339	6	28	66
DH408035	3.5		.1378	6	28	66
DH408009F	3.572	9/64	.1406	6	28	66
DH408036	3.6		.1417	6	28	66
DH408037	3.7		.1457	6	28	66
DH408038	3.8		.1496	6	36	74
DH408039	3.9		.1535	6	36	74
DH408010F	3.969	5/32	.1563	6	36	74
DH408040	4.0		.1575	6	36	74
DH408041	4.1		.1614	6	36	74
DH408042	4.2		.1654	6	36	74
DH408043	4.3		.1693	6	36	74
DH408011F	4.366	11/64	.1719	6	36	74
DH408044	4.4		.1732	6	36	74
DH408045	4.5		.1772	6	36	74
DH408046	4.6		.1811	6	36	74
DH408047	4.7		.1850	6	36	74
DH408012F	4.763	3/16	.1875	6	36	74
DH408048	4.8		.1890	6	44	82
DH408049	4.9		.1929	6	44	82
DH408050	5.0		.1969	6	44	82
DH408051	5.1		.2008	6	44	82
DH408013F	5.159	13/64	.2031	6	44	82
DH408052	5.2		.2047	6	44	82
DH408053	5.3		.2087	6	44	82
DH408054	5.4		.2126	6	44	82
DH408055	5.5		.2165	6	44	82

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

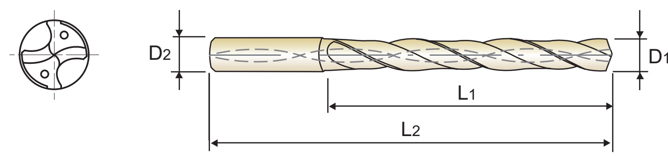
DREAM DRILLS -GENERAL

DH408 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS

General with Coolant Holes (5XD)

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN

p.A104~A105

LONG

5×D

Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH408014F	5.556	7/32	.2188	6	44	82
DH408056	5.6		.2205	6	44	82
DH408057	5.7		.2244	6	44	82
DH408058	5.8		.2283	6	44	82
DH408059	5.9		.2323	6	44	82
DH408015F	5.953	15/64	.2344	6	44	82
DH408060	6.0		.2362	6	44	82
DH408061	6.1		.2402	8	53	91
DH408062	6.2		.2441	8	53	91
DH408063	6.3		.2480	8	53	91
DH408016F	6.350	1/4	.2500	8	53	91
DH408064	6.4		.2520	8	53	91
DH408065	6.5		.2559	8	53	91
DH408006L	6.528	F	.2570	8	53	91
DH408066	6.6		.2598	8	53	91
DH408067	6.7		.2638	8	53	91
DH408017F	6.747	17/64	.2656	8	53	91
DH408068	6.8		.2677	8	53	91
DH408069	6.9		.2717	8	53	91
DH408009L	6.909	I	.2720	8	53	91
DH408070	7.0		.2756	8	53	91
DH408071	7.1		.2795	8	53	91
DH408018F	7.144	9/32	.2812	8	53	91
DH408072	7.2		.2835	8	53	91
DH408073	7.3		.2874	8	53	91
DH408074	7.4		.2913	8	53	91
DH408075	7.5		.2953	8	53	91
DH408019F	7.541	19/64	.2969	8	53	91

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH408076	7.6		.2992	8	53	91
DH408077	7.7		.3031	8	53	91
DH408078	7.8		.3071	8	53	91
DH408079	7.9		.3110	8	53	91
DH408020F	7.938	5/16	.3125	8	53	91
DH408080	8.0		.3150	8	53	91
DH408081	8.1		.3189	10	61	103
DH408082	8.2		.3228	10	61	103
DH408083	8.3		.3268	10	61	103
DH408021F	8.334	21/64	.3281	10	61	103
DH408084	8.4		.3307	10	61	103
DH408017L	8.433	Q	.3320	10	61	103
DH408085	8.5		.3346	10	61	103
DH408086	8.6		.3386	10	61	103
DH408087	8.7		.3425	10	61	103
DH408022F	8.731	11/32	.3438	10	61	103
DH408088	8.8		.3465	10	61	103
DH408089	8.9		.3504	10	61	103
DH408090	9.0		.3543	10	61	103
DH408091	9.1		.3583	10	61	103
DH408023F	9.128	23/64	.3594	10	61	103
DH408092	9.2		.3622	10	61	103
DH408093	9.3		.3661	10	61	103
DH408021L	9.347	U	.3680	10	61	103
DH408094	9.4		.3701	10	61	103
DH408095	9.5		.3740	10	61	103
DH408024F	9.525	3/8	.3750	10	61	103
DH408096	9.6		.3780	10	61	103

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

DREAM DRILLS -GENERAL
DH408 SERIES
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (5XD)
▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
▶ Self centering and chip breaking by R-thinning
▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
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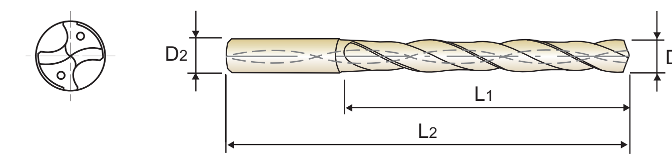


DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN
p.A104~A105
LONG
5×D

Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH408097	9.7		.3819	10	61	103
DH408098	9.8		.3858	10	61	103
DH408099	9.9		.3898	10	61	103
DH408025F	9.922	25/64	.3906	10	61	103
DH408100	10.0		.3937	10	61	103
DH408101	10.1		.3976	12	71	118
DH408102	10.2		.4016	12	71	118
DH408103	10.3		.4055	12	71	118
DH408026F	10.319	13/32	.4062	12	71	118
DH408104	10.4		.4094	12	71	118
DH408105	10.5		.4134	12	71	118
DH408106	10.6		.4173	12	71	118
DH408107	10.7		.4212	12	71	118
DH408027F	10.716	27/64	.4219	12	71	118
DH408108	10.8		.4252	12	71	118
DH408109	10.9		.4291	12	71	118
DH408110	11.0		.4330	12	71	118
DH408111	11.1		.4370	12	71	118
DH408028F	11.113	7/16	.4375	12	71	118
DH408112	11.2		.4409	12	71	118
DH408113	11.3		.4448	12	71	118
DH408114	11.4		.4488	12	71	118
DH408115	11.5		.4527	12	71	118
DH408029F	11.509	29/64	.4531	12	71	118
DH408116	11.6		.4566	12	71	118
DH408117	11.7		.4606	12	71	118
DH408118	11.8		.4645	12	71	118
DH408119	11.9		.4685	12	71	118

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH408030F	11.906	15/32	.4688	12	71	118
DH408120	12.0		.4724	12	71	118
DH408121	12.1		.4764	14	77	124
DH408122	12.2		.4803	14	77	124
DH408123	12.3		.4843	14	77	124
DH408031F	12.303	31/64	.4844	14	77	124
DH408124	12.4		.4882	14	77	124
DH408125	12.5		.4921	14	77	124
DH408126	12.6		.4961	14	77	124
DH408032F	12.7	1/2	.5000	14	77	124
DH408128	12.8		.5039	14	77	124
DH408129	12.9		.5079	14	77	124
DH408130	13.0		.5118	14	77	124
DH408131	13.1		.5157	14	77	124
DH408132	13.2		.5197	14	77	124
DH408133	13.3		.5236	14	77	124
DH408134	13.4		.5276	14	77	124
DH408135	13.5		.5314	14	77	124
DH408136	13.6		.5354	14	77	124
DH408137	13.7		.5394	14	77	124
DH408138	13.8		.5433	14	77	124
DH408139	13.9		.5472	14	77	124
DH408140	14.0		.5512	14	77	124
DH408141	14.1		.5551	16	83	133
DH408142	14.2		.5591	16	83	133
DH408036F	14.288	9/16	.5625	16	83	133
DH408143	14.3		.5630	16	83	133
DH408144	14.4		.5669	16	83	133

▶ Other shank types are available on your request.
▶ NEXT PAGE
◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

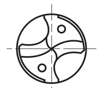
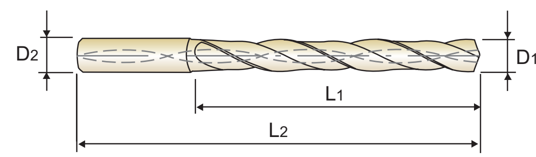
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

DREAM DRILLS -GENERAL

DH408 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (5XD)

- ▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶Self centering and chip breaking by R-thinning
- ▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶Optimized flute shape for strength of drilling and smooth chip evacuation

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A104~A105

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH408145	14.5		.5708	16	83	133
DH408146	14.6		.5748	16	83	133
DH408147	14.7		.5787	16	83	133
DH408148	14.8		.5827	16	83	133
DH408149	14.9		.5866	16	83	133
DH408150	15.0		.5905	16	83	133
DH408151	15.1		.5945	16	83	133
DH408152	15.2		.5984	16	83	133
DH408153	15.3		.6024	16	83	133
DH408154	15.4		.6063	16	83	133
DH408155	15.5		.6102	16	83	133
DH408156	15.6		.6142	16	83	133
DH408157	15.7		.6181	16	83	133
DH408158	15.8		.6220	16	83	133
DH408040F	15.875	5/8	.6250	16	83	133
DH408159	15.9		.6260	16	83	133
DH408160	16.0		.6299	16	83	133
DH408161	16.1		.6339	18	93	143
DH408162	16.2		.6378	18	93	143
DH408163	16.3		.6417	18	93	143
DH408164	16.4		.6457	18	93	143
DH408165	16.5		.6495	18	93	143
DH408166	16.6		.6535	18	93	143
DH408167	16.7		.6575	18	93	143
DH408168	16.8		.6614	18	93	143
DH408169	16.9		.6654	18	93	143
DH408170	17.0		.6692	18	93	143
DH408171	17.1		.6732	18	93	143
DH408172	17.2		.6772	18	93	143
DH408173	17.3		.6811	18	93	143
DH408174	17.4		.6850	18	93	143
DH408175	17.5		.6889	18	93	143
DH408176	17.6		.6929	18	93	143
DH408177	17.7		.6968	18	93	143
DH408178	17.8		.7008	18	93	143
DH408179	17.9		.7047	18	93	143
DH408180	18.0		.7087	18	93	143
DH408181	18.1		.7126	20	101	153
DH408182	18.2		.7165	20	101	153
DH408183	18.3		.7205	20	101	153
DH408184	18.4		.7244	20	101	153
DH408185	18.5		.7283	20	101	153
DH408186	18.6		.7323	20	101	153
DH408187	18.7		.7362	20	101	153
DH408188	18.8		.7402	20	101	153
DH408189	18.9		.7441	20	101	153
DH408190	19.0		.7480	20	101	153
DH408048F	19.050	3/4	.7500	20	101	153
DH408191	19.1		.7520	20	101	153
DH408192	19.2		.7559	20	101	153
DH408193	19.3		.7598	20	101	153
DH408194	19.4		.7638	20	101	153
DH408195	19.5		.7676	20	101	153
DH408196	19.6		.7717	20	101	153
DH408197	19.7		.7756	20	101	153
DH408198	19.8		.7795	20	101	153
DH408199	19.9		.7835	20	101	153
DH408200	20.0		.7874	20	101	153

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

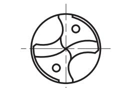
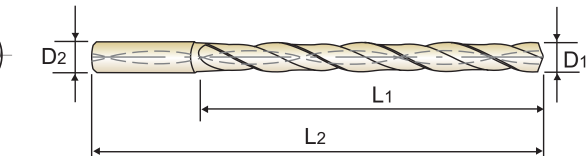
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

DREAM DRILLS -GENERAL

DH421 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (8XD)

- ▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶Self centering and chip breaking by R-thinning
- ▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶Optimized flute shape for strength of drilling and smooth chip evacuation

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A104~A105

EXTRA LONG
8×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH421030	3.0		.1181	6	34	72
DH421031	3.1		.1220	6	34	72
DH421008F	3.175	1/8	.1250	6	34	72
DH421032	3.2		.1260	6	34	72
DH421033	3.3		.1299	6	34	72
DH421034	3.4		.1339	6	34	72
DH421229G	3.450	#29	.1360	6	34	72
DH421035	3.5		.1378	6	34	72
DH421009F	3.572	9/64	.1406	6	34	72
DH421036	3.6		.1417	6	34	72
DH421037	3.7		.1457	6	34	72
DH421038	3.8		.1496	6	43	81
DH421039	3.9		.1535	6	43	81
DH421010F	3.969	5/32	.1563	6	43	81
DH421040	4.0		.1575	6	43	81
DH421221G	4.040	#21	.1590	6	43	81
DH421041	4.1		.1614	6	43	81
DH421042	4.2		.1654	6	43	81
DH421043	4.3		.1693	6	43	81
DH421011F	4.366	11/64	.1719	6	43	81
DH421044	4.4		.1732	6	43	81
DH421045	4.5		.1772	6	43	81
DH421046	4.6		.1811	6	43	81
DH421047	4.7		.1850	6	43	81
DH421012F	4.763	3/16	.1875	6	57	95
DH421048	4.8		.1890	6	57	95
DH421049	4.9		.1929	6	57	95
DH421050	5.0		.1969	6	57	95
DH421051	5.1		.2008	6	57	95
DH421013F	5.159	13/64	.2031	6	57	95
DH421052	5.2		.2047	6	57	95
DH421053	5.3		.2087	6	57	95
DH421054	5.4		.2126	6	57	95
DH421055	5.5		.2165	6	57	95
DH421014F	5.556	7/32	.2188	6	57	95
DH421056	5.6		.2205	6	57	95
DH421057	5.7		.2244	6	57	95
DH421058	5.8		.2283	6	57	95
DH421059	5.9		.2323	6	57	95
DH421015F	5.953	15/64	.2344	6	57	95
DH421060	6.0		.2362	6	57	95
DH421061	6.1		.2402	8	76	114
DH421062	6.2		.2441	8	76	114
DH421063	6.3		.2480	8	76	114
DH421016F	6.350	1/4	.2500	8	76	114
DH421064	6.4		.2520	8	76	114
DH421065	6.5		.2559	8	76	114
DH421106L	6.528	F	.2570	8	76	114
DH421066	6.6		.2598	8	76	114
DH421067	6.7		.2638	8	76	114
DH421017F	6.747	17/64	.2656	8	76	114
DH421068	6.8		.2677	8	76	114

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

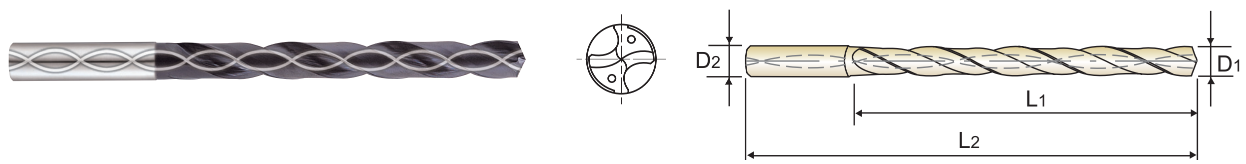
DREAM DRILLS -GENERAL

DH421 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS

General with Coolant Holes (8XD)

- Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- Self centering and chip breaking by R-thinning
- Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN

p.A104~A105

EXTRA LONG
8×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH421069	6.9		.2717	8	76	114
DH421009L	6.909	I	.2720	8	76	114
DH421070	7.0		.2756	8	76	114
DH421071	7.1		.2795	8	76	114
DH421018F	7.144	9/32	.2813	8	76	114
DH421072	7.2		.2835	8	76	114
DH421073	7.3		.2874	8	76	114
DH421074	7.4		.2913	8	76	114
DH421075	7.5		.2953	8	76	114
DH421019F	7.541	19/64	.2969	8	76	114
DH421076	7.6		.2992	8	76	114
DH421077	7.7		.3031	8	76	114
DH421078	7.8		.3071	8	76	114
DH421079	7.9		.3110	8	76	114
DH421020F	7.938	5/16	.3125	8	76	114
DH421080	8.0		.3150	8	76	114
DH421081	8.1		.3189	10	95	142
DH421082	8.2		.3228	10	95	142
DH421083	8.3		.3268	10	95	142
DH421021F	8.334	21/64	.3281	10	95	142
DH421084	8.4		.3307	10	95	142
DH421117L	8.430	Q	.3320	10	95	142
DH421085	8.5		.3346	10	95	142
DH421086	8.6		.3386	10	95	142
DH421087	8.7		.3425	10	95	142
DH421022F	8.731	11/32	.3438	10	95	142

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH421088	8.8		.3465	10	95	142
DH421089	8.9		.3504	10	95	142
DH421090	9.0		.3543	10	95	142
DH421091	9.1		.3583	10	95	142
DH421023F	9.128	23/64	.3594	10	95	142
DH421092	9.2		.3622	10	95	142
DH421093	9.3		.3661	10	95	142
DH421121L	9.350	U	.3680	10	95	142
DH421094	9.4		.3701	10	95	142
DH421095	9.5		.3740	10	95	142
DH421024F	9.525	3/8	.3750	10	95	142
DH421096	9.6		.3780	10	95	142
DH421097	9.7		.3819	10	95	142
DH421098	9.8		.3858	10	95	142
DH421099	9.9		.3898	10	95	142
DH421025F	9.922	25/64	.3906	10	95	142
DH421100	10.0		.3937	10	95	142
DH421101	10.1		.3976	12	114	162
DH421102	10.2		.4016	12	114	162
DH421103	10.3		.4055	12	114	162
DH421026F	10.319	13/32	.4063	12	114	162
DH421104	10.4		.4094	12	114	162
DH421105	10.5		.4134	12	114	162
DH421106	10.6		.4173	12	114	162
DH421107	10.7		.4212	12	114	162
DH421027F	10.716	27/64	.4219	12	114	162

▶ Other shank types are available on your request.

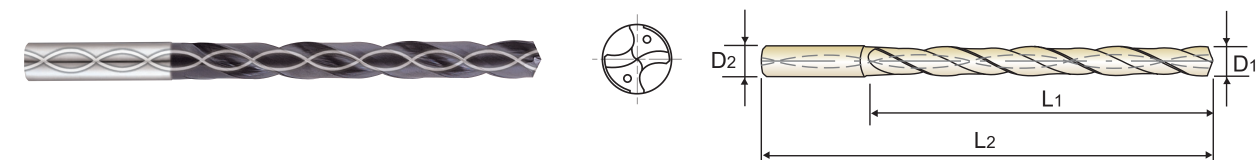
▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

DREAM DRILLS -GENERAL
DH421 SERIES
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (8XD)
▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
▶Self centering and chip breaking by R-thinning
▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
▶Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN
p.A104~A105
EXTRA LONG
8×D
Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH421108	10.8		.4252	12	114	162
DH421 109	10.9		.4291	12	114	162
DH421110	11.0		.4330	12	114	162
DH421111	11.1		.4370	12	114	162
DH421028F	11.113	7/16	.4375	12	114	162
DH421112	11.2		.4409	12	114	162
DH421113	11.3		.4448	12	114	162
DH421114	11.4		.4488	12	114	162
DH421115	11.5		.4527	12	114	162
DH421029F	11.509	29/64	.4531	12	114	162
DH421116	11.6		.4566	12	114	162
DH421117	11.7		.4606	12	114	162
DH421118	11.8		.4645	12	114	162
DH421119	11.9		.4685	12	114	162
DH421030F	11.906	15/32	.4688	12	114	162
DH421120	12.0		.4724	12	114	162
DH421121	12.1		.4764	14	133	178
DH421122	12.2		.4803	14	133	178
DH421123	12.3		.4843	14	133	178
DH421031F	12.303	31/64	.4844	14	133	178
DH421124	12.4		.4882	14	133	178
DH421125	12.5		.4921	14	133	178
DH421126	12.6		.4961	14	133	178
DH421032F	12.7	1/2	.5000	14	133	178
DH421128	12.8		.5039	14	133	178
DH421129	12.9		.5079	14	133	178

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH421130	13.0		.5118	14	133	178
DH421033F	13.097	33/64	.5156	14	133	178
DH421131	13.1		.5157	14	133	178
DH421132	13.2		.5197	14	133	178
DH421133	13.3		.5236	14	133	178
DH421134	13.4		.5276	14	133	178
DH421135	13.5		.5314	14	133	178
DH421136	13.6		.5354	14	133	178
DH421137	13.7		.5394	14	133	178
DH421138	13.8		.5433	14	133	178
DH421139	13.9		.5472	14	133	178
DH421140	14.0		.5512	14	133	178
DH421141	14.1		.5551	16	152	203
DH421142	14.2		.5591	16	152	203
DH421036F	14.288	9/16	.5625	16	152	203
DH421143	14.3		.5630	16	152	203
DH421144	14.4		.5669	16	152	203
DH421145	14.5		.5709	16	152	203
DH421146	14.6		.5748	16	152	203
DH421147	14.7		.5787	16	152	203
DH421148	14.8		.5827	16	152	203
DH421149	14.9		.5866	16	152	203
DH421150	15.0		.5905	16	152	203
DH421151	15.1		.5945	16	152	203
DH421152	15.2		.5984	16	152	203
DH421153	15.3		.6024	16	152	203

▶ Other shank types are available on your request.
▶ NEXT PAGE
◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

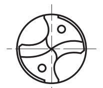
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

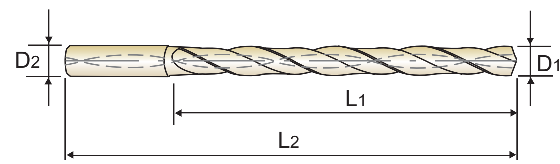
DREAM DRILLS -GENERAL

DH421 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (8XD)

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation





DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN

p.A104~A105

EXTRA LONG
8×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH421154	15.4		.6063	16	152	203
DH421155	15.5		.6102	16	152	203
DH421156	15.6		.6142	16	152	203
DH421157	15.7		.6181	16	152	203
DH421158	15.8		.6220	16	152	203
DH421040F	15.875	5/8	.6250	16	152	203
DH421159	15.9		.6260	16	152	203
DH421160	16.0		.6299	16	152	203
DH421161	16.1		.6339	18	171	222
DH421162	16.2		.6378	18	171	222
DH421163	16.3		.6417	18	171	222
DH421164	16.4		.6457	18	171	222
DH421165	16.5		.6496	18	171	222
DH421166	16.6		.6535	18	171	222
DH421167	16.7		.6575	18	171	222
DH421168	16.8		.6614	18	171	222
DH421169	16.9		.6654	18	171	222
DH421170	17.0		.6693	18	171	222
DH421171	17.1		.6732	18	171	222
DH421172	17.2		.6772	18	171	222
DH421173	17.3		.6811	18	171	222
DH421174	17.4		.6850	18	171	222
DH421175	17.5		.6890	18	171	222
DH421176	17.6		.6929	18	171	222
DH421177	17.7		.6968	18	171	222

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH421178	17.8		.7008	18	171	222
DH421179	17.9		.7047	18	171	222
DH421180	18.0		.7087	18	171	222
DH421181	18.1		.7126	20	190	243
DH421182	18.2		.7165	20	190	243
DH421183	18.3		.7205	20	190	243
DH421184	18.4		.7244	20	190	243
DH421185	18.5		.7283	20	190	243
DH421186	18.6		.7323	20	190	243
DH421187	18.7		.7362	20	190	243
DH421188	18.8		.7402	20	190	243
DH421189	18.9		.7441	20	190	243
DH421190	19.0		.7480	20	190	243
DH421048F	19.050	3/4	.7500	20	190	243
DH421191	19.1		.7520	20	190	243
DH421192	19.2		.7559	20	190	243
DH421193	19.3		.7598	20	190	243
DH421194	19.4		.7638	20	190	243
DH421195	19.5		.7677	20	190	243
DH421196	19.6		.7717	20	190	243
DH421197	19.7		.7756	20	190	243
DH421198	19.8		.7795	20	190	243
DH421199	19.9		.7835	20	190	243
DH421200	20.0		.7874	20	190	243

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

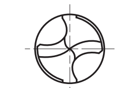
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

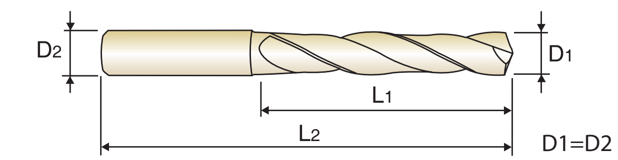
DREAM DRILLS -GENERAL

DH414 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (3XD)

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation
- ▶ Tolerance : Dia. Tolerance ØD1: See page A405
  Shank Tolerance ØD2: -.0001 -.0005





CARBIDE | h6 | 140° | TiAlN

p.A106~A107

STUB
3×D

Unit : inch

EDP No.	Drill Diameter		Flute Length	Overall Length
	Fractional	Decimal		
TiAlN	D1 = D2		L1	L2
0081ATF	1/8	.1250	45/64	1-59/64
0091ATF	9/64	.1406	25/32	2-3/64
0101ATF	5/32	.1562	7/8	2-3/16
0111ATF	11/64	.1719	15/16	2-9/32
0121ATF	3/16	.1875	1	2-7/16
0131ATF	13/64	.2031	1	2-7/16
0141ATF	7/32	.2188	1-1/8	2-5/8
0151ATF	15/64	.2344	1-1/8	2-5/8
0161ATF	1/4	.2500	1-5/8	3-3/16
2061ATF	F	.2570	1-11/16	3-17/64
0171ATF	17/64	.2656	1-11/16	3-17/64
2091ATF	I	.2720	1-11/16	3-17/64
0181ATF	9/32	.2812	1-3/4	3-7/16
0191ATF	19/64	.2969	1-7/8	3-9/16
0201ATF	5/16	.3125	1-7/8	3-9/16
0211ATF	21/64	.3281	2-1/16	3-3/4
2171ATF	Q	.3320	2-1/16	3-3/4

EDP No.	Drill Diameter		Flute Length	Overall Length
	Fractional	Decimal		
TiAlN	D1 = D2		L1	L2
0221ATF	11/32	.3438	2-3/16	3-7/8
0231ATF	23/64	.3594	2-9/32	4
2211ATF	U	.3680	2-9/32	4
0241ATF	3/8	.3750	2-3/8	4-1/8
0251ATF	25/64	.3906	2-3/8	4-1/8
0261ATF	13/32	.4062	2-5/8	4-13/32
0271ATF	27/64	.4219	2-11/16	4-1/2
0281ATF	7/16	.4375	2-13/16	4-5/8
0291ATF	29/64	.4531	2-7/8	4-3/4
0301ATF	15/32	.4688	2-7/8	4-3/4
0311ATF	31/64	.4844	3	5-5/16
0321ATF	1/2	.5000	3-1/16	5-3/8
0331ATF	33/64	.5156	3-11/32	5-11/16
0341ATF	17/32	.5312	3-11/32	5-11/16
0361ATF	9/16	.5625	3-1/2	5-15/16
0371ATF	37/64	.5781	3-37/64	6
0401ATF	5/8	.6250	3-25/3	6-19/64

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

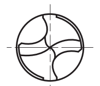
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

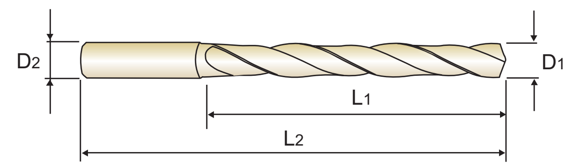
DREAM DRILLS -GENERAL

DH722 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (5XD)

- ▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶Self centering and chip breaking by R-thinning
- ▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶Optimized flute shape for strength of drilling and smooth chip evacuation
- ▶Tolerance : Dia. Tolerance ØD1: See page A405
  Shank Tolerance ØD2: -.0001 -.0005





CARBIDE | h6 | 140° | TiAlN | p.A106~A107

LONG 5×D

Unit : inch

EDP No.	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1		D2	L1	L2
DH722013	13/64	.2031	1/4	1-3/4	3-15/16
DH722014	7/32	.2188	1/4	1-57/64	3-15/16
DH722015	15/64	.2344	1/4	1-57/64	3-15/16
DH722016	1/4	.2500	1/4	2-3/64	4-19/64
DH722206	F	.2570	5/16	2-13/64	4-19/64
DH722017	17/64	.2656	5/16	2-13/64	4-19/64
DH722209	I	.2720	5/16	2-13/64	4-19/64
DH722018	9/32	.2812	5/16	2-23/64	4-41/64
DH722019	19/64	.2969	5/16	2-33/64	4-41/64
DH722020	5/16	.3125	5/16	2-33/64	4-41/64
DH722021	21/64	.3281	3/8	2-43/64	5
DH722217	Q	.3320	3/8	2-43/64	5
DH722022	11/32	.3438	3/8	2-27/32	5
DH722023	23/64	.3594	3/8	3	5-23/64
DH722221	U	.3680	3/8	3	5-23/64
DH722024	3/8	.3750	3/8	3-5/32	5-23/64
DH722025	25/64	.3906	7/16	3-5/32	5-23/64
DH722026	13/32	.4062	7/16	3-5/16	5-7/8
DH722027	27/64	.4219	7/16	3-15/32	5-7/8
DH722028	7/16	.4375	7/16	3-5/8	6-7/32
DH722029	29/64	.4531	1/2	3-25/32	6-7/32
DH722030	15/32	.4688	1/2	3-25/32	6-7/32
DH722031	31/64	.4844	1/2	3-15/16	6-37/64
DH722032	1/2	.5000	1/2	4-3/32	6-37/64

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

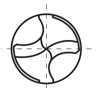
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

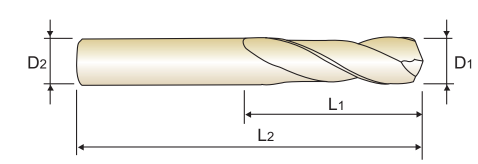
DREAM DRILLS -GENERAL

DH404 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (3XD)

- ▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶Self centering and chip breaking by R-thinning
- ▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶Optimized flute shape for strength of drilling and smooth chip evacuation





DIN 6539 | CARBIDE | h6 | m7 | 140° | TiAlN | p.A106~A107

STUB 3×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Flute Length	Overall Length
TiAlN	D1 = D2		L1	L2
DH404030	3.0	.1181	16	46
DH404031	3.1	.1220	18	49
DH404032	3.2	.1260	18	49
DH404033	3.3	.1299	18	49
DH404034	3.4	.1339	20	52
DH404035	3.5	.1378	20	52
DH404036	3.6	.1417	20	52
DH404037	3.7	.1457	20	52
DH404038	3.8	.1496	22	55
DH404039	3.9	.1535	22	55
DH404040	4.0	.1575	22	55
DH404041	4.1	.1614	22	55
DH404042	4.2	.1654	22	55
DH404043	4.3	.1693	24	58
DH404044	4.4	.1732	24	58
DH404045	4.5	.1772	24	58
DH404046	4.6	.1811	24	58
DH404047	4.7	.1850	24	58
DH404048	4.8	.1890	26	62
DH404049	4.9	.1929	26	62
DH404050	5.0	.1969	26	62
DH404051	5.1	.2008	26	62
DH404052	5.2	.2047	26	62
DH404053	5.3	.2087	26	62
DH404054	5.4	.2126	28	66
DH404055	5.5	.2165	28	66
DH404056	5.6	.2205	28	66
DH404057	5.7	.2244	28	66
DH404058	5.8	.2283	28	66
DH404059	5.9	.2323	28	66
DH404060	6.0	.2362	28	66
DH404061	6.1	.2402	31	70
DH404062	6.2	.2441	31	70
DH404063	6.3	.2480	31	70
DH404064	6.4	.2520	31	70
DH404065	6.5	.2559	31	70
DH404066	6.6	.2598	31	70
DH404067	6.7	.2638	31	70
DH404068	6.8	.2677	34	74
DH404069	6.9	.2717	34	74
DH404070	7.0	.2756	34	74
DH404071	7.1	.2795	34	74
DH404072	7.2	.2835	34	74
DH404073	7.3	.2874	34	74
DH404074	7.4	.2913	34	74
DH404075	7.5	.2953	34	74
DH404076	7.6	.2992	37	79
DH404077	7.7	.3031	37	79
DH404078	7.8	.3071	37	79
DH404079	7.9	.3110	37	79
DH404080	8.0	.3150	37	79
DH404081	8.1	.3189	37	79

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

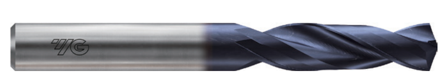
YG DREAM DRILLS -GENERAL

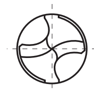
DH404 SERIES

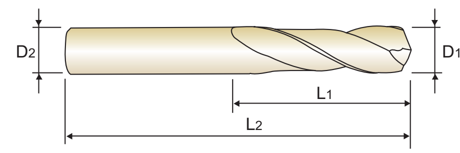
TiAIN-COATED SOLID CARBIDE DREAM DRILLS

General without Coolant Holes (3XD)

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation







DIN 6539 | CARBIDE | h6 | m7 | 140° | TiAIN | p.A106~A107

STUB
3×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Flute Length	Overall Length
TiAIN	D1 = D2		L1	L2
DH404082	8.2	.3228	37	79
DH404083	8.3	.3268	37	79
DH404084	8.4	.3307	37	79
DH404085	8.5	.3346	37	79
DH404086	8.6	.3386	40	84
DH404087	8.7	.3425	40	84
DH404088	8.8	.3465	40	84
DH404089	8.9	.3504	40	84
DH404090	9.0	.3543	40	84
DH404091	9.1	.3583	40	84
DH404092	9.2	.3622	40	84
DH404093	9.3	.3661	40	84
DH404094	9.4	.3701	40	84
DH404095	9.5	.3740	40	84
DH404096	9.6	.3780	43	89
DH404097	9.7	.3819	43	89
DH404098	9.8	.3858	43	89
DH404099	9.9	.3898	43	89
DH404100	10.0	.3937	43	89
DH404102	10.2	.4016	43	89
DH404105	10.5	.4134	43	89
DH404110	11.0	.4331	47	95
DH404115	11.5	.4528	47	95
DH404120	12.0	.4724	51	102
DH404130	13.0	.5118	51	102
DH404135	13.5	.5314	54	107
DH404140	14.0	.5512	54	107
DH404145	14.5	.5708	56	111
DH404150	15.0	.5905	56	111
DH404155	15.5	.6102	58	115
DH404160	16.0	.6299	58	115
DH404165	16.5	.6495	60	119
DH404170	17.0	.6692	60	119
DH404175	17.5	.6889	62	123
DH404180	18.0	.7087	62	123
DH404185	18.5	.7283	64	127
DH404190	19.0	.7480	64	127
DH404195	19.5	.7676	66	131
DH404200	20.0	.7874	66	131

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

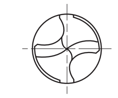
YG DREAM DRILLS -GENERAL

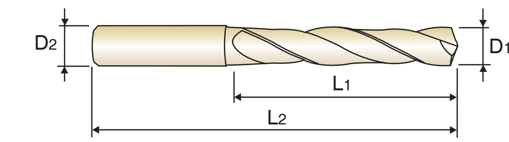
DH423 SERIES

TiAIN-COATED SOLID CARBIDE DREAM DRILLS

General without Coolant Holes (3XD)

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation





DIN 6537 | CARBIDE | h6 | m7 | 140° | TiAIN | p.A106~A107

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAIN	D1			D2	L1	L2
DH423030	3.0		.1181	6	20	62
DH423031	3.1		.1220	6	20	62
DH423008F	3.175	1/8	.1250	6	20	62
DH423032	3.2		.1260	6	20	62
DH423033	3.3		.1299	6	20	62
DH423034	3.4		.1339	6	20	62
DH423035	3.5		.1378	6	20	62
DH423009F	3.572	9/64	.1406	6	20	62
DH423036	3.6		.1417	6	20	62
DH423037	3.7		.1457	6	20	62
DH423038	3.8		.1496	6	24	66
DH423039	3.9		.1535	6	24	66
DH423010F	3.969	5/32	.1563	6	24	66
DH423040	4.0		.1575	6	24	66
DH423041	4.1		.1614	6	24	66
DH423042	4.2		.1654	6	24	66
DH423043	4.3		.1693	6	24	66
DH423011F	4.366	11/64	.1719	6	24	66
DH423044	4.4		.1732	6	24	66
DH423045	4.5		.1772	6	24	66
DH423046	4.6		.1811	6	24	66
DH423047	4.7		.1850	6	24	66
DH423012F	4.763	3/16	.1875	6	24	66
DH423048	4.8		.1890	6	28	66
DH423049	4.9		.1929	6	28	66
DH423050	5.0		.1969	6	28	66
DH423051	5.1		.2008	6	28	66
DH423013F	5.159	13/64	.2031	6	28	66
DH423052	5.2		.2047	6	28	66
DH423053	5.3		.2087	6	28	66
DH423054	5.4		.2126	6	28	66
DH423055	5.5		.2165	6	28	66
DH423014F	5.556	7/32	.2188	6	28	66
DH423056	5.6		.2205	6	28	66
DH423057	5.7		.2244	6	28	66
DH423058	5.8		.2283	6	28	66
DH423059	5.9		.2323	6	28	66
DH423015F	5.953	15/64	.2344	6	28	66
DH423060	6.0		.2362	6	28	66
DH423061	6.1		.2402	8	34	79
DH423062	6.2		.2441	8	34	79
DH423063	6.3		.2480	8	34	79
DH423016F	6.350	1/4	.2500	8	34	79
DH423064	6.4		.2520	8	34	79
DH423065	6.5		.2559	8	34	79
DH423006L	6.528	F	.2570	8	34	79
DH423066	6.6		.2598	8	34	79
DH423067	6.7		.2638	8	34	79
DH423017F	6.747	17/64	.2656	8	34	79
DH423068	6.8		.2677	8	34	79
DH423069	6.9		.2717	8	34	79
DH423009L	6.909	I	.2720	8	34	79

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

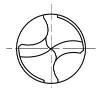
DREAM DRILLS -GENERAL

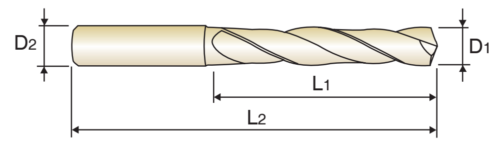
DH423 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS

General without Coolant Holes (3XD)

- ▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶Self centering and chip breaking by R-thinning
- ▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶Optimized flute shape for strength of drilling and smooth chip evacuation





DIN 6537 | CARBIDE | h6 | m7 | 140° | TiAlN | p.A106~A107

SHORT 3×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH423070	7.0		.2756	8	34	79
DH423071	7.1		.2795	8	41	79
DH423018F	7.144	9/32	.2812	8	41	79
DH423072	7.2		.2835	8	41	79
DH423073	7.3		.2874	8	41	79
DH423074	7.4		.2913	8	41	79
DH423075	7.5		.2953	8	41	79
DH423019F	7.541	19/64	.2969	8	41	79
DH423076	7.6		.2992	8	41	79
DH423077	7.7		.3031	8	41	79
DH423078	7.8		.3071	8	41	79
DH423079	7.9		.3110	8	41	79
DH423020F	7.938	5/16	.3125	8	41	79
DH423080	8.0		.3150	8	41	79
DH423081	8.1		.3189	10	47	89
DH423082	8.2		.3228	10	47	89
DH423083	8.3		.3268	10	47	89
DH423021F	8.334	21/64	.3281	10	47	89
DH423084	8.4		.3307	10	47	89
DH423017L	8.433	Q	.3320	10	47	89
DH423085	8.5		.3346	10	47	89
DH423086	8.6		.3386	10	47	89
DH423087	8.7		.3425	10	47	89
DH423022F	8.731	11/32	.3438	10	47	89
DH423088	8.8		.3465	10	47	89
DH423089	8.9		.3504	10	47	89

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH423090	9.0		.3543	10	47	89
DH423091	9.1		.3583	10	47	89
DH423023F	9.128	23/64	.3594	10	47	89
DH423092	9.2		.3622	10	47	89
DH423093	9.3		.3661	10	47	89
DH423021L	9.347	U	.3680	10	47	89
DH423094	9.4		.3701	10	47	89
DH423095	9.5		.3740	10	47	89
DH423024F	9.525	3/8	.3750	10	47	89
DH423096	9.6		.3780	10	47	89
DH423097	9.7		.3819	10	47	89
DH423098	9.8		.3858	10	47	89
DH423099	9.9		.3898	10	47	89
DH423025F	9.922	25/64	.3906	10	47	89
DH423100	10.0		.3937	10	47	89
DH423101	10.1		.3976	12	55	102
DH423102	10.2		.4016	12	55	102
DH423103	10.3		.4055	12	55	102
DH423026F	10.319	13/32	.4062	12	55	102
DH423104	10.4		.4094	12	55	102
DH423105	10.5		.4134	12	55	102
DH423106	10.6		.4173	12	55	102
DH423107	10.7		.4213	12	55	102
DH423027F	10.716	27/64	.4219	12	55	102
DH423108	10.8		.4252	12	55	102
DH423109	10.9		.4291	12	55	102

▶ Other shank types are available on your request.

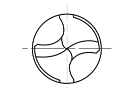
▶ NEXT PAGE

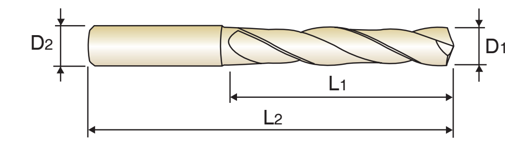
◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

DREAM DRILLS -GENERAL
DH423 SERIES
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (3XD)
▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
▶Self centering and chip breaking by R-thinning
▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
▶Optimized flute shape for strength of drilling and smooth chip evacuation





DIN 6537 | CARBIDE | h6 | m7 | 140° | TiAlN | p.A106~A107

SHORT 3×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH423110	11.0		.4331	12	55	102
DH423111	11.1		.4370	12	55	102
DH423028F	11.113	7/16	.4375	12	55	102
DH423112	11.2		.4409	12	55	102
DH423113	11.3		.4449	12	55	102
DH423114	11.4		.4488	12	55	102
DH423115	11.5		.4528	12	55	102
DH423029F	11.509	29/64	.4531	12	55	102
DH423116	11.6		.4567	12	55	102
DH423117	11.7		.4606	12	55	102
DH423118	11.8		.4646	12	55	102
DH423119	11.9		.4685	12	55	102
DH423030F	11.906	15/32	.4688	12	55	102
DH423120	12.0		.4724	12	55	102
DH423121	12.1		.4764	14	60	107
DH423122	12.2		.4803	14	60	107
DH423123	12.3		.4843	14	60	107
DH423031F	12.303	31/64	.4844	14	60	107
DH423124	12.4		.4882	14	60	107
DH423125	12.5		.4921	14	60	107
DH423126	12.6		.4961	14	60	107
DH423032F	12.7	1/2	.5000	14	60	107
DH423128	12.8		.5039	14	60	107
DH423129	12.9		.5079	14	60	107
DH423130	13.0		.5118	14	60	107
DH423131	13.1		.5157	14	60	107

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH423132	13.2		.5197	14	60	107
DH423133	13.3		.5236	14	60	107
DH423134	13.4		.5276	14	60	107
DH423135	13.5		.5315	14	60	107
DH423136	13.6		.5354	14	60	107
DH423137	13.7		.5394	14	60	107
DH423138	13.8		.5433	14	60	107
DH423139	13.9		.5472	14	60	107
DH423140	14.0		.5512	14	60	107
DH423141	14.1		.5551	16	65	115
DH423142	14.2		.5591	16	65	115
DH423036F	14.288	9/16	.5625	16	65	115
DH423143	14.3		.5630	16	65	115
DH423144	14.4		.5669	16	65	115
DH423145	14.5		.5708	16	65	115
DH423146	14.6		.5748	16	65	115
DH423147	14.7		.5787	16	65	115
DH423148	14.8		.5827	16	65	115
DH423149	14.9		.5866	16	65	115
DH423150	15.0		.5905	16	65	115
DH423151	15.1		.5945	16	65	115
DH423152	15.2		.5984	16	65	115
DH423153	15.3		.6024	16	65	115
DH423154	15.4		.6063	16	65	115
DH423155	15.5		.6102	16	65	115
DH423156	15.6		.6142	16	65	115

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

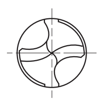
DREAM DRILLS -GENERAL

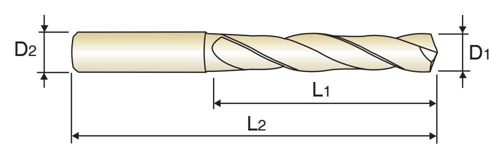
DH423 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS

General without Coolant Holes (3XD)

- Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- Self centering and chip breaking by R-thinning
- Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- Optimized flute shape for strength of drilling and smooth chip evacuation





DIN 6537 | CARBIDE | h6 | m7 | 140° | TiAlN

p.A106~A107

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH423157	15.7		.6181	16	65	115
DH423158	15.8		.6220	16	65	115
DH423040F	15.875	5/8	.6250	16	65	115
DH423159	15.9		.6260	16	65	115
DH423160	16.0		.6299	16	65	115
DH423161	16.1		.6339	18	73	123
DH423162	16.2		.6378	18	73	123
DH423163	16.3		.6417	18	73	123
DH423164	16.4		.6457	18	73	123
DH423165	16.5		.6495	18	73	123
DH423166	16.6		.6535	18	73	123
DH423167	16.7		.6575	18	73	123
DH423168	16.8		.6614	18	73	123
DH423169	16.9		.6654	18	73	123
DH423170	17.0		.6692	18	73	123
DH423171	17.1		.6732	18	73	123
DH423172	17.2		.6772	18	73	123
DH423173	17.3		.6811	18	73	123
DH423174	17.4		.6850	18	73	123
DH423044F	17.463	11/16	.6875	18	73	123
DH423175	17.5		.6889	18	73	123
DH423176	17.6		.6929	18	73	123
DH423177	17.7		.6968	18	73	123
DH423178	17.8		.7008	18	73	123
DH423179	17.9		.7047	18	73	123
DH423180	18.0		.7087	18	73	123
DH423181	18.1		.7126	20	79	131
DH423182	18.2		.7165	20	79	131
DH423183	18.3		.7205	20	79	131
DH423184	18.4		.7244	20	79	131
DH423185	18.5		.7283	20	79	131
DH423186	18.6		.7323	20	79	131
DH423187	18.7		.7362	20	79	131
DH423188	18.8		.7402	20	79	131
DH423189	18.9		.7441	20	79	131
DH423190	19.0		.7480	20	79	131
DH423048F	19.050	3/4	.7500	20	79	131
DH423191	19.1		.7520	20	79	131
DH423192	19.2		.7559	20	79	131
DH423193	19.3		.7598	20	79	131
DH423194	19.4		.7638	20	79	131
DH423195	19.5		.7676	20	79	131
DH423196	19.6		.7717	20	79	131
DH423197	19.7		.7756	20	79	131
DH423198	19.8		.7795	20	79	131
DH423199	19.9		.7835	20	79	131
DH423200	20.0		.7874	20	79	131

- Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

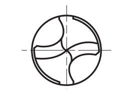
DREAM DRILLS -GENERAL

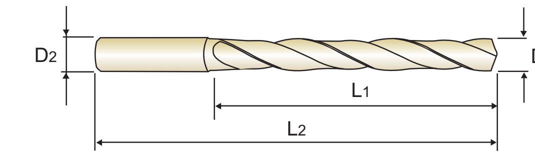
DH424 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS

General without Coolant Holes (5XD)

- Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- Self centering and chip breaking by R-thinning
- Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- Optimized flute shape for strength of drilling and smooth chip evacuation





DIN 6537 | CARBIDE | h6 | m7 | 140° | TiAlN

p.A106~A107

LONG
5×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH424010	1.0		.0394	3	8	55
DH424011	1.1		.0433	3	12	55
DH424012	1.2		.0472	3	12	55
DH424013	1.3		.0512	3	12	55
DH424014	1.4		.0551	3	12	55
DH424015	1.5		.0591	3	16	55
DH424004F	1.588	1/16	.0625	3	16	55
DH424016	1.6		.0630	3	16	55
DH424017	1.7		.0669	3	16	55
DH424018	1.8		.0709	3	16	55
DH424019	1.9		.0748	3	16	55
DH424005F	1.984	5/64	.0781	3	16	55
DH424020	2.0		.0787	4	21	57
DH424021	2.1		.0827	4	21	57
DH424022	2.2		.0866	4	21	57
DH424023	2.3		.0906	4	21	57
DH424006F	2.381	3/32	.0938	4	21	57
DH424024	2.4		.0945	4	21	57
DH424025	2.5		.0984	4	21	57
DH424026	2.6		.1024	4	21	57
DH424027	2.7		.1063	4	21	57
DH424007F	2.778	7/64	.1094	4	21	57
DH424028	2.8		.1102	4	21	57
DH424029	2.9		.1142	4	21	57
DH424030	3.0		.1181	6	28	66
DH424031	3.1		.1220	6	28	66
DH424008F	3.175	1/8	.1250	6	28	66
DH424032	3.2		.1260	6	28	66
DH424033	3.3		.1299	6	28	66
DH424034	3.4		.1339	6	28	66
DH424035	3.5		.1378	6	28	66
DH424009F	3.572	9/64	.1406	6	28	66
DH424036	3.6		.1417	6	28	66
DH424037	3.7		.1457	6	28	66
DH424038	3.8		.1496	6	36	74
DH424039	3.9		.1535	6	36	74
DH424010F	3.969	5/32	.1563	6	36	74
DH424040	4.0		.1575	6	36	74
DH424041	4.1		.1614	6	36	74
DH424042	4.2		.1654	6	36	74
DH424043	4.3		.1693	6	36	74
DH424011F	4.366	11/64	.1719	6	36	74
DH424044	4.4		.1732	6	36	74
DH424045	4.5		.1772	6	36	74
DH424046	4.6		.1811	6	36	74
DH424047	4.7		.1850	6	36	74
DH424012F	4.763	3/16	.1875	6	36	74
DH424048	4.8		.1890	6	44	82
DH424049	4.9		.1929	6	44	82
DH424050	5.0		.1969	6	44	82
DH424051	5.1		.2008	6	44	82
DH424013F	5.159	13/64	.2031	6	44	82

- Other shank types are available on your request.

NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

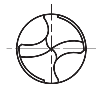
YG DREAM DRILLS -GENERAL

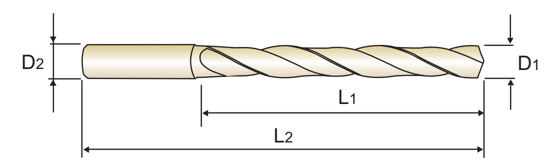
DH424 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS

General without Coolant Holes (5XD)

- ▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶Self centering and chip breaking by R-thinning
- ▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶Optimized flute shape for strength of drilling and smooth chip evacuation





DIN 6537 | CARBIDE | h6 | m7 | 140° | TiAlN | p.A106~A107

LONG

5×D

Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH424052	5.2		.2047	6	44	82
DH424053	5.3		.2087	6	44	82
DH424054	5.4		.2126	6	44	82
DH424055	5.5		.2165	6	44	82
DH424014F	5.556	7/32	.2188	6	44	82
DH424056	5.6		.2205	6	44	82
DH424057	5.7		.2244	6	44	82
DH424058	5.8		.2283	6	44	82
DH424059	5.9		.2323	6	44	82
DH424015F	5.953	15/64	.2344	6	44	82
DH424060	6.0		.2362	6	44	82
DH424061	6.1		.2402	8	53	91
DH424062	6.2		.2441	8	53	91
DH424063	6.3		.2480	8	53	91
DH424016F	6.350	1/4	.2500	8	53	91
DH424064	6.4		.2520	8	53	91
DH424065	6.5		.2559	8	53	91
DH424006L	6.528	F	.2570	8	53	91
DH424066	6.6		.2598	8	53	91
DH424067	6.7		.2638	8	53	91
DH424017F	6.747	17/64	.2656	8	53	91
DH424068	6.8		.2677	8	53	91
DH424069	6.9		.2717	8	53	91
DH424009L	6.909	I	.2720	8	53	91
DH424070	7.0		.2756	8	53	91
DH424071	7.1		.2795	8	53	91

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH424018F	7.144	9/32	.2812	8	53	91
DH424072	7.2		.2835	8	53	91
DH424073	7.3		.2874	8	53	91
DH424074	7.4		.2913	8	53	91
DH424075	7.5		.2953	8	53	91
DH424019F	7.541	19/64	.2969	8	53	91
DH424076	7.6		.2992	8	53	91
DH424077	7.7		.3031	8	53	91
DH424078	7.8		.3071	8	53	91
DH424079	7.9		.3110	8	53	91
DH424020F	7.938	5/16	.3125	8	53	91
DH424080	8.0		.3150	8	53	91
DH424081	8.1		.3189	10	61	103
DH424082	8.2		.3228	10	61	103
DH424083	8.3		.3268	10	61	103
DH424021F	8.334	21/64	.3281	10	61	103
DH424084	8.4		.3307	10	61	103
DH424017L	8.433	Q	.3320	10	61	103
DH424085	8.5		.3346	10	61	103
DH424086	8.6		.3386	10	61	103
DH424087	8.7		.3425	10	61	103
DH424022F	8.731	11/32	.3438	10	61	103
DH424088	8.8		.3465	10	61	103
DH424089	8.9		.3504	10	61	103
DH424090	9.0		.3543	10	61	103
DH424091	9.1		.3583	10	61	103

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

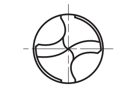
YG DREAM DRILLS -GENERAL

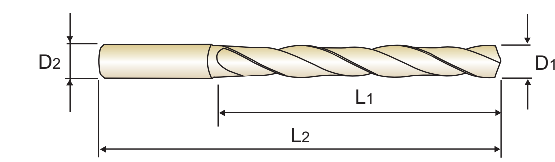
DH424 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS

General without Coolant Holes (5XD)

▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
▶Self centering and chip breaking by R-thinning
▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
▶Optimized flute shape for strength of drilling and smooth chip evacuation





DIN 6537 | CARBIDE | h6 | m7 | 140° | TiAlN | p.A106~A107

LONG

5×D

Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH424023F	9.128	23/64	.3594	10	61	103
DH424092	9.2		.3622	10	61	103
DH424093	9.3		.3661	10	61	103
DH424021L	9.347	U	.3680	10	61	103
DH424094	9.4		.3701	10	61	103
DH424095	9.5		.3740	10	61	103
DH424024F	9.525	3/8	.3750	10	61	103
DH424096	9.6		.3780	10	61	103
DH424097	9.7		.3819	10	61	103
DH424098	9.8		.3858	10	61	103
DH424099	9.9		.3898	10	61	103
DH424025F	9.922	25/64	.3906	10	61	103
DH424100	10.0		.3937	10	61	103
DH424101	10.1		.3976	12	71	118
DH424102	10.2		.4016	12	71	118
DH424103	10.3		.4055	12	71	118
DH424026F	10.319	13/32	.4062	12	71	118
DH424104	10.4		.4094	12	71	118
DH424105	10.5		.4134	12	71	118
DH424106	10.6		.4173	12	71	118
DH424107	10.7		.4213	12	71	118
DH424027F	10.716	27/64	.4219	12	71	118
DH424108	10.8		.4252	12	71	118
DH424109	10.9		.4291	12	71	118
DH424110	11.0		.4331	12	71	118
DH424111	11.1		.4370	12	71	118

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH424028F	11.113	7/16	.4375	12	71	118
DH424112	11.2		.4409	12	71	118
DH424113	11.3		.4449	12	71	118
DH424114	11.4		.4488	12	71	118
DH424115	11.5		.4528	12	71	118
DH424029F	11.509	29/64	.4531	12	71	118
DH424116	11.6		.4567	12	71	118
DH424117	11.7		.4606	12	71	118
DH424118	11.8		.4646	12	71	118
DH424119	11.9		.4685	12	71	118
DH424030F	11.906	15/32	.4688	12	71	118
DH424120	12.0		.4724	12	71	118
DH424121	12.1		.4764	14	77	124
DH424122	12.2		.4803	14	77	124
DH424123	12.3		.4843	14	77	124
DH424031F	12.303	31/64	.4844	14	77	124
DH424124	12.4		.4882	14	77	124
DH424125	12.5		.4921	14	77	124
DH424126	12.6		.4961	14	77	124
DH424032F	12.7	1/2	.5000	14	77	124
DH424128	12.8		.5039	14	77	124
DH424129	12.9		.5079	14	77	124
DH424130	13.0		.5118	14	77	124
DH424131	13.1		.5157	14	77	124
DH424132	13.2		.5197	14	77	124
DH424133	13.3		.5236	14	77	124

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

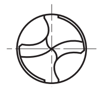
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

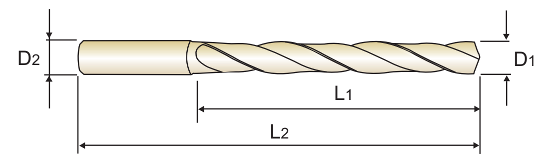
YG DREAM DRILLS -GENERAL

DH424 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (5XD)

- ▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶Self centering and chip breaking by R-thinning
- ▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶Optimized flute shape for strength of drilling and smooth chip evacuation





DIN 6537 | CARBIDE | h6 | m7 | 140° | TiAlN | p.A106~A107

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH424134	13.4		.5276	14	77	124
DH424135	13.5		.5315	14	77	124
DH424136	13.6		.5354	14	77	124
DH424137	13.7		.5394	14	77	124
DH424138	13.8		.5433	14	77	124
DH424139	13.9		.5472	14	77	124
DH424140	14.0		.5512	14	77	124
DH424141	14.1		.5551	16	83	133
DH424142	14.2		.5591	16	83	133
DH424036F	14.288	9/16	.5625	16	83	133
DH424143	14.3		.5630	16	83	133
DH424144	14.4		.5669	16	83	133
DH424145	14.5		.5708	16	83	133
DH424146	14.6		.5748	16	83	133
DH424147	14.7		.5787	16	83	133
DH424148	14.8		.5827	16	83	133
DH424149	14.9		.5866	16	83	133
DH424150	15.0		.5905	16	83	133
DH424151	15.1		.5945	16	83	133
DH424152	15.2		.5984	16	83	133
DH424153	15.3		.6024	16	83	133
DH424154	15.4		.6063	16	83	133
DH424155	15.5		.6102	16	83	133
DH424156	15.6		.6142	16	83	133
DH424157	15.7		.6181	16	83	133
DH424158	15.8		.6220	16	83	133
DH424040F	15.875	5/8	.6250	16	83	133
DH424159	15.9		.6260	16	83	133
DH424160	16.0		.6299	16	83	133
DH424161	16.1		.6339	18	93	143
DH424162	16.2		.6378	18	93	143
DH424163	16.3		.6417	18	93	143
DH424164	16.4		.6457	18	93	143
DH424165	16.5		.6495	18	93	143
DH424166	16.6		.6535	18	93	143
DH424167	16.7		.6575	18	93	143
DH424168	16.8		.6614	18	93	143
DH424169	16.9		.6654	18	93	143
DH424170	17.0		.6692	18	93	143
DH424171	17.1		.6732	18	93	143
DH424172	17.2		.6772	18	93	143
DH424173	17.3		.6811	18	93	143
DH424174	17.4		.6850	18	93	143
DH424175	17.5		.6889	18	93	143
DH424176	17.6		.6929	18	93	143
DH424177	17.7		.6968	18	93	143
DH424178	17.8		.7008	18	93	143
DH424179	17.9		.7047	18	93	143
DH424180	18.0		.7087	18	93	143
DH424181	18.1		.7126	20	101	153
DH424182	18.2		.7165	20	101	153
DH424183	18.3		.7205	20	101	153

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

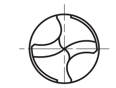
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

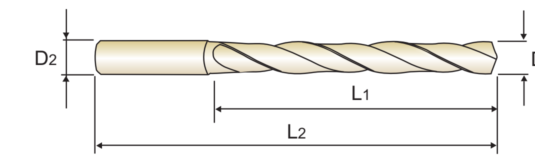
YG DREAM DRILLS -GENERAL

DH424 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (5XD)

▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
▶Self centering and chip breaking by R-thinning
▶Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
▶Optimized flute shape for strength of drilling and smooth chip evacuation





DIN 6537 | CARBIDE | h6 | m7 | 140° | TiAlN | p.A106~A107

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH424184	18.4		.7244	20	101	153
DH424185	18.5		.7283	20	101	153
DH424186	18.6		.7323	20	101	153
DH424187	18.7		.7362	20	101	153
DH424188	18.8		.7402	20	101	153
DH424189	18.9		.7441	20	101	153
DH424190	19.0		.7480	20	101	153
DH424048F	19.005	3/4	.7500	20	101	153
DH424191	19.1		.7520	20	101	153
DH424192	19.2		.7559	20	101	153
DH424193	19.3		.7598	20	101	153
DH424194	19.4		.7638	20	101	153
DH424195	19.5		.7676	20	101	153
DH424196	19.6		.7717	20	101	153
DH424197	19.7		.7756	20	101	153
DH424198	19.8		.7795	20	101	153
DH424199	19.9		.7835	20	101	153
DH424200	20.0		.7874	20	101	153

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○	○	○		◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

YG DREAM DRILLS -GENERAL

RECOMMENDED CUTTING CONDITIONS

YG DREAM DRILLS -GENERAL RECOMMENDED CUTTING CONDITIONS

DH416, DH418, DH711, DH712, DH406, DH408, DH421 SERIES

with COOLANT HOLES

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM		Drill Diameter		SFM		Drill Diameter			Drill Diameter									
			1.0 ~ 2.9	METRIC	1.0	2.0	3.0 ~ 20.0	METRIC	3.0 / -	4.0	- / 5.0	6.0 / -	- / 8.0	- / 10.0	12.0	-	14.0 / -	- / 16.0	18.0	-	20.0
			-	FRACTIONAL	-	-	1/8 ~ 3/4	FRACTIONAL	- / 1/8	-	3/16 / -	- / 1/4	5/16 / -	3/8 / -	-	1/2	- / 9/16	5/8 / -	-	3/4	-
			.0394 ~ .0787	DECIMAL	.0394	.0787	.1181 ~ .7874	DECIMAL	.1181 / .1250	.1575	.1875 / .1969	.2362 / .2500	.3125 / .3150	.3750 / .3937	.4724	.5000	.5512 / .5625	.6250 / .6299	.7087	.7500	.7874
P	2	Non-alloy steel	263	RPM	25,460	12,730	362	RPM	11,670	8,750	7,000	5,840	4,380	3,500	2,920	2,770	2,500	2,190	1,950	1,840	1,750
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0024 - .0047	.0031 - .0055	.0055 - .0079	.0063 - .0087	.0071 - .0094	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
	3		263	RPM	25,460	12,730	362	RPM	11,670	8,750	7,000	5,840	4,380	3,500	2,920	2,770	2,500	2,190	1,950	1,840	1,750
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0024 - .0047	.0031 - .0055	.0055 - .0079	.0063 - .0087	.0071 - .0094	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
	4		263	RPM	25,460	12,730	362	RPM	11,670	8,750	7,000	5,840	4,380	3,500	2,920	2,770	2,500	2,190	1,950	1,840	1,750
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0016 - .0039	.0028 - .0051	.0039 - .0063	.0047 - .0071	.0055 - .0079	.0059 - .0091	.0067 - .0098	.0067 - .0098	.0071 - .0102	.0075 - .0106	.0079 - .0118	.0079 - .0118	.0087 - .0126
	5		230	RPM	22,280	11,140	296	RPM	9,550	7,160	5,730	4,770	3,580	2,860	2,390	2,260	2,050	1,790	1,590	1,510	1,430
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0016 - .0039	.0028 - .0051	.0039 - .0063	.0047 - .0071	.0055 - .0079	.0059 - .0091	.0067 - .0098	.0067 - .0098	.0071 - .0102	.0075 - .0106	.0079 - .0118	.0079 - .0118	.0087 - .0126
	6	Low alloy steel	263	RPM	25,460	12,730	362	RPM	11,670	8,750	7,000	5,840	4,380	3,500	2,920	2,770	2,500	2,190	1,950	1,840	1,750
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0024 - .0047	.0031 - .0055	.0055 - .0079	.0063 - .0087	.0071 - .0094	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
	7		230	RPM	22,280	11,140	296	RPM	9,550	7,160	5,730	4,770	3,580	2,860	2,390	2,260	2,050	1,790	1,590	1,510	1,430
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0024 - .0047	.0031 - .0055	.0039 - .0079	.0047 - .0094	.0063 - .0110	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
	8		230	RPM	22,280	11,140	296	RPM	9,550	7,160	5,730	4,770	3,580	2,860	2,390	2,260	2,050	1,790	1,590	1,510	1,430
				FEED	.0008 - .0016	.0012 - .0020		FEED	.0016 - .0039	.0028 - .0051	.0039 - .0063	.0047 - .0071	.0055 - .0079	.0059 - .0091	.0067 - .0098	.0067 - .0098	.0071 - .0102	.0075 - .0106	.0079 - .0118	.0079 - .0118	.0087 - .0126
	9		132	RPM	12,730	6,370	165	RPM	5,310	3,980	3,180	2,650	1,990	1,590	1,330	1,260	1,140	990	880	840	800
				FEED	.0008 - .0016	.0012 - .0020		FEED	.0012 - .0031	.0020 - .0043	.0031 - .0055	.0039 - .0063	.0047 - .0071	.0051 - .0075	.0055 - .0079	.0055 - .0079	.0059 - .0083	.0063 - .0087	.0067 - .0098	.0063 - .0102	.0071 - .0110
	10	High alloyed steel, and tool steel	198	RPM	19,100	9,550	263	RPM	8,490	6,370	5,090	4,240	3,180	2,550	2,120	2,010	1,820	1,590	1,410	1,340	1,270
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0016 - .0039	.0028 - .0051	.0039 - .0063	.0047 - .0071	.0055 - .0079	.0059 - .0091	.0067 - .0098	.0067 - .0098	.0071 - .0102	.0075 - .0106	.0079 - .0118	.0079 - .0118	.0087 - .0126
	11		132	RPM	12,730	6,370	148	RPM	4,770	3,580	2,860	2,390	1,790	1,430	1,190	1,130	1,020	900	800	750	720
				FEED	.0008 - .0016	.0012 - .0020		FEED	.0012 - .0031	.0020 - .0043	.0031 - .0055	.0039 - .0063	.0047 - .0071	.0051 - .0075	.0055 - .0079	.0055 - .0079	.0059 - .0083	.0063 - .0087	.0067 - .0098	.0063 - .0102	.0071 - .0110
M	12	Stainless steel	198	RPM	19,100	9,550	263	RPM	8,490	6,370	5,090	4,240	3,180	2,550	2,120	2,010	1,820	1,590	1,410	1,340	1,270
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0024 - .0047	.0031 - .0055	.0055 - .0079	.0063 - .0087	.0071 - .0094	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
	13		148	RPM	14,320	7,160	181	RPM	5,840	4,380	3,500	2,920	2,190	1,750	1,460	1,380	1,250	1,090	970	920	880
				FEED	.0008 - .0016	.0012 - .0020		FEED	.0016 - .0039	.0028 - .0051	.0039 - .0063	.0047 - .0071	.0055 - .0079	.0059 - .0091	.0067 - .0098	.0067 - .0098	.0071 - .0102	.0075 - .0106	.0079 - .0118	.0079 - .0118	.0087 - .0126
K	15	Grey cast iron	263	RPM	25,460	12,730	362	RPM	11,670	8,750	7,000	5,840	4,380	3,500	2,920	2,770	2,500	2,190	1,950	1,840	1,750
				FEED	.0016 - .0024	.0016 - .0024		FEED	.0031 - .0055	.0047 - .0071	.0059 - .0087	.0079 - .0102	.0087 - .0110	.0098 - .0130	.0106 - .0138	.0106 - .0138	.0114 - .0146	.0122 - .0154	.0126 - .0165	.0126 - .0165	.0134 - .0173
	16		247	RPM	23,870	11,940	313	RPM	10,080	7,560	6,050	5,040	3,780	3,020	2,520	2,390	2,160	1,890	1,680	1,590	1,510
				FEED	.0016 - .0024	.0016 - .0024		FEED	.0024 - .0047	.0031 - .0055	.0055 - .0079	.0063 - .0087	.0071 - .0094	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
	17	Nodular cast iron	296	RPM	28,650	14,320	395	RPM	12,730	9,550	7,640	6,370	4,770	3,820	3,180	3,020	2,730	2,390	2,120	2,010	1,910
				FEED	.0016 - .0024	.0016 - .0024		FEED	.0031 - .0055	.0047 - .0071	.0059 - .0087	.0079 - .0102	.0087 - .0110	.0098 - .0130	.0106 - .0138	.0106 - .0138	.0114 - .0146	.0122 - .0154	.0126 - .0165	.0126 - .0165	.0134 - .0173
	18		198	RPM	19,100	9,550	263	RPM	8,490	6,370	5,090	4,240	3,180	2,550	2,120	2,010	1,820	1,590	1,410	1,340	1,270
				FEED	.0016 - .0024	.0016 - .0024		FEED	.0024 - .0047	.0031 - .0055	.0055 - .0079	.0063 - .0087	.0071 - .0094	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
	19	Malleable cast iron	230	RPM	22,280	11,140	296	RPM	9,550	7,160	5,730	4,770	3,580	2,860	2,390	2,260	2,050	1,790	1,590	1,510	1,430
				FEED	.0016 - .0024	.0016 - .0024		FEED	.0031 - .0055	.0047 - .0071	.0059 - .0087	.0079 - .0102	.0087 - .0110	.0098 - .0130	.0106 - .0138	.0106 - .0138	.0114 - .0146	.0122 - .0154	.0126 - .0165	.0126 - .0165	.0134 - .0173
	20		198	RPM	19,100	9,550	263	RPM	8,490	6,370	5,090	4,240	3,180	2,550	2,120	2,010	1,820	1,590	1,410	1,340	1,270
				FEED	.0012 - .0020	.0020 - .0028		FEED	.0024 - .0047	.0031 - .0055	.0055 - .0079	.0063 - .0087	.0071 - .0094	.0075 - .0106	.0083 - .0114	.0083 - .0114	.0091 - .0122	.0098 - .0130	.0110 - .0150	.0110 - .0150	.0118 - .0157
H	38 38.1	Hardened steel	82	RPM	7,960	3,980	98	RPM	3,180	2,390	1,910	1,590	1,190	950	800	750	680	600	530	500	480
				FEED	.0004- .0008	.0004- .0012		FEED	.0004- .0012	.0004- .0016	.0008- .0020	.0012- .0024	.0012- .0024	.0016- .0028	.0016- .0031	.0016- .0031	.0020- .0035	.0020- .0035	.0020- .0039	.0020- .0039	.0020- .0039

▸ Recommend to reduce the feed rate as following

Feed 100% : DH416/DH711(3xD), DH406(3xD) **Feed 80%** : DH418/DH712(5xD), DH408(5xD) **Feed 70%** : DH421(8xD)

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG DREAM DRILLS -GENERAL

RECOMMENDED CUTTING CONDITIONS

DH414, DH722, DH404, DH423, DH424 SERIES

without COOLANT HOLES

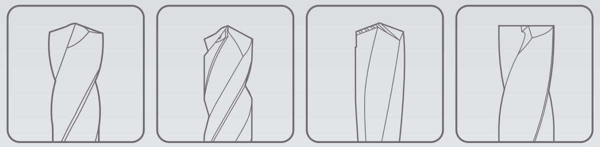
SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM 1.0~2.9 (.0394~.0787)		Drill Diameter 1.0 (.0394)	Drill Diameter 2.0 (.0787)	SFM 3.0~20.0 (1/8~3/4, .1181~.7874)		Drill Diameter 3.0 (.1181) / 1/8 (.1250)	Drill Diameter 4.0 (.1575)	Drill Diameter 3/16 (.1875) / 5.0 (.1969)
P	2	Non-alloy steel	230	RPM	22,280	11,140	329	RPM	10,610	7,960	6,370
				FEED	.0012-.0020	.0020-.0028		FEED	.0024-.0047	.0031-.0055	.0055-.0079
	3		230	RPM	22,280	11,140	329	RPM	10,610	7,960	6,370
				FEED	.0012-.0020	.0020-.0028		FEED	.0024-.0047	.0031-.0055	.0055-.0079
	4		230	RPM	22,280	11,140	329	RPM	10,610	7,960	6,370
				FEED	.0012-.0020	.0020-.0028		FEED	.0016-.0039	.0028-.0051	.0039-.0063
	5		197	RPM	19,100	9,550	263	RPM	8,490	6,370	5,090
				FEED	.0012-.0020	.0020-.0028		FEED	.0016-.0039	.0028-.0051	.0039-.0063
	6	Low alloy steel	230	RPM	22,280	11,140	329	RPM	10,610	7,960	6,370
				FEED	.0012-.0020	.0020-.0028		FEED	.0024-.0047	.0031-.0055	.0055-.0079
	7		197	RPM	19,100	9,550	263	RPM	8,490	6,370	5,090
				FEED	.0012-.0020	.0020-.0028		FEED	.0024-.0047	.0031-.0055	.0039-.0079
	8		197	RPM	19,100	9,550	263	RPM	8,490	6,370	5,090
				FEED	.0008-.0016	.0012-.0020		FEED	.0016-.0039	.0028-.0051	.0039-.0063
	9		99	RPM	9,550	4,770	132	RPM	4,240	3,180	2,550
				FEED	.0008-.0016	.0012-.0020		FEED	.0012-.0031	.0020-.0043	.0031-.0055
	10	High alloyed steel, and tool steel	165	RPM	15,920	7,960	230	RPM	7,430	5,570	4,460
				FEED	.0012-.0020	.0020-.0028		FEED	.0016-.0039	.0028-.0051	.0039-.0063
	11		99	RPM	9,550	4,770	132	RPM	4,240	3,180	2,550
				FEED	.0008-.0016	.0012-.0020		FEED	.0012-.0031	.002-.0043	.0031-.0055
M	12	Stainless steel	165	RPM	15,920	7,960	230	RPM	7,430	5,570	4,460
				FEED	.0012-.0020	.0020-.0028		FEED	.0024-.0047	.0031-.0055	.0055-.0079
	13		115	RPM	11,140	5,570	148	RPM	4,770	3,580	2,860
				FEED	.0008-.0016	.0012-.0020		FEED	.0016-.0039	.0028-.0051	.0039-.0063
K	15	Grey cast iron	230	RPM	22,280	11,140	329	RPM	10,610	7,960	6,370
				FEED	.0016-.0024	.0016-.0024		FEED	.0031-.0055	.0047-.0071	.0059-.0087
	16		214	RPM	20,690	10,350	263	RPM	8,490	6,370	5,090
				FEED	.0016-.0024	.0016-.0024		FEED	.0024-.0047	.0031-.0055	.0055-.0079
	17	Nodular cast iron	230	RPM	22,280	11,140	329	RPM	10,610	7,960	6,370
				FEED	.0016-.0024	.0016-.0024		FEED	.0031-.0055	.0047-.0071	.0059-.0087
	18		165	RPM	15,920	7,960	230	RPM	7,430	5,570	4,460
				FEED	.0016-.0024	.0016-.0024		FEED	.0024-.0047	.0031-.0055	.0055-.0079
	19	Malleable cast iron	197	RPM	19,100	9,550	263	RPM	8,490	6,370	5,090
				FEED	.0016-.0024	.0016-.0024		FEED	.0031-.0055	.0047-.0071	.0059-.0087
	20		165	RPM	15,920	7,960	230	RPM	7,430	5,570	4,460
				FEED	.0012-.0020	.0020-.0028		FEED	.0024-.0047	.0031-.0055	.0055-.0079
H	38	Hardened steel	65	RPM	6,370	3,180	82	RPM	2,650	1,990	1,590
				FEED	.0004-.0008	.0004-.0012		FEED	.0004-.0012	.0004-.0016	.0008-.0020

VDI 3323	6.0 (.2362) / 1/4 (.2500)	5/16 (.3125) / 8.0 (.3150)	3/8 (.3750) / 10.0 (.3937)	12.0 (.4724)	1/2 (.5000)	14.0 (.5512) / 9/16 (.5625)	5/8 (.6250) / 16.0 (.6299)	18.0 (.7087)	3/4 (.7500)	20.0 (.7874)
2	5,310	3,980	3,180	2,650	2,510	2,270	1,990	1,770	1,680	1,590
	.0063-.0087	.0071-.0094	.0075-.0106	.0083-.0114	.0083-.0114	.0091-.0122	.0098-.0130	.0110-.0150	.0110-.0150	.0118-.0157
3	5,310	3,980	3,180	2,650	2,510	2,270	1,990	1,770	1,680	1,590
	.0063-.0087	.0071-.0094	.0075-.0106	.0083-.0114	.0083-.0114	.0091-.0122	.0098-.0130	.0110-.0150	.0110-.0150	.0118-.0157
4	5,310	3,980	3,180	2,650	2,510	2,270	1,990	1,770	1,680	1,590
	.0047-.0071	.0055-.0079	.0059-.0091	.0067-.0098	.0067-.0098	.0071-.0102	.0075-.0106	.0079-.0118	.0079-.0118	.0087-.0126
5	4,240	3,180	2,550	2,120	2,010	1,820	1,590	1,410	1,340	1,270
	.0047-.0071	.0055-.0079	.0059-.0091	.0067-.0098	.0067-.0098	.0071-.0102	.0075-.0106	.0079-.0118	.0079-.0118	.0087-.0126
6	5,310	3,980	3,180	2,650	2,510	2,270	1,990	1,770	1,680	1,590
	.0063-.0087	.0071-.0094	.0075-.0106	.0083-.0114	.0083-.0114	.0091-.0122	.0098-.0130	.0110-.0150	.0110-.0150	.0118-.0157
7	4,240	3,180	2,550	2,120	2,010	1,820	1,590	1,410	1,340	1,270
	.0047-.0094	.0063-.011	.0075-.0106	.0083-.0114	.0083-.0114	.0091-.0122	.0098-.0130	.0110-.0150	.0110-.0150	.0118-.0157
8	4,240	3,180	2,550	2,120	2,010	1,820	1,590	1,410	1,340	1,270
	.0047-.0071	.0055-.0079	.0059-.0091	.0067-.0098	.0067-.0098	.0071-.0102	.0075-.0106	.0079-.0118	.0079-.0118	.0087-.0126
9	2,120	1,590	1,270	1,060	1,010	910	800	710	670	640
	.0039-.0063	.0047-.0071	.0051-.0075	.0055-.0079	.0055-.0079	.0059-.0083	.0063-.0087	.0067-.0098	.0067-.0098	.0071-.0110
10	3,710	2,790	2,230	1,860	1,760	1,590	1,390	1,240	1,170	1,110
	.0047-.0071	.0055-.0079	.0059-.0091	.0067-.0098	.0067-.0098	.0071-.0102	.0075-.0106	.0079-.0118	.0079-.0118	.0087-.0126
11	2,120	1,590	1,270	1,060	1,010	910	800	710	670	640
	.0039-.0063	.0047-.0071	.0051-.0075	.0055-.0079	.0055-.0079	.0059-.0083	.0063-.0087	.0067-.0098	.0067-.0098	.0071-.0110
12	3,710	2,790	2,230	1,860	1,760	1,590	1,390	1,240	1,170	1,110
	.0063-.0087	.0071-.0094	.0075-.0106	.0083-.0114	.0083-.0114	.0091-.0122	.0098-.0130	.0110-.0150	.0110-.0150	.0118-.0157
13	2,390	1,790	1,430	1,190	1,130	1,020	900	800	750	720
	.0047-.0071	.0055-.0079	.0059-.0091	.0067-.0098	.0067-.0098	.0071-.0102	.0075-.0106	.0079-.0118	.0079-.0118	.0087-.0126
15	5,310	3,980	3,180	2,650	2,510	2,270	1,990	1,770	1,680	1,590
	.0079-.0102	.0087-.0110	.0098-.0130	.0106-.0138	.0106-.0138	.0114-.0146	.0122-.0154	.0126-.0165	.0126-.0165	.0134-.0173
16	4,240	3,180	2,550	2,120	2,010	1,820	1,590	1,410	1,340	1,270
	.0063-.0087	.0071-.0094	.0075-.0106	.0083-.0114	.0083-.0114	.0091-.0122	.0098-.0130	.0110-.0150	.0110-.0150	.0118-.0157
17	5,310	3,980	3,180	2,650	2,510	2,270	1,990	1,770	1,680	1,590
	.0079-.0102	.0087-.0110	.0098-.0130	.0106-.0138	.0106-.0138	.0114-.0146	.0122-.0154	.0126-.0165	.0126-.0165	.0134-.0173
18	3,710	2,790	2,230	1,860	1,760	1,590	1,390	1,240	1,170	1,110
	.0063-.0087	.0071-.0094	.0075-.0106	.0083-.0114	.0083-.0114	.0091-.0122	.0098-.0130	.0110-.0150	.0110-.0150	.0118-.0157
19	4,240	3,180	2,550	2,120	2,010	1,820	1,590	1,410	1,340	1,270
	.0079-.0102	.0087-.0110	.0098-.0130	.0106-.0138	.0106-.0138	.0114-.0146	.0122-.0154	.0126-.0165	.0126-.0165	.0134-.0173
20	3,710	2,790	2,230	1,860	1,760	1,590	1,390	1,240	1,170	1,110
	.0063-.0087	.0071-.0094	.0075-.0106	.0083-.0114	.0083-.0114	.0091-.0122	.0098-.0130	.0110-.0150	.0110-.0150	.0118-.0157
38	1,330	990	800	660	620	570	500	440	420	400
	.0012-.0024	.0012-.0024	.0016-.0028	.0016-.0031	.0016-.0031	.0020-.0035	.0020-.0035	.0020-.0039	.0020-.0039	.0020-.0039

▸ Recommend to reduce the feed rate as following
Feed 100% : DH414(3xD), DH404(3xD), DH423(3xD) **Feed 80%** : DH722(5xD), DH424(5xD)

Global Cutting Tool Leader **YG-1**



DREAM DRILLS

SOLID CARBIDE

DREAM DRILLS HIGH FEED

- 1.5 to 2 Times Faster Feeding Speed than 2-Flute Drill
  For Carbon Steels, Alloy Steels(up to HRc35) and Cast Iron

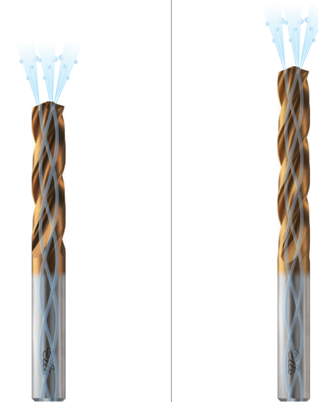
SELECTION GUIDE

YG HOLEMAKING TOOLS

SERIES	DGR493 DGR496	DGR495 DGR497
DRILLING DEPTH	3XD	5XD
TOOL MATERIAL	SOLID CARBIDE	
LENGTH	SHORT	LONG
SIZE MIN	D13/64, D4.0	D13/64, D4.0
SIZE MAX	D3/4, D20.0	D3/4, D20.0
PAGE	A111	A115
SURFACE TREATMENT	H-Coating	

SOLID CARBIDE DREAM DRILLS HIGH FEED

- 1.5 to 2 Times Faster Feeding Speed than 2-Flute Drill
For carbon Steels, alloy Steels(up to HRc35) and cast Iron



Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A119

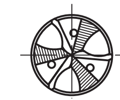
ISO	VDI 3323	Material Description	Composition / Structure	Heat Treatment	HB	HRc	DGR493 DGR496	DGR495 DGR497
P	1	Non-alloy steel	About 0.15% C	Annealed	125			
P	2	Non-alloy steel	About 0.45% C	Annealed	190	13	◎	◎
P	3	Non-alloy steel	About 0.45% C	Quenched & Tempered	250	25	◎	◎
P	4	Non-alloy steel	About 0.75% C	Annealed	270	28	◎	◎
P	5	Non-alloy steel	About 0.75% C	Quenched & Tempered	300	32	○	○
P	6	Low alloy steel		Annealed	180	10	◎	◎
P	7	Low alloy steel		Quenched & Tempered	275	29	◎	◎
P	8	Low alloy steel		Quenched & Tempered	300	32	○	○
P	9	Low alloy steel		Quenched & Tempered	350	38	○	○
P	10	High alloyed steel, and tool steel		Annealed	200	15	◎	◎
P	11	High alloyed steel, and tool steel		Quenched & Tempered	325	35	○	○
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15		
M	13	Stainless steel	Martensitic	Quenched & Tempered	240	23		
M	14	Stainless steel	Austenitic		180	10		
K	15	Grey cast iron	Pearlitic / ferritic		180	10	◎	◎
K	16	Grey cast iron	Pearlitic (Martensitic)		260	26	○	○
K	17	Nodular cast iron	Ferritic		160	3	◎	◎
K	18	Nodular cast iron	Pearlitic		250	25	○	○
K	19	Malleable cast iron	Ferritic		130		◎	◎
K	20	Malleable cast iron	Pearlitic		230	21	○	○
N	21	Aluminum-wrought alloy	Not Curable		60			
N	22	Aluminum-wrought alloy	Curable	Hardened	100			
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75			
N	24	Aluminum-cast, alloyed	≤ 12% Si, Curable	Hardened	90			
N	25	Aluminum-cast, alloyed	> 12% Si, Not Curable		130			
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110			
N	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90			
N	28	Copper and Copper Alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper		100			
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic					
N	30	Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.	Rubber, Wood, etc.					
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15		
S	32	Heat Resistant Super Alloys	Fe Based	Cured	280	30		
S	33	Heat Resistant Super Alloys	Ni or Co Based	Annealed	250	25		
S	34	Heat Resistant Super Alloys	Ni or Co Based	Cured	350	38		
S	35	Heat Resistant Super Alloys	Ni or Co Based	Cast	320	34		
S	36	Titanium Alloys	Pure Titanium		400 Rm			
S	37	Titanium Alloys	Alpha + Beta Alloys	Hardened	1050 Rm			
H	38	Hardened steel		Hardened	550	55		
H	39	Hardened steel		Hardened	630	60		
H	40	Chilled Cast Iron		Cast	400	42		
H	41	Hardened Cast Iron		Hardened	550	55		

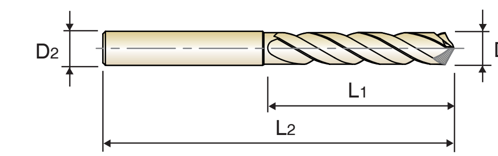
YG DREAM DRILLS -HIGH FEED

DGR493 SERIES
DGR496 SERIES

H-COATED SOLID CARBIDE DREAM DRILLS
High Feed with Coolant Holes (3XD)

- ▶Drilling for Carbon Steels, Alloy Steels(-HRc35) and Cast Iron
- ▶Higher productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
- ▶Multi-Layer coating delivers much better productivity and reliability
- ▶Self centering and chip breaking by R-thinning and coolant holes





DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | H Coating | p.A119~A120

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
H-coating	D1			D2	L1	L2
DGR493040	4.00		.1575	6	24	66
DGR493945	4.05		.1594	6	24	66
DGR493020G	4.09	#20	.1610	6	24	66
DGR493041	4.10		.1614	6	24	66
DGR4930416	4.16		.1638	6	24	66
DGR493042	4.20		.1654	6	24	66
DGR4930427	4.27		.1681	6	24	66
DGR493043	4.30		.1693	6	24	66
DGR493011F	4.366	11/64	.1719	6	24	66
DGR493044	4.40		.1732	6	24	66
DGR4930446	4.46		.1756	6	24	66
DGR493045	4.50		.1772	6	24	66
DGR493046	4.60		.1811	6	24	66
DGR4930466	4.66		.1835	6	24	66
DGR493047	4.70		.1850	6	24	66
DGR493012F	4.763	3/16	.1875	6	28	66
DGR493048	4.80		.1890	6	28	66
DGR493049	4.90		.1929	6	28	66
DGR493050	5.00		.1969	6	28	66
DGR493051	5.10		.2008	6	28	66
DGR496013	5.16	13/64	.2031	1/4	28	66
DGR493052	5.20		.2047	6	28	66
DGR493053	5.30		.2087	6	28	66
DGR493054	5.40		.2126	6	28	66
DGR496103	5.41	#3	.2130	1/4	28	66
DGR493055	5.50		.2165	6	28	66

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
H-coating	D1			D2	L1	L2
DGR496014	5.56	7/32	.2188	1/4	28	66
DGR493056	5.60		.2205	6	28	66
DGR496102	5.61	#2	.2210	1/4	28	66
DGR493057	5.70		.2244	6	28	66
DGR496101	5.79	#1	.2280	1/4	28	66
DGR493058	5.80		.2283	6	28	66
DGR493059	5.90		.2323	6	28	66
DGR496015	5.95	15/64	.2344	1/4	28	66
DGR493060	6.00		.2362	6	28	66
DGR493061	6.10		.2402	8	34	79
DGR493062	6.20		.2441	8	34	79
DGR493063	6.30		.2480	8	34	79
DGR496016	6.35	1/4	.2500	1/4	34	79
DGR493064	6.40		.2520	8	34	79
DGR493065	6.50		.2559	8	34	79
DGR496206	6.53	F	.2570	5/16	34	79
DGR493066	6.60		.2598	8	34	79
DGR493067	6.70		.2638	8	34	79
DGR496017	6.75	17/64	.2656	5/16	34	79
DGR493068	6.80		.2677	8	34	79
DGR493069	6.90		.2717	8	34	79
DGR496209	6.91	I	.2720	5/16	34	79
DGR493070	7.00		.2756	8	34	79
DGR493071	7.10		.2795	8	41	79
DGR496018	7.14	9/32	.2813	5/16	41	79
DGR493072	7.20		.2835	8	41	79

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

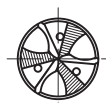
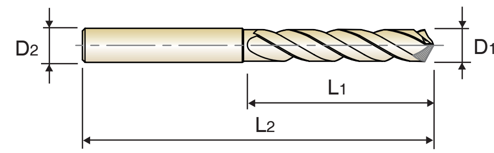
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG DREAM DRILLS -HIGH FEED

DGR493 SERIES
DGR496 SERIES

H-COATED SOLID CARBIDE DREAM DRILLS
High Feed with Coolant Holes (3XD)

- Drilling for Carbon Steels, Alloy Steels(-HRc35) and Cast Iron
- Higher productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
- Multi-Layer coating delivers much better productivity and reliability
- Self centering and chip breaking by R-thinning and coolant holes

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | H Coating | p.A119~A120

SHORT 3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR493073	7.30		.2874	8	41	79
DGR493074	7.40		.2913	8	41	79
DGR493075	7.50		.2953	8	41	79
DGR496019	7.54	19/64	.2969	5/16	41	79
DGR493076	7.60		.2992	8	41	79
DGR493077	7.70		.3031	8	41	79
DGR493078	7.80		.3071	8	41	79
DGR493079	7.90		.3110	8	41	79
DGR496020	7.94	5/16	.3125	5/16	41	79
DGR493080	8.00		.3150	8	41	79
DGR493081	8.10		.3189	10	47	89
DGR493082	8.20	P	.3228	10	47	89
DGR493083	8.30		.3268	10	47	89
DGR496021	8.33	21/64	.3281	3/8	47	89
DGR493084	8.40		.3307	10	47	89
DGR496217	8.43	Q	.3320	3/8	47	89
DGR493085	8.50		.3346	10	47	89
DGR493086	8.60		.3386	10	47	89
DGR493087	8.70		.3425	10	47	89
DGR496022	8.73	11/32	.3437	3/8	47	89
DGR493088	8.80		.3465	10	47	89
DGR493089	8.90		.3504	10	47	89
DGR493090	9.00		.3543	10	47	89
DGR493091	9.10		.3583	10	47	89
DGR496023	9.13	23/64	.3594	3/8	47	89
DGR493092	9.20		.3622	10	47	89

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR493093	9.30		.3661	10	47	89
DGR496221	9.35	U	.3680	3/8	47	89
DGR493094	9.40		.3701	10	47	89
DGR493095	9.50		.3740	10	47	89
DGR496024	9.53	3/8	.3750	3/8	47	89
DGR493096	9.60		.3780	10	47	89
DGR493097	9.70		.3819	10	47	89
DGR493098	9.80	W	.3858	10	47	89
DGR493099	9.90		.3898	10	47	89
DGR496025	9.92	25/64	.3906	7/16	47	89
DGR493100	10.00		.3937	10	47	89
DGR493101	10.10		.3976	12	55	102
DGR493102	10.20		.4016	12	55	102
DGR493103	10.30		.4055	12	55	102
DGR496026	10.32	13/32	.4063	7/16	55	102
DGR493104	10.40		.4094	12	55	102
DGR493105	10.50		.4134	12	55	102
DGR493106	10.60		.4173	12	55	102
DGR493107	10.70		.4213	12	55	102
DGR496027	10.72	27/64	.4219	7/16	55	102
DGR493108	10.80		.4252	12	55	102
DGR493109	10.90		.4291	12	55	102
DGR493110	11.00		.4331	12	55	102
DGR493111	11.10		.4370	12	55	102
DGR496028	11.11	7/16	.4375	7/16	55	102
DGR493112	11.20		.4409	12	55	102

▶ Other shank types are available on your request.

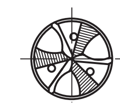
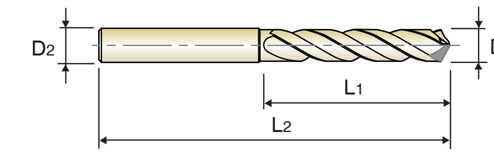
▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

YG DREAM DRILLS -HIGH FEED
DGR493 SERIES
DGR496 SERIES
H-COATED SOLID CARBIDE DREAM DRILLS
High Feed with Coolant Holes (3XD)
- Drilling for Carbon Steels, Alloy Steels(-HRc35) and Cast Iron
- Higher productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
- Multi-Layer coating delivers much better productivity and reliability
- Self centering and chip breaking by R-thinning and coolant holes

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | H Coating | p.A119~A120
SHORT 3×D
Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR493113	11.30		.4449	12	55	102
DGR493114	11.40		.4488	12	55	102
DGR493115	11.50		.4528	12	55	102
DGR496029	11.51	29/64	.4531	1/2	55	102
DGR493116	11.60		.4567	12	55	102
DGR493117	11.70		.4606	12	55	102
DGR493118	11.80		.4646	12	55	102
DGR493119	11.90		.4685	12	55	102
DGR496030	11.91	15/32	.4688	1/2	55	102
DGR493120	12.00		.4724	12	55	102
DGR493121	12.10		.4764	14	60	107
DGR493122	12.20		.4803	14	60	107
DGR493123	12.30		.4843	14	60	107
DGR496031	12.30	31/64	.4844	1/2	60	107
DGR493124	12.40		.4882	14	60	107
DGR493125	12.50		.4921	14	60	107
DGR493126	12.60		.4961	14	60	107
DGR496032	12.70	1/2	.5000	1/2	60	107
DGR493127	12.70		.5000	14	60	107
DGR493128	12.80		.5039	14	60	107
DGR493129	12.90		.5079	14	60	107
DGR493130	13.00		.5118	14	60	107
DGR493131	13.10	33/64	.5156	14	60	107
DGR493132	13.20		.5197	14	60	107
DGR493133	13.30		.5236	14	60	107
DGR493134	13.40		.5276	14	60	107

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR496034	13.49	17/32	.5312	9/16	60	107
DGR493135	13.50		.5315	14	60	107
DGR493136	13.60		.5354	14	60	107
DGR493137	13.70		.5394	14	60	107
DGR493138	13.80		.5433	14	60	107
DGR496035	13.89	35/64	.5469	9/16	60	107
DGR493139	13.90		.5472	14	60	107
DGR493140	14.00		.5512	14	60	107
DGR493141	14.10		.5551	16	65	115
DGR493142	14.20		.5591	16	65	115
DGR496036	14.29	9/16	.5625	9/16	65	115
DGR493143	14.30		.5630	16	65	115
DGR493144	14.40		.5669	16	65	115
DGR493145	14.50		.5709	16	65	115
DGR493146	14.60		.5748	16	65	115
DGR496037	14.68	37/64	.5781	5/8	65	115
DGR493147	14.70		.5787	16	65	115
DGR493148	14.80		.5827	16	65	115
DGR493149	14.90		.5866	16	65	115
DGR493150	15.00		.5906	16	65	115
DGR496038	15.08	19/32	.5938	5/8	65	115
DGR493151	15.10		.5945	16	65	115
DGR493152	15.20		.5984	16	65	115
DGR493153	15.30		.6024	16	65	115
DGR493154	15.40		.6063	16	65	115
DGR496039	15.48	39/64	.6094	5/8	65	115

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

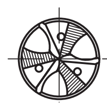
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

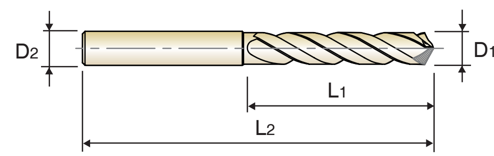
YG DREAM DRILLS -HIGH FEED

DGR493 SERIES
DGR496 SERIES

H-COATED SOLID CARBIDE DREAM DRILLS
High Feed with Coolant Holes (3XD)

- Drilling for Carbon Steels, Alloy Steels(-HRc35) and Cast Iron
- Higher productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
- Multi-Layer coating delivers much better productivity and reliability
- Self centering and chip breaking by R-thinning and coolant holes





DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | H Coating

p.A119~A120

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR493155	15.50		.6102	16	65	115
DGR493156	15.60		.6142	16	65	115
DGR493157	15.70		.6181	16	65	115
DGR493158	15.80		.6220	16	65	115
DGR496040	15.88	5/8	.6250	5/8	65	115
DGR493159	15.90		.6260	16	65	115
DGR493160	16.00		.6299	16	65	115
DGR493161	16.10		.6339	18	73	123
DGR496041	16.27	41/64	.6406	11/16	73	123
DGR493165	16.50		.6496	18	73	123
DGR496042	16.67	21/32	.6563	11/16	73	123
DGR493170	17.00		.6693	18	73	123
DGR496043	17.07	43/64	.6719	11/16	73	123
DGR496044	17.46	11/16	.6875	11/16	73	123
DGR493175	17.50		.6890	18	73	123
DGR496045	17.86	45/64	.7031	3/4	73	123
DGR493180	18.00		.7087	18	73	123
DGR496046	18.26	23/32	.7188	3/4	79	131
DGR493185	18.50		.7283	20	79	131
DGR496047	18.65	47/64	.7344	3/4	79	131
DGR493190	19.00		.7480	20	79	131
DGR496048	19.05	3/4	.7500	3/4	79	131
DGR493195	19.50		.7677	20	79	131
DGR493200	20.00		.7874	20	79	131

- Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P										M			K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○				◎	○	◎	○	◎	○

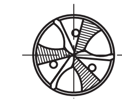
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

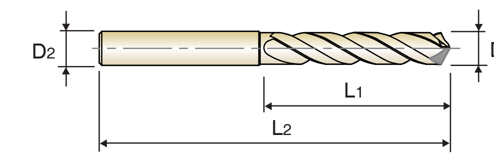
YG DREAM DRILLS -HIGH FEED

DGR495 SERIES
DGR497 SERIES

H-COATED SOLID CARBIDE DREAM DRILLS
High Feed with Coolant Holes (5XD)

- Drilling for Carbon Steels, Alloy Steels(-HRc35) and Cast Iron
- Higher productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
- Multi-Layer coating delivers much better productivity and reliability
- Self centering and chip breaking by R-thinning and coolant holes





DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | H Coating

p.A119~A120

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR495040	4.00		.1575	6	36	74
DGR495020G	4.09	#20	.1610	6	36	74
DGR495041	4.10		.1614	6	36	74
DGR495042	4.20		.1654	6	36	74
DGR495043	4.30		.1693	6	36	74
DGR495011F	4.366	11/64	.1719	6	36	74
DGR495044	4.40		.1732	6	36	74
DGR495045	4.50		.1772	6	36	74
DGR495046	4.60		.1811	6	36	74
DGR495047	4.70		.1850	6	36	74
DGR495012F	4.763	3/16	.1875	6	44	82
DGR495048	4.80		.1890	6	44	82
DGR495049	4.90		.1929	6	44	82
DGR495050	5.00		.1969	6	44	82
DGR495051	5.10		.2008	6	44	82
DGR497013	5.16	13/64	.2031	1/4	44	82
DGR495052	5.20		.2047	6	44	82
DGR495053	5.30		.2087	6	44	82
DGR495054	5.40		.2126	6	44	82
DGR497103	5.41	#3	.2130	1/4	44	82
DGR495055	5.50		.2165	6	44	82
DGR497014	5.56	7/32	.2188	1/4	44	82
DGR495056	5.60		.2205	6	44	82
DGR497102	5.61	#2	.2210	1/4	44	82
DGR495057	5.70		.2244	6	44	82
DGR497101	5.79	#1	.2280	1/4	44	82
DGR495058	5.80		.2283	6	44	82
DGR495059	5.90		.2323	6	44	82
DGR497015	5.95	15/64	.2344	1/4	44	82
DGR495060	6.00		.2362	6	44	82
DGR495061	6.10		.2402	8	53	91
DGR495062	6.20		.2441	8	53	91
DGR495063	6.30		.2480	8	53	91
DGR497016	6.35	1/4	.2500	1/4	53	91
DGR495064	6.40		.2520	8	53	91
DGR495065	6.50		.2559	8	53	91
DGR497206	6.53	F	.2570	5/16	53	91
DGR495066	6.60		.2598	8	53	91
DGR495067	6.70		.2638	8	53	91
DGR497017	6.75	17/64	.2656	5/16	53	91
DGR495068	6.80		.2677	8	53	91
DGR495069	6.90		.2717	8	53	91
DGR497209	6.91	I	.2720	5/16	53	91
DGR495070	7.00		.2756	8	53	91
DGR495071	7.10		.2795	8	53	91
DGR497018	7.14	9/32	.2813	5/16	53	91
DGR495072	7.20		.2835	8	53	91
DGR495073	7.30		.2874	8	53	91
DGR495074	7.40		.2913	8	53	91
DGR495075	7.50		.2953	8	53	91
DGR497019	7.54	19/64	.2969	5/16	53	91
DGR495076	7.60		.2992	8	53	91

- Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○				◎	○	◎	○	◎	○

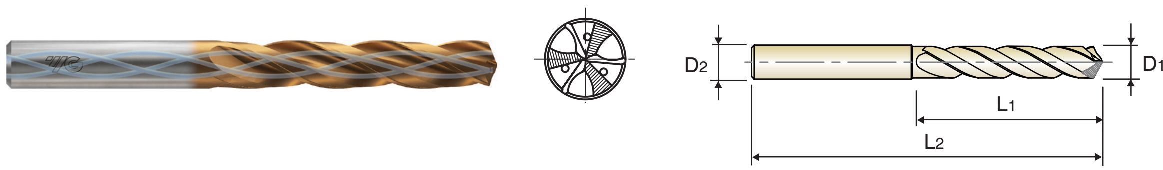
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

DREAM DRILLS -HIGH FEED

DGR495 SERIES
DGR497 SERIES

H-COATED SOLID CARBIDE DREAM DRILLS
High Feed with Coolant Holes (5XD)

- ▶Drilling for Carbon Steels, Alloy Steels(-HRc35) and Cast Iron
- ▶Higher productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
- ▶Multi-Layer coating delivers much better productivity and reliability
- ▶Self centering and chip breaking by R-thinning and coolant holes



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | H Coating

p.A119~A120

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR495077	7.70		.3031	8	53	91
DGR495078	7.80		.3071	8	53	91
DGR495079	7.90		.3110	8	53	91
DGR497020	7.94	5/16	.3125	5/16	53	91
DGR495080	8.00		.3150	8	53	91
DGR495081	8.10		.3189	10	61	103
DGR495082	8.20	P	.3228	10	61	103
DGR495083	8.30		.3268	10	61	103
DGR497021	8.33	21/64	.3281	3/8	61	103
DGR495084	8.40		.3307	10	61	103
DGR497217	8.43	Q	.3320	3/8	61	103
DGR495085	8.50		.3346	10	61	103
DGR495086	8.60		.3386	10	61	103
DGR495087	8.70		.3425	10	61	103
DGR497022	8.73	11/32	.3437	3/8	61	103
DGR495088	8.80		.3465	10	61	103
DGR495089	8.90		.3504	10	61	103
DGR495090	9.00		.3543	10	61	103
DGR495091	9.10		.3583	10	61	103
DGR497023	9.13	23/64	.3594	3/8	61	103
DGR495092	9.20		.3622	10	61	103
DGR495093	9.30		.3661	10	61	103
DGR497221	9.35	U	.3680	3/8	61	103
DGR495094	9.40		.3701	10	61	103
DGR495095	9.50		.3740	10	61	103
DGR497024	9.53	3/8	.3750	3/8	61	103

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR495096	9.60		.3780	10	61	103
DGR495097	9.70		.3819	10	61	103
DGR495098	9.80	W	.3858	10	61	103
DGR495099	9.90		.3898	10	61	103
DGR497025	9.92	25/64	.3906	7/16	61	103
DGR495100	10.00		.3937	10	61	103
DGR495101	10.10		.3976	12	71	118
DGR495102	10.20		.4016	12	71	118
DGR495103	10.30		.4055	12	71	118
DGR497026	10.32	13/32	.4063	7/16	71	118
DGR495104	10.40		.4094	12	71	118
DGR495105	10.50		.4134	12	71	118
DGR495106	10.60		.4173	12	71	118
DGR495107	10.70		.4213	12	71	118
DGR497027	10.72	27/64	.4219	7/16	71	118
DGR495108	10.80		.4252	12	71	118
DGR495109	10.90		.4291	12	71	118
DGR495110	11.00		.4331	12	71	118
DGR495111	11.10		.4370	12	71	118
DGR497028	11.11	7/16	.4375	7/16	71	118
DGR495112	11.20		.4409	12	71	118
DGR495113	11.30		.4449	12	71	118
DGR495114	11.40		.4488	12	71	118
DGR495115	11.50		.4528	12	71	118
DGR497029	11.51	29/64	.4531	1/2	71	118
DGR495116	11.60		.4567	12	71	118

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○				◎	○	◎	○	◎	○

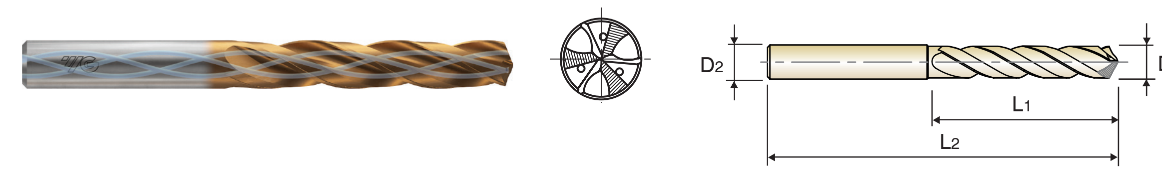
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

DREAM DRILLS -HIGH FEED

DGR495 SERIES
DGR497 SERIES

H-COATED SOLID CARBIDE DREAM DRILLS
High Feed with Coolant Holes (5XD)

- ▶Drilling for Carbon Steels, Alloy Steels(-HRc35) and Cast Iron
- ▶Higher productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
- ▶Multi-Layer coating delivers much better productivity and reliability
- ▶Self centering and chip breaking by R-thinning and coolant holes



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | H Coating

p.A119~A120

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR495117	11.70		.4606	12	71	118
DGR495118	11.80		.4646	12	71	118
DGR495119	11.90		.4685	12	71	118
DGR497030	11.91	15/32	.4688	1/2	71	118
DGR495120	12.00		.4724	12	71	118
DGR495121	12.10		.4764	14	77	124
DGR495122	12.20		.4803	14	77	124
DGR495123	12.30		.4843	14	77	124
DGR497031	12.30	31/64	.4844	1/2	77	124
DGR495124	12.40		.4882	14	77	124
DGR495125	12.50		.4921	14	77	124
DGR495126	12.60		.4961	14	77	124
DGR497032	12.70	1/2	.5000	1/2	77	124
DGR495127	12.70		.5000	14	77	124
DGR495128	12.80		.5039	14	77	124
DGR495129	12.90		.5079	14	77	124
DGR495130	13.00		.5118	14	77	124
DGR495131	13.10	33/64	.5156	14	77	124
DGR495132	13.20		.5197	14	77	124
DGR495133	13.30		.5236	14	77	124
DGR495134	13.40		.5276	14	77	124
DGR497034	13.49	17/32	.5312	9/16	77	124
DGR495135	13.50		.5315	14	77	124
DGR495136	13.60		.5354	14	77	124
DGR495137	13.70		.5394	14	77	124
DGR495138	13.80		.5433	14	77	124

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR497035	13.89	35/64	.5469	9/16	77	124
DGR495139	13.90		.5472	14	77	124
DGR495140	14.00		.5512	14	77	124
DGR495141	14.10		.5551	16	83	133
DGR495142	14.20		.5591	16	83	133
DGR497036	14.29	9/16	.5625	9/16	83	133
DGR495143	14.30		.5630	16	83	133
DGR495144	14.40		.5669	16	83	133
DGR495145	14.50		.5709	16	83	133
DGR495146	14.60		.5748	16	83	133
DGR497037	14.68	37/64	.5781	5/8	83	133
DGR495147	14.70		.5787	16	83	133
DGR495148	14.80		.5827	16	83	133
DGR495149	14.90		.5866	16	83	133
DGR495150	15.00		.5906	16	83	133
DGR497038	15.08	19/32	.5938	5/8	83	133
DGR495151	15.10		.5945	16	83	133
DGR495152	15.20		.5984	16	83	133
DGR495153	15.30		.6024	16	83	133
DGR495154	15.40		.6063	16	83	133
DGR497039	15.48	39/64	.6094	5/8	83	133
DGR495155	15.50		.6102	16	83	133
DGR495156	15.60		.6142	16	83	133
DGR495157	15.70		.6181	16	83	133
DGR495158	15.80		.6220	16	83	133
DGR497040	15.88	5/8	.6250	5/8	83	133

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

YG DREAM DRILLS -HIGH FEED

DGR495 SERIES
DGR497 SERIES

H-COATED SOLID CARBIDE DREAM DRILLS
High Feed with Coolant Holes (5XD)

- ▶Drilling for Carbon Steels, Alloy Steels(-HRc35) and Cast Iron
- ▶Higher productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
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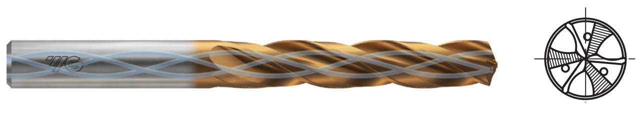
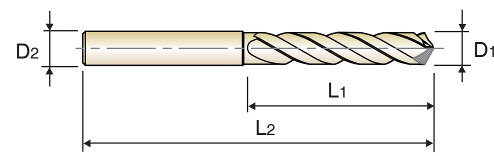




DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | H Coating

p.A119~A120

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR495159	15.90		.6260	16	83	133
DGR495160	16.00		.6299	16	83	133
DGR495161	16.10		.6339	18	93	143
DGR497041	16.27	41/64	.6406	11/16	93	143
DGR495165	16.50		.6496	18	93	143
DGR497042	16.67	21/32	.6563	11/16	93	143
DGR495170	17.00		.6693	18	93	143
DGR497043	17.07	43/64	.6719	11/16	93	143
DGR497044	17.46	11/16	.6875	11/16	93	143
DGR495175	17.50		.6890	18	93	143

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR497045	17.86	45/64	.7031	3/4	93	143
DGR495180	18.00		.7087	18	93	143
DGR497046	18.26	23/32	.7188	3/4	101	153
DGR495185	18.50		.7283	20	101	153
DGR497047	18.65	47/64	.7344	3/4	101	153
DGR495190	19.00		.7480	20	101	153
DGR497048	19.05	3/4	.7500	3/4	101	153
DGR495195	19.50		.7677	20	101	153
DGR495200	20.00		.7874	20	101	153

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	○	◎	◎	○	○	◎	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

YG DREAM DRILLS -HIGH FEED

RECOMMENDED CUTTING CONDITIONS

DGR493, DGR496, DGR495, DGR497 SERIES
with COOLANT HOLES

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter	METRIC - / 5.0	6.0 / -	- / 8.0	- / 10.0	12.0
				FRACTIONAL	3/16 / -	- / 1/4	5/16 / -	3/8 / -	-
				DECIMAL	.1875 / .1969	.2362 / .2500	.3125 / .3150	.3750 / .3937	.4724
P	2	Non-alloy steel	329	RPM	6370	5310	3980	3180	2650
				FEED	.0079 - .0098	.0094 - .0118	.0126 - .0157	.0157 - .0197	.0189 - .0236
	3		329	RPM	6370	5310	3980	3180	2650
				FEED	.0079 - .0098	.0094 - .0118	.0126 - .0157	.0157 - .0197	.0189 - .0236
	4		329	RPM	6370	5310	3980	3180	2650
				FEED	.0063 - .0083	.0079 - .0102	.0102 - .0134	.0134 - .0165	.0161 - .0185
	5		263	RPM	5090	4240	3180	2550	2120
				FEED	.0063 - .0083	.0079 - .0102	.0102 - .0134	.0134 - .0165	.0161 - .0185
	6	Low alloy steel	329	RPM	6370	5310	3980	3180	2650
				FEED	.0079 - .0098	.0094 - .0118	.0126 - .0157	.0157 - .0197	.0189 - .0213
	7		263	RPM	5090	4240	3180	2550	2120
				FEED	.0079 - .0098	.0094 - .0118	.0126 - .0157	.0157 - .0197	.0189 - .0213
	8		263	RPM	5090	4240	3180	2550	2120
				FEED	.0063 - .0083	.0079 - .0102	.0102 - .0134	.0134 - .0165	.0161 - .0185
	9		132	RPM	2550	2120	1590	1270	1060
				FEED	.0051 - .0071	.0063 - .0087	.0083 - .0114	.0102 - .0142	.0126 - .0150
	10	High alloyed steel, and tool steel	230	RPM	4460	3710	2790	2230	1860
				FEED	.0063 - .0083	.0079 - .0102	.0102 - .0134	.0134 - .0165	.0161 - .0185
	11		132	RPM	2550	2120	1590	1270	1060
				FEED	.0051 - .0071	.0063 - .0087	.0083 - .0114	.0102 - .0142	.0126 - .0150
K	15	Grey cast iron	329	RPM	6370	5310	3980	3180	2650
				FEED	.0091 - .0118	.0106 - .0142	.0142 - .0189	.0177 - .0236	.0213 - .0283
	16		263	RPM	5090	4240	3180	2550	2120
				FEED	.0079 - .0098	.0094 - .0118	.0126 - .0157	.0157 - .0197	.0189 - .0236
	17	Nodular cast iron	329	RPM	6370	5310	3980	3180	2650
				FEED	.0091 - .0118	.0106 - .0142	.0142 - .0189	.0177 - .0236	.0213 - .0283
	18		230	RPM	4460	3710	2790	2230	1860
				FEED	.0079 - .0098	.0094 - .0118	.0126 - .0157	.0157 - .0197	.0189 - .0236
	19	Malleable cast iron	263	RPM	5090	4240	3180	2550	2120
				FEED	.0091 - .0118	.0106 - .0142	.0142 - .0189	.0177 - .0236	.0213 - .0283
	20		230	RPM	4460	3710	2790	2230	1860
				FEED	.0079 - .0098	.0094 - .0118	.0126 - .0157	.0157 - .0197	.0189 - .0236

YG DREAM DRILLS -HIGH FEED

RECOMMENDED CUTTING CONDITIONS

DGR493, DGR496, DGR495, DGR497 SERIES

with COOLANT HOLES

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter METRIC / FRACTIONAL / DECIMAL	- / 1/2 / .5000	14.0, - / -, 9/16 / .5512, .5625	-, 16.0 / 5/8, - / .6250, .6299	18.0 / - / .7087	- / 3/4 / .7500	20.0 / - / .7874
P	2	Non-alloy steel	329	RPM	2510	2270	1990	1770	1680	1590
				FEED	.0189 - .0236	.0220 - .0276	.0220 - .0283	.0248 - .0319	.0248 - .0319	.0276 - .0346
	3		329	RPM	2510	2270	1990	1770	1680	1590
				FEED	.0189 - .0236	.0220 - .0276	.022 - .0283	.0248 - .0319	.0248 - .0319	.0276 - .0346
	4		329	RPM	2510	2270	1990	1770	1680	1590
				FEED	.0161 - .0185	.0185 - .0213	.0185 - .0217	.0197 - .0232	.0197 - .0232	.0213 - .0264
	5		263	RPM	2010	1820	1590	1410	1340	1270
				FEED	.0161 - .0185	.0185 - .0213	.0185 - .0217	.0197 - .0232	.0197 - .0232	.0213 - .0264
	6	Low alloy steel	329	RPM	2510	2270	1990	1770	1680	1590
				FEED	.0189 - .0213	.0220 - .0248	.0220 - .0252	.0248 - .0283	.0248 - .0283	.0268 - .0319
	7		263	RPM	2010	1820	1590	1410	1340	1270
				FEED	.0189 - .0213	.0220 - .0248	.0220 - .0252	.0248 - .0283	.0248 - .0283	.0268 - .0319
	8		263	RPM	2010	1820	1590	1410	1340	1270
				FEED	.0161 - .0185	.0185 - .0213	.0185 - .0217	.0197 - .0232	.0197 - .0232	.0213 - .0264
	9		132	RPM	1010	910	800	710	670	640
				FEED	.0126 - .0150	.0142 - .0169	.0142 - .0177	.0150 - .0185	.0150 - .0185	.0161 - .0213
	10	High alloyed steel, and tool steel	230	RPM	1760	1590	1390	1240	1170	1110
				FEED	.0161 - .0185	.0185 - .0213	.0185 - .0217	.0197 - .0232	.0197 - .0232	.0213 - .0264
	11		132	RPM	1010	910	800	710	670	640
				FEED	.0126 - .0150	.0142 - .0169	.0142 - .0177	.0150 - .0185	.0150 - .0185	.0161 - .0213
K	15	Grey cast iron	329	RPM	2510	2270	1990	1770	1680	1590
				FEED	.0213 - .0283	.0248 - .0331	.0252 - .0315	.0283 - .0354	.0283 - .0354	.0315 - .0386
	16		263	RPM	2010	1820	1590	1410	1340	1270
				FEED	.0189 - .0236	.0220 - .0276	.0220 - .0283	.0248 - .0319	.0248 - .0319	.0276 - .0354
	17	Nodular cast iron	329	RPM	2510	2270	1990	1770	1680	1590
				FEED	.0213 - .0283	.0248 - .0331	.0252 - .0315	.0283 - .0354	.0283 - .0354	.0315 - .0386
	18		230	RPM	1760	1590	1390	1240	1170	1110
				FEED	.0189 - .0236	.0220 - .0276	.0220 - .0283	.0248 - .0319	.0248 - .0319	.0276 - .0354
	19	Malleable cast iron	263	RPM	2010	1820	1590	1410	1340	1270
				FEED	.0213 - .0283	.0248 - .0331	.0252 - .0315	.0283 - .0354	.0283 - .0354	.0315 - .0386
	20		230	RPM	1760	1590	1390	1240	1170	1110
				FEED	.0189 - .0236	.0220 - .0276	.0220 - .0283	.0248 - .0319	.0248 - .0319	.0276 - .0354

SOLID CARBIDE DREAM DRILLS FLAT BOTTOM

- For Holes on Various Angled Surfaces

i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

SELECTION GUIDE

HOLEMAKING TOOLS

SERIES	DPP447
DRILLING DEPTH	2XD
TOOL MATERIAL	SOLID CARBIDE
LENGTH	SHORT
SIZE MIN	D3.0
SIZE MAX	D20.0
PAGE	A123
SURFACE TREATMENT	X-Coating

SOLID CARBIDE
DREAM DRILLS FLAT BOTTOM

- For Holes on Various Angled Surfaces

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A127

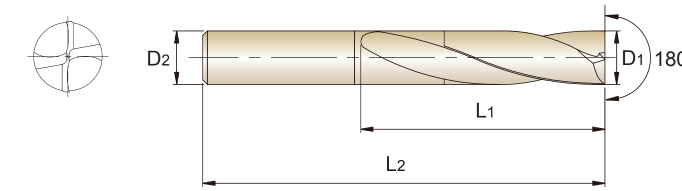
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	DPP447
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎
	2		About 0.45% C	Annealed	190	13	◎
	3		About 0.45% C	Quenched & Tempered	250	25	◎
	4		About 0.75% C	Annealed	270	28	○
	5		About 0.75% C	Quenched & Tempered	300	32	○
	6	Low alloy steel		Annealed	180	10	◎
	7			Quenched & Tempered	275	29	○
	8			Quenched & Tempered	300	32	○
	9			Quenched & Tempered	350	38	○
	10	High alloyed steel, and tool steel		Annealed	200	15	
	11			Quenched & Tempered	325	35	
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○
	13		Martensitic	Quenched & Tempered	240	23	
	14		Austenitic		180	10	
K	15	Grey cast iron	Pearlitic / ferritic		180	10	◎
	16		Pearlitic (Martensitic)		260	26	○
	17	Nodular cast iron	Ferritic		160	3	
	18		Pearlitic		250	25	
	19	Malleable cast iron	Ferritic		130		
	20		Pearlitic		230	21	
N	21	Aluminum-wrought alloy	Not Curable		60		○
	22		Curable	Hardened	100		○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		
	24		≤ 12% Si, Curable	Hardened	90		
	25		> 12% Si, Not Curable		130		
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		
	27		CuZn, CuSnZn (Brass)		90		
	28		CuSn, lead-free copper and electrolytic copper		100		
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.	Duroplastic, Fiber Reinforced Plastic				
	30		Rubber, Wood, etc.				
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15	
	32			Cured	280	30	
	33		Ni or Co Based	Annealed	250	25	
	34			Cured	350	38	
	35			Cast	320	34	
	36	Titanium Alloys	Pure Titanium		400 Rm		
	37		Alpha + Beta Alloys	Hardened	1050 Rm		
H	38	Hardened steel		Hardened	550	55	
	39			Hardened	630	60	
	40	Chilled Cast Iron		Cast	400	42	
	41	Hardened Cast Iron		Hardened	550	55	

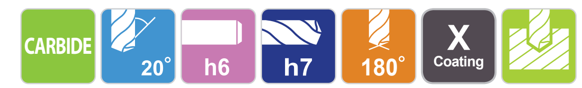
DREAM DRILLS -FLAT BOTTOM

DPP447 SERIES

X-COATED SOLID CARBIDE DREAM DRILLS
Flat Bottom without Coolant Holes (2XD)

- ▶Just ONE Drill 180 degree point angle enables drilling of horizontal surface and sloped surface
- ▶Excellent chip evacuation by optimized flute shape
- ▶High strength cutting edge to improve tool life and versatility drilling
- ▶Variety of drilling can be used in a variety of drilling applications





p.A127~A128

SHORT
2×D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
X-Coating	D1	D2	L1	L2
DPP447030	3.0	6	16	50
DPP447031	3.1	6	16	50
DPP447008F	1/8	6	16	50
DPP447032	3.2	6	16	50
DPP447033	3.3	6	16	50
DPP447034	3.4	6	18	50
DPP447035	3.5	6	18	50
DPP447036	3.6	6	18	50
DPP447037	3.7	6	18	50
DPP447038	3.8	6	18	50
DPP447039	3.9	6	18	50
DPP447010F	5/32	6	18	50
DPP447040	4.0	6	18	50
DPP447041	4.1	6	20	60
DPP447042	4.2	6	20	60
DPP447043	4.3	6	20	60
DPP447044	4.4	6	20	60
DPP447045	4.5	6	22	60
DPP447046	4.6	6	22	60
DPP447047	4.7	6	22	60
DPP447012F	3/16	6	22	60
DPP447048	4.8	6	22	60
DPP447049	4.9	6	22	60
DPP447050	5.0	6	22	60

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
X-Coating	D1	D2	L1	L2
DPP447051	5.1	6	24	60
DPP447052	5.2	6	24	60
DPP447053	5.3	6	24	60
DPP447054	5.4	6	24	60
DPP447055	5.5	6	24	60
DPP447014F	7/32	6	24	60
DPP447056	5.6	6	24	60
DPP447057	5.7	6	26	60
DPP447058	5.8	6	26	60
DPP447059	5.9	6	26	60
DPP447060	6.0	6	26	60
DPP447061	6.1	8	28	70
DPP447062	6.2	8	28	70
DPP447063	6.3	8	28	70
DPP447016F	1/4	8	30	70
DPP447064	6.4	8	30	70
DPP447065	6.5	8	30	70
DPP447066	6.6	8	30	70
DPP447067	6.7	8	30	70
DPP447068	6.8	8	30	70
DPP447069	6.9	8	30	70
DPP447070	7.0	8	30	70
DPP447071	7.1	8	34	70
DPP447018F	9/32	8	34	70

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○			○			◎	○				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○																			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

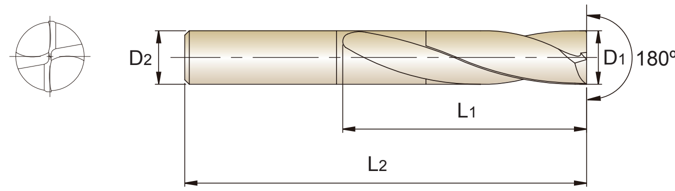
DREAM DRILLS -FLAT BOTTOM

DPP447 SERIES

X-COATED SOLID CARBIDE DREAM DRILLS

Flat Bottom without Coolant Holes (2XD)

- ▶Just ONE Drill 180 degree point angle enables drilling of horizontal surface and sloped surface
- ▶Excellent chip evacuation by optimized flute shape
- ▶High strength cutting edge to improve tool life and versatility drilling
- ▶Variety of drilling can be used in a variety of drilling applications



CARBIDE | 20° | h6 | h7 | 180° | X Coating

p.A127~A128

SHORT
2×D

Unit : mm

EDP No. X-Coating	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2
DPP447072	7.2	8	34	70
DPP447073	7.3	8	34	70
DPP447074	7.4	8	34	70
DPP447075	7.5	8	34	70
DPP447076	7.6	8	34	70
DPP447077	7.7	8	34	70
DPP447078	7.8	8	34	70
DPP447079	7.9	8	34	70
DPP447020F	5/16	8	34	70
DPP447080	8.0	8	34	70
DPP447081	8.1	10	38	80
DPP447082	8.2	10	38	80
DPP447083	8.3	10	38	80
DPP447021F	21/64	10	38	80
DPP447084	8.4	10	38	80
DPP447085	8.5	10	38	80
DPP447086	8.6	10	38	80
DPP447087	8.7	10	40	80
DPP447088	8.8	10	40	80
DPP447089	8.9	10	40	80
DPP447090	9.0	10	40	80
DPP447091	9.1	10	42	80
DPP447023F	23/64	10	42	80
DPP447092	9.2	10	42	80

EDP No. X-Coating	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2
DPP447093	9.3	10	42	80
DPP447094	9.4	10	42	80
DPP447095	9.5	10	42	80
DPP447024F	3/8	10	42	80
DPP447096	9.6	10	42	80
DPP447097	9.7	10	45	80
DPP447098	9.8	10	45	80
DPP447099	9.9	10	45	80
DPP447100	10.0	10	45	80
DPP447101	10.1	12	46	90
DPP447102	10.2	12	46	90
DPP447103	10.3	12	46	90
DPP447026F	13/32	12	46	90
DPP447104	10.4	12	48	90
DPP447105	10.5	12	48	90
DPP447106	10.6	12	48	90
DPP447107	10.7	12	48	90
DPP447108	10.8	12	48	90
DPP447109	10.9	12	48	90
DPP447110	11.0	12	48	90
DPP447111	11.1	12	50	90
DPP447028F	7/16	12	50	90
DPP447112	11.2	12	50	90
DPP447113	11.3	12	50	90

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○			○			◎	○				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○																			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

DREAM DRILLS -FLAT BOTTOM
DPP447 SERIES
X-COATED SOLID CARBIDE DREAM DRILLS
Flat Bottom without Coolant Holes (2XD)
▶Just ONE Drill 180 degree point angle enables drilling of horizontal surface and sloped surface
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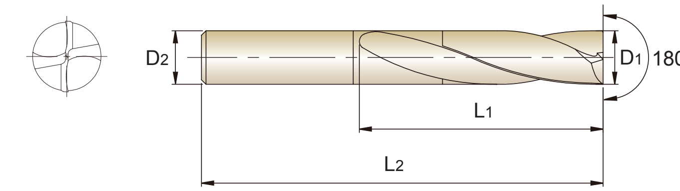

CARBIDE | 20° | h6 | h7 | 180° | X Coating
p.A127~A128
SHORT
2×D
Unit : mm

EDP No. X-Coating	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2
DPP447114	11.4	12	50	90
DPP447115	11.5	12	50	90
DPP447029F	29/64	12	50	90
DPP447116	11.6	12	50	90
DPP447117	11.7	12	52	90
DPP447118	11.8	12	52	90
DPP447119	11.9	12	52	90
DPP447030F	15/32	12	52	90
DPP447120	12.0	12	52	90
DPP447121	12.1	14	54	100
DPP447122	12.2	14	54	100
DPP447123	12.3	14	54	100
DPP447124	12.4	14	54	100
DPP447125	12.5	14	54	100
DPP447126	12.6	14	54	100
DPP447127	12.7	14	56	100
DPP447128	12.8	14	56	100
DPP447129	12.9	14	56	100
DPP447130	13.0	14	56	100
DPP447131	13.1	14	58	100
DPP447132	13.2	14	58	100
DPP447133	13.3	14	58	100
DPP447134	13.4	14	58	100
DPP447135	13.5	14	58	100

EDP No. X-Coating	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2
DPP447136	13.6	14	58	100
DPP447137	13.7	14	58	100
DPP447138	13.8	14	58	100
DPP447139	13.9	14	58	100
DPP447140	14.0	14	58	100
DPP447141	14.1	16	62	105
DPP447142	14.2	16	62	105
DPP447036F	9/16	16	62	105
DPP447143	14.3	16	62	105
DPP447144	14.4	16	62	105
DPP447145	14.5	16	62	105
DPP447146	14.6	16	62	105
DPP447147	14.7	16	62	105
DPP447148	14.8	16	62	105
DPP447149	14.9	16	62	105
DPP447150	15.0	16	62	105
DPP447151	15.1	16	64	115
DPP447152	15.2	16	64	115
DPP447153	15.3	16	64	115
DPP447154	15.4	16	64	115
DPP447155	15.5	16	64	115
DPP447156	15.6	16	64	115
DPP447157	15.7	16	64	115
DPP447158	15.8	16	64	115

▶ Other shank types are available on your request.
▶ NEXT PAGE
◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○			○			◎	○				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○																			

YG DREAM DRILLS -FLAT BOTTOM

DPP447 SERIES

X-COATED SOLID CARBIDE DREAM DRILLS
Flat Bottom without Coolant Holes (2XD)

- ▶Just ONE Drill 180 degree point angle enables drilling of horizontal surface and sloped surface
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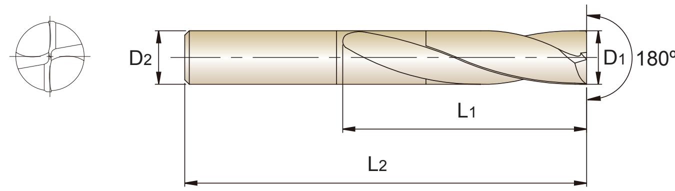


p.A127~A128

SHORT
2×D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
X-Coating	D_1	D_2	L_1	L_2
DPP447040F	5/8	16	64	115
DPP447159	15.9	16	64	115
DPP447160	16.0	16	64	115
DPP447165	16.5	18	70	125
DPP447170	17.0	18	70	125
DPP447044F	11/16	18	70	125
DPP447175	17.5	18	70	125
DPP447180	18.0	18	70	125
DPP447185	18.5	20	75	135
DPP447190	19.0	20	75	135
DPP447048F	3/4	20	75	135
DPP447195	19.5	20	75	145
DPP447200	20.0	20	75	145

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○			○			◎	○				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○																			

YG DREAM DRILLS -FLAT BOTTOM

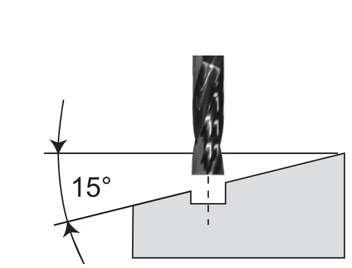
RECOMMENDED CUTTING CONDITIONS

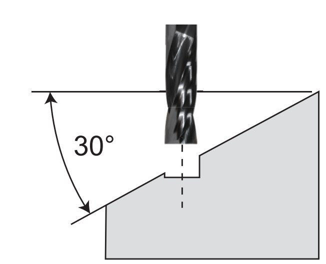
DPP447 SERIES

without COOLANT HOLES

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter METRIC	3.0	-	4.0	-	5.0	6.0	-	8.0
				FRACTIONAL	-	1/8	-	3/16	-	-	5/16	-
				DECIMAL	.1181	.1250	.1575	.1875	.1969	.2362	.3125	.3150
P	1	Non-alloy steel	263	RPM	8490		6370	5090		4240	3180	
				FEED	.0008 - .0020		.0012 - .0028	.0012 - .0031		.0016 - .0039	.0031 - .0055	
	2		263	RPM	8490		6370	5090		4240	3180	
				FEED	.0008 - .0020		.0012 - .0028	.0012 - .0031		.0016 - .0039	.0031 - .0055	
	3		230	RPM	7430		5570	4460		3710	2790	
				FEED	.0008 - .0020		.0012 - .0028	.0012 - .0031		.0016 - .0039	.0028 - .0051	
	4		132	RPM	4240		3180	2550		2120	1590	
				FEED	.0008 - .0020		.0012 - .0028	.0012 - .0031		.0016 - .0039	.0028 - .0051	
	5		125	RPM	4030		3020	2420		2020	1510	
				FEED	.0008 - .0020		.0008 - .0024	.0012 - .0031		.0012 - .0035	.0024 - .0047	
	6	Low alloy steel	148	RPM	4770		3580	2860		2390	1790	
				FEED	.0008 - .0020		.0012 - .0028	.0012 - .0031		.0016 - .0039	.0028 - .0051	
	7		132	RPM	4240		3180	2550		2120	1590	
				FEED	.0008 - .0020		.0012 - .0028	.0012 - .0031		.0016 - .0039	.0028 - .0051	
	8		125	RPM	4030		3020	2420		2020	1510	
				FEED	.0008 - .0020		.0008 - .0024	.0012 - .0031		.0012 - .0035	.0024 - .0047	
	9		82	RPM	2650		1990	1590		1330	990	
				FEED	.0004 - .0012		.0008 - .0016	.0008 - .0020		.0012 - .0024	.0012 - .0031	
M	12	Stainless steel	99	RPM	3180		2390	1910		1590	1190	
				FEED	.0004 - .0012		.0004 - .0012	.0008 - .0016		.0008 - .002	.0012 - .0024	
K	15	Grey cast iron	230	RPM	7430		5570	4460		3710	2790	
				FEED	.0008 - .0020		.0008 - .0024	.0012 - .0031		.0012 - .0035	.0024 - .0047	
	16		197	RPM	6370		4770	3820		3180	2390	
				FEED	.0008 - .0020		.0008 - .0020	.0012 - .0024		.0012 - .0028	.0016 - .0039	
N	21	Aluminum-wrought alloy	543	RPM	17510		13130	10500		8750	6570	
				FEED	.0008 - .0020		.0016 - .0031	.0016 - .0039		.0024 - .0047	.0039 - .0063	
	22		543	RPM	17510		13130	10500		8750	6570	
				FEED	.0008 - .0020		.0016 - .0031	.0016 - .0039		.0024 - .0047	.0039 - .0063	





RPM = rev./min.
FEED = mm/rev.

Surface Angle	Cutting Conditions	
	RPM	IPR
0° ~ 15°	100%	100%
15° ~ 30°	100%	50%
30° ~	70%	30%

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DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

DREAM DRILLS -FLAT BOTTOM

RECOMMENDED CUTTING CONDITIONS

DPP447 SERIES

without COOLANT HOLES

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter						
				METRIC	- / 10.0	12.0	-	- / 16.0	-	20.0
				FRACTIONAL	3/8 / -	-	1/2	5/8 / -	3/4	-
				DECIMAL	.3750 / .3937	.4724	.5000	.6250 / .6299	.7500	.7874
P	1	Non-alloy steel	263	RPM	2550	2120	2010	1590	1340	1270
				FEED	.0043 - .0067	.0043 - .0083	.0043 - .0083	.0071 - .0110	.0104 - .0144	.0110 - .0150
	2		263	RPM	2550	2120	2010	1590	1340	1270
				FEED	.0043 - .0067	.0043 - .0083	.0043 - .0083	.0071 - .0110	.0104 - .0144	.0110 - .0150
	3		230	RPM	2230	1860	1760	1390	1170	1110
				FEED	.0043 - .0067	.0043 - .0083	.0043 - .0083	.0071 - .0110	.0088 - .0128	.0094 - .0134
	4		132	RPM	1270	1060	1010	800	670	640
				FEED	.0043 - .0067	.0043 - .0083	.0043 - .0083	.0071 - .0110	.0088 - .0128	.0094 - .0134
	5		125	RPM	1210	1010	960	760	640	600
				FEED	.0035 - .0059	.0031 - .0071	.0031 - .0071	.0055 - .0094	.0077 - .0117	.0083 - .0122
	6	Low alloy steel	148	RPM	1430	1190	1130	900	750	720
				FEED	.0043 - .0067	.0043 - .0083	.0043 - .0083	.0071 - .0110	.0088 - .0128	.0094 - .0134
	7		132	RPM	1270	1060	1010	800	670	640
				FEED	.0043 - .0067	.0043 - .0083	.0043 - .0083	.0071 - .0110	.0088 - .0128	.0094 - .0134
	8		125	RPM	1210	1010	960	760	640	600
				FEED	.0035 - .0059	.0031 - .0071	.0031 - .0071	.0055 - .0094	.0077 - .0117	.0083 - .0122
	9		82	RPM	800	660	630	500	420	400
				FEED	.0020 - .0039	.0024 - .0047	.0024 - .0047	.0024 - .0063	.0025 - .0065	.0039 - .0079
M	12	Stainless steel	99	RPM	950	800	760	600	500	480
				FEED	.0012 - .0031	.0020 - .0039	.0020 - .0039	.0024 - .0047	.0025 - .0065	.0035 - .0059
K	15	Grey cast iron	230	RPM	2010	1820	1590	1410	1340	1270
				FEED	.0189 - .0236	.0220 - .0276	.0220 - .0283	.0248 - .0319	.0248 - .0319	.0276 - .0354
	16		197	RPM	2510	2270	1990	1770	1680	1590
				FEED	.0213 - .0283	.0248 - .0331	.0252 - .0315	.0283 - .0354	.0283 - .0354	.0315 - .0386
N	21	Aluminum-wrought alloy	543	RPM	5250	4380	4150	3280	2770	2630
				FEED	.0055 - .0079	.0055 - .0094	.0055 - .0094	.0087 - .0126	.0111 - .0151	.0118 - .0157
	22		543	RPM	5250	4380	4150	3280	2770	2630
				FEED	.0055 - .0079	.0055 - .0094	.0055 - .0094	.0087 - .0126	.0111 - .0151	.0118 - .0157

- ▶ The cutting conditions are for 2xD.
- ▶ The rigid and precise machine and holder are required.
- ▶ The recommended depth of hole is measured from the highest point of the hole on drilling in inclined and angled surfaces.
- ▶ The recommended cutting conditions are those for drilling on flat and horizontal surfaces.
- ▶ Please adjust feed rate according to the above surface angle when drilling on an inclined surface.
  - The recommended feed rate 50% or lower, in case of 15°~30° of the incline angle.
  - The recommended feed rate 30% or lower and RPM 70%, in case of 30° ~ of the incline angle.
- ▶ Please decrease cutting speed as material hardness increases.
- ▶ Only use drilling tool. Side milling, traversing, helical milling are not usable.

DREAM DRILLS INOX

- For Tough Materials like Stainless Steels

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DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
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SPADE DRILLS
REAMERS
TECHNICAL DATA

SELECTION GUIDE

YG HOLEMAKING TOOLS

SERIES	DH463 DH714	DH464 DH715	DH451	DH452	DH453
DRILLING DEPTH	3XD	5XD	3XD	5XD	8XD
TOOL MATERIAL	SOLID CARBIDE				
LENGTH	STUB	LONG	SHORT	LONG	EXTRA LONG
SIZE MIN	D1/8	D13/64	D3.0	D1.0	D2.0
SIZE MAX	D5/8	D1/2	D20.0	D20.0	D20.0
PAGE	A131	A133	A134	A138	A143
SURFACE TREATMENT	TiAIN				

SOLID CARBIDE DREAM DRILLS INOX

- For Tough Materials like Stainless Steels

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A147

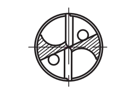
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	DH463 DH714	DH464 DH715	DH451	DH452	DH453
P	1	Non-alloy steel	About 0.15% C	Annealed	125						
	2		About 0.45% C	Annealed	190	13	◎	◎	◎	◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	○	○	○	○	○
	4		About 0.75% C	Annealed	270	28					
	5		About 0.75% C	Quenched & Tempered	300	32					
	6	Low alloy steel		Annealed	180	10	◎	◎	◎	◎	◎
	7			Quenched & Tempered	275	29	○	○	○	○	○
	8			Quenched & Tempered	300	32					
	9			Quenched & Tempered	350	38					
	10	High alloyed steel, and tool steel		Annealed	200	15					
	11			Quenched & Tempered	325	35					
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎	◎	◎	◎	◎
	13		Martensitic	Quenched & Tempered	240	23	◎	◎	◎	◎	◎
	14		Austenitic		180	10	◎	◎	◎	◎	◎
K	15	Grey cast iron	Pearlitic / ferritic		180	10					
	16		Pearlitic (Martensitic)		260	26					
	17	Nodular cast iron	Ferritic		160	3					
	18		Pearlitic		250	25					
	19	Malleable cast iron	Ferritic		130						
	20		Pearlitic		230	21					
N	21	Aluminum-wrought alloy	Not Curable		60		◎	◎	◎	◎	◎
	22		Curable	Hardened	100		◎	◎	◎	◎	◎
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○	○	○	○	○
	24		≤ 12% Si, Curable	Hardened	90		○	○	○	○	○
	25		> 12% Si, Not Curable		130		○	○	○	○	○
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110						
	27		CuZn, CuSnZn (Brass)		90						
	28		CuSn, lead-free copper and electrolytic copper		100						
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.	Duroplastic, Fiber Reinforced Plastic								
	30		Rubber, Wood, etc.								
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15					
	32			Cured	280	30					
	33		Ni or Co Based	Annealed	250	25					
	34			Cured	350	38					
	35			Cast	320	34					
	36	Titanium Alloys	Pure Titanium		400 Rm						
	37		Alpha + Beta Alloys	Hardened	1050 Rm		○	○	○	○	○
H	38	Hardened steel		Hardened	550	55					
	39			Hardened	630	60					
	40	Chilled Cast Iron		Cast	400	42					
	41	Hardened Cast Iron		Hardened	550	55					

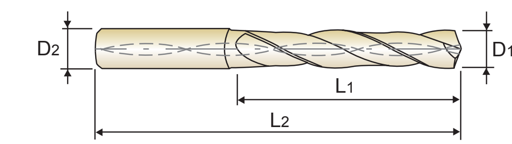
DREAM DRILLS -INOX

DH463 SERIES
DH714 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (3XD)

- ▶ Special flute shape and geometry suitable for machining stainless steel
- ▶ Excellent chip evacuation from better surface treatment
- ▶ Point R-thinning achieves superior centering and chip curling
- ▶ TiAIN coating for better surface finishes and longer tool life
- ▶ Tolerance : Dia. Tolerance ØD1: See page A405
  Shank Tolerance ØD2: -.0001 -.0005





CARBIDE 140° 20 bar TiAIN p.A147

STUB
3×D

Unit : inch

EDP No.	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAIN	D1		D2	L1	L2	TiAIN	D1		D2	L1	L2
DH714008	1/8	.1250	3/16	1.102	2.992	DH714021	21/64	.3281	3/8	1.673	3.937
DH463008	1/8	.1250	15/64	1.102	2.992	DH463217	Q	.3320	11/32	1.673	3.937
DH714011	11/64	.1719	3/16	1.417	3.386	DH714217	Q	.3320	3/8	1.673	3.937
DH463011	11/64	.1719	15/64	1.417	3.386	DH463022	11/32	.3438	11/32	1.772	3.937
DH714012	3/16	.1875	3/16	1.575	3.543	DH714022	11/32	.3438	3/8	1.772	3.937
DH463012	3/16	.1875	15/64	1.575	3.543	DH714023	23/64	.3594	3/8	1.870	4.174
DH463013	13/64	.2031	15/64	1.082	3.228	DH463023	23/64	.3594	25/64	1.870	4.174
DH714013	13/64	.2031	1/4	1.082	3.228	DH714221	U	.3680	3/8	1.870	4.174
DH463014	7/32	.2188	15/64	1.181	3.228	DH463221	U	.3680	25/64	1.870	4.174
DH714014	7/32	.2188	1/4	1.181	3.228	DH714024	3/8	.3750	3/8	1.969	4.174
DH463015	15/64	.2344	15/64	1.181	3.228	DH463024	3/8	.3750	25/64	1.969	4.174
DH714015	15/64	.2344	1/4	1.181	3.228	DH463025	25/64	.3906	25/64	1.969	4.174
DH714016	1/4	.2500	1/4	1.279	3.465	DH714025	25/64	.3906	7/16	1.969	4.174
DH463016	1/4	.2500	17/64	1.279	3.465	DH463026	13/32	.4062	27/64	2.067	4.567
DH463206	F	.2570	17/64	1.279	3.465	DH714026	13/32	.4062	7/16	2.067	4.567
DH714206	F	.2570	5/16	1.279	3.465	DH463027	27/64	.4219	27/64	2.165	4.567
DH463017	17/64	.2656	17/64	1.378	3.465	DH714027	27/64	.4219	7/16	2.165	4.567
DH714017	17/64	.2656	5/16	1.378	3.465	DH714028	7/16	.4375	7/16	2.264	4.803
DH463209	I	.2720	.2720	1.378	3.465	DH463028	7/16	.4375	15/32	2.264	4.803
DH714209	I	.2720	5/16	1.378	3.465	DH463029	29/64	.4531	15/32	2.264	4.803
DH463018	9/32	.2812	5/16	1.476	3.701	DH714029	29/64	.4531	1/2	2.264	4.803
DH463019	19/64	.2969	5/16	1.476	3.701	DH463030	15/32	.4688	15/32	2.362	4.803
DH463020	5/16	.3125	5/16	1.575	3.701	DH714030	15/32	.4688	1/2	2.362	4.803
DH463021	21/64	.3281	11/32	1.673	3.937	DH463031	31/64	.4844	1/2	2.461	5.039

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

CARBIDE
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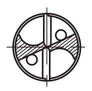
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

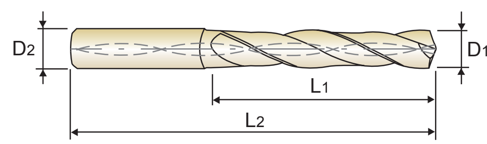
YG DREAM DRILLS -INOX

DH463 SERIES
DH714 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (3XD)

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life
- ▶Tolerance : Dia. Tolerance ØD1: See page A405
  Shank Tolerance ØD2: -.0001 -.0005





p.A147

STUB
3×D

Unit : inch

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH463032	1/2	.5000	1/2	2.559	5.039
DH463033	33/64	.5156	35/64	2.657	5.276
DH714033	33/64	.5156	9/16	2.657	5.276
DH463034	17/32	.5312	35/64	2.756	5.276
DH714034	17/32	.5312	9/16	2.756	5.276
DH463035	35/64	.5469	35/64	2.756	5.276
DH714035	35/64	.5469	9/16	2.756	5.276

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH714036	9/16	.5625	9/16	2.854	5.512
DH463036	9/16	.5625	37/64	2.854	5.512
DH463037	37/64	.5781	37/64	2.953	5.512
DH714037	37/64	.5781	5/8	2.953	5.512
DH463038	19/32	.5937	5/8	3.051	5.709
DH463039	39/64	.6094	5/8	3.051	5.709
DH463040	5/8	.6250	5/8	3.150	5.709

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

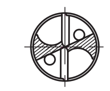
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

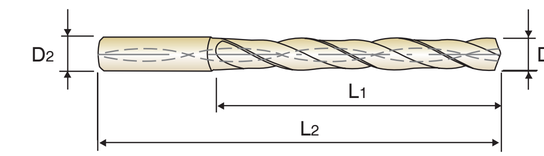
YG DREAM DRILLS -INOX

DH464 SERIES
DH715 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (5XD)

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life
- ▶Tolerance : Dia. Tolerance ØD1: See page A405
  Shank Tolerance ØD2: -.0001 -.0005





p.A147

LONG
5×D

Unit : inch

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH464013	13/64	.2031	15/64	1-3/4	3-15/16
DH715013	13/64	.2031	1/4	1-3/4	3-15/16
DH464014	7/32	.2188	15/64	1-57/64	3-15/16
DH715014	7/32	.2188	1/4	1-57/64	3-15/16
DH464015	15/64	.2344	15/64	1-57/64	3-15/16
DH715015	15/64	.2344	1/4	1-57/64	3-15/16
DH715016	1/4	.2500	1/4	2-3/64	4-19/64
DH464016	1/4	.2500	17/64	2-3/64	4-19/64
DH464206	F	.2570	17/64	2-13/64	4-19/64
DH715206	F	.2570	5/16	2-13/64	4-19/64
DH464017	17/64	.2656	17/64	2-13/64	4-19/64
DH715017	17/64	.2656	5/16	2-13/64	4-19/64
DH464209	I	.2720	.2720	2-13/64	4-19/64
DH715209	I	.2720	5/16	2-13/64	4-19/64
DH464018	9/32	.2812	5/16	2-23/64	4-41/64
DH464019	19/64	.2969	5/16	2-33/64	4-41/64
DH464020	5/16	.3125	5/16	2-33/64	4-41/64
DH464021	21/64	.3281	11/32	2-43/64	5
DH715021	21/64	.3281	3/8	2-43/64	5
DH464217	Q	.3320	11/32	2-43/64	5
DH715217	Q	.3320	3/8	2-43/64	5
DH464022	11/32	.3438	11/32	2-27/32	5

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH715022	11/32	.3438	3/8	2-27/32	5
DH715023	23/64	.3594	3/8	3	5-23/64
DH464023	23/64	.3594	25/64	3	5-23/64
DH715221	U	.3680	3/8	3	5-23/64
DH464221	U	.3680	25/64	3	5-23/64
DH715024	3/8	.3750	3/8	3-5/32	5-23/64
DH464024	3/8	.3750	25/64	3-5/32	5-23/64
DH464025	25/64	.3906	25/64	3-5/32	5-23/64
DH715025	25/64	.3906	7/16	3-5/32	5-23/64
DH464026	13/32	.4062	27/64	3-5/16	5-7/8
DH715026	13/32	.4062	7/16	3-5/16	5-7/8
DH464027	27/64	.4219	27/64	3-15/32	5-7/8
DH715027	27/64	.4219	7/16	3-15/32	5-7/8
DH715028	7/16	.4375	7/16	3-5/8	6-7/32
DH464028	7/16	.4375	15/32	3-5/8	6-7/32
DH464029	29/64	.4531	15/32	3-25/32	6-7/32
DH715029	29/64	.4531	1/2	3-25/32	6-7/32
DH464030	15/32	.4688	15/32	3-25/32	6-7/32
DH715030	15/32	.4688	1/2	3-25/32	6-7/32
DH464031	31/64	.4844	1/2	3-15/16	6-37/64
DH464032	1/2	.5000	1/2	4-3/32	6-37/64

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG

DREAM DRILLS -INOX

DH451 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (3XD)

- ▶Special flute shape and geometry suitable for machining stainless steel
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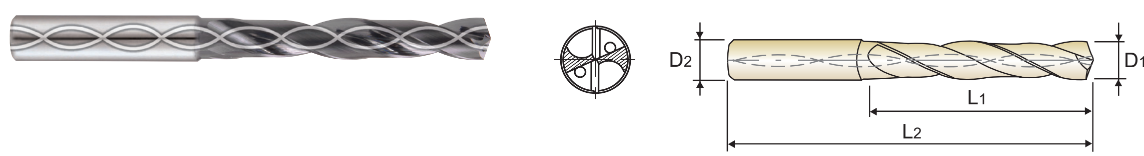
- ▶TiAlN coating for better surface finishes and longer tool life



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A147

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH451021	2.1		.0827	4	20	55
DH451006F	2.381	3/32	.0937	4	20	55
DH451027	2.7		.1063	4	20	55
DH451007F	2.778	7/64	.1094	4	20	55
DH451929	2.95		.1161	6	20	62
DH451030	3.0		.1181	6	20	62
DH451031	3.1		.1220	6	20	62
DH451008F	3.175	1/8	.1250	6	20	62
DH451032	3.2		.1260	6	20	62
DH451033	3.3		.1299	6	20	62
DH451034	3.4		.1339	6	20	62
DH451035	3.5		.1378	6	20	62
DH451009F	3.572	9/64	.1406	6	20	62
DH451036	3.6		.1417	6	20	62
DH451037	3.7		.1457	6	20	62
DH451038	3.8		.1496	6	24	66
DH451039	3.9		.1535	6	24	66
DH451010F	3.969	5/32	.1563	6	24	66
DH451040	4.0		.1575	6	24	66
DH451041	4.1		.1614	6	24	66
DH451042	4.2		.1654	6	24	66
DH451043	4.3		.1693	6	24	66
DH451011F	4.366	11/64	.1719	6	24	66
DH451044	4.4		.1732	6	24	66
DH451045	4.5		.1772	6	24	66
DH451046	4.6		.1811	6	24	66

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH451047	4.7		.1850	6	24	66
DH451012F	4.763	3/16	.1875	6	24	66
DH451048	4.8		.1890	6	28	66
DH451049	4.9		.1929	6	28	66
DH451050	5.0		.1969	6	28	66
DH451051	5.1		.2008	6	28	66
DH451013F	5.159	13/64	.2031	6	28	66
DH451052	5.2		.2047	6	28	66
DH451053	5.3		.2087	6	28	66
DH451054	5.4		.2126	6	28	66
DH451055	5.5		.2165	6	28	66
DH451014F	5.556	7/32	.2188	6	28	66
DH451056	5.6		.2205	6	28	66
DH451057	5.7		.2244	6	28	66
DH451058	5.8		.2283	6	28	66
DH451059	5.9		.2323	6	28	66
DH451015F	5.953	15/64	.2344	6	28	66
DH451060	6.0		.2362	6	28	66
DH451061	6.1		.2402	8	34	79
DH451062	6.2		.2441	8	34	79
DH451063	6.3		.2480	8	34	79
DH451016F	6.350	1/4	.2500	8	34	79
DH451064	6.4		.2520	8	34	79
DH451065	6.5		.2559	8	34	79
DH451006L	6.528	F	.2570	8	34	79
DH451066	6.6		.2598	8	34	79

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

ISO	N									S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

YG

DREAM DRILLS -INOX

DH451 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (3XD)

▶Special flute shape and geometry suitable for machining stainless steel
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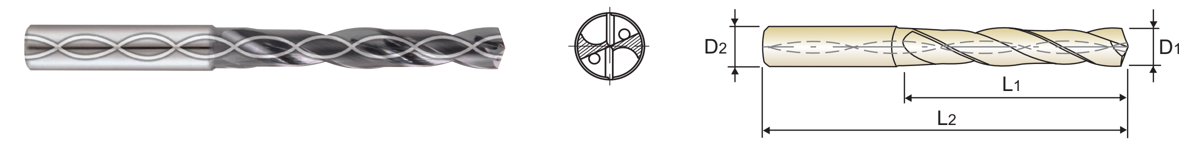
▶Point R-thinning achieves superior centering and chip curling
▶TiAlN coating for better surface finishes and longer tool life



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A147

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH451067	6.7		.2638	8	34	79
DH451017F	6.747	17/64	.2656	8	34	79
DH451068	6.8		.2677	8	34	79
DH451069	6.9		.2717	8	34	79
DH451009L	6.909	I	.2720	8	34	79
DH451070	7.0		.2756	8	34	79
DH451071	7.1		.2795	8	41	79
DH451018F	7.144	9/32	.2812	8	41	79
DH451072	7.2		.2835	8	41	79
DH451073	7.3		.2874	8	41	79
DH451074	7.4		.2913	8	41	79
DH451075	7.5		.2953	8	41	79
DH451019F	7.541	19/64	.2969	8	41	79
DH451076	7.6		.2992	8	41	79
DH451077	7.7		.3031	8	41	79
DH451078	7.8		.3071	8	41	79
DH451079	7.9		.3110	8	41	79
DH451020F	7.938	5/16	.3125	8	41	79
DH451080	8.0		.3150	8	41	79
DH451081	8.1		.3189	10	47	89
DH451082	8.2		.3228	10	47	89
DH451083	8.3		.3268	10	47	89
DH451021F	8.334	21/64	.3281	10	47	89
DH451084	8.4		.3307	10	47	89
DH451017L	8.433	Q	.3320	10	47	89
DH451085	8.5		.3346	10	47	89

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH451086	8.6		.3386	10	47	89
DH451087	8.7		.3425	10	47	89
DH451022F	8.731	11/32	.3438	10	47	89
DH451088	8.8		.3465	10	47	89
DH451089	8.9		.3504	10	47	89
DH451090	9.0		.3543	10	47	89
DH451091	9.1		.3583	10	47	89
DH451023F	9.128	23/64	.3594	10	47	89
DH451092	9.2		.3622	10	47	89
DH451093	9.3		.3661	10	47	89
DH451021L	9.347	U	.3680	10	47	89
DH451094	9.4		.3701	10	47	89
DH451095	9.5		.3740	10	47	89
DH451024F	9.525	3/8	.3750	10	47	89
DH451096	9.6		.3780	10	47	89
DH451097	9.7		.3819	10	47	89
DH451098	9.8		.3858	10	47	89
DH451099	9.9		.3898	10	47	89
DH451025F	9.922	25/64	.3906	10	47	89
DH451100	10.0		.3937	10	47	89
DH451101	10.1		.3976	12	55	102
DH451102	10.2		.4016	12	55	102
DH451103	10.3		.4055	12	55	102
DH451026F	10.319	13/32	.4062	12	55	102
DH451104	10.4		.4094	12	55	102
DH451105	10.5		.4134	12	55	102

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

ISO	N									S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

YG DREAM DRILLS -INOX

DH451 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS

INOX with Coolant Holes (3XD)

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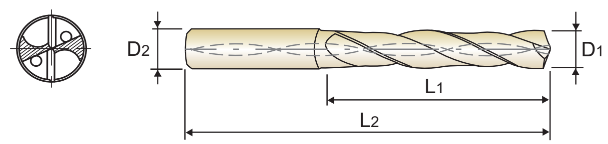


DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A147

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH451106	10.6		.4173	12	55	102
DH451107	10.7		.4212	12	55	102
DH451027F	10.716	27/64	.4219	12	55	102
DH451108	10.8		.4252	12	55	102
DH451109	10.9		.4291	12	55	102
DH451110	11.0		.4330	12	55	102
DH451111	11.1		.4370	12	55	102
DH451028F	11.113	7/16	.4375	12	55	102
DH451112	11.2		.4409	12	55	102
DH451113	11.3		.4448	12	55	102
DH451114	11.4		.4488	12	55	102
DH451115	11.5		.4527	12	55	102
DH451029F	11.509	29/64	.4531	12	55	102
DH451116	11.6		.4566	12	55	102
DH451117	11.7		.4606	12	55	102
DH451118	11.8		.4645	12	55	102
DH451119	11.9		.4685	12	55	102
DH451030F	11.906	15/32	.4688	12	55	102
DH451120	12.0		.4724	12	55	102
DH451121	12.1		.4764	14	60	107
DH451122	12.2		.4803	14	60	107
DH451123	12.3		.4843	14	60	107
DH451031F	12.303	31/64	.4844	14	60	107
DH451124	12.4		.4882	14	60	107
DH451125	12.5		.4921	14	60	107
DH451126	12.6		.4961	14	60	107

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH451032F	12.7	1/2	.5000	14	60	107
DH451128	12.8		.5039	14	60	107
DH451129	12.9		.5079	14	60	107
DH451130	13.0		.5118	14	60	107
DH451131	13.1		.5157	14	60	107
DH451132	13.2		.5197	14	60	107
DH451133	13.3		.5236	14	60	107
DH451134	13.4		.5276	14	60	107
DH451135	13.5		.5314	14	60	107
DH451136	13.6		.5354	14	60	107
DH451137	13.7		.5394	14	60	107
DH451138	13.8		.5433	14	60	107
DH451139	13.9		.5472	14	60	107
DH451140	14.0		.5512	14	60	107
DH451141	14.1		.5551	16	65	115
DH451142	14.2		.5591	16	65	115
DH451036F	14.288	9/16	.5625	16	65	115
DH451143	14.3		.5630	16	65	115
DH451144	14.4		.5669	16	65	115
DH451145	14.5		.5708	16	65	115
DH451146	14.6		.5748	16	65	115
DH451147	14.7		.5787	16	65	115
DH451148	14.8		.5827	16	65	115
DH451149	14.9		.5866	16	65	115
DH451150	15.0		.5905	16	65	115
DH451151	15.1		.5945	16	65	115

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

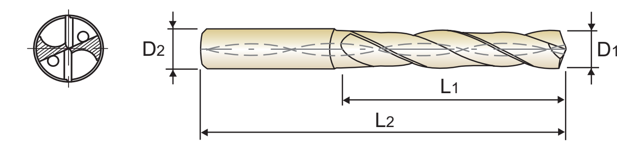
YG DREAM DRILLS -INOX

DH451 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS

INOX with Coolant Holes (3XD)

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A147

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH451152	15.2		.5984	16	65	115
DH451153	15.3		.6024	16	65	115
DH451154	15.4		.6063	16	65	115
DH451155	15.5		.6102	16	65	115
DH451156	15.6		.6142	16	65	115
DH451157	15.7		.6181	16	65	115
DH451158	15.8		.6220	16	65	115
DH451040F	15.875	5/8	.6250	16	65	115
DH451159	15.9		.6260	16	65	115
DH451160	16.0		.6299	16	65	115
DH451161	16.1		.6339	18	73	123
DH451162	16.2		.6378	18	73	123
DH451163	16.3		.6417	18	73	123
DH451164	16.4		.6457	18	73	123
DH451165	16.5		.6495	18	73	123
DH451166	16.6		.6535	18	73	123
DH451167	16.7		.6575	18	73	123
DH451168	16.8		.6614	18	73	123
DH451169	16.9		.6654	18	73	123
DH451170	17.0		.6692	18	73	123
DH451171	17.1		.6732	18	73	123
DH451172	17.2		.6772	18	73	123
DH451173	17.3		.6811	18	73	123
DH451174	17.4		.6850	18	73	123
DH451044F	17.463	11/16	.6875	18	73	123
DH451175	17.5		.6889	18	73	123

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH451176	17.6		.6929	18	73	123
DH451177	17.7		.6968	18	73	123
DH451178	17.8		.7008	18	73	123
DH451179	17.9		.7047	18	73	123
DH451180	18.0		.7087	18	73	123
DH451181	18.1		.7126	20	79	131
DH451182	18.2		.7165	20	79	131
DH451183	18.3		.7205	20	79	131
DH451184	18.4		.7244	20	79	131
DH451185	18.5		.7283	20	79	131
DH451186	18.6		.7323	20	79	131
DH451187	18.7		.7362	20	79	131
DH451188	18.8		.7402	20	79	131
DH451189	18.9		.7441	20	79	131
DH451190	19.0		.7480	20	79	131
DH451048F	19.050	3/4	.7500	20	79	131
DH451191	19.1		.7520	20	79	131
DH451192	19.2		.7559	20	79	131
DH451193	19.3		.7598	20	79	131
DH451194	19.4		.7638	20	79	131
DH451195	19.5		.7676	20	79	131
DH451196	19.6		.7717	20	79	131
DH451197	19.7		.7756	20	79	131
DH451198	19.8		.7795	20	79	131
DH451199	19.9		.7835	20	79	131
DH451200	20.0		.7874	20	79	131

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

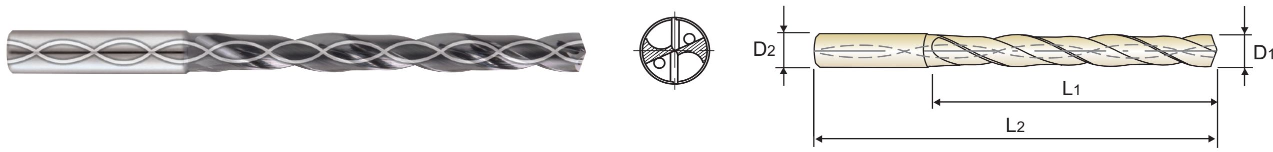
DREAM DRILLS -INOX

DH452 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS

INOX with Coolant Holes (5XD)

▶Special flute shape and geometry suitable for machining stainless steel
▶Excellent chip evacuation from better surface treatment
▶Point R-thinning achieves superior centering and chip curling
▶TiAlN coating for better surface finishes and longer tool life



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A147

LONG
5×D

Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D_1			D_2	L_1	L_2
DH452010	1.0		.0394	3	8	55
DH452011	1.1		.0433	3	12	55
DH452012	1.2		.0472	3	12	55
DH452013	1.3		.0512	3	12	55
DH452014	1.4		.0551	3	12	55
DH452015	1.5		.0591	3	16	55
DH452004F	1.588	1/16	.0625	3	16	55
DH452016	1.6		.0630	3	16	55
DH452017	1.7		.0669	3	16	55
DH452018	1.8		.0709	3	16	55
DH452019	1.9		.0748	3	16	55
DH452005F	1.984	5/64	.0781	3	16	55
DH452020	2.0		.0787	4	21	57
DH452021	2.1		.0827	4	21	57
DH452022	2.2		.0866	4	21	57
DH452023	2.3		.0906	4	21	57
DH452006F	2.381	3/32	.0938	4	21	57
DH452024	2.4		.0945	4	21	57
DH452025	2.5		.0984	4	21	57
DH452026	2.6		.1024	4	21	57
DH452027	2.7		.1063	4	21	57
DH452007F	2.778	7/64	.1094	4	21	57
DH452028	2.8		.1102	4	21	57
DH452029	2.9		.1142	4	21	57
DH452030	3.0		.1181	6	28	66
DH452031	3.1		.1220	6	28	66

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D_1			D_2	L_1	L_2
DH452008F	3.175	1/8	.1250	6	28	66
DH452032	3.2		.1260	6	28	66
DH452033	3.3		.1299	6	28	66
DH452034	3.4		.1339	6	28	66
DH452035	3.5		.1378	6	28	66
DH452009F	3.572	9/64	.1406	6	28	66
DH452036	3.6		.1417	6	28	66
DH452037	3.7		.1457	6	28	66
DH452038	3.8		.1496	6	36	74
DH452039	3.9		.1535	6	36	74
DH452010F	3.969	5/32	.1563	6	36	74
DH452040	4.0		.1575	6	36	74
DH452041	4.1		.1614	6	36	74
DH452042	4.2		.1654	6	36	74
DH452043	4.3		.1693	6	36	74
DH452011F	4.366	11/64	.1719	6	36	74
DH452044	4.4		.1732	6	36	74
DH452045	4.5		.1772	6	36	74
DH452046	4.6		.1811	6	36	74
DH452047	4.7		.1850	6	36	74
DH452012F	4.763	3/16	.1875	6	36	74
DH452048	4.8		.1890	6	44	82
DH452049	4.9		.1929	6	44	82
DH452050	5.0		.1969	6	44	82
DH452051	5.1		.2008	6	44	82
DH452013F	5.159	13/64	.2031	6	44	82

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

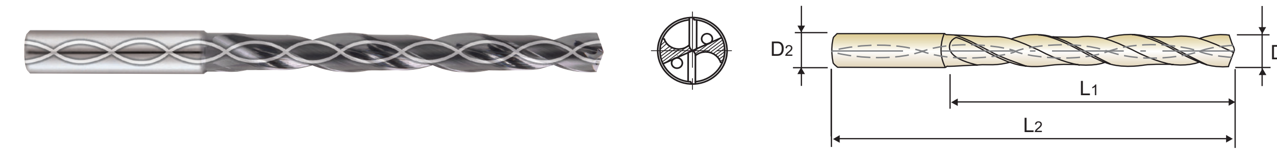
DREAM DRILLS -INOX

DH452 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS

INOX with Coolant Holes (5XD)

▶Special flute shape and geometry suitable for machining stainless steel
▶Excellent chip evacuation from better surface treatment
▶Point R-thinning achieves superior centering and chip curling
▶TiAlN coating for better surface finishes and longer tool life



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A147

LONG
5×D

Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D_1			D_2	L_1	L_2
DH452052	5.2		.2047	6	44	82
DH452053	5.3		.2087	6	44	82
DH452054	5.4		.2126	6	44	82
DH452055	5.5		.2165	6	44	82
DH452014F	5.556	7/32	.2188	6	44	82
DH452056	5.6		.2205	6	44	82
DH452057	5.7		.2244	6	44	82
DH452058	5.8		.2283	6	44	82
DH452059	5.9		.2323	6	44	82
DH452015F	5.953	15/64	.2344	6	44	82
DH452060	6.0		.2362	6	44	82
DH452061	6.1		.2402	8	53	91
DH452062	6.2		.2441	8	53	91
DH452063	6.3		.2480	8	53	91
DH452016F	6.350	1/4	.2500	8	53	91
DH452064	6.4		.2520	8	53	91
DH452065	6.5		.2559	8	53	91
DH452006L	6.528	F	.2570	8	53	91
DH452066	6.6		.2598	8	53	91
DH452067	6.7		.2638	8	53	91
DH452017F	6.747	17/64	.2656	8	53	91
DH452068	6.8		.2677	8	53	91
DH452069	6.9		.2717	8	53	91
DH452009L	6.909	I	.2720	8	53	91
DH452070	7.0		.2756	8	53	91
DH452071	7.1		.2795	8	53	91

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D_1			D_2	L_1	L_2
DH452018F	7.144	9/32	.2812	8	53	91
DH452072	7.2		.2835	8	53	91
DH452073	7.3		.2874	8	53	91
DH452074	7.4		.2913	8	53	91
DH452075	7.5		.2953	8	53	91
DH452019F	7.541	19/64	.2969	8	53	91
DH452076	7.6		.2992	8	53	91
DH452077	7.7		.3031	8	53	91
DH452078	7.8		.3071	8	53	91
DH452079	7.9		.3110	8	53	91
DH452020F	7.938	5/16	.3125	8	53	91
DH452080	8.0		.3150	8	53	91
DH452081	8.1		.3189	10	61	103
DH452082	8.2		.3228	10	61	103
DH452083	8.3		.3268	10	61	103
DH452021F	8.334	21/64	.3281	10	61	103
DH452084	8.4		.3307	10	61	103
DH452017L	8.433	Q	.3320	10	61	103
DH452085	8.5		.3346	10	61	103
DH452086	8.6		.3386	10	61	103
DH452087	8.7		.3425	10	61	103
DH452022F	8.731	11/32	.3438	10	61	103
DH452088	8.8		.3465	10	61	103
DH452089	8.9		.3504	10	61	103
DH452090	9.0		.3543	10	61	103
DH452091	9.1		.3583	10	61	103

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

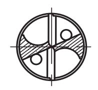
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

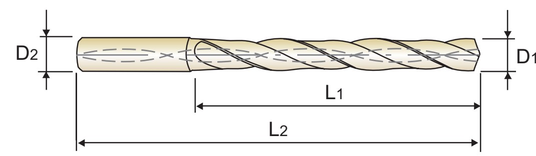
DREAM DRILLS -INOX

DH452 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (5XD)

- Special flute shape and geometry suitable for machining stainless steel
- Excellent chip evacuation from better surface treatment
- Point R-thinning achieves superior centering and chip curling
- TiAlN coating for better surface finishes and longer tool life





DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A147

LONG
5×D

Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH452023F	9.128	23/64	.3594	10	61	103
DH452092	9.2		.3622	10	61	103
DH452093	9.3		.3661	10	61	103
DH452021L	9.347	U	.3680	10	61	103
DH452094	9.4		.3701	10	61	103
DH452095	9.5		.3740	10	61	103
DH452024F	9.525	3/8	.3750	10	61	103
DH452096	9.6		.3780	10	61	103
DH452097	9.7		.3819	10	61	103
DH452098	9.8		.3858	10	61	103
DH452099	9.9		.3898	10	61	103
DH452025F	9.922	25/64	.3906	10	61	103
DH452100	10.0		.3937	10	61	103
DH452101	10.1		.3976	12	71	118
DH452102	10.2		.4016	12	71	118
DH452103	10.3		.4055	12	71	118
DH452026F	10.319	13/32	.4062	12	71	118
DH452104	10.4		.4094	12	71	118
DH452105	10.5		.4134	12	71	118
DH452106	10.6		.4173	12	71	118
DH452107	10.7		.4212	12	71	118
DH452027F	10.716	27/64	.4219	12	71	118
DH452108	10.8		.4252	12	71	118
DH452109	10.9		.4291	12	71	118
DH452110	11.0		.4330	12	71	118
DH452111	11.1		.4370	12	71	118

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH452028F	11.113	7/16	.4375	12	71	118
DH452112	11.2		.4409	12	71	118
DH452113	11.3		.4448	12	71	118
DH452114	11.4		.4488	12	71	118
DH452115	11.5		.4527	12	71	118
DH452029F	11.509	29/64	.4531	12	71	118
DH452116	11.6		.4566	12	71	118
DH452117	11.7		.4606	12	71	118
DH452118	11.8		.4645	12	71	118
DH452119	11.9		.4685	12	71	118
DH452030F	11.906	15/32	.4688	12	71	118
DH452120	12.0		.4724	12	71	118
DH452121	12.1		.4764	14	77	124
DH452122	12.2		.4803	14	77	124
DH452123	12.3		.4843	14	77	124
DH452031F	12.303	31/64	.4844	14	77	124
DH452124	12.4		.4882	14	77	124
DH452125	12.5		.4921	14	77	124
DH452126	12.6		.4961	14	77	124
DH452032F	12.7	1/2	.5000	14	77	124
DH452128	12.8		.5039	14	77	124
DH452129	12.9		.5079	14	77	124
DH452130	13.0		.5118	14	77	124
DH452131	13.1		.5157	14	77	124
DH452132	13.2		.5197	14	77	124
DH452133	13.3		.5236	14	77	124

- Other shank types are available on your request.

▶ NEXT PAGE

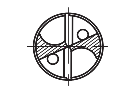
◎ : Excellent ○ : Good

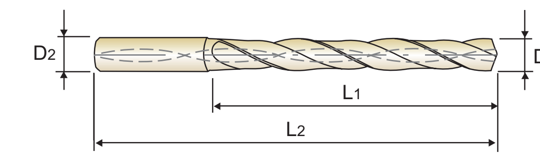
ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

DREAM DRILLS -INOX
DH452 SERIES
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (5XD)
Special flute shape and geometry suitable for machining stainless steel
Excellent chip evacuation from better surface treatment
Point R-thinning achieves superior centering and chip curling
TiAlN coating for better surface finishes and longer tool life





DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A147
LONG
5×D
Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH452134	13.4		.5276	14	77	124
DH452135	13.5		.5314	14	77	124
DH452136	13.6		.5354	14	77	124
DH452137	13.7		.5394	14	77	124
DH452138	13.8		.5433	14	77	124
DH452139	13.9		.5472	14	77	124
DH452140	14.0		.5512	14	77	124
DH452141	14.1		.5551	16	83	133
DH452142	14.2		.5591	16	83	133
DH452036F	14.288	9/16	.5625	16	83	133
DH452143	14.3		.5630	16	83	133
DH452144	14.4		.5669	16	83	133
DH452145	14.5		.5708	16	83	133
DH452146	14.6		.5748	16	83	133
DH452147	14.7		.5787	16	83	133
DH452148	14.8		.5827	16	83	133
DH452149	14.9		.5866	16	83	133
DH452150	15.0		.5905	16	83	133
DH452151	15.1		.5945	16	83	133
DH452152	15.2		.5984	16	83	133
DH452153	15.3		.6024	16	83	133
DH452154	15.4		.6063	16	83	133
DH452155	15.5		.6102	16	83	133
DH452156	15.6		.6142	16	83	133
DH452157	15.7		.6181	16	83	133
DH452158	15.8		.6220	16	83	133

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH452040F	15.875	5/8	.6250	16	83	133
DH452159	15.9		.6260	16	83	133
DH452160	16.0		.6299	16	83	133
DH452161	16.1		.6339	18	93	143
DH452162	16.2		.6378	18	93	143
DH452163	16.3		.6417	18	93	143
DH452164	16.4		.6457	18	93	143
DH452165	16.5		.6495	18	93	143
DH452166	16.6		.6535	18	93	143
DH452167	16.7		.6575	18	93	143
DH452168	16.8		.6614	18	93	143
DH452169	16.9		.6654	18	93	143
DH452170	17.0		.6692	18	93	143
DH452171	17.1		.6732	18	93	143
DH452172	17.2		.6772	18	93	143
DH452173	17.3		.6811	18	93	143
DH452174	17.4		.6850	18	93	143
DH452175	17.5		.6889	18	93	143
DH452176	17.6		.6929	18	93	143
DH452177	17.7		.6968	18	93	143
DH452178	17.8		.7008	18	93	143
DH452179	17.9		.7047	18	93	143
DH452180	18.0		.7087	18	93	143
DH452181	18.1		.7126	20	101	153
DH452182	18.2		.7165	20	101	151
DH452183	18.3		.7205	20	101	151

Other shank types are available on your request.
▶ NEXT PAGE
◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

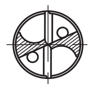
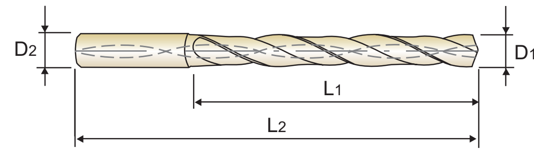
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

YG DREAM DRILLS -INOX

DH452 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (5XD)

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A147

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH452184	18.4		.7244	20	101	153
DH452185	18.5		.7283	20	101	153
DH452186	18.6		.7323	20	101	151
DH452187	18.7		.7362	20	101	153
DH452188	18.8		.7402	20	101	153
DH452189	18.9		.7441	20	101	153
DH452190	19.0		.7480	20	101	153
DH452048F	19.050	3/4	.7500	20	101	153
DH452191	19.1		.7520	20	101	151
DH452192	19.2		.7559	20	101	151
DH452193	19.3		.7598	20	101	151
DH452194	19.4		.7638	20	101	151
DH452195	19.5		.7676	20	101	153
DH452196	19.6		.7717	20	101	151
DH452197	19.7		.7756	20	101	151
DH452198	19.8		.7795	20	101	153
DH452199	19.9		.7835	20	101	151
DH452200	20.0		.7874	20	101	153

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

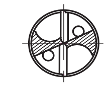
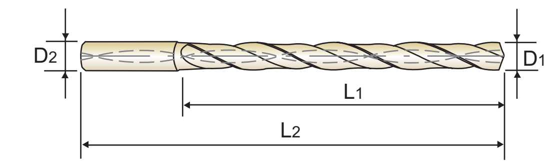
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

YG DREAM DRILLS -INOX

DH453 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (8XD)

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A147

EXTRA LONG
8×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH453020	2.0		.0787	4	25	66
DH453021	2.1		.0827	4	25	66
DH453022	2.2		.0866	4	25	66
DH453023	2.3		.0906	4	25	66
DH453006F	2.381	3/32	.0938	4	30	66
DH453024	2.4		.0945	4	30	66
DH453025	2.5		.0984	4	30	66
DH453026	2.6		.1024	4	30	66
DH453027	2.7		.1063	4	30	66
DH453007F	2.778	7/64	.1094	4	30	66
DH453028	2.8		.1102	4	30	66
DH453029	2.9		.1142	4	30	66
DH453030	3.0		.1181	6	34	72
DH453031	3.1		.1220	6	34	72
DH453008F	3.175	1/8	.1250	6	34	72
DH453032	3.2		.1260	6	34	72
DH453033	3.3		.1299	6	34	72
DH453034	3.4		.1339	6	34	72
DH453229G	3.454	#29	.1360	6	34	72
DH453035	3.5		.1378	6	34	72
DH453009F	3.572	9/64	.1406	6	34	72
DH453036	3.6		.1417	6	34	72
DH453037	3.7		.1457	6	34	72
DH453038	3.8		.1496	6	43	81
DH453039	3.9		.1535	6	43	81
DH453010F	3.969	5/32	.1563	6	43	81
DH453040	4.0		.1575	6	43	81
DH453221G	4.038	#21	.1590	6	43	81
DH453041	4.1		.1614	6	43	81
DH453042	4.2		.1654	6	43	81
DH453043	4.3		.1693	6	43	81
DH453011F	4.366	11/64	.1719	6	43	81
DH453044	4.4		.1732	6	43	81
DH453045	4.5		.1772	6	43	81
DH453046	4.6		.1811	6	43	81
DH453047	4.7		.1850	6	43	81
DH453012F	4.763	3/16	.1875	6	57	95
DH453048	4.8		.1890	6	57	95
DH453049	4.9		.1929	6	57	95
DH453050	5.0		.1969	6	57	95
DH453051	5.1		.2008	6	57	95
DH453013F	5.159	13/64	.2031	6	57	95
DH453052	5.2		.2047	6	57	95
DH453053	5.3		.2087	6	57	95
DH453054	5.4		.2126	6	57	95
DH453055	5.5		.2165	6	57	95
DH453014F	5.556	7/32	.2188	6	57	95
DH453056	5.6		.2205	6	57	95
DH453057	5.7		.2244	6	57	95
DH453058	5.8		.2283	6	57	95
DH453059	5.9		.2323	6	57	95
DH453015F	5.953	15/64	.2344	6	57	95
DH453060	6.0		.2362	6	57	95
DH453061	6.1		.2402	8	76	114
DH453062	6.2		.2441	8	76	114
DH453063	6.3		.2480	8	76	114

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

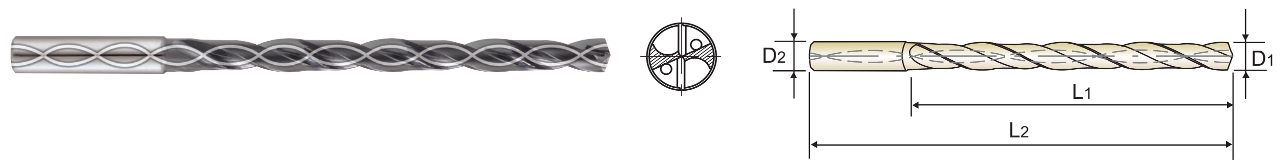
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG DREAM DRILLS -INOX

DH453 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (8XD)

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A147

EXTRA LONG
8×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH453016F	6.350	1/4	.2500	8	76	114
DH453064	6.4		.2520	8	76	114
DH453065	6.5		.2559	8	76	114
DH453106L	6.527	F	.2570	8	76	114
DH453066	6.6		.2598	8	76	114
DH453067	6.7		.2638	8	76	114
DH453017F	6.747	17/64	.2656	8	76	114
DH453068	6.8		.2677	8	76	114
DH453069	6.9		.2717	8	76	114
DH453009L	6.909	I	.2720	8	76	114
DH453070	7.0		.2756	8	76	114
DH453071	7.1		.2795	8	76	114
DH453018F	7.144	9/32	.2813	8	76	114
DH453072	7.2		.2835	8	76	114
DH453073	7.3		.2874	8	76	114
DH453074	7.4		.2913	8	76	114
DH453075	7.5		.2953	8	76	114
DH453019F	7.541	19/64	.2969	8	76	114
DH453076	7.6		.2992	8	76	114
DH453077	7.7		.3031	8	76	114
DH453078	7.8		.3071	8	76	114
DH453079	7.9		.3110	8	76	114
DH453020F	7.938	5/16	.3125	8	76	114
DH453080	8.0		.3150	8	76	114
DH453081	8.1		.3189	10	95	142
DH453082	8.2		.3228	10	95	142
DH453083	8.3		.3268	10	95	142
DH453021F	8.334	21/64	.3281	10	95	142

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH453084	8.4		.3307	10	95	142
DH453117L	8.432	Q	.3320	10	95	142
DH453085	8.5		.3346	10	95	142
DH453086	8.6		.3386	10	95	142
DH453087	8.7		.3425	10	95	142
DH453022F	8.731	11/32	.3438	10	95	142
DH453088	8.8		.3465	10	95	142
DH453089	8.9		.3504	10	95	142
DH453090	9.0		.3543	10	95	142
DH453091	9.1		.3583	10	95	142
DH453023F	9.128	23/64	.3594	10	95	142
DH453092	9.2		.3622	10	95	142
DH453093	9.3		.3661	10	95	142
DH453121L	9.347	U	.3680	10	95	142
DH453094	9.4		.3701	10	95	142
DH453095	9.5		.3740	10	95	142
DH453024F	9.525	3/8	.3750	10	95	142
DH453096	9.6		.3780	10	95	142
DH453097	9.7		.3819	10	95	142
DH453098	9.8		.3858	10	95	142
DH453099	9.9		.3898	10	95	142
DH453025F	9.922	25/64	.3906	10	95	142
DH453100	10.0		.3937	10	95	142
DH453101	10.1		.3976	12	114	162
DH453102	10.2		.4016	12	114	162
DH453103	10.3		.4055	12	114	162
DH453026F	10.319	13/32	.4063	12	114	162
DH453104	10.4		.4094	12	114	162

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

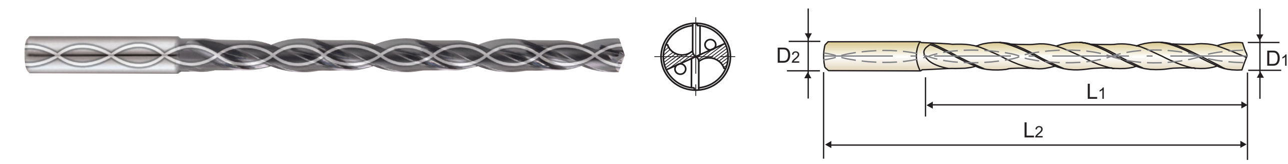
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG DREAM DRILLS -INOX

DH453 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (8XD)

▶Special flute shape and geometry suitable for machining stainless steel
▶Excellent chip evacuation from better surface treatment
▶Point R-thinning achieves superior centering and chip curling
▶TiAlN coating for better surface finishes and longer tool life



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A147

EXTRA LONG
8×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH453105	10.5		.4134	12	114	162
DH453106	10.6		.4173	12	114	162
DH453107	10.7		.4212	12	114	162
DH453027F	10.716	27/64	.4219	12	114	162
DH453108	10.8		.4252	12	114	162
DH453109	10.9		.4291	12	114	162
DH453110	11.0		.4330	12	114	162
DH453111	11.1		.4370	12	114	162
DH453028F	11.113	7/16	.4375	12	114	162
DH453112	11.2		.4409	12	114	162
DH453113	11.3		.4448	12	114	162
DH453114	11.4		.4488	12	114	162
DH453115	11.5		.4527	12	114	162
DH453029F	11.509	29/64	.4531	12	114	162
DH453116	11.6		.4566	12	114	162
DH453117	11.7		.4606	12	114	162
DH453118	11.8		.4645	12	114	162
DH453119	11.9		.4685	12	114	162
DH453030F	11.906	15/32	.4688	12	114	162
DH453120	12.0		.4724	12	114	162
DH453121	12.1		.4764	14	133	178
DH453122	12.2		.4803	14	133	178
DH453123	12.3		.4843	14	133	178
DH453031F	12.303	31/64	.4844	14	133	178
DH453124	12.4		.4882	14	133	178
DH453125	12.5		.4921	14	133	178
DH453126	12.6		.4961	14	133	178
DH453032F	12.7	1/2	.5000	14	133	178

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH453128	12.8		.5039	14	133	178
DH453129	12.9		.5079	14	133	178
DH453130	13.0		.5118	14	133	178
DH453033F	13.097	33/64	.5156	14	133	178
DH453131	13.1		.5157	14	133	178
DH453132	13.2		.5197	14	133	178
DH453133	13.3		.5236	14	133	178
DH453134	13.4		.5276	14	133	178
DH453135	13.5		.5314	14	133	178
DH453136	13.6		.5354	14	133	178
DH453137	13.7		.5394	14	133	178
DH453138	13.8		.5433	14	133	178
DH453139	13.9		.5472	14	133	178
DH453140	14.0		.5512	14	133	178
DH453141	14.1		.5551	16	152	203
DH453142	14.2		.5591	16	152	203
DH453036F	14.288	9/16	.5625	16	152	203
DH453143	14.3		.5630	16	152	203
DH453144	14.4		.5669	16	152	203
DH453145	14.5		.5709	16	152	203
DH453146	14.6		.5748	16	152	203
DH453147	14.7		.5787	16	152	203
DH453148	14.8		.5827	16	152	203
DH453149	14.9		.5866	16	152	203
DH453150	15.0		.5905	16	152	203
DH453151	15.1		.5945	16	152	203
DH453152	15.2		.5984	16	152	203
DH453153	15.3		.6024	16	152	203

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

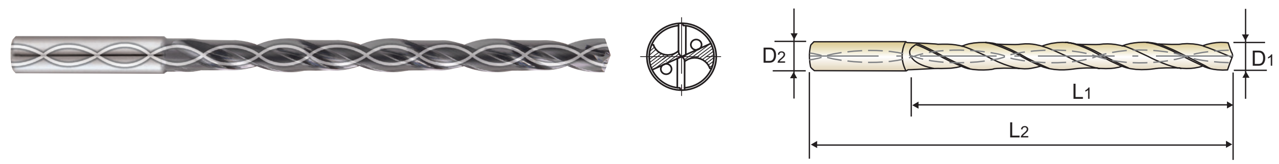
YG DREAM DRILLS -INOX

DH453 SERIES

TiAIN-COATED SOLID CARBIDE DREAM DRILLS

INOX with Coolant Holes (8XD)

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | TiAlN | p.A147

EXTRA LONG

8×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH453154	15.4		.6063	16	152	203
DH453155	15.5		.6102	16	152	203
DH453156	15.6		.6142	16	152	203
DH453157	15.7		.6181	16	152	203
DH453158	15.8		.6220	16	152	203
DH453040F	15.875	5/8	.6250	16	152	203
DH453159	15.9		.6260	16	152	203
DH453160	16.0		.6299	16	152	203
DH453161	16.1		.6339	18	171	222
DH453162	16.2		.6378	18	171	222
DH453163	16.3		.6417	18	171	222
DH453164	16.4		.6457	18	171	222
DH453165	16.5		.6496	18	171	222
DH453166	16.6		.6535	18	171	222
DH453167	16.7		.6575	18	171	222
DH453168	16.8		.6614	18	171	222
DH453169	16.9		.6654	18	171	222
DH453170	17.0		.6693	18	171	222
DH453171	17.1		.6732	18	171	222
DH453172	17.2		.6772	18	171	222
DH453173	17.3		.6811	18	171	222
DH453174	17.4		.6850	18	171	222
DH453175	17.5		.6890	18	171	222
DH453176	17.6		.6929	18	171	222
DH453177	17.7		.6968	18	171	222
DH453178	17.8		.7008	18	171	222
DH453179	17.9		.7047	18	171	222
DH453180	18.0		.7087	18	171	222
DH453181	18.1		.7126	20	190	243
DH453182	18.2		.7165	20	190	243
DH453183	18.3		.7205	20	190	243
DH453184	18.4		.7244	20	190	243
DH453185	18.5		.7283	20	190	243
DH453186	18.6		.7323	20	190	243
DH453187	18.7		.7362	20	190	243
DH453188	18.8		.7402	20	190	243
DH453189	18.9		.7441	20	190	243
DH453190	19.0		.7480	20	190	243
DH453048F	19.050	3/4	.7500	20	190	243
DH453191	19.1		.7520	20	190	243
DH453192	19.2		.7559	20	190	243
DH453193	19.3		.7598	20	190	243
DH453194	19.4		.7638	20	190	243
DH453195	19.5		.7677	20	190	243
DH453196	19.6		.7717	20	190	243
DH453197	19.7		.7756	20	190	243
DH453198	19.8		.7795	20	190	243
DH453199	19.9		.7835	20	190	243
DH453200	20.0		.7874	20	190	243

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	○			◎	○					◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○	○												○				

YG DREAM DRILLS -INOX

RECOMMENDED CUTTING CONDITIONS

DH463, DH714, DH464, DH715, DH451, DH452, DH453 SERIES

with COOLANT HOLES

ISO	VDI 3323	Material Description	SFM	Drill Diameter			SFM	Drill Diameter			
				METRIC	1.0	2.0		METRIC	3.0 / -	4.0	- / 5.0	6.0 / -
				FRACTIONAL	-	-		FRACTIONAL	- / 1/8	-	3/16 / -	- / 1/4
				DECIMAL	.0394	.0787		DECIMAL	.1181 / .1250	.1575	.1875 / .1969	.2362 / .2500
P	2	Non-alloy steel	230	RPM	22280	11140	329	RPM	10610	7960	6370	5310
				FEED	.0008- .0016	.0016- .0024		FEED	.0016- .0039	.0024- .0047	.0047- .0071	.0055- .0079
	3		230	RPM	22280	11140	329	RPM	10610	7960	6370	5310
				FEED	.0008- .0016	.0016- .0024		FEED	.0016- .0039	.0024- .0047	.0047- .0071	.0055- .0079
	6	Low alloy steel	230	RPM	22280	11140	329	RPM	10610	7960	6370	5310
				FEED	.0008- .0016	.0016- .0024		FEED	.0016- .0039	.0024- .0047	.0047- .0071	.0055- .0079
	7		160	RPM	15920	7960	230	RPM	7430	5570	4460	3710
				FEED	.0008- .0016	.0016- .0024		FEED	.0016- .0039	.0024- .0047	.0047- .0071	.0055- .0079
M	12	Stainless steel	130	RPM	12730	6370	165	RPM	5310	3980	3180	2650
				FEED	.0008- .0016	.0008- .0016		FEED	.0012- .0020	.0020- .0035	.0028- .0043	.0035- .0051
	13		80	RPM	7960	3980	132	RPM	4240	3180	2550	2120
				FEED	.0008- .0016	.0008- .0016		FEED	.0012- .0020	.0020- .0035	.0028- .0043	.0035- .0051
	14		150	RPM	14320	7160	198	RPM	6370	4770	3820	3180
				FEED	.0008- .0016	.0008- .0016		FEED	.0016- .0024	.0024- .0039	.0031- .0047	.0039- .0055
N	21	Aluminum-wrought alloy	430	RPM	41380	20690	659	RPM	21220	15920	12730	10610
				FEED	.0016- .0039	.0031- .0055		FEED	.0055- .0079	.0075- .0098	.0079- .0102	.0087- .0110
	22		430	RPM	41380	20690	659	RPM	21220	15920	12730	10610
				FEED	.0016- .0039	.0031- .0055		FEED	.0055- .0079	.0075- .0098	.0079- .0102	.0087- .0110
	23	Aluminum-wrought alloy	360	RPM	35010	17510	593	RPM	19100	14320	11460	9550
				FEED	.0016- .0039	.0031- .0055		FEED	.0055- .0079	.0075- .0098	.0079- .0102	.0087- .0110
	24	Aluminum-wrought alloy	360	RPM	35010	17510	593	RPM	19100	14320	11460	9550
				FEED	.0016- .0039	.0031- .0055		FEED	.0055- .0079	.0075- .0098	.0079- .0102	.0087- .0110
	25	Aluminum-wrought alloy	300	RPM	28650	14320	494	RPM	15920	11940	9550	7960
				FEED	.0016- .0031	.0024- .0039		FEED	.0047- .0071	.0063- .0087	.0067- .0091	.0075- .0098
S	37	Aluminum-wrought alloy	80	RPM	7960	3980	132	RPM	4240	3180	2550	2120
				FEED	.0004- .0012	.0004- .0012		FEED	.0008- .0016	.0016- .0031	.0024- .0039	.0031- .0047

▶ NEXT PAGE

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

▶ Recommend to reduce the feed rate as following

Feed 100% : DH463/DH714/DH451(3xD), DH464/DH714/DH452(5xD)

Feed 85% : DH453(8xD)

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG DREAM DRILLS -INOX

RECOMMENDED CUTTING CONDITIONS

DH463, DH714, DH464, DH715, DH451, DH452, DH453 SERIES

with COOLANT HOLES

ISO	VDI 3323	Material Description	SFM	Drill Diameter													
				METRIC	-	8.0	-	10.0	12.0	-	14.0	-	-	16.0	18.0	-	20.0
				FRACTIONAL	5/16	-	3/8	-	-	1/2	-	9/16	5/8	-	-	3/4	-
				DECIMAL	.3125	.3150	.3750	.3937	.4724	.5000	.5512	.5625	.6250	.6299	.7087	.7500	.7874
P	2	Non-alloy steel	329	RPM	3980		3180		2650	2510	2270		1990		1770	1680	1590
				FEED	.0063-.0087		.0079-.0102		.0071-.0110	.0071-.0110	.0079-.0118		.0087-.0126		.0102-.0142	.0102-.0142	.0110-.0150
	3		329	RPM	3980		3180		2650	2510	2270		1990		1770	1680	1590
				FEED	.0063-.0087		.0079-.0102		.0071-.0110	.0071-.0110	.0079-.0118		.0087-.0126		.0102-.0142	.0102-.0142	.0110-.0150
	6	Low alloy steel	329	RPM	3980		3180		2650	2510	2270		1990		1770	1680	1590
				FEED	.0063-.0087		.0079-.0102		.0071-.0110	.0071-.0110	.0079-.0118		.0087-.0126		.0102-.0142	.0102-.0142	.0110-.0150
	7		230	RPM	2790		2230		1860	1760	1590		1390		1240	1170	1110
				FEED	.0063-.0087		.0079-.0102		.0071-.0110	.0071-.0110	.0079-.0118		.0087-.0126		.0102-.0142	.0102-.0142	.0110-.0150
M	12	Stainless steel	165	RPM	1990		1590		1330	1260	1140		990		880	840	800
				FEED	.0035-.0051		.0039-.0059		.0043-.0063	.0043-.0063	.0047-.0067		.0051-.0071		.0055-.0075	.0055-.0075	.0059-.0079
	13		132	RPM	1590		1270		1060	1010	910		800		710	670	640
				FEED	.0035-.0051		.0039-.0059		.0043-.0063	.0043-.0063	.0047-.0067		.0051-.0071		.0055-.0075	.0055-.0075	.0059-.0079
	14		198	RPM	2390		1910		1590	1510	1360		1190		1060	1010	950
				FEED	.0039-.0055		.0043-.0063		.0047-.0067	.0047-.0067	.0051-.0071		.0055-.0075		.0059-.0079	.0059-.0079	.0063-.0083
N	21	Aluminum-wrought alloy	659	RPM	7960		6370		5310	5030	4550		3980		3540	3360	3180
				FEED	.0094-.0118		.0114-.0138		.0114-.0138	.0114-.0138	.0118-.0157		.0118-.0157		.0130-.0169	.0130-.0169	.0138-.0177
	22		659	RPM	7960		6370		5310	5030	4550		3980		3540	3360	3180
				FEED	.0094-.0118		.0114-.0138		.0114-.0138	.0114-.0138	.0118-.0157		.0118-.0157		.0130-.0169	.0130-.0169	.0138-.0177
	23	Aluminum-wrought alloy	593	RPM	7160		5730		4770	4530	4090		3580		3180	3020	2860
				FEED	.0094-.0118		.0114-.0138		.0114-.0138	.0114-.0138	.0118-.0157		.0118-.0157		.0130-.0169	.0130-.0169	.0138-.0177
	24	Aluminum-wrought alloy	593	RPM	7160		5730		4770	4530	4090		3580		3180	3020	2860
				FEED	.0094-.0118		.0114-.0138		.0114-.0138	.0114-.0138	.0118-.0157		.0118-.0157		.0130-.0169	.0130-.0169	.0138-.0177
	25	Aluminum-wrought alloy	494	RPM	5970		4770		3980	3770	3410		2980		2650	2520	2390
				FEED	.0087-.0110		.0094-.0118		.0094-.0118	.0094-.0118	.0098-.0138		.0098-.0138		.0110-.0150	.0110-.0150	.0118-.0157
S	37	Aluminum-wrought alloy	132	RPM	1590		1270		1060	1010	910		800		710	670	640
				FEED	.0031-.0047		.0035-.0055		.0039-.0059	.0039-.0059	.0043-.0063		.0047-.0067		.0051-.0071	.0051-.0071	.0055-.0075

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

▸ Recommend to reduce the feed rate as following
Feed 100% : DH463/DH714/DH451(3xD), DH464/DH714/DH452(5xD)
Feed 85% : DH453(8xD)

SOLID CARBIDE

DREAM DRILLS ALU

- For Aluminum and Aluminum Alloys

SELECTION GUIDE

YG HOLEMAKING TOOLS

SERIES	DGE466 DGE718	DGE433
DRILLING DEPTH	5XD	
TOOL MATERIAL	SOLID CARBIDE	
LENGTH	LONG	
SIZE MIN	D13/64	D3.0
SIZE MAX	D1/2	D20.0
PAGE	A151	A152
SURFACE TREATMENT	DLC	

SOLID CARBIDE DREAM DRILLS ALU

- For aluminum and aluminum alloys

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A156

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	DGE466 DGE718	DGE433
P	1	Non-alloy steel	About 0.15% C	Annealed	125			
	2		About 0.45% C	Annealed	190	13		
	3		About 0.45% C	Quenched & Tempered	250	25		
	4		About 0.75% C	Annealed	270	28		
	5		About 0.75% C	Quenched & Tempered	300	32		
	6	Low alloy steel		Annealed	180	10		
	7			Quenched & Tempered	275	29		
	8			Quenched & Tempered	300	32		
	9			Quenched & Tempered	350	38		
	10	High alloyed steel, and tool steel		Annealed	200	15		
	11			Quenched & Tempered	325	35		
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15		
	13		Martensitic	Quenched & Tempered	240	23		
	14		Austenitic		180	10		
K	15	Grey cast iron	Pearlitic / ferritic		180	10		
	16		Pearlitic (Martensitic)		260	26		
	17	Nodular cast iron	Ferritic		160	3		
	18		Pearlitic		250	25		
	19	Malleable cast iron	Ferritic		130			
	20		Pearlitic		230	21		
N	21	Aluminum-wrought alloy	Not Curable		60		◎	◎
	22		Curable	Hardened	100		◎	◎
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		◎	◎
	24		≤ 12% Si, Curable	Hardened	90		◎	◎
	25		> 12% Si, Not Curable		130			
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110			
	27		CuZn, CuSnZn (Brass)		90			
	28		CuSn, lead-free copper and electrolytic copper		100			
	29	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)	Duroplastic, Fiber Reinforced Plastic					
	30		Rubber, Wood, etc.					
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15		
	32			Cured	280	30		
	33		Ni or Co Based	Annealed	250	25		
	34			Cured	350	38		
	35			Cast	320	34		
	36	Titanium Alloys	Pure Titanium		400 Rm			
	37		Alpha + Beta Alloys	Hardened	1050 Rm			
H	38	Hardened steel		Hardened	550	55		
	39			Hardened	630	60		
	40	Chilled Cast Iron		Cast	400	42		
	41	Hardened Cast Iron		Hardened	550	55		

YG DREAM DRILLS -ALU

DGE466 SERIES
DGE718 SERIES

DLC-COATED SOLID CARBIDE DREAM DRILLS
ALU with Coolant Holes (5XD)

- ▶ Optimized thining for Aluminum & Aluminum Alloys to prevent any clogging from chip welding
- ▶ Wider and deeper flute gullets for maximum chip removal
- ▶ Special geometry and smooth coating reduces built up edge and improves finishes
- ▶ Tolerance : Dia. Tolerance ∅D1: See page A405

CARBIDE | h6 | 118° | 20 bar | DLC | p.A156

LONG
5×D

Unit : inch

EDP No.	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
DLC	D1		D2	L1	L2
DGE466013	13/64	.2031	15/64	1-3/4	3-15/16
DGE718013	13/64	.2031	1/4	1-3/4	3-15/16
DGE466014	7/32	.2188	15/64	1-57/64	3-15/16
DGE718014	7/32	.2188	1/4	1-57/64	3-15/16
DGE466015	15/64	.2344	15/64	1-57/64	3-15/16
DGE718015	15/64	.2344	1/4	1-57/64	3-15/16
DGE718016	1/4	.2500	1/4	2-3/64	4-19/64
DGE466016	1/4	.2500	17/64	2-3/64	4-19/64
DGE466206	F	.2570	17/64	2-13/64	4-19/64
DGE718206	F	.2570	5/16	2-13/64	4-19/64
DGE466017	17/64	.2656	17/64	2-13/64	4-19/64
DGE718017	17/64	.2656	5/16	2-13/64	4-19/64
DGE466209	I	.2720	.272	2-13/64	4-19/64
DGE718209	I	.2720	5/16	2-13/64	4-19/64
DGE466018	9/32	.2812	5/16	2-23/64	4-41/64
DGE466019	19/64	.2969	5/16	2-33/64	4-41/64
DGE466020	5/16	.3125	5/16	2-33/64	4-41/64
DGE466021	21/64	.3281	11/32	2-43/64	5
DGE718021	21/64	.3281	3/8	2-43/64	5
DGE466217	Q	.3320	11/32	2-43/64	5
DGE718217	Q	.3320	3/8	2-43/64	5
DGE466022	11/32	.3438	11/32	2-27/32	5

EDP No.	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
DLC	D1		D2	L1	L2
DGE718022	11/32	.3438	3/8	2-27/32	5
DGE718023	23/64	.3594	3/8	3	5-23/64
DGE466023	23/64	.3594	25/64	3	5-23/64
DGE718221	U	.3680	3/8	3	5-23/64
DGE466221	U	.3680	25/64	3	5-23/64
DGE718024	3/8	.3750	3/8	3-5/32	5-23/64
DGE466024	3/8	.3750	25/64	3-5/32	5-23/64
DGE466025	25/64	.3906	25/64	3-5/32	5-23/64
DGE718025	25/64	.3906	7/16	3-5/32	5-23/64
DGE466026	13/32	.4062	27/64	3-5/16	5-7/8
DGE718026	13/32	.4062	7/16	3-5/16	5-7/8
DGE466027	27/64	.4219	27/64	3-15/32	5-7/8
DGE718027	27/64	.4219	7/16	3-15/32	5-7/8
DGE718028	7/16	.4375	7/16	3-5/8	6-7/32
DGE466028	7/16	.4375	15/32	3-5/8	6-7/32
DGE466029	29/64	.4531	15/32	3-25/32	6-7/32
DGE718029	29/64	.4531	1/2	3-25/32	6-7/32
DGE466030	15/32	.4688	15/32	3-25/32	6-7/32
DGE718030	15/32	.4688	1/2	3-25/32	6-7/32
DGE466031	31/64	.4844	1/2	3-15/16	6-37/64
DGE466032	1/2	.5000	1/2	4-3/32	6-37/64

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	◎	◎																	

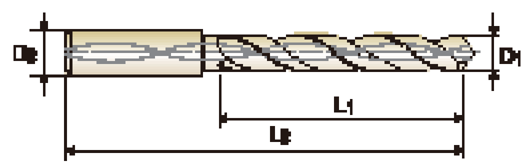
YG DREAM DRILLS -ALU

DGE433 SERIES

DLC-COATED SOLID CARBIDE DREAM DRILLS
ALU with Coolant Holes (5XD)

- ▶Optimized thining for Aluminum & Aluminum Alloys to prevent any clogging from chip welding
- ▶Wider and deeper flute gullets for maximum chip removal
- ▶Special geometry and smooth coating reduces built up edge and improves finishes





DIN 6537 | CARBIDE | h6 | m7 | 118° | 20 bar | DLC | p.A156

LONG
5×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
DLC	D1			D2	L1	L2
DGE433030	3.0		.1181	6	28	66
DGE433031	3.1		.1220	6	28	66
DGE433008F	3.175	1/8	.1250	6	28	66
DGE433032	3.2		.1260	6	28	66
DGE433033	3.3		.1299	6	28	66
DGE433034	3.4		.1339	6	28	66
DGE433035	3.5		.1378	6	28	66
DGE433009F	3.572	9/64	.1406	6	28	66
DGE433036	3.6		.1417	6	28	66
DGE433037	3.7		.1457	6	28	66
DGE433038	3.8		.1496	6	36	74
DGE433039	3.9		.1535	6	36	74
DGE433010F	3.969	5/32	.1563	6	36	74
DGE433040	4.0		.1575	6	36	74
DGE433041	4.1		.1614	6	36	74
DGE433042	4.2		.1654	6	36	74
DGE433043	4.3		.1693	6	36	74
DGE433011F	4.366	11/64	.1719	6	36	74
DGE433044	4.4		.1732	6	36	74
DGE433045	4.5		.1772	6	36	74
DGE433046	4.6		.1811	6	36	74
DGE433047	4.7		.1850	6	36	74
DGE433012F	4.763	3/16	.1875	6	36	74
DGE433048	4.8		.1890	6	44	82
DGE433049	4.9		.1929	6	44	82
DGE433050	5.0		.1969	6	44	82

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
DLC	D1			D2	L1	L2
DGE433051	5.1		.2008	6	44	82
DGE433013F	5.159	13/64	.2031	6	44	82
DGE433052	5.2		.2047	6	44	82
DGE433053	5.3		.2087	6	44	82
DGE433054	5.4		.2126	6	44	82
DGE433055	5.5		.2165	6	44	82
DGE433014F	5.556	7/32	.2188	6	44	82
DGE433056	5.6		.2205	6	44	82
DGE433057	5.7		.2244	6	44	82
DGE433058	5.8		.2283	6	44	82
DGE433059	5.9		.2323	6	44	82
DGE433015F	5.953	15/64	.2344	6	44	82
DGE433060	6.0		.2362	6	44	82
DGE433061	6.1		.2402	8	53	91
DGE433062	6.2		.2441	8	53	91
DGE433063	6.3		.2480	8	53	91
DGE433016F	6.350	1/4	.2500	8	53	91
DGE433064	6.4		.2520	8	53	91
DGE433065	6.5		.2559	8	53	91
DGE433006L	6.528	F	.2570	8	53	9
DGE433066	6.6		.2598	8	53	91
DGE433067	6.7		.2638	8	53	91
DGE433017F	6.747	17/64	.2656	8	53	91
DGE433068	6.8		.2677	8	53	91
DGE433069	6.9		.2717	8	53	91
DGE433009L	6.909	I	.2720	8	53	91

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	◎	◎																	

YG DREAM DRILLS -ALU

DGE433 SERIES

DLC-COATED SOLID CARBIDE DREAM DRILLS
ALU with Coolant Holes (5XD)

- ▶Optimized thining for Aluminum & Aluminum Alloys to prevent any clogging from chip welding
- ▶Wider and deeper flute gullets for maximum chip removal
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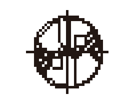
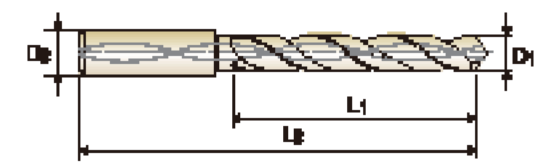



DIN 6537 | CARBIDE | h6 | m7 | 118° | 20 bar | DLC | p.A156

LONG
5×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
DLC	D1			D2	L1	L2
DGE433070	7.0		.2756	8	53	91
DGE433071	7.1		.2795	8	53	91
DGE433018F	7.144	9/32	.2812	8	53	91
DGE433072	7.2		.2835	8	53	91
DGE433073	7.3		.2874	8	53	91
DGE433074	7.4		.2913	8	53	91
DGE433075	7.5		.2953	8	53	91
DGE433019F	7.541	19/64	.2969	8	53	91
DGE433076	7.6		.2992	8	53	91
DGE433077	7.7		.3031	8	53	91
DGE433078	7.8		.3071	8	53	91
DGE433079	7.9		.3110	8	53	91
DGE433020F	7.938	5/16	.3125	8	53	91
DGE433080	8.0		.3150	8	53	91
DGE433081	8.1		.3189	10	61	103
DGE433082	8.2		.3228	10	61	103
DGE433083	8.3		.3268	10	61	103
DGE433021F	8.334	21/64	.3281	10	61	103
DGE433084	8.4		.3307	10	61	103
DGE433017L	8.433	Q	.3320	10	61	103
DGE433085	8.5		.3346	10	61	103
DGE433086	8.6		.3386	10	61	103
DGE433087	8.7		.3425	10	61	103
DGE433022F	8.731	11/32	.3438	10	61	103
DGE433088	8.8		.3465	10	61	103
DGE433089	8.9		.3504	10	61	103

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
DLC	D1			D2	L1	L2
DGE433090	9.0		.3543	10	61	103
DGE433091	9.1		.3583	10	61	103
DGE433023F	9.128	23/64	.3594	10	61	103
DGE433092	9.2		.3622	10	61	103
DGE433093	9.3		.3661	10	61	103
DGE433021L	9.347	U	.3680	10	61	103
DGE433094	9.4		.3701	10	61	103
DGE433095	9.5		.3740	10	61	103
DGE433024F	9.525	3/8	.3750	10	61	103
DGE433096	9.6		.3780	10	61	103
DGE433097	9.7		.3819	10	61	103
DGE433098	9.8		.3858	10	61	103
DGE433099	9.9		.3898	10	61	103
DGE433025F	9.922	25/64	.3906	10	61	103
DGE433100	10.0		.3937	10	61	103
DGE433101	10.1		.3976	12	71	118
DGE433102	10.2		.4016	12	71	118
DGE433103	10.3		.4055	12	71	118
DGE433026F	10.319	13/32	.4062	12	71	118
DGE433104	10.4		.4094	12	71	118
DGE433105	10.5		.4134	12	71	118
DGE433106	10.6		.4173	12	71	118
DGE433107	10.7		.4212	12	71	118
DGE433027F	10.716	27/64	.4219	12	71	118
DGE433108	10.8		.4252	12	71	118
DGE433109	10.9		.4291	12	71	118

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	◎	◎																	

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

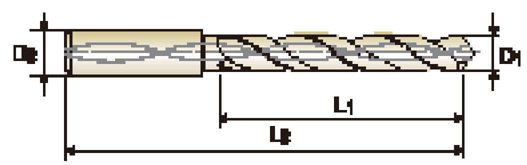
DREAM DRILLS -ALU

DGE433 SERIES

DLC-COATED SOLID CARBIDE DREAM DRILLS
ALU with Coolant Holes (5XD)

- ▶Optimized thining for Aluminum & Aluminum Alloys to prevent any clogging from chip welding
- ▶Wider and deeper flute gullets for maximum chip removal
- ▶Special geometry and smooth coating reduces built up edge and improves finishes





DIN 6537 | CARBIDE | h6 | m7 | 118° | 20 bar | DLC | p.A156

LONG
5×D

Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
DLC	D1			D2	L1	L2
DGE433110	11.0		.4330	12	71	118
DGE433111	11.1		.4370	12	71	118
DGE433028F	11.113	7/16	.4375	12	71	118
DGE433112	11.2		.4409	12	71	118
DGE433113	11.3		.4448	12	71	118
DGE433114	11.4		.4488	12	71	118
DGE433115	11.5		.4527	12	71	118
DGE433029F	11.509	29/64	.4531	12	71	118
DGE433116	11.6		.4566	12	71	118
DGE433117	11.7		.4606	12	71	118
DGE433118	11.8		.4645	12	71	118
DGE433119	11.9		.4685	12	71	118
DGE433030F	11.906	15/32	.4688	12	71	118
DGE433120	12.0		.4724	12	71	118
DGE433121	12.1		.4764	14	77	124
DGE433122	12.2		.4803	14	77	124
DGE433123	12.3		.4843	14	77	124
DGE433031F	12.303	31/64	.4844	14	77	124
DGE433124	12.4		.4882	14	77	124
DGE433125	12.5		.4921	14	77	124
DGE433126	12.6		.4961	14	77	124
DGE433032F	12.7	1/2	.5000	14	77	124
DGE433128	12.8		.5039	14	77	124
DGE433129	12.9		.5079	14	77	124
DGE433130	13.0		.5118	14	77	124
DGE433131	13.1		.5157	14	77	124

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
DLC	D1			D2	L1	L2
DGE433132	13.2		.5197	14	77	124
DGE433133	13.3		.5236	14	77	124
DGE433134	13.4		.5276	14	77	124
DGE433135	13.5		.5314	14	77	124
DGE433136	13.6		.5354	14	77	124
DGE433137	13.7		.5394	14	77	124
DGE433138	13.8		.5433	14	77	124
DGE433139	13.9		.5472	14	77	124
DGE433140	14.0		.5512	14	77	124
DGE433141	14.1		.5551	16	83	133
DGE433142	14.2		.5591	16	83	133
DGE433036F	14.288	9/16	.5625	16	83	133
DGE433143	14.3		.5630	16	83	133
DGE433144	14.4		.5669	16	83	133
DGE433145	14.5		.5708	16	83	133
DGE433146	14.6		.5748	16	83	133
DGE433147	14.7		.5787	16	83	133
DGE433148	14.8		.5827	16	83	133
DGE433149	14.9		.5866	16	83	133
DGE433150	15.0		.5905	16	83	133
DGE433151	15.1		.5945	16	83	133
DGE433152	15.2		.5984	16	83	133
DGE433153	15.3		.6024	16	83	133
DGE433154	15.4		.6063	16	83	133
DGE433155	15.5		.6102	16	83	133
DGE433156	15.6		.6142	16	83	133

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	◎	◎																	

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
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COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
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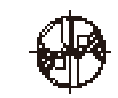
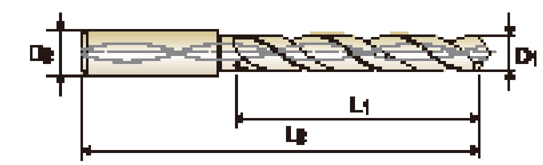
TECHNICAL DATA

DREAM DRILLS -ALU

DGE433 SERIES

DLC-COATED SOLID CARBIDE DREAM DRILLS
ALU with Coolant Holes (5XD)

▶Optimized thining for Aluminum & Aluminum Alloys to prevent any clogging from chip welding
▶Wider and deeper flute gullets for maximum chip removal
▶Special geometry and smooth coating reduces built up edge and improves finishes

DIN 6537 | CARBIDE | h6 | m7 | 118° | 20 bar | DLC | p.A156

LONG
5×D

Unit : mm

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
DLC	D1			D2	L1	L2
DGE433157	15.7		.6181	16	83	133
DGE433158	15.8		.6220	16	83	133
DGE433040F	15.875	5/8	.6250	16	83	133
DGE433159	15.9		.6260	16	83	133
DGE433160	16.0		.6299	16	83	133
DGE433161	16.1		.6339	18	93	143
DGE433162	16.2		.6378	18	93	143
DGE433163	16.3		.6417	18	93	143
DGE433164	16.4		.6457	18	93	143
DGE433165	16.5		.6495	18	93	143
DGE433166	16.6		.6535	18	93	143
DGE433167	16.7		.6575	18	93	143
DGE433168	16.8		.6614	18	93	143
DGE433169	16.9		.6654	18	93	143
DGE433170	17.0		.6692	18	93	143
DGE433171	17.1		.6732	18	93	143
DGE433172	17.2		.6772	18	93	143
DGE433173	17.3		.6811	18	93	143
DGE433174	17.4		.6850	18	93	143
DGE433175	17.5		.6889	18	93	143
DGE433176	17.6		.6929	18	93	143
DGE433177	17.7		.6968	18	93	143
DGE433178	17.8		.7008	18	93	143

EDP No.	Drill Diameter Metric	Fractional	Decimal	Shank Diameter	Flute Length	Overall Length
DLC	D1			D2	L1	L2
DGE433179	17.9		.7047	18	93	143
DGE433180	18.0		.7087	18	93	143
DGE433181	18.1		.7126	20	101	153
DGE433182	18.2		.7165	20	101	153
DGE433183	18.3		.7205	20	101	153
DGE433184	18.4		.7244	20	101	153
DGE433185	18.5		.7283	20	101	153
DGE433186	18.6		.7323	20	101	153
DGE433187	18.7		.7362	20	101	153
DGE433188	18.8		.7402	20	101	153
DGE433189	18.9		.7441	20	101	153
DGE433190	19.0		.7480	20	101	153
DGE433048F	19.050	3/4	.7500	20	101	153
DGE433191	19.1		.7520	20	101	153
DGE433192	19.2		.7559	20	101	153
DGE433193	19.3		.7598	20	101	153
DGE433194	19.4		.7638	20	101	153
DGE433195	19.5		.7676	20	101	153
DGE433196	19.6		.7717	20	101	153
DGE433197	19.7		.7756	20	101	153
DGE433198	19.8		.7795	20	101	153
DGE433199	19.9		.7835	20	101	153
DGE433200	20.0		.7874	20	101	153

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	◎	◎																	

YG DREAM DRILLS -ALU

RECOMMENDED CUTTING CONDITIONS

DGE466, DGE718, DGE433 SERIES

with COOLANT HOLES

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM		Drill Diameter										
				METRIC	3.0	-	4.0	-	5.0	6.0	-	-	8.0	-	10.0
				FRACTIONAL	-	1/8	-	3/16	-	-	1/4	5/16	-	3/8	-
				DECIMAL	.1181	.1250	.1575	.1875	.1969	.2362	.2500	.3125	.3150	.3750	.3937
N	21	Aluminum-wrought alloy	658	RPM	21220		15920	12730		10610		7960		6370	
				FEED	.0047 - .0071		.0055 - .0087	.0059 - .0091		.0067 - .0098		.0083 - .0110		.0094 - .0118	
	22		527	RPM	16980		12730	10190		8490		6370		5090	
				FEED	.0047 - .0071		.0055 - .0087	.0059 - .0091		.0067 - .0098		.0083 - .0110		.0094 - .0118	
	23	Aluminum-cast, alloyed	494	RPM	15920		11940	9550		7960		5970		4770	
				FEED	.0059 - .0083		.0067 - .0098	.0075 - .0106		.0083 - .0110		.0094 - .0122		.0114 - .0177	
	24		461	RPM	14850		11140	8910		7430		5570		4460	
				FEED	.0059 - .0083		.0067 - .0098	.0075 - .0106		.0083 - .0110		.0094 - .0122		.0114 - .0177	

ISO	VDI 3323	Material Description	SFM		Drill Diameter								
				METRIC	12.0	-	14.0	-	-	16.0	18.0	-	20.0
				FRACTIONAL	-	1/2	-	9/16	5/8	-	-	3/4	-
				DECIMAL	.4724	.5000	.5512	.5625	.6250	.6299	.7087	.7500	.7874
N	21	Aluminum-wrought alloy	658	RPM	5310	5030	4550		3980		3540	3350	3180
				FEED	.0094 - .0118	.0094 - .0118	.0098 - .0138		.0098 - .0138		.0110 - .0150	.0110 - .0150	.0118 - .0157
	22		527	RPM	4240	4030	3640		3180		2830	2680	2550
				FEED	.0094 - .0118	.0094 - .0118	.0098 - .0138		.0098 - .0138		.0110 - .0150	.0110 - .0150	.0118 - .0157
	23	Aluminum-cast, alloyed	494	RPM	3980	3770	3410		2980		2650	2520	2390
				FEED	.0130 - .0217	.0130 - .0217	.0138 - .0236		.0138 - .0236		.0154 - .0287	.0154 - .0287	.0154 - .0335
	24		461	RPM	3710	3520	3180		2790		2480	2350	2230
				FEED	.0130 - .0217	.0130 - .0217	.0138 - .0236		.0138 - .0236		.0154 - .0287	.0154 - .0287	.0154 - .0335

DREAM DRILLS MQL TYPE

- Minimum Quantity Lubrication
  Drilling Deep Holes (10×D - 40×D)

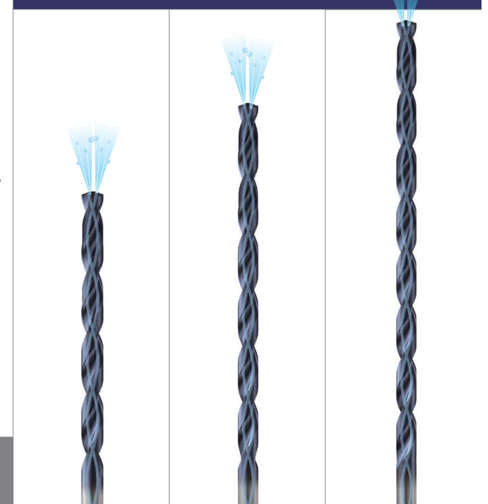
SELECTION GUIDE

YG HOLEMAKING TOOLS

SOLID CARBIDE DREAM DRILLS MQL TYPE

- Minimum Quantity Lubrication
Drilling Deep Holes (10×D - 30×D)

SERIES	DH510	DH515	DH520	DHM10	DHM15	DHM20	DHM25	DHM30
DRILLING DEPTH	10XD	15XD	20XD	10XD	15XD	20XD	25XD	30XD
LENGTH	EXTRA LONG	EXTRA LONG	EXTRA LONG	EXTRA LONG	EXTRA LONG	EXTRA LONG	EXTRA LONG	EXTRA LONG
SIZE MIN	D3.0	D3.0	D3.0	D3.0	D3.0	D3.0	D3.0	D3.0
SIZE MAX	D14.0	D14.0	D12.0	D14.0	D14.0	D12.0	D10.0	D8.0
PAGE	A160	A163	A166	A168	A168	A169	A170	A172
SURFACE TREATMENT	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN



Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A174

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	DH510	DH515	DH520	DHM10	DHM15	DHM20	DHM25	DHM30
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	◎	◎	◎	◎	◎	◎	◎
P	2	Non-alloy steel	About 0.45% C	Annealed	190	13	◎	◎	◎	◎	◎	◎	◎	◎
P	3	Non-alloy steel	About 0.45% C	Quenched & Tempered	250	25	○	○	○	○	○	○	○	○
P	4	Non-alloy steel	About 0.75% C	Annealed	270	28								
P	5	Non-alloy steel	About 0.75% C	Quenched & Tempered	300	32								
P	6	Low alloy steel		Annealed	180	10	◎	◎	◎	◎	◎	◎	◎	◎
P	7	Low alloy steel		Quenched & Tempered	275	29	○	○	○	○	○	○	○	○
P	8	Low alloy steel		Quenched & Tempered	300	32	○	○	○	○	○	○	○	○
P	9	Low alloy steel		Quenched & Tempered	350	38								
P	10	High alloyed steel, and tool steel		Annealed	200	15	○	○	○	○	○	○	○	○
P	11	High alloyed steel, and tool steel		Quenched & Tempered	325	35	○	○	○	○	○	○	○	○
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15								
M	13	Stainless steel	Martensitic	Quenched & Tempered	240	23								
M	14	Stainless steel	Austenitic		180	10								
K	15	Grey cast iron	Pearlitic / ferritic		180	10	◎	◎	◎	◎	◎	◎	◎	◎
K	16	Grey cast iron	Pearlitic (Martensitic)		260	26	○	○	○	○	○	○	○	○
K	17	Nodular cast iron	Ferritic		160	3	◎	◎	◎	◎	◎	◎	◎	◎
K	18	Nodular cast iron	Pearlitic		250	25	○	○	○	○	○	○	○	○
K	19	Malleable cast iron	Ferritic		130		◎	◎	◎	◎	◎	◎	◎	◎
K	20	Malleable cast iron	Pearlitic		230	21	○	○	○	○	○	○	○	○
N	21	Aluminum-wrought alloy	Not Curable		60									
N	22	Aluminum-wrought alloy	Curable	Hardened	100									
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75									
N	24	Aluminum-cast, alloyed	≤ 12% Si, Curable	Hardened	90									
N	25	Aluminum-cast, alloyed	> 12% Si, Not Curable		130									
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110									
N	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90									
N	28	Copper and Copper Alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper		100									
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic											
N	30	Non Metallic Materials	Rubber, Wood, etc.											
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15								
S	32	Heat Resistant Super Alloys	Fe Based	Cured	280	30								
S	33	Heat Resistant Super Alloys	Ni or Co Based	Annealed	250	25								
S	34	Heat Resistant Super Alloys	Ni or Co Based	Cured	350	38								
S	35	Heat Resistant Super Alloys	Ni or Co Based	Cast	320	34								
S	36	Titanium Alloys	Pure Titanium		400 Rm									
S	37	Titanium Alloys	Alpha + Beta Alloys	Hardened	1050 Rm									
H	38	Hardened steel		Hardened	550	55								
H	39	Hardened steel		Hardened	630	60								
H	40	Chilled Cast Iron		Cast	400	42								
H	41	Hardened Cast Iron		Hardened	550	55								

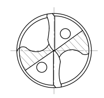
YG DREAM DRILLS MQL TYPE

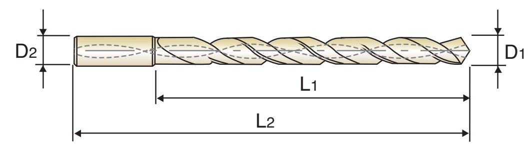
DH510 SERIES

TiAIN-COATED SOLID CARBIDE DREAM DRILLS

MQL with Coolant Holes (10XD)

- ▶4-Facet Point for good centering capability
- ▶Optimized special flutes are ideal for removing chips and for productive drilling
- ▶Enhanced chip evacuation by polished flute upgraded TiAIN nano layer full coating
- ▶MQL system compatible (Minimum Quantity Lubrication)





CARBIDE | 30° | h6 | h7 | 140° | 20 bar | TiAIN | p.A174

EXTRA LONG
10 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAIN	D1			D2	L1	L2
DH510030	3.0		.1181	3	39	90
DH510031	3.1		.1220	4	46	97
DH510008F	3.175	1/8	.1250	4	46	97
DH510032	3.2		.1260	4	46	97
DH510033	3.3		.1299	4	46	97
DH510034	3.4		.1339	4	46	97
DH510035	3.5		.1378	4	46	97
DH510036	3.6		.1417	4	52	103
DH510037	3.7		.1457	4	52	103
DH510038	3.8		.1496	4	52	103
DH510039	3.9		.1535	4	52	103
DH510040	4.0		.1575	4	52	103
DH510041	4.1		.1614	5	59	112
DH510042	4.2		.1654	5	59	112
DH510043	4.3		.1693	5	59	112
DH510044	4.4		.1732	5	59	112
DH510045	4.5		.1772	5	59	112
DH510046	4.6		.1811	5	65	118
DH510047	4.7		.1850	5	65	118
DH510048	4.8		.1890	5	65	118
DH510049	4.9		.1929	5	65	118
DH510050	5.0		.1969	5	65	118
DH510051	5.1		.2008	6	72	127
DH510052	5.2		.2047	6	72	127
DH510053	5.3		.2087	6	72	127
DH510054	5.4		.2126	6	72	127

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAIN	D1			D2	L1	L2
DH510055	5.5		.2165	6	72	127
DH510056	5.6		.2205	6	78	133
DH510057	5.7		.2244	6	78	133
DH510058	5.8		.2283	6	78	133
DH510059	5.9		.2323	6	78	133
DH510060	6.0		.2362	6	78	133
DH510061	6.1		.2402	7	85	141
DH510062	6.2		.2441	7	85	141
DH510063	6.3		.2480	7	85	141
DH510016F	6.350	1/4	.2500	7	85	141
DH510064	6.4		.2520	7	85	141
DH510065	6.5		.2559	7	85	141
DH510206L	6.528	F	.2570	7	91	147
DH510066	6.6		.2598	7	91	147
DH510067	6.7		.2638	7	91	147
DH510017F	6.746	17/64	.2656	7	91	147
DH510068	6.8		.2677	7	91	147
DH510069	6.9		.2717	7	91	147
DH510209L	6.909	I	.2720	7	91	147
DH510070	7.0		.2756	7	91	147
DH510071	7.1		.2795	8	98	155
DH510018F	7.142	9/32	.2812	8	98	155
DH510072	7.2		.2835	8	98	155
DH510073	7.3		.2874	8	98	155
DH510074	7.4		.2913	8	98	155
DH510075	7.5		.2953	8	98	155

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○		○	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

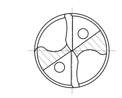
YG DREAM DRILLS MQL TYPE

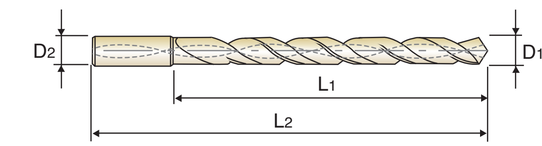
DH510 SERIES

TiAIN-COATED SOLID CARBIDE DREAM DRILLS

MQL with Coolant Holes (10XD)

- ▶4-Facet Point for good centering capability
- ▶Optimized special flutes are ideal for removing chips and for productive drilling
- ▶Enhanced chip evacuation by polished flute upgraded TiAIN nano layer full coating
- ▶MQL system compatible (Minimum Quantity Lubrication)





CARBIDE | 30° | h6 | h7 | 140° | 20 bar | TiAIN | p.A174

EXTRA LONG
10 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAIN	D1			D2	L1	L2
DH510019F	7.541	19/64	.2969	8	104	161
DH510076	7.6		.2992	8	104	161
DH510077	7.7		.3031	8	104	161
DH510078	7.8		.3071	8	104	161
DH510079	7.9		.3110	8	104	161
DH510020F	7.938	5/16	.3125	8	104	161
DH510080	8.0		.3150	8	104	161
DH510081	8.1		.3189	9	111	169
DH510082	8.2		.3228	9	111	169
DH510083	8.3		.3268	9	111	169
DH510021F	8.334	21/64	.3281	9	111	169
DH510084	8.4		.3307	9	111	169
DH510217L	8.433	Q	.3320	9	111	169
DH510085	8.5		.3346	9	111	169
DH510086	8.6		.3386	9	117	175
DH510087	8.7		.3425	9	117	175
DH510022F	8.733	11/32	.3438	9	117	175
DH510088	8.8		.3465	9	117	175
DH510089	8.9		.3504	9	117	175
DH510090	9.0		.3543	9	117	175
DH510091	9.1		.3583	10	124	182
DH510023F	9.129	23/64	.3594	10	124	182
DH510092	9.2		.3622	10	124	182
DH510093	9.3		.3661	10	124	182
DH510221L	9.347	U	.3680	10	124	182
DH510094	9.4		.3701	10	124	182

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAIN	D1			D2	L1	L2
DH510095	9.5		.3740	10	124	182
DH510024F	9.525	3/8	.3750	10	130	188
DH510096	9.6		.3780	10	130	188
DH510097	9.7		.3819	10	130	188
DH510098	9.8		.3858	10	130	188
DH510099	9.9		.3898	10	130	188
DH510025F	9.921	25/64	.3906	10	130	188
DH510100	10.0		.3937	10	130	188
DH510101	10.1		.3976	11	137	201
DH510102	10.2		.4016	11	137	201
DH510103	10.3		.4055	11	137	201
DH510026F	10.318	13/32	.4062	11	137	201
DH510104	10.4		.4094	11	137	201
DH510105	10.5		.4134	11	137	201
DH510106	10.6		.4173	11	143	207
DH510107	10.7		.4213	11	143	207
DH510027F	10.716	27/64	.4219	11	143	207
DH510108	10.8		.4252	11	143	207
DH510109	10.9		.4291	11	143	207
DH510110	11.0		.4331	11	143	207
DH510111	11.1		.4370	12	150	215
DH510028F	11.113	7/16	.4375	12	150	215
DH510112	11.2		.4409	12	150	215
DH510113	11.3		.4449	12	150	215
DH510114	11.4		.4488	12	150	215
DH510115	11.5		.4528	12	150	215

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○		○	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

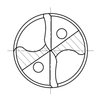
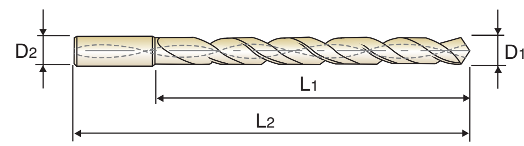
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

DREAM DRILLS MQL TYPE

DH510 SERIES

TiAIN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (10XD)

- ▶4-Facet Point for good centering capability
- ▶Optimized special flutes are ideal for removing chips and for productive drilling
- ▶Enhanced chip evacuation by polished flute upgraded TiAIN nano layer full coating
- ▶MQL system compatible (Minimum Quantity Lubrication)

CARBIDE | 30° | h6 | h7 | 140° | 20 bar | TiAIN | p.A174

EXTRA LONG
10 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAIN	D1			D2	L1	L2
DH510029F	11.509	29/64	.4531	12	156	221
DH510116	11.6		.4567	12	156	221
DH510117	11.7		.4606	12	156	221
DH510118	11.8		.4646	12	156	221
DH510119	11.9		.4685	12	156	221
DH510030F	11.908	15/32	.4688	12	156	221
DH510120	12.0		.4724	12	156	221
DH510121	12.1		.4764	13	163	229
DH510122	12.2		.4803	13	163	229
DH510123	12.3		.4843	13	163	229
DH510031F	12.304	31/64	.4844	13	163	229
DH510124	12.4		.4882	13	163	229
DH510125	12.5		.4921	13	163	229
DH510126	12.6		.4961	13	169	235
DH510127	12.7	1/2	.5000	13	169	235
DH510128	12.8		.5039	13	169	235
DH510129	12.9		.5079	13	169	235
DH510130	13.0		.5118	13	169	235
DH510131	13.1		.5157	14	176	243
DH510132	13.2		.5197	14	176	243
DH510133	13.3		.5236	14	176	243
DH510134	13.4		.5276	14	176	243
DH510135	13.5		.5315	14	176	243
DH510136	13.6		.5354	14	182	249
DH510137	13.7		.5394	14	182	249
DH510138	13.8		.5433	14	182	249
DH510139	13.9		.5472	14	182	249
DH510140	14.0		.5512	14	182	249

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○		○	○				◎	○	◎	○	◎	○

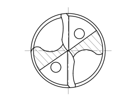
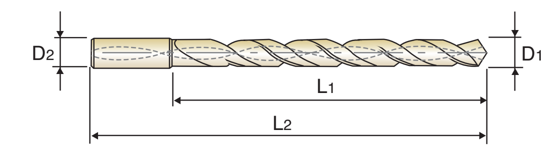
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

DREAM DRILLS MQL TYPE

DH515 SERIES

TiAIN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (15XD)

- ▶4-Facet Point for good centering capability
- ▶Optimized special flutes are ideal for removing chips and for productive drilling
- ▶Enhanced chip evacuation by polished flute upgraded TiAIN nano layer full coating
- ▶MQL system compatible (Minimum Quantity Lubrication)

CARBIDE | 30° | h6 | h7 | 140° | 20 bar | TiAIN | p.A174

EXTRA LONG
15 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAIN	D1			D2	L1	L2
DH515030	3.0		.1181	3	54	105
DH515031	3.1		.1220	4	63	114
DH515008F	3.175	1/8	.1250	4	63	114
DH515032	3.2		.1260	4	63	114
DH515033	3.3		.1299	4	63	114
DH515034	3.4		.1339	4	63	114
DH515035	3.5		.1378	4	63	114
DH515036	3.6		.1417	4	72	123
DH515037	3.7		.1457	4	72	123
DH515038	3.8		.1496	4	72	123
DH515039	3.9		.1535	4	72	123
DH515040	4.0		.1575	4	72	123
DH515041	4.1		.1614	5	81	134
DH515042	4.2		.1654	5	81	134
DH515043	4.3		.1693	5	81	134
DH515044	4.4		.1732	5	81	134
DH515045	4.5		.1772	5	81	134
DH515046	4.6		.1811	5	90	143
DH515047	4.7		.1850	5	90	143
DH515048	4.8		.1890	5	90	143
DH515049	4.9		.1929	5	90	143
DH515050	5.0		.1969	5	90	143
DH515051	5.1		.2008	6	99	154
DH515052	5.2		.2047	6	99	154
DH515053	5.3		.2087	6	99	154
DH515054	5.4		.2126	6	99	154
DH515055	5.5		.2165	6	99	154
DH515056	5.6		.2205	6	108	163
DH515057	5.7		.2244	6	108	163
DH515058	5.8		.2283	6	108	163
DH515059	5.9		.2323	6	108	163
DH515060	6.0		.2362	6	108	163
DH515061	6.1		.2402	7	117	173
DH515062	6.2		.2441	7	117	173
DH515063	6.3		.2480	7	117	173
DH515016F	6.350	1/4	.2500	7	117	173
DH515064	6.4		.2520	7	117	173
DH515065	6.5		.2559	7	117	173
DH515206L	6.528	F	.2570	7	126	182
DH515066	6.6		.2598	7	126	182
DH515067	6.7		.2638	7	126	182
DH515017F	6.746	17/64	.2656	7	126	182
DH515068	6.8		.2677	7	126	182
DH515069	6.9		.2717	7	126	182
DH515209L	6.909	I	.2720	7	126	182
DH515070	7.0		.2756	7	126	182
DH515071	7.1		.2795	8	135	192
DH515018F	7.142	9/32	.2812	8	135	192
DH515072	7.2		.2835	8	135	192
DH515073	7.3		.2874	8	135	192
DH515074	7.4		.2913	8	135	192
DH515075	7.5		.2953	8	135	192

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○		○	○				◎	○	◎	○	◎	○

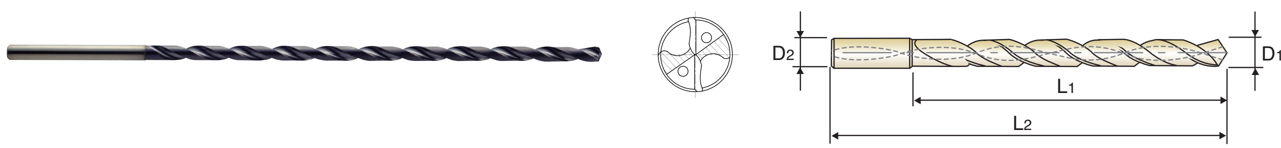
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

DREAM DRILLS MQL TYPE

DH515 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (15XD)

- ▶4-Facet Point for good centering capability
- ▶Optimized special flutes are ideal for removing chips and for productive drilling
- ▶Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶MQL system compatible (Minimum Quantity Lubrication)



CARBIDE | 30° | h6 | h7 | 140° | 20 bar | TiAlN | p.A174

EXTRA LONG
15 x D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH515019F	7.541	19/64	.2969	8	144	201
DH515076	7.6		.2992	8	144	201
DH515077	7.7		.3031	8	144	201
DH515078	7.8		.3071	8	144	201
DH515079	7.9		.3110	8	144	201
DH515020F	7.938	5/16	.3125	8	144	201
DH515080	8.0		.3150	8	144	201
DH515081	8.1		.3189	9	153	211
DH515082	8.2		.3228	9	153	211
DH515083	8.3		.3268	9	153	211
DH515021F	8.334	21/64	.3281	9	153	211
DH515084	8.4		.3307	9	153	211
DH515217L	8.433	Q	.3320	9	153	211
DH515085	8.5		.3346	9	153	211
DH515086	8.6		.3386	9	162	220
DH515087	8.7		.3425	9	162	220
DH515022F	8.733	11/32	.3438	9	162	220
DH515088	8.8		.3465	9	162	220
DH515089	8.9		.3504	9	162	220
DH515090	9.0		.3543	9	162	220
DH515091	9.1		.3583	10	171	229
DH515023F	9.129	23/64	.3594	10	171	229
DH515092	9.2		.3622	10	171	229
DH515093	9.3		.3661	10	171	229
DH515221L	9.347	U	.3680	10	171	229
DH515094	9.4		.3701	10	171	229

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH515095	9.5		.3740	10	171	229
DH515024F	9.525	3/8	.3750	10	180	238
DH515096	9.6		.3780	10	180	238
DH515097	9.7		.3819	10	180	238
DH515098	9.8		.3858	10	180	238
DH515099	9.9		.3898	10	180	238
DH515025F	9.921	25/64	.3906	10	180	238
DH515100	10.0		.3937	10	180	238
DH515101	10.1		.3976	11	189	253
DH515102	10.2		.4016	11	189	253
DH515103	10.3		.4055	11	189	253
DH515026F	10.318	13/32	.4062	11	189	253
DH515104	10.4		.4094	11	189	253
DH515105	10.5		.4134	11	189	253
DH515106	10.6		.4173	11	198	262
DH515107	10.7		.4213	11	198	262
DH515027F	10.716	27/64	.4219	11	198	262
DH515108	10.8		.4252	11	198	262
DH515109	10.9		.4291	11	198	262
DH515110	11.0		.4331	11	198	262
DH515111	11.1		.4370	12	207	272
DH515028F	11.113	7/16	.4375	12	207	272
DH515112	11.2		.4409	12	207	272
DH515113	11.3		.4449	12	207	272
DH515114	11.4		.4488	12	207	272
DH515115	11.5		.4527	12	207	272

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○		○	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

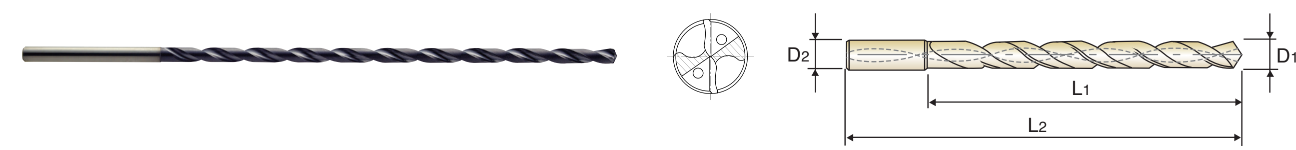
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

DREAM DRILLS MQL TYPE

DH515 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (15XD)

- ▶4-Facet Point for good centering capability
- ▶Optimized special flutes are ideal for removing chips and for productive drilling
- ▶Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶MQL system compatible (Minimum Quantity Lubrication)



CARBIDE | 30° | h6 | h7 | 140° | 20 bar | TiAlN | p.A174

EXTRA LONG
15 x D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH515029F	11.509	29/64	.4531	12	216	281
DH515116	11.6		.4567	12	216	281
DH515117	11.7		.4606	12	216	281
DH515118	11.8		.4646	12	216	281
DH515119	11.9		.4685	12	216	281
DH515030F	11.908	15/32	.4688	12	216	281
DH515120	12.0		.4724	12	216	281
DH515121	12.1		.4764	13	225	291
DH515122	12.2		.4803	13	225	291
DH515123	12.3		.4843	13	225	291
DH515031F	12.304	31/64	.4844	13	225	291
DH515124	12.4		.4882	13	225	291
DH515125	12.5		.4921	13	225	291
DH515126	12.6		.4961	13	234	300

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH515127	12.7	1/2	.5000	13	234	300
DH515128	12.8		.5039	13	234	300
DH515129	12.9		.5079	13	234	300
DH515130	13.0		.5118	13	234	300
DH515131	13.1		.5157	14	243	310
DH515132	13.2		.5197	14	243	310
DH515133	13.3		.5236	14	243	310
DH515134	13.4		.5276	14	243	310
DH515135	13.5		.5314	14	243	310
DH515136	13.6		.5354	14	252	319
DH515137	13.7		.5394	14	252	319
DH515138	13.8		.5433	14	252	319
DH515139	13.9		.5472	14	252	319
DH515140	14.0		.5512	14	252	319

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○		○	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

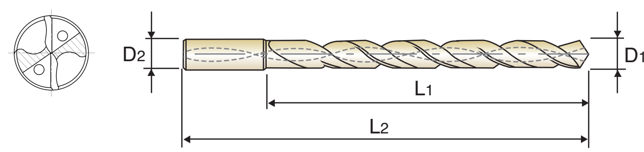
DREAM DRILLS MQL TYPE

DH520 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS

MQL with Coolant Holes (20XD)

- ▶4-Facet Point for good centering capability
- ▶Optimized special flutes are ideal for removing chips and for productive drilling
- ▶Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶MQL system compatible (Minimum Quantity Lubrication)



CARBIDE 30° h6 h7 140° 20 bar TiAlN p.A174

EXTRA LONG

20 × D

Unit : mm

EDP No.	Drill Diameter Metric	Inch	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH520030	3.0		.1181	3	69	120
DH520031	3.1		.1220	4	81	132
DH520008F	3.175	1/8	.1250	4	81	132
DH520032	3.2		.1260	4	81	132
DH520033	3.3		.1299	4	81	132
DH520034	3.4		.1339	4	81	132
DH520035	3.5		.1378	4	81	132
DH520036	3.6		.1417	4	92	143
DH520037	3.7		.1457	4	92	143
DH520038	3.8		.1496	4	92	143
DH520039	3.9		.1535	4	92	143
DH520040	4.0		.1575	4	92	143
DH520041	4.1		.1614	5	104	157
DH520042	4.2		.1654	5	104	157
DH520043	4.3		.1693	5	104	157
DH520044	4.4		.1732	5	104	157
DH520045	4.5		.1772	5	104	157
DH520046	4.6		.1811	5	115	168
DH520047	4.7		.1850	5	115	168
DH520048	4.8		.1890	5	115	168
DH520049	4.9		.1929	5	115	168
DH520050	5.0		.1969	5	115	168
DH520051	5.1		.2008	6	127	182
DH520052	5.2		.2047	6	127	182
DH520053	5.3		.2087	6	127	182
DH520054	5.4		.2126	6	127	182
DH520055	5.5		.2165	6	127	182
DH520056	5.6		.2205	6	138	193

EDP No.	Drill Diameter Metric	Inch	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH520057	5.7		.2244	6	138	193
DH520058	5.8		.2283	6	138	193
DH520059	5.9		.2323	6	138	193
DH520060	6.0		.2362	6	138	193
DH520061	6.1		.2402	7	150	206
DH520062	6.2		.2441	7	150	206
DH520063	6.3		.2480	7	150	206
DH520016F	6.350	1/4	.2500	7	150	206
DH520064	6.4		.2520	7	150	206
DH520065	6.5		.2559	7	150	206
DH520206L	6.528	F	.2570	7	161	217
DH520066	6.6		.2598	7	161	217
DH520067	6.7		.2638	7	161	217
DH520017F	6.746	17/64	.2656	7	161	217
DH520068	6.8		.2677	7	161	217
DH520069	6.9		.2717	7	161	217
DH520209L	6.909	I	.2720	7	161	217
DH520070	7.0		.2756	7	161	217
DH520071	7.1		.2795	8	173	230
DH520018F	7.142	9/32	.2812	8	173	230
DH520072	7.2		.2835	8	173	230
DH520073	7.3		.2874	8	173	230
DH520074	7.4		.2913	8	173	230
DH520075	7.5		.2953	8	173	230
DH520019F	7.541	19/64	.2969	8	184	241
DH520076	7.6		.2992	8	184	241
DH520077	7.7		.3031	8	184	241
DH520078	7.8		.3071	8	184	241

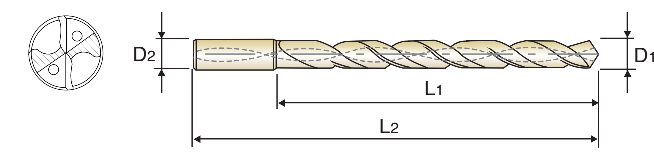
▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○		○	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

DREAM DRILLS MQL TYPE
DH520 SERIES
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (20XD)
▶4-Facet Point for good centering capability
▶Optimized special flutes are ideal for removing chips and for productive drilling
▶Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
▶MQL system compatible (Minimum Quantity Lubrication)



CARBIDE 30° h6 h7 140° 20 bar TiAlN p.A174
EXTRA LONG
20 × D

Unit : mm

EDP No.	Drill Diameter Metric	Inch	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH520079	7.9		.3110	8	184	241
DH520020F	7.938	5/16	.3125	8	184	241
DH520080	8.0		.3150	8	184	241
DH520081	8.1		.3189	9	196	254
DH520082	8.2		.3228	9	196	254
DH520083	8.3		.3268	9	196	254
DH520021F	8.334	21/64	.3281	9	196	254
DH520084	8.4		.3307	9	196	254
DH520217L	8.433	Q	.3320	9	196	254
DH520085	8.5		.3346	9	196	254
DH520086	8.6		.3386	9	207	265
DH520087	8.7		.3425	9	207	265
DH520022F	8.733	11/32	.3438	9	207	265
DH520088	8.8		.3465	9	207	265
DH520089	8.9		.3504	9	207	265
DH520090	9.0		.3543	9	207	265
DH520091	9.1		.3583	10	219	277
DH520023F	9.129	23/64	.3594	10	219	277
DH520092	9.2		.3622	10	219	277
DH520093	9.3		.3661	10	219	277
DH520221L	9.347	U	.3680	10	219	277
DH520094	9.4		.3701	10	219	277
DH520095	9.5		.3740	10	219	277
DH520024F	9.525	3/8	.3750	10	230	288
DH520096	9.6		.3780	10	230	288
DH520097	9.7		.3819	10	230	288
DH520098	9.8		.3858	10	230	288
DH520099	9.9		.3898	10	230	288

EDP No.	Drill Diameter Metric	Inch	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH520025F	9.921	25/64	.3906	10	230	288
DH520100	10.0		.3937	10	230	288
DH520101	10.1		.3976	11	242	306
DH520102	10.2		.4016	11	242	306
DH520103	10.3		.4055	11	242	306
DH520026F	10.318	13/32	.4062	11	242	306
DH520104	10.4		.4094	11	242	306
DH520105	10.5		.4134	11	242	306
DH520106	10.6		.4173	11	253	317
DH520107	10.7		.4213	11	253	317
DH520027F	10.716	27/64	.4219	11	253	317
DH520108	10.8		.4252	11	253	317
DH520109	10.9		.4291	11	253	317
DH520110	11.0		.4331	11	253	317
DH520111	11.1		.4370	12	265	330
DH520028F	11.113	7/16	.4375	12	265	330
DH520112	11.2		.4409	12	265	330
DH520113	11.3		.4449	12	265	330
DH520114	11.4		.4488	12	265	330
DH520115	11.5		.4527	12	265	330
DH520029F	11.509	29/64	.4531	12	276	341
DH520116	11.6		.4567	12	276	341
DH520117	11.7		.4606	12	276	341
DH520118	11.8		.4646	12	276	341
DH520119	11.9		.4685	12	276	341
DH520030F	11.908	15/32	.4688	12	276	341
DH520120	12.0		.4724	12	276	341

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○		○	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

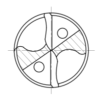
YG DREAM DRILLS MQL TYPE

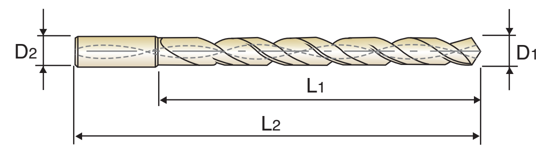
DHM10 SERIES
DHM15 SERIES

TiAIN-COATED SOLID CARBIDE DREAM DRILLS

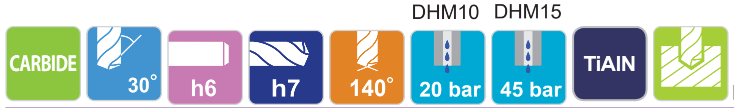
MQL with Coolant Holes (10XD, 15XD)

- ▶4-Facet Point for good centering capability
- ▶Optimized special flutes are ideal for removing chips and for productive drilling
- ▶Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶MQL system compatible (Minimum Quantity Lubrication)





DHM10 DHM15



p.A174

EXTRA LONG

10×D (DHM10) | 15×D (DHM15)

10XD

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Metric	Decimal			
TiAlN	D1		D2	L1	L2
DHM10030	3.0	.1181	6	40	80
DHM10033	3.3	.1299	6	47	87
DHM10035	3.5	.1378	6	47	87
DHM10040	4.0	.1575	6	53	93
DHM10042	4.2	.1654	6	60	100
DHM10045	4.5	.1772	6	60	100
DHM10050	5.0	.1969	6	66	106
DHM10055	5.5	.2165	6	73	113
DHM10060	6.0	.2362	6	79	119
DHM10065	6.5	.2559	8	86	126
DHM10068	6.8	.2677	8	92	132
DHM10070	7.0	.2756	8	92	132
DHM10075	7.5	.2953	8	99	139
DHM10080	8.0	.3150	8	105	145
DHM10085	8.5	.3346	10	112	156
DHM10090	9.0	.3543	10	118	162
DHM10095	9.5	.3740	10	126	170
DHM10100	10.0	.3937	10	132	176
DHM10105	10.5	.4134	12	139	188
DHM10110	11.0	.4330	12	145	194
DHM10115	11.5	.4527	12	152	201
DHM10120	12.0	.4724	12	158	207
DHM10125	12.5	.4921	14	165	214
DHM10130	13.0	.5118	14	171	220
DHM10135	13.5	.5314	14	178	227
DHM10140	14.0	.5512	14	184	233

15XD

Unit : mm

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Metric	Decimal			
TiAlN	D1		D2	L1	L2
DHM15030	3.0	.1181	6	55	95
DHM15035	3.5	.1378	6	64	104
DHM15040	4.0	.1575	6	73	113
DHM15045	4.5	.1772	6	82	122
DHM15050	5.0	.1969	6	91	131
DHM15055	5.5	.2165	6	100	140
DHM15060	6.0	.2362	6	109	149
DHM15070	7.0	.2756	8	127	167
DHM15080	8.0	.3150	8	145	185
DHM15090	9.0	.3543	10	163	207
DHM15100	10.0	.3937	10	182	226
DHM15110	11.0	.4330	12	200	249
DHM15120	12.0	.4724	12	218	267

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○		○	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

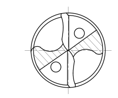
YG DREAM DRILLS MQL TYPE

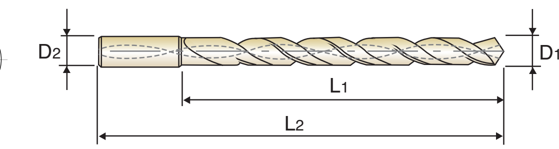
DHM20 SERIES

TiAIN-COATED SOLID CARBIDE DREAM DRILLS

MQL with Coolant Holes (20XD)

- ▶4-Facet Point for good centering capability
- ▶Optimized special flutes are ideal for removing chips and for productive drilling
- ▶Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶MQL system compatible (Minimum Quantity Lubrication)





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EXTRA LONG

20×D (DHM20)

20XD

Unit : mm

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Metric	Decimal			
TiAlN	D1		D2	L1	L2
DHM20030	3.0	.1181	6	70	110
DHM20035	3.5	.1378	6	82	122
DHM20040	4.0	.1575	6	93	133
DHM20045	4.5	.1772	6	105	145
DHM20050	5.0	.1969	6	116	156
DHM20055	5.5	.2165	6	128	168
DHM20060	6.0	.2362	6	139	179
DHM20070	7.0	.2756	8	162	202
DHM20080	8.0	.3150	8	185	225
DHM20090	9.0	.3543	10	208	252
DHM20100	10.0	.3937	10	232	276
DHM20110	11.0	.4330	12	255	304
DHM20120	12.0	.4724	12	278	327

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○		○	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

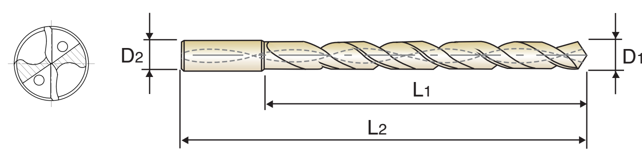
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

DREAM DRILLS MQL TYPE

DHM25 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (25XD)

- ▶4-Facet Point for good centering capability
- ▶Optimized special flutes are ideal for removing chips and for productive drilling
- ▶Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶MQL system compatible (Minimum Quantity Lubrication)



CARBIDE | 30° | h6 | h7 | 140° | 45 bar | TiAlN | p.A174

EXTRA LONG
25×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DHM25030	3.0		.1181	6	85	125
DHM25031	3.1		.1220	6	99	139
DHM25008F	3.175	1/8	.1250	6	99	139
DHM25032	3.2		.1260	6	99	139
DHM25033	3.3		.1299	6	99	139
DHM25034	3.4		.1339	6	99	139
DHM25035	3.5		.1378	6	99	139
DHM25036	3.6		.1417	6	113	153
DHM25037	3.7		.1457	6	113	153
DHM25038	3.8		.1496	6	113	153
DHM25039	3.9		.1535	6	113	153
DHM25040	4.0		.1575	6	113	153
DHM25041	4.1		.1614	6	127	167
DHM25042	4.2		.1654	6	127	167
DHM25043	4.3		.1693	6	127	167
DHM25044	4.4		.1732	6	127	167
DHM25045	4.5		.1772	6	127	167
DHM25046	4.6		.1811	6	141	181
DHM25047	4.7		.1850	6	141	181
DHM25048	4.8		.1890	6	141	181
DHM25049	4.9		.1929	6	141	181
DHM25050	5.0		.1969	6	141	181
DHM25051	5.1		.2008	6	155	195
DHM25052	5.2		.2047	6	155	195
DHM25053	5.3		.2087	6	155	195
DHM25054	5.4		.2126	6	155	195

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DHM25055	5.5		.2165	6	155	195
DHM25056	5.6		.2205	6	169	209
DHM25057	5.7		.2244	6	169	209
DHM25058	5.8		.2283	6	169	209
DHM25059	5.9		.2323	6	169	209
DHM25060	6.0		.2362	6	169	209
DHM25061	6.1		.2402	8	183	223
DHM25062	6.2		.2441	8	183	223
DHM25063	6.3		.2480	8	183	223
DHM25016F	6.350	1/4	.2500	8	183	223
DHM25064	6.4		.2520	8	183	223
DHM25065	6.5		.2559	8	183	223
DHM25206L	6.528	F	.2570	8	197	237
DHM25066	6.6		.2598	8	197	237
DHM25067	6.7		.2638	8	197	237
DHM25017F	6.746	17/64	.2656	8	197	237
DHM25068	6.8		.2677	8	197	237
DHM25069	6.9		.2717	8	197	237
DHM25209L	6.909	I	.2720	8	197	237
DHM25070	7.0		.2756	8	197	237
DHM25071	7.1		.2795	8	211	251
DHM25018F	7.142	9/32	.2812	8	211	251
DHM25072	7.2		.2835	8	211	251
DHM25073	7.3		.2874	8	211	251
DHM25074	7.4		.2913	8	211	251
DHM25075	7.5		.2953	8	211	251

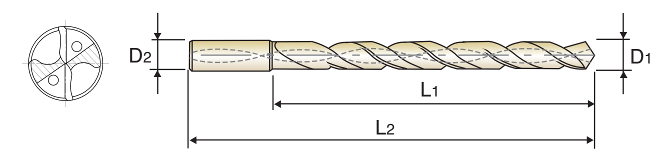
▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○		○	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

DREAM DRILLS MQL TYPE
DHM25 SERIES
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (25XD)
▶4-Facet Point for good centering capability
▶Optimized special flutes are ideal for removing chips and for productive drilling
▶Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
▶MQL system compatible (Minimum Quantity Lubrication)



CARBIDE | 30° | h6 | h7 | 140° | 45 bar | TiAlN | p.A174
EXTRA LONG
25×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DHM25019F	7.541	19/64	.2969	8	225	265
DHM25076	7.6		.2992	8	225	265
DHM25077	7.7		.3031	8	225	265
DHM25078	7.8		.3071	8	225	265
DHM25079	7.9		.3110	8	225	265
DHM25020F	7.938	5/16	.3125	8	225	265
DHM25080	8.0		.3150	8	225	265
DHM25081	8.1		.3189	10	239	283
DHM25082	8.2		.3228	10	239	283
DHM25083	8.3		.3268	10	239	283
DHM25021F	8.334	21/64	.3281	10	239	283
DHM25084	8.4		.3307	10	239	283
DHM25217L	8.433	Q	.3320	10	239	283
DHM25085	8.5		.3346	10	239	283
DHM25086	8.6		.3386	10	253	297
DHM25087	8.7		.3425	10	253	297
DHM25022F	8.733	11/32	.3438	10	253	297

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DHM25088	8.8		.3465	10	253	297
DHM25089	8.9		.3504	10	253	297
DHM25090	9.0		.3543	10	253	297
DHM25091	9.1		.3583	10	268	312
DHM25023F	9.129	23/64	.3594	10	268	312
DHM25092	9.2		.3622	10	268	312
DHM25093	9.3		.3661	10	268	312
DHM25221L	9.347	U	.3680	10	268	312
DHM25094	9.4		.3701	10	268	312
DHM25095	9.5		.3740	10	268	312
DHM25024F	9.525	3/8	.3750	10	282	326
DHM25096	9.6		.3780	10	282	326
DHM25097	9.7		.3819	10	282	326
DHM25098	9.8		.3858	10	282	326
DHM25099	9.9		.3898	10	282	326
DHM25025F	9.921	25/64	.3906	10	282	326
DHM25100	10.0		.3937	10	282	326

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○		○	○				◎	○	◎	○	◎	○

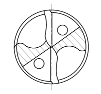
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

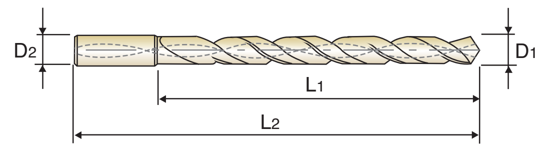
DREAM DRILLS MQL TYPE

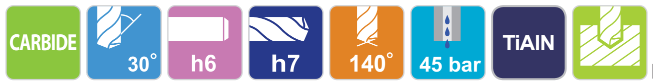
DHM30 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (30XD)

- ▶4-Facet Point for good centering capability
- ▶Optimized special flutes are ideal for removing chips and for productive drilling
- ▶Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶MQL system compatible (Minimum Quantity Lubrication)







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EXTRA LONG
30 × D

Unit : mm

EDP No.	Drill Diameter Metric	Inch	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DHM30030	3.0		.1181	6	100	140
DHM30031	3.1		.1220	6	117	157
DHM30008F	3.175	1/8	.1250	6	117	157
DHM30032	3.2		.1260	6	117	157
DHM30033	3.3		.1299	6	117	157
DHM30034	3.4		.1339	6	117	157
DHM30035	3.5		.1378	6	117	157
DHM30036	3.6		.1417	6	133	173
DHM30037	3.7		.1457	6	133	173
DHM30038	3.8		.1496	6	133	173
DHM30039	3.9		.1535	6	133	173
DHM30040	4.0		.1575	6	133	173
DHM30041	4.1		.1614	6	150	190
DHM30042	4.2		.1654	6	150	190
DHM30043	4.3		.1693	6	150	190
DHM30044	4.4		.1732	6	150	190
DHM30045	4.5		.1772	6	150	190
DHM30046	4.6		.1811	6	166	206
DHM30047	4.7		.1850	6	166	206
DHM30048	4.8		.1890	6	166	206
DHM30049	4.9		.1929	6	166	206
DHM30050	5.0		.1969	6	166	206
DHM30051	5.1		.2008	6	183	223
DHM30052	5.2		.2047	6	183	223
DHM30053	5.3		.2087	6	183	223
DHM30054	5.4		.2126	6	183	223
DHM30055	5.5		.2165	6	183	223
DHM30056	5.6		.2205	6	199	239
DHM30057	5.7		.2244	6	199	239
DHM30058	5.8		.2283	6	199	239
DHM30059	5.9		.2323	6	199	239
DHM30060	6.0		.2362	6	199	239
DHM30061	6.1		.2402	8	216	256
DHM30062	6.2		.2441	8	216	256
DHM30063	6.3		.2480	8	216	256
DHM30016F	6.350	1/4	.2500	8	216	256
DHM30064	6.4		.2520	8	216	256
DHM30065	6.5		.2559	8	216	256
DHM30206L	6.528	F	.2570	8	232	272
DHM30066	6.6		.2598	8	232	272
DHM30067	6.7		.2638	8	232	272
DHM30017F	6.746	17/64	.2656	8	232	272
DHM30068	6.8		.2677	8	232	272
DHM30069	6.9		.2717	8	232	272
DHM30209L	6.909	I	.2720	8	232	272
DHM30070	7.0		.2756	8	232	272
DHM30071	7.1		.2795	8	249	289
DHM30018F	7.142	9/32	.2812	8	249	289
DHM30072	7.2		.2835	8	249	289
DHM30073	7.3		.2874	8	249	289
DHM30074	7.4		.2913	8	249	289
DHM30075	7.5		.2953	8	249	289

▶ NEXT PAGE

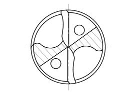
◎ : Excellent ○ : Good

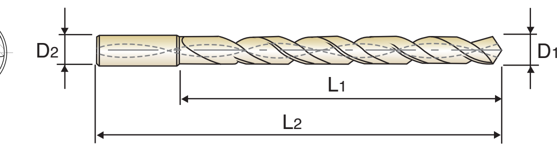
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○		○	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

DREAM DRILLS MQL TYPE
DHM30 SERIES
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (30XD)
▶4-Facet Point for good centering capability
▶Optimized special flutes are ideal for removing chips and for productive drilling
▶Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
▶MQL system compatible (Minimum Quantity Lubrication)





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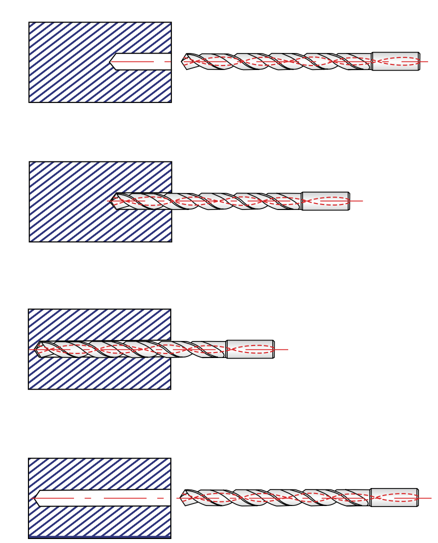
EXTRA LONG
30 × D

Unit : inch

EDP No.	Drill Diameter Metric	Inch	Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DHM30019F	7.541	19/64	.2969	8	265	305
DHM30076	7.6		.2992	8	265	305
DHM30077	7.7		.3031	8	265	305
DHM30078	7.8		.3071	8	265	305
DHM30079	7.9		.3110	8	265	305
DHM30020F	7.938	5/16	.3125	8	265	305
DHM30080	8.0		.3150	8	265	305

▶ Made to order in depth 35xD(Ø3-Ø6) & 40xD(Ø3-Ø6)



1. Guide Drilling should be done as Diameter +0.01~+0.1mm between 3xD and 5xD depth.
2. For Main Drilling, proceed with low RPM at Guide Drilling segment.
   (RPM 300, FEED 400mm/min)
3. Just before the end of Guide Drilling segment, reduce feed to zero and increase the RPM according to Recommended Cutting Condition chart (See above).
4. After then, proceed main drilling by increasing feed without step drilling.
5. When coming out from Guide Drilling start point after drilling, RPM should be reduced as 300 and feed should be 1000 mm/min.
6. When coming out from Guide Drilling segment to the outside, the feed should be decreased as 50%.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○		○	○				◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

YG DREAM DRILLS MQL TYPE

RECOMMENDED CUTTING CONDITIONS

DH510, DH515, DH520, DHM10, DHM15, DHM20, DHM25, DHM30 SERIES

with COOLANT HOLES

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM 10xD ~20xD	SFM 25xD ~30xD	Drill Diameter									
					METRIC	3.0, -	4.0, -	-, 5.0	6.0, -	-, 8.0	-, 10.0	12.0	-	14.0
					FRACTIONAL	-, 1/8	-	3/16, -	-, 1/4	5/16, -	3/8, -	-	1/2	-
					DECIMAL	.1181, .1250	.1575	.1875, .1969	.2362, .2500	.3125, .3150	.3750, .3937	.4724	.5000	.5512
P	1	Non-alloy steel	395	329	RPM(10xD~20xD)	12730	9550	7640	6370	4770	3820	3180	3020	2730
					RPM(25xD~30xD)	10610	7960	6370	5310	3980	3180	2650	2510	2270
					FEED	.0031 - .0047	.0039 - .0055	.0047 - .0071	.0055 - .0079	.0071 - .0094	.0079 - .0102	.0087 - .0102	.0087 - .0102	.0098 - .0122
	2		329	263	RPM(10xD~20xD)	10610	7960	6370	5310	3980	3180	2650	2510	2270
					RPM(25xD~30xD)	8490	6370	5090	4240	3180	2550	2120	2010	1820
					FEED	.0031 - .0047	.0039 - .0055	.0047 - .0071	.0055 - .0079	.0071 - .0094	.0079 - .0102	.0087 - .0102	.0087 - .0102	.0098 - .0122
	3		263	214	RPM(10xD~20xD)	8490	6370	5090	4240	3180	2550	2120	2010	1820
					RPM(25xD~30xD)	6900	5170	4140	3450	2590	2070	1720	1630	1480
					FEED	.0024 - .0039	.0031 - .0047	.0039 - .0063	.0047 - .0071	.0055 - .0079	.0063 - .0087	.0071 - .0094	.0071 - .0094	.0079 - .0102
	6	Low alloy steel	329	329	RPM(10xD~20xD)	10610	7960	6370	5310	3980	3180	2650	2510	2270
					RPM(25xD~30xD)	10610	7960	6370	5310	3980	3180	2650	2510	2270
					FEED	.0031 - .0047	.0039 - .0055	.0047 - .0071	.0055 - .0079	.0071 - .0094	.0079 - .0102	.0087 - .0102	.0087 - .0102	.0098 - .0122
	7		230	197	RPM(10xD~20xD)	7430	5570	4460	3710	2790	2230	1860	1760	1590
					RPM(25xD~30xD)	6370	4770	3820	3180	2390	1910	1590	1510	1360
					FEED	.0024 - .0039	.0031 - .0047	.0039 - .0063	.0047 - .0071	.0055 - .0079	.0063 - .0087	.0071 - .0094	.0071 - .0094	.0079 - .0102
	8		181	165	RPM(10xD~20xD)	5840	4380	3500	2920	2190	1750	1460	1380	1250
					RPM(25xD~30xD)	5310	3980	3180	2650	1990	1590	1330	1260	1140
					FEED	.0024 - .0039	.0031 - .0047	.0039 - .0063	.0047 - .0071	.0055 - .0079	.0063 - .0087	.0071 - .0094	.0071 - .0094	.0079 - .0102
	10	High alloyed steel, and tool steel	197	165	RPM(10xD~20xD)	6370	4770	3820	3180	2390	1910	1590	1510	1360
					RPM(25xD~30xD)	5310	3980	3180	2650	1990	1590	1330	1260	1140
					FEED	.0020 - .0035	.0028 - .0043	.0031 - .0055	.0039 - .0063	.0047 - .0071	.0055 - .0079	.0063 - .0087	.0063 - .0087	.0071 - .0094
	11		165	148	RPM(10xD~20xD)	5310	3980	3180	2650	1990	1590	1330	1260	1140
					RPM(25xD~30xD)	4770	3580	2860	2390	1790	1430	1190	1130	1020
					FEED	.0016 - .0031	.0024 - .0039	.0028 - .0051	.0031 - .0055	.0039 - .0063	.0047 - .0071	.0051 - .0075	.0051 - .0075	.0059 - .0083
K	15	Grey cast iron	296	247	RPM(10xD~20xD)	9550	7160	5730	4770	3580	2860	2390	2260	2050
					RPM(25xD~30xD)	7960	5970	4770	3980	2980	2390	1990	1890	1710
					FEED	.0039 - .0055	.0047 - .0063	.0067 - .0091	.0075 - .0098	.0087 - .0110	.0094 - .0118	.0110 - .0134	.0110 - .0134	.0118 - .0142
	16		230	197	RPM(10xD~20xD)	7430	5570	4460	3710	2790	2230	1860	1760	1590
					RPM(25xD~30xD)	6370	4770	3820	3180	2390	1910	1590	1510	1360
					FEED	.0039 - .0055	.0047 - .0063	.0067 - .0091	.0075 - .0098	.0087 - .0110	.0094 - .0118	.0110 - .0134	.0110 - .0134	.0118 - .0142
	17	Nodular cast iron	329	263	RPM(10xD~20xD)	10610	7960	6370	5310	3980	3180	2650	2510	2270
					RPM(25xD~30xD)	8490	6370	5090	4240	3180	2550	2120	2010	1820
					FEED	.0039 - .0055	.0047 - .0063	.0067 - .0091	.0075 - .0098	.0087 - .0110	.0094 - .0118	.0110 - .0134	.0110 - .0134	.0118 - .0142
	18		230	197	RPM(10xD~20xD)	7430	5570	4460	3710	2790	2230	1860	1760	1590
					RPM(25xD~30xD)	6370	4770	3820	3180	2390	1910	1590	1510	1360
					FEED	.0031 - .0047	.0039 - .0055	.0047 - .0071	.0055 - .0079	.0071 - .0094	.0079 - .0102	.0087 - .0102	.0087 - .0102	.0098 - .0122
	19	Malleable cast iron	263	214	RPM(10xD~20xD)	8490	6370	5090	4240	3180	2550	2120	2010	1820
					RPM(25xD~30xD)	6900	5170	4140	3450	2590	2070	1720	1630	1480
					FEED	.0039 - .0055	.0047 - .0063	.0067 - .0091	.0075 - .0098	.0087 - .0110	.0094 - .0118	.0110 - .0134	.0110 - .0134	.0118 - .0142
	20		230	181	RPM(10xD~20xD)	7430	5570	4460	3710	2790	2230	1860	1760	1590
					RPM(25xD~30xD)	5840	4380	3500	2920	2190	1750	1460	1380	1250
					FEED	.0031 - .0047	.0039 - .0055	.0047 - .0071	.0055 - .0079	.0071 - .0094	.0079 - .0102	.0087 - .0102	.0087 - .0102	.0098 - .0122

Global Cutting Tool Leader **YG-1**

DREAM DRILLS

DREAM DRILLS
for HIGH HARDENED STEELS

- For High Hardened Steels (HRc 50 - 70)

SELECTION GUIDE

YG HOLEMAKING TOOLS

SERIES	DH501	DH500
DRILLING DEPTH	3XD	
TOOL MATERIAL	SOLID CARBIDE	
LENGTH	SHORT	
SIZE MIN	D1/8	D1.0
SIZE MAX	D3/4	D14.0
PAGE	A179	A181
SURFACE TREATMENT	TiAlN	

SOLID CARBIDE DREAM DRILLS for HIGH HARDENED STEELS

- For aluminum and aluminum alloys

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A182

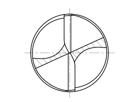
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	DH501	DH500
P	1	Non-alloy steel	About 0.15% C	Annealed	125			
	2		About 0.45% C	Annealed	190	13		
	3		About 0.45% C	Quenched & Tempered	250	25		
	4		About 0.75% C	Annealed	270	28		
	5		About 0.75% C	Quenched & Tempered	300	32		
	6	Low alloy steel		Annealed	180	10		
	7			Quenched & Tempered	275	29		
	8			Quenched & Tempered	300	32		
	9			Quenched & Tempered	350	38		
	10	High alloyed steel, and tool steel		Annealed	200	15		
	11			Quenched & Tempered	325	35		
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15		
	13		Martensitic	Quenched & Tempered	240	23		
	14		Austenitic		180	10		
K	15	Grey cast iron	Pearlitic / ferritic		180	10		
	16		Pearlitic (Martensitic)		260	26		
	17	Nodular cast iron	Ferritic		160	3		
	18		Pearlitic		250	25		
	19	Malleable cast iron	Ferritic		130			
	20		Pearlitic		230	21		
N	21	Aluminum-wrought alloy	Not Curable		60			
	22		Curable	Hardened	100			
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75			
	24		≤ 12% Si, Curable	Hardened	90			
	25		> 12% Si, Not Curable		130			
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110			
	27		CuZn, CuSnZn (Brass)		90			
	28		CuSn, lead-free copper and electrolytic copper		100			
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.	Duroplastic, Fiber Reinforced Plastic					
	30		Rubber, Wood, etc.					
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15		
	32			Cured	280	30		
	33		Ni or Co Based	Annealed	250	25		
	34			Cured	350	38		
	35			Cast	320	34		
	36	Titanium Alloys	Pure Titanium		400 Rm			
	37		Alpha + Beta Alloys	Hardened	1050 Rm			
H	38	Hardened steel		Hardened	550	55	◎	◎
	39			Hardened	630	60	◎	◎
	40	Chilled Cast Iron		Cast	400	42		
	41	Hardened Cast Iron		Hardened	550	55		

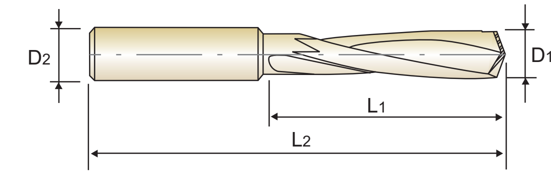
DREAM DRILLS for HIGH HARDENED STEELS

DH501 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
for High Hardened Steels (HRc50~70)

- ▶Drilling for High Hardened Steels; Quenched Steels, Tempered Steels (under HRc 70)
- ▶Special geometry design for Hardened Steels
- ▶Minimum of cutting load through special thinning
- ▶Performing good chip removal and powerful drilling
- ▶Tolerance : Dia. Tolerance ØD1: See page A405





CARBIDE 15° h6 h7 140° TiAlN p.A182

Unit : inch

EDP No.	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1		D2	L1	L2
DH501001	1/8	.1250	1/8	21/32	2
DH501002	#30	.1285	3/16	23/32	2
DH501003	#29	.1360	3/16	13/16	2
DH501004	#28	.1405	3/16	13/16	2
DH501005	9/64	.1406	3/16	13/16	2
DH501006	#27	.1440	3/16	13/16	2
DH501007	#26	.1470	3/16	13/16	2
DH501008	#25	.1495	3/16	7/8	2-1/16
DH501009	#24	.1520	3/16	7/8	2-1/16
DH501010	#23	.1540	3/16	7/8	2-1/16
DH501011	5/32	.1562	3/16	7/8	2-1/16
DH501012	#22	.1570	3/16	7/8	2-1/16
DH501013	#21	.1590	3/16	7/8	2-1/16
DH501014	#20	.1610	3/16	1	2-1/2
DH501015	#19	.1660	3/16	1	2-1/2
DH501016	11/64	.1719	3/16	1-1/8	2-3/4
DH501017	#15	.1800	3/16	1-1/8	2-3/4
DH501018	#14	.1820	3/16	1-1/8	2-3/4
DH501019	3/16	.1875	3/16	1-1/8	2-3/4
DH501020	#10	.1935	1/4	1-9/32	2-7/8
DH501021	#9	.1960	1/4	1-9/32	2-7/8
DH501022	#8	.1990	1/4	1-9/32	2-7/8
DH501023	#7	.2010	1/4	1-9/32	2-7/8
DH501024	13/64	.2031	1/4	1-9/32	2-7/8
DH501025	#6	.2040	1/4	1-9/32	2-7/8
DH501026	#5	.2055	1/4	1-9/32	2-7/8
DH501027	#4	.2090	1/4	1-9/32	2-7/8
DH501028	#3	.2130	1/4	1-13/32	3
DH501029	7/32	.2188	1/4	1-13/32	3
DH501030	#2	.2210	1/4	1-13/32	3
DH501031	#1	.2280	1/4	1-13/32	3
DH501032	15/64	.2344	1/4	1-13/32	3
DH501033	B	.2380	1/4	1-19/32	3-1/8
DH501034	C	.2420	1/4	1-19/32	3-1/8
DH501035	D	.2460	1/4	1-19/32	3-1/8
DH501036	1/4	.2500	1/4	1-19/32	3-1/8
DH501037	F	.2570	3/8	1-19/32	3-1/8
DH501038	G	.2610	3/8	1-19/32	3-1/8
DH501039	17/64	.2656	3/8	1-19/32	3-1/8
DH501040	I	.2720	3/8	1-25/32	3-3/8
DH501041	J	.2770	3/8	1-25/32	3-3/8
DH501042	9/32	.2812	3/8	1-25/32	3-3/8
DH501043	L	.2900	3/8	1-25/32	3-3/8
DH501044	M	.2950	3/8	1-25/32	3-3/8
DH501045	19/64	.2969	3/8	1-25/32	3-3/8
DH501046	N	.3020	3/8	1-31/32	3-7/8
DH501047	5/16	.3125	3/8	1-31/32	3-7/8
DH501048	O	.3160	3/8	1-31/32	3-7/8
DH501049	21/64	.3281	3/8	1-31/32	3-7/8
DH501050	Q	.3320	3/8	1-31/32	3-7/8
DH501051	R	.3390	3/8	2-1/4	4-1/8
DH501052	11/32	.3438	3/8	2-1/4	4-1/8

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

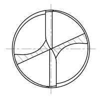
ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39.1	39.3	40	41
HRc											15	30	25	38	34			55	60	70	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630		400	550
Recommended																		◎	◎			

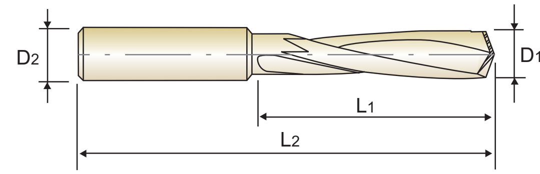
YG DREAM DRILLS for HIGH HARDENED STEELS

DH501 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
for High Hardened Steels (HRc50~70)

- Drilling for High Hardened Steels; Quenched Steels, Tempered Steels (under HRc 70)
- Special geometry design for Hardened Steels
- Minimum of cutting load through special thinning
- Performing good chip removal and powerful drilling
- Tolerance : Dia. Tolerance ØD1: See page A405





CARBIDE 15° h6 h7 140° TiAlN p.A182

Unit : inch

EDP No.	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1		D2	L1	L2
DH501053	23/64	.3594	3/8	2-1/4	4-1/8
DH501054	U	.3680	3/8	2-1/4	4-1/8
DH501055	3/8	.3750	3/8	2-1/4	4-1/8
DH501056	V	.3770	1/2	2-1/2	4-3/8
DH501057	25/64	.3906	1/2	2-1/2	4-3/8
DH501058	X	.3970	1/2	2-1/2	4-3/8
DH501059	Y	.4040	1/2	2-1/2	4-3/8
DH501060	13/32	.4062	1/2	2-1/2	4-3/8
DH501061	Z	.4130	1/2	2-1/2	4-3/8
DH501062	27/64	.4219	1/2	2-13/16	4-5/8
DH501063	7/16	.4375	1/2	2-13/16	4-5/8
DH501064	29/64	.4531	1/2	2-13/16	4-5/8
DH501065	15/32	.4688	1/2	2-13/16	4-5/8
DH501066	31/64	.4844	1/2	2-13/16	4-5/8
DH501067	1/2	.5000	1/2	3-1/16	5
DH501068	33/64	.5156	5/8	3-1/16	5
DH501069	17/32	.5312	5/8	3-1/16	5
DH501070	35/64	.5469	5/8	3-1/16	5
DH501071	9/16	.5625	5/8	3-1/16	5
DH501072	37/64	.5781	5/8	3-9/32	5-1/4
DH501073	19/32	.5937	5/8	3-9/32	5-1/4
DH501074	39/64	.6094	5/8	3-9/32	5-1/4
DH501075	5/8	.6250	5/8	3-9/32	5-1/4
DH501076	41/64	.6406	3/4	3-9/32	5-1/4
DH501077	21/32	.6563	3/4	3-11/16	5-5/8
DH501078	43/64	.6719	3/4	3-11/16	5-5/8
DH501079	11/16	.6875	3/4	3-11/16	5-5/8
DH501080	45/64	.7031	3/4	3-11/16	5-5/8
DH501081	23/32	.7188	3/4	3-3/4	6
DH501082	47/64	.7344	3/4	3-3/4	6
DH501083	3/4	.7500	3/4	3-3/4	6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

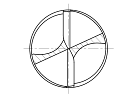
ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39.1	39.3	40	41
HRc											15	30	25	38	34			55	60	70	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630		400	550
Recommended																		◎	◎			

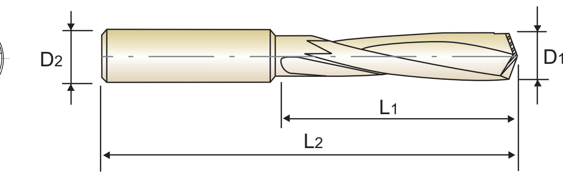
YG DREAM DRILLS for HIGH HARDENED STEELS

DH500 SERIES

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
for High Hardened Steels (HRc50~70)

- Drilling for High Hardened Steels; Quenched Steels, Tempered Steels (under HRc 70)
- Special geometry design for Hardened Steels
- Minimum of cutting load through special thinning
- Performing good chip removal and powerful drilling





CARBIDE 15° h6 h7 140° TiAlN p.A182

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1		D2	L1	L2
DH500010	1.0	.0394	3	6	40
DH500011	1.1	.0433	3	6	40
DH500012	1.2	.0472	3	6	40
DH500013	1.3	.0512	3	8	40
DH500014	1.4	.0551	3	8	40
DH500015	1.5	.0591	3	8	40
DH500016	1.6	.0630	3	10	40
DH500017	1.7	.0669	3	10	40
DH500018	1.8	.0709	3	10	40
DH500019	1.9	.0748	3	10	40
DH500020	2.0	.0787	3	12	42
DH500025	2.5	.0984	3	14	44
DH500026	2.6	.1024	3	16	44
DH500028	2.8	.1102	3	16	46
DH500030	3.0	.1181	3	18	46
DH500033	3.3	.1299	4	18	48
DH500034	3.4	.1339	4	20	50
DH500035	3.5	.1378	4	20	50
DH500038	3.8	.1496	4	22	52
DH500040	4.0	.1575	4	22	52
DH500041	4.1	.1614	6	25	65
DH500042	4.2	.1654	6	25	65
DH500043	4.3	.1693	6	28	68
DH500044	4.4	.1732	6	28	68
DH500045	4.5	.1772	6	28	68
DH500046	4.6	.1811	6	28	68
DH500048	4.8	.1890	6	32	72
DH500049	4.9	.1929	6	32	72
DH500050	5.0	.1969	6	32	72
DH500051	5.1	.2008	6	32	72
DH500052	5.2	.2047	6	32	72
DH500053	5.3	.2087	6	32	72
DH500055	5.5	.2165	6	35	75
DH500060	6.0	.2362	6	35	75
DH500062	6.2	.2441	8	40	80
DH500065	6.5	.2559	8	40	80
DH500068	6.8	.2677	8	45	85
DH500069	6.9	.2717	8	45	85
DH500070	7.0	.2756	8	45	85
DH500075	7.5	.2953	8	45	85
DH500080	8.0	.3150	8	50	98
DH500085	8.5	.3346	10	50	98
DH500086	8.6	.3386	10	57	105
DH500088	8.8	.3465	10	57	105
DH500090	9.0	.3543	10	57	105
DH500093	9.3	.3661	10	57	105
DH500095	9.5	.3740	10	57	105
DH500100	10.0	.3937	10	63	111
DH500102	10.2	.4016	12	63	111
DH500103	10.3	.4055	12	63	111
DH500105	10.5	.4134	12	71	111
DH500108	10.8	.4252	12	71	119
DH500110	11.0	.4331	12	71	119
DH500115	11.5	.4528	12	71	119
DH500120	12.0	.4724	12	71	119
DH500121	12.1	.4764	14	77	125
DH500140	14.0	.5512	14	77	125

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39.1	39.3	40	41
HRc											15	30	25	38	34			55	60	70	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630		400	550
Recommended																		◎	◎			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

DREAM DRILLS for HIGH HARDENED STEELS

RECOMMENDED CUTTING CONDITIONS

DH501, DH500 SERIES

without COOLANT HOLES

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM		Drill Diameter										
				METRIC	3.0	-	4.0	-	5.0	6.0	-	-	8.0	-	10.0
				FRACTIONAL	-	1/8	-	3/16	-	-	1/4	5/16	-	3/8	-
				DECIMAL	.1181	.1250	.1575	.1875	.1969	.2362	.2500	.3125	.3150	.3750	.3937
H	38	Hardened steel	66	RPM	2120		1590	1270		1060		800		640	
				FEED	.0004 - .0012		.0004 - .0016	.0004 - .0016		.0004 - .0020		.0004 - .0020		.0004 - .0020	
	39.1		49	RPM	1590		1190	950		800		600		480	
				FEED	.0004 - .0012		.0004 - .0016	.0004 - .0016		.0004 - .0020		.0004 - .0020		.0004 - .0020	
	39.3		39	RPM	1270		950	760		640		480		380	
				FEED	.0004 - .0012		.0004 - .0016	.0004 - .0016		.0004 - .0020		.0004 - .0020		.0004 - .0020	

ISO	VDI 3323	Material Description	SFM		Drill Diameter							
				METRIC	12.0	-	14.0	-	-	16.0	18.0	-
				FRACTIONAL	-	1/2	-	9/16	5/8	-	-	3/4
				DECIMAL	.4724	.5000	.5512	.5625	.6250	.6299	.7087	.7500
H	38	Hardened steel	66	RPM	530	504	450		403		356	336
				FEED	.0004 - .0024	.0004 - .0024	.0004 - .0024		.0004 - .0024		.0004 - .0024	.0004 - .0024
	39.1		49	RPM	400	374	340		299		299	250
				FEED	.0004 - .0024	.0004 - .0024	.0004 - .0024		.0004 - .0024		.0004 - .0024	.0004 - .0024
	39.3		39	RPM	320	298	270		238		238	199
				FEED	.0004 - .0024	.0004 - .0024	.0004 - .0024		.0004 - .0024		.0004 - .0024	.0004 - .0024

Being the best through innovation

SOLID CARBIDE

STANDARD CARBIDE DRILLS

- General Purpose
- 118° Point

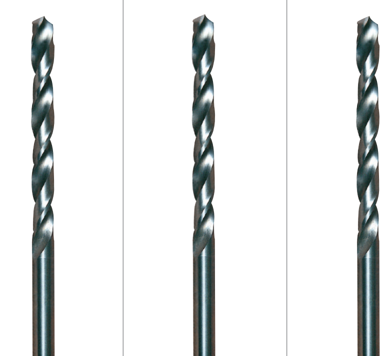
SELECTION GUIDE

YG HOLEMAKING TOOLS

SERIES	D5412 DH412	D5413 DH413	D5417 DH417
TOOL MATERIAL	SOLID CARBIDE		
LENGTH	JOBBER		
SIZE MIN	#60	A	D3/64
SIZE MAX	#1	Z	D1/2
PAGE	A185	A186	A187
SURFACE TREATMENT	Bright / TiAlN		

SOLID CARBIDE
STANDARD CARBIDE DRILLS

- General Purpose - 118° Point



Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A188

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	D5412 DH412	D5413 DH413	D5417 DH417
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	◎	◎
	2		About 0.45% C	Annealed	190	13	○	○	○
	3		About 0.45% C	Quenched & Tempered	250	25			
	4		About 0.75% C	Annealed	270	28			
	5		About 0.75% C	Quenched & Tempered	300	32			
	6	Low alloy steel		Annealed	180	10	○	○	○
	7			Quenched & Tempered	275	29			
	8			Quenched & Tempered	300	32			
	9			Quenched & Tempered	350	38			
	10	High alloyed steel, and tool steel		Annealed	200	15			
	11			Quenched & Tempered	325	35			
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○	○	○
	13		Martensitic	Quenched & Tempered	240	23			
	14		Austenitic		180	10			
K	15	Grey cast iron	Pearlitic / ferritic		180	10	○	○	○
	16		Pearlitic (Martensitic)		260	26			
	17	Nodular cast iron	Ferritic		160	3			
	18		Pearlitic		250	25			
	19	Malleable cast iron	Ferritic		130				
	20		Pearlitic		230	21			
N	21	Aluminum-wrought alloy	Not Curable		60		◎	◎	◎
	22		Curable	Hardened	100		◎	◎	◎
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		◎	◎	◎
	24		≤ 12% Si, Curable	Hardened	90		◎	◎	◎
	25		> 12% Si, Not Curable		130				
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110				
	27		CuZn, CuSnZn (Brass)		90				
	28		CuSn, lead-free copper and electrolytic copper		100				
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic						
	30	Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.	Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15			
	32			Cured	280	30			
	33		Ni or Co Based	Annealed	250	25			
	34			Cured	350	38			
	35			Cast	320	34			
	36	Titanium Alloys	Pure Titanium		400 Rm		○	○	○
	37		Alpha + Beta Alloys	Hardened	1050 Rm				
H	38	Hardened steel		Hardened	550	55			
	39			Hardened	630	60			
	40	Chilled Cast Iron		Cast	400	42			
	41	Hardened Cast Iron		Hardened	550	55			

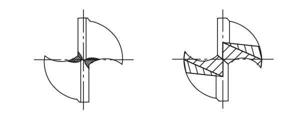
YG STANDARD CARBIDE DRILLS

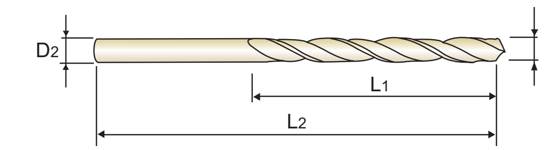
DH412 SERIES
D5412 SERIES

CARBIDE DRILLS

JOBBER

▶ **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.





CARBIDE 30° h6 h7 118° p.A188

$D_1 = D_2$

▶ Wire gauge sizes

Unit : Inch

EDP No. Bright	EDP No. TiAlN	Diameter Wire gauge ($D_1 = D_2$)	Diameter Decimal ($D_1 = D_2$)	Flute Length L1	Overall Length L2
D5412101	DH412101	1	.2280	1-3/4	3
D5412102	DH412102	2	.2210	1-3/4	3
D5412103	DH412103	3	.2130	1-3/4	3
D5412104	DH412104	4	.2090	1-3/4	3
D5412105	DH412105	5	.2055	1-3/4	3
D5412106	DH412106	6	.2040	1-3/4	3
D5412107	DH412107	7	.2010	1-3/4	3
D5412108	DH412108	8	.1990	1-3/4	3
D5412109	DH412109	9	.1960	1- 3/4	3
D5412110	DH412110	10	.1935	1-5/8	2-3/4
D5412111	DH412111	11	.1910	1-5/8	2-3/4
D5412112	DH412112	12	.1890	1-5/8	2-3/4
D5412113	DH412113	13	.1850	1-5/8	2-3/4
D5412114	DH412114	14	.1820	1-5/8	2-3/4
D5412115	DH412115	15	.1800	1-5/8	2-3/4
D5412116	DH412116	16	.1770	1-5/8	2-3/4
D5412117	DH412117	17	.1730	1-5/8	2-3/4
D5412118	DH412118	18	.1695	1-5/8	2-3/4
D5412119	DH412119	19	.1660	1-5/8	2-3/4
D5412120	DH412120	20	.1610	1-3/8	2-1/2
D5412121	DH412121	21	.1590	1-3/8	2-1/2
D5412122	DH412122	22	.1570	1-3/8	2-1/2
D5412123	DH412123	23	.1540	1-3/8	2-1/2
D5412124	DH412124	24	.1520	1-3/8	2-1/2
D5412125	DH412125	25	.1495	1-3/8	2-1/2
D5412126	DH412126	26	.1470	1-3/8	2-1/2
D5412127	DH412127	27	.1440	1-3/8	2-1/2
D5412128	DH412128	28	.1405	1-3/8	2-1/2
D5412129	DH412129	29	.1360	1-3/8	2-1/2
D5412130	DH412130	30	.1285	1-1/4	2-1/4
D5412131	DH412131	31	.1200	1-1/4	2-1/4
D5412132	DH412132	32	.1160	1-1/4	2-1/4
D5412133	DH412133	33	.1130	1-1/4	2-1/4
D5412134	DH412134	34	.1110	1-1/4	2-1/4
D5412135	DH412135	35	.1100	1-1/4	2-1/4
D5412136	DH412136	36	.1065	1-1/4	2-1/4
D5412137	DH412137	37	.1040	1-1/4	2-1/4
D5412138	DH412138	38	.1015	1-1/4	2-1/4
D5412139	DH412139	39	.0995	1-1/4	2-1/4
D5412140	DH412140	40	.0980	1	2
D5412141	DH412141	41	.0960	1	2
D5412142	DH412142	42	.0935	1	2
D5412143	DH412143	43	.0890	1	2
D5412144	DH412144	44	.0860	1	2
D5412145	DH412145	45	.0820	7/8	1-3/4
D5412146	DH412146	46	.0810	7/8	1-3/4
D5412147	DH412147	47	.0785	7/8	1-3/4
D5412148	DH412148	48	.0760	7/8	1-3/4
D5412149	DH412149	49	.0730	7/8	1-3/4
D5412150	DH412150	50	.0700	7/8	1-3/4
D5412151	DH412151	51	.0670	3/4	1-1/2
D5412152	DH412152	52	.0635	3/4	1-1/2
D5412153	DH412153	53	.0595	3/4	1-1/2
D5412154	DH412154	54	.0550	3/4	1-1/2
D5412155	DH412155	55	.0520	3/4	1-1/2
D5412156	DH412156	56	.0465	3/4	1-1/2
D5412157	DH412157	57	.0430	3/4	1-1/2
D5412158	DH412158	58	.0420	3/4	1-1/2
D5412159	DH412159	59	.0410	3/4	1-1/2
D5412160	DH412160	60	.0400	3/4	1-1/2

▶ Other coating is available on you request.

◎ : Excellent ○ : Good

ISO	Material Description	VDI 3323	HRc	HB	Recommended
P	Non-alloy steel	1		125	◎
P	Non-alloy steel	2	13	190	○
P	Non-alloy steel	3	25	250	
P	Non-alloy steel	4	28	270	
P	Non-alloy steel	5	32	300	
P	Low alloy steel	6	10	180	○
P	Low alloy steel	7	29	275	
P	Low alloy steel	8	32	300	
P	Low alloy steel	9	38	350	
P	High alloyed steel, and tool steel	10	15	200	
P	High alloyed steel, and tool steel	11	35	325	
M	Stainless steel	12	15	200	○
M	Stainless steel	13	23	240	
M	Stainless steel	14	10	180	
K	Grey cast iron	15	10	180	○
K	Grey cast iron	16	26	260	
K	Nodular cast iron	17	3	160	
K	Nodular cast iron	18	25	250	
K	Malleable cast iron	19		130	
K	Malleable cast iron	20	21	230	
N	Aluminum-wrought alloy	21		60	◎
N	Aluminum-wrought alloy	22		100	◎
N	Aluminum-cast, alloyed	23		75	◎
N	Aluminum-cast, alloyed	24		90	◎
N	Aluminum-cast, alloyed	25		130	
N	Copper and Copper Alloys (Bronze / Brass)	26		110	
N	Copper and Copper Alloys (Bronze / Brass)	27		90	
N	Copper and Copper Alloys (Bronze / Brass)	28		100	
N	Non Metallic Materials	29			
N	Non Metallic Materials	30			
S	Heat Resistant Super Alloys	31	15	200	
S	Heat Resistant Super Alloys	32	30	280	
S	Heat Resistant Super Alloys	33	25	250	
S	Heat Resistant Super Alloys	34	38	350	
S	Heat Resistant Super Alloys	35	34	320	
S	Titanium Alloys	36		400 Rm	○
S	Titanium Alloys	37		1050 Rm	
H	Hardened steel	38	55	550	
H	Hardened steel	39	60	630	
H	Chilled Cast Iron	40	42	400	
H	Hardened Cast Iron	41	55	550	

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

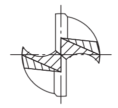
STANDARD CARBIDE DRILLS

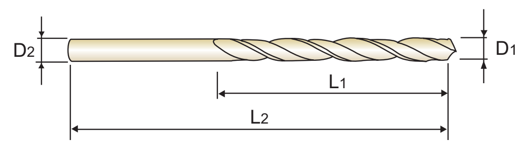
DH413 SERIES
D5413 SERIES

CARBIDE DRILLS

JOBBER

▶**Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.





CARBIDE | 30° | h6 | h7 | 118° | p.A188

D1=D2

▶ Letter sizes

Unit : Inch

EDP No. Bright	EDP No. TiAlN	Diameter Letter	Diameter Decimal	Flute Length L1	Overall Length L2
D5413201	DH413201	A	.2340	2	3-1/4
D5413202	DH413202	B	.2380	2	3-1/4
D5413203	DH413203	C	.2420	2	3-1/4
D5413204	DH413204	D	.2460	2	3-1/4
D5413205	DH413205	E	.2500	2	3-1/4
D5413206	DH413206	F	.2570	2	3-1/4
D5413207	DH413207	G	.2610	2-1/8	3-1/2
D5413208	DH413208	H	.2660	2-1/8	3-1/2
D5413209	DH413209	I	.2720	2-1/8	3-1/2
D5413210	DH413210	J	.2770	2-1/8	3-1/2
D5413211	DH413211	K	.2810	2-1/8	3-1/2
D5413212	DH413212	L	.2900	2-1/8	3-1/2
D5413213	DH413213	M	.2950	2-3/8	3-3/4
D5413214	DH413214	N	.3020	2-3/8	3-3/4
D5413215	DH413215	O	.3160	2-3/8	3-3/4
D5413216	DH413216	P	.3230	2-3/8	3-3/4
D5413217	DH413217	Q	.3320	2-1/2	4
D5413218	DH413218	R	.3390	2-1/2	4
D5413219	DH413219	S	.3480	2-1/2	4
D5413220	DH413220	T	.3580	2-3/4	4-1/4
D5413221	DH413221	U	.3680	2-3/4	4-1/4
D5413222	DH413222	V	.3770	2-3/4	4-1/4
D5413223	DH413223	W	.3860	2-7/8	4-1/2
D5413224	DH413224	X	.3970	2-7/8	4-1/2
D5413225	DH413225	Y	.4040	2-7/8	4-1/2
D5413226	DH413226	Z	.4130	2-7/8	4-1/2

▶ Other coating is available on you request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	○				○						○			○					

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	◎	◎												○					

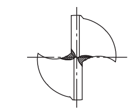
STANDARD CARBIDE DRILLS

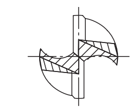
DH417 SERIES
D5417 SERIES

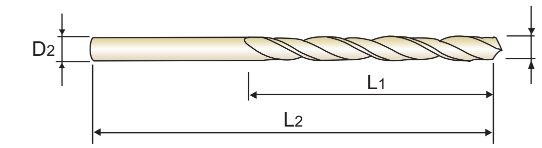
CARBIDE DRILLS

JOBBER

▶**Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.


under .1181 inch


.1181 inch & over



CARBIDE | 30° | h6 | h7 | 118° | p.A188

D1=D2

▶ Fractional sizes

Unit : Inch

EDP No. Bright	EDP No. TiAlN	Diameter Fractional	Diameter Decimal	Flute Length L1	Overall Length L2
D5417003	DH417003	3/64	.0469	3/4	1-1/2
D5417004	DH417004	1/16	.0625	3/4	1-1/2
D5417005	DH417005	5/64	.0781	7/8	1-3/4
D5417006	DH417006	3/32	.0938	1	2
D5417007	DH417007	7/64	.1094	1-1/4	2-1/4
D5417008	DH417008	1/8	.1250	1-1/4	2-1/4
D5417009	DH417009	9/64	.1406	1-3/8	2-1/2
D5417010	DH417010	5/32	.1563	1-3/8	2-1/2
D5417011	DH417011	11/64	.1719	1-5/8	2-3/4
D5417012	DH417012	3/16	.1875	1-5/8	2-3/4
D5417013	DH417013	13/64	.2031	1-3/4	3
D5417014	DH417014	7/32	.2188	1-3/4	3
D5417015	DH417015	15/64	.2344	2	3-1/4
D5417016	DH417016	1/4	.2500	2	3-1/4
D5417017	DH417017	17/64	.2656	2-1/8	3-1/2
D5417018	DH417018	9/32	.2813	2-1/8	3-1/2
D5417019	DH417019	19/64	.2969	2-3/8	3-3/4
D5417020	DH417020	5/16	.3125	2-3/8	3-3/4
D5417021	DH417021	21/64	.3281	2-1/2	4
D5417022	DH417022	11/32	.3438	2-1/2	4
D5417023	DH417023	23/64	.3594	2-3/4	4-1/4
D5417024	DH417024	3/8	.3750	2-3/4	4-1/4
D5417025	DH417025	25/64	.3906	2-7/8	4-1/2
D5417026	DH417026	13/32	.4063	2-7/8	4-1/2
D5417027	DH417027	27/64	.4219	2-7/8	4-1/2
D5417028	DH417028	7/16	.4375	2-7/8	4-1/2
D5417029	DH417029	29/64	.4531	3	4-3/4
D5417030	DH417030	15/32	.4688	3	4-3/4
D5417031	DH417031	31/64	.4844	3	4-3/4
D5417032	DH417032	1/2	.5000	3	4-3/4

▶ Other coating is available on you request.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	○				○						○			○					

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	◎	◎												○					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG STANDARD CARBIDE DRILLS

RECOMMENDED CUTTING CONDITIONS

DH412, DH413, DH417 D5412, D5413, D5417 SERIES

STANDARD CARBIDE DRILLS

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter			SFM	Drill Diameter		
				METRIC	1.0	2.0		METRIC	3.0 / -	4.0
				FRACTIONAL	-	-		FRACTIONAL	- / 1/8	-
				DECIMAL	.0394	.0787		DECIMAL	.1181 / .1250	.1575
P	1	Non-alloy steel	180	RPM	17510	8750	230	RPM	7430	5570
				FEED	.0008 - .0012	.0008 - .0016		FEED	.0012 - .0020	.0012 - .0024
	2	Non-alloy steel	150	RPM	14320	7160	200	RPM	6370	4770
				FEED	.0008 - .0012	.0008 - .0016		FEED	.0012 - .0020	.0012 - .0024
	6	Low alloy steel	115	RPM	11140	5570	165	RPM	5310	3980
				FEED	.0008 - .0012	.0008 - .0016		FEED	.0012 - .0020	.0012 - .0024
M	12	Stainless steel	50	RPM	4770	2390	80	RPM	2650	1990
				FEED	.0004 - .0008	.0004 - .0012		FEED	.0008 - .0016	.0008 - .0020
K	15	Grey cast iron	80	RPM	7960	3980	150	RPM	4770	3580
				FEED	.0012 - .0016	.0012 - .0020		FEED	.0016 - .0024	.0016 - .0028
N	21	Aluminum-wrought alloy	330	RPM	31830	15920	460	RPM	14850	11140
				FEED	.0016 - .0020	.0016 - .0024		FEED	.0020 - .0028	.0020 - .0031
	22	Aluminum-wrought alloy	295	RPM	28650	14320	395	RPM	12730	9550
				FEED	.0016 - .0020	.0016 - .0024		FEED	.0020 - .0028	.0020 - .0031
	23	Aluminum-cast, alloyed	230	RPM	22280	11140	330	RPM	10610	7960
				FEED	.0016 - .0020	.0016 - .0024		FEED	.0020 - .0028	.0020 - .0031
	24	Aluminum-cast, alloyed	200	RPM	19100	9550	260	RPM	8490	6370
				FEED	.0016 - .0020	.0016 - .0024		FEED	.0020 - .0028	.0020 - .0031
S	36	Titanium Alloys	30	RPM	3180	1590	65	RPM	2120	1590
				FEED	.0004 - .0008	.0004 - .0012		FEED	.0008 - .0016	.0008 - .0020

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter						
				METRIC	- / 5.0	6.0 / -	- / 8.0	- / 10.0	12.0	- / 13.0
				FRACTIONAL	3/16 / -	- / 1/4	5/16 / -	3/8 / -	-	1/2 / -
				DECIMAL	.1875 / .1969	.2362 / .2500	.3125 / .3150	.3750 / .3937	.4724	.5000 / .5118
P	1	Non-alloy steel	230	RPM	4460	3710	2790	2230	1860	1710
				FEED	.0016 - .0028	.0020 - .0031	.0028 - .0039	.0031 - .0047	.0039 - .0055	.0047 - .0063
	2	Non-alloy steel	200	RPM	3820	3180	2390	1910	1590	1470
				FEED	.0016 - .0028	.0020 - .0031	.0028 - .0039	.0031 - .0047	.0039 - .0055	.0047 - .0063
	6	Low alloy steel	165	RPM	3180	2650	1990	1590	1330	1220
				FEED	.0016 - .0028	.0020 - .0031	.0028 - .0039	.0031 - .0047	.0039 - .0055	.0047 - .0063
M	12	Stainless steel	80	RPM	1590	1330	990	800	660	610
				FEED	.0012 - .0024	.0016 - .0028	.0024 - .0035	.0028 - .0043	.0031 - .0047	.0035 - .0051
K	15	Grey cast iron	150	RPM	2860	2390	1790	1430	1190	1100
				FEED	.0020 - .0031	.0024 - .0035	.0035 - .0047	.0047 - .0063	.0055 - .0071	.0063 - .0079
N	21	Aluminum-wrought alloy	460	RPM	8910	7430	5570	4460	3710	3430
				FEED	.0024 - .0035	.0031 - .0043	.0047 - .0059	.0059 - .0075	.0075 - .0091	.0083 - .0098
	22	Aluminum-wrought alloy	395	RPM	7640	6370	4770	3820	3180	2940
				FEED	.0024 - .0035	.0031 - .0043	.0047 - .0059	.0059 - .0075	.0075 - .0091	.0083 - .0098
	23	Aluminum-cast, alloyed	330	RPM	6370	5310	3980	3180	2650	2450
				FEED	.0024 - .0035	.0031 - .0043	.0047 - .0059	.0059 - .0075	.0075 - .0091	.0083 - .0098
	24	Aluminum-cast, alloyed	260	RPM	5090	4240	3180	2550	2120	1960
				FEED	.0024 - .0035	.0031 - .0043	.0047 - .0059	.0059 - .0075	.0075 - .0091	.0083 - .0098
S	36	Titanium Alloys	65	RPM	1270	1060	800	640	530	490
				FEED	.0012 - .0024	.0016 - .0028	.0024 - .0035	.0028 - .0043	.0031 - .0047	.0035 - .0051

MULTI-1 DRILLS

- Premium HSS-PM Drills
- For Wide Range of Applications Particularly Stainless Steels and Titanium

SELECTION GUIDE

HOLEMAKING TOOLS

SERIES	CDRA05	CDRA06	CDRA07
TOOL MATERIAL	HSS-PM		
LENGTH	JOBBER		
SIZE MIN	D3/32	#45	B
SIZE MAX	D1/2	#1	Z
PAGE	A191	A192	A193
SURFACE TREATMENT	TiAlN		

HSS-PM MULTI-1 DRILLS

Premium HSS-PM Drills
For Wide Range of Applications Particularly Stainless Steels and Titanium

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A194

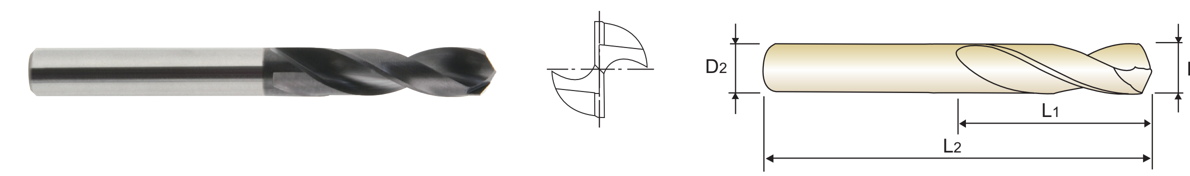
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	CDRA05	CDRA06	CDRA07
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	◎	◎
	2		About 0.45% C	Annealed	190	13	◎	◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	○	○	○
	4		About 0.75% C	Annealed	270	28			
	5		About 0.75% C	Quenched & Tempered	300	32			
	6	Low alloy steel		Annealed	180	10	◎	◎	◎
	7			Quenched & Tempered	275	29	○	○	○
	8			Quenched & Tempered	300	32	○	○	○
	9			Quenched & Tempered	350	38	○	○	○
	10	High alloyed steel, and tool steel		Annealed	200	15			
	11			Quenched & Tempered	325	35			
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○	○	○
	13		Martensitic	Quenched & Tempered	240	23			
	14		Austenitic		180	10	◎	◎	◎
K	15	Grey cast iron	Pearlitic / ferritic		180	10			
	16		Pearlitic (Martensitic)		260	26			
	17	Nodular cast iron	Ferritic		160	3			
	18		Pearlitic		250	25			
	19	Malleable cast iron	Ferritic		130				
	20		Pearlitic		230	21			
N	21	Aluminum-wrought alloy	Not Curable		60		◎	◎	◎
	22		Curable	Hardened	100		◎	◎	◎
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○	○	○
	24		≤ 12% Si, Curable	Hardened	90		○	○	○
	25		> 12% Si, Not Curable		130				
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110				
	27		CuZn, CuSnZn (Brass)		90				
	28		CuSn, lead-free copper and electrolytic copper		100				
	29	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)	Duroplastic, Fiber Reinforced Plastic						
	30		Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15			
	32			Cured	280	30			
	33		Ni or Co Based	Annealed	250	25			
	34			Cured	350	38			
	35			Cast	320	34			
	36	Titanium Alloys	Pure Titanium		400 Rm		○	○	○
	37		Alpha + Beta Alloys	Hardened	1050 Rm				
H	38	Hardened steel		Hardened	550	55			
	39			Hardened	630	60			
	40	Chilled Cast Iron		Cast	400	42			
	41	Hardened Cast Iron		Hardened	550	55			

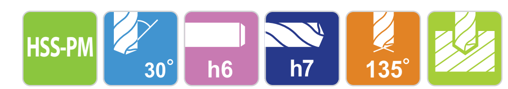
MULTI-1 DRILLS

CDRA05 SERIES

HSS-PM, MULTI-1 DRILLS

- **Application :** Structural steels, Carbon steels, Alloy steels, Prehardened steels, Mold steels, Stainless steels, Hardened steels(HRc30~45), Cast iron, Aluminum alloys, Nonferrous alloys, Titanium.
- **Advantage :** Point shape to maximize self-centering.
  Flute design for the best chip evacuation.
  Premium powder materials with excellent toughness.





p.A194

▶ M15 / Fractional sizes

Unit : Inch

EDP No.	Diameter Fractional	Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1		D2	L1	L2
M15006	3/32	.0938	1/8	1/2	1-3/4
M15007	7/64	.1094	1/8	5/8	1-7/8
M15008	1/8	.1250	1/8	3/4	2
M15009	9/64	.1406	3/16	13/16	2-1/8
M15010	5/32	.1563	3/16	13/16	2-1/8
M15011	11/64	.1719	3/16	1	2-3/8
M15012	3/16	.1875	3/16	1	2-3/8
M15013	13/64	.2031	1/4	1-1/8	2-7/8
M15014	7/32	.2188	1/4	1-1/8	2-7/8
M15015	15/64	.2344	1/4	1-1/4	3
M15016	1/4	.2500	1/4	1-1/4	3
M15017	17/64	.2656	3/8	1-3/8	3-3/16
M15018	9/32	.2813	3/8	1-3/8	3-3/16
M15019	19/64	.2969	3/8	1-3/8	3-3/16

EDP No.	Diameter Fractional	Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1		D2	L1	L2
M15020	5/16	.3125	3/8	1-1/2	3-3/8
M15021	21/64	.3281	3/8	1-1/2	3-3/8
M15022	11/32	.3438	3/8	1-5/8	3-1/2
M15023	23/64	.3594	3/8	1-5/8	3-1/2
M15024	3/8	.3750	3/8	1-5/8	3-1/2
M15025	25/64	.3906	1/2	1-11/16	3-7/8
M15026	13/32	.4063	1/2	1-11/16	3-7/8
M15027	27/64	.4219	1/2	1-7/8	4-1/8
M15028	7/16	.4375	1/2	1-7/8	4-1/8
M15029	29/64	.4531	1/2	1-7/8	4-1/8
M15030	15/32	.4688	1/2	2	4-1/4
M15031	31/64	.4844	1/2	2	4-1/4
M15032	1/2	.5000	1/2	2	4-1/4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○	○			○		◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○												○					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

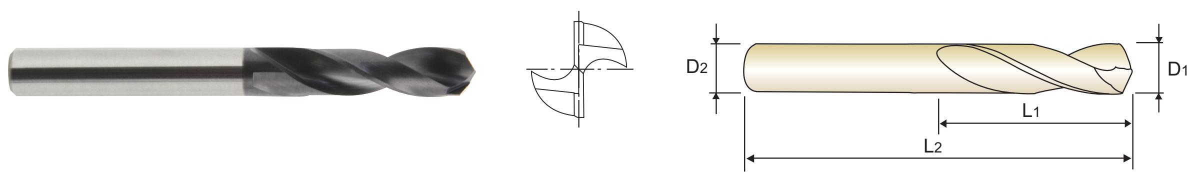
YG MULTI-1 DRILLS

CDRA06 SERIES

HSS-PM, MULTI-1 DRILLS

▶ **Application** : Structural steels, Carbon steels, Alloy steels, Prehardened steels, Mold steels, Stainless steels, Hardened steels(HRc30~45), Cast iron, Aluminum alloys, Nonferrous alloys, Titanium.

▶ **Advantage** : Point shape to maximize self-centering.
Flute design for the best chip evacuation.
Premium powder materials with excellent toughness.



HSS-PM | 30° | h6 | h7 | 135° | p.A194

▶ M16 / Wire gauge sizes

Unit : Inch

EDP No.	Diameter		Shank Diameter	Flute Length	Overall Length
	Wire gauge	Decimal			
TiAIN	D1		D2	L1	L2
M16045	45	.0820	1/8	3/4	2
M16044	44	.0860	1/8	3/4	2
M16043	43	.0890	1/8	3/4	2
M16042	42	.0935	1/8	3/4	2
M16041	41	.0960	1/8	13/16	2-1/16
M16040	40	.0980	1/8	13/16	2-1/16
M16039	39	.0995	1/8	13/16	2-1/4
M16038	38	.1015	1/8	13/16	2-1/4
M16037	37	.1040	1/8	13/16	2-1/4
M16036	36	.1065	1/8	13/16	2-1/4
M16035	35	.1100	1/8	7/8	2-5/16
M16034	34	.1110	1/8	7/8	2-5/16
M16033	33	.1130	1/8	7/8	2-5/16
M16032	32	.1160	1/8	7/8	2-5/16
M16031	31	.1120	1/8	7/8	2-5/16
M16030	30	.1285	3/16	15/16	2-3/8
M16029	29	.1360	3/16	15/16	2-3/8
M16028	28	.1405	3/16	15/16	2-3/8
M16027	27	.1440	3/16	1	2-7/16
M16026	26	.1470	3/16	1	2-7/16
M16025	25	.1495	3/16	1	2-7/16
M16024	24	.1520	3/16	1	2-7/16
M16023	23	.1540	3/16	1	2-7/16
M16022	22	.1570	3/16	1-1/16	2-1/2
M16021	21	.1590	3/16	1-1/16	2-1/2
M16020	20	.1610	3/16	1-1/16	2-1/2
M16019	19	.1660	3/16	1-1/16	2-1/2
M16018	18	.1695	3/16	1-1/16	2-1/2
M16017	17	.1730	3/16	1-1/8	2-9/16
M16016	16	.1770	3/16	1-1/8	2-9/16
M16015	15	.1800	3/16	1-1/8	2-9/16
M16014	14	.1820	3/16	1-1/8	2-9/16
M16013	13	.1850	3/16	1-1/8	2-9/16
M16012	12	.1890	1/4	1-3/16	3
M16011	11	.1910	1/4	1-3/16	3
M16010	10	.1935	1/4	1-3/16	3
M16009	9	.1960	1/4	1-3/16	3
M16008	8	.1990	1/4	1-3/16	3
M16007	7	.2010	1/4	1-3/16	3
M16006	6	.2040	1/4	1-1/4	3-1/16
M16005	5	.2055	1/4	1-1/4	3-1/16
M16004	4	.2090	1/4	1-1/4	3-1/16
M16003	3	.2130	1/4	1-1/4	3-1/16
M16002	2	.2210	1/4	1-5/16	3-1/8
M16001	1	.2280	1/4	1-5/16	3-1/8

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○	○			○		◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○												○					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

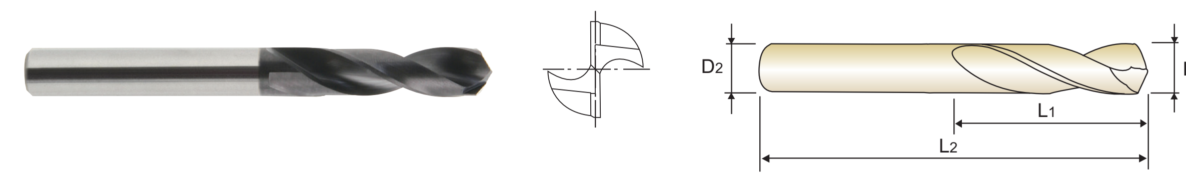
YG MULTI-1 DRILLS

CDRA07 SERIES

HSS-PM, MULTI-1 DRILLS

▶ **Application** : Structural steels, Carbon steels, Alloy steels, Prehardened steels, Mold steels, Stainless steels, Hardened steels(HRc30~45), Cast iron, Aluminum alloys, Nonferrous alloys, Titanium.

▶ **Advantage** : Point shape to maximize self-centering.
Flute design for the best chip evacuation.
Premium powder materials with excellent toughness.



HSS-PM | 30° | h6 | h7 | 135° | p.A194

▶ M17 / Letter sizes

Unit : Inch

EDP No.	Diameter		Shank Diameter	Flute Length	Overall Length
	Letter	Decimal			
TiAIN	D1		D2	L1	L2
M1700B	B	.2380	1/4	1-3/8	3-3/16
M1700C	C	.2420	1/4	1-3/8	3-3/16
M1700D	D	.2460	1/4	1-3/8	3-3/16
M1700F	F	.2570	3/8	1-7/16	3-1/4
M1700G	G	.2610	3/8	1-7/16	3-1/4
M1700I	I	.2720	3/8	1-1/2	3-5/16
M1700J	J	.2770	3/8	1-1/2	3-5/16
M1700L	L	.2900	3/8	1-9/16	3-3/8
M1700M	M	.2950	3/8	1-9/16	3-3/8
M1700N	N	.3020	3/8	1-5/8	3-7/16
M1700O	O	.3160	3/8	1-11/16	3-1/2
M1700Q	Q	.3320	3/8	1-11/16	3-1/2
M1700R	R	.3390	3/8	1-11/16	3-1/2
M1700U	U	.3680	3/8	1-13/16	3-5/8
M1700V	V	.3770	1/2	1-7/8	3-31/32
M1700X	X	.3970	1/2	1-15/16	4-1/32
M1700Y	Y	.4040	1/2	1-15/16	4-1/32
M1700Z	Z	.4130	1/2	2	4-1/32

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○	○			○		◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	○	○												○					

YG MULTI-1 DRILLS

RECOMMENDED CUTTING CONDITIONS

CDRA05, CDRA06, CDRA07 SERIES — MULTI-1 DRILLS

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter								
				METRIC	2.0	3.0 / -	4.0	- / 5.0	6.0 / -	- / 8.0	- / 10.0	12.0 / -
				FRACTIONAL	-	- / 1/8	-	3/16 / -	- / 1/4	5/16 / -	3/8 / -	1/2
				DECIMAL	.0787	.1181 / .1250	.1575	.1875 / .1969	.2362 / .2500	.3125 / .3150	.3750 / .3937	.5000
P	1	Non-alloy steel	130	RPM	6370	4240	3180	2550	2120	1590	1270	1060
				FEED	.0012 - .0024	.0031 - .0047	.0035 - .0059	.0047 - .0071	.0055 - .0079	.0071 - .0094	.0071 - .0110	.0079 - .0118
	2		120	RPM	5570	3710	2790	2230	1860	1390	1110	930
				FEED	.0012 - .0024	.0031 - .0047	.0035 - .0059	.0047 - .0071	.0055 - .0079	.0071 - .0094	.0071 - .0110	.0079 - .0118
	3		120	RPM	5570	3710	2790	2230	1860	1390	1110	930
				FEED	.0012 - .0024	.0031 - .0047	.0035 - .0059	.0047 - .0071	.0055 - .0079	.0071 - .0094	.0071 - .0110	.0079 - .0118
	6	Low alloy steel	120	RPM	5570	3710	2790	2230	1860	1390	1110	930
				FEED	.0012 - .0024	.0031 - .0047	.0035 - .0059	.0047 - .0071	.0055 - .0079	.0071 - .0094	.0071 - .0110	.0079 - .0118
	7		100	RPM	4770	3180	2390	1910	1590	1190	950	800
				FEED	.0012 - .0020	.0024 - .0039	.0028 - .0051	.0039 - .0063	.0047 - .0071	.0055 - .0079	.0055 - .0094	.0063 - .0102
	8		80	RPM	3980	2650	1990	1590	1330	990	800	660
				FEED	.0008 - .0020	.0012 - .0028	.0016 - .0039	.0024 - .0047	.0028 - .0051	.0039 - .0079	.0047 - .0087	.0055 - .0094
	9		70	RPM	3180	2120	1590	1270	1060	800	640	530
				FEED	.0008 - .0020	.0012 - .0028	.0016 - .0039	.0024 - .0047	.0028 - .0051	.0039 - .0079	.0047 - .0087	.0055 - .0094
M	12	Stainless steel	70	RPM	3180	2120	1590	1270	1060	800	640	530
				FEED	.0012 - .0028	.0020 - .0035	.0024 - .0047	.0035 - .0059	.0047 - .0071	.0071 - .0094	.0079 - .0118	.0102 - .0142
	14		50	RPM	2390	1590	1190	950	800	600	480	400
				FEED	.0008 - .0020	.0012 - .0028	.0016 - .0039	.0024 - .0047	.0028 - .0051	.0039 - .0079	.0047 - .0087	.0055 - .0094
K	15	Grey cast iron	130	RPM	6370	4240	3180	2550	2120	1590	1270	1060
				FEED	.0016 - .0039	.0028 - .0051	.0035 - .0059	.0047 - .0071	.0051 - .0075	.0071 - .0094	.0079 - .0118	.0087 - .0126
N	21	Aluminum-wrought alloy	300	RPM	14320	9550	7160	5730	4770	3580	2860	2390
				FEED	.0051 - .0067	.0091 - .0106	.0106 - .0130	.0130 - .0154	.0157 - .0181	.0177 - .0201	.0201 - .0240	.0248 - .0287
	22		300	RPM	14320	9550	7160	5730	4770	3580	2860	2390
				FEED	.0051 - .0067	.0091 - .0106	.0106 - .0130	.0130 - .0154	.0157 - .0181	.0177 - .0201	.0201 - .0240	.0248 - .0287
	23	Aluminum-cast, alloyed	260	RPM	12730	8490	6370	5090	4240	3180	2550	2120
				FEED	.0051 - .0067	.0091 - .0106	.0106 - .0130	.0130 - .0154	.0157 - .0181	.0177 - .0201	.0201 - .0240	.0248 - .0287
	24		230	RPM	11140	7430	5570	4460	3710	2790	2230	1860
				FEED	.0039 - .0055	.0059 - .0075	.0079 - .0102	.0094 - .0118	.011 - .0134	.0118 - .0142	.0134 - .0173	.0142 - .0181
S	36	Titanium Alloys	20	RPM	800	530	400	320	270	200	160	130
				FEED	.0008 - .0020	.0012 - .0028	.0016 - .0031	.0024 - .0047	.0028 - .0051	.0035 - .0059	.0047 - .0087	.0055 - .0094

HPD DRILLS

- High Performance for Stainless Steels

SELECTION GUIDE

YG HOLEMAKING TOOLS

SERIES	DJ543	DJ544
TOOL MATERIAL	HSS-E	
LENGTH	STUB	JOBBER
SIZE MIN	D2.0	D2.0
SIZE MAX	D13.0	D20.0
PAGE	A197	A199
SURFACE TREATMENT	TiN	

HSS-E HPD DRILLS

- High Performance for Stainless Steels

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A202

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	DJ543	DJ544
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○	○
	2		About 0.45% C	Annealed	190	13		
	3		About 0.45% C	Quenched & Tempered	250	25		
	4		About 0.75% C	Annealed	270	28		
	5		About 0.75% C	Quenched & Tempered	300	32		
	6	Low alloy steel		Annealed	180	10		
	7			Quenched & Tempered	275	29		
	8			Quenched & Tempered	300	32		
	9			Quenched & Tempered	350	38		
	10	High alloyed steel, and tool steel		Annealed	200	15		
	11			Quenched & Tempered	325	35		
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎	◎
	13		Martensitic	Quenched & Tempered	240	23	○	○
	14		Austenitic		180	10	◎	◎
K	15	Grey cast iron	Pearlitic / ferritic		180	10		
	16		Pearlitic (Martensitic)		260	26		
	17	Nodular cast iron	Ferritic		160	3		
	18		Pearlitic		250	25		
	19	Malleable cast iron	Ferritic		130			
	20		Pearlitic		230	21		
N	21	Aluminum-wrought alloy	Not Curable		60		◎	◎
	22		Curable	Hardened	100		◎	◎
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75			
	24		≤ 12% Si, Curable	Hardened	90			
	25		> 12% Si, Not Curable		130			
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○	○
	27		CuZn, CuSnZn (Brass)		90			
	28		CuSn, lead-free copper and electrolytic copper		100			
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.	Duroplastic, Fiber Reinforced Plastic					
	30		Rubber, Wood, etc.					
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15		
	32			Cured	280	30		
	33		Ni or Co Based	Annealed	250	25		
	34			Cured	350	38		
	35			Cast	320	34		
	36	Titanium Alloys	Pure Titanium		400 Rm			
	37		Alpha + Beta Alloys	Hardened	1050 Rm			
H	38	Hardened steel		Hardened	550	55		
	39			Hardened	630	60		
	40	Chilled Cast Iron		Cast	400	42		
	41	Hardened Cast Iron		Hardened	550	55		

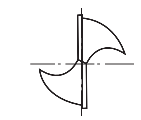
YG HPD DRILLS

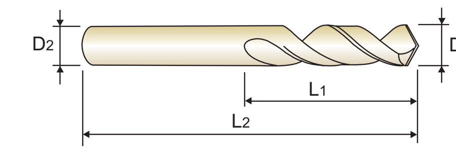
DJ543 SERIES

HSS-E, HPD-SUS DRILLS

STUB

- **Application** : Designed for drilling in stainless steels, mild steels, aluminum, aluminum alloy, aluminum die cast, copper, copper alloy, etc.
- **Advantage** : Self centering - center drilling is not required
  Excellent positioning - bush is not necessary
  Special Design - reaming is not required
  - good chip removal
  - powerful drilling
- **Plain Shank** : DIN6535-HA





p.A202

$D_1=D_2$

Unit : mm

EDP No.	Diameter		Flute Length	Overall Length	EDP No.	Diameter		Flute Length	Overall Length
	Metric	Inch				Metric	Inch		
TiN	$D_1 = D_2$		L_1	L_2	TiN	$D_1 = D_2$		L_1	L_2
0201JCN	2.0	.0787	12	44	0481JCN	4.8	.1890	26	70
0211JCN	2.1	.0827	12	44	0491JCN	4.9	.1929	26	70
0221JCN	2.2	.0866	13	45	0501JCN	5.0	.1969	26	70
0231JCN	2.3	.0906	13	45	0511JCN	5.1	.2008	26	70
0241JCN	2.4	.0945	14	46	0521JCN	5.2	.2047	26	70
0251JCN	2.5	.0984	14	46	0531JCN	5.3	.2087	26	70
0261JCN	2.6	.1024	14	46	0541JCN	5.4	.2126	28	72
0271JCN	2.7	.1063	16	48	0551JCN	5.5	.2165	28	72
0281JCN	2.8	.1102	16	48	0561JCN	5.6	.2205	28	72
0291JCN	2.9	.1142	16	48	0571JCN	5.7	.2244	28	72
0301JCN	3.0	.1181	16	48	0581JCN	5.8	.2283	28	72
0311JCN	3.1	.1220	18	50	0591JCN	5.9	.2323	28	72
0321JCN	3.2	.1260	18	50	0601JCN	6.0	.2362	28	72
0331JCN	3.3	.1299	18	50	0611JCN	6.1	.2402	31	75
0341JCN	3.4	.1339	20	52	0621JCN	6.2	.2441	31	75
0351JCN	3.5	.1378	20	52	0631JCN	6.3	.2480	31	75
0361JCN	3.6	.1417	20	52	0641JCN	6.4	.2520	31	75
0371JCN	3.7	.1457	20	52	0651JCN	6.5	.2559	31	75
0381JCN	3.8	.1496	22	54	0661JCN	6.6	.2598	31	75
0391JCN	3.9	.1535	22	54	0671JCN	6.7	.2638	31	75
0401JCN	4.0	.1575	22	54	0681JCN	6.8	.2677	34	78
0411JCN	4.1	.1614	22	66	0691JCN	6.9	.2717	34	78
0421JCN	4.2	.1654	22	66	0701JCN	7.0	.2756	34	78
0431JCN	4.3	.1693	24	68	0711JCN	7.1	.2795	34	78
0441JCN	4.4	.1732	24	68	0721JCN	7.2	.2835	34	78
0451JCN	4.5	.1772	24	68	0731JCN	7.3	.2874	34	78
0461JCN	4.6	.1811	24	68	0741JCN	7.4	.2913	34	78
0471JCN	4.7	.1850	24	68	0751JCN	7.5	.2953	34	78

* Individually packaged

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○											◎	○	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎				○															

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

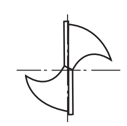
YG HPD DRILLS

DJ543 SERIES

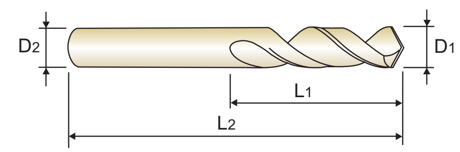
HSS-E, HPD-SUS DRILLS

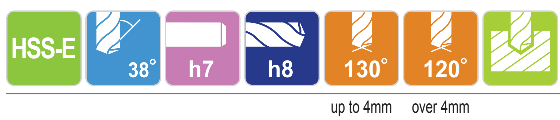
STUB

▶ **Application** : Designed for drilling in stainless steels, mild steels, aluminum, aluminum alloy, aluminum die cast, copper, copper alloy, etc.
▶ **Advantage** : Self centering - center drilling is not required
Excellent positioning - bush is not necessary
Special Design - reaming is not required
- good chip removal
- powerful drilling
▶ **Plain Shank** : DIN6535-HA



four facet





p.A202

$D_1=D_2$

Unit : mm

EDP No.	Diameter		Flute Length	Overall Length
	Metric	Inch		
TiN	$D_1 = D_2$		L_1	L_2
0761JCN	7.6	.2992	37	81
0771JCN	7.7	.3031	37	81
0781JCN	7.8	.3071	37	81
0791JCN	7.9	.3110	37	81
0801JCN	8.0	.3150	37	81
0811JCN	8.1	.3189	37	87
0821JCN	8.2	.3228	37	87
0831JCN	8.3	.3268	37	87
0841JCN	8.4	.3307	37	87
0851JCN	8.5	.3346	37	87
0861JCN	8.6	.3386	40	90
0871JCN	8.7	.3425	40	90
0881JCN	8.8	.3465	40	90
0891JCN	8.9	.3504	40	90
0901JCN	9.0	.3543	40	90
0911JCN	9.1	.3583	40	90
0921JCN	9.2	.3622	40	90
0931JCN	9.3	.3661	40	90
0941JCN	9.4	.3701	40	90
0951JCN	9.5	.3740	40	90
0961JCN	9.6	.3780	43	93
0971JCN	9.7	.3819	43	93
0981JCN	9.8	.3858	43	93
0991JCN	9.9	.3898	43	93
1001JCN	10.0	.3937	43	93
1011JCN	10.1	.3976	43	100
1021JCN	10.2	.4016	43	100
1031JCN	10.3	.4055	43	100

EDP No.	Diameter		Flute Length	Overall Length
	Metric	Inch		
TiN	D_1		L_1	L_2
1041JCN	10.4	.4094	43	100
1051JCN	10.5	.4134	43	100
1061JCN	10.6	.4173	43	100
1071JCN	10.7	.4212	47	104
1081JCN	10.8	.4252	47	104
1091JCN	10.9	.4291	47	104
1101JCN	11.0	.4330	47	104
1111JCN	11.1	.4370	47	104
1121JCN	11.2	.4409	47	104
1131JCN	11.3	.4448	47	104
1141JCN	11.4	.4488	47	104
1151JCN	11.5	.4527	47	104
1161JCN	11.6	.4566	47	104
1171JCN	11.7	.4606	47	104
1181JCN	11.8	.4645	47	104
1191JCN	11.9	.4685	51	108
1201JCN	12.0	.4724	51	108
1211JCN	12.1	.4764	51	108
1221JCN	12.2	.4803	51	108
1231JCN	12.3	.4843	51	108
1241JCN	12.4	.4882	51	108
1251JCN	12.5	.4921	51	108
1261JCN	12.6	.4961	51	108
1271JCN	12.7	.5000	51	108
1281JCN	12.8	.5039	51	108
1291JCN	12.9	.5079	51	108
1301JCN	13.0	.5118	51	108

* Individually packaged

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○											◎	○	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎				○															

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
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TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

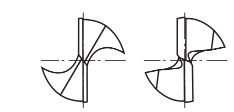
YG HPD DRILLS

DJ544 SERIES

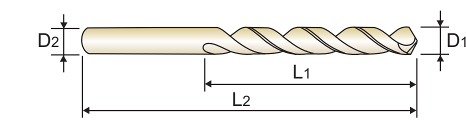
HSS-E, HPD-SUS DRILLS

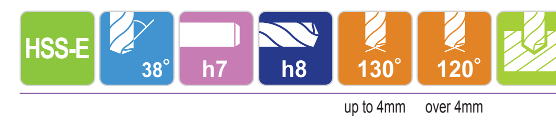
JOBBER

▶ **Application** : Designed for drilling in stainless steels, mild steels, aluminum, aluminum alloy, aluminum die cast, copper, copper alloy, etc.
▶ **Advantage** : High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling
Wide flute and stub length-increasing chip removal and reducing vibration and deflection.
High vanadium HSS-EX material with superior TiN coating - higher speed and feed, longer service life
High quality-good surface finishes, high productivity.



up to 13mm over 13mm





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$D_1=D_2$

Unit : mm

EDP No.	Diameter		Flute Length	Overall Length
	Metric	Inch		
TiN	$D_1 = D_2$		L_1	L_2
0201KCN	2.0	.0787	24	56
0211KCN	2.1	.0827	24	56
0221KCN	2.2	.0866	27	59
0231KCN	2.3	.0906	27	59
0241KCN	2.4	.0945	30	62
0251KCN	2.5	.0984	30	62
0261KCN	2.6	.1024	30	62
0271KCN	2.7	.1063	33	65
0281KCN	2.8	.1102	33	65
0291KCN	2.9	.1142	33	65
0301KCN	3.0	.1181	33	65
0311KCN	3.1	.1220	36	68
0321KCN	3.2	.1260	36	68
0331KCN	3.3	.1299	36	68
0341KCN	3.4	.1339	39	71
0351KCN	3.5	.1378	39	71
0361KCN	3.6	.1417	39	71
0371KCN	3.7	.1457	39	71
0381KCN	3.8	.1496	43	75
0391KCN	3.9	.1535	43	75
0401KCN	4.0	.1575	43	75
0411KCN	4.1	.1614	43	87
0421KCN	4.2	.1654	43	87
0431KCN	4.3	.1693	47	91

EDP No.	Diameter		Flute Length	Overall Length
	Metric	Inch		
TiN	D_1		D_2	L_2
0441KCN	4.4	.1732	47	91
0451KCN	4.5	.1772	47	91
0461KCN	4.6	.1811	47	91
0471KCN	4.7	.1850	47	91
0481KCN	4.8	.1890	52	96
0491KCN	4.9	.1929	52	96
0501KCN	5.0	.1969	52	96
0511KCN	5.1	.2008	52	96
0521KCN	5.2	.2047	52	96
0531KCN	5.3	.2087	52	96
0541KCN	5.4	.2126	57	101
0551KCN	5.5	.2165	57	101
0561KCN	5.6	.2205	57	101
0571KCN	5.7	.2244	57	101
0581KCN	5.8	.2283	57	101
0591KCN	5.9	.2323	57	101
0601KCN	6.0	.2362	57	101
0611KCN	6.1	.2402	63	107
0621KCN	6.2	.2441	63	107
0631KCN	6.3	.2480	63	107
0641KCN	6.4	.2520	63	107
0651KCN	6.5	.2559	63	107
0661KCN	6.6	.2598	63	107
0671KCN	6.7	.2638	63	107

* Individually packaged

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○											◎	○	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎				○															

HSS-E, HPD-SUS DRILLS

JOBBER

▶**Application** : Designed for drilling in stainless steels, mild steels, aluminum, aluminum alloy, aluminum die cast, copper, copper alloy, etc.
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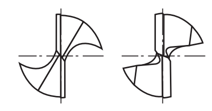
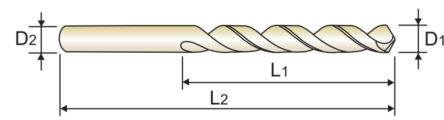
High vanadium HSS-EX material with superior TiN coating - higher speed and feed, longer service life
High quality-good surface finishes, high productivity.





HSS-E 38° h7 h8 130° 120° p.A202
up to 4mm

$D_1 = D_2$

Unit : mm

EDP No.	Diameter		Flute Length	Overall Length
	Metric	Inch		
TiN	$D_1 = D_2$		L_1	L_2
0681KCN	6.8	.2677	69	113
0691KCN	6.9	.2717	69	113
0701KCN	7.0	.2756	69	113
0711KCN	7.1	.2795	69	113
0721KCN	7.2	.2835	69	113
0731KCN	7.3	.2874	69	113
0741KCN	7.4	.2913	69	113
0751KCN	7.5	.2953	69	113
0761KCN	7.6	.2992	75	119
0771KCN	7.7	.3031	75	119
0781KCN	7.8	.3071	75	119
0791KCN	7.9	.3110	75	119
0801KCN	8.0	.3150	75	119
0811KCN	8.1	.3189	75	125
0821KCN	8.2	.3228	75	125
0831KCN	8.3	.3268	75	125
0841KCN	8.4	.3307	75	125
0851KCN	8.5	.3346	75	125
0861KCN	8.6	.3386	81	131
0871KCN	8.7	.3425	81	131
0881KCN	8.8	.3465	81	131
0891KCN	8.9	.3504	81	131
0901KCN	9.0	.3543	81	131
0911KCN	9.1	.3583	81	131

EDP No.	Diameter		Flute Length	Overall Length
	Metric	Inch		
TiN	D_1		L_1	L_2
0921KCN	9.2	.3622	81	131
0931KCN	9.3	.3661	81	131
0941KCN	9.4	.3701	81	131
0951KCN	9.5	.3740	81	131
0961KCN	9.6	.3780	87	137
0971KCN	9.7	.3819	87	137
0981KCN	9.8	.3858	87	137
0991KCN	9.9	.3898	87	137
1001KCN	10.0	.3937	87	137
1011KCN	10.1	.3976	87	144
1021KCN	10.2	.4016	87	144
1031KCN	10.3	.4055	87	144
1041KCN	10.4	.4094	87	144
1051KCN	10.5	.4134	87	144
1061KCN	10.6	.4173	87	144
1071KCN	10.7	.4212	94	151
1081KCN	10.8	.4252	94	151
1091KCN	10.9	.4291	94	151
1101KCN	11.0	.4330	94	151
1111KCN	11.1	.4370	94	151
1121KCN	11.2	.4409	94	151
1131KCN	11.3	.4448	94	151
1141KCN	11.4	.4488	94	151
1151KCN	11.5	.4527	94	151

* Individually packaged

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○											◎	○	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎				○															

YG HPD DRILLS
DJ544 SERIES

HSS-E, HPD-SUS DRILLS

JOBBER

▶**Application** : Designed for drilling in stainless steels, mild steels, aluminum, aluminum alloy, aluminum die cast, copper, copper alloy, etc.
▶**Advantage** : High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling
Wide flute and stub length-increasing chip removal and reducing vibration and deflection.
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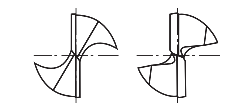
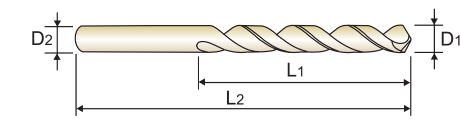




HSS-E 38° h7 h8 130° 120° p.A202
up to 4mm over 4mm

$D_1 = D_2$

Unit : mm

EDP No.	Diameter		Flute Length	Overall Length
	Metric	Inch		
TiN	$D_1 = D_2$		L_1	L_2
1161KCN	11.6	.4566	94	151
1171KCN	11.7	.4606	94	151
1181KCN	11.8	.4645	94	151
1191KCN	11.9	.4685	101	158
1201KCN	12.0	.4724	101	158
1211KCN	12.1	.4764	101	158
1221KCN	12.2	.4803	101	158
1231KCN	12.3	.4843	101	158
1241KCN	12.4	.4882	101	158
1251KCN	12.5	.4921	101	158
1261KCN	12.6	.4961	101	158
1271KCN	12.7	.5000	101	158
1281KCN	12.8	.5039	101	158
1291KCN	12.9	.5079	101	158
1301KCN	13.0	.5118	101	158
1351KCN	13.5	.5314	106	166
1401KCN	14.0	.5512	106	166

EDP No.	Diameter		Flute Length	Overall Length
	Metric	Inch		
TiN	$D_1 = D_2$		L_1	L_2
1411KCN	14.1	.5551	109	169
1451KCN	14.5	.5708	109	169
1501KCN	15.0	.5905	109	169
1551KCN	15.5	.6102	112	172
1561KCN	15.6	.6141	112	172
1601KCN	16.0	.6299	112	172
1651KCN	16.5	.6495	115	181
1701KCN	17.0	.6692	115	181
1751KCN	17.5	.6889	118	184
1761KCN	17.6	.6929	118	184
1801KCN	18.0	.7087	118	184
1851KCN	18.5	.7283	122	188
1901KCN	19.0	.7480	122	188
1951KCN	19.5	.7676	125	191
1961KCN	19.6	.7716	125	191
2001KCN	20.0	.7874	125	191

* Individually packaged

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○											◎	○	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎				○															

YG HPD DRILLS

RECOMMENDED CUTTING CONDITIONS

DJ543, DJ544 SERIES — HPD DRILLS for STAINLESS STEELS

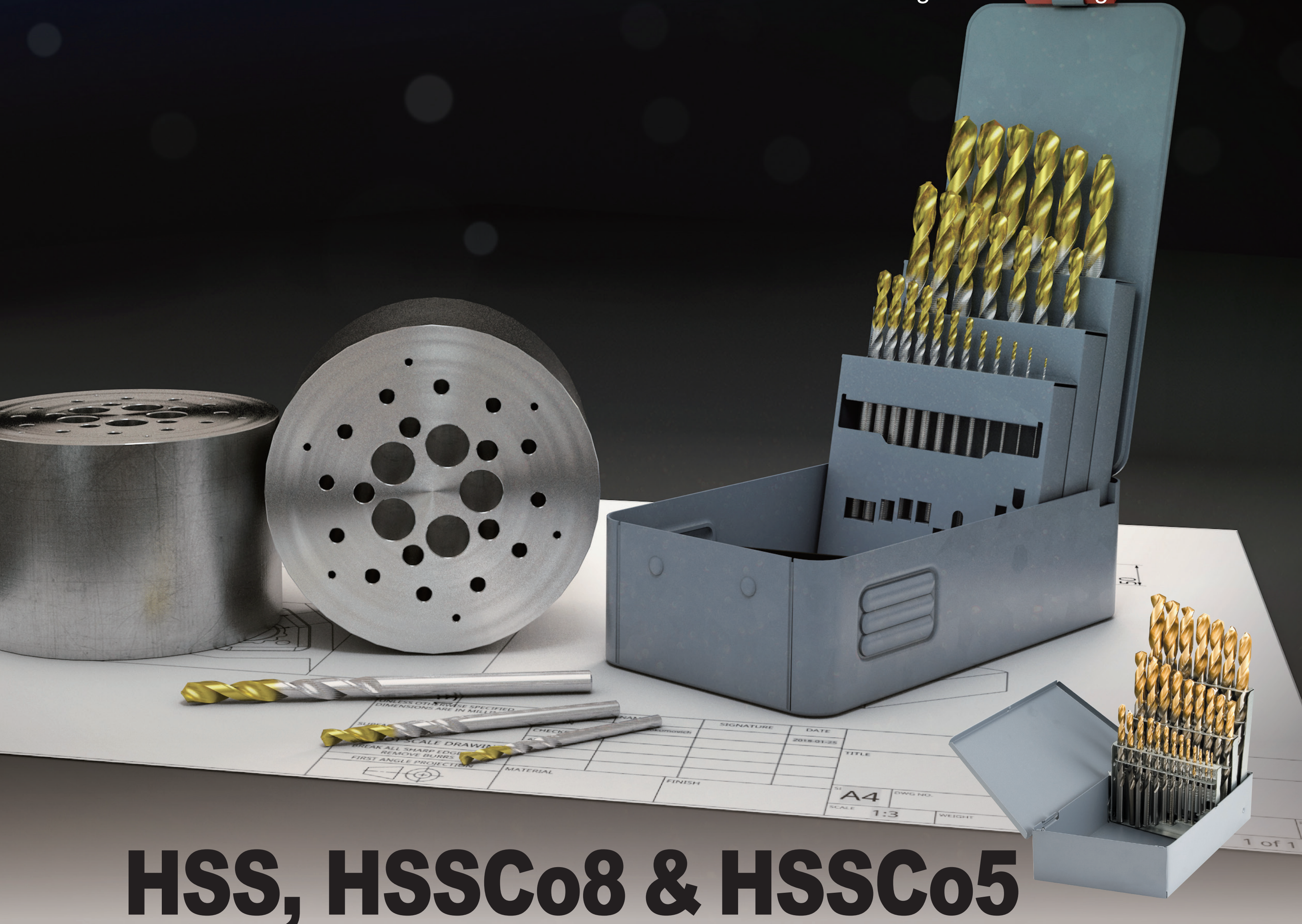
SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM		Drill Diameter									
				METRIC	2.0	3.0	-	4.0	-	5.0	6.0	-	-	8.0
				FRACTIONAL	-	-	1/8	-	3/16	-	-	1/4	5/16	-
				DECIMAL	.0787	.1181	.1250	.1575	.1875	.1969	.2362	.2500	.3125	.3150
P	1	Non-alloy steel	115	RPM	5570	3710		2790	2230		1860		1390	
				FEED	.0016 - .0039	.0028 - .0051		.0035 - .0059	.0047 - .0071		.0051 - .0075		.0071 - .0094	
M	12	Stainless steel	66	RPM	3180	2120		1590	1270		1060		800	
				FEED	.0012 - .0028	.0020 - .0035		.0024 - .0047	.0035 - .0059		.0047 - .0071		.0071 - .0094	
	13		59	RPM	2860	1910		1430	1150		950		720	
				FEED	.0012 - .0028	.0020 - .0035		.0024 - .0047	.0035 - .0059		.0047 - .0071		.0071 - .0094	
	14		49	RPM	2390	1590		1190	950		800		600	
				FEED	.0008 - .0020	.0012 - .0028		.0016 - .0039	.0024 - .0047		.0028 - .0051		.0039 - .0063	
N	21	Aluminum-wrought alloy	296	RPM	14320	9550		7160	5730		4770		3580	
				FEED	.0020 - .0047	.0039 - .0071		.0047 - .0087	.0059 - .0098		.0067 - .0106		.0098 - .0138	
	22		296	RPM	14320	9550		7160	5730		4770		3580	
				FEED	.0020 - .0047	.0039 - .0071		.0047 - .0087	.0059 - .0098		.0067 - .0106		.0098 - .0138	
	26	Copper and Copper Alloys (Bronze / Brass)	115	RPM	5570	3710		2790	2230		1860		1390	
				FEED	.0012 - .0024	.0020 - .0035		.0020 - .0043	.0031 - .0055		.0043 - .0067		.0055 - .0079	

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM		Drill Diameter									
				METRIC	-	10.0	12.0	-	14.0		16.0	18.0		20.0
				FRACTIONAL	3/8	-		1/2		5/8			3/4	
				DECIMAL	.3750	.3937		.5000		.6250	.6299	.7086	.7500	.7874
P	1	Non-alloy steel	115	RPM	1110		930		800	700		620	590	560
				FEED	.0079 - .0118		.0087 - .0126		.0098 - .0138	.0110 - .0150		.0134 - .0173	.0134 - .0173	.0138 - .0177
M	12	Stainless steel	66	RPM	640		530		450	400		350	340	320
				FEED	.0079 - .0118		.0102 - .0142		.0134 - .0173	.0150 - .0189		.0157 - .0197	.0157 - .0197	.0169 - .0209
	13		59	RPM	570		480		410	360		320	300	290
				FEED	.0079 - .0118		.0102 - .0142		.0134 - .0173	.0150 - .0189		.0157 - .0197	.0157 - .0197	.0169 - .0209
	14		49	RPM	480		400		340	300		270	250	240
				FEED	.0047 - .0087		.0055 - .0094		.0094 - .0134	.0110 - .0150		.0118 - .0157	.0118 - .0157	.0130 - .0169
N	21	Aluminum-wrought alloy	296	RPM	2860		2390		2050	1790		1590	1510	1430
				FEED	.0138 - .0177		.0157 - .0217		.0177 - .0236	.0217 - .0276		.0236 - .0295	.0236 - .0295	.0256 - .0315
	22		296	RPM	2860		2390		2050	1790		1590	1510	1430
				FEED	.0138 - .0177		.0157 - .0217		.0177 - .0236	.0217 - .0276		.0236 - .0295	.0236 - .0295	.0256 - .0315
	26	Copper and Copper Alloys (Bronze / Brass)	115	RPM	1110		930		800	700		620	590	560
				FEED	.0063 - .0102		.0071 - .0110		.0087 - .0126	.0102 - .0142		.0110 - .0150	.0110 - .0150	.0118 - .0157

Being the best through innovation



HSS, HSSCo8 & HSSCo5

GOLD-P DRILLS

GOLD-P COATING
- Competitive price and same performance as full TiN coating

SELECTION GUIDE

YG HOLEMAKING TOOLS

HSS, HSSCo8 & HSSCo5
GOLD-P DRILLS

GOLD-P COATING
- Competitive price and same performance as full TiN coating

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A224

SERIES	D1GP182 D8182	D1GP139	D1GP138	D2GP185	D2GP186	D2GP187	D1GP195	DLGP511	DLGP512	DLGP513	DLGP506
STANDARD	ANSI			ANSI			DIN338	ANSI			DIN338
LENGTH	JOBBER	JOBBER	JOBBER	JOBBER	JOBBER	JOBBER	JOBBER	JOBBER	JOBBER	JOBBER	JOBBER
SIZE MIN	D3/64	A	#56	D3/64	A	#56	D5/64	A	#47	D1.0	D2.0
SIZE MAX	D3/4	Z	#1	D1/2	Z	#1	D1/2	Z	#1	D13.0	D13.0
PAGE	A206	A208	A209	A210	A211	A212	A214	A217	A218	A219	A220
SURFACE TREATMENT	TiN			TiN							

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	D1GP182 D8182	D1GP139	D1GP138	D2GP185	D2GP186	D2GP187	D1GP195	DLGP511	DLGP512	DLGP513	DLGP506
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	2		About 0.45% C	Annealed	190	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	4		About 0.75% C	Annealed	270	28	○	○	○	○	○	○	○	○	○	○	○
	5		About 0.75% C	Quenched & Tempered	300	32											
	6	Low alloy steel		Annealed	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7			Quenched & Tempered	275	29	○	○	○	○	○	○	○	○	○	○	○
	8			Quenched & Tempered	300	32	○	○	○	○	○	○	○	○	○	○	○
	9			Quenched & Tempered	350	38											
	10	High alloyed steel, and tool steel		Annealed	200	15	○	○	○	○	○	○	○	○	○	○	○
	11			Quenched & Tempered	325	35											
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎	◎	◎	◎	◎	◎	◎				
	13		Martensitic	Quenched & Tempered	240	23	○	○	○	○	○	○	○				
	14		Austenitic		180	10	○	○	○	○	○	○	○				
K	15	Grey cast iron	Pearlitic / ferritic		180	10	○	○	○	○	○	○	○	○	○	○	○
	16		Pearlitic (Martensitic)		260	26	○	○	○	○	○	○	○	○	○	○	○
	17	Nodular cast iron	Ferritic		160	3	○	○	○	○	○	○	○	○	○	○	○
	18		Pearlitic		250	25								○	○	○	○
	19	Malleable cast iron	Ferritic		130		○	○	○	○	○	○	○	○	○	○	○
	20		Pearlitic		230	21								○	○	○	○
N	21	Aluminum-wrought alloy	Not Curable		60		○	○	○	○	○	○	○				
	22		Curable	Hardened	100		○	○	○	○	○	○	○				
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○	○	○	○	○	○	○				
	24		≤ 12% Si, Curable	Hardened	90												
	25		> 12% Si, Not Curable		130												
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110												
	27		CuZn, CuSnZn (Brass)		90												
	28		CuSn, lead-free copper and electrolytic copper		100												
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic				○	○	○	○	○	○	○				
	30		Rubber, Wood, etc.														
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15											
	32			Cured	280	30											
	33		Ni or Co Based	Annealed	250	25											
	34			Cured	350	38											
	35			Cast	320	34											
	36	Titanium Alloys	Pure Titanium		400 Rm		○	○	○	○	○	○	○				
	37		Alpha + Beta Alloys	Hardened	1050 Rm												
H	38	Hardened steel		Hardened	550	55											
	39			Hardened	630	60											
	40	Chilled Cast Iron		Cast	400	42											
	41	Hardened Cast Iron		Hardened	550	55											

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

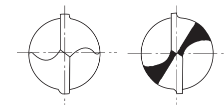
YG GOLD-P DRILLS

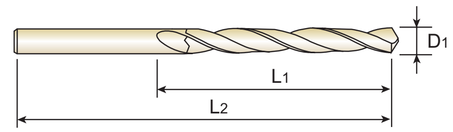
D1GP182 SERIES
D8182 SERIES

HSS, STRAIGHT SHANK, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand helix, wider flutes
- **Point Angle** : 135˚
  under 1/16 : Normal point
  1/16 & over : Split point
- **Surface treatment** : Bright body TiN coating on working part
  over TiN coating on flute length
- **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron





ANSI HSS N ≈30˚ h8 135˚ p.A224

D1 Ø3/64, 118˚

▶ Fractional sizes

Unit : Inch

EDP No.	Diameter Fractional	Diameter Decimal	Flute Length	Overall Length
	D1		L1	L2
* D1GP113003	3/64	.0469	3/4	1-3/4
* D1GP182001	1/64	.0156	3/16	3/4
* D1GP182002	1/32	.0313	1/2	1-3/8
* D1GP182004	1/16	.0625	7/8	1-7/8
* D1GP182005	5/64	.0781	1	2
* D1GP182006	3/32	.0938	1-1/4	2-1/4
* D1GP182007	7/64	.1094	1-1/2	2-5/8
* D1GP182008	1/8	.1250	1-5/8	2-3/4
* D1GP182009	9/64	.1406	1-3/4	2-7/8
* D1GP182010	5/32	.1563	2	3-1/8
* D1GP182011	11/64	.1719	2-1/8	3-1/4
* D1GP182012	3/16	.1875	2-5/16	3-1/2
* D1GP182013	13/64	.2031	2-7/16	3-5/8
* D1GP182014	7/32	.2188	2-1/2	3-3/4
* D1GP182015	15/64	.2344	2-5/8	3-7/8
* D1GP182016	1/4	.2500	2-3/4	4
* D1GP182017	17/64	.2656	2-7/8	4-1/8
* D1GP182018	9/32	.2813	2-15/16	4-1/4
* D1GP182019	19/64	.2969	3-1/16	4-3/8
* D1GP182020	5/16	.3125	3-3/16	4-1/2
** D1GP182021	21/64	.3281	3-5/16	4-5/8
** D1GP182022	11/32	.3438	3-7/16	4-3/4
** D1GP182023	23/64	.3594	3-1/2	4-7/8
** D1GP182024	3/8	.3750	3-5/8	5
** D1GP182025	25/64	.3906	3-3/4	5-1/8
** D1GP182026	13/32	.4063	3-7/8	5-1/4
** D1GP182027	27/64	.4219	3-15/16	5-3/8
** D1GP182028	7/16	.4375	4-1/16	5-1/2
** D1GP182029	29/64	.4531	4-3/16	5-5/8
** D1GP182030	15/32	.4688	4-5/16	5-3/4
** D1GP182031	31/64	.4844	4-3/8	5-7/8
** D1GP182032	1/2	.5000	4-1/2	6
** D8182033	33/64	.5156	4-13/16	6-5/8
** D8182034	17/32	.5312	4-13/16	6-5/8
** D8182035	35/64	.5469	4-13/16	6-5/8
** D8182036	9/16	.5625	4-13/16	6-5/8
** D8182037	37/64	.5781	4-13/16	6-5/8
⁂ D8182038	19/32	.5937	5-3/16	7-1/8
⁂ D8182039	39/64	.6094	5-3/16	7-1/8
⁂ D8182040	5/8	.6250	5-3/16	7-1/8

* 10pcs per package
** 5pcs per package
⁂ 3pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

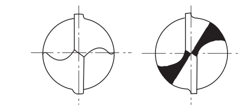
YG GOLD-P DRILLS

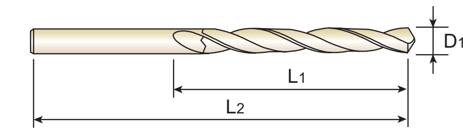
D1GP182 SERIES

HSS, STRAIGHT SHANK, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand helix, wider flutes
- **Point Angle** : 135˚
  under 1/16 : Normal point
  1/16 & over : Split point
- **Surface treatment** : Bright body TiN coating on working part
  over TiN coating on flute length
- **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron





ANSI HSS N ≈30˚ h8 135˚ p.A224

D1 Ø3/64, 118˚

▶ Fractional sizes

Unit : Inch

EDP No.	Diameter Fractional	Diameter Decimal	Flute Length	Overall Length
	D1		L1	L2
⁂ D8182042	21/32	.6563	5-3/16	7-1/8
⁂ D8182044	11/16	.6875	5-5/8	7-5/8
⁂ D8182045	45/64	.7031	5-5/8	7-5/8
⁂ D8182046	23/32	.7188	5-5/8	7-5/8
⁂ D8182047	47/64	.7344	5-5/8	7-5/8
⁂ D8182048	3/4	.7500	6	8

⁂ 3pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

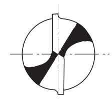
YG GOLD-P DRILLS

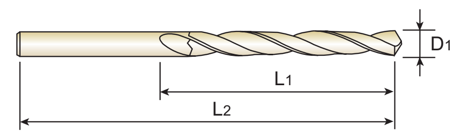
D1GP139 SERIES

HSS, STRAIGHT SHANK, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand helix, wider flutes
- **Point Angle** : 135°: Split point
- **Surface treatment** : Bright body TiN coating on working part
- **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron





ANSI | HSS | N ≈30° | h8 | 135° | p.A224

Letter sizes

Unit : Inch

EDP No.	Diameter Letter	Diameter Decimal D1	Flute Length L1	Overall Length L2
* D1GP139101	A	.2340	2-5/8	3-7/8
* D1GP139102	B	.2380	2-3/4	4
* D1GP139103	C	.2420	2-3/4	4
* D1GP139104	D	.2460	2-3/4	4
* D1GP139105	E	.2500	2-3/4	4
* D1GP139106	F	.2570	2-7/8	4-1/8
* D1GP139107	G	.2610	2-7/8	4-1/8
* D1GP139108	H	.2660	2-7/8	4-1/8
* D1GP139109	I	.2720	2-7/8	4-1/8
* D1GP139110	J	.2770	2-7/8	4-1/8
* D1GP139111	K	.2810	2-15/16	4-1/4
* D1GP139112	L	.2900	2-15/16	4-1/4
* D1GP139113	M	.2950	3-1/16	4-3/8
* D1GP139114	N	.3020	3-1/16	4-3/8
* D1GP139115	O	.3160	3-3/16	4-1/2
* D1GP139116	P	.3230	3-5/16	4-5/8
** D1GP139117	Q	.3320	3-7/16	4-3/4
** D1GP139118	R	.3390	3-7/16	4-3/4
** D1GP139119	S	.3480	3-1/2	4-7/8
** D1GP139120	T	.3580	3-1/2	4-7/8
** D1GP139121	U	.3680	3-5/8	5
** D1GP139122	V	.3770	3-5/8	5
** D1GP139123	W	.3860	3-3/4	5-1/8
** D1GP139124	X	.3970	3-3/4	5-1/8
** D1GP139125	Y	.4040	3-7/8	5-1/4
** D1GP139126	Z	.4130	3-7/8	5-1/4

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

* 10pcs per package
** 5pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

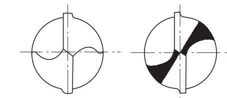
YG GOLD-P DRILLS

D1GP138 SERIES

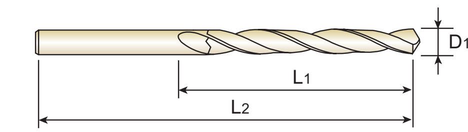
HSS, STRAIGHT SHANK, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand helix, wider flutes
- **Point Angle** : 135°, Split point
  Wire gauge size #53~#56 : Normal point
  Wire gauge size #1~#52 : Split point
- **Surface treatment** : Bright body TiN coating on working part
- **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



#53~#56 #1~#52



ANSI | HSS | N ≈30° | h8 | 135° (#53~#56) | 118° (#1~#52) | p.A224

Wire gauge sizes

Unit : Inch

EDP No.	Diameter Wire gauge	Diameter Decimal D1	Flute Length L1	Overall Length L2
* D1GP138256	1	.2280	2-5/8	3-7/8
* D1GP138255	2	.2210	2-5/8	3-7/8
* D1GP138254	3	.2130	2-1/2	3-3/4
* D1GP138253	4	.2090	2-1/2	3-3/4
* D1GP138252	5	.2055	2-1/2	3-3/4
* D1GP138251	6	.2040	2-1/2	3-3/4
* D1GP138250	7	.2010	2-7/16	3-5/8
* D1GP138249	8	.1990	2-7/16	3-5/8
* D1GP138248	9	.1960	2-7/16	3-5/8
* D1GP138247	10	.1935	2-7/16	3-5/8
* D1GP138246	11	.1910	2-5/16	3-1/2
* D1GP138245	12	.1890	2-5/16	3-1/2
* D1GP138244	13	.1850	2-5/16	3-1/2
* D1GP138243	14	.1820	2-3/16	3-3/8
* D1GP138242	15	.1800	2-3/16	3-3/8
* D1GP138241	16	.1770	2-3/16	3-3/8
* D1GP138240	17	.1730	2-3/16	3-3/8
* D1GP138239	18	.1695	2-1/8	3-1/4
* D1GP138238	19	.1660	2-1/8	3-1/4
* D1GP138237	20	.1610	2-1/8	3-1/4
* D1GP138236	21	.1590	2-1/8	3-1/4
* D1GP138235	22	.1570	2	3-1/8
* D1GP138234	23	.1540	2	3-1/8
* D1GP138233	24	.1520	2	3-1/8
* D1GP138232	25	.1495	1-7/8	3
* D1GP138231	26	.1470	1-7/8	3
* D1GP138230	27	.1440	1-7/8	3
* D1GP138229	28	.1405	1-3/4	2-7/8
* D1GP138228	29	.1360	1-3/4	2-7/8
* D1GP138227	30	.1285	1-5/8	2-3/4
* D1GP138226	31	.1200	1-5/8	2-3/4
* D1GP138225	32	.1160	1-5/8	2-3/4
* D1GP138224	33	.1130	1-1/2	2-5/8
* D1GP138223	34	.1110	1-1/2	2-5/8
* D1GP138222	35	.1100	1-1/2	2-5/8
* D1GP138221	36	.1065	1-7/16	2-1/2
* D1GP138220	37	.1040	1-7/16	2-1/2
* D1GP138219	38	.1015	1-7/16	2-1/2
* D1GP138218	39	.0995	1-3/8	2-3/8
* D1GP138217	40	.0980	1-3/8	2-3/8
* D1GP138216	41	.0960	1-3/8	2-3/8
* D1GP138215	42	.0935	1-1/4	2-1/4
* D1GP138214	43	.0890	1-1/4	2-1/4
* D1GP138213	44	.0860	1-1/8	2-1/8
* D1GP138212	45	.0820	1-1/8	2-1/8
* D1GP138211	46	.0810	1-1/8	2-1/8
* D1GP138210	47	.0785	1	2
* D1GP138209	48	.0760	1	2
* D1GP138208	49	.0730	1	2
* D1GP138207	50	.0700	1	2
* D1GP138206	51	.0670	1	2
* D1GP138205	52	.0635	7/8	1-7/8
* D1GP134204	53	.0595	7/8	1-7/8
* D1GP134203	54	.0550	7/8	1-7/8
* D1GP134202	55	.0520	7/8	1-7/8
* D1GP134201	56	.0465	3/4	1-3/4

* 10pcs per package

- **Tolerance** : See page 000

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

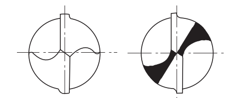
GOLD-P DRILLS

D2GP185 SERIES

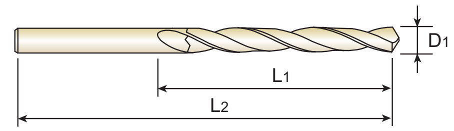
HSSCo8, STRAIGHT SHANK, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand helix, wider flutes
- **Point Angle** : 135˚
  under 1/16 : Normal point
  1/16 & over : Split point
- **Surface treatment** : Bright body TiN coating on working part
- **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



under 1/16 1/16 & over



ANSI | HSS Co8 | N ≈30˚ | h8 | 135˚ | p.A224

Fractional sizes

Unit : Inch

EDP No.	Diameter Fractional	Diameter Decimal	Flute Length	Overall Length
	D1		L1	L2
D2185001	1/64	.0156	3/16	3/4
D2185002	1/32	.0313	1/2	1_3/8
*D2GP185003	3/64	.0469	3/4	1-3/4
*D2GP185004	1/16	.0625	7/8	1-7/8
*D2GP185005	5/64	.0781	1	2
*D2GP185006	3/32	.0938	1-1/4	2-1/4
*D2GP185007	7/64	.1094	1-1/2	2-5/8
*D2GP185008	1/8	.1250	1-5/8	2-3/4
*D2GP185009	9/64	.1406	1-3/4	2-7/8
*D2GP185010	5/32	.1563	2	3-1/8
*D2GP185011	11/64	.1719	2-1/8	3-1/4
*D2GP185012	3/16	.1875	2-5/16	3-1/2
*D2GP185013	13/64	.2031	2-7/16	3-5/8
*D2GP185014	7/32	.2188	2-1/2	3-3/4
*D2GP185015	15/64	.2344	2-5/8	3-7/8
*D2GP185016	1/4	.2500	2-3/4	4
*D2GP185017	17/64	.2656	2-7/8	4-1/8
*D2GP185018	9/32	.2813	2-15/16	4-1/4
*D2GP185019	19/64	.2969	3-1/16	4-3/8
*D2GP185020	5/16	.3125	3-3/16	4-1/2
**D2GP185021	21/64	.3281	3-5/16	4-5/8
**D2GP185022	11/32	.3438	3-7/16	4-3/4
**D2GP185023	23/64	.3594	3-1/2	4-7/8
**D2GP185024	3/8	.3750	3-5/8	5
**D2GP185025	25/64	.3906	3-3/4	5-1/8
**D2GP185026	13/32	.4063	3-7/8	5-1/4
**D2GP185027	27/64	.4219	3-15/16	5-3/8
**D2GP185028	7/16	.4375	4-1/16	5-1/2
**D2GP185029	29/64	.4531	4-3/16	5-5/8
**D2GP185030	15/32	.4688	4-5/16	5-3/4
**D2GP185031	31/64	.4844	4-3/8	5-7/8
**D2GP185032	1/2	.5000	4-1/2	6

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

* 10pcs per package
** 5pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○						○							○					

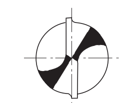
GOLD-P DRILLS

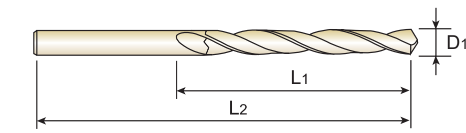
D2GP186 SERIES

HSSCo8, STRAIGHT SHANK, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand helix, wider flutes
- **Point Angle** : 135° : Split point
- **Surface treatment** : Bright body TiN coating on working part
- **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron





ANSI | HSS Co8 | N ≈30˚ | h8 | 135˚ | p.A224

Letter sizes

Unit : Inch

EDP No.	Diameter Letter	Diameter Decimal	Flute Length	Overall Length
	D1		L1	L2
*D2GP186101	A	.2340	2-5/8	3-7/8
*D2GP186102	B	.2380	2-3/4	4
*D2GP186103	C	.2420	2-3/4	4
*D2GP186104	D	.2460	2-3/4	4
*D2GP185105	E	.2500	2-3/4	4
*D2GP186106	F	.2570	2-7/8	4-1/8
*D2GP186107	G	.2610	2-7/8	4-1/8
*D2GP186108	H	.2660	2-7/8	4-1/8
*D2GP186109	I	.2720	2-7/8	4-1/8
*D2GP186110	J	.2770	2-7/8	4-1/8
*D2GP186111	K	.2810	2-15/16	4-1/4
*D2GP186112	L	.2900	2-15/16	4-1/4
*D2GP186113	M	.2950	3-1/16	4-3/8
*D2GP186114	N	.3020	3-1/16	4-3/8
*D2GP186115	O	.3160	3-3/16	4-1/2
*D2GP186116	P	.3230	3-5/16	4-5/8
**D2GP186117	Q	.3320	3-7/16	4-3/4
**D2GP186118	R	.3390	3-7/16	4-3/4
**D2GP186119	S	.3480	3-1/2	4-7/8
**D2GP186120	T	.3580	3-1/2	4-7/8
**D2GP186121	U	.3680	3-5/8	5
**D2GP186122	V	.3770	3-5/8	5
**D2GP186123	W	.3860	3-3/4	5-1/8
**D2GP186124	X	.3970	3-3/4	5-1/8
**D2GP186125	Y	.4040	3-7/8	5-1/4
**D2GP186126	Z	.4130	3-7/8	5-1/4

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○						○							○					

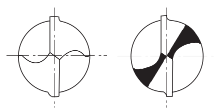
YG GOLD-P DRILLS

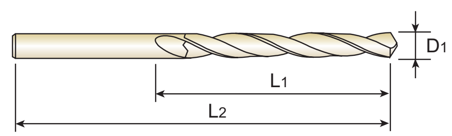
D2GP187 SERIES

HSSCo8, STRAIGHT SHANK, GOLD-P COATED

JOBBER

- ▶**Flute Geometry** : Right hand helix, wider flutes
- ▶**Point Angle** : 135° : Split point
  Wire gauge size #53~#56 : Normal point
  Wire gauge size #1~#52 : Split point
- ▶**Surface treatment** : Bright body TiN coating on working part
- ▶**Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron





ANSI | HSS Co8 | N ≈30° | h8 | 135°

p.A224

▶ Wire gauge sizes

Unit : Inch

EDP No.	Diameter Wire gauge	Diameter Decimal	Flute Length	Overall Length
	D1		L1	L2
* D2GP187256	1	.2280	2-5/8	3-7/8
* D2GP187255	2	.2210	2-5/8	3-7/8
* D2GP187254	3	.2130	2-1/2	3-3/4
* D2GP187253	4	.2090	2-1/2	3-3/4
* D2GP187252	5	.2055	2-1/2	3-3/4
* D2GP187251	6	.2040	2-1/2	3-3/4
* D2GP187250	7	.2010	2-7/16	3-5/8
* D2GP187249	8	.1990	2-7/16	3-5/8
* D2GP187248	9	.1960	2-7/16	3-5/8
* D2GP187247	10	.1935	2-7/16	3-5/8
* D2GP187246	11	.1910	2-5/16	3-1/2
* D2GP187245	12	.1890	2-5/16	3-1/2
* D2GP187244	13	.1850	2-5/16	3-1/2
* D2GP187243	14	.1820	2-3/16	3-3/8
* D2GP187242	15	.1800	2-3/16	3-3/8
* D2GP187241	16	.1770	2-3/16	3-3/8
* D2GP187240	17	.1730	2-3/16	3-3/8
* D2GP187239	18	.1695	2-1/8	3-1/4
* D2GP187238	19	.1660	2-1/8	3-1/4
* D2GP187237	20	.1610	2-1/8	3-1/4

EDP No.	Diameter Wire gauge	Diameter Decimal	Flute Length	Overall Length
	D1		L1	L2
* D2GP187236	21	.1590	2-1/8	3-1/4
* D2GP187235	22	.1570	2	3-1/8
* D2GP187234	23	.1540	2	3-1/8
* D2GP187233	24	.1520	2	3-1/8
* D2GP187232	25	.1495	1-7/8	3
* D2GP187231	26	.1470	1-7/8	3
* D2GP187230	27	.1440	1-7/8	3
* D2GP187229	28	.1405	1-3/4	2-7/8
* D2GP187228	29	.1360	1-3/4	2-7/8
* D2GP187227	30	.1285	1-5/8	2-3/4
* D2GP187226	31	.1200	1-5/8	2-3/4
* D2GP187225	32	.1160	1-5/8	2-3/4
* D2GP187224	33	.1130	1-1/2	2-5/8
* D2GP187223	34	.1110	1-1/2	2-5/8
* D2GP187222	35	.1100	1-1/2	2-5/8
* D2GP187221	36	.1065	1-7/16	2-1/2
* D2GP187220	37	.1040	1-7/16	2-1/2
* D2GP187219	38	.1015	1-7/16	2-1/2
* D2GP187218	39	.0995	1-3/8	2-3/8
* D2GP187217	40	.0980	1-3/8	2-3/8

* 10pcs per package
▶ **Tolerance** : See page 000

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○						○							○					

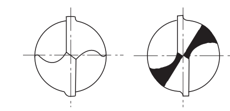
YG GOLD-P DRILLS

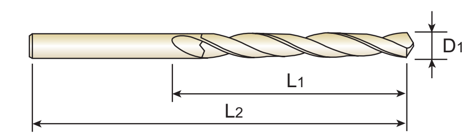
D2GP187 SERIES

HSSCo8, STRAIGHT SHANK, GOLD-P COATED

JOBBER

- ▶**Flute Geometry** : Right hand helix, wider flutes
- ▶**Point Angle** : 135° : Split point
  Wire gauge size #53~#56 : Normal point
  Wire gauge size #1~#52 : Split point
- ▶**Surface treatment** : Bright body TiN coating on working part
- ▶**Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron





ANSI | HSS Co8 | N ≈30° | h8 | 135°

p.A224

▶ Wire gauge sizes

Unit : Inch

EDP No.	Diameter Wire gauge	Diameter Decimal	Flute Length	Overall Length
	D1		L1	L2
* D2GP187216	41	.0960	1-3/8	2-3/8
* D2GP187215	42	.0935	1-1/4	2-1/4
* D2GP187214	43	.0890	1-1/4	2-1/4
* D2GP187213	44	.0860	1-1/8	2-1/8
* D2GP187212	45	.0820	1-1/8	2-1/8
* D2GP187211	46	.0810	1-1/8	2-1/8
* D2GP187210	47	.0785	1	2
* D2GP187209	48	.0760	1	2

EDP No.	Diameter Wire gauge	Diameter Decimal	Flute Length	Overall Length
	D1		L1	L2
* D2GP187208	49	.0730	1	2
* D2GP187207	50	.0700	1	2
* D2GP187206	51	.0670	1	2
* D2GP187205	52	.0635	7/8	1-7/8
* D2GP187204	53	.0595	7/8	1-7/8
* D2GP187203	54	.0550	7/8	1-7/8
* D2GP187202	55	.0520	7/8	1-7/8
* D2GP187201	56	.0465	3/4	1-3/4

* 10pcs per package
▶ **Tolerance** : See page 000

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○						○							○					

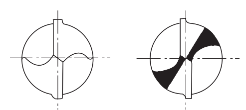
YG GOLD-P DRILLS

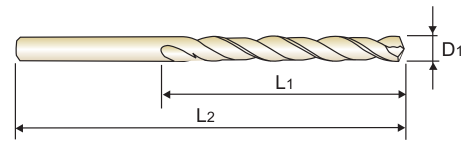
DLGP195 SERIES

HSSCo5, STRAIGHT SHANK DRILLS, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand helix
- **Point Angle** : 135˚
  under 1.6mm : Normal point
  1.6mm & over : Split point
- **Surface treatment** : Bright body, TiN coating on working area
- **Application** : Drilling to steels, cast steels alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron





DIN 338 | HSS Co5 | 33˚ | h8 | 135˚

p.A224

Unit : Inch

EDP No.	Diameter Metric	Diameter Inch	Flute Length	Overall Length
	D1		L1	L2
* DLGP195010	1.0	.0394	12	34
* DLGP195011	1.1	.0433	14	36
* DLGP195012	1.2	.0472	16	38
* DLGP195013	1.3	.0512	16	38
* DLGP195014	1.4	.0551	18	40
* DLGP195015	1.5	.0591	18	40
* DLGP195016	1.6	.0630	20	43
* DLGP195017	1.7	.0669	20	43
* DLGP195018	1.8	.0709	22	46
* DLGP195019	1.9	.0748	22	46
* DLGP195020	2.0	.0787	24	49
* DLGP195021	2.1	.0827	24	49
* DLGP195022	2.2	.0866	27	53
* DLGP195023	2.3	.0906	27	53
* DLGP195024	2.4	.0945	30	57
* DLGP195025	2.5	.0984	30	57
* DLGP195026	2.6	.1024	30	57
* DLGP195027	2.7	.1063	33	61
* DLGP195028	2.8	.1102	33	61
* DLGP195029	2.9	.1142	33	61
* DLGP195030	3.0	.1181	33	61
* DLGP195031	3.1	.1220	36	65
* DLGP195032	3.2	.1260	36	65
* DLGP195033	3.3	.1299	36	65

EDP No.	Diameter Metric	Diameter Inch	Flute Length	Overall Length
	D1		L1	L2
* DLGP195034	3.4	.1339	39	70
* DLGP195035	3.5	.1378	39	70
* DLGP195036	3.6	.1417	39	70
* DLGP195037	3.7	.1457	39	70
* DLGP195038	3.8	.1496	43	75
* DLGP195039	3.9	.1535	43	75
* DLGP195040	4.0	.1575	43	75
* DLGP195041	4.1	.1614	43	75
* DLGP195042	4.2	.1654	43	75
* DLGP195043	4.3	.1693	47	80
* DLGP195044	4.4	.1732	47	80
* DLGP195045	4.5	.1772	47	80
* DLGP195046	4.6	.1811	47	80
* DLGP195047	4.7	.1850	47	80
* DLGP195048	4.8	.1890	52	86
* DLGP195049	4.9	.1929	52	86
* DLGP195050	5.0	.1969	52	86
* DLGP195051	5.1	.2008	52	86
* DLGP195052	5.2	.2047	52	86
* DLGP195053	5.3	.2087	52	86
* DLGP195054	5.4	.2126	57	93
* DLGP195055	5.5	.2165	57	93
* DLGP195056	5.6	.2205	57	93
* DLGP195057	5.7	.2244	57	93

* 10pcs per package

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

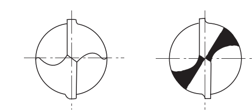
YG GOLD-P DRILLS

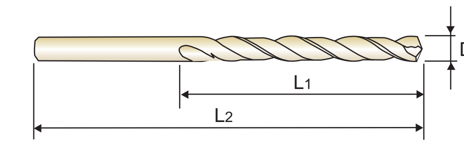
DLGP195 SERIES

HSSCo5, STRAIGHT SHANK DRILLS, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand helix
- **Point Angle** : 135°
  under 1.6mm : Normal point
  1.6mm & over : Split point
- **Surface treatment** : Bright body, TiN coating on working area
- **Application** : Drilling to steels, cast steels alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron





DIN 338 | HSS Co5 | 33˚ | h8 | 135˚

p.A224

Unit : Inch

EDP No.	Diameter Metric	Diameter Inch	Flute Length	Overall Length
	D1		L1	L2
* DLGP195058	5.8	.2283	57	93
* DLGP195059	5.9	.2323	57	93
* DLGP195060	6.0	.2362	57	93
* DLGP195061	6.1	.2402	63	101
* DLGP195062	6.2	.2441	63	101
* DLGP195063	6.3	.2480	63	101
* DLGP195064	6.4	.2520	63	101
* DLGP195065	6.5	.2559	63	101
* DLGP195066	6.6	.2598	63	101
* DLGP195067	6.7	.2638	63	101
* DLGP195068	6.8	.2677	69	109
* DLGP195069	6.9	.2717	69	109
* DLGP195070	7.0	.2756	69	109
* DLGP195071	7.1	.2795	69	109
* DLGP195072	7.2	.2835	69	109
* DLGP195073	7.3	.2874	69	109
* DLGP195074	7.4	.2913	69	109
* DLGP195075	7.5	.2953	69	109
* DLGP195076	7.6	.2992	75	117
* DLGP195077	7.7	.3031	75	117
* DLGP195078	7.8	.3071	75	117
* DLGP195079	7.9	.3110	75	117
* DLGP195080	8.0	.3150	75	117
* DLGP195081	8.1	.3189	75	117

EDP No.	Diameter Metric	Diameter Inch	Flute Length	Overall Length
	D1		L1	L2
* DLGP195082	8.2	.3228	75	117
* DLGP195083	8.3	.3268	75	117
** DLGP195084	8.4	.3307	75	117
** DLGP195085	8.5	.3346	75	117
** DLGP195086	8.6	.3386	81	125
** DLGP195087	8.7	.3425	81	125
** DLGP195088	8.8	.3465	81	125
** DLGP195089	8.9	.3504	81	125
** DLGP195090	9.0	.3543	81	125
** DLGP195091	9.1	.3583	81	125
** DLGP195092	9.2	.3622	81	125
** DLGP195093	9.3	.3661	81	125
** DLGP195094	9.4	.3701	81	125
** DLGP195095	9.5	.3740	81	125
** DLGP195096	9.6	.3780	87	133
** DLGP195097	9.7	.3819	87	133
** DLGP195098	9.8	.3858	87	133
** DLGP195099	9.9	.3898	87	133
** DLGP195100	10.0	.3937	87	133
** DLGP195101	10.1	.3976	87	133
** DLGP195102	10.2	.4016	87	133
** DLGP195103	10.3	.4055	87	133
** DLGP195104	10.4	.4094	87	133
** DLGP195105	10.5	.4134	87	133

* 10pcs per package
** 5pcs per package

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

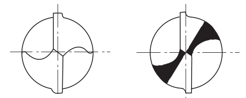
YG GOLD-P DRILLS

DLGP195 SERIES

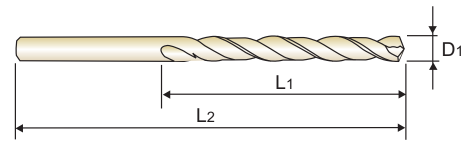
HSSCo5, STRAIGHT SHANK DRILLS, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand helix
- **Point Angle** : 135˚
  under 1.6mm : Normal point
  1.6mm & over : Split point
- **Surface treatment** : Bright body, TiN coating on working area
- **Application** : Drilling to steels, cast steels alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



under 1.6mm 1.6mm & over



DIN 338 | HSS Co5 | 33˚ | h8 | 135˚

p.A224

Unit : Inch

EDP No.	Diameter Metric	Diameter Inch	Flute Length	Overall Length
	D1		L1	L2
** DLGP195106	10.6	.4173	87	133
** DLGP195107	10.7	.4212	94	142
** DLGP195108	10.8	.4252	94	142
** DLGP195109	10.9	.4291	94	142
** DLGP195110	11.0	.4330	94	142
** DLGP195111	11.1	.4370	94	142
** DLGP195112	11.2	.4409	94	142
** DLGP195113	11.3	.4448	94	142
** DLGP195114	11.4	.4488	94	142
** DLGP195115	11.5	.4527	94	142
** DLGP195116	11.6	.4566	94	142
** DLGP195117	11.7	.4606	94	142
** DLGP195118	11.8	.4645	94	142
** DLGP195119	11.9	.4685	101	151
** DLGP195120	12.0	.4724	101	151
** DLGP195121	12.1	.4764	101	151
** DLGP195122	12.2	.4803	101	151
** DLGP195123	12.3	.4843	101	151
** DLGP195124	12.4	.4882	101	151
** DLGP195125	12.5	.4921	101	151
** DLGP195126	12.6	.4921	101	151
** DLGP195127	12.7	.5000	101	151
** DLGP195128	12.8	.5039	101	151
** DLGP195129	12.9	.5079	101	151
** DLGP195130	13.0	.5118	101	151

** 5pcs per package

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

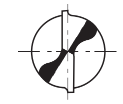
YG GOLD-P DRILLS

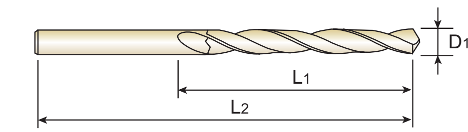
DLGP511 SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand spiral, 38° helix, parabolic flute.
- **Point Angle** : 130° : Split point
- **Surface treatment** : Bright body TiN coating on working part
- **Application** : Improved chip removal in most materials, especially in deep drilling applications.





ANSI | HSS Co5 | W 38˚ | h8 | 130˚

p.A224

Fractional sizes

Unit : Inch

EDP No.	Diameter Fractional	Diameter Decimal	Flute Length	Overall Length
	D1		L1	L2
* DLGP511005	5/64	.0781	1	2
* DLGP511006	3/32	.0938	1-1/4	2-1/4
* DLGP511007	7/64	.1094	1-1/2	2-5/8
* DLGP511008	1/8	.1250	1-5/8	2-3/4
* DLGP511009	9/64	.1406	1-3/4	2-7/8
* DLGP511010	5/32	.1563	2	3-1/8
* DLGP511011	11/64	.1719	2-1/8	3-1/4
* DLGP511012	3/16	.1875	2-5/16	3-1/2
* DLGP511013	13/64	.2031	2-7/16	3-5/8
* DLGP511014	7/32	.2188	2-1/2	3-3/4
* DLGP511015	15/64	.2344	2-5/8	3-7/8
* DLGP511016	1/4	.2500	2-3/4	4
* DLGP511017	17/64	.2656	2-7/8	4-1/8
* DLGP511018	9/32	.2813	2-15/16	4-1/4
* DLGP511019	19/64	.2969	3-1/16	4-3/8
* DLGP511020	5/16	.3125	3-3/16	4-1/2
** DLGP511021	21/64	.3281	3-5/16	4-5/8
** DLGP511022	11/32	.3438	3-7/16	4-3/4
** DLGP511023	23/64	.3594	3-1/2	4-7/8
** DLGP511024	3/8	.3750	3-5/8	5
** DLGP511025	25/64	.3906	3-3/4	5-1/8
** DLGP511026	13/32	.4063	3-7/8	5-1/4
** DLGP511027	27/64	.4219	3-15/16	5-3/8
** DLGP511028	7/16	.4375	4-1/16	5-1/2
** DLGP511029	29/64	.4531	4-3/16	5-5/8
** DLGP511030	15/32	.4688	4-5/16	5-3/4
** DLGP511031	31/64	.4844	4-3/8	5-7/8
** DLGP511032	1/2	.5000	4-1/2	6

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○					○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

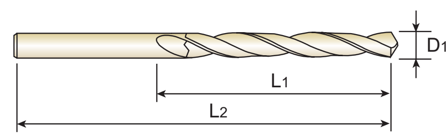
YG GOLD-P DRILLS

DLGP512 SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED

JOBBER

- ▶**Flute Geometry** : Right hand spiral, 38° helix, parabolic flute.
- ▶**Point Angle** : 130° : Split point
- ▶**Surface treatment** : Bright body TiN coating on working part
- ▶**Application** : Improved chip removal in most materials, especially in deep drilling applications.


D1 L1 L2

ANSI | HSS Co5 | W 38° | h8 | 130° | p.A224

▶ Wire gauge sizes

Unit : Inch

EDP No.	Diameter Wire gauge	Diameter Decimal D1	Flute Length L1	Overall Length L2
* DLGP512247	1	.2280	2-5/8	3-7/8
* DLGP512246	2	.2210	2-5/8	3-7/8
* DLGP512245	3	.2130	2-1/2	3-3/4
* DLGP512244	4	.2090	2-1/2	3-3/4
* DLGP512243	5	.2055	2-1/2	3-3/4
* DLGP512242	6	.2040	2-1/2	3-3/4
* DLGP512241	7	.2010	2-7/16	3-5/8
* DLGP512240	8	.1990	2-7/16	3-5/8
* DLGP512239	9	.1960	2-7/16	3-5/8
* DLGP512238	10	.1935	2-7/16	3-5/8
* DLGP512237	11	.1910	2-5/16	3-1/2
* DLGP512236	12	.1890	2-5/16	3-1/2
* DLGP512235	13	.1850	2-5/16	3-1/2
* DLGP512234	14	.1820	2-3/16	3-3/8
* DLGP512233	15	.1800	2-3/16	3-3/8
* DLGP512232	16	.1770	2-3/16	3-3/8
* DLGP512231	17	.1730	2-3/16	3-3/8
* DLGP512230	18	.1695	2-1/8	3-1/4
* DLGP512229	19	.1660	2-1/8	3-1/4
* DLGP512228	20	.1610	2-1/8	3-1/4
* DLGP512227	21	.1590	2-1/8	3-1/4
* DLGP512226	22	.1570	2	3-1/8
* DLGP512225	23	.1540	2	3-1/8
* DLGP512224	24	.1520	2	3-1/8

EDP No.	Diameter Wire gauge	Diameter Decimal D1	Flute Length L1	Overall Length L2
* DLGP512223	25	.1495	1-7/8	3
* DLGP512222	26	.1470	1-7/8	3
* DLGP512221	27	.1440	1-7/8	3
* DLGP512220	28	.1405	1-3/4	2-7/8
* DLGP512219	29	.1360	1-3/4	2-7/8
* DLGP512218	30	.1285	1-5/8	2-3/4
* DLGP512217	31	.1200	1-5/8	2-3/4
* DLGP512216	32	.1160	1-5/8	2-3/4
* DLGP512215	33	.1130	1-1/2	2-5/8
* DLGP512214	34	.1110	1-1/2	2-5/8
* DLGP512213	35	.1100	1-1/2	2-5/8
* DLGP512212	36	.1065	1-7/16	2-1/2
* DLGP512211	37	.1040	1-7/16	2-1/2
* DLGP512210	38	.1015	1-7/16	2-1/2
* DLGP512209	39	.0995	1-3/8	2-3/8
* DLGP512208	40	.0980	1-3/8	2-3/8
* DLGP512207	41	.0960	1-3/8	2-3/8
* DLGP512206	42	.0935	1-1/4	2-1/4
* DLGP512205	43	.0890	1-1/4	2-1/4
* DLGP512204	44	.0860	1-1/8	2-1/8
* DLGP512203	45	.0820	1-1/8	2-1/8
* DLGP512202	46	.0810	1-1/8	2-1/8
* DLGP512201	47	.0785	1	2

* 10pcs per package

▶ **Tolerance** : See page 000

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○					○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

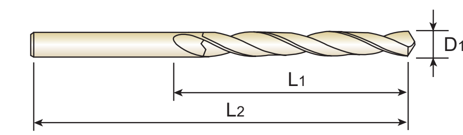
YG GOLD-P DRILLS

DLGP513 SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED

JOBBER

- ▶**Flute Geometry** : Right hand spiral, 38° helix, parabolic flute.
- ▶**Point Angle** : 130° : Split point
- ▶**Surface treatment** : Bright body TiN coating on working part
- ▶**Application** : Improved chip removal in most materials, especially in deep drilling applications.


D1 L1 L2

ANSI | HSS Co5 | W 38° | h8 | 130° | p.A224

▶ Letter sizes

Unit : Inch

EDP No.	Diameter Letter	Diameter Decimal D1	Flute Length L1	Overall Length L2
* DLGP513101	A	.2340	2-5/8	3-7/8
* DLGP513102	B	.2380	2-3/4	4
* DLGP513103	C	.2420	2-3/4	4
* DLGP513104	D	.2460	2-3/4	4
* DLGP513105	E	.2500	2-3/4	4
* DLGP513106	F	.2570	2-7/8	4-1/8
* DLGP513107	G	.2610	2-7/8	4-1/8
* DLGP513108	H	.2660	2-7/8	4-1/8
* DLGP513109	I	.2720	2-7/8	4-1/8
* DLGP513110	J	.2770	2-7/8	4-1/8
* DLGP513111	K	.2810	2-15/16	4-1/4
* DLGP513112	L	.2900	2-15/16	4-1/4
* DLGP513113	M	.2950	3-1/16	4-3/8

EDP No.	Diameter Letter	Diameter Decimal D1	Flute Length L1	Overall Length L2
* DLGP513114	N	.3020	3-1/16	4-3/8
* DLGP513115	O	.3160	3-3/16	4-1/2
* DLGP513116	P	.3230	3-5/16	4-5/8
** DLGP513117	Q	.3320	3-7/16	4-3/4
** DLGP513118	R	.3390	3-7/16	4-3/4
** DLGP513119	S	.3480	3-1/2	4-7/8
** DLGP513120	T	.3580	3-1/2	4-7/8
** DLGP513121	U	.3680	3-5/8	5
** DLGP513122	V	.3770	3-5/8	5
** DLGP513123	W	.3860	3-3/4	5-1/8
** DLGP513124	X	.3970	3-3/4	5-1/8
** DLGP513125	Y	.4040	3-7/8	5-1/4
** DLGP513126	Z	.4130	3-7/8	5-1/4

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○					○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

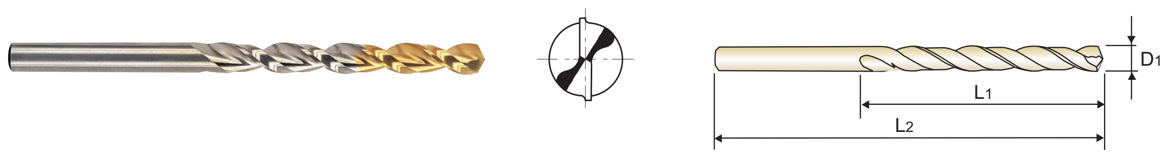
YG GOLD-P DRILLS

DLGP506 SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand, 38° helix, Parabolic flutes
- **Point Angle** : 130˚, Split point giving higher chip removal.
- **Surface treatment** : Bright body, TiN coating on working area.
- **Application** : Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, Special aluminum or magnesium alloys.



DIN 338 | HSS Co5 | W 38° | h8 | 130° | p.A224

Unit : Inch

EDP No.	Diameter Metric D1	Diameter Inch D1	Flute Length L1	Overall Length L2
*DLGP506020	2.0	.0787	24	49
*DLGP506021	2.1	.0827	24	49
*DLGP506022	2.2	.0866	27	53
*DLGP506023	2.3	.0906	27	53
*DLGP506024	2.4	.0945	30	57
*DLGP506025	2.5	.0984	30	57
*DLGP506026	2.6	.1024	30	57
*DLGP506027	2.7	.1063	33	61
*DLGP506028	2.8	.1102	33	61
*DLGP506029	2.9	.1142	33	61
*DLGP506030	3.0	.1181	33	61
*DLGP506031	3.1	.1220	36	65
*DLGP506032	3.2	.1260	36	65
*DLGP506033	3.3	.1299	36	65
*DLGP506034	3.4	.1339	39	70
*DLGP506035	3.5	.1378	39	70
*DLGP506036	3.6	.1417	39	70
*DLGP506037	3.7	.1457	39	70
*DLGP506038	3.8	.1496	43	75
*DLGP506039	3.9	.1535	43	75
*DLGP506040	4.0	.1575	43	75
*DLGP506041	4.1	.1614	43	75
*DLGP506042	4.2	.1654	43	75
*DLGP506043	4.3	.1693	47	80

EDP No.	Diameter Metric D1	Diameter Inch D1	Flute Length L1	Overall Length L2
*DLGP506044	4.4	.1732	47	80
*DLGP506045	4.5	.1772	47	80
*DLGP506046	4.6	.1811	47	80
*DLGP506047	4.7	.1850	47	80
*DLGP506048	4.8	.1890	52	86
*DLGP506049	4.9	.1929	52	86
*DLGP506050	5.0	.1969	52	86
*DLGP506051	5.1	.2008	52	86
*DLGP506052	5.2	.2047	52	86
*DLGP506053	5.3	.2087	52	86
*DLGP506054	5.4	.2126	57	93
*DLGP506055	5.5	.2165	57	93
*DLGP506056	5.6	.2205	57	93
*DLGP506057	5.7	.2244	57	93
*DLGP506058	5.8	.2283	57	93
*DLGP506059	5.9	.2323	57	93
*DLGP506060	6.0	.2362	57	93
*DLGP506061	6.1	.2402	63	101
*DLGP506062	6.2	.2441	63	101
*DLGP506063	6.3	.2480	63	101
*DLGP506064	6.4	.2520	63	101
*DLGP506065	6.5	.2559	63	101
*DLGP506066	6.6	.2598	63	101
*DLGP506067	6.7	.2638	63	101

* 10pcs per package

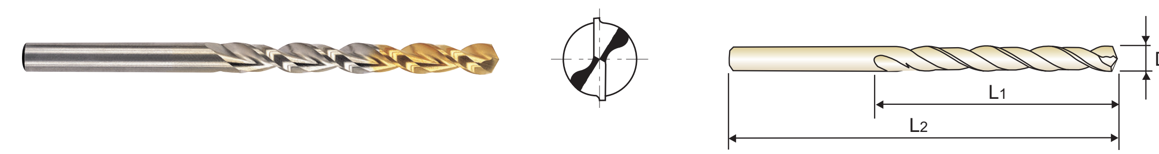
▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○					○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

YG GOLD-P DRILLS
DLGP506 SERIES
HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED
JOBBER
Flute Geometry : Right hand, 38° helix, Parabolic flutes
Point Angle : 130˚, Split point giving higher chip removal.
Surface treatment : Bright body, TiN coating on working area.
Application : Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, Special aluminum or magnesium alloys.



DIN 338 | HSS Co5 | W 38° | h8 | 130° | p.A224
Unit : Inch

EDP No.	Diameter Metric D1	Diameter Inch D1	Flute Length L1	Overall Length L2
*DLGP506068	6.8	.2677	69	109
*DLGP506069	6.9	.2717	69	109
*DLGP506070	7.0	.2756	69	109
*DLGP506071	7.1	.2795	69	109
*DLGP506072	7.2	.2835	69	109
*DLGP506073	7.3	.2874	69	109
*DLGP506074	7.4	.2913	69	109
*DLGP506075	7.5	.2953	69	109
*DLGP506076	7.6	.2992	75	117
*DLGP506077	7.7	.3031	75	117
*DLGP506078	7.8	.3071	75	117
*DLGP506079	7.9	.3110	75	117
*DLGP506080	8.0	.3150	75	117
*DLGP506081	8.1	.3189	75	117
*DLGP506082	8.2	.3228	75	117
*DLGP506083	8.3	.3268	75	117
**DLGP506084	8.4	.3307	75	117
**DLGP506085	8.5	.3346	75	117
**DLGP506086	8.6	.3386	81	125
**DLGP506087	8.7	.3425	81	125
**DLGP506088	8.8	.3465	81	125
**DLGP506089	8.9	.3504	81	125
**DLGP506090	9.0	.3543	81	125
**DLGP506091	9.1	.3583	81	125

EDP No.	Diameter Metric D1	Diameter Inch D1	Flute Length L1	Overall Length L2
**DLGP506092	9.2	.3622	81	125
**DLGP506093	9.3	.3661	81	125
**DLGP506094	9.4	.3701	81	125
**DLGP506095	9.5	.3740	81	125
**DLGP506096	9.6	.3780	87	133
**DLGP506097	9.7	.3819	87	133
**DLGP506098	9.8	.3858	87	133
**DLGP506099	9.9	.3898	87	133
**DLGP506100	10.0	.3937	87	133
**DLGP506101	10.1	.3976	87	133
**DLGP506102	10.2	.4016	87	133
**DLGP506103	10.3	.4055	87	133
**DLGP506104	10.4	.4094	87	133
**DLGP506105	10.5	.4134	87	133
**DLGP506106	10.6	.4173	87	133
**DLGP506107	10.7	.4212	94	142
**DLGP506108	10.8	.4252	94	142
**DLGP506109	10.9	.4291	94	142
**DLGP506110	11.0	.4330	94	142
**DLGP506111	11.1	.4370	94	142
**DLGP506112	11.2	.4409	94	142
**DLGP506113	11.3	.4448	94	142
**DLGP506114	11.4	.4488	94	142
**DLGP506115	11.5	.4527	94	142

* 10pcs per package
** 5pcs per package

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○					○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

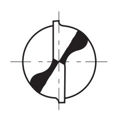
GOLD-P DRILLS

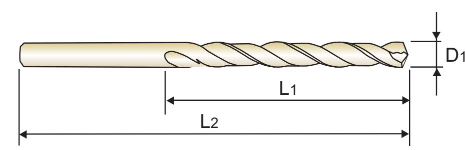
DLGP506 SERIES

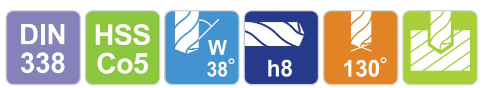
HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand, 38° helix, Parabolic flutes
- **Point Angle** : 130°, Split point giving higher chip removal.
- **Surface treatment** : Bright body, TiN coating on working area.
- **Application** : Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, Special aluminum or magnesium alloys.







p.A224

Unit : Inch

EDP No.	Diameter Metric (D1)	Diameter Inch (D1)	Flute Length (L1)	Overall Length (L2)
** DLGP506116	11.6	.4566	94	142
** DLGP506117	11.7	.4606	94	142
** DLGP506118	11.8	.4645	94	142
** DLGP506119	11.9	.4685	101	151
** DLGP506120	12.0	.4724	101	151
** DLGP506121	12.1	.4764	101	151
** DLGP506122	12.2	.4803	101	151
** DLGP506123	12.3	.4843	101	151
** DLGP506124	12.4	.4882	101	151
** DLGP506125	12.5	.4921	101	151
** DLGP506126	12.6	.4921	101	151
** DLGP506127	12.7	.5000	101	151
** DLGP506128	12.8	.5039	101	151
** DLGP506129	12.9	.5079	101	151
** DLGP506130	13.0	.5118	101	151

** 5pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○					○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

GOLD-P DRILLS

GOLD-P COATED DRILL SETS

EDP No.	Series No.	Description	SIZE	Q'TY
D1GP138 SET	D1GP SET924	HSS Straight Shank, Split Point (53 ~56 : NORMAL point)	#1~#56(Wire gauge)	56 pcs
D1GP139 SET	D1GP SET925	HSS Straight Shank, Split Point	A~Z(Letter)	26 pcs
D1GP182 SET	D1GP SET926	HSS Straight Shank, Split Point	Ø1/16~Ø1/2(Fracitional)	29 pcs
D2GP185 SET	D2GP SET927	HSSCo8 Straight Shank, Split Point	Ø1/16~Ø1/2(Fracitional)	29 pcs
D2GP186 SET	D2GP SET928	HSSCo8 Straight Shank, Split Point	A~Z(Letter)	26 pcs
D2GP187 SET	D2GP SET930	HSSCo8 Straight Shank, Split Point (53 ~56 : NORMAL point)	#1~#56(Wire gauge)	56 pcs
DLGP511 SET	DLGP SET931	HSSCo5 Straight Shank, Split Point	Ø5/64~Ø1/2(Fracitional)	28 pcs
DLGP513 SET	DLGP SET933	HSSCo5 Straight Shank, Split Point	A~Z(Letter)	26 pcs

YG GOLD-P DRILLS

RECOMMENDED CUTTING CONDITIONS

D1GP182, D1GP139, D1GP138, D2GP185, D2GP186, D2GP187, DLGP195 SERIES

HSS, HSSCo5 & HSSCo8 STRAIGHT SHANK, GOLD-P COATED

RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM		Drill Diameter						
				METRIC	2.0	3.0 / -	4.0	6.0 / -	- / 8.0	- / 10.0	- / 13
				FRACTIONAL	-	- / 1/8	-	- / 1/4	5/16 / -	3/8 / -	1/2 /
				DECIMAL	.0787	.1181 / .1250	.1575	.2362 / .2500	.3125 / .3150	.3750 / .3937	.5000 / .5118
P	1	Non-alloy steel	132	RPM	6370	4240	3180	2120	2120	1270	980
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0063	.0063 - .0087	.0071 - .0094
	2		115	RPM	5570	3710	2790	1860	1860	1110	860
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0063	.0063 - .0087	.0071 - .0094
	3		99	RPM	4770	3180	2390	1590	1590	950	730
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0063	.0063 - .0087	.0071 - .0094
	4		66	RPM	3180	2120	1590	1060	1060	640	490
				FEED	.0008 - .0020	.0008 - .0024	.0016 - .0031	.0016 - .0039	.0016 - .0039	.0031 - .0055	.0047 - .0071
	6	Low alloy steel	115	RPM	5570	3710	2790	1860	1860	1110	860
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0063	.0063 - .0087	.0071 - .0094
	7		99	RPM	4770	3180	2390	1590	1590	950	730
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0063	.0063 - .0087	.0071 - .0094
	8		99	RPM	4770	3180	2390	1590	1590	950	730
				FEED	.0008 - .0020	.0008 - .0024	.0016 - .0031	.0016 - .0039	.0016 - .0039	.0031 - .0055	.0047 - .0071
	10	High alloyed steel, and tool steel	66	RPM	3180	2120	1590	1060	1060	640	490
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0063	.0063 - .0087	.0071 - .0094
M	12	Stainless steel	82	RPM	3980	2650	1990	1330	1330	800	610
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0063	.0063 - .0087	.0071 - .0094
	13		66	RPM	3180	2120	1590	1060	1060	640	490
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0063	.0063 - .0087	.0071 - .0094
	14		49	RPM	2390	1590	1190	800	800	480	370
				FEED	.0008 - .0020	.0008 - .0024	.0016 - .0031	.0016 - .0039	.0016 - .0039	.0031 - .0055	.0047 - .0071
K	15	Grey cast iron	132	RPM	6370	4240	3180	2120	2120	1270	980
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0063	.0063 - .0087	.0071 - .0094
	16		115	RPM	5570	3710	2790	1860	1860	1110	860
				FEED	.0008 - .0020	.0008 -.0024	.0016 - .0031	.0016 - .0039	.0016 - .0039	.0031 - .0055	.0047 - .0071
	17	Nodular cast iron	132	RPM	6370	4240	3180	2120	2120	1270	980
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0063	.0063 - .0087	.0071 - .0094
	18		99	RPM	4770	3180	2390	1590	1590	950	730
				FEED	.0008 - .0020	.0008 - .0024	.0016 - .0031	.0016 - .0039	.0016 - .0039	.0031 - .0055	.0047 - .0071
	19	Malleable cast iron	115	RPM	5570	3710	2790	1860	1860	1110	860
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0063	.0063 - .0087	.0071 - .0094
	20		99	RPM	4770	3180	2390	1590	1590	950	730
				FEED	.0008 - .0020	.0008 - .0024	.0016 - .0031	.0016 - .0039	.0016 - .0039	.0031 - .0055	.0047 - .0071
N	21	Aluminum-wrought alloy	214	RPM	10350	6900	5170	3450	3450	2070	1590
				FEED	.0020 - .0035	.0028 - .0043	.0047 - .0063	.0047 - .0071	.0047 - .0071	.0063 - .0087	.0087 - .011
	22		214	RPM	10350	6900	5170	3450	3450	2070	1590
				FEED	.0020 - .0035	.0028 - .0043	.0047 - .0063	.0047 - .0071	.0047 - .0071	.0063 - .0087	.0087 - .011
	23	Aluminum-cast, alloyed	165	RPM	7960	5310	3980	2650	2650	1590	1220
				FEED	.0020 - .0035	.0028 - .0043	.0047 - .0063	.0047 - .0071	.0047 - .0071	.0063 - .0087	.0087 - .011
	29	Non Metallic Materials	99	RPM	4770	3180	2390	1590	1590	950	730
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0063	.0063 - .0087	.0071 - .0094
S	36	Titanium Alloys	66	RPM	3180	2120	1590	1060	1060	640	490
				FEED	.0008 - .0020	.0008 - .0024	.0016 - .0031	.0020 - .0035	.0020 - .0035	.0028 - .0051	.0031 - .0055

Being the best through innovation

HSS, HSS-E & HSSCo8

STRAIGHT SHANK DRILLS

- HSS Drills for soft materials & HSS cobalt Drills for tough materials

i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

SELECTION GUIDE

YG HOLEMAKING TOOLS

HSS, HSS-E & HSSCo8 STRAIGHT SHANK DRILLS

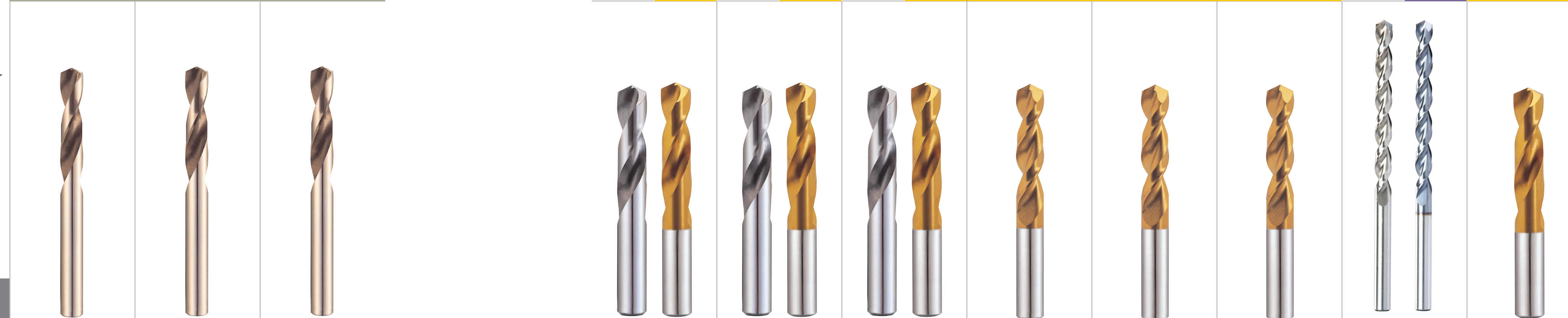
- HSS Drills for soft materials & HSS cobalt Drills for tough materials

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A242

SERIES	D1118	D1115	D1119	D2146 D4146	D2147 D4147	D2148 D4148	DN514	DN516	DN515	DL517 DX517	D4107
STANDARD	ANSI	ANSI	ANSI	ANSI	ANSI	ANSI	ANSI	ANSI	ANSI	ANSI	DIN1897
LENGTH	SCREW MACHINE	SCREW MACHINE	SCREW MACHINE	SCREW MACHINE	SCREW MACHINE	SCREW MACHINE	SCREW MACHINE	SCREW MACHINE	SCREW MACHINE	TAPER	STUB
SIZE MIN	D3/64	A	#60	D3/64	A	#60	D3/32	A	#47	D5/64	D1.0
SIZE MAX	D1/2	Z	#1	D1/2	Z	#1	D1/2	Z	#1	D1/2	D31.0
PAGE	A228	A229	A230	A231	A232	A233	A235	A236	A237	A238	A239
SURFACE TREATMENT	Coloring	Coloring	Coloring	Bright / TiN	Bright / TiN	Bright / TiN	TiN	TiN	TiN	Bright / TiCN	TiN



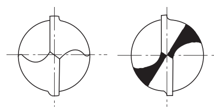
ISO	VDI 3323	Material Description	Composition / Structure	Heat Treatment	HB	HRc	D1118	D1115	D1119	D2146 D4146	D2147 D4147	D2148 D4148	DN514	DN516	DN515	DL517 DX517	D4107
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	2	Non-alloy steel	About 0.45% C	Annealed	190	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	3	Non-alloy steel	About 0.45% C	Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	4	Non-alloy steel	About 0.75% C	Annealed	270	28	○	○	○	○	○	○	○	○	○	○	○
P	5	Non-alloy steel	About 0.75% C	Quenched & Tempered	300	32											
P	6	Low alloy steel		Annealed	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	7	Low alloy steel		Quenched & Tempered	275	29	○	○	○	○	○	○	○	○	○	○	○
P	8	Low alloy steel		Quenched & Tempered	300	32	○	○	○	○	○	○	○	○	○	○	○
P	9	Low alloy steel		Quenched & Tempered	350	38											
P	10	High alloyed steel, and tool steel		Annealed	200	15	○	○	○	○	○	○	○	○	○	○	○
P	11	High alloyed steel, and tool steel		Quenched & Tempered	325	35											
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎	◎	◎	◎	◎	◎					◎
M	13	Stainless steel	Martensitic	Quenched & Tempered	240	23	○	○	○	○	○	○					○
M	14	Stainless steel	Austenitic		180	10	○	○	○	○	○	○					○
K	15	Grey cast iron	Pearlitic / ferritic		180	10	○	○	○	○	○	○	○	○	○	○	○
K	16	Grey cast iron	Pearlitic (Martensitic)		260	26	○	○	○	○	○	○	○	○	○	○	○
K	17	Nodular cast iron	Ferritic		160	3	○	○	○	○	○	○	○	○	○	○	○
K	18	Nodular cast iron	Pearlitic		250	25					○	○	○	○	○	○	○
K	19	Malleable cast iron	Ferritic		130		○	○	○	○	○	○	○	○	○	○	○
K	20	Malleable cast iron	Pearlitic		230	21					○	○	○	○	○	○	○
N	21	Aluminum-wrought alloy	Not Curable		60		○	○	○	○	○	○					○
N	22	Aluminum-wrought alloy	Curable	Hardened	100		○	○	○	○	○	○					○
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○	○	○	○	○	○					○
N	24	Aluminum-cast, alloyed	≤ 12% Si, Curable	Hardened	90												
N	25	Aluminum-cast, alloyed	> 12% Si, Not Curable		130												
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110												
N	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90												
N	28	Copper and Copper Alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper		100												
N	29	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)	Duroplastic, Fiber Reinforced Plastic				○	○	○	○	○	○					○
N	30	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)	Rubber, Wood, etc.														
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15											
S	32	Heat Resistant Super Alloys	Fe Based	Cured	280	30											
S	33	Heat Resistant Super Alloys	Ni or Co Based	Annealed	250	25											
S	34	Heat Resistant Super Alloys	Ni or Co Based	Cured	350	38											
S	35	Heat Resistant Super Alloys	Ni or Co Based	Cast	320	34											
S	36	Titanium Alloys	Pure Titanium		400 Rm		○	○	○	○	○	○					○
S	37	Titanium Alloys	Alpha + Beta Alloys	Hardened	1050 Rm												
H	38	Hardened steel		Hardened	550	55											
H	39	Hardened steel		Hardened	630	60											
H	40	Chilled Cast Iron		Cast	400	42											
H	41	Hardened Cast Iron		Hardened	550	55											

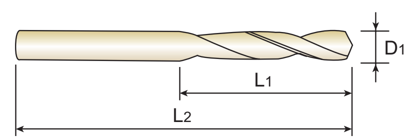
STRAIGHT SHANK DRILLS

D1118 SERIES

HSS, STRAIGHT SHANK SCREW MACHINE

▶**Flute Geometry** : Right hand spiral, wider flutes
▶**Point Angle** : 135˚
under 1/16 : Normal point
1/16 & over : Split point
▶**Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron





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▶ Fractional sizes

Unit : Inch

EDP No.	Diameter Fractional	Diameter Decimal	Flute Length	Overall Length
Coloring	D1		L1	L2
* D1118003	3/64	.0469	1/2	1-3/8
* D1118004	1/16	.0625	5/8	1-5/8
* D1118005	5/64	.0781	11/16	1-11/16
* D1118006	3/32	.0938	3/4	1-3/4
* D1118007	7/64	.1094	13/16	1-13/16
* D1118008	1/8	.1250	7/8	1-7/8
* D1118009	9/64	.1406	15/16	1-15/16
* D1118010	5/32	.1563	1	2-1/16
* D1118011	11/64	.1719	1-1/16	2-1/8
* D1118012	3/16	.1875	1-1/8	2-3/16
* D1118013	13/64	.2031	1-3/16	2-1/4
* D1118014	7/32	.2188	1-1/4	2-3/8
* D1118015	15/64	.2344	1-5/16	2-7/16
* D1118016	1/4	.2500	1-3/8	2-1/2
* D1118017	17/64	.2656	1-7/16	2-5/8
* D1118018	9/32	.2813	1-1/2	2-11/16
* D1118019	19/64	.2969	1-9/16	2-3/4
* D1118020	5/16	.3125	1-5/8	2-13/16
* D1118021	21/64	.3281	1-11/16	2-15/16
* D1118022	11/32	.3438	1-11/16	3
** D1118023	23/64	.3594	1-3/4	3-1/16
** D1118024	3/8	.3750	1-13/16	3-1/8
** D1118025	25/64	.3906	1-7/8	3-1/4
** D1118026	13/32	.4063	1-15/16	3-5/16
** D1118027	27/64	.4219	2	3-3/8
** D1118028	7/16	.4375	2-1/16	3-7/16
** D1118029	29/64	.4531	2-1/8	3-9/16
** D1118030	15/32	.4688	2-1/8	3-5/8
** D1118031	31/64	.4844	2-3/16	3-11/16
** D1118032	1/2	.5000	2-1/4	3-3/4

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

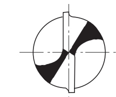
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

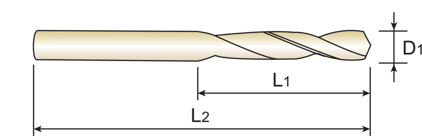
STRAIGHT SHANK DRILLS

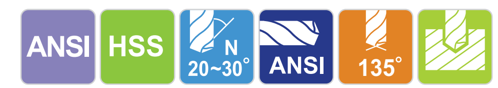
D1115 SERIES

HSS, STRAIGHT SHANK SCREW MACHINE

▶**Flute Geometry** : Right hand spiral, wider flutes
▶**Point Angle** : 135° : Split point
▶**Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron







p.A242

▶ Letter sizes

Unit : Inch

EDP No.	Diameter Letter	Diameter Decimal	Flute Length	Overall Length
Coloring	D1		L1	L2
* D1115201	A	.2340	1-5/16	2-7/16
* D1115202	B	.2380	1-3/8	2-1/2
* D1115203	C	.2420	1-3/8	2-1/2
* D1115204	D	.2460	1-3/8	2-1/2
* D1115205	E	.2500	1-3/8	2-1/2
* D1115206	F	.2570	1-7/16	2-5/8
* D1115207	G	.2610	1-7/16	2-5/8
* D1115208	H	.2660	1-1/2	2-11/16
* D1115209	I	.2720	1-1/2	2-11/16
* D1115210	J	.2770	1-1/2	2-11/16
* D1115211	K	.2810	1-1/2	2-11/16
* D1115212	L	.2900	1-9/16	2-3/4
* D1115213	M	.2950	1-9/16	2-3/4
* D1115214	N	.3020	1-5/8	2-13/16
* D1115215	O	.3160	1-11/16	2-15/16
* D1115216	P	.3230	1-11/16	2-15/16
** D1115217	Q	.3320	1-11/16	3
** D1115218	R	.3390	1-11/16	3
** D1115219	S	.3480	1-3/4	3-1/16
** D1115220	T	.3580	1-3/4	3-1/16
** D1115221	U	.3680	1-13/16	3-1/8
** D1115222	V	.3770	1-7/8	3-1/4
** D1115223	W	.3860	1-7/8	3-1/4
** D1115224	X	.3970	1-15/16	3-5/16
** D1115225	Y	.4040	1-15/16	3-5/16
** D1115226	Z	.4130	2	3-3/8

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

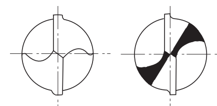
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

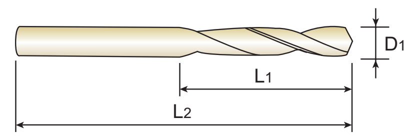
STRAIGHT SHANK DRILLS

D1119 SERIES

HSS, STRAIGHT SHANK SCREW MACHINE

▶ **Flute Geometry** : Right hand spiral, wider flutes
▶ **Point Angle** : 135° : Split point
Wire gauge size #47~#60 : Normal point
Wire gauge size #1~#46 : Split point
▶ **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron





ANSI | HSS | N 20~30° | ANSI | 135° | p.A242

▶ Wire gauge sizes

Unit : Inch

EDP No.	Diameter		Flute Length	Overall Length
	Wire gauge	Decimal		
Coloring	D1		L1	L2
*D1119201	1	.2280	1-5/16	2-7/16
*D1119202	2	.2210	1-5/16	2-7/16
*D1119203	3	.2130	1-1/4	2-3/8
*D1119204	4	.2090	1-1/4	2-3/8
*D1119205	5	.2055	1-1/4	2-3/8
*D1119206	6	.2040	1-1/4	2-3/8
*D1119207	7	.2010	1-3/16	2-1/4
*D1119208	8	.1990	1-3/16	2-1/4
*D1119209	9	.1960	1-3/16	2-1/4
*D1119210	10	.1935	1-3/16	2-1/4
*D1119211	11	.1910	1-3/16	2-1/4
*D1119212	12	.1890	1-3/16	2-1/4
*D1119213	13	.1850	1-1/8	2-3/16
*D1119214	14	.1820	1-1/8	2-3/16
*D1119215	15	.1800	1-1/8	2-3/16
*D1119216	16	.1770	1-1/8	2-3/16
*D1119217	17	.1730	1-1/8	2-3/16
*D1119218	18	.1695	1-1/16	2-1/8
*D1119219	19	.1660	1-1/16	2-1/8
*D1119220	20	.1610	1-1/16	2-1/8
*D1119221	21	.1590	1-1/16	2-1/8
*D1119222	22	.1570	1-1/16	2-1/8
*D1119223	23	.1540	1	2-1/16
*D1119224	24	.1520	1	2-1/16
*D1119225	25	.1495	1	2-1/16
*D1119226	26	.1470	1	2-1/16
*D1119227	27	.1440	1	2-1/16
*D1119228	28	.1405	15/16	1-15/16
*D1119229	29	.1360	15/16	1-15/16
*D1119230	30	.1285	15/16	1-15/16
*D1119231	31	.1200	7/8	1-7/8
*D1119232	32	.1160	7/8	1-7/8
*D1119233	33	.1130	7/8	1-7/8
*D1119234	34	.1110	7/8	1-7/8
*D1119235	35	.1100	7/8	1-7/8
*D1119236	36	.1065	13/16	1-13/16
*D1119237	37	.1040	13/16	1-13/16
*D1119238	38	.1015	13/16	1-13/16
*D1119239	39	.0995	13/16	1-13/16
*D1119240	40	.0980	13/16	1-13/16
*D1119241	41	.0960	13/16	1-13/16
*D1119242	42	.0935	3/4	1-3/4
*D1119243	43	.0890	3/4	1-3/4
*D1119244	44	.0860	3/4	1-3/4
*D1119245	45	.0820	3/4	1-3/4
*D1119246	46	.0810	3/4	1-3/4
*D1119247	47	.0785	11/16	1-11/16
*D1119248	48	.0760	11/16	1-11/16
*D1119249	49	.0730	11/16	1-11/16
*D1119250	50	.0700	11/16	1-11/16
*D1119251	51	.0670	11/16	1-11/16
*D1119252	52	.0635	11/16	1-11/16
*D1119253	53	.0595	5/8	1-5/8
*D1119254	54	.0550	5/8	1-5/8
*D1119255	55	.0520	5/8	1-5/8
*D1119256	56	.0465	1/2	1-3/8
*D1119257	57	.0430	1/2	1-3/8
*D1119258	58	.0420	1/2	1-3/8
*D1119259	59	.0410	1/2	1-3/8
*D1119260	60	.0400	1/2	1-3/8

▶ **Tolerance** : See page 218 / * 10pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

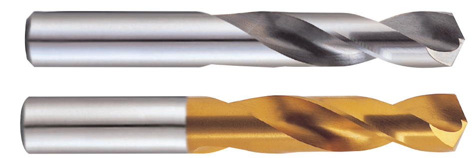
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

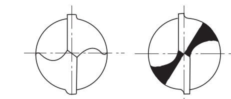
STRAIGHT SHANK DRILLS

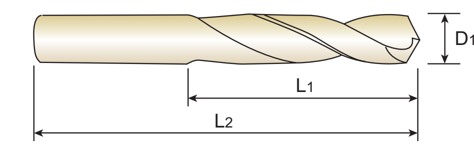
UN-COATED **D2146 SERIES**
TiN-COATED **D4146 SERIES**

HSSCo8, STRAIGHT SHANK SCREW MACHINE

▶ **Flute Geometry** : Right hand spiral, wider flutes
▶ **Point Angle** : 135˚
under 1/16 : Normal point
1/16 & over : Split point
▶ **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron







ANSI | HSS Co8 | N 20~30° | ANSI | 135° | p.A242

▶ Fractional sizes

Unit : Inch

EDP No.		Drill Diameter		Flute Length	Overall Length
		Fractional	Decimal		
Bright	TiN	D1		L1	L2
*D2146003	D4146003	3/64	.0469	1/2	1-3/8
*D2146004	D4146004	1/16	.0625	5/8	1-5/8
*D2146005	D4146005	5/64	.0781	11/16	1-11/16
*D2146006	D4146006	3/32	.0938	3/4	1-3/4
**D2146007	D4146007	7/64	.1094	13/16	1-13/16
**D2146008	D4146008	1/8	.1250	7/8	1-7/8
**D2146009	D4146009	9/64	.1406	15/16	1-15/16
**D2146010	D4146010	5/32	.1563	1	2-1/16
**D2146011	D4146011	11/64	.1719	1-1/16	2-1/8
**D2146012	D4146012	3/16	.1875	1-1/8	2-3/16
**D2146013	D4146013	13/64	.2031	1-3/16	2-1/4
**D2146014	D4146014	7/32	.2188	1-1/4	2-3/8
**D2146015	D4146015	15/64	.2344	1-5/16	2-7/16
**D2146016	D4146016	1/4	.2500	1-3/8	2-1/2
**D2146017	D4146017	17/64	.2656	1-7/16	2-5/8
**D2146018	D4146018	9/32	.2813	1-1/2	2-11/16
**D2146019	D4146019	19/64	.2969	1-9/16	2-3/4
**D2146020	D4146020	5/16	.3125	1-5/8	2-13/16
**D2146021	D4146021	21/64	.3281	1-11/16	2-15/16
**D2146022	D4146022	11/32	.3438	1-11/16	3
**D2146023	D4146023	23/64	.3594	1-3/4	3-1/16
**D2146024	D4146024	3/8	.3750	1-13/16	3-1/8
**D2146025	D4146025	25/64	.3906	1-7/8	3-1/4
**D2146026	D4146026	13/32	.4063	1-15/16	3-5/16
**D2146027	D4146027	27/64	.4219	2	3-3/8
**D2146028	D4146028	7/16	.4375	2-1/16	3-7/16
**D2146029	D4146029	29/64	.4531	2-1/8	3-9/16
**D2146030	D4146030	15/32	.4688	2-1/8	3-5/8
**D2146031	D4146031	31/64	.4844	2-3/16	3-11/16
**D2146032	D4146032	1/2	.5000	2-1/4	3-3/4

▶ **Tolerance** : See page 218 / * 10pcs per package ** 5pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

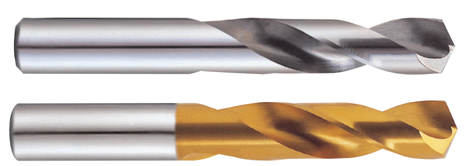
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

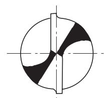
YG STRAIGHT SHANK DRILLS

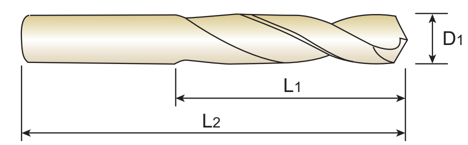
UN-COATED **D2147** SERIES
TiN-COATED **D4147** SERIES

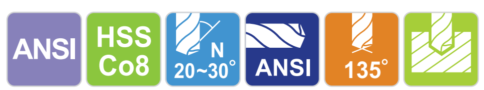
HSSCo8, STRAIGHT SHANK SCREW MACHINE

- **Flute Geometry** : Right hand spiral, wider flutes
- **Point Angle** : 135° : Split point
- **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron









p.A242

Letter sizes

Unit : Inch

EDP No.		Drill Diameter		Flute Length	Overall Length
		Letter	Decimal		
Bright	TiN	D1		L1	L2
** D2147201	D4147201	A	.2340	1-5/16	2-7/16
** D2147202	D4147202	B	.2380	1-3/8	2-1/2
** D2147203	D4147203	C	.2420	1-3/8	2-1/2
** D2147204	D4147204	D	.2460	1-3/8	2-1/2
** D2147205	D4147205	E	.2500	1-3/8	2-1/2
** D2147206	D4147206	F	.2570	1-7/16	2-5/8
** D2147207	D4147207	G	.2610	1-7/16	2-5/8
** D2147208	D4147208	H	.2660	1-1/2	2-11/16
** D2147209	D4147209	I	.2720	1-1/2	2-11/16
** D2147210	D4147210	J	.2770	1-1/2	2-11/16
** D2147211	D4147211	K	.2810	1-1/2	2-11/16
** D2147212	D4147212	L	.2900	1-9/16	2-3/4
** D2147213	D4147213	M	.2950	1-9/16	2-3/4
** D2147214	D4147214	N	.3020	1-5/8	2-13/16
** D2147215	D4147215	O	.3160	1-11/16	2-15/16
** D2147216	D4147216	P	.3230	1-11/16	2-15/16
** D2147217	D4147217	Q	.3320	1-11/16	3
** D2147218	D4147218	R	.3390	1-11/16	3
** D2147219	D4147219	S	.3480	1-3/4	3-1/16
** D2147220	D4147220	T	.3580	1-3/4	3-1/16
** D2147221	D4147221	U	.3680	1-13/16	3-1/8
** D2147222	D4147222	V	.3770	1-7/8	3-1/4
** D2147223	D4147223	W	.3860	1-7/8	3-1/4
** D2147224	D4147224	X	.3970	1-15/16	3-5/16
** D2147225	D4147225	Y	.4040	1-15/16	3-5/16
** D2147226	D4147226	Z	.4130	2	3-3/8

Tolerance : See page 218 / ** 5pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

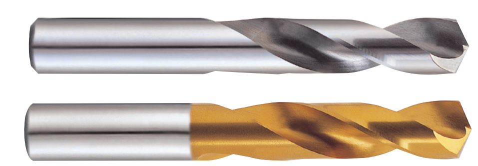
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

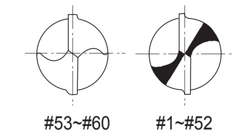
YG STRAIGHT SHANK DRILLS

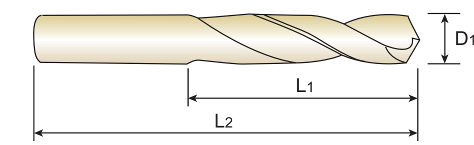
UN-COATED **D2148** SERIES
TiN-COATED **D4148** SERIES

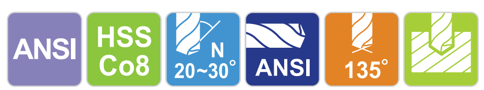
HSSCo8, STRAIGHT SHANK SCREW MACHINE

- **Flute Geometry** : Right hand spiral, wider flutes
- **Point Angle** : 135° : Split point
  Wire gauge size #53~#60 : Normal point
  Wire gauge size #1~#52 : Split point
- **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron









p.A242

Wire gauge sizes

Unit : Inch

EDP No.		Drill Diameter		Flute Length	Overall Length
		Wire gauge	Decimal		
Bright	TiN	D1		L1	L2
** D2148101	D4148101	1	.2280	1-5/16	2-7/16
** D2148102	D4148102	2	.2210	1-5/16	2-7/16
** D2148103	D4148103	3	.2130	1-1/4	2-3/8
** D2148104	D4148104	4	.2090	1-1/4	2-3/8
** D2148105	D4148105	5	.2055	1-1/4	2-3/8
** D2148106	D4148106	6	.2040	1-1/4	2-3/8
** D2148107	D4148107	7	.2010	1-3/16	2-1/4
** D2148108	D4148108	8	.1990	1-3/16	2-1/4
** D2148109	D4148109	9	.1960	1-3/16	2-1/4
** D2148110	D4148110	10	.1935	1-3/16	2-1/4
** D2148111	D4148111	11	.1910	1-3/16	2-1/4
** D2148112	D4148112	12	.1890	1-3/16	2-1/4
** D2148113	D4148113	13	.1850	1-1/8	2-3/16
** D2148114	D4148114	14	.1820	1-1/8	2-3/16
** D2148115	D4148115	15	.1800	1-1/8	2-3/16
** D2148116	D4148116	16	.1770	1-1/8	2-3/16
** D2148117	D4148117	17	.1730	1-1/8	2-3/16
** D2148118	D4148118	18	.1695	1-1/16	2-1/8
** D2148119	D4148119	19	.1660	1-1/16	2-1/8
** D2148120	D4148120	20	.1610	1-1/16	2-1/8
** D2148121	D4148121	21	.1590	1-1/16	2-1/8
** D2148122	D4148122	22	.1570	1-1/16	2-1/8
** D2148123	D4148123	23	.1540	1	2-1/16
** D2148124	D4148124	24	.1520	1	2-1/16
** D2148125	D4148125	25	.1495	1	2-1/16
** D2148126	D4148126	26	.1470	1	2-1/16
** D2148127	D4148127	27	.1440	1	2-1/16
** D2148128	D4148128	28	.1405	15/16	1-15/16
** D2148129	D4148129	29	.1360	15/16	1-15/16
** D2148130	D4148130	30	.1285	15/16	1-15/16

Tolerance : See page 218 / ** 5pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

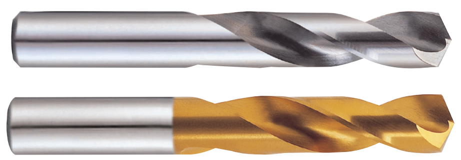
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

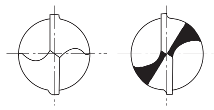
YG STRAIGHT SHANK DRILLS

UN-COATED **D2148** SERIES
TiN-COATED **D4148** SERIES

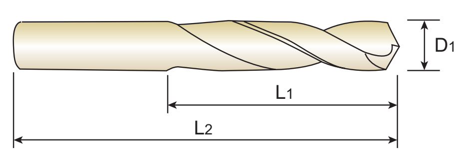
HSSCo8, STRAIGHT SHANK SCREW MACHINE

- **Flute Geometry** : Right hand spiral, wider flutes
- **Point Angle** : 135° : Split point
  Wire gauge size #53~#60 : Normal point
  Wire gauge size #1~#52 : Split point
- **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron





#53~#60 #1~#52



ANSI | HSS Co8 | N 20~30° | ANSI | 135°

p.A242

Wire gauge sizes

Unit : Inch

EDP No.		Drill Diameter		Flute Length	Overall Length
		Wire gauge	Decimal		
Bright	TiN	D1		L1	L2
** D2148131	D4148131	31	.1200	7/8	1-7/8
** D2148132	D4148132	32	.1160	7/8	1-7/8
** D2148133	D4148133	33	.1130	7/8	1-7/8
** D2148134	D4148134	34	.1110	7/8	1-7/8
** D2148135	D4148135	35	.1100	7/8	1-7/8
** D2148136	D4148136	36	.1065	13/16	1-13/16
* D2148137	D4148137	37	.1040	13/16	1-13/16
* D2148138	D4148138	38	.1015	13/16	1-13/16
* D2148139	D4148139	39	.0995	13/16	1-13/16
* D2148140	D4148140	40	.0980	13/16	1-13/16
* D2148141	D4148141	41	.0960	13/16	1-13/16
* D2148142	D4148142	42	.0935	3/4	1-3/4
* D2148143	D4148143	43	.0890	3/4	1-3/4
* D2148144	D4148144	44	.0860	3/4	1-3/4
* D2148145	D4148145	45	.0820	3/4	1-3/4
* D2148146	D4148146	46	.0810	3/4	1-3/4
* D2148147	D4148147	47	.0785	11/16	1-11/16
* D2148148	D4148148	48	.0760	11/16	1-11/16
* D2148149	D4148149	49	.0730	11/16	1-11/16
* D2148150	D4148150	50	.0700	11/16	1-11/16
* D2148151	D4148151	51	.0670	11/16	1-11/16
* D2148152	D4148152	52	.0635	11/16	1-11/16
* D2148153	D4148153	53	.0595	5/8	1-5/8
* D2148154	D4148154	54	.0550	5/8	1-5/8
* D2148155	D4148155	55	.0520	5/8	1-5/8
* D2148156	D4148156	56	.0465	1/2	1-3/8
* D2148157	D4148157	57	.0430	1/2	1-3/8
* D2148158	D4148158	58	.0420	1/2	1-3/8
* D2148159	D4148159	59	.0410	1/2	1-3/8
* D2148160	D4148160	60	.0400	1/2	1-3/8

▶ **Tolerance** : See page 218 / * 10pcs per package ** cs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

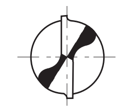
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

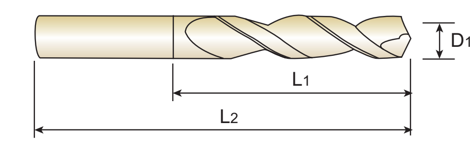
YG STRAIGHT SHANK DRILLS

DN514 SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE SCREW MACHINE, TiN COATED

- **Flute Geometry** : Right hand spiral, Parabolic flute
  38° helix
- **Point Angle** : 130° : Split point
- **Application** : Improved chip removal in most materials, especially in deep drilling applications.





ANSI | HSS-E | W 38° | ANSI | 130°

p.A244

Fractional sizes

Unit : Inch

EDP No.	Diameter		Flute Length	Overall Length
	Fractional	Decimal		
TiN	D1		L1	L2
* DN514006	3/32	.0938	3/4	1-3/4
** DN514007	7/64	.1094	13/16	1-13/16
** DN514008	1/8	.1250	7/8	1-7/8
** DN514009	9/64	.1406	15/16	1-15/16
** DN514010	5/32	.1563	1	2-1/16
** DN514011	11/64	.1719	1-1/16	2-1/8
** DN514012	3/16	.1875	1-1/8	2-3/16
** DN514013	13/64	.2031	1-3/16	2-1/4
** DN514014	7/32	.2188	1-1/4	2-3/8
** DN514015	15/64	.2344	1-5/16	2-7/16
** DN514016	1/4	.2500	1-3/8	2-1/2
** DN514017	17/64	.2656	1-7/16	2-5/8
** DN514018	9/32	.2813	1-1/2	2-11/16
** DN514019	19/64	.2969	1-9/16	2-3/4
** DN514020	5/16	.3125	1-5/8	2-13/16
** DN514021	21/64	.3281	1-11/16	2-15/16
** DN514022	11/32	.3438	1-11/16	3
** DN514023	23/64	.3594	1-3/4	3-1/16
** DN514024	3/8	.3750	1-13/16	3-1/8
** DN514025	25/64	.3906	1-7/8	3-1/4
** DN514026	13/32	.4063	1-15/16	3-5/16
** DN514027	27/64	.4219	2	3-3/8
** DN514028	7/16	.4375	2-1/16	3-7/16
** DN514029	29/64	.4531	2-1/8	3-9/16
** DN514030	15/32	.4688	2-1/8	3-5/8
** DN514031	31/64	.4844	2-3/16	3-11/16
** DN514032	1/2	.5000	2-1/4	3-3/4

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○					○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

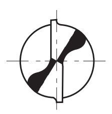
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

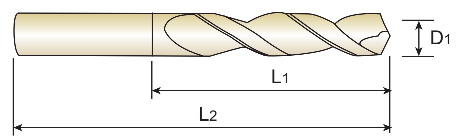
YG STRAIGHT SHANK DRILLS

DN515 SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE SCREW MACHINE, TiN COATED

- **Flute Geometry** : Right hand spiral, Parabolic flute
  38° helix
- **Point Angle** : 130° : Split point
- **Application** : Improved chip removal in most materials, especially in deep drilling applications.





ANSI HSS-E W 38° ANSI 130°

p.A244

Wire gauge sizes

Unit : Inch

EDP No. TiN	Wire gauge	Decimal D1	Flute Length L1	Overall Length L2
** DN515201	1	.2280	1-5/16	2-7/16
** DN515202	2	.2210	1-5/16	2-7/16
** DN515203	3	.2130	1-1/4	2-3/8
** DN515204	4	.2090	1-1/4	2-3/8
** DN515205	5	.2055	1-1/4	2-3/8
** DN515206	6	.2040	1-1/4	2-3/8
** DN515207	7	.2010	1-3/16	2-1/4
** DN515208	8	.1990	1-3/16	2-1/4
** DN515209	9	.1960	1-3/16	2-1/4
** DN515210	10	.1935	1-3/16	2-1/4
** DN515211	11	.1910	1-3/16	2-1/4
** DN515212	12	.1890	1-3/16	2-1/4
** DN515213	13	.1850	1-1/8	2-3/16
** DN515214	14	.1820	1-1/8	2-3/16
** DN515215	15	.1800	1-1/8	2-3/16
** DN515216	16	.1770	1-1/8	2-3/16
** DN515217	17	.1730	1-1/8	2-3/16
** DN515218	18	.1695	1-1/16	2-1/8
** DN515219	19	.1660	1-1/16	2-1/8
** DN515220	20	.1610	1-1/16	2-1/8
** DN515221	21	.1590	1-1/16	2-1/8
** DN515222	22	.1570	1-1/16	2-1/8
** DN515223	23	.1540	1	2-1/16
** DN515224	24	.1520	1	2-1/16

EDP No. TiN	Wire gauge	Decimal D1	Flute Length L1	Overall Length L2
** DN515225	25	.1495	1	2-1/16
** DN515226	26	.1470	1	2-1/16
** DN515227	27	.1440	1	2-1/16
** DN515228	28	.1405	15/16	1-15/16
** DN515229	29	.1360	15/16	1-15/16
** DN515230	30	.1285	15/16	1-15/16
** DN515231	31	.1200	7/8	1-7/8
** DN515232	32	.1160	7/8	1-7/8
** DN515233	33	.1130	7/8	1-7/8
** DN515234	34	.1110	7/8	1-7/8
** DN515235	35	.1100	7/8	1-7/8
** DN515236	36	.1065	13/16	1-13/16
* DN515237	37	.1040	13/16	1-13/16
* DN515238	38	.1015	13/16	1-13/16
* DN515239	39	.0995	13/16	1-13/16
* DN515240	40	.0980	13/16	1-13/16
* DN515241	41	.0960	13/16	1-13/16
* DN515242	42	.0935	3/4	1-3/4
* DN515243	43	.0890	3/4	1-3/4
* DN515244	44	.0860	3/4	1-3/4
* DN515245	45	.0820	3/4	1-3/4
* DN515246	46	.0810	3/4	1-3/4
* DN515247	47	.0785	11/16	1-11/16

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

* 10pcs per package
** 5pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○					○	○	○	○	○	○

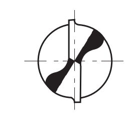
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

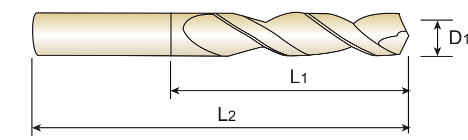
YG STRAIGHT SHANK DRILLS

DN516 SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE SCREW MACHINE, TiN COATED

- **Flute Geometry** : Right hand spiral, Parabolic flute
  38° helix
- **Point Angle** : 130° : Split point
- **Application** : Improved chip removal in most materials, especially in deep drilling applications.





ANSI HSS-E W 38° ANSI 130°

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Letter sizes

Unit : Inch

EDP No. TiN	Letter	Decimal D1	Flute Length L1	Overall Length L2
** DN516101	A	.2340	1-5/16	2-7/16
** DN516102	B	.2380	1-3/8	2-1/2
** DN516103	C	.2420	1-3/8	2-1/2
** DN516104	D	.2460	1-3/8	2-1/2
** DN516105	E	.2500	1-3/8	2-1/2
** DN516106	F	.2570	1-7/16	2-5/8
** DN516107	G	.2610	1-7/16	2-5/8
** DN516108	H	.2660	1-1/2	2-11/16
** DN516109	I	.2720	1-1/2	2-11/16
** DN516110	J	.2770	1-1/2	2-11/16
** DN516111	K	.2810	1-1/2	2-11/16
** DN516112	L	.2900	1-9/16	2-3/4
** DN516113	M	.2950	1-9/16	2-3/4

EDP No. TiN	Letter	Decimal D1	Flute Length L1	Overall Length L2
** DN516114	N	.3020	1-5/8	2-13/16
** DN516115	O	.3160	1-11/16	2-15/16
** DN516116	P	.3230	1-11/16	2-15/16
** DN516117	Q	.3320	1-11/16	3
** DN516118	R	.3390	1-11/16	3
** DN516119	S	.3480	1-3/4	3-1/16
** DN516120	T	.3580	1-3/4	3-1/16
** DN516121	U	.3680	1-13/16	3-1/8
** DN516122	V	.3770	1-7/8	3-1/4
** DN516123	W	.3860	1-7/8	3-1/4
** DN516124	X	.3970	1-15/16	3-5/16
** DN516125	Y	.4040	1-15/16	3-5/16
** DN516126	Z	.4130	2	3-3/8

** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○					○	○	○	○	○	○

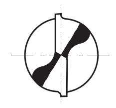
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

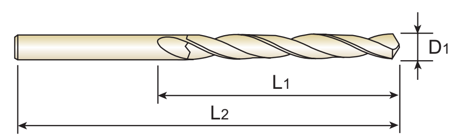
YG STRAIGHT SHANK DRILLS

UN-COATED **DL517** SERIES
TICN-COATED **DX517** SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE TAPER LENGTH, TiCN COATED

- Flute Geometry : Right hand spiral, Parabolic flute, 38° helix
- Point Angle : 130° : Split point
- Application : Improved chip removal in most materials, especially in deep drilling applications.





ANSI | HSS-E | W 38° | ANSI | 130°

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▶ Fractional sizes

Unit : Inch

EDP No.		Drill Diameter		Flute Length	Overall Length
		Fractional	Decimal		
Bright	TiCN	D1		L1	L2
* DL517005	DX517005	5/64	.0781	2	3-3/4
* DL517006	DX517006	3/32	.0938	2-1/4	4-1/4
* DL517007	DX517007	7/64	.1094	2-1/2	4-5/8
* DL517008	DX517008	1/8	.1250	2-3/4	5-1/8
* DL517009	DX517009	9/64	.1406	3	5-3/8
* DL517010	DX517010	5/32	.1563	3	5-3/8
* DL517011	DX517011	11/64	.1719	3-3/8	5-3/4
* DL517012	DX517012	3/16	.1875	3-3/8	5-3/4
* DL517013	DX517013	13/64	.2031	3-5/8	6
* DL517014	DX517014	7/32	.2188	3-5/8	6
* DL517015	DX517015	15/64	.2344	3-3/4	6-1/8
** DL517016	DX517016	1/4	.2500	3-3/4	6-1/8
** DL517017	DX517017	17/64	.2656	3-7/8	6-1/4
** DL517018	DX517018	9/32	.2813	3-7/8	6-1/4
** DL517019	DX517019	19/64	.2969	4	6-3/8
** DL517020	DX517020	5/16	.3125	4	6-3/8
** DL517021	DX517021	21/64	.3281	4-1/8	6-1/2
** DL517022	DX517022	11/32	.3438	4-1/8	6-3/4
** DL517023	DX517023	23/64	.3594	4-1/4	6-3/4
** DL517024	DX517024	3/8	.3750	4-1/4	6-3/4
** DL517025	DX517025	25/64	.3906	4-3/8	7
** DL517026	DX517026	13/32	.4063	4-3/8	7
** DL517027	DX517027	27/64	.4219	4-5/8	7-1/4
** DL517028	DX517028	7/16	.4375	4-5/8	7-1/4
** DL517029	DX517029	29/64	.4531	4-3/4	7-1/2
** DL517030	DX517030	15/32	.4688	4-3/4	7-1/2
** DL517031	DX517031	31/64	.4844	4-3/4	7-3/4
** DL517032	DX517032	1/2	.5000	4-3/4	7-3/4

▶ **Tolerance** : See page 218

* 10pcs per package ** 5pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○					○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

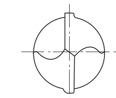
YG STRAIGHT SHANK DRILLS

D4107 SERIES

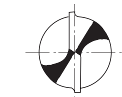
HSSCo8, STRAIGHT SHANK DRILL, TiN COATED

STUB

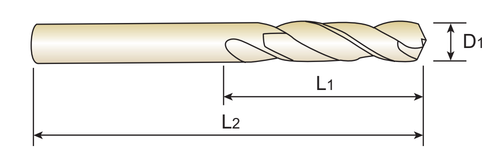
- **Flute Geometry** : Right hand spiral helix
- **Point Angle** : 135°
  under 1.6mm : Normal point
  1.6mm & over : Split point
- **Surface Treatment** : TiN Coating
- **Application** : Drills suitable for drilling in thin materials with portable drills. Special twist drills for automatic and turret lathes.



under 1.6mm



1.6mm & over



DIN 1897 | HSS Co8 | 33° | h8 | 135°

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Unit : mm

EDP No.	Diameter		Flute Length	Overall Length	EDP No.	Diameter		Flute Length	Overall Length
	Metric	Inch				Metric	Inch		
TiN	D1		L1	L2	TiN	D1		L1	L2
* D4107010	1.0	.0394	6	26	** D4107035	3.5	.1378	20	52
* D4107011	1.1	.0433	7	28	** D4107036	3.6	.1417	20	52
* D4107012	1.2	.0472	8	30	** D4107037	3.7	.1457	20	52
* D4107912	1.25	.0492	8	30	** D4107937	3.75	.1476	20	52
* D4107013	1.3	.0512	8	30	** D4107038	3.8	.1496	22	55
* D4107014	1.4	.0551	9	32	** D4107039	3.9	.1535	22	55
* D4107015	1.5	.0591	9	32	** D4107040	4.0	.1575	22	55
* D4107016	1.6	.0630	10	34	** D4107041	4.1	.1614	22	55
* D4107017	1.7	.0669	10	34	** D4107042	4.2	.1654	22	55
* D4107917	1.75	.0689	11	36	** D4107942	4.25	.1673	22	55
* D4107018	1.8	.0709	11	36	** D4107043	4.3	.1693	24	58
* D4107019	1.9	.0748	11	36	** D4107044	4.4	.1732	24	58
* D4107020	2.0	.0787	12	38	** D4107045	4.5	.1772	24	58
* D4107021	2.1	.0827	12	38	** D4107046	4.6	.1811	24	58
* D4107022	2.2	.0866	13	40	** D4107946	4.65	.1831	24	58
* D4107925	2.25	.0886	13	40	** D4107047	4.7	.1850	24	58
* D4107023	2.3	.0906	13	40	** D4107947	4.75	.1870	24	58
* D4107024	2.4	.0945	14	43	** D4107048	4.8	.1890	26	62
* D4107025	2.5	.0984	14	43	** D4107049	4.9	.1929	26	62
* D4107026	2.6	.1024	14	43	** D4107050	5.0	.1969	26	62
* D4107027	2.7	.1063	16	46	** D4107051	5.1	.2008	26	62
** D4107927	2.75	.1083	16	46	** D4107052	5.2	.2047	26	62
** D4107028	2.8	.1102	16	46	** D4107952	5.25	.2067	26	62
** D4107029	2.9	.1142	16	46	** D4107053	5.3	.2087	26	62
** D4107030	3.0	.1181	16	46	** D4107054	5.4	.2126	28	66
** D4107031	3.1	.1220	18	49	** D4107055	5.5	.2165	28	66
** D4107032	3.2	.1260	18	49	** D4107955	5.55	.2185	28	66
** D4107932	3.25	.1280	18	49	** D4107056	5.6	.2205	28	66
** D4107033	3.3	.1299	18	49	** D4107057	5.7	.2244	28	66
** D4107034	3.4	.1339	20	52	** D4107957	5.75	.2264	28	66

▶ The HSSCo5(DL107) is available when you need.
The TiN(D4107), TiCN(D7107) and TiAlN(DQ107) are available on your request.

* 10pcs per package ** 5pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

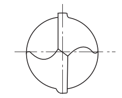
YG STRAIGHT SHANK DRILLS

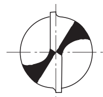
D4107 SERIES

HSSCo8, STRAIGHT SHANK DRILL, TiN COATED

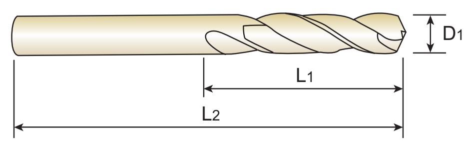
STUB

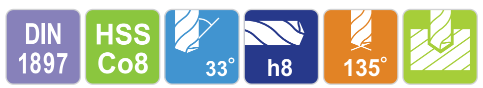
- **Flute Geometry** : Right hand spiral helix
- **Point Angle** : 135˚
  under 1.6mm : Normal point
  1.6mm & over : Split point
- **Surface Treatment** : TiN Coating
- **Application** : Drills suitable for drilling in thin materials with portable drills. Special twist drills for automatic and turret lathes.





under 1.6mm 1.6mm & over





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Unit : mm

EDP No.	Diameter Metric	Diameter Inch	Flute Length	Overall Length
TiN	D1		L1	L2
** D4107058	5.8	.2283	28	66
** D4107059	5.9	.2323	28	66
** D4107060	6.0	.2362	28	66
** D4107061	6.1	.2402	31	70
** D4107062	6.2	.2441	31	70
** D4107962	6.25	.2461	31	70
** D4107063	6.3	.2480	31	70
** D4107064	6.4	.2520	31	70
** D4107065	6.5	.2559	31	70
** D4107066	6.6	.2598	31	70
** D4107067	6.7	.2638	31	70
** D4107967	6.75	.2657	34	74
** D4107068	6.8	.2677	34	74
** D4107069	6.9	.2717	34	74
** D4107070	7.0	.2756	34	74
** D4107071	7.1	.2795	34	74
** D4107072	7.2	.2835	34	74
** D4107972	7.25	.2854	34	74
** D4107073	7.3	.2874	34	74
** D4107074	7.4	.2913	34	74
** D4107974	7.45	.2933	34	74
** D4107075	7.5	.2953	34	74
** D4107076	7.6	.2992	37	79
** D4107077	7.7	.3031	37	79
** D4107977	7.75	.3051	37	79
** D4107078	7.8	.3071	37	79
** D4107079	7.9	.3110	37	79
** D4107080	8.0	.3150	37	79
** D4107081	8.1	.3189	37	79
** D4107082	8.2	.3228	37	79

EDP No.	Diameter Metric	Diameter Inch	Flute Length	Overall Length
TiN	D1		L1	L2
** D4107982	8.25	.3248	37	79
** D4107083	8.3	.3268	37	79
** D4107084	8.4	.3307	37	79
** D4107085	8.5	.3346	37	79
** D4107086	8.6	.3386	40	84
** D4107087	8.7	.3425	40	84
** D4107987	8.75	.3445	40	84
** D4107088	8.8	.3465	40	84
** D4107089	8.9	.3504	40	84
** D4107090	9.0	.3543	40	84
** D4107091	9.1	.3583	40	84
** D4107092	9.2	.3622	40	84
** D4107992	9.25	.3642	40	84
** D4107093	9.3	.3661	40	84
** D4107993	9.35	.3681	40	84
** D4107094	9.4	.3701	40	84
** D4107095	9.5	.3740	40	84
** D4107096	9.6	.3780	43	89
** D4107097	9.7	.3819	43	89
** D4107997	9.75	.3839	43	89
** D4107098	9.8	.3858	43	89
** D4107099	9.9	.3898	43	89
** D4107100	10.0	.3937	43	89
** D4107102	10.2	.4016	43	89
** D4107802	10.25	.4035	43	89
** D4107105	10.5	.4134	43	89
** D4107807	10.75	.4232	47	95
** D4107110	11.0	.4330	47	95
** D4107812	11.25	.4429	47	95
** D4107115	11.5	.4527	47	95

▶ The HSSCo5(DL107) is available when you need.
The TiN(D4107), TiCN(D7107) and TiAlN(DQ107) are available on your request.

** 5pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

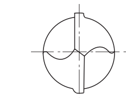
YG STRAIGHT SHANK DRILLS

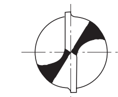
D4107 SERIES

HSSCo8, STRAIGHT SHANK DRILL, TiN COATED

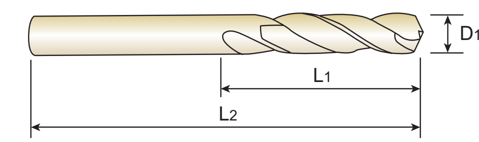
STUB

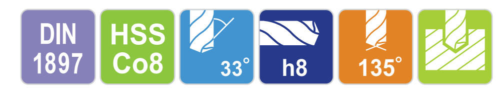
- **Flute Geometry** : Right hand spiral helix
- **Point Angle** : 135˚
  under 1.6mm : Normal point
  1.6mm & over : Split point
- **Surface Treatment** : TiN Coating
- **Application** : Drills suitable for drilling in thin materials with portable drills. Special twist drills for automatic and turret lathes.





under 1.6mm 1.6mm & over





p.A244

Unit : mm

EDP No.	Diameter Metric	Diameter Inch	Flute Length	Overall Length
TiN	D1		L1	L2
** D4107817	11.75	.4626	47	95
** D4107118	11.8	.4645	47	95
** D4107120	12.0	.4724	51	102
** D4107822	12.25	.4823	51	102
** D4107125	12.5	.4921	51	102
** D4107827	12.75	.5020	51	102
** D4107130	13.0	.5118	51	102
- D4107832	13.25	.5217	54	107
- D4107135	13.5	.5314	54	107
- D4107837	13.75	.5413	54	107
- D4107138	13.8	.5433	54	107
- D4107140	14.0	.5512	54	107
- D4107842	14.25	.5610	56	111
- D4107145	14.5	.5708	56	111
- D4107847	14.75	.5807	56	111
- D4107150	15.0	.5905	56	111
- D4107852	15.25	.6004	58	115
- D4107155	15.5	.6102	58	115
- D4107857	15.75	.6201	58	115
- D4107160	16.0	.6299	58	115
- D4107862	16.25	.6398	60	119
- D4107165	16.5	.6495	60	119
- D4107867	16.75	.6594	60	119
- D4107170	17.0	.6692	60	119
- D4107872	17.25	.6791	62	123
- D4107175	17.5	.6889	62	123

EDP No.	Diameter Metric	Diameter Inch	Flute Length	Overall Length
TiN	D1		L1	L2
- D4107877	17.75	.6907	62	123
- D4107180	18.0	.7087	62	123
- D4107882	18.25	.7185	64	127
- D4107185	18.5	.7283	64	127
- D4107887	18.75	.7382	64	127
- D4107190	19.0	.7480	64	127
- D4107892	19.25	.7579	66	131
- D4107195	19.5	.7676	66	131
- D4107897	19.75	.7776	66	131
- D4107200	20.0	.7874	66	131
- D4107205	20.5	.8071	68	136
- D4107210	21.0	.8268	68	136
- D4107215	21.5	.8465	70	141
- D4107220	22.0	.8661	70	141
- D4107225	22.5	.8858	72	146
- D4107230	23.0	.9055	72	146
- D4107235	23.5	.9252	72	146
- D4107240	24.0	.9449	75	151
- D4107245	24.5	.9646	75	151
- D4107250	25.0	.9843	75	151
- D4107260	26.0	1.0236	78	156
- D4107270	27.0	1.0630	81	162
- D4107280	28.0	1.1024	81	162
- D4107290	29.0	1.1417	84	168
- D4107300	30.0	1.1811	84	168
- D4107310	31.0	1.2205	87	174

▶ The HSSCo5(DL107) is available when you need.
The TiN(D4107), TiCN(D7107) and TiAlN(DQ107) are available on your request.

** 5pcs per package
- 1pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG STRAIGHT SHANK DRILLS

RECOMMENDED CUTTING CONDITIONS

D1118, D1115, D1119, D2146, D2147, D2148 SERIES

HSS STRAIGHT SHANK DRILLS

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM		Drill Diameter					
				METRIC	2.0	3.0 / -	4.0	6.0 / -	- / 8.0	- / 10.0
				FRACTIONAL	-	- / 1/8	-	- / 1/4	5/16 / -	3/8 / -
				DECIMAL	.0787	.1181 / .1250	.1575	.2362 / .2500	.3125 / .3150	.3750 / .3937
P	1	Non-alloy steel	99	RPM	4770	3180	2390	1590	1190	950
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	2		82	RPM	3980	2650	1990	1330	990	800
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	3		66	RPM	3180	2120	1590	1060	800	640
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	4		66	RPM	3180	2120	1590	1060	800	640
				FEED	.0004 - .0008	.0004 - .0012	.0008 - .0016	.0008 - .0020	.0012 - .0024	.0012 - .0024
	6	Low alloy steel	82	RPM	3980	2650	1990	1330	990	800
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	7		66	RPM	3180	2120	1590	1060	800	640
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	8		66	RPM	3180	2120	1590	1060	800	640
				FEED	.0004 - .0008	.0004 - .0012	.0008 - .0016	.0008 - .0020	.0012 - .0024	.0012 - .0024
	10	High alloyed steel, and tool steel	49	RPM	2390	1590	1190	800	600	480
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
M	12	Stainless steel	66	RPM	3180	2120	1590	1060	800	640
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	13		49	RPM	2390	1590	1190	800	600	480
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	14		33	RPM	1590	1060	800	530	400	320
				FEED	.0004 - .0008	.0004 - .0012	.0008 - .0016	.0008 - .0020	.0012 - .0024	.0012 - .0024
K	15	Grey cast iron	99	RPM	4770	3180	2390	1590	1190	950
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	16		82	RPM	3980	2650	1990	1330	990	800
				FEED	.0004 - .0008	.0004 - .0012	.0008 - .0016	.0008 - .0020	.0012 - .0024	.0012 - .0024
	17	Nodular cast iron	99	RPM	4770	3180	2390	1590	1190	950
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	19	Malleable cast iron	82	RPM	3980	2650	1990	1330	990	800
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
N	21	Aluminum-wrought alloy	181	RPM	8750	5840	4380	2920	2190	1750
				FEED	.0012 - .0024	.0020 - .0035	.0028 - .0043	.0047 - .0063	.0047 - .0071	.0055 - .0079
	22		181	RPM	8750	5840	4380	2920	2190	1750
				FEED	.0012 - .0024	.0020 - .0035	.0028 - .0043	.0047 - .0063	.0047 - .0071	.0055 - .0079
	23	Aluminum-cast, alloyed	132	RPM	6370	4240	3180	2120	1590	1270
				FEED	.0012 - .0024	.0020 - .0035	.0028 - .0043	.0047 - .0063	.0047 - .0071	.0055 - .0079
	29	Non Metallic Materials	66	RPM	3180	2120	1590	1060	800	640
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.002 - .0031	.0039 - .0051	.0043 - .0059
	36	Titanium Alloys	33	RPM	1590	1060	800	530	400	320
				FEED	.0004 - .0012	.0008 - .0016	.0012 - .0020	.0016 - .0028	.0020 - .0031	.0020 - .0035

CARBIDE
HSS

YG STRAIGHT SHANK DRILLS

RECOMMENDED CUTTING CONDITIONS

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

VDI 3323		Drill Diameter						
	METRIC	- / 13.0	/ 16.0	18.0	-	20.0	-	30.0
	FRACTIONAL	1/2 /	/ 5/8	-	3/4	-	1"	
	DECIMAL	.5000 / .5118	.6250 / .6299	.7086	0.75	.7874	1.0000	
1	RPM	730	600	530	500	480	380	320
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
2	RPM	610	500	440	420	400	310	270
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
3	RPM	490	400	350	340	320	250	210
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
4	RPM	490	400	350	340	320	250	210
	FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071	.0047 - .0071
6	RPM	610	500	440	420	400	310	270
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
7	RPM	490	400	350	340	320	250	210
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
8	RPM	490	400	350	340	320	250	210
	FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071	.0047 - .0071
10	RPM	370	300	270	250	240	190	160
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
12	RPM	490	400	350	340	320	250	210
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
13	RPM	370	300	270	250	240	190	160
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
14	RPM	240	200	180	170	160	130	110
	FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071	.0047 - .0071
15	RPM	730	600	530	500	480	380	320
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098		.0087 - .0110
16	RPM	610	500	440	420	400	310	270
	FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071	.0047 - .0071
17	RPM	730	600	530	500	480	380	320
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
19	RPM	610	500	440	420	400	310	270
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
21	RPM	1350	1090	970	920	880	690	580
	FEED	.0063 - .0087	.0071 - .0094	.0079 - .0110	.0079 - .0118	.0079 - .0118	.0110 - .0150	.0110 - .0150
22	RPM	1350	1090	970	920	880	690	580
	FEED	.0063 - .0087	.0071 - .0094	.0079 - .0110	.0079 - .0118	.0079 - .0118	.0110 - .0150	.0110 - .0150
23	RPM	980	800	710	670	640	500	420
	FEED	.0063 - .0087	.0071 - .0094	.0079 - .0110	.0079 - .0118	.0079 - .0118	.0110 - .0150	.0110 - .0150
29	RPM	490	400	350	340	320	250	210
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
36	RPM	240	200	180	170	160	130	110
	FEED	.0024 - .0039	.0020 - .0043	.0024 - .0047	.0030 - .0049	.0035 - .0051	.0047 - .0071	.0047 - .0071

i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

STRAIGHT SHANK DRILLS

RECOMMENDED CUTTING CONDITIONS

D4107, DN514, DN515, DN516, DX517 SERIES

COATED HSS STRAIGHT SHANK DRILLS

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter	METRIC 2.0 / FRACTIONAL - / DECIMAL .0787	METRIC 3.0, - / FRACTIONAL -, 1/8 / DECIMAL .1181, .1250	METRIC 4.0 / FRACTIONAL - / DECIMAL .1575	METRIC 6.0, - / FRACTIONAL -, 1/4 / DECIMAL .2362, .2500	METRIC -, 8.0 / FRACTIONAL 5/16, - / DECIMAL .3125, .3150	METRIC -, 10.0 / FRACTIONAL 3/8, - / DECIMAL .3750, .3937	METRIC -, 13 / FRACTIONAL 1/2, - / DECIMAL .5000, .5118
P	1	Non-alloy steel	132	RPM	6370	4240	3180	2120	1590	1270	980
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0071	.0063 - .0087	.0071 - .0094
	2		115	RPM	5570	3710	2790	1860	1390	1110	860
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0071	.0063 - .0087	.0071 - .0094
	3		99	RPM	4770	3180	2390	1590	1190	950	730
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0071	.0063 - .0087	.0071 - .0094
	4		66	RPM	3180	2120	1590	1060	800	640	490
				FEED	.0008 - .0020	.0008 - .0024	.0016 - .0031	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0047 - .0071
	6	Low alloy steel	115	RPM	5570	3710	2790	1860	1390	1110.000	860
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0071	.0063 - .0087	.0071 - .0094
	7		99	RPM	4770	3180	2390	1590	1190	950	730
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0071	.0063 - .0087	.0071 - .0094
	8		99	RPM	4770	3180	2390	1590	1190	950	730
				FEED	.0008 - .0020	.0008 - .0024	.0016 - .0031	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0047 - .0071
	10	High alloyed steel, and tool steel	66	RPM	3180	2120	1590	1060	800	640	490
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0071	.0063 - .0087	.0071 - .0094
M	12	Stainless steel	82	RPM	3980	2650	1990	1330	990	800	610
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0071	.0063 - .0087	.0071 - .0094
	13		66	RPM	3180	2120	1590	1060	800	640	490
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0071	.0063 - .0087	.0071 - .0094
	14		49	RPM	2390	1590	1190	800	600	480	370
				FEED	.0008 - .0020	.0008 - .0024	.0016 - .0031	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0047 - .0071
K	15	Grey cast iron	132	RPM	6370	4240	3180	2120	1590	1270	980
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0071	.0063 - .0087	.0071 - .0094
	16		115	RPM	5570	3710	2790	1860	1390	1110	860
				FEED	.0008 - .0020	.0008 - .0024	.0016 - .0031	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0047 - .0071
	17	Nodular cast iron Mallable cast iron	132	RPM	6370	4240	3180	2120	1590	1270	980
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0071	.0063 - .0087	.0071 - .0094
	18		99	RPM	4770	3180	2390	1590	1190	950	730
				FEED	.0008 - .0020	.0008 - .0024	.0016 - .0031	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0047 - .0071
	19	Malleable cast iron	115	RPM	5570	3710	2790	1860	1390	1110	860
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0071	.0063 - .0087	.0071 - .0094
	20		99	RPM	4770	3180	2390	1590	1190	950	730
				FEED	.0008 - .0020	.0008 - .0024	.0016 - .0031	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0047 - .0071
N	21	Aluminum-wrought alloy	214	RPM	10350	6900	5170	3450	2590	2070	1590
				FEED	.0020 - .0035	.0028 - .0043	.0047 - .0063	.0047 - .0071	.0055 - .0079	.0063 - .0087	.0087 - .0110
	22		214	RPM	10350	6900	5170	3450	2590	2070	1590
				FEED	.0020 - .0035	.0028 - .0043	.0047 - .0063	.0047 - .0071	.0055 - .0079	.0063 - .0087	.0087 - .0110
	23	Aluminum-cast, alloyed	165	RPM	7960	5310	3980	2650	1990	1590	1220
				FEED	.0020 - .0035	.0028 - .0043	.0047 - .0063	.0047 - .0071	.0055 - .0079	.0063 - .0087	.0087 - .0110
	29	Non Metallic Materials	99	RPM	4770	3180	2390	1590	1190	950	730
				FEED	.0016 - .0031	.0024 - .0039	.0031 - .0047	.0047 - .0063	.0047 - .0071	.0063 - .0087	.0071 - .0094
	36	Titanium Alloys	66	RPM	3180	2120	1590	1060	800	640	490
				FEED	.0008 - .0020	.0008 - .0024	.0016 - .0031	.0020 - .0035	.0024 - .0039	.0028 - .0051	.0031 - .0055

Being the best through innovation

HSSCo5 & HSS

AIRCRAFT DRILLS

- 6 and 12 inch Length Drills

i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

SELECTION GUIDE

YG HOLEMAKING TOOLS

HSSCo5 & HSS AIRCRAFT DRILLS

- 6 and 12 inch Length Drills

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A254

SERIES	DL601 DL604	DL602 DL605	DL603 DL606	D1631 D1634	D1632 D1635	D1633 D1636
STANDARD	NAS907		NAS907			
LENGTH	EXTENTION		EXTENTION			
SIZE MIN	D5/64	A	#43	D5/64	A	#43
SIZE MAX	D1/2	Z	#1	D1/2	Z	#1
PAGE	A248	A249	A250	A251	A252	A253
SURFACE TREATMENT	Coloring		Coloring	Steam Oxide		

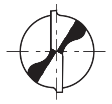
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	DL601 DL604	DL602 DL605	DL603 DL606	D1631 D1634	D1632 D1635	D1633 D1636
P	1	Non-alloy steel	About 0.15% C Annealed	125		◎	◎	◎	◎	◎	◎
	2		About 0.45% C Annealed	190	13	◎	◎	◎	◎	◎	◎
	3		About 0.45% C Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎
	4		About 0.75% C Annealed	270	28	○	○	○	○	○	○
	5		About 0.75% C Quenched & Tempered	300	32						
	6	Low alloy steel	Annealed	180	10	◎	◎	◎	◎	◎	◎
	7		Quenched & Tempered	275	29	○	○	○	○	○	○
	8		Quenched & Tempered	300	32	○	○	○	○	○	○
	9		Quenched & Tempered	350	38						
	10	High alloyed steel, and tool steel	Annealed	200	15	○	○	○	○	○	○
	11		Quenched & Tempered	325	35						
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15	◎	◎	◎	◎	◎	◎
	13		Martensitic Quenched & Tempered	240	23	○	○	○	○	○	○
	14		Austenitic	180	10	○	○	○	○	○	○
K	15	Grey cast iron	Pearlitic / ferritic	180	10	○	○	○	○	○	○
	16		Pearlitic (Martensitic)	260	26	○	○	○	○	○	○
	17	Nodular cast iron	Ferritic	160	3	○	○	○	○	○	○
	18		Pearlitic	250	25						
	19	Malleable cast iron	Ferritic	130		○	○	○	○	○	○
	20		Pearlitic	230	21						
N	21	Aluminum-wrought alloy	Not Curable	60		○	○	○	○	○	○
	22		Curable Hardened	100		○	○	○	○	○	○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75		○	○	○	○	○	○
	24		≤ 12% Si, Curable Hardened	90							
	25		> 12% Si, Not Curable	130							
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110							
	27		CuZn, CuSnZn (Brass)	90							
	28		CuSn, lead-free copper and electrolytic copper	100							
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.	Duroplastic, Fiber Reinforced Plastic			○	○	○	○	○	○
	30		Rubber, Wood, etc.								
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15						
	32		Cured	280	30						
	33		Ni or Co Based Annealed	250	25						
	34		Cured	350	38						
	35		Cast	320	34						
	36	Titanium Alloys	Pure Titanium	400 Rm		○	○	○	○	○	○
	37		Alpha + Beta Alloys Hardened	1050 Rm							
H	38	Hardened steel	Hardened	550	55						
	39		Hardened	630	60						
	40	Chilled Cast Iron	Cast	400	42						
	41	Hardened Cast Iron	Hardened	550	55						

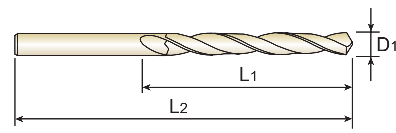
YG AIRCRAFT DRILLS

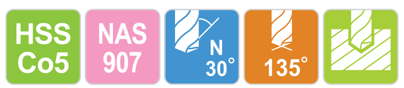
DL601 SERIES
DL604 SERIES

HSSCo5, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT COLORING

- **Flute Geometry** : Right hand spiral, 30° helix
- **Point Angle** : 135° : Split point
- **Application** : Improved chip removal in most materials, especially in deep drilling applications.







p.A254

Fractional sizes

Unit : Inch

EDP No.	Diameter Fractional	Diameter Decimal	Flute Length	Overall Length
Coloring	D1		L1	L2
* DL601005	5/64	.0781	1	6
* DL601006	3/32	.0938	1-1/4	6
* DL601007	7/64	.1094	1-1/2	6
* DL601008	1/8	.1250	1-5/8	6
* DL601009	9/64	.1406	1-3/4	6
* DL601010	5/32	.1563	2	6
* DL601011	11/64	.1719	2-1/8	6
* DL601012	3/16	.1875	2-5/16	6
* DL601013	13/64	.2031	2-7/16	6
* DL601014	7/32	.2188	2-1/2	6
* DL601015	15/64	.2344	2-5/8	6
** DL601016	1/4	.2500	2-3/4	6
** DL601017	17/64	.2656	2-7/8	6
** DL601018	9/32	.2813	2-15/16	6
** DL601019	19/64	.2969	3-1/16	6
** DL601020	5/16	.3125	3-3/16	6
** DL601021	21/64	.3281	3-5/16	6
** DL601022	11/32	.3438	3-7/16	6
** DL601023	23/64	.3594	3-1/2	6
** DL601024	3/8	.3750	3-5/8	6
** DL601025	25/64	.3906	3-3/4	6
** DL601026	13/32	.4063	3-7/8	6
** DL601027	27/64	.4219	3-15/16	6
** DL601028	7/16	.4375	4-1/16	6

EDP No.	Diameter Fractional	Diameter Decimal	Flute Length	Overall Length
Coloring	D1		L1	L2
** DL601029	29/64	.4531	4-3/16	6
** DL601030	15/32	.4688	4-5/16	6
** DL601031	31/64	.4844	4-3/8	6
** DL601032	1/2	.5000	4-1/2	6
** DL604014	7/32	.2188	2-1/2	12
** DL604015	15/64	.2344	2-5/8	12
** DL604016	1/4	.2500	2-3/4	12
** DL604017	17/64	.2656	2-7/8	12
** DL604018	9/32	.2813	2-15/16	12
** DL604019	19/64	.2969	3-1/16	12
** DL604020	5/16	.3125	3-3/16	12
** DL604021	21/64	.3281	3-5/16	12
** DL604022	11/32	.3438	3-7/16	12
** DL604023	23/64	.3594	3-1/2	12
** DL604024	3/8	.3750	3-5/8	12
** DL604025	25/64	.3906	3-3/4	12
** DL604026	13/32	.4063	3-7/8	12
** DL604027	27/64	.4219	3-15/16	12
** DL604028	7/16	.4375	4-1/16	12
** DL604029	29/64	.4531	4-3/16	12
** DL604030	15/32	.4688	4-5/16	12
** DL604031	31/64	.4844	4-3/8	12
** DL604032	1/2	.5000	4-1/2	12

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

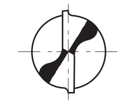
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

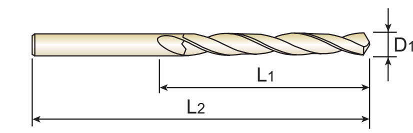
YG AIRCRAFT DRILLS

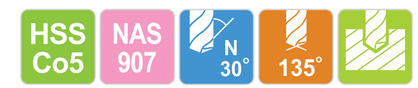
DL602 SERIES
DL605 SERIES

HSSCo5, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT COLORING

- **Flute Geometry** : Right hand spiral, 30° helix
- **Point Angle** : 135° : Split point
- **Application** : Improved chip removal in most materials, especially in deep drilling applications.







p.A254

Letter sizes

Unit : Inch

EDP No.	Diameter Letter	Diameter Decimal	Flute Length	Overall Length
Coloring	D1		L1	L2
* DL602101	A	.2340	2-5/8	6
** DL602102	B	.2380	2-3/4	6
** DL602103	C	.2420	2-3/4	6
** DL602104	D	.2460	2-3/4	6
** DL602105	E	.2500	2-3/4	6
** DL602106	F	.2570	2-7/8	6
** DL602107	G	.2610	2-7/8	6
** DL602108	H	.2660	2-7/8	6
** DL602109	I	.2720	2-7/8	6
** DL602110	J	.2770	2-7/8	6
** DL602111	K	.2810	2-15/16	6
** DL602112	L	.2900	2-15/16	6
** DL602113	M	.2950	3-1/16	6
** DL602114	N	.3020	3-1/16	6
** DL602115	O	.3160	3-3/16	6
** DL602116	P	.3230	3-5/16	6
** DL602117	Q	.3320	3-7/16	6
** DL602118	R	.3390	3-7/16	6
** DL602119	S	.3480	3-1/2	6
** DL602120	T	.3580	3-1/2	6
** DL602121	U	.3680	3-5/8	6
** DL602122	V	.3770	3-5/8	6
** DL602123	W	.3860	3-3/4	6
** DL602124	X	.3970	3-3/4	6
** DL602125	Y	.4040	3-7/8	6
** DL602126	Z	.4130	3-7/8	6

EDP No.	Diameter Letter	Diameter Decimal	Flute Length	Overall Length
Coloring	D1		L1	L2
* DL605101	A	.2340	2-5/8	12
** DL605102	B	.2380	2-3/4	12
** DL605103	C	.2420	2-3/4	12
** DL605104	D	.2460	2-3/4	12
** DL605105	E	.2500	2-3/4	12
** DL605106	F	.2570	2-7/8	12
** DL605107	G	.2610	2-7/8	12
** DL605108	H	.2660	2-7/8	12
** DL605109	I	.2720	2-7/8	12
** DL605110	J	.2770	2-7/8	12
** DL605111	K	.2810	2-15/16	12
** DL605112	L	.2900	2-15/16	12
** DL605113	M	.2950	3-1/16	12
** DL605114	N	.3020	3-1/16	12
** DL605115	O	.3160	3-3/16	12
** DL605116	P	.3230	3-5/16	12
** DL605117	Q	.3320	3-7/16	12
** DL605118	R	.3390	3-7/16	12
** DL605119	S	.3480	3-1/2	12
** DL605120	T	.3580	3-1/2	12
** DL605121	U	.3680	3-5/8	12
** DL605122	V	.3770	3-5/8	12
** DL605123	W	.3860	3-3/4	12
** DL605124	X	.3970	3-3/4	12
** DL605125	Y	.4040	3-7/8	12
** DL605126	Z	.4130	3-7/8	12

Tolerance : See page 240

* 10pcs per package
** 5pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

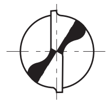
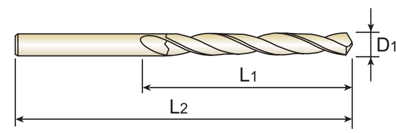
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG AIRCRAFT DRILLS

DL603 SERIES
DL606 SERIES

HSSCo5, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT COLORING

- **Flute Geometry** : Right hand spiral, 30° helix
- **Point Angle** : 135° : Split point
- **Application** : Improved chip removal in most materials, especially in deep drilling applications.

HSS Co5 | NAS 907 | N 30° | 135°

p.A254

Wire gauge sizes

Unit : Inch

EDP No.	Diameter Wire gauge	Diameter Decimal	Flute Length	Overall Length
Coloring	D1		L1	L2
* DL603256	1	.2280	2-5/8	6
* DL603255	2	.2210	2-5/8	6
* DL603254	3	.2130	2-1/2	6
* DL603253	4	.2090	2-1/2	6
* DL603252	5	.2055	2-1/2	6
* DL603251	6	.2040	2-1/2	6
* DL603250	7	.2010	2-7/16	6
* DL603249	8	.1990	2-7/16	6
* DL603248	9	.1960	2-7/16	6
* DL603247	10	.1935	2-7/16	6
* DL603246	11	.1910	2-5/16	6
* DL603245	12	.1890	2-5/16	6
* DL603244	13	.1850	2-5/16	6
* DL603243	14	.1820	2-3/16	6
* DL603242	15	.1800	2-3/16	6
* DL603241	16	.1770	2-3/16	6
* DL603240	17	.1730	2-3/16	6
* DL603239	18	.1695	2-1/8	6
* DL603238	19	.1660	2-1/8	6
* DL603237	20	.1610	2-1/8	6
* DL603236	21	.1590	2-1/8	6
* DL603235	22	.1570	2	6
* DL603234	23	.1540	2	6
* DL603233	24	.1520	2	6
* DL603232	25	.1495	1-7/8	6
* DL603231	26	.1470	1-7/8	6
* DL603230	27	.1440	1-7/8	6
* DL603229	28	.1405	1-3/4	6
* DL603228	29	.1360	1-3/4	6
* DL603227	30	.1280	1-5/8	6
* DL603226	31	.1200	1-5/8	6
* DL603225	32	.1160	1-5/8	6
* DL603224	33	.1130	1-1/2	6
* DL603223	34	.1110	1-1/2	6
* DL603222	35	.1100	1-1/2	6
* DL603221	36	.1065	1-7/16	6
* DL603220	37	.1040	1-7/16	6
* DL603219	38	.1015	1-7/16	6
* DL603218	39	.0995	1-3/8	6
* DL603217	40	.0980	1-3/8	6
* DL603216	41	.0960	1-3/8	6
* DL603215	42	.0935	1-1/4	6
* DL603214	43	.0890	1-1/4	6
* DL606256	1	.2280	2-5/8	12
* DL606254	3	.2130	2-1/2	12

* 10pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

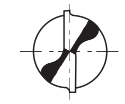
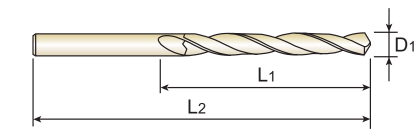
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○		

YG AIRCRAFT DRILLS

D1631 SERIES
D1634 SERIES

HSS, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT STEAM OXIDE

- **Flute Geometry** : Right hand spiral, 30° helix
- **Point Angle** : 135° : Split point
- **Application** : Improved chip removal in most materials, especially in deep drilling applications.

HSS | NAS 907 | N 30° | 135°

p.A254

Fractional sizes

Unit : Inch

EDP No.	Diameter Fractional	Diameter Decimal	Flute Length	Overall Length
Steam Oxide	D1		L1	L2
* D1631005	5/64	.0781	1	6
* D1631006	3/32	.0938	1-1/4	6
* D1631007	7/64	.1094	1-1/2	6
* D1631008	1/8	.1250	1-5/8	6
* D1631009	9/64	.1406	1-3/4	6
* D1631010	5/32	.1563	2	6
* D1631011	11/64	.1719	2-1/8	6
* D1631012	3/16	.1875	2-5/16	6
* D1631013	13/64	.2031	2-7/16	6
* D1631014	7/32	.2188	2-1/2	6
* D1631015	15/64	.2344	2-5/8	6
** D1631016	1/4	.2500	2-3/4	6
** D1631017	17/64	.2656	2-7/8	6
** D1631018	9/32	.2813	2-15/16	6
** D1631019	19/64	.2969	3-1/16	6
** D1631020	5/16	.3125	3-3/16	6
** D1631021	21/64	.3281	3-5/16	6
** D1631022	11/32	.3438	3-7/16	6
** D1631023	23/64	.3594	3-1/2	6
** D1631024	3/8	.3750	3-5/8	6
** D1631025	25/64	.3906	3-3/4	6
** D1631026	13/32	.4063	3-7/8	6
** D1631027	27/64	.4219	3-15/16	6
** D1631028	7/16	.4375	4-1/16	6
** D1631029	29/64	.4531	4-3/16	6
** D1631030	15/32	.4688	4-5/16	6
** D1631031	31/64	.4844	4-3/8	6
** D1631032	1/2	.5000	4-1/2	6
** D1634014	7/32	.2188	2-1/2	12
** D1634015	15/64	.2344	2-5/8	12
** D1634016	1/4	.2500	2-3/4	12
** D1634017	17/64	.2656	2-7/8	12
** D1634018	9/32	.2813	2-15/16	12
** D1634019	19/64	.2969	3-1/16	12
** D1634020	5/16	.3125	3-3/16	12
** D1634021	21/64	.3281	3-5/16	12
** D1634022	11/32	.3438	3-7/16	12
** D1634023	23/64	.3594	3-1/2	12
** D1634024	3/8	.3750	3-5/8	12
** D1634025	25/64	.3906	3-3/4	12
** D1634026	13/32	.4063	3-7/8	12
** D1634027	27/64	.4219	3-15/16	12
** D1634028	7/16	.4375	4-1/16	12
** D1634029	29/64	.4531	4-3/16	12
** D1634030	15/32	.4688	4-5/16	12
** D1634031	31/64	.4844	4-3/8	12
** D1634032	1/2	.5000	4-1/2	12

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

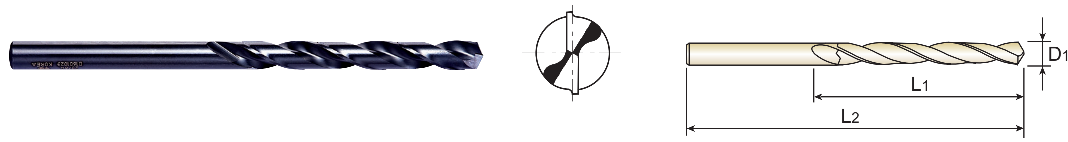
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

YG AIRCRAFT DRILLS

D1632 SERIES
D1635 SERIES

HSS, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT STEAM OXIDE

- **Flute Geometry** : Right hand spiral, 30° helix
- **Point Angle** : 135° : Split point
- **Application** : Improved chip removal in most materials, especially in deep drilling applications.



HSS | NAS 907 | N 30° | 135° | p.A254

Letter sizes

Unit : Inch

EDP No.	Diameter		Flute Length	Overall Length
	Letter	Decimal		
Steam Oxide	D1		L1	L2
* D1632101	A	.2340	2-5/8	6
** D1632102	B	.2380	2-3/4	6
** D1632103	C	.2420	2-3/4	6
** D1632104	D	.2460	2-3/4	6
** D1632105	E	.2500	2-3/4	6
** D1632106	F	.2570	2-7/8	6
** D1632107	G	.2610	2-7/8	6
** D1632108	H	.2660	2-7/8	6
** D1632109	I	.2720	2-7/8	6
** D1632110	J	.2770	2-7/8	6
** D1632111	K	.2810	2-15/16	6
** D1632112	L	.2900	2-15/16	6
** D1632113	M	.2950	3-1/16	6
** D1632114	N	.3020	3-1/16	6
** D1632115	O	.3160	3-3/16	6
** D1632116	P	.3230	3-5/16	6
** D1632117	Q	.3320	3-7/16	6
** D1632118	R	.3390	3-7/16	6
** D1632119	S	.3480	3-1/2	6
** D1632120	T	.3580	3-1/2	6
** D1632121	U	.3680	3-5/8	6
** D1632122	V	.3770	3-5/8	6
** D1632123	W	.3860	3-3/4	6
** D1632124	X	.3970	3-3/4	6
** D1632125	Y	.4040	3-7/8	6
** D1632126	Z	.4130	3-7/8	6

EDP No.	Diameter		Flute Length	Overall Length
	Letter	Decimal		
Steam Oxide	D1		L1	L2
* D1635101	A	.2340	2-5/8	12
** D1635102	B	.2380	2-3/4	12
** D1635103	C	.2420	2-3/4	12
** D1635104	D	.2460	2-3/4	12
** D1635105	E	.2500	2-3/4	12
** D1635106	F	.2570	2-7/8	12
** D1635107	G	.2610	2-7/8	12
** D1635108	H	.2660	2-7/8	12
** D1635109	I	.2720	2-7/8	12
** D1635110	J	.2770	2-7/8	12
** D1635111	K	.2810	2-15/16	12
** D1635112	L	.2900	2-15/16	12
** D1635113	M	.2950	3-1/16	12
** D1635114	N	.3020	3-1/16	12
** D1635115	O	.3160	3-3/16	12
** D1635116	P	.3230	3-5/16	12
** D1635117	Q	.3320	3-7/16	12
** D1635118	R	.3390	3-7/16	12
** D1635119	S	.3480	3-1/2	12
** D1635120	T	.3580	3-1/2	12
** D1635121	U	.3680	3-5/8	12
** D1635122	V	.3770	3-5/8	12
** D1635123	W	.3860	3-3/4	12
** D1635124	X	.3970	3-3/4	12
** D1635125	Y	.4040	3-7/8	12
** D1635126	Z	.4130	3-7/8	12

▶ **Tolerance** : See page 240

* 10pcs per package
** 5pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

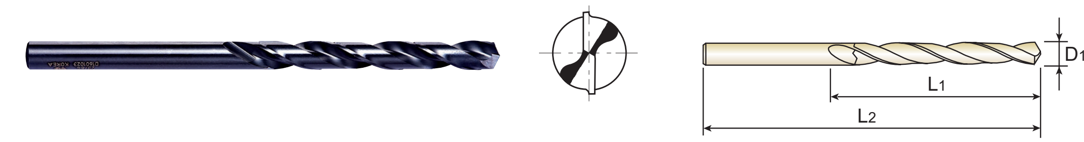
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

YG AIRCRAFT DRILLS

D1633 SERIES
D1636 SERIES

HSS, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT STEAM OXIDE

- **Flute Geometry** : Right hand spiral, 30° helix
- **Point Angle** : 135° : Split point
- **Application** : Improved chip removal in most materials, especially in deep drilling applications.



HSS | NAS 907 | N 30° | 135° | p.A254

Wire gauge sizes

Unit : Inch

EDP No.	Diameter		Flute Length	Overall Length
	Wire gauge	Decimal		
Steam Oxide	D1		L1	L2
* D1633256	1	.2280	2-5/8	6
* D1633255	2	.2210	2-5/8	6
* D1633254	3	.2130	2-1/2	6
* D1633253	4	.2090	2-1/2	6
* D1633252	5	.2055	2-1/2	6
* D1633251	6	.2040	2-1/2	6
* D1633250	7	.2010	2-7/16	6
* D1633249	8	.1990	2-7/16	6
* D1633248	9	.1960	2-7/16	6
* D1633247	10	.1935	2-7/16	6
* D1633246	11	.1910	2-5/16	6
* D1633245	12	.1890	2-5/16	6
* D1633244	13	.1850	2-5/16	6
* D1633243	14	.1820	2-3/16	6
* D1633242	15	.1800	2-3/16	6
* D1633241	16	.1770	2-3/16	6
* D1633240	17	.1730	2-3/16	6
* D1633239	18	.1695	2-1/8	6
* D1633238	19	.1660	2-1/8	6
* D1633237	20	.1610	2-1/8	6
* D1633236	21	.1590	2-1/8	6
* D1633235	22	.1570	2	6
* D1633234	23	.1540	2	6

EDP No.	Diameter		Flute Length	Overall Length
	Wire gauge	Decimal		
Steam Oxide	D1		L1	L2
* D1633233	24	.1520	2	6
* D1633232	25	.1495	1-7/8	6
* D1633231	26	.1470	1-7/8	6
* D1633230	27	.1440	1-7/8	6
* D1633229	28	.1405	1-3/4	6
* D1633228	29	.1360	1-3/4	6
* D1633227	30	.1280	1-5/8	6
* D1633226	31	.1200	1-5/8	6
* D1633225	32	.1160	1-5/8	6
* D1633224	33	.1130	1-1/2	6
* D1633223	34	.1110	1-1/2	6
* D1633222	35	.1100	1-1/2	6
* D1633221	36	.1065	1-7/16	6
* D1633220	37	.1040	1-7/16	6
* D1633219	38	.1015	1-7/16	6
* D1633218	39	.0995	1-3/8	6
* D1633217	40	.0980	1-3/8	6
* D1633216	41	.0960	1-3/8	6
* D1633215	42	.0935	1-1/4	6
* D1633214	43	.0890	1-1/4	6
* D1636256	1	.2280	2-5/8	12
* D1636254	3	.2130	2-1/2	12

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

* 10pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○	○	○	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

DL601, DL602, DL603, D1631, D1632, D1633 DL604, DL605, DL606, D1634, D1635, D1636 SERIES

AIRCRAFT DRILLS

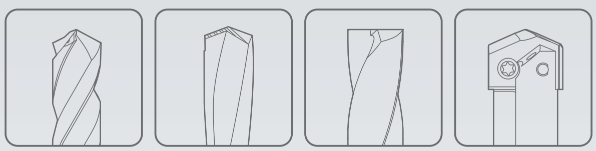
SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter METRIC	2.0	3.0 / -	4.0	6.0 / -	- / 8.0	- / 10.0
				FRACTIONAL	-	- / 1/8	-	- / 1/4	5/16 / -	3/8 / -
				DECIMAL	.0787	.1181 / .1250	.1575	.2362 / .2500	.3125 / .3150	.3750 / .3937
P	1	Non-alloy steel	99	RPM	4770	3180	2390	1590	1190	950
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	2		82	RPM	3980	2650	1990	1330	990	800
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	3		66	RPM	3180	2120	1590	1060	800	640
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	4		66	RPM	3180	2120	1590	1060	800	640
				FEED	.0004 - .0008	.0004 - .0012	.0008 - .0016	.0008 - .0020	.0012 - .0024	.0012 - .0024
	6	Low alloy steel	82	RPM	3980	2650	1990	1330	990	800
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	7		66	RPM	3180	2120	1590	1060	800	640
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	8		66	RPM	3180	2120	1590	1060	800	640
				FEED	.0004 - .0008	.0004 - .0012	.0008 - .0016	.0008 - .0020	.0012 - .0024	.0012 - .0024
	10	High alloyed steel, and tool steel	49	RPM	2390	1590	1190	800	600	480
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
M	12	Stainless steel	66	RPM	3180	2120	1590	1060	800	640
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020- .0031	.0039 - .0051	.0043 - .0059
	13		49	RPM	2390	1590	1190	800	600	480
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	14		33	RPM	1590	1060	800	530	400	320
				FEED	.0004 - .0008	.0004 - .0012	.0008 - .0016	.0008 - .0020	.0012 - .0024	.0012 - .0024
K	15	Grey cast iron	99	RPM	4770	3180	2390	1590	1190	950
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	16		82	RPM	3980	2650	1990	1330	990	800
				FEED	.0004 - .0008	.0004 - .0012	.0008 - .0016	.0008 - .0020	.0012 - .0024	.0012 - .0024
	17	Nodular cast iron	99	RPM	4770	3180	2390	1590	1190	950
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	19	Malleable cast iron	82	RPM	3980	2650	1990	1330	990	800
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
N	21	Aluminum-wrought alloy	181	RPM	8750	5840	4380	2920	2190	1750
				FEED	.0012 - .0024	.0020 - .0035	.0028 - .0043	.0047 - .0063	.0047 - .0071	.0055 - .0079
	22		181	RPM	8750	5840	4380	2920	2190	1750
				FEED	.0012 - .0024	.0020 - .0035	.0028 - .0043	.0047 - .0063	.0047 - .0071	.0055 - .0079
	23	Aluminum-cast, alloyed	132	RPM	6370	4240	3180	2120	1590	1270
				FEED	.0012 - .0024	.0020 - .0035	.0028 - .0043	.0047 - .0063	.0047 - .0071	.0055 - .0079
	29	Non Metallic Materials	66	RPM	3180	2120	1590	1060	800	640
				FEED	.0008 - .0016	.0012 - .0020	.0016 - .0024	.0020 - .0031	.0039 - .0051	.0043 - .0059
	36	Titanium Alloys	33	RPM	1590	1060	800	530	400	320
				FEED	.0004 - .0012	.0008 - .0016	.0012 - .0020	.0016 - .0028	.0020 - .0031	.0020 - .0035

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

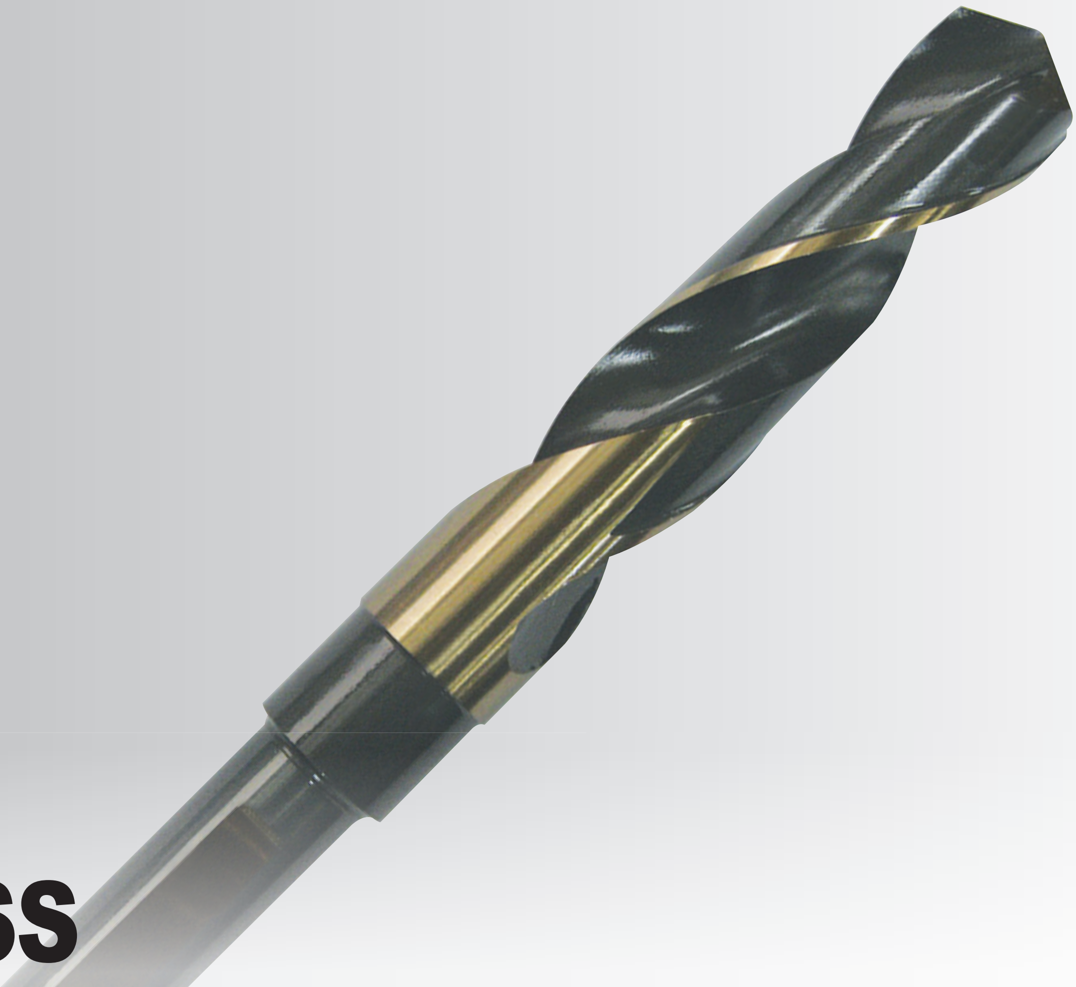
VDI 3323	Drill Diameter METRIC	- / 13.0	16.0	18.0	-	20.0	-	30.0
	FRACTIONAL	1/2	5/8	-	3/4	-	1"	
	DECIMAL	.5000 / .5118	.6250 / .6299	.7086	0.75	.7874	1.0000	
1	RPM	730	600	530	500	480	380	320
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
2	RPM	610	500	440	420	400	310	270
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
3	RPM	490	400	350	340	320	250	210
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
4	RPM	490	400	350	340	320	250	210
	FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071	.0047 - .0071
6	RPM	610	500	440	420	400	310	270
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
7	RPM	490	400	350	340	320	250	210
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
8	RPM	490	400	350	340	320	250	210
	FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071	.0047 - .0071
10	RPM	370	300	270	250	240	190	160
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
12	RPM	490	400	350	340	320	250	210
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
13	RPM	370	300	270	250	240	190	160
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
14	RPM	240	200	180	170	160	130	110
	FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071	.0047 - .0071
15	RPM	730	600	530	500	480	380	320
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
16	RPM	610	500	440	420	400	310	270
	FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071	.0047 - .0071
17	RPM	730	600	530	500	480	380	320
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
19	RPM	610	500	440	420	400	310	270
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
21	RPM	1350	1090	970	920	880	690	580
	FEED	.0063 - .0087	.0071 - .0094	.0079 - .0110	.0079 - .0118	.0079 - .0118	.0110 - .0150	.0110 - .0150
22	RPM	1350	1090	970	920	880	690	580
	FEED	.0063 - .0087	.0071 - .0094	.0079 - .0110	.0079 - .0118	.0079 - .0118	.0110 - .0150	.0110 - .0150
23	RPM	980	800	710	670	640	500	420
	FEED	.0063 - .0087	.0071 - .0094	.0079 - .0110	.0079 - .0118	.0079 - .0118	.0110 - .0150	.0110 - .0150
29	RPM	490	400	350	340	320	250	210
	FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .0110	.0087 - .0110
36	RPM	240	200	180	170	160	130	110
	FEED	.0024 - .0039	.0020 - .0043	.0024 - .0047	.0030 - .0049	.0035 - .0051	.0047 - .0071	.0047 - .0071

Global Cutting Tool Leader **YG-1**



HOLEMAKING

Being the best through innovation



HSS

SILVER & DEMING DRILLS

- 118° Split Point
- 3 Flats Black and Gold

SELECTION GUIDE

YG HOLEMAKING TOOLS

SERIES	D1191
STANDARD	ANSI
TOOL MATERIAL	HSS(M2)
SIZE MIN	D1/2
SIZE MAX	D1-1/2
PAGE	A259
SURFACE TREATMENT	BLACK & GOLD

HSS SILVER & DEMING DRILLS

- 118° Split Point
- 3 Flats Black and Gold

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

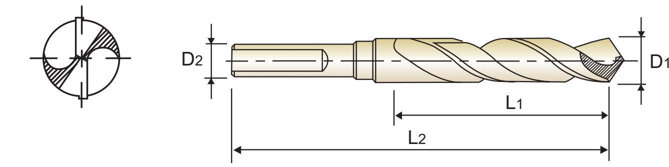
Recommended cutting conditions : p.A260

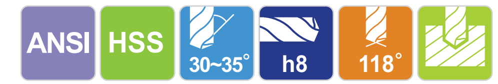
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	D1191
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎
	2		About 0.45% C	Annealed	190	13	◎
	3		About 0.45% C	Quenched & Tempered	250	25	◎
	4		About 0.75% C	Annealed	270	28	○
	5		About 0.75% C	Quenched & Tempered	300	32	
	6	Low alloy steel		Annealed	180	10	◎
	7			Quenched & Tempered	275	29	○
	8			Quenched & Tempered	300	32	○
	9			Quenched & Tempered	350	38	
	10	High alloyed steel, and tool steel		Annealed	200	15	○
	11			Quenched & Tempered	325	35	
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎
	13		Martensitic	Quenched & Tempered	240	23	○
	14		Austenitic		180	10	
K	15	Grey cast iron	Pearlitic / ferritic		180	10	○
	16		Pearlitic (Martensitic)		260	26	○
	17	Nodular cast iron	Ferritic		160	3	○
	18		Pearlitic		250	25	○
	19	Malleable cast iron	Ferritic		130		○
	20		Pearlitic		230	21	○
N	21	Aluminum-wrought alloy	Not Curable		60		○
	22		Curable	Hardened	100		○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○
	24		≤ 12% Si, Curable	Hardened	90		
	25		> 12% Si, Not Curable		130		
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		
	27		CuZn, CuSnZn (Brass)		90		
	28		CuSn, lead-free copper and electrolytic copper		100		
	29	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)	Duroplastic, Fiber Reinforced Plastic				○
	30		Rubber, Wood, etc.				
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15	
	32			Cured	280	30	
	33		Ni or Co Based	Annealed	250	25	
	34			Cured	350	38	
	35			Cast	320	34	
	36	Titanium Alloys	Pure Titanium		400 Rm		○
	37		Alpha + Beta Alloys	Hardened	1050 Rm		
H	38	Hardened steel		Hardened	550	55	
	39			Hardened	630	60	
	40	Chilled Cast Iron		Cast	400	42	
	41	Hardened Cast Iron		Hardened	550	55	

YG SILVER & DEMING DRILLS

D1191 SERIES

HSS(M2), 118° SPLIT POINT 3FLAT BLACK & GOLD SILVER & DEMING DRILLS





p.A260

Unit : Inch

EDP No.	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2
D1191032	1/2	1/2	3	6
D1191033	33/64	1/2	3	6
D1191034	17/32	1/2	3	6
D1191035	35/64	1/2	3	6
D1191036	9/16	1/2	3	6
D1191037	37/64	1/2	3	6
D1191038	19/32	1/2	3	6
D1191039	39/64	1/2	3	6
D1191040	5/8	1/2	3	6
D1191041	41/64	1/2	3	6
D1191042	21/32	1/2	3	6
D1191043	43/64	1/2	3	6
D1191044	11/16	1/2	3	6
D1191045	45/64	1/2	3	6
D1191046	23/32	1/2	3	6
D1191047	47/64	1/2	3	6
D1191048	3/4	1/2	3	6
D1191049	49/64	1/2	3	6
D1191050	25/32	1/2	3	6
D1191051	51/64	1/2	3	6
D1191052	13/16	1/2	3	6
D1191053	53/64	1/2	3	6
D1191054	27/32	1/2	3	6
D1191055	55/64	1/2	3	6
D1191056	7/8	1/2	3	6
D1191057	57/64	1/2	3	6
D1191058	29/32	1/2	3	6
D1191059	59/64	1/2	3	6
D1191060	15/16	1/2	3	6
D1191061	61/64	1/2	3	6
D1191062	31/32	1/2	3	6
D1191063	63/64	1/2	3	6
D1191064	1	1/2	3	6
D1191101	1-1/64	1/2	3	6
D1191102	1-1/32	1/2	3	6
D1191103	1-3/64	1/2	3	6
D1191104	1-1/16	1/2	3	6
D1191105	1-5/64	1/2	3	6
D1191106	1-3/32	1/2	3	6
D1191107	1-7/64	1/2	3	6
D1191108	1-1/8	1/2	3	6
D1191109	1-9/64	1/2	3	6
D1191110	1-5/32	1/2	3	6
D1191111	1-11/64	1/2	3	6
D1191112	1-3/16	1/2	3	6
D1191113	1-13/64	1/2	3	6
D1191114	1-7/32	1/2	3	6
D1191115	1-15/64	1/2	3	6
D1191116	1-1/4	1/2	3	6
D1191118	1-9/32	1/2	3	6
D1191120	1-5/16	1/2	3	6
D1191122	1-11/32	1/2	3	6
D1191124	1-3/8	1/2	3	6
D1191126	1-13/32	1/2	3	6
D1191128	1-7/16	1/2	3	6
D1191130	1-15/32	1/2	3	6
D1191132	1-1/2	1/2	3	6

* Individually packaged

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○		○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○						○							○					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

SILVER & DEMING DRILLS

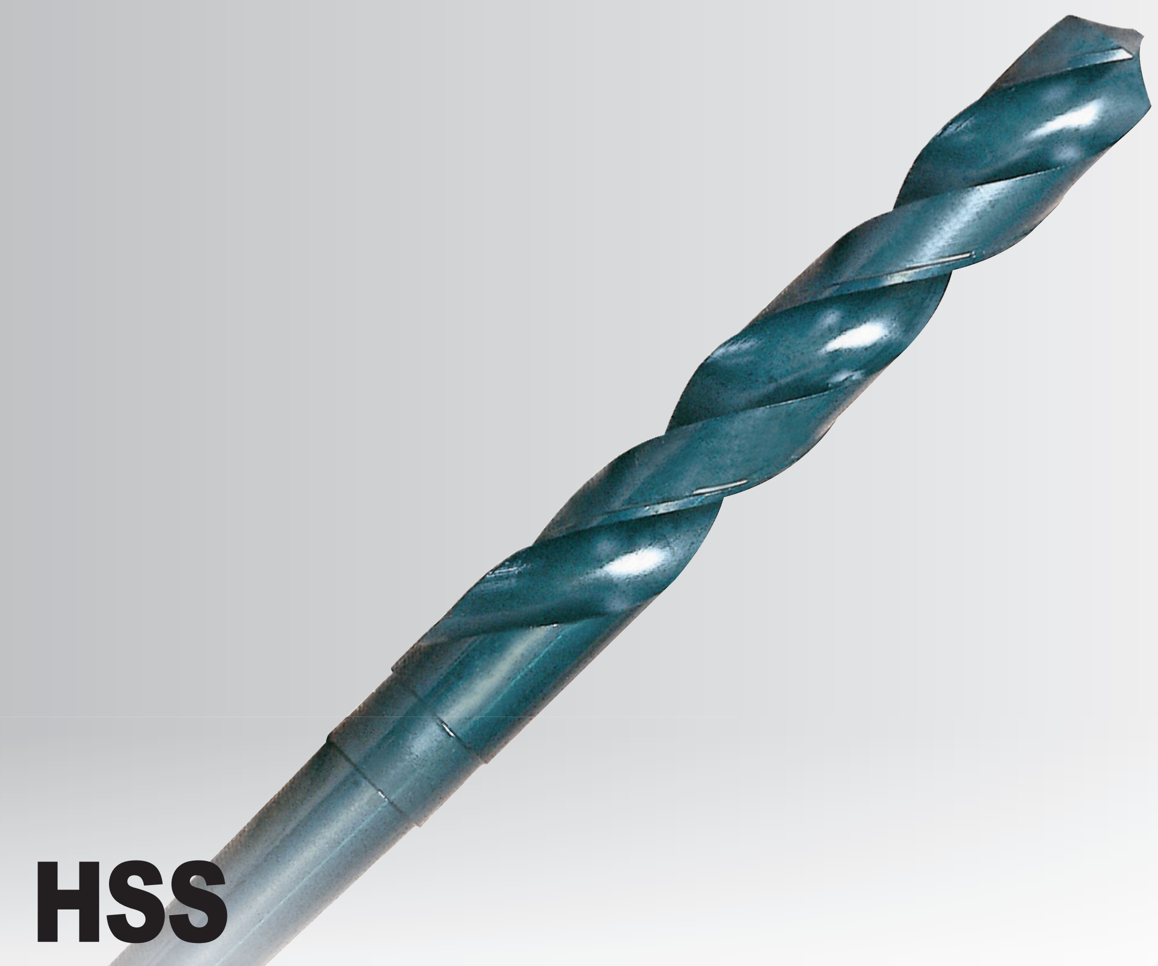
RECOMMENDED CUTTING CONDITIONS

D1191 SERIES HSS Silver&Deming Drill

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter										
				METRIC	- / 13.0	- / 16.0	18.0		20.0		30.0	40.0	50.0	60.0
				FRACTIONAL	1/2	5/8		3/4		1"		1-1/2	2"	2-3/4
				DECIMAL	.5000 / .5118	.6250 / .6299	.7086	.7500	.7874	1.0000	1.1811	1.5000 / 1.5748	1.9685 / 2.0000	2.3620 / 2.3750
P	1	Non-alloy steel	99	RPM	730	600	530	500	480	380	320	240	190	160
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011	.0087 - .011	.0094 - .0118	.011 - .0134	.0142 - .0157
	2		82	RPM	610	500	440	420	400	310	270	200	160	130
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011	.0087 - .011	.0094 - .0118	.011 - .0134	.0142 - .0157
	3		66	RPM	490	400	350	340	320	250	210	160	130	110
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011	.0087 - .011	.0094 - .0118	.011 - .0134	.0142 - .0157
	4		49	RPM	370	300	270	250	240	190	160	120	100	80
				FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0066 - .0089	.0039 - .0063	.0047 - .0071	.0047 - .0071	.0055 - .0079	.0063 - .0087	.0071 - .0094
	6	Low alloy steel	82	RPM	610	500	440	420	400	310	270	200	160	130
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011	.0087 - .011	.0094 - .0118	.011 - .0134	.0142 - .0157
	7		66	RPM	490	400	350	340	320	250	210	160	130	110
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011	.0087 - .011	.0094 - .0118	.011 - .0134	.0142 - .0157
	8		49	RPM	370	300	270	250	240	190	160	120	100	80
				FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071	.0047 - .0071	.0055 - .0079	.0063 - .0087	.0071 - .0094
	10	High alloyed steel, and tool steel	49	RPM	370	300	270	250	240	190	160	120	100	80
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011	.0087 - .011	.0094 - .0118	.011 - .0134	.0142 - .0157
M	12	Stainless steel	66	RPM	490	400	350	340	320	250	210	160	130	110
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011	.0087 - .011	.0094 - .0118	.011 - .0134	.0142 - .0157
	13		49	RPM	370	300	270	250	240	190	160	120	100	80
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011	.0087 - .011	.0094 - .0118	.011 - .0134	.0142 - .0157
K	15	Grey cast iron	99	RPM	730	600	530	500	480	380	320	240	190	160
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011	.0087 - .011	.0094 - .0118	.011 - .0134	.0142 - .0157
	16		82	RPM	610	500	440	420	400	310	270	200	160	130
				FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071	.0047 - .0071	.0055 - .0079	.0063 - .0087	.0071 - .0094
	17	Nodular cast iron	99	RPM	730	600	530	500	480	380	320	240	190	160
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011	.0087 - .011	.0094 - .0118	.011 - .0134	.0142 - .0157
	18		66	RPM	490	400	350	340	320	250	210	160	130	110
				FEED	.0016 -.0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071	.0047 - .0071	.0055 - .0079	.0063 - .0087	.0071 - .0094
	19	Malleable cast iron	82	RPM	610	500	440	420	400	310	270	200	160	130
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011	.0087 - .011	.0094 - .0118	.011 - .0134	.0142 - .0157
	20		66	RPM	490	400	350	340	320	250	210	160	130	110
				FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071	.0047 - .0071	.0055 - .0079	.0063 - .0087	.0071 - .0094
N	21	Aluminum-wrought alloy	181	RPM	1350	1090	970	920	880	690	580	440	350	290
				FEED	.0063 - .0087	.0071 - .0094	.0079 - .011	.0079 - .0118	.0079 - .0118	.011 - .015	.011 - .015	.0126 - .0165	.0142 - .0181	.0157 - .0197
	22		181	RPM	1350	1090	970	920	880	690	580	440	350	290
				FEED	.0063 - .0087	.0071 - .0094	.0079 - .011	.0079 - .0118	.0079 - .0118	.011 - .015	.011 - .015	.0126 - .0165	.0142 - .0181	.0157 - .0197
	23	Aluminum-cast, alloyed	132	RPM	980	800	710	670	640	500	420	320	250	210
				FEED	.0063 - .0087	.0071 - .0094	.0079 - .011	.0079 - .0118	.0079 - .0118	.011 - .015	.011 - .015	.0126 - .0165	.0142 - .0181	.0157 - .0197
	29	Non Metallic Materials	66	RPM	490	400	350	340	320	250	210	160	130	110
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011	.0087 - .011	.0094 - .0118	.011 - .0134	.0142 - .0157
S	36	Titanium Alloys	33	RPM	240	200	180	170	160	130	110	80	60	50
				FEED	.0024 - .0039	.002 - .0043	.0024 - .0047	.003 - .0049	.0035 - .0051	.0047 - .0071	.0047 - .0071	.0055 - .0079	.0063 - .0087	.0071 - .0094

Being the best through innovation



HSS MORSE TAPER SHANK DRILLS

- Morse Taper Shank Drills for Wide Applications

SELECTION GUIDE

YG HOLEMAKING TOOLS

SERIES	D1211
STANDARD	ANSI
LENGTH	JOBBER
SIZE MIN	D1/2
SIZE MAX	D2-1/2
PAGE	A263
SURFACE TREATMENT	Steam Tempered

HSS MORSE TAPER SHANK DRILLS

- Morse Taper Shank Drills for Wide Applications

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A265

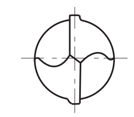
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	D1211
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎
	2		About 0.45% C	Annealed	190	13	◎
	3		About 0.45% C	Quenched & Tempered	250	25	◎
	4		About 0.75% C	Annealed	270	28	○
	5		About 0.75% C	Quenched & Tempered	300	32	
	6	Low alloy steel		Annealed	180	10	◎
	7			Quenched & Tempered	275	29	○
	8			Quenched & Tempered	300	32	○
	9			Quenched & Tempered	350	38	
	10	High alloyed steel, and tool steel		Annealed	200	15	○
	11			Quenched & Tempered	325	35	
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎
	13		Martensitic	Quenched & Tempered	240	23	○
	14		Austenitic		180	10	
K	15	Grey cast iron	Pearlitic / ferritic		180	10	○
	16		Pearlitic (Martensitic)		260	26	○
	17	Nodular cast iron	Ferritic		160	3	○
	18		Pearlitic		250	25	○
	19	Malleable cast iron	Ferritic		130		○
	20		Pearlitic		230	21	○
N	21	Aluminum-wrought alloy	Not Curable		60		○
	22		Curable	Hardened	100		○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○
	24		≤ 12% Si, Curable	Hardened	90		
	25		> 12% Si, Not Curable		130		
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		
	27		CuZn, CuSnZn (Brass)		90		
	28		CuSn, lead-free copper and electrolytic copper		100		
	29	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)	Duroplastic, Fiber Reinforced Plastic				○
	30		Rubber, Wood, etc.				
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15	
	32			Cured	280	30	
	33		Ni or Co Based	Annealed	250	25	
	34			Cured	350	38	
	35			Cast	320	34	
	36	Titanium Alloys	Pure Titanium		400 Rm		○
	37		Alpha + Beta Alloys	Hardened	1050 Rm		
H	38	Hardened steel		Hardened	550	55	
	39			Hardened	630	60	
	40	Chilled Cast Iron		Cast	400	42	
	41	Hardened Cast Iron		Hardened	550	55	

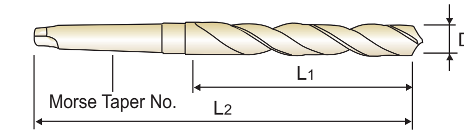
MORSE TAPER SHANK DRILLS

D1211 SERIES

HSS(M2) MORSE TAPER SHANK TWIST DRILL

▶**Surface treatment** : Steam Tempered(Black Oxide Finish)
▶**Application** : Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron, graphite.





ANSI HSS 30~35° 2~5 h8 118°

p.A265~A266

Unit : Inch

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	Morse Taper No.
D1211032	1/2	4-3/8	8-1/4	2
D1211033	33/64	4-5/8	8-1/2	2
D1211034	17/32	4-5/8	8-1/2	2
D1211035	35/64	4-7/8	8-3/4	2
D1211036	9/16	4-7/8	8-3/4	2
D1211037	37/64	4-7/8	8-3/4	2
D1211038	19/32	4-7/8	8-3/4	2
D1211039	39/64	4-7/8	8-3/4	2
D1211040	5/8	4-7/8	8-3/4	2
D1211041	41/64	5-1/8	9	2
D1211042	21/32	5-1/8	9	2
D1211043	43/64	5-3/8	9-1/4	2
D1211044	11/16	5-3/8	9-1/4	2
D1211045	45/64	5-5/8	9-1/2	2
D1211046	23/32	5-5/8	9-1/2	2
D1211047	47/64	5-7/8	9-3/4	2
D1211048	3/4	5-7/8	9-3/4	2
D1211049	49/64	6	9-7/8	2
D1211050	25/32	6	9-7/8	2
D1211051	51/64	6-1/8	10-3/4	3
D1211052	13/16	6-1/8	10-3/4	3
D1211053	53/64	6-1/8	10-3/4	3
D1211054	27/32	6-1/8	10-3/4	3
D1211055	55/64	6-1/8	10-3/4	3
D1211056	7/8	6-1/8	10-3/4	3
D1211057	57/64	6-1/8	10-3/4	3

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	Morse Taper No.
D1211058	29/32	6-1/8	10-3/4	3
D1211059	59/64	6-1/8	10-3/4	3
D1211060	15/16	6-1/8	10-3/4	3
D1211061	61/64	6-3/8	11	3
D1211062	31/32	6-3/8	11	3
D1211063	63/64	6-3/8	11	3
D1211100	1	6-3/8	11	3
D1211101	1-1/64	6-1/2	11-1/8	3
D1211102	1-1/32	6-1/2	11-1/8	3
D1211103	1-3/64	6-5/8	11-1/4	3
D1211104	1-1/16	6-5/8	11-1/4	3
D1211105	1-5/64	6-7/8	12-1/2	4
D1211106	1-3/32	6-7/8	12-1/2	4
D1211107	1-7/64	7-1/8	12-3/4	4
D1211108	1-1/8	7-1/8	12-3/4	4
D1211109	1-9/64	7-1/4	12-7/8	4
D1211110	1-5/32	7-1/4	12-7/8	4
D1211111	1-11/64	7-3/8	13	4
D1211112	1-3/16	7-3/8	13	4
D1211113	1-13/64	7-1/2	13-1/8	4
D1211114	1-7/32	7-1/2	13-1/8	4
D1211115	1-15/64	7-7/8	13-1/2	4
D1211116	1-1/4	7-7/8	13-1/2	4
D1211117	1-17/64	8-1/2	14-1/8	4
D1211118	1-9/32	8-1/2	14-1/8	4
D1211119	1-19/64	8-5/8	14-1/4	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○		○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○						○							○					

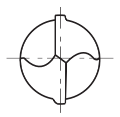
CARBIDE
HSS
i-ONE DRILLS | i-DREAM DRILLS | DREAM DRILLS -PRO | DREAM DRILLS -GENERAL | DREAM DRILLS -HIGH FEED | DREAM DRILLS -FLAT BOTTOM | DREAM DRILLS -INOX | DREAM DRILLS -ALU | DREAM DRILLS -MQL TYPE | DREAM DRILLS for HIGH HARDENED STEELS | STANDARD CARBIDE DRILLS | MULTI-1 DRILLS | HPD DRILLS | GOLD-P DRILLS | STRAIGHT SHANK DRILLS | AIRCRAFT DRILLS | SILVER & DEMING DRILLS | TAPER SHANK DRILLS | NC-SPOTTING DRILLS | COMBINATION DRILLS & COUNTERSINK | SPADE DRILLS | REAMERS | TECHNICAL DATA

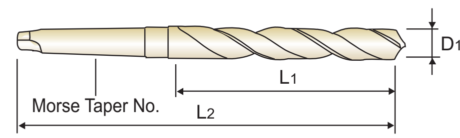
YG MORSE TAPER SHANK DRILLS

D1211 SERIES

HSS(M2) MORSE TAPER SHANK TWIST DRILL

▶**Surface treatment** : Steam Tempered(Black Oxide Finish)
▶**Application** : Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron, graphite.





ANSI | HSS | 30~35° | 2~5 | h8 | 118°

p.A265~A266

Unit : Inch

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	Morse Taper No.
D1211120	1-5/16	8-5/8	14-1/4	4
D1211121	1-21/64	8-3/4	14-3/8	4
D1211122	1-11/32	8-3/4	14-3/8	4
D1211123	1-23/64	8-7/8	14-1/2	4
D1211124	1-3/8	8-7/8	14-1/2	4
D1211126	1-13/32	9	14-5/8	4
D1211128	1-7/16	9-1/8	14-3/4	4
D1211130	1-15/32	9-1/4	14-7/8	4
D1211132	1-1/2	9-3/8	15	4
D1211133	1-33/64	9-3/8	16-3/8	4
D1211134	1-17/32	9-3/8	16-3/8	5
D1211136	1-9/16	9-5/8	16-5/8	5
D1211138	1-19/32	9-7/8	16-7/8	5
D1211140	1-5/8	10	17	5
D1211142	1-21/32	10-1/8	17-1/8	5
D1211144	1-11/16	10-1/8	17-1/8	5
D1211146	1-23/32	10-1/8	17-1/8	5
D1211148	1-3/4	10-1/8	17-1/8	5
D1211152	1-13/16	10-1/8	17-1/8	5
D1211154	1-27/32	10-1/8	17-1/8	5
D1211156	1-7/8	10-3/8	17-3/8	5
D1211160	1-15/16	10-3/8	17-3/8	5
D1211162	1-31/32	10-3/8	17-3/8	5
D1211200	2	10-3/8	17-3/8	5
D1211202	2-1/32	10-3/8	17-3/8	5
D1211204	2-1/16	10-1/4	17-3/8	5
D1211206	2-3/32	10-1/4	17-3/8	5
D1211208	2-1/8	10-1/4	17-3/8	5
D1211210	2-5/32	10-1/4	17-3/8	5
D1211212	2-3/16	10-1/4	17-3/8	5
D1211214	2-7/32	10-1/8	17-3/8	5
D1211216	2-1/4	10-1/8	17-3/8	5
D1211220	2-5/16	10-1/8	17-3/8	5
D1211224	2-3/8	10-1/8	17-3/8	5
D1211228	2-7/16	11-1/4	18-3/4	5
D1211232	2-1/2	11-1/4	18-3/4	5

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎	○	○		○		◎	○		○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

YG MORSE TAPER SHANK DRILLS

RECOMMENDED CUTTING CONDITIONS

D1211 SERIES HSS TAPER SHANK DRILLS

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter: METRIC / FRACTIONAL / DECIMAL	- / 1/2 / .5000 ; 13.0 / - / .5118	- / 5/8 / .6250 ; 16.0 / - / .6299	18.0 / - / .7086	- / 3/4 / .7500	20.0 / - / .7874	- / 1" / 1.0000
P	1	Non-alloy steel	99	RPM	730	600	530	500	480	380
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011
	2		82	RPM	610	500	440	420	400	310
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011
	3		66	RPM	490	400	350	340	320	250
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011
	4		49	RPM	370	300	270	250	240	190
				FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055		.0039 - .0063	.0047 - .0071
	6	Low alloy steel	82	RPM	610	500	440	420	400	310
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011
	7		66	RPM	490	400	350	340	320	250
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011
	8		49	RPM	370	300	270	250	240	190
				FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071
	10	High alloyed steel, and tool steel	49	RPM	370	300	270	250	240	190
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011
M	12	Stainless steel	66	RPM	490	400	350	340	320	250
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011
	13		49	RPM	370	300	270	250	240	190
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011
K	15	Grey cast iron	99	RPM	730	600	530	500	480	380
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011
	16		82	RPM	610	500	440	420	400	310
				FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071
	17	Nodular cast iron	99	RPM	730	600	530	500	480	380
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011
	18		66	RPM	490	400	350	340	320	250
				FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071
	19	Malleable cast iron	82	RPM	610	500	440	420	400	310
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011
	20		66	RPM	490	400	350	340	320	250
				FEED	.0016 - .0039	.0024 - .0047	.0031 - .0055	.0035 - .0059	.0039 - .0063	.0047 - .0071
N	21	Aluminum-wrought alloy	181	RPM	1350	1090	970	920	880	690
				FEED	.0063 - .0087	.0071 - .0094	.0079 - .011	.0079 - .0118	.0079 - .0118	.011 - .015
	22		181	RPM	1350	1090	970	920	880	690
				FEED	.0063 - .0087	.0071 - .0094	.0079 - .011	.0079 - .0118	.0079 - .0118	.011 - .015
	23	Aluminum-cast, alloyed	132	RPM	980	800	710	670	640	500
				FEED	.0063 - .0087	.0071 - .0094	.0079 - .011	.0079 - .0118	.0079 - .0118	.011 - .015
	29	Non Metallic Materials	66	RPM	490	400	350	340	320	250
				FEED	.0043 - .0067	.0047 - .0071	.0055 - .0079	.0066 - .0089	.0075 - .0098	.0087 - .011
S	36	Titanium Alloys	33	RPM	240	200	180	170	160	130
				FEED	.0024 - .0039	.002 - .0043	.0024 - .0047	.003 - .0049	.0035 - .0051	.0047 - .0071

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG MORSE TAPER SHANK DRILLS

RECOMMENDED CUTTING CONDITIONS

D1211 SERIES HSS TAPER SHANK DRILLS

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter METRIC / FRACTIONAL / DECIMAL	30.0 / - / 1.1811	- / 1-1/2 / 1.5000	40.0 / - / 1.5748	50.0 / - / 1.9685	- / 2" / 2.0000	60.0 / - / 2.3620	- / 2-3/4 / 2.3750
P	1	Non-alloy steel	99	RPM	320	240		190		160	
				FEED	.0087 - .011	.0094 - .0118		.011 - .0134		.0142 - .0157	
	2		82	RPM	270	200		160		130	
				FEED	.0087 - .011	.0094 - .0118		.011 - .0134		.0142 - .0157	
	3		66	RPM	210	160		130		110	
				FEED	.0087 - .011	.0094 - .0118		.011 - .0134		.0142 - .0157	
	4		49	RPM	160	120		100		80	
				FEED	.0047 - .0071	.0055 - .0079		.0063 - .0087		.0071 - .0094	
	6	Low alloy steel	82	RPM	270	200		160		130	
				FEED	.0087 - .011	.0094 - .0118		.011 - .0134		.0142 - .0157	
	7		66	RPM	210	160		130		110	
				FEED	.0087 - .011	.0094 - .0118		.011 - .0134		.0142 - .0157	
	8		49	RPM	160	120		100		80	
				FEED	.0047 - .0071	.0055 - .0079		.0063 - .0087		.0071 - .0094	
	10	High alloyed steel, and tool steel	49	RPM	160	120		100		80	
				FEED	.0087 - .011	.0094 - .0118		.011 - .0134		.0142 - .0157	
M	12	Stainless steel	66	RPM	210	160		130		110	
				FEED	.0087 - .011	.0094 - .0118		.011 - .0134		.0142 - .0157	
	13		49	RPM	160	120		100		80	
				FEED	.0087 - .011	.0094 - .0118		.011 - .0134		.0142 - .0157	
K	15	Grey cast iron	99	RPM	320	240		190		160	
				FEED	.0087 - .011	.0094 - .0118		.011 - .0134		.0142 - .0157	
	16		82	RPM	270	200		160		130	
				FEED	.0047 - .0071	.0055 - .0079		.0063 - .0087		.0071 - .0094	
	17	Nodular cast iron	99	RPM	320	240		190		160	
				FEED	.0087 - .011	.0094 - .0118		.011 - .0134		.0142 - .0157	
	18		66	RPM	210	160		130		110	
				FEED	.0047 - .0071	.0055 - .0079		.0063 - .0087		.0071 - .0094	
	19	Malleable cast iron	82	RPM	270	200		160		130	
				FEED	.0087 - .011	.0094 - .0118		.011 - .0134		.0142 - .0157	
	20		66	RPM	210	160		130		110	
				FEED	.0047 - .0071	.0055 - .0079		.0063 - .0087		.0071 - .0094	
N	21	Aluminum-wrought alloy	181	RPM	580	440		350		290	
				FEED	.011 - .015	.0126 - .0165		.0142 - .0181		.0157 - .0197	
	22		181	RPM	580	440		350		290	
				FEED	.011 - .015	.0126 - .0165		.0142 - .0181		.0157 - .0197	
	23	Aluminum-cast, alloyed	132	RPM	420	320		250		210	
				FEED	.011 - .015	.0126 - .0165		.0142 - .0181		.0157 - .0197	
	29	Non Metallic Materials	66	RPM	210	160		130		110	
				FEED	.0087 - .011	.0094 - .0118		.011 - .0134		.0142 - .0157	
S	36	Titanium Alloys	33	RPM	110	80		60		50	
				FEED	.0047 - .0071	.0055 - .0079		.0063 - .0087		.0071 - .0094	

SOLID CARBIDE & HSSCo8

NC SPOTTING DRILLS

- For Centering and Chamfering of Holes

i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

SELECTION GUIDE

YG HOLEMAKING TOOLS

SERIES	D5321	D5322	D2N90	
TOOL MATERIAL	CARBIDE		HSSCo8	
POINT ANGLE	90°	120°	90°	120°
SIZE MIN	D1/8	D1/8	D1/8	D1/8
SIZE MAX	D3/4	D3/4	D1	D1
PAGE	A269		A270	
SURFACE TREATMENT	Bright			

SOLID CARBIDE & HSSCo8 NC SPOTTING DRILLS

- For Centering and Chamfering of Holes

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A271

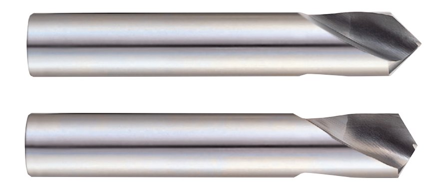
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	D5321	D5322	D2N90 90°	D2N90 120°
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	◎	◎	◎
	2		About 0.45% C	Annealed	190	13	◎	◎	◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	◎	◎	◎	◎
	4		About 0.75% C	Annealed	270	28				
	5		About 0.75% C	Quenched & Tempered	300	32				
	6	Low alloy steel		Annealed	180	10	◎	◎	◎	◎
	7			Quenched & Tempered	275	29	○	○	○	○
	8			Quenched & Tempered	300	32				
	9			Quenched & Tempered	350	38				
	10	High alloyed steel, and tool steel		Annealed	200	15				
	11			Quenched & Tempered	325	35				
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○	○	○	○
	13		Martensitic	Quenched & Tempered	240	23				
	14		Austenitic		180	10				
K	15	Grey cast iron	Pearlitic / ferritic		180	10	◎	◎	◎	◎
	16		Pearlitic (Martensitic)		260	26	○	○	○	○
	17	Nodular cast iron	Ferritic		160	3	○	○	○	○
	18		Pearlitic		250	25				
	19	Malleable cast iron	Ferritic		130		○	○	○	○
	20		Pearlitic		230	21				
N	21	Aluminum-wrought alloy	Not Curable		60		○	○	○	○
	22		Curable	Hardened	100		○	○	○	○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○	○	○	○
	24		≤ 12% Si, Curable	Hardened	90					
	25		> 12% Si, Not Curable		130					
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110					
	27		CuZn, CuSnZn (Brass)		90					
	28		CuSn, lead-free copper and electrolytic copper		100					
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.	Duroplastic, Fiber Reinforced Plastic							
	30		Rubber, Wood, etc.							
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15				
	32			Cured	280	30				
	33		Ni or Co Based	Annealed	250	25				
	34			Cured	350	38				
	35			Cast	320	34				
	36	Titanium Alloys	Pure Titanium		400 Rm				○	○
	37		Alpha + Beta Alloys	Hardened	1050 Rm					
H	38	Hardened steel		Hardened	550	55				
	39			Hardened	630	60				
	40	Chilled Cast Iron		Cast	400	42				
	41	Hardened Cast Iron		Hardened	550	55				

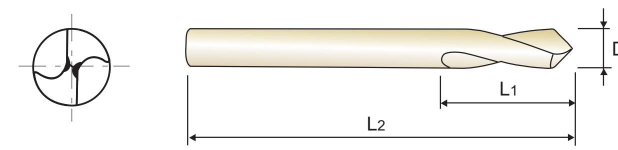
YG NC SPOTTING DRILLS

D5321 SERIES
D5322 SERIES

CARBIDE, NC SPOTTING DRILLS

90°
120°





CARBIDE | h6 | 90° | 120° | Bright | p.A271

NC Spotting drills 90°

EDP No.	Drill Diameter Fractional	Drill Diameter Decimal	Flute Length	Overall Length
	D1		L1	L2
D5321008	1/8	.1250	5/8	2"
D5321012	3/16	.1875	3/4	2"
D5321016	1/4	.2500	3/4	2-1/2
D5321020	5/16	.3125	1"	2-1/2
D5321024	3/8	.3750	1"	3"
D5321032	1/2	.5000	1"	3"
D5321040	5/8	.6250	1-1/4	3"
D5321048	3/4	.7500	1-3/4	4"

NC Spotting drills 120°

Unit : Inch

EDP No.	Drill Diameter Fractional	Drill Diameter Decimal	Flute Length	Overall Length
	D1		L1	L2
D5322008	1/8	.1250	5/8	2"
D5322012	3/16	.1875	3/4	2"
D5322016	1/4	.2500	3/4	2-1/2
D5322020	5/16	.3125	1"	2-1/2
D5322024	3/8	.3750	1"	3"
D5322032	1/2	.5000	1"	3"
D5322040	5/8	.6250	1-1/4	3"
D5322048	3/4	.7500	1-3/4	4"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎			◎	○					○			◎	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○													○					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
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GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

NC SPOTTING DRILLS

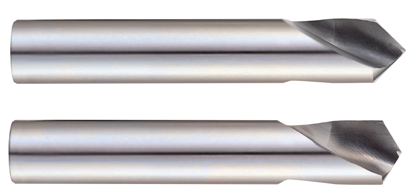
D2N90 SERIES

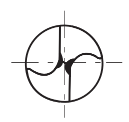
HSSCo8, NC SPOTTING DRILLS

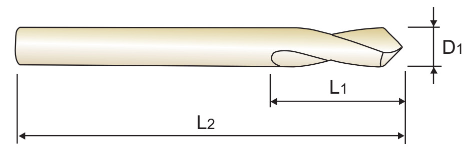
▶**Application** : For more precise centering work on NC/CNC machine. A larger diameter in respect to the subsequent drilling tool permit to obtain the centering and chamfering simultaneously.

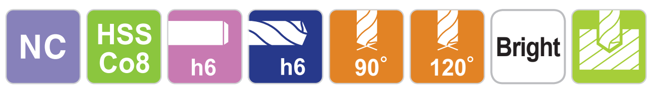
90°

120°









p.A271

NC Spotting drills 90°

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
2081L	1/8	.472	1.93
2121L	3/16	.590	2.44
2161L	1/4	.669	2.76
2201L	5/16	.984	3.11
2241L	3/8	.827	3.50
2321L	1/2	.984	4.02
2401L	5/8	1.575	4.53
2481L	3/4	1.968	5.16
2641L	1	1.968	6.14

NC Spotting drills 120°

Unit : Inch

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
2081L	1/8	.472	1.93
2121L	3/16	.590	2.44
2161L	1/4	.669	2.76
2201L	5/16	.984	3.11
2241L	3/8	.827	3.50
2321L	1/2	.984	4.02
2401L	5/8	1.575	4.53
2481L	3/4	1.968	5.16
2641L	1	1.968	6.14

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎			◎	○					○			◎	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○																		

NC SPOTTING DRILLS

RECOMMENDED CUTTING CONDITIONS

D5321, D5322 SERIES CARBIDE, NC SPOTTING DRILLS

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter								
				METRIC	-	-	-	-	-	-	-	-
				FRACTIONAL	1/8	3/16	1/4	5/16	3/8	1/2	5/8	5/8
				DECIMAL	.1250	.1875	.2500	.3125	.3750	.5000	.6250	.6250
P	1	Non-alloy steel	247	RPM	7960	4790	3980	2980	2390	1890	1490	1490
				FEED	.0016 - .0024	.0024 - .0035	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0051 - .0075	.0051 - .0075
	2		230	RPM	7430	4460	3710	2790	2230	1760	1390	1390
				FEED	.0016 - .0024	.0024 - .0035	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0051 - .0075	.0051 - .0075
	3		214	RPM	6900	4150	3450	2590	2070	1630	1290	1290
				FEED	.0012 - .002	.0018 - .003	.0020 - .0031	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0043 - .0067
	6	Low alloy steel	230	RPM	7430	4460	3710	2790	2230	1760	1390	1390
				FEED	.0016 - .0024	.0024 - .0035	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0051 - .0075	.0051 - .0075
	7		181	RPM	5840	3510	2920	2190	1750	1380	1090	1090
				FEED	.0012 -.0020	.0018 - .0030	.0020 - .0031	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0043 - .0067
M	12	Stainless steel	115	RPM	3710	2230	1860	1390	1110	880	700	700
				FEED	.0016 - .0024	.0024 - .0035	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0051 - .0075	.0051 - .0075
K	15	Grey cast iron	296	RPM	9550	5740	4770	3580	2860	2260	1790	1790
				FEED	.0020 - .0028	.0028 - .0039	.0031 - .0043	.0039 - .0051	.0047 - .0063	.0059 - .0079	.0071 - .0094	.0071 - .0094
	16		230	RPM	7430	4460	3710	2790	2230	1760	1390	1390
				FEED	.0012 -. 0020	.0018 - .0030	.0020 - .0031	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0043 - .0067
	17	Nodular cast iron	296	RPM	9550	5740	4770	3580	2860	2260	1790	1790
				FEED	.0020 - .0028	.0028 - .0039	.0031 - .0043	.0039 - .0051	.0047 - .0063	.0059 - .0079	.0071 - .0094	.0071 - .0094
	19	Malleable cast iron	197	RPM	6370	3820	3180	2390	1910	1510	1190	1190
				FEED	.0020 - .0028	.0028 - .0039	.0031 - .0043	.0039 - .0051	.0047 - .0063	.0059 - .0079	.0071 - .0094	.0071 - .0094
N	21	Aluminum-wrought alloy	543	RPM	17510	10530	8750	6570	5250	4150	3280	3280
				FEED	.0024 - .0035	.0035 - .0047	.0039 - .0051	.0047 - .0059	.0059 - .0075	.0071 - .0091	.0083 - .0106	.0083 - .0106
	22		428	RPM	13790	8300	6900	5170	4140	3270	2590	2590
				FEED	.0024 - .0035	.0035 - .0047	.0039 - .0051	.0047 - .0059	.0059 - .0075	.0071 - .0091	.0083 - .0106	.0083 - .0106
	23	Aluminum-cast, alloyed	362	RPM	11670	7020	5840	4380	3500	2770	2190	2190
				FEED	.0024 - .0035	.0035 - .0047	.0039 - .0051	.0047 - .0059	.0059 - .0075	.0071 - .0091	.0083 - .0106	.0083 - .0106
S	36	Titanium Alloys	115	RPM	3710	2230	1860	1390	1110	880	700	700
				FEED	.0012 -.0020	.0018 - .0030	.0020 - .0031	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0043 - .0067

YG NC SPOTTING DRILLS

RECOMMENDED CUTTING CONDITIONS

D2N90 SERIES HSSCo8, NC-SPOTTING DRILLS

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter METRIC / FRACTIONAL / DECIMAL	2.0 / - / .0787	3.0 / - / .1181 ; - / 1/8 / .1250	4.0 / - / .1575	6.0 / - / .2362 ; - / 1/4 / .2500	- / 5/16 / .3125 ; 8.0 / - / .3150
P	1	Non-alloy steel	82	RPM	3980	2650	1990	1330	990
				FEED	.0008 - .0016	.0016 - .0024	.0020 - .0031	.0028 - .0039	.0031 - .0047
P	2	Non-alloy steel	82	RPM	3980	2650	1990	1330	990
				FEED	.0008 - .0016	.0016 - .0024	.0020 - .0031	.0028 - .0039	.0031 - .0047
P	3	Non-alloy steel	49	RPM	2390	1590	1190	800	600
				FEED	.0004 - .0012	.0012 - .0020	.0016 - .0028	.0020 - .0031	.0028 - .0039
P	6	Low alloy steel	66	RPM	3180	2120	1590	1060	800
				FEED	.0008 - .0016	.0016 - .0024	.0020 - .0031	.0028 - .0039	.0031 - .0047
P	7	Low alloy steel	49	RPM	2390	1590	1190	800	600
				FEED	.0004 - .0012	.0012 - .0020	.0016 - .0028	.0020 - .0031	.0028 - .0039
M	12	Stainless steel	49	RPM	2390	1590	1190	800	600
				FEED	.0008 - .0016	.0016 - .0024	.0020 - .0031	.0028 - .0039	.0031 - .0047
K	15	Grey cast iron	99	RPM	4770	3180	2390	1590	1190
				FEED	.0012 - .0020	.002 0- .0028	.0024 - .0035	.0031 - .0043	.0039 - .0051
K	16	Grey cast iron	82	RPM	3980	2650	1990	1330	990
				FEED	.0004 - .0012	.0012 - .0020	.0016 - .0028	.0020 - .0031	.0028 - .0039
K	17	Nodular cast iron	99	RPM	4770	3180	2390	1590	1190
				FEED	.0012 - .0020	.0020 - .0028	.0024 - .0035	.0031 - .0043	.0039 - .0051
K	19	Malleable cast iron	66	RPM	3180	2120	1590	1060	800
				FEED	.0012 - .0020	.0020 - .0028	.0024 - .0035	.0031 - .0043	.0039 - .0051
N	21	Aluminum-wrought alloy	214	RPM	10350	6900	5170	3450	2590
				FEED	.0016 - .0024	.0024 - .0035	.0031 - .0043	.0039 - .0051	.0047 - .0059
N	22	Aluminum-wrought alloy	197	RPM	9550	6370	4770	3180	2390
				FEED	.0016 - .0024	.0024 - .0035	.0031 - .0043	.0039 - .0051	.0047 - .0059
N	23	Aluminum-cast, alloyed	165	RPM	7960	5310	3980	2650	1990
				FEED	.0016 - .0024	.0024 - .0035	.0031 - .0043	.0039 - .0051	.0047 - .0059

ISO	VDI 3323	Material Description	SFM	Drill Diameter METRIC / FRACTIONAL / DECIMAL	- / 3/8 / .3750 ; 10.0 / - / .3937	12.0 / - / .4724	- / 1/2 / .5000	- / 5/8 / .6250 ; 16.0 / - / .6299	- / 3/4 / .7500	20.0 / - / .7874
P	1	Non-alloy steel	82	RPM	800	660	630	500	420	400
				FEED	.0035 - .0055	.0043 - .0067	.0043 - .0067	.0051 - .0075	.0051 - .0075	.0059 - .0083
P	2	Non-alloy steel	82	RPM	800	660	630	500	420	400
				FEED	.0035 - .0055	.0043 - .0067	.0043 - .0067	.0051 - .0075	.0051 - .0075	.0059 - .0083
P	3	Non-alloy steel	49	RPM	480	400	370	300	250	240
				FEED	.0031 - .0047	.0035 - .0055	.0035 - .0055	.0043 - .0067	.0043 - .0067	.0051 - .0075
P	6	Low alloy steel	66	RPM	640	530	500	400	340	320
				FEED	.0035 - .0055	.0043 - .0067	.0043 - .0067	.0051 - .0075	.0051 - .0075	.0059 - .0083
P	7	Low alloy steel	49	RPM	480	400	370	300	250	240
				FEED	.0031 - .0047	.0035 - .0055	.0035 - .0055	.0043 - .0067	.0043 - .0067	.0051 - .0075
M	12	Stainless steel	49	RPM	480	400	370	300	250	240
				FEED	.0035 - .0055	.0043 - .0067	.0043 - .0067	.0051 - .0075	.0051 - .0075	.0059 - .0083
K	15	Grey cast iron	99	RPM	950	800	760	600	500	480
				FEED	.0047 - .0063	.0059 -- .0079	.0059 - .0079	.0071 - .0094	.0071 - .0094	.0087 - .0110
K	16	Grey cast iron	82	RPM	800	660	630	500	420	400
				FEED	.0031 - .0047	.0035 - .0055	.0035 - .0055	.0043 - .0067	.0043 - .0067	.0051 - .0075
K	17	Nodular cast iron	99	RPM	950	800	760	600	500	480
				FEED	.0047 - .0063	.0059 -- .0079	.0059 - .0079	.0071 - .0094	.0071 - .0094	.0087 - .0110
K	19	Malleable cast iron	66	RPM	640	530	500	400	340	320
				FEED	.0047 - .0063	.0059 -- .0079	.0059 - .0079	.0071 - .0094	.0071 - .0094	.0087 - .0110
N	21	Aluminum-wrought alloy	214	RPM	2070	1720	1630	1290	1090	1030
				FEED	.0059 - .0075	.0071 - .0091	.0071 - .0091	.0083 - .0106	.0083 - .0106	.0098 - .0122
N	22	Aluminum-wrought alloy	197	RPM	1910	1590	1510	1190	1000	950
				FEED	.0059 - .0075	.0071 - .0091	.0071 - .0091	.0083 - .0106	.0083 - .0106	.0098 - .0122
N	23	Aluminum-cast, alloyed	165	RPM	1590	1330	1260	990	840	800
				FEED	.0059 - .0075	.0071 - .0091	.0071 - .0091	.0083 - .0106	.0083 - .0106	.0098 - .0122

SOLID CARBIDE & HSS

COMBINATION DRILL & COUNTER SINK / CENTER DRILL

- For General Purpose

SELECTION GUIDE

YG HOLEMAKING TOOLS

SERIES	D1C90	D5331	D5332
TOOL MATERIAL	HSS(M2)	CARBIDE	
POINT ANGLE	60°	60°	90°
LENGTH	LONG	-	-
SIZE MIN	D3/64	D3/64	D3/64
SIZE MAX	D7/32	D5/16	D5/16
PAGE	A275	A276	
SURFACE TREATMENT	Bright		

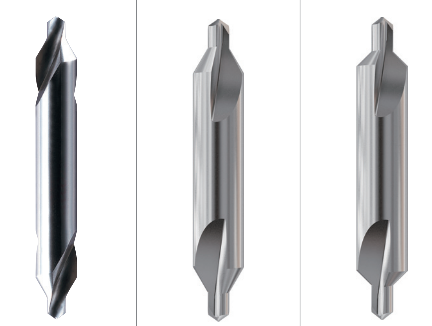
SOLID CARBIDE & HSS COMBINATION DRILL & COUNTER SINK

- For General Purpose

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A277

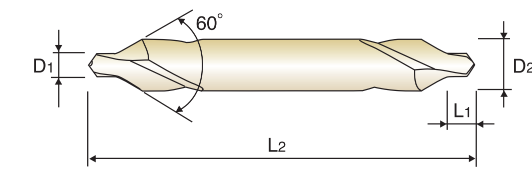


ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	D1C90	D5331	D5332
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	◎	◎
	2		About 0.45% C	Annealed	190	13	◎	◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	○	○	○
	4		About 0.75% C	Annealed	270	28			
	5		About 0.75% C	Quenched & Tempered	300	32			
	6	Low alloy steel		Annealed	180	10	◎	◎	◎
	7			Quenched & Tempered	275	29	○	○	○
	8			Quenched & Tempered	300	32	○	○	○
	9			Quenched & Tempered	350	38	○	○	○
	10	High alloyed steel, and tool steel		Annealed	200	15			
	11			Quenched & Tempered	325	35			
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○	○	○
	13		Martensitic	Quenched & Tempered	240	23			
	14		Austenitic		180	10	◎	◎	◎
K	15	Grey cast iron	Pearlitic / ferritic		180	10			
	16		Pearlitic (Martensitic)		260	26			
	17	Nodular cast iron	Ferritic		160	3			
	18		Pearlitic		250	25			
	19	Malleable cast iron	Ferritic		130				
	20		Pearlitic		230	21			
N	21	Aluminum-wrought alloy	Not Curable		60		◎	◎	◎
	22		Curable	Hardened	100		◎	◎	◎
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○	○	○
	24		≤ 12% Si, Curable	Hardened	90		○	○	○
	25		> 12% Si, Not Curable		130				
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110				
	27		CuZn, CuSnZn (Brass)		90				
	28		CuSn, lead-free copper and electrolyte copper		100				
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.	Duroplastic, Fiber Reinforced Plastic						
	30		Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15			
	32			Cured	280	30			
	33		Ni or Co Based	Annealed	250	25			
	34			Cured	350	38			
	35			Cast	320	34			
	36	Titanium Alloys	Pure Titanium		400 Rm		○	○	○
	37		Alpha + Beta Alloys	Hardened	1050 Rm				
H	38	Hardened steel		Hardened	550	55			
	39			Hardened	630	60			
	40	Chilled Cast Iron		Cast	400	42			
	41	Hardened Cast Iron		Hardened	550	55			

YG COMBINATION DRILL & COUNTER SINK

D1C90 SERIES

HSS(M2), COMBINATION DRILL & COUNTER SINK / CENTER DRILL



HSS | h8 | k12 | 120° | Bright | p.A277

60°

EDP No.	Size	Diameter D1	Shank Diameter D2	Drill Length L1	Overall Length L2
*D1C90079	1	3/64	1/8	1/16	1-1/2
*D1C90080	2	1/16	3/16	5/64	1-3/4
*D1C90081	3	3/32	1/4	1/8	2
*D1C90082	4	1/8	5/16	5/32	2-1/4
*D1C90083	5	3/16	7/16	1/4	2-1/2
★D1C90084	6	7/32	1/2	7/32	3

* 10pcs per package
★ Individually package

60°

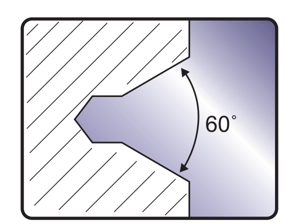
EDP No.	Size	Diameter D1	Shank Diameter D2	Drill Length L1	Overall Length L2
*D1C90141	1	3/64	1/8	3/64	1-1/4
*D1C90142	2	5/64	3/16	5/64	1-7/8
*D1C90143	3	7/64	1/4	7/64	2
*D1C90144	4	1/8	5/16	1/8	2-1/8
*D1C90145	5	3/16	7/16	3/16	2-3/4

* 10pcs per package

LONG LENGTH (60°)

Unit : Inch

EDP No.	Size	Diameter D1	Shank Diameter D2	Drill Length L1	Overall Length L2
D1C90085	1	3/64	1/8	3/64	3
D1C90086	1	3/64	1/8	3/64	4
D1C90087	1	3/64	1/8	3/64	5
D1C90088	1	3/64	1/8	3/64	6
D1C90089	2	5/64	3/16	5/64	3
D1C90090	2	5/64	3/16	5/64	4
D1C90091	2	5/64	3/16	5/64	5
D1C90092	2	5/64	3/16	5/64	6
D1C90093	3	7/64	1/4	7/64	4
D1C90094	3	7/64	1/4	7/64	5
D1C90095	3	7/64	1/4	7/64	6
D1C90096	4	1/8	5/16	1/8	4
D1C90097	4	1/8	5/16	1/8	5
D1C90098	4	1/8	5/16	1/8	6
D1C90099	5	3/16	7/16	3/16	4
D1C90100	5	3/16	7/16	3/16	5
D1C90101	5	3/16	7/16	3/16	6
D1C90102	6	7/32	1/2	7/32	4
D1C90103	6	7/32	1/2	7/32	5
D1C90104	6	7/32	1/2	7/32	6



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○					○			◎	○	○		○	

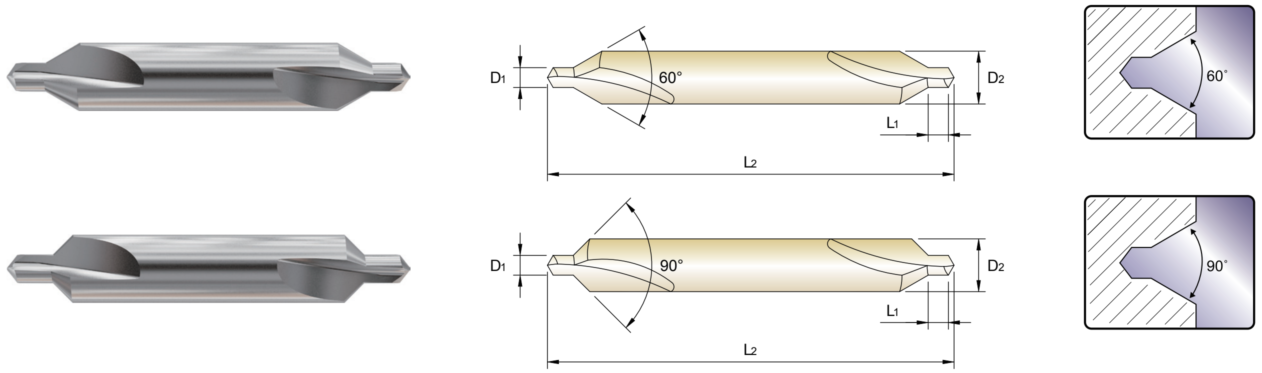
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

COMBINATION DRILL & COUNTER SINK

D5331 SERIES
D5332 SERIES

CARBIDE, COMBINATION DRILL & COUNTER SINK / CENTER DRILL



p.A278

Unit : Inch

EDP No. 60°	EDP No. 90°	Size	Diameter Fractional (D1)	Diameter Decimal (D1)	Shank Diameter D2	Drill Length L1	Overall Length L2
D5331008	D5332008	#1	3/64	.0468	1/8	3/64	1-1/2
D5331012	D5332012	#2	5/64	.0781	3/16	5/64	1-7/8
D5331016	D5332016	#3	7/64	.1094	1/4	7/64	2"
D5331020	D5332020	#4	1/8	.1250	5/16	1/8	2-1/8
D5331028	D5332028	#5	3/16	.1875	7/16	3/16	2-3/4
D5331032	D5332032	#6	7/32	.2188	1/2	7/32	3"
D5331040	D5332040	#7	1/4	.2500	5/8	1/4	3-3/4
D5331048	D5332048	#8	5/16	.3125	3/4	5/16	4"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎			◎	○					○			◎	○	○		○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

COMBINATION DRILL & COUNTER SINK

RECOMMENDED CUTTING CONDITIONS

D1C90 SERIES HSS CENTER DRILLS

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM		Drill Diameter: METRIC 1.0 / FRACTIONAL (blank) / DECIMAL 0.394	METRIC 2.0 / FRACTIONAL - / DECIMAL .0787	METRIC 3.0, - / FRACTIONAL -, 1/8 / DECIMAL .1181, .1250	METRIC 4.0 / FRACTIONAL - / DECIMAL .1575	METRIC 6.0, - / FRACTIONAL -, 1/4 / DECIMAL .2362, .2500	METRIC -, 8.0 / FRACTIONAL 5/16, - / DECIMAL .3125, .3150	METRIC -, 10.0 / FRACTIONAL 3/8, - / DECIMAL .3750, .3937
P	1	Non-alloy steel	132	RPM	12730	6370	4240	3180	2120	1590	1270
				FEED	.0008 - .0016	.0012 - .0024	.0016 - .0031	.0020 - .0035	.0028 - .0047	.0035 - .0059	.0047 - .0071
	2		99	RPM	9550	4770	3180	2390	1590	1190	950
				FEED	.0008 - .0016	.0012 - .0024	.0016 - .0031	.0020 - .0035	.0028 - .0047	.0035 - .0059	.0047 - .0071
	3		82	RPM	7960	3980	2650	1990	1330	990	800
				FEED	.0004 - .0012	.0004 - .0014	.0004 - .0020	.0008 - .0024	.0016 - .0031	.0024 - .0047	.0031 - .0055
	6	Low alloy steel	99	RPM	9550	4770	3180	2390	1590	1190	950
				FEED	.0008 - .0016	.0012 - .0024	.0016 - .0031	.0020 - .0035	.0028 - .0047	.0035 - .0059	.0047 - .0071
	7		86	RPM	6370	3180	2120	1590	1060	800	640
				FEED	.0004 - .0012	.0004 - .0014	.0004 - .0020	.0008 - .0024	.0016 - .0031	.0024 - .0047	.0031 - .0055
M	12	Stainless steel	33	RPM	3180	1590	1060	800	530	400	320
				FEED	.0004 - .0012	.0004 - .0014	.0004 - .0020	.0008 - .0024	.0016 - .0031	.0024 - .0047	.0031 - .0055
K	15	Grey cast iron	132	RPM	12730	6370	4240	3180	2120	1590	1270
				FEED	.0008 - .0016	.0012 - .0024	.0016 - .0031	.0020 - .0035	.0028 - .0047	.0035 - .0059	.0047 - .0071
	16		99	RPM	9550	4770	3180	2390	1590	1190	950
				FEED	.0004 - .0012	.0004 - .0014	.0004 - .0020	.0008 - .0024	.0016 - .0031	.0024 - .0047	.0031 - .0055
	17	Nodular cast iron	132	RPM	12730	6370	4240	3180	2120	1590	1270
				FEED	.0008 - .0016	.0012 - .0024	.0016 - .0031	.0020 - .0035	.0028 - .0047	.0035 - .0059	.0047 - .0071
	19	Malleable cast iron	82	RPM	7960	3980	2650	1990	1330	990	800
				FEED	.0008 - .0016	.0012 - .0024	.0016 - .0031	.0020 - .0035	.0028 - .0047	.0024 - .0047	.0047 - .0071

COMBINATION DRILL & COUNTER SINK

RECOMMENDED CUTTING CONDITIONS

D5331, D5332 SERIES — CARBIDE CENTER DRILL

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM		Drill Diameter				
				METRIC	1.0	2.0	3.0 / -	4.0	6.0 / -
				FRACTIONAL	-	-	- / 1/8	-	- / 1/4
				DECIMAL	.0394	.0787	.1181 / .1250	.1575	.2362 / .2500
P	1	Non-alloy steel	165	RPM	15920	7960	5310	3980	2650
				FEED	.0008 - .0016	.0012 - .0024	.0016 - .0031	.0020 - .0035	.0028 - .0047
	2		132	RPM	12730	6370	4240	3180	2120
				FEED	.0008 - .0016	.0012 - .0024	.0016 - .0031	.0020 - .0035	.0028 - .0047
	3		99	RPM	9550	4770	3180	2390	1590
				FEED	.0004 - .0012	.0004 - .0014	.0004 - .0020	.0008 - .0024	.0016 - .0031
	6	Low alloy steel	132	RPM	12730	6370	4240	3180	2120
				FEED	.0008 - .0016	.0012 - .0024	.0016 - .0031	.0020 - .0035	.0028 - .0047
	7		99	RPM	9550	4770	3180	2390	1590
				FEED	.0004 - .0012	.0004 - .0014	.0004 - .0020	.0008 - .0024	.0016 - .0031
M	12	Stainless steel	66	RPM	6370	3180	2120	1590	1060
				FEED	.0004 - .0012	.0004 - .0014	.0004 - .0020	.0008 - .0024	.0016 - .0031
K	15	Grey cast iron	197	RPM	19100	9550	6370	4770	3180
				FEED	.0008 - .0016	.0012 - .0024	.0016 - .0031	.0020 - .0035	.0028 - .0047
	16		165	RPM	15920	7960	5310	3980	2650
				FEED	.0004 - .0012	.0004 - .0014	.0004 - .0020	.0008 - .0024	.0016 - .0031
	17	Nodular cast iron	197	RPM	19100	9550	6370	4770	3180
				FEED	.0008 - .0016	.0012 - .0024	.0016 - .0031	.0020 - .0035	.0028 - .0047
	19	Malleable cast iron	132	RPM	12730	6370	4240	3180	2120
				FEED	.0008 - .0016	.0012 - .0024	.0016 - .0031	.0020 - .0035	.0028 - .0047

Leading Through Innovation

INSERTS & HOLDERS

SPADE DRILLS

- Carbide for Long Tool Life, and HSS-PM for General Machines and Large Diameters Higher Productivity than Other Drilling Tools

SELECTION GUIDE

YG HOLEMAKING TOOLS

INSERTS & HOLDERS
SPADE DRILLS

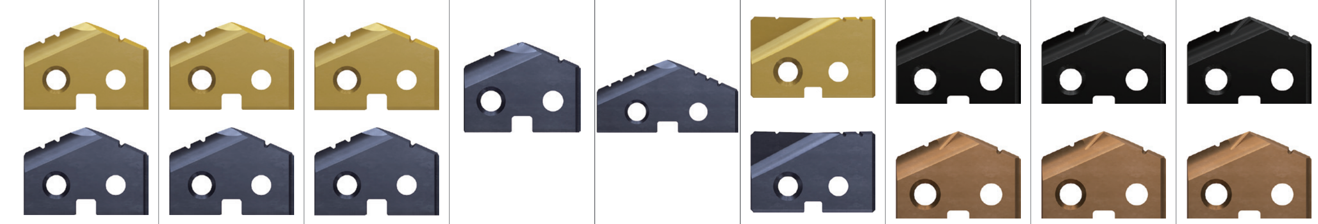
- For General Purpose (HRC30A to HRC50)

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A346

SERIES	1~8	Y,Z,0,1~8	Y,Z,0,1,2	Y,Z,0,1~3	Y,Z,0,1~3	Y,Z,0,1~2	Y,Z,0,1~8	Y,Z,0,1~3	Y,Z,0,1,2	Y,Z,0,1~8	Y,Z,0,1~8	Y,Z,0,1~3
STANDARD	STANDARD			STANDARD			SM-POINT	SM-POINT	FLAT BOTTOM	SV-POINT	SV-POINT	SV-POINT
TOOL MATERIAL	HSS(M4)	SUPER COBALT(T15)	PREMIUM COBALT(M48)	CARBIDE(K20)	CARBIDE(P40)	CARBIDE(K10)	SUPER COBALT(T15)	CARBIDE(P40)	SUPER COBALT(T15)	SUPER COBALT(T15)	PREMIUM COBALT(M48)	CARBIDE(P40)
SIZE MIN	.3740 (#1)	.3740 (#Y)	.3740 (#Y)	.3740 (#Y)	.3740 (#Y)	.3740 (#Y)	.3740(#Y)	.3740(#Y)	.3740(#Y)	.3740(#Y)	.3740(#Y)	.3740(#Y)
SIZE MAX	4.5000 (#8)	4.5000 (#8)	1.3780 (#2)	1.8750 (#3)	1.3780 (#3)	1.3780 (#2)	4.5000 (#8)	1.8750 (#3)	1.3780 (#2)	4.5000 (#8)	4.5000 (#8)	1.8750 (#3)
PAGE	A282~A285	A286~A292	A293~A295	A296~A300			A302~A307		A308	A310~A320	A321~A331	A332~336
SURFACE TREATMENT	TiN/TiAlN/Hardslick			TiN/TiAlN			TiAlN		TiN/TiAlN	Hardslick/H-Coating		



ISO	VDI 3323	Material Description	Composition / Structure	Heat Treatment	HB	HRc	1~8	Y,Z,0,1~8	Y,Z,0,1,2	Y,Z,0,1~3 (K20)	Y,Z,0,1~3 (P40)	Y,Z,0,1~2	Y,Z,0,1~8 (SM)	Y,Z,0,1~3 (SM)	Y,Z,0,1,2 (FB)	Y,Z,0,1~8 (SV T15)	Y,Z,0,1~8 (SV M48)	Y,Z,0,1~3 (SV)
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○	◎	◎	○	◎		◎	◎	◎	◎	◎	◎
	2		About 0.45% C	Annealed	190	13	○	◎	◎	○	◎		◎	◎	◎	◎	◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	○	◎	◎	○	◎		◎	◎	◎	◎	◎	◎
	4		About 0.75% C	Annealed	270	28	○	◎	◎	○	◎		◎	◎	◎	◎	◎	◎
	5		About 0.75% C	Quenched & Tempered	300	32												
	6	Low alloy steel		Annealed	180	10	○	◎	◎	○	◎		◎	◎	◎	◎	◎	◎
	7			Quenched & Tempered	275	29	○	◎	◎	○	◎		◎	◎	◎	◎	◎	◎
	8			Quenched & Tempered	300	32		○	◎	○	◎		○	◎	○	○	◎	◎
	9			Quenched & Tempered	350	38		○	◎	○	◎		○	◎	○	○	◎	◎
	10	High alloyed steel, and tool steel		Annealed	200	15		○	◎	○	◎		○	◎	○	○	◎	◎
	11			Quenched & Tempered	325	35		○	◎	○	◎		○	◎	○	○	◎	◎
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15		○	○	◎	○		○	○	○	○	○	○
	13		Martensitic	Quenched & Tempered	240	23		○	○	◎	○		○	○	○	○	○	○
	14		Austenitic		180	10		○	○	◎	○		○	○	○	○	○	○
K	15	Grey cast iron	Pearlitic / ferritic		180	10	◎	○	○	○	○	◎	○	○	○	○	○	○
	16		Pearlitic (Martensitic)		260	26	○	◎	◎	○	○	◎	◎	○	◎	◎	◎	○
	17	Nodular cast iron	Ferritic		160	3	◎	○	○	○	○	◎	○	○	○	○	○	○
	18		Pearlitic		250	25	○	◎	◎	○	○	◎	◎	○	◎	◎	◎	○
	19	Malleable cast iron	Ferritic		130		◎	○	○	○	○	◎	○	○	○	○	○	○
	20		Pearlitic		230	21	○	◎	◎	○	○	◎	◎	○	◎	◎	◎	○
N	21	Aluminum-wrought alloy	Not Curable		60		◎	○	○	◎	○		○	○	○	○	○	○
	22		Curable	Hardened	100		◎	○	○	◎	○		○	○	○	○	○	○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75													
	24		≤ 12% Si, Curable	Hardened	90													
	25		> 12% Si, Not Curable		130													
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110													
	27		CuZn, CuSnZn (Brass)		90		◎	○	○	◎	○		○	○	○	○	○	○
	28		CuSn, lead-free copper and electrolytic copper		100													
	29	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)	Duroplastic, Fiber Reinforced Plastic															
	30		Rubber, Wood, etc.															
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15		◎	◎	◎	○		◎	○	◎	◎	◎	○
	32			Cured	280	30		○	◎	◎	○		○	○	○	○	◎	○
	33		Ni or Co Based	Annealed	250	25		○	◎	◎	○		○	○	○	○	◎	○
	34			Cured	350	38		○	◎	◎	○		○	○	○	○	◎	○
	35			Cast	320	34		○	◎	◎	○		○	○	○	○	◎	○
	36	Titanium Alloys	Pure Titanium		400 Rm													
	37		Alpha + Beta Alloys	Hardened	1050 Rm													
H	38	Hardened steel		Hardened	550	55		○	◎	○	◎		○	◎	○	○	◎	◎
	39			Hardened	630	60												
	40	Chilled Cast Iron		Cast	400	42												
	41	Hardened Cast Iron		Hardened	550	55												

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG SPADE DRILLS

SERIES 1, 2

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE DRILL INSERTS - HSS (M4)

- General purpose insert for most materials
- Not recommended for tool steels and high temperature alloys
- High toughness for loose or manual machines

POINT ANGLE - 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. HSS (M4) TiN	EDP No. HSS (M4) TiAIN	EDP No. HSS (M4) Hardslick
1 .690 (17.53) to .960 (24.38)	45/64	17.86	.7031	5/32 (4.0)	S01101	S03101	S04101
		18.00	.7087		S01102	S03102	S04102
	23/32	18.26	.7188		S01103	S03103	S04103
		18.50	.7283		S01104	S03104	S04104
	47/64	18.65	.7344		S01105	S03105	S04105
		19.00	.7480		S01106	S03106	S04106
	3/4	19.05	.7500		S01107	S03107	S04107
	49/64	19.45	.7656		S01108	S03108	S04108
		19.50	.7677		S01109	S03109	S04109
	25/32	19.84	.7813		S01110	S03110	S04110
		20.00	.7874		S01111	S03111	S04111
	51/64	20.24	.7969		S01160	S03160	S04160
		20.50	.8071		S01112	S03112	S04112
	13/16	20.64	.8125		S01113	S03113	S04113
		21.00	.8268		S01114	S03114	S04114
	27/32	21.43	.8438		S01115	S03115	S04115
	55/64	21.83	.8594		S01161	S03161	S04161
		22.00	.8661		S01116	S03116	S04116
	7/8	22.23	.8750		S01117	S03117	S04117
	57/64	22.62	.8906		S01162	S03162	S04162
		23.00	.9055		S01118	S03118	S04118
	29/32	23.02	.9063		S01119	S03119	S04119
	59/64	23.42	.9219		S01120	S03120	S04120
	15/16	23.81	.9375		S01121	S03121	S04121
		24.00	.9449		S01122	S03122	S04122
2 .961 (24.41) to 1.380 (35.05)	31/32	24.61	.9688	3/16 (4.8)	S01201	S03201	S04201
	63/64	25.00	.9843		S01202	S03202	S04202
	1	25.40	1.0000		S01203	S03203	S04203
	1-1/64	25.80	1.0156		S01204	S03204	S04204
		26.00	1.0236		S01205	S03205	S04205
	1-1/32	26.19	1.0313		S01206	S03206	S04206
	1-3/64	26.59	1.0469		S01260	S03260	S04260
	1-1/16	26.99	1.0625		S01207	S03207	S04207
		27.00	1.0630		S01208	S03208	S04208

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○	○								◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎					◎														

YG SPADE DRILLS

SERIES 2, 3

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE DRILL INSERTS - HSS (M4)

- General purpose insert for most materials
- Not recommended for tool steels and high temperature alloys
- High toughness for loose or manual machines

POINT ANGLE - 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. HSS (M4) TiN	EDP No. HSS (M4) TiAIN	EDP No. HSS (M4) Hardslick
2 .961 (24.41) to 1.380 (35.05)	1-3/32	27.78	1.0938	3/16 (4.8)	S01209	S03209	S04209
		28.00	1.1024		S01210	S03210	S04210
	1-7/64	28.18	1.1094		S01261	S03261	S04261
	1-1/8	28.58	1.1250		S01211	S03211	S04211
		29.00	1.1417		S01212	S03212	S04212
	1-5/32	29.37	1.1563		S01213	S03213	S04213
		30.00	1.1811		S01214	S03214	S04214
	1-3/16	30.16	1.1875		S01215	S03215	S04215
	1-7/32	30.96	1.2188		S01216	S03216	S04216
		31.00	1.2205		S01217	S03217	S04217
	1-1/4	31.75	1.2500		S01218	S03218	S04218
		32.00	1.2598		S01219	S03219	S04219
	1-9/32	32.54	1.2813		S01220	S03220	S04220
		33.00	1.2992		S01221	S03221	S04221
	1-5/16	33.34	1.3125		S01222	S03222	S04222
		34.00	1.3386		S01223	S03223	S04223
	1-11/32	34.13	1.3438		S01224	S03224	S04224
	1-3/8	34.93	1.3750		S01225	S03225	S04225
		35.00	1.3780		S01226	S03226	S04226
3 1.353 (34.37) to 1.882 (47.80)	1-13/32	35.72	1.4063	1/4 (6.4)	S01301	S03301	S04301
		36.00	1.4173		S01302	S03302	S04302
	1-7/16	36.51	1.4375		S01303	S03303	S04303
		37.00	1.4567		S01304	S03304	S04304
	1-15/32	37.31	1.4688		S01305	S03305	S04305
		38.00	1.4961		S01306	S03306	S04306
	1-1/2	38.10	1.5000		S01307	S03307	S04307
	1-17/32	38.89	1.5313		S01308	S03308	S04308
		39.00	1.5354		S01309	S03309	S04309
	1-9/16	39.69	1.5625		S01310	S03310	S04310
		40.00	1.5748		S01311	S03311	S04311
	1-19/32	40.48	1.5938		S01312	S03312	S04312
		41.00	1.6142		S01313	S03313	S04313
	1-5/8	41.28	1.6250		S01314	S03314	S04314
		42.00	1.6535		S01315	S03315	S04315

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○	○								◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎					◎														

YG SPADE DRILLS

SERIES 3, 4

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE DRILL INSERTS - HSS (M4)

- General purpose insert for most materials
- Not recommended for tool steels and high temperature alloys
- High toughness for loose or manual machines

POINT ANGLE - 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. HSS (M4) TiN	EDP No. HSS (M4) TiAIN	EDP No. HSS (M4) Hardslick
3 1.353 (34.37) to 1.882 (47.80)	1-21/32	42.07	1.6563	1/4 (6.4)	S01316	S03316	S04316
	1-11/16	42.86	1.6875		S01317	S03317	S04317
		43.00	1.6929		S01318	S03318	S04318
	1-23/32	43.66	1.7188		S01319	S03319	S04319
		44.00	1.7323		S01320	S03320	S04320
	1-3/4	44.45	1.7500		S01321	S03321	S04321
		45.00	1.7717		S01322	S03322	S04322
	1-25/32	45.24	1.7813		S01323	S03323	S04323
		46.00	1.8110		S01324	S03324	S04324
	1-13/16	46.04	1.8125		S01325	S03325	S04325
	1-27/32	46.83	1.8438		S01326	S03326	S04326
		47.00	1.8504		S01327	S03327	S04327
	1-7/8	47.63	1.8750		S01328	S03328	S04328
4 1.850 (46.99) to 2.570 (65.28)	1-29/32	48.42	1.9063	5/16 (7.9)	S01402	S03402	S04402
	1-15/16	49.21	1.9375		S01404	S03404	S04404
	1-31/32	50.01	1.9688		S01406	S03406	S04406
	2	50.80	2.0000		S01407	S03407	S04407
	2-1/32	51.59	2.0313		S01409	S03409	S04409
	2-3/64	52.00	2.0472		S01410	S03410	S04410
	2-1/16	52.39	2.0625		S01411	S03411	S04411
	2-3/32	53.18	2.0938		S01413	S03413	S04413
	2-1/8	53.98	2.1250		S01414	S03414	S04414
	2-5/32	54.77	2.1563		S01416	S03416	S04416
	2-3/16	55.56	2.1875		S01418	S03418	S04418
	2-7/32	56.36	2.2188		S01420	S03420	S04420
	2-1/4	57.15	2.2500		S01422	S03422	S04422
	2-9/32	57.94	2.2813		S01423	S03423	S04423
	2-5/16	58.74	2.3125		S01425	S03425	S04425
	2-11/32	59.53	2.3438		S01427	S03427	S04427
	2-3/8	60.33	2.3750		S01429	S03429	S04429
	2-13/32	61.12	2.4063		S01431	S03431	S04431
	2-7/16	61.91	2.4375		S01432	S03432	S04432
	2-15/32	62.71	2.4688		S01434	S03434	S04434
	2-1/2	63.50	2.5000		S01436	S03436	S04436

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○	○								◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎					◎														

YG SPADE DRILLS

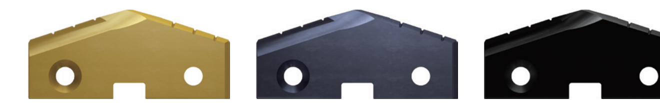
SERIES 4, 5, 6, 7, 8

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE DRILL INSERTS - HSS (M4)

- General purpose insert for most materials
- Not recommended for tool steels and high temperature alloys
- High toughness for loose or manual machines

POINT ANGLE - 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. HSS (M4) TiN	EDP No. HSS (M4) TiAIN	EDP No. HSS (M4) Hardslick
4	2-17/32	64.29	2.5313	5/16 (7.9)	S01438	S03438	S04438
	2-9/16	65.09	2.5625		S01440	S03440	S04440
5 2.456 (62.38) to 3.000 (76.20)	2-1/2	63.50	2.5000	7/16 (11.1)	S01501	S03501	S04501
	2-5/8	66.68	2.6250		S01507	S03507	S04507
	2-3/4	69.85	2.7500		S01512	S03512	S04512
	2-25/32	70.64	2.7813		S01514	S03514	S04514
	2-13/16	71.44	2.8125		S01515	S03515	S04515
	2-27/32	72.23	2.8438		S01517	S03517	S04517
	2-7/8	73.03	2.8750		S01518	S03518	S04518
	2-29/32	73.82	2.9063		S01519	S03519	S04519
	2-15/16	74.61	2.9375		S01521	S03521	S04521
	2-31/32	75.41	2.9688		S01522	S03522	S04522
	3	76.20	3.0000		S01524	S03524	S04524
6 3.001(76.23) to 3.507(89.08	3-1/16	77.79	3.0625	7/16 (11.1)	S01602	S03602	S04602
	3-1/8	79.38	3.1250		S01605	S03605	S04605
	3-1/4	82.55	3.2500		S01611	S03611	S04611
	3-3/8	85.73	3.3750		S01616	S03616	S04616
	3-7/16	87.31	3.4375		S01619	S03619	S04619
	3-1/2	88.90	3.5000		S01622	S03622	S04622
7 3.455(87.76) to 4.000(101.60)	3-9/16	90.49	3.5625	7/16 (11.1)	S01703	S03703	S04703
	3-5/8	92.08	3.6250		S01706	S03706	S04706
	3-3/4	95.25	3.7500		S01711	S03711	S04711
	3-7/8	98.43	3.8750		S01717	S03717	S04717
	4	101.60	4.0000		S01722	S03722	S04722
8 4.001(101.63) to 4.507(114.48)	4-1/8	104.78	4.1250	7/16 (11.1)	S01804	S03804	S04804
	4-1/4	107.95	4.2500		S01807	S03807	S04807
	4-3/8	111.13	4.3750		S01811	S03811	S04811
	4-1/2	114.30	4.5000		S01815	S03815	S04815

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○	○								◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎					◎														

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG SPADE DRILLS

SERIES Y, Z, 0

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE DRILL INSERTS - SUPER COBALT (T15)

- Increase wear resistance over M4
- For use in medium carbon steel to high temperature alloys
- Performs best in rigid setups

POINT ANGLE - 132 degree (Series 5-8 : 144 degree)

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. SUPER COBALT (T15) TiN	TiAIN	Hardslick
Y .374 (9.50) to .436 (11.07)		9.50	.3740	3/32 (2.4)	* S06Y01	* S08Y01	* S09Y01
	3/8	9.53	.3750		* S06Y02	* S08Y02	* S09Y02
		9.80	.3860		* S06Y03	* S08Y03	* S09Y03
	25/64	9.92	.3906		* S06Y04	* S08Y04	* S09Y04
		10.00	.3937		* S06Y05	* S08Y05	* S09Y05
		10.20	.4016		* S06Y06	* S08Y06	* S09Y06
	13/32	10.32	.4063		* S06Y07	* S08Y07	* S09Y07
		10.50	.4134		* S06Y08	* S08Y08	* S09Y08
	27/64	10.72	.4219		* S06Y09	* S08Y09	* S09Y09
		10.80	.4252		* S06Y10	* S08Y10	* S09Y10
		11.00	.4331		* S06Y11	* S08Y11	* S09Y11
Z .437 (11.11) to .510 (12.95)	7/16	11.11	.4375	3/32 (2.4)	* S06Z01	* S08Z01	* S09Z01
		11.50	.4528		* S06Z02	* S08Z02	* S09Z02
	29/64	11.51	.4531		* S06Z03	* S08Z03	* S09Z03
	15/32	11.91	.4688		* S06Z04	* S08Z04	* S09Z04
		12.00	.4724		* S06Z05	* S08Z05	* S09Z05
	31/64	12.30	.4844		* S06Z06	* S08Z06	* S09Z06
		12.50	.4921		* S06Z07	* S08Z07	* S09Z07
	1/2	12.70	.5000		* S06Z08	* S08Z08	* S09Z08
0 .511 (12.98) to .695 (17.65)		13.00	.5118	1/8 (3.2)	* S06001	* S08001	* S09001
	33/64	13.10	.5156		* S06002	* S08002	* S09002
	17/32	13.49	.5313		* S06003	* S08003	* S09003
		13.50	.5315		* S06004	* S08004	* S09004
	35/64	13.89	.5469		* S06060	* S08060	* S09060
		14.00	.5512		* S06005	* S08005	* S09005
	9/16	14.29	.5625		* S06006	* S08006	* S09006
		14.50	.5709		* S06007	* S08007	* S09007
	37/64	14.68	.5781		* S06008	* S08008	* S09008
		15.00	.5906		* S06009	* S08009	* S09009
	19/32	15.08	.5938		* S06010	* S08010	* S09010
	39/64	15.48	.6094		* S06061	* S08061	* S09061
		15.50	.6102		* S06011	* S08011	* S09011
	5/8	15.88	.6250		* S06012	* S08012	* S09012

* 2pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

YG SPADE DRILLS

SERIES 0, 1

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE DRILL INSERTS - SUPER COBALT (T15)

- Increase wear resistance over M4
- For use in medium carbon steel to high temperature alloys
- Performs best in rigid setups

POINT ANGLE - 132 degree (Series 5-8 : 144 degree)

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. SUPER COBALT (T15) TiN	TiAIN	Hardslick
0 .511 (12.98) to .695 (17.65)		16.00	.6299	1/8 (3.2)	S06013	S08013	S09013
	41/64	16.27	.6406		* S06062	* S08062	* S09062
		16.50	.6496		* S06014	* S08014	* S09014
	21/32	16.67	.6563		* S06015	* S08015	* S09015
		17.00	.6693		* S06016	* S08016	* S09016
	43/64	17.07	.6719		* S06063	* S08063	* S09063
	11/16	17.46	.6875		* S06017	* S08017	* S09017
		17.50	.6890		* S06018	* S08018	* S09018
1 .690 (17.53) to .960 (24.38)	45/64	17.86	.7031	5/32 (4.0)	* S06101	* S08101	* S09101
		18.00	.7087		S06102	S08102	S09102
	23/32	18.26	.7188		S06103	S08103	S09103
		18.50	.7283		S06104	S08104	S09104
	47/64	18.65	.7344		S06105	S08105	S09105
		19.00	.7480		S06106	S08106	S09106
	3/4	19.05	.7500		S06107	S08107	S09107
	49/64	19.45	.7656		S06108	S08108	S09108
		19.50	.7677		S06109	S08109	S09109
	25/32	19.84	.7813		S06110	S08110	S09110
		20.00	.7874		S06111	S08111	S09111
	51/64	20.24	.7969		S06160	S08160	S09160
		20.50	.8071		S06112	S08112	S09112
	13/16	20.64	.8125		S06113	S08113	S09113
		21.00	.8268		S06114	S08114	S09114
	27/32	21.43	.8438		S06115	S08115	S09115
	55/64	21.83	.8594		S06161	S08161	S09161
		22.00	.8661		S06116	S08116	S09116
	7/8	22.23	.8750		S06117	S08117	S09117
	57/64	22.62	.8906		S06162	S08162	S09162
		23.00	.9055		S06118	S08118	S09118
	29/32	23.02	.9063		S06119	S08119	S09119
	59/64	23.42	.9219		S06120	S08120	S09120
	15/16	23.81	.9375		S06121	S08121	S09121
		24.00	.9449		S06122	S08122	S09122

* 2pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG SPADE DRILLS

SERIES 2, 3

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SPADE DRILL INSERTS - SUPER COBALT (T15)

- ▶ Increase wear resistance over M4
- ▶ For use in medium carbon steel to high temperature alloys
- ▶ Performs best in rigid setups

POINT ANGLE - 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. SUPER COBALT (T15) TiN	EDP No. SUPER COBALT (T15) TiAIN	EDP No. SUPER COBALT (T15) Hardslick
2 .961 (24.41) to 1.380 (35.05)	31/32	24.61	.9688	3/16 (4.8)	S06201	S08201	S09201
	63/64	25.00	.9843		S06202	S08202	S09202
	1	25.40	1.0000		S06203	S08203	S09203
	1-1/64	25.80	1.0156		S06204	S08204	S09204
		26.00	1.0236		S06205	S08205	S09205
	1-1/32	26.19	1.0313		S06206	S08206	S09206
	1-3/64	26.59	1.0469		S06260	S08260	S09260
	1-1/16	26.99	1.0625		S06207	S08207	S09207
		27.00	1.0630		S06208	S08208	S09208
	1-3/32	27.78	1.0938		S06209	S08209	S09209
		28.00	1.1024		S06210	S08210	S09210
	1-7/64	28.18	1.1094		S06261	S08261	S09261
	1-1/8	28.58	1.1250		S06211	S08211	S09211
		29.00	1.1417		S06212	S08212	S09212
	1-5/32	29.37	1.1563		S06213	S08213	S09213
		30.00	1.1811		S06214	S08214	S09214
	1-3/16	30.16	1.1875		S06215	S08215	S09215
	1-7/32	30.96	1.2188		S06216	S08216	S09216
		31.00	1.2205		S06217	S08217	S09217
	1-1/4	31.75	1.2500		S06218	S08218	S09218
		32.00	1.2598		S06219	S08219	S09219
	1-9/32	32.54	1.2813		S06220	S08220	S09220
		33.00	1.2992		S06221	S08221	S09221
	1-5/16	33.34	1.3125		S06222	S08222	S09222
		34.00	1.3386		S06223	S08223	S09223
	1-11/32	34.13	1.3438		S06224	S08224	S09224
	1-3/8	34.93	1.3750		S06225	S08225	S09225
		35.00	1.3780		S06226	S08226	S09226
3	1-13/32	35.72	1.4063	1/4 (6.4)	S06301	S08301	S09301
		36.00	1.4173		S06302	S08302	S09302
	1-7/16	36.51	1.4375		S06303	S08303	S09303
		37.00	1.4567		S06304	S08304	S09304
	1-15/32	37.31	1.4688		S06305	S08305	S09305

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

YG SPADE DRILLS

SERIES 3, 4

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SPADE DRILL INSERTS - SUPER COBALT (T15)

- ▶ Increase wear resistance over M4
- ▶ For use in medium carbon steel to high temperature alloys
- ▶ Performs best in rigid setups

POINT ANGLE - 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. SUPER COBALT (T15) TiN	EDP No. SUPER COBALT (T15) TiAIN	EDP No. SUPER COBALT (T15) Hardslick
3 1.353 (34.37) to 1.882 (47.80)		38.00	1.4961	1/4 (6.4)	S06306	S08306	S09306
	1-1/2	38.10	1.5000		S06307	S08307	S09307
	1-17/32	38.89	1.5313		S06308	S08308	S09308
		39.00	1.5354		S06309	S08309	S09309
	1-9/16	39.69	1.5625		S06310	S08310	S09310
		40.00	1.5748		S06311	S08311	S09311
	1-19/32	40.48	1.5938		S06312	S08312	S09312
		41.00	1.6142		S06313	S08313	S09313
	1-5/8	41.28	1.6250		S06314	S08314	S09314
		42.00	1.6535		S06315	S08315	S09315
	1-21/32	42.07	1.6563		S06316	S08316	S09316
	1-11/16	42.86	1.6875		S06317	S08317	S09317
		43.00	1.6929		S06318	S08318	S09318
	1-23/32	43.66	1.7188		S06319	S08319	S09319
		44.00	1.7323		S06320	S08320	S09320
	1-3/4	44.45	1.7500		S06321	S08321	S09321
		45.00	1.7717		S06322	S08322	S09322
	1-25/32	45.24	1.7813		S06323	S08323	S09323
		46.00	1.8110		S06324	S08324	S09324
	1-13/16	46.04	1.8125		S06325	S08325	S09325
	1-27/32	46.83	1.8438		S06326	S08326	S09326
		47.00	1.8504		S06327	S08327	S09327
	1-7/8	47.63	1.8750		S06328	S08328	S09328
4 1.850 (46.99) to 2.570 (65.28)	1-29/32	48.42	1.9062	5/16 (7.9)	S06402	S08402	S09402
	1-15/16	49.21	1.9375		S06404	S08404	S09404
	1-31/32	50.01	1.9688		S06406	S08406	S09406
	2	50.80	2.0000		S06407	S08407	S09407
	2-1/32	51.59	2.0312		S06409	S08409	S09409
	2-3/64	52.00	2.0472		S06410	S08410	S09410
	2-1/16	52.39	2.0625		S06411	S08411	S09411
	2-3/32	53.18	2.0938		S06413	S08413	S09413
	2-1/8	53.98	2.1250		S06414	S08414	S09414
	2-5/32	54.77	2.1562		S06416	S08416	S09416

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG SPADE DRILLS

SERIES 4, 5

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE DRILL INSERTS - SUPER COBALT (T15)

- Increase wear resistance over M4
- For use in medium carbon steel to high temperature alloys
- Performs best in rigid setups

POINT ANGLE - 132 degree (Series 5-8 : 144 degree)

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. SUPER COBALT (T15) TiN	EDP No. SUPER COBALT (T15) TiAlN	EDP No. SUPER COBALT (T15) Hardslick
4 1.850 (46.99) to 2.570 (65.28)	2-3/16	55.56	2.1875	5/16 (7.9)	S06418	S08418	S09418
	2-7/32	56.36	2.2188		S06420	S08420	S09420
	2-1/4	57.15	2.2500		S06422	S08422	S09422
	2-9/32	57.94	2.2812		S06423	S08423	S09423
	2-5/16	58.74	2.3125		S06425	S08425	S09425
	2-11/32	59.53	2.3438		S06427	S08427	S09427
	2-3/8	60.33	2.3750		S06429	S08429	S09429
	2-13/32	61.12	2.4062		S06431	S08431	S09431
	2-7/16	61.91	2.4375		S06432	S08432	S09432
	2-15/32	62.71	2.4688		S06434	S08434	S09434
	2-1/2	63.50	2.5000		S06436	S08436	S09436
	2-17/32	64.29	2.5312		S06438	S08438	S09438
	2-9/16	65.09	2.5625		S06440	S08440	S09440
5 2.456 (62.38) to 3.000 (76.20)	2-1/2	63.50	2.5000	7/16 (11.1)	—	—	S09501
		64.00	2.5197		—	—	S09502
	2-17/32	64.29	2.5312		—	—	S09503
	2-9/16	65.09	2.5625		—	—	S09504
	2-19/32	65.88	2.5938		—	—	S09505
		66.00	2.5984		—	—	S09506
	2-5/8	66.68	2.6250		—	—	S09507
	2-21/32	67.47	2.6562		—	—	S09508
		68.00	2.6772		—	—	S09509
	2-11/16	68.26	2.6875		—	—	S09510
	2-23/32	69.09	2.7188		—	—	S09511
	2-3/4	69.85	2.7500		—	—	S09512
		70.00	2.7559		—	—	S09513
	2-25/32	70.64	2.7812		—	—	S09514
	2-13/16	71.44	2.8125		—	—	S09515
		72.00	2.8346		—	—	S09516
	2-27/32	72.23	2.8438		—	—	S09517
	2-7/8	73.03	2.8750		—	—	S09518
	2-29/32	73.82	2.9062		—	—	S09519
		74.00	2.9134		—	—	S09520

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG SPADE DRILLS

SERIES 5, 6, 7

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE DRILL INSERTS - SUPER COBALT (T15)

- Increase wear resistance over M4
- For use in medium carbon steel to high temperature alloys
- Performs best in rigid setups

POINT ANGLE - 132 degree (Series 5-8 : 144 degree)

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. SUPER COBALT (T15) TiN	EDP No. SUPER COBALT (T15) TiAlN	EDP No. SUPER COBALT (T15) Hardslick
5	2-15/16	74.61	2.9375	7/16 (11.1)	—	—	S09521
	2-31/32	75.41	2.8688		—	—	S09522
		76.00	2.9921		—	—	S09523
	3	76.20	3.0000		—	—	S09524
6 3.001 (76.23) to 3.507 (89.08)	3-1/32	76.99	3.0312	7/16 (11.1)	—	—	S09601
	3-1/16	77.79	3.0625		—	—	S09602
		78.00	3.0709		—	—	S09603
	3-3/32	78.58	3.0938		—	—	S09604
	3-1/8	79.38	3.1250		—	—	S09605
		80.00	3.1496		—	—	S09606
	3-5/32	80.17	3.1562		—	—	S09607
	3-3/16	80.96	3.1875		—	—	S09608
	3-7/32	81.76	3.2188		—	—	S09609
		82.00	3.2283		—	—	S09610
	3-1/4	82.55	3.2500		—	—	S09611
	3-9/32	83.34	3.2812		—	—	S09612
		84.00	3.3071		—	—	S09613
	3-5/16	84.14	3.3125		—	—	S09614
	3-11/32	84.93	3.3438		—	—	S09615
	3-3/8	85.73	3.3750		—	—	S09616
		86.00	3.3858		—	—	S09617
	3-13/32	86.52	3.3062		—	—	S09618
	3-7/16	87.31	3.4375		—	—	S09619
		88.00	3.4646		—	—	S09620
	3-15/32	88.11	3.4688		—	—	S09621
	3-1/2	88.90	3.5000		—	—	S09622
7 3.455(87.76) to 4.000(101.60)	3-17/32	89.69	3.5312	7/16 (11.1)	—	—	S09701
		90.00	3.5433		—	—	S09702
	3-9/16	90.49	3.5625		—	—	S09703
	3-19/32	91.28	3.5938		—	—	S09704
		92.00	3.6221		—	—	S09705
	3-5/8	92.08	3.6250		—	—	S09706
	3-21/32	92.87	3.6563		—	—	S09707

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

YG SPADE DRILLS

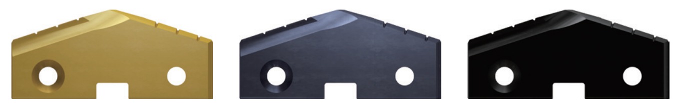
SERIES 7, 8

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE DRILL INSERTS - SUPER COBALT (T15)

- Increase wear resistance over M4
- For use in medium carbon steel to high temperature alloys
- Performs best in rigid setups

POINT ANGLE - 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. SUPER COBALT (T15) TiN	TiAlN	Hardslick
7 3.455 (87.76) to 4.000 (101.60)	3-11/16	93.66	3.6875	7/16 (11.1)	—	—	S09708
		94.00	3.7008		—	—	S09709
	3-23/32	94.46	3.7188		—	—	S09710
	3-3/4	95.25	3.7500		—	—	S09711
		96.00	3.7795		—	—	S09712
	3-25/32	96.04	3.7812		—	—	S09713
	3-13/16	96.84	3.8125		—	—	S09714
	3-27/32	97.63	3.8438		—	—	S09715
		98.00	3.8583		—	—	S09716
	3-7/8	98.43	3.8750		—	—	S09717
	3-29/32	99.22	3.9062		—	—	S09718
		100.00	3.9370		—	—	S09719
	3-15/16	100.01	3.9375		—	—	S09720
	3-31/32	100.81	3.9688		—	—	S09721
	4	101.60	4.0000		—	—	S09722
8 4.001 (101.63) to 4.507 (114.48)	4-1/64	102.00	4.0156	7/16 (11.1)	—	—	S09801
	4-1/16	103.19	4.0625		—	—	S09802
	4-3/32	104.00	4.0945		—	—	S09803
	4-1/8	104.78	4.1250		—	—	S09804
		106.00	4.1732		—	—	S09805
	4-3/16	106.36	4.1875		—	—	S09806
	4-1/4	107.95	4.2500		—	—	S09807
		108.00	4.2520		—	—	S09808
	4-5/16	109.54	4.3125		—	—	S09809
		110.00	4.3307		—	—	S09810
	4-3/8	111.13	4.3750		—	—	S09811
		112.00	4.4094		—	—	S09812
	4-7/16	112.71	4.4375		—	—	S09813
		114.00	4.4882		—	—	S09814
	4-1/2	114.30	4.5000		—	—	S09815

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

YG SPADE DRILLS

SERIES Y, Z, 0

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- Increased tool life over T15
- For use in high temperature alloys and materials including medium carbon, Alloy and tool steels
- Rigid set up needed

POINT ANGLE : 132 degree

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. PREMIUM COBALT (M48) TiN	TiAlN	Hardslick
Y .374 (9.50) to .436 (11.07)		9.50	.3740	3/32 (2.4)	* S11Y01	* S13Y01	* S14Y01
	3/8	9.53	.3750		* S11Y02	* S13Y02	* S14Y02
		9.80	.3860		* S11Y03	* S13Y03	* S14Y03
	25/64	9.92	.3906		* S11Y04	* S13Y04	* S14Y04
		10.00	.3937		* S11Y05	* S13Y05	* S14Y05
		10.20	.4016		* S11Y06	* S13Y06	* S14Y06
	13/32	10.32	.4063		* S11Y07	* S13Y07	* S14Y07
		10.50	.4134		* S11Y08	* S13Y08	* S14Y08
	27/64	10.72	.4219		* S11Y09	* S13Y09	* S14Y09
		10.80	.4252		* S11Y10	* S13Y10	* S14Y10
		11.00	.4331		* S11Y11	* S13Y11	* S14Y11
Z .437 (11.11) to .510 (12.95)	7/16	11.11	.4375	3/32 (2.4)	* S11Z01	* S13Z01	* S14Z01
		11.50	.4528		* S11Z02	* S13Z02	* S14Z02
	29/64	11.51	.4531		* S11Z03	* S13Z03	* S14Z03
	15/32	11.91	.4688		* S11Z04	* S13Z04	* S14Z04
		12.00	.4724		* S11Z05	* S13Z05	* S14Z05
	31/64	12.30	.4844		* S11Z06	* S13Z06	* S14Z06
		12.50	.4921		* S11Z07	* S13Z07	* S14Z07
	1/2	12.70	.5000		* S11Z08	* S13Z08	* S14Z08
0 .511 (12.98) to .695 (17.65)		13.00	.5118	1/8 (3.2)	* S11001	* S13001	* S14001
	33/64		.5156		* S11002	* S13002	* S14002
	17/32		.5313		* S11003	* S13003	* S14003
		13.50	.5315		* S11004	* S13004	* S14004
	35/64		.5469		* S11060	* S13060	* S14060
		14.00	.5512		* S11005	* S13005	* S14005
	9/16		.5625		* S11006	* S13006	* S14006
		14.50	.5709		* S11007	* S13007	* S14007
	37/64		.5781		* S11008	* S13008	* S14008
		15.00	.5906		* S11009	* S13009	* S14009
	19/32		.5938		* S11010	* S13010	* S14010
	39/64		.6094		* S11061	* S13061	* S14061
		15.50	.6102		* S11011	* S13011	* S14011
	5/8		.6250		* S11012	* S13012	* S14012

* 2pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	◎	◎	◎	◎			◎			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG SPADE DRILLS

SERIES 0, 1

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- Increased tool life over T15
- For use in high temperature alloys and materials including medium carbon, Alloy and tool steels
- Rigid set up needed

POINT ANGLE : 132 degree

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. PREMIUM COBALT (M48) TiN	EDP No. PREMIUM COBALT (M48) TiAlN	EDP No. PREMIUM COBALT (M48) Hardslick
0 .511 (12.98) to .695 (17.65)		16.00	.6299	1/8 (3.2)	* S11013	* S13013	* S14013
	41/64		.6406		* S11062	* S13062	* S14062
		16.50	.6496		* S11014	* S13014	* S14014
	21/32		.6563		* S11015	* S13015	* S14015
		17.00	.6693		* S11016	* S13016	* S14016
	43/64		.6719		* S11063	* S13063	* S14063
	11/16		.6875		* S11017	* S13017	* S14017
		17.50	.6890		* S11018	* S13018	* S14018
1 .690 (17.53) to .960 (24.38)	45/64	17.86	.7031	5/32 (4.0)	S11101	S13101	S14101
		18.00	.7087		S11102	S13102	S14102
	23/32	18.26	.7188		S11103	S13103	S14103
		18.50	.7283		S11104	S13104	S14104
	47/64	18.65	.7344		S11105	S13105	S14105
		19.00	.7480		S11106	S13106	S14106
	3/4	19.05	.7500		S11107	S13107	S14107
	49/64	19.45	.7656		S11108	S13108	S14108
		19.50	.7677		S11109	S13109	S14109
	25/32	19.84	.7812		S11110	S13110	S14110
		20.00	.7874		S11111	S13111	S14111
	51/64	20.24	.7969		S11160	S13160	S14160
		20.50	.8071		S11112	S13112	S14112
	13/16	20.64	.8125		S11113	S13113	S14113
		21.00	.8268		S11114	S13114	S14114
	27/32	21.43	.8438		S11115	S13115	S14115
	55/64	21.83	.8594		S11161	S13161	S14161
		22.00	.8661		S11116	S13116	S14116
	7/8	22.23	.8750		S11117	S13117	S14117
	57/64	22.62	.8906		S11162	S13162	S14162
		23.00	.9055		S11118	S13118	S14118
	29/32	23.02	.9062		S11119	S13119	S14119
	59/64	23.42	.9219		S11120	S13120	S14120
	15/16	23.81	.9375		S11121	S13121	S14121
		24.00	.9449		S11122	S13122	S14122

* 2pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	◎	◎	◎	◎			◎			

YG SPADE DRILLS

SERIES 2

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- Increased tool life over T15
- For use in high temperature alloys and materials including medium carbon, Alloy and tool steels
- Rigid set up needed

POINT ANGLE : 132 degree

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. PREMIUM COBALT (M48) TiN	EDP No. PREMIUM COBALT (M48) TiAlN	EDP No. PREMIUM COBALT (M48) Hardslick
2 .961 (24.41) to 1.380 (35.05)	31/32	24.61	.9688	3/16 (4.8)	S11201	S13201	S14201
	63/64	25.00	.9843		S11202	S13202	S14202
	1	25.40	1.0000		S11203	S13203	S14203
	1-1/64	25.80	1.0156		S11204	S13204	S14204
		26.00	1.0236		S11205	S13205	S14205
	1-1/32	26.19	1.0312		S11206	S13206	S14206
	1-3/64	26.59	1.0469		S11260	S13260	S14260
	1-1/16	26.99	1.0625		S11207	S13207	S14207
		27.00	1.0630		S11208	S13208	S14208
	1-3/32	27.78	1.0938		S11209	S13209	S14209
		28.00	1.1024		S11210	S13210	S14210
	1-7/64	28.18	1.1094		S11261	S13261	S14261
	1-1/8	28.58	1.1250		S11211	S13211	S14211
		29.00	1.1417		S11212	S13212	S14212
	1-5/32	29.37	1.1562		S11213	S13213	S14213
		30.00	1.1811		S11214	S13214	S14214
	1-3/16	30.16	1.1875		S11215	S13215	S14215
	1-7/32	30.96	1.2188		S11216	S13216	S14216
		31.00	1.2205		S11217	S13217	S14217
	1-1/4	31.75	1.2500		S11218	S13218	S14218
		32.00	1.2598		S11219	S13219	S14219
	1-9/32	32.54	1.2812		S11220	S13220	S14220
		33.00	1.2992		S11221	S13221	S14221
	1-5/16	33.34	1.3125		S11222	S13222	S14222
		34.00	1.3386		S11223	S13223	S14223
	1-11/32	34.13	1.3438		S11224	S13224	S14224
	1-3/8	34.93	1.3750		S11225	S13225	S14225
		35.00	1.3780		S11226	S13226	S14226

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	◎	◎	◎	◎			◎			

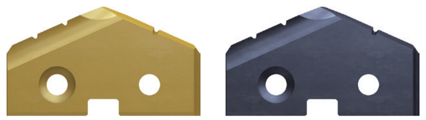
YG SPADE DRILLS

SERIES Y, Z

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
CARBIDE BLADE INSERTS C2 (K20), C5 (P40), C3 (K10)

- ▶ High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys. (C3)
- ▶ For general use in carbon steels and alloys steels. (C5)
- ▶ For use in Gray cast iron, nonferrous metals,copper, brass and aluminum. (C2)

POINT ANGLE : 132 degree



* 2pcs per package

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. Multi purpose Geometry C2 (K20) TiN	C2 (K20) TiAlN	C5 (P40) TiN	C5 (P40) TiAlN	Cast Iron Geometry C3 (K10) TiN	C3 (K10) TiAlN
Y .374 (9.50) to .436 (11.07)		9.50	.3740	3/32 (2.4)	* S21Y01	* S23Y01	* S26Y01	* S28Y01	* S16Y01	* S18Y01
	3/8	9.53	.3750		* S21Y02	* S23Y02	* S26Y02	* S28Y02	* S16Y02	* S18Y02
		9.80	.3860		* S21Y03	* S23Y03	* S26Y03	* S28Y03	* S16Y03	* S18Y03
	25/64	9.92	.3906		* S21Y04	* S23Y04	* S26Y04	* S28Y04	* S16Y04	* S18Y04
		10.00	.3937		* S21Y05	* S23Y05	* S26Y05	* S28Y05	* S16Y05	* S18Y05
		10.20	.4016		* S21Y06	* S23Y06	* S26Y06	* S28Y06	* S16Y06	* S18Y06
	13/32	10.32	.4063		* S21Y07	* S23Y07	* S26Y07	* S28Y07	* S16Y07	* S18Y07
		10.50	.4134		* S21Y08	* S23Y08	* S26Y08	* S28Y08	* S16Y08	* S18Y08
	27/64	10.72	.4219		* S21Y09	* S23Y09	* S26Y09	* S28Y09	* S16Y09	* S18Y09
		10.80	.4252		* S21Y10	* S23Y10	* S26Y10	* S28Y10	* S16Y10	* S18Y10
		11.00	.4331		* S21Y11	* S23Y11	* S26Y11	* S28Y11	* S16Y11	* S18Y11
Z .437 (11.11) to .510 (12.95)	7/16	11.11	.4375	3/32 (2.4)	* S21Z01	* S23Z01	* S26Z01	* S28Z01	* S16Z01	* S18Z01
		11.50	.4528		* S21Z02	* S23Z02	* S26Z02	* S28Z02	* S16Z02	* S18Z02
	29/64	11.51	.4531		* S21Z03	* S23Z03	* S26Z03	* S28Z03	* S16Z03	* S18Z03
	15/32	11.91	.4688		* S21Z04	* S23Z04	* S26Z04	* S28Z04	* S16Z04	* S18Z04
		12.00	.4724		* S21Z05	* S23Z05	* S26Z05	* S28Z05	* S16Z05	* S18Z05
	31/64	12.30	.4844		* S21Z06	* S23Z06	* S26Z06	* S28Z06	* S16Z06	* S18Z06
		12.50	.4921		* S21Z07	* S23Z07	* S26Z07	* S28Z07	* S16Z07	* S18Z07
	1/2	12.70	.5000		* S21Z08	* S23Z08	* S26Z08	* S28Z08	* S16Z08	* S18Z08

◎ : Excellent ○ : Good

ISO		P											M			K					
Material Description		Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc			13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB		125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	C2(K20)	○	○	○	○		○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○
	C5(P40)	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○
	C3(K10)															◎	◎	◎	◎	◎	◎

ISO		N										S							H			
Material Description		Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc												15	30	25	38	34			55	60	42	55
HB		60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	C2(K20)	◎	◎					◎				◎	◎	◎	◎	◎			○			
	C5(P40)	○	○					○				○	○	○	○	○			◎			
	C3(K10)																					

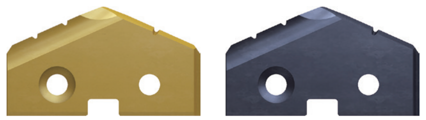
YG SPADE DRILLS

SERIES 0

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
CARBIDE BLADE INSERTS C2 (K20), C5 (P40), C3 (K10)

- ▶ High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys. (C3)
- ▶ For general use in carbon steels and alloys steels. (C5)
- ▶ For use in Gray cast iron, nonferrous metals,copper, brass and aluminum. (C2)

POINT ANGLE : 132 degree



* 2pcs per package

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. Multi purpose Geometry C2 (K20) TiN	C2 (K20) TiAlN	C5 (P40) TiN	C5 (P40) TiAlN	Cast Iron Geometry C3 (K10) TiN	C3 (K10) TiAlN
0 .511 (12.98) to .695 (17.65)		13.00	.5118	1/8 (3.2)	* S21001	* S23001	* S26001	* S28001	* S16001	* S18001
	33/64	13.10	.5156		* S21002	* S23002	* S26002	* S28002	* S16002	* S18002
	17/32	13.49	.5313		* S21003	* S23003	* S26003	* S28003	* S16003	* S18003
		13.50	.5315		* S21004	* S23004	* S26004	* S28004	* S16004	* S18004
	35/64	13.89	.5469		* S21060	* S23060	* S26060	* S28060	* S16060	* S18060
		14.00	.5512		* S21005	* S23005	* S26005	* S28005	* S16005	* S18005
	9/16	14.29	.5625		* S21006	* S23006	* S26006	* S28006	* S16006	* S18006
		14.50	.5709		* S21007	* S23007	* S26007	* S28007	* S16007	* S18007
	37/64	14.68	.5781		* S21008	* S23008	* S26008	* S28008	* S16008	* S18008
		15.00	.5906		* S21009	* S23009	* S26009	* S28009	* S16009	* S18009
	19/32	15.08	.5938		* S21010	* S23010	* S26010	* S28010	* S16010	* S18010
	39/64	15.48	.6094		* S21061	* S23061	* S26061	* S28061	* S16061	* S18061
		15.50	.6102		* S21011	* S23011	* S26011	* S28011	* S16011	* S18011
		15.70	.6181		* S21064	* S23064	* S26064	* S28064	* S16064	* S18064
	5/8	15.88	.6250		* S21012	* S23012	* S26012	* S28012	* S16012	* S18012
		16.00	.6299		* S21013	* S23013	* S26013	* S28013	* S16013	* S18013
	41/64	16.27	.6406		* S21062	* S23062	* S26062	* S28062	* S16062	* S18062
		16.50	.6496		* S21014	* S23014	* S26014	* S28014	* S16014	* S18014
	21/32	16.67	.6563		* S21015	* S23015	* S26015	* S28015	* S16015	* S18015
		17.00	.6693		* S21016	* S23016	* S26016	* S28016	* S16016	* S18016
	43/64	17.07	.6719		* S21063	* S23063	* S26063	* S28063	* S16063	* S18063
	11/16	17.46	.6875		* S21017	* S23017	* S26017	* S28017	* S16017	* S18017
		17.50	.6890		* S21018	* S23018	* S26018	* S28018	* S16018	* S18018

◎ : Excellent ○ : Good

ISO		P											M			K					
Material Description		Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc			13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB		125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	C2(K20)	○	○	○	○		○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○
	C5(P40)	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○
	C3(K10)															◎	◎	◎	◎	◎	◎

ISO		N										S							H			
Material Description		Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc												15	30	25	38	34			55	60	42	55
HB		60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	C2(K20)	◎	◎					◎				◎	◎	◎	◎	◎			○			
	C5(P40)	○	○					○				○	○	○	○	○			◎			
	C3(K10)																					

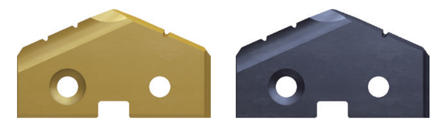
YG SPADE DRILLS

SERIES 1

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
CARBIDE BLADE INSERTS C2 (K20), C5 (P40), C3 (K10)

- ▶ High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys. (C3)
- ▶ For general use in carbon steels and alloys steels. (C5)
- ▶ For use in Gray cast iron, nonferrous metals,copper, brass and aluminum. (C2)

POINT ANGLE : 132 degree



Series Min. to Max. (inch/mm)	Diameter			Thick	EDP No.					
					Multi purpose Geometry				Cast Iron Geometry	
					C2 (K20)		C5 (P40)		C3 (K10)	
	Fractional (inch)	Metric (mm)	Decimal (inch)	Fractional [Metric]	TiN	TiAlN	TiN	TiAlN	TiN	TiAlN
1 .690 (17.53) to .960 (24.38)	45/64	17.86	.7031	5/32 (4.0)	S21101	S23101	S26101	S28101	S16101	S18101
		18.00	.7087		S21102	S23102	S26102	S28102	S16102	S18102
	23/32	18.26	.7188		S21103	S23103	S26103	S28103	S16103	S18103
		18.50	.7283		S21104	S23104	S26104	S28104	S16104	S18104
	47/64	18.65	.7344		S21105	S23105	S26105	S28105	S16105	S18105
		19.00	.7480		S21106	S23106	S26106	S28106	S16106	S18106
	3/4	19.05	.7500		S21107	S23107	S26107	S28107	S16107	S18107
	49/64	19.45	.7656		S21108	S23108	S26108	S28108	S16108	S18108
		19.50	.7677		S21109	S23109	S26109	S28109	S16109	S18109
	25/32	19.84	.7813		S21110	S23110	S26110	S28110	S16110	S18110
		20.00	.7874		S21111	S23111	S26111	S28111	S16111	S18111
	51/64	20.24	.7969		S21160	S23160	S26160	S28160	S16160	S18160
		20.50	.8071		S21112	S23112	S26112	S28112	S16112	S18112
	13/16	20.64	.8125		S21113	S23113	S26113	S28113	S16113	S18113
		21.00	.8268		S21114	S23114	S26114	S28114	S16114	S18114
	27/32	21.43	.8438		S21115	S23115	S26115	S28115	S16115	S18115
	55/64	21.83	.8594		S21161	S23161	S26161	S28161	S16161	S18161
		22.00	.8661		S21116	S23116	S26116	S28116	S16116	S18116
	7/8	22.23	.8750		S21117	S23117	S26117	S28117	S16117	S18117
	57/64	22.62	.8906		S21162	S23162	S26162	S28162	S16162	S18162
		23.00	.9055		S21118	S23118	S26118	S28118	S16118	S18118
	29/32	23.02	.9063		S21119	S23119	S26119	S28119	S16119	S18119
	59/64	23.42	.9219		S21120	S23120	S26120	S28120	S16120	S18120
	15/16	23.81	.9375		S21121	S23121	S26121	S28121	S16121	S18121
		24.00	.9449		S21122	S23122	S26122	S28122	S16122	S18122

◎ : Excellent ○ : Good

ISO		P											M			K					
Material Description		Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc			13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB		125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	C2(K20)	○	○	○	○		○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○
	C5(P40)	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○
	C3(K10)															◎	◎	◎	◎	◎	◎

ISO		N										S							H			
Material Description		Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc												15	30	25	38	34			55	60	42	55
HB		60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	C2(K20)	◎	◎					◎				◎	◎	◎	◎	◎			○			
	C5(P40)	○	○					○				○	○	○	○	○			◎			
	C3(K10)																					

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

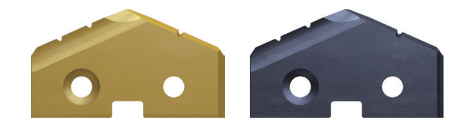
YG SPADE DRILLS

SERIES 2

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
CARBIDE BLADE INSERTS C2 (K20), C5 (P40), C3 (K10)

- ▶ High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys. (C3)
- ▶ For general use in carbon steels and alloys steels. (C5)
- ▶ For use in Gray cast iron, nonferrous metals,copper, brass and aluminum. (C2)

POINT ANGLE : 132 degree



Series Min. to Max. (inch/mm)	Diameter			Thick	EDP No.					
					Multi purpose Geometry				Cast Iron Geometry	
					C2 (K20)		C5 (P40)		C3 (K10)	
	Fractional (inch)	Metric (mm)	Decimal (inch)	Fractional [Metric]	TiN	TiAlN	TiN	TiAlN	TiN	TiAlN
2 .961 (24.41) to 1.380 (35.05)	31/32	24.61	..9688	3/16 (4.8)	S21201	S23201	S26201	S28201	S16201	S18201
	63/64	25.00	.9843		S21202	S23202	S26202	S28202	S16202	S18202
	1	25.40	1.0000		S21203	S23203	S26203	S28203	S16203	S18203
	1-1/64	25.80	1.0156		S21204	S23204	S26204	S28204	S16204	S18204
		26.00	1.0236		S21205	S23205	S26205	S28205	S16205	S18205
	1-1/32	26.19	1.0313		S21206	S23206	S26206	S28206	S16206	S18206
	1-3/64	26.59	1.0469		S21260	S23260	S26260	S28260	S16260	S18260
	1-1/16	26.99	1.0625		S21207	S23207	S26207	S28207	S16207	S18207
		27.00	1.0630		S21208	S23208	S26208	S28208	S16208	S18208
	1-3/32	27.78	1.0938		S21209	S23209	S26209	S28209	S16209	S18209
		28.00	1.1024		S21210	S23210	S26210	S28210	S16210	S18210
	1-7/64	28.18	1.1094		S21261	S23261	S26261	S28261	S16261	S18261
	1-1/8	28.58	1.1250		S21211	S23211	S26211	S28211	S16211	S18211
		29.00	1.1417		S21212	S23212	S26212	S28212	S16212	S18212
	1-5/32	29.37	1.1563		S21213	S23213	S26213	S28213	S16213	S18213
		30.00	1.1811		S21214	S23214	S26214	S28214	S16214	S18214
	1-3/16	30.16	1.1875		S21215	S23215	S26215	S28215	S16215	S18215
	1-7/32	30.96	1.2188		S21216	S23216	S26216	S28216	S16216	S18216
		31.00	1.2205		S21217	S23217	S26217	S28217	S16217	S18217
	1-1/4	31.75	1.2500		S21218	S23218	S26218	S28218	S16218	S18218
		32.00	1.2598		S21219	S23219	S26219	S28219	S16219	S18219
	1-9/32	32.54	1.2813		S21220	S23220	S26220	S28220	S16220	S18220
		33.00	1.2992		S21221	S23221	S26221	S28221	S16221	S18221
	1-5/16	33.34	1.3125		S21222	S23222	S26222	S28222	S16222	S18222
		34.00	1.3386		S21223	S23223	S26223	S28223	S16223	S18223
	1-11/32	34.13	1.3438		S21224	S23224	S26224	S28224	S16224	S18224
	1-3/8	34.93	1.3750		S21225	S23225	S26225	S28225	S16225	S18225
		35.00	1.3780		S21226	S23226	S26226	S28226	S16226	S18226

◎ : Excellent ○ : Good

ISO		P											M			K					
Material Description		Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc			13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB		125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	C2(K20)	○	○	○	○		○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○
	C5(P40)	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○
	C3(K10)															◎	◎	◎	◎	◎	◎

ISO		N										S							H			
Material Description		Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc												15	30	25	38	34			55	60	42	55
HB		60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	C2(K20)	◎	◎					◎				◎	◎	◎	◎	◎			○			
	C5(P40)	○	○					○				○	○	○	○	○			◎			
	C3(K10)																					

SPADE DRILLS

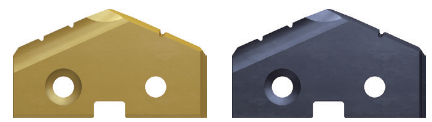
SERIES 3

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

CARBIDE BLADE INSERTS C2 (K20), C5 (P40), C3 (K10)

- High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys. (C3)
- For general use in carbon steels and alloys steels. (C5)
- For use in Gray cast iron, nonferrous metals,copper, brass and aluminum. (C2)

POINT ANGLE : 132 degree



Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. Multi purpose Geometry C2 (K20) TiN	C2 (K20) TiAlN	C5 (P40) TiN	C5 (P40) TiAlN	Cast Iron Geometry C3 (K10) TiN	C3 (K10) TiAlN
3 1.353 (34.37) to 1.882 (47.80)	1-13/32	35.72	1.4063	1/4 (6.4)	S21301	S23301	S26301	S28301	Special or non-standard inserts available on request	
		36.00	1.4173		S21302	S23302	S26302	S28302		
	1-7/16	36.51	1.4375		S21303	S23303	S26303	S28303		
		37.00	1.4567		S21304	S23304	S26304	S28304		
	1-15/32	37.31	1.4688		S21305	S23305	S26305	S28305		
		38.00	1.4961		S21306	S23306	S26306	S28306		
	1-1/2	38.10	1.5000		S21307	S23307	S26307	S28307		
	1-17/32	38.89	1.5313		S21308	S23308	S26308	S28308		
		39.00	1.5354		S21309	S23309	S26309	S28309		
	1-9/16	39.69	1.5625		S21310	S23310	S26310	S28310		
		40.00	1.5748		S21311	S23311	S26311	S28311		
	1-19/32	40.48	1.5938		S21312	S23312	S26312	S28312		
		41.00	1.6142		S21313	S23313	S26313	S28313		
	1-5/8	41.28	1.6250		S21314	S23314	S26314	S28314		
		42.00	1.6535		S21315	S23315	S26315	S28315		
	1-21/32	42.07	1.6563		S21316	S23316	S26316	S28316		
	1-11/16	42.86	1.6875		S21317	S23317	S26317	S28317		
		43.00	1.6929		S21318	S23318	S26318	S28318		
	1-23/32	43.66	1.7188		S21319	S23319	S26319	S28319		
		44.00	1.7323		S21320	S23320	S26320	S28320		
	1-3/4	44.45	1.7500		S21321	S23321	S26321	S28321		
		45.00	1.7717		S21322	S23322	S26322	S28322		
	1-25/32	45.24	1.7813		S21323	S23323	S26323	S28323		
		46.00	1.8110		S21324	S23324	S26324	S28324		
	1-13/16	46.04	1.8125		S21325	S23325	S26325	S28325		
	1-27/32	46.83	1.8438		S21326	S23326	S26326	S28326		
		47.00	1.8504		S21327	S23327	S26327	S28327		
	1-7/8	47.63	1.8750		S21328	S23328	S26328	S28328		

◎ : Excellent ○ : Good

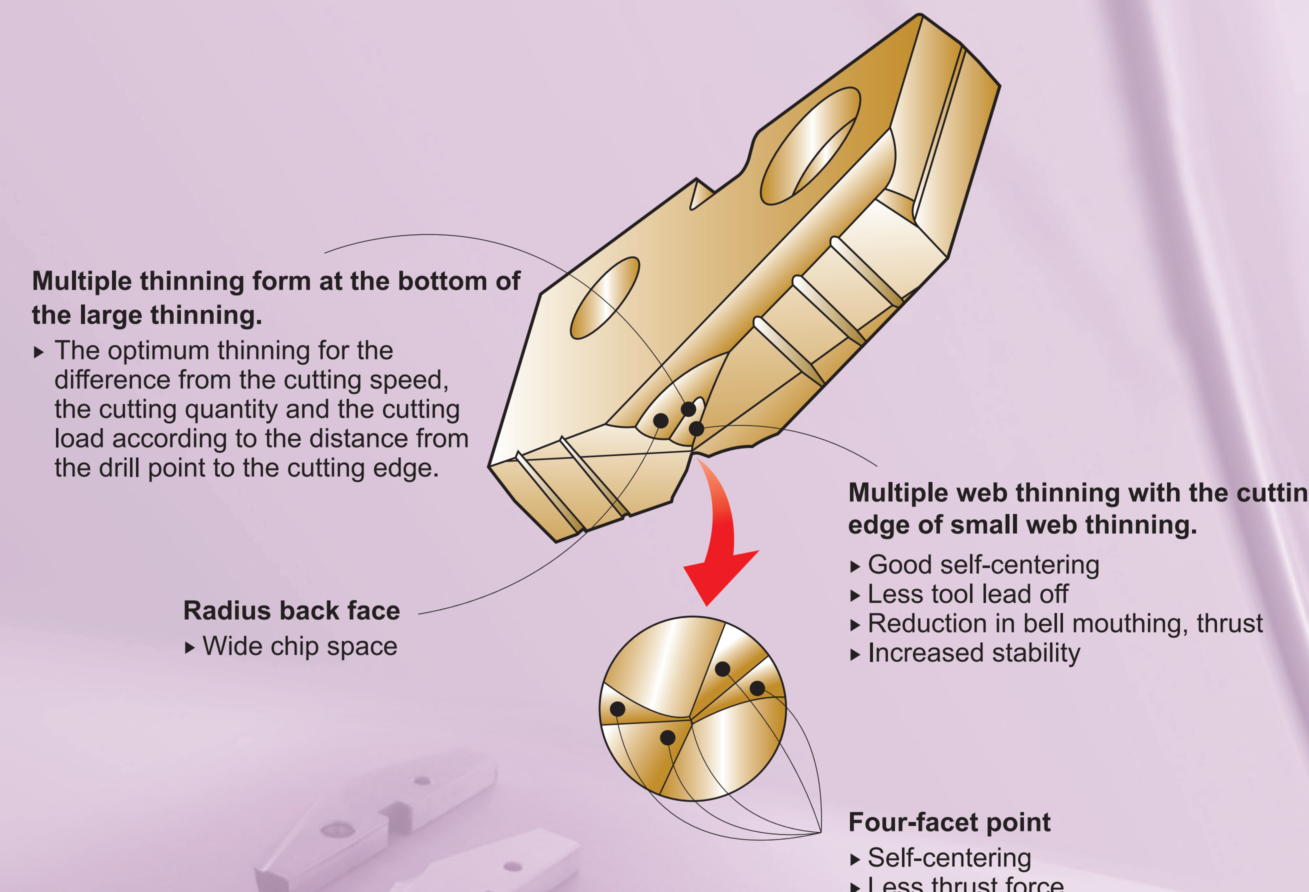
ISO		P										M			K					
Material Description		Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc			13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB		125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	C2(K20)	○	○	○	○		○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○
	C5(P40)	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○
	C3(K10)															◎	◎	◎	◎	◎	◎

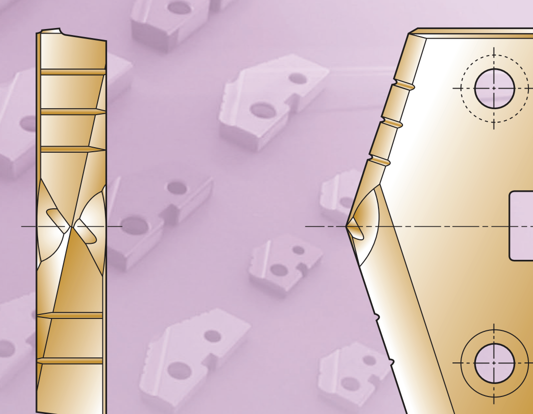
ISO		N										S							H			
Material Description		Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc												15	30	25	38	34			55	60	42	55
HB		60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	C2(K20)	◎	◎					◎				◎	◎	◎	◎	◎			○			
	C5(P40)	○	○					○				○	○	○	○	○			◎			
	C3(K10)																					

Special features of SM-Point Spade Drill

This "Hybrid Point" combines the strength of the standard point with additional "Web Thinning".

This point increases stability, reduces thrust, improves centering and allows increased speeds and feeds.





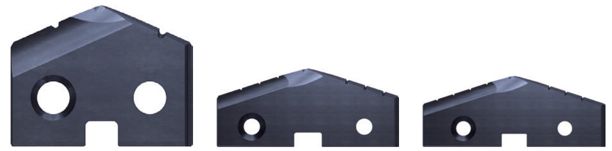
YG SPADE DRILLS

SERIES Y, Z, 0, 1

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SM-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

POINT ANGLE - 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. TiAIN
Y .374 (9.50) to .436 (11.07)		9.50	.3740	3/32 (2.4)	*SM08Y01
	3/8	9.53	.3750		*SM08Y02
		9.80	.3858		*SM08Y03
	25/64	9.92	.3906		*SM08Y04
		10.00	.3937		*SM08Y05
		10.20	.4016		*SM08Y06
	13/32	10.32	.4062		*SM08Y07
		10.50	.4134		*SM08Y08
	27/64	10.72	.4219		*SM08Y09
		10.80	.4252		*SM08Y10
		11.00	.4331		*SM08Y11
Z .437 (11.11) to .510 (12.95)	7/16	11.11	.4375	3/32 (2.4)	*SM08Z01
		11.50	.4528		*SM08Z02
	29/64	11.51	.4531		*SM08Z03
	15/32	11.91	.4688		*SM08Z04
		12.00	.4724		*SM08Z05
	31/64	12.30	.4844		*SM08Z06
		12.50	.4921		*SM08Z07
	1/2	12.70	.5000		*SM08Z08
0 .511 (12.98) to .695 (17.65)		13.00	.5118	1/8 (3.2)	*SM08001
	33/64	13.10	.5156		*SM08002
	17/32	13.49	.5312		*SM08003
		13.50	.5315		*SM08004
	35/64	13.89	.5469		*SM08060
		14.00	.5512		*SM08005
	9/16	14.29	.5625		*SM08006
		14.50	.5709		*SM08007
	37/64	14.68	.5781		*SM08008
		15.00	.5906		*SM08009
	19/32	15.08	.5938		*SM08010
	39/64	15.48	.6094		*SM08061
		15.50	.6102		*SM08011
	5/8	15.88	.6250		*SM08012

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. TiAIN
0 .511 (12.98) to .695 (17.65)		16.00	.6299	1/8 (3.2)	*SM08013
	41/64	16.27	.6406		*SM08062
		16.50	.6496		*SM08014
	21/32	16.67	.6562		*SM08015
		17.00	.6693		*SM08016
	43/64	17.07	.6719		*SM08063
	11/16	17.46	.6875		*SM08017
		17.50	.6890		*SM08018
1 .690 (17.53) to .960 (24.38)	45/64	17.86	.7031	5/32 (4.0)	SM08101
		18.00	.7087		SM08102
	23/32	18.26	.7188		SM08103
		18.50	.7283		SM08104
	47/64	18.65	.7344		SM08105
		19.00	.7480		SM08106
	3/4	19.05	.7500		SM08107
	49/64	19.45	.7656		SM08108
		19.50	.7677		SM08109
	25/32	19.84	.7812		SM08110
		20.00	.7874		SM08111
	51/64	20.24	.7969		SM08160
		20.50	.8071		SM08112
	13/16	20.64	.8125		SM08113
		21.00	.8268		SM08114
	27/32	21.43	.8438		SM08115
	55/64	21.83	.8594		SM08161
		22.00	.8661		SM08116
	7/8	22.23	.8750		SM08117
	57/64	22.62	.8906		SM08162
		23.00	.9055		SM08118
	29/32	23.02	.9062		SM08119
	59/64	23.42	.9219		SM08120
	15/16	23.81	.9375		SM08121
		24.00	.9449		SM08122

* 2pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

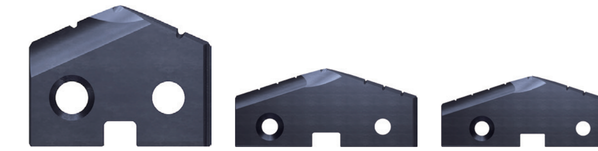
YG SPADE DRILLS

SERIES 2, 3

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SM-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

POINT ANGLE - 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. TiAIN
2 .961 (24.41) to 1.380 (35.05)	31/32	24.61	.9688	3/16 (4.8)	SM08201
	63/64	25.00	.9843		SM08202
	1	25.40	1.0000		SM08203
	1-1/64	25.80	1.0156		SM08204
		26.00	1.0236		SM08205
	1-1/32	26.19	1.0312		SM08206
	1-3/64	26.59	1.0469		SM08260
	1-1/16	26.99	1.0625		SM08207
		27.00	1.0630		SM08208
	1-3/32	27.78	1.0938		SM08209
		28.00	1.1024		SM08210
	1-7/64	28.18	1.1094		SM08261
	1-1/8	28.58	1.1250		SM08211
		29.00	1.1417		SM08212
	1-5/32	29.37	1.1562		SM08213
		30.00	1.1811		SM08214
	1-3/16	30.16	1.1875		SM08215
	1-7/32	30.96	1.2188		SM08216
		31.00	1.2205		SM08217
	1-1/4	31.75	1.2500		SM08218
		32.00	1.2598		SM08219
	1-9/32	32.54	1.2812		SM08220
		33.00	1.2992		SM08221
	1-5/16	33.34	1.3125		SM08222
		34.00	1.3386		SM08223
	1-11/32	34.13	1.3438		SM08224
	1-3/8	34.93	1.3750		SM08225
		35.00	1.3780		SM08226

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. TiAIN
3 1.353 (34.37) to 1.882 (47.80)	1-13/32	35.72	1.4062	1/4 (6.4)	SM08301
		36.00	1.4173		SM08302
	1-7/16	36.51	1.4375		SM08303
		37.00	1.4567		SM08304
	1-15/32	37.31	1.4688		SM08305
		38.00	1.4961		SM08306
	1-1/2	38.10	1.5000		SM08307
	1-17/32	38.89	1.5312		SM08308
		39.00	1.5354		SM08309
	1-9/16	39.69	1.5625		SM08310
		40.00	1.5748		SM08311
	1-19/32	40.48	1.5938		SM08312
		41.00	1.6142		SM08313
	1-5/8	41.28	1.6250		SM08314
		42.00	1.6535		SM08315
	1-21/32	42.07	1.6562		SM08316
	1-11/16	42.86	1.6875		SM08317
		43.00	1.6929		SM08318
	1-23/32	43.66	1.7188		SM08319
		44.00	1.7323		SM08320
	1-3/4	44.45	1.7500		SM08321
		45.00	1.7717		SM08322
	1-25/32	45.24	1.7812		SM08323
		46.00	1.8110		SM08324
	1-13/16	46.04	1.8125		SM08325
	1-27/32	46.83	1.8438		SM08326
		47.00	1.8504		SM08327
	1-7/8	47.63	1.8750		SM08328

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

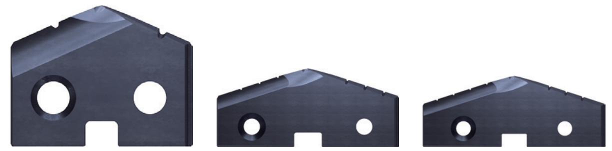
YG SPADE DRILLS

SERIES 4, 5

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SM-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- ▶ Improved stability and hole straightness by newly developed thinning design.
- ▶ Less thrust force and excellent self-centering.
- ▶ Any non-standard size available.

POINT ANGLE - 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. TiAIN
4 1.850 (46.99) to 2.570 (65.28)		48.00	1.8898	5/16 (7.9)	SM08401
	1-29/32	48.42	1.9062		SM08402
		49.00	1.9291		SM08403
	1-15/16	49.21	1.9375		SM08404
		50.00	1.9685		SM08405
	1-31/32	50.01	1.9688		SM08406
	2	50.80	2.0000		SM08407
		51.00	2.0079		SM08408
	2-1/32	51.59	2.0312		SM08409
	2-3/64	52.00	2.0472		SM08410
	2-1/16	52.39	2.0625		SM08411
		53.00	2.0866		SM08412
	2-3/32	53.18	2.0938		SM08413
	2-1/8	53.98	2.1250		SM08414
		54.00	2.1260		SM08415
	2-5/32	54.77	2.1562		SM08416
		55.00	2.1654		SM08417
	2-3/16	55.56	2.1875		SM08418
		56.00	2.2047		SM08419
	2-7/32	56.36	2.2188		SM08420
		57.00	2.2441		SM08421
	2-1/4	57.15	2.2500		SM08422
	2-9/32	57.94	2.2812		SM08423
		58.00	2.2835		SM08424
	2-5/16	58.74	2.3125		SM08425
		59.00	2.3228		SM08426
	2-11/32	59.53	2.3438		SM08427
		60.00	2.3622		SM08428
	2-3/8	60.33	2.3750		SM08429
		61.00	2.4016		SM08430
	2-13/32	61.12	2.4062		SM08431
	2-7/16	61.91	2.4375		SM08432

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. TiAIN
4 1.850 (46.99) to 2.570 (65.28)		62.00	2.4409	5/16 (7.9)	SM08433
	2-15/32	62.71	2.4688		SM08434
		63.00	2.4803		SM08435
	2-1/2	63.50	2.5000		SM08436
		64.00	2.5197		SM08437
	2-17/32	64.29	2.5312		SM08438
		65.00	2.5591		SM08439
	2-9/16	65.09	2.5625		SM08440
5 2.456 (62.38) to 3.000 (76.20)	2-1/2	63.50	2.5000	7/16 (11.1)	SM08501
		64.00	2.5197		SM08502
	2-17/32	64.29	2.5312		SM08503
	2-9/16	65.09	2.5625		SM08504
	2-19/32	65.88	2.5938		SM08505
		66.00	2.5984		SM08506
	2-5/8	66.68	2.6250		SM08507
	2-21/32	67.47	2.6562		SM08508
		68.00	2.6772		SM08509
	2-11/16	68.26	2.6875		SM08510
	2-23/32	69.05	2.7188		SM08511
	2-3/4	69.85	2.7500		SM08512
		70.00	2.7559		SM08513
	2-25/32	70.64	2.7812		SM08514
	2-13/16	71.44	2.8125		SM08515
		72.00	2.8346		SM08516
	2-27/32	72.23	2.8438		SM08517
	2-7/8	73.03	2.8750		SM08518
	2-29/32	73.82	2.9062		SM08519
		74.00	2.9134		SM08520
	2-15/16	74.61	2.9375		SM08521
	2-31/32	75.41	2.9688		SM08522
		76.00	2.9921		SM08523
	3	76.20	3.0000		SM08524

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

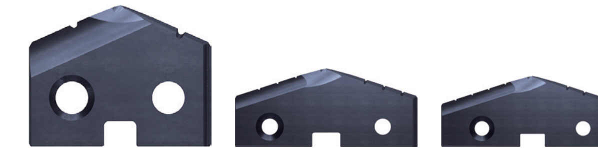
YG SPADE DRILLS

SERIES 6, 7, 8

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SM-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- ▶ Improved stability and hole straightness by newly developed thinning design.
- ▶ Less thrust force and excellent self-centering.
- ▶ Any non-standard size available.

POINT ANGLE - 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. TiAIN
6 3.001 (76.23) to 3.507 (89.08)	3-1/32	76.99	3.0312	7/16 (11.1)	SM08601
	3-1/16	77.79	3.0625		SM08602
		78.00	3.0709		SM08603
	3-3/32	78.58	3.0938		SM08604
	3-1/8	79.38	3.1250		SM08605
		80.00	3.1496		SM08606
	3-5/32	80.17	3.1562		SM08607
	3-3/16	80.96	3.1875		SM08608
	3-7/32	81.76	3.2188		SM08609
		82.00	3.2283		SM08610
	3-1/4	82.55	3.2500		SM08611
	3-9/32	83.34	3.2812		SM08612
		84.00	3.3071		SM08613
	3-5/16	84.14	3.3125		SM08614
	3-11/32	84.93	3.3438		SM08615
	3-3/8	85.73	3.3750		SM08616
		86.00	3.3858		SM08617
	3-13/32	86.52	3.4063		SM08618
	3-7/16	87.31	3.4375		SM08619
		88.00	3.4646		SM08620
	3-15/32	88.11	3.4688		SM08621
7 3.455 (87.76) to 4.000 (101.60)	3-1/2	88.90	3.5000	7/16 (11.1)	SM08622
	3-17/32	89.69	3.5312		SM08701
		90.00	3.5433		SM08702
	3-9/16	90.49	3.5625		SM08703
	3-19/32	91.28	3.5938		SM08704
		92.00	3.6221		SM08705
	3-5/8	92.08	3.6250		SM08706
	3-21/32	92.87	3.6562		SM08707
	3-11/16	93.66	3.6875		SM08708

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. TiAIN
7 3.455 (87.76) to 4.000 (101.60		94.00	3.7008	7/16 (11.1)	SM08709
	3-23/32	94.46	3.7188		SM08710
	3-3/4	95.25	3.7500		SM08711
		96.00	3.7795		SM08712
	3-25/32	96.04	3.7812		SM08713
	3-13/16	96.84	3.8125		SM08714
	3-27/32	97.63	3.8438		SM08715
		98.00	3.8583		SM08716
	3-7/8	98.43	3.8750		SM08717
	3-29/32	99.22	3.9062		SM08718
		100.00	3.9370		SM08719
	3-15/16	100.01	3.9375		SM08720
	3-31/32	100.81	3.9688		SM08721
	4	101.60	4.0000		SM08722
8 4.001 (101.63) to 4.507 (114.48	4-1/64	102.00	4.0156	7/16 (11.1)	SM08801
	4-1/16	103.19	4.0625		SM08802
	4-3/32	104.00	4.0945		SM08803
	4-1/8	104.78	4.1250		SM08804
		106.00	4.1732		SM08805
	4-3/16	106.36	4.1875		SM08806
	4-1/4	107.95	4.2500		SM08807
		108.00	4.2520		SM08808
	4-5/16	109.54	4.3125		SM08809
		110.00	4.3307		SM08810
	4-3/8	111.13	4.3750		SM08811
		112.00	4.4094		SM08812
	4-7/16	112.71	4.4375		SM08813
		114.00	4.4882		SM08814
	4-1/2	114.30	4.5000		SM08815

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

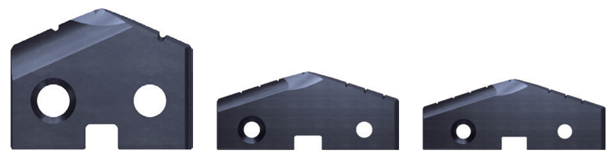
YG SPADE DRILLS

SERIES Y, Z, 0, 1

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SM-POINT SPADE DRILL INSERTS - CARBIDE C5 (P40)

- Improved stability and hole straightness by newly developed chip thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.
- Increased speeds & feeds

POINT ANGLE : 132 degree



Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. TiAIN
Y .374 (9.50) to .436 (11.07)		9.50	.3740	3/32 (2.4)	* SM28Y01
	3/8	9.53	.3750		* SM28Y02
		9.80	.3858		* SM28Y03
	25/64	9.92	.3906		* SM28Y04
		10.00	.3937		* SM28Y05
		10.20	.4016		* SM28Y06
	13/32	10.32	.4062		* SM28Y07
		10.50	.4134		* SM28Y08
	27/64	10.72	.4219		* SM28Y09
		10.80	.4252		* SM28Y10
		11.00	.4331		* SM28Y11
Z .437 (11.11) to .510 (12.95)	7/16	11.11	.4375	3/32 (2.4)	* SM28Z01
		11.50	.4528		* SM28Z02
	29/64	11.51	.4531		* SM28Z03
	15/32	11.91	.4688		* SM28Z04
		12.00	.4724		* SM28Z05
	31/64	12.30	.4844		* SM28Z06
		12.50	.4921		* SM28Z07
	1/2	12.70	.5000		* SM28Z08
0 .511 (12.98) to .695 (17.65)		13.00	.5118	1/8 (3.2)	* SM28001
	33/64	13.10	.5156		* SM28002
	17/32	13.49	.5312		* SM28003
		13.50	.5315		* SM28004
	35/64	13.89	.5469		* SM28060
		14.00	.5512		* SM28005
	9/16	14.29	.5625		* SM28006
		14.50	.5709		* SM28007
	37/64	14.68	.5781		* SM28008
		15.00	.5906		* SM28009
	19/32	15.08	.5938		* SM28010
	39/64	15.48	.6094		* SM28061
		15.50	.6102		* SM28011
	5/8	15.88	.6250		* SM28012

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. TiAIN
0 .511 (12.98) to .695 (17.65)		16.00	.6299	1/8 (3.2)	* SM28013
	41/64	16.27	.6406		* SM28062
		16.50	.6496		* SM28014
	21/32	16.67	.6562		* SM28015
		17.00	.6693		* SM28016
	43/64	17.07	.6719		* SM28063
	11/16	17.46	.6875		* SM28017
		17.50	.6890		* SM28018
1 .690 (17.53) to .960 (24.38)	45/64	17.86	.7031	5/32 (4.0)	SM28101
		18.00	.7087		SM28102
	23/32	18.26	.7188		SM28103
		18.50	.7283		SM28104
	47/64	18.65	.7344		SM28105
		19.00	.7480		SM28106
	3/4	19.05	.7500		SM28107
	49/64	19.45	.7656		SM28108
		19.50	.7677		SM28109
	25/32	19.84	.7812		SM28110
		20.00	.7874		SM28111
	51/64	20.24	.7969		SM28160
		20.50	.8071		SM28112
	13/16	20.64	.8125		SM28113
		21.00	.8268		SM28114
	27/32	21.43	.8438		SM28115
	55/64	21.83	.8594		SM28161
		22.00	.8661		SM28116
	7/8	22.23	.8750		SM28117
	57/64	22.62	.8906		SM28162
		23.00	.9055		SM28118
	29/32	23.02	.9062		SM28119
	59/64	23.42	.9219		SM28120
	15/16	23.81	.9375		SM28121
		24.00	.9449		SM28122

* 2pcs per package

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				○	○	○	○	○			◎			

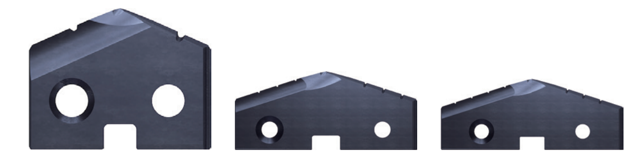
YG SPADE DRILLS

SERIES 2, 3

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SM-POINT SPADE DRILL INSERTS - CARBIDE C5 (P40)

- Improved stability and hole straightness by newly developed chip thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.
- Increased speeds & feeds

POINT ANGLE : 132 degree



Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. TiAIN
2 .961 (24.41) to 1.380 (35.05)	31/32	24.61	.9688	3/16 (4.8)	SM28201
	63/64	25.00	.9843		SM28202
	1	25.40	1.0000		SM28203
	1-1/64	25.80	1.0156		SM28204
		26.00	1.0236		SM28205
	1-1/32	26.19	1.0312		SM28206
	1-3/64	26.59	1.0469		SM28260
	1-1/16	26.99	1.0625		SM28207
		27.00	1.0630		SM28208
	1-3/32	27.78	1.0938		SM28209
		28.00	1.1024		SM28210
	1-7/64	28.18	1.1094		SM28261
	1-1/8	28.58	1.1250		SM28211
		29.00	1.1417		SM28212
	1-5/32	29.37	1.1562		SM28213
		30.00	1.1811		SM28214
	1-3/16	30.16	1.1875		SM28215
	1-7/32	30.96	1.2188		SM28216
		31.00	1.2205		SM28217
	1-1/4	31.75	1.2500		SM28218
		32.00	1.2598		SM28219
	1-9/32	32.54	1.2812		SM28220
		33.00	1.2992		SM28221
	1-5/16	33.34	1.3125		SM28222
		34.00	1.3386		SM28223
	1-11/32	34.13	1.3438		SM28224
	1-3/8	34.93	1.3750		SM28225
		35.00	1.3780		SM28226

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. TiAIN
3 1.353 (34.37) to 1.882 (47.80)	1-13/32	35.72	1.4062	1/4 (6.4)	SM28301
		36.00	1.4173		SM28302
	1-7/16	36.51	1.4375		SM28303
		37.00	1.4567		SM28304
	1-15/32	37.31	1.4688		SM28305
		38.00	1.4961		SM28306
	1-1/2	38.10	1.5000		SM28307
	1-17/32	38.89	1.5312		SM28308
		39.00	1.5354		SM28309
	1-9/16	39.69	1.5625		SM28310
		40.00	1.5748		SM28311
	1-19/32	40.48	1.5938		SM28312
		41.00	1.6142		SM28313
	1-5/8	41.28	1.6250		SM28314
		42.00	1.6535		SM28315
	1-21/32	42.07	1.6562		SM28316
	1-11/16	42.86	1.6875		SM28317
		43.00	1.6929		SM28318
	1-23/32	43.66	1.7188		SM28319
		44.00	1.7323		SM28320
	1-3/4	44.45	1.7500		SM28321
		45.00	1.7717		SM28322
	1-25/32	45.24	1.7812		SM28323
		46.00	1.8110		SM28324
	1-13/16	46.04	1.8125		SM28325
	1-27/32	46.83	1.8438		SM28326
		47.00	1.8504		SM28327
	1-7/8	47.63	1.8750		SM28328

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				○	○	○	○	○			◎			

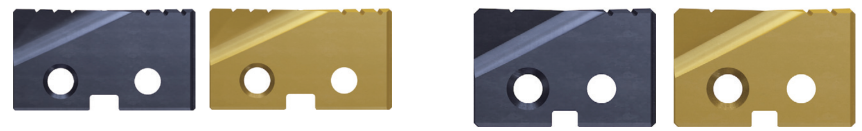
SPADE DRILLS

SERIES Y, Z, 0, 1, 2

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE DRILL FLAT BOTTOM INSERTS - SUPER COBALT (T15)

POINT ANGLE : 180 degree



Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. TiN	EDP No. TiAlN
Y	3/8	.3750	3/32 (2.4)	SF05024	SF15024
	13/32	.4063		SF05026	SF15026
Z	7/16	.4375	3/32 (2.4)	SF05028	SF15028
	15/32	.4688		SF05030	SF15030
	1/2	.5000		SF05032	SF15032
	17/32	.5313		SF05034	SF15034
0	9/16	.5625	1/8 (3.2)	SF05036	SF15036
	19/32	.5938		SF05038	SF15038
	5/8	.6250		SF05040	SF15040
	21/32	.6563		SF05042	SF15042
	11/16	.6875		SF05044	SF15044
	23/32	.7188		SF05046	SF15046
1	3/4	.7500	5/32 (4.0)	SF05048	SF15048
	25/32	.7813		SF05050	SF15050
	13/16	.8125		SF05052	SF15052
	27/32	.8438		SF05054	SF15054
	7/8	.8750		SF05056	SF15056
	29/32	.9063		SF05058	SF15058
	15/16	.9375		SF05060	SF15060

Series Min. to Max. (inch/mm)	Diameter Fractional (inch)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP No. TiN	EDP No. TiAlN
2	31/32	.9688	3/16 (4.8)	SF05062	SF15062
	1	1.0000		SF05100	SF15100
	1-1/32	1.0313		SF05102	SF15102
	1-1/16	1.0625		SF05104	SF15104
	1-3/32	1.0938		SF05106	SF15106
	1-1/8	1.1250		SF05108	SF15108
	1-5/32	1.1563		SF05110	SF15110
	1-3/16	1.1875		SF05112	SF15112
	1-7/32	1.2188		SF05114	SF15114
	1-1/4	1.2500		SF05116	SF15116
	1-9/32	1.2813		SF05118	SF15118
	1-5/16	1.3125		SF05120	SF15120
	1-11/32	1.3438		SF05122	SF15122
	1-3/8	1.3750		SF05124	SF15124

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

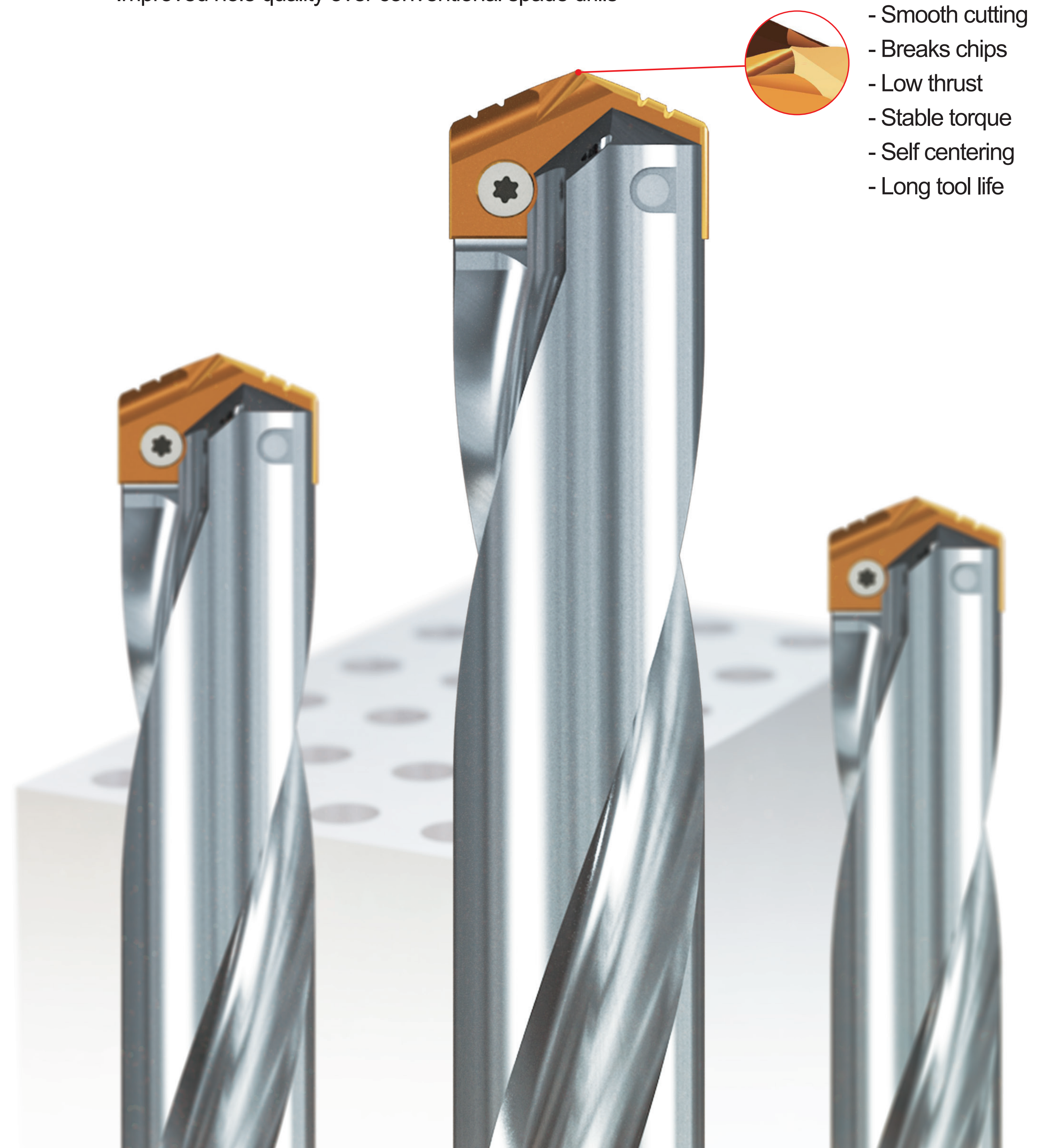
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

SPADE DRILLS SV-POINT

Improved stability and hole straightness

H-Coating (Upgraded AlCrN-Based Multi-Layer coating)

- Higher wear resistance and reduced material adhesion
- Higher cutting speeds and feeds
- Improved hole quality over conventional spade drills



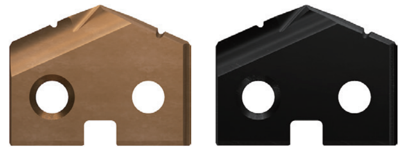
YG SPADE DRILLS

SERIES Y, Z

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. SUPER COBALT (T15) Hardslick	EDP. No. SUPER COBALT (T15) H-Coating
Y .374 (9.50) to .436 (11.07)		9.5	.3740	3/32 [2.4]	SV170095	SV175095
	3/8	9.53	.3750		SV120024	SV125024
		9.8	.3860		SV170098	SV175098
	25/64	9.92	.3906		SV120025	SV125025
		10	.3937		SV170100	SV175100
		10.2	.4016		SV170102	SV175102
	13/32	10.32	.4063		SV120026	SV125026
		10.5	.4134		SV170105	SV175105
	27/64	10.72	.4219		SV120027	SV125027
		10.8	.4252		SV170108	SV175108
		11	.4331		SV170110	SV175110
Z .437 (11.11) to .510 (12.95)	7/16	11.11	.4375	3/32 [2.4]	SV120028	SV125028
		11.5	.4528		SV170115	SV175115
	29/64	11.51	.4531		SV120029	SV125029
	15/32	11.91	.4688		SV120030	SV125030
		12	.4724		SV170120	SV175120
	31/64	12.3	.4844		SV120031	SV125031
		12.5	.4921		SV170125	SV175125
	1/2	12.7	.5000		SV120032	SV125032

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

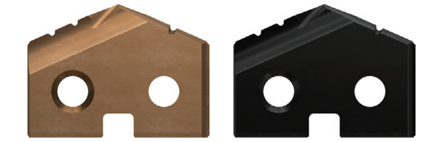
YG SPADE DRILLS

SERIES 0

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. SUPER COBALT (T15) Hardslick	EDP. No. SUPER COBALT (T15) H-Coating
0 .511 (12.98) to .695 (17.65)		13	.5118	1/8 [3.2]	SV170130	SV175130
	33/64	13.1	.5156		SV120033	SV125033
	17/32	13.49	.5313		SV120034	SV125034
		13.5	.5315		SV170135	SV175135
	35/64	13.89	.5469		SV120035	SV125035
		14	.5512		SV170140	SV175140
	9/16	14.29	.5625		SV120036	SV125036
		14.5	.5709		SV170145	SV175145
	37/64	14.68	.5781		SV120037	SV125037
		15	.5906		SV170150	SV175150
	19/32	15.08	.5938		SV120038	SV125038
	39/64	15.48	.6094		SV120039	SV125039
		15.5	.6102		SV170155	SV175155
	5/8	15.88	.6250		SV120040	SV125040
		16	.6299		SV170160	SV175160
	41/64	16.27	.6406		SV120041	SV125041
		16.5	.6496		SV170165	SV175165
	21/32	16.67	.6563		SV120042	SV125042
		17	.6693		SV170170	SV175170
	43/64	17.07	.6719		SV120043	SV125043
	11/16	17.46	.6875		SV120044	SV125044

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

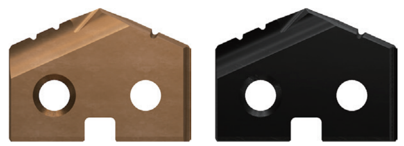
YG SPADE DRILLS

SERIES 1

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. SUPER COBALT (T15) Hardslick	EDP. No. SUPER COBALT (T15) H-Coating
1 .690 (17.53) to .960 (24.38)	45/64	17.86	.7031	5/32 [4.0]	SV120045	SV125045
		18	.7087		SV170180	SV175180
	23/32	18.26	.7188		SV120046	SV125046
		18.5	.7283		SV170185	SV175185
	47/64	18.65	.7344		SV120047	SV125047
		19	.7480		SV170190	SV175190
	3/4	19.05	.7500		SV120048	SV125048
		19.5	.7677		SV170195	SV175195
	25/32	19.84	.7812		SV120050	SV125050
		20	.7874		SV170200	SV175200
	51/64	20.24	.7969		SV120051	SV125051
		20.5	.8071		SV170205	SV175205
	13/16	20.64	.8125		SV120052	SV125052
		21	.8268		SV170210	SV175210
	27/32	21.43	.8438		SV120054	SV125054
	55/64	21.83	.8594		SV120055	SV125055
		22	.8661		SV170220	SV175220
	7/8	22.23	.8750		SV120056	SV125056
	57/64	22.62	.8906		SV120057	SV125057
		23	.9055		SV170230	SV175230
	29/32	23.02	.9062		SV120058	SV125058
	59/64	23.42	.9219		SV120059	SV125059
	15/16	23.81	.9375		SV120060	SV125060
		24	.9449		SV170240	SV175240

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

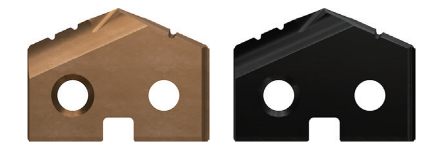
YG SPADE DRILLS

SERIES 2

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. SUPER COBALT (T15) Hardslick	EDP. No. SUPER COBALT (T15) H-Coating
2 .961 (24.41) to 1.380 (35.05)	31/32	24.61	.9688	3/16 [4.8]	SV120062	SV125062
	63/64	25	.9843		SV120063	SV125063
	1	25.4	1.0000		SV120100	SV125100
	1 1/64	25.8	1.0156		SV120101	SV125101
		26	1.0236		SV170260	SV175260
	1 1/32	26.19	1.0312		SV120102	SV125102
	1 3/64	26.59	1.0469		SV120103	SV125103
	1 1/16	26.99	1.0625		SV120104	SV125104
		27	1.0630		SV170270	SV175270
	1 3/32	27.78	1.0938		SV120106	SV125106
		28	1.1024		SV170280	SV175280
	1 7/64	28.18	1.1094		SV120107	SV125107
	1 1/8	28.58	1.1250		SV120108	SV125108
		29	1.1417		SV170290	SV175290
	1 5/32	29.37	1.1562		SV120110	SV125110
		30	1.1811		SV170300	SV175300
	1 3/16	30.16	1.1875		SV120112	SV125112
	1 7/32	30.96	1.2188		SV120114	SV125114
		31	1.2205		SV170310	SV175310
	1 1/4	31.75	1.2500		SV120116	SV125116
		32	1.2598		SV170320	SV175320
	1 9/32	32.54	1.2812		SV120118	SV125118
		33	1.2992		SV170330	SV175330
	1 5/16	33.34	1.3125		SV120120	SV125120
		34	1.3386		SV170340	SV175340
	1 11/32	34.13	1.3438		SV120122	SV125122
	1 3/8	34.93	1.3750		SV120124	SV125124
		35	1.3780		SV170350	SV175350

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG SPADE DRILLS

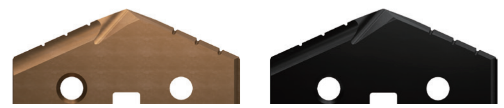
SERIES 3

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SV-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. SUPER COBALT (T15) Hardslick	EDP. No. SUPER COBALT (T15) H-Coating
3 1.353 (34.37) to 1.882 (47.80)	1 13/32	35.72	1.4063	1/4 [6.4]	SV120126	SV125126
		36	1.4173		SV170360	SV175360
	1 7/16	36.51	1.4375		SV120128	SV125128
		37	1.4567		SV170370	SV175370
	1 15/32	37.31	1.4688		SV120130	SV125130
		38	1.4961		SV170380	SV175380
	1 1/2	38.1	1.5000		SV120132	SV125132
	1 17/32	38.89	1.5313		SV120134	SV125134
		39	1.5354		SV170390	SV175390
	1 9/16	39.69	1.5625		SV120136	SV125136
		40	1.5748		SV170400	SV175400
	1 19/32	40.48	1.5938		SV120138	SV125138
		41	1.6142		SV170410	SV175410
	1 5/8	41.28	1.6250		SV120140	SV125140
		42	1.6535		SV170420	SV175420
	1 21/32	42.07	1.6563		SV120142	SV125142
	1 11/16	42.86	1.6875		SV120144	SV125144
		43	1.6929		SV170430	SV175430
	1 23/32	43.66	1.7188		SV120146	SV125146
		44	1.7323		SV170440	SV175440
	1 3/4	44.45	1.7500		SV120148	SV125148
		45	1.7717		SV170450	SV175450
	1 25/32	45.24	1.7813		SV120150	SV125150
		46	1.8110		SV170460	SV175460
	1 13/16	46.04	1.8125		SV120152	SV125152
	1 27/32	46.83	1.8438		SV120154	SV125154
		47	1.8504		SV170470	SV175470
	1 7/8	47.63	1.8750		SV120156	SV125156

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

YG SPADE DRILLS

SERIES 4

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SV-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. SUPER COBALT (T15) Hardslick	EDP. No. SUPER COBALT (T15) H-Coating
4 1.850 (46.99) to 2.570 (65.28)		48	1.8898	5/16 [7.9]	SV170480	SV175480
	1 29/32	48.42	1.9062		SV120158	SV125158
		49	1.9291		SV170490	SV175490
	1 15/16	49.21	1.9375		SV120160	SV125160
		50	1.9685		SV170500	SV175500
	1 31/32	50.01	1.9688		SV120162	SV125162
	2	50.8	2.0000		SV120200	SV125200
		51	2.0079		SV170510	SV175510
	2 1/32	51.59	2.0312		SV120202	SV125202
	2 3/64	51.99	2.0472		SV120203	SV125203
	2 1/16	52.39	2.0625		SV120204	SV125204
		53	2.0866		SV170530	SV175530
	2 3/32	53.18	2.0938		SV120206	SV125206
	2 1/8	53.98	2.1250		SV120208	SV125208
		54	2.1260		SV170540	SV175540
	2 5/32	54.77	2.1562		SV120210	SV125210
		55	2.1654		SV170550	SV175550
	2 3/16	55.56	2.1875		SV120212	SV125212
		56	2.2047		SV170560	SV175560
	2 7/32	56.36	2.2188		SV120214	SV125214
		57	2.2441		SV170570	SV175570
	2 1/4	57.15	2.2500		SV120216	SV125216
	2 9/32	57.94	2.2812		SV120218	SV125218
		58	2.2835		SV170580	SV175580
	2 5/16	58.74	2.3125		SV120220	SV125220
		59	2.3228		SV170590	SV175590
	2 11/32	59.53	2.3438		SV120222	SV125222
		60	2.3622		SV170600	SV175600
	2 3/8	60.33	2.3750		SV120224	SV125224

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

YG SPADE DRILLS

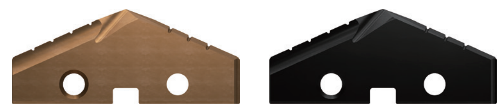
SERIES 4

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SV-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. SUPER COBALT (T15) Hardslick	EDP. No. SUPER COBALT (T15) H-Coating
4 1.850 (46.99) to 2.570 (65.28)		61	2.4016	5/16 [7.9]	SV170610	SV175610
	2 13/32	61.12	2.4062		SV120226	SV125226
	2 7/16	61.91	2.4375		SV120228	SV125228
		62	2.4409		SV170620	SV175620
	2 15/32	62.71	2.4688		SV120230	SV125230
		63	2.4803		SV170630	SV175630
	2 1/2	63.5	2.5000		SV120232	SV125232
		64	2.5197		SV170640	SV175640
	2 17/32	64.29	2.5312		SV120234	SV125234
		65	2.5591		SV170650	SV175650
	2 9/16	65.09	2.5625		SV120236	SV125236

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

YG SPADE DRILLS

SERIES 5

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SV-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. SUPER COBALT (T15) Hardslick	EDP. No. SUPER COBALT (T15) H-Coating
5 2.456 (62.38) to 3.000 (76.20)	2 1/2	63.5	2.5000	7/16 [11.1]	SV1202D2	SV1252D2
		64	2.5197		SV17064A	SV17564A
	2 17/32	64.29	2.5312		SV1202D4	SV1252D4
	2 9/16	65.09	2.5625		SV1202D6	SV1252D6
	2 19/32	65.88	2.5938		SV120238	SV125238
		66	2.5984		SV170660	SV175660
	2 5/8	66.68	2.6250		SV120240	SV125240
	2 21/32	67.47	2.6562		SV120242	SV125242
		68	2.6772		SV170680	SV175680
	2 11/16	68.26	2.6875		SV120244	SV125244
	2 23/32	69.06	2.7188		SV120246	SV125246
	2 3/4	69.85	2.7500		SV120248	SV125248
		70	2.7559		SV170700	SV175700
	2 25/32	70.64	2.7812		SV120250	SV125250
	2 13/16	71.44	2.8125		SV120252	SV125252
		72	2.8346		SV170720	SV175720
	2 27/32	72.23	2.8438		SV120254	SV125254
	2 7/8	73.03	2.8750		SV120256	SV125256
	2 29/32	73.82	2.9062		SV120258	SV125258
		74	2.9134		SV170740	SV175740
	2 15/16	74.61	2.9375		SV120260	SV125260
	2 31/32	75.41	2.9688		SV120262	SV125262
		76	2.9921		SV170760	SV175760
	3	76.2	3.0000		SV120300	SV125300

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

YG SPADE DRILLS

SERIES 6

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. inch (mm)	Diameter			Thick	EDP. No.	
	Fractional (inch)	Metric (mm)	Decimal (inch)	Fractional [Metric]	SUPER COBALT (T15) Hardslick	SUPER COBALT (T15) H-Coating
6 3.001 (76.23) to 3.507 (89.08)	3 1/32	76.99	3.0312	7/16 [11.1]	SV120302	SV125302
	3 1/16	77.79	3.0625		SV120304	SV125304
		78	3.0709		SV170780	SV175780
	3 3/32	78.58	3.0938		SV120306	SV125306
	3 1/8	79.38	3.1250		SV120308	SV125308
		80	3.1496		SV170800	SV175800
	3 5/32	80.17	3.1562		SV120310	SV125310
	3 3/16	80.96	3.1875		SV120312	SV125312
	3 7/32	81.76	3.2188		SV120314	SV125314
		82	3.2283		SV170820	SV175820
	3 1/4	82.55	3.2500		SV120316	SV125316
	3 9/32	83.34	3.2812		SV120318	SV125318
		84	3.3071		SV170840	SV175840
	3 5/16	84.14	3.3125		SV120320	SV125320
	3 11/32	84.93	3.3438		SV120322	SV125322
	3 3/8	85.73	3.3750		SV120324	SV125324
		86	3.3858		SV170860	SV175860
	3 13/32	86.52	3.4063		SV120326	SV125326
	3 7/16	87.31	3.4375		SV120328	SV125328
		88	3.4646		SV170880	SV175880
	3 15/32	88.11	3.4688		SV120330	SV125330
	3 1/2	88.9	3.5000		SV120332	SV125332

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG SPADE DRILLS

SERIES 7

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. inch (mm)	Diameter			Thick	EDP. No.	
	Fractional (inch)	Metric (mm)	Decimal (inch)	Fractional [Metric]	SUPER COBALT (T15) Hardslick	SUPER COBALT (T15) H-Coating
7 3.455 (87.76) to 4.000 (101.60)	3 17/32	89.69	3.5312	7/16 [11.1]	SV120334	SV125334
		90	3.5433		SV170900	SV175900
	3 9/16	90.49	3.5625		SV120336	SV125336
	3 19/32	91.28	3.5938		SV120338	SV125338
		92	3.6221		SV170920	SV175920
	3 5/8	92.08	3.6250		SV120340	SV125340
	3 21/32	92.87	3.6562		SV120342	SV125342
	3 11/16	93.66	3.6875		SV120344	SV125344
		94	3.7008		SV170940	SV175940
	3 23/32	94.46	3.7188		SV120346	SV125346
	3 3/4	95.25	3.7500		SV120348	SV125348
		96	3.7795		SV170960	SV175960
	3 25/32	96.04	3.7812		SV120350	SV125350
	3 13/16	96.84	3.8125		SV120352	SV125352
	3 27/32	97.63	3.8438		SV120354	SV125354
		98	3.8583		SV170980	SV175980
	3 7/8	98.43	3.8750		SV120356	SV125356
	3 29/32	99.22	3.9062		SV120358	SV125358
		100	3.9370		SV170A00	SV175A00
	3 15/16	100.01	3.9375		SV120360	SV125360
	3 31/32	100.81	3.9688		SV120362	SV125362
	4	101.6	4.0000		SV120400	SV125400

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

YG SPADE DRILLS

SERIES 8

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. SUPER COBALT (T15) Hardslick	EDP. No. SUPER COBALT (T15) H-Coating
8 4.001 (101.63) to 4.507 (114.48)	4 1/64	102	4.0156	7/16 [11.1]	SV120401	SV125401
	4 1/16	103.19	4.0625		SV120404	SV125404
	4 3/32	103.98	4.0945		SV120406	SV125406
	4 1/8	104.78	4.1250		SV120408	SV125408
		106	4.1732		SV170A60	SV175A60
	4 3/16	106.36	4.1875		SV120412	SV125412
	4 1/4	107.95	4.2500		SV120416	SV125416
		108	4.2520		SV170A80	SV175A80
	4 5/16	109.54	4.3125		SV120420	SV125420
		110	4.3307		SV170B00	SV175B00
	4 3/8	111.13	4.3750		SV120424	SV125424
		112	4.4094		SV170B20	SV175B20
	4 7/16	112.71	4.4375		SV120428	SV125428
		114	4.4882		SV170B40	SV175B40
	4 1/2	114.3	4.5000		SV120432	SV125432

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

YG SPADE DRILLS

SERIES Y, Z

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. PREMIUM COBALT (M48) Hardslick	EDP. No. PREMIUM COBALT (M48) H-Coating
Y .374 (9.50) to .436 (11.07)		9.5	.3740	3/32 [2.4]	SV570095	SV575095
	3/8	9.53	.3750		SV520024	SV525024
		9.8	.3860		SV570098	SV575098
	25/64	9.92	.3906		SV520025	SV525025
		10	.3937		SV570100	SV575100
		10.2	.4016		SV570102	SV575102
	13/32	10.32	.4063		SV520026	SV525026
		10.5	.4134		SV570105	SV575105
	27/64	10.72	.4219		SV520027	SV525027
		10.8	.4252		SV570108	SV575108
		11	.4331		SV570110	SV575110
Z .437 (11.11) to .510 (12.95)	7/16	11.11	.4375	3/32 [2.4]	SV520028	SV525028
		11.5	.4528		SV570115	SV575115
	29/64	11.51	.4531		SV520029	SV525029
	15/32	11.91	.4688		SV520030	SV525030
		12	.4724		SV570120	SV575120
	31/64	12.3	.4844		SV520031	SV525031
		12.5	.4921		SV570125	SV575125
	1/2	12.7	.5000		SV520032	SV525032

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	◎	◎	◎	◎			◎			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG SPADE DRILLS

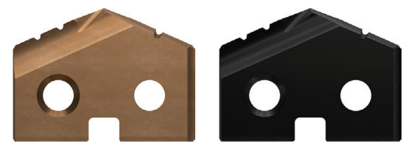
SERIES 0

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SV-POINT SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- ▶ Sinusoidal thinning edge for smooth cutting
- ▶ Positive rake angle
- ▶ Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. inch (mm)	Diameter			Thick	EDP. No.	
					PREMIUM COBALT (M48)	
	Fractional (inch)	Metric (mm)	Decimal (inch)	Fractional [Metric]	Hardslick	H-Coating
0 .511 (12.98) to .695 (17.65)		13	.5118	1/8 [3.2]	SV570130	SV575130
	33/64	13.1	.5156		SV520033	SV525033
	17/32	13.49	.5313		SV520034	SV525034
		13.5	.5315		SV570135	SV575135
	35/64	13.89	.5469		SV520035	SV525035
		14	.5512		SV570140	SV575140
	9/16	14.29	.5625		SV520036	SV525036
		14.5	.5709		SV570145	SV575145
	37/64	14.68	.5781		SV520037	SV525037
		15	.5906		SV570150	SV575150
	19/32	15.08	.5938		SV520038	SV525038
	39/64	15.48	.6094		SV520039	SV525039
		15.5	.6102		SV570155	SV575155
	5/8	15.88	.6250		SV520040	SV525040
		16	.6299		SV570160	SV575160
	41/64	16.27	.6406		SV520041	SV525041
		16.5	.6496		SV570165	SV575165
	21/32	16.67	.6563		SV520042	SV525042
		17	.6693		SV570170	SV575170
	43/64	17.07	.6719		SV520043	SV525043
	11/16	17.46	.6875		SV520044	SV525044
		17.5	.6890		SV570175	SV575175

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	◎	◎	◎	◎			◎			

YG SPADE DRILLS

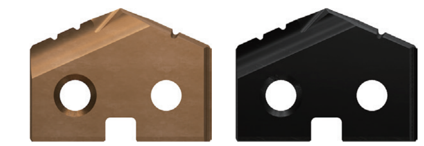
SERIES 1

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SV-POINT SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- ▶ Sinusoidal thinning edge for smooth cutting
- ▶ Positive rake angle
- ▶ Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. inch (mm)	Diameter			Thick	EDP. No.	
					PREMIUM COBALT (M48)	
	Fractional (inch)	Metric (mm)	Decimal (inch)	Fractional [Metric]	Hardslick	H-Coating
1 .690 (17.53) to .960 (24.38)	45/64	17.86	.7031	5/32 [4.0]	SV520045	SV525045
		18	.7087		SV570180	SV575180
	23/32	18.26	.7188		SV520046	SV525046
		18.5	.7283		SV570185	SV575185
	47/64	18.65	.7344		SV520047	SV525047
		19	.7480		SV570190	SV575190
	3/4	19.05	.7500		SV520048	SV525048
	49/64	19.45	.7656		SV520049	SV525049
		19.5	.7677		SV570195	SV575195
	25/32	19.84	.7812		SV520050	SV525050
		20	.7874		SV570200	SV575200
	51/64	20.24	.7969		SV520051	SV525051
		20.5	.8071		SV570205	SV575205
	13/16	20.64	.8125		SV520052	SV525052
		21	.8268		SV570210	SV575210
	27/32	21.43	.8438		SV520054	SV525054
	55/64	21.83	.8594		SV520055	SV525055
		22	.8661		SV570220	SV575220
	7/8	22.23	.8750		SV520056	SV525056
	57/64	22.62	.8906		SV520057	SV525057
		23	.9055		SV570230	SV575230
	29/32	23.02	.9062		SV520058	SV525058
	59/64	23.42	.9219		SV520059	SV525059
	15/16	23.81	.9375		SV520060	SV525060
		24	.9449		SV570240	SV575240

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	◎	◎	◎	◎			◎			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

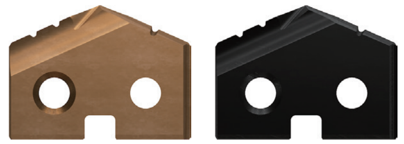
YG SPADE DRILLS

SERIES 2

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. PREMIUM COBALT (M48) Hardslick	EDP. No. PREMIUM COBALT (M48) H-Coating
2 .961 (24.41) to 1.380 (35.05)	31/32	24.61	.9688	3/16 [4.8]	SV520062	SV525062
	63/64	25	.9843		SV520063	SV525063
	1	25.4	1.0000		SV520100	SV525100
	1 1/64	25.8	1.0156		SV520101	SV525101
		26	1.0236		SV570260	SV575260
	1 1/32	26.19	1.0312		SV520102	SV525102
	1 3/64	26.59	1.0469		SV520103	SV525103
	1 1/16	26.99	1.0625		SV520104	SV525104
		27	1.0630		SV570270	SV575270
	1 3/32	27.78	1.0938		SV520106	SV525106
		28	1.1024		SV570280	SV575280
	1 7/64	28.18	1.1094		SV520107	SV525107
	1 1/8	28.58	1.1250		SV520108	SV525108
		29	1.1417		SV570290	SV575290
	1 5/32	29.37	1.1562		SV520110	SV525110
		30	1.1811		SV570300	SV575300
	1 3/16	30.16	1.1875		SV520112	SV525112
	1 7/32	30.96	1.2188		SV520114	SV525114
		31	1.2205		SV570310	SV575310
	1 1/4	31.75	1.2500		SV520116	SV525116
		32	1.2598		SV570320	SV575320
	1 9/32	32.54	1.2812		SV520118	SV525118
		33	1.2992		SV570330	SV575330
	1 5/16	33.34	1.3125		SV520120	SV525120
		34	1.3386		SV570340	SV575340
	1 11/32	34.13	1.3438		SV520122	SV525122
	1 3/8	34.93	1.3750		SV520124	SV525124
		35	1.3780		SV570350	SV575350

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	◎	◎	◎	◎			◎			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG SPADE DRILLS

SERIES 3

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. PREMIUM COBALT (M48) Hardslick	EDP. No. PREMIUM COBALT (M48) H-Coating
3 1.353 (34.37) to 1.882 (47.80)	1 13/32	35.72	1.4063	1/4 [6.4]	SV520126	SV525126
		36	1.4173		SV570360	SV575360
	1 7/16	36.51	1.4375		SV520128	SV525128
		37	1.4567		SV570370	SV575370
	1 15/32	37.31	1.4688		SV520130	SV525130
		38	1.4961		SV570380	SV575380
	1 1/2	38.1	1.5000		SV520132	SV525132
	1 17/32	38.89	1.5313		SV520134	SV525134
		39	1.5354		SV570390	SV575390
	1 9/16	39.69	1.5625		SV520136	SV525136
		40	1.5748		SV570400	SV575400
	1 19/32	40.48	1.5938		SV520138	SV525138
		41	1.6142		SV570410	SV575410
	1 5/8	41.28	1.6250		SV520140	SV525140
		42	1.6535		SV570420	SV575420
	1 21/32	42.07	1.6563		SV520142	SV525142
	1 11/16	42.86	1.6875		SV520144	SV525144
		43	1.6929		SV570430	SV575430
	1 23/32	43.66	1.7188		SV520146	SV525146
		44	1.7323		SV570440	SV575440
	1 3/4	44.45	1.7500		SV520148	SV525148
		45	1.7717		SV570450	SV575450
	1 25/32	45.24	1.7813		SV520150	SV525150
		46	1.8110		SV570460	SV575460
	1 13/16	46.04	1.8125		SV520152	SV525152
	1 27/32	46.83	1.8438		SV520154	SV525154
		47	1.8504		SV570470	SV575470
	1 7/8	47.63	1.8750		SV520156	SV525156

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	◎	◎	◎	◎			◎			

SPADE DRILLS

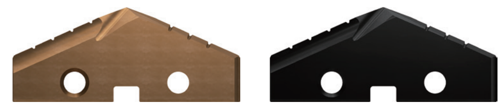
SERIES 4

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SV-POINT SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)



Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. PREMIUM COBALT (M48) Hardslick	EDP. No. PREMIUM COBALT (M48) H-Coating
4 1.850 (46.99) to 2.570 (65.28)		48	1.8898	5/16 [7.9]	SV570480	SV575480
	1 29/32	48.42	1.9062		SV520158	SV525158
		49	1.9291		SV570490	SV575490
	1 15/16	49.21	1.9375		SV520160	SV525160
		50	1.9685		SV570500	SV575500
	1 31/32	50.01	1.9688		SV520162	SV525162
	2	50.8	2.0000		SV520200	SV525200
		51	2.0079		SV570510	SV575510
	2 1/32	51.59	2.0312		SV520202	SV525202
	2 3/64	51.99	2.0472		SV520203	SV525203
	2 1/16	52.39	2.0625		SV520204	SV525204
		53	2.0866		SV570530	SV575530
	2 3/32	53.18	2.0938		SV520206	SV525206
	2 1/8	53.98	2.1250		SV520208	SV525208
		54	2.1260		SV570540	SV575540
	2 5/32	54.77	2.1562		SV520210	SV525210
		55	2.1654		SV570550	SV575550
	2 3/16	55.56	2.1875		SV520212	SV525212
		56	2.2047		SV570560	SV575560
	2 7/32	56.36	2.2188		SV520214	SV525214
		57	2.2441		SV570570	SV575570
	2 1/4	57.15	2.2500		SV520216	SV525216
	2 9/32	57.94	2.2812		SV520218	SV525218
		58	2.2835		SV570580	SV575580
	2 5/16	58.74	2.3125		SV520220	SV525220
		59	2.3228		SV570590	SV575590

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	◎	◎	◎	◎			◎			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

SPADE DRILLS

SERIES 4

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SV-POINT SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. PREMIUM COBALT (M48) Hardslick	EDP. No. PREMIUM COBALT (M48) H-Coating
4 1.850 (46.99) to 2.570 (65.28)	2 11/32	59.53	2.3438	5/16 [7.9]	SV520222	SV525222
		60	2.3622		SV570600	SV575600
	2 3/8	60.33	2.3750		SV520224	SV525224
		61	2.4016		SV570610	SV575610
	2 13/32	61.12	2.4062		SV520226	SV525226
	2 7/16	61.91	2.4375		SV520228	SV525228
		62	2.4409		SV570620	SV575620
	2 15/32	62.71	2.4688		SV520230	SV525230
		63	2.4803		SV570630	SV575630
	2 1/2	63.5	2.5000		SV520232	SV525232
		64	2.5197		SV570640	SV575640
	2 17/32	64.29	2.5312		SV520234	SV525234
		65	2.5591		SV570650	SV575650
	2 9/16	65.09	2.5625		SV520236	SV525236

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	◎	◎	◎	◎			◎			

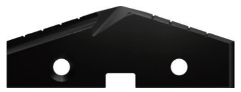
YG SPADE DRILLS

SERIES 5

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. PREMIUM COBALT (M48) Hardslick	EDP. No. PREMIUM COBALT (M48) H-Coating
5 2.456 (62.38) to 3.000 (76.20)	2 19/32	65.88	2.5938	7/16 [11.1]	SV520238	SV525238
		66	2.5984		SV570660	SV575660
	2 5/8	66.68	2.6250		SV520240	SV525240
	2 21/32	67.47	2.6562		SV520242	SV525242
		68	2.6772		SV570680	SV575680
	2 11/16	68.26	2.6875		SV520244	SV525244
	2 23/32	69.06	2.7188		SV520246	SV525246
	2 3/4	69.85	2.7500		SV520248	SV525248
		70	2.7559		SV570700	SV575700
	2 25/32	70.64	2.7812		SV520250	SV525250
	2 13/16	71.44	2.8125		SV520252	SV525252
		72	2.8346		SV570720	SV575720
	2 27/32	72.23	2.8438		SV520254	SV525254
	2 7/8	73.03	2.8750		SV520256	SV525256
	2 29/32	73.82	2.9062		SV520258	SV525258
		74	2.9134		SV570740	SV575740
	2 15/16	74.61	2.9375		SV520260	SV525260
	2 31/32	75.41	2.9688		SV520262	SV525262
		76	2.9921		SV570760	SV575760
	3	76.2	3.0000		SV520300	SV525300

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	◎	◎	◎	◎			◎			

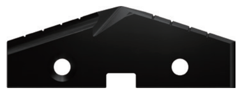
YG SPADE DRILLS

SERIES 6

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. PREMIUM COBALT (M48) Hardslick	EDP. No. PREMIUM COBALT (M48) H-Coating
6 3.001 (76.23) to 3.507 (89.08)	3 1/32	76.99	3.0312	7/16 [11.1]	SV520302	SV525302
	3 1/16	77.79	3.0625		SV520304	SV525304
		78	3.0709		SV570780	SV575780
	3 3/32	78.58	3.0938		SV520306	SV525306
	3 1/8	79.38	3.1250		SV520308	SV525308
		80	3.1496		SV570800	SV575800
	3 5/32	80.17	3.1562		SV520310	SV525310
	3 3/16	80.96	3.1875		SV520312	SV525312
	3 7/32	81.76	3.2188		SV520314	SV525314
		82	3.2283		SV570820	SV575820
	3 1/4	82.55	3.2500		SV520316	SV525316
	3 9/32	83.34	3.2812		SV520318	SV525318
		84	3.3071		SV570840	SV575840
	3 5/16	84.14	3.3125		SV520320	SV525320
	3 11/32	84.93	3.3438		SV520322	SV525322
	3 3/8	85.73	3.3750		SV520324	SV525324
		86	3.3858		SV570860	SV575860
	3 13/32	86.52	3.4063		SV520326	SV525326
	3 7/16	87.31	3.4375		SV520328	SV525328
		88	3.4646		SV570880	SV575880
	3 15/32	88.11	3.4688		SV520330	SV525330
	3 1/2	88.9	3.5000		SV520332	SV525332

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	◎	◎	◎	◎			◎			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

SPADE DRILLS

SERIES 7

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. PREMIUM COBALT (M48) Hardslick	EDP. No. PREMIUM COBALT (M48) H-Coating
7 3.455 (87.76) to 4.000 (101.60)	3 17/32	89.69	3.5312	7/16 [11.1]	SV520334	SV525334
		90	3.5433		SV570900	SV575900
	3 9/16	90.49	3.5625		SV520336	SV525336
	3 19/32	91.28	3.5938		SV520338	SV525338
		92	3.6221		SV570920	SV575920
	3 5/8	92.08	3.6250		SV520340	SV525340
	3 21/32	92.87	3.6562		SV520342	SV525342
	3 11/16	93.66	3.6875		SV520344	SV525344
		94	3.7008		SV570940	SV575940
	3 23/32	94.46	3.7188		SV520346	SV525346
	3 3/4	95.25	3.7500		SV520348	SV525348
		96	3.7795		SV570960	SV575960
	3 25/32	96.04	3.7812		SV520350	SV525350
	3 13/16	96.84	3.8125		SV520352	SV525352
	3 27/32	97.63	3.8438		SV520354	SV525354
		98	3.8583		SV570980	SV575980
	3 7/8	98.43	3.8750		SV520356	SV525356
	3 29/32	99.22	3.9062		SV520358	SV525358
		100	3.9370		SV570A00	SV575A00
	3 15/16	100.01	3.9375		SV520360	SV525360
	3 31/32	100.81	3.9688		SV520362	SV525362
	4	101.6	4.0000		SV520400	SV525400

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	◎	◎	◎	◎			◎			

i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

SPADE DRILLS

SERIES 8

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree
(Series 5-8 : 144 degree)

Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. PREMIUM COBALT (M48) Hardslick	EDP. No. PREMIUM COBALT (M48) H-Coating
8 4.001 (101.63) to 4.507 (114.48)	4 1/64	102	4.0156	7/16 [11.1]	SV520401	SV525401
	4 1/16	103.19	4.0625		SV520404	SV525404
	4 3/32	103.98	4.0945		SV520406	SV525406
	4 1/8	104.78	4.1250		SV520408	SV525408
		106	4.1732		SV570A60	SV575A60
	4 3/16	106.36	4.1875		SV520412	SV525412
	4 1/4	107.95	4.2500		SV520416	SV525416
		108	4.2520		SV570A80	SV575A80
	4 5/16	109.54	4.3125		SV520420	SV525420
		110	4.3307		SV570B00	SV575B00
	4 3/8	111.13	4.3750		SV520424	SV525424
		112	4.4094		SV570B20	SV575B20
	4 7/16	112.71	4.4375		SV520428	SV525428
		114	4.4882		SV570B40	SV575B40
	4 1/2	114.3	4.5000		SV520432	SV525432

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				◎	◎	◎	◎	◎			◎			

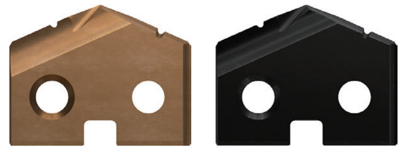
YG SPADE DRILLS

SERIES Y, Z

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - CARBIDE C5 (P40)

- For general use in carbon steels and alloys steels
- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree



Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. C5 (P40) Hardslick	EDP. No. C5 (P40) H-Coating
Y .374 (9.50) to .436 (11.07)		9.5	.3740	3/32 [2.4]	SV870095	SV875095
	3/8	9.53	.3750		SV820024	SV825024
		9.8	.3860		SV870098	SV875098
	25/64	9.92	.3906		SV820025	SV825025
		10	.3937		SV870100	SV875100
		10.2	.4016		SV870102	SV875102
	13/32	10.32	.4063		SV820026	SV825026
		10.5	.4134		SV870105	SV875105
	27/64	10.72	.4219		SV820027	SV825027
		10.8	.4252		SV870108	SV875108
		11	.4331		SV870110	SV875110
Z .437 (11.11) to .510 (12.95)	7/16	11.11	.4375	3/32 [2.4]	SV820028	SV825028
		11.5	.4528		SV870115	SV875115
	29/64	11.51	.4531		SV820029	SV825029
	15/32	11.91	.4688		SV820030	SV825030
		12	.4724		SV870120	SV875120
	31/64	12.3	.4844		SV820031	SV825031
		12.5	.4921		SV870125	SV875125
	1/2	12.7	.5000		SV820032	SV825032

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				○	○	○	○	○			◎			

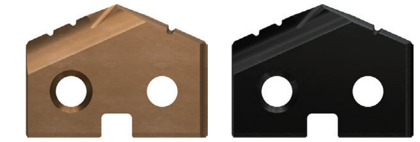
YG SPADE DRILLS

SERIES 0

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - CARBIDE C5 (P40)

- For general use in carbon steels and alloys steels
- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree



Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. C5 (P40) Hardslick	EDP. No. C5 (P40) H-Coating
0 .511 (12.98) to .695 (17.65)		13	.5118	1/8 [3.2]	SV870130	SV875130
	33/64	13.1	.5156		SV820033	SV825033
	17/32	13.49	.5313		SV820034	SV825034
		13.5	.5315		SV870135	SV875135
	35/64	13.89	.5469		SV820035	SV825035
		14	.5512		SV870140	SV875140
	9/16	14.29	.5625		SV820036	SV825036
		14.5	.5709		SV870145	SV875145
	37/64	14.68	.5781		SV820037	SV825037
		15	.5906		SV870150	SV875150
	19/32	15.08	.5938		SV820038	SV825038
	39/64	15.48	.6094		SV820039	SV825039
		15.5	.6102		SV870155	SV875155
	5/8	15.88	.6250		SV820040	SV825040
		16	.6299		SV870160	SV875160
	41/64	16.27	.6406		SV820041	SV825041
		16.5	.6496		SV870165	SV875165
	21/32	16.67	.6563		SV820042	SV825042
		17	.6693		SV870170	SV875170
	43/64	17.07	.6719		SV820043	SV825043
	11/16	17.46	.6875		SV820044	SV825044
		17.5	.6890		SV870175	SV875175

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				○	○	○	○	○			◎			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

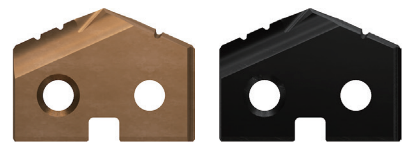
YG SPADE DRILLS

SERIES 1

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - CARBIDE C5 (P40)

- For general use in carbon steels and alloys steels
- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree



Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. C5 (P40) Hardslick	EDP. No. C5 (P40) H-Coating
1 .690 (17.53) to .960 (24.38)	45/64	17.86	.7031	5/32 [4.0]	SV820045	SV825045
		18	.7087		SV870180	SV875180
	23/32	18.26	.7188		SV820046	SV825046
		18.5	.7283		SV870185	SV875185
	47/64	18.65	.7344		SV820047	SV825047
		19	.7480		SV870190	SV875190
	3/4	19.05	.7500		SV820048	SV825048
	49/64	19.45	.7656		SV820049	SV825049
		19.5	.7677		SV870195	SV875195
	25/32	19.84	.7812		SV820050	SV825050
		20	.7874		SV870200	SV875200
	51/64	20.24	.7969		SV820051	SV825051
		20.5	.8071		SV870205	SV875205
	13/16	20.64	.8125		SV820052	SV825052
		21	.8268		SV870210	SV875210
	27/32	21.43	.8438		SV820054	SV825054
	55/64	21.83	.8594		SV820055	SV825055
		22	.8661		SV870220	SV875220
	7/8	22.23	.8750		SV820056	SV825056
	57/64	22.62	.8906		SV820057	SV825057
		23	.9055		SV870230	SV875230
	29/32	23.02	.9062		SV820058	SV825058
	59/64	23.42	.9219		SV820059	SV825059
	15/16	23.81	.9375		SV820060	SV825060
		24	.9449		SV870240	SV875240

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				○	○	○	○	○			◎			

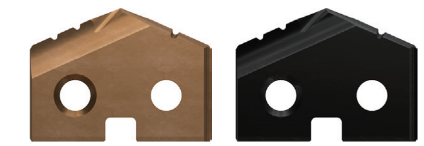
YG SPADE DRILLS

SERIES 2

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - CARBIDE C5 (P40)

- For general use in carbon steels and alloys steels
- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree



Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. C5 (P40) Hardslick	EDP. No. C5 (P40) H-Coating
2 .961 (24.41) to 1.380 (35.05)	31/32	24.61	.9688	3/16 [4.8]	SV820062	SV825062
	63/64	25	.9843		SV820063	SV825063
	1	25.4	1.0000		SV820100	SV825100
	1 1/64	25.8	1.0156		SV820101	SV825101
		26	1.0236		SV870260	SV875260
	1 1/32	26.19	1.0312		SV820102	SV825102
	1 3/64	26.59	1.0469		SV820103	SV825103
	1 1/16	26.99	1.0625		SV820104	SV825104
		27	1.0630		SV870270	SV875270
	1 3/32	27.78	1.0938		SV820106	SV825106
		28	1.1024		SV870280	SV875280
	1 7/64	28.18	1.1094		SV820107	SV825107
	1 1/8	28.58	1.1250		SV820108	SV825108
		29	1.1417		SV870290	SV875290
	1 5/32	29.37	1.1562		SV820110	SV825110
		30	1.1811		SV870300	SV875300
	1 3/16	30.16	1.1875		SV820112	SV825112
	1 7/32	30.96	1.2188		SV820114	SV825114
		31	1.2205		SV870310	SV875310
	1 1/4	31.75	1.2500		SV820116	SV825116
		32	1.2598		SV870320	SV875320
	1 9/32	32.54	1.2812		SV820118	SV825118
		33	1.2992		SV870330	SV875330
	1 5/16	33.34	1.3125		SV820120	SV825120
		34	1.3386		SV870340	SV875340
	1 11/32	34.13	1.3438		SV820122	SV825122
	1 3/8	34.93	1.3750		SV820124	SV825124
		35	1.3780		SV870350	SV875350

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				○	○	○	○	○			◎			

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

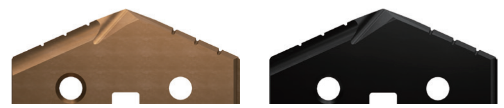
SPADE DRILLS

SERIES 3

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
SV-POINT SPADE DRILL INSERTS - CARBIDE C5 (P40)

- For general use in carbon steels and alloys steels
- Sinusoidal thinning edge for smooth cutting
- Positive rake angle
- Less thrust force and heat generation

POINT ANGLE : 132 degree



Series Min. to Max. inch (mm)	Diameter Fractional (inch)	Diameter Metric (mm)	Diameter Decimal (inch)	Thick Fractional [Metric]	EDP. No. C5 (P40) Hardslick	EDP. No. C5 (P40) H-Coating
3 1.353 (34.37) to 1.882 (47.80)	1 13/32	35.72	1.4063	1/4 [6.4]	SV820126	SV825126
		36	1.4173		SV870360	SV875360
	1 7/16	36.51	1.4375		SV820128	SV825128
		37	1.4567		SV870370	SV875370
	1 15/32	37.31	1.4688		SV820130	SV825130
		38	1.4961		SV870380	SV875380
	1 1/2	38.1	1.5000		SV820132	SV825132
	1 17/32	38.89	1.5313		SV820134	SV825134
		39	1.5354		SV870390	SV875390
	1 9/16	39.69	1.5625		SV820136	SV825136
		40	1.5748		SV870400	SV875400
	1 19/32	40.48	1.5938		SV820138	SV825138
		41	1.6142		SV870410	SV875410
	1 5/8	41.28	1.6250		SV820140	SV825140
		42	1.6535		SV870420	SV875420
	1 21/32	42.07	1.6563		SV820142	SV825142
	1 11/16	42.86	1.6875		SV820144	SV825144
		43	1.6929		SV870430	SV875430
	1 23/32	43.66	1.7188		SV820146	SV825146
		44	1.7323		SV870440	SV875440
	1 3/4	44.45	1.7500		SV820148	SV825148
		45	1.7717		SV870450	SV875450
	1 25/32	45.24	1.7813		SV820150	SV825150
		46	1.8110		SV870460	SV875460
	1 13/16	46.04	1.8125		SV820152	SV825152
	1 27/32	46.83	1.8438		SV820154	SV825154
		47	1.8504		SV870470	SV875470
	1 7/8	47.63	1.8750		SV820156	SV825156

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

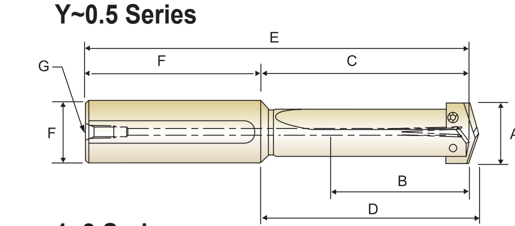
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○					○				○	○	○	○	○			◎			

SPADE DRILLS

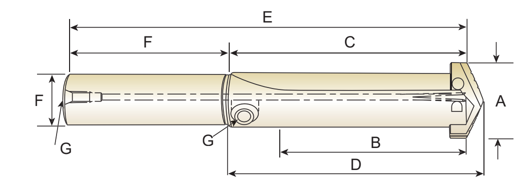
P13 SERIES
P14 SERIES

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
STRAIGHT SHANK HOLDER, STRAIGHT FLUTE

Y~0.5 Series



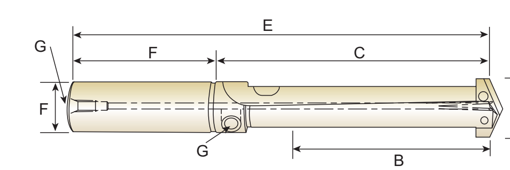
1~8 Series



SHORT LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Flute Length C	Ref. Length D	Overall Length E	Shank Dia. F	Shank Length F	Pipe Tap G
Y	P13Y01	3/8 – 27/64	1-1/4	2-1/32	2-1/8	4-13/32	3/4	2-3/8	1/8
Z	P13Z01	7/16 – 1/2	1-1/4	2-1/32	2-1/8	4-13/32	3/4	2-3/8	1/8
0	P13001	33/64 – 11/16	1-3/8	2-3/16	2-19/64	4-9/16	3/4	2-3/8	1/8
0.5	P13051	39/64 – 11/16	1-3/8	2-3/16	2-19/64	4-9/16	3/4	2-3/8	1/8
1	P13101	45/64 – 15/16	2-5/8	3-7/8	4-1/64	6-7/8	3/4	3	1/8
	P13102	45/64 – 15/16	2-5/8	3-7/8	4-1/64	6-7/8	1	3	1/8
1.5	P13151	55/64 – 15/16	2-5/8	3-7/8	4-1/64	6-7/8	3/4	3	1/8
	P13152	55/64 – 15/16	2-5/8	3-7/8	4-1/64	6-7/8	1	3	1/8
2	P13202	31/32 – 1-3/8	3-3/8	4-1/2	4-41/64	8	1	3-1/2	1/8
	P13203	31/32 – 1-3/8	3-3/8	4-1/2	4-41/64	8	1-1/4	3-1/2	1/8
2.5	P13252	1-3/16 – 1-3/8	3-3/8	4-1/2	4-41/64	8	1	3-1/2	1/8
	P13253	1-3/16 – 1-3/8	3-3/8	4-1/2	4-41/64	8	1-1/4	3-1/2	1/8
3	P13303	1-13/32 – 1-7/8	4-3/4	6	6-3/16	10	1-1/4	4	1/4
	P13304	1-13/32 – 1-7/8	4-3/4	6	6-3/16	10	1-1/2	4	1/4
4	P13404	1-29/32 – 2-9/16	5-1/8	6-1/2	6-11/16	10-1/2	1-1/2	4	1/4
	P13405	1-29/32 – 2-9/16	5-1/8	6-1/2	6-11/16	10-1/2	1-3/4	4	1/4
5-6	P13506	2-1/2 – 3-1/2	6-3/4	8-1/2	8-3/4	12-1/2	2	4	1/2
7-8	P13708	3-17/32 – 4-1/2	6-3/4	8-7/8	9-1/8	13-7/8	3	5	1/2



INTERMEDIATE LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Flute Length C	Ref. Length D	Overall Length E	Shank Dia. F	Shank Length F	Pipe Tap G
1	P14102	45/64 – 15/16	4-5/8	5-7/8	6-1/64	8-7/8	1	3	1/8
1.5	P14152	55/64 – 15/16	4-5/8	5-7/8	6-1/64	8-7/8	1	3	1/8
2	P14203	31/32 – 1-3/8	5-3/8	6-1/2	6-41/64	10	1-1/4	3-1/2	1/8
2.5	P14253	1-3/16 – 1-3/8	5-3/8	6-1/2	6-41/64	10	1-1/4	3-1/2	1/8
3	P14304	1-13/32 – 1-7/8	6-1/2	7-3/4	7-15/16	11-3/4	1-1/2	4	1/4

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

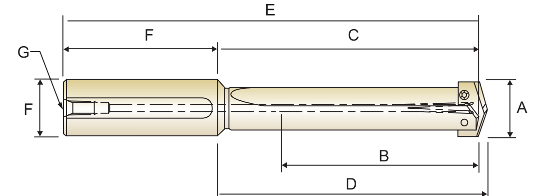
SPADE DRILLS

P15 SERIES

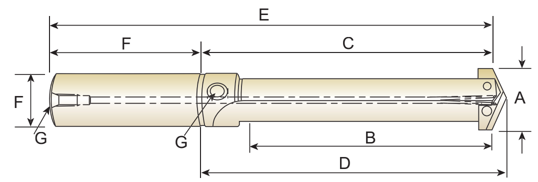
2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

STRAIGHT SHANK HOLDER, STRAIGHT FLUTE

Y~0.5 Series



1~8 Series



STANDARD LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	Shank Dia.	Shank Length	Pipe Tap
		A	B	C	D	E	F	F	G
Y	P15Y01	3/8 – 27/64	2-3/8	3-5/32	3-1/4	5-17/32	3/4	2-3/8	1/8
Z	P15Z01	7/16 – 1/2	2-3/8	3-5/32	3-1/4	5-17/32	3/4	2-3/8	1/8
0	P15001	33/64 – 11/16	2-1/2	3-5/16	3-27/64	5-11/16	3/4	2-3/8	1/8
0.5	P15051	39/64 – 11/16	2-1/2	3-5/16	3-27/64	5-11/16	3/4	2-3/8	1/8
1	P15101	45/64 – 15/16	6-5/8	7-7/8	8-1/64	10-7/8	3/4	3	1/8
	P15102	45/64 – 15/16	6-5/8	7-7/8	8-1/64	10-7/8	1	3	1/8
1.5	P15151	55/64 – 15/16	6-5/8	7-7/8	8-1/64	10-7/8	3/4	3	1/8
	P15152	55/64 – 15/16	6-5/8	7-7/8	8-1/64	10-7/8	1	3	1/8
2	P15202	31/32 – 1-3/8	7-3/8	8-1/2	8-41/64	12	1	3-1/2	1/8
	P15203	31/32 – 1-3/8	7-3/8	8-1/2	8-41/64	12	1-1/4	3-1/2	1/8
2.5	P15252	1-3/16 – 1-3/8	7-3/8	8-1/2	8-41/64	12	1	3-1/2	1/8
	P15253	1-3/16 – 1-3/8	7-3/8	8-1/2	8-41/64	12	1-1/4	3-1/2	1/8
3	P15303	1-13/32 – 1-7/8	8-1/4	9-1/2	9-11/16	13-1/2	1-1/4	4	1/4
	P15304	1-13/32 – 1-7/8	8-1/4	9-1/2	9-11/16	13-1/2	1-1/2	4	1/4
4	P15404	1-29/32 – 2-9/16	9-1/8	10-1/2	10-11/16	14-1/2	1-1/2	4	1/4
	P15405	1-29/32 – 2-9/16	9-1/8	10-1/2	10-11/16	14-1/2	1-3/4	4	1/4
5-6	P15506	2-1/2 – 3-1/2	10-3/4	12-1/2	12-3/4	16-1/2	2	4	1/2
7-8	P15708	3-17/32 – 4-1/2	10-3/4	12-7/8	13-1/8	17-7/8	3	5	1/2

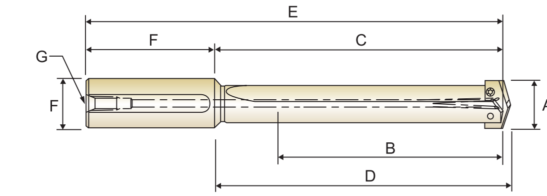
SPADE DRILLS

P16 SERIES

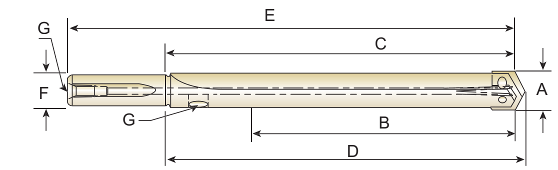
2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

STRAIGHT SHANK HOLDER, STRAIGHT FLUTE

Y~0.5 Series



1~8 Series



EXTENDED LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	Shank Dia.	Shank Length	Pipe Tap
		A	B	C	D	E	F	F	G
Y	P16Y01	3/8 – 27/64	4-3/8	5-5/32	5-1/4	7-17/32	3/4	2-3/8	1/8
Z	P16Z01	7/16 – 1/2	4-3/8	5-5/32	5-1/4	7-17/32	3/4	2-3/8	1/8
0	P16001	33/64 – 11/16	4-1/2	5-5/16	5-27/64	7-11/16	3/4	2-3/8	1/8
0.5	P16051	39/64 – 11/16	4-1/2	5-5/16	5-27/64	7-11/16	3/4	2-3/8	1/8
1	P16102	45/64 – 15/16	10-5/8	11-7/8	12-1/64	14-7/8	1	3	1/8
1.5	P16152	55/64 – 15/16	10-5/8	11-7/8	12-1/64	14-7/8	1	3	1/8
2	P16203	31/32 – 1-3/8	11-3/8	12-1/2	12-41/64	16	1-1/4	3-1/2	1/8
2.5	P16253	1-3/16 – 1-3/8	11-3/8	12-1/2	12-41/64	16	1-1/4	3-1/2	1/8
3	P16303	1-13/32 – 1-7/8	13-3/4	15	15-3/16	19	1-1/4	4	1/4
4	P16404	1-29/32 – 2-9/16	16-5/8	18	18-3/16	22	1-1/2	4	1/4
5-6	P16506	2-1/2 – 3-1/2	18-1/4	20	20-1/4	24	2	4	1/2
7-8	P16708	3-17/32 – 4-1/2	21-7/8	24	24-1/4	29	3	5	1/2

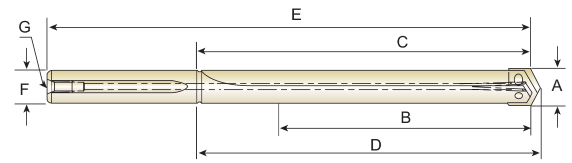
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG SPADE DRILLS

P17 SERIES

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

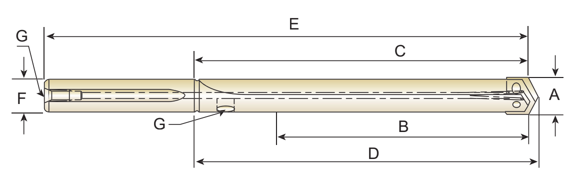
STRAIGHT SHANK HOLDER, STRAIGHT FLUTE



LONG LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
0	P17001	33/64 – 11/16	7	7-13/16	7-59/64	10-3/16	3/4	2-3/8	1/8
0.5	P17051	39/64 – 11/16	7	7-13/16	7-59/64	10-3/16	3/4	2-3/8	1/8



EXTRA LONG LENGTH

Unit : Inch

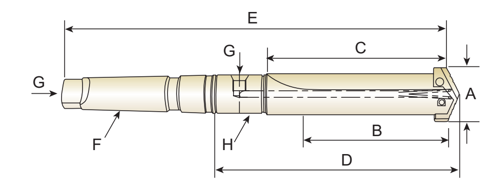
Series	EDP No.	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
1	P17101	45/64 – 15/16	18	19-1/4	19-25/64	22-1/4	1	3	1/8
2	P17202	31/32 – 1-3/8	20-1/8	21-1/4	21-25/64	24-3/4	1-1/4	3-1/2	1/8
3	P17303	1-13/32 – 1-7/8	22	23-1/4	23-7/16	27-1/4	1-1/2	4	1/4
4	P17404	1-29/32 – 2-9/16	24-5/8	26	26-3/16	30	1-1/2	4	1/4
5	P17506	2-1/2 – 3-1/2	26	27-3/4	28	31-3/4	2	4	1/2
7	P17708	3-17/32 – 4-1/2	27	29-1/8	29-3/8	34-1/8	3	5	1/2

YG SPADE DRILLS

P01 SERIES
P08 SERIES

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

TAPER SHANK HOLDER, STRAIGHT FLUTE / HELICAL FLUTE

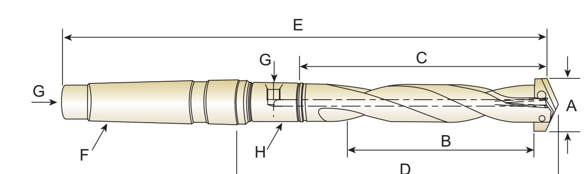


SHORT LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	MT	Pipe Tap	RCI
		A	B	C	D	E	F	G	H
Y	P01Y02	3/8 – 27/64	1-1/4	2-1/32	3-15/32	6-5/16	#2	1/16	PR1030
Z	P01Z02	7/16 – 1/2	1-1/4	2-1/32	3-15/32	6-5/16	#2	1/16	PR1030
0	P01002	33/64 – 11/16	1-3/8	2-3/16	3-41/64	6-15/32	#2	1/16	PR1030
0.5	P01052	39/64 – 11/16	1-3/8	2-3/16	3-41/64	6-15/32	#2	1/16	PR1030
1	P01103	45/64 – 15/16	2-3/4	3-7/8	5-39/64	9-5/32	#3	1/8	PR1031
	P01104	45/64 – 15/16	2-3/4	3-7/8	5-43/64	10-5/32	#4	1/8	PR1031
1.5	P01153	55/64 – 15/16	2-3/4	3-7/8	5-39/64	9-5/32	#3	1/8	PR1031
	P01154	55/64 – 15/16	2-3/4	3-7/8	5-43/64	10-5/32	#4	1/8	PR1031
2	P01203	31/32 – 1-3/8	3-3/8	4-1/2	6-15/64	9-25/32	#3	1/8	PR1031
	P01204	31/32 – 1-3/8	3-3/8	4-1/2	6-19/64	10-25/32	#4	1/8	PR1031
2.5	P01253	1-3/16 – 1-3/8	3-3/8	4-1/2	6-15/64	9-25/32	#3	1/8	PR1031
	P01254	1-3/16 – 1-3/8	3-3/8	4-1/2	6-37/64	11-1/16	#4	1/4	PR1042
3	P01304	1-13/32 – 1-7/8	4-3/4	6	8-1/8	12-9/16	#4	1/4	PR1042
	P01305	1-13/32 – 1-7/8	4-3/4	6	8-1/8	13-13/16	#5	1/4	PR1043
4	P01404	1-29/32 – 2-9/16	5-1/8	6-1/2	8-5/8	13-1/16	#4	1/4	PR1042
	P01405	1-29/32 – 2-9/16	5-1/8	6-1/2	8-5/8	14-5/16	#5	1/4	PR1043
5-6	P01505	2-1/2 – 3-1/2	6-3/4	8-1/2	11-5/16	16-15/16	#5	1/2	PR1054
7-8	P01705	3-17/32 – 4-1/2	6-3/4	8-7/8	11-11/16	17-5/16	#5	1/2	PR1054

▶ You can also apply **RCI**(**R**otary **C**oolant **I**nducer) for internal cooling. (See page 67)



INTERMEDIATE LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	MT	Pipe Tap	RCI
		A	B	C	D	E	F	G	H
1	P08103	45/64 – 15/16	4-3/4	5-7/8	7-39/64	11-5/32	#3	1/8	PR1031
1.5	P08153	55/64 – 15/16	4-3/4	5-7/8	7-39/64	11-5/32	#3	1/8	PR1031
2	P08204	31/32 – 1-3/8	5-3/8	6-1/2	8-19/64	12-25/32	#4	1/8	PR1031
2.5	P08254	1-3/16 – 1-3/8	5-3/8	6-1/2	8-37/64	13-1/16	#4	1/4	PR1042

▶ You can also apply **RCI**(**R**otary **C**oolant **I**nducer) for internal cooling. (See page 67)

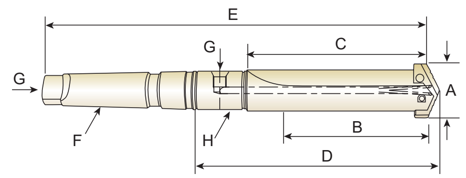
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG SPADE DRILLS

P03 SERIES

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

STRAIGHT SHANK HOLDER, STRAIGHT FLUTE



STANDARD LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Flute Length C	Ref. Length D	Overall Length E	MT F	Pipe Tap G	RCI H
Y	P03Y02	3/8 – 27/64	2-3/8	3-5/32	4-19/32	7-7/16	#2	1/16	PR1030
Z	P03Z02	7/16 – 1/2	2-3/8	3-5/32	4-19/32	7-7/16	#2	1/16	PR1030
0	P03002	33/64 – 11/16	2-1/2	3-5/16	4-49/64	7-19/32	#2	1/16	PR1030
0.5	P03052	39/64 – 11/16	2-1/2	3-5/16	4-49/64	7-19/32	#2	1/16	PR1030
1	P03103	45/64 – 15/16	6-3/4	7-7/8	9-39/64	13-5/32	#3	1/8	PR1031
	P03104	45/64 – 15/16	6-3/4	7-7/8	9-43/64	14-5/32	#4	1/8	PR1031
1.5	P03153	55/64 – 15/16	6-3/4	7-7/8	9-39/64	13-5/32	#3	1/8	PR1031
	P03154	55/64 – 15/16	6-3/4	7-7/8	9-43/64	14-5/32	#4	1/8	PR1031
2	P03203	31/32 – 1-3/8	7-3/8	8-1/2	10-15/64	13-25/32	#3	1/8	PR1031
	P03204	31/32 – 1-3/8	7-3/8	8-1/2	10-19/64	14-25/32	#4	1/8	PR1031
2.5	P03253	1-3/16 – 1-3/8	7-3/8	8-1/2	10-15/64	13-25/32	#3	1/8	PR1031
	P03254	1-3/16 – 1-3/8	7-3/8	8-1/2	10-37/64	15-1/16	#4	1/4	PR1042
3	P03304	1-13/32 – 1-7/8	8-1/4	9-1/2	11-5/8	16-1/16	#4	1/4	PR1042
	P03305	1-13/32 – 1-7/8	8-1/4	9-1/2	11-5/8	17-5/16	#5	1/4	PR1043
4	P03404	1-29/32 – 2-9/16	9-1/8	10-1/2	12-5/8	17-1/16	#4	1/4	PR1042
	P03405	1-29/32 – 2-9/16	9-1/8	10-1/2	12-5/8	18-5/16	#5	1/4	PR1043
5-6	P03505	2-1/2 – 3-1/2	10-3/4	12-1/2	15-5/16	20-15/16	#5	1/2	PR1054
7-8	P03705	3-17/32 – 4-1/2	10-3/4	12-7/8	15-11/16	21-5/16	#5	1/2	PR1054

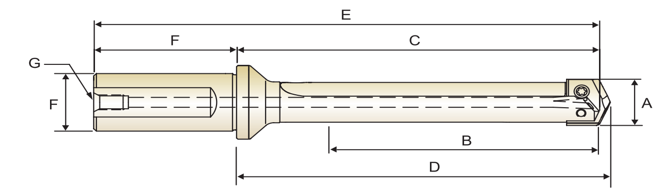
▶ You can also apply **RCI**(**R**otary **C**oolant **I**nducer) for internal cooling. (See page 67)

YG SPADE DRILLS

P25 SERIES
P26 SERIES

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

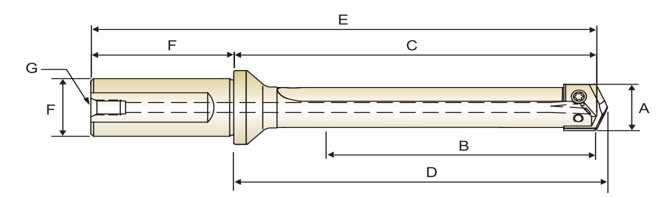
FLANGED STRAIGHT SHANK HOLDER, STRAIGHT FLUTE



SHORT LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Flute Length C	Ref. Length D	Overall Length E	Shank Dia. F	Shank Length F	Pipe Tap G
Y	P25Y01	3/8 – 27/64	1-1/4	2-13/32	2-1/2	4-7/16	3/4	2-1/32	1/8
Z	P25Z01	7/16 – 1/2	1-1/4	2-13/32	2-1/2	4-7/16	3/4	2-1/32	1/8
0	P25001	33/64 – 11/16	1-3/8	2-1/2	2-39/64	4-17/32	3/4	2-1/32	1/8
0.5	P25051	39/64 – 11/16	1-3/8	2-1/2	2-39/64	4-17/32	3/4	2-1/32	1/8
1	P25102	45/64 – 15/16	2-5/8	4-7/32	4-23/64	6-1/2	1	2-9/32	1/8
1.5	P25152	55/64 – 15/16	2-5/8	4-7/32	4-23/64	6-1/2	1	2-9/32	1/8
2	P25203	31/32 – 1-3/8	3-3/8	5-1/16	5-13/64	7-11/32	1-1/4	2-9/32	1/4
2.5	P25253	1-3/16 – 1-3/8	3-3/8	5-1/16	5-13/64	7-11/32	1-1/4	2-9/32	1/4
3	P25303	1-13/32 – 1-7/8	4-3/4	6-13/16	7	9-1/2	1-1/2	2-11/16	1/4
4	P25404	1-29/32 – 2-9/16	5-1/8	7-1/16	7-1/4	9-3/4	1-1/2	2-11/16	1/4



INTERMEDIATED LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Flute Length C	Ref. Length D	Overall Length E	Shank Dia. F	Shank Length F	Pipe Tap G
1	P26102	45/64 ~ 15/16	4-5/8	6-3/32	6-15/64	8-3/8	1	2-9/32	1/8
1.5	P26152	55/64 ~ 15/16	4-5/8	6-3/32	6-15/64	8-3/8	1	2-9/32	1/8
2	P26203	31/32 ~ 1-3/8	5-3/8	7-1/16	7-13/64	9-11/32	1-1/4	2-9/32	1/4
2.5	P26253	1-3/16 ~ 1-3/8	5-3/8	7-1/16	7-13/64	9-11/32	1-1/4	2-9/32	1/4
3	P26304	1-13/32 ~ 1-7/8	6-1/2	8-9/16	8-3/4	11-1/4	1-1/2	2-11/32	1/4

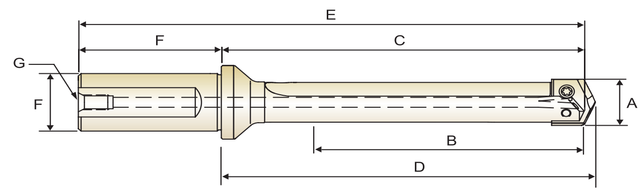
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG SPADE DRILLS

P27 SERIES
P28 SERIES

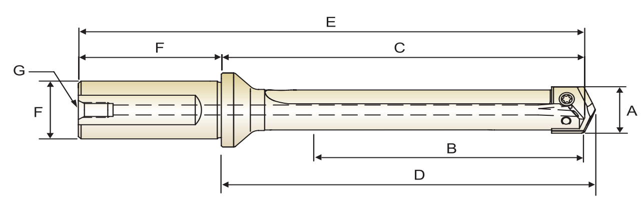
2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
FLANGED STRAIGHT SHANK HOLDER, STRAIGHT FLUTE



STANDARD LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	Shank Dia.	Shank Length	Pipe Tap
		A	B	C	D	E	F		G
Y	P27Y01	3/8 ~ 27/64	2-3/8	3-17/32	3-5/8	5-9/16	3/4	2-1/32	1/8
Z	P27Z01	7/16 ~ 1/2	2-3/8	3-17/32	3-5/8	5-9/16	3/4	2-1/32	1/8
0	P27001	33/64 ~ 11/16	2-1/2	3-5/8	3-47/64	5-21/32	3/4	2-1/32	1/8
0.5	P27051	39/64 ~ 11/16	2-1/2	3-5/8	3-47/64	5-21/32	3/4	2-1/32	1/8
1	P27102	45/64 ~ 15/16	6-5/8	8-3/32	8-15/64	10-3/8	1	2-9/32	1/8
1.5	P27152	55/64 ~ 15/16	6-5/8	8-3/32	8-15/64	10-3/8	1	2-9/32	1/8
2	P27203	31/32 ~ 1-3/8	7-3/8	9-1/16	9-13/64	11-11/32	1-1/4	2-9/32	1/4
2.5	P27253	1-3/16 ~ 1-3/8	7-3/8	9-1/16	9-13/64	11-11/32	1-1/4	2-9/32	1/4
3	P27303	1-13/32 ~ 1-7/8	8-1/4	10-5/16	10-1/2	13	1-1/2	2-11/16	1/4
4	P27404	1-29/32 ~ 2-9/16	9-1/8	11-1/16	11-1/4	13-3/4	1-1/2	2-11/16	1/4



EXTENDED LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	Shank Dia.	Shank Length	Pipe Tap
		A	B	C	D	E	F		G
Y	P28Y01	3/8 ~ 27/64	4-3/8	5-17/32	5-5/8	7-9/16	3/4	2-1/32	1/8
Z	P28Z01	7/16 ~ 1/2	4-3/8	5-17/32	5-5/8	7-9/16	3/4	2-1/32	1/8
O	P28001	33/64 ~ 11/16	4-1/2	5-5/8	5-47/64	7-21/32	3/4	2-1/32	1/8
0.5	P28051	39/64 ~ 11/16	4-1/2	5-5/8	5-47/64	7-21/32	3/4	2-1/32	1/8
1	P28102	45/64 ~ 15/16	10-5/8	12-3/32	12-15/64	14-3/8	1	2-9/32	1/8
1.5	P28152	55/64 ~ 15/16	10-5/8	12-3/32	12-15/64	14-3/8	1	2-9/32	1/8
2	P28203	31/32 ~ 1-3/8	11-3/8	13-1/16	13-13/64	15-11/32	1-1/4	2-9/32	1/4
2.5	P28253	1-3/32 ~ 1-3/8	11-3/8	13-1/16	13-13/64	15-11/32	1-1/4	2-9/32	1/4

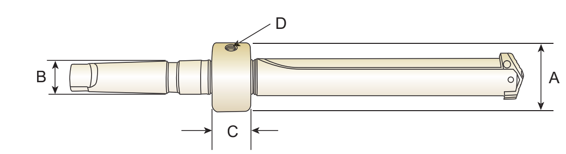
YG SPADE DRILLS

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT
HOLDER ACCESSORIES

TORX SCREWS AND PREMIUM TORX HAND DRIVERS

Series	Torx Screws Item	Torx Screws PKG EDP No. (10 Screws)	Torx Screws (Nylon Locking) Item	Torx Screws (Nylon Locking) PKG EDP No. (10 Screws)	Premium Torx Drivers EDP No.	Drill Range Inch	Drill Range Metric	Torque in Lbs. 5.5
						inch	mm	
Y	2XT7	**J7Y001**	2XT7N	**J7Y006**	**J5Y007**	3/8 – 27/64	9.5 – 11.0	5.5
Z	2LXT7	**J7Z011**	2LXT7N	**J7Z016**	**J5Y007**	7/16 – 1/2	11.5 – 12.5	5.5
0	2.5XT8	**J80021**	2.5XT8N	**J80026**	**J50008**	33/64 – 11/16	13.0 – 17.5	11.0
0.5	2.5LXT8	**J80531**	2.5LXT8N	**J80536**	**J50008**	39/64 – 11/16	15.5 – 17.5	11.0
1	3XT9	**J91041**	3XT9N	**J91046**	**J51009**	45/64 – 15/16	18.0 – 24.0	20.0
1.5	3LXT9	**J91551**	3LXT9N	**J91556**	**J51009**	55/64 – 15/16	22.0 – 24.0	20.0
2	4XT15	**JB2061**	4XT15N	**JB2066**	**J52015**	31/32 – 1-3/8	25.0 – 35.0	45.0
2.5	4XT15	**JB2061**	4XT15N	**JB2066**	**J52015**	31/32 – 1-3/8	30.0 – 35.0	45.0
3-4	5XT20	**JC3081**	5XT20N	**JC3086**	**J53020**	1-13/32 – 2-9/16	36.0 – 65.0	90.0
5-8	6XT25	**JD5091**	6XT25N	**JD5096**	**J55025**	2-1/2 – 4-1/2	64.0 – 114.0	155.0

NOTE : Replacement screws sold in packages (10 screws per package)



ROTARY COOLANT INDUCER (RCI) AND ACCESSORIES

Complete with O'Rings, Flat Washers and Locking Clips.

EDP No.	I.D.	Pipe O.D.	Length	Tap	Thread for Driving Rod
	A	B	C	D	
PR1030	1-3/4	3/4	7/8	1/8	5/16 – NC
PR1031	2-1/8	1	1-1/8	1/8	5/16 – NC
PR1042	2-1/2	1-1/4	1-3/8	1/4	3/8 – NC
PR1043	3	1-3/4	1-3/8	1/4	3/8 – NC
PR1054	3-3/4	2-1/4	1-3/4	1/2	1/2 – NC

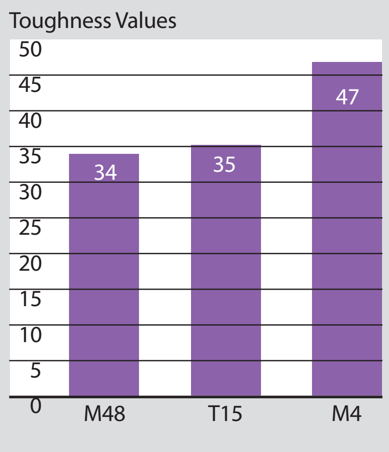
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

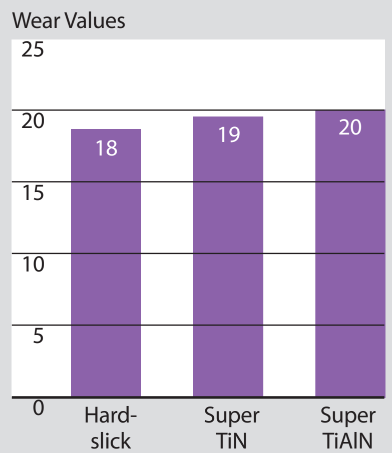
YG SPADE DRILLS

RECOMMENDED CUTTING CONDITIONS

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE BLADE INSERTS SELECTION & APPLICATIONS HSS





- **WHEN TO USE M4**
  - Loose or Manual Machines
  - If T15 Breaks
- **WHEN TO USE T15**
  - When M4 Life needs to be Extended
  - If M48 Breaks
- **WHEN TO USE M48**
  - Extend Life T15
- **WHEN TO USE SM POINT**
  - Reduce Thrust
  - Smoother Entry
  - Improve Hole Quality
  - Higher Speeds and Feeds

SPEEDS – FEED RECOMMENDATIONS (STD POINT-SM POINT, SV POINT)

STANDARD GEOMETRY
SM POINT, SV POINT

Material	Material Hardness (BHN)	SFM Surface Footage		Feed (IPR) 3/8 ~ 1/2		33/64 ~ 11/16		45/64 ~ 15/16		31/32~ 1-3/8		1-13/32 ~ 1-7/8		1-29/32 ~ 2-9/16		2-19/32 ~ 4-1/2	
Free Machining Steel 1118, 1215, 12L14	100 - 150	280	330	.007	.008	.010	.012	.013	.016	.016	.019	.020	.020	.023	.023	.028	.028
	150 - 200	260	305	.007	.007	.010	.011	.013	.015	.016	.017	.020	.020	.023	.023	.028	.028
	200 - 250	240	285	.007	.006	.010	.010	.013	.014	.016	.016	.020	.020	.023	.023	.028	.028
Low & Medium Carbon Steel 1018, 1040, 1140		240	280	.006	.007	.009	.010	.012	.014	.015	.017	.019	.019	.023	.023	.027	.027
		225	265	.005	.006	.008	.009	.010	.013	.014	.016	.018	.018	.021	.021	.024	.024
		210	245	.005	.006	.008	.009	.010	.013	.014	.016	.018	.018	.021	.021	.024	.024
		195	230	.004	.005	.007	.008	.009	.012	.012	.015	.016	.016	.019	.019	.022	.022
Alloy Steel 4140, 5140, 8640	125 - 175	210	245	.006	.007	.008	.010	.010	.014	.014	.017	.017	.017	.019	.019	.022	.022
	175 - 225	195	230	.005	.006	.008	.009	.010	.013	.014	.016	.017	.017	.019	.019	.022	.022
	225 - 275	180	215	.005	.006	.007	.009	.010	.013	.014	.016	.017	.017	.019	.019	.022	.022
	275 - 325	170	200	.004	.005	.006	.008	.009	.012	.012	.015	.015	.015	.017	.017	.020	.020
	325 - 375	155	185	.003	.004	.006	.007	.009	.011	.012	.014	.015	.015	.017	.017	.020	.020
High Strength Alloy Stee 4340, 4330V, 300M		110	130	.005	.006	.007	.009	.009	.011	.010	.013	.014	.014	.017	.017	.020	.020
		85	105	.004	.005	.007	.008	.009	.010	.010	.012	.014	.014	.017	.017	.020	.020
		70	85	.003	.004	.006	.007	.008	.009	.009	.011	.012	.012	.015	.015	.018	.018
Structural Steel A36, A285, A516	100 - 150	200	240	.006	.008	.010	.011	.012	.015	.014	.017	.018	.018	.021	.021	.026	.026
	150 - 250	170	195	.005	.006	.009	.010	.010	.013	.012	.015	.016	.016	.019	.019	.024	.024
	250 - 350	140	165	.004	.005	.008	.009	.009	.012	.010	.013	.014	.014	.017	.017	.020	.020
High Temp, Alloy Hastelloy B, Inconel 600		40	50	.003	.004	.006	.007	.007	.009	.008	.011	.010	.012	.012	.015	.015	.017
		35	45	.003	.004	.006	.006	.007	.008	.008	.010	.010	.010	.012	.012	.015	.014
Stainless Steel 303, 416, 420, 17-4 PH	135 - 185	105	125	.006	.007	.008	.009	.009	.012	.011	.014	.014	.014	.016	.016	.020	.020
	185 - 275	90	110	.005	.006	.007	.008	.008	.011	.010	.012	.012	.012	.014	.014	.018	.018
Tool Steel H-13, H021, A04, 0-2, S-3		110	130	.004	.004	.006	.007	.008	.010	.010	.012	.012	.012	.015	.015	.017	.017
		90	110	.004	.004	.006	.007	.008	.010	.010	.012	.012	.012	.015	.015	.017	.017
Aluminum	30	850	-	.008	-	.013	-	.016	-	.020	-	.022	.022	.025	.025	.025	.025
	180	450	-	.008	-	.013	-	.016	-	.018	-	.022	.022	.025	.025	.025	.025
Cast Iron Gray, Ductile, Nodular		250	295	.007	.008	.012	.012	.016	.016	.020	.020	.024	.024	.027	.027	.030	.030
		225	265	.006	.007	.011	.011	.014	.015	.018	.019	.022	.022	.025	.025	.028	.028
		195	230	.006	.006	.009	.009	.012	.013	.016	.017	.018	.018	.021	.021	.024	.024
		165	195	.005	.005	.007	.008	.009	.011	.012	.014	.014	.014	.017	.017	.020	.020
		135	160	.004	.005	.006	.007	.007	.010	.009	.011	.012	.012	.014	.014	.016	.016

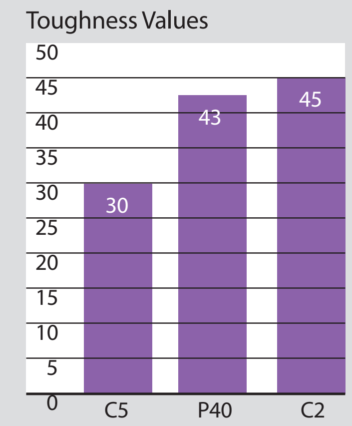
The recommendations for speed, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points. Speed and feed reduction (20% reduction in speed and 10% reduction in feed) are recommended.

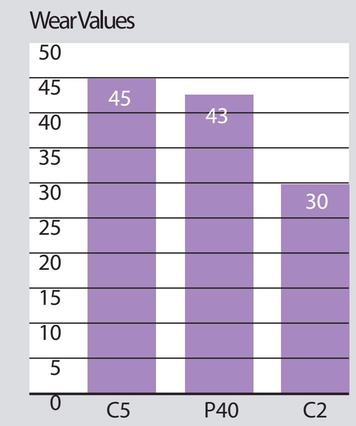
YG SPADE DRILLS

RECOMMENDED CUTTING CONDITIONS

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE BLADE INSERTS SELECTION & APPLICATIONS CARBIDE





If C5 chips try C2 at 10% – 20% lower S.F.M. than C5 rating

Grade	Geometry and Application	Stocked Coatings
P40 & C5	Steel Cutting	Super TiN TiAlN
C3	Cast Iron	Super TiN TiAlN
P40 & C2	Ductile Iron Stainless Steel Aluminum Exotic Alloys	Super TiN TiAlNE

Note : Carbide has a lower transverse rupture strength than HSS and is prone to chipping and breakage.

Recutting of chips or lack of rigidity can cause breakage.

Check Coolant Recommendations Chart on Page 461 for flow rates.

SPEEDS – FEED RECOMMENDATIONS (STD POINT-SM POINT, SV POINT)

STANDARD GEOMETRY
SM POINT, SV POINT

Material	Material Hardness (BHN)	SFM Surface Footage		Feed (IPR) 3/8 ~ 1/2		33/64 ~ 11/16		45/64 ~ 15/16		31/32 ~ 1-3/8		1-13/32 ~ 1-7/8	
Free Machining Steel 1118, 1215, 12L14	100 - 150	420	485	.006	.008	.009	.012	.012	.016	.015	.019	.019	-
	150 - 200	360	420	.006	.007	.008	.011	.011	.015	.013	.017	.017	-
	200 - 250	340	395	.005	.006	.008	.010	.010	.014	.012	.016	.015	-
Low & Medium Carbon Steel 1018, 1040, 1140	125 - 175	340	395	.005	.007	.008	.010	.010	.014	.014	.017	.017	-
	175 - 225	310	360	.005	.006	.007	.009	.008	.013	.012	.016	.016	-
	225 - 275	270	315	.004	.006	.007	.009	.008	.013	.012	.016	.015	-
	275 - 325	230	270	.004	.005	.006	.008	.006	.012	.010	.015	.014	-
Alloy Steel 4140, 5140, 8640	125 - 175	325	380	.005	.007	.008	.010	.010	.014	.013	.017	.016	-
	175 - 225	300	350	.005	.006	.007	.009	.009	.013	.012	.016	.015	-
	225 - 275	270	315	.004	.006	.007	.009	.009	.013	.012	.016	.015	-
	275 - 325	250	290	.004	.005	.006	.008	.008	.012	.011	.015	.014	-
	325 - 375	220	260	.003	.004	.005	.007	.008	.011	.010	.014	.013	-
High Strength Alloy Stee 4340, 4330V, 300M	225 - 300	200	235	.005	.006	.007	.009	.008	.011	.010	.013	.014	-
	300 - 350	180	210	.004	.005	.006	.008	.007	.010	.009	.012	.012	-
	350 - 400	160	190	.003	.004	.005	.007	.006	.009	.008	.011	.010	-
Structural Steel A36, A285, A516	100 - 150	310	360	.006	.008	.010	.011	.011	.015	.012	.017	.016	-
	150 - 250	250	290	.005	.006	.008	.010	.009	.013	.011	.015	.015	-
	250 - 350	230	270	.004	.005	.007	.009	.008	.012	.009	.013	.013	-
High Temp, Alloy Hastelloy B, Inconel 600	140 - 220	80	125	.003	.004	.006	.007	.007	.009	.009	.011	.011	-
	220 - 310	60	100	.003	.004	.005	.006	.006	.008	.008	.010	.010	-
Stainless Steel 303, 416, 420, 17-4 PH	135 - 185	210	245	.006	.007	.008	.009	.009	.012	.011	.014	.013	-
	185 - 275	160	190	.005	.006	.007	.008	.008	.011	.010	.012	.011	-
Tool Steel H-13, H021, A04, 0-2, S-3	150 - 200	220	260	.003	.004	.005	.007	.007	.010	.009	.012	.011	-
	200 - 250	170	200	.003	.004	.005	.007	.007	.010	.009	.012	.011	-
Aluminum	30	1500	-	.008	-	.013	-	.016	-	.020	-	.022	-
	180	1000	-	.007	-	.011	-	.014	-	.018	-	.020	-
Cast Iron Gray, Ductile, Nodular	120 - 150	460	505	.006	.008	.009	.012	.011	.015	.015	.019	.020	-
	150 - 200	400	485	.005	.007	.008	.011	.010	.013	.014	.017	.018	-
	200 - 220	360	435	.005	.006	.007	.009	.008	.012	.012	.015	.015	-
	220 - 260	310	375	.004	.005	.006	.008	.007	.011	.010	.013	.013	-
	260 - 320	270	340	.004	.005	.005	.007	.006	.010	.008	.011	.011	-

The recommendations for speed, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points. Speed and feed reduction (20% reduction in speed and 10% reduction in feed) are recommended.

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
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HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
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SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
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YG SPADE DRILLS

RECOMMENDED CUTTING CONDITIONS

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SUPER COBALT (T15) FLAT BOTTOM

Material	Material Hardness (BHN)	TiN	TiAlN	3/8 ~ 1/2	33/64 ~ 11/16	45/64 ~ 15/16	31/32 ~ 1-3/8
Free machining Steel 1213, 12L13, 1215 12L14, 1118	100 - 150	165	220	0.005	0.007	0.010	0.013
	150 - 200	150	215	0.005	0.007	0.010	0.013
	200 - 250	135	190	0.004	0.007	0.010	0.012
Low Carbon Steel 1015, 1020, 1140, 1025	85 - 125	140	195	0.005	0.007	0.009	0.012
	125 - 175	135	190	0.005	0.007	0.009	0.012
	175 - 225	125	180	0.004	0.006	0.008	0.011
	225 - 275	115	175	0.004	0.006	0.008	0.011
Medium Carbon Steel 1035, 1050, 1045 1055, 1140	125 - 175	135	195	0.004	0.007	0.009	0.011
	175 - 225	125	180	0.004	0.006	0.007	0.011
	225 - 275	115	165	0.004	0.006	0.007	0.011
	275 - 325	105	150	0.003	0.005	0.007	0.009
Structural Steel A36, A516, A182	100 - 150	115	165	0.004	0.007	0.009	0.011
	150 - 250	100	140	0.004	0.007	0.008	0.009
	250 - 350	80	115	0.003	0.006	0.007	0.008
Cast Iron / S,G Iron A48-76 GR30/GR45 A536-72 60-40-18 A220-76 GR40010	120 - 150	145	215	0.005	0.010	0.014	0.016
	150 - 200	130	190	0.005	0.008	0.011	0.016
	200 - 220	110	165	0.005	0.008	0.010	0.014
	220 - 260	95	150	0.004	0.006	0.008	0.010
	260 - 320	80	120	0.004	0.005	0.006	0.008
Alloy Steel 8620, 4130, 4137 4140, 6150	125 - 175	125	165	0.005	0.006	0.008	0.011
	175 - 225	115	150	0.004	0.006	0.008	0.011
	225 - 275	105	145	0.004	0.005	0.007	0.011
	275 - 325	100	140	0.003	0.005	0.007	0.009
	325 - 375	90	120	0.003	0.005	0.007	0.009
Tool Steel H13, H21, A2, S1	150 - 200	65	90	0.003	0.005	0.006	0.008
	200 - 250	45	75	0.003	0.005	0.006	0.008
High Temp. Alloy Hastelloy B,Inconel	140 - 220	20	30	0.003	0.005	0.006	0.008
	220 - 310	15	25	0.003	0.004	0.006	0.006
	225 - 300	65	90	0.004	0.006	0.007	0.008
High Strength Alloy 9840, 4340, 4330V	300 - 350	45	70	0.003	0.006	0.007	0.008
	350 - 400	40	60	0.003	0.005	0.006	0.007
Aluminium 2014, 6061, 7075	30	520	700	0.007	0.011	0.014	0.017
	180	255	390	0.007	0.011	0.014	0.016
Stainless Steel 310, 316, 410, 330	135 - 185	60	90	0.005	0.007	0.008	0.009
	185 - 275	50	80	0.004	0.006	0.007	0.009

RPM = revolution per minute (rev/min)
SFM = surface feet per minute (ft/min)
DIA = diameter of drill (inch)
IPR = feed rate (in/rev)
IPM = inch per minute penetration rate

* Formulas :

SFM = (RPM)·(.262)·(DIA.)

IPM = (RPM)·(IPR)

$$RPM = \frac{(SFM)\cdot(3.82)}{(DIA.)}$$

The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points. Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.

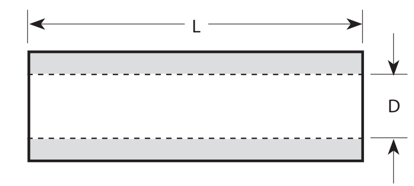
YG SPADE DRILLS

RECOMMENDED CUTTING CONDITIONS

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

SPADE BLADE INSERTS HORSEPOWER CONSUMPTION RATE

Metal Removal Rates (MRR)
Example : 1.50 Dia. Drill @ 6.412 I.P.M.



Volume of Cylinder Method : D^2x.785xL
D = Hole Diameter
L = Length in I.P.M.
.785 is Constant

Material Drilled 4140 250 BHN :
Cutting Data : 180 S.F.M. (458 R.P.M.) x .014 Feed per Rev.

458 R.P.M. x .014 = 6.412 I.P.M. (L)

D^2 $(1.5)^2$ x .785 x L (6.412) = 11.3 C.U.In./ Min (MRR)

MRR of 11.3 x 1.4 Energy Value = 15.8HP.

metal removal rates (mrR)

- Cubic inches of metal removal per unit of horsepower.
- Unit horsepower (HP_u) is the amount of power to remove a volume of metal in a period of time.
  - HP_u = power to cut 1 cubic inch per minute – found in tables

Average Unit Horsepower Values of Energy Per Unit Volume

Material	BHN	HP_u (HP/(in^3/min.))
Carbon Steels	150-200	1.0
	200-250	1.4
	250-350	1.6
Leaded Steels	150-175	0.7
Cast Irons	125-190	0.5
	190-250	1.6
Stainless Steels	135-275	1.5
Aluminum Alloys	50-100	0.3
Magnesium Alloys	40-90	0.2
Copper	125-140	0.7
Copper Alloys	100-150	0.7

CARBIDE
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STRAIGHT SHANK DRILLS
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SPADE DRILLS
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TECHNICAL DATA

2-FLUTE EXCHANGEABLE DRILLS WITH INTERNAL COOLANT

COOLANT RECOMMENDATIONS (SPADE BLADE)

Material	Material Hardness (BHN)	Coolant Pressure (PSi) / Coolant Volumetric Flowrate (GPM)						
		3/8 ~ 1/2	33/64 ~ 11/16	23/32 ~ 1	1 ~ 1-1/4	1-1/4 ~ 2	2 ~ 3	3 ~ 4
Free Machining Steel **1118, 1215, 12L14, etc.**	100 – 250	175-185 2.5-2.6	100-120 2.8-3.0	105-140 4.4-5.2	80-115 7-8	75-100 12-14	40-50 30-33	65-90 38-44
Low Carbon Steel **1010, 1020, 1025, 1522, etc.**	85 – 275	165-170 2.4-2.5	75-90 2.4-2.6	75-95 3.7-4.2	60-80 6-7	55-75 11-12	30-40 26-30	50-65 33-38
Medium Carbon Steel **1030,1040,1050,1527,1140,1151,etc.**	125 – 325	160-165 2.3-2.4	70-85 2.3-2.6	70-90 3.6-4.1	55-75 5-6	50-70 10-12	30-40 26-30	50-65 33-38
Alloy Steel **4140, 5140, 8640, etc.**	125 – 375	160-165 2.3-2.4	66-75 2.2-2.4	65-80 3.5-3.9	50-70 5-6	45-60 10-11	30-35 26-28	40-50 30-33
High Strength Alloy **4340, 4330V, 300M, etc.**	225 – 400	150-155 2.3-2.4	55-60 2.1-2.2	45-50 2.9-3.1	25-30 4-5	25-30 7-8	20-25 21-23	25-30 23-26
Structural Steel **A36, A285, A516, etc.**	100 – 350	160-165 2.3-2.4	75-85 2.4-2.6	65-80 3.5-3.9	40-55 5-6	40-50 9-10	25-30 23-26	40-50 30-33
High Temp. Alloy **Hastelloy B, Inconel 600, etc.**	140 – 310	150-155 2.3-2.4	60-65 2.2-2.3	50-55 3.1-3.2	30-35 4-5	25-30 7-8	25-30 23-26	- -
Stainless Steel **301, 316, 330, 17-4PH, etc.**	135 – 275	165-170 2.4-2.5	70-85 2.3-2.6	65-75 3.5-3.7	40-55 5-6	40-50 9-10	25-30 23-26	35-45 28-31
Tool Steel **H-13, H-21, A-4, 0-2, S-3, etc.**	150 – 250	150-155 2.3-2.4	55-60 2.1-2.2	45-50 2.9-3.1	25-30 4-5	25-30 7-8	20-25 21-23	25-30 23-26
Aluminum	30 – 180	190-210 2.6-2.7	140-180 3.3-3.7	150-200 5.3-6.1	115-160 8-9	90-125 14-16	40-50 30-33	60-80 36-42
Cast Iron	120 – 320	155-160 2.3-2.4	60-65 2.2-2.3	50-60 3.1-3.3	30-40 4-5	30-35 8-9	25-30 23-26	30-35 26-28

Being the best through innovation

SOLID CARBIDE & HSS

REAMERS

- STRAIGHT SHANK CHUCKING REAMERS
- STRAIGHT FLUTE

i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
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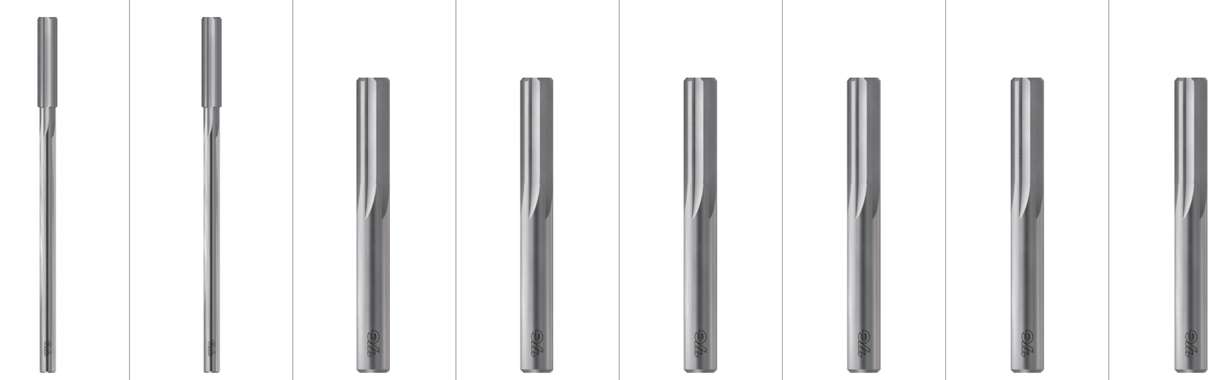
SELECTION GUIDE

YG HOLEMAKING TOOLS

CARBIDE, HSS REAMERS

STRAIGHT SHANK CHUCKING REAMERS -STRAIGHT FLUTE

SERIES	K6106	K6101/K6105	K6103	K6102	K9106	K9101	K9103	K9102	K9104	K9107
FLUTE TYPE	Straight Flute		Straight Flute		Straight Flute					
TOOL MATERIAL	HSS		HSS		Carbide					
CUTTING DIRECTION	Right Hand Cut		Right Hand Cut		Right Hand Cut					
SIZE MIN	.0135		.0135		.0280					.0355
SIZE MAX	.7500		.7500		.6299					.5020
PAGE	A354~A362		A354~A362		A363~A368					A369~A389
SURFACE TREATMENT	Bright		Bright							



Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A390

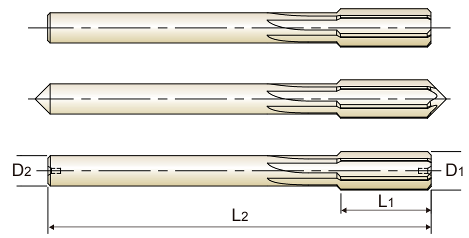
ISO	VDI 3323	Material Description	Composition / Structure	Heat Treatment	HB	HRc	K6106	K6101/K6105	K6103	K6102	K9106	K9101	K9103	K9102	K9104	K9107
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	2	Non-alloy steel	About 0.45% C	Annealed	190	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	3	Non-alloy steel	About 0.45% C	Quenched & Tempered	250	25	○	○	○	○	◎	◎	◎	◎	◎	◎
P	4	Non-alloy steel	About 0.75% C	Annealed	270	28	○	○	○	○	○	○	○	○	○	○
P	5	Non-alloy steel	About 0.75% C	Quenched & Tempered	300	32					○	○	○	○	○	○
P	6	Low alloy steel		Annealed	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	7	Low alloy steel		Quenched & Tempered	275	29	○	○	○	○	◎	◎	◎	◎	◎	◎
P	8	Low alloy steel		Quenched & Tempered	300	32					○	○	○	○	○	○
P	9	Low alloy steel		Quenched & Tempered	350	38										
P	10	High alloyed steel, and tool steel		Annealed	200	15	○	○	○	○	○	○	○	○	○	○
P	11	High alloyed steel, and tool steel		Quenched & Tempered	325	35										
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○	○	○	○	○	○	○	○	○	○
M	13	Stainless steel	Martensitic	Quenched & Tempered	240	23	○	○	○	○	○	○	○	○	○	○
M	14	Stainless steel	Austenitic		180	10	○	○	○	○	○	○	○	○	○	○
K	15	Grey cast iron	Pearlitic / ferritic		180	10	○	○	○	○	◎	◎	◎	◎	◎	◎
K	16	Grey cast iron	Pearlitic (Martensitic)		260	26	○	○	○	○	○	○	○	○	○	○
K	17	Nodular cast iron	Ferritic		160	3	○	○	○	○	◎	◎	◎	◎	◎	◎
K	18	Nodular cast iron	Pearlitic		250	25	○	○	○	○	○	○	○	○	○	○
K	19	Malleable cast iron	Ferritic		130		○	○	○	○	◎	◎	◎	◎	◎	◎
K	20	Malleable cast iron	Pearlitic		230	21	○	○	○	○	○	○	○	○	○	○
N	21	Aluminum-wrought alloy	Not Curable		60		○	○	○	○	○	○	○	○	○	○
N	22	Aluminum-wrought alloy	Curable	Hardened	100		○	○	○	○	○	○	○	○	○	○
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○	○	○	○	○	○	○	○	○	○
N	24	Aluminum-cast, alloyed	≤ 12% Si, Curable	Hardened	90		○	○	○	○	○	○	○	○	○	○
N	25	Aluminum-cast, alloyed	> 12% Si, Not Curable		130											
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○	○	○	○	○	○	○	○	○	○
N	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90		○	○	○	○	○	○	○	○	○	○
N	28	Copper and Copper Alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper		100		○	○	○	○	○	○	○	○	○	○
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic													
N	30	Non Metallic Materials	Rubber, Wood, etc.													
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15										
S	32	Heat Resistant Super Alloys	Fe Based	Cured	280	30										
S	33	Heat Resistant Super Alloys	Ni or Co Based	Annealed	250	25										
S	34	Heat Resistant Super Alloys	Ni or Co Based	Cured	350	38										
S	35	Heat Resistant Super Alloys	Ni or Co Based	Cast	320	34										
S	36	Titanium Alloys	Pure Titanium		400 Rm											
S	37	Titanium Alloys	Alpha + Beta Alloys	Hardened	1050 Rm											
H	38	Hardened steel		Hardened	550	55										
H	39	Hardened steel		Hardened	630	60										
H	40	Chilled Cast Iron		Cast	400	42										
H	41	Hardened Cast Iron		Hardened	550	55										

YG REAMER

Metric **K6106** SERIES | Letter **K6103** SERIES
Fractional **K6101/K6105** SERIES | Wire Gauge **K6102** SERIES

HSS, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

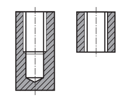
▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Type of Center
Up to .0393" : Non-Center
Over .0393" to .1799" : External
Over .1799" : Internal



HSS 45°

p.A402

Hole type



Unit : inch

EDP No.	Nominal Size Metric	Fractional	Letter	Wire Gauge	Decimal	Shank Diameter	Flute Length	Overall Length	No. of Flute
	D1					D2	L1	L2	
K610200135				#80	.0135	.0135	3/8	3/4	2
K610200145				#79	.0145	.0145	3/8	3/4	2
K610100156		1/64			.0156	.0156	3/8	3/4	2
K610200160				#78	.0160	.0160	3/8	7/8	2
K610200180				#77	.0180	.0180	3/8	7/8	2
K610200200				#76	.0200	.0200	3/8	7/8	2
K610200210				#75	.0210	.0210	1/2	1	3
K610200225				#74	.0225	.0225	1/2	1	3
K610200240				#73	.0240	.0240	1/2	1-1/8	3
K610200250				#72	.0250	.0250	1/2	1-1/8	3
K610200260				#71	.0260	.0260	1/2	1-1/4	3
K610200280				#70	.0280	.0280	1/2	1-1/4	3
K610200292				#69	.0292	.0292	1/2	1-3/8	3
K610200310				#68	.0310	.0310	1/2	1-3/8	3
K610100312		1/32			.0312	.0312	1/2	1-3/8	3
K610200320				#67	.0320	.0320	1/2	1-3/8	3
K610200330				#66	.0330	.0330	1/2	1-3/8	3
K610200350				#65	.0350	.0350	1/2	1-1/2	3
K610200360				#64	.0360	.0360	1/2	1-1/2	3
K610200370				#63	.0370	.0370	1/2	1-1/2	3
K610200380				#62	.0380	.0380	1/2	1-1/2	3
K610200390				#61	.0390	.0390	1/2	1-1/2	3
K610600394	1.00				.0394	.0394	1/2	2-1/2	4
K610200400				#60	.0400	.0390	1/2	2-1/2	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to 1/2 Inch : +.0002"/-.0000" Over 1/2 to 5/8 Inch : +.0003"/-.0000" Over 5/8 to 1 Inch : +.0004"/+.0001"	Up to .4355" : +.0000"/-.0010" Over .4355" : +.0000"/-.0015"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○	○		◎	○			○		○	○	○	○	○	○	○	○	○

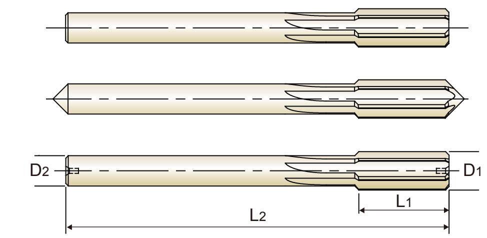
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Metric **K6106** SERIES | Letter **K6103** SERIES
Fractional **K6101/K6105** SERIES | Wire Gauge **K6102** SERIES

HSS, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

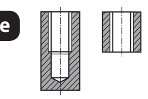
▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Type of Center
Up to .0393" : Non-Center
Over .0393" to .1799" : External
Over .1799" : Internal



HSS 45°

p.A402

Hole type



Unit : inch

EDP No.	Nominal Size Metric	Fractional	Letter	Wire Gauge	Decimal	Shank Diameter	Flute Length	Overall Length	No. of Flute
	D1					D2	L1	L2	
K610200410				#59	.0410	.0390	1/2	2-1/2	4
K610200420				#58	.0420	.0390	1/2	2-1/2	4
K610200430				#57	.0430	.0390	1/2	2-1/2	4
K610200465				#56	.0465	.0455	1/2	2-1/2	4
K610100469		3/64			.0469	.0455	1/2	2-1/2	4
K610200520				#55	.0520	.0510	1/2	2-1/2	4
K610200550				#54	.0550	.0510	1/2	2-1/2	4
K610600591	1.50				.0591	.0510	1/2	2-1/2	4
K610200595				#53	.0595	.0585	1/2	2-1/2	4
K610100625		1/16			.0625	.0585	1/2	2-1/2	4
K610200635				#52	.0635	.0585	1/2	2-1/2	4
K610200670				#51	.0670	.0660	3/4	3	4
K610200700				#50	.0700	.0660	3/4	3	4
K610200730				#49	.0730	.0660	3/4	3	4
K610200760				#48	.0760	.0720	3/4	3	4
K610100781		5/64			.0781	.0720	3/4	3	4
K610200785				#47	.0785	.0720	3/4	3	4
K610600787	2.00				.0787	.0720	3/4	3	4
K610200810				#46	.0810	.0771	3/4	3	4
K610200820				#45	.0820	.0771	3/4	3	4
K610200860				#44	.0860	.0810	3/4	3	4
K610200890				#43	.0890	.0810	3/4	3	4
K610200935				#42	.0935	.0880	3/4	3	4
K610100938		3/32			.0938	.0880	3/4	3	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to 1/2 Inch : +.0002"/-.0000" Over 1/2 to 5/8 Inch : +.0003"/-.0000" Over 5/8 to 1 Inch : +.0004"/+.0001"	Up to .4355" : +.0000"/-.0010" Over .4355" : +.0000"/-.0015"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○	○		◎	○			○		○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

HSS, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

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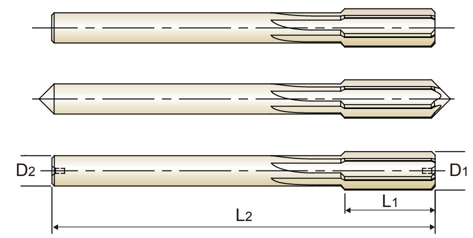

HSS 45°

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Hole type

Unit : inch

EDP No.	Metric	Fractional	Letter	Wire Gauge	Decimal	Shank Diameter	Flute Length	Overall Length	No. of Flute
	D1					D2	L1	L2	
K610200960				#41	.0960	.0928	7/8	3-1/2	4
K610200980				#40	.0980	.0928	7/8	3-1/2	4
K610600984	2.50				.0984	.0928	7/8	3-1/2	4
K610200995				#39	.0995	.0928	7/8	3-1/2	4
K610201015				#38	.1015	.0950	7/8	3-1/2	4
K610201040				#37	.1040	.0950	7/8	3-1/2	4
K610201065				#36	.1065	.1030	7/8	3-1/2	4
K610101094		7/64			.1094	.1030	7/8	3-1/2	4
K610201100				#35	.1100	.1030	7/8	3-1/2	4
K610201110				#34	.1110	.1055	7/8	3-1/2	4
K610201130				#33	.1130	.1055	7/8	3-1/2	4
K610201160				#32	.1160	.1120	7/8	3-1/2	4
K610601181	3.00				.1181	.1120	7/8	3-1/2	4
K610201200				#31	.1200	.1120	7/8	3-1/2	4
K610501240		0.1240 U/S			.1240	.1190	7/8	3-1/2	4
K610101250		1/8			.1250	.1190	7/8	3-1/2	4
K610501260		0.1260 O/S			.1260	.1190	7/8	3-1/2	4
K610201285				#30	.1285	.1190	7/8	3-1/2	4
K610201360				#29	.1360	.1275	1	4	4
K610601378	3.50				.1378	.1350	1	4	4
K610201405				#28	.1405	.1350	1	4	4
K610101406		9/64			.1406	.1350	1	4	4
K610201440				#27	.1440	.1350	1	4	4
K610201470				#26	.1470	.1430	1	4	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to 1/2 Inch : +.0002"/-.0000" Over 1/2 to 5/8 Inch : +.0003"/-.0000" Over 5/8 to 1 Inch : +.0004"/+.0001"	Up to .4355" : +.0000"/-.0010" Over .4355" : +.0000"/-.0015"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○	○		◎	○			○		○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER
Metric K6106 SERIES | Letter K6103 SERIES
Fractional K6101/K6105 SERIES | Wire Gauge K6102 SERIES

HSS, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

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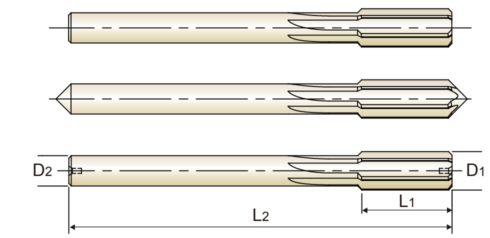

HSS 45°

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Hole type

Unit : inch

EDP No.	Metric	Fractional	Letter	Wire Gauge	Decimal	Shank Diameter	Flute Length	Overall Length	No. of Flute
	D1					D2	L1	L2	
K610201495				#25	.1495	.1430	1	4	4
K610201520				#24	.1520	.1460	1	4	4
K610201540				#23	.1540	.1460	1	4	4
K610101562		5/32			.1562	.1510	1	4	4
K610201570				#22	.1570	.1510	1	4	6
K610601575	4.00				.1575	.1530	1	4	6
K610201590				#21	.1590	.1530	1-1/8	4-1/2	6
K610201610				#20	.1610	.1530	1-1/8	4-1/2	6
K610201660				#19	.1660	.1595	1-1/8	4-1/2	6
K610201695				#18	.1695	.1595	1-1/8	4-1/2	6
K610101719		11/64			.1719	.1645	1-1/8	4-1/2	6
K610201730				#17	.1730	.1645	1-1/8	4-1/2	6
K610201770				#16	.1770	.1704	1-1/8	4-1/2	6
K610601772	4.50				.1772	.1704	1-1/8	4-1/2	6
K610201800				#15	.1800	.1755	1-1/8	4-1/2	6
K610201820				#14	.1820	.1755	1-1/8	4-1/2	6
K610201850				#13	.1850	.1805	1-1/8	4-1/2	6
K610501865		0.1865 U/S			.1865	.1805	1-1/8	4-1/2	6
K610101875		3/16			.1875	.1805	1-1/8	4-1/2	6
K610501885		0.1885 O/S			.1885	.1805	1-1/8	4-1/2	6
K610201890				#12	.1890	.1805	1-1/8	4-1/2	6
K610201910				#11	.1910	.1860	1-1/4	5	6
K610201935				#10	.1935	.1860	1-1/4	5	6
K610201960				#9	.1960	.1895	1-1/4	5	6

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to 1/2 Inch : +.0002"/-.0000" Over 1/2 to 5/8 Inch : +.0003"/-.0000" Over 5/8 to 1 Inch : +.0004"/+.0001"	Up to .4355" : +.0000"/-.0010" Over .4355" : +.0000"/-.0015"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○	○		◎	○			○		○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG REAMER

Metric **K6106** SERIES | Letter **K6103** SERIES
Fractional **K6101/K6105** SERIES | Wire Gauge **K6102** SERIES

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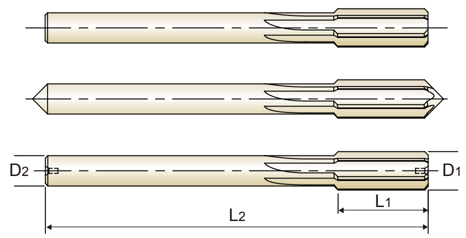

HSS 45° p.A402

Hole type

Unit : inch

EDP No.	Nominal Size					Shank Diameter	Flute Length	Overall Length	No. of Flute
	Metric	Fractional	Letter	Wire Gauge	Decimal				
	D1					D2	L1	L2	
K610601969	5.00				.1969	**.1895**	1-1/4	5	6
K610201990				#8	.1990	**.1895**	1-1/4	5	6
K610202010				#7	.2010	**.1945**	1-1/4	5	6
K610102031		13/64			.2031	**.1945**	1-1/4	5	6
K610202040				#6	.2040	**.1945**	1-1/4	5	6
K610202055				#5	.2055	**.2016**	1-1/4	5	6
K610202090				#4	.2090	**.2016**	1-1/4	5	6
K610202130				#3	.2130	**.2075**	1-1/4	5	6
K610602165	5.50				.2165	**.2075**	1-1/4	5	6
K610102188		7/32			.2188	**.2075**	1-1/4	5	6
K610202210				#2	.2210	**.2173**	1-1/2	6	6
K610202280				#1	.2280	**.2173**	1-1/2	6	6
K610302340			A		.2340	**.2265**	1-1/2	6	6
K610102344		15/64			.2344	**.2265**	1-1/2	6	6
K610602362	6.00				.2362	**.2265**	1-1/2	6	6
K610302380			B		.2380	**.2329**	1-1/2	6	6
K610302420			C		.2420	**.2329**	1-1/2	6	6
K610302460			D		.2460	**.2329**	1-1/2	6	6
K610502490		0.2490 U/S			.2490	**.2405**	1-1/2	6	6
K610102500		1/4			.2500	**.2405**	1-1/2	6	6
K610502510		0.2510 O/S			.2510	**.2405**	1-1/2	6	6
K610602559	6.50				.2559	**.2405**	1-1/2	6	6
K610302570			F		.2570	**.2485**	1-1/2	6	6
K610302610			G		.2610	**.2485**	1-1/2	6	6

▶ NEXT PAGE

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◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○	○		◎	○			○		○	○	○	○	○	○	○	○	○

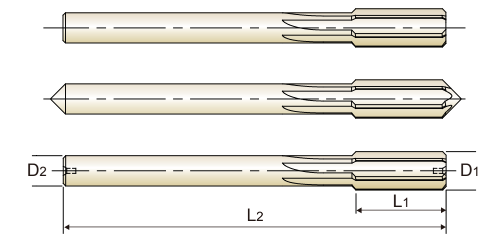
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Metric **K6106** SERIES | Letter **K6103** SERIES
Fractional **K6101/K6105** SERIES | Wire Gauge **K6102** SERIES

HSS, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Type of Center
Up to .0393" : Non-Center
Over .0393" to .1799" : External
Over .1799" : Internal



HSS 45° p.A402

Hole type

Unit : inch

EDP No.	Nominal Size					Shank Diameter	Flute Length	Overall Length	No. of Flute
	Metric	Fractional	Letter	Wire Gauge	Decimal				
	D1					D2	L1	L2	
K610102656		17/64			.2656	**.2485**	1-1/2	6	6
K610302660			H		.2660	**.2485**	1-1/2	6	6
K610302720			I		.2720	**.2485**	1-1/2	6	6
K610602756	7.00				.2756	**.2485**	1-1/2	6	6
K610302770			J		.2770	**.2485**	1-1/2	6	6
K610302810			K		.2810	**.2485**	1-1/2	6	6
K610102812		9/32			.2812	**.2485**	1-1/2	6	6
K610302900			L		.2900	**.2792**	1-1/2	6	6
K610302950			M		.2950	**.2792**	1-1/2	6	6
K610602953	7.50				.2953	**.2792**	1-1/2	6	6
K610102969		19/64			.2969	**.2792**	1-1/2	6	6
K610303020			N		.3020	**.2792**	1-1/2	6	6
K610503115		0.3115 U/S			.3115	**.2792**	1-1/2	6	6
K610103125		5/16			.3125	**.2792**	1-1/2	6	6
K610503135		0.3135 O/S			.3135	**.2792**	1-1/2	6	6
K610603150	8.00				.3150	**.2792**	1-1/2	6	6
K610303160			O		.3160	**.2792**	1-1/2	6	6
K610303230			P		.3230	**.2792**	1-1/2	6	6
K610103281		21/64			.3281	**.2792**	1-1/2	6	6
K610303320			Q		.3320	**.2792**	1-1/2	6	6
K610603346	8.50				.3346	**.2792**	1-1/2	6	6
K610303390			R		.3390	**.2792**	1-1/2	6	6
K610103438		11/32			.3438	**.2792**	1-1/2	6	6
K610303480			S		.3480	**.3105**	1-3/4	7	6

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to 1/2 Inch : +.0002"/-.0000" Over 1/2 to 5/8 Inch : +.0003"/-.0000" Over 5/8 to 1 Inch : +.0004"/+.0001"	Up to .4355" : +.0000"/-.0010" Over .4355" : +.0000"/-.0015"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○	○		◎	○			○		○	○	○	○	○	○	○	○	○

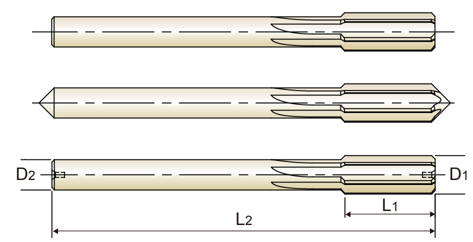
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Metric **K6106** SERIES | Letter **K6103** SERIES
Fractional **K6101/K6105** SERIES | Wire Gauge **K6102** SERIES

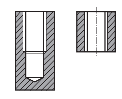
HSS, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Type of Center
Up to .0393" : Non-Center
Over .0393" to .1799" : External
Over .1799" : Internal



HSS 45° p.A402

Hole type



Unit : inch

EDP No.	Nominal Size Metric	Nominal Size Fractional	Nominal Size Letter	Nominal Size Wire Gauge	Nominal Size Decimal	Shank Diameter	Flute Length	Overall Length	No. of Flute
	D1					D2	L1	L2	
K610603543	9.00				.3543	**.3105**	1-3/4	7	6
K610303580			T		.3580	**.3105**	1-3/4	7	6
K610103594		23/64			.3594	**.3105**	1-3/4	7	6
K610303680			U		.3680	**.3105**	1-3/4	7	6
K610503740		0.3740 U/S			.3740	**.3105**	1-3/4	7	6
K610103750		3/8			.3750	**.3105**	1-3/4	7	6
K610503760		0.3760 O/S			.3760	**.3105**	1-3/4	7	6
K610303770			V		.3770	**.3105**	1-3/4	7	6
K610303860			W		.3860	**.3105**	1-3/4	7	6
K610103906		25/64			.3906	**.3105**	1-3/4	7	6
K610603937	10.00				.3937	**.3105**	1-3/4	7	6
K610303970			X		.3970	**.3105**	1-3/4	7	6
K610304040			Y		.4040	**.3105**	1-3/4	7	6
K610104062		13/32			.4062	**.3105**	1-3/4	7	6
K610304130			Z		.4130	**.3730**	1-3/4	7	6
K610604134	10.50				.4134	**.3730**	1-3/4	7	6
K610104219		27/64			.4219	**.3730**	1-3/4	7	6
K610604331	11.00				.4331	**.3730**	1-3/4	7	6
K610504365		0.4365 U/S			.4365	**.3730**	1-3/4	7	6
K610104375		7/16			.4375	**.3730**	1-3/4	7	6
K610504385		0.4385 O/S			.4385	**.3730**	1-3/4	7	6
K610604528	11.50				.4528	**.3730**	1-3/4	7	6
K610104531		29/64			.4531	**.3730**	1-3/4	7	6
K610104688		15/32			.4688	**.3730**	1-3/4	7	6

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to 1/2 Inch : +.0002"/-.0000" Over 1/2 to 5/8 Inch : +.0003"/-.0000" Over 5/8 to 1 Inch : +.0004"/+.0001"	Up to .4355" : +.0000"/-.0010" Over .4355" : +.0000"/-.0015"

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○	○		◎	○			○		○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG REAMER

Metric **K6106** SERIES | Letter **K6103** SERIES
Fractional **K6101/K6105** SERIES | Wire Gauge **K6102** SERIES

HSS, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

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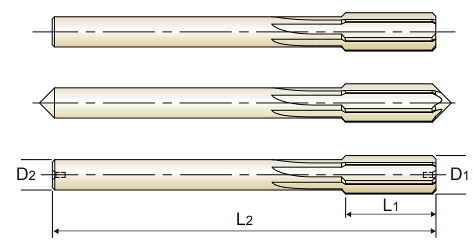
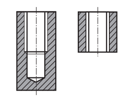
Over .1799" : Internal



HSS 45° p.A402

Hole type



Unit : inch

EDP No.	Nominal Size Metric	Nominal Size Fractional	Nominal Size Letter	Nominal Size Wire Gauge	Nominal Size Decimal	Shank Diameter	Flute Length	Overall Length	No. of Flute
	D1					D2	L1	L2	
K610604724	12.00				.4724	**.4355**	2	8	6
K610104844		31/64			.4844	**.4355**	2	8	6
K610604921	12.50				.4921	**.4355**	2	8	6
K610504990		0.4990 U/S			.4990	**.4355**	2	8	6
K610105000		1/2			.5000	**.4355**	2	8	6
K610505010		0.5010 O/S			.5010	**.4355**	2	8	6
K610605118	13.00				.5118	**.4355**	2	8	6
K610105156		33/64			.5156	**.4355**	2	8	6
K610105313		17/32			.5312	**.4355**	2	8	6
K610605315	13.50				.5315	**.4355**	2	8	6
K610105469		35/64			.5469	**.4355**	2	8	8
K610605512	14.00				.5512	**.4355**	2	8	8
K610105625		9/16			.5625	**.4355**	2	8	8
K610605709	14.50				.5709	**.4355**	2	8	8
K610105781		37/64			.5781	**.4355**	2	8	8
K610605906	15.00				.5906	**.4355**	2	8	8
K610105938		19/32			.5938	**.4355**	2	8	8
K610106094		39/64			.6094	**.5620**	2-1/4	9	8
K610606102	15.50				.6102	**.5620**	2-1/4	9	8
K610506240		0.6240 U/S			.6240	**.5615**	2-1/4	9	8
K610106250		5/8			.6250	**.5620**	2-1/4	9	8
K610506260		0.6260 O/S			.6260	**.5615**	2-1/4	9	8
K610606299	16.00				.6299	**.5620**	2-1/4	9	8
K610106406		41/64			.6406	**.5620**	2-1/4	9	8

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to 1/2 Inch : +.0002"/-.0000" Over 1/2 to 5/8 Inch : +.0003"/-.0000" Over 5/8 to 1 Inch : +.0004"/+.0001"	Up to .4355" : +.0000"/-.0010" Over .4355" : +.0000"/-.0015"

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○	○		◎	○			○		○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Metric **K6106** SERIES | Fractional **K6101/K6105** SERIES | Letter **K6103** SERIES | Wire Gauge **K6102** SERIES

HSS, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

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- ▶Straight Flute, Right Hand Cut
- ▶Type of Center
  - Up to .0393" : Non-Center
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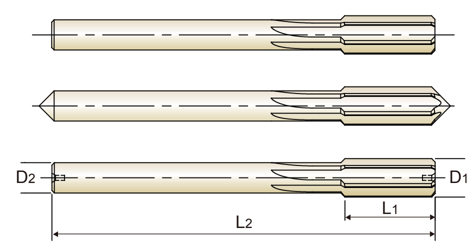


HSS 45°

p.A402

Hole type

Unit : inch

EDP No.	Nominal Size Metric	Fractional	Letter	Wire Gauge	Decimal	Shank Diameter	Flute Length	Overall Length	No. of Flute
	D1					D2	L1	L2	
K610606496	16.50				.6496	**.5620**	2-1/4	9	8
K610106562		21/32			.6562	**.5620**	2-1/4	9	8
K610606693	17.00				.6693	**.5620**	2-1/4	9	8
K610106719		43/64			.6719	**.5620**	2-1/4	9	8
K610506865		0.6865 U/S			.6865	**.5615**	2-1/4	9	8
K610106875		11/16			.6875	**.5620**	2-1/4	9	8
K610506885		0.6885 O/S			.6885	**.5615**	2-1/4	9	8
K610606890	17.50				.6890	**.5620**	2-1/4	9	8
K610107031		45/64			.7031	**.5620**	2-1/4	9	8
K610607087	18.00				.7087	**.5620**	2-1/4	9	8
K610107188		23/32			.7188	**.5620**	2-1/4	9	8
K610607283	18.50				.7283	**.6245**	2-1/4	9	8
K610107344		47/64			.7344	**.6245**	2-1/2	9-1/2	8
K610607480	19.00				.7480	**.6245**	2-1/4	9	8
K610507490		0.7490 U/S			.7490	**.6240**	2-1/2	9	8
K610107500		3/4			.7500	**.6245**	2-1/2	9-1/2	8

O.D. Tolerance	Shank Dia. Tolerance
Up to 1/2 Inch : +.0002"/-.0000" Over 1/2 to 5/8 Inch : +.0003"/-.0000" Over 5/8 to 1 Inch : +.0004"/+.0001"	Up to .4355" : +.0000"/-.0010" Over .4355" : +.0000"/-.0015"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○	○		◎	○			○		○	○	○	○	○	○	○	○	○

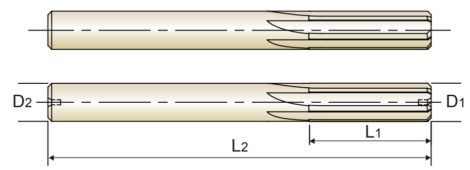
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Metric **K9106** SERIES | Fractional **K9101** SERIES | Letter **K9103** SERIES | Wire Gauge **K9102** SERIES | Dowel Pin **K9104** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

- ▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
- ▶Straight Flute, Right Hand Cut
- ▶Shank Diameter ≒ Nominal Reamer Diameter
- ▶Type of Center
  - Up to .1177" : Non-Center
  - Over .1177" : Internal



CARBIDE 45°

p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Metric	Fractional	Letter	Wire Gauge	Decimal	Shank Diameter	Flute Length	Overall Length	No. of Flute
	D1					D2	L1	L2	
K910200280				#70	.0280	**.0280**	1/4	1-1/2	4
K910200292				#69	.0292	**.0292**	1/4	1-1/2	4
K910200310				#68	.0310	**.0310**	1/4	1-1/2	4
K910200320				#67	.0320	**.0320**	1/4	1-1/2	4
K910200330				#66	.0330	**.0330**	1/4	1-1/2	4
K910200350				#65	.0350	**.0350**	1/4	1-1/2	4
K910200360				#64	.0360	**.0360**	1/4	1-1/2	4
K910200370				#63	.0370	**.0370**	1/4	1-1/2	4
K910200380				#62	.0380	**.0380**	1/4	1-1/2	4
K910200390				#61	.0390	**.0390**	1/4	1-1/2	4
K910200400				#60	.0400	**.0400**	1/4	1-1/2	4
K910200410				#59	.0410	**.0410**	3/8	1-1/2	4
K910200420				#58	.0420	**.0420**	3/8	1-1/2	4
K910200430				#57	.0430	**.0430**	3/8	1-1/2	4
K910200465				#56	.0465	**.0465**	3/8	1-1/2	4
K910200520				#55	.0520	**.0520**	3/8	1-1/2	4
K910200550				#54	.0550	**.0550**	3/8	1-1/2	4
K910600591	1.50				.0591	**.0591**	3/8	1-1/2	4
K910200595				#53	.0595	**.0595**	3/8	1-1/2	4
K910200635				#52	.0635	**.0635**	3/8	1-1/2	4
K910200670				#51	.0670	**.0670**	1/2	1-3/4	4
K910200700				#50	.0700	**.0700**	1/2	1-3/4	4
K910200730				#49	.0730	**.0730**	1/2	1-3/4	4
K910200760				#48	.0760	**.0760**	1/2	1-3/4	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to 1/4 Inch : +.0000"/-.0002" Over 1/4 Inch : +.0000"/-.0003"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

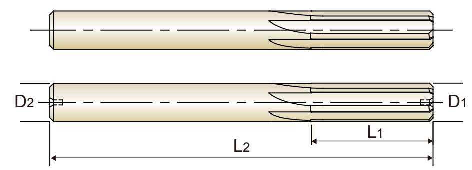
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG REAMER

Metric **K9106** SERIES | Fractional **K9101** SERIES | Letter **K9103** SERIES | Wire Gauge **K9102** SERIES | Dowel Pin **K9104** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

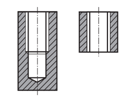
- ▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
- ▶Straight Flute, Right Hand Cut
- ▶Shank Diameter ≒ Nominal Reamer Diameter
- ▶Type of Center
  Up to .1177" : Non-Center
  Over .1177" : Internal



CARBIDE 45°

p.A404

Hole type



Unit : inch

EDP No.	Nominal Size Metric (D1)	Fractional	Letter	Wire Gauge	Decimal	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910200785				#47	.0785	.0785	1/2	1-3/4	4
K910600787	2.00				.0787	.0787	1/2	1-3/4	4
K910200810				#46	.0810	.0810	1/2	2	4
K910200820				#45	.0820	.0820	1/2	2	4
K910200860				#44	.0860	.0860	1/2	2	4
K910200890				#43	.0890	.0890	1/2	2	4
K910200935				#42	.0935	.0935	1/2	2	4
K910200960				#41	.0960	.0960	5/8	2	4
K910600965	2.45				.0965	.0965	1/2	2	4
K910200980				#40	.0980	.0980	5/8	2	4
K910600984	2.50				.0984	.0984	5/8	2	4
K910200995				#39	.0995	.0995	5/8	2-1/4	4
K910201015				#38	.1015	.1015	5/8	2-1/4	4
K910201040				#37	.1040	.1040	5/8	2-1/4	4
K910201065				#36	.1065	.1065	5/8	2-1/4	4
K910201100				#35	.1100	.1100	5/8	2-1/4	4
K910201110				#34	.1110	.1110	5/8	2-1/4	4
K910201130				#33	.1130	.1130	5/8	2-1/4	4
K910201160				#32	.1160	.1160	5/8	2-1/4	4
K910601181	3.00				.1181	.1181	5/8	2-1/4	4
K910201200				#31	.1200	.1200	5/8	2-1/4	4
K910601280	3.25				.1280	.1280	5/8	2-1/4	4
K910201285				#30	.1285	.1285	5/8	2-1/4	4
K910201360				#29	.1360	.1360	3/4	2-1/2	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to 1/4 Inch : +.0000"/-.0002" Over 1/4 Inch : +.0000"/-.0003"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Metric **K9106** SERIES | Fractional **K9101** SERIES | Letter **K9103** SERIES | Wire Gauge **K9102** SERIES | Dowel Pin **K9104** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

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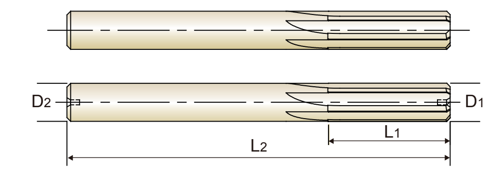
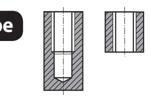


CARBIDE 45°

p.A404

Hole type



Unit : inch

EDP No.	Nominal Size Metric (D1)	Fractional	Letter	Wire Gauge	Decimal	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910601378	3.50				.1378	.1378	3/4	2-1/2	4
K910201405				#28	.1405	.1405	3/4	2-1/2	4
K910201440				#27	.1440	.1440	3/4	2-1/2	4
K910201470				#26	.1470	.1470	3/4	2-1/2	4
K910201495				#25	.1495	.1495	3/4	2-1/2	4
K910201520				#24	.1520	.1520	3/4	2-1/2	4
K910201540				#23	.1540	.1540	3/4	2-1/2	4
K910201570				#22	.1570	.1570	3/4	2-1/2	4
K910601575	4.00				.1575	.1575	3/4	2-1/2	4
K910201590				#21	.1590	.1590	3/4	2-1/2	4
K910201610				#20	.1610	.1610	7/8	2-1/2	4
K910201660				#19	.1660	.1660	7/8	2-3/4	4
K910201695				#18	.1695	.1695	7/8	2-3/4	4
K910201730				#17	.1730	.1730	7/8	2-3/4	4
K910201770				#16	.1770	.1770	7/8	2-3/4	4
K910601772	4.50				.1772	.1772	7/8	2-3/4	4
K910201800				#15	.1800	.1800	7/8	2-3/4	4
K910201820				#14	.1820	.1820	7/8	2-3/4	4
K910201850				#13	.1850	.1850	7/8	2-3/4	4
K910201890				#12	.1890	.1890	7/8	2-3/4	4
K910201910				#11	.1910	.1910	7/8	2-3/4	4
K910201935				#10	.1935	.1935	7/8	2-3/4	4
K910201960				#9	.1960	.1960	1	3	4
K910601969	5.00				.1969	.1969	1	3	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to 1/4 Inch : +.0000"/-.0002" Over 1/4 Inch : +.0000"/-.0003"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG REAMER

Metric **K9106** SERIES | Fractional **K9101** SERIES | Letter **K9103** SERIES | Wire Gauge **K9102** SERIES | Dowel Pin **K9104** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

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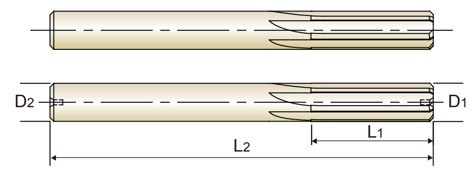

CARBIDE 45° p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Metric	Fractional	Letter	Wire Gauge	Decimal	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910201990				#8	.1990	.1990	1	3	4
K910202010				#7	.2010	.2010	1	3	4
K910102031		13/64			.2031	.2031	1	3	4
K910202040				#6	.2040	.2040	1	3	4
K910202055				#5	.2055	.2055	1	3	4
K910202090				#4	.2090	.2090	1	3	4
K910202130				#3	.2130	.2130	1	3	4
K910602165	5.50				.2165	.2165	1	3	4
K910202210				#2	.2210	.2210	1	3	4
K910202280				#1	.2280	.2280	1	3	4
K910302340			A		.2340	.2340	1	3	4
K910102344		15/64			.2344	.2344	1	3	4
K910602362	6.00				.2362	.2362	1	3	4
K910302380			B		.2380	.2380	1	3	4
K910302420			C		.2420	.2420	1	3	4
K910302460			D		.2460	.2460	1	3	4
K910402498					.2498	.2498	1	3	4
K910602559	6.50				.2559	.2559	1-1/8	3-1/4	6
K910302570			F		.2570	.2570	1-1/8	3-1/4	6
K910302610			G		.2610	.2610	1-1/8	3-1/4	6
K910102656		17/64			.2656	.2656	1-1/8	3-1/4	6
K910302660			H		.2660	.2660	1-1/8	3-1/4	6
K910302720			I		.2720	.2720	1-1/8	3-1/4	6
K910602756	7.00				.2756	.2756	1-1/8	3-1/4	6

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to 1/4 Inch : +.0000"/-.0002" Over 1/4 Inch : +.0000"/-.0003"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Metric **K9106** SERIES | Fractional **K9101** SERIES | Letter **K9103** SERIES | Wire Gauge **K9102** SERIES | Dowel Pin **K9104** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

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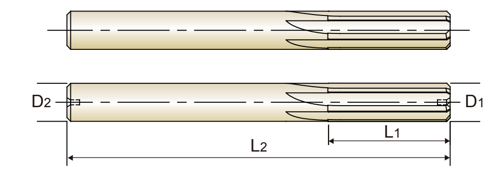

CARBIDE 45° p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Metric	Fractional	Letter	Wire Gauge	Decimal	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910302770			J		.2770	.2770	1-1/8	3-1/4	6
K910302810			K		.2810	.2810	1-1/8	3-1/4	6
K910302900			L		.2900	.2900	1-1/8	3-1/4	6
K910302950			M		.2950	.2950	1-1/8	3-1/4	6
K910602953	7.50				.2953	.2953	1-1/8	3-1/4	6
K910102969		19/64			.2969	.2969	1-1/8	3-1/4	6
K910303020			N		.3020	.3020	1-1/8	3-1/4	6
K910603150	8.00				.3150	.3150	1-1/8	3-1/4	6
K910303160			O		.3160	.3160	1-1/8	3-1/4	6
K910303230			P		.3230	.3230	1-1/4	3-1/2	6
K910103281		21/64			.3281	.3281	1-1/4	3-1/2	6
K910303320			Q		.3320	.3320	1-1/4	3-1/2	6
K910603346	8.50				.3346	.3346	1-1/4	3-1/2	6
K910303390			R		.3390	.3390	1-1/4	3-1/2	6
K910303480			S		.3480	.3480	1-1/4	3-1/2	6
K910603543	9.00				.3543	.3543	1-1/4	3-1/2	6
K910303580			T		.3580	.3580	1-1/4	3-1/2	6
K910103594		23/64			.3594	.3594	1-1/4	3-1/2	6
K910303680			U		.3680	.3680	1-1/4	3-1/2	6
K910603740	9.50				.3740	.3740	1-1/4	3-1/2	6
K910303770			V		.3770	.3770	1-1/4	3-1/2	6
K910303860			W		.3860	.3860	1-1/4	3-1/2	6
K910103906		25/64			.3906	.3906	1-1/4	3-1/2	6
K910603937	10.00				.3937	.3937	1-1/4	3-1/2	6

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to 1/4 Inch : +.0000"/-.0002" Over 1/4 Inch : +.0000"/-.0003"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Letter **K9103** SERIES
Metric **K9106** SERIES | Wire Gauge **K9102** SERIES
Fractional **K9101** SERIES | Dowel Pin **K9104** SERIES

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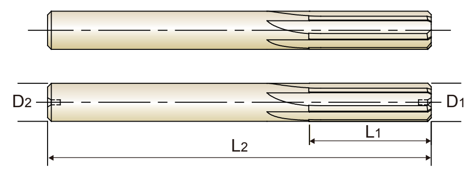
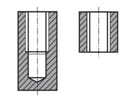
Up to .1177" : Non-Center
Over .1177" : Internal



CARBIDE 45°

p.A404

Hole type



Unit : inch

EDP No.	Nominal Size					Shank Diameter	Flute Length	Overall Length	No. of Flute
	Metric	Fractional	Letter	Wire Gauge	Decimal				
	D1					D2	L1	L2	
K910303970			X		.3970	**.3970**	1-1/4	3-1/2	6
K910304040			Y		.4040	**.4040**	1-1/4	3-1/2	6
K910104062		13/32			.4062	**.4062**	1-1/4	3-1/2	6
K910304130			Z		.4130	**.4130**	1-1/4	3-1/2	6
K910604134	10.50				.4134	**.4134**	1-1/4	3-1/2	6
K910104219		27/64			.4219	**.4219**	1-3/8	4	6
K910604331	11.00				.4331	**.4331**	1-3/8	4	6
K910604528	11.50				.4528	**.4528**	1-3/8	4	6
K910104531		29/64			.4531	**.4531**	1-3/8	4	6
K910104688		15/32			.4688	**.4688**	1-3/8	4	6
K910604724	12.00				.4724	**.4724**	1-3/8	4	6
K910104844		31/64			.4844	**.4844**	1-1/2	4	6
K910604921	12.50				.4921	**.4921**	1-1/2	4	6
K910605118	13.00				.5118	**.5118**	1-1/2	4	6
K910605512	14.00				.5512	**.5512**	1-1/2	4	6
K910105625		9/16			.5625	**.5625**	1-1/2	4	6
K910106250		5/8			.6250	**.6250**	1-3/4	4	6
K910606299	16.00				.6299	**.6299**	1-3/4	4	6

O.D. Tolerance	Shank Dia. Tolerance
Up to 1/4 Inch : +.0000"/-.0002" Over 1/4 Inch : +.0000"/-.0003"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

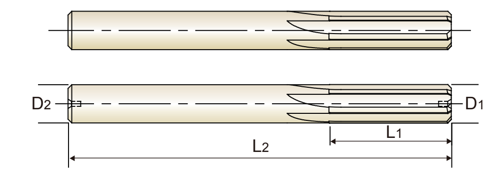
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

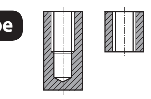
▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45°

p.A404

Hole type



Unit : inch

EDP No.	Nominal Size	Shank Diameter	Flute Length	Overall Length	No. of Flute
	Decimal				
	D1	D2	L1	L2	
K910700355	.0355	**.0355**	1/4	1-1/2	4
K910700365	.0365	**.0365**	1/4	1-1/2	4
K910700375	.0375	**.0375**	1/4	1-1/2	4
K910700385	.0385	**.0385**	1/4	1-1/2	4
K910700395	.0395	**.0395**	1/4	1-1/2	4
K910700405	.0405	**.0405**	3/8	1-1/2	4
K910700425	.0425	**.0425**	3/8	1-1/2	4
K910700435	.0435	**.0435**	3/8	1-1/2	4
K910700440	.0440	**.0440**	3/8	1-1/2	4
K910700450	.0450	**.0450**	3/8	1-1/2	4
K910700460	.0460	**.0460**	3/8	1-1/2	4
K910700469	.0469	**.0469**	3/8	1-1/2	4
K910700470	.0470	**.0470**	3/8	1-1/2	4
K910700475	.0475	**.0475**	3/8	1-1/2	4
K910700480	.0480	**.0480**	3/8	1-1/2	4
K910700485	.0485	**.0485**	3/8	1-1/2	4
K910700490	.0490	**.0490**	3/8	1-1/2	4
K910700500	.0500	**.0500**	3/8	1-1/2	4
K910700505	.0505	**.0505**	3/8	1-1/2	4
K910700510	.0510	**.0510**	3/8	1-1/2	4
K910700515	.0515	**.0515**	3/8	1-1/2	4
K910700525	.0525	**.0525**	3/8	1-1/2	4
K910700530	.0530	**.0530**	3/8	1-1/2	4
K910700540	.0540	**.0540**	3/8	1-1/2	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

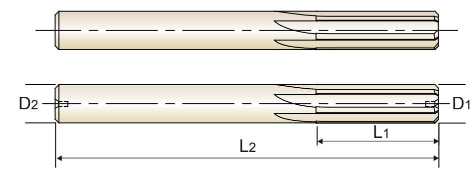
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

- ▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
- ▶Straight Flute, Right Hand Cut
- ▶Shank Diameter ≒ Nominal Reamer Diameter
- ▶Type of Center
  Up to .1175" : Non-Center
  Over .1175" : Internal



CARBIDE 45° p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910700560	.0560	.0560	3/8	1-1/2	4
K910700570	.0570	.0570	3/8	1-1/2	4
K910700580	.0580	.0580	3/8	1-1/2	4
K910700590	.0590	.0590	3/8	1-1/2	4
K910700600	.0600	.0600	3/8	1-1/2	4
K910700605	.0605	.0605	3/8	1-1/2	4
K910700610	.0610	.0610	3/8	1-1/2	4
K910700615	.0615	.0615	3/8	1-1/2	4
K910700620	.0620	.0620	3/8	1-1/2	4
K910700625	.0625	.0625	3/8	1-1/2	4
K910700630	.0630	.0630	3/8	1-1/2	4
K910700640	.0640	.0640	3/8	1-1/2	4
K910700645	.0645	.0645	3/8	1-1/2	4
K910700650	.0650	.0650	3/8	1-1/2	4
K910700655	.0655	.0655	3/8	1-1/2	4
K910700660	.0660	.0660	1/2	1-3/4	4
K910700675	.0675	.0675	1/2	1-3/4	4
K910700680	.0680	.0680	1/2	1-3/4	4
K910700690	.0690	.0690	1/2	1-3/4	4
K910700705	.0705	.0705	1/2	1-3/4	4
K910700710	.0710	.0710	1/2	1-3/4	4
K910700720	.0720	.0720	1/2	1-3/4	4
K910700740	.0740	.0740	1/2	1-3/4	4
K910700750	.0750	.0750	1/2	1-3/4	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

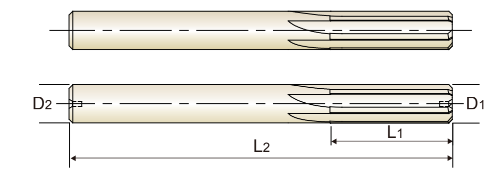
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

- ▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
- ▶Straight Flute, Right Hand Cut
- ▶Shank Diameter ≒ Nominal Reamer Diameter
- ▶Type of Center
  Up to .1175" : Non-Center
  Over .1175" : Internal



CARBIDE 45° p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910700765	.0765	.0765	1/2	1-3/4	4
K910700770	.0770	.0770	1/2	1-3/4	4
K910700775	.0775	.0775	1/2	1-3/4	4
K910700780	.0780	.0780	1/2	1-3/4	4
K910700781	.0781	.0781	1/2	1-3/4	4
K910700790	.0790	.0790	1/2	1-3/4	4
K910700795	.0795	.0795	1/2	1-3/4	4
K910700800	.0800	.0800	1/2	1-3/4	4
K910700830	.0830	.0830	1/2	2	4
K910700840	.0840	.0840	1/2	2	4
K910700850	.0850	.0850	1/2	2	4
K910700865	.0865	.0865	1/2	2	4
K910700870	.0870	.0870	1/2	2	4
K910700880	.0880	.0880	1/2	2	4
K910700900	.0900	.0900	1/2	2	4
K910700905	.0905	.0905	1/2	2	4
K910700910	.0910	.0910	1/2	2	4
K910700915	.0915	.0915	1/2	2	4
K910700920	.0920	.0920	1/2	2	4
K910700925	.0925	.0925	1/2	2	4
K910700930	.0930	.0930	1/2	2	4
K910700938	.0938	.0938	1/2	2	4
K910700940	.0940	.0940	1/2	2	4
K910700945	.0945	.0945	1/2	2	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

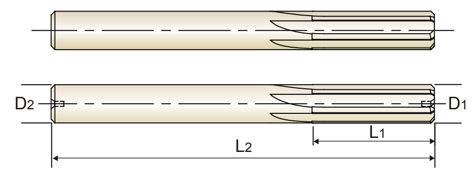
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45° p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910700950	.0950	.0950	1/2	2	4
K910700955	.0955	.0955	1/2	2	4
K910700970	.0970	.0970	5/8	2	4
K910700975	.0975	.0975	5/8	2-1/4	4
K910700985	.0985	.0985	5/8	2-1/4	4
K910700990	.0990	.0990	5/8	2-1/4	4
K910701000	.1000	.1000	5/8	2-1/4	4
K910701010	.1010	.1010	5/8	2-1/4	4
K910701020	.1020	.1020	5/8	2-1/4	4
K910701030	.1030	.1030	5/8	2-1/4	4
K910701050	.1050	.1050	5/8	2-1/4	4
K910701060	.1060	.1060	5/8	2-1/4	4
K910701070	.1070	.1070	5/8	2-1/4	4
K910701080	.1080	.1080	5/8	2-1/4	4
K910701090	.1090	.1090	5/8	2-1/4	4
K910701094	.1094	.1094	5/8	2-1/4	4
K910701120	.1120	.1120	5/8	2-1/4	4
K910701140	.1140	.1140	5/8	2-1/4	4
K910701150	.1150	.1150	5/8	2-1/4	4
K910701170	.1170	.1170	5/8	2-1/4	4
K910701175	.1175	.1175	5/8	2-1/4	4
K910701180	.1180	.1180	5/8	2-1/4	4
K910701185	.1185	.1185	5/8	2-1/4	4
K910701190	.1190	.1190	5/8	2-1/4	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

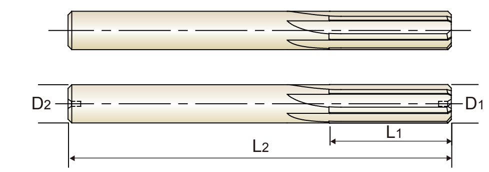
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45° p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910701195	.1195	.1195	5/8	2-1/4	4
K910701205	.1205	.1205	5/8	2-1/4	4
K910701210	.1210	.1210	5/8	2-1/4	4
K910701215	.1215	.1215	5/8	2-1/4	4
K910701220	.1220	.1220	5/8	2-1/4	4
K910701225	.1225	.1225	5/8	2-1/4	4
K910701230	.1230	.1230	5/8	2-1/4	4
K910701235	.1235	.1235	5/8	2-1/4	4
K910701240	.1240	.1240	5/8	2-1/4	4
K910701245	.1245	.1245	5/8	2-1/4	4
K910701247	.1247	.1247	5/8	2-1/4	4
K910701250	.1250	.1250	5/8	2-1/4	4
K910701255	.1255	.1255	5/8	2-1/4	4
K910701260	.1260	.1260	5/8	2-1/4	4
K910701265	.1265	.1265	5/8	2-1/4	4
K910701270	.1270	.1270	5/8	2-1/4	4
K910701275	.1275	.1275	5/8	2-1/4	4
K910701290	.1290	.1290	5/8	2-1/4	4
K910701295	.1295	.1295	3/4	2-1/2	4
K910701300	.1300	.1300	5/8	2-1/2	4
K910701305	.1305	.1305	3/4	2-1/2	4
K910701310	.1310	.1310	3/4	2-1/2	4
K910701315	.1315	.1315	3/4	2-1/2	4
K910701320	.1320	.1320	3/4	2-1/2	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

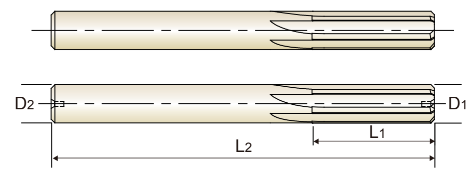
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

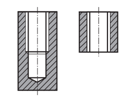
▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45°

p.A404

Hole type



Unit : inch

EDP No.	Nominal Size Decimal	Shank Diameter	Flute Length	Overall Length	No. of Flute
	D1	D2	L1	L2	
K910701330	.1330	.1330	3/4	2-1/2	4
K910701340	.1340	.1340	3/4	2-1/2	4
K910701350	.1350	.1350	3/4	2-1/2	4
K910701365	.1365	.1365	3/4	2-1/2	4
K910701370	.1370	.1370	3/4	2-1/2	4
K910701380	.1380	.1380	3/4	2-1/2	4
K910701390	.1390	.1390	3/4	2-1/2	4
K910701400	.1400	.1400	3/4	2-1/2	4
K910701406	.1406	.1406	3/4	2-1/2	4
K910701410	.1410	.1410	3/4	2-1/2	4
K910701415	.1415	.1415	3/4	2-1/2	4
K910701420	.1420	.1420	3/4	2-1/2	4
K910701430	.1430	.1430	3/4	2-1/2	4
K910701435	.1435	.1435	3/4	2-1/2	4
K910701450	.1450	.1450	3/4	2-1/2	4
K910701460	.1460	.1460	3/4	2-1/2	4
K910701480	.1480	.1480	3/4	2-1/2	4
K910701490	.1490	.1490	3/4	2-1/2	4
K910701500	.1500	.1500	3/4	2-1/2	4
K910701510	.1510	.1510	3/4	2-1/2	4
K910701530	.1530	.1530	3/4	2-1/2	4
K910701545	.1545	.1545	3/4	2-1/2	4
K910701550	.1550	.1550	3/4	2-1/2	4
K910701555	.1555	.1555	3/4	2-1/2	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

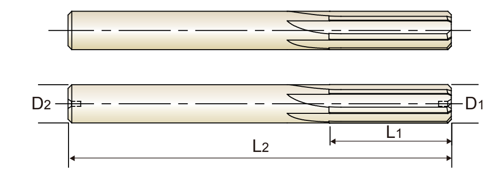
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

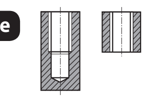
▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45°

p.A404

Hole type



Unit : inch

EDP No.	Nominal Size Decimal	Shank Diameter	Flute Length	Overall Length	No. of Flute
	D1	D2	L1	L2	
K910701560	.1560	.1560	3/4	2-1/2	4
K910701562	.1562	.1562	3/4	2-1/2	4
K910701565	.1565	.1565	3/4	2-1/2	4
K910701580	.1580	.1580	3/4	2-1/2	4
K910701585	.1585	.1585	3/4	2-1/2	4
K910701600	.1600	.1600	3/4	2-1/2	4
K910701605	.1605	.1605	7/8	2-3/4	4
K910701615	.1615	.1615	7/8	2-3/4	4
K910701620	.1620	.1620	7/8	2-3/4	4
K910701630	.1630	.1630	7/8	2-3/4	4
K910701640	.1640	.1640	7/8	2-3/4	4
K910701650	.1650	.1650	7/8	2-3/4	4
K910701670	.1670	.1670	7/8	2-3/4	4
K910701680	.1680	.1680	7/8	2-3/4	4
K910701690	.1690	.1690	7/8	2-3/4	4
K910701700	.1700	.1700	7/8	2-3/4	4
K910701710	.1710	.1710	7/8	2-3/4	4
K910701719	.1719	.1719	7/8	2-3/4	4
K910701720	.1720	.1720	7/8	2-3/4	4
K910701740	.1740	.1740	7/8	2-3/4	4
K910701750	.1750	.1750	7/8	2-3/4	4
K910701760	.1760	.1760	7/8	2-3/4	4
K910701780	.1780	.1780	7/8	2-3/4	4
K910701790	.1790	.1790	7/8	2-3/4	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

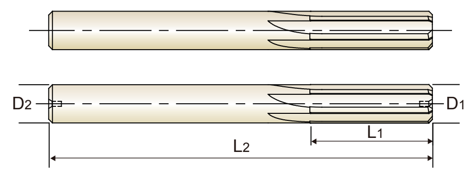
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG REAMER

Decimal K9107 SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45°

p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910701810	.1810	.1810	7/8	2-3/4	4
K910701830	.1830	.1830	7/8	2-3/4	4
K910701840	.1840	.1840	7/8	2-3/4	4
K910701855	.1855	.1855	7/8	2-3/4	4
K910701860	.1860	.1860	7/8	2-3/4	4
K910701865	.1865	.1865	7/8	2-3/4	4
K910701870	.1870	.1870	7/8	2-3/4	4
K910701875	.1875	.1875	7/8	2-3/4	4
K910701880	.1880	.1880	7/8	2-3/4	4
K910701885	.1885	.1885	7/8	2-3/4	4
K910701895	.1895	.1895	7/8	2-3/4	4
K910701900	.1900	.1900	7/8	2-3/4	4
K910701905	.1905	.1905	7/8	2-3/4	4
K910701915	.1915	.1915	1	3	4
K910701920	.1920	.1920	7/8	2-3/4	4
K910701925	.1925	.1925	1	3	4
K910701930	.1930	.1930	7/8	2-3/4	4
K910701940	.1940	.1940	7/8	2-3/4	4
K910701950	.1950	.1950	7/8	2-3/4	4
K910701955	.1955	.1955	1	3	4
K910701965	.1965	.1965	1	3	4
K910701970	.1970	.1970	1	3	4
K910701980	.1980	.1980	1	3	4
K910702000	.2000	.2000	1	3	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

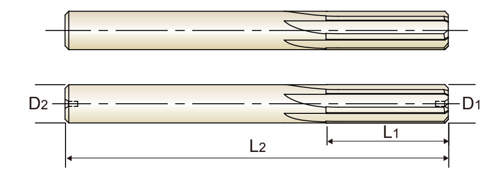
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Decimal K9107 SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45°

p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910702005	.2005	.2005	1	3	4
K910702015	.2015	.2015	1	3	4
K910702020	.2020	.2020	1	3	4
K910702025	.2025	.2025	1	3	4
K910702030	.2030	.2030	1	3	4
K910702050	.2050	.2050	1	3	4
K910702060	.2060	.2060	1	3	4
K910702070	.2070	.2070	1	3	4
K910702080	.2080	.2080	1	3	4
K910702100	.2100	.2100	1	3	4
K910702110	.2110	.2110	1	3	4
K910702120	.2120	.2120	1	3	4
K910702140	.2140	.2140	1	3	4
K910702150	.2150	.2150	1	3	4
K910702160	.2160	.2160	1	3	4
K910702170	.2170	.2170	1	3	4
K910702180	.2180	.2180	1	3	4
K910702188	.2188	.2188	1	3	4
K910702190	.2190	.2190	1	3	4
K910702200	.2200	.2200	1	3	4
K910702220	.2220	.2220	1	3	4
K910702230	.2230	.2230	1	3	4
K910702240	.2240	.2240	1	3	4
K910702250	.2250	.2250	1	3	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

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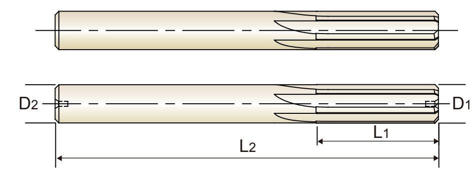


CARBIDE 45°

p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910702260	.2260	.2260	1	3	4
K910702270	.2270	.2270	1	3	4
K910702290	.2290	.2290	1	3	4
K910702300	.2300	.2300	1	3	4
K910702310	.2310	.2310	1	3	4
K910702320	.2320	.2320	1	3	4
K910702330	.2330	.2330	1	3	4
K910702350	.2350	.2350	1	3	4
K910702355	.2355	.2355	1	3	4
K910702360	.2360	.2360	1	3	4
K910702365	.2365	.2365	1	3	4
K910702370	.2370	.2370	1	3	4
K910702375	.2375	.2375	1	3	4
K910702390	.2390	.2390	1	3	4
K910702400	.2400	.2400	1	3	4
K910702410	.2410	.2410	1	3	4
K910702430	.2430	.2430	1	3	4
K910702440	.2440	.2440	1	3	4
K910702450	.2450	.2450	1	3	4
K910702470	.2470	.2470	1	3	4
K910702480	.2480	.2480	1	3	4
K910702485	.2485	.2485	1	3	4
K910702490	.2490	.2490	1	3	4
K910702495	.2495	.2495	1	3	4

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

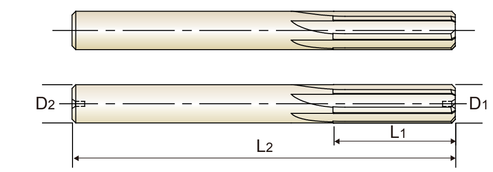
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45°

p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910702500	.2500	.2500	1	3	4
K910702505	.2505	.2505	1	3	4
K910702510	.2510	.2510	1	3	4
K910702515	.2515	.2515	1	3	4
K910702520	.2520	.2520	1	3	4
K910702530	.2530	.2530	1	3	4
K910702540	.2540	.2540	1	3	4
K910702550	.2550	.2550	1	3	6
K910702560	.2560	.2560	1-1/8	3-1/4	6
K910702580	.2580	.2580	1-1/8	3-1/4	6
K910702590	.2590	.2590	1-1/8	3-1/4	6
K910702600	.2600	.2600	1-1/8	3-1/4	6
K910702620	.2620	.2620	1-1/8	3-1/4	6
K910702630	.2630	.2630	1-1/8	3-1/4	6
K910702640	.2640	.2640	1-1/8	3-1/4	6
K910702650	.2650	.2650	1-1/8	3-1/4	6
K910702670	.2670	.2670	1-1/8	3-1/4	6
K910702680	.2680	.2680	1-1/8	3-1/4	6
K910702690	.2690	.2690	1-1/8	3-1/4	6
K910702700	.2700	.2700	1-1/8	3-1/4	6
K910702710	.2710	.2710	1-1/8	3-1/4	6
K910702730	.2730	.2730	1-1/8	3-1/4	6
K910702740	.2740	.2740	1-1/8	3-1/4	6
K910702750	.2750	.2750	1-1/8	3-1/4	6

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

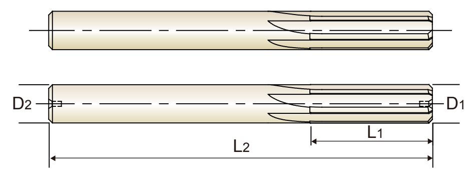
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

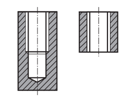
▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45°

p.A404

Hole type



Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910702760	.2760	.2760	1-1/8	3-1/4	6
K910702780	.2780	.2780	1-1/8	3-1/4	6
K910702790	.2790	.2790	1-1/8	3-1/4	6
K910702800	.2800	.2800	1-1/8	3-1/4	6
K910702812	.2812	.2812	1-1/8	3-1/4	6
K910702820	.2820	.2820	1-1/8	3-1/4	6
K910702830	.2830	.2830	1-1/8	3-1/4	6
K910702840	.2840	.2840	1-1/8	3-1/4	6
K910702850	.2850	.2850	1-1/8	3-1/4	6
K910702860	.2860	.2860	1-1/8	3-1/4	6
K910702870	.2870	.2870	1-1/8	3-1/4	6
K910702880	.2880	.2880	1-1/8	3-1/4	6
K910702890	.2890	.2890	1-1/8	3-1/4	6
K910702910	.2910	.2910	1-1/8	3-1/4	6
K910702920	.2920	.2920	1-1/8	3-1/4	6
K910702930	.2930	.2930	1-1/8	3-1/4	6
K910702940	.2940	.2940	1-1/8	3-1/4	6
K910702960	.2960	.2960	1-1/8	3-1/4	6
K910702970	.2970	.2970	1-1/8	3-1/4	6
K910702980	.2980	.2980	1-1/8	3-1/4	6
K910702990	.2990	.2990	1-1/8	3-1/4	6
K910703000	.3000	.3000	1-1/8	3-1/4	6
K910703010	.3010	.3010	1-1/8	3-1/4	6
K910703030	.3030	.3030	1-1/8	3-1/4	6

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
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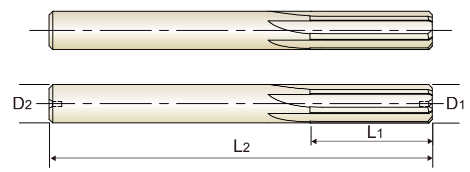
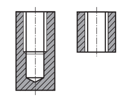
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45°

p.A404

Hole type



Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910703040	.3040	.3040	1-1/8	3-1/4	6
K910703050	.3050	.3050	1-1/8	3-1/4	6
K910703060	.3060	.3060	1-1/8	3-1/4	6
K910703070	.3070	.3070	1-1/8	3-1/4	6
K910703080	.3080	.3080	1-1/8	3-1/4	6
K910703090	.3090	.3090	1-1/8	3-1/4	6
K910703100	.3100	.3100	1-1/8	3-1/4	6
K910703105	.3105	.3105	1-1/8	3-1/4	6
K910703110	.3110	.3110	1-1/8	3-1/4	6
K910703115	.3115	.3115	1-1/8	3-1/4	6
K910703120	.3120	.3120	1-1/8	3-1/4	6
K910703125	.3125	.3125	1-1/8	3-1/4	6
K910703130	.3130	.3130	1-1/8	3-1/4	6
K910703135	.3135	.3135	1-1/8	3-1/4	6
K910703140	.3140	.3140	1-1/8	3-1/4	6
K910703170	.3170	.3170	1-1/8	3-1/4	6
K910703180	.3180	.3180	1-1/8	3-1/4	6
K910703190	.3190	.3190	1-1/8	3-1/4	6
K910703200	.3200	.3200	1-1/8	3-1/4	6
K910703210	.3210	.3210	1-1/4	3-1/2	6
K910703220	.3220	.3220	1-1/4	3-1/2	6
K910703240	.3240	.3240	1-1/4	3-1/2	6
K910703250	.3250	.3250	1-1/4	3-1/2	6
K910703260	.3260	.3260	1-1/4	3-1/2	6

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

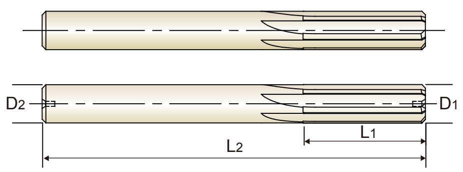
◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

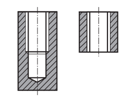
CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45° p.A404

Hole type



Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910703270	.3270	.3270	1-1/4	3-1/2	6
K910703280	.3280	.3280	1-1/4	3-1/2	6
K910703290	.3290	.3290	1-1/4	3-1/2	6
K910703300	.3300	.3300	1-1/4	3-1/2	6
K910703310	.3310	.3310	1-1/4	3-1/2	6
K910703330	.3330	.3330	1-1/4	3-1/2	6
K910703340	.3340	.3340	1-1/4	3-1/2	6
K910703350	.3350	.3350	1-1/4	3-1/2	6
K910703360	.3360	.3360	1-1/4	3-1/2	6
K910703370	.3370	.3370	1-1/4	3-1/2	6
K910703380	.3380	.3380	1-1/4	3-1/2	6
K910703400	.3400	.3400	1-1/4	3-1/2	6
K910703410	.3410	.3410	1-1/4	3-1/2	6
K910703420	.3420	.3420	1-1/4	3-1/2	6
K910703430	.3430	.3430	1-1/4	3-1/2	6
K910703438	.3438	.3438	1-1/4	3-1/2	6
K910703440	.3440	.3440	1-1/4	3-1/2	6
K910703450	.3450	.3450	1-1/4	3-1/2	6
K910703460	.3460	.3460	1-1/4	3-1/2	6
K910703470	.3470	.3470	1-1/4	3-1/2	6
K910703490	.3490	.3490	1-1/4	3-1/2	6
K910703500	.3500	.3500	1-1/4	3-1/2	6
K910703510	.3510	.3510	1-1/4	3-1/2	6
K910703520	.3520	.3520	1-1/4	3-1/2	6

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

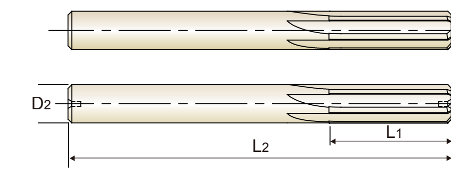
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG REAMER
Decimal K9107 SERIES

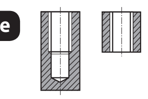
CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45° p.A404

Hole type



Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910703530	.3530	.3530	1-1/4	3-1/2	6
K910703540	.3540	.3540	1-1/4	3-1/2	6
K910703550	.3550	.3550	1-1/4	3-1/2	6
K910703560	.3560	.3560	1-1/4	3-1/2	6
K910703570	.3570	.3570	1-1/4	3-1/2	6
K910703590	.3590	.3590	1-1/4	3-1/2	6
K910703600	.3600	.3600	1-1/4	3-1/2	6
K910703610	.3610	.3610	1-1/4	3-1/2	6
K910703620	.3620	.3620	1-1/4	3-1/2	6
K910703630	.3630	.3630	1-1/4	3-1/2	6
K910703640	.3640	.3640	1-1/4	3-1/2	6
K910703650	.3650	.3650	1-1/4	3-1/2	6
K910703660	.3660	.3660	1-1/4	3-1/2	6
K910703670	.3670	.3670	1-1/4	3-1/2	6
K910703690	.3690	.3690	1-1/4	3-1/2	6
K910703700	.3700	.3700	1-1/4	3-1/2	6
K910703710	.3710	.3710	1-1/4	3-1/2	6
K910703720	.3720	.3720	1-1/4	3-1/2	6
K910703730	.3730	.3730	1-1/4	3-1/2	6
K910703745	.3745	.3745	1-1/4	3-1/2	6
K910703750	.3750	.3750	1-1/4	3-1/2	6
K910703755	.3755	.3755	1-1/4	3-1/2	6
K910703760	.3760	.3760	1-1/4	3-1/2	6
K910703765	.3765	.3765	1-1/4	3-1/2	6

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

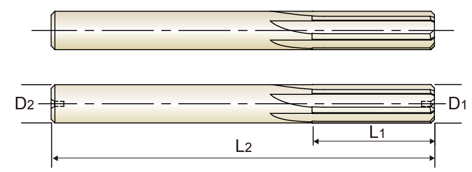
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45°

p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910703780	.3780	.3780	1-1/4	3-1/2	6
K910703790	.3790	.3790	1-1/4	3-1/2	6
K910703800	.3800	.3800	1-1/4	3-1/2	6
K910703810	.3810	.3810	1-1/4	3-1/2	6
K910703820	.3820	.3820	1-1/4	3-1/2	6
K910703830	.3830	.3830	1-1/4	3-1/2	6
K910703840	.3840	.3840	1-1/4	3-1/2	6
K910703850	.3850	.3850	1-1/4	3-1/2	6
K910703870	.3870	.3870	1-1/4	3-1/2	6
K910703880	.3880	.3880	1-1/4	3-1/2	6
K910703890	.3890	.3890	1-1/4	3-1/2	6
K910703900	.3900	.3900	1-1/4	3-1/2	6
K910703910	.3910	.3910	1-1/4	3-1/2	6
K910703920	.3920	.3920	1-1/4	3-1/2	6
K910703930	.3930	.3930	1-1/4	3-1/2	6
K910703940	.3940	.3940	1-1/4	3-1/2	6
K910703950	.3950	.3950	1-1/4	3-1/2	6
K910703960	.3960	.3960	1-1/4	3-1/2	6
K910703980	.3980	.3980	1-1/4	3-1/2	6
K910703990	.3990	.3990	1-1/4	3-1/2	6
K910704000	.4000	.4000	1-1/4	3-1/2	6
K910704010	.4010	.4010	1-1/4	3-1/2	6
K910704020	.4020	.4020	1-1/4	3-1/2	6
K910704030	.4030	.4030	1-1/4	3-1/2	6

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

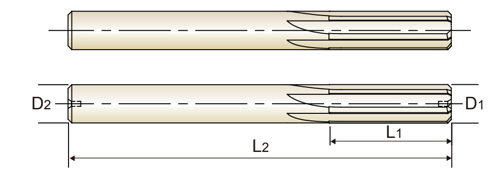
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45°

p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910704050	.4050	.4050	1-1/4	3-1/2	6
K910704060	.4060	.4060	1-1/4	3-1/2	6
K910704070	.4070	.4070	1-1/4	3-1/2	6
K910704080	.4080	.4080	1-1/4	3-1/2	6
K910704090	.4090	.4090	1-1/4	3-1/2	6
K910704100	.4100	.4100	1-1/4	3-1/2	6
K910704110	.4110	.4110	1-1/4	3-1/2	6
K910704120	.4120	.4120	1-1/4	3-1/2	6
K910704140	.4140	.4140	1-1/4	3-1/2	6
K910704150	.4150	.4150	1-1/4	3-1/2	6
K910704160	.4160	.4160	1-3/8	4	6
K910704170	.4170	.4170	1-3/8	4	6
K910704180	.4180	.4180	1-3/8	4	6
K910704190	.4190	.4190	1-3/8	4	6
K910704200	.4200	.4200	1-3/8	4	6
K910704210	.4210	.4210	1-3/8	4	6
K910704220	.4220	.4220	1-3/8	4	6
K910704230	.4230	.4230	1-3/8	4	6
K910704240	.4240	.4240	1-3/8	4	6
K910704250	.4250	.4250	1-3/8	4	6
K910704260	.4260	.4260	1-3/8	4	6
K910704270	.4270	.4270	1-3/8	4	6
K910704280	.4280	.4280	1-3/8	4	6
K910704290	.4290	.4290	1-3/8	4	6

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

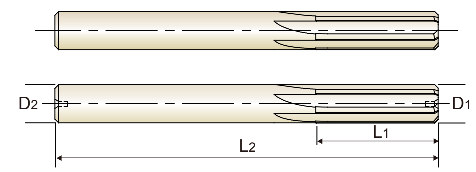
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45°

p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910704300	.4300	.4300	1-3/8	4	6
K910704310	.4310	.4310	1-3/8	4	6
K910704320	.4320	.4320	1-3/8	4	6
K910704330	.4330	.4330	1-3/8	4	6
K910704340	.4340	.4340	1-3/8	4	6
K910704350	.4350	.4350	1-3/8	4	6
K910704360	.4360	.4360	1-3/8	4	6
K910704365	.4365	.4365	1-3/8	4	6
K910704370	.4370	.4370	1-3/8	4	6
K910704375	.4375	.4375	1-3/8	4	6
K910704380	.4380	.4380	1-3/8	4	6
K910704385	.4385	.4385	1-3/8	4	6
K910704390	.4390	.4390	1-3/8	4	6
K910704400	.4400	.4400	1-3/8	4	6
K910704410	.4410	.4410	1-3/8	4	6
K910704420	.4420	.4420	1-3/8	4	6
K910704430	.4430	.4430	1-3/8	4	6
K910704440	.4440	.4440	1-3/8	4	6
K910704450	.4450	.4450	1-3/8	4	6
K910704460	.4460	.4460	1-3/8	4	6
K910704470	.4470	.4470	1-3/8	4	6
K910704480	.4480	.4480	1-3/8	4	6
K910704490	.4490	.4490	1-3/8	4	6
K910704500	.4500	.4500	1-3/8	4	6

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
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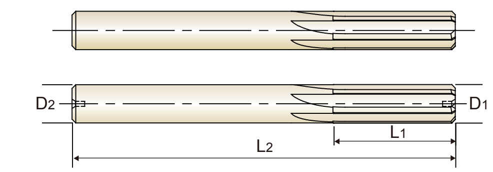

CARBIDE 45°

p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910704510	.4510	.4510	1-3/8	4	6
K910704520	.4520	.4520	1-3/8	4	6
K910704530	.4530	.4530	1-3/8	4	6
K910704540	.4540	.4540	1-3/8	4	6
K910704550	.4550	.4550	1-3/8	4	6
K910704560	.4560	.4560	1-3/8	4	6
K910704570	.4570	.4570	1-3/8	4	6
K910704580	.4580	.4580	1-3/8	4	6
K910704590	.4590	.4590	1-3/8	4	6
K910704600	.4600	.4600	1-3/8	4	6
K910704610	.4610	.4610	1-3/8	4	6
K910704620	.4620	.4620	1-3/8	4	6
K910704630	.4630	.4630	1-3/8	4	6
K910704640	.4640	.4640	1-3/8	4	6
K910704650	.4650	.4650	1-3/8	4	6
K910704660	.4660	.4660	1-3/8	4	6
K910704670	.4670	.4670	1-3/8	4	6
K910704680	.4680	.4680	1-3/8	4	6
K910704690	.4690	.4690	1-3/8	4	6
K910704700	.4700	.4700	1-3/8	4	6
K910704710	.4710	.4710	1-3/8	4	6
K910704720	.4720	.4720	1-3/8	4	6
K910704730	.4730	.4730	1-3/8	4	6
K910704740	.4740	.4740	1-3/8	4	6

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

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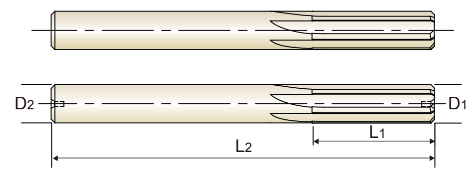


CARBIDE 45°

p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910704750	.4750	.4750	1-3/8	4	6
K910704760	.4760	.4760	1-1/2	4	6
K910704770	.4770	.4770	1-1/2	4	6
K910704780	.4780	.4780	1-1/2	4	6
K910704790	.4790	.4790	1-1/2	4	6
K910704800	.4800	.4800	1-1/2	4	6
K910704810	.4810	.4810	1-1/2	4	6
K910704820	.4820	.4820	1-1/2	4	6
K910704830	.4830	.4830	1-1/2	4	6
K910704840	.4840	.4840	1-1/2	4	6
K910704850	.4850	.4850	1-1/2	4	6
K910704860	.4860	.4860	1-1/2	4	6
K910704870	.4870	.4870	1-1/2	4	6
K910704880	.4880	.4880	1-1/2	4	6
K910704890	.4890	.4890	1-1/2	4	6
K910704900	.4900	.4900	1-1/2	4	6
K910704910	.4910	.4910	1-1/2	4	6
K910704920	.4920	.4920	1-1/2	4	6
K910704930	.4930	.4930	1-1/2	4	6
K910704940	.4940	.4940	1-1/2	4	6
K910704950	.4950	.4950	1-1/2	4	6
K910704960	.4960	.4960	1-1/2	4	6
K910704970	.4970	.4970	1-1/2	4	6
K910704980	.4980	.4980	1-1/2	4	6

▶ NEXT PAGE

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

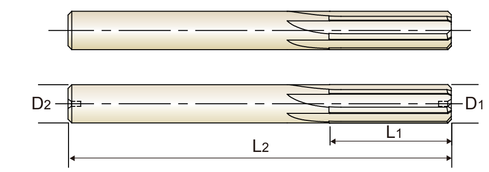
CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

YG REAMER

Decimal **K9107** SERIES

CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

▶Precision reamers for a variety of materials, applications and sizes that ensure close hole tolerance and excellent surface finish
▶Straight Flute, Right Hand Cut
▶Shank Diameter ≒ Nominal Reamer Diameter
▶Type of Center
Up to .1175" : Non-Center
Over .1175" : Internal



CARBIDE 45°

p.A404

Hole type

Unit : inch

EDP No.	Nominal Size Decimal D1	Shank Diameter D2	Flute Length L1	Overall Length L2	No. of Flute
K910704990	.4990	.4990	1-1/2	4	6
K910704995	.4995	.4995	1-1/2	4	6
K910705000	.5000	.5000	1-1/2	4	6
K910705005	.5005	.5005	1-1/2	4	6
K910705010	.5010	.5010	1-1/2	4	6
K910705020	.5020	.5020	1-1/2	4	6

O.D. Tolerance	Shank Dia. Tolerance
Up to .2504" : +.0002"/-.0000" Over .2504" : +.0003"/-.0000"	+.0000"/-.0010"

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	◎	○		○		○	○	○	◎	○	◎	○	◎	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○		○	○	○													

YG REAMER RECOMMENDED CUTTING CONDITIONS

YG REAMER RECOMMENDED CUTTING CONDITIONS

HSS, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

SFM = ft/min.
IPR = inch/rev.

ISO	VDI 3323	Material Description	SFM (ft/min.)	IPR(inch/rev.)										
				<Ø.0394	Ø.0394	Ø.0787	Ø.1575	Ø.2362	Ø.315	Ø.3937	Ø.4724	Ø.5512	Ø.6299	Ø.7874
P	1	Non-alloy steel	46	.0004~.0012	.0012~.002	.002~.0028	.0028~.0035	.0035~.0043	.0043~.0055	.0055~.0067	.0067~.0079	.0079~.0091	.0091~.0102	.0102~.0114
	2		46	.0004~.0012	.0012~.002	.002~.0028	.0028~.0035	.0035~.0043	.0043~.0055	.0055~.0067	.0067~.0079	.0079~.0091	.0091~.0102	.0102~.0114
	3		33	.0004~.0012	.0012~.002	.002~.0028	.0028~.0035	.0035~.0043	.0043~.0051	.0051~.0059	.0059~.0067	.0067~.0075	.0075~.0083	.0083~.0091
	4		26	.0004~.0012	.0012~.002	.002~.0028	.0028~.0035	.0035~.0043	.0043~.0051	.0051~.0059	.0059~.0067	.0067~.0075	.0075~.0083	.0083~.0091
	5													
	6	Low alloy steel	39	.0004~.0012	.0012~.002	.002~.0028	.0028~.0035	.0035~.0043	.0043~.0051	.0051~.0059	.0059~.0067	.0067~.0075	.0075~.0083	.0083~.0091
	7		26	.0004~.0012	.0012~.002	.002~.0028	.0028~.0035	.0035~.0043	.0043~.0051	.0051~.0059	.0059~.0067	.0067~.0075	.0075~.0083	.0083~.0091
	8													
	9													
	10	High alloyed steel, and tool steel	20	.0004~.0008	.0008~.0012	.0012~.0016	.0016~.002	.002~.0024	.0024~.0028	.0028~.0031	.0031~.0039	.0039~.0047	.0047~.0055	.0055~.0063
	11													
M	12	Stainless steel	20	.0004~.0008	.0008~.0012	.0012~.0016	.0016~.002	.002~.0024	.0024~.0028	.0028~.0031	.0031~.0039	.0039~.0047	.0047~.0055	.0055~.0063
	13		16	.0004~.0008	.0008~.0012	.0012~.0016	.0016~.002	.002~.0024	.0024~.0028	.0028~.0031	.0031~.0039	.0039~.0047	.0047~.0055	.0055~.0063
	14		13	.0004~.0008	.0008~.0012	.0012~.0016	.0016~.002	.002~.0024	.0024~.0028	.0028~.0031	.0031~.0039	.0039~.0047	.0047~.0055	.0055~.0063
K	15	Grey cast iron	46	.0004~.0012	.0012~.002	.002~.0028	.0028~.0035	.0035~.0043	.0043~.0055	.0055~.0067	.0067~.0079	.0079~.0091	.0091~.0102	.0102~.0114
	16		36	.0004~.0012	.0012~.002	.002~.0028	.0028~.0035	.0035~.0043	.0043~.0051	.0051~.0059	.0059~.0067	.0067~.0075	.0075~.0083	.0083~.0091
	17	Nodular cast iron	39	.0004~.0012	.0012~.002	.002~.0028	.0028~.0035	.0035~.0043	.0043~.0055	.0055~.0067	.0067~.0079	.0079~.0091	.0091~.0102	.0102~.0114
	18		33	.0004~.0012	.0012~.002	.002~.0028	.0028~.0035	.0035~.0043	.0043~.0051	.0051~.0059	.0059~.0067	.0067~.0075	.0075~.0083	.0083~.0091
	19	Malleable cast iron	39	.0004~.0012	.0012~.002	.002~.0028	.0028~.0035	.0035~.0043	.0043~.0055	.0055~.0067	.0067~.0079	.0079~.0091	.0091~.0102	.0102~.0114
	20		33	.0004~.0012	.0012~.002	.002~.0028	.0028~.0035	.0035~.0043	.0043~.0051	.0051~.0059	.0059~.0067	.0067~.0075	.0075~.0083	.0083~.0091
N	21	Aluminum-wrought alloy	59	.0008~.0024	.0024~.0039	.0039~.0051	.0051~.0063	.0063~.0075	.0075~.0087	.0087~.0098	.0098~.011	.011~.0122	.0122~.0134	.0134~.0146
	22		59	.0008~.0024	.0024~.0039	.0039~.0051	.0051~.0063	.0063~.0075	.0075~.0087	.0087~.0098	.0098~.011	.011~.0122	.0122~.0134	.0134~.0146
	23	Aluminum-cast, alloyed	59	.0008~.0024	.0024~.0039	.0039~.0051	.0051~.0063	.0063~.0075	.0075~.0087	.0087~.0098	.0098~.011	.011~.0122	.0122~.0134	.0134~.0146
	24		56	.0008~.0024	.0024~.0039	.0039~.0051	.0051~.0063	.0063~.0075	.0075~.0087	.0087~.0098	.0098~.011	.011~.0122	.0122~.0134	.0134~.0146
	25													
	26	Copper and Copper Alloys (Bronze / Brass)	59	.0008~.0024	.0024~.0039	.0039~.0051	.0051~.0063	.0063~.0075	.0075~.0087	.0087~.0098	.0098~.011	.011~.0122	.0122~.0134	.0134~.0146
	27		52	.0008~.0024	.0024~.0039	.0039~.0051	.0051~.0063	.0063~.0075	.0075~.0087	.0087~.0098	.0098~.011	.011~.0122	.0122~.0134	.0134~.0146
	28		66	.0008~.0024	.0024~.0039	.0039~.0051	.0051~.0063	.0063~.0075	.0075~.0087	.0087~.0098	.0098~.011	.011~.0122	.0122~.0134	.0134~.0146
	29	Non Metallic Materials												
	30													

YG REAMER

RECOMMENDED CUTTING CONDITIONS

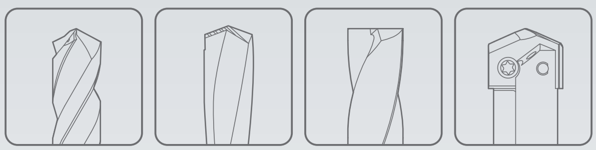
CARBIDE, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTE

SFM = ft/min.
IPR = inch/rev.

ISO	VDI 3323	Material Description	SFM (ft/min.)	IPR(inch/rev.)			
				<Ø.0394	Ø.0394	Ø.0787	Ø.1575
P	1	Non-alloy steel	59	.0008~.002	.002~.0031	.0031~.0039	.0039~.0047
	2		56	.0008~.002	.002~.0031	.0031~.0039	.0039~.0047
	3		49	.0008~.002	.002~.0031	.0031~.0039	.0039~.0047
	4		49	.0008~.002	.002~.0031	.0031~.0039	.0039~.0047
	5		49	.0008~.002	.002~.0031	.0031~.0039	.0039~.0047
	6	Low alloy steel	56	.0008~.0016	.0016~.0024	.0024~.0031	.0031~.0039
	7		46	.0008~.0016	.0016~.0024	.0024~.0031	.0031~.0039
	8		46	.0008~.0016	.0016~.0024	.0024~.0031	.0031~.0039
	9						
	10	High alloyed steel, and tool steel	43	.0008~.0016	.0016~.0024	.0024~.0031	.0031~.0039
	11						
M	12	Stainless steel	26	.0008~.0016	.0016~.0024	.0024~.0031	.0031~.0039
	13		23	.0008~.0016	.0016~.0024	.0024~.0031	.0031~.0039
	14		20	.0008~.0016	.0016~.0024	.0024~.0031	.0031~.0039
K	15	Grey cast iron	66	.0008~.002	.002~.0031	.0031~.0039	.0039~.0047
	16		49	.0008~.002	.002~.0031	.0031~.0039	.0039~.0047
	17	Nodular cast iron	59	.0008~.002	.002~.0031	.0031~.0039	.0039~.0047
	18		43	.0008~.002	.002~.0031	.0031~.0039	.0039~.0047
	19	Malleable cast iron	59	.0008~.002	.002~.0031	.0031~.0039	.0039~.0047
	20		43	.0008~.002	.002~.0031	.0031~.0039	.0039~.0047
N	21	Aluminum-wrought alloy	98	.0008~.0024	.0024~.0039	.0039~.0051	.0051~.0063
	22		98	.0008~.0024	.0024~.0039	.0039~.0051	.0051~.0063
	23	Aluminum-cast, alloyed	98	.0008~.0024	.0024~.0039	.0039~.0051	.0051~.0063
	24		82	.0008~.0024	.0024~.0039	.0039~.0051	.0051~.0063
	25						
	26	Copper and Copper Alloys (Bronze / Brass)	82	.0008~.0024	.0024~.0039	.0039~.0051	.0051~.0063
	27		72	.0008~.0024	.0024~.0039	.0039~.0051	.0051~.0063
	28		75	.0008~.0024	.0024~.0039	.0039~.0051	.0051~.0063
	29	Non Metallic Materials					
	30						

VDI 3323	IPR(inch/rev.)					
	Ø.2362	Ø.315	Ø.3937	Ø.4724	Ø.5512	Ø.6299
1	.0047~.0063	.0063~.0079	.0079~.0094	.0094~.011	.011~.0126	.0126~.0142
2	.0047~.0063	.0063~.0079	.0079~.0094	.0094~.011	.011~.0126	.0126~.0142
3	.0047~.0063	.0063~.0079	.0079~.0094	.0094~.011	.011~.0126	.0126~.0142
4	.0047~.0063	.0063~.0079	.0079~.0094	.0094~.011	.011~.0126	.0126~.0142
5	.0047~.0063	.0063~.0079	.0079~.0094	.0094~.011	.011~.0126	.0126~.0142
6	.0039~.0047	.0047~.0059	.0059~.0071	.0071~.0083	.0083~.0094	.0094~.0106
7	.0039~.0047	.0047~.0059	.0059~.0071	.0071~.0083	.0083~.0094	.0094~.0106
8	.0039~.0047	.0047~.0059	.0059~.0071	.0071~.0083	.0083~.0094	.0094~.0106
9						
10	.0039~.0047	.0047~.0059	.0059~.0071	.0071~.0083	.0083~.0094	.0094~.0106
11						
12	.0039~.0047	.0047~.0059	.0059~.0071	.0071~.0083	.0083~.0094	.0094~.0106
13	.0039~.0047	.0047~.0059	.0059~.0071	.0071~.0083	.0083~.0094	.0094~.0106
14	.0039~.0047	.0047~.0059	.0059~.0071	.0071~.0083	.0083~.0094	.0094~.0106
15	.0047~.0063	.0063~.0079	.0079~.0094	.0094~.011	.011~.0126	.0126~.0142
16	.0047~.0063	.0063~.0079	.0079~.0094	.0094~.011	.011~.0126	.0126~.0142
17	.0047~.0063	.0063~.0079	.0079~.0094	.0094~.011	.011~.0126	.0126~.0142
18	.0047~.0063	.0063~.0079	.0079~.0094	.0094~.011	.011~.0126	.0126~.0142
19	.0047~.0063	.0063~.0079	.0079~.0094	.0094~.011	.011~.0126	.0126~.0142
20	.0047~.0063	.0063~.0079	.0079~.0094	.0094~.011	.011~.0126	.0126~.0142
21	.0063~.0079	.0079~.0098	.0098~.0118	.0118~.0138	.0138~.0157	.0157~.0177
22	.0063~.0079	.0079~.0098	.0098~.0118	.0118~.0138	.0138~.0157	.0157~.0177
23	.0063~.0079	.0079~.0098	.0098~.0118	.0118~.0138	.0138~.0157	.0157~.0177
24	.0063~.0079	.0079~.0098	.0098~.0118	.0118~.0138	.0138~.0157	.0157~.0177
25						
26	.0063~.0079	.0079~.0098	.0098~.0118	.0118~.0138	.0138~.0157	.0157~.0177
27	.0063~.0079	.0079~.0098	.0098~.0118	.0118~.0138	.0138~.0157	.0157~.0177
28	.0063~.0079	.0079~.0098	.0098~.0118	.0118~.0138	.0138~.0157	.0157~.0177
29						
30						

Global Cutting Tool Leader **YG-1**



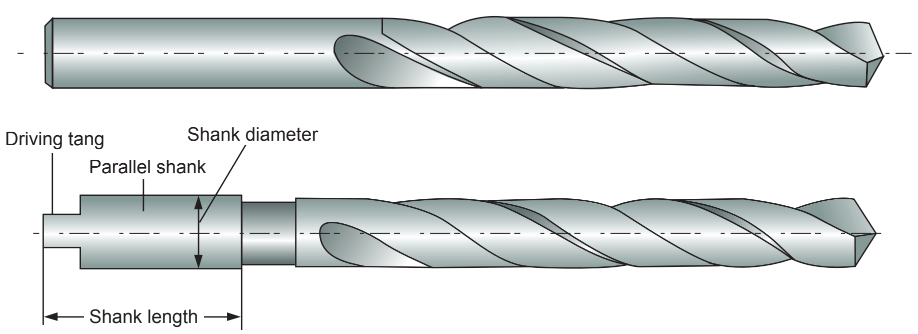
HOLEMAKING

Being the best through innovation

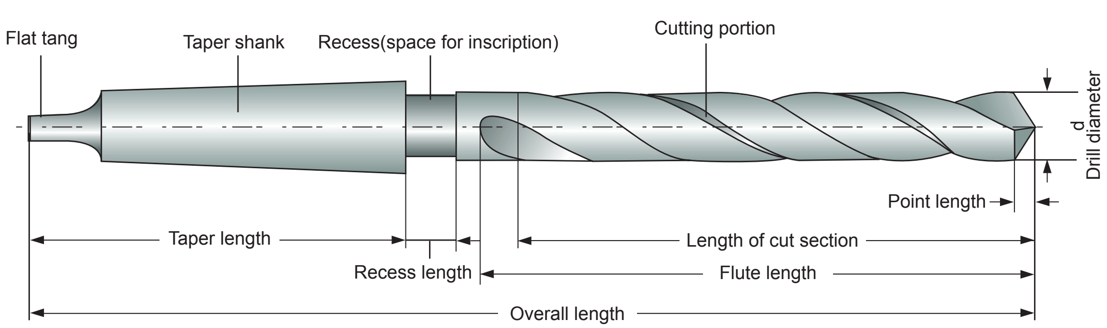
DRILLS

TECHNICAL DATA

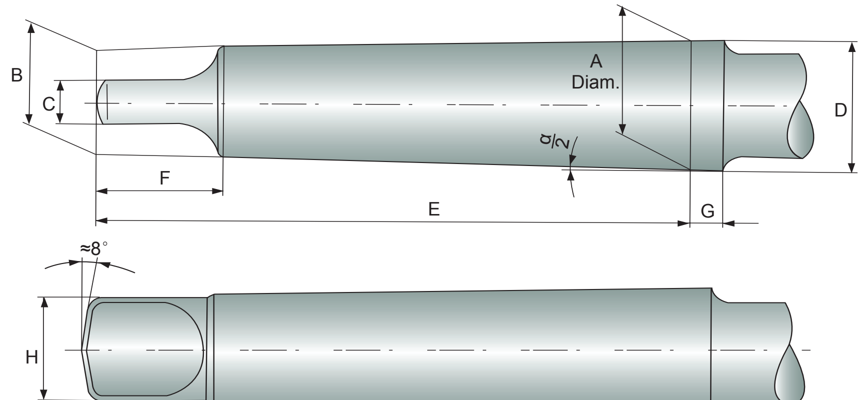
1 Twist Drill with parallel shank



2 Twist Drill with taper shank



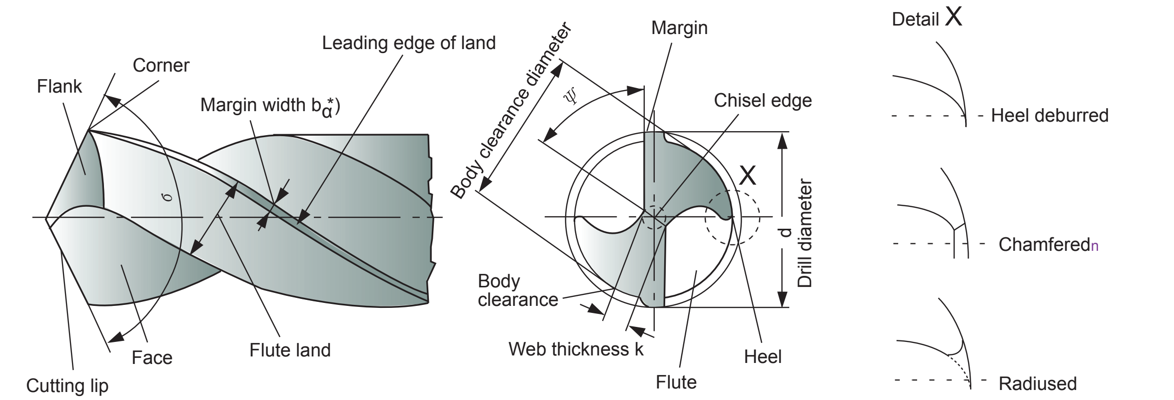
3 General dimensions of morse taper shanks



Morse Taper Shank	A mm	B mm	C(h13) mm	D mm	E mm	F(max.) mm	G mm	H(max.) mm	$\alpha/2$
No.1	12.065	9	5.2	12.2	62	13.5	3.5	8.7	1°25´43″
No.2	17.780	14	6.3	18.0	75	16	5	13.5	1°25´50″
No.3	23.825	19.1	7.9	24.1	94	20	5	18.5	1°26´16″
No.4	31.267	25.2	11.9	31.6	117.5	24	6.5	24.5	1°29´15″
No.5	44.399	36.5	15.9	44.7	149.5	29	6.5	35.7	1°30´26″
No.6	63.348	52.4	19	63.8	210	40	8	51	1°29´36″

YG TECHNICAL DATA

4 Cutting portion



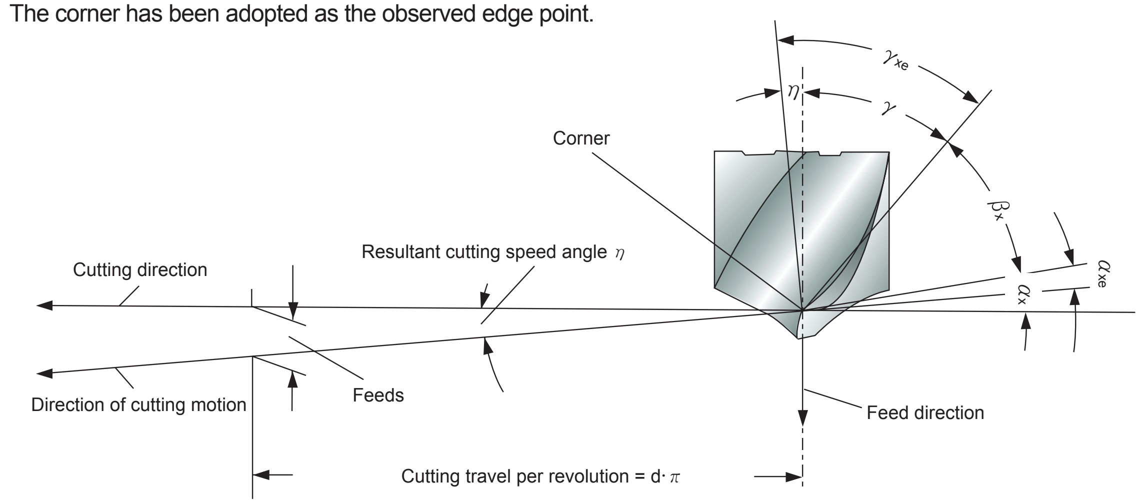
σ = Point angle (sigma)

Ψ = Chisel edge angle (psi)

* In the context of cutting technology, land width b_{α} is the body clearance land width which is to be by $b_{f\alpha n}$, see DIN 6581.

5 Angle at the cutting edges

The corner has been adopted as the observed edge point.



α_x = Side clearance angle (alpha)

α_{xe} = Effective side clearance angle

β_x = Side wedge angle (beta)

γ_x = Front rake angle (gamma)

γ_{xe} = Working front rake angle

η = Resultant cutting speed angle (eta)

Clearance angle α, wedge angle β and rake angle γ are measured in the tool orthogonal plane. For details, see DIN 6581, definitions of metal-cutting technology; geometry at the tool edge.

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
REAMERS
TECHNICAL DATA

6 Web thickness k

Test values : The web thickness according to Fig. 1 shall not be less than the minimum value k_{min} indicated in Fig. 2.
Test point : At the point of the drill.
Testing equipment : Slide gauge with measuring points.

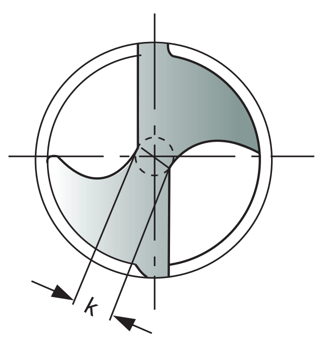


Figure 1. Web thickness k

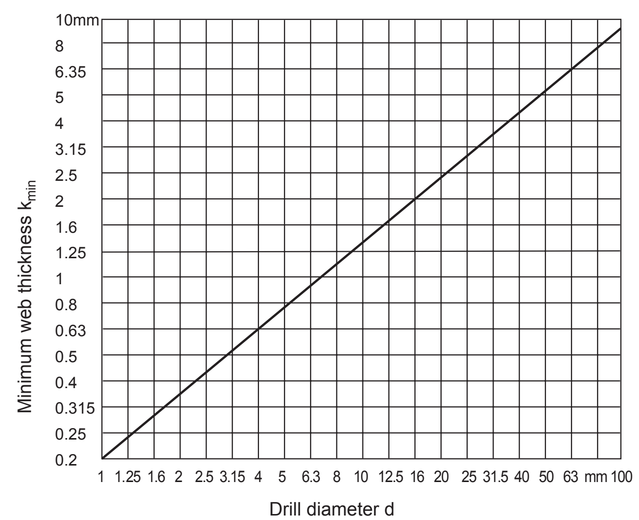


Figure 2. Web thickness k_{min}

7 Margin width bα

Test values : The land width as in Fig. 3 shall lie within the limited values indicated in Fig. 4.
Test point : 5mm behind the corner
Testing equipment : Slide gauge

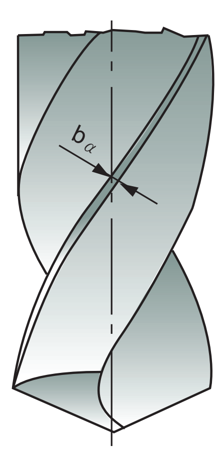


Figure 3. Margin width b_α

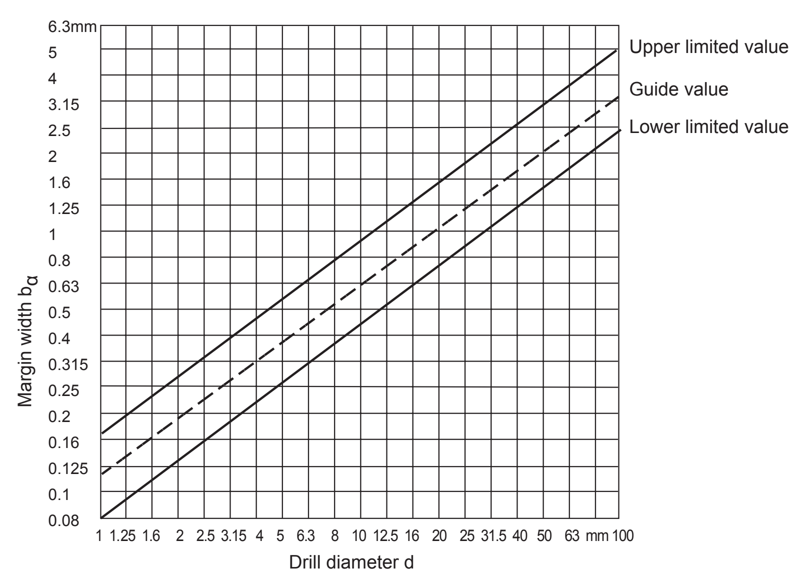


Figure 4. Margin width b_α

YG TECHNICAL DATA

8 Angle on Twist Drills

(1) Side rake angle γf (Helix angle)

Recommended test value : Recommended ranges depending on the tool types N,H and W according to DIN 1836 and the diameter of the drill included in Fig. 5.

Test point : At the corner, see Fig. 6.

Testing equipment : According to VDI Guideline 3331 Part 1, Section Margin width b_α

Note : The side rake angle γ_f is measured in place of the orthogonal rake angle γ_o found in the wedge measuring plane (see DIN 6581), as this changes along the cutting edge (becoming smaller towards the point of the drill).

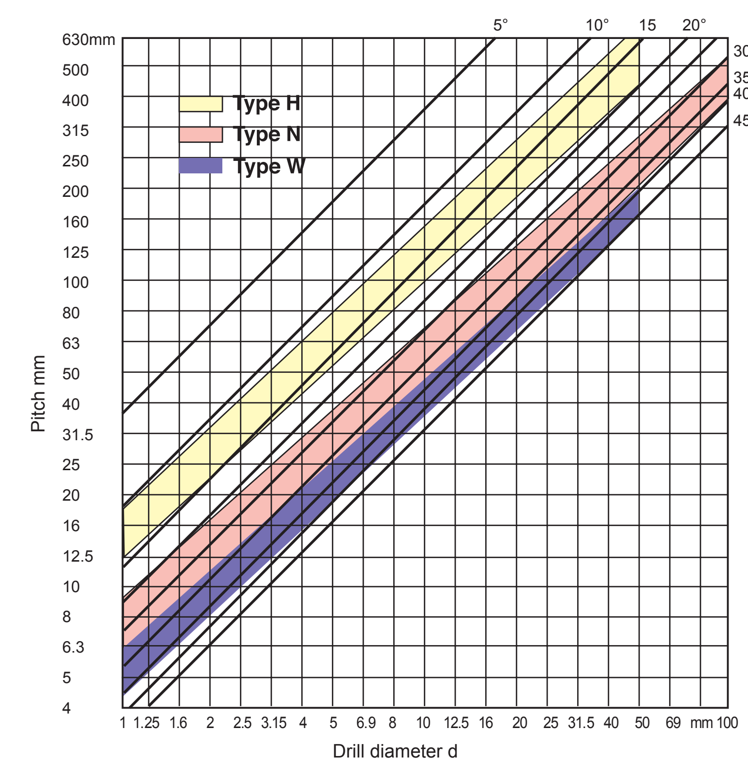


Figure 6. Side rake angle γ_f

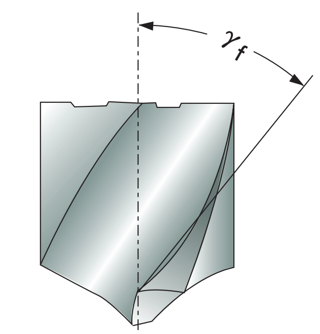


Figure 5. Side rake angle γ_f

(2) Point angle σ

Test value : Usual executin for tool types N and H : σ =118°,
for tool type W : σ =130°

Test point : At the cutting, see Fig. 7.

Testing equipment : According to VDI Guideline 3331 Part 1, Section Margin width b_α

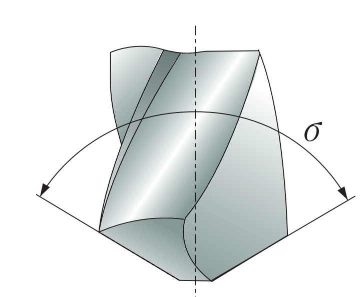


Figure 7. Point angle σ

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DREAM DRILLS -MQL TYPE
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9 Resharpening Twist Drills

(1) Drills are worn off irregularly. It should be sharpened prior to developing into excessive wear.

(2) Resharpening

① Grind the correct point angle to suit your application. (figure 8)
② Check that both cutting lips have the same angle. On a 130° point, each lip should be 65° toward the axis. The point must be on center, i.e., the chisel edge must produce cutting lips of equal length. (figure 8)
③ Grind Primary relief and Secondary clearance. (figure 9)
④ Grind web thinning. (figure 10)

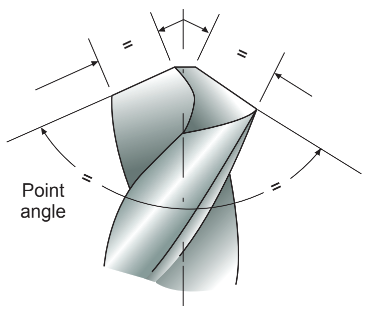


Figure 8

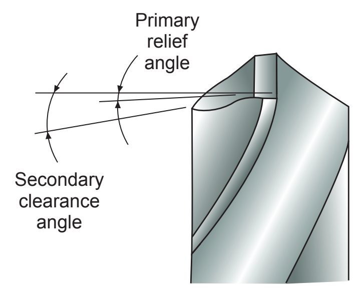


Figure 9

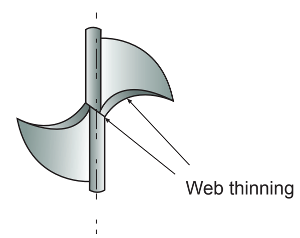
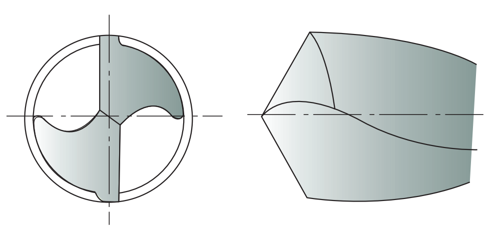


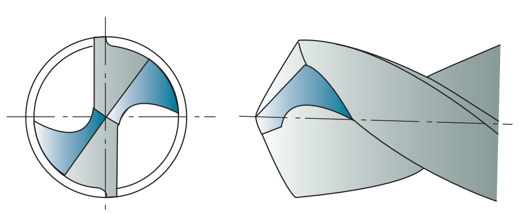
Figure 10

10 Web thinning

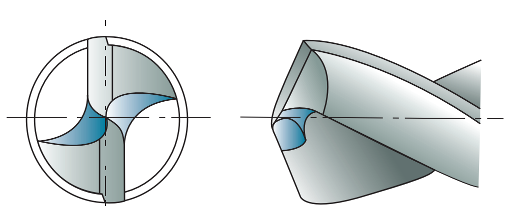
(1) Without thinning
Suitable for drill of general purpose.
Thanks to thin web thickness, web thinning is not needed.
This without web thinning type is applied to design of drills for mild steels, alloy steels, cast iron, stainless steels, titanium, inconel, etc. and conventional cutting conditons.



(2) Type C thinning (DIN1412 FORM C, SPLIT POINT)
Because Split point enables good centering when drilling and breaks the chips, chip removals are easy.
Suitable for drill design in high hardened tough materials, i.e, heat treated steels, titanium alloys, stainless steels, incoroy inconel, nimonic, etc.



(3) Type R thinning (HELICAL THINNING)
Helical thinning ensures to frequent chip breaking and removal. The different direction force of cutting edges and helical thinning parts enable that chips curl, break and remove through the flutes. In addition, helical thinning makes the chip room up to center, remove the chisel and enables good centering



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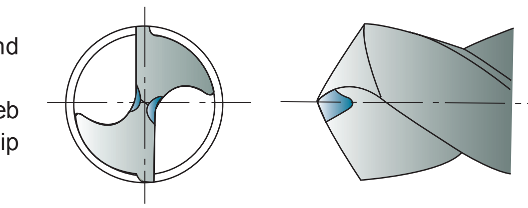
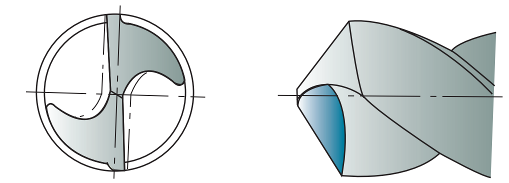
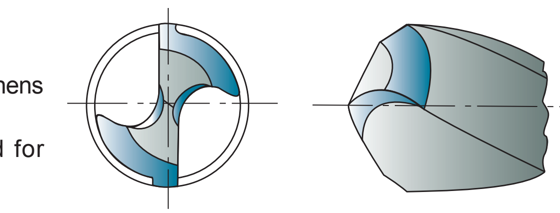
(4) Type A thinning (DIN1412 FORM A)
A type thinnings makes thin chisel, good chip removal and favorable centering.
This type is the easiest type to grind the thinning. In narrow web and wide fluted drills, keeping of the rigidity and smooth chip removal are possible.



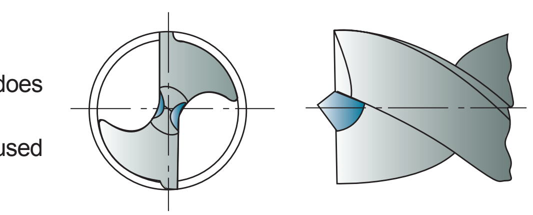
(5) Type B thinning (DIN1412 FORM B)
In case of work materials with low cutting resistance and good chip removal, i.e., cast iron, aluminum, plastic etc., B type thinning is suitable.
Especially when drills for high hardened steels are designed, this type is applied to decrease rake angle and avoid chipping of cutting lips.



(6) Type D thinning (DIN1412 FORM D)
Grey cast iron thinning; bevelling of external edges strengthens the cutting edge.
Used for medium to high grey cast iron hardness and for abrasives.



(7) Type E thinning (DIN1412 FORM E)
Center drill bit thinning; ensures optimal center drilling and does not leave burs in through holes.
As the bit and cutting edges are delicate, this bit should be used for drilling thin sheet metal.



11 Surface Finishes for high speed steels Twist Drills

(1) Bright Finish
Drills with a bright finish are without surface treatment and ground condition.
Especially bright finished drills are used in machining of non ferrous materials.

(2) Coloring (Gold color)
The coloring is a thin oxide layer formed on the tool surfaces.
This is often applied to cobalt high speed steels twist drills.

(3) Steam Tempered (black oxide finish)
This is a black oxide layer 1-2㎛ formed on the tool surfaces.
Steam Tempered treated drill is the result of a steam tempering operation. Because the oxide layer retains some coolant on the tool surface, and aids chip flow, helps to dissipate heat, steam homo treated drills are recommended for ferrous applications.

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12 Coating

The use of coated cutting tools reduce production costs.
For example

- Avoidance of machine downtime due to premature tool wear.
- Higher cutting capabilities to reduce actual machining times.
- Reproducible tool life.
- Improvement of component surface quality.

(1) TiN (Titanium Nitride) coating

Titanium Nitride gives the tool a higher performance in comparison to traditional non-coated drills.
TiN coating, with good all-around properties, is recommended for the general application, i.e., attack by abrasive, adhesive and chemical wear in equal proportions.

(2) TiCN (Titanium Carbon Nitride) coating

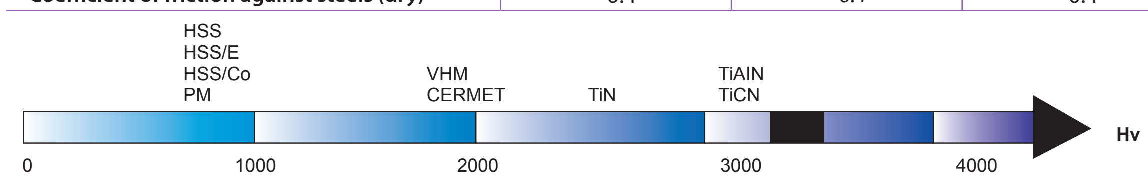
TiCN coating should be employed when severe thermodynamic stress is expected, for example when drilling in high hardened steels or in mild steels with high speed and feed.

(3) TiAlN (Titanium Alumium Nitride) coating

The addition of Aluminum to the Titanium Nitride produces an increase in hardness and an exceptional increase in resistance to oxidation at high temperature.
TiAlN coating is applied to drilling with severe thermal stress on cutting edges when continuous non-step feed, dry cutting or high speed cutting.

(4) Properties of coating

Properties	TiN	TiCN	TiAlN
Coating color	gold - yellow	blue - grey	violet - grey
Hardness (Hv 0.05)	2300	3000	3000
Coating thickness (㎛)	1~ 4	1~ 4	1~ 5
Max. working temperature (°C)	600	400	800
Coefficient of friction against steels (dry)	0.4	0.4	0.4



(5) Selection of coating

Work-material	Hss Twist Drills	Carbide Drills
Unalloyed steels	TiCN, TiAlN	TiCN, TiAlN
Steels < 1000 N/mm²	TiCN, TiAlN	TiCN, TiAlN
Steels > 1000 N/mm²	TiCN, TiAlN	TiCN, TiAlN
Stainless steels	TiCN, TiAlN	TiCN, TiAlN
Cast iron	TiCN, TiAlN	TiAlN
Al-wrought alloys	TiN	TiN
Al-cast alloys	TiCN	TiCN
Copper (pure)	CrN	CrN
Brass	TiCN	TiCN
Bronze	TiCN	TiCN

13 Drill sizes before Tapping

(1) Metric - ISO threads coarse pitch

Nominal diameter	Drill diameter	Nominal diameter	Drill diameter	Nominal diameter	Drill diameter	Nominal diameter	Drill diameter
		M3	2.5	M11	9.5	M30	26.5
M1	0.75	M3.5	2.9	M12	10.2	M33	29.5
M1.2	0.95	M4	3.3	M14	12.0	M36	32.0
M1.4	1.1	M5	4.2	M16	14.0	M39	35.0
M1.6	1.25	M6	5.0	M18	15.5	M42	37.5
M1.8	1.45	M7	6.0	M20	17.5	M45	40.5
M2	1.6	M8	6.8	M22	19.5	M48	43.0
M2.2	1.75	M9	7.8	M24	21.0	M52	47.0
M2.5	2.05	M10	8.5	M27	24.0	M56	50.5

(2) Metric ISO threads fine pitch

Nominal diameter	Tap Pitch	Drill diameter	Nominal diameter	Tap Pitch	Drill diameter	Nominal diameter	Tap Pitch	Drill diameter
2.5	0.35	2.15	17	1.5	15.5	33	1.5	31.5
3	0.35	2.65	18	1	17	33	2	31
3.5	0.35	3.15	18	1.5	16.5	33	3	30
4	0.5	3.5	18	2	16	35	1.5	33.5
4.5	0.5	4	20	1	19	36	1.5	34.5
5	0.5	4.5	20	1.5	18.5	36	2	34
5.5	0.5	5	20	2	18	36	3	33
6	0.75	5.2	22	1	21	38	1.5	36.5
7	0.75	6.2	22	1.5	20.5	39	1.5	37.5
8	0.75	7.2	22	2	20	39	2	37
8	1	7	24	1	23	39	3	36
9	0.75	8.2	24	1.5	22.5	40	1.5	38.5
9	1	8	24	2	22	40	2	38
10	0.75	9.2	25	1	24	40	3	37
10	1	9	25	1.5	23.5	42	1.5	40.5
10	1.25	8.8	25	2	23	42	2	40
11	0.75	10.2	26	1.5	24.5	42	3	39
11	1	10	27	1	26	45	1.5	43.5
12	1	11	27	1.5	25.5	45	2	43
12	1.25	10.8	27	2	25	45	3	42
12	1.5	10.5	28	1	27	48	1.5	46.5
14	1	13	28	1.5	26.5	48	2	46
14	1.25	12.8	28	2	26	48	3	45
14	1.5	12.5	30	1	29	50	1.5	48.5
15	1	14	30	1.5	28.5	50	2	48
15	1.5	13.5	30	2	28	50	3	47
16	1	15	30	3	27	52	1.5	50.5
16	1.5	14.5	32	1.5	30.5	52	2	50
17	1	16	32	2	30	52	3	49

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(3) WITHWORTH pipe threads (BSP)

Nominal size	Drill diameter	Nominal size	Drill diameter
inches	mm	inches	mm
G1/8	8.8	G1*1/4	39.5
G1/4	11.8	G1*3/8	42.0
G3/8	15.25	G1*1/2	45.0
G1/2	19.0	G1*3/4	51.0
G5/8	21.0	G2	57.0
G3/4	24.5	G2*1/4	63.0
G7/8	28.25	G2*1/2	73.0
G1	30.75	G2*3/4	79.0
G11/8	35.5	G3	85.0

(4) American unified coarse threads

UNC	Drill diameter		UNC	Drill diameter	
	inches	mm		inches	mm
No. 1	53	1.51	7/16	U	9.35
No. 2	50	1.78	1/2	27/64	10.71
No. 3	47	1.99	9/16	31/64	12.30
No. 4	43	2.26	5/8	17/32	13.49
No. 5	38	2.58	3/4	21/32	16.67
No. 6	36	2.71	7/8	49/64	19.44
No. 8	29	3.45	1	7/8	22.22
No. 10	25	3.8	1*1/8	63/64	25.00
No. 12	16	4.5	1*1/4	1*7/64	28.18
1/4	7	5.11	1*3/8	1*7/32	30.95
5/16	F	6.53	1*1/2	1*11/32	34.13
3/8	5/16	7.94			

(5) American unified fine threads

NF	Drill diameter		NF	Drill diameter	
	inches	mm		inches	mm
No. 0	3/64	1.19	3/8	Q	8.43
No. 1	53	1.51	7/16	25/64	9.92
No. 2	50	1.78	1/2	29/64	11.51
No. 3	45	2.08	9/16	33/64	13.10
No. 4	42	2.37	5/8	37/64	14.86
No. 5	37	2.64	3/4	11/16	17.46
No. 6	33	2.87	7/8	13/16	20.64
No. 8	29	3.45	1	59/64	23.42
No. 10	21	4.04	1*1/8	1* 3/64	26.59
No. 12	14	4.62	1*1/4	1*11/32	29.76
1/4	3	5.41	1*3/8	1*19/32	32.94
5/16	1	6.91	1*1/2	1*27/64	36.11

TECHNICAL DATA

14 ISO Tolerance

Drill Diameter Tolerance Inch

up to .118	over .118 up to .236	over .236 up to .394	over .394 up to .709
+0 -.00055	+0 -.00071	+0 -.00087	+0 -.00106

Drill Diameter Tolerance Metric

Diameter (mm)	1 - 3 from to	3 - 6 over to	6 - 10 over to	10 - 18 over to	18 - 30 over to
h6	0 –.00024	0 –.00032	0 –.00036	0 –.00044	0 –.00052
h7	0 –.0004	0 –.00048	0 –.00059	0 –.00071	0 –.00083
h8	0 –.00056	0 –.00071	0 –.00087	0 –.00107	0 –.00130
m7	+.00048 +.00007	+.00063 +.00015	+.00083 +.00023	+.00099 +.00027	+.00114 +.00031

15 Trouble Shooting in Drilling

Occurrence of trouble	Cause of trouble	Countermeasures
Drill will not enter work	1. Drill is dull. 2. Lip relief too small. 3. Too thick a web.	1. Grind lip relief sufficiently. 2. Grind web thinning. 3. Choose a drill with narrow web.
Margin chipping	1.Oversized jig bushing.	1. Choose the suitable jig bushing for drill diameter
Cutting lip breaks	1. Lip relief too much. 2. Feed too heavy.	1. Grind lip relief sufficiently. 2. Decrease feed rate.
Tang breaks Bruch der	1. Imperfect fit between taper shank and socket. 2. Burred or Badly worn sockets.	1. Clean the dirt or chips in sockets. 2. Change the worn sockets to new ones.
Drill breaks in brass	1. Unsuitable drill 2. Flutes clogged with chips	1. Choose the suitable drill for work material.
Chipping of drill center	1. Lip relief too much. 2. Feed too heavy.	1. Grind lip relief sufficiently. 2. Decrease feed rate.
Hole oversize	1. Unequal angle or length of cutting edges. 2. Loosen spindle.	1. Resharpening point, choose correct drills. 2. Tighten spindle sufficiently.
Outer corners broken down	1. Cutting speed too high. 2. Hard spots in work material. 3. Flutes clogged with chips. 4. Too wear of drills.	1. Grind point to suit work material. 2. Decrease the feed rates. 3. Resharpening early beforce too wear.
Large chip of one flute and small chip of other flute	1. Improperly ground point. 2. Only one lip doing all the cutting	1. Properly grind point. 2. Grind point with same point angle and length of lip 3. Grind with small lip height.
Hole rough	1. Improperly ground point. 2. Unenough coolant supply 3. Too much feed. 4. Fixture not rigid.	1. Properly grind point. 2. Supply coolant enough. 3. Decrease the feed rate. 4. Tighten the fixture or replace.

16 Characteristic of DREAM DRILLS

- YG-1's Dream Drill Series are suitable for high speed and accurate drilling operations by special design and high quality.
- Good performance for Steels, Cast Irons, Tool steels, Alloy steels and Stainless steels.
- Rapid chip evacuation and excellent chip breaking can be achieved by special designed cutting edges on point and chip breakers on leading edges.
- High accuracy and stability.
- Longer tool life with TiAlN coating.
- Self-centering

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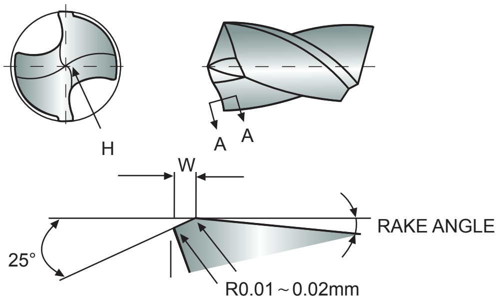
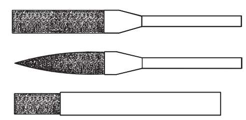
17 Honing Guide of DREAM DRILLS

■ **Dimension of Honing**



▶ Section A-A

■ **Scraper**



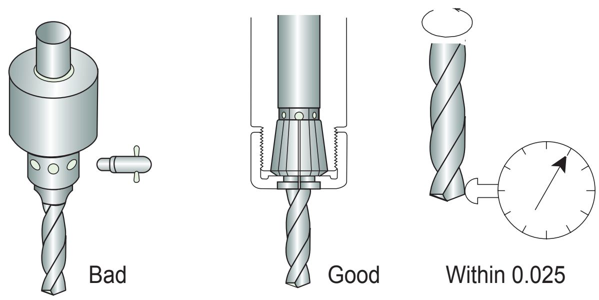
for Roughing (#140)

for Finishing (#230～#400)

Work Material	Alloy Steels	Mild Steels	Cast Iron
W(mm)	0.15～0.2	0.1～0.15	0.03

▶The dimension W of stocked products is 0.1～0.15.

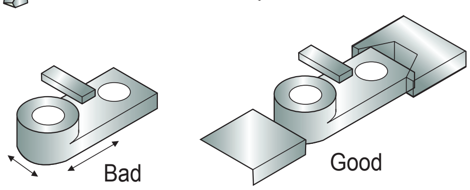
18 Use of DREAM DRILLS

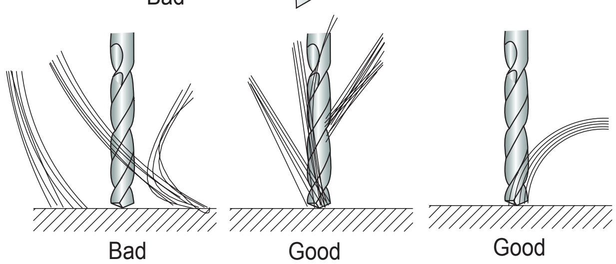


▶ Chucking with spring collet correctly.

▶ Radial run out at cutting lip must not exceed 0.025 mm.

▶ Tighten clamp of work piece.

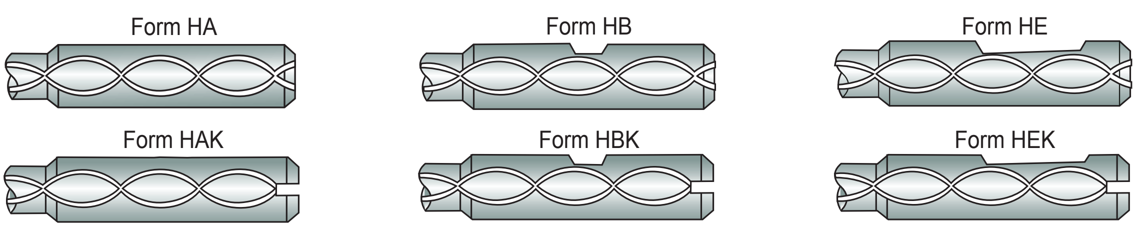




▶ Supply coolant enough to the entrance of hole.

▶ When using Dream Drills with Coolant holes, Supply high pressure coolant.

19 Shank Type DREAM DRILLS with Coolant Holes



▶ Shank Type of stocked products is Form HA.

▶ If you need other Shank Type, we can supply them.

THREADING TOOLS

SOLID CARBIDE THREAD MILL (with & without Coolant Holes)

HSS-PM SYNCHRO TAP (Spiral Flute, Spiral Point, Straight Flute & Forming)

HSS-E COMBO TAP (Spiral Flute & Spiral Point Tap)

HSS-PM YG TAP BLUE RING

HSS-E YG TAP STEEL

HSS-PM & HSS-E YG TAP INOX

SOLID CARBIDE & HSS-PM YG TAP CAST IRON

HSS-E YG TAP ALU

HSS-PM YG TAP Ti Ni

HSS-PM YG TAP HARDENED STEEL

HSS-E & HSS YG TAP GENERAL

HSS-PM, HSS-E & HSS YG TAP FORMING

HSS-E & HSS SCREW THREAD INSERT TAP

HSS-E & HSS PIPE TAP

TECHNICAL DATA

YG-1 CO., LTD.

Contents

THREADING TOOLS

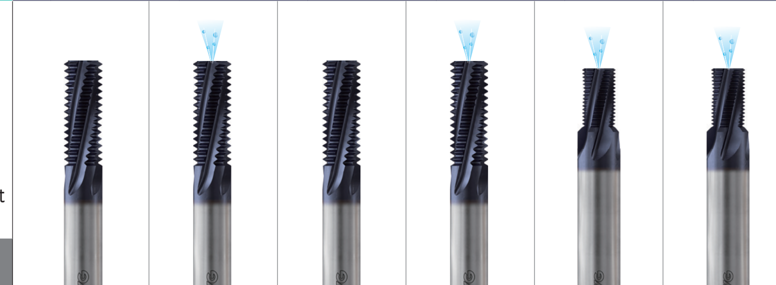
SELECTION GUIDE

YG

THREADING TOOLS

THREAD MILL

TYPE	without Coolant Hole	with Coolant Hole	without Coolant Hole	with Coolant Hole	with Coolant Hole & Chamfer	
HOLE TYPE	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole
THREAD FORM	UN	UN	M	M	UN	M
TOOL MATERIAL	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE
FLUTE TYPE	Helix		Helix		Helix	
HELIX ANGLE	R15	R15	R15	R15	R15	R15
SERIES	**TE** (p.B48)	**L421E** (p.B50)	**TD** (p.B51)	**L421D** (p.B52)	**L427E** (p.B53)	**L427D** (p.B54)
SURFACE TREATMENT / COATING	TiAlN					



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◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	TE	L421E	TD	L421D	L427E	L427D
P	1	Non-alloy steel	125		◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400
	2		190	13	◎ 250-370	◎ 250-370	◎ 250-370	◎ 250-370	◎ 250-370	◎ 250-370
	3		250	25	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360
	4		270	28	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330
	5		300	32	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320
	6	Low alloy steel	180	10	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360
	7		275	29	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330
	8		300	32	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320
	9		350	38	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300
	10	High alloyed steel, and tool steel	200	15	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320
	11		325	35	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300
M	12	Stainless steel	200	15	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250
	13		240	23	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250
	14		180	10	○ 150-250	○ 150-250	○ 150-250	○ 150-250	○ 150-250	○ 150-250
K	15	Grey cast iron	180	10	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400
	16		260	26	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360
	17	Nodular cast iron	160	3	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400
	18		250	25	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320
	19	Malleable cast iron	130		◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320
	20		230	21	◎ 230-350	◎ 230-350	◎ 230-350	◎ 230-350	◎ 230-350	◎ 230-350
N	21	Aluminum-wrought alloy	60		◎ 500-1000	◎ 500-1000	◎ 500-1000	◎ 500-1000	◎ 500-1000	◎ 500-1000
	22		100		◎ 400-800	◎ 400-800	◎ 400-800	◎ 400-800	◎ 400-800	◎ 400-800
	23	Aluminum-cast, alloyed	75		◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900
	24		90		◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900
	25		130		◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800
	26	Copper and Copper Alloys (Bronze / Brass)	110		◎ 500-800	◎ 500-800	◎ 500-800	◎ 500-800	◎ 500-800	◎ 500-800
	27		90		◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800
	28		100		◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600
	29	Non Metallic Materials			◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900
	30	Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.			◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900
S	31	Heat Resistant Super Alloys	200	15	○ 100-200	○ 100-200	○ 100-200	○ 100-200	○ 100-200	○ 100-200
	32		280	30	○ 70-180	○ 70-180	○ 70-180	○ 70-180	○ 70-180	○ 70-180
	33		250	25	○ 50-140	○ 50-140	○ 50-140	○ 50-140	○ 50-140	○ 50-140
	34		350	38	○ 50-120	○ 50-120	○ 50-120	○ 50-120	○ 50-120	○ 50-120
	35		320	34	○ 50-140	○ 50-140	○ 50-140	○ 50-140	○ 50-140	○ 50-140
	36	Titanium Alloys	400 Rm		○ 100-250	○ 100-250	○ 100-250	○ 100-250	○ 100-250	○ 100-250
	37		1050 Rm		○ 60-140	○ 60-140	○ 60-140	○ 60-140	○ 60-140	○ 60-140
H	38	Hardened steel	550	55						
	39		630	60						
	40	Chilled Cast Iron	400	42						
	41	Hardened Cast Iron	550	55						

THREAD MILL

TYPE	Miniature		without Coolant Hole	with Coolant Hole	without Coolant Hole	with Coolant Hole	without Coolant Hole	with Coolant Hole
HOLE TYPE	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole
THREAD FORM	UN	M	NPT	NPT	NPTF	NPTF	NPS	NPS
TOOL MATERIAL	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE
FLUTE TYPE	Helix		Helix		Helix		Helix	
HELIX ANGLE	R15	R15	R15	R15	R15	R15	R15	R15
SERIES	**L12DE** (p.B55)	**L12DD** (p.B56)	**TF** (p.B57)	**L621F** (p.B58)	**TG** (p.B59)	**L621G** (p.B60)	**L121K** (p.B61)	**L421K** (p.B62)
SURFACE TREATMENT / COATING	TiAlN							

L12DE	L12DD	TF	L621F	TG	L621G	L121K	L421K	VDI 3323	ISO
◎ 220-380	◎ 220-380	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	1	P
◎ 220-380	◎ 220-380	◎ 250-370	◎ 250-370	◎ 250-370	◎ 250-370	◎ 250-370	◎ 250-370	2	
◎ 220-380	◎ 220-380	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	3	
◎ 220-350	◎ 220-350	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330	4	
◎ 220-300	◎ 220-300	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	5	
◎ 220-350	◎ 220-350	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	6	
◎ 220-350	◎ 220-350	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330	7	
◎ 200-300	◎ 200-300	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	8	
◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	9	
◎ 220-350	◎ 220-350	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	10	
◎ 220-350	◎ 220-350	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	11	
○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	12	M
○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	13	
○ 180-220	○ 180-220	○ 150-250	○ 150-250	○ 150-250	○ 150-250	○ 150-250	○ 150-250	14	
◎ 300-500	◎ 300-500	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	15	K
◎ 300-500	◎ 300-500	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	16	
◎ 280-450	◎ 280-450	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	17	
◎ 250-400	◎ 250-400	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	18	
◎ 250-400	◎ 250-400	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	19	
◎ 280-450	◎ 280-450	◎ 230-350	◎ 230-350	◎ 230-350	◎ 230-350	◎ 230-350	◎ 230-350	20	
◎ 400-1000	◎ 400-1000	◎ 500-1000	◎ 500-1000	◎ 500-1000	◎ 500-1000	◎ 500-1000	◎ 500-1000	21	N
◎ 400-900	◎ 400-900	◎ 400-800	◎ 400-800	◎ 400-800	◎ 400-800	◎ 400-800	◎ 400-800	22	
◎ 300-900	◎ 300-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	23	
◎ 300-900	◎ 300-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	24	
◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	25	
◎ 400-700	◎ 400-700	◎ 500-800	◎ 500-800	◎ 500-800	◎ 500-800	◎ 500-800	◎ 500-800	26	
◎ 350-700	◎ 350-700	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	27	
◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600	28	
◎ 350-700	◎ 350-700	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	29	
◎ 350-700	◎ 350-700	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	30	
○ 150-250	○ 150-250	○ 100-200	○ 100-200	○ 100-200	○ 100-200	○ 100-200	○ 100-200	31	S
○ 130-200	○ 130-200	○ 70-180	○ 70-180	○ 70-180	○ 70-180	○ 70-180	○ 70-180	32	
○ 100-160	○ 100-160	○ 50-140	○ 50-140	○ 50-140	○ 50-140	○ 50-140	○ 50-140	33	
○ 100-160	○ 100-160	○ 50-120	○ 50-120	○ 50-120	○ 50-120	○ 50-120	○ 50-120	34	
○ 120-180	○ 120-180	○ 50-140	○ 50-140	○ 50-140	○ 50-140	○ 50-140	○ 50-140	35	
○ 80-200	○ 80-200	○ 100-250	○ 100-250	○ 100-250	○ 100-250	○ 100-250	○ 100-250	36	
○ 80-120	○ 80-120	○ 60-140	○ 60-140	○ 60-140	○ 60-140	○ 60-140	○ 60-140	37	
								38	H
								39	
								40	
								41	

SELECTION GUIDE

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THREADING TOOLS

SYNCHRO TAP

HOLE TYPE	Max. 2.5xD Blind Hole		Max. 3.0xD Through Hole	
TOOL MATERIAL	HSS-PM	HSS-PM	HSS-PM	HSS-PM
FLUTE TYPE	Spiral Flute		Spiral Point	
SPIRAL FLUTE ANGLE	R45	R45	-	-
SERIES M				
SERIES M/MF		**TTS61** (p.B70)		**TTS62** (p.B73)
SERIES UNC				
SERIES UNC/UNF	**TTS65** (p.B68)		**TTS66** (p.B71)	
SERIES UNC/UNF/UNS				
SERIES UNC/UN8				
SERIES NPT				
SERIES NPTF				
SERIES NPS/NPSF				
SURFACE TREATMENT / COATING	TiN		TiN	

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◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	TTS65	TTS61	TTS66	TTS62
P	1	Non-alloy steel	125		◎ 79-148	◎ 79-148	◎ 79-148	◎ 79-148
	2		190	13	◎ 79-148	◎ 79-148	◎ 79-148	◎ 79-148
	3		250	25	◎ 79-148	◎ 79-148	◎ 79-148	◎ 79-148
	4		270	28	◎ 66-128	◎ 66-128	◎ 66-128	◎ 66-128
	5		300	32				
	6	Low alloy steel	180	10	◎ 66-128	◎ 66-128	◎ 66-128	◎ 66-128
	7		275	29	◎ 66-128	◎ 66-128	◎ 66-128	◎ 66-128
	8		300	32				
	9		350	38				
	10	High alloyed steel, and tool steel	200	15				
	11		325	35				
M	12	Stainless steel	200	15	◎ 39-98	◎ 39-98	◎ 39-98	◎ 39-98
	13		240	23	◎ 39-98	◎ 39-98	◎ 39-98	◎ 39-98
	14		180	10	○ 39-60	○ 39-60	○ 39-60	○ 39-60
K	15	Grey cast iron	180	10	○ 98-148	○ 98-148	○ 98-148	○ 98-148
	16		260	26				
	17	Nodular cast iron	160	3	◎ 82-148	◎ 82-148	◎ 82-148	◎ 82-148
	18		250	25				
	19	Malleable cast iron	130					
	20		230	21				
N	21	Aluminum-wrought alloy	60					
	22		100					
	23	Aluminum-cast, alloyed	75		◎ 148-197	◎ 148-197	◎ 148-197	◎ 148-197
	24		90		◎ 148-197	◎ 148-197	◎ 148-197	◎ 148-197
	25		130		◎ 82-118	◎ 82-118	◎ 82-118	◎ 82-118
	26	Copper and Copper Alloys (Bronze / Brass)	110		◎ 98-148	◎ 98-148	◎ 98-148	◎ 98-148
	27		90					
	28		100		○ 82-118	○ 82-118	○ 82-118	○ 82-118
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.						
	30							
S	31	Heat Resistant Super Alloys	200	15				
	32		280	30				
	33		250	25				
	34		350	38				
	35		320	34				
	36	Titanium Alloys	400 Rm					
	37		1050 Rm					
H	38	Hardened steel	550	55				
	39		630	60				
	40	Chilled Cast Iron	400	42				
	41	Hardened Cast Iron	550	55				

SYNCHRO TAP

HOLE TYPE	Max. 2.0xD Blind / Through Hole		Max. 3.0xD Blind / Through Hole		SYNCHRO TAPPING CHUCK (ER TYPE)
TOOL MATERIAL	HSS-PM	HSS-PM	HSS-PM	HSS-PM	
FLUTE TYPE	Straight Flute		Forming		
SPIRAL FLUTE ANGLE	-	-	-	-	
SERIES M					
SERIES M/MF		**TKS63** (p.B76)		**TTS64** (p.B79)	
SERIES UNC					
SERIES UNC/UNF	**TKS67** (p.B74)		**TTS68** (p.B77)		
SERIES UNC/UNF/UNS					**CAT** (p.B80)
SERIES UNC/UN8					
SERIES NPT					
SERIES NPTF					
SERIES NPS/NPSF					
SURFACE TREATMENT / COATING	TiCN		TiN		

ISO	VDI 3323	TKS67	TKS63	TTS68	TTS64	CAT
P	1	○ 79-148	○ 79-148	◎ 115-184	◎ 115-184	
P	2	○ 79-148	○ 79-148	◎ 115-184	◎ 115-184	
P	3	○ 79-148	○ 79-148	◎ 115-184	◎ 115-184	
P	4	○ 66-128	○ 66-128	◎ 98-164	◎ 98-164	
P	5					
P	6	○ 66-128	○ 66-128	◎ 98-164	◎ 98-164	
P	7	○ 66-128	○ 66-128	◎ 98-164	◎ 98-164	
P	8					
P	9					
P	10					
P	11					
M	12			◎ 49-108	◎ 49-108	
M	13			◎ 49-108	◎ 49-108	
M	14			◎ 49-75	◎ 49-75	
K	15	◎ 98-148	◎ 98-148			
K	16	◎ 98-148	◎ 98-148			
K	17	◎ 82-148	◎ 82-148			
K	18	◎ 82-148	◎ 82-148			
K	19	○ 82-148	○ 82-148			
K	20	○ 82-148	○ 82-148			
N	21			◎ 131-184	◎ 131-184	
N	22			◎ 131-184	◎ 131-184	
N	23	○ 148-197	○ 148-197	◎ 184-230	◎ 184-230	
N	24	○ 148-197	○ 148-197	◎ 184-230	◎ 184-230	
N	25	○ 82-118	○ 82-118	○ 115-148	○ 115-148	
N	26					
N	27					
N	28			◎ 115-148	◎ 115-148	
N	29					
N	30					
S	31					
S	32					
S	33					
S	34					
S	35					
S	36					
S	37					
H	38					
H	39					
H	40					
H	41					

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

SELECTION GUIDE

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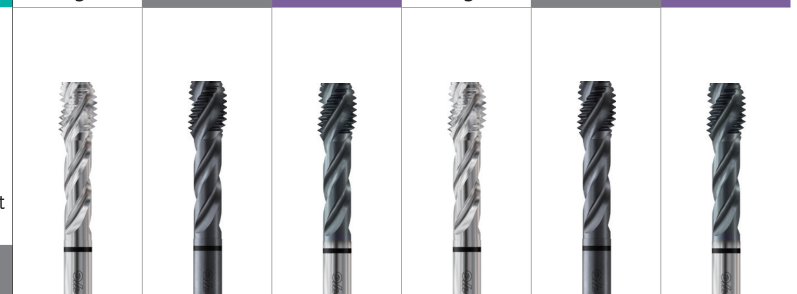
THREADING TOOLS

COMBO TAP

HOLE TYPE		Max. 2.5xD Blind Hole					
FORM TYPE		Standard					
TOOL MATERIAL		HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
FLUTE TYPE		Spiral Flute					
SPIRAL FLUTE ANGLE		R40	R40	R40	R40	R40	R40
M	USCTI 302A						
M/MF	USCTI 302A				T5 (p.B90)	T5-S (p.B90)	T5-C (p.B90)
M/MF	DIN Length-ANSI Shank						
UNC	USCTI Long Shank						
UNC/UNF	USCTI 302						
UNC/UNF	USCTI 302A	T2 (p.B86)	T2-S (p.B86)	T2-C (p.B86)			
UNC/UNF	DIN Length-ANSI Shank						
SURFACE TREATMENT / COATING		Bright	Steam Oxide	TiCN	Bright	Steam Oxide	TiCN



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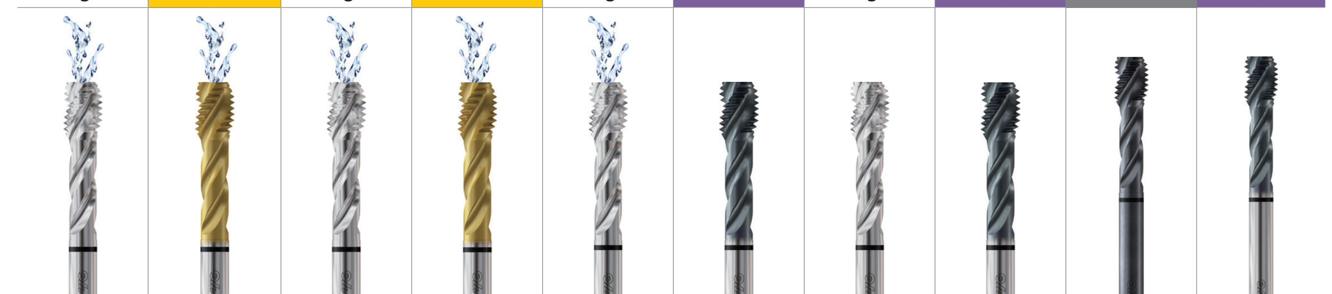
◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	T2	T2-S	T2-C	T5	T5-S	T5-C
P	1	Non-alloy steel	125		○ 25-50	○ 25-50	○ 50-80	○ 25-50	○ 25-50	○ 50-80
P	2	Non-alloy steel	190	13	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80
P	3	Non-alloy steel	250	25	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80
P	4	Non-alloy steel	270	28	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35
P	5	Non-alloy steel	300	32	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35
P	6	Low alloy steel	180	10	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35
P	7	Low alloy steel	275	29	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35
P	8	Low alloy steel	300	32	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35
P	9	Low alloy steel	350	38	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35
P	10	High alloyed steel, and tool steel	200	15	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35
P	11	High alloyed steel, and tool steel	325	35						
M	12	Stainless steel	200	15	◎ 12-35	◎ 12-35	◎ 20-50	◎ 12-35	◎ 12-35	◎ 20-50
M	13	Stainless steel	240	23	◎ 12-35	◎ 12-35	◎ 20-50	◎ 12-35	◎ 12-35	◎ 20-50
M	14	Stainless steel	180	10	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
K	15	Grey cast iron	180	10	◎ 35-50	◎ 35-50	◎ 50-65	◎ 35-50	◎ 35-50	◎ 50-65
K	16	Grey cast iron	260	26	◎ 35-50	◎ 35-50	◎ 50-65	◎ 35-50	◎ 35-50	◎ 50-65
K	17	Nodular cast iron	160	3	◎ 12-45	◎ 12-45	◎ 25-55	◎ 12-45	◎ 12-45	◎ 25-55
K	18	Nodular cast iron	250	25	◎ 12-45	◎ 12-45	◎ 25-55	◎ 12-45	◎ 12-45	◎ 25-55
K	19	Malleable cast iron	130							
K	20	Malleable cast iron	230	21						
N	21	Aluminum-wrought alloy	60							
N	22	Aluminum-wrought alloy	100							
N	23	Aluminum-cast, alloyed	75		◎ 40-65	◎ 40-65	◎ 45-90	◎ 40-65	◎ 40-65	◎ 45-90
N	24	Aluminum-cast, alloyed	90							
N	25	Aluminum-cast, alloyed	130							
N	26	Copper and Copper Alloys (Bronze / Brass)	110		◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	27	Copper and Copper Alloys (Bronze / Brass)	90		◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	28	Copper and Copper Alloys (Bronze / Brass)	100		◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	29	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)								
N	30	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)								
S	31	Heat Resistant Super Alloys	200	15						
S	32	Heat Resistant Super Alloys	280	30						
S	33	Heat Resistant Super Alloys	250	25						
S	34	Heat Resistant Super Alloys	350	38						
S	35	Heat Resistant Super Alloys	320	34						
S	36	Titanium Alloys	400 Rm							
S	37	Titanium Alloys	1050 Rm							
H	38	Hardened steel	550	55						
H	39	Hardened steel	630	60						
H	40	Chilled Cast Iron	400	42						
H	41	Hardened Cast Iron	550	55						

COMBO TAP

HOLE TYPE	Max. 2.5xD Blind Hole									
FORM TYPE	with Internal Coolant				Short Chamfer				DIN Length-ANSI Shank	
TOOL MATERIAL	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
FLUTE TYPE	Spiral Flute									
SPIRAL FLUTE ANGLE	R40	R40	R40	R40	R40	R40	R40	R40	R40	R40
M			T8 (p.B93)	T8-N (p.B93)						
M/MF							T9 (p.B96)	T9-C (p.B96)		
M/MF										
UNC										
UNC/UNF										
UNC/UNF	T6 (p.B92)	T6-N (p.B92)			T7 (p.B94)	T7-C (p.B94)				
UNC/UNF									T1-S (p.B97)	T1-C (p.B97)
SURFACE TREATMENT / COATING	Bright	TiN	Bright	TiN	Bright	TiCN	Bright	TiCN	Steam Oxide	TiCN



ISO	VDI 3323	T6	T6-N	T8	T8-N	T7	T7-C	T9	T9-C	T1-S	T1-C
P	1	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80
P	2	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
P	3	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
P	4	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	5	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	6	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	7	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	8	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	9	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	10	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35
P	11										
M	12	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
M	13	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
M	14	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
K	15	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65
K	16	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65
K	17	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55
K	18	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55
K	19										
K	20										
N	21										
N	22										
N	23	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90
N	24										
N	25										
N	26	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	27	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	28	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	29										
N	30										
S	31										
S	32										
S	33										
S	34										
S	35										
S	36										
S	37										
H	38										
H	39										
H	40										
H	41										

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

SELECTION GUIDE

YG

THREADING TOOLS

COMBO TAP

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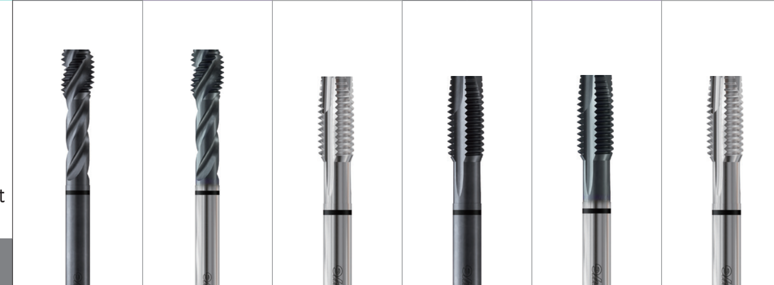
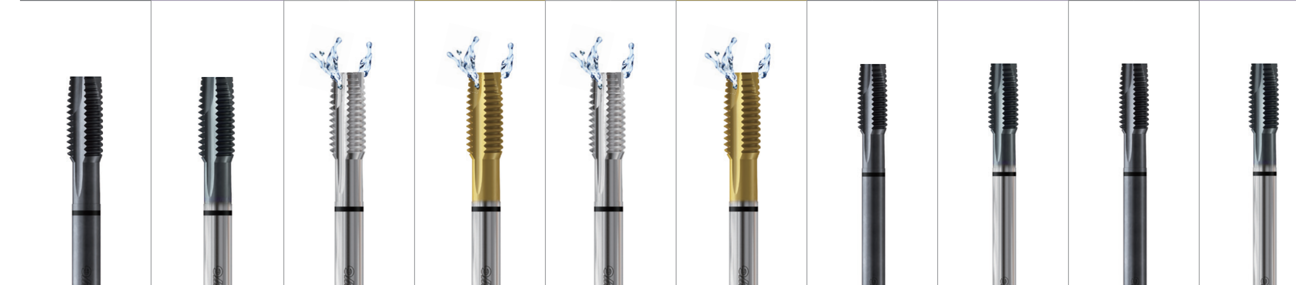
◎ : Excellent
○ : Good

HOLE TYPE					Max. 2.5xD Blind Hole		Max. 3.0xD Through Hole			
FORM TYPE					DIN Length-ANSI Shank		Standard			
TOOL MATERIAL					HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
FLUTE TYPE					Spiral Flute		Spiral Point			
SPIRAL FLUTE ANGLE					R40	R40	-	-	-	-
M	USCTI 302A									
M/MF	USCTI 302A									T3 (p.B105)
M/MF	DIN Length-ANSI Shank				TA-S (p.B99)	TA-C (p.B99)				
UNC	USCTI Long Shank									
UNC/UNF	USCTI 302									
UNC/UNF	USCTI 302A						T4 (p.B100)	T4-S (p.B100)	T4-C (p.B100)	
UNC/UNF	DIN Length-ANSI Shank									
SURFACE TREATMENT / COATING					Steam Oxide	TiCN	Bright	Steam Oxide	TiCN	Bright
ISO	VDI 3323	Material Description	HB	HRc						
P	1	Non-alloy steel	125		○ 25-50	○ 50-80	○ 25-50	○ 25-50	○ 50-80	○ 25-50
P	2	Non-alloy steel	190	13	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50
P	3	Non-alloy steel	250	25	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50
P	4	Non-alloy steel	270	28	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30
P	5	Non-alloy steel	300	32	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30
P	6	Low alloy steel	180	10	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30
P	7	Low alloy steel	275	29	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30
P	8	Low alloy steel	300	32	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30
P	9	Low alloy steel	350	38	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30
P	10	High alloyed steel, and tool steel	200	15	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30
P	11	High alloyed steel, and tool steel	325	35						
M	12	Stainless steel	200	15	◎ 12-35	◎ 20-50	◎ 12-35	◎ 12-35	◎ 20-50	◎ 12-35
M	13	Stainless steel	240	23	◎ 12-35	◎ 20-50	◎ 12-35	◎ 12-35	◎ 20-50	◎ 12-35
M	14	Stainless steel	180	10	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
K	15	Grey cast iron	180	10	◎ 35-50	◎ 50-65	◎ 35-50	◎ 35-50	◎ 50-65	◎ 35-50
K	16	Grey cast iron	260	26	◎ 35-50	◎ 50-65	◎ 35-50	◎ 35-50	◎ 50-65	◎ 35-50
K	17	Nodular cast iron	160	3	◎ 12-45	◎ 25-55	◎ 12-45	◎ 12-45	◎ 25-55	◎ 12-45
K	18	Nodular cast iron	250	25	◎ 12-45	◎ 25-55	◎ 12-45	◎ 12-45	◎ 25-55	◎ 12-45
K	19	Malleable cast iron	130							
K	20	Malleable cast iron	230	21						
N	21	Aluminum-wrought alloy	60							
N	22	Aluminum-wrought alloy	100							
N	23	Aluminum-cast, alloyed	75		◎ 40-65	◎ 45-90	◎ 40-65	◎ 40-65	◎ 45-90	◎ 40-65
N	24	Aluminum-cast, alloyed	90							
N	25	Aluminum-cast, alloyed	130							
N	26	Copper and Copper Alloys (Bronze / Brass)	110		◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	27	Copper and Copper Alloys (Bronze / Brass)	90		◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	28	Copper and Copper Alloys (Bronze / Brass)	100		◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.								
N	30	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.								
S	31	Heat Resistant Super Alloys	200	15						
S	32	Heat Resistant Super Alloys	280	30						
S	33	Heat Resistant Super Alloys	250	25						
S	34	Heat Resistant Super Alloys	350	38						
S	35	Heat Resistant Super Alloys	320	34						
S	36	Titanium Alloys	400 Rm							
S	37	Titanium Alloys	1050 Rm							
H	38	Hardened steel	550	55						
H	39	Hardened steel	630	60						
H	40	Chilled Cast Iron	400	42						
H	41	Hardened Cast Iron	550	55						



COMBO TAP

HOLE TYPE		Max. 3.0xD Through Hole									
FORM TYPE		Standard		with Internal Coolant				DIN Length-ANSI Shank			
TOOL MATERIAL		HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
FLUTE TYPE		Spiral Point									
SPIRAL FLUTE ANGLE		-	-	-	-	-	-	-	-	-	-
M						TH (p.B108)	TH-N (p.B108)				
M/MF		T3-S (p.B105)	T3-C (p.B105)								
M/MF										TK-S (p.B110)	TK-C (p.B110)
UNC											
UNC/UNF											
UNC/UNF				TB (p.B107)	TB-N (p.B107)						
UNC/UNF								TC-S (p.B109)	TC-C (p.B109)		
SURFACE TREATMENT / COATING		Steam Oxide	TiCN	Bright	TiN	Bright	TiN	Steam Oxide	TiCN	Steam Oxide	TiCN
ISO	VDI 3323										
P	1	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80
P	2	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
P	3	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
P	4	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	5	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	6	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	7	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	8	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	9	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	10	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35
P	11										
M	12	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
M	13	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
M	14	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
K	15	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65
K	16	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65
K	17	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55
K	18	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55
K	19										
K	20										
N	21										
N	22										
N	23	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90
N	24										
N	25										
N	26	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	27	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	28	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	29										
N	30										
S	31										
S	32										
S	33										
S	34										
S	35										
S	36										
S	37										
H	38										
H	39										
H	40										
H	41										



CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

SELECTION GUIDE

YG

THREADING TOOLS

YG TAP BLUE RING

HOLE TYPE	Max. 2.5xD Blind Hole					
TOOL MATERIAL	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM
FLUTE TYPE	Spiral Flute		Spiral Flute		Spiral Flute	
SPIRAL FLUTE ANGLE	R40	R40	R40	R40	R40	R40
SERIES M						
SERIES M/MF			BH (p.B119)	BM (p.B119)		
SERIES UNC						
SERIES UNC/UNF	BB (p.B116)	BI (p.B116)			BF (p.B120)	BK (p.B120)
SERIES UNC/UNF/UNS						
SERIES UNC/UN8						
SERIES NPT						
SERIES NPTF						
SERIES NPS/NPSF						
SURFACE TREATMENT / COATING	Steam Oxide	HardSlick	Steam Oxide	HardSlick	Steam Oxide	HardSlick

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◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	BB	BI	BH	BM	BF	BK
P	1	Non-alloy steel	125		○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80
	2		190	13	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
	3		250	25	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
	4		270	28	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	5		300	32	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	6	Low alloy steel	180	10	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	7		275	29	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	8		300	32	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	9		350	38	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	10	High alloyed steel, and tool steel	200	15						
	11		325	35						
M	12	Stainless steel	200	15	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
	13		240	23	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
	14		180	10	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
K	15	Grey cast iron	180	10						
	16		260	26						
	17	Nodular cast iron	160	3						
	18		250	25						
	19	Malleable cast iron	130							
	20		230	21						
N	21	Aluminum-wrought alloy	60		○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60
	22		100		○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60
	23	Aluminum-cast, alloyed	75							
	24		90							
	25		130							
	26	Copper and Copper Alloys (Bronze / Brass)	110		○ 50-60	○ 65-100	○ 50-60	○ 65-100	○ 50-60	○ 65-100
	27		90		○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
	28		100							
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.								
	30									
S	31	Heat Resistant Super Alloys	200	15						
	32		280	30						
	33		250	25						
	34		350	38						
	35		320	34						
	36	Titanium Alloys	400 Rm							
	37		1050 Rm							
H	38	Hardened steel	550	55						
	39		630	60						
	40	Chilled Cast Iron	400	42						
	41	Hardened Cast Iron	550	55						

YG TAP BLUE RING

HOLE TYPE	Max. 2.5xD Blind Hole		Max. 3.0xD Through Hole							
TOOL MATERIAL	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM
FLUTE TYPE	Spiral Flute		Spiral Point		Spiral Point		Spiral Point		Spiral Point	
SPIRAL FLUTE ANGLE	R40	R40	-	-	-	-	-	-	-	-
SERIES M										
SERIES M/MF	BD (p.B122)	BO (p.B122)			N7 (p.B126)	N8 (p.B126)			N3 (p.B129)	O3 (p.B129)
SERIES UNC										
SERIES UNC/UNF			M9 (p.B123)	O1 (p.B123)			N4 (p.B127)	O5 (p.B127)		
SERIES UNC/UNF/UNS										
SERIES UNC/UN8										
SERIES NPT										
SERIES NPTF										
SERIES NPS/NPSF										
SURFACE TREATMENT / COATING	Steam Oxide	HardSlick	Steam Oxide	HardSlick	Steam Oxide	HardSlick	Steam Oxide	HardSlick	Steam Oxide	HardSlick

ISO	VDI 3323	BD	BO	M9	O1	N7	N8	N4	O5	N3	O3
P	1	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80
	2	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
	3	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
	4	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	5	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	6	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	7	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	8	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	9	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	10										
	11										
M	12	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
	13	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
	14	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
K	15										
	16										
	17										
	18										
	19										
	20										
N	21	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60
	22	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60
	23										
	24										
	25										
	26	○ 50-60	○ 65-100	○ 50-60	○ 65-100	○ 50-60	○ 65-100	○ 50-60	○ 65-100	○ 50-60	○ 65-100
	27	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
	28										
	29										
	30										
S	31										
	32										
	33										
	34										
	35										
	36										
	37										
H	38										
	39										
	40										
	41										

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
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YG

THREADING TOOLS

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◎ : Excellent
○ : Good

YG TAP STEEL

HOLE TYPE	Max. 2.5xD Blind Hole						
TOOL MATERIAL	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
FLUTE TYPE	Spiral Flute						
SPIRAL FLUTE ANGLE	R45	R45	R45	R45	R45	R45	R45
SERIES M							
SERIES M/MF			BU (p.B138)	BV (p.B138)	E2 (p.B140)	E4 (p.B140)	E5 (p.B140)
SERIES UNC							
SERIES UNC/UNF	D3 (p.B134)	E0 (p.B134)					
SERIES UNC/UNF/UNS							
SERIES UNC/UN8							
SERIES NPT							
SERIES NPTF							
SERIES NPS/NPSF							
SURFACE TREATMENT / COATING	Steam Oxide	HardSlick	Steam Oxide	HardSlick	Steam Oxide	TiCN	HardSlick

ISO	VDI 3323	Material Description	HB	HRc	D3	E0	BU	BV	E2	E4	E5
P	1	Non-alloy steel	125								
	2		190	13	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
	3		250	25	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
	4		270	28	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
	5		300	32	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
	6	Low alloy steel	180	10	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
	7		275	29	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
	8		300	32	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
	9		350	38	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 10-35
	10	High alloyed steel, and tool steel	200	15	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 10-35
	11		325	35							
M	12	Stainless steel	200	15	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 20-50
	13		240	23	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 20-50
	14		180	10	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15
K	15	Grey cast iron	180	10							
	16		260	26							
	17	Nodular cast iron	160	3							
	18		250	25							
	19	Malleable cast iron	130								
	20		230	21							
N	21	Aluminum-wrought alloy	60								
	22		100								
	23	Aluminum-cast, alloyed	75								
	24		90								
	25		130								
	26	Copper and Copper Alloys (Bronze / Brass)	110								
	27		90								
	28		100								
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.									
	30										
S	31	Heat Resistant Super Alloys	200	15							
	32		280	30							
	33		250	25	○ 10-12	○ 10-12	○ 10-12	○ 10-12	○ 10-12	○ 10-12	○ 10-12
	34		350	38							
	35		320	34							
	36	Titanium Alloys	400 Rm								
	37		1050 Rm								
H	38	Hardened steel	550	55							
	39		630	60							
	40	Chilled Cast Iron	400	42							
	41	Hardened Cast Iron	550	55							

YG TAP STEEL

HOLE TYPE	Max. 3.0xD Through Hole							
TOOL MATERIAL	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
FLUTE TYPE	Spiral Point							
SPIRAL FLUTE ANGLE	-	-	-	-	-	-	-	-
SERIES M								
SERIES M/MF				IB (p.B146)	IC (p.B146)		K7 (p.B148)	
SERIES UNC								
SERIES UNC/UNF	J3 (p.B141)	J4 (p.B141)	J8 (p.B141)			J9 (p.B148)		K2 (p.B148)
SERIES UNC/UNF/UNS								
SERIES UNC/UN8								
SERIES NPT								
SERIES NPTF								
SERIES NPS/NPSF								
SURFACE TREATMENT / COATING	Steam Oxide	Bright	HardSlick	Steam Oxide	HardSlick	Steam Oxide	TiCN	HardSlick

ISO	VDI 3323	J3	J4	J8	IB	IC	J9	K7	K2
P	1								
	2	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
	3	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
	4	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
	5	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
	6	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
	7	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
	8	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
	9	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 10-35
	10	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 10-35
	11								
M	12	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 20-50
	13	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 20-50
	14	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15
K	15								
	16								
	17								
	18								
	19								
	20								
N	21								
	22								
	23								
	24								
	25								
	26								
	27								
	28								
	29								
	30								
S	31								
	32								
	33	○ 10-12	○ 10-12	○ 10-12	○ 10-12	○ 10-12	○ 10-12	○ 10-12	○ 10-12
	34								
	35								
	36								
	37								
H	38								
	39								
	40								
	41								

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
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STI TAP
PIPE TAP
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THREADING TOOLS

YG TAP INOX

	G7	G8	G9	H0	B1
HOLE TYPE	Max. 2.5xD Blind Hole				
TOOL MATERIAL	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-E
FLUTE TYPE	Spiral Flute				
SPIRAL FLUTE ANGLE	R45	R45	R45	R45	R45
SERIES M					
SERIES M/MF					
SERIES UNC					
SERIES UNC/UNF	**G7** (p.B154)	**G8** (p.B154)	**G9** (p.B154)	**H0** (p.B154)	**B1** (p.B155)
SERIES UNC/UNF/UNS					
SERIES UNC/UN8					
SERIES NPT					
SERIES NPTF					
SERIES NPS/NPSF					
SURFACE TREATMENT / COATING	TiN	TiN	HardSlick	HardSlick	Bright

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ISO	VDI 3323	Material Description	HB	HRc	G7	G8	G9	H0	B1
P	1	Non-alloy steel	125		○ 50-80	○ 50-80	○ 50-80	○ 50-80	○ 25-50
P	2	Non-alloy steel	190	13	◎ 50-80	◎ 50-80	◎ 50-80	◎ 50-80	◎ 25-50
P	3	Non-alloy steel	250	25	◎ 50-80	◎ 50-80	◎ 50-80	◎ 50-80	◎ 25-50
P	4	Non-alloy steel	270	28	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35	◎ 6-30
P	5	Non-alloy steel	300	32					
P	6	Low alloy steel	180	10	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35	◎ 6-30
P	7	Low alloy steel	275	29					
P	8	Low alloy steel	300	32					
P	9	Low alloy steel	350	38					
P	10	High alloyed steel, and tool steel	200	15					
P	11	High alloyed steel, and tool steel	325	35					
M	12	Stainless steel	200	15	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50	◎ 12-35
M	13	Stainless steel	240	23	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50	◎ 12-35
M	14	Stainless steel	180	10	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
K	15	Grey cast iron	180	10					
K	16	Grey cast iron	260	26					
K	17	Nodular cast iron	160	3					
K	18	Nodular cast iron	250	25					
K	19	Malleable cast iron	130						
K	20	Malleable cast iron	230	21					
N	21	Aluminum-wrought alloy	60		○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65
N	22	Aluminum-wrought alloy	100						
N	23	Aluminum-cast, alloyed	75						
N	24	Aluminum-cast, alloyed	90						
N	25	Aluminum-cast, alloyed	130						
N	26	Copper and Copper Alloys (Bronze / Brass)	110		○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
N	27	Copper and Copper Alloys (Bronze / Brass)	90		○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
N	28	Copper and Copper Alloys (Bronze / Brass)	100						
N	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.							
N	30	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.							
S	31	Heat Resistant Super Alloys	200	15					
S	32	Heat Resistant Super Alloys	280	30					
S	33	Heat Resistant Super Alloys	250	25					
S	34	Heat Resistant Super Alloys	350	38					
S	35	Heat Resistant Super Alloys	320	34					
S	36	Titanium Alloys	400 Rm						
S	37	Titanium Alloys	1050 Rm						
H	38	Hardened steel	550	55					
H	39	Hardened steel	630	60					
H	40	Chilled Cast Iron	400	42					
H	41	Hardened Cast Iron	550	55					

YG TAP INOX

	B0	B2	D2	BS	BT	E6	E8	E9
HOLE TYPE	Max. 2.5xD Blind Hole							
TOOL MATERIAL	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
FLUTE TYPE	Spiral Flute							
SPIRAL FLUTE ANGLE	R45	R45	R45	R45	R45	R45	R45	R45
SERIES M								
SERIES M/MF				**BS** (p.B159)	**BT** (p.B159)	**E6** (p.B159)	**E8** (p.B160)	**E9** (p.B160)
SERIES UNC								
SERIES UNC/UNF	**B0** (p.B155)	**B2** (p.B155)	**D2** (p.B155)					
SERIES UNC/UNF/UNS								
SERIES UNC/UN8								
SERIES NPT								
SERIES NPTF								
SERIES NPS/NPSF								
SURFACE TREATMENT / COATING	Steam Oxide	TiN	HardSlick	Steam Oxide	HardSlick	Steam Oxide	TiCN	HardSlick

ISO	VDI 3323	B0	B2	D2	BS	BT	E6	E8	E9
P	1	○ 25-50	○ 50-80	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 50-80
P	2	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	3	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	4	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
P	5								
P	6	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
P	7								
P	8								
P	9								
P	10								
P	11								
M	12	◎ 12-35	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50
M	13	◎ 12-35	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50
M	14	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
K	15								
K	16								
K	17								
K	18								
K	19								
K	20								
N	21	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65
N	22								
N	23								
N	24								
N	25								
N	26	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
N	27	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
N	28								
N	29								
N	30								
S	31								
S	32								
S	33								
S	34								
S	35								
S	36								
S	37								
H	38								
H	39								
H	40								
H	41								

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
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YG TAP BLUE RING
YG TAP STEEL
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YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
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YG TAP INOX

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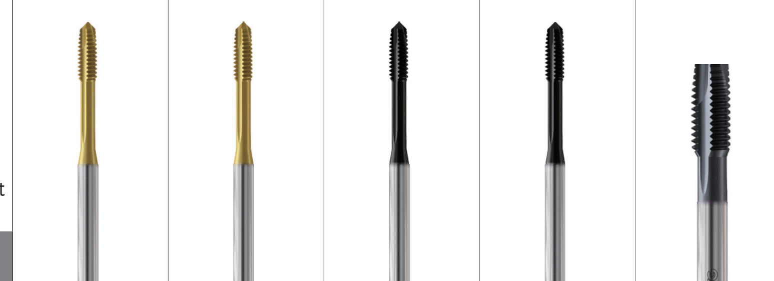

ISO	VDI 3323	Material Description	HB	HRc	M0	M1	M2	M3	I0
		HOLE TYPE			Max. 3.0xD Through Hole				
		TOOL MATERIAL			HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM
		FLUTE TYPE			Spiral Point				
		SPIRAL FLUTE ANGLE			-	-	-	-	-
		SERIES UNC/UNF			M0 (p.B161)	M1 (p.B161)	M2 (p.B161)	M3 (p.B161)	I0 (p.B162)
		SURFACE TREATMENT / COATING			TiN	TiN	HardSlick	HardSlick	Steam Oxide
P	1	Non-alloy steel	125		○ 50-80	○ 50-80	○ 50-80	○ 50-80	○ 25-50
	2		190	13	◎ 50-80	◎ 50-80	◎ 50-80	◎ 50-80	◎ 25-50
	3		250	25	◎ 50-80	◎ 50-80	◎ 50-80	◎ 50-80	◎ 25-50
	4		270	28	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35	◎ 6-30
	5		300	32					
	6	Low alloy steel	180	10	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35	◎ 6-30
	7		275	29					
	8		300	32					
	9		350	38					
	10	High alloyed steel, and tool steel	200	15					
	11		325	35					
M	12	Stainless steel	200	15	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50	◎ 12-35
	13		240	23	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50	◎ 12-35
	14		180	10	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
K	15	Grey cast iron	180	10					
	16		260	26					
	17	Nodular cast iron	160	3					
	18		250	25					
	19	Malleable cast iron	130						
	20		230	21					
N	21	Aluminum-wrought alloy	60		○ 50-65	○ 50-65	50-65	○ 50-65	○ 50-65
	22		100						
	23	Aluminum-cast, alloyed	75						
	24		90						
	25		130						
	26	Copper and Copper Alloys (Bronze / Brass)	110		○ 30-65	○ 30-65	30-65	○ 30-65	○ 30-65
	27		90		○ 30-65	○ 30-65	30-65	○ 30-65	○ 30-65
	28		100						
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.							
	30								
S	31	Heat Resistant Super Alloys	200	15					
	32		280	30					
	33		250	25					
	34		350	38					
	35		320	34					
	36	Titanium Alloys	400 Rm						
	37		1050 Rm						
H	38	Hardened steel	550	55					
	39		630	60					
	40	Chilled Cast Iron	400	42					
	41	Hardened Cast Iron	550	55					

YG TAP INOX

ISO	VDI 3323	I2	J2	O9	IA	K3	K5	K6	H2	H4	BG	BG-GB
	HOLE TYPE	Max. 3.0xD Through Hole									Max. 2.5xD Blind Hole	
	TOOL MATERIAL	HSS-PM	HSS-PM	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-PM	HSS-PM	HSS-E	HSS-E
	FLUTE TYPE	Spiral Point							Spiral Flute		Spiral Flute	
	SPIRAL FLUTE ANGLE	-	-	-	-	-	-	-	L15	L15	R40	R40
	SERIES M/MF			O9 (p.B166)	IA (p.B166)	K3 (p.B167)	K5 (p.B167)	K6 (p.B167)				
	SERIES UNC/UNF	I2 (p.B162)	J2 (p.B162)						H2 (p.B168)	H4 (p.B168)		
	SERIES UNC/UN8										BG (p.B169)	BG-GB (p.B169)
	SURFACE TREATMENT / COATING	TiN	HardSlick	Steam Oxide	HardSlick	Steam Oxide	TiCN	HardSlick	TiN	HardSlick	HardSlick	Gold & Black
											Oil Field	
P	1	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 50-80		
	2	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	○ 50-80	○ 50-80
	3	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	○ 50-80	○ 50-80
	4	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35
	5										◎ 10-35	◎ 10-35
	6	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35
	7										◎ 10-35	◎ 10-35
	8										◎ 10-35	◎ 10-35
	9										○ 10-35	○ 10-35
	10										○ 10-35	○ 10-35
	11											
M	12	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50
	13	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50
	14	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
K	15											
	16											
	17											
	18											
	19											
	20											
N	21	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65		
	22											
	23											
	24											
	25											
	26	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65		
	27	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65		
	28											
	29											
	30											
S	31											
	32											
	33											
	34											
	35											
	36											
	37											
H	38											
	39											
	40											
	41											

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

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YG

THREADING TOOLS

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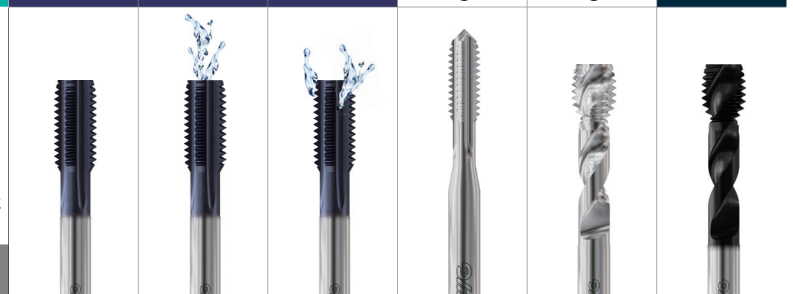
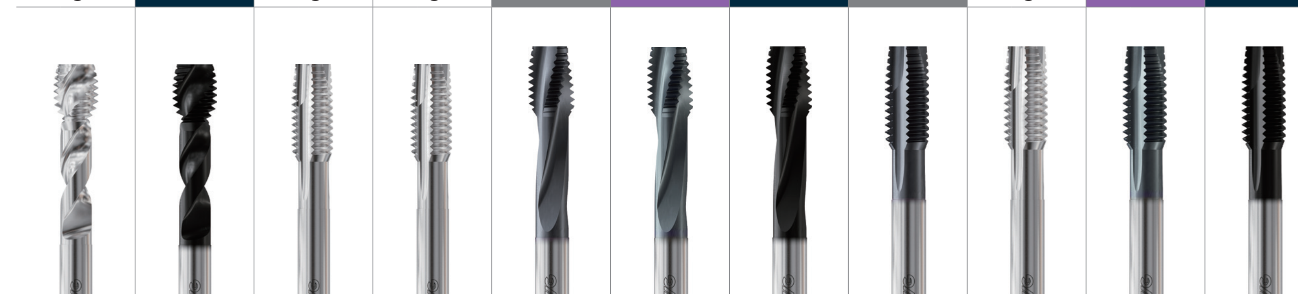
◎ : Excellent
○ : Good

					YG TAP CAST IRON				YG TAP ALU	
				HOLE TYPE	Max. 3.0xD Through Hole				Max. 2.5xD Blind Hole	
				TOOL MATERIAL	HSS-PM	HSS-PM	HSS-PM	Carbide	HSS-E	HSS-E
				FLUTE TYPE	Straight Flute				Spiral Flute	
				SPIRAL FLUTE ANGLE	-	-	-	-	R50	R50
SERIES				M						
				M/MF	TR (p.B174)	TR-A (p.B177)	TR-R (p.B177)			
				UNC						
				UNC/UNF	TR (p.B173)	TR-A (p.B175)	TR-R (p.B175)	T0C01 (p.B178)	C0 (p.B181)	D8 (p.B181)
				UNC/UNF/UNS						
				UNC/UN8						
				NPT						
				NPTF						
				NPS/NPSF						
				SURFACE TREATMENT / COATING	TiAlN	TiAlN	TiAlN	Bright	Bright	HardSlick
ISO	VDI 3323	Material Description	HB	HRc						
P	1	Non-alloy steel	125							
P	2	Non-alloy steel	190	13						
P	3	Non-alloy steel	250	25						
P	4	Non-alloy steel	270	28						
P	5	Non-alloy steel	300	32						
P	6	Low alloy steel	180	10						
P	7	Low alloy steel	275	29						
P	8	Low alloy steel	300	32						
P	9	Low alloy steel	350	38						
P	10	High alloyed steel, and tool steel	200	15						
P	11	High alloyed steel, and tool steel	325	35						
M	12	Stainless steel	200	15						
M	13	Stainless steel	240	23						
M	14	Stainless steel	180	10						
K	15	Grey cast iron	180	10	◎ 50-65	◎ 50-65	◎ 50-65	◎ 35-50		
K	16	Grey cast iron	260	26	◎ 50-65	◎ 50-65	◎ 50-65	◎ 35-50		
K	17	Nodular cast iron	160	3	◎ 25-55	◎ 25-55	◎ 25-55	◎ 12-45		
K	18	Nodular cast iron	250	25	◎ 25-55	◎ 25-55	◎ 25-55	◎ 12-45		
K	19	Malleable cast iron	130		○ 25-55	○ 25-55	○ 25-55	○ 12-45		
K	20	Malleable cast iron	230	21	○ 25-55	○ 25-55	○ 25-55	○ 12-45		
N	21	Aluminum-wrought alloy	60					○ 50-65	◎ 50-65	◎ 50-65
N	22	Aluminum-wrought alloy	100						◎ 50-65	◎ 50-65
N	23	Aluminum-cast, alloyed	75		◎ 45-90	◎ 45-90	◎ 45-90	○ 40-65	◎ 40-65	◎ 45-90
N	24	Aluminum-cast, alloyed	90		○ 45-90	○ 45-90	○ 45-90	○ 40-65	○ 40-65	○ 45-90
N	25	Aluminum-cast, alloyed	130							
N	26	Copper and Copper Alloys (Bronze / Brass)	110							
N	27	Copper and Copper Alloys (Bronze / Brass)	90							
N	28	Copper and Copper Alloys (Bronze / Brass)	100							
N	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.								
N	30	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.								
S	31	Heat Resistant Super Alloys	200	15						
S	32	Heat Resistant Super Alloys	280	30						
S	33	Heat Resistant Super Alloys	250	25						
S	34	Heat Resistant Super Alloys	350	38						
S	35	Heat Resistant Super Alloys	320	34						
S	36	Titanium Alloys	400 Rm							
S	37	Titanium Alloys	1050 Rm							
H	38	Hardened steel	550	55						
H	39	Hardened steel	630	60						
H	40	Chilled Cast Iron	400	42						
H	41	Hardened Cast Iron	550	55						

			YG TAP ALU				YG TAP TI / NI						
		HOLE TYPE	Max. 2.5xD Blind Hole		Max. 3.0xD Through Hole		Max. 2.5xD Blind Hole			Max. 3.0xD Through Hole			
		TOOL MATERIAL	HSS-E	HSS-E	HSS-E	HSS-E	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM
		FLUTE TYPE	Spiral Flute		Spiral Point		Spiral Flute			Spiral Point			
		SPIRAL FLUTE ANGLE	R50	R50	-	-	R15	R15	R15	-	-	-	-
SERIES		M											
		M/MF	BW (p.B182)	BX (p.B182)		T2K01 (p.B184)							
		UNC											
		UNC/UNF			T2496 (p.B183)		B3 (p.B187)	B5 (p.B187)	B6 (p.B187)	I3 (p.B185)	M8 (p.B189)	I5 (p.B189)	J6 (p.B189)
		UNC/UNF/UNS											
		UNC/UN8											
		NPT											
		NPTF											
		NPS/NPSF											
		SURFACE TREATMENT / COATING	Bright	HardSlick	Bright	Bright	Steam Oxide	TiCN	HardSlick	Steam Oxide	Bright	TiCN	HardSlick
ISO	VDI 3323												
P	1												
P	2												
P	3												
P	4												
P	5												
P	6												
P	7												
P	8						○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 10-35
P	9						○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 10-35
P	10												
P	11												
M	12												
M	13												
M	14												
K	15												
K	16												
K	17												
K	18												
K	19												
K	20												
N	21		◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65							
N	22		◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65							
N	23		◎ 40-65	◎ 45-90	◎ 40-65	◎ 40-65							
N	24		○ 40-65	○ 45-90	○ 40-65	○ 40-65							
N	25				○ 40-65	○ 40-65							
N	26												
N	27				○ 30-65	○ 30-65							
N	28				○ 30-65	○ 30-65							
N	29												
N	30												
S	31						◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15
S	32						◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15
S	33						◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15
S	34						○ 10-15	○ 10-15	○ 10-15	○ 10-15	○ 10-15	○ 10-15	○ 10-15
S	35						○ 10-15	○ 10-15	○ 10-15	○ 10-15	○ 10-15	○ 10-15	○ 10-15
S	36						◎ 3-15	◎ 3-15	◎ 3-15	◎ 3-15	◎ 3-15	◎ 3-15	◎ 3-15
S	37						○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15
H	38												
H	39												
H	40									○ 3-15	○ 3-15	○ 3-15	○ 3-15
H	41												

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YG

THREADING TOOLS

YG TAP HARDENED STEEL

	B22-1	B22-2	B22-3	B22-4	B22-5	B22-6	B23-1	B23-2	B23-3	B23-4	B23-5	B23-6	B23-7
HOLE TYPE	Max. 2.5xD Blind Hole			Max. 3.0xD Through Hole			Max. 3.0xD Through Hole						
TOOL MATERIAL	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM
FLUTE TYPE	Spiral Flute			Spiral Flute			Spiral Point						
SPIRAL FLUTE ANGLE	R15	R15	R15	R15	R15	R15	-	-	-	-	-	-	-
SERIES M													
SERIES M/MF				**TQ858** (p.B195)	**TK858** (p.B195)	**TR858** (p.B195)					**TQ808** (p.B198)	**TK808** (p.B198)	**TR808** (p.B198)
SERIES UNC													
SERIES UNC/UNF	**H6** (p.B194)	**H7** (p.B194)	**H8** (p.B194)				**M4** (p.B197)	**M5** (p.B197)	**M6** (p.B197)	**M7** (p.B197)			
SERIES UNC/UNF/UNS													
SERIES UNC/UN8													
SERIES NPT													
SERIES NPTF													
SERIES NPS/NPSF													
SURFACE TREATMENT / COATING	Bright	TiCN	HardSlick	Steam Oxide	TiCN	HardSlick	Steam Oxide	Bright	TiCN	HardSlick	Steam Oxide	TiCN	HardSlick

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ISO	VDI 3323	Material Description	HB	HRc	B22-1	B22-2	B22-3	B22-4	B22-5	B22-6	B23-1	B23-2	B23-3	B23-4	B23-5	B23-6	B23-7
P	1	Non-alloy steel	125														
	2		190	13													
	3		250	25													
	4		270	28													
	5		300	32													
	6	Low alloy steel	180	10													
	7		275	29	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
	8		300	32	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
	9		350	38	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
	10	High alloyed steel, and tool steel	200	15	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12
	11		325	35	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12
M	12	Stainless steel	200	15													
	13		240	23													
	14		180	10													
K	15	Grey cast iron	180	10													
	16		260	26													
	17	Nodular cast iron	160	3													
	18		250	25													
	19	Malleable cast iron	130														
	20		230	21													
N	21	Aluminum-wrought alloy	60														
	22		100														
	23	Aluminum-cast, alloyed	75														
	24		90														
	25		130														
	26	Copper and Copper Alloys (Bronze / Brass)	110														
	27		90														
	28		100														
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.															
	30																
S	31	Heat Resistant Super Alloys	200	15													
	32		280	30													
	33		250	25													
	34		350	38													
	35		320	34													
	36	Titanium Alloys	400 Rm														
	37		1050 Rm														
H	38	Hardened steel	550	55							○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15
	39		630	60													
	40	Chilled Cast Iron	400	42							○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15
	41	Hardened Cast Iron	550	55													

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THREADING TOOLS

YG TAP GENERAL

HOLE TYPE	Max. 2.0xD Blind /Through Hole			
TOOL MATERIAL	HSS	HSS	HSS	HSS
FLUTE TYPE	Straight Flute			
SPIRAL FLUTE ANGLE	-	-	-	-
SERIES M/MF				T7315 (p.B224)
SERIES UNC/UNF/UNS	T7316/T7A16/T7B16 (p.B212/B217/B218)	T6316 (p.B220)	T8316 (p.B222)	
SURFACE TREATMENT / COATING	Bright	Steam Oxide	TiN	Bright
	HAND TAP			

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◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	T7316/T7A16/T7B16	T6316	T8316	T7315
P	1	Non-alloy steel	125		○ 25-50	○ 25-50	○ 50-80	○ 25-50
	2		190	13	○ 25-50	○ 25-50	○ 50-80	○ 25-50
	3		250	25	○ 25-50	○ 25-50	○ 50-80	○ 25-50
	4		270	28				
	5		300	32				
	6	Low alloy steel	180	10	○ 6-30	○ 6-30	○ 10-35	○ 6-30
	7		275	29				
	8		300	32				
	9		350	38				
	10	High alloyed steel, and tool steel	200	15				
	11		325	35				
M	12	Stainless steel	200	15	○ 12-35	○ 12-35	○ 20-50	○ 12-35
	13		240	23				
	14		180	10				
K	15	Grey cast iron	180	10				
	16		260	26				
	17	Nodular cast iron	160	3	○ 12-45	○ 12-45	○ 25-55	○ 12-45
	18		250	25	○ 12-45	○ 12-45	○ 25-55	○ 12-45
	19	Malleable cast iron	130					
	20		230	21				
N	21	Aluminum-wrought alloy	60		○ 50-65	○ 50-65	○ 50-65	○ 50-65
	22		100		○ 50-65	○ 50-65	○ 50-65	○ 50-65
	23	Aluminum-cast, alloyed	75		○ 40-65	○ 40-65	○ 45-90	○ 40-65
	24		90					
	25		130					
	26	Copper and Copper Alloys (Bronze / Brass)	110		○ 50-60	○ 50-60	○ 65-100	○ 50-60
	27		90		○ 30-65	○ 30-65	○ 30-65	○ 30-65
	28		100					
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.						
	30							
S	31	Heat Resistant Super Alloys	200	15				
	32		280	30				
	33		250	25				
	34		350	38				
	35		320	34				
	36	Titanium Alloys	400 Rm					
	37		1050 Rm					
H	38	Hardened steel	550	55				
	39		630	60				
	40	Chilled Cast Iron	400	42				
	41	Hardened Cast Iron	550	55				

YG TAP GENERAL

HOLE TYPE	Max. 2.0xD Blind /Through Hole								
TOOL MATERIAL	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
FLUTE TYPE	Straight Flute								
SPIRAL FLUTE ANGLE	-	-	-	-	left hand	left hand	-	-	-
SERIES M/MF	T6315 (p.B225)	T8315 (p.B226)		T7B15 (p.B228)		T7A15 (p.B230)			
SERIES UNC							T7616 (p.B231)	T6616 (p.B231)	T8616 (p.B231)
SERIES UNC/UNF			T7326 (p.B227)		T7336 (p.B229)				
SURFACE TREATMENT / COATING	Steam Oxide	TiN	Bright	Bright	Bright	Bright	Bright	Steam Oxide	TiN
	HAND TAP							Pulley Tap	

VDI 3323	T6315	T8315	T7326	T7B15	T7336	T7A15	T7616	T6616	T8616	ISO
1	○ 25-50	○ 50-80	○ 25-50	○ 25-50	○ 25-50	○ 25-50	◎ 25-50	◎ 25-50	◎ 50-80	P
2	○ 25-50	○ 50-80	○ 25-50	○ 25-50	○ 25-50	○ 25-50	◎ 25-50	◎ 25-50	◎ 50-80	
3	○ 25-50	○ 50-80	○ 25-50	○ 25-50	○ 25-50	○ 25-50	◎ 25-50	◎ 25-50	◎ 50-80	
4										
5										
6	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 6-30	○ 6-30	◎ 6-30	◎ 6-30	◎ 10-35	
7										
8										
9										
10										
11										
12	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 12-35	○ 12-35	○ 12-35	○ 12-35	○ 20-50	M
13										
14										
15										K
16										
17	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 12-45	○ 12-45	○ 12-45	○ 12-45	○ 25-55	
18	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 12-45	○ 12-45	○ 12-45	○ 12-45	○ 25-55	
19										
20										
21	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	N
22	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	
23	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 40-65	○ 40-65	○ 40-65	○ 40-65	○ 45-90	
24										
25										
26	○ 50-60	○ 65-100	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 65-100	
27	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	
28										
29										
30										
31										S
32										
33										
34										
35										
36										
37										
38										H
39										
40										
41										

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

SELECTION GUIDE

THREADING TOOLS

YG TAP GENERAL

HOLE TYPE	Max. 2.5xD Blind Hole				
TOOL MATERIAL	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
FLUTE TYPE	Spiral Flute				
SPIRAL FLUTE ANGLE	R45	R45	R45	R45	R50
SERIES M					
SERIES M/MF					
SERIES UNC					
SERIES UNC/UNF	**C2** (p.B232)	**C3** (p.B232)	**C4** (p.B232)	**D9** (p.B232)	**F4** (p.B234)
SERIES UNC/UNF/UNS					
SERIES UNC/UN8					
SERIES NPT					
SERIES NPTF					
SERIES NPS/NPSF					
SURFACE TREATMENT / COATING	Steam Oxide	Bright	TiN	HardSlick	Steam Oxide

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◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	C2	C3	C4	D9	F4
P	1	Non-alloy steel	125		◎ 25-50	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50
P	2		190	13	◎ 25-50	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50
P	3		250	25	◎ 25-50	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50
P	4		270	28	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30
P	5		300	32	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30
P	6	Low alloy steel	180	10	◎ 6-30	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30
P	7		275	29	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30
P	8		300	32	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30
P	9		350	38					
P	10	High alloyed steel, and tool steel	200	15					
P	11		325	35					
M	12	Stainless steel	200	15	○ 12-35	○ 12-35	○ 20-50	○ 20-50	○ 12-35
M	13		240	23	○ 12-35	○ 12-35	○ 20-50	○ 20-50	○ 12-35
M	14		180	10					
K	15	Grey cast iron	180	10					
K	16		260	26					
K	17	Nodular cast iron	160	3	○ 12-45	○ 12-45	○ 25-55	○ 25-55	○ 12-45
K	18		250	25	○ 12-45	○ 12-45	○ 25-55	○ 25-55	○ 12-45
K	19	Malleable cast iron	130						
K	20		230	21					
N	21	Aluminum-wrought alloy	60						
N	22		100						
N	23	Aluminum-cast, alloyed	75		○ 40-65	○ 40-65	○ 45-90	○ 45-90	○ 40-65
N	24		90		○ 40-65	○ 40-65	○ 45-90	○ 45-90	○ 40-65
N	25		130						
N	26	Copper and Copper Alloys (Bronze / Brass)	110		○ 50-60	○ 50-60	○ 65-100	○ 65-100	○ 50-60
N	27		90		○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
N	28		100						
N	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.							
N	30								
S	31	Heat Resistant Super Alloys	200	15					
S	32		280	30					
S	33		250	25					
S	34		350	38					
S	35		320	34					
S	36	Titanium Alloys	400 Rm						
S	37		1050 Rm						
H	38	Hardened steel	550	55					
H	39		630	60					
H	40	Chilled Cast Iron	400	42					
H	41	Hardened Cast Iron	550	55					

YG TAP GENERAL

HOLE TYPE	Max. 2.5xD Blind Hole							
TOOL MATERIAL	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
FLUTE TYPE	Spiral Flute							
SPIRAL FLUTE ANGLE	R50	R50	R50	R50	R50	R45	R45	R45
M								
M/MF			**G4** (p.B236)	**G5** (p.B236)	**G6** (p.B236)			
UNC								
UNC/UNF	**F8** (p.B234)	**F6** (p.B234)				**G0** (p.B237)	**G1** (p.B237)	**G2** (p.B237)
UNC/UNF/UNS								
UNC/UN8								
NPT								
NPTF								
NPS/NPSF								
SURFACE TREATMENT / COATING	TiN	HardSlick	Bright	TiCN	HardSlick	Bright	TiN	HardSlick

ISO	VDI 3323	F8	F6	G4	G5	G6	G0	G1	G2
P	1	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	2	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	3	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	4	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
P	5	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
P	6	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
P	7	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
P	8	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
P	9								
P	10								
P	11								
M	12	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50
M	13	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50
M	14								
K	15								
K	16								
K	17	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55
K	18	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55
K	19								
K	20								
N	21								
N	22								
N	23	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90
N	24	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90
N	25								
N	26	○ 65-100	○ 65-100	○ 50-60	○ 65-100	○ 50-60	○ 65-100	○ 65-100	○ 50-60
N	27	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
N	28								
N	29								
N	30								
S	31								
S	32								
S	33								
S	34								
S	35								
S	36								
S	37								
H	38								
H	39								
H	40								
H	41								

SELECTION GUIDE

THREADING TOOLS

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YG TAP GENERAL

HOLE TYPE					Max. 2.5xD Blind Hole					
TOOL MATERIAL					HSS	HSS	HSS	HSS	HSS	HSS
FLUTE TYPE					Spiral Flute					
SPIRAL FLUTE ANGLE					R50	R50	R50	R50	R50	R50
SERIES	M									
	M/MF									
	UNC									
	UNC/UNF				T7A96 (p.B239)	T6A96 (p.B239)	T8A96 (p.B239)	T7295 (p.B240)	T6295 (p.B240)	T8295 (p.B240)
	UNC/UNF/UNS									
	UNC/UN8									
	NPT									
	NPTF									
	NPS/NPSF									
SURFACE TREATMENT / COATING					Bright	Steam Oxide	TiN	Bright	Steam Oxide	TiN
ISO	VDI 3323	Material Description	HB	HRc						
P	1	Non-alloy steel	125		◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80
	2		190	13	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80
	3		250	25	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80
	4		270	28	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35
	5		300	32	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35
	6	Low alloy steel	180	10	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35
	7		275	29	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35
	8		300	32	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35
	9		350	38						
	10	High alloyed steel, and tool steel	200	15						
	11		325	35						
M	12	Stainless steel	200	15	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50
	13		240	23	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50
	14		180	10						
K	15	Grey cast iron	180	10						
	16		260	26						
	17	Nodular cast iron	160	3	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55
	18		250	25	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55
	19	Malleable cast iron	130							
	20		230	21						
N	21	Aluminum-wrought alloy	60							
	22		100							
	23	Aluminum-cast, alloyed	75		○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90
	24		90		○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90
	25		130							
	26	Copper and Copper Alloys (Bronze / Brass)	110		○ 50-60	○ 65-100	○ 50-60	○ 50-60	○ 65-100	○ 50-60
	27		90		○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
	28		100							
	29	Non Metallic Materials								
	30	Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.								
S	31	Heat Resistant Super Alloys	200	15						
	32		280	30						
	33		250	25						
	34		350	38						
	35		320	34						
	36	Titanium Alloys	400 Rm							
	37		1050 Rm							
H	38	Hardened steel	550	55						
	39		630	60						
	40	Chilled Cast Iron	400	42						
	41	Hardened Cast Iron	550	55						

YG TAP GENERAL

HOLE TYPE		Max. 2.5xD Blind Hole									
TOOL MATERIAL		HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
FLUTE TYPE		Spiral Flute									
SPIRAL FLUTE ANGLE		R50	R50	R50	R50	R50	R50	R50	R50	R50	R50
SERIES	M										
	M/MF	T7A86 (p.B241)	T6A86 (p.B241)	T8A86 (p.B241)	T7A85 (p.B241)	T6A85 (p.B241)	T8A85 (p.B241)				
	UNC										
	UNC/UNF							T7D01 (p.B242)	T8D01 (p.B242)	T7D02 (p.B242)	T8D02 (p.B242)
	UNC/UNF/UNS										
	UNC/UN8										
	NPT										
	NPTF										
	NPS/NPSF										
SURFACE TREATMENT / COATING		Bright	Steam Oxide	TiN	Bright	Steam Oxide	TiN	Bright	TiN	Bright	TiN
P	1	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
	2	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
	3	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
	4	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35
	5	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35
	6	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	7	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35
	8	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35
	9										
	10										
	11										
M	12	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 12-35	○ 20-50
	13	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 12-35	○ 20-50
	14										
K	15										
	16										
	17	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 25-55	○ 12-45	○ 25-55
	18	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 25-55	○ 12-45	○ 25-55
	19										
	20										
N	21										
	22										
	23	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 45-90	○ 40-65	○ 45-90
	24	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 45-90	○ 40-65	○ 45-90
	25										
	26	○ 50-60	○ 65-100	○ 50-60	○ 50-60	○ 65-100	○ 50-60	○ 65-100	○ 50-60	○ 65-100	○ 50-60
	27	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
	28										
	29										
	30										
S	31										
	32										
	33										
	34										
	35										
	36										
	37										
H	38										
	39										
	40										
	41										

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THREADING TOOLS

YG TAP GENERAL

HOLE TYPE	Max. 3.0xD Through Hole				
TOOL MATERIAL	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
FLUTE TYPE	Spiral Point				
SPIRAL FLUTE ANGLE	-	-	-	-	-
SERIES M					
SERIES M/MF					
SERIES UNC					
SERIES UNC/UNF	**I9** (p.B243)	**J0** (p.B243)	**J1** (p.B243)	**J7** (p.B243)	**K9** (p.B245)
SERIES UNC/UNF/UNS					
SERIES UNC/UN8					
SERIES NPT					
SERIES NPTF					
SERIES NPS/NPSF					
SURFACE TREATMENT / COATING	Steam Oxide	Bright	TiN	HardSlick	Bright

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◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	I9	J0	J1	J7	K9
P	1	Non-alloy steel	125		◎ 25-50	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50
P	2	Non-alloy steel	190	13	◎ 25-50	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50
P	3	Non-alloy steel	250	25	◎ 25-50	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50
P	4	Non-alloy steel	270	28	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30
P	5	Non-alloy steel	300	32	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30
P	6	Low alloy steel	180	10	◎ 6-30	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30
P	7	Low alloy steel	275	29	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30
P	8	Low alloy steel	300	32	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30
P	9	Low alloy steel	350	38					
P	10	High alloyed steel, and tool steel	200	15					
P	11	High alloyed steel, and tool steel	325	35					
M	12	Stainless steel	200	15	○ 12-35	○ 12-35	○ 20-50	○ 20-50	○ 12-35
M	13	Stainless steel	240	23	○ 12-35	○ 12-35	○ 20-50	○ 20-50	○ 12-35
M	14	Stainless steel	180	10					
K	15	Grey cast iron	180	10					
K	16	Grey cast iron	260	26					
K	17	Nodular cast iron	160	3	○ 12-45	○ 12-45	○ 25-55	○ 25-55	○ 12-45
K	18	Nodular cast iron	250	25	○ 12-45	○ 12-45	○ 25-55	○ 25-55	○ 12-45
K	19	Malleable cast iron	130						
K	20	Malleable cast iron	230	21					
N	21	Aluminum-wrought alloy	60						
N	22	Aluminum-wrought alloy	100						
N	23	Aluminum-cast, alloyed	75		○ 40-65	○ 40-65	○ 45-90	○ 45-90	○ 40-65
N	24	Aluminum-cast, alloyed	90		○ 40-65	○ 40-65	○ 45-90	○ 45-90	○ 40-65
N	25	Aluminum-cast, alloyed	130						
N	26	Copper and Copper Alloys (Bronze / Brass)	110		○ 50-60	○ 50-60	○ 65-100	○ 65-100	○ 50-60
N	27	Copper and Copper Alloys (Bronze / Brass)	90		○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
N	28	Copper and Copper Alloys (Bronze / Brass)	100						
N	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.							
N	30	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.							
S	31	Heat Resistant Super Alloys	200	15					
S	32	Heat Resistant Super Alloys	280	30					
S	33	Heat Resistant Super Alloys	250	25					
S	34	Heat Resistant Super Alloys	350	38					
S	35	Heat Resistant Super Alloys	320	34					
S	36	Titanium Alloys	400 Rm						
S	37	Titanium Alloys	1050 Rm						
H	38	Hardened steel	550	55					
H	39	Hardened steel	630	60					
H	40	Chilled Cast Iron	400	42					
H	41	Hardened Cast Iron	550	55					

YG TAP GENERAL

HOLE TYPE	Max. 3.0xD Through Hole							
TOOL MATERIAL	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
FLUTE TYPE	Spiral Point							
SPIRAL FLUTE ANGLE	-	-	-	-	-	-	-	-
M								
M/MF			**L7** (p.B247)	**L8** (p.B247)	**L9** (p.B247)			
UNC								
UNC/UNF	**L0** (p.B245)	**L1** (p.B245)				**L3** (p.B248)	**L4** (p.B248)	**L5** (p.B248)
UNC/UNF/UNS								
UNC/UN8								
NPT								
NPTF								
NPS/NPSF								
SURFACE TREATMENT / COATING	TiN	HardSlick	Bright	TiCN	HardSlick	Bright	TiN	HardSlick

ISO	VDI 3323	L0	L1	L7	L8	L9	L3	L4	L5
P	1	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	2	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	3	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	4	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
P	5	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
P	6	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
P	7	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
P	8	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
P	9								
P	10								
P	11								
M	12	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50
M	13	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50
M	14								
K	15								
K	16								
K	17	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55
K	18	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55
K	19								
K	20								
N	21								
N	22								
N	23	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90
N	24	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90
N	25								
N	26	○ 65-100	○ 65-100	○ 50-60	○ 65-100	○ 65-100	○ 50-60	○ 65-100	○ 65-100
N	27	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
N	28								
N	29								
N	30								
S	31								
S	32								
S	33								
S	34								
S	35								
S	36								
S	37								
H	38								
H	39								
H	40								
H	41								

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

SELECTION GUIDE

THREADING TOOLS

YG TAP GENERAL

HOLE TYPE	Max. 3.0xD Through Hole											
TOOL MATERIAL	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
FLUTE TYPE	Spiral Point											
SPIRAL FLUTE ANGLE	-	-	-	-	-	-	-	-	-	-	-	-
SERIES M												
SERIES M/MF							T7217 (p.B255)	T6217 (p.B255)	T8217 (p.B255)			
SERIES UNC												
SERIES UNC/UNF	T7216 (p.B250)	T6216 (p.B250)	T8216 (p.B250)	T7C16 (p.B254)	T6C16 (p.B254)	T8C16 (p.B254)				T7226 (p.B256)	T6226 (p.B256)	T8226 (p.B256)
SERIES UNC/UNF/UNS												
SERIES UNC/UN8												
SERIES NPT												
SERIES NPTF												
SERIES NPS/NPSF												
SURFACE TREATMENT / COATING	Bright	Steam Oxide	TiN	Bright	Steam Oxide	TiN	Bright	Steam Oxide	TiN	Bright	Steam Oxide	TiN

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ISO	VDI 3323	Material Description	HB	HRc	T7216	T6216	T8216	T7C16	T6C16	T8C16	T7217	T6217	T8217	T7226	T6226	T8226
P	1	Non-alloy steel	125		◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80
	2		190	13	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80
	3		250	25	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80
	4		270	28	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35
	5		300	32	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35
	6	Low alloy steel	180	10	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35
	7		275	29	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35
	8		300	32	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35
	9		350	38												
	10	High alloyed steel, and tool steel	200	15												
	11		325	35												
M	12	Stainless steel	200	15	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50
	13		240	23	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50
	14		180	10												
K	15	Grey cast iron	180	10												
	16		260	26												
	17	Nodular cast iron	160	3	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55
	18		250	25	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55
	19	Malleable cast iron	130													
	20		230	21												
N	21	Aluminum-wrought alloy	60													
	22		100													
	23	Aluminum-cast, alloyed	75		○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90
	24		90		○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90
	25		130													
	26	Copper and Copper Alloys (Bronze / Brass)	110		○ 50-60	○ 50-60	○ 65-100	○ 50-60	○ 50-60	○ 65-100	○ 50-60	○ 50-60	○ 65-100	○ 50-60	○ 50-60	○ 65-100
	27		90		○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
	28		100													
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.														
	30															
S	31	Heat Resistant Super Alloys	200	15												
	32		280	30												
	33		250	25												
	34		350	38												
	35		320	34												
	36	Titanium Alloys	400 Rm													
	37		1050 Rm													
H	38	Hardened steel	550	55												
	39		630	60												
	40	Chilled Cast Iron	400	42												
	41	Hardened Cast Iron	550	55												

SELECTION GUIDE

YG

THREADING TOOLS

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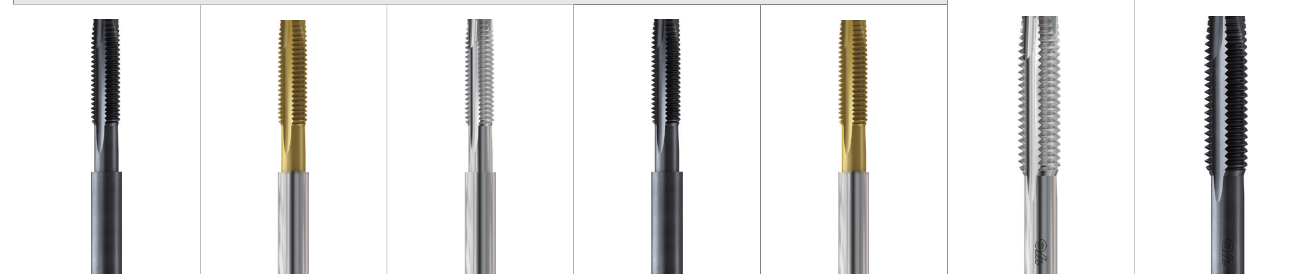
YG TAP GENERAL

	YG TAP GENERAL			
HOLE TYPE	Max. 3.0xD Through Hole			
TOOL MATERIAL	HSS	HSS	HSS	HSS
FLUTE TYPE	Spiral Point			
SPIRAL FLUTE ANGLE	-	-	-	-
SERIES – M	T7B17 (p.B257)	T6B17 (p.B257)	T8B17 (p.B257)	
SERIES – M/MF				
SERIES – UNC				
SERIES – UNC/UNF				T7236 (p.B258)
SERIES – UNC/UNF/UNS				
SERIES – UNC/UN8				
SERIES – NPT				
SERIES – NPTF				
SERIES – NPS/NPSF				
SURFACE TREATMENT / COATING	Bright	Steam Oxide	TiN	Bright
				Pulley Tap

ISO	VDI 3323	Material Description	HB	HRc	T7B17	T6B17	T8B17	T7236
P	1	Non-alloy steel	125		◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50
P	2	Non-alloy steel	190	13	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50
P	3	Non-alloy steel	250	25	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50
P	4	Non-alloy steel	270	28	○ 6-30	○ 6-30	○ 10-35	○ 6-30
P	5	Non-alloy steel	300	32	○ 6-30	○ 6-30	○ 10-35	○ 6-30
P	6	Low alloy steel	180	10	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30
P	7	Low alloy steel	275	29	○ 6-30	○ 6-30	○ 10-35	○ 6-30
P	8	Low alloy steel	300	32	○ 6-30	○ 6-30	○ 10-35	○ 6-30
P	9	Low alloy steel	350	38				
P	10	High alloyed steel, and tool steel	200	15				
P	11	High alloyed steel, and tool steel	325	35				
M	12	Stainless steel	200	15	○ 12-35	○ 12-35	○ 20-50	○ 12-35
M	13	Stainless steel	240	23	○ 12-35	○ 12-35	○ 20-50	○ 12-35
M	14	Stainless steel	180	10				
K	15	Grey cast iron	180	10				
K	16	Grey cast iron	260	26				
K	17	Nodular cast iron	160	3	○ 12-45	○ 12-45	○ 25-55	○ 12-45
K	18	Nodular cast iron	250	25	○ 12-45	○ 12-45	○ 25-55	○ 12-45
K	19	Malleable cast iron	130					
K	20	Malleable cast iron	230	21				
N	21	Aluminum-wrought alloy	60					
N	22	Aluminum-wrought alloy	100					
N	23	Aluminum-cast, alloyed	75		○ 40-65	○ 40-65	○ 45-90	○ 40-65
N	24	Aluminum-cast, alloyed	90		○ 40-65	○ 40-65	○ 45-90	○ 40-65
N	25	Aluminum-cast, alloyed	130					
N	26	Copper and Copper Alloys (Bronze / Brass)	110		○ 50-60	○ 50-60	○ 65-100	○ 50-60
N	27	Copper and Copper Alloys (Bronze / Brass)	90		○ 30-65	○ 30-65	○ 30-65	○ 30-65
N	28	Copper and Copper Alloys (Bronze / Brass)	100					
N	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.						
N	30	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.						
S	31	Heat Resistant Super Alloys	200	15				
S	32	Heat Resistant Super Alloys	280	30				
S	33	Heat Resistant Super Alloys	250	25				
S	34	Heat Resistant Super Alloys	350	38				
S	35	Heat Resistant Super Alloys	320	34				
S	36	Titanium Alloys	400 Rm					
S	37	Titanium Alloys	1050 Rm					
H	38	Hardened steel	550	55				
H	39	Hardened steel	630	60				
H	40	Chilled Cast Iron	400	42				
H	41	Hardened Cast Iron	550	55				

YG TAP GENERAL

	YG TAP GENERAL						
HOLE TYPE	Max. 3.0xD Through Hole						
TOOL MATERIAL	HSS	HSS	HSS	HSS	HSS	HSS	HSS
FLUTE TYPE	Spiral Point						
SPIRAL FLUTE ANGLE	-	-	-	-	-	-	-
SERIES – M							
SERIES – M/MF							
SERIES – UNC							
SERIES – UNC/UNF	T6236 (p.B258)	T8236 (p.B258)	T7G36 (p.B258)	T6G36 (p.B258)	T8G36 (p.B258)	T7256 (p.B259)	T6256 (p.B259)
SERIES – UNC/UNF/UNS							
SERIES – UNC/UN8							
SERIES – NPT							
SERIES – NPTF							
SERIES – NPS/NPSF							
SURFACE TREATMENT / COATING	Steam Oxide	TiN	Bright	Steam Oxide	TiN	Bright	Steam Oxide
	Pulley Tap						



VDI 3323	T6236	T8236	T7G36	T6G36	T8G36	T7256	T6256	ISO
1	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	P
2	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	P
3	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	P
4	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	P
5	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	P
6	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	P
7	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	P
8	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	P
9								P
10								P
11								P
12	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	M
13	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	M
14								M
15								K
16								K
17	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	K
18	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	K
19								K
20								K
21								N
22								N
23	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	N
24	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	N
25								N
26	○ 50-60	○ 65-100	○ 50-60	○ 50-60	○ 65-100	○ 50-60	○ 50-60	N
27	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	N
28								N
29								N
30								N
31								S
32								S
33								S
34								S
35								S
36								S
37								S
38								H
39								H
40								H
41								H

SELECTION GUIDE

YG

THREADING TOOLS

YG TAP FORMING

HOLE TYPE	Max. 3.0xD Blind /Through Hole			
TOOL MATERIAL	HSS-PM	HSS-E	HSS-E	HSS-E
FLUTE TYPE	-			
SPIRAL FLUTE ANGLE	-	-	-	-
SERIES M				
SERIES M/MF				
SERIES UNC				
SERIES UNC/UNF	**TKR03** (p.B266)	**ZF** (p.B268)	**Z0** (p.B269)	**Z1** (p.B269)
SERIES UNC/UNF/UNS				
SERIES UNC/UN8				
SERIES NPT				
SERIES NPTF				
SERIES NPS/NPSF				
SURFACE TREATMENT / COATING	TiCN	Bright	Bright	TiN

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ISO	VDI 3323	Material Description	HB	HRc	TKR03	ZF	Z0	Z1
P	1	Non-alloy steel	125		◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80
P	2	Non-alloy steel	190	13	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80
P	3	Non-alloy steel	250	25	◎ 50-80		◎ 25-50	◎ 50-80
P	4	Non-alloy steel	270	28				
P	5	Non-alloy steel	300	32	◎ 10-35		◎ 6-30	◎ 10-35
P	6	Low alloy steel	180	10				
P	7	Low alloy steel	275	29				
P	8	Low alloy steel	300	32				
P	9	Low alloy steel	350	38				
P	10	High alloyed steel, and tool steel	200	15				
P	11	High alloyed steel, and tool steel	325	35				
M	12	Stainless steel	200	15	◎ 20-50	◎ 12-35	◎ 12-35	◎ 20-50
M	13	Stainless steel	240	23	◎ 20-50	◎ 12-35	◎ 12-35	◎ 20-50
M	14	Stainless steel	180	10	○ 12-15	○ 12-15	○ 12-15	○ 12-15
K	15	Grey cast iron	180	10				
K	16	Grey cast iron	260	26				
K	17	Nodular cast iron	160	3				
K	18	Nodular cast iron	250	25				
K	19	Malleable cast iron	130					
K	20	Malleable cast iron	230	21				
N	21	Aluminum-wrought alloy	60		◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65
N	22	Aluminum-wrought alloy	100		◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65
N	23	Aluminum-cast, alloyed	75		○ 45-90	○ 40-65	○ 40-65	○ 45-90
N	24	Aluminum-cast, alloyed	90		○ 45-90	○ 40-65	○ 40-65	○ 45-90
N	25	Aluminum-cast, alloyed	130					
N	26	Copper and Copper Alloys (Bronze / Brass)	110		◎ 30-65		◎ 30-65	◎ 30-65
N	27	Copper and Copper Alloys (Bronze / Brass)	90		◎ 30-65		◎ 30-65	◎ 30-65
N	28	Copper and Copper Alloys (Bronze / Brass)	100					
N	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.						
N	30	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.						
S	31	Heat Resistant Super Alloys	200	15				
S	32	Heat Resistant Super Alloys	280	30				
S	33	Heat Resistant Super Alloys	250	25				
S	34	Heat Resistant Super Alloys	350	38				
S	35	Heat Resistant Super Alloys	320	34				
S	36	Titanium Alloys	400 Rm					
S	37	Titanium Alloys	1050 Rm					
H	38	Hardened steel	550	55				
H	39	Hardened steel	630	60				
H	40	Chilled Cast Iron	400	42				
H	41	Hardened Cast Iron	550	55				

YG TAP FORMING

HOLE TYPE	Max. 3.0xD Blind /Through Hole						
TOOL MATERIAL	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
FLUTE TYPE	-						
SPIRAL FLUTE ANGLE	-	-	-	-	-	-	-
SERIES M							**Z8** (p.B274)
SERIES M/MF							
SERIES UNC							
SERIES UNC/UNF	**Z2** (p.B269)	**Z3** (p.B269)	**Z4** (p.B272)	**Z5** (p.B272)	**Z6** (p.B272)	**Z7** (p.B272)	
SERIES UNC/UNF/UNS							
SERIES UNC/UN8							
SERIES NPT							
SERIES NPTF							
SERIES NPS/NPSF							
SURFACE TREATMENT / COATING	Bright	TiN	Bright	TiN	Bright	TiN	Bright

ISO	VDI 3323	Z2	Z3	Z4	Z5	Z6	Z7	Z8
P	1	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50
P	2	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50
P	3	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50
P	4							
P	5	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30
P	6							
P	7							
P	8							
P	9							
P	10							
P	11							
M	12	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35
M	13	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35
M	14	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15
K	15							
K	16							
K	17							
K	18							
K	19							
K	20							
N	21	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65
N	22	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65
N	23	○ 40-65	○ 45-90	○ 40-65	○ 45-90	○ 40-65	○ 45-90	○ 40-65
N	24	○ 40-65	○ 45-90	○ 40-65	○ 45-90	○ 40-65	○ 45-90	○ 40-65
N	25							
N	26	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	27	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	28							
N	29							
N	30							
S	31							
S	32							
S	33							
S	34							
S	35							
S	36							
S	37							
H	38							
H	39							
H	40							
H	41							

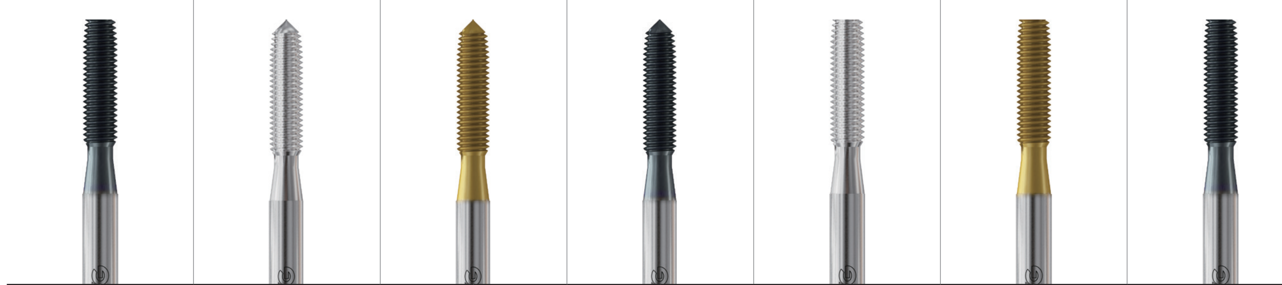
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

SELECTION GUIDE

THREADING TOOLS

YG TAP FORMING

	ZA	ZC	Z9	ZB	ZD	T7R01	T8R01	THR01	T7R02	T8R02	THR02
HOLE TYPE	Max. 3.0xD Blind /Through Hole				Max. 3.0xD Blind /Through Hole						
TOOL MATERIAL	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS	HSS	HSS	HSS	HSS	HSS
FLUTE TYPE	Spiral Flute			-	-						
SPIRAL FLUTE ANGLE	-	-	-	-	-	-	-	-	-	-	-
SERIES M	ZA (p.B274)	ZC (p.B274)	Z9 (p.B274)	ZB (p.B274)	ZD (p.B274)						
SERIES M/MF											
SERIES UNC											
SERIES UNC/UNF						T7R01 (p.B275)	T8R01 (p.B275)	THR01 (p.B275)	T7R02 (p.B276)	T8R02 (p.B276)	THR02 (p.B276)
SERIES UNC/UNF/UNS											
SERIES UNC/UN8											
SERIES NPT											
SERIES NPTF											
SERIES NPS/NPSF											
SURFACE TREATMENT / COATING	TiN	TiCN	Bright	TiN	TiCN	Bright	TiN	TiCN	Bright	TiN	TiCN

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ISO	VDI 3323	Material Description	HB	HRc	ZA	ZC	Z9	ZB	ZD	T7R01	T8R01	THR01	T7R02	T8R02	THR02
P	1	Non-alloy steel	125		◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	2	Non-alloy steel	190	13	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	3	Non-alloy steel	250	25	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	4	Non-alloy steel	270	28											
P	5	Non-alloy steel	300	32	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
P	6	Low alloy steel	180	10											
P	7	Low alloy steel	275	29											
P	8	Low alloy steel	300	32											
P	9	Low alloy steel	350	38											
P	10	High alloyed steel, and tool steel	200	15											
P	11	High alloyed steel, and tool steel	325	35											
M	12	Stainless steel	200	15	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50
M	13	Stainless steel	240	23	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50
M	14	Stainless steel	180	10	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15
K	15	Grey cast iron	180	10											
K	16	Grey cast iron	260	26											
K	17	Nodular cast iron	160	3											
K	18	Nodular cast iron	250	25											
K	19	Malleable cast iron	130												
K	20	Malleable cast iron	230	21											
N	21	Aluminum-wrought alloy	60		◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65
N	22	Aluminum-wrought alloy	100		◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65
N	23	Aluminum-cast, alloyed	75		○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90
N	24	Aluminum-cast, alloyed	90		○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90
N	25	Aluminum-cast, alloyed	130												
N	26	Copper and Copper Alloys (Bronze / Brass)	110		◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	27	Copper and Copper Alloys (Bronze / Brass)	90		◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	28	Copper and Copper Alloys (Bronze / Brass)	100												
N	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.													
N	30	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.													
S	31	Heat Resistant Super Alloys	200	15											
S	32	Heat Resistant Super Alloys	280	30											
S	33	Heat Resistant Super Alloys	250	25											
S	34	Heat Resistant Super Alloys	350	38											
S	35	Heat Resistant Super Alloys	320	34											
S	36	Titanium Alloys	400 Rm												
S	37	Titanium Alloys	1050 Rm												
H	38	Hardened steel	550	55											
H	39	Hardened steel	630	60											
H	40	Chilled Cast Iron	400	42											
H	41	Hardened Cast Iron	550	55											

SELECTION GUIDE

THREADING TOOLS

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SCREW THREAD INSERT TAP

	SCREW THREAD INSERT TAP				
HOLE TYPE	Max. 2.5xD Blind Hole			Max. 3.0xD Through Hole	
TOOL MATERIAL	HSS-E	HSS	HSS	HSS-E	HSS
FLUTE TYPE	Spiral Flute			Spiral Point	
SPIRAL FLUTE ANGLE	R40	R50	R50	-	-
SERIES M/MF			**T7425** (p.B283)		
SERIES UNC/UNF	**ST/SI** (p.B280)	**T7406** (p.B281)		**ST/SI** (p.B284)	**T7436** (p.B285)
SURFACE TREATMENT / COATING	HardSlick	Bright	Bright	HardSlick	Bright

ISO	VDI 3323	Material Description	HB	HRc	ST/SI (p.B280)	T7406 (p.B281)	T7425 (p.B283)	ST/SI (p.B284)	T7436 (p.B285)
P	1	Non-alloy steel	125		◎ 50-80	○ 25-50	○ 25-50	◎ 50-80	○ 25-50
P	2	Non-alloy steel	190	13	◎ 50-80	○ 25-50	○ 25-50	◎ 50-80	○ 25-50
P	3	Non-alloy steel	250	25	◎ 50-80	○ 25-50	○ 25-50	◎ 50-80	○ 25-50
P	4	Non-alloy steel	270	28	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30
P	5	Non-alloy steel	300	32					
P	6	Low alloy steel	180	10	◎ 10-35	○ 6-30	○ 6-30	◎ 10-35	○ 6-30
P	7	Low alloy steel	275	29					
P	8	Low alloy steel	300	32					
P	9	Low alloy steel	350	38					
P	10	High alloyed steel, and tool steel	200	15					
P	11	High alloyed steel, and tool steel	325	35					
M	12	Stainless steel	200	15					
M	13	Stainless steel	240	23					
M	14	Stainless steel	180	10					
K	15	Grey cast iron	180	10	○ 50-65	○ 35-50	○ 35-50	○ 50-65	○ 35-50
K	16	Grey cast iron	260	26	○ 50-65	○ 35-50	○ 35-50	○ 50-65	○ 35-50
K	17	Nodular cast iron	160	3					
K	18	Nodular cast iron	250	25					
K	19	Malleable cast iron	130						
K	20	Malleable cast iron	230	21					
N	21	Aluminum-wrought alloy	60		○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65
N	22	Aluminum-wrought alloy	100		○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65
N	23	Aluminum-cast, alloyed	75		○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65
N	24	Aluminum-cast, alloyed	90		○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65
N	25	Aluminum-cast, alloyed	130						
N	26	Copper and Copper Alloys (Bronze / Brass)	110						
N	27	Copper and Copper Alloys (Bronze / Brass)	90						
N	28	Copper and Copper Alloys (Bronze / Brass)	100						
N	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.							
N	30	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.							
S	31	Heat Resistant Super Alloys	200	15					
S	32	Heat Resistant Super Alloys	280	30					
S	33	Heat Resistant Super Alloys	250	25					
S	34	Heat Resistant Super Alloys	350	38					
S	35	Heat Resistant Super Alloys	320	34					
S	36	Titanium Alloys	400 Rm						
S	37	Titanium Alloys	1050 Rm						
H	38	Hardened steel	550	55					
H	39	Hardened steel	630	60					
H	40	Chilled Cast Iron	400	42					
H	41	Hardened Cast Iron	550	55					

SCREW THREAD INSERT TAP / PIPE TAP

	SCREW THREAD INSERT TAP			PIPE TAP					
HOLE TYPE	Max. 3.0xD Through Hole	Max. 2.0xD Blind /Through Hole		Max. 2.5xD Blind Hole					
TOOL MATERIAL	HSS	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
FLUTE TYPE	Spiral Point	Straight Flute		Spiral Flute					
SPIRAL FLUTE ANGLE	-	-	-	R15	R15	R15	R15	R15	R15
SERIES M	**T7415** (p.B287)		**T7405** (p.B290)						
SERIES UNC/UNF		**T7426** (p.B288)							
SERIES NPTF				**Q1** (p.B296)	**Q0** (p.B296)	**Q6** (p.B296)	**Q9** (p.B297)	**R0** (p.B297)	**R1** (p.B297)
SURFACE TREATMENT / COATING	Bright	Bright	Bright	Bright	Steam Oxide	HardSlick	Bright	TiN	HardSlick

ISO	VDI 3323	T7415 (p.B287)	T7426 (p.B288)	T7405 (p.B290)	Q1 (p.B296)	Q0 (p.B296)	Q6 (p.B296)	Q9 (p.B297)	R0 (p.B297)	R1 (p.B297)
P	1	○ 25-50	○ 25-50	○ 25-50	○ 15-40	○ 15-40	○ 15-40	◎ 15-40	◎ 15-40	◎ 15-40
P	2	○ 25-50	○ 25-50	○ 25-50	○ 15-40	○ 15-40	○ 15-40	◎ 15-40	◎ 15-40	◎ 15-40
P	3	○ 25-50	○ 25-50	○ 25-50	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25
P	4	○ 6-30	○ 6-30	○ 6-30	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20
P	5				○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20
P	6	○ 6-30	○ 6-30	○ 6-30	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25
P	7				○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25
P	8				○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25
P	9									
P	10									
P	11									
M	12				◎ 10-25	◎ 10-25	◎ 10-25			
M	13				◎ 10-25	◎ 10-25	◎ 10-25			
M	14				○ 10-25	○ 10-25	○ 10-25			
K	15	○ 35-50	○ 35-50	○ 35-50				◎ 15-50	◎ 15-50	◎ 15-50
K	16	○ 35-50	○ 35-50	○ 35-50				◎ 15-50	◎ 15-50	◎ 15-50
K	17				○ 15-50	○ 15-50	○ 15-50	◎ 15-50	◎ 15-50	◎ 15-50
K	18				○ 15-50	○ 15-50	○ 15-50	◎ 15-50	◎ 15-50	◎ 15-50
K	19									
K	20									
N	21	○ 50-65	○ 50-65	○ 50-65						
N	22	○ 50-65	○ 50-65	○ 50-65						
N	23	○ 40-65	○ 40-65	○ 40-65	○ 20-35	○ 20-35	○ 20-35			
N	24	○ 40-65	○ 40-65	○ 40-65						
N	25									
N	26									
N	27									
N	28									
N	29									
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S	35									
S	36									
S	37									
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H	40									
H	41									

SELECTION GUIDE

THREADING TOOLS

PIPE TAP

	R7	R8	R9	S0	S1	S2	T7L36/T7536	T6L36/T6536	T7505	T6505	TH505	T7546	T8546
HOLE TYPE	Max. 2.0xD Blind / Through Hole				Max. 2.0xD Blind / Through Hole						Max. 2.0xD Blind / Through Hole		
TOOL MATERIAL	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS	HSS	HSS	HSS	HSS	HSS	HSS
FLUTE TYPE	Straight Flute				Straight Flute						Straight Flute		
SPIRAL FLUTE ANGLE	-	-	-	-	R15	R15	R15	-	-	-	-	-	-
SERIES: M													
SERIES: M/MF													
SERIES: UNC													
SERIES: UNC/UNF													
SERIES: UNC/UNF/UNS													
SERIES: UNC/UN8													
SERIES: NPT									T7505 (p.B302)	T6505 (p.B302)	TH505 (p.B302)		
SERIES: NPTF	R7 (p.B298)	R8 (p.B298)	R9 (p.B298)	S0 (p.B298)	S1 (p.B299)	S2 (p.B299)						T7546 (p.B303)	T8546 (p.B303)
SERIES: NPS/NPSF							T7L36/T7536 (p.B300/p.B301)	T6L36/T6536 (p.B300/p.B301)					
SURFACE TREATMENT / COATING	Bright	TiN	HardSlick	Nitrided Steam Oxide	Bright	TiCN	Bright	Steam Oxide	Bright	Steam Oxide	TiCN	Bright	TiN

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ISO	VDI 3323	Material Description	HB	HRc	R7	R8	R9	S0	S1	S2	T7L36/T7536	T6L36/T6536	T7505	T6505	TH505	T7546	T8546
P	1	Non-alloy steel	125		◎ 15-40	◎ 15-40	◎ 15-40	◎ 15-40	◎ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40
	2		190	13	◎ 15-40	◎ 15-40	◎ 15-40	◎ 15-40	◎ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40
	3		250	25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25
	4		270	28	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20							
	5		300	32	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20							
	6	Low alloy steel	180	10	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25
	7		275	29	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25							
	8		300	32	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25							
	9		350	38													
	10	High alloyed steel, and tool steel	200	15													
	11		325	35													
M	12	Stainless steel	200	15													
	13		240	23													
	14		180	10													
K	15	Grey cast iron	180	10	○ 15-50	○ 15-50	○ 15-50	○ 15-50	◎ 15-50	◎ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50
	16		260	26	○ 15-50	○ 15-50	○ 15-50	○ 15-50	◎ 15-50	◎ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50
	17	Nodular cast iron	160	3	◎ 15-50	◎ 15-50	◎ 15-50	◎ 15-50	◎ 15-50	◎ 15-50							
	18		250	25	◎ 15-50	◎ 15-50	◎ 15-50	◎ 15-50	◎ 15-50	◎ 15-50							
	19	Malleable cast iron	130														
	20		230	21													
N	21	Aluminum-wrought alloy	60								○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40
	22		100								○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40
	23	Aluminum-cast, alloyed	75								○ 20-35	○ 20-35	○ 20-35	○ 20-35	○ 20-35	○ 20-35	○ 20-35
	24		90														
	25		130														
	26	Copper and Copper Alloys (Bronze / Brass)	110														
	27		90														
	28		100														
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.															
	30																
S	31	Heat Resistant Super Alloys	200	15													
	32		280	30													
	33		250	25													
	34		350	38													
	35		320	34													
	36	Titanium Alloys	400 Rm														
	37		1050 Rm														
H	38	Hardened steel	550	55													
	39		630	60													
	40	Chilled Cast Iron	400	42													
	41	Hardened Cast Iron	550	55													

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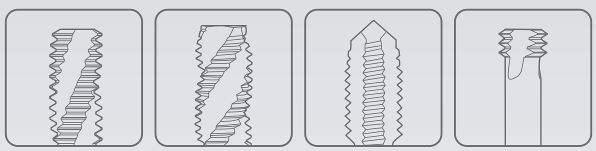
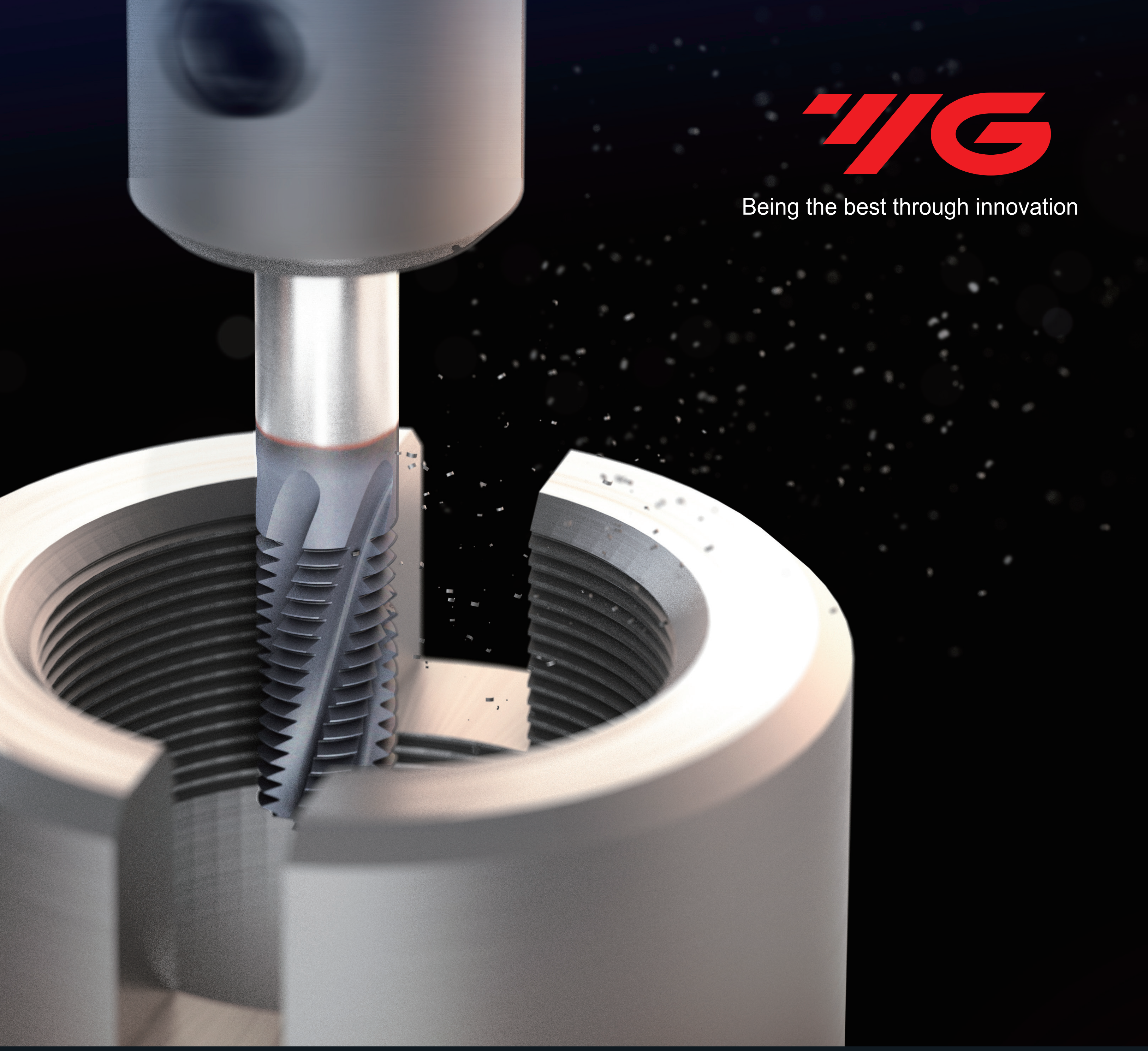


THREADING



THREAD MILL

- Threading a Range of Hole Sizes with the Same Thread Mill in a Wide Range of Materials

SELECTION GUIDE

THREADING TOOLS

SOLID CARBIDE THREAD MILL

- Threading a Range of Hole Sizes with the Same Thread Mill in a Wide Range of Materials

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	TE	L421E	TD	L421D	L427E	L427D	L12DE	L12DD	TF	L621F	TG	L621G	L121K	L421K
THREAD MILL TYPE	without Coolant Hole	with Coolant Hole	without Coolant Hole	with Coolant Hole	with Coolant Hole & Chamfer		Miniature		without Coolant Hole	with Coolant Hole	without Coolant Hole	with Coolant Hole	without Coolant Hole	with Coolant Hole
THREAD STANDARD	UN	UN	M	M	UN	M	UN	M	NPT	NPT	NPTF	NPTF	NPS	NPS
HOLE TYPE	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole	Blind / Through Hole
TOOL MATERIAL	CARBIDE			CARBIDE	CARBIDE		CARBIDE		CARBIDE					
FLUTE TYPE	Helix			Helix	Helix		Helix		Helix					
HELIX ANGLE	R15			R15	R15		R15		R15					
SERIES NO.	TE (p.B48)	L421E (p.B50)	TD (p.B51)	L421D (p.B52)	L427E (p.B53)	L427D (p.B54)	L12DE (p.B55)	L12DD (p.B56)	TF (p.B57)	L621F (p.B58)	TG (p.B59)	L621G (p.B60)	L121K (p.B61)	L421K (p.B62)
COATING	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN
MODEL														

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	Examples	TE	L421E	TD
P	1	Non-alloy steel	About 0.15% C	Annealed	125		S15C, C15, 1015	◎ 250-400	◎ 250-400	◎ 250-400
	2		About 0.45% C	Annealed	190	13	S45C, C45, 1045	◎ 250-370	◎ 250-370	◎ 250-370
	3		About 0.45% C	Quenched & Tempered	250	25		◎ 250-360	◎ 250-360	◎ 250-360
	4		About 0.75% C	Annealed	270	28	SK5, Ck75, 1080	◎ 230-330	◎ 230-330	◎ 230-330
	5		About 0.75% C	Quenched & Tempered	300	32		◎ 230-320	◎ 230-320	◎ 230-320
	6	Low alloy steel		Annealed	180	10	SCM440, 42CrMo4, 410	◎ 250-360	◎ 250-360	◎ 250-360
	7			Quenched & Tempered	275	29		◎ 230-330	◎ 230-330	◎ 230-330
	8			Quenched & Tempered	300	32		◎ 230-320	◎ 230-320	◎ 230-320
	9			Quenched & Tempered	350	38		◎ 200-300	◎ 200-300	◎ 200-300
	10	High alloyed steel, and tool steel		Annealed	200	15	SKD, D2	◎ 230-320	◎ 230-320	◎ 230-320
	11			Quenched & Tempered	325	35	SKH, SUH, M42	◎ 200-300	◎ 200-300	◎ 200-300
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	SUS 420, X40Cr13, 420	○ 200-250	○ 200-250	○ 200-250
	13		Martensitic	Quenched & Tempered	240	23		○ 200-250	○ 200-250	○ 200-250
	14		Austenitic		180	10	SUS 316, 316, X5CrNiMo 17 12 2	○ 150-250	○ 150-250	○ 150-250
K	15	Grey cast iron	Pearlitic / ferritic		180	10	FC, GG, EN-GJL-250	◎ 250-400	◎ 250-400	◎ 250-400
	16		Pearlitic (Martensitic)		260	26		◎ 250-360	◎ 250-360	◎ 250-360
	17	Nodular cast iron	Ferritic		160	3	FCD, GGG, EN-GJS-500-7	◎ 250-400	◎ 250-400	◎ 250-400
	18		Pearlitic		250	25		◎ 230-320	◎ 230-320	◎ 230-320
	19	Malleable cast iron	Ferritic		130		FCMW, FCMP, GTS, GJMB350-10	◎ 230-320	◎ 230-320	◎ 230-320
	20		Pearlitic		230	21		◎ 230-350	◎ 230-350	◎ 230-350
N	21	Aluminum-wrought alloy	Not Curable		60		SAE 1000, AlMg 1, 3.3315	◎ 500-1000	◎ 500-1000	◎ 500-1000
	22		Curable	Hardened	100		SAE 7050, AlCuMg 1, 3.1325	◎ 400-800	◎ 400-800	◎ 400-800
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		ADC12, G-AlSi12, 3.2581	◎ 350-900	◎ 350-900	◎ 350-900
	24		≤ 12% Si, Curable	Hardened	90		C4BS, G-AlSi10Mg, 3.2381	◎ 350-900	◎ 350-900	◎ 350-900
	25		> 12% Si, Not Curable		130			◎ 350-800	◎ 350-800	◎ 350-800
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		CuZn36Pb 3, 2.0375	◎ 500-800	◎ 500-800	◎ 500-800
	27		CuZn, CuSnZn (Brass)		90		CuZn 15, 2.0240	◎ 350-800	◎ 350-800	◎ 350-800
	28		CuSn, lead-free copper and electrolytic copper		100		G-CuZn40Fe, 2.0590	◎ 300-600	◎ 300-600	◎ 300-600
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic				CFRP	◎ 350-900	◎ 350-900	◎ 350-900
	30		Rubber, Wood, etc.					◎ 350-900	◎ 350-900	◎ 350-900
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15	X12 NiCrSi 36-16, 1.4864	○ 100-200	○ 100-200	○ 100-200
	32			Cured	280	30		○ 70-180	○ 70-180	○ 70-180
	33		Ni or Co Based	Annealed	250	25	Inconel 718, NiCr20TiAl, 2.4631	○ 50-140	○ 50-140	○ 50-140
	34			Cured	350	38	NiCu30Al, 2.4375	○ 50-120	○ 50-120	○ 50-120
	35			Cast	320	34	G-X120Mn12, 1.3401	○ 50-140	○ 50-140	○ 50-140
	36	Titanium Alloys	Pure Titanium		400 Rm			○ 100-250	○ 100-250	○ 100-250
	37		Alpha + Beta Alloys	Hardened	1050 Rm		TiAl6V4, 3.7165	○ 60-140	○ 60-140	○ 60-140
H	38	Hardened steel		Hardened	550	55	SK3			
	39			Hardened	630	60				
	40	Chilled Cast Iron		Cast	400	42				
	41	Hardened Cast Iron		Hardened	550	55				

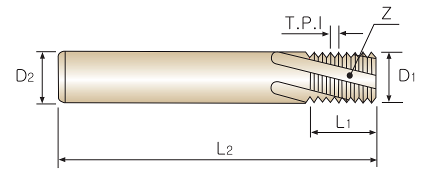
VDI 3323	L421D	L427E	L427D	L12DE	L12DD	TF	L621F	TG	L621G	L121K	L421K
1	◎ 250-400	◎ 250-400	◎ 250-400	◎ 220-380	◎ 220-380	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400
2	◎ 250-370	◎ 250-370	◎ 250-370	◎ 220-380	◎ 220-380	◎ 250-370	◎ 250-370	◎ 250-370	◎ 250-370	◎ 250-370	◎ 250-370
3	◎ 250-360	◎ 250-360	◎ 250-360	◎ 220-380	◎ 220-380	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360
4	◎ 230-330	◎ 230-330	◎ 230-330	◎ 220-350	◎ 220-350	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330
5	◎ 230-320	◎ 230-320	◎ 230-320	◎ 220-300	◎ 220-300	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320
6	◎ 250-360	◎ 250-360	◎ 250-360	◎ 220-350	◎ 220-350	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360
7	◎ 230-330	◎ 230-330	◎ 230-330	◎ 220-350	◎ 220-350	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330	◎ 230-330
8	◎ 230-320	◎ 230-320	◎ 230-320	◎ 200-300	◎ 200-300	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320
9	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300
10	◎ 230-320	◎ 230-320	◎ 230-320	◎ 220-350	◎ 220-350	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320
11	◎ 200-300	◎ 200-300	◎ 200-300	◎ 220-350	◎ 220-350	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300	◎ 200-300
12	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250
13	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250	○ 200-250
14	○ 150-250	○ 150-250	○ 150-250	○ 180-220	○ 180-220	○ 150-250	○ 150-250	○ 150-250	○ 150-250	○ 150-250	○ 150-250
15	◎ 250-400	◎ 250-400	◎ 250-400	◎ 300-500	◎ 300-500	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400
16	◎ 250-360	◎ 250-360	◎ 250-360	◎ 300-500	◎ 300-500	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360	◎ 250-360
17	◎ 250-400	◎ 250-400	◎ 250-400	◎ 280-450	◎ 280-450	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400	◎ 250-400
18	◎ 230-320	◎ 230-320	◎ 230-320	◎ 250-400	◎ 250-400	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320
19	◎ 230-320	◎ 230-320	◎ 230-320	◎ 250-400	◎ 250-400	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320	◎ 230-320
20	◎ 230-350	◎ 230-350	◎ 230-350	◎ 280-450	◎ 280-450	◎ 230-350	◎ 230-350	◎ 230-350	◎ 230-350	◎ 230-350	◎ 230-350
21	◎ 500-1000	◎ 500-1000	◎ 500-1000	◎ 400-1000	◎ 400-1000	◎ 500-1000	◎ 500-1000	◎ 500-1000	◎ 500-1000	◎ 500-1000	◎ 500-1000
22	◎ 400-800	◎ 400-800	◎ 400-800	◎ 400-900	◎ 400-900	◎ 400-800	◎ 400-800	◎ 400-800	◎ 400-800	◎ 400-800	◎ 400-800
23	◎ 350-900	◎ 350-900	◎ 350-900	◎ 300-900	◎ 300-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900
24	◎ 350-900	◎ 350-900	◎ 350-900	◎ 300-900	◎ 300-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900
25	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800
26	◎ 500-800	◎ 500-800	◎ 500-800	◎ 400-700	◎ 400-700	◎ 500-800	◎ 500-800	◎ 500-800	◎ 500-800	◎ 500-800	◎ 500-800
27	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-700	◎ 350-700	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800	◎ 350-800
28	◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600	◎ 300-600
29	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-700	◎ 350-700	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900
30	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-700	◎ 350-700	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900	◎ 350-900
31	○ 100-200	○ 100-200	○ 100-200	○ 150-250	○ 150-250	○ 100-200	○ 100-200	○ 100-200	○ 100-200	○ 100-200	○ 100-200
32	○ 70-180	○ 70-180	○ 70-180	○ 130-200	○ 130-200	○ 70-180	○ 70-180	○ 70-180	○ 70-180	○ 70-180	○ 70-180
33	○ 50-140	○ 50-140	○ 50-140	○ 100-160	○ 100-160	○ 50-140	○ 50-140	○ 50-140	○ 50-140	○ 50-140	○ 50-140
34	○ 50-120	○ 50-120	○ 50-120	○ 100-160	○ 100-160	○ 50-120	○ 50-120	○ 50-120	○ 50-120	○ 50-120	○ 50-120
35	○ 50-140	○ 50-140	○ 50-140	○ 120-180	○ 120-180	○ 50-140	○ 50-140	○ 50-140	○ 50-140	○ 50-140	○ 50-140
36	○ 100-250	○ 100-250	○ 100-250	○ 80-200	○ 80-200	○ 100-250	○ 100-250	○ 100-250	○ 100-250	○ 100-250	○ 100-250
37	○ 60-140	○ 60-140	○ 60-140	○ 80-120	○ 80-120	○ 60-140	○ 60-140	○ 60-140	○ 60-140	○ 60-140	○ 60-140
38											
39											
40											
41											

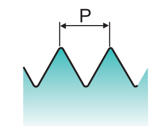
THREAD MILL

TE SERIES

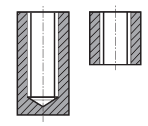
Solid Carbide Thread Mill for Unified Internal Threads - ANSI B1.1

UN





Hole type



Material groups MU | CARBIDE | PLAIN | 60° | R15° | TiAlN | P.B63

Unit : Inch

SIZE	Pitch	EDP No.	Cutter Diameter	Shank Diameter	Thread Length	Overall Length	No. of Flute
	TPI	TiAlN	D1	D2	L1	L2	Z
#2	64	**TE100**	.065	.125	.125	2.000	3
#2	56	**TE080**	.065	.125	.125	2.000	3
#3	48	**TE120**	.075	.125	.167	2.000	3
#5	44	**TE220**	.095	.125	.228	2.000	3
#4	40	**TE160**	.085	.125	.175	2.000	3
#8	36	**TE300**	.115	.125	.250	2.000	3
#6	32	**TE240**	.100	.125	.218	2.000	3
#8	32	**TE280**	.115	.125	.250	2.000	3
#10	32	**TE340**	.120	.125	.312	2.000	3
1/2	32	**TEF90**	.370	.375	1.000	3.500	4
#10	28	**TEK90**	.120	.125	.312	2.000	3
1/4	28	**TE420**	.180	.187	.500	2.500	3
1/2	28	**TE590**	.370	.375	1.000	3.500	4
#10	24	**TE320**	.120	.125	.312	2.000	3
5/16	24	**TE460**	.235	.250	.625	2.500	3
3/8	24	**TE500**	.285	.312	.750	3.000	4
1/2	24	**TE570**	.370	.375	1.000	3.500	4
1/4	20	**TE400**	.180	.187	.500	2.500	3
7/16	20	**TE540**	.335	.375	.875	3.500	4
1/2	20	**TE580**	.370	.375	1.000	3.500	4
5/16	18	**TE440**	.235	.250	.625	2.500	3
9/16	18	**TE620**	.370	.375	.875	3.500	4
3/8	16	**TE480**	.285	.312	.750	3.000	4
3/4	16	**TE720**	.490	.500	1.250	3.500	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎	◎	◎	◎	◎

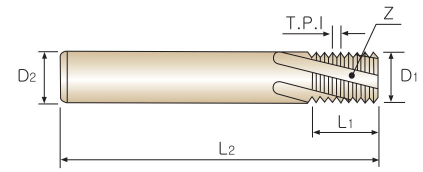
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○				

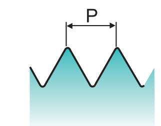
THREAD MILL

TE SERIES

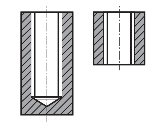
Solid Carbide Thread Mill for Unified Internal Threads - ANSI B1.1

UN





Hole type



Material groups MU | CARBIDE | PLAIN | 60° | R15° | TiAlN | P.B63

Unit : Inch

SIZE	Pitch	EDP No.	Cutter Diameter	Shank Diameter	Thread Length	Overall Length	No. of Flute
	TPI	TiAlN	D1	D2	L1	L2	Z
7/16	14	**TE520**	.305	.312	.750	3.000	4
7/8	14	**TE760**	.490	.500	1.250	3.500	4
1/2	13	**TE560**	.350	.375	.875	3.500	4
9/16	12	**TE600**	.370	.375	.875	3.500	4
3/4	12	**TE710**	.495	.500	1.250	3.500	4
1	12	**TE800**	.745	.750	1.500	4.000	5
5/8	11	**TE640**	.470	.500	1.250	3.500	4
3/4	10	**TE700**	.495	.500	1.250	3.500	4
7/8	9	**TE740**	.620	.625	1.375	4.000	4
1	8	**TE780**	.620	.625	1.375	4.000	4
1-1/8 & 1-1/4	7	**TE820**	.745	.750	1.572	4.500	5
1-3/8	6	**TE900**	.745	.750	1.500	4.500	5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○				

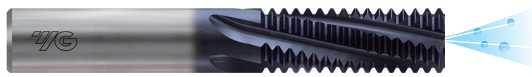
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

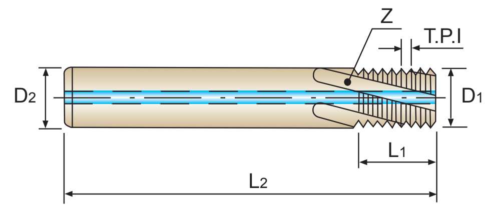
YG THREAD MILL

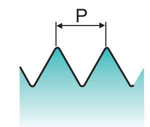
L421E SERIES

Solid Carbide Thread Mill with Coolant Hole for Unified Internal Threads - ANSI B1.1

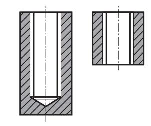
UN







Hole type



Material groups MU | CARBIDE | PLAIN | 60° | R15° | TiAlN | P.B63

Unit : Inch

SIZE	Pitch	EDP No.	Cutter Diameter	Shank Diameter	Thread Length	Overall Length	No. of Flute
	TPI	TiAlN	D1	D2	L1	L2	Z
1/2	32	L421EF90	.370	.375	1.000	3.500	4
1/4	28	L421E420	.180	.187	.500	2.500	3
1/2	28	L421E590	.370	.375	1.000	3.500	4
5/16	24	L421E460	.235	.250	.625	2.500	3
3/8	24	L421E500	.285	.312	.750	3.000	4
1/2	24	L421E570	.370	.375	1.000	3.500	4
1/4	20	L421E400	.180	.187	.500	2.500	3
7/16	20	L421E540	.335	.375	.875	3.500	4
1/2	20	L421E580	.370	.375	1.000	3.500	4
5/16	18	L421E440	.235	.250	.625	2.500	3
9/16	18	L421E620	.370	.375	.875	3.500	4
3/8	16	L421E480	.285	.312	.750	3.000	4
3/4	16	L421E720	.490	.500	1.250	3.500	4
7/16	14	L421E520	.305	.312	.750	3.000	4
7/8	14	L421E760	.490	.500	1.250	3.500	4
1/2	13	L421E560	.350	.375	.875	3.500	4
9/16	12	L421E600	.370	.375	.875	3.500	4
3/4	12	L421E710	.495	.500	1.250	3.500	4
1	12	L421E800	.745	.750	1.500	4.000	5
5/8	11	L421E640	.470	.500	1.250	3.500	4
3/4	10	L421E700	.495	.500	1.250	3.500	4
7/8	9	L421E740	.620	.625	1.375	4.000	4
1	8	L421E780	.620	.625	1.375	4.000	4
1-1/8" & 1-1/4"	7	L421E820	.745	.750	1.572	4.500	5
1-3/8"	6	L421E900	.745	.750	1.500	4.500	5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○				

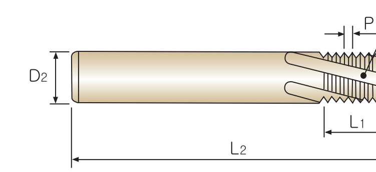
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP TiNi
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

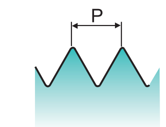
YG THREAD MILL

TD SERIES

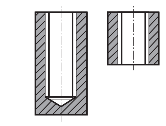
Solid Carbide Thread Mill for Metric Internal Thread - DIN13

M





Hole type



Material groups MU | CARBIDE | PLAIN | 60° | R15° | TiAlN | P.B63

Unit : Inch

SIZE	Pitch (mm)	EDP No.	Cutter Diameter	Shank Diameter	Thread Length	Overall Length	No. of Flute
	P	TiAlN	D1	D2	L1	L2	Z
M3	0.50	TD200	.085	.125	.178	2.000	3
M4	0.70	TD240	.115	.125	.276	2.000	3
M4.5	0.75	TD260	.120	.125	.250	2.000	3
M8	0.75	TD380	.235	.250	.625	2.500	3
M5	0.80	TD280	.120	.125	.312	2.000	3
M6	1.00	TD310	.170	.187	.500	2.500	3
M10	1.00	TD440	.300	.312	.750	3.000	4
M12	1.00	TD530	.360	.375	.875	3.500	4
M8	1.25	TD360	.235	.250	.625	2.500	3
M10	1.50	TD420	.300	.312	.750	3.000	4
M14	1.50	TD550	.370	.375	.875	3.500	4
M18	1.50	TD670	.490	.500	1.250	3.500	4
M12	1.75	TD500	.360	.375	.875	3.500	4
M14	2.00	TD540	.370	.375	1.125	3.500	4
M16	2.00	TD600	.470	.500	1.250	3.500	4
M20	2.50	TD700	.495	.500	1.250	3.500	4
M24	3.00	TD780	.620	.625	1.375	4.000	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎	◎	◎	◎	◎

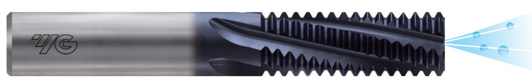
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○				

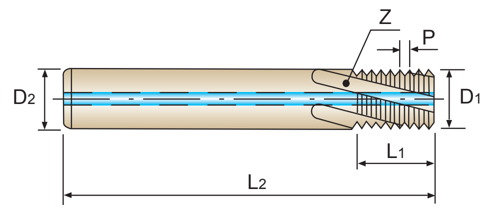
YG THREAD MILL

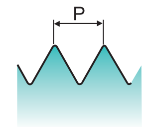
L421D SERIES

Solid Carbide Thread Mill with Coolant Hole for Metric Internal Thread - DIN13

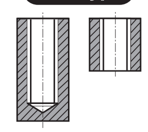
M







Hole type



Material groups MU | CARBIDE | PLAIN | 60° | R15° | TiAlN | P.B63

Unit : Inch

SIZE	Pitch (mm)	EDP No.	Cutter Diameter	Shank Diameter	Thread Length	Overall Length	No. of Flute
	P	TiAlN	D1	D2	L1	L2	Z
M8	0.75	L421D380	.235	.250	.625	2.500	3
M6	1.00	L421D310	.170	.187	.500	2.500	3
M10	1.00	L421D440	.300	.312	.750	3.000	4
M12	1.00	L421D530	.360	.375	.875	3.500	4
M8	1.25	L421D360	.235	.250	.625	2.500	3
M10	1.50	L421D420	.300	.312	.750	3.000	4
M14	1.50	L421D550	.370	.375	.875	3.500	4
M18	1.50	L421D670	.490	.500	1.250	3.500	4
M12	1.75	L421D500	.360	.375	.875	3.500	4
M14	2.00	L421D540	.370	.375	1.125	3.500	4
M16	2.00	L421D600	.470	.500	1.250	3.500	4
M20	2.50	L421D700	.495	.500	1.250	3.500	4
M24	3.00	L421D780	.620	.625	1.375	4.000	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎	◎	◎	◎	◎

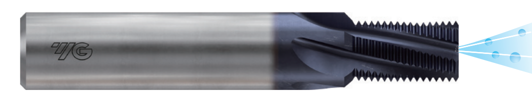
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○				

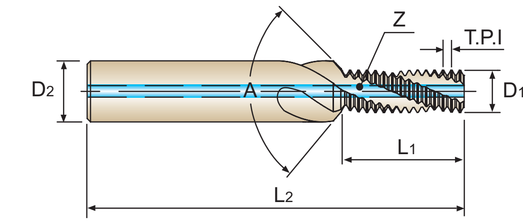
YG THREAD MILL

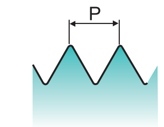
L427E SERIES

Solid Carbide Thread Mill with Coolant Hole & Chamfer for Unified Internal Threads - ANSI B1.1

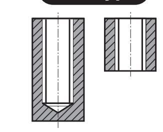
UN







Hole type



Material groups MU | CARBIDE | PLAIN | 60° | R15° | TiAlN | P.B63

Unit : Inch

SIZE	Pitch	EDP No.	Cutter Diameter	Shank Diameter	Thread Length	Overall Length	Angle	No. of Flute
	TPI	TiAlN	D1	D2	L1	L2	A	Z
1/4	28	L427E420	.205	.312	.500	2.500	90°	3
3/8	24	L427E500	.325	.500	.750	3.000	90°	4
1/4	20	L427E400	.190	.312	.500	2.500	90°	3
1/2	20	L427E580	.435	.625	1.000	3.500	90°	4
5/16	18	L427E440	.240	.375	.625	2.500	90°	3
3/8	16	L427E480	.290	.375	.750	3.000	90°	4
3/4	16	L427E720	.655	.750	1.500	4.000	90°	5
7/16	14	L427E520	.335	.500	.750	3.500	90°	4
1/2	13	L427E560	.385	.500	1.000	3.500	90°	4
9/16	12	L427E600	.455	.625	1.200	3.500	90°	4
5/8	11	L427E640	.515	.625	1.250	3.500	90°	4
3/4	10	L427E700	.630	.750	1.500	4.000	90°	5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎	◎	◎	◎	◎

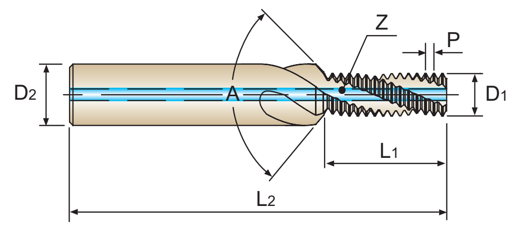
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○				

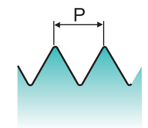
YG THREAD MILL

L427D SERIES

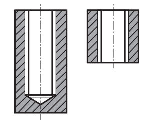
Solid Carbide Thread Mill with Coolant Hole & Chamfer for Metric Internal Thread - DIN13

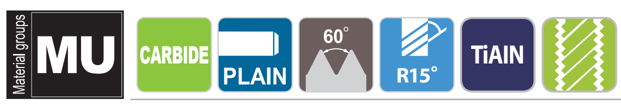
M





Hole type





P.B63

Unit : Inch

SIZE	Pitch (mm)	EDP No.	Cutter Diameter	Shank Diameter	Thread Length	Overall Length	Angle	No. of Flute
	P	TiAlN	D1	D2	L1	L2	A	Z
M6	1.00	**L427D310**	.185	.312	.500	2.500	90°	3
M8	1.25	**L427D360**	.250	.375	.630	2.500	90°	3
M10	1.50	**L427D420**	.315	.500	.790	3.000	90°	4
M12	1.75	**L427D500**	.370	.500	.950	3.500	90°	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○				

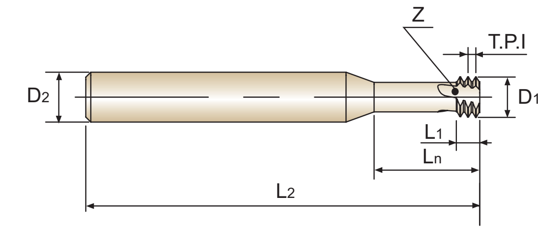
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

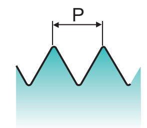
YG THREAD MILL

L12DE SERIES

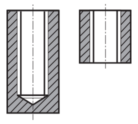
Solid Carbide Miniature Thread Mill for Unified Internal Threads - ANSI B1.1

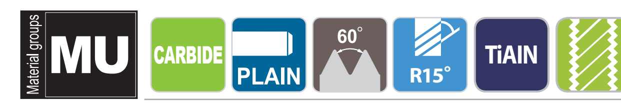
UN





Hole type





P.B63

Unit : Inch

SIZE	Pitch	EDP No.	Cutter Diameter	Shank Diameter	Thread Length	Neck Length	Overall Length	No. of Flute
	TPI	TiAlN	D1	D2	L1	Ln	L2	Z
#1	64	**L12DE040**	.055	.250	.047	.165	2.500	3
#2	56	**L12DE080**	.065	.250	.054	.197	2.500	3
#3	48	**L12DE120**	.075	.250	.063	.236	2.500	3
#4	40	**L12DE160**	.083	.250	.075	.236	2.500	3
#8	36	**L12DE300**	.130	.250	.083	.343	2.500	3
#6	32	**L12DE240**	.100	.250	.094	.292	2.500	3
#8	32	**L12DE280**	.126	.250	.094	.394	2.500	3
#10	32	**L12DE340**	.150	.250	.094	.406	2.500	3
1/4	28	**L12DE420**	.207	.250	.107	.520	2.500	3
#10	24	**L12DE320**	.141	.250	.125	.402	2.500	3
5/16	24	**L12DE460**	.263	.312	.125	.650	2.500	3
1/4	20	**L12DE400**	.192	.250	.150	.528	2.500	3
7/16	20	**L12DE540**	.360	.375	.150	.906	2.500	4
5/16	18	**L12DE440**	.242	.312	.167	.650	2.500	3
3/8	16	**L12DE480**	.264	.375	.188	.752	2.500	3
7/16	14	**L12DE520**	.354	.375	.214	.917	2.500	4
1/2	13	**L12DE560**	.407	.500	.231	1.080	3.000	4
9/16	12	**L12DE600**	.465	.500	.250	1.240	3.500	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎	◎	◎	◎	◎

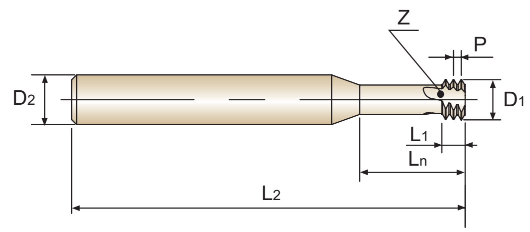
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○				

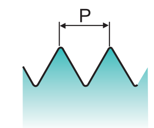
YG THREAD MILL

L12DD SERIES

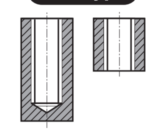
Solid Carbide Miniature Thread Mill for Metric Internal Thread - DIN13

M





Hole type



Material groups MU | CARBIDE | PLAIN | 60° | R15° | TiAlN | P.B63

Unit : Inch

SIZE	Pitch (mm)	EDP No.	Cutter Diameter	Shank Diameter	Thread Length	Neck Length	Overall Length	No. of Flute
	P	TiAlN	D1	D2	L1	Ln	L2	Z
M1.6	0.35	**L12DD090**	.047	.125	.041	.134	2.500	3
M2	0.40	**L12DD130**	.061	.250	.047	.165	2.500	3
M2.2	0.45	**L12DD150**	.065	.250	.053	.181	2.500	3
M2.5	0.45	**L12DD170**	.077	.250	.053	.205	2.500	3
M3	0.50	**L12DD200**	.094	.250	.059	.244	2.500	3
M3.5	0.60	**L12DD220**	.108	.250	.071	.287	2.500	3
M4	0.70	**L12DD240**	.124	.250	.083	.327	2.500	3
M4.5	0.75	**L12DD260**	.133	.250	.089	.369	2.500	3
M5	0.80	**L12DD280**	.159	.250	.094	.409	2.500	3
M6	1.00	**L12DD310**	.189	.250	.118	.492	2.500	3
M8	1.25	**L12DD360**	.256	.312	.148	.654	2.500	3
M10	1.50	**L12DD420**	.323	.375	.177	.819	2.500	4
M12	1.75	**L12DD500**	.371	.375	.207	.984	2.500	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎	◎	◎	◎	◎

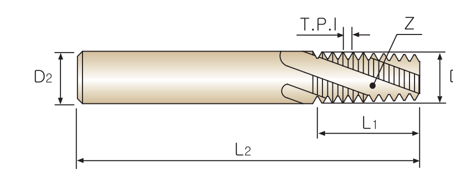
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○				

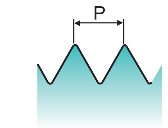
YG THREAD MILL

TF SERIES

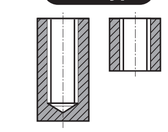
Solid Carbide Thread Mill for NPT Thread - ANSI B 1.20.1

NPT





Hole type



Material groups MU | CARBIDE | PLAIN | 60° | R15° | TiAlN | P.B63

Unit : Inch

SIZE	Pitch	EDP No.	Cutter Diameter	Shank Diameter	Thread Length	Overall Length	No. of Flute
	TPI	TiAlN	D1	D2	L1	L2	Z
1/16 & 1/8	27	**TF020**	.245	.250	.437	2.500	3
1/4 & 3/8	18	**TF400**	.305	.312	.625	3.000	4
1/4 & 3/8	18	**TF480**	.363	.375	.680	3.500	4
1/2 & 3/4	14	**TF560**	.495	.500	.875	3.500	4
1" - 2"	11.5	**TF780**	.620	.625	1.125	4.000	4
2-1/2" - 6"	8	**TFF40**	.745	.750	1.500	5.000	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○				

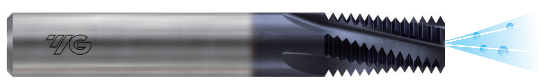
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

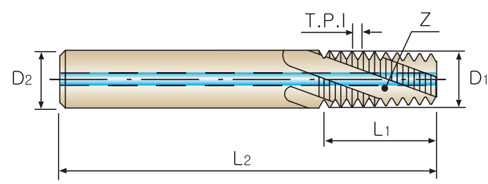
YG THREAD MILL

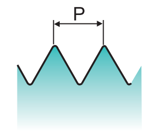
L621F SERIES

Solid Carbide Thread Mill with Coolant Hole for NPT Thread - ANSI B 1.20.1

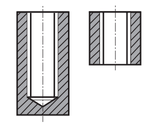
NPT







Hole type



Material groups MU | CARBIDE | PLAIN | 60° | R15° | TiAlN | P.B63

Unit : Inch

SIZE	Pitch	EDP No.	Cutter Diameter	Shank Diameter	Thread Length	Overall Length	No. of Flute
	TPI	TiAlN	D1	D2	L1	L2	Z
1/6 & 1/8	27	**L621F020**	.245	.250	.437	2.500	3
1/4 & 3/8	18	**L621F400**	.305	.312	.625	3.000	4
1/4 & 3/8	18	**L621F480**	.363	.375	.680	3.500	4
1/2 & 3/4	14	**L621F560**	.495	.500	.875	3.500	4
1" - 2"	11.5	**L621F780**	.620	.625	1.125	4.000	4
2-1/2" - 6"	8	**L621FF40**	.745	.750	1.500	5.000	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎	◎	◎	◎	◎

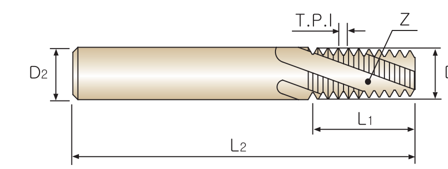
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○				

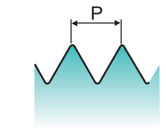
YG THREAD MILL

TG SERIES

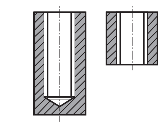
Solid Carbide Thread Mill for NPTF Thread - ANSI B 1.20.3

NPTF





Hole type



Material groups MU | CARBIDE | PLAIN | 60° | R15° | TiAlN | P.B63

Unit : Inch

SIZE	Pitch	EDP No.	Cutter Diameter	Shank Diameter	Thread Length	Overall Length	No. of Flute
	TPI	TiAlN	D1	D2	L1	L2	Z
1/16 & 1/8	27	**TG020**	.245	.250	.437	2.500	3
1/4 & 3/8	18	**TG400**	.305	.312	.625	3.000	4
1/2 & 3/4	14	**TG560**	.495	.500	.875	3.500	4
1" -2"	11.5	**TG780**	.620	.625	1.125	4.000	4
2-1/2" - 6"	8	**TGF40**	.745	.750	1.500	5.000	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎	◎	◎	◎	◎

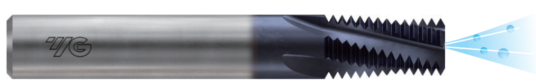
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○				

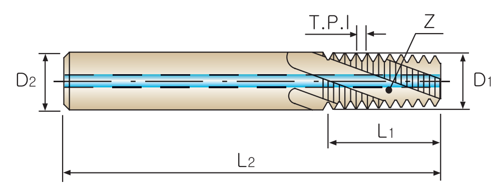
THREAD MILL

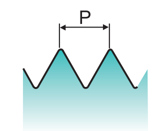
L621G SERIES

Solid Carbide Thread Mill with Coolant Hole for NPTF Thread - ANSI B 1.20.3

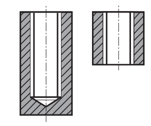
NPTF

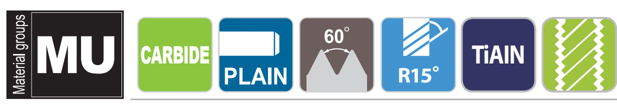






Hole type





P.B63

Unit : Inch

SIZE	Pitch	EDP No.	Cutter Diameter	Shank Diameter	Thread Length	Overall Length	No. of Flute
	TPI	TiAlN	D1	D2	L1	L2	Z
1/16 & 1/8	27	**L621G020**	.245	.250	.437	2.500	3
1/4 & 3/8	18	**L621G400**	.305	.312	.625	3.000	4
1/2 & 3/4	14	**L621G560**	.495	.500	.875	3.500	4
1" - 2"	11.5	**L621G780**	.620	.625	1.125	4.000	4
2-1/2" - 6"	8	**L621GF40**	.745	.750	1.500	5.000	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○				

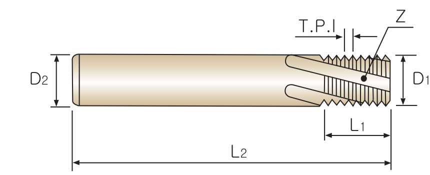
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

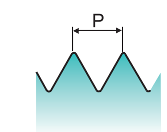
THREAD MILL

L121K SERIES

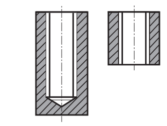
Solid Carbide Thread Mill for NPS Thread - ANSI B 1.20.1

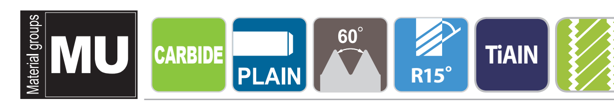
NPS





Hole type





P.B63

Unit : Inch

SIZE	Pitch	EDP No.	Cutter Diameter	Shank Diameter	Thread Length	Overall Length	No. of Flute
	TPI	TiAlN	D1	D2	L1	L2	Z
1/8	27	**L121K020**	.245	.250	.556	2.500	3
1/4 & 3/8	18	**L121K400**	.363	.375	.833	3.500	4
1/2 & 3/4	14	**L121K560**	.495	.500	1.071	3.500	4
1" - 2"	11.5	**L121K780**	.620	.625	1.304	4.000	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎	◎	◎	◎	◎

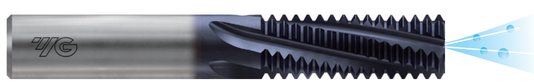
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○				

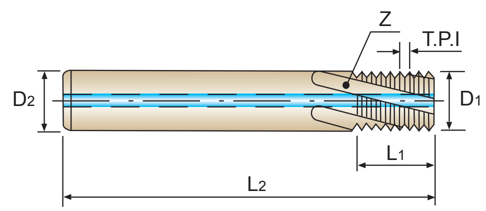
THREAD MILL

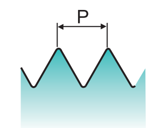
L421K SERIES

Solid Carbide Thread Mill with Coolant Hole for NPS Thread - ANSI B 1.20.1

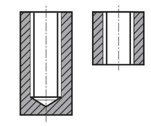
NPS

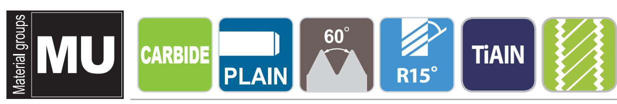






Hole type





P.B63

Unit : Inch

SIZE	Pitch	EDP No.	Cutter Diameter	Shank Diameter	Thread Length	Overall Length	No. of Flute
	TPI	TiAlN	D1	D2	L1	L2	Z
1/8	27	**L421K020**	.245	.250	.556	2.500	3
1/4 & 3/8	18	**L421K400**	.363	.375	.833	3.500	4
1/2 & 3/4	14	**L421K560**	.495	.500	1.071	3.500	4
1" - 2"	11.5	**L421K780**	.620	.625	1.304	4.000	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○				

THREAD MILL

RECOMMENDED CUTTING CONDITIONS

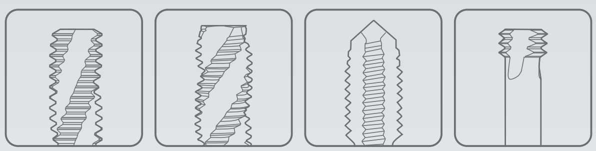
RECOMMENDED CUTTING SPEED AND FEED

ISO	VDI 3323	Material Description	HB	HRC	Cutting Speed (SFM)		Feed per tooth (inch/tooth)			
					without Coolant Hole with Coolant Hole with Coolant & Chamfer	Miniature	without Coolant Hole with Coolant Hole with Coolant & Chamfer		Miniature	
							D1≤.3125	D1>.3125	D1≤.3125	D1>.3125
P	1	Non-alloy steel	125		250-400	220-380	.0010-.0020	.0020-.0038	.0008-.0022	.0022-.0042
P	2	Non-alloy steel	190	13	250-370	220-380	.0008-.0016	.0016-.0034	.0008-.0018	.0018-.0038
P	3	Non-alloy steel	250	25	250-360	220-380	.0008-.0016	.0016-.0034	.0008-.0018	.0018-.0038
P	4	Non-alloy steel	270	28	230-330	220-350	.0006-.0014	.0014-.0030	.0006-.0016	.0016-.0036
P	5	Non-alloy steel	300	32	230-320	220-300	.0006-.0014	.0014-.0030	.0006-.0016	.0016-.0036
P	6	Low alloy steel	180	10	250-360	220-350	.0008-.0016	.0016-.0034	.0008-.0020	.0020-.0040
P	7	Low alloy steel	275	29	230-330	220-350	.0006-.0014	.0014-.0030	.0006-.0018	.0018-.0038
P	8	Low alloy steel	300	32	230-320	200-300	.0006-.0014	.0014-.0030	.0006-.0018	.0018-.0038
P	9	Low alloy steel	350	38	200-300	200-300	.0006-.0014	.0014-.0030	.0006-.0018	.0018-.0038
P	10	High alloyed steel, and tool steel	200	15	230-320	220-350	.0008-.0016	.0016-.0034	.0008-.0020	.0020-.0040
P	11	High alloyed steel, and tool steel	325	35	200-300	220-350	.0006-.0014	.0014-.0026	.0006-.0018	.0018-.0042
M	12	Stainless steel	200	15	200-250	200-250	.0006-.0010	.0010-.0022	.0006-.0016	.0016-.0028
M	13	Stainless steel	240	23	200-250	200-250	.0004-.0008	.0008-.0018	.0004-.0014	.0014-.0026
M	14	Stainless steel	180	10	150-250	180-220	.0006-.0010	.0010-.0022	.0006-.0016	.0016-.0028
K	15	Grey cast iron	180	10	250-400	300-500	.0012-.0020	.0020-.0041	.0012-.0024	.0024-.0046
K	16	Grey cast iron	260	26	250-360	300-500	.0008-.0016	.0016-.0034	.0008-.0020	.0020-.0042
K	17	Nodular cast iron	160	3	250-400	280-450	.0012-.0020	.0020-.0041	.0012-.0024	.0024-.0046
K	18	Nodular cast iron	250	25	230-320	250-400	.0008-.0016	.0016-.0034	.0008-.0020	.0020-.0042
K	19	Malleable cast iron	130		230-320	250-400	.0008-.0016	.0016-.0034	.0008-.0020	.0020-.0042
K	20	Malleable cast iron	230	21	230-350	280-450	.0012-.0020	.0020-.0041	.0012-.0024	.0024-.0046
N	21	Aluminum-wrought alloy	60		500-1000	400-1000	.0024-.0032	.0032-.0049	.0020-.0034	.0034-.0060
N	22	Aluminum-wrought alloy	100		400-800	400-900	.0020-.0028	.0028-.0041	.0016-.0030	.0030-.0056
N	23	Aluminum-cast, alloyed	75		350-900	300-900	.0012-.0020	.0020-.0034	.0008-.0022	.0022-.0048
N	24	Aluminum-cast, alloyed	90		350-900	300-900	.0012-.0020	.0020-.0034	.0008-.0022	.0022-.0048
N	25	Aluminum-cast, alloyed	130		350-800	350-800	.0008-.0016	.0016-.0030	.0004-.0018	.0018-.0044
N	26	Copper and Copper Alloys (Bronze / Brass)	110		500-800	400-700	.0016-.0024	.0024-.0038	.0012-.0026	.0026-.0052
N	27	Copper and Copper Alloys (Bronze / Brass)	90		350-800	350-700	.0016-.0024	.0024-.0038	.0012-.0026	.0026-.0052
N	28	Copper and Copper Alloys (Bronze / Brass)	100		300-600	300-600	.0012-.0020	.0020-.0034	.0008-.0022	.0022-.0048
N	29	Non Metallic Materials			350-900	350-700	.0012-.0020	.0020-.0034	.0008-.0022	.0022-.0048
N	30	Non Metallic Materials			350-900	350-700	.0012-.0020	.0020-.0034	.0008-.0022	.0022-.0048
S	31	Heat Resistant Super Alloys	200	15	100-200	150-250	.0004-.0008	.0008-.0014	.0004-.0008	.0008-.0018
S	32	Heat Resistant Super Alloys	280	30	70-180	130-200	.0002-.0006	.0006-.0014	.0002-.0006	.0006-.0016
S	33	Heat Resistant Super Alloys	250	25	50-140	100-160	.0002-.0006	.0006-.0010	.0002-.0006	.0006-.0016
S	34	Heat Resistant Super Alloys	350	38	50-120	100-160	.0002-.0006	.0006-.0010	.0002-.0006	.0006-.0016
S	35	Heat Resistant Super Alloys	320	34	50-140	120-180	.0002-.0006	.0006-.0009	.0002-.0006	.0006-.0016
S	36	Titanium Alloys	400 Rm		100-250	80-200	.0006-.0010	.0010-.0022	.0006-.0010	.0010-.0026
S	37	Titanium Alloys	1050 Rm		60-140	80-120	.0002-.0006	.0006-.0010	.0002-.0006	.0006-.0016

- without Coolant Hole : TE, TD, TF, TG, L121K
- with Coolant Hole : L421E, L421D, L621F, L621G, L421K
- with Coolant & Chamfer : L427E, L427D
- Miniature : L12DE, L12DD

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

Global Cutting Tool Leader **YG-1**



THREADING

Being the best through innovation

HSS-PM

SYNCHRO TAP

- High Speed Tapping with Rigid CNC Machines

SELECTION GUIDE

THREADING TOOLS

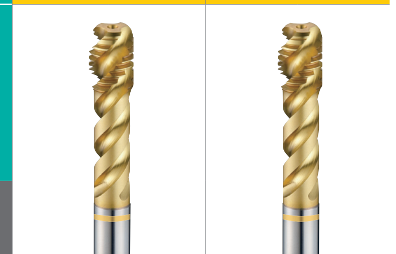
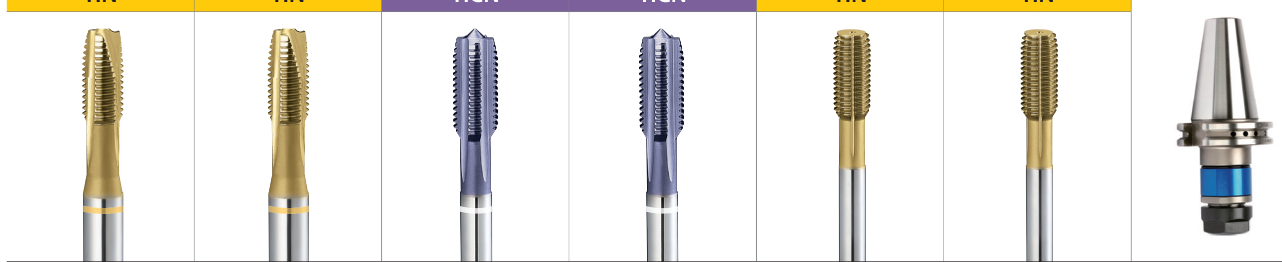
HSS-PM SYNCHRO TAP

- High Speed Tapping with Rigid CNC Machines

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

HOLE TYPE		Max. 2.5xD Blind Hole		Max. 3.0xD Through Hole		Max. 2.0xD Blind / Through Hole		Max. 3.0xD Blind / Through Hole		SYNCHRO TAPPING CHUCK (ER TYPE)
TOOL MATERIAL		HSS-PM		HSS-PM						
CHAMFER LEAD ACC. TO DIN2197		2p-3p		4p-5p		2p-3p		2p-3p		
FLUTE TYPE		Spiral Flute	Spiral Flute	Spiral Point	Spiral Point	Straight Flute	Straight Flute	Forming	Forming	
SPIRAL FLUTE ANGLE		R45	R45	-	-	-	-	-	-	
SERIES	M									
	M/MF		TTS61 (p.B70)		TTS62 (p.B73)		TKS63 (p.B76)		TTS64 (p.B79)	
	UNC									
	UNC/UNF	TTS65 (p.B68)		TTS66 (p.B71)		TKS67 (p.B74)		TTS68 (p.B77)		
	UNC/UNF/UNS									CAT (p.B80)
	UNC/UN8									
	NPT									
	NPTF									
	NPS/NPSF									
SURFACE TREATMENT / COATING		TiN	TiN	TiN	TiN	TiCN	TiCN	TiN	TiN	
MODEL										

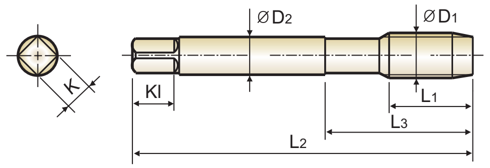
ISO	VDI 3323	Material Description	Composition / Structure	Heat Treatment	HB	TTS65	TTS61	TTS66	TTS62	TKS67	TKS63	TTS68	TTS64	CAT
P	1	Non-alloy steel	About 0.15% C	Annealed	125	◎ 79-148	◎ 79-148	◎ 79-148	◎ 79-148	○ 79-148	○ 79-148	◎ 115-184	◎ 115-184	
	2		About 0.45% C	Annealed	190	◎ 79-148	◎ 79-148	◎ 79-148	◎ 79-148	○ 79-148	○ 79-148	◎ 115-184	◎ 115-184	
	3		About 0.45% C	Quenched & Tempered	250	◎ 79-148	◎ 79-148	◎ 79-148	◎ 79-148	○ 79-148	○ 79-148	◎ 115-184	◎ 115-184	
	4		About 0.75% C	Annealed	270	◎ 66-128	◎ 66-128	◎ 66-128	◎ 66-128	○ 66-128	○ 66-128	◎ 98-164	◎ 98-164	
	5		About 0.75% C	Quenched & Tempered	300									
	6	Low alloy steel		Annealed	180	◎ 66-128	◎ 66-128	◎ 66-128	◎ 66-128	○ 66-128	○ 66-128	◎ 98-164	◎ 98-164	
	7			Quenched & Tempered	275	◎ 66-128	◎ 66-128	◎ 66-128	◎ 66-128	○ 66-128	○ 66-128	◎ 98-164	◎ 98-164	
	8			Quenched & Tempered	300									
	9			Quenched & Tempered	350									
	10	High alloyed steel, and tool steel		Annealed	200									
	11			Quenched & Tempered	325									
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	◎ 39-98	◎ 39-98	◎ 39-98	◎ 39-98			◎ 49-108	◎ 49-108	
	13		Martensitic	Quenched & Tempered	240	◎ 39-98	◎ 39-98	◎ 39-98	◎ 39-98			◎ 49-108	◎ 49-108	
	14		Austenitic		180	○ 39-60	○ 39-60	○ 39-60	○ 39-60			◎ 49-75	◎ 49-75	
K	15	Grey cast iron	Pearlitic / ferritic		180	○ 98-148	○ 98-148	○ 98-148	○ 98-148	◎ 98-148	◎ 98-148			
	16		Pearlitic (Martensitic)		260					◎ 98-148	◎ 98-148			
	17	Nodular cast iron	Ferritic		160	◎ 82-148	◎ 82-148	◎ 82-148	◎ 82-148	◎ 82-148	◎ 82-148			
	18		Pearlitic		250					◎ 82-148	◎ 82-148			
	19	Malleable cast iron	Ferritic		130					○ 82-148	○ 82-148			
	20		Pearlitic		230					○ 82-148	○ 82-148			
N	21	Aluminum-wrought alloy	Not Curable		60							◎ 131-184	◎ 131-184	
	22		Curable	Hardened	100							◎ 131-184	◎ 131-184	
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75	◎ 148-197	◎ 148-197	◎ 148-197	◎ 148-197	○ 148-197	○ 148-197	◎ 184-230	◎ 184-230	
	24		≤ 12% Si, Curable	Hardened	90	◎ 148-197	◎ 148-197	◎ 148-197	◎ 148-197	○ 148-197	○ 148-197	◎ 184-230	◎ 184-230	
	25		> 12% Si, Not Curable		130	◎ 82-118	◎ 82-118	◎ 82-118	◎ 82-118	○ 82-118	○ 82-118	○ 115-148	○ 115-148	
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110	◎ 98-148	◎ 98-148	◎ 98-148	◎ 98-148					
	27		CuZn, CuSnZn (Brass)		90									
	28		CuSn, lead-free copper and electrolytic copper		100	○ 82-118	○ 82-118	○ 82-118	○ 82-118			◎ 115-148	◎ 115-148	
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic											
	30		Rubber, Wood, etc.											
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200									
	32			Cured	280									
	33		Ni or Co Based	Annealed	250									
	34			Cured	350									
	35			Cast	320									
	36	Titanium Alloys	Pure Titanium		400 Rm									
	37		Alpha + Beta Alloys	Hardened	1050 Rm									
H	38	Hardened steel		Hardened	550									
	39			Hardened	630									
	40	Chilled Cast Iron		Cast	400									
	41	Hardened Cast Iron		Hardened	550									

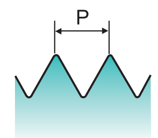
SYNCHRO TAP

TTS65 SERIES

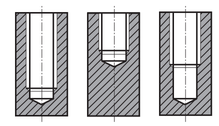
SPIRAL FLUTE for High Speed Tapping

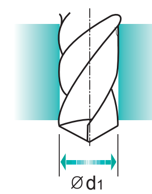
- 2-3 times faster when tapping the GS material group
- Precision Threads
- Unsurpassed chip handling





Hole type 2.5XD





Refer to B323~B336 for tap drill sizes

Material groups GS | HSS PM | UNC UNF | H | 60° | R45° | 2P~3P | TiN | P.B66

Unit : Inch

Size	TPI	EDP No.	Limit	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1	P	TiN		L1	L2	L3	D2	K	Kl	Z
#4	- 40 UNC	TTS65162	H2	.250	1.88	.563	.141	.110	.190	3
#4	- 48 UNF	TTS65181	H1	.209	1.88	.563	.141	.110	.190	3
#4	- 48 UNF	TTS65182	H2	.209	1.88	.563	.141	.110	.190	3
#5	- 40 UNC	TTS65202	H2	.250	1.94	.626	.141	.110	.190	3
#5	- 44 UNF	TTS65221	H1	.227	1.94	.626	.141	.110	.190	3
#5	- 44 UNF	TTS65222	H2	.227	1.94	.626	.141	.110	.190	3
#6	- 32 UNC	TTS65242	H2	.313	2.00	.689	.141	.110	.190	3
#6	- 32 UNC	TTS65243	H3	.313	2.00	.689	.141	.110	.190	3
#6	- 40 UNF	TTS65262	H2	.250	2.00	.689	.141	.110	.190	3
#8	- 32 UNC	TTS65282	H2	.313	2.13	.752	.168	.131	.250	3
#8	- 32 UNC	TTS65283	H3	.313	2.13	.752	.168	.131	.250	3
#8	- 36 UNF	TTS65302	H2	.278	2.13	.752	.168	.131	.250	3
#10	- 24 UNC	TTS65323	H3	.417	2.38	.906	.194	.152	.250	3
#10	- 32 UNF	TTS65342	H2	.313	2.38	.906	.194	.152	.250	3
#10	- 32 UNF	TTS65343	H3	.313	2.38	.906	.194	.152	.250	3
#12	- 24 UNC	TTS65363	H3	.417	2.38	.906	.220	.165	.280	3
#12	- 28 UNF	TTS65383	H3	.357	2.38	.906	.220	.165	.280	3
1/4	- 20 UNC	TTS65403	H3	.500	2.50	1.000	.255	.191	.310	3
1/4	- 20 UNC	TTS65405	H5	.500	2.50	1.000	.255	.191	.310	3
1/4	- 28 UNF	TTS65423	H3	.357	2.50	1.000	.255	.191	.310	3
1/4	- 28 UNF	TTS65424	H4	.357	2.50	1.000	.255	.191	.310	3
5/16	- 18 UNC	TTS65443	H3	.556	2.72	1.126	.318	.238	.380	3
5/16	- 18 UNC	TTS65445	H5	.556	2.72	1.126	.318	.238	.380	3
5/16	- 24 UNF	TTS65463	H3	.417	2.72	1.126	.318	.238	.380	3
5/16	- 24 UNF	TTS65464	H4	.417	2.72	1.126	.318	.238	.380	3
3/8	- 16 UNC	TTS65483	H3	.625	2.94	1.252	.381	.286	.440	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎					◎	◎	○	○		◎			

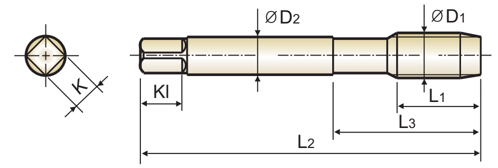
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎	◎	◎	◎		○													

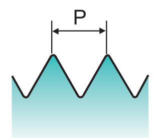
SYNCHRO TAP

TTS65 SERIES

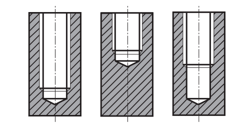
SPIRAL FLUTE for High Speed Tapping

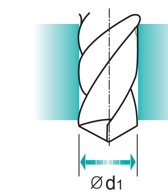
- 2-3 times faster when tapping the GS material group
- Precision Threads
- Unsurpassed chip handling





Hole type 2.5XD





Refer to B323~B336 for tap drill sizes

Material groups GS | HSS PM | UNC UNF | H | 60° | R45° | 2P~3P | TiN | P.B66

Unit : Inch

Size	TPI	EDP No.	Limit	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1	P	TiN		L1	L2	L3	D2	K	Kl	Z
3/8	- 16 UNC	TTS65485	H5	.625	2.94	1.252	.381	.286	.440	3
3/8	- 24 UNF	TTS65503	H3	.417	2.94	1.252	.381	.286	.440	3
3/8	- 24 UNF	TTS65504	H4	.417	2.94	1.252	.381	.286	.440	3
7/16	- 14 UNC	TTS65523	H3	.714	3.16	1.850	.323	.242	.410	3
7/16	- 14 UNC	TTS65525	H5	.714	3.16	1.850	.323	.242	.410	3
7/16	- 20 UNF	TTS65543	H3	.500	3.16	1.850	.323	.242	.410	3
7/16	- 20 UNF	TTS65545	H5	.500	3.16	1.850	.323	.242	.410	3
1/2	- 13 UNC	TTS65563	H3	.769	3.38	2.067	.367	.275	.440	3
1/2	- 13 UNC	TTS65565	H5	.769	3.38	2.067	.367	.275	.440	3
1/2	- 20 UNF	TTS65583	H3	.500	3.38	2.067	.367	.275	.440	3
1/2	- 20 UNF	TTS65585	H5	.500	3.38	2.067	.367	.275	.440	3
9/16	- 12 UNC	TTS65603	H3	.833	3.59	2.067	.429	.322	.500	3
9/16	- 12 UNC	TTS65605	H5	.833	3.59	2.067	.429	.322	.500	3
9/16	- 18 UNF	TTS65623	H3	.556	3.59	2.067	.429	.322	.500	3
9/16	- 18 UNF	TTS65625	H5	.556	3.59	2.067	.429	.322	.500	3
5/8	- 11 UNC	TTS65643	H3	.909	3.81	2.205	.480	.360	.560	3
5/8	- 11 UNC	TTS65645	H5	.909	3.81	2.205	.480	.360	.560	3
5/8	- 18 UNF	TTS65663	H3	.556	3.81	2.205	.480	.360	.560	3
5/8	- 18 UNF	TTS65665	H5	.556	3.81	2.205	.480	.360	.560	3
3/4	- 10 UNC	TTS65705	H5	1.000	4.25	2.480	.590	.442	.690	4
3/4	- 16 UNF	TTS65723	H3	.625	4.25	2.480	.590	.442	.690	4
3/4	- 16 UNF	TTS65725	H5	.625	4.25	2.480	.590	.442	.690	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎					◎	◎	○	○		◎			

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎	◎	◎	◎		○													

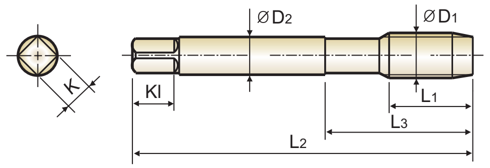
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

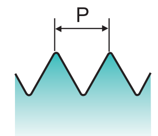
YG SYNCHRO TAP

TTS61 SERIES

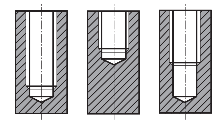
SPIRAL FLUTE for High Speed Tapping

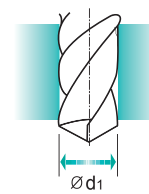
- ▶2-3 times faster when tapping the GS material group
- ▶Precision Threads
- ▶Unsurpassed chip handling





Hole type 2.5XD





Refer to B323~B336 for tap drill sizes

Material groups: GS | HSS PM | M/MF | D | 60° | R45° | 2P~3P | TiN | P.B66

Unit : Metric

Size	Pitch	EDP No.	Limit	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1	P	TiN		L1	L2	L3	D2	K	KI	Z
M3 x	0.5	TTS61203	D3	.197	1.94	.646	.141	.110	.190	3
M4 x	0.7	TTS61244	D4	.276	2.13	.768	.168	.131	.250	3
M5 x	0.8	TTS61284	D4	.315	2.38	.933	.194	.152	.250	3
M6 x	1.0	TTS61315	D5	.394	2.50	1.000	.255	.191	.310	3
M8 x	1.25	TTS61365	D5	.512	2.72	1.126	.318	.238	.380	3
M8 x	1.0	TTS61375	D5	.394	2.72	1.126	.318	.238	.380	3
M10 x	1.5	TTS61426	D6	.591	2.94	1.252	.381	.286	.440	3
M10 x	1.25	TTS61435	D5	.512	2.94	1.252	.381	.286	.440	3
M12 x	1.75	TTS61506	D6	.709	3.38	2.067	.367	.275	.440	3
M12 x	1.25	TTS61525	D5	.512	3.38	2.067	.367	.275	.440	3
M14 x	2.0	TTS61547	D7	.787	3.59	2.067	.429	.322	.500	3
M14 x	1.5	TTS61556	D6	.591	3.59	2.067	.429	.322	.500	3
M16 x	2.0	TTS61607	D7	.787	3.81	2.205	.480	.360	.560	3
M16 x	1.5	TTS61616	D6	.591	3.81	2.205	.480	.360	.560	3
M18 x	2.5	TTS61657	D7	.984	4.03	2.205	.542	.406	.630	4
M18 x	1.5	TTS61676	D6	.591	4.03	2.205	.542	.406	.630	4
M20 x	2.5	TTS61707	D7	.984	4.47	2.480	.652	.489	.690	4
M20 x	1.5	TTS61726	D6	.591	4.47	2.480	.652	.489	.690	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎					◎	◎	○	○		◎			

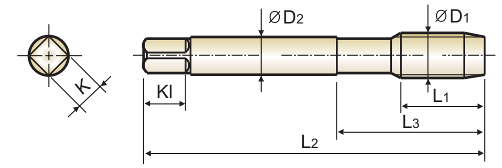
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎	◎	◎	◎		○													

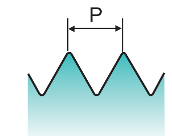
YG SYNCHRO TAP

TTS66 SERIES

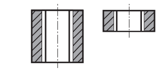
SPIRAL POINT for High Speed Tapping

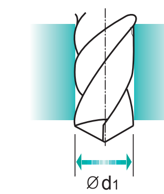
- ▶2-3 times faster when tapping the GS material group
- ▶Precision Threads
- ▶Unsurpassed chip handling





Hole type 3.0XD





Refer to B323~B336 for tap drill sizes

Material groups: GS | HSS PM | UNC UNF | H | 60° | 4P~5P | TiN | P.B66

Unit : Inch

Size	TPI	EDP No.	Limit	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1	P	TiN		L1	L2	L3	D2	K	KI	Z
#4 -	40 UNC	TTS66162	H2	.250	1.88	.563	.141	.110	.190	3
#4 -	48 UNF	TTS66181	H1	.209	1.88	.563	.141	.110	.190	3
#4 -	48 UNF	TTS66182	H2	.209	1.88	.563	.141	.110	.190	3
#5 -	40 UNC	TTS66202	H2	.250	1.94	.626	.141	.110	.190	3
#5 -	44 UNF	TTS66221	H1	.227	1.94	.626	.141	.110	.190	3
#5 -	44 UNF	TTS66222	H2	.227	1.94	.626	.141	.110	.190	3
#6 -	32 UNC	TTS66242	H2	.313	2.00	.689	.141	.110	.190	3
#6 -	32 UNC	TTS66243	H3	.313	2.00	.689	.141	.110	.190	3
#6 -	40 UNF	TTS66262	H2	.250	2.00	.689	.141	.110	.190	3
#8 -	32 UNC	TTS66282	H2	.313	2.13	.752	.168	.131	.250	3
#8 -	32 UNC	TTS66283	H3	.313	2.13	.752	.168	.131	.250	3
#8 -	36 UNF	TTS66302	H2	.278	2.13	.752	.168	.131	.250	3
#10 -	24 UNC	TTS66323	H3	.417	2.38	.906	.194	.152	.250	3
#10 -	32 UNF	TTS66342	H2	.313	2.38	.906	.194	.152	.250	3
#10 -	32 UNF	TTS66343	H3	.313	2.38	.906	.194	.152	.250	3
#12 -	24 UNC	TTS66363	H3	.417	2.38	.906	.220	.165	.280	3
#12 -	28 UNF	TTS66383	H3	.357	2.38	.906	.220	.165	.280	3
1/4 -	20 UNC	TTS66403	H3	.500	2.50	1.000	.255	.191	.310	3
1/4 -	20 UNC	TTS66405	H5	.500	2.50	1.000	.255	.191	.310	3
1/4 -	28 UNF	TTS66423	H3	.357	2.50	1.000	.255	.191	.310	3
1/4 -	28 UNF	TTS66424	H4	.357	2.50	1.000	.255	.191	.310	3
5/16 -	18 UNC	TTS66443	H3	.556	2.72	1.126	.318	.238	.380	3
5/16 -	18 UNC	TTS66445	H5	.556	2.72	1.126	.318	.238	.380	3
5/16 -	24 UNF	TTS66463	H3	.417	2.72	1.126	.318	.238	.380	3
5/16 -	24 UNF	TTS66464	H4	.417	2.72	1.126	.318	.238	.380	3
3/8 -	16 UNC	TTS66483	H3	.625	2.94	1.252	.381	.286	.440	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎					◎	◎	○	○		◎			

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎	◎	◎	◎		○													

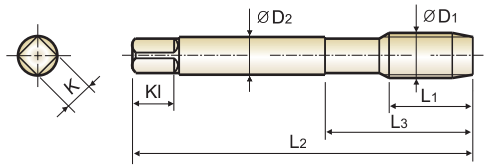
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

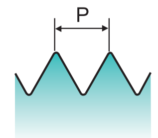
YG SYNCHRO TAP

TTS66 SERIES

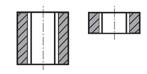
SPIRAL POINT for High Speed Tapping

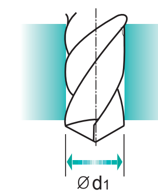
- ▶ 2-3 times faster when tapping the GS material group
- ▶ Precision Threads
- ▶ Unsurpassed chip handling





Hole type 3.0XD





Refer to B323~B336 for tap drill sizes

Material groups: GS | HSS PM | UNC UNF | H | 60° | 4P~5P | TiN | P.B66

Unit : Inch

Size	TPI		EDP No.	Limit	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1	P		TiN		L1	L2	L3	D2	K	Kl	Z
3/8	- 16	UNC	TTS66485	H5	.625	2.94	1.252	.381	.286	.440	3
3/8	- 24	UNF	TTS66503	H3	.417	2.94	1.252	.381	.286	.440	3
3/8	- 24	UNF	TTS66504	H4	.417	2.94	1.252	.381	.286	.440	3
7/16	- 14	UNC	TTS66523	H3	.714	3.16	1.850	.323	.242	.410	4
7/16	- 14	UNC	TTS66525	H5	.714	3.16	1.850	.323	.242	.410	4
7/16	- 20	UNF	TTS66543	H3	.500	3.16	1.850	.323	.242	.410	4
7/16	- 20	UNF	TTS66545	H5	.500	3.16	1.850	.323	.242	.410	4
1/2	- 13	UNC	TTS66563	H3	.769	3.38	2.067	.367	.275	.440	4
1/2	- 13	UNC	TTS66565	H5	.769	3.38	2.067	.367	.275	.440	4
1/2	- 20	UNF	TTS66583	H3	.500	3.38	2.067	.367	.275	.440	4
1/2	- 20	UNF	TTS66585	H5	.500	3.38	2.067	.367	.275	.440	4
9/16	- 12	UNC	TTS66603	H3	.833	3.59	2.067	.429	.322	.500	4
9/16	- 12	UNC	TTS66605	H5	.833	3.59	2.067	.429	.322	.500	4
9/16	- 18	UNF	TTS66623	H3	.556	3.59	2.067	.429	.322	.500	4
9/16	- 18	UNF	TTS66625	H5	.556	3.59	2.067	.429	.322	.500	4
5/8	- 11	UNC	TTS66643	H3	.909	3.81	2.205	.480	.360	.560	4
5/8	- 11	UNC	TTS66645	H5	.909	3.81	2.205	.480	.360	.560	4
5/8	- 18	UNF	TTS66663	H3	.556	3.81	2.205	.480	.360	.560	4
5/8	- 18	UNF	TTS66665	H5	.556	3.81	2.205	.480	.360	.560	4
3/4	- 10	UNC	TTS66703	H3	1.000	4.25	2.480	.590	.442	.690	4
3/4	- 10	UNC	TTS66705	H5	1.000	4.25	2.480	.590	.442	.690	4
3/4	- 16	UNF	TTS66723	H3	.625	4.25	2.480	.590	.442	.690	4
3/4	- 16	UNF	TTS66725	H5	.625	4.25	2.480	.590	.442	.690	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎					◎	◎	○	○		◎			

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎	◎	◎	◎		○													

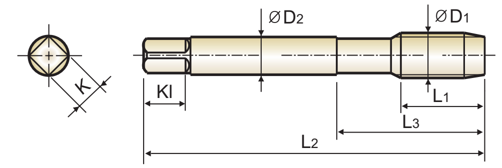
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

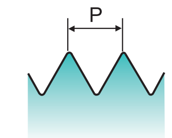
YG SYNCHRO TAP

TTS62 SERIES

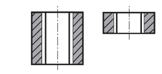
SPIRAL POINT for High Speed Tapping

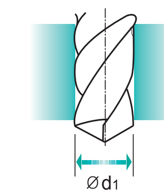
- ▶ 2-3 times faster when tapping the GS material group
- ▶ Precision Threads
- ▶ Unsurpassed chip handling





Hole type 3.0XD





Refer to B323~B336 for tap drill sizes

Material groups: GS | HSS PM | M/MF | D | 60° | 4P~5P | TiN | P.B66

Unit : Metric

Size		Pitch	EDP No.	Limit	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		P	TiN		L1	L2	L3	D2	K	Kl	Z
M3	x	0.5	TTS62203	D3	.197	1.94	.646	.141	.110	.190	3
M4	x	0.7	TTS62244	D4	.276	2.13	.768	.168	.131	.250	3
M5	x	0.8	TTS62284	D4	.315	2.38	.933	.194	.152	.250	3
M6	x	1.0	TTS62315	D5	.394	2.50	1.000	.255	.191	.310	3
M8	x	1.25	TTS62365	D5	.512	2.72	1.126	.318	.238	.380	3
M8	x	1.0	TTS62375	D5	.394	2.72	1.126	.318	.238	.380	3
M10	x	1.5	TTS62426	D6	.591	2.94	1.252	.381	.286	.440	3
M10	x	1.25	TTS62435	D5	.512	2.94	1.252	.381	.286	.440	3
M12	x	1.75	TTS62506	D6	.709	3.38	2.067	.367	.275	.440	4
M12	x	1.25	TTS62525	D5	.512	3.38	2.067	.367	.275	.440	4
M14	x	2.0	TTS62547	D7	.787	3.59	2.067	.429	.322	.500	4
M14	x	1.5	TTS62556	D6	.591	3.59	2.067	.429	.322	.500	4
M16	x	2.0	TTS62607	D7	.787	3.81	2.205	.480	.360	.560	4
M16	x	1.5	TTS21616	D6	.591	3.81	2.205	.480	.360	.560	4
M18	x	2.5	TTS62657	D7	.984	4.03	2.205	.542	.406	.630	4
M18	x	1.5	TTS62676	D6	.591	4.03	2.205	.542	.406	.630	4
M20	x	2.5	TTS62707	D7	.984	4.47	2.480	.652	.489	.690	4
M20	x	1.5	TTS62726	D6	.591	4.47	2.480	.652	.489	.690	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎					◎	◎	○	○		◎			

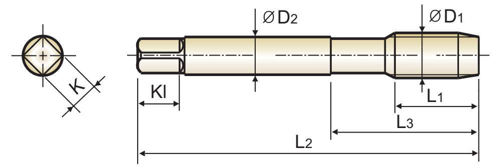
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎	◎	◎	◎		○													

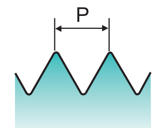
SYNCHRO TAP

TKS67 SERIES

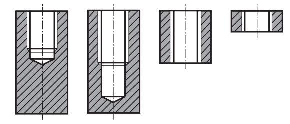
STRAIGHT FLUTE for High Speed Tapping

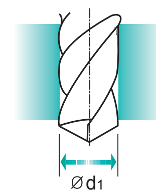
- 2-3 times faster when tapping the GG material group
- Precision Threads
- Unsurpassed chip handling





Hole type 2.0XD





Material groups GG | HSS PM | UNC UNF | H | 60° | 2P~3P | TiCN | P.B66

Refer to B323~B336 for tap drill sizes

Unit : Inch

Size	TPI		EDP No.	Limit	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1	P		TiN		L1	L2	L3	D2	K	Kl	Z
#4	- 40	UNC	TKS67162	H2	.250	1.88	.563	.141	.110	.190	3
#4	- 48	UNF	TKS67181	H1	.209	1.88	.563	.141	.110	.190	3
#4	- 48	UNF	TKS67182	H2	.209	1.88	.563	.141	.110	.190	3
#5	- 40	UNC	TKS67202	H2	.250	1.94	.626	.141	.110	.190	3
#5	- 44	UNF	TKS67221	H1	.227	1.94	.626	.141	.110	.190	3
#5	- 44	UNF	TKS67222	H2	.227	1.94	.626	.141	.110	.190	3
#6	- 32	UNC	TKS67242	H2	.313	2.00	.689	.141	.110	.190	3
#6	- 32	UNC	TKS67243	H3	.313	2.00	.689	.141	.110	.190	3
#6	- 40	UNF	TKS67262	H2	.250	2.00	.689	.141	.110	.190	3
#8	- 32	UNC	TKS67282	H2	.313	2.13	.752	.168	.131	.250	3
#8	- 32	UNC	TKS67283	H3	.313	2.13	.752	.168	.131	.250	3
#8	- 36	UNF	TKS67302	H2	.278	2.13	.752	.168	.131	.250	3
#10	- 24	UNC	TKS67323	H3	.417	2.38	.906	.194	.152	.250	3
#10	- 32	UNF	TKS67342	H2	.313	2.38	.906	.194	.152	.250	3
#10	- 32	UNF	TKS67343	H3	.313	2.38	.906	.194	.152	.250	3
#12	- 24	UNC	TKS67363	H3	.417	2.38	.906	.220	.165	.280	3
#12	- 28	UNF	TKS67383	H3	.357	2.38	.906	.220	.165	.280	3
1/4	- 20	UNC	TKS67403	H3	.500	2.50	1.000	.255	.191	.310	3
1/4	- 20	UNC	TKS67405	H5	.500	2.50	1.000	.255	.191	.310	3
1/4	- 28	UNF	TKS67423	H3	.357	2.50	1.000	.255	.191	.310	3
1/4	- 28	UNF	TKS67424	H4	.357	2.50	1.000	.255	.191	.310	3
5/16	- 18	UNC	TKS67443	H3	.556	2.72	1.126	.318	.238	.380	3
5/16	- 18	UNC	TKS67445	H5	.556	2.72	1.126	.318	.238	.380	3
5/16	- 24	UNF	TKS67463	H3	.417	2.72	1.126	.318	.238	.380	3
5/16	- 24	UNF	TKS67464	H4	.417	2.72	1.126	.318	.238	.380	3
3/8	- 16	UNC	TKS67483	H3	.625	2.94	1.252	.381	.286	.440	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○	○								◎	◎	◎	◎	○	○

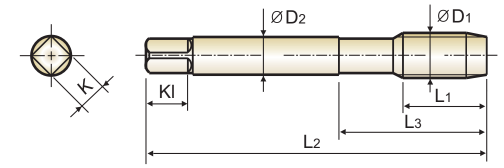
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			○	○	○																

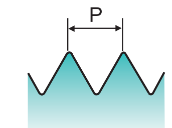
SYNCHRO TAP

TKS67 SERIES

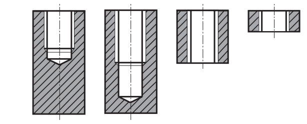
STRAIGHT FLUTE for High Speed Tapping

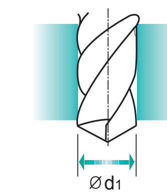
- 2-3 times faster when tapping the GG material group
- Precision Threads
- Unsurpassed chip handling





Hole type 2.0XD





Material groups GG | HSS PM | UNC UNF | H | 60° | 2P~3P | TiCN | P.B66

Refer to B323~B336 for tap drill sizes

Unit : Inch

Size	TPI		EDP No.	Limit	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1	P		TiN		L1	L2	L3	D2	K	Kl	Z
3/8	- 16	UNC	TKS67485	H5	.625	2.94	1.252	.381	.286	.440	4
3/8	- 24	UNF	TKS67503	H3	.417	2.94	1.252	.381	.286	.440	4
3/8	- 24	UNF	TKS67504	H4	.417	2.94	1.252	.381	.286	.440	4
7/16	- 14	UNC	TKS67523	H3	.714	3.16	1.850	.323	.242	.410	4
7/16	- 14	UNC	TKS67525	H5	.714	3.16	1.850	.323	.242	.410	4
7/16	- 20	UNF	TKS67543	H3	.500	3.16	1.850	.323	.242	.410	4
7/16	- 20	UNF	TKS67545	H5	.500	3.16	1.850	.323	.242	.410	4
1/2	- 13	UNC	TKS67563	H3	.769	3.38	2.067	.367	.275	.440	4
1/2	- 13	UNC	TKS67565	H5	.769	3.38	2.067	.367	.275	.440	4
1/2	- 20	UNF	TKS67583	H3	.500	3.38	2.067	.367	.275	.440	4
1/2	- 20	UNF	TKS67585	H5	.500	3.38	2.067	.367	.275	.440	4
9/16	- 12	UNC	TKS67603	H3	.833	3.59	2.067	.429	.322	.500	4
9/16	- 12	UNC	TKS67605	H5	.833	3.59	2.067	.429	.322	.500	4
9/16	- 18	UNF	TKS67623	H3	.556	3.59	2.067	.429	.322	.500	4
9/16	- 18	UNF	TKS67625	H5	.556	3.59	2.067	.429	.322	.500	4
5/8	- 11	UNC	TKS67643	H3	.909	3.81	2.205	.480	.360	.560	4
5/8	- 11	UNC	TKS67645	H5	.909	3.81	2.205	.480	.360	.560	4
5/8	- 18	UNF	TKS67663	H3	.556	3.81	2.205	.480	.360	.560	4
5/8	- 18	UNF	TKS67665	H5	.556	3.81	2.205	.480	.360	.560	4
3/4	- 10	UNC	TKS67703	H3	1.000	4.25	2.480	.590	.442	.690	4
3/4	- 10	UNC	TKS67705	H5	1.000	4.25	2.480	.590	.442	.690	4
3/4	- 16	UNF	TKS67723	H3	.625	4.25	2.480	.590	.442	.690	4
3/4	- 16	UNF	TKS67725	H5	.625	4.25	2.480	.590	.442	.690	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○	○								◎	◎	◎	◎	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			○	○	○																

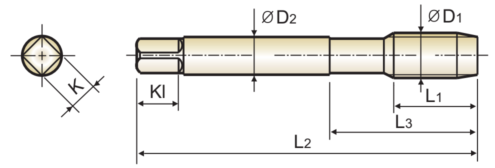
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

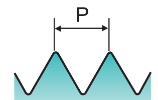
YG SYNCHRO TAP

TKS63 SERIES

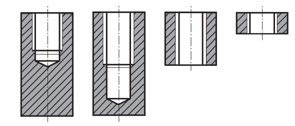
STRAIGHT FLUTE for High Speed Tapping

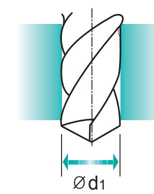
- ▶2-3 times faster when tapping the GG material group
- ▶Precision Threads
- ▶Unsurpassed chip handling





Hole type 2.0XD





Material groups: GG | HSS PM | M/MF | D | 60° | 2P~3P | TiCN | P.B66

Refer to B323~B336 for tap drill sizes

Unit : Metric

Size D1		Pitch P	EDP No. TiN	Limit	Thread Length L1	Overall Length L2	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute Z
M3	x	0.5	TKS63203	D3	.197	1.94	.646	.141	.110	.190	3
M4	x	0.7	TKS63244	D4	.276	2.13	.768	.168	.131	.250	3
M5	x	0.8	TKS63284	D4	.315	2.38	.933	.194	.152	.250	3
M6	x	1.0	TKS63315	D5	.394	2.50	1.000	.255	.191	.310	3
M8	x	1.25	TKS63365	D5	.512	2.72	1.126	.318	.238	.380	3
M8	x	1.0	TKS63375	D5	.394	2.72	1.126	.318	.238	.380	3
M10	x	1.5	TKS63426	D6	.591	2.94	1.252	.381	.286	.440	4
M10	x	1.25	TKS63435	D5	.512	2.94	1.252	.381	.286	.440	4
M12	x	1.75	TKS63506	D6	.709	3.38	2.067	.367	.275	.440	4
M12	x	1.25	TKS63525	D5	.512	3.38	2.067	.367	.275	.440	4
M14	x	2.0	TKS63547	D7	.787	3.59	2.067	.429	.322	.500	4
M14	x	1.5	TKS63556	D6	.591	3.59	2.067	.429	.322	.500	4
M16	x	2.0	TKS63607	D7	.787	3.81	2.205	.480	.360	.560	4
M16	x	1.5	TKS63616	D6	.591	3.81	2.205	.480	.360	.560	4
M18	x	2.5	TKS63657	D7	.984	4.03	2.205	.542	.406	.630	4
M18	x	1.5	TKS63676	D6	.591	4.03	2.205	.542	.406	.630	4
M20	x	2.5	TKS63707	D7	.984	4.47	2.480	.652	.489	.690	4
M20	x	1.5	TKS63726	D6	.591	4.47	2.480	.652	.489	.690	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○	○								◎	◎	◎	◎	○	○

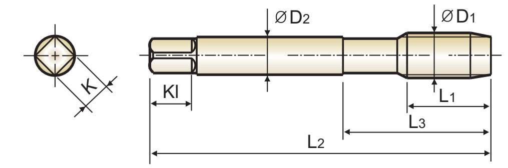
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			○	○	○																

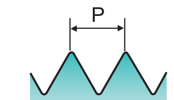
YG SYNCHRO TAP

TTS68 SERIES

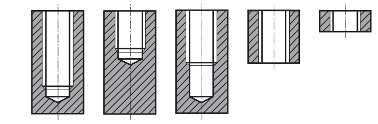
FORMING for High Speed Tapping

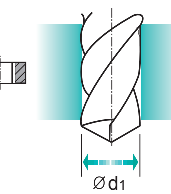
- ▶2-3 times faster when machining the GV material group
- ▶Precision Threads





Hole type 3.0XD





Material groups: GV | HSS PM | UNC UNF | H | 60° | 2P~3P | TiN | P.B66

Refer to B323~B336 for tap drill sizes

Unit : Inch

Size D1		TPI P		EDP No. TiN	Limit	Thread Length L1	Overall Length L2	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute Z
#4	-	40	UNC	TTS68163	H3	.250	1.88	.563	.141	.110	.190	4
#4	-	40	UNC	TTS68165	H5	.250	1.88	.563	.141	.110	.190	4
#4	-	48	UNF	TTS68183	H3	.209	1.88	.563	.141	.110	.190	4
#4	-	48	UNF	TTS68185	H5	.209	1.88	.563	.141	.110	.190	4
#5	-	40	UNC	TTS68203	H3	.250	1.94	.626	.141	.110	.190	5
#5	-	40	UNC	TTS68205	H5	.250	1.94	.626	.141	.110	.190	5
#5	-	44	UNF	TTS68223	H3	.227	1.94	.626	.141	.110	.190	5
#5	-	44	UNF	TTS68225	H5	.227	1.94	.626	.141	.110	.190	5
#6	-	32	UNC	TTS68243	H3	.313	2.00	.689	.141	.110	.190	5
#6	-	32	UNC	TTS68245	H5	.313	2.00	.689	.141	.110	.190	5
#6	-	40	UNF	TTS68263	H3	.250	2.00	.689	.141	.110	.190	5
#6	-	40	UNF	TTS68265	H5	.250	2.00	.689	.141	.110	.190	5
#8	-	32	UNC	TTS68283	H3	.313	2.13	.752	.168	.131	.250	5
#8	-	32	UNC	TTS68285	H5	.313	2.13	.752	.168	.131	.250	5
#8	-	36	UNF	TTS68303	H3	.278	2.13	.752	.168	.131	.250	5
#8	-	36	UNF	TTS68305	H5	.278	2.13	.752	.168	.131	.250	5
#10	-	24	UNC	TTS68324	H4	.417	2.38	.906	.194	.152	.250	5
#10	-	24	UNC	TTS68326	H6	.417	2.38	.906	.194	.152	.250	5
#10	-	32	UNF	TTS68344	H4	.313	2.38	.906	.194	.152	.250	5
#10	-	32	UNF	TTS68346	H6	.313	2.38	.906	.194	.152	.250	5
#12	-	24	UNC	TTS68364	H4	.417	2.38	.906	.220	.165	.280	5
#12	-	24	UNC	TTS68366	H6	.417	2.38	.906	.220	.165	.280	5
1/4	-	20	UNC	TTS68404	H4	.500	2.50	1.000	.255	.191	.310	5
1/4	-	20	UNC	TTS68406	H6	.500	2.50	1.000	.255	.191	.310	5
1/4	-	28	UNF	TTS68424	H4	.357	2.50	1.000	.255	.191	.310	5
1/4	-	28	UNF	TTS68426	H6	.357	2.50	1.000	.255	.191	.310	5
5/16	-	18	UNC	TTS68445	H5	.556	2.72	1.126	.318	.238	.380	5

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎					◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	◎	◎	○			◎													

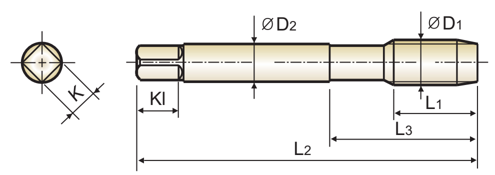
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

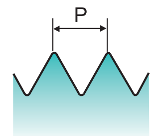
SYNCHRO TAP

TTS68 SERIES

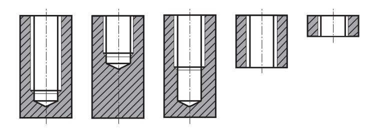
FORMING for High Speed Tapping

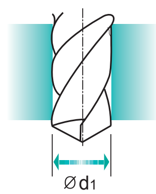
▶2-3 times faster when machining the GV material group
▶Precision Threads





Hole type 3.0XD





Refer to B323~B336 for tap drill sizes

Material groups: GV | HSS PM | UNC UNF | H | 60° | 2P~3P | TiN | P.B66

Unit : Inch

Size	TPI		EDP No.	Limit	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1	P		TiN		L1	L2	L3	D2	K	Kl	Z
5/16	- 18	UNC	TTS68447	H7	.556	2.72	1.126	.318	.238	.380	5
5/16	- 24	UNF	TTS68465	H5	.417	2.72	1.126	.318	.238	.380	5
5/16	- 24	UNF	TTS68467	H7	.417	2.72	1.126	.318	.238	.380	5
3/8	- 16	UNC	TTS68485	H5	.625	2.94	1.252	.381	.286	.440	6
3/8	- 16	UNC	TTS68487	H7	.625	2.94	1.252	.381	.286	.440	6
3/8	- 24	UNF	TTS68505	H5	.417	2.94	1.252	.381	.286	.440	6
3/8	- 24	UNF	TTS68507	H7	.417	2.94	1.252	.381	.286	.440	6
7/16	- 14	UNC	TTS68525	H5	.714	3.16	1.850	.323	.242	.410	6
7/16	- 14	UNC	TTS68528	H8	.714	3.16	1.850	.323	.242	.410	6
7/16	- 20	UNF	TTS68545	H5	.500	3.16	1.850	.323	.242	.410	6
7/16	- 20	UNF	TTS68548	H8	.500	3.16	1.850	.323	.242	.410	6
1/2	- 13	UNC	TTS68566	H6	.769	3.38	2.067	.367	.275	.440	6
1/2	- 13	UNC	TTS68568	H8	.769	3.38	2.067	.367	.275	.440	6
1/2	- 20	UNF	TTS68585	H5	.500	3.38	2.067	.367	.275	.440	6
1/2	- 20	UNF	TTS68588	H8	.500	3.38	2.067	.367	.275	.440	6
9/16	- 12	UNC	TTS68607	H7	.833	3.59	2.067	.429	.322	.500	8
9/16	- 12	UNC	TTS68600	H10	.833	3.59	2.067	.429	.322	.500	8
9/16	- 18	UNF	TTS68627	H7	.556	3.59	2.067	.429	.322	.500	8
9/16	- 18	UNF	TTS68620	H10	.556	3.59	2.067	.429	.322	.500	8
5/8	- 11	UNC	TTS68647	H7	.909	3.81	2.205	.480	.360	.560	8
5/8	- 11	UNC	TTS68640	H10	.909	3.81	2.205	.480	.360	.560	8
5/8	- 18	UNF	TTS68667	H7	.556	3.81	2.205	.480	.360	.560	8
5/8	- 18	UNF	TTS68660	H10	.556	3.81	2.205	.480	.360	.560	8
3/4	- 10	UNC	TTS68707	H7	1.000	4.25	2.480	.590	.442	.690	8
3/4	- 10	UNC	TTS68700	H10	1.000	4.25	2.480	.590	.442	.690	8
3/4	- 16	UNF	TTS68727	H7	.625	4.25	2.480	.590	.442	.690	8
3/4	- 16	UNF	TTS68720	H10	.625	4.25	2.480	.590	.442	.690	8

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎					◎	◎	◎						

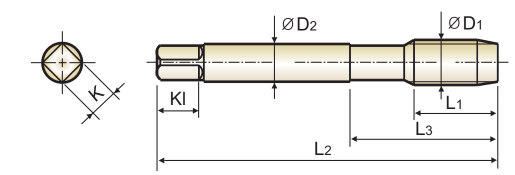
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	◎	◎	○			◎													

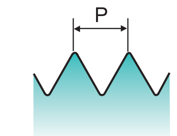
SYNCHRO TAP

TTS64 SERIES

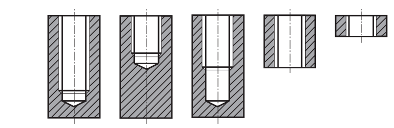
FORMING for High Speed Tapping

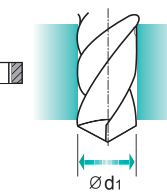
▶2-3 times faster when machining the GV material group
▶Precision Threads





Hole type 3.0XD





Refer to B323~B336 for tap drill sizes

Material groups: GV | HSS PM | M/MF | D M | 6H MF | 60° | 2P~3P | TiN | P.B66

Unit : Metric

Size		Pitch	EDP No.	Limit	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Lobe
D1		P	TiN		L1	L2	L3	D2	K	Kl	Z
M3	x	0.5	TTS64205	D5	.197	1.94	0.646	.141	.110	.190	5
M4	x	0.7	TTS64246	D6	.276	2.13	0.768	.168	.131	.250	5
M5	x	0.8	TTS64287	D7	.315	2.38	0.933	.194	.152	.250	5
M6	x	1.0	TTS64318	D8	.394	2.50	1.000	.255	.191	.310	5
M8	x	1.0	TTS64378	D8	.394	2.72	1.126	.318	.238	.380	5
M8	x	1.25	TTS64369	D9	.512	2.72	1.126	.318	.238	.380	5
M10	x	1.25	TTS64439	D9	.492	2.94	1.252	.381	.286	.440	6
M10	x	1.5	TTS64420	D10	.591	2.94	1.252	.381	.286	.440	6
M12	x	1.25	TTS64520	D10	.492	3.38	2.067	.367	.275	.440	6
M12	x	1.75	TTS6450A	D11	.709	3.38	2.067	.367	.275	.440	6
M14	x	1.5	TTS64550	D10	.591	3.59	2.067	.429	.322	.500	8
M14	x	2.0	TTS6454B	D12	.787	3.59	2.067	.429	.322	.500	8
M16	x	1.5	TTS64610	D10	.591	3.81	2.205	.480	.360	.560	8
M16	x	2.0	TTS6460B	D12	.787	3.81	2.205	.480	.360	.560	8
M18	x	1.5	TTS64670	D10	.591	4.03	2.205	.542	.406	.630	8
M18	x	2.5	TTS6465B	D12	.984	4.03	2.205	.542	.406	.630	8
M20	x	1.5	TTS64720	D10	.984	4.47	2.48	.652	.489	.690	8
M20	x	2.5	TTS6470B	D12	.984	4.47	2.48	.652	.489	.690	8

◎ : Excellent ○ : Good

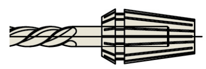
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎		◎	◎					◎	◎	◎						

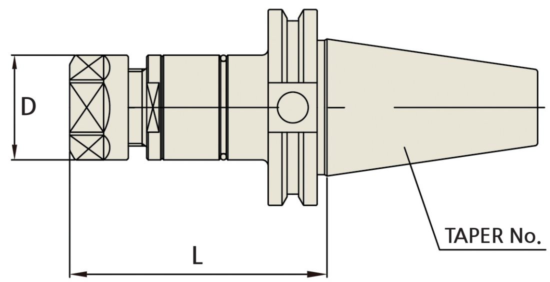
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	◎	◎	◎	◎	○			◎													

SYNCHRO TAP

CAT SERIES

SYNCHRO TAPPING CHUCK (ER TYPE)





CAT AT3 AD/B

Unit : Metric

EDP No.	TAPER No.	MODEL No.	Tap Size	Clamping Range	Nut	D	L
JK060SYT	40	CAT40AD/B-SYTER12-79	M3~M12	3.5~10	ER16	28	79
JK062SYT		CAT40AD/B-SYTER16-85	M3~M16	3.5~10	ER20	35	85
JK064SYT		CAT40AD/B-SYTER20-90	M3~M20	3.5~16	ER25	42	90
JK066SYT		CAT40AD/B-SYTER27-100	M4~M27	3.5~16	ER32	50	100
JK068SYT		CAT40AD/B-SYTER33-105	M4~M33	7~16	ER40	63	105
JL060SYT	50	CAT50AD/B-SYTER12-79	M3~M12	3.5~10	ER16	28	79
JL062SYT		CAT50AD/B-SYTER16-85	M3~M16	3.5~10	ER20	35	85
JL064SYT		CAT50AD/B-SYTER20-90	M3~M20	3.5~16	ER25	42	90
JL066SYT		CAT50AD/B-SYTER27-100	M4~M27	3.5~16	ER32	50	100
JL068SYT		CAT50AD/B-SYTER33-105	M4~M33	7~16	ER40	63	105

▶ Feature :
- To compensate for synchronization errors to extend tap life and to improve thread quality
- To compensate for lead tolerances of taps
- For machines with synchronous tapping cycles

▶ BT(JIS B6339/MAS-403), HSK(DIN 69893/ISO 12164-1) AND K-STRAIGHT TAPER PRODUCTS ARE AVAILABLE

Being the best through innovation

HSS-E

COMBO TAP

- HSS-E Taps for Multipurpose

SELECTION GUIDE

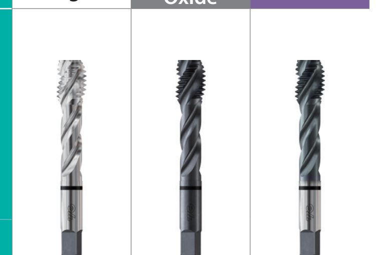
YG THREADING TOOLS

HSS-E COMBO TAP

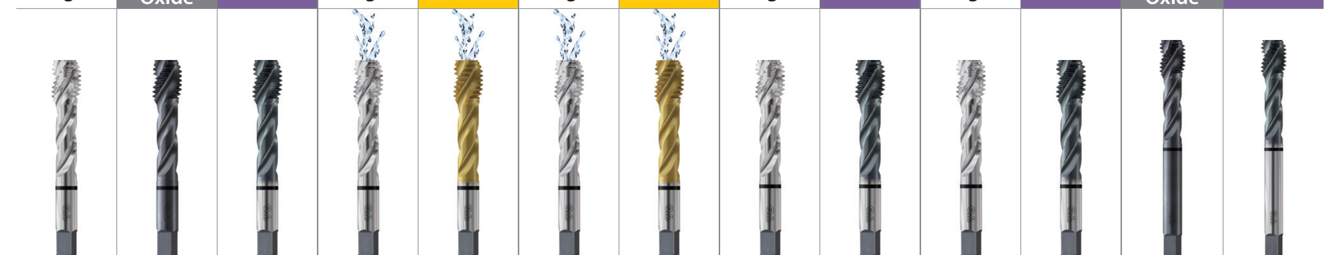
- HSS-E Taps for Multipurpose

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

HOLE TYPE	Max. 2.5xD Blind Hole		
FORM TYPE	Standard		
TOOL MATERIAL	HSS-E		
CHAMFER LEAD ACC. TO DIN2197	2p-3p		
FLUTE TYPE	Spiral Flute		
SPIRAL FLUTE ANGLE	R40		
M – USCTI 302A			
M/MF – USCTI 302A			
M/MF – DIN Length-ANSI Shank			
UNC – USCTI Long Shank			
UNC/UNF – USCTI 302			
UNC/UNF – USCTI 302A	T2 (p.B86)	T2-S (p.B86)	T2-C (p.B86)
UNC/UNF – DIN Length-ANSI Shank			
SURFACE TREATMENT / COATING	Bright	Steam Oxide	TiCN
MODEL			

ISO	VDI 3323	Material Description	Composition / Structure	Heat Treatment	HB	HRC	Examples	T2	T2-S	T2-C
P	1	Non-alloy steel	About 0.15% C	Annealed	125		S15C, C15, 1015	○ 25-50	○ 25-50	○ 50-80
	2		About 0.45% C	Annealed	190	13	S45C, C45, 1045	◎ 25-50	◎ 25-50	◎ 50-80
	3		About 0.45% C	Quenched & Tempered	250	25		◎ 25-50	◎ 25-50	◎ 50-80
	4		About 0.75% C	Annealed	270	28	SK5, Ck75, 1080	◎ 6-30	◎ 6-30	◎ 10-35
	5		About 0.75% C	Quenched & Tempered	300	32		◎ 6-30	◎ 6-30	◎ 10-35
	6	Low alloy steel		Annealed	180	10	SCM440, 42CrMo4, 410	◎ 6-30	◎ 6-30	◎ 10-35
	7			Quenched & Tempered	275	29		◎ 6-30	◎ 6-30	◎ 10-35
	8			Quenched & Tempered	300	32		◎ 6-30	◎ 6-30	◎ 10-35
	9			Quenched & Tempered	350	38		◎ 6-30	◎ 6-30	◎ 10-35
	10	High alloyed steel, and tool steel		Annealed	200	15	SKD, D2	○ 6-30	○ 6-30	○ 10-35
	11			Quenched & Tempered	325	35	SKH, SUH, M42			
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	SUS 420, X40Cr13, 420	◎ 12-35	◎ 12-35	◎ 20-50
	13		Martensitic	Quenched & Tempered	240	23		◎ 12-35	◎ 12-35	◎ 20-50
	14		Austenitic		180	10	SUS 316, 316, X5CrNiMo 17 12 2	◎ 12-15	◎ 12-15	◎ 12-15
K	15	Grey cast iron	Pearlitic / ferritic		180	10	FC, GG, EN-GJL-250	◎ 35-50	◎ 35-50	◎ 50-65
	16		Pearlitic (Martensitic)		260	26		◎ 35-50	◎ 35-50	◎ 50-65
	17	Nodular cast iron	Ferritic		160	3	FCD, GGG, EN-GJS-500-7	◎ 12-45	◎ 12-45	◎ 25-55
	18		Pearlitic		250	25		◎ 12-45	◎ 12-45	◎ 25-55
	19	Malleable cast iron	Ferritic		130		FCMW, FCMP, GTS, GJMB350-10			
	20		Pearlitic		230	21				
N	21	Aluminum-wrought alloy	Not Curable		60		SAE 1000, AlMg 1, 3.3315			
	22		Curable	Hardened	100		SAE 7050, AlCuMg 1, 3.1325			
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		ADC12, G-AlSi12, 3.2581	◎ 40-65	◎ 40-65	◎ 45-90
	24		≤ 12% Si, Curable	Hardened	90		C4BS, G-AlSi10Mg, 3.2381			
	25		> 12% Si, Not Curable		130					
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		CuZn36Pb 3, 2.0375	◎ 30-65	◎ 30-65	◎ 30-65
	27		CuZn, CuSnZn (Brass)		90		CuZn 15, 2.0240	◎ 30-65	◎ 30-65	◎ 30-65
	28		CuSn, lead-free copper and electrolytic copper		100		G-CuZn40Fe, 2.0590	◎ 30-65	◎ 30-65	◎ 30-65
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic				CFRP			
	30		Rubber, Wood, etc.							
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15	X12 NiCrSi 36-16, 1.4864			
	32			Cured	280	30				
	33		Ni or Co Based	Annealed	250	25	Inconel 718, NiCr20TiAl, 2.4631			
	34			Cured	350	38	NiCu30Al, 2.4375			
	35			Cast	320	34	G-X120Mn12, 1.3401			
	36	Titanium Alloys	Pure Titanium		400 Rm					
	37		Alpha + Beta Alloys	Hardened	1050 Rm		TiAl6V4, 3.7165			
H	38	Hardened steel		Hardened	550	55	SK3			
	39			Hardened	630	60				
	40	Chilled Cast Iron		Cast	400	42				
	41	Hardened Cast Iron		Hardened	550	55				

HOLE TYPE	Max. 2.5xD Blind Hole												
FORM TYPE	Standard			with Internal Coolant				Short Chamfer				DIN Length-ANSI Shank	
TOOL MATERIAL	HSS-E												
CHAMFER LEAD ACC. TO DIN2197	2p-3p			2p-3p		2p-3p		1p-2p		1p-2p		2p-3p	
FLUTE TYPE	Spiral Flute			Spiral Flute		Spiral Flute		Spiral Flute		Spiral Flute		Spiral Flute	
SPIRAL FLUTE ANGLE	R40			R40		R40		R40		R40		R40	
M – USCTI 302A						T8 (p.B93)	T8-N (p.B93)						
M/MF – USCTI 302A	T5 (p.B90)	T5-S (p.B90)	T5-C (p.B90)							T9 (p.B96)	T9-C (p.B96)		
M/MF – DIN Length-ANSI Shank													
UNC – USCTI Long Shank													
UNC/UNF – USCTI 302													
UNC/UNF – USCTI 302A				T6 (p.B92)	T6-N(p.B92)			T7 (p.B94)	T7-C (p.B94)				
UNC/UNF – DIN Length-ANSI Shank												T1-S (p.B97)	T1-C (p.B97)
SURFACE TREATMENT / COATING	Bright	Steam Oxide	TiCN	Bright	TiN	Bright	TiN	Bright	TiCN	Bright	TiCN	Steam Oxide	TiCN
MODEL													

VDI 3323	T5	T5-S	T5-C	T6	T6-N	T8	T8-N	T7	T7-C	T9	T9-C	T1-S	T1-C
1	○ 25-50	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80
2	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
3	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
4	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
5	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
6	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
7	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
8	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
9	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
10	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35
11													
12	◎ 12-35	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
13	◎ 12-35	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
14	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
15	◎ 35-50	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65
16	◎ 35-50	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65
17	◎ 12-45	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55
18	◎ 12-45	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55
19													
20													
21													
22													
23	◎ 40-65	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90
24													
25													
26	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
27	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
28	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
29													
30													
31													
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41													

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

SELECTION GUIDE

YG THREADING TOOLS

HSS-E COMBO TAP

- HSS-E Taps for Multipurpose

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◎ : Excellent ○ : Good

		TA-S	TA-C
HOLE TYPE		Max. 2.5xD Blind Hole	
FORM TYPE		DIN Length-ANSI Shank	
TOOL MATERIAL		HSS-E	
CHAMFER LEAD ACC. TO DIN2197		2p-3p	
FLUTE TYPE		Spiral Flute	
SPIRAL FLUTE ANGLE		R40	
M	USCTI 302A		
M/MF	USCTI 302A		
M/MF	DIN Length-ANSI Shank	TA-S (p.B99)	TA-C (p.B99)
UNC	USCTI Long Shank		
UNC/UNF	USCTI 302		
UNC/UNF	USCTI 302A		
UNC/UNF	DIN Length-ANSI Shank		
SURFACE TREATMENT / COATING		Steam Oxide	TiCN
MODEL			

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	Examples	TA-S	TA-C
P	1	Non-alloy steel	About 0.15% C	Annealed	125		S15C, C15, 1015	○ 25-50	○ 50-80
	2		About 0.45% C	Annealed	190	13	S45C, C45, 1045	◎ 25-50	◎ 50-80
	3		About 0.45% C	Quenched & Tempered	250	25		◎ 25-50	◎ 50-80
	4		About 0.75% C	Annealed	270	28	SK5, Ck75, 1080	◎ 6-30	◎ 10-35
	5		About 0.75% C	Quenched & Tempered	300	32		◎ 6-30	◎ 10-35
	6	Low alloy steel		Annealed	180	10	SCM440, 42CrMo4, 410	◎ 6-30	◎ 10-35
	7			Quenched & Tempered	275	29		◎ 6-30	◎ 10-35
	8			Quenched & Tempered	300	32		◎ 6-30	◎ 10-35
	9			Quenched & Tempered	350	38		◎ 6-30	◎ 10-35
	10	High alloyed steel, and tool steel		Annealed	200	15	SKD, D2	○ 6-30	○ 10-35
	11			Quenched & Tempered	325	35	SKH, SUH, M42		
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	SUS 420, X40Cr13, 420	◎ 12-35	◎ 20-50
	13		Martensitic	Quenched & Tempered	240	23		◎ 12-35	◎ 20-50
	14		Austenitic		180	10	SUS 316, 316, X5CrNiMo 17 12 2	◎ 12-15	◎ 12-15
K	15	Grey cast iron	Pearlitic / ferritic		180	10	FC, GG, EN-GJL-250	◎ 35-50	◎ 50-65
	16		Pearlitic (Martensitic)		260	26		◎ 35-50	◎ 50-65
	17	Nodular cast iron	Ferritic		160	3	FCD, GGG, EN-GJS-500-7	◎ 12-45	◎ 25-55
	18		Pearlitic		250	25		◎ 12-45	◎ 25-55
	19	Malleable cast iron	Ferritic		130		FCMW, FCMP, GTS, GJMB350-10		
	20		Pearlitic		230	21			
N	21	Aluminum-wrought alloy	Not Curable		60		SAE 1000, AlMg 1, 3.3315		
	22		Curable	Hardened	100		SAE 7050, AlCuMg 1, 3.1325		
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		ADC12, G-AlSi12, 3.2581	◎ 40-65	◎ 45-90
	24		≤ 12% Si, Curable	Hardened	90		C4BS, G-AlSi10Mg, 3.2381		
	25		> 12% Si, Not Curable		130				
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		CuZn36Pb 3, 2.0375	◎ 30-65	◎ 30-65
	27		CuZn, CuSnZn (Brass)		90		CuZn 15, 2.0240	◎ 30-65	◎ 30-65
	28		CuSn, lead-free copper and electrolytic copper		100		G-CuZn40Fe, 2.0590	◎ 30-65	◎ 30-65
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic				CFRP		
	30		Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15	X12 NiCrSi 36-16, 1.4864		
	32			Cured	280	30			
	33		Ni or Co Based	Annealed	250	25	Inconel 718, NiCr20TiAl, 2.4631		
	34			Cured	350	38	NiCu30Al, 2.4375		
	35			Cast	320	34	G-X120Mn12, 1.3401		
	36	Titanium Alloys	Pure Titanium		400 Rm				
	37		Alpha + Beta Alloys	Hardened	1050 Rm		TiAl6V4, 3.7165		
H	38	Hardened steel		Hardened	550	55	SK3		
	39			Hardened	630	60			
	40	Chilled Cast Iron		Cast	400	42			
	41	Hardened Cast Iron		Hardened	550	55			

HOLE TYPE		Max. 3.0xD Through Hole													
FORM TYPE		Standard						with Internal Coolant				DIN Length-ANSI Shank			
TOOL MATERIAL		HSS-E													
CHAMFER LEAD ACC. TO DIN2197		4p-5p			4p-5p			4p-5p		4p-5p		4p-5p		4p-5p	
FLUTE TYPE		Spiral Point			Spiral Point			Spiral Point		Spiral Point		Spiral Point		Spiral Point	
SPIRAL FLUTE ANGLE		-			-			-		-		-		-	
M	USCTI 302A									TH (p.B108)	TH-N (p.B108)				
M/MF	USCTI 302A				T3 (p.B105)	T3-S (p.B105)	T3-C (p.B105)								
M/MF	DIN Length-ANSI Shank													TK-S (p.B110)	TK-C (p.B110)
UNC	USCTI Long Shank														
UNC/UNF	USCTI 302														
UNC/UNF	USCTI 302A	T4 (p.B100)	T4-S (p.B100)	T4-C (p.B100)				TB (p.B107)	TB-N (p.B107)						
UNC/UNF	DIN Length-ANSI Shank											TC-S (p.B109)	TC-C (p.B109)		
SURFACE TREATMENT / COATING		Bright	Steam Oxide	TiCN	Bright	Steam Oxide	TiCN	Bright	TiN	Bright	TiN	Steam Oxide	TiCN	Steam Oxide	TiCN
MODEL															

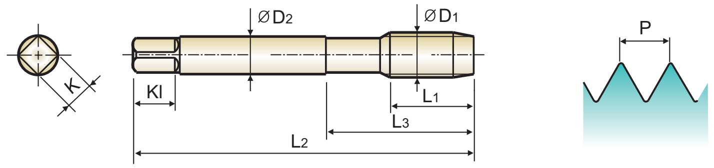
ISO	VDI 3323	T4	T4-S	T4-C	T3	T3-S	T3-C	TB	TB-N	TH	TH-N	TC-S	TC-C	TK-S	TK-C
P	1	○ 25-50	○ 25-50	○ 50-80	○ 25-50	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80
	2	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
	3	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
	4	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	5	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	6	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	7	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	8	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	9	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
	10	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35
	11														
M	12	◎ 12-35	◎ 12-35	◎ 20-50	◎ 12-35	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
	13	◎ 12-35	◎ 12-35	◎ 20-50	◎ 12-35	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
	14	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
K	15	◎ 35-50	◎ 35-50	◎ 50-65	◎ 35-50	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65
	16	◎ 35-50	◎ 35-50	◎ 50-65	◎ 35-50	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65	◎ 35-50	◎ 50-65
	17	◎ 12-45	◎ 12-45	◎ 25-55	◎ 12-45	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55
	18	◎ 12-45	◎ 12-45	◎ 25-55	◎ 12-45	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55	◎ 12-45	◎ 25-55
	19														
	20														
N	21														
	22														
	23	◎ 40-65	◎ 40-65	◎ 45-90	◎ 40-65	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90
	24														
	25														
	26	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
	27	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
	28	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
	29														
	30														
S	31														
	32														
	33														
	34														
	35														
	36														
	37														
H	38														
	39														
	40														
	41														

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

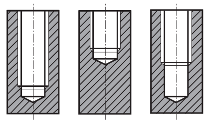
YG COMBO TAP

T2 SERIES / T2-S SERIES / T2-C SERIES

SPIRAL FLUTE for Multipurpose



Hole type
2.5XD



Material groups **MU** | HSS-E | UNC UNF | USCTI 302A | 2P~3P | Bright | Steam Oxide | TiCN | R40

Unit : Inch

Size D1		TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#2	-	56UNC	T2082	T2082S	T2082C	H2	1.752	.157	.433	.141	.110	.190	2
#3	-	48UNC	T2122	T2122S	T2122C	H2	1.811	.197	.492	.141	.110	.190	2
#4	-	40UNC	T2162	T2162S	T2162C	H2	1.874	.236	.563	.141	.110	.190	2
#4	-	40UNC	T2163	T2163S	T2163C	H3	1.874	.236	.563	.141	.110	.190	2
#4	-	40UNC	T2164	T2164S	T2164C	H4	1.874	.236	.563	.141	.110	.190	2
#4	-	40UNC	T2165	T2165S	T2165C	H5	1.874	.236	.563	.141	.110	.190	2
#4	-	48UNF	T2182	T2182S	T2182C	H2	1.874	.236	.563	.141	.110	.190	2
#5	-	40UNC	T2202	T2202S	T2202C	H2	1.937	.236	.626	.141	.110	.190	3
#5	-	44UNF	T2222	T2222S	T2222C	H2	1.937	.236	.626	.141	.110	.190	3
#6	-	32UNC	T2242	T2242S	T2242C	H2	2.000	.276	.689	.141	.110	.190	3
#6	-	32UNC	T2243	T2243S	T2243C	H3	2.000	.276	.689	.141	.110	.190	3
#6	-	32UNC	T2245	T2245S	T2245C	H5	2.000	.276	.689	.141	.110	.190	3
#6	-	32UNC	T2247	T2247S	T2247C	H7	2.000	.276	.689	.141	.110	.190	3
#6	-	32UNC	T224A	T224AS	T224AC	H11	2.000	.276	.689	.141	.110	.190	3
#6	-	40UNF	T2262	T2262S	T2262C	H2	2.000	.276	.689	.141	.110	.190	3
#8	-	32UNC	T2282	T2282S	T2282C	H2	2.126	.276	.752	.168	.131	.250	3
#8	-	32UNC	T2283	T2283S	T2283C	H3	2.126	.276	.752	.168	.131	.250	3
#8	-	32UNC	T2285	T2285S	T2285C	H5	2.126	.276	.752	.168	.131	.250	3
#8	-	32UNC	T2287	T2287S	T2287C	H7	2.126	.276	.752	.168	.131	.250	3
#8	-	32UNC	T228A	T228AS	T228AC	H11	2.126	.276	.752	.168	.131	.250	3
#8	-	36UNF	T2302	T2302S	T2302C	H2	2.126	.276	.752	.168	.131	.250	3
#10	-	24UNC	T2323	T2323S	T2323C	H3	2.374	.354	.906	.194	.152	.250	3
#10	-	24UNC	T2325	T2325S	T2325C	H5	2.374	.354	.906	.194	.152	.250	3
#10	-	24UNC	T232A	T232AS	T232AC	H11	2.374	.354	.906	.194	.152	.250	3
#10	-	32UNF	T2342	T2342S	T2342C	H2	2.374	.276	.906	.194	.152	.250	3
#10	-	32UNF	T2343	T2343S	T2343C	H3	2.374	.276	.906	.194	.152	.250	3
#10	-	32UNF	T2345	T2345S	T2345C	H5	2.374	.276	.906	.194	.152	.250	3
#10	-	32UNF	T2347	T2347S	T2347C	H7	2.374	.276	.906	.194	.152	.250	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

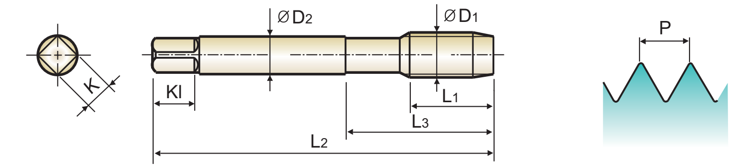
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

CARBIDE
HSS
THREAD MILL | SYNCHRO TAP | COMBO TAP | YG TAP BLUE RING | YG TAP STEEL | YG TAP INOX | YG TAP CAST IRON | YG TAP ALU | YG TAP Ti Ni | YG TAP HARDENED STEEL | YG TAP GENERAL | YG TAP FORMING | STI TAP | PIPE TAP | TECHNICAL DATA

YG COMBO TAP

T2 SERIES / T2-S SERIES / T2-C SERIES

SPIRAL FLUTE for Multipurpose



Hole type
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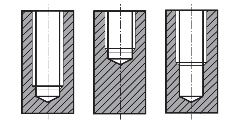


Material groups **MU** | HSS-E | UNC UNF | USCTI 302A | 2P~3P | Bright | Steam Oxide | TiCN | R40

Unit : Inch

Size D1		TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#10	-	32UNF	T234A	T234AS	T234AC	H11	2.374	.276	.906	.194	.152	.250	3
#12	-	24UNC	T2363	T2363S	T2363C	H3	2.374	.354	.906	.220	.165	.280	3
#12	-	28UNF	T2383	T2383S	T2383C	H3	2.374	.276	.906	.220	.165	.280	3
1/4	-	20UNC	T2403	T2403S	T2403C	H3	2.500	.433	1.000	.255	.191	.310	3
1/4	-	20UNC	T2405	T2405S	T2405C	H5	2.500	.433	1.000	.255	.191	.310	3
1/4	-	20UNC	T240A	T240AS	T240AC	H11	2.500	.433	1.000	.255	.191	.310	3
1/4	-	28UNF	T2422	T2422S	T2422C	H2	2.500	.354	1.000	.255	.191	.310	3
1/4	-	28UNF	T2423	T2423S	T2423C	H3	2.500	.354	1.000	.255	.191	.310	3
1/4	-	28UNF	T2424	T2424S	T2424C	H4	2.500	.354	1.000	.255	.191	.310	3
1/4	-	28UNF	T2425	T2425S	T2425C	H5	2.500	.354	1.000	.255	.191	.310	3
1/4	-	28UNF	T2427	T2427S	T2427C	H7	2.500	.354	1.000	.255	.191	.310	3
1/4	-	28UNF	T242A	T242AS	T242AC	H11	2.500	.354	1.000	.255	.191	.310	3
5/16	-	18UNC	T2442	T2442S	T2442C	H2	2.720	.472	1.126	.318	.238	.380	3
5/16	-	18UNC	T2443	T2443S	T2443C	H3	2.720	.472	1.126	.318	.238	.380	3
5/16	-	18UNC	T2445	T2445S	T2445C	H5	2.720	.472	1.126	.318	.238	.380	3
5/16	-	18UNC	T2447	T2447S	T2447C	H7	2.720	.472	1.126	.318	.238	.380	3
5/16	-	18UNC	T244A	T244AS	T244AC	H11	2.720	.472	1.126	.318	.238	.380	3
5/16	-	24UNF	T2462	T2462S	T2462C	H2	2.720	.394	1.126	.318	.238	.380	3
5/16	-	24UNF	T2463	T2463S	T2463C	H3	2.720	.394	1.126	.318	.238	.380	3
5/16	-	24UNF	T2464	T2464S	T2464C	H4	2.720	.394	1.126	.318	.238	.380	3
5/16	-	24UNF	T2465	T2465S	T2465C	H5	2.720	.394	1.126	.318	.238	.380	3
5/16	-	24UNF	T2466	T2466S	T2466C	H6	2.720	.394	1.126	.318	.238	.380	3
5/16	-	24UNF	T2467	T2467S	T2467C	H7	2.720	.394	1.126	.318	.238	.380	3
5/16	-	24UNF	T246A	T246AS	T246AC	H11	2.720	.394	1.126	.318	.238	.380	3
3/8	-	16UNC	T2482	T2482S	T2482C	H2	2.937	.551	1.252	.381	.286	.440	3
3/8	-	16UNC	T2483	T2483S	T2483C	H3	2.937	.551	1.252	.381	.286	.440	3
3/8	-	16UNC	T2485	T2485S	T2485C	H5	2.937	.551	1.252	.381	.286	.440	3
3/8	-	16UNC	T2487	T2487S	T2487C	H7	2.937	.551	1.252	.381	.286	.440	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

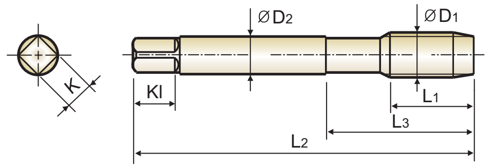
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

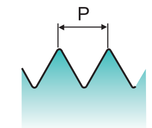
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

YG COMBO TAP

T2 SERIES
T2-S SERIES
T2-C SERIES

SPIRAL FLUTE for Multipurpose





Hole type
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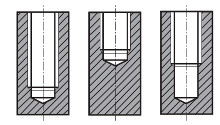


Material groups: MU | HSS-E | UNC UNF | USCTI 302A | 2P~3P | Bright | Steam Oxide | TiCN | R40

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
3/8	- 16UNC	T248A	T248AS	T248AC	H11	2.937	.551	1.252	.381	.286	.440	3
3/8	- 24UNF	T2502	T2502S	T2502C	H2	2.937	.394	1.252	.381	.286	.440	3
3/8	- 24UNF	T2503	T2503S	T2503C	H3	2.937	.394	1.252	.381	.286	.440	3
3/8	- 24UNF	T2504	T2504S	T2504C	H4	2.937	.394	1.252	.381	.286	.440	3
3/8	- 24UNF	T2505	T2505S	T2505C	H5	2.937	.394	1.252	.381	.286	.440	3
3/8	- 24UNF	T2507	T2507S	T2507C	H7	2.937	.394	1.252	.381	.286	.440	3
3/8	- 24UNF	T250A	T250AS	T250AC	H11	2.937	.394	1.252	.381	.286	.440	3
7/16	- 14UNC	T2523	T2523S	T2523C	H3	3.157	.591	1.850	.323	.242	.410	3
7/16	- 14UNC	T2525	T2525S	T2525C	H5	3.157	.591	1.850	.323	.242	.410	3
7/16	- 14UNC	T2527	T2527S	T2527C	H7	3.157	.591	1.850	.323	.242	.410	3
7/16	- 14UNC	T252A	T252AS	T252AC	H11	3.157	.591	1.850	.323	.242	.410	3
7/16	- 20UNF	T2543	T2543S	T2543C	H3	3.157	.472	1.850	.323	.242	.410	3
7/16	- 20UNF	T2545	T2545S	T2545C	H5	3.157	.472	1.850	.323	.242	.410	3
7/16	- 20UNF	T2547	T2547S	T2547C	H7	3.157	.472	1.850	.323	.242	.410	3
7/16	- 20UNF	T254A	T254AS	T254AC	H11	3.157	.472	1.850	.323	.242	.410	3
1/2	- 13UNC	T2563	T2563S	T2563C	H3	3.374	.630	2.067	.367	.275	.440	3
1/2	- 13UNC	T2565	T2565S	T2565C	H5	3.374	.630	2.067	.367	.275	.440	3
1/2	- 13UNC	T2567	T2567S	T2567C	H7	3.374	.630	2.067	.367	.275	.440	3
1/2	- 13UNC	T256A	T256AS	T256AC	H11	3.374	.630	2.067	.367	.275	.440	3
1/2	- 20UNF	T2582	T2582S	T2582C	H2	3.374	.472	2.067	.367	.275	.440	3
1/2	- 20UNF	T2583	T2583S	T2583C	H3	3.374	.472	2.067	.367	.275	.440	3
1/2	- 20UNF	T2585	T2585S	T2585C	H5	3.374	.472	2.067	.367	.275	.440	3
1/2	- 20UNF	T2587	T2587S	T2587C	H7	3.374	.472	2.067	.367	.275	.440	3
1/2	- 20UNF	T258A	T258AS	T258AC	H11	3.374	.472	2.067	.367	.275	.440	3
9/16	- 12UNC	T2603	T2603S	T2603C	H3	3.594	.709	2.067	.429	.322	.500	3
9/16	- 12UNC	T2605	T2605S	T2605C	H5	3.594	.709	2.067	.429	.322	.500	3
9/16	- 18UNF	T2623	T2623S	T2623C	H3	3.594	.512	2.067	.429	.322	.500	3
9/16	- 18UNF	T2625	T2625S	T2625C	H5	3.594	.512	2.067	.429	.322	.500	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

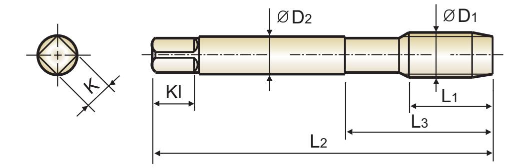
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

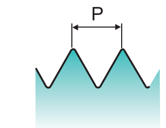
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

YG COMBO TAP

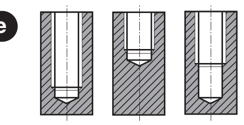
T2 SERIES
T2-S SERIES
T2-C SERIES

SPIRAL FLUTE for Multipurpose





Hole type
2.5XD



Material groups: MU | HSS-E | UNC UNF | USCTI 302A | 2P~3P | Bright | Steam Oxide | TiCN | R40

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
5/8	- 11UNC	T2645	T2645S	T2645C	H5	3.811	.748	2.205	.480	.360	.560	4
5/8	- 18UNF	T2663	T2663S	T2663C	H3	3.811	.512	2.205	.480	.360	.560	4
5/8	- 18UNF	T2665	T2665S	T2665C	H5	3.811	.512	2.205	.480	.360	.560	4
3/4	- 10UNC	T2703	T2703S	T2703C	H3	4.252	.827	2.480	.590	.442	.690	4
3/4	- 10UNC	T2705	T2705S	T2705C	H5	4.252	.827	2.480	.590	.442	.690	4
3/4	- 16UNF	T2723	T2723S	T2723C	H3	4.252	.591	2.480	.590	.442	.690	4
3/4	- 16UNF	T2725	T2725S	T2725C	H5	4.252	.591	2.480	.590	.442	.690	4
7/8	- 9UNC	T2746	T2746S	T2746C	H6	4.689	.827	2.815	.697	.523	.750	4
7/8	- 14UNF	T2764	T2764S	T2764C	H4	4.689	.709	2.815	.697	.523	.750	4
7/8	- 14UNF	T2766	T2766S	T2766C	H6	4.689	.709	2.815	.697	.523	.750	4
1"	- 8UNC	T2786	T2786S	T2786C	H6	5.126	.984	3.091	.800	.600	.810	4
1"	- 12UNF	T2806	T2806S	T2806C	H6	5.126	.709	3.091	.800	.600	.810	4
1_1/8	- 7UNC	T2826	T2826S	T2826C	H6	5.437	1.024	3.150	.896	.672	.880	4
1_1/8	- 8UN	T2836	T2836S	T2836C	H6	5.437	1.024	3.150	.896	.672	.880	4
1_1/8	- 12UNF	T2845	T2845S	T2845C	H5	5.437	.787	3.150	.896	.672	.880	4
1_1/4	- 7UNC	T2866	T2866S	T2866C	H6	5.752	1.024	3.150	1.021	.766	1.00	4
1_1/4	- 8UN	T2876	T2876S	T2876C	H6	5.752	1.024	3.150	1.021	.766	1.00	4
1_1/4	- 12UNF	T2885	T2885S	T2885C	H5	5.752	.787	3.150	1.021	.766	1.00	4
1_3/8	- 6UNC	T2906	T2906S	T2906C	H6	6.063	1.181	3.583	1.108	.831	1.06	4
1_3/8	- 8UN	T2916	T2916S	T2916C	H6	6.063	1.181	3.583	1.108	.831	1.06	4
1_3/8	- 12UNF	T2925	T2925S	T2925C	H5	6.063	.866	3.583	1.108	.831	1.06	4
1_1/2	- 6UNC	T2946	T2946S	T2946C	H6	6.374	1.181	3.583	1.233	.925	1.13	4
1_1/2	- 8UN	T2956	T2956S	T2956C	H6	6.374	1.181	3.583	1.233	.925	1.13	4
1_1/2	- 12UNF	T2965	T2965S	T2965C	H5	6.374	.866	3.583	1.233	.925	1.13	4

◎ : Excellent ○ : Good

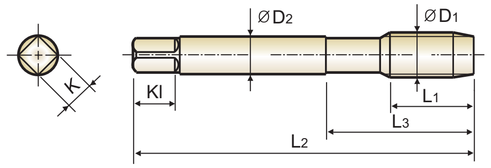
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

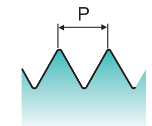
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

YG COMBO TAP

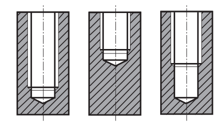
T5 SERIES
T5-S SERIES
T5-C SERIES

SPIRAL FLUTE for Multipurpose





Hole type
2.5XD



Material groups MU | HSS-E | M/MF | USCTI 302A | 2P~3P | Bright | Steam Oxide | TiCN | R40

Unit : Inch

Size D1			Pitch	EDP No. Bright	Steam Oxide	TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M3	x	0.5		T520A	T520AS	T520AC	D11	1.937	.197	.646	.141	.110	.190	3
M3	x	0.5		T5203	T5203S	T5203C	D3	1.937	.197	.646	.141	.110	.190	3
M3.5	x	0.6		T522A	T522AS	T522AC	D11	2.000	.276	.709	.141	.110	.190	3
M3.5	x	0.6		T5224	T5224S	T5224C	D4	2.000	.276	.709	.141	.110	.190	3
M4	x	0.7		T524A	T524AS	T524AC	D11	2.126	.276	.768	.168	.131	.250	3
M4	x	0.7		T5244	T5244S	T5244C	D4	2.126	.276	.768	.168	.131	.250	3
M5	x	0.8		T528A	T528AS	T528AC	D11	2.374	.354	.933	.194	.152	.250	3
M5	x	0.8		T5284	T5284S	T5284C	D4	2.374	.354	.933	.194	.152	.250	3
M6	x	1.0		T531A	T531AS	T531AC	D11	2.500	.433	1.000	.255	.191	.310	3
M6	x	1.0		T5315	T5315S	T5315C	D5	2.500	.433	1.000	.255	.191	.310	3
M7	x	1.0		T534A	T534AS	T534AC	D11	2.720	.433	1.126	.318	.238	.380	3
M7	x	1.0		T5345	T5345S	T5345C	D5	2.720	.433	1.126	.318	.238	.380	3
M8	x	1.25		T536A	T536AS	T536AC	D11	2.720	.472	1.126	.318	.238	.380	3
M8	x	1.25		T5365	T5365S	T5365C	D5	2.720	.472	1.126	.318	.238	.380	3
M8	x	1.0		T537A	T537AS	T537AC	D11	2.720	.433	1.126	.318	.238	.380	3
M8	x	1.0		T5375	T5375S	T5375C	D5	2.720	.433	1.126	.318	.238	.380	3
M10	x	1.5		T542A	T542AS	T542AC	D11	2.937	.512	1.252	.381	.286	.440	3
M10	x	1.5		T5426	T5426S	T5426C	D6	2.937	.512	1.252	.381	.286	.440	3
M10	x	1.25		T543A	T543AS	T543AC	D11	2.937	.472	1.252	.381	.286	.440	3
M10	x	1.25		T5435	T5435S	T5435C	D5	2.937	.472	1.252	.381	.286	.440	3
M10	x	1.00		T544A	T544AS	T544AC	D11	2.937	.433	1.252	.381	.286	.440	3
M10	x	1.00		T5445	T5445S	T5445C	D5	2.937	.433	1.252	.381	.286	.440	3
M12	x	1.75		T550A	T550AS	T550AC	D11	3.374	.591	2.067	.367	.275	.440	3
M12	x	1.75		T5506	T5506S	T5506C	D6	3.374	.591	2.067	.367	.275	.440	3
M12	x	1.50		T551A	T551AS	T551AC	D11	3.374	.591	2.067	.367	.275	.440	3

▶ NEXT PAGE

- ▶ Coating(TiN, TiAlN or Hardslick) is available on your request.
- ▶ Coating Codes for Combo Tap
  Bright Finish No. + N(TiN), F(TiAlN), H(Hardslick)
- ▶ Steam Oxide is not recommended for Aluminum and Aluminum alloys.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

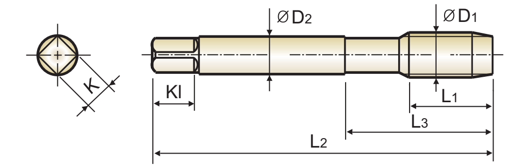
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

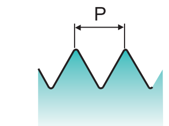
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG COMBO TAP

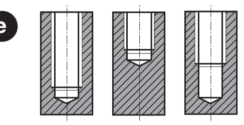
T5 SERIES
T5-S SERIES
T5-C SERIES

SPIRAL FLUTE for Multipurpose





Hole type
2.5XD



Material groups MU | HSS-E | M/MF | USCTI 302A | 2P~3P | Bright | Steam Oxide | TiCN | R40

Unit : Inch

Size D1			Pitch	EDP No. Bright	Steam Oxide	TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M12	x	1.50		T5516	T5516S	T5516C	D6	3.374	.591	2.067	.367	.275	.440	3
M12	x	1.25		T552A	T552AS	T552AC	D11	3.374	.551	2.067	.367	.275	.440	3
M12	x	1.25		T5525	T5525S	T5525C	D5	3.374	.551	2.067	.367	.275	.440	3
M14	x	2.0		T5547	T5547S	T5547C	D7	3.594	.709	2.067	.429	.322	.500	3
M14	x	1.5		T5556	T5556S	T5556C	D6	3.594	.551	2.067	.429	.322	.500	3
M16	x	2.0		T5607	T5607S	T5607C	D7	3.811	.709	2.205	.480	.360	.560	3
M16	x	1.5		T5616	T5616S	T5616C	D6	3.811	.551	2.205	.480	.360	.560	3
M18	x	2.5		T5657	T5657S	T5657C	D7	4.031	.787	2.205	.542	.406	.630	4
M18	x	1.5		T5676	T5676S	T5676C	D6	4.031	.551	2.205	.542	.406	.630	4
M20	x	2.5		T5707	T5707S	T5707C	D7	4.469	.787	2.480	.652	.489	.690	4
M20	x	1.5		T5726	T5726S	T5726C	D6	4.469	.551	2.480	.652	.489	.690	4
M22	x	2.5		T5747	T5747S	T5747C	D7	4.689	.787	2.815	.697	.523	.750	4
M22	x	1.5		T5766	T5766S	T5766C	D6	4.689	.551	2.815	.697	.523	.750	4
M24	x	3.0		T5788	T5788S	T5788C	D8	4.906	.945	2.815	.760	.570	.750	4
M24	x	1.5		T5806	T5806S	T5806C	D6	4.906	.551	2.815	.760	.570	.750	4
M27	x	3.0		T5869	T5869S	T5869C	D9	5.126	.945	3.091	.896	.672	.880	4
M27	x	3.0		T5868	T5868S	T5868C	D8	5.126	.945	3.091	.896	.672	.880	4
M27	x	3.0		T5866	T5866S	T5866C	D6	5.126	.945	3.091	.896	.672	.880	4
M27	x	1.5		T5886	T5886S	T5886C	D6	5.126	.591	3.091	.896	.672	.880	4

- ▶ Coating(TiN, TiAlN or Hardslick) is available on your request.
- ▶ Coating Codes for Combo Tap
  Bright Finish No. + N(TiN), F(TiAlN), H(Hardslick)
- ▶ Steam Oxide is not recommended for Aluminum and Aluminum alloys.

◎ : Excellent ○ : Good

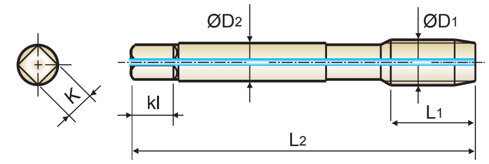
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

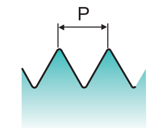
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

COMBO TAP

T6 SERIES
T6-N SERIES

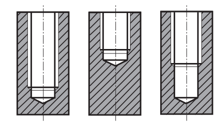
SPIRAL FLUTE for Multipurpose



with Internal Coolant

Hole type
2.5XD



Material groups MU | HSS-E | UNC UNF | USCTI 302A | 2P~3P | Bright | TiN | R40

Unit : Inch

Size		TPI	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Bright	TiN		L2	L1	L3	D2	K	Kl	
1/4	-	20UNC	T6405	T6405N	H5	2.500	.433	1.000	.255	.191	.310	3
1/4	-	28UNF	T6424	T6424N	H4	2.500	.354	1.000	.255	.191	.310	3
5/16	-	18UNC	T6445	T6445N	H5	2.720	.472	1.126	.318	.238	.380	3
5/16	-	24UNF	T6464	T6464N	H4	2.720	.394	1.126	.318	.238	.380	3
3/8	-	16UNC	T6485	T6485N	H5	2.937	.551	1.252	.381	.286	.440	3
3/8	-	24UNF	T6504	T6504N	H4	2.937	.394	1.252	.381	.286	.440	3
7/16	-	14UNC	T6525	T6525N	H5	3.157	.591	1.850	.323	.242	.410	3
7/16	-	20UNF	T6545	T6545N	H5	3.157	.472	1.850	.323	.242	.410	3
1/2	-	13UNC	T6565	T6565N	H5	3.374	.630	2.067	.367	.275	.440	3
1/2	-	20UNF	T6585	T6585N	H5	3.374	.472	2.067	.367	.275	.440	3
9/16	-	12UNC	T6605	T6605N	H5	3.594	.709	2.067	.429	.322	.500	3
9/16	-	18UNF	T6625	T6625N	H5	3.594	.512	2.067	.429	.322	.500	3
5/8	-	11UNC	T6645	T6645N	H5	3.811	.748	2.205	.480	.360	.560	4
5/8	-	18UNF	T6665	T6665N	H5	3.811	.512	2.205	.480	.360	.560	4
3/4	-	10UNC	T6705	T6705N	H5	4.252	.827	2.480	.590	.442	.690	4
3/4	-	16UNF	T6725	T6725N	H5	4.252	.591	2.480	.590	.442	.690	4
7/8	-	9UNC	T6746	T6746N	H6	4.689	.827	2.815	.697	.523	.750	4
7/8	-	14UNF	T6766	T6766N	H6	4.689	.709	2.815	.697	.523	.750	4
1"	-	8UNC	T6786	T6786N	H6	5.126	.984	3.091	.800	.600	.810	4
1"	-	12UNF	T6806	T6806N	H6	5.126	.709	3.091	.800	.600	.810	4

▶ Coating(TiCN, TiAlN or Hardslick) or Surface Treatment(Steam Oxide) is available on your request.
▶ Coating Codes for Combo Tap
Bright Finish No. + C(TiCN), F(TiAlN), H(Hardslick), S(Steam Oxide)

◎ : Excellent ○ : Good

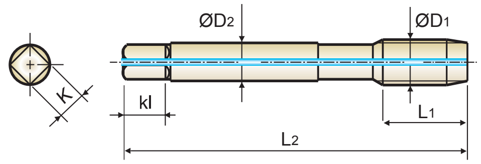
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

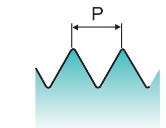
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

COMBO TAP

T8 SERIES
T8-N SERIES

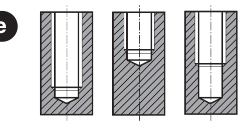
SPIRAL FLUTE for Multipurpose



with Internal Coolant

Hole type
2.5XD



Material groups MU | HSS-E | M | USCTI 302A | 2P~3P | Bright | TiN | R40

Unit : Inch

Size		Pitch	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Bright	TiN		L2	L1	L3	D2	K	Kl	
M6	x	1.0	T8315	T8315N	D5	2.500	.433	1.000	.255	.191	.310	3
M8	x	1.25	T8365	T8365N	D5	2.720	.472	1.126	.318	.238	.380	3
M10	x	1.5	T8426	T8426N	D6	2.937	.512	1.252	.381	.286	.440	3
M12	x	1.75	T8506	T8506N	D6	3.374	.591	2.067	.367	.275	.440	3
M14	x	2.0	T8547	T8547N	D7	3.594	.709	2.067	.429	.322	.500	3
M16	x	2.0	T8607	T8607N	D7	3.811	.709	2.205	.480	.360	.560	3
M18	x	2.5	T8657	T8657N	D7	4.031	.787	2.205	.542	.406	.630	4
M24	x	2.5	T8707	T8707N	D7	4.469	.787	2.480	.652	.489	.690	4

▶ Coating(TiCN, TiAlN or Hardslick) or Surface Treatment(Steam Oxide) is available on your request.
▶ Coating Codes for Combo Tap
Bright Finish No. + C(TiCN), F(TiAlN), H(Hardslick), S(Steam Oxide)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

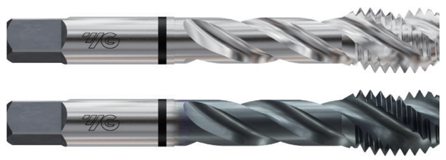
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

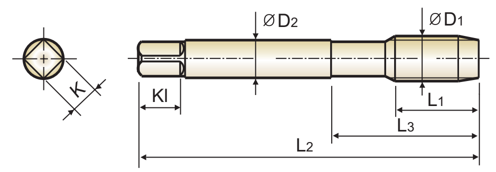
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

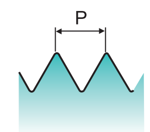
YG COMBO TAP

T7 SERIES
T7-C SERIES

SPIRAL FLUTE for Multipurpose

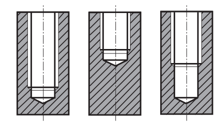






Short Chamfer

Hole type
2.5XD



Material groups MU | HSS-E | UNC UNF | USCTI 302A | 1P~2P | Bright | TiCN | R40

Unit : Inch

Size		TPI	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Bright	TiCN		L2	L1	L3	D2	K	Kl	
#4	-	40UNC	T7162	T7162C	H2	1.874	.236	.563	.141	.110	.190	2
#4	-	48UNF	T7182	T7182C	H2	1.874	.236	.563	.141	.110	.190	2
#5	-	40UNC	T7202	T7202C	H2	1.937	.236	.626	.141	.110	.190	3
#5	-	44UNF	T7222	T7222C	H2	1.937	.236	.626	.141	.110	.190	3
#6	-	32UNC	T7243	T7243C	H3	2.000	.276	.689	.141	.110	.190	3
#6	-	40UNF	T7262	T7262C	H2	2.000	.276	.689	.141	.110	.190	3
#8	-	32UNC	T7283	T7283C	H3	2.126	.276	.752	.168	.131	.250	3
#8	-	36UNF	T7302	T7302C	H2	2.126	.276	.752	.168	.131	.250	3
#10	-	24UNC	T7323	T7323C	H3	2.374	.354	.906	.194	.152	.250	3
#10	-	32UNF	T7343	T7343C	H3	2.374	.276	.906	.194	.152	.250	3
#12	-	24UNC	T7363	T7363C	H3	2.374	.354	.906	.220	.165	.280	3
#12	-	28UNF	T7383	T7383C	H3	2.374	.276	.906	.220	.165	.280	3
1/4	-	20UNC	T7405	T7405C	H5	2.500	.433	1.000	.255	.191	.310	3
1/4	-	28UNF	T7424	T7424C	H4	2.500	.354	1.000	.255	.191	.310	3
5/16	-	18UNC	T7445	T7445C	H5	2.720	.472	1.126	.318	.238	.380	3
5/16	-	24UNF	T7465	T7465C	H4	2.720	.394	1.126	.318	.238	.380	3
3/8	-	16UNC	T7485	T7485C	H5	2.937	.551	1.252	.381	.286	.440	3
3/8	-	24UNF	T7504	T7504C	H4	2.937	.394	1.252	.381	.286	.440	3
7/16	-	14UNC	T7525	T7525C	H5	3.157	.591	1.850	.323	.242	.410	3
7/16	-	20UNF	T7545	T7545C	H5	3.157	.472	1.850	.323	.242	.410	3
1/2	-	13UNC	T7565	T7565C	H5	3.374	.630	2.067	.367	.275	.440	3
1/2	-	20UNF	T7585	T7585C	H5	3.374	.472	2.067	.367	.275	.440	3
9/16	-	12UNC	T7605	T7605C	H5	3.594	.709	2.067	.429	.322	.500	3
9/16	-	18UNF	T7625	T7625C	H5	3.594	.512	2.067	.429	.322	.500	3
5/8	-	11UNC	T7645	T7645C	H5	3.811	.748	2.205	.480	.360	.560	4
5/8	-	18UNF	T7665	T7665C	H5	3.811	.512	2.205	.480	.360	.560	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

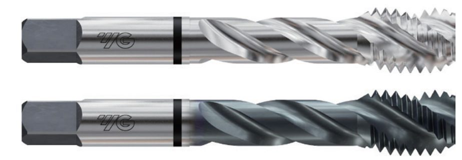
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

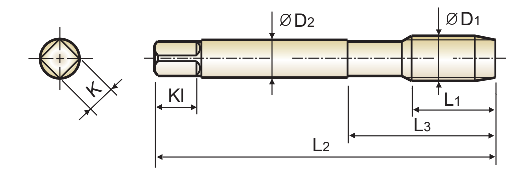
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

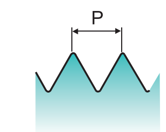
YG COMBO TAP

T7 SERIES
T7-C SERIES

SPIRAL FLUTE for Multipurpose

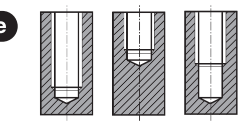






Short Chamfer

Hole type
2.5XD



Material groups MU | HSS-E | UNC UNF | USCTI 302A | 1P~2P | Bright | TiCN | R40

Unit : Inch

Size		TPI	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Bright	TiCN		L2	L1	L3	D2	K	Kl	
3/4	-	10UNC	T7705	T7705C	H5	4.252	.827	2.480	.590	.442	.690	4
3/4	-	16UNF	T7725	T7725C	H5	4.252	.591	2.480	.590	.442	.690	4
7/8	-	9UNC	T7746	T7746C	H6	4.689	.827	2.815	.697	.523	.750	4
7/8	-	14UNF	T7766	T7766C	H6	4.689	.709	2.815	.697	.523	.750	4
1"	-	8UNC	T7786	T7786C	H6	5.126	.984	3.091	.800	.600	.810	4
1"	-	12UNF	T7806	T7806C	H6	5.126	.709	3.091	.800	.600	.810	4

▶ Coating(TiN, TiAlN or Hardslick) or Surface Treatment(Steam Oxide) is available on your request.
▶ Coating Codes for Combo Tap
Bright Finish No. + N(TiN), F(TiAlN), H(Hardslick), S(Steam Oxide)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

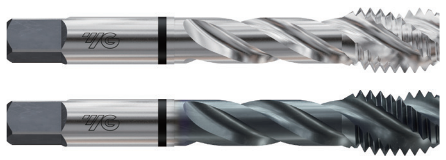
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

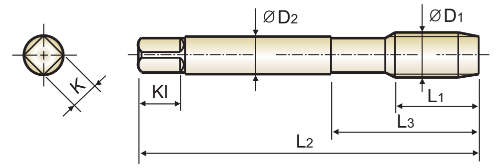
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

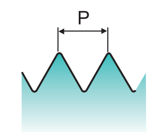
YG COMBO TAP

T9 SERIES
T9-C SERIES

SPIRAL FLUTE for Multipurpose

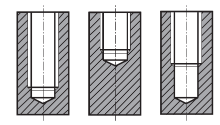






Short Chamfer

Hole type
2.5XD



Material groups: MU | HSS-E | M/MF | USCTI 302A | 1P~2P | Bright | TiCN | R40

Unit : Inch

Size		Pitch	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Bright	TiCN		L2	L1	L3	D2	K	Kl	
M3	x	0.5	T9203	T9203C	D3	97mm	.197	.646	.141	.110	.190	3
M3.5	x	0.6	T9224	T9224C	D4	2.000	.276	.709	.141	.110	.190	3
M4	x	0.7	T9244	T9244C	D4	2.126	.276	.768	.168	.131	.250	3
M5	x	0.8	T9284	T9284C	D4	2.374	.354	.933	.194	.152	.250	3
M6	x	1.0	T9315	T9315C	D5	2.500	.433	1.000	.255	.191	.310	3
M7	x	1.0	T9345	T9345C	D5	2.720	.433	1.126	.318	.238	.380	3
M8	x	1.25	T9365	T9365C	D5	2.720	.472	1.126	.318	.238	.380	3
M8	x	1.0	T9375	T9375C	D5	2.720	.433	1.126	.318	.238	.380	3
M10	x	1.5	T9426	T9426C	D6	2.937	.512	1.252	.381	.286	.440	3
M10	x	1.25	T9435	T9435C	D5	2.937	.472	1.252	.381	.286	.440	3
M12	x	1.75	T9506	T9506C	D6	3.374	.591	2.067	.367	.275	.440	3
M12	x	1.25	T9525	T9525C	D5	3.374	.551	2.067	.367	.275	.440	3
M14	x	2.0	T9547	T9547C	D7	3.594	.709	2.067	.429	.322	.500	3
M14	x	1.5	T9556	T9556C	D6	3.594	.551	2.067	.429	.322	.500	3
M16	x	2.0	T9607	T9607C	D7	3.811	.709	2.205	.480	.360	.560	3
M16	x	1.5	T9616	T9616C	D6	3.811	.551	2.205	.480	.360	.560	3
M18	x	2.5	T9657	T9657C	D7	4.031	.787	2.205	.542	.406	.630	4
M18	x	1.5	T9676	T9676C	D6	4.031	.551	2.205	.542	.406	.630	4
M20	x	2.5	T9707	T9707C	D7	4.469	.787	2.480	.652	.489	.690	4
M20	x	1.5	T9726	T9726C	D6	4.469	.551	2.480	.652	.489	.690	4
M22	x	2.5	T9747	T9747C	D7	4.689	.787	2.815	.697	.523	.750	4
M22	x	1.5	T9766	T9766C	D6	4.689	.551	2.815	.697	.523	.750	4
M24	x	3.0	T9788	T9788C	D8	4.906	.945	2.815	.760	.570	.750	4

▶ Coating(TiN, TiAlN or Hardslick) or Surface Treatment(Steam Oxide) is available on your request.
▶ Coating Codes for Combo Tap
Bright Finish No. + N(TiN), F(TiAlN), H(Hardslick), S(Steam Oxide)

◎ : Excellent ○ : Good

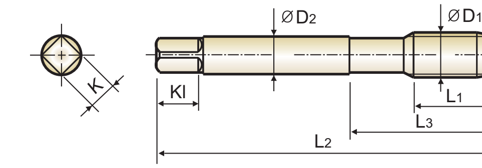
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

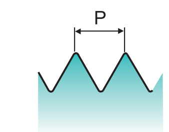
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

YG COMBO TAP

T1-S SERIES
T1-C SERIES

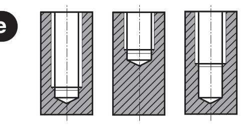
SPIRAL FLUTE for Multipurpose





DIN Length-ANSI Shank

Hole type
2.5XD



Material groups: MU | HSS-E | UNC UNF | 2P~3P | Steam Oxide | TiCN | R40

Unit : Inch

Size		TPI	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Steam Oxide	TiCN		L2	L1	L3	D2	K	Kl	
#2	-	56UNC	T1082S	T1082C	H2	1.772	.157	.433	.141	.110	.190	2
#3	-	48UNC	T1122S	T1122C	H2	1.969	.197	.492	.141	.110	.190	2
#4	-	40UNC	T1162S	T1162C	H2	2.205	.236	.563	.141	.110	.190	2
#4	-	48UNF	T1182S	T1182C	H2	2.205	.236	.563	.141	.110	.190	2
#5	-	40UNC	T1202S	T1202C	H2	2.205	.236	.626	.141	.110	.190	3
#6	-	32UNC	T1243S	T1243C	H3	2.205	.276	.689	.141	.110	.190	3
#6	-	40UNF	T1262S	T1262C	H2	2.205	.276	.689	.141	.110	.190	3
#8	-	32UNC	T1283S	T1283C	H3	2.480	.276	.752	.168	.131	.250	3
#10	-	24UNC	T1323S	T1323C	H3	2.756	.354	.906	.194	.152	.250	3
#10	-	32UNF	T1343S	T1343C	H3	2.756	.276	.906	.194	.152	.250	3
#12	-	24UNC	T1363S	T1363C	H3	3.150	.354	.906	.220	.165	.280	3
#12	-	28UNF	T1383S	T1383C	H3	3.150	.276	.906	.220	.165	.280	3
1/4	-	20UNC	T1405S	T1405C	H5	3.150	.433	1.000	.255	.191	.310	3
1/4	-	28UNF	T1424S	T1424C	H4	3.150	.354	1.000	.255	.191	.310	3
5/16	-	18UNC	T1445S	T1445C	H5	3.543	.472	1.126	.318	.238	.380	3
5/16	-	24UNF	T1464S	T1464C	H4	3.543	.394	1.126	.318	.238	.380	3
3/8	-	16UNC	T1485S	T1485C	H5	3.937	.551	1.252	.381	.286	.440	3
3/8	-	24UNF	T1504S	T1504C	H4	3.937	.394	1.252	.381	.286	.440	3
7/16	-	14UNC	T1525S	T1525C	H5	3.937	.591	1.850	.323	.242	.410	3
7/16	-	20UNF	T1545S	T1545C	H5	3.937	.472	1.850	.323	.242	.410	3
1/2	-	13UNC	T1565S	T1565C	H5	4.331	.630	2.067	.367	.275	.440	3
1/2	-	20UNF	T1585S	T1585C	H5	3.937	.472	2.067	.367	.275	.440	3
9/16	-	12UNC	T1605S	T1605C	H5	4.331	.709	2.067	.429	.322	.500	3
9/16	-	18UNF	T1625S	T1625C	H5	3.937	.512	2.067	.429	.322	.500	3
5/8	-	11UNC	T1645S	T1645C	H5	4.331	.748	2.205	.480	.360	.560	4
5/8	-	18UNF	T1665S	T1665C	H5	3.937	.512	2.205	.480	.360	.560	4

▶ NEXT PAGE

▶ Steam Oxide is not recommended for Aluminum and Aluminum alloys.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

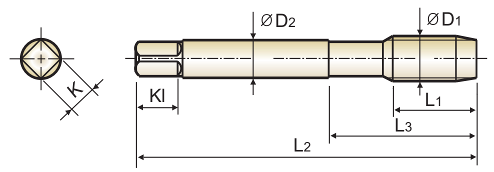
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

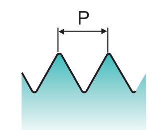
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP TiNi
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG COMBO TAP

T1-S SERIES
T1-C SERIES

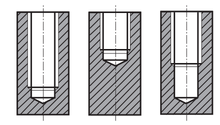
SPIRAL FLUTE for Multipurpose





DIN Length-ANSI Shank

Hole type
2.5XD



Material groups: MU | HSS-E | UNC UNF | 2P~3P | Steam Oxide | TiCN | R40

Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
3/4 -	10UNC	T1705S	T1705C	H5	4.921	.827	2.480	.590	.442	.690	4
3/4 -	16UNF	T1725S	T1725C	H5	4.331	.591	2.480	.590	.442	.690	4
7/8	9UNC	T1746S	T1746C	H6	5.512	.827	2.815	.697	.523	.750	4
7/8	14UNF	T1766S	T1766C	H6	4.921	.709	2.815	.697	.523	.750	4
1"	8UNC	T1786S	T1786C	H6	6.299	.984	3.091	.800	.600	.810	4
1"	12UNF	T1806S	T1806C	H6	5.512	.709	3.091	.800	.600	.810	4

▶ Steam Oxide is not recommended for Aluminum and Aluminum alloys.

◎ : Excellent ○ : Good

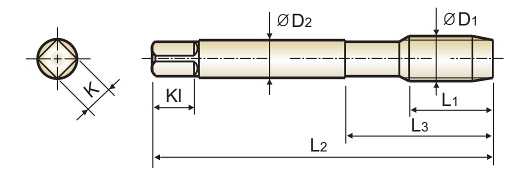
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

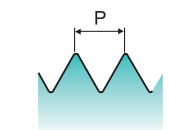
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

YG COMBO TAP

TA-S SERIES
TA-C SERIES

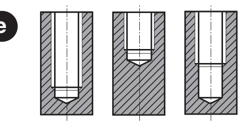
SPIRAL FLUTE for Multipurpose





DIN Length-ANSI Shank

Hole type
2.5XD



Material groups: MU | HSS-E | M/MF | 2P~3P | Steam Oxide | TiCN | R40

Unit : Inch

Size D1	Pitch	EDP No. Steam Oxide	EDP No. TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M3 x	0.5	TA203S	TA203C	D3	2.205	.197	.646	.141	.110	.190	3
M3.5 x	0.6	TA224S	TA224C	D4	2.205	.276	.709	.141	.110	.190	3
M4 x	0.7	TA244S	TA244C	D4	2.480	.276	.768	.168	.131	.250	3
M5 x	0.8	TA284S	TA284C	D4	2.756	.354	.933	.194	.152	.250	3
M6 x	1.0	TA315S	TA315C	D5	3.150	.433	1.000	.255	.191	.310	3
M7 x	1.0	TA345S	TA345C	5	3.150	.433	1.126	.318	.238	.380	3
M8 x	1.25	TA365S	TA365C	D5	3.543	.472	1.126	.318	.238	.380	3
M8 x	1.0	TA375S	TA375C	D5	3.543	.433	1.126	.318	.238	.380	3
M10 x	1.5	TA426S	TA426C	D6	3.937	.512	1.252	.381	.286	.440	3
M10 x	1.25	TA435S	TA435C	D5	3.937	.472	1.252	.381	.286	.440	3
M12 x	1.75	TA506S	TA506C	D6	4.331	.591	2.067	.367	.275	.440	3
M12 x	1.5	TA51AS	TA51AC	D11	3.937	.551	2.067	.367	.275	.440	3
M12 x	1.25	TA525S	TA525C	D5	3.937	.551	2.067	.367	.275	.440	3
M14 x	2.0	TA547S	TA547C	D7	4.331	.709	2.067	.429	.322	.500	3
M14 x	1.5	TA556S	TA556C	D6	3.937	.551	2.067	.429	.322	.500	3
M16 x	2.0	TA607S	TA607C	D7	4.331	.709	2.205	.480	.360	.560	3
M16	1.5	TA616S	TA616C	D6	3.937	.551	2.205	.480	.360	.560	3
M18	2.5	TA657S	TA657C	D7	4.921	.787	2.205	.542	.406	.630	4
M18	1.5	TA676S	TA676C	D6	4.331	.551	2.205	.542	.406	.630	4
M20	1.5	TA726S	TA726C	D6	4.921	.551	2.480	.652	.489	.690	4
M20	2.5	TA707S	TA707C	D7	5.512	.787	2.815	.652	.489	.690	4

▶ Steam Oxide is not recommended for Aluminum and Aluminum alloys.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

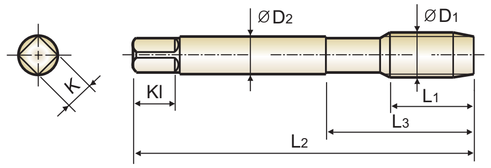
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

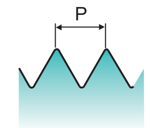
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

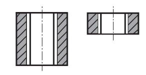
COMBO TAP

T4 SERIES
T4-S SERIES
T4-C SERIES

SPIRAL POINT for Multipurpose





Hole type 

3.0XD

Material groups: MU | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Bright | Steam Oxide | TiCN

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#2	- 56UNC	T4082	T4082S	T4082C	H2	1.752	.256	.433	.141	.110	.190	2
#3	- 48UNC	T4122	T4122S	T4122C	H2	1.811	.295	.492	.141	.110	.190	2
#4	- 40UNC	T4162	T4162S	T4162C	H2	1.874	.335	.563	.141	.110	.190	2
#4	- 40UNC	T4163	T4163S	T4163C	H3	1.874	.335	.563	.141	.110	.190	2
#4	- 40UNC	T4164	T4164S	T4164C	H4	1.874	.335	.563	.141	.110	.190	2
#4	- 40UNC	T4165	T4165S	T4165C	H5	1.874	.335	.563	.141	.110	.190	2
#4	- 48UNF	T4182	T4182S	T4182C	H2	1.874	.335	.563	.141	.110	.190	2
#5	- 40UNC	T4202	T4202S	T4202C	H2	1.937	.374	.626	.141	.110	.190	3
#5	- 44UNF	T4222	T4222S	T4222C	H2	1.937	.374	.626	.141	.110	.190	3
#6	- 32UNC	T4243	T4243S	T4243C	H3	2.000	.413	.689	.141	.110	.190	3
#6	- 32UNC	T4242	T4242S	T4242C	H2	2.000	.413	.689	.141	.110	.190	3
#6	- 32UNC	T4244	T4244S	T4244C	H4	2.000	.413	.689	.141	.110	.190	3
#6	- 32UNC	T4245	T4245S	T4245C	H5	2.000	.413	.689	.141	.110	.190	3
#6	- 32UNC	T4246	T4246S	T4246C	H6	2.000	.413	.689	.141	.110	.190	3
#6	- 32UNC	T4247	T4247S	T4247C	H7	2.000	.413	.689	.141	.110	.190	3
#6	- 32UNC	T424A	T424AS	T424AC	H11	2.000	.413	.689	.141	.110	.190	3
#6	- 40UNF	T4262	T4262S	T4262C	H2	2.000	.413	.689	.141	.110	.190	3
#8	- 32UNC	T4283	T4283S	T4283C	H3	2.126	.453	.752	.168	.131	.250	3
#8	- 32UNC	T4282	T4282S	T4282C	H2	2.126	.453	.752	.168	.131	.250	3
#8	- 32UNC	T4284	T4284S	T4284C	H4	2.126	.453	.752	.168	.131	.250	3
#8	- 32UNC	T4285	T4285S	T4285C	H5	2.126	.453	.752	.168	.131	.250	3
#8	- 32UNC	T4286	T4286S	T4286C	H6	2.126	.453	.752	.168	.131	.250	3
#8	- 32UNC	T4287	T4287S	T4287C	H7	2.126	.453	.752	.168	.131	.250	3
#8	- 32UNC	T428A	T428AS	T428AC	H11	2.126	.453	.752	.168	.131	.250	3
#8	- 36UNF	T4302	T4302S	T4302C	H2	2.126	.453	.752	.168	.131	.250	3
#10	- 24UNC	T4323	T4323S	T4323C	H3	2.374	.531	.906	.194	.152	.250	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

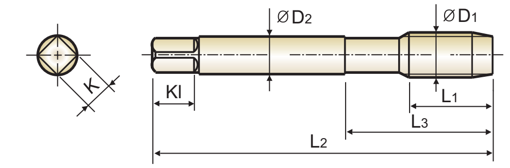
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

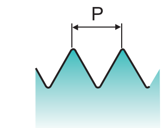
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

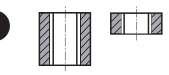
COMBO TAP

T4 SERIES
T4-S SERIES
T4-C SERIES

SPIRAL POINT for Multipurpose





Hole type 

3.0XD

Material groups: MU | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Bright | Steam Oxide | TiCN

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#10	- 24UNC	T4325	T4325S	T4325C	H5	2.374	.531	.906	.194	.152	.250	3
#10	- 24UNC	T432A	T432AS	T432AC	H11	2.374	.531	.906	.194	.152	.250	3
#10	- 32UNF	T4343	T4343S	T4343C	H3	2.374	.531	.906	.194	.152	.250	3
#10	- 32UNF	T4342	T4342S	T4342C	H2	2.374	.531	.906	.194	.152	.250	3
#10	- 32UNF	T4344	T4344S	T4344C	H4	2.374	.531	.906	.194	.152	.250	3
#10	- 32UNF	T4345	T4345S	T4345C	H5	2.374	.531	.906	.194	.152	.250	3
#10	- 32UNF	T4346	T4346S	T4346C	H6	2.374	.531	.906	.194	.152	.250	3
#10	- 32UNF	T4347	T4347S	T4347C	H7	2.374	.531	.906	.194	.152	.250	3
#10	- 32UNF	T434A	T434AS	T434AC	H11	2.374	.531	.906	.194	.152	.250	3
#12	- 24UNC	T4363	T4363S	T4363C	H3	2.374	.571	.906	.220	.165	.280	3
#12	- 28UNF	T4383	T4383S	T4383C	H3	2.374	.571	.906	.220	.165	.280	3
1/4	- 20UNC	T4403	T4403S	T4403C	H3	2.500	.591	1.000	.255	.191	.310	3
1/4	- 20UNC	T4405	T4405S	T4405C	H5	2.500	.591	1.000	.255	.191	.310	3
1/4	- 20UNC	T4402	T4402S	T4402C	H2	2.500	.591	1.000	.255	.191	.310	3
1/4	- 20UNC	T4407	T4407S	T4407C	H7	2.500	.591	1.000	.255	.191	.310	3
1/4	- 20UNC	T440A	T440AS	T440AC	H11	2.500	.591	1.000	.255	.191	.310	3
1/4	- 28UNF	T4423	T4423S	T4423C	H3	2.500	.591	1.000	.255	.191	.310	3
1/4	- 28UNF	T4424	T4424S	T4424C	H4	2.500	.591	1.000	.255	.191	.310	3
1/4	- 28UNF	T4422	T4422S	T4422C	H2	2.500	.591	1.000	.255	.191	.310	3
1/4	- 28UNF	T4425	T4425S	T4425C	H5	2.500	.591	1.000	.255	.191	.310	3
1/4	- 28UNF	T4426	T4426S	T4426C	H6	2.500	.591	1.000	.255	.191	.310	3
1/4	- 28UNF	T4427	T4427S	T4427C	H7	2.500	.591	1.000	.255	.191	.310	3
1/4	- 28UNF	T442A	T442AS	T442AC	H11	2.500	.591	1.000	.255	.191	.310	3
5/16	- 18UNC	T4443	T4443S	T4443C	H3	2.720	.669	1.126	.318	.238	.380	3
5/16	- 18UNC	T4445	T4445S	T4445C	H5	2.720	.669	1.126	.318	.238	.380	3
5/16	- 18UNC	T4447	T4447S	T4447C	H7	2.720	.669	1.126	.318	.238	.380	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

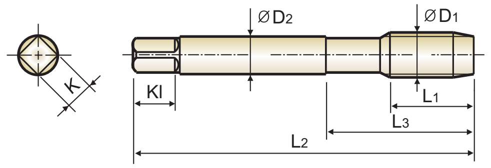
ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

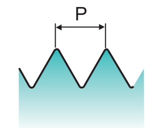
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

YG COMBO TAP

T4 SERIES
T4-S SERIES
T4-C SERIES

SPIRAL POINT for Multipurpose





Hole type
3.0XD

Material groups MU | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Bright | Steam Oxide | TiCN

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
5/16	18UNC	T444A	T444AS	T444AC	H11	2.720	.669	1.126	.318	.238	.380	3
5/16	24UNF	T4463	T4463S	T4463C	H3	2.720	.669	1.126	.318	.238	.380	3
5/16	24UNF	T4465	T4465S	T4465C	H5	2.720	.669	1.126	.318	.238	.380	3
5/16	24UNF	T4462	T4462S	T4462C	H2	2.720	.669	1.126	.318	.238	.380	3
5/16	24UNF	T4464	T4464S	T4464C	H4	2.720	.669	1.126	.318	.238	.380	3
5/16	24UNF	T4466	T4466S	T4466C	H6	2.720	.669	1.126	.318	.238	.380	3
5/16	24UNF	T4467	T4467S	T4467C	H7	2.720	.669	1.126	.318	.238	.380	3
5/16	24UNF	T446A	T446AS	T446AC	H11	2.720	.669	1.126	.318	.238	.380	3
3/8	16UNC	T4483	T4483S	T4483C	H3	2.937	.748	1.252	.381	.286	.440	3
3/8	16UNC	T4485	T4485S	T4485C	H5	2.937	.748	1.252	.381	.286	.440	3
3/8	16UNC	T4487	T4487S	T4487C	H7	2.937	.748	1.252	.381	.286	.440	3
3/8	16UNC	T448A	T448AS	T448AC	H11	2.937	.748	1.252	.381	.286	.440	3
3/8	24UNF	T4503	T4503S	T4503C	H3	2.937	.748	1.252	.381	.286	.440	3
3/8	24UNF	T4504	T4504S	T4504C	H4	2.937	.748	1.252	.381	.286	.440	3
3/8	24UNF	T4502	T4502S	T4502C	H2	2.937	.748	1.252	.381	.286	.440	3
3/8	24UNF	T4505	T4505S	T4505C	H5	2.937	.748	1.252	.381	.286	.440	3
3/8	24UNF	T4506	T4506S	T4506C	H6	2.937	.748	1.252	.381	.286	.440	3
3/8	24UNF	T4507	T4507S	T4507C	H7	2.937	.748	1.252	.381	.286	.440	3
3/8	24UNF	T450A	T450AS	T450AC	H11	2.937	.748	1.252	.381	.286	.440	3
7/16	14UNC	T4523	T4523S	T4523C	H3	3.157	.866	1.437	.323	.242	.410	3
7/16	14UNC	T4525	T4525S	T4525C	H5	3.157	.866	1.437	.323	.242	.410	3
7/16	14UNC	T4527	T4527S	T4527C	H7	3.157	.866	1.437	.323	.242	.410	3
7/16	14UNC	T452A	T452AS	T452AC	H11	3.157	.866	1.437	.323	.242	.410	3
7/16	20UNF	T4543	T4543S	T4543C	H3	3.157	.866	1.437	.323	.242	.410	3
7/16	20UNF	T4545	T4545S	T4545C	H5	3.157	.866	1.437	.323	.242	.410	3
7/16	20UNF	T4547	T4547S	T4547C	H7	3.157	.866	1.437	.323	.242	.410	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

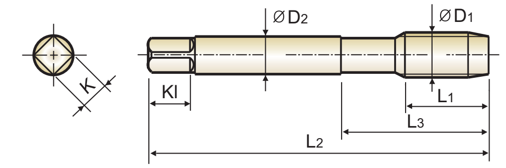
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

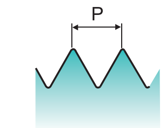
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

YG COMBO TAP

T4 SERIES
T4-S SERIES
T4-C SERIES

SPIRAL POINT for Multipurpose





Hole type
3.0XD

Material groups MU | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Bright | Steam Oxide | TiCN

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
7/16	20UNF	T454A	T454AS	T454AC	H11	3.157	.866	1.437	.323	.242	.410	3
1/2	13UNC	T4565	T4565S	T4565C	H5	3.374	.984	1.657	.367	.275	.440	3
1/2	13UNC	T4563	T4563S	T4563C	H3	3.374	.984	1.657	.367	.275	.440	3
1/2	13UNC	T4567	T4567S	T4567C	H7	3.374	.984	1.657	.367	.275	.440	3
1/2	13UNC	T456A	T456AS	T456AC	H11	3.374	.984	1.657	.367	.275	.440	3
1/2	20UNF	T4585	T4585S	T4585C	H5	3.374	.984	1.657	.367	.275	.440	3
1/2	20UNF	T4582	T4582S	T4582C	H2	3.374	.984	1.657	.367	.275	.440	3
1/2	20UNF	T4583	T4583S	T4583C	H3	3.374	.984	1.657	.367	.275	.440	3
1/2	20UNF	T4587	T4587S	T4587C	H7	3.374	.984	1.657	.367	.275	.440	3
1/2	20UNF	T458A	T458AS	T458AC	H11	3.374	.984	1.657	.367	.275	.440	3
9/16	12UNC	T4605	T4605S	T4605C	H5	3.594	.984	1.657	.429	.322	.500	3
9/16	12UNC	T4603	T4603S	T4603C	H3	3.594	.984	1.657	.429	.322	.500	3
9/16	18UNF	T4623	T4623S	T4623C	H3	3.594	.984	1.657	.429	.322	.500	3
9/16	18UNF	T4625	T4625S	T4625C	H5	3.594	.984	1.657	.429	.322	.500	3
5/8	11UNC	T4645	T4645S	T4645C	H5	3.811	1.083	1.811	.480	.360	.560	3
5/8	11UNC	T4643	T4643S	T4643C	H3	3.811	1.083	1.811	.480	.360	.560	3
5/8	18UNF	T4665	T4665S	T4665C	H5	3.811	1.083	1.811	.480	.360	.560	3
5/8	18UNF	T4663	T4663S	T4663C	H3	3.811	1.083	1.811	.480	.360	.560	3
5/8	18UNF	T4667	T4667S	T4667C	H7	3.811	1.083	1.811	.480	.360	.560	3
3/4	10UNC	T4705	T4705S	T4705C	H5	4.252	1.201	2.000	.590	.442	.690	3
3/4	10UNC	T4703	T4703S	T4703C	H3	4.252	1.201	2.000	.590	.442	.690	3
3/4	16UNF	T4725	T4725S	T4725C	H5	4.252	1.201	2.000	.590	.442	.690	3
3/4	16UNF	T4723	T4723S	T4723C	H3	4.252	1.201	2.000	.590	.442	.690	3
7/8	9UNC	T4746	T4746S	T4746C	H6	4.689	1.339	2.220	.697	.523	.750	3
7/8	9UNC	T4745	T4745S	T4745C	H5	4.689	1.339	2.220	.697	.523	.750	3
7/8	14UNF	T4766	T4766S	T4766C	H6	4.689	1.339	2.220	.697	.523	.750	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

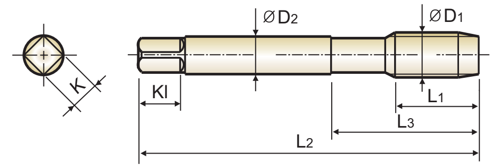
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

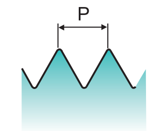
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

YG COMBO TAP

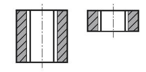
T4 SERIES
T4-S SERIES
T4-C SERIES

SPIRAL POINT for Multipurpose





Hole type



3.0XD

Material groups MU | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Bright | Steam Oxide | TiCN

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
7/8	- 14UNF	T4764	T4764S	T4764C	H4	4.689	1.339	2.220	.697	.523	.750	3
1"	- 8UNC	T4786	T4786S	T4786C	H6	5.126	1.496	2.500	.800	.600	.810	3
1"	- 8UNC	T4784	T4784S	T4784C	H4	5.126	1.496	2.500	.800	.600	.810	3
1"	- 12UNF	T4806	T4806S	T4806C	H6	5.126	1.496	2.500	.800	.600	.810	3
1"	- 12UNF	T4804	T4804S	T4804C	H4	5.126	1.496	2.500	.800	.600	.810	3
1-1/8	- 7UNC	T4826	T4826S	T4826C	H6	5.437	1.535	2.563	.896	.672	.880	4
1-1/8	- 8UN	T4836	T4836S	T4836C	H6	5.437	1.535	2.563	.896	.672	.880	4
1-1/8	- 12UNF	T4845	T4845S	T4845C	H5	5.437	1.535	2.563	.896	.672	.880	4
1-1/4	- 7UNC	T4866	T4866S	T4866C	H6	5.752	1.535	2.563	1.021	.766	1.000	4
1-1/4	- 8UN	T4876	T4876S	T4876C	H6	5.752	1.535	2.563	1.021	.766	1.000	4
1-1/4	- 12UNF	T4885	T4885S	T4885C	H5	5.752	1.535	2.563	1.021	.766	1.000	4
1-3/8	- 6UNC	T4906	T4906S	T4906C	H6	6.063	1.791	3.000	1.108	.831	1.060	4
1-3/8	- 8UN	T4916	T4916S	T4916C	H6	6.063	1.791	3.000	1.108	.831	1.060	4
1-3/8	- 12UNF	T4925	T4925S	T4925C	H5	6.063	1.791	3.000	1.108	.831	1.060	4
1-1/2	- 6UNC	T4946	T4946S	T4946C	H6	6.374	1.791	3.000	1.233	.925	1.130	4
1-1/2	- 8UN	T4956	T4956S	T4956C	H6	6.374	1.791	3.000	1.233	.925	1.130	4
1-1/2	- 12UNF	T4965	T4965S	T4965C	H5	6.374	1.791	3.000	1.233	.925	1.130	4

◎ : Excellent ○ : Good

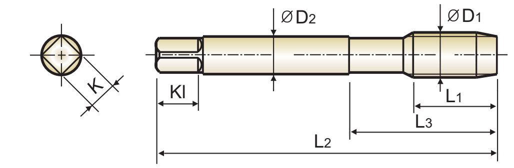
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

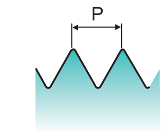
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

YG COMBO TAP

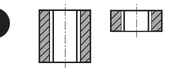
T3 SERIES
T3-S SERIES
T3-C SERIES

SPIRAL POINT for Multipurpose





Hole type



3.0XD

Material groups MU | HSS-E | M/MF | USCTI 302A | 4P~5P | Bright | Steam Oxide | TiCN

Unit : Inch

Size D1	Pitch	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M3	x 0.5	T3203	T3203S	T3203C	D3	1.937	.374	.646	.141	.110	.190	3
M3	x 0.5	T320A	T320AS	T320AC	D11	1.937	.374	.646	.141	.110	.190	3
M3.5	x 0.6	T3224	T3224S	T3224C	D4	2.000	.413	.709	.141	.110	.190	3
M3.5	x 0.6	T322A	T322AS	T322AC	D11	2.000	.413	.709	.141	.110	.190	3
M4	x 0.7	T3244	T3244S	T3244C	D4	2.126	.453	.768	.168	.131	.250	3
M4	x 0.7	T324A	T324AS	T324AC	D11	2.126	.453	.768	.168	.131	.250	3
M5	x 0.8	T3284	T3284S	T3284C	D4	2.374	.531	.933	.194	.152	.250	3
M5	x 0.8	T328A	T328AS	T328AC	D11	2.374	.531	.933	.194	.152	.250	3
M6	x 1.0	T3315	T3315S	T3315C	D5	2.500	.591	1.000	.255	.191	.310	3
M6	x 1.0	T331A	T331AS	T331AC	D11	2.500	.591	1.000	.255	.191	.310	3
M7	x 1.0	T3345	T3345S	T3345C	D5	2.720	.669	1.126	.318	.238	.380	3
M7	x 1.0	T334A	T334AS	T334AC	D11	2.720	.669	1.126	.318	.238	.380	3
M8	x 1.25	T3365	T3365S	T3365C	D5	2.720	.669	1.126	.318	.238	.380	3
M8	x 1.25	T336A	T336AS	T336AC	D11	2.720	.669	1.126	.318	.238	.380	3
M8	x 1.0	T3375	T3375S	T3375C	D5	2.720	.669	1.126	.318	.238	.380	3
M8	x 1.0	T337A	T337AS	T337AC	D11	2.720	.669	1.126	.318	.238	.380	3
M10	x 1.0	T3445	T3445S	T3445C	D5	2.937	.748	1.252	.381	.286	.440	3
M10	x 1.0	T344A	T344AS	T344AC	D11	2.937	.748	1.252	.381	.286	.440	3
M10	x 1.5	T3426	T3426S	T3426C	D6	2.937	.748	1.252	.381	.286	.440	3
M10	x 1.5	T342A	T342AS	T342AC	D11	2.937	.748	1.252	.381	.286	.440	3
M10	x 1.25	T3435	T3435S	T3435C	D5	2.937	.748	1.252	.381	.286	.440	3
M10	x 1.25	T343A	T343AS	T343AC	D11	2.937	.748	1.252	.381	.286	.440	3
M12	x 1.5	T3516	T3516S	T3516C	D6	3.374	.984	1.657	.367	.275	.440	3
M12	x 1.5	T351A	T351AS	T351AC	D11	3.374	.984	1.657	.367	.275	.440	3
M12	x 1.75	T3506	T3506S	T3506C	D6	3.374	.984	1.657	.367	.275	.440	3
M12	x 1.75	T350A	T350AS	T350AC	D11	3.374	.984	1.657	.367	.275	.440	3

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

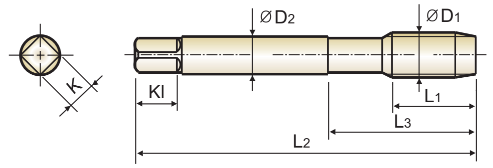
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

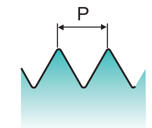
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG COMBO TAP

T3 SERIES
T3-S SERIES
T3-C SERIES

SPIRAL POINT for Multipurpose





Hole type

3.0XD

Material groups MU | HSS-E | M/MF | USCTI 302A | 4P~5P | Bright | Steam Oxide | TiCN

Unit : Inch

Size	Pitch	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Bright	Steam Oxide	TiCN		L2	L1	L3	D2	K	Kl	
M12 x	1.25	T3525	T3525S	T3525C	D5	3.374	.984	1.657	.367	.275	.440	3
M12 x	1.25	T352A	T352AS	T352AC	D11	3.374	.984	1.657	.367	.275	.440	3
M14 x	2.0	T3547	T3547S	T3547C	D7	3.594	.984	1.657	.429	.322	.500	3
M14 x	1.5	T3556	T3556S	T3556C	D6	3.594	.984	1.657	.429	.322	.500	3
M16 x	2.0	T3607	T3607S	T3607C	D7	3.811	1.083	1.811	.480	.360	.560	3
M16 x	1.5	T3616	T3616S	T3616C	D6	3.811	1.083	1.811	.480	.360	.560	3
M18 x	2.5	T3657	T3657S	T3657C	D7	4.031	1.083	1.811	.542	.406	.630	3
M18 x	1.5	T3676	T3676S	T3676C	D6	4.031	1.083	1.811	.542	.406	.630	3
M20 x	2.5	T3707	T3707S	T3707C	D7	4.469	1.201	2.000	.652	.489	.690	3
M20 x	1.5	T3726	T3726S	T3726C	D6	4.469	1.201	2.000	.652	.489	.690	3
M22 x	2.5	T3747	T3747S	T3747C	D7	4.689	1.339	2.220	.697	.523	.750	3
M22 x	1.5	T3766	T3766S	T3766C	D6	4.689	1.339	2.220	.697	.523	.750	3
M24 x	3.0	T3788	T3788S	T3788C	D8	4.906	1.339	2.220	.760	.570	.750	3
M24 x	1.5	T3806	T3806S	T3806C	D6	4.906	1.339	2.220	.760	.570	.750	3
M27 x	1.5	T3886	T3886S	T3886C	D6	5.126	1.496	2.500	.896	.672	.880	4
M27 x	3.0	T3868	T3868S	T3868C	D8	5.126	1.496	2.500	.896	.672	.880	4
M30 x	1.5	T3976	T3976S	T3976C	D6	5.437	1.535	2.638	1.021	.766	1.000	4
M30 x	3.0	T3949	T3949S	T3949C	D9	5.437	1.535	2.638	1.021	.766	1.000	4
M30 x	3.5	T3949	T3949S	T3949C	D9	5.437	1.535	2.638	1.021	.766	1.000	4

◎ : Excellent ○ : Good

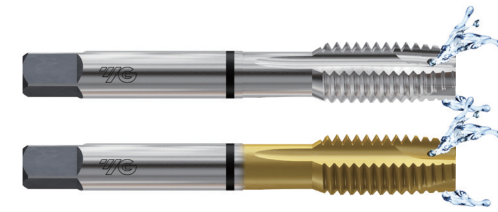
ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

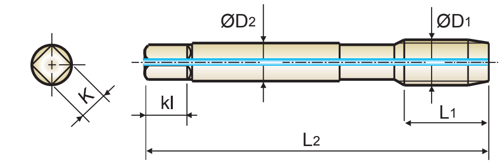
YG COMBO TAP

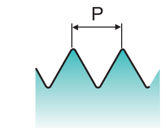
TB SERIES
TB-N SERIES

SPIRAL POINT for Multipurpose



with Internal Coolant





Hole type

3.0XD

Material groups MU | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Bright | TiN

Unit : Inch

Size	TPI	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Bright	TiN		L2	L1	L3	D2	K	Kl	
1/4 -	20UNC	TB405	TB405N	H5	2.500	.591	1.000	.255	.191	.310	3
1/4 -	28UNF	TB424	TB424N	H4	2.500	.591	1.000	.255	.191	.310	3
5/16 -	18UNF	TB445	TB445N	H5	2.720	.669	1.126	.318	.238	.380	3
5/16 -	24UNF	TB464	TB464N	H4	2.720	.669	1.126	.318	.238	.380	3
3/8 -	16UNC	TB485	TB485N	H5	2.937	.748	1.252	.381	.286	.440	3
3/8 -	24UNF	TB504	TB504N	H4	2.937	.748	1.252	.381	.286	.440	3
7/16 -	14UNC	TB525	TB525N	H5	3.157	.866	1.437	.323	.242	.410	3
7/16 -	20UNF	TB545	TB545N	H5	3.157	.866	1.437	.323	.242	.410	3
1/2 -	13UNC	TB565	TB565N	H5	3.374	.984	1.657	.367	.275	.440	3
1/2 -	20UNF	TB585	TB585N	H5	3.374	.984	1.657	.367	.275	.440	3
9/16 -	12UNC	TB605	TB605N	H5	3.594	.984	1.657	.429	.322	.500	3
9/16 -	18UNF	TB625	TB625N	H5	3.594	.984	1.657	.429	.322	.500	3
5/8 -	11UNC	TB645	TB645N	H5	3.811	1.083	1.811	.480	.360	.560	3
5/8 -	18UNF	TB665	TB665N	H5	3.811	1.083	1.811	.480	.360	.560	3
3/4 -	10UNC	TB705	TB705N	H5	4.252	1.201	2.000	.590	.442	.690	3
3/4 -	16UNF	TB725	TB725N	H5	4.252	1.201	2.000	.590	.442	.690	3
7/8 -	9UNC	TB746	TB746N	H6	4.689	1.339	2.220	.697	.523	.750	3
7/8 -	14UNF	TB766	TB766N	H6	4.689	1.339	2.220	.697	.523	.750	3
1" -	8UNC	TB786	TB786N	H6	5.126	1.496	2.500	.800	.600	.810	3
1" -	12UNF	TB806	TB806N	H6	5.126	1.496	2.500	.800	.600	.810	3

▶ Coating(TiCN, TiAlN or Hardslick) or Surface Treatment(Steam Oxide) is available on your request.
▶ Coating Codes for Combo Tap
Bright Finish No. + N(TiN), F(TiAlN), H(Hardslick), S(Steam Oxide)

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

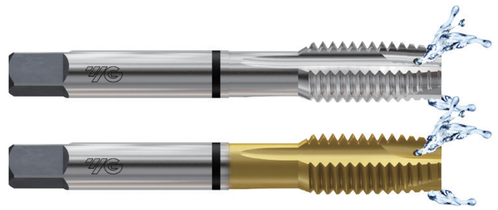
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

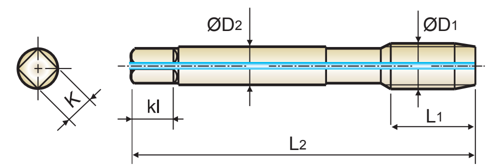
YG COMBO TAP

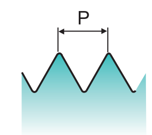
TH SERIES
TH-N SERIES

SPIRAL POINT for Multipurpose



with Internal Coolant





Hole type 3.0XD

Material groups: MU | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Bright | TiN

Unit : Inch

Size D1	Pitch	EDP No. Bright	EDP No. TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M6	x 1.0	TH315	TH315N	D5	2.500	.591	1.000	.255	.191	.310	3
M8	x 1.25	TH365	TH365N	D5	2.720	.669	1.126	.318	.238	.380	3
M10	x 1.5	TH426	TH426N	D6	2.937	.748	1.252	.381	.286	.440	3
M12	x 1.75	TH506	TH506N	D6	3.374	.984	1.657	.367	.275	.440	3
M14	x 2.0	TH547	TH547N	D7	3.594	.984	1.657	.429	.322	.500	3
M16	x 2.0	TH607	TH607N	D7	3.811	1.083	1.811	.480	.360	.560	3
M18	x 2.5	TH657	TH657N	D7	4.031	1.083	1.811	.542	.406	.630	3
M20	x 2.5	TH707	TH707N	D7	4.469	1.201	2.000	.652	.489	.690	3

▶ Coating(TiCN, TiAIN or Hardslick) or Surface Treatment(Steam Oxide) is available on your request.
▶ Coating Codes for Combo Tap
Bright Finish No. + C(TiCN), F(TiAlN), H(Hardslick), S(Steam Oxide)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

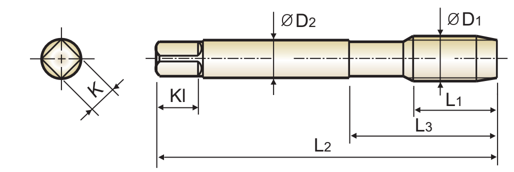
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

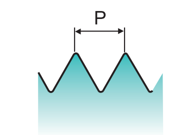
YG COMBO TAP

TC-S SERIES
TC-C SERIES

SPIRAL POINT for Multipurpose

DIN Length-ANSI Shank





Hole type 3.0XD

Material groups: MU | HSS-E | UNC UNF | 4P~5P | Steam Oxide | TiCN

Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#4	- 40UNC	TC162S	TC162C	H2	2.205	.335	.563	.141	.110	.190	2
#5	- 40UNC	TC202S	TC202C	H2	2.205	.374	.626	.141	.110	.190	3
#6	- 32UNC	TC243S	TC243C	H3	2.205	.413	.689	.141	.110	.190	3
#8	- 32UNC	TC283S	TC283C	H3	2.480	.453	.752	.168	.131	.250	3
#10	- 24UNC	TC323S	TC323C	H3	2.756	.531	.906	.194	.152	.250	3
#10	- 32UNF	TC343S	TC343C	H3	2.756	.531	.906	.194	.152	.250	3
#12	- 24UNC	TC363S	TC363C	H3	3.150	.571	.906	.220	.165	.280	3
#12	- 28UNF	TC383S	TC383C	H3	3.150	.571	.906	.220	.165	.280	3
1/4	- 20UNC	TC405S	TC405C	H5	3.150	.591	1.000	.255	.191	.310	3
1/4	- 28UNF	TC424S	TC424C	H4	3.150	.591	1.000	.255	.191	.310	3
5/16	- 18UNC	TC445S	TC445C	H5	3.543	.669	1.126	.318	.238	.380	3
5/16	- 24UNF	TC464S	TC464C	H4	3.543	.669	1.126	.318	.238	.380	3
3/8	- 16UNC	TC485S	TC485C	H5	3.937	.748	1.252	.381	.286	.440	3
3/8	- 24UNF	TC504S	TC504C	H4	3.937	.748	1.252	.381	.286	.440	3
7/16	- 14UNC	TC525S	TC525C	H5	3.937	.866	1.437	.323	.242	.410	3
7/16	- 20UNF	TC545S	TC545C	H5	3.937	.866	1.437	.323	.242	.410	3
1/2	- 13UNC	TC565S	TC565C	H5	4.331	.984	1.657	.367	.275	.440	3
1/2	- 20UNF	TC585S	TC585C	H5	3.937	.984	1.657	.367	.275	.440	3
9/16	- 12UNC	TC605S	TC605C	H5	4.331	.984	1.657	.429	.322	.500	3
9/16	- 18UNF	TC625S	TC625C	H5	3.937	.984	1.657	.429	.322	.500	3
5/8	- 11UNC	TC645S	TC645C	H5	4.331	1.083	1.811	.480	.360	.560	3
5/8	- 18UNF	TC665S	TC665C	H5	3.937	1.083	1.811	.480	.360	.560	3
3/4	- 10UNC	TC705S	TC705C	H5	4.921	1.201	2.000	.590	.442	.690	3
3/4	- 16UNF	TC725S	TC725C	H5	4.331	1.201	2.000	.590	.442	.690	3
7/8	- 9UNC	TC746S	TC746C	H6	5.512	1.339	2.224	.697	.523	.750	3
7/8	- 14UNF	TC766S	TC766C	H6	4.921	1.339	2.224	.697	.523	.750	3
1"	- 8UNC	TC786S	TC786C	H6	6.299	1.496	2.500	.800	.600	.810	3
1"	- 12UNF	TC806S	TC806C	H6	5.512	1.496	2.500	.800	.600	.810	3

▶ Steam Oxide is not recommended for Aluminum and Aluminum alloys.

◎ : Excellent ○ : Good

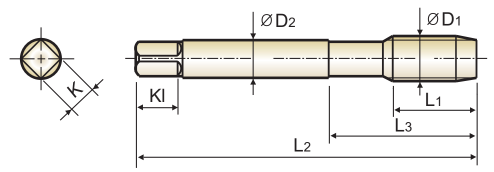
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

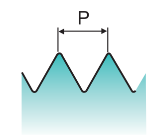
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

COMBO TAP

TK-S SERIES
TK-C SERIES

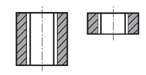
SPIRAL POINT for Multipurpose





DIN Length-ANSI Shank

Hole type



3.0XD

Material groups MU | HSS-E | M/MF | 4P~5P | Steam Oxide | TiCN

Unit : Inch

Size D1		Pitch	EDP No. Steam Oxide	EDP No. TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M3	x	0.5	TK203S	TK203C	D3	2.205	.374	.646	.141	.110	.190	3
M3.5	x	0.6	TK224S	TK224C	D4	2.205	.413	.709	.141	.110	.190	3
M4	x	0.7	TK244S	TK244C	D4	2.480	.453	.768	.168	.131	.250	3
M5	x	0.8	TK284S	TK284C	D4	2.756	.531	.933	.194	.152	.250	3
M6	x	1.0	TK315S	TK315C	D5	3.150	.591	1.000	.255	.191	.310	3
M7	x	1.0	T1345S	TK345C	D5	3.150	.669	1.126	.318	.238	.380	3
M8	x	1.00	T1375S	TK375C	D5	3.543	.669	1.126	.318	.238	.380	3
M8	x	1.25	TK365S	TK365C	D5	3.543	.669	1.126	.318	.238	.380	3
M10	x	1.5	TK426S	TK426C	D6	3.937	.748	1.252	.381	.286	.440	3
M10	x	1.25	TK435S	TK435C	D5	3.937	.748	1.252	.381	.286	.440	3
M12	x	1.75	TK506S	TK506C	D6	4.331	.984	1.657	.367	.275	.440	3
M12	x	1.50	T1516S	TK516C	D6	3.937	.984	1.657	.367	.275	.440	3
M12	x	1.25	TK525S	TK525C	D5	3.937	.984	1.657	.367	.275	.440	3
M14	x	2.0	TK547S	TK547C	D7	4.331	.984	1.657	.429	.322	.500	3
M14	x	1.5	TK556S	TK556C	D6	3.937	.984	1.657	.429	.322	.500	3
M16	x	2.0	TK607S	TK607C	D7	4.331	1.083	1.811	.480	.360	.560	3
M16	x	1.5	TK616S	TK616C	D6	3.937	1.083	1.811	.480	.360	.560	3
M18	x	2.5	TK657S	TK657C	D7	4.921	1.083	1.811	.542	.406	.630	3
M18	x	1.5	TK676S	TK676C	D6	4.331	1.083	1.811	.542	.406	.630	3
M20	x	1.5	TK676S	TK676C	D6	4.921	1.201	2.000	.652	.489	.690	3
M20	x	2.5	T1707S	TK707C	D7	5.512	1.201	2.224	.652	.489	.690	3

▶ Steam Oxide is not recommended for Aluminum and Aluminum alloys.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎	○		◎	◎	◎	◎	◎	◎	◎		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended			◎			◎	◎	◎													

COMBO TAP

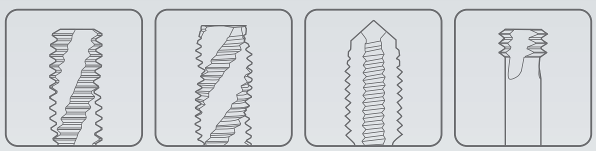
COMBO SPIRAL FLUTE TAP SETS

Series	Series	Standard	Surface Treatment	Size	Q'ty
T2836SET8	T2	UNC/F	Bright	1/4-20, 1/4-28, 5/16-18, 5-16-24, 3/8-16, 3/8-24, 7/16 -14, 7/16 -20	8 pcs
TG836SET8	T2-C	UNC/F	TiCN	1/4-20, 1/4-28, 5/16-18, 5-16-24, 3/8-16, 3/8-24, 7/16 -14, 7/16 -20	8 pcs
T2836SET8 -1	T2	UNC/F	Bright	1/4-20, 1/4-28, 5/16-18, 5-16-24, 3/8-16, 3/8-24, 1/2-13, 1/2-20	8 pcs
TG836SET8 -1	T2-C	UNC/F	TiCN	1/4-20, 1/4-28, 5/16-18, 5-16-24, 3/8-16, 3/8-24, 1/2-13, 1/2-20	8 pcs
T2805SET7	T5	M/MF	Bright	M3, M4, M5, M6, M8, M10, M12	7 pcs
TG805SET7	T5-C	M/MF	TiCN	M3, M4, M5, M6, M8, M10, M12	7 pcs

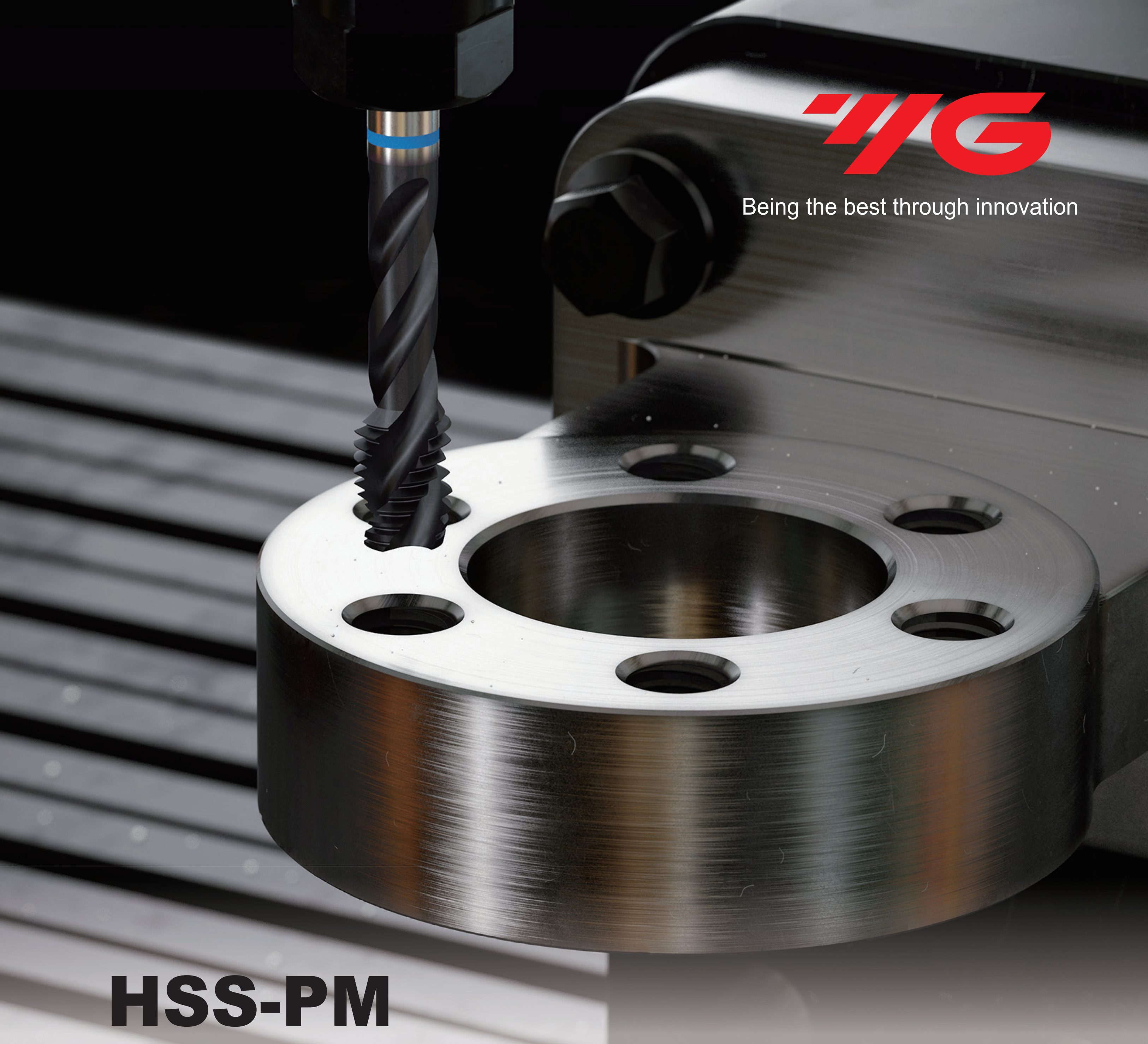
* Hardslick Coated Set available upon request

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

Global Cutting Tool Leader YG-1



THREADING



Being the best through innovation

HSS-PM

YG TAP BLUE RING

- For Steels & Stainless Steels up to 35HRc

SELECTION GUIDE

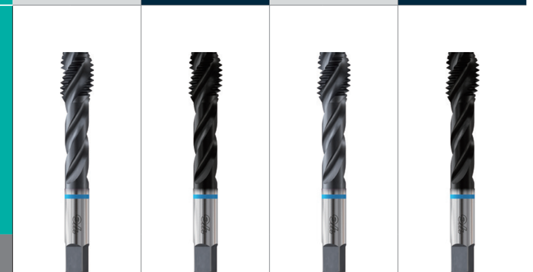
THREADING TOOLS

HSS-PM
YG TAP
BLUE RING

- For Steels & Stainless Steels up to 35HRc

Please visit
globalyg1.com/mat
for material search

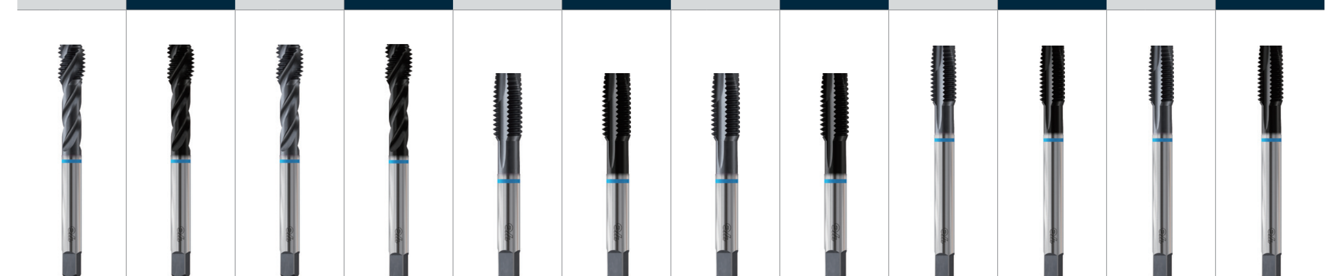
HOLE TYPE	Max. 2.5xD Blind Hole			
TOOL MATERIAL	HSS-PM			
CHAMFER LEAD ACC. TO DIN2197	2P-3P			
FLUTE TYPE	Spiral Flute			
SPIRAL FLUTE ANGLE	R40			
SERIES – M				
SERIES – M/MF			BH (p.B119)	BM (p.B119)
SERIES – UNC				
SERIES – UNC/UNF	BB (p.B116)	BI (p.B116)		
SERIES – UNC/UNF/UNS				
SERIES – UNC/UN8				
SERIES – NPT				
SERIES – NPTF				
SERIES – NPS/NPSF				
SURFACE TREATMENT / COATING	Steam Oxide	HardSlick	Steam Oxide	HardSlick
MODEL				



ISO	VDI 3323	Material Description	Composition / Structure	Heat Treatment	HB	HRC	BB	BI	BH	BM
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○ 25-50	○ 50-80	○ 25-50	○ 50-80
P	2	Non-alloy steel	About 0.45% C	Annealed	190	13	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
P	3	Non-alloy steel	About 0.45% C	Quenched & Tempered	250	25	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
P	4	Non-alloy steel	About 0.75% C	Annealed	270	28	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	5	Non-alloy steel	About 0.75% C	Quenched & Tempered	300	32	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	6	Low alloy steel		Annealed	180	10	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	7	Low alloy steel		Quenched & Tempered	275	29	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	8	Low alloy steel		Quenched & Tempered	300	32	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	9	Low alloy steel		Quenched & Tempered	350	38	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	10	High alloyed steel, and tool steel		Annealed	200	15				
P	11	High alloyed steel, and tool steel		Quenched & Tempered	325	35				
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
M	13	Stainless steel	Martensitic	Quenched & Tempered	240	23	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
M	14	Stainless steel	Austenitic		180	10	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
K	15	Grey cast iron	Pearlitic / ferritic		180	10				
K	16	Grey cast iron	Pearlitic (Martensitic)		260	26				
K	17	Nodular cast iron	Ferritic		160	3				
K	18	Nodular cast iron	Pearlitic		250	25				
K	19	Malleable cast iron	Ferritic		130					
K	20	Malleable cast iron	Pearlitic		230	21				
N	21	Aluminum-wrought alloy	Not Curable		60		○ 50-60	○ 50-60	○ 50-60	○ 50-60
N	22	Aluminum-wrought alloy	Curable	Hardened	100		○ 50-60	○ 50-60	○ 50-60	○ 50-60
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75					
N	24	Aluminum-cast, alloyed	≤ 12% Si, Curable	Hardened	90					
N	25	Aluminum-cast, alloyed	> 12% Si, Not Curable		130					
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○ 50-60	○ 65-100	○ 50-60	○ 65-100
N	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90		○ 30-65	○ 30-65	○ 30-65	○ 30-65
N	28	Copper and Copper Alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper		100					
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic							
N	30	Non Metallic Materials	Rubber, Wood, etc.							
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15				
S	32	Heat Resistant Super Alloys	Fe Based	Cured	280	30				
S	33	Heat Resistant Super Alloys	Ni or Co Based	Annealed	250	25				
S	34	Heat Resistant Super Alloys	Ni or Co Based	Cured	350	38				
S	35	Heat Resistant Super Alloys	Ni or Co Based	Cast	320	34				
S	36	Titanium Alloys	Pure Titanium		400 Rm					
S	37	Titanium Alloys	Alpha + Beta Alloys	Hardened	1050 Rm					
H	38	Hardened steel		Hardened	550	55				
H	39	Hardened steel		Hardened	630	60				
H	40	Chilled Cast Iron		Cast	400	42				
H	41	Hardened Cast Iron		Hardened	550	55				

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

HOLE TYPE	Max. 2.5xD Blind Hole				Max. 3.0xD Through Hole							
TOOL MATERIAL	HSS-PM											
CHAMFER LEAD	2P-3P				4P-5P							
FLUTE TYPE	Spiral Flute				Spiral Point							
SPIRAL FLUTE ANGLE	R40				-							
M												
M/MF			BD (p.B122)	BO (p.B122)			N7 (p.B126)	N8 (p.B126)			N3 (p.B129)	O3 (p.B129)
UNC												
UNC/UNF	BF (p.B120)	BK (p.B120)			M9 (p.B123)	O1 (p.B123)			N4 (p.B127)	O5 (p.B127)		
UNC/UNF/UNS												
UNC/UN8												
NPT												
NPTF												
NPS/NPSF												
SURFACE TREATMENT / COATING	Steam Oxide	HardSlick	Steam Oxide	HardSlick	Steam Oxide	HardSlick	Steam Oxide	HardSlick	Steam Oxide	HardSlick	Steam Oxide	HardSlick

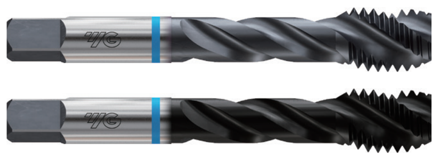


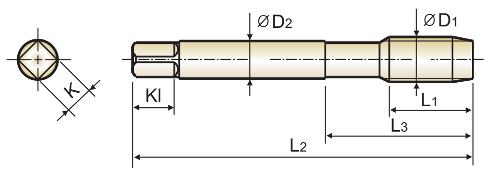
ISO	No.	BF	BK	BD	BO	M9	O1	N7	N8	N4	O5	N3	O3
P	1	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80
P	2	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
P	3	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80
P	4	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	5	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	6	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	7	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	8	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	9	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35
P	10												
P	11												
M	12	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
M	13	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50
M	14	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
K	15												
K	16												
K	17												
K	18												
K	19												
K	20												
N	21	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60
N	22	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60
N	23												
N	24												
N	25												
N	26	○ 50-60	○ 65-100	○ 50-60	○ 65-100	○ 50-60	○ 65-100	○ 50-60	○ 65-100	○ 50-60	○ 65-100	○ 50-60	○ 65-100
N	27	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
N	28												
N	29												
N	30												
S	31												
S	32												
S	33												
S	34												
S	35												
S	36												
S	37												
H	38												
H	39												
H	40												
H	41												

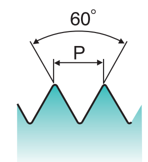
YG TAP BLUE RING

BB/BI SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels & Stainless Steels

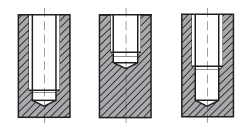






ANSI

Thread Depth / Hole Type
2.5×D



Material groups: VG | HSS-PM | UNC UNF | USCTI 302A | 2P~3P | Steam Oxide | Hardslick | R40

Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#2	56UNC	BB082	BI082	H2	1.752	.157	.433	.141	.110	.190	2
#4	40UNC	BB162	BI162	H2	1.874	.236	.563	.141	.110	.190	2
#4	40UNC	BB163	BI163	H3	1.874	.236	.563	.141	.110	.190	2
#4	40UNC	BB164	BI164	H4	1.874	.236	.563	.141	.110	.190	2
#5	40UNC	BB202	BI202	H2	1.937	.236	.626	.141	.110	.190	3
#6	32UNC	BB242	BI242	H2	2.000	.276	.689	.141	.110	.190	3
#6	32UNC	BB243	BI243	H3	2.000	.276	.689	.141	.110	.190	3
#6	32UNC	BB244	BI244	H4	2.000	.276	.689	.141	.110	.190	3
#6	32UNC	BB245	BI245	H5	2.000	.276	.689	.141	.110	.190	3
#8	32UNC	BB282	BI282	H2	2.126	.276	.752	.168	.131	.250	3
#8	32UNC	BB283	BI283	H3	2.126	.276	.752	.168	.131	.250	3
#8	32UNC	BB284	BI284	H4	2.126	.276	.752	.168	.131	.250	3
#8	32UNC	BB285	BI285	H5	2.126	.276	.752	.168	.131	.250	3
#8	32UNC	BB286	BI286	H6	2.126	.276	.752	.168	.131	.250	3
#10	24UNC	BB323	BI323	H3	2.374	.354	.906	.194	.152	.250	3
#10	24UNC	BB325	BI325	H5	2.374	.354	.906	.194	.152	.250	3
#10	32UNF	BB342	BI342	H2	2.374	.276	.906	.194	.152	.250	3
#10	32UNF	BB343	BI343	H3	2.374	.276	.906	.194	.152	.250	3
#10	32UNF	BB344	BI344	H4	2.374	.276	.906	.194	.152	.250	3
#10	32UNF	BB345	BI345	H5	2.374	.276	.906	.194	.152	.250	3
#10	32UNF	BB346	BI346	H6	2.374	.276	.906	.194	.152	.250	3
1/4	20UNC	BB403	BI403	H3	2.500	.433	1.000	.255	.191	.310	3
1/4	20UNC	BB405	BI405	H5	2.500	.433	1.000	.255	.191	.310	3
1/4	28UNF	BB423	BI423	H3	2.500	.354	1.000	.255	.191	.310	3
1/4	28UNF	BB424	BI424	H4	2.500	.354	1.000	.255	.191	.310	3
1/4	28UNF	BB425	BI425	H5	2.500	.354	1.000	.255	.191	.310	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

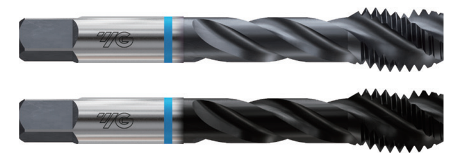
ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎						

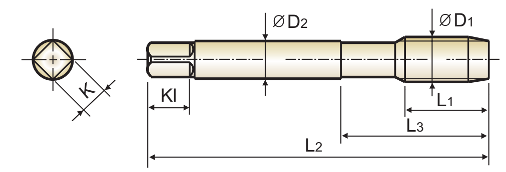
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○				○	○														

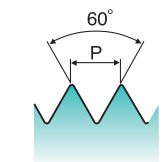
YG TAP BLUE RING

BB/BI SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels & Stainless Steels

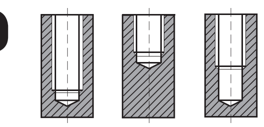






ANSI

Thread Depth / Hole Type
2.5×D



Material groups: VG | HSS-PM | UNC UNF | USCTI 302A | 2P~3P | Steam Oxide | Hardslick | R40

Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
1/4	28UNF	BB426	BI426	H6	2.500	.354	1.000	.255	.191	.310	3
5/16	18UNC	BB443	BI443	H3	2.720	.472	1.126	.318	.238	.380	3
5/16	18UNC	BB445	BI445	H5	2.720	.472	1.126	.318	.238	.380	3
5/16	24UNF	BB463	BI463	H3	2.720	.394	1.126	.318	.238	.380	3
5/16	24UNF	BB464	BI464	H4	2.720	.394	1.126	.318	.238	.380	3
5/16	24UNF	BB465	BI465	H5	2.720	.394	1.126	.318	.238	.380	3
5/16	24UNF	BB466	BI466	H6	2.720	.394	1.126	.318	.238	.380	3
3/8	16UNC	BB483	BI483	H3	2.937	.551	1.252	.381	.286	.440	3
3/8	16UNC	BB485	BI485	H5	2.937	.551	1.252	.381	.286	.440	3
3/8	24UNF	BB503	BI503	H3	2.937	.394	1.252	.381	.286	.440	3
3/8	24UNF	BB504	BI504	H4	2.937	.394	1.252	.381	.286	.440	3
3/8	24UNF	BB505	BI505	H5	2.937	.394	1.252	.381	.286	.440	3
3/8	24UNF	BB506	BI506	H6	2.937	.394	1.252	.381	.286	.440	3
7/16	14UNC	BB523	BI523	H3	3.157	.591	1.850	.323	.242	.410	3
7/16	14UNC	BB525	BI525	H5	3.157	.591	1.850	.323	.242	.410	3
7/16	20UNF	BB543	BI543	H3	3.157	.472	1.850	.323	.242	.410	3
7/16	20UNF	BB545	BI545	H5	3.157	.472	1.850	.323	.242	.410	3
1/2	13UNC	BB563	BI563	H3	3.374	.630	2.067	.367	.275	.440	3
1/2	13UNC	BB565	BI565	H5	3.374	.630	2.067	.367	.275	.440	3
1/2	20UNF	BB583	BI583	H3	3.374	.472	2.067	.367	.275	.440	3
1/2	20UNF	BB585	BI585	H5	3.374	.472	2.067	.367	.275	.440	3
9/16	12UNC	BB605	BI605	H5	3.594	.709	2.067	.429	.322	.500	3
9/16	18UNF	BB625	BI625	H5	3.594	.512	2.067	.429	.322	.500	3
5/8	11UNC	BB643	BI643	H3	3.811	.748	2.205	.480	.360	.560	4
5/8	11UNC	BB645	BI645	H5	3.811	.748	2.205	.480	.360	.560	4
5/8	18UNF	BB663	BI663	H3	3.811	.512	2.205	.480	.360	.560	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

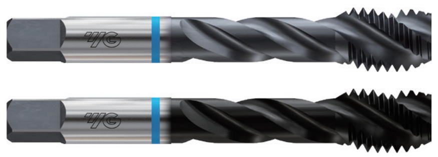
ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○				○	○														

YG TAP BLUE RING

BB/BI SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels & Stainless Steels



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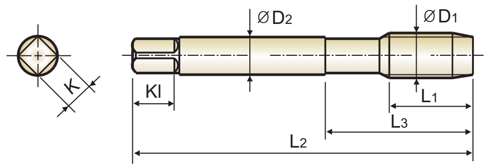
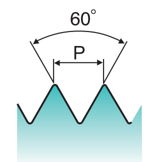
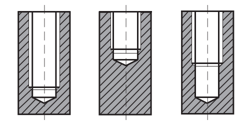




Thread Depth / Hole Type: 2.5×D



Material groups: VG | HSS-PM | UNC UNF | USCTI 302A | 2P~3P | Steam Oxide | Hardslick | R40

Unit : Inch

Size D1		TPI	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
5/8	-	18UNF	BB665	BI665	H5	3.811	.512	2.205	.480	.360	.560	4
3/4	-	10UNC	BB703	BI703	H3	4.252	.827	2.480	.590	.442	.690	4
3/4	-	10UNC	BB705	BI705	H5	4.252	.827	2.480	.590	.442	.690	4
3/4	-	16UNF	BB723	BI723	H3	4.252	.591	2.480	.590	.442	.690	4
3/4	-	16UNF	BB725	BI725	H5	4.252	.591	2.480	.590	.442	.690	4
7/8	-	9UNC	BB746	BI746	H6	4.689	.827	2.815	.697	.523	.750	4
7/8	-	14UNF	BB766	BI766	H6	4.689	.709	2.815	.697	.523	.750	4
1"	-	8UNC	BB786	BI786	H6	5.126	.984	3.091	.800	.600	.810	4
1"	-	12UNF	BB806	BI806	H6	5.126	.709	3.091	.800	.600	.810	4
1-1/8	-	8UN	BB836	BI836	H6	5.437	1.024	3.150	.896	.672	.880	4
1-1/4	-	8UN	BB876	BI876	H6	5.752	1.024	3.150	1.021	.766	1.000	4
1-3/8	-	8UN	BB916	BI916	H6	6.063	1.181	3.583	1.108	.831	1.060	4
1-1/2	-	8UN	BB956	BI956	H6	6.374	1.181	3.583	1.233	.925	1.130	4

◎ : Excellent ○ : Good

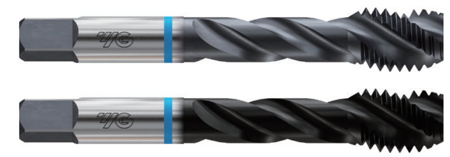
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○				○	○														

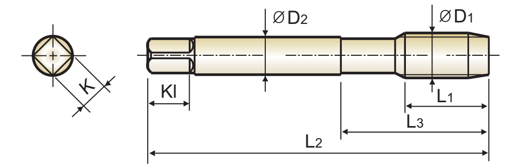
YG TAP BLUE RING

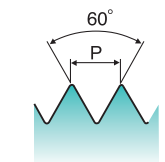
BH/BM SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels & Stainless Steels

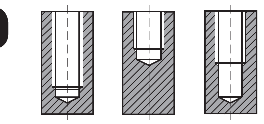


ANSI





Thread Depth / Hole Type: 2.5×D



Material groups: VG | HSS-PM | M/MF | USCTI 302A | 2P~3P | Steam Oxide | Hardslick | R40

Unit : Inch

Size D1		Pitch	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M3	x	0.5	BH203	BM203	D3	1.937	.197	.646	.141	.110	.190	3
M3.5	x	0.6	BH224	BM224	D4	2.000	.276	.709	.141	.110	.190	3
M4	x	0.7	BH244	BM244	D4	2.126	.276	.768	.168	.131	.250	3
M5	x	0.8	BH284	BM284	D4	2.374	.354	.933	.194	.152	.250	3
M6	x	1.0	BH315	BM315	D5	2.500	.433	1.000	.255	.191	.310	3
M7	x	1.0	BH345	BM345	D5	2.720	.433	1.126	.318	.238	.380	3
M8	x	1.25	BH365	BM365	D5	2.720	.472	1.126	.318	.238	.380	3
M8	x	1.0	BH375	BM375	D5	2.720	.433	1.126	.318	.238	.380	3
M10	x	1.5	BH426	BM426	D6	2.937	.512	1.252	.381	.286	.440	3
M10	x	1.25	BH435	BM435	D5	2.937	.472	1.252	.381	.286	.440	3
M12	x	1.75	BH506	BM506	D6	3.374	.591	2.067	.367	.275	.440	3
M12	x	1.25	BH525	BM525	D5	3.374	.551	2.067	.367	.275	.440	3
M14	x	2.0	BH547	BM547	D7	3.594	.709	2.067	.429	.322	.500	3
M14	x	1.5	BH556	BM556	D6	3.594	.551	2.067	.429	.322	.500	3
M16	x	2.0	BH607	BM607	D7	3.811	.709	2.205	.480	.360	.560	3
M16	x	1.5	BH616	BM616	D6	3.811	.551	2.205	.480	.360	.560	3
M18	x	2.5	BH657	BM657	D7	4.031	.787	2.205	.542	.406	.630	4
M18	x	1.5	BH676	BM676	D6	4.031	.551	2.205	.542	.406	.630	4

◎ : Excellent ○ : Good

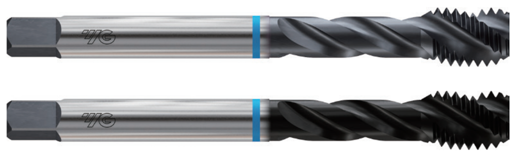
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎						

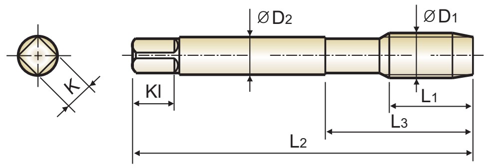
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○				○	○														

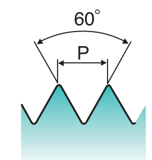
YG TAP BLUE RING

BF/BK SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels & Stainless Steels







DIN Length-ANSI Shank

Thread Depth / Hole Type: 2.5×D

Material groups: VG | HSS-PM | UNC UNF | 2P~3P | Steam Oxide | Hardslick | R40

Unit : Inch

Size D1		TPI	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#2	-	56UNC	BF082	BK082	H2	1.752	.157	.433	.141	.110	.190	2
#4	-	40UNC	BF162	BK162	H2	2.205	.236	.563	.141	.110	.190	2
#5	-	40UNC	BF202	BK202	H2	2.205	.236	.626	.141	.110	.190	3
#6	-	32UNC	BF243	BK243	H3	2.205	.276	.689	.141	.110	.190	3
#8	-	32UNC	BF283	BK283	H3	2.480	.276	.752	.168	.131	.250	3
#10	-	24UNC	BF323	BK323	H3	2.756	.354	.906	.194	.152	.250	3
#10	-	32UNF	BF343	BK343	H3	2.756	.276	.906	.194	.152	.250	3
1/4	-	20UNC	BF403	BK403	H3	3.150	.433	1.000	.255	.191	.310	3
1/4	-	20UNC	BF405	BK405	H5	3.150	.433	1.000	.255	.191	.310	3
1/4	-	28UNF	BF423	BK423	H3	3.150	.354	1.000	.255	.191	.310	3
1/4	-	28UNF	BF424	BK424	H4	3.150	.354	1.000	.255	.191	.310	3
5/16	-	18UNC	BF445	BK445	H5	3.543	.472	1.126	.318	.238	.380	3
5/16	-	24UNF	BF464	BK464	H4	3.543	.472	1.126	.318	.238	.380	3
3/8	-	16UNC	BF485	BK485	H5	3.937	.551	1.252	.381	.286	.440	3
3/8	-	24UNF	BF504	BK504	H4	3.937	.394	1.252	.381	.286	.440	3
7/16	-	14UNC	BF525	BK525	H5	3.937	.591	1.850	.323	.242	.410	3
7/16	-	20UNF	BF545	BK545	H5	3.937	.472	1.850	.323	.242	.410	3
1/2	-	13UNC	BF565	BK565	H5	4.331	.630	2.067	.367	.275	.440	3
1/2	-	20UNF	BF585	BK585	H5	3.937	.472	2.067	.367	.275	.440	3
9/16	-	12UNC	BF605	BK605	H5	4.331	.709	2.067	.429	.322	.500	3
9/16	-	18UNF	BF625	BK625	H5	3.937	.512	2.067	.429	.322	.500	3
5/8	-	11UNC	BF645	BK645	H5	4.331	.748	2.205	.480	.360	.560	4
5/8	-	18UNF	BF665	BK665	H5	3.937	.512	2.205	.480	.360	.560	4
3/4	-	10UNC	BF705	BK705	H5	4.921	.827	2.480	.590	.442	.690	4
3/4	-	16UNF	BF725	BK725	H5	4.331	.591	2.480	.590	.442	.690	4
7/8	-	9UNC	BF746	BK746	H6	5.512	.827	2.815	.697	.523	.750	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

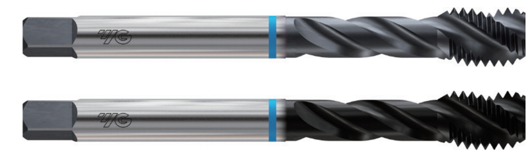
ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎						

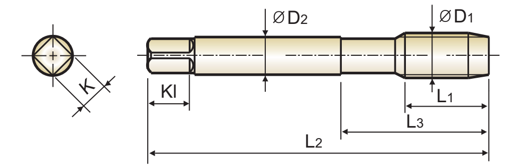
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○				○	○														

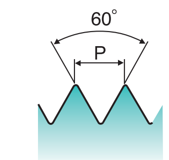
YG TAP BLUE RING

BF/BK SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels & Stainless Steels







DIN Length-ANSI Shank

Thread Depth / Hole Type: 2.5×D

Material groups: VG | HSS-PM | UNC UNF | 2P~3P | Steam Oxide | Hardslick | R40

Unit : Inch

Size D1		TPI	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
7/8	-	14UNF	BF766	BK766	H6	4.921	.709	2.815	.697	.523	.750	4
1"	-	8UNC	BF786	BK786	H6	6.299	.984	3.091	.800	.600	.810	4
1"	-	12UNF	BF806	BK806	H6	5.512	.709	3.091	.800	.600	.810	4
1-1/8	-	8UN	BF836	BK836	H6	7.087	1.260	3.740	.896	.672	.880	4
1-1/4	-	8UN	BF876	BK876	H6	7.087	1.260	3.740	1.021	.766	1.000	4
1-3/8	-	8UN	BF916	BK916	H6	7.874	1.260	3.937	1.108	.831	1.060	4
1-1/2		8UN	BF956	BK956	H6	7.874	1.260	3.937	1.233	.925	1.130	4

◎ : Excellent ○ : Good

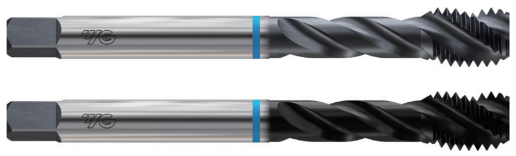
ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎						

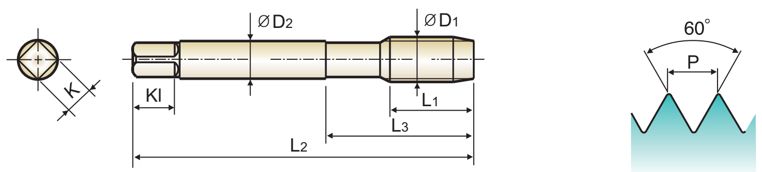
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○				○	○														

YG TAP BLUE RING

BD/BO SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels & Stainless Steels



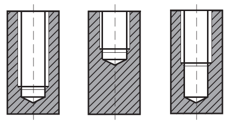


DIN Length-ANSI Shank

Material groups: VG | HSS-PM | M/MF | 2P~3P | Steam Oxide | Hardslick | R40

Thread Depth / Hole Type

2.5×D



Unit : Inch

Size D1		Pitch	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M3	x	0.5	BD203	BO203	D3	2.205	.197	.646	.141	.110	.190	3
M3.5	x	0.6	BD224	BO224	D4	2.205	.276	.709	.141	.110	.190	3
M4	x	0.7	BD244	BO244	D4	2.480	.276	.768	.168	.131	.250	3
M5	x	0.8	BD284	BO284	D4	2.756	.354	.933	.194	.152	.250	3
M6	x	1.0	BD315	BO315	D5	3.150	.433	1.000	.255	.191	.310	3
M7	x	1.0	BD345	BO345	D5	3.150	.433	1.126	.318	.238	.380	3
M8	x	1.25	BD365	BO365	D5	3.543	.472	1.126	.318	.238	.380	3
M8	x	1.0	BD375	BO375	D5	3.543	.433	1.126	.318	.238	.380	3
M10	x	1.50	BD426	BO426	D6	3.937	.512	1.252	.381	.286	.440	3
M10	x	1.25	BD435	BO435	D5	3.937	.472	1.252	.381	.286	.440	3
M12	x	1.75	BD506	BO506	D6	4.331	.591	2.067	.367	.275	.440	3
M12	x	1.25	BD525	BO525	D5	3.937	.551	2.067	.367	.275	.440	3
M14	x	2.0	BD547	BO547	D7	4.331	.709	2.067	.429	.322	.500	3
M14	x	1.5	BD556	BO556	D6	3.937	.551	2.067	.429	.322	.500	3
M16	x	2.0	BD607	BO607	D7	4.331	.709	2.205	.480	.360	.560	3
M16	x	1.5	BD616	BO616	D6	3.937	.551	2.205	.480	.360	.560	3
M18	x	2.5	BD657	BO657	D7	4.921	.787	2.205	.542	.406	.630	4
M18	x	1.5	BD676	BO676	D6	4.331	.551	2.205	.542	.406	.630	4

◎ : Excellent ○ : Good

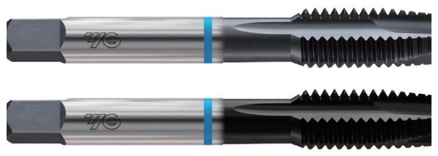
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎						

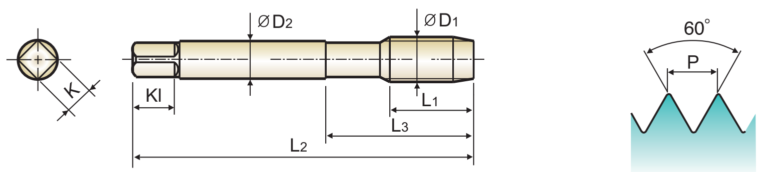
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○				○	○														

YG TAP BLUE RING

M9/O1 SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels & Stainless Steels



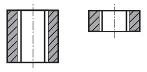


ANSI

Material groups: VG | HSS-PM | UNC UNF | USCTI 302A | 4P~5P | Steam Oxide | Hardslick

Thread Depth / Hole Type

3.0×D



Unit : Inch

Size D1		TPI	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#2	-	56UNC	M9082	O1082	H2	1.752	.256	.433	.141	.110	.190	2
#4	-	40UNC	M9162	O1162	H2	1.874	.335	.563	.141	.110	.190	2
#4	-	40UNC	M9163	O1163	H3	1.874	.335	.563	.141	.110	.190	2
#4	-	40UNC	M9164	O1164	H4	1.874	.335	.563	.141	.110	.190	2
#4	-	40UNC	M9165	O1165	H5	1.874	.335	.563	.141	.110	.190	2
#5	-	40UNC	M9202	O1202	H2	1.937	.374	.626	.141	.110	.190	3
#6	-	32UNC	M9242	O1242	H2	2.000	.413	.689	.141	.110	.190	3
#6	-	32UNC	M9243	O1243	H3	2.000	.413	.689	.141	.110	.190	3
#6	-	32UNC	M9244	O1244	H4	2.000	.413	.689	.141	.110	.190	3
#6	-	32UNC	M9245	O1245	H5	2.000	.413	.689	.141	.110	.190	3
#6	-	32UNC	M9246	O1246	H6	2.000	.413	.689	.141	.110	.190	3
#8	-	32UNC	M9282	O1282	H2	2.126	.453	.752	.168	.131	.250	3
#8	-	32UNC	M9283	O1283	H3	2.126	.453	.752	.168	.131	.250	3
#8	-	32UNC	M9284	O1284	H4	2.126	.453	.752	.168	.131	.250	3
#8	-	32UNC	M9285	O1285	H5	2.126	.453	.752	.168	.131	.250	3
#8	-	32UNC	M9286	O1286	H6	2.126	.453	.752	.168	.131	.250	3
#10	-	24UNC	M9323	O1323	H3	2.374	.531	.906	.194	.152	.250	3
#10	-	24UNC	M9325	O1325	H5	2.374	.531	.906	.194	.152	.250	3
#10	-	32UNF	M9342	O1342	H2	2.374	.531	.906	.194	.152	.250	3
#10	-	32UNF	M9343	O1343	H3	2.374	.531	.906	.194	.152	.250	3
#10	-	32UNF	M9344	O1344	H4	2.374	.531	.906	.194	.152	.250	3
#10	-	32UNF	M9345	O1345	H5	2.374	.531	.906	.194	.152	.250	3
#10	-	32UNF	M9346	O1346	H6	2.374	.531	.906	.194	.152	.250	3
1/4	-	20UNC	M9403	O1403	H3	2.500	.591	1.000	.255	.191	.310	3
1/4	-	20UNC	M9405	O1405	H5	2.500	.591	1.000	.255	.191	.310	3
1/4	-	28UNF	M9423	O1423	H3	2.500	.591	1.000	.255	.191	.310	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

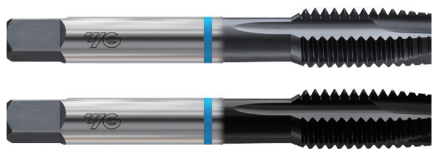
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎						

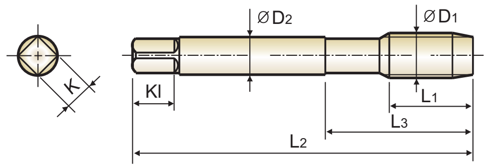
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○				○	○														

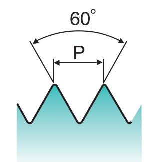
YG TAP BLUE RING

M9/O1 SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels & Stainless Steels







ANSI

Thread Depth / Hole Type

3.0×D

Material groups: VG | HSS-PM | UNC UNF | USCTI 302A | 4P~5P | Steam Oxide | Hardslick

Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
1/4	28UNF	M9424	O1424	H4	2.500	.591	1.000	.255	.191	.310	3
1/4	28UNF	M9425	O1425	H5	2.500	.591	1.000	.255	.191	.310	3
1/4	28UNF	M9426	O1426	H6	2.500	.591	1.000	.255	.191	.310	3
5/16	18UNC	M9443	O1443	H3	2.720	.669	1.126	.318	.238	.380	3
5/16	18UNC	M9445	O1445	H5	2.720	.669	1.126	.318	.238	.380	3
5/16	24UNF	M9463	O1463	H3	2.720	.669	1.126	.318	.238	.380	3
5/16	24UNF	M9464	O1464	H4	2.720	.669	1.126	.318	.238	.380	3
5/16	24UNF	M9465	O1465	H5	2.720	.669	1.126	.318	.238	.380	3
5/16	24UNF	M9466	O1466	H6	2.720	.669	1.126	.318	.238	.380	3
3/8	16UNC	M9483	O1483	H3	2.937	.748	1.252	.381	.286	.440	3
3/8	16UNC	M9485	O1485	H5	2.937	.748	1.252	.381	.286	.440	3
3/8	24UNF	M9503	O1503	H3	2.937	.748	1.252	.381	.286	.440	3
3/8	24UNF	M9504	O1504	H4	2.937	.748	1.252	.381	.286	.440	3
3/8	24UNF	M9505	O1505	H5	2.937	.748	1.252	.381	.286	.440	3
3/8	24UNF	M9506	O1506	H6	2.937	.748	1.252	.381	.286	.440	3
7/16	14UNC	M9523	O1523	H3	3.157	.866	1.437	.323	.242	.410	3
7/16	14UNC	M9525	O1525	H5	3.157	.866	1.437	.323	.242	.410	3
7/16	20UNF	M9543	O1543	H3	3.157	.866	1.437	.323	.242	.410	3
7/16	20UNF	M9545	O1545	H5	3.157	.866	1.437	.323	.242	.410	3
1/2	13UNC	M9563	O1563	H3	3.374	.984	1.657	.367	.275	.440	3
1/2	13UNC	M9565	O1565	H5	3.374	.984	1.657	.367	.275	.440	3
1/2	20UNF	M9583	O1583	H3	3.374	.984	1.657	.367	.275	.440	3
1/2	20UNF	M9585	O1585	H5	3.374	.984	1.657	.367	.275	.440	3
9/16	12UNC	M9605	O1605	H5	3.594	.984	1.657	.429	.322	.500	3
9/16	18UNF	M9625	O1625	H5	3.594	.984	1.657	.429	.322	.500	3
5/8	11UNC	M9643	O1643	H3	3.811	1.083	1.811	.480	.360	.560	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎						

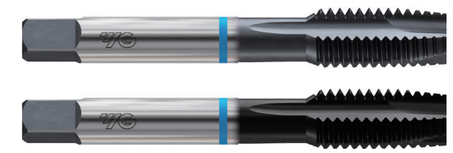
ISO	N									S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○				○	○														

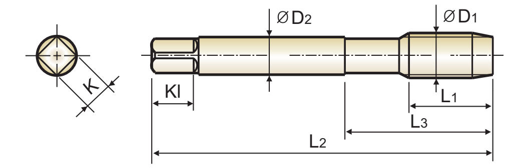
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

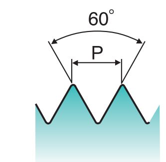
YG TAP BLUE RING

M9/O1 SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels & Stainless Steels







ANSI

Thread Depth / Hole Type

3.0×D

Material groups: VG | HSS-PM | UNC UNF | USCTI 302A | 4P~53P | Steam Oxide | Hardslick

Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
5/8	11UNC	M9645	O1645	H5	3.811	1.083	1.811	.480	.360	.560	3
5/8	18UNF	M9663	O1663	H3	3.811	1.083	1.811	.480	.360	.560	3
5/8	18UNF	M9665	O1665	H5	3.811	1.083	1.811	.480	.360	.560	3
3/4	10UNC	M9703	O1703	H3	4.252	1.201	2.000	.590	.442	.690	3
3/4	10UNC	M9705	O1705	H5	4.252	1.201	2.000	.590	.442	.690	3
3/4	16UNF	M9723	O1723	H3	4.252	1.201	2.000	.590	.442	.690	3
3/4	16UNF	M9725	O1725	H5	4.252	1.201	2.000	.590	.442	.690	3
7/8	9UNC	M9746	O1746	H6	4.689	1.339	2.220	.697	.523	.750	3
7/8	14UNF	M9766	O1766	H6	4.689	1.339	2.220	.697	.523	.750	3
1"	8UNC	M9786	O1786	H6	5.126	1.496	2.500	.800	.600	.810	3
1"	12UNF	M9806	O1806	H6	5.126	1.496	2.500	.800	.600	.810	3
1-1/8	8UN	M9836	O1836	H6	5.437	1.535	2.563	.896	.672	.880	4
1-1/4	8UN	M9876	O1876	H6	5.752	1.535	2.563	1.021	.766	1.000	4
1-3/8	8UN	M9916	O1916	H6	6.063	1.791	3.000	1.108	.831	1.060	4
1-1/2	8UN	M9956	O1956	H6	6.374	1.791	3.000	1.233	.925	1.130	4

◎ : Excellent ○ : Good

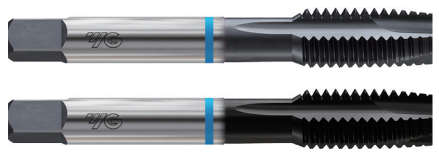
ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎						

ISO	N									S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○				○	○														

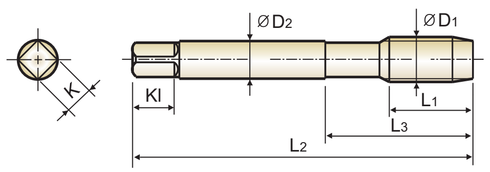
YG TAP BLUE RING

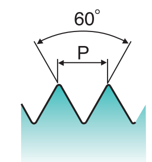
N7/N8 SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels & Stainless Steels



ANSI





Thread Depth / Hole Type

3.0×D

Material groups: VG | HSS-PM | M/MF | USCTI 302A | 4P~5P | Steam Oxide | Hardslick

Unit : Inch

Size		Pitch	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Steam Oxide	Hardslick		L2	L1	L3	D2	K	Kl	
M3	x	0.5	N7203	N8203	D3	1.937	.374	.646	.141	.110	.190	3
M3.5	x	0.6	N7224	N8224	D4	2.000	.413	.709	.141	.110	.190	3
M4	x	0.7	N7244	N8244	D4	2.126	.453	.768	.168	.131	.250	3
M5	x	0.8	N7284	N8284	D4	2.374	.531	.933	.194	.152	.250	3
M6	x	1.0	N7315	N8315	D5	2.500	.591	1.000	.255	.191	.310	3
M7	x	1.0	N7345	N8345	D5	2.720	.669	1.126	.318	.238	.380	3
M8	x	1.25	N7365	N8365	D5	2.720	.669	1.126	.318	.238	.380	3
M8	x	1.0	N7375	N8375	D5	2.720	.669	1.126	.318	.238	.380	3
M10	x	1.5	N7426	N8426	D6	2.937	.748	1.252	.381	.286	.440	3
M10	x	1.25	N7435	N8435	D5	2.937	.748	1.252	.381	.286	.440	3
M12	x	1.75	N7506	N8506	D6	3.374	.984	1.657	.367	.275	.440	3
M12	x	1.25	N7525	N8525	D5	3.374	.984	1.657	.367	.275	.440	3
M14	x	2.0	N7547	N8547	D7	3.594	.984	1.657	.429	.322	.500	3
M14	x	1.5	N7556	N8556	D6	3.594	.984	1.657	.429	.322	.500	3
M16	x	2.0	N7607	N8607	D7	3.811	1.083	1.811	.480	.360	.560	3
M16	x	1.5	N7616	N8616	D6	3.811	1.083	1.811	.480	.360	.560	3
M18	x	2.5	N7657	N8657	D7	4.031	1.083	1.811	.542	.406	.630	3
M18	x	1.5	N7676	N8676	D6	4.031	1.083	1.811	.542	.406	.630	3

◎ : Excellent ○ : Good

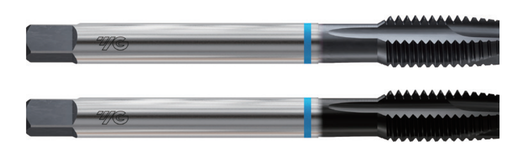
ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○				○	○														

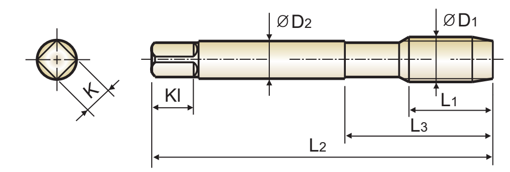
YG TAP BLUE RING

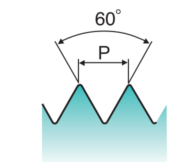
N4/O5 SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels & Stainless Steels



DIN Length-ANSI Shank





Thread Depth / Hole Type

3.0×D

Material groups: VG | HSS-PM | UNC UNF | 4P~5P | Steam Oxide | Hardslick

Unit : Inch

Size		TPI	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Steam Oxide	Hardslick		L2	L1	L3	D2	K	Kl	
#2	-	56UNC	N4082	O5082	H2	1.752	.256	.433	.141	.110	.190	2
#4	-	40UNC	N4162	O5162	H2	2.205	.335	.563	.141	.110	.190	2
#5	-	40UNC	N4202	O5202	H2	2.205	.374	.626	.141	.110	.190	3
#6	-	32UNC	N4243	O5243	H3	2.205	.413	.689	.141	.110	.190	3
#8	-	32UNC	N4283	O5283	H3	2.480	.453	.752	.168	.131	.250	3
#10	-	24UNC	N4323	O5323	H3	2.756	.531	.906	.194	.152	.250	3
#10	-	32UNF	N4343	O5343	H3	2.756	.531	.906	.194	.152	.250	3
1/4	-	20UNC	N4403	O5403	H3	3.150	.591	1.000	.255	.191	.310	3
1/4	-	20UNC	N4405	O5405	H5	3.150	.591	1.000	.255	.191	.310	3
1/4	-	28UNF	N4423	O5423	H3	3.150	.591	1.000	.255	.191	.310	3
5/16	-	18UNC	N4445	O5445	H5	3.543	.669	1.126	.318	.238	.380	3
5/16	-	24UNF	N4464	O5464	H4	3.543	.669	1.126	.318	.238	.380	3
3/8	-	16UNC	N4485	O5485	H5	3.937	.748	1.252	.381	.286	.440	3
3/8	-	24UNF	N4504	O5504	H4	3.937	.748	1.252	.381	.286	.440	3
7/16	-	14UNC	N4525	O5525	H5	3.937	.866	1.437	.323	.242	.410	3
7/16	-	20UNF	N4545	O5545	H5	3.937	.866	1.437	.323	.242	.410	3
1/2	-	13UNC	N4565	O5565	H5	4.331	.984	1.657	.367	.275	.440	3
1/2	-	20UNF	N4585	O5585	H5	3.937	.984	1.657	.367	.275	.440	3
9/16	-	12UNC	N4605	O5605	H5	4.331	.984	1.657	.429	.322	.500	3
9/16	-	18UNC	N4625	O5625	H5	3.937	.984	1.657	.429	.322	.500	3
5/8	-	11UNC	N4645	O5645	H5	4.331	1.083	1.811	.480	.360	.560	3
5/8	-	18UNF	N4665	O5665	H5	3.937	1.083	1.811	.480	.360	.560	3
3/4	-	10UNC	N4705	O5705	H5	4.921	1.201	2.000	.590	.442	.690	3
3/4	-	16UNF	N4725	O5725	H5	4.331	1.201	2.000	.590	.442	.690	3
7/8	-	9UNC	N4746	O5746	H6	5.512	1.339	2.224	.697	.523	.750	3
7/8	-	14UNF	N4766	O5766	H6	4.921	1.339	2.224	.697	.523	.750	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○				○	○														

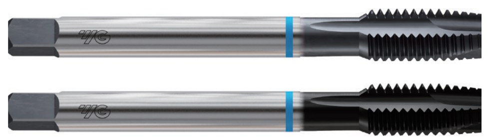
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

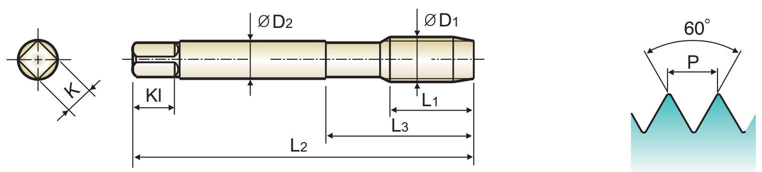
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TAP BLUE RING

N4/05 SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels & Stainless Steels





DIN Length-ANSI Shank

Thread Depth / Hole Type

Material groups: VG | HSS-PM | UNC UNF | 4P~5P | Steam Oxide | Hardslick

Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
1"	- 8UNC	N4786	O5786	H6	6.299	1.496	2.500	.800	.600	.810	3
1"	- 12UNC	N4806	O5806	H6	5.512	1.496	2.500	.800	.600	.810	3
1-1/8	- 8UN	N4836	O5836	H6	7.087	1.575	2.638	.896	.672	.880	4
1-1/4	- 8UN	N4876	O5876	H6	7.087	1.575	2.638	1.021	.766	1.000	4
1-3/8	- 8UN	N4916	O5916	H6	7.874	1.654	2.953	1.108	.831	1.060	4
1-1/2	- 8UN	N4956	O5956	H6	7.874	1.654	2.953	1.233	.925	1.130	4

◎ : Excellent ○ : Good

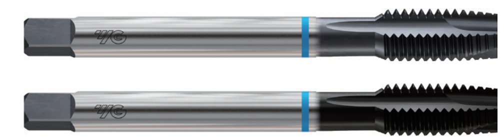
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎						

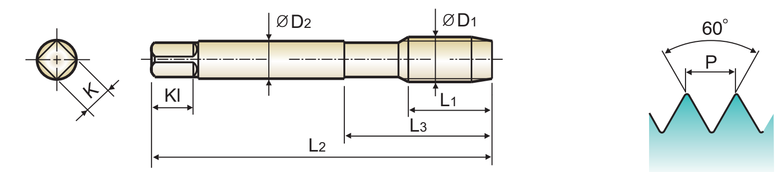
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○				○	○														

YG TAP BLUE RING

N3/03 SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels & Stainless Steels





DIN Length-ANSI Shank

Thread Depth / Hole Type

3.0×D

Material groups: VG | HSS-PM | M/MF | 4P~5P | Steam Oxide | Hardslick

Unit : Inch

Size D1	Pitch	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M3	x 0.5	N3203	O3203	D3	2.205	.374	.646	.141	.110	.190	3
M3.5	x 0.6	N3224	O3224	D4	2.205	.413	.709	.141	.110	.190	3
M4	x 0.7	N3244	O3244	D4	2.480	.453	.768	.168	.131	.250	3
M5	x 0.8	N3284	O3284	D4	2.756	.531	.933	.194	.152	.250	3
M6	x 1.0	N3315	O3315	D5	3.150	.591	1.000	.255	.191	.310	3
M7	x 1.0	N3345	O3345	D5	3.150	.669	1.126	.318	.238	.380	3
M8	x 1.25	N3365	O3365	D5	3.543	.669	1.126	.318	.238	.380	3
M8	x 1.0	N3375	O3375	D5	3.543	.669	1.126	.318	.238	.380	3
M10	x 1.5	N3426	O3426	D6	3.937	.748	1.252	.381	.286	.440	3
M10	x 1.25	N3435	O3435	D5	3.937	.748	1.252	.381	.286	.440	3
M12	x 1.75	N3506	O3506	D6	4.331	.984	1.657	.367	.275	.440	3
M12	x 1.25	N3525	O3525	D5	3.937	.984	1.657	.367	.275	.440	3
M14	x 2.0	N3547	O3547	D7	4.331	.984	1.657	.429	.322	.500	3
M14	x 1.5	N3556	O3556	D6	3.937	.984	1.657	.429	.322	.500	3
M16	x 2.0	N3607	O3607	D7	4.331	1.083	1.811	.480	.360	.560	3
M16	x 1.5	N3616	O3616	D6	3.937	1.083	1.811	.480	.360	.560	3
M18	x 2.5	N3657	O3657	D7	4.921	1.083	1.811	.542	.406	.630	3
M18	x 1.5	N3676	O3676	D6	4.331	1.083	1.811	.542	.406	.630	3

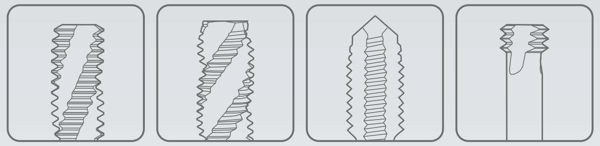
◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○				○	○														

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

Global Cutting Tool Leader **YG-1**



THREADING

YG TAP STEEL

- For carbon and alloy steel

SELECTION GUIDE

YG THREADING TOOLS

HSS-E YG TAP STEEL

- For carbon and alloy steel

Please visit globalyg1.com/mat for material search

	D3	E0	BU	BV	E2
HOLE TYPE	Max. 2.5xD Blind Hole				
TOOL MATERIAL	HSS-E				
CHAMFER LEAD ACC. TO DIN2197	2P-3P				
FLUTE TYPE	Spiral Flute				
SPIRAL FLUTE ANGLE	R45				
SERIES M					
SERIES M/MF			BU (p.B138)	BV (p.B138)	E2 (p.B140)
SERIES UNC					
SERIES UNC/UNF	D3 (p.B134)	E0 (p.B134)			
SERIES UNC/UNF/UNS					
SERIES UNC/UN8					
SERIES NPT					
SERIES NPTF					
SERIES NPS/NPSF					
SURFACE TREATMENT / COATING	Steam Oxide	HardSlick	Steam Oxide	HardSlick	Steam Oxide

MODEL

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	D3	E0	BU	BV	E2
P	1	Non-alloy steel	About 0.15% C	Annealed	125						
P	2	Non-alloy steel	About 0.45% C	Annealed	190	13	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50
P	3	Non-alloy steel	About 0.45% C	Quenched&Tempered	250	25	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50
P	4	Non-alloy steel	About 0.75% C	Annealed	270	28	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30
P	5	Non-alloy steel	About 0.75% C	Quenched&Tempered	300	32	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30
P	6	Low alloy steel		Annealed	180	10	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30
P	7	Low alloy steel		Quenched&Tempered	275	29	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30
P	8	Low alloy steel		Quenched&Tempered	300	32	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30
P	9	Low alloy steel		Quenched&Tempered	350	38	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30
P	10	High alloyed steel, and tool steel		Annealed	200	15	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30
P	11	High alloyed steel, and tool steel		Quenched&Tempered	325	35					
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 12-35
M	13	Stainless steel	Martensitic	Quenched&Tempered	240	23	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 12-35
M	14	Stainless steel	Austenitic		180	10	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15
K	15	Grey cast iron	Pearlitic / ferritic		180	10					
K	16	Grey cast iron	Pearlitic (Martensitic)		260	26					
K	17	Nodular cast iron	Ferritic		160	3					
K	18	Nodular cast iron	Pearlitic		250	25					
K	19	Malleable cast iron	Ferritic		130						
K	20	Malleable cast iron	Pearlitic		230	21					
N	21	Aluminum-wrought alloy	Not Curable		60						
N	22	Aluminum-wrought alloy	Curable	Hardened	100						
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75						
N	24	Aluminum-cast, alloyed	≤ 12% Si, Curable	Hardened	90						
N	25	Aluminum-cast, alloyed	> 12% Si, Not Curable		130						
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110						
N	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90						
N	28	Copper and Copper Alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper		100						
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic								
N	30	Non Metallic Materials	Rubber, Wood, etc.								
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15					
S	32	Heat Resistant Super Alloys	Fe Based	Cured	280	30					
S	33	Heat Resistant Super Alloys	Ni or Co Based	Annealed	250	25	○ 10-12	○ 10-12	○ 10-12	○ 10-12	○ 10-12
S	34	Heat Resistant Super Alloys	Ni or Co Based	Cured	350	38					
S	35	Heat Resistant Super Alloys	Ni or Co Based	Cast	320	34					
S	36	Titanium Alloys	Pure Titanium		400 Rm						
S	37	Titanium Alloys	Alpha + Beta Alloys	Hardened	1050 Rm						
H	38	Hardened steel		Hardened	550	55					
H	39	Hardened steel		Hardened	630	60					
H	40	Chilled Cast Iron		Cast	400	42					
H	41	Hardened Cast Iron		Hardened	550	55					

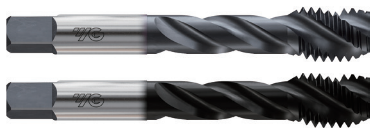
	E4	E5	J3	J4	J8	IB	IC	J9	K7	K2
HOLE TYPE	Max. 2.5xD Blind Hole		Max. 3.0xD Through Hole							
TOOL MATERIAL	HSS-E									
CHAMFER LEAD ACC. TO DIN2197	2P-3P		4P-5P							
FLUTE TYPE	Spiral Flute		Spiral Point							
SPIRAL FLUTE ANGLE	R45		-							
M										
M/MF	E4 (p.B140)	E5 (p.B140)				IB (p.B146)	IC (p.B146)		K7 (p.B148)	
UNC										
UNC/UNF			J3 (p.B141)	J4 (p.B141)	J8 (p.B141)			J9 (p.B148)		K2 (p.B148)
UNC/UNF/UNS										
UNC/UN8										
NPT										
NPTF										
NPS/NPSF										
SURFACE TREATMENT / COATING	TiCN	HardSlick	Steam Oxide	Bright	HardSlick	Steam Oxide	HardSlick	Steam Oxide	TiCN	HardSlick

ISO	VDI 3323	E4	E5	J3	J4	J8	IB	IC	J9	K7	K2
P	1										
P	2	◎ 50-80	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	3	◎ 50-80	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	4	◎ 10-35	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
P	5	◎ 10-35	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
P	6	◎ 10-35	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
P	7	◎ 10-35	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
P	8	◎ 10-35	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
P	9	○ 10-35	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 10-35
P	10	○ 10-35	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 10-35
P	11										
M	12	○ 20-50	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 20-50
M	13	○ 20-50	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 20-50
M	14	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15
K	15										
K	16										
K	17										
K	18										
K	19										
K	20										
N	21										
N	22										
N	23										
N	24										
N	25										
N	26										
N	27										
N	28										
N	29										
N	30										
S	31										
S	32										
S	33	○ 10-12	○ 10-12	○ 10-12	○ 10-12	○ 10-12	○ 10-12	○ 10-12	○ 10-12	○ 10-12	○ 10-12
S	34										
S	35										
S	36										
S	37										
H	38										
H	39										
H	40										
H	41										

YG TAP STEEL

D3 / E0 SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels



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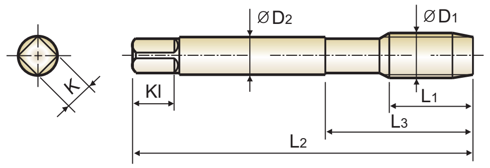
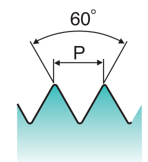
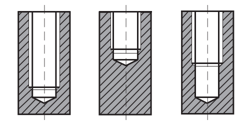




A variety of H Limit

Material groups: VG | HSS-E | UNC UNF | USCTI 302A | 2P~3P | Steam Oxide | Hardslick | R45

Thread Depth / Hole Type: 2.5×D



Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#2	56UNC	D3082	E0082	H2	1.752	.157	.433	.141	.110	.190	2
#3	48UNC	D3122	E0122	H2	1.811	.197	.492	.141	.110	.190	2
#4	40UNC	D3162	E0162	H2	1.874	.236	.563	.141	.110	.190	2
#4	40UNC	D3163	E0163	H3	1.874	.236	.563	.141	.110	.190	2
#4	40UNC	D3164	E0164	H4	1.874	.236	.563	.141	.110	.190	2
#4	40UNC	D3165	E0165	H5	1.874	.236	.563	.141	.110	.190	2
#4	48UNF	D3182	E0182	H2	1.874	.236	.563	.141	.110	.190	2
#5	40UNC	D3202	E0202	H2	1.937	.236	.626	.141	.110	.190	3
#6	32UNC	D3242	E0242	H2	2.000	.276	.689	.141	.110	.190	3
#6	32UNC	D3243	E0243	H3	2.000	.276	.689	.141	.110	.190	3
#6	32UNC	D3245	E0245	H5	2.000	.276	.689	.141	.110	.190	3
#6	32UNC	D3247	E0247	H7	2.000	.276	.689	.141	.110	.190	3
#6	32UNC	D324A	E024A	H11	2.000	.276	.689	.141	.110	.190	3
#6	40UNF	D3262	E0262	H2	2.000	.276	.689	.141	.110	.190	3
#8	32UNC	D3282	E0282	H2	2.126	.276	.752	.168	.131	.250	3
#8	32UNC	D3283	E0283	H3	2.126	.276	.752	.168	.131	.250	3
#8	32UNC	D3285	E0285	H5	2.126	.276	.752	.168	.131	.250	3
#8	32UNC	D3287	E0287	H7	2.126	.276	.752	.168	.131	.250	3
#8	32UNC	D328A	E028A	H11	2.126	.276	.752	.168	.131	.250	3
#10	24UNC	D3323	E0323	H3	2.374	.354	.906	.194	.152	.250	3
#10	24UNC	D3325	E0325	H5	2.374	.354	.906	.194	.152	.250	3
#10	24UNC	D332A	E032A	H11	2.374	.354	.906	.194	.152	.250	3
#10	32UNF	D3342	E0342	H2	2.374	.276	.906	.194	.152	.250	3
#10	32UNF	D3343	E0343	H3	2.374	.276	.906	.194	.152	.250	3
#10	32UNF	D3345	E0345	H5	2.374	.276	.906	.194	.152	.250	3
#10	32UNF	D3347	E0347	H7	2.374	.276	.906	.194	.152	.250	3

▶ Bright Finish Available: D4 Series

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	◎	◎	◎	◎	○	○		○	○	○						

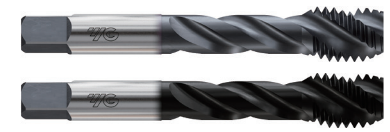
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended													○								

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TAP STEEL

D3 / E0 SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels



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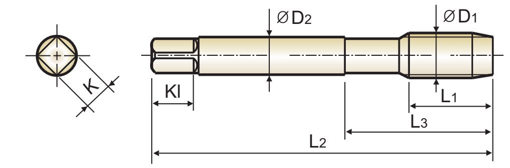
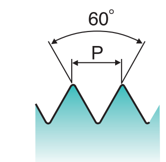
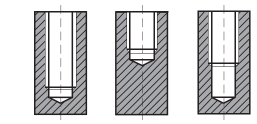




A variety of H Limit

Material groups: VG | HSS-E | UNC UNF | USCTI 302A | 2P~3P | Steam Oxide | Hardslick | R45

Thread Depth / Hole Type: 2.5×D



Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#10	32UNF	D334A	E034A	H11	2.374	.276	.906	.194	.152	.250	3
#12	24UNC	D3363	E0363	H3	2.374	.354	.906	.220	.165	.280	3
#12	28UNF	D3383	E0383	H3	2.374	.276	.906	.220	.165	.280	3
1/4	20UNC	D3402	E0402	H2	2.500	.433	1.000	.255	.191	.310	3
1/4	20UNC	D3403	E0403	H3	2.500	.433	1.000	.255	.191	.310	3
1/4	20UNC	D3405	E0405	H5	2.500	.433	1.000	.255	.191	.310	3
1/4	20UNC	D3407	E0407	H7	2.500	.433	1.000	.255	.191	.310	3
1/4	20UNC	D340A	E040A	H11	2.500	.433	1.000	.255	.191	.310	3
1/4	28UNF	D3422	E0422	H2	2.500	.354	1.000	.255	.191	.310	3
1/4	28UNF	D3423	E0423	H3	2.500	.354	1.000	.255	.191	.310	3
1/4	28UNF	D3424	E0424	H4	2.500	.354	1.000	.255	.191	.310	3
1/4	28UNF	D3425	E0425	H5	2.500	.354	1.000	.255	.191	.310	3
1/4	28UNF	D3427	E0427	H7	2.500	.354	1.000	.255	.191	.310	3
1/4	28UNF	D342A	E042A	H11	2.500	.354	1.000	.255	.191	.310	3
5/16	18UNC	D3442	E0442	H2	2.720	.472	1.126	.318	.238	.380	3
5/16	18UNC	D3443	E0443	H3	2.720	.472	1.126	.318	.238	.380	3
5/16	18UNC	D3445	E0445	H5	2.720	.472	1.126	.318	.238	.380	3
5/16	18UNC	D3447	E0447	H7	2.720	.472	1.126	.318	.238	.380	3
5/16	18UNC	D344A	E044A	H11	2.720	.472	1.126	.318	.238	.380	3
5/16	24UNF	D3462	E0462	H2	2.720	.394	1.126	.318	.238	.380	3
5/16	24UNF	D3463	E0463	H3	2.720	.394	1.126	.318	.238	.380	3
5/16	24UNF	D3464	E0464	H4	2.720	.394	1.126	.318	.238	.380	3
5/16	24UNF	D3465	E0465	H5	2.720	.394	1.126	.318	.238	.380	3
5/16	24UNF	D3466	E0466	H6	2.720	.394	1.126	.318	.238	.380	3
5/16	24UNF	D3467	E0467	H7	2.720	.394	1.126	.318	.238	.380	3
5/16	24UNF	D346A	E046A	H11	2.720	.394	1.126	.318	.238	.380	3

▶ Bright Finish Available: D4 Series

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	◎	◎	◎	◎	○	○		○	○	○						

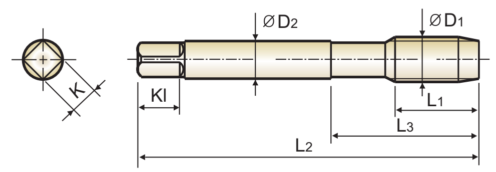
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended													○								

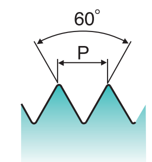
YG TAP STEEL

D3 / E0 SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels

ANSI

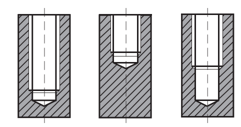




A variety of H Limit

Material groups: VG | HSS-E | UNC UNF | USCTI 302A | 2P~3P | Steam Oxide | Hardslick | R45

Thread Depth / Hole Type: 2.5×D



Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
3/8	16UNC	D3482	E0482	H2	2.937	.551	1.252	.381	.286	.440	3
3/8	16UNC	D3483	E0483	H3	2.937	.551	1.252	.381	.286	.440	3
3/8	16UNC	D3485	E0485	H5	2.937	.551	1.252	.381	.286	.440	3
3/8	16UNC	D3487	E0487	H7	2.937	.551	1.252	.381	.286	.440	3
3/8	16UNC	D348A	E048A	H11	2.937	.551	1.252	.381	.286	.440	3
3/8	24UNF	D3502	E0502	H2	2.937	.394	1.252	.381	.286	.440	3
3/8	24UNF	D3503	E0503	H3	2.937	.394	1.252	.381	.286	.440	3
3/8	24UNF	D3504	E0504	H4	2.937	.394	1.252	.381	.286	.440	3
3/8	24UNF	D3505	E0505	H5	2.937	.394	1.252	.381	.286	.440	3
3/8	24UNF	D3507	E0507	H7	2.937	.394	1.252	.381	.286	.440	3
3/8	24UNF	D350A	E050A	H11	2.937	.394	1.252	.381	.286	.440	3
7/16	14UNC	D3523	E0523	H3	3.157	.591	1.850	.323	.242	.410	3
7/16	14UNC	D3525	E0525	H5	3.157	.591	1.850	.323	.242	.410	3
7/16	14UNC	D3527	E0527	H7	3.157	.591	1.850	.323	.242	.410	3
7/16	14UNC	D352A	E052A	H11	3.157	.591	1.850	.323	.242	.410	3
7/16	20UNF	D3543	E0543	H3	3.157	.472	1.850	.323	.242	.410	3
7/16	20UNF	D3545	E0545	H5	3.157	.472	1.850	.323	.242	.410	3
7/16	20UNF	D3547	E0547	H7	3.157	.472	1.850	.323	.242	.410	3
7/16	20UNF	D354A	E054A	H11	3.157	.472	1.850	.323	.242	.410	3
1/2	13UNC	D3563	E0563	H3	3.374	.630	2.067	.367	.275	.440	3
1/2	13UNC	D3565	E0565	H5	3.374	.630	2.067	.367	.275	.440	3
1/2	13UNC	D3567	E0567	H7	3.374	.630	2.067	.367	.275	.440	3
1/2	13UNC	D356A	E056A	H11	3.374	.630	2.067	.367	.275	.440	3
1/2	20UNF	D3583	E0583	H3	3.374	.472	2.067	.367	.275	.440	3
1/2	20UNF	D3585	E0585	H5	3.374	.472	2.067	.367	.275	.440	3
1/2	20UNF	D3587	E0587	H7	3.374	.472	2.067	.367	.275	.440	3

▶ Bright Finish Available: D4 Series

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	◎	◎	◎	◎	○	○		○	○	○						

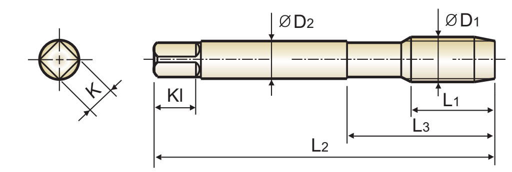
ISO	N									S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended													○								

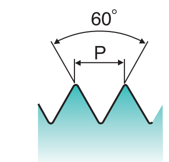
YG TAP STEEL

D3 / E0 SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels

ANSI

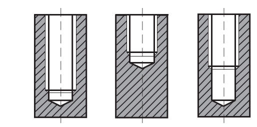




A variety of H Limit

Material groups: VG | HSS-E | UNC UNF | USCTI 302A | 2P~3P | Steam Oxide | Hardslick | R45

Thread Depth / Hole Type: 2.5×D



Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
1/2	20UNF	D358A	E058A	H11	3.374	.472	2.067	.367	.275	.440	3
9/16	12UNC	D3603	E0603	H3	3.594	.709	2.067	.429	.322	.500	3
9/16	18UNF	D3623	E0623	H3	3.594	.512	2.067	.429	.322	.500	3
5/8	11UNC	D3643	E0643	H3	3.811	.748	2.205	.480	.360	.560	4
5/8	11UNC	D3645	E0645	H5	3.811	.748	2.205	.480	.360	.560	4
5/8	18UNF	D3663	E0663	H3	3.811	.512	2.205	.480	.360	.560	4
3/4	10UNC	D3703	E0703	H3	4.252	.827	2.480	.590	.442	.690	4
3/4	10UNC	D3705	E0705	H5	4.252	.827	2.480	.590	.442	.690	4
3/4	16UNF	D3723	E0723	H3	4.252	.591	2.480	.590	.442	.690	4
3/4	16UNF	D3725	E0725	H5	4.252	.591	2.480	.590	.442	.690	4
7/8	9UNC	D3745	E0745	H5	4.689	.827	2.815	.697	.523	.750	4
7/8	14UNF	D3764	E0764	H4	4.689	.709	2.815	.697	.523	.750	4
1"	8UNC	D3785	E0785	H5	5.126	.984	3.091	.800	.600	.810	4
1"	12UNF	D3804	E0804	H4	5.126	.709	3.091	.800	.600	.810	4
1-1/8	7UNC	D3824	E0824	H4	5.437	1.024	3.150	.896	.672	.880	4
1-1/8	8UN	D3836	E0836	H6	5.437	1.024	3.150	.896	.672	.880	4
1-1/8	12UNF	D3845	E0845	H5	5.437	.787	3.150	.896	.672	.880	4
1-1/4	7UNC	D3866	E0866	H6	5.752	1.024	3.150	1.021	.766	1.000	4
1-1/4	8UN	D3876	E0876	H6	5.752	1.024	3.150	1.021	.766	1.000	4
1-1/4	12UNF	D3885	E0885	H5	5.752	.787	3.150	1.021	.766	1.000	4
1-3/8	6UNC	D3906	E0906	H6	6.063	1.181	3.583	1.108	.831	1.060	4
1-3/8	8UN	D3916	E0916	H6	6.063	1.181	3.583	1.108	.831	1.060	4
1-3/8	12UNF	D3925	E0925	H5	6.063	.866	3.583	1.108	.831	1.060	4
1-1/2	6UNC	D3946	E0946	H6	6.374	1.181	3.583	1.233	.925	1.130	4
1-1/2	8UN	D3956	E0956	H6	6.374	1.181	3.583	1.233	.925	1.130	4
1-1/2	12UNF	D3965	E0965	H5	6.374	.866	3.583	1.233	.925	1.130	4

▶ Bright Finish Available: D4 Series

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	◎	◎	◎	◎	○	○		○	○	○						

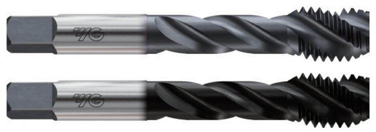
ISO	N									S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended													○								

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TAP STEEL

BU / BV SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels



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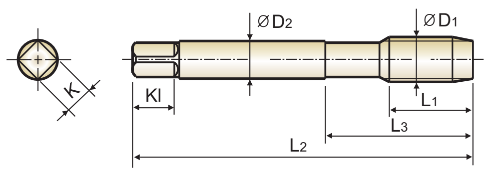
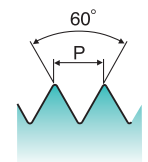
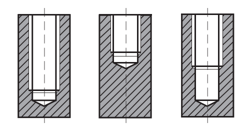




A variety of D L limit

Material groups: VG | HSS-E | M/MF | USCTI 302A | 2P~3P | Steam Oxide | Hardslick | R45

Thread Depth / Hole Type: 2.5×D



Size	Pitch	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Steam Oxide	Hardslick		L2	L1	L3	D2	K	Kl	
M3	x 0.5	BU203	BV203	D3	1.937	.197	.646	.141	.110	.190	3
M3	x 0.5	BU20A	BV20A	D11	1.937	.197	.646	.141	.110	.190	3
M3.5	x 0.6	BU224	BV224	D4	2.000	.276	.709	.141	.110	.190	3
M3.5	x 0.6	BU22A	BV22A	D11	2.000	.276	.709	.141	.110	.190	3
M4	x 0.7	BU244	BV244	D4	2.126	.276	.768	.168	.131	.250	3
M4	x 0.7	BU24A	BV24A	D11	2.126	.276	.768	.168	.131	.250	3
M5	x 0.8	BU284	BV284	D4	2.374	.354	.933	.194	.152	.250	3
M5	x 0.8	BU28A	BV28A	D11	2.374	.354	.933	.194	.152	.250	3
M6	x 1.0	BU315	BV315	D5	2.500	.433	1.000	.255	.191	.310	3
M6	x 1.0	BU31A	BV31A	D11	2.500	.433	1.000	.255	.191	.310	3
M7	x 1.0	BU345	BV345	D5	2.720	.433	1.126	.318	.238	.380	3
M7	x 1.0	BU34A	BV34A	D11	2.720	.433	1.126	.318	.238	.380	3
M8	x 1.25	BU365	BV365	D5	2.720	.472	1.126	.318	.238	.380	3
M8	x 1.25	BU36A	BV36A	D11	2.720	.472	1.126	.318	.238	.380	3
M8	x 1.0	BU375	BV375	D5	2.720	.433	1.126	.318	.238	.380	3
M8	x 1.0	BU37A	BV37A	D11	2.720	.433	1.126	.318	.238	.380	3
M10	x 1.5	BU426	BV426	D6	2.937	.512	1.252	.381	.286	.440	3
M10	x 1.5	BU42A	BV42A	D11	2.937	.512	1.252	.381	.286	.440	3
M10	x 1.25	BU435	BV435	D5	2.937	.472	1.252	.381	.286	.440	3
M10	x 1.25	BU43A	BV43A	D11	2.937	.472	1.252	.381	.286	.440	3
M10	x 1.0	BU445	BV445	D5	2.937	.433	1.252	.381	.286	.440	3
M10	x 1.0	BU44A	BV44A	D11	2.937	.433	1.252	.381	.286	.440	3
M12	x 1.75	BU506	BV506	D6	3.374	.591	2.067	.367	.275	.440	3
M12	x 1.75	BU50A	BV50A	D11	3.374	.591	2.067	.367	.275	.440	3
M12	x 1.5	BU516	BV516	D6	3.374	.591	2.067	.367	.275	.440	3
M12	x 1.5	BU51A	BV51A	D11	3.374	.591	2.067	.367	.275	.440	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel				Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	◎	◎	◎	◎	○	○		○	○	○						

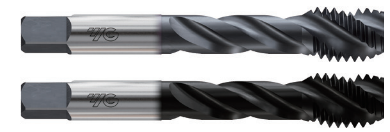
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended													○								

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TAP STEEL

BU / BV SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels



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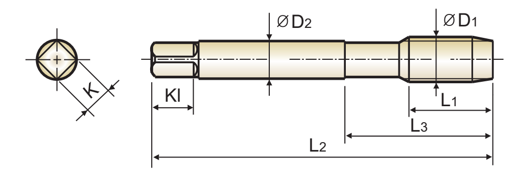
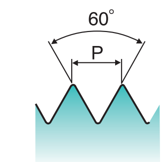
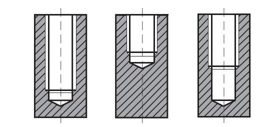




A variety of D Limit

Material groups: VG | HSS-E | M/MF | USCTI 302A | 2P~3P | Steam Oxide | Hardslick | R45

Thread Depth / Hole Type: 2.5×D



Unit : Inch

Size	Pitch	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Steam Oxide	Hardslick		L2	L1	L3	D2	K	Kl	
M12	x 1.25	BU525	BV525	D5	3.374	.551	2.067	.367	.275	.440	3
M12	x 1.25	BU52A	BV52A	D11	3.374	.551	2.067	.367	.275	.440	3
M14	x 2.0	BU547	BV547	D7	3.594	.709	2.067	.429	.322	.500	3
M14	x 1.5	BU556	BV556	D6	3.594	.551	2.067	.429	.322	.500	3
M16	x 2.0	BU607	BV607	D7	3.811	.709	2.205	.480	.360	.560	3
M16	x 1.5	BU616	BV616	D6	3.811	.551	2.205	.480	.360	.560	3
M18	x 2.5	BU657	BV657	D7	4.031	.787	2.205	.542	.406	.630	4
M18	x 1.5	BU676	BV676	D6	4.031	.551	2.205	.542	.406	.630	4
M20	x 2.5	BU708	BV708	D8	4.469	.787	2.480	.652	.489	.690	4
M20	x 1.5	BU726	BV726	D6	4.469	.551	2.480	.652	.489	.690	4
M22	x 2.5	BU748	BV748	D8	4.689	.787	2.815	.697	.523	.750	4
M22	x 1.5	BU766	BV766	D6	4.689	.551	2.815	.697	.523	.750	4
M24	x 3.0	BU788	BV788	D8	4.906	.945	2.815	.760	.570	.750	4
M24	x 1.5	BU806	BV806	D6	4.906	.551	2.815	.760	.570	.750	4
M27	x 3.0	BU868	BV868	D8	5.126	.945	3.091	.896	.672	.880	4
M27	x 1.5	BU886	BV886	D6	5.126	.591	3.091	.896	.672	.880	4
M30	x 3.5	BU949	BV949	D9	5.437	1.102	3.150	1.021	.766	1.000	4
M30	x 1.5	BU976	BV976	D6	5.437	.591	3.150	1.021	.766	1.000	4

◎ : Excellent ○ : Good

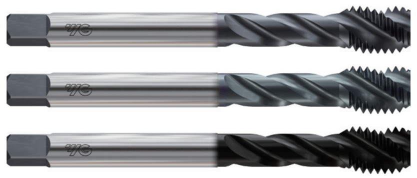
ISO	P										M			K					
Material Description	Non-alloy steel				Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	◎	◎	◎	◎	○	○		○	○	○						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended													○								

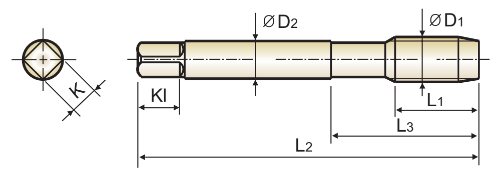
YG TAP STEEL

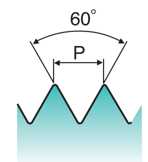
E2/E4/E5 SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels



DIN Length-ANSI Shank





Thread Depth / Hole Type

2.5×D

Material groups: VG | HSS-E | M/MF | 2P~3P | Steam Oxide | TiCN | Hardslick | R45

Unit : Inch

Size			Pitch	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1				Steam Oxide	TiCN	Hardslick		L2	L1	L3	D2	K	Kl	
M3	x	0.5		E2203	E4203	E5203	D3	2.205	.197	.646	.141	.110	.190	3
M3.5	x	0.6		E2224	E4224	E5224	D4	2.205	.276	.709	.141	.110	.190	3
M4	x	0.7		E2244	E4244	E5244	D4	2.480	.276	.768	.168	.131	.250	3
M5	x	0.8		E2284	E4284	E5284	D4	2.756	.354	.933	.194	.152	.250	3
M6	x	1.0		E2315	E4315	E5315	D5	3.150	.433	1.000	.255	.191	.310	3
M7	x	1.0		E2345	E4345	E5345	D5	3.150	.433	1.126	.318	.238	.380	3
M8	x	1.25		E2365	E4365	E5365	D5	3.543	.472	1.126	.318	.238	.380	3
M8	x	1.0		E2375	E4375	E5375	D5	3.543	.433	1.126	.318	.238	.380	3
M10	x	1.5		E2426	E4426	E5426	D6	3.937	.512	1.252	.381	.286	.440	3
M10	x	1.25		E2435	E4435	E5435	D5	3.937	.472	1.252	.381	.286	.440	3
M12	x	1.75		E2506	E4506	E5506	D6	4.331	.591	2.067	.367	.275	.440	3
M12	x	1.25		E2525	E4525	E5525	D5	3.937	.551	2.067	.367	.275	.440	3
M14	x	2.0		E2547	E4547	E5547	D7	4.331	.709	2.067	.429	.322	.500	3
M14	x	1.5		E2556	E4556	E5556	D6	3.937	.551	2.067	.429	.322	.500	3
M16	x	2.0		E2607	E4607	E5607	D7	4.331	.709	2.205	.480	.360	.560	3
M16	x	1.5		E2616	E4616	E5616	D6	3.937	.551	2.205	.480	.360	.560	3
M18	x	2.5		E2657	E4657	E5657	D7	4.921	.787	2.205	.542	.406	.630	4
M18	x	1.5		E2676	E4676	E5676	D6	4.331	.551	2.205	.542	.406	.630	4

◎ : Excellent ○ : Good

ISO	P										M			K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	◎	◎	◎	◎	○	○		○	○	○						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended													○								

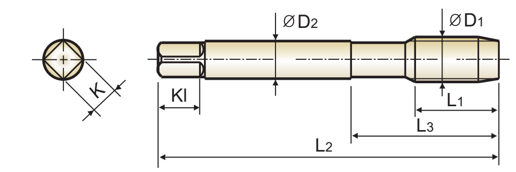
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

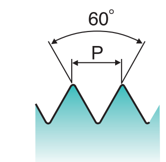
YG TAP STEEL

J3/J4/J8 SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels

ANSI





A variety of H Limit

Thread Depth / Hole Type

3.0×D

Material groups: VG | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Bright | Steam Oxide | Hardslick

Unit : Inch

Size		TPI	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Steam Oxide	Bright	Hardslick		L2	L1	L3	D2	K	Kl	
#2	-	56UNC	J3082	J4082	J8082	H2	1.752	.256	.433	.141	.110	.190	2
#3	-	48UNC	J3122	J4122	J8122	H2	1.811	.295	.492	.141	.110	.190	2
#4	-	40UNC	J3162	J4162	J8162	H2	1.874	.335	.563	.141	.110	.190	2
#4	-	40UNC	J3163	J4163	J8163	H3	1.874	.335	.563	.141	.110	.190	2
#4	-	40UNC	J3164	J4164	J8164	H4	1.874	.335	.563	.141	.110	.190	2
#4	-	40UNC	J3165	J4165	J8165	H5	1.874	.335	.563	.141	.110	.190	2
#4	-	48UNF	J3182	J4182	J8182	H2	1.874	.335	.563	.141	.110	.190	2
#5	-	40UNC	J3202	J4202	J8202	H2	1.937	.374	.626	.141	.110	.190	2
#6	-	32UNC	J3242	J4242	J8242	H2	2.000	.413	.689	.141	.110	.190	3
#6	-	32UNC	J3243	J4243	J8243	H3	2.000	.413	.689	.141	.110	.190	3
#6	-	32UNC	J3244	J4244	J8244	H4	2.000	.413	.689	.141	.110	.190	3
#6	-	32UNC	J3245	J4245	J8245	H5	2.000	.413	.689	.141	.110	.190	3
#6	-	32UNC	J3246	J4246	J8246	H6	2.000	.413	.689	.141	.110	.190	3
#6	-	32UNC	J3247	J4247	J8247	H7	2.000	.413	.689	.141	.110	.190	3
#6	-	32UNC	J324A	J424A	J824A	H11	2.000	.413	.689	.141	.110	.190	3
#6	-	40UNF	J3262	J4262	J8262	H2	2.000	.413	.689	.141	.110	.190	3
#8	-	32UNC	J3282	J4282	J8282	H2	2.126	.453	.752	.168	.131	.250	3
#8	-	32UNC	J3283	J4283	J8283	H3	2.126	.453	.752	.168	.131	.250	3
#8	-	32UNC	J3284	J4284	J8284	H4	2.126	.453	.752	.168	.131	.250	3
#8	-	32UNC	J3285	J4285	J8285	H5	2.126	.453	.752	.168	.131	.250	3
#8	-	32UNC	J3286	J4286	J8286	H6	2.126	.453	.752	.168	.131	.250	3
#8	-	32UNC	J3287	J4287	J8287	H7	2.126	.453	.752	.168	.131	.250	3
#8	-	32UNC	J328A	J428A	J828A	H11	2.126	.453	.752	.168	.131	.250	3
#8	-	36UNC	J3302	J4302	J8302	H2	2.126	.453	.752	.168	.131	.250	3
#10	-	24UNC	J3323	J4323	J8323	H3	2.374	.531	.906	.194	.152	.250	3
#10	-	24UNC	J3325	J4325	J8325	H5	2.374	.531	.906	.194	.152	.250	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

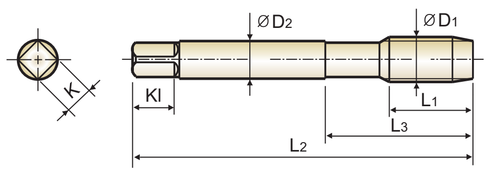
ISO	P										M			K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	◎	◎	◎	◎	○	○		○	○	○						

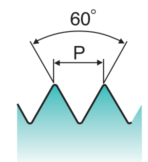
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended													○								

YG TAP STEEL

J3/J4/J8 SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels

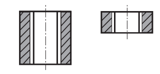




ANSI

A variety of H Limit

Thread Depth / Hole Type



3.0×D

Material groups: VG | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Bright | Steam Oxide | Hardslick

Unit : Inch

Size	TPI	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Steam Oxide	Bright	Hardslick		L2	L1	L3	D2	K	Kl	
#10 -	24UNC	J332A	J432A	J832A	H11	2.374	.531	.906	.194	.152	.250	3
#10 -	32UNF	J3342	J4342	J8342	H2	2.374	.531	.906	.194	.152	.250	3
#10 -	32UNF	J3343	J4343	J8343	H3	2.374	.531	.906	.194	.152	.250	3
#10 -	32UNF	J3344	J4344	J8344	H4	2.374	.531	.906	.194	.152	.250	3
#10 -	32UNF	J3345	J4345	J8345	H5	2.374	.531	.906	.194	.152	.250	3
#10 -	32UNF	J3346	J4346	J8346	H6	2.374	.531	.906	.194	.152	.250	3
#10 -	32UNF	J3347	J4347	J8347	H7	2.374	.531	.906	.194	.152	.250	3
#10 -	32UNF	J334A	J434A	J834A	H11	2.374	.531	.906	.194	.152	.250	3
#12 -	24UNC	J3363	J4363	J8363	H3	2.374	.571	.906	.220	.165	.280	3
#12 -	28UNF	J3383	J4383	J8383	H3	2.374	.571	.906	.220	.165	.280	3
1/4 -	20UNC	J3402	J4402	J8402	H2	2.500	.591	1.000	.255	.191	.310	3
1/4 -	20UNC	J3403	J4403	J8403	H3	2.500	.591	1.000	.255	.191	.310	3
1/4 -	20UNC	J3405	J4405	J8405	H5	2.500	.591	1.000	.255	.191	.310	3
1/4 -	20UNC	J3407	J4407	J8407	H7	2.500	.591	1.000	.255	.191	.310	3
1/4 -	20UNC	J340A	J440A	J840A	H11	2.500	.591	1.000	.255	.191	.310	3
1/4 -	28UNF	J3422	J4422	J8422	H2	2.500	.591	1.000	.255	.191	.310	3
1/4 -	28UNF	J3423	J4423	J8423	H3	2.500	.591	1.000	.255	.191	.310	3
1/4 -	28UNF	J3424	J4424	J8424	H4	2.500	.591	1.000	.255	.191	.310	3
1/4 -	28UNF	J3425	J4425	J8425	H5	2.500	.591	1.000	.255	.191	.310	3
1/4 -	28UNF	J3426	J4426	J8426	H6	2.500	.591	1.000	.255	.191	.310	3
1/4 -	28UNF	J3427	J4427	J8427	H7	2.500	.591	1.000	.255	.191	.310	3
1/4 -	28UNF	J342A	J442A	J842A	H11	2.500	.591	1.000	.255	.191	.310	3
5/16 -	18UNC	J3443	J4443	J8443	H3	2.720	.669	1.126	.318	.238	.380	3
5/16 -	18UNC	J3445	J4445	J8445	H5	2.720	.669	1.126	.318	.238	.380	3
5/16 -	18UNC	J3447	J4447	J8447	H7	2.720	.669	1.126	.318	.238	.380	3
5/16 -	18UNC	J344A	J444A	J844A	H11	2.720	.669	1.126	.318	.238	.380	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	◎	◎	◎	◎	○	○		○	○	○						

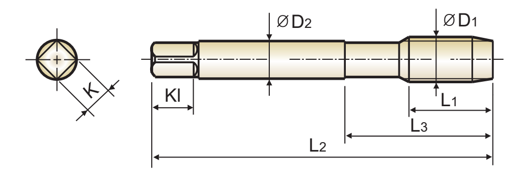
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended													○								

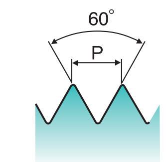
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TAP STEEL

J3/J4/J8 SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels

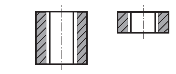




ANSI

A variety of H Limit

Thread Depth / Hole Type



3.0×D

Material groups: VG | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Bright | Steam Oxide | Hardslick

Unit : Inch

Size	TPI	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Steam Oxide	Bright	Hardslick		L2	L1	L3	D2	K	Kl	
5/16 -	24UNF	J3462	J4462	J8462	H2	2.720	.669	1.126	.318	.238	.380	3
5/16 -	24UNF	J3463	J4463	J8463	H3	2.720	.669	1.126	.318	.238	.380	3
5/16 -	24UNF	J3464	J4464	J8464	H4	2.720	.669	1.126	.318	.238	.380	3
5/16 -	24UNF	J3465	J4465	J8465	H5	2.720	.669	1.126	.318	.238	.380	3
5/16 -	24UNF	J3466	J4466	J8466	H6	2.720	.669	1.126	.318	.238	.380	3
5/16 -	24UNF	J3467	J4467	J8467	H7	2.720	.669	1.126	.318	.238	.380	3
5/16 -	24UNF	J346A	J446A	J846A	H11	2.720	.669	1.126	.318	.238	.380	3
3/8 -	16UNC	J3483	J4483	J8483	H3	2.937	.748	1.252	.381	.286	.440	3
3/8 -	16UNC	J3485	J4485	J8485	H5	2.937	.748	1.252	.381	.286	.440	3
3/8 -	16UNC	J3487	J4487	J8487	H7	2.937	.748	1.252	.381	.286	.440	3
3/8 -	16UNC	J348A	J448A	J848A	H11	2.937	.748	1.252	.381	.286	.440	3
3/8 -	24UNF	J3502	J4502	J8502	H2	2.937	.748	1.252	.381	.286	.440	3
3/8 -	24UNF	J3503	J4503	J8503	H3	2.937	.748	1.252	.381	.286	.440	3
3/8 -	24UNF	J3504	J4504	J8504	H4	2.937	.748	1.252	.381	.286	.440	3
3/8 -	24UNF	J3505	J4505	J8505	H5	2.937	.748	1.252	.381	.286	.440	3
3/8 -	24UNF	J3506	J4506	J8506	H6	2.937	.748	1.252	.381	.286	.440	3
3/8 -	24UNF	J3507	J4507	J8507	H7	2.937	.748	1.252	.381	.286	.440	3
3/8 -	24UNF	J350A	J450A	J850A	H11	2.937	.748	1.252	.381	.286	.440	3
7/16 -	14UNC	J3523	J4523	J8523	H3	3.157	.866	1.437	.323	.242	.410	3
7/16 -	14UNC	J3525	J4525	J8525	H5	3.157	.866	1.437	.323	.242	.410	3
7/16 -	14UNC	J3527	J4527	J8527	H7	3.157	.866	1.437	.323	.242	.410	3
7/16 -	14UNC	J352A	J452A	J852A	H11	3.157	.866	1.437	.323	.242	.410	3
7/16 -	20UNF	J3543	J4543	J8543	H3	3.157	.866	1.437	.323	.242	.410	3
7/16 -	20UNF	J3545	J4545	J8545	H5	3.157	.866	1.437	.323	.242	.410	3
7/16 -	20UNF	J3547	J4547	J8547	H7	3.157	.866	1.437	.323	.242	.410	3
7/16 -	20UNF	J354A	J454A	J854A	H11	3.157	.866	1.437	.323	.242	.410	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

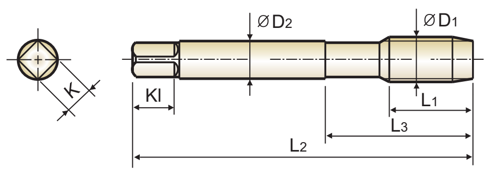
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	◎	◎	◎	◎	○	○		○	○	○						

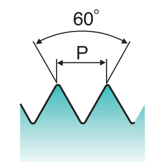
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended													○								

YG TAP STEEL

J3/J4/J8 SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels





ANSI

A variety of H Limit

Thread Depth / Hole Type: 3.0×D

Material groups: VG | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Bright | Steam Oxide | Hardslick

Unit : Inch

Size D1		TPI	EDP No. Steam Oxide	EDP No. Bright	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
1/2	-	13UNC	J3563	J4563	J8563	H3	3.374	.984	1.657	.367	.275	.440	3
1/2	-	13UNC	J3565	J4565	J8565	H5	3.374	.984	1.657	.367	.275	.440	3
1/2	-	13UNC	J3567	J4567	J8567	H7	3.374	.984	1.657	.367	.275	.440	3
1/2	-	13UNC	J356A	J456A	J856A	H11	3.374	.984	1.657	.367	.275	.440	3
1/2	-	20UNF	J3582	J4582	J8582	H2	3.374	.984	1.657	.367	.275	.440	3
1/2	-	20UNF	J3583	J4583	J8583	H3	3.374	.984	1.657	.367	.275	.440	3
1/2	-	20UNF	J3585	J4585	J8585	H5	3.374	.984	1.657	.367	.275	.440	3
1/2	-	20UNF	J3587	J4587	J8587	H7	3.374	.984	1.657	.367	.275	.440	3
1/2	-	20UNF	J358A	J458A	J858A	H11	3.374	.984	1.657	.367	.275	.440	3
9/16	-	12UNC	J3605	J4605	J8605	H5	3.594	.984	1.657	.429	.322	.500	3
9/16	-	18UNF	J3625	J4625	J8625	H5	3.594	.984	1.657	.429	.322	.500	3
5/8	-	11UNC	J3643	J4643	J8643	H3	3.811	1.083	1.811	.480	.360	.560	3
5/8	-	11UNC	J3645	J4645	J8645	H5	3.811	1.083	1.811	.480	.360	.560	3
5/8	-	18UNF	J3663	J4663	J8663	H3	3.811	1.083	1.811	.480	.360	.560	3
5/8	-	18UNF	J3665	J4665	J8665	H5	3.811	1.083	1.811	.480	.360	.560	3
5/8	-	18UNF	J3667	J4667	J8667	H7	3.811	1.083	1.811	.480	.360	.560	3
3/4	-	10UNC	J3703	J4703	J8703	H3	4.252	1.201	2.000	.590	.442	.690	3
3/4	-	10UNC	J3705	J4705	J8705	H5	4.252	1.201	2.000	.590	.442	.690	3
3/4	-	16UNF	J3723	J4723	J8723	H3	4.252	1.201	2.000	.590	.442	.690	3
3/4	-	16UNF	J3725	J4725	J8725	H5	4.252	1.201	2.000	.590	.442	.690	3
7/8	-	9UNC	J3745	J4745	J8745	H5	4.689	1.339	2.220	.697	.523	.750	3
7/8	-	14UNF	J3764	J4764	J8764	H4	4.689	1.339	2.220	.697	.523	.750	3
1"	-	8UNC	J3784	J4784	J8784	H4	5.126	1.496	2.500	.800	.600	.810	3
1"	-	12UNF	J3804	J4804	J8804	H4	5.126	1.496	2.500	.800	.600	.810	3
1-1/8	-	7UNC	J3826	J4826	J8826	H6	5.437	1.535	2.563	.896	.672	.880	4
1-1/8	-	8UN	J3836	J4836	J8836	H6	5.437	1.535	2.563	.896	.672	.880	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	◎	◎	◎	◎	○	○		○	○	○						

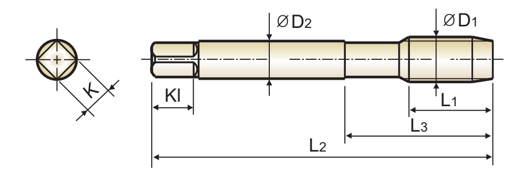
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended													○								

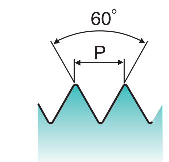
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TAP STEEL

J3/J4/J8 SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels





ANSI

A variety of H Limit

Thread Depth / Hole Type: 3.0×D

Material groups: VG | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Bright | Steam Oxide | Hardslick

Unit : Inch

Size D1		TPI	EDP No. Steam Oxide	EDP No. Bright	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
1-1/8	-	12UNF	J3845	J4845	J8845	H5	5.437	1.535	2.563	.896	.672	.880	4
1-1/4	-	7UNC	J3866	J4866	J8866	H6	5.752	1.535	2.563	1.021	.766	1.000	4
1-1/4	-	8UN	J3876	J4876	J8876	H6	5.752	1.535	2.563	1.021	.766	1.000	4
1-1/4	-	12UNF	J3885	J4885	J8885	H5	5.752	1.535	2.563	1.021	.766	1.000	4
1-3/8	-	6UNC	J3906	J4906	J8906	H6	6.063	1.791	3.000	1.108	.831	1.060	4
1-3/8	-	8UN	J3916	J4916	J8916	H6	6.063	1.791	3.000	1.108	.831	1.060	4
1-3/8	-	12UNF	J3925	J4925	J8925	H5	6.063	1.791	3.000	1.108	.831	1.060	4
1-1/2	-	6UNC	J3946	J4946	J8946	H6	6.374	1.791	3.000	1.233	.925	1.130	4
1-1/2	-	8UN	J3956	J4956	J8956	H6	6.374	1.791	3.000	1.233	.925	1.130	4
1-1/2	-	12UNF	J3965	J4965	J8965	H5	6.374	1.791	3.000	1.233	.925	1.130	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	◎	◎	◎	◎	○	○		○	○	○						

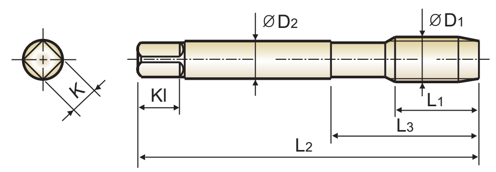
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended													○								

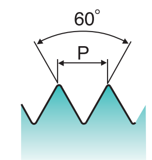
YG TAP STEEL

IB/IC SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels

ANSI





A variety of D Limit

Thread Depth / Hole Type: 3.0×D

Material groups: VG | HSS-E | M/MF | USCTI 302A | 4P~5P | Steam Oxide | Hardslick

Unit : Inch

Size D1		Pitch	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M3	x	0.5	IB203	IC203	D3	1.937	.374	.646	.141	.110	.190	3
M3	x	0.5	IB20A	IC20A	D11	1.937	.374	.646	.141	.110	.190	3
M3.5	x	0.6	IB224	IC224	D4	2.000	.413	.709	.141	.110	.190	3
M3.5	x	0.6	IB22A	IC22A	D11	2.000	.413	.709	.141	.110	.190	3
M4	x	0.7	IB244	IC244	D4	2.126	.453	.768	.168	.131	.250	3
M4	x	0.7	IB24A	IC24A	D11	2.126	.453	.768	.168	.131	.250	3
M5	x	0.8	IB284	IC284	D4	2.374	.531	.933	.194	.152	.250	3
M5	x	0.8	IB28A	IC28A	D11	2.374	.531	.933	.194	.152	.250	3
M6	x	1.0	IB315	IC315	D5	2.500	.591	1.000	.255	.191	.310	3
M6	x	1.0	IB31A	IC31A	D11	2.500	.591	1.000	.255	.191	.310	3
M7	x	1.0	IB345	IC345	D5	2.720	.669	1.126	.318	.238	.380	3
M7	x	1.0	IB34A	IC34A	D11	2.720	.669	1.126	.318	.238	.380	3
M8	x	1.25	IB365	IC365	D5	2.720	.669	1.126	.318	.238	.380	3
M8	x	1.25	IB36A	IC36A	D11	2.720	.669	1.126	.318	.238	.380	3
M8	x	1.0	IB375	IC375	D5	2.720	.669	1.126	.318	.238	.380	3
M8	x	1.0	IB37A	IC37A	D11	2.720	.669	1.126	.318	.238	.380	3
M10	x	1.5	IB426	IC426	D6	2.937	.748	1.252	.381	.286	.440	3
M10	x	1.5	IB42A	IC42A	D11	2.937	.748	1.252	.381	.286	.440	3
M10	x	1.25	IB435	IC435	D5	2.937	.748	1.252	.381	.286	.440	3
M10	x	1.25	IB43A	IC43A	D11	2.937	.748	1.252	.381	.286	.440	3
M10	x	1.0	IB445	IC445	D5	2.937	.748	1.252	.381	.286	.440	3
M10	x	1.0	IB44A	IC44A	D11	2.937	.748	1.252	.381	.286	.440	3
M12	x	1.75	IB506	IC506	D6	3.374	.984	1.657	.367	.275	.440	3
M12	x	1.75	IB50A	IC50A	D11	3.374	.984	1.657	.367	.275	.440	3
M12	x	1.5	IB516	IC516	D6	3.374	.984	1.657	.367	.275	.440	3
M12	x	1.5	IB51A	IC51A	D11	3.374	.984	1.657	.367	.275	.440	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	◎	◎	◎	◎	○	○		○	○	○						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended													○								

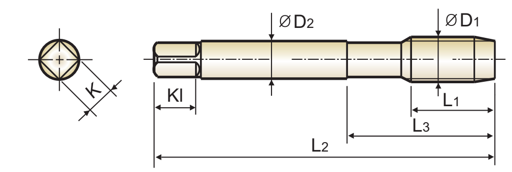
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

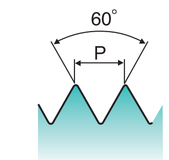
YG TAP STEEL

IB/IC SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels

ANSI





A variety of D Limit

Thread Depth / Hole Type: 3.0×D

Material groups: VG | HSS-E | M/MF | USCTI 302A | 4P~5P | Steam Oxide | Hardslick

Unit : Inch

Size D1		Pitch	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M12	x	1.25	IB525	IC525	D5	3.374	.984	1.657	.367	.275	.440	3
M12	x	1.25	IB52A	IC52A	D11	3.374	.984	1.657	.367	.275	.440	3
M14	x	2.0	IB547	IC547	D7	3.594	.984	1.657	.429	.322	.500	3
M14	x	1.5	IB556	IC556	D6	3.594	.984	1.657	.429	.322	.500	3
M16	x	2.0	IB607	IC607	D7	3.811	1.083	1.811	.480	.360	.560	3
M16	x	1.5	IB616	IC616	D6	3.811	1.083	1.811	.480	.360	.560	3
M18	x	2.5	IB657	IC657	D7	4.031	1.083	1.811	.542	.406	.630	3
M18	x	1.5	IB676	IC676	D6	4.031	1.083	1.811	.542	.406	.630	3
M20	x	2.5	IB708	IC708	D8	4.469	1.201	2.000	.652	.489	.690	3
M20	x	1.5	IB726	IC726	D6	4.469	1.201	2.000	.652	.489	.690	3
M22	x	2.5	IB748	IC748	D8	4.689	1.339	2.220	.697	.523	.750	3
M22	x	1.5	IB766	IC766	D6	4.689	1.339	2.220	.697	.523	.750	3
M24	x	3.0	IB788	IC788	D8	4.906	1.339	2.220	.760	.570	.750	4
M24	x	1.5	IB806	IC806	D6	4.906	1.339	2.220	.760	.570	.750	4
M27	x	3.0	IB868	IC868	D8	5.126	1.496	2.500	.896	.672	.880	4
M27	x	1.5	IB886	IC886	D6	5.126	1.496	2.500	.896	.672	.880	4
M30	x	3.5	IB949	IC949	D9	5.437	1.713	2.854	1.021	.766	1.000	4
M30	x	1.5	IB976	IC976	D6	5.437	1.713	2.854	1.021	.766	1.000	4

◎ : Excellent ○ : Good

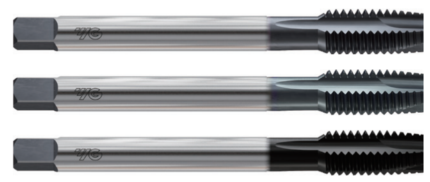
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	◎	◎	◎	◎	○	○		○	○	○						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended													○								

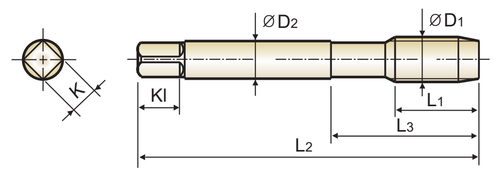
YG TAP STEEL

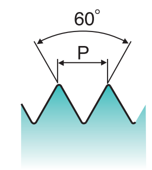
J9 / K7 / K2 SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels



DIN Length-ANSI Shank





Thread Depth / Hole Type: 3.0×D

Material groups: VG | HSS-E | M/MF | 4P~5P | Steam Oxide | TiCN | Hardslick

Unit : Inch

Size D1		Pitch	EDP No. Steam Oxide	EDP No. TiCN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M3	x	0.5	J9203	K7203	K2203	D3	2.205	.374	.646	.141	.110	.190	3
M3.5	x	0.6	J9224	K7224	K2224	D4	2.205	.413	.709	.141	.110	.190	3
M4	x	0.7	J9244	K7244	K2244	D4	2.480	.453	.768	.168	.131	.250	3
M5	x	0.8	J9284	K7284	K2284	D4	2.756	.531	.933	.194	.152	.250	3
M6	x	1.0	J9315	K7315	K2315	D5	3.150	.591	1.000	.255	.191	.310	3
M7	x	1.0	J9345	K7345	K2345	D5	3.150	.669	1.126	.318	.238	.380	3
M8	x	1.25	J9365	K7365	K2365	D5	3.543	.669	1.126	.318	.238	.380	3
M8	x	1.0	J9375	K7375	K2375	D5	3.543	.669	1.126	.318	.238	.380	3
M10	x	1.5	J9426	K7426	K2426	D6	3.937	.748	1.252	.381	.286	.440	3
M10	x	1.25	J9435	K7435	K2435	D5	3.937	.748	1.252	.381	.286	.440	3
M12	x	1.75	J9506	K7506	K2506	D6	4.331	.984	1.657	.367	.275	.440	3
M12	x	1.25	J9525	K7525	K2525	D5	3.937	.984	1.657	.367	.275	.440	3
M14	x	2.0	J9547	K7547	K2547	D7	4.331	.984	1.657	.429	.322	.500	3
M14	x	1.5	J9556	K7556	K2556	D6	3.937	.984	1.657	.429	.322	.500	3
M16	x	2.0	J9607	K7607	K2607	D7	4.331	1.083	1.811	.480	.360	.560	3
M16	x	1.5	J9616	K7616	K2616	D6	3.937	1.083	1.811	.480	.360	.560	3
M18	x	2.5	J9657	K7657	K2657	D7	4.921	1.083	1.811	.542	.406	.630	3
M18	x	1.5	J9676	K7676	K2676	D6	4.331	1.083	1.811	.542	.406	.630	3

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		◎	◎	◎	◎	◎	◎	◎	○	○		○	○	○						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended													○								

YG TAP INOX

- For Stainless Steels

SELECTION GUIDE

YG THREADING TOOLS

HSS-PM & HSS-E YG TAP INOX

- For Stainless Steels

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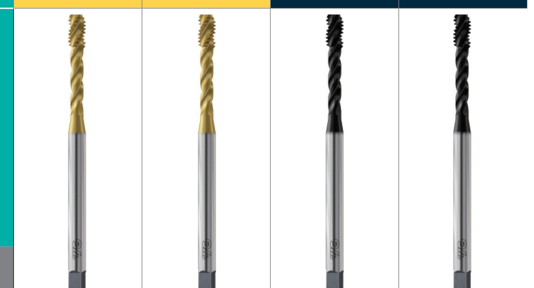
	G7	G8	G9	H0	B1	B0	B2	D2	BS	BT	E6	E8	E9
HOLE TYPE	Max. 3.0xD Blind Hole				Max. 3.0xD Through Hole								
TOOL MATERIAL	HSS-PM				HSS-E								
CHAMFER LEAD ACC. TO DIN2197	2P-3P				2P-3P								
FLUTE TYPE	Spiral Flute				Spiral Flute								
SPIRAL FLUTE ANGLE	R45				R45								
SERIES: M													
SERIES: M/MF									BS (p.B159)	BT (p.B159)	E6 (p.B160)	E8 (p.B160)	E9 (p.B160)
SERIES: UNC													
SERIES: UNC/UNF	G7 (p.B154)	G8 (p.B154)	G9 (p.B154)	H0 (p.B154)	B1 (p.B155)	B0 (p.B155)	B2 (p.B155)	D2 (p.B155)					
SERIES: UNC/UNF/UNS													
SERIES: UNC/UN8													
SERIES: NPT													
SERIES: NPTF													
SERIES: NPS/NPSF													
SURFACE TREATMENT / COATING	TiN	TiN	HardSlick	HardSlick	Bright	Steam Oxide	TiN	HardSlick	Steam Oxide	HardSlick	Steam Oxide	TiCN	HardSlick
MODEL													




ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	G7	G8	G9	H0	B1	B0	B2	D2	BS	BT	E6	E8	E9
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○ 50-80	○ 50-80	○ 50-80	○ 50-80	○ 25-50	○ 25-50	○ 50-80	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 50-80
	2		About 0.45% C	Annealed	190	13	◎ 50-80	◎ 50-80	◎ 50-80	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
	3		About 0.45% C	Quenched & Tempered	250	25	◎ 50-80	◎ 50-80	◎ 50-80	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
	4		About 0.75% C	Annealed	270	28	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
	5		About 0.75% C	Quenched & Tempered	300	32													
	6	Low alloy steel		Annealed	180	10	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
	7			Quenched & Tempered	275	29													
	8			Quenched & Tempered	300	32													
	9			Quenched & Tempered	350	38													
	10	High alloyed steel, and tool steel		Annealed	200	15													
	11			Quenched & Tempered	325	35													
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50	◎ 12-35	◎ 12-35	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50
	13		Martensitic	Quenched & Tempered	240	23	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50	◎ 12-35	◎ 12-35	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50
	14		Austenitic		180	10	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
K	15	Grey cast iron	Pearlitic / ferritic		180	10													
	16		Pearlitic (Martensitic)		260	26													
	17	Nodular cast iron	Ferritic		160	3													
	18		Pearlitic		250	25													
	19	Malleable cast iron	Ferritic		130														
	20		Pearlitic		230	21													
N	21	Aluminum-wrought alloy	Not Curable		60		○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65
	22		Curable	Hardened	100														
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75														
	24		≤ 12% Si, Curable	Hardened	90														
	25		> 12% Si, Not Curable		130														
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
	27		CuZn, CuSnZn (Brass)		90		○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
	28		CuSn, lead-free copper and electrolytic copper		100														
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic																
	30		Rubber, Wood, etc.																
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15													
	32			Cured	280	30													
	33		Ni or Co Based	Annealed	250	25													
	34			Cured	350	38													
	35			Cast	320	34													
	36	Titanium Alloys	Pure Titanium		400 Rm														
	37		Alpha + Beta Alloys	Hardened	1050 Rm														
H	38	Hardened steel		Hardened	550	55													
	39			Hardened	630	60													
	40	Chilled Cast Iron		Cast	400	42													
	41	Hardened Cast Iron		Hardened	550	55													

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SELECTION GUIDE

YG THREADING TOOLS

HSS-PM & HSS-E YG TAP INOX

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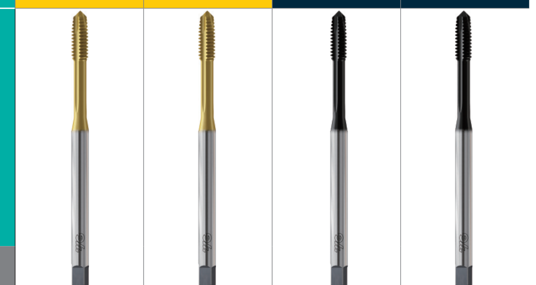
HOLE TYPE	Max. 3.0xD Through Hole			
TOOL MATERIAL	HSS-PM			
CHAMFER LEAD ACC. TO DIN2197	4P-5P			
FLUTE TYPE	Spiral Point			
SPIRAL FLUTE ANGLE	-			
SERIES: M				
SERIES: M/MF				
SERIES: UNC				
SERIES: UNC/UNF	M0 (p.B161)	M1 (p.B161)	M2 (p.B161)	M3 (p.B161)
SERIES: UNC/UNF/UNS				
SERIES: UNC/UN8				
SERIES: NPT				
SERIES: NPTF				
SERIES: NPS/NPSF				
SURFACE TREATMENT / COATING	TiN	TiN	HardSlick	HardSlick
MODEL				

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	M0	M1	M2	M3
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○ 50-80	○ 50-80	○ 50-80	○ 50-80
	2		About 0.45% C	Annealed	190	13	◎ 50-80	◎ 50-80	◎ 50-80	◎ 50-80
	3		About 0.45% C	Quenched & Tempered	250	25	◎ 50-80	◎ 50-80	◎ 50-80	◎ 50-80
	4		About 0.75% C	Annealed	270	28	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35
	5		About 0.75% C	Quenched & Tempered	300	32				
	6	Low alloy steel		Annealed	180	10	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35
	7			Quenched & Tempered	275	29				
	8			Quenched & Tempered	300	32				
	9			Quenched & Tempered	350	38				
	10	High alloyed steel, and tool steel		Annealed	200	15				
	11			Quenched & Tempered	325	35				
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50
	13		Martensitic	Quenched & Tempered	240	23	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50
	14		Austenitic		180	10	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15
K	15	Grey cast iron	Pearlitic / ferritic		180	10				
	16		Pearlitic (Martensitic)		260	26				
	17	Nodular cast iron	Ferritic		160	3				
	18		Pearlitic		250	25				
	19	Malleable cast iron	Ferritic		130					
	20		Pearlitic		230	21				
N	21	Aluminum-wrought alloy	Not Curable		60		○ 50-65	○ 50-65	○ 50-65	○ 50-65
	22		Curable	Hardened	100					
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75					
	24		≤ 12% Si, Curable	Hardened	90					
	25		> 12% Si, Not Curable		130					
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○ 30-65	○ 30-65	○ 30-65	○ 30-65
	27		CuZn, CuSnZn (Brass)		90		○ 30-65	○ 30-65	○ 30-65	○ 30-65
	28		CuSn, lead-free copper and electrolytic copper		100					
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic							
	30		Rubber, Wood, etc.							
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15				
	32			Cured	280	30				
	33		Ni or Co Based	Annealed	250	25				
	34			Cured	350	38				
	35			Cast	320	34				
	36	Titanium Alloys	Pure Titanium		400 Rm					
	37		Alpha + Beta Alloys	Hardened	1050 Rm					
H	38	Hardened steel		Hardened	550	55				
	39			Hardened	630	60				
	40	Chilled Cast Iron		Cast	400	42				
	41	Hardened Cast Iron		Hardened	550	55				

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HOLE TYPE	Max. 3.0xD Through Hole										Max. 2.5xD Blind Hole	
TOOL MATERIAL	HSS-E								HSS-PM		HSS-E	
CHAMFER LEAD	4P-5P								4P-5P		2P-3P	
FLUTE TYPE	Spiral Point								Spiral Flute		Spiral Flute	
SPIRAL FLUTE ANGLE	-								L15		R40	
M												
M/MF				O9 (p.B166)	IA (p.B166)	K3 (p.B167)	K5 (p.B167)	K6 (p.B167)				
UNC												
UNC/UNF	I0 (p.B162)	I2 (p.B162)	J2 (p.B162)						H2 (p.B168)	H4 (p.B168)		
UNC/UNF/UNS												
UNC/UN8											BG (p.B169)	BG-GB (p.B169)
NPT												
NPTF												
NPS/NPSF												
COATING	Steam Oxide	TiN	HardSlick	Steam Oxide	HardSlick	Steam Oxide	TiCN	HardSlick	TiN	HardSlick	HardSlick	Gold & Black
											Oil Field	
MODEL												

VDI	I0	I2	J2	O9	IA	K3	K5	K6	H2	H4	BG	BG-GB	ISO
1	○ 25-50	○ 50-80	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 50-80	○ 50-80	○ 50-80			P
2	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 50-80	◎ 50-80	○ 50-80	○ 50-80	
3	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 50-80	◎ 50-80	○ 50-80	○ 50-80	
4	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35	
5											◎ 10-35	◎ 10-35	
6	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35	
7											◎ 10-35	◎ 10-35	
8											◎ 10-35	◎ 10-35	
9											○ 10-35	○ 10-35	
10											○ 10-35	○ 10-35	
11													
12	◎ 12-35	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50	M
13	◎ 12-35	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50	
14	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	
15													K
16													
17													
18													
19													
20													
21	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65			N
22													
23													
24													
25													
26	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65			
27	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65			
28													
29													
30													
31													S
32													
33													
34													
35													
36													
37													
38													H
39													
40													
41													

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

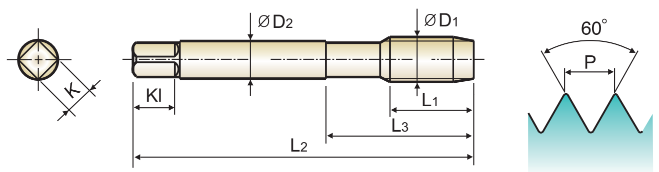
YG TAP INOX

G7 / G9 / G8 / H0 SERIES

EXTENDED LENGTH SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Stainless Steels

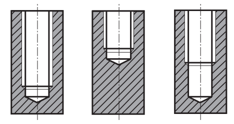
Extended length for greater reach

ANSI Long Shank



Thread Depth / Hole Type

2.5×D



Material groups: VA | HSS-PM | UNC UNF | USCTI Long Shank | 2P~3P | TiN | Hardslick | R45

Unit : Inch

Size		TPI	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			TiN 4" OAL	Hardslick 4" OAL		L2	L1	L3	D2	K	Kl	
#4	-	40UNC	G7162	G9162	H2	4.000	.236	.846	.141	.110	.190	3
#6	-	32UNC	G7243	G9243	H3	4.000	.276	1.024	.141	.110	.190	3
#8	-	32UNC	G7283	G9283	H3	4.000	.276	1.122	.168	.131	.250	3
#10	-	24UNC	G7323	G9323	H3	4.000	.354	1.319	.194	.152	.250	3
#10	-	32UNF	G7343	G9343	H3	4.000	.276	1.319	.194	.152	.250	3
1/4	-	20UNC	G7403	G9403	H3	4.000	.433	1.496	.255	.191	.310	3

Unit : Inch

Size		TPI	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			TiN 6" OAL	Hardslick 6" OAL		L2	L1	L3	D2	K	Kl	
#6	-	32UNC	G8243	H0243	H3	6.000	.276	1.024	.141	.110	.190	3
#8	-	32UNC	G8283	H0283	H3	6.000	.276	1.122	.168	.131	.250	3
#10	-	24UNC	G8323	H0323	H3	6.000	.354	1.319	.194	.152	.250	3
#10	-	32UNF	G8343	H0343	H3	6.000	.276	1.319	.194	.152	.250	3
1/4	-	20UNC	G8403	H0403	H3	6.000	.433	1.496	.255	.191	.310	3
1/4	-	28UNF	G8423	H0423	H3	6.000	.433	1.496	.255	.191	.310	3
5/16	-	18UNC	G8443	H0443	H3	6.000	.472	1.693	.318	.238	.380	3
5/16	-	24UNF	G8463	H0463	H3	6.000	.394	1.693	.318	.238	.380	3
3/8	-	16UNC	G8483	H0483	H3	6.000	.551	1.870	.381	.286	.440	3
3/8	-	24UNF	G8503	H0503	H3	6.000	.394	1.870	.381	.286	.440	3
7/16	-	14UNC	G8523	H0523	H3	6.000	.591	2.165	.323	.242	.410	3
7/16	-	20UNF	G8543	H0543	H3	6.000	.472	2.165	.323	.242	.410	3
1/2	-	13UNC	G8563	H0563	H3	6.000	.630	2.480	.367	.275	.440	3
1/2	-	20UNF	G8583	H0583	H3	6.000	.472	2.480	.367	.275	.440	3
5/8	-	11UNC	G8643	H0643	H3	6.000	.748	2.717	.480	.360	.560	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

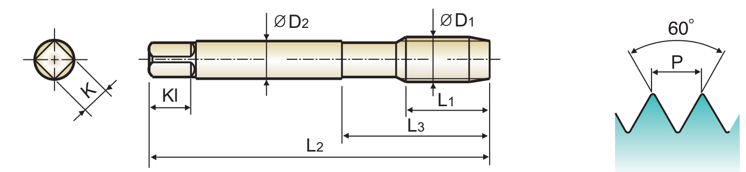
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

YG TAP INOX

B1/B0/B2/D2 SERIES

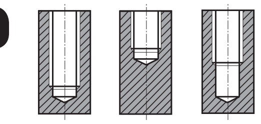
SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Stainless Steels

ANSI



Thread Depth / Hole Type

2.5×D



Material groups: VA | HSS-E | UNC UNF | USCTI 302A | 2P~3P | Bright | Steam Oxide | TiN | Hardslick | R45

Unit : Inch

Size		TPI	EDP No.				Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Bright	Steam Oxide	TiN	Hardslick		L2	L1	L3	D2	K	Kl	
#2	-	56UNC	B1082	B0082	B2082	D2082	H2	1.752	.157	.433	.141	.110	.190	2
#3	-	48UNC	-	B0122	-	D2122	H2	1.811	.197	.492	.141	.110	.190	2
#4	-	40UNC	B1162	B0162	B2162	D2162	H2	1.874	.236	.563	.141	.110	.190	2
#4	-	40UNC	-	B0163	-	D2163	H3	1.874	.236	.563	.141	.110	.190	2
#4	-	40UNC	-	B0164	-	D2164	H4	1.874	.236	.563	.141	.110	.190	2
#4	-	40UNC	B1165	B0165	-	D2165	H5	1.874	.236	.563	.141	.110	.190	2
#4	-	40UNC	B1166	B0166	-	D2166	H6	1.874	.236	.563	.141	.110	.190	2
#4	-	48UNF	-	B0182	-	D2182	H2	1.874	.236	.563	.141	.110	.190	2
#5	-	40UNC	B1202	B0202	B2202	D2202	H2	1.937	.236	.626	.141	.110	.190	3
#6	-	32UNC	-	B0242	-	D2242	H2	2.000	.276	.689	.141	.110	.190	3
#6	-	32UNC	B1243	B0243	B2243	D2243	H3	2.000	.276	.689	.141	.110	.190	3
#6	-	32UNC	-	B0244	-	D2244	H4	2.000	.276	.689	.141	.110	.190	3
#6	-	32UNC	-	B0245	-	D2245	H5	2.000	.276	.689	.141	.110	.190	3
#6	-	32UNC	-	B0247	-	D2247	H7	2.000	.276	.689	.141	.110	.190	3
#6	-	40UNF	-	B0262	-	D2262	H2	2.000	.276	.689	.141	.110	.190	3
#6	-	40UNF	-	B0263	-	D2263	H3	2.000	.276	.689	.141	.110	.190	3
#8	-	32UNC	-	B0282	-	D2282	H2	2.126	.276	.752	.168	.131	.250	3
#8	-	32UNC	B1283	B0283	B2283	D2283	H3	2.126	.276	.752	.168	.131	.250	3
#8	-	32UNC	-	B0284	-	D2284	H4	2.126	.276	.752	.168	.131	.250	3
#8	-	32UNC	-	B0285	-	D2285	H5	2.126	.276	.752	.168	.131	.250	3
#8	-	32UNC	-	B0286	-	D2286	H6	2.126	.276	.752	.168	.131	.250	3
#8	-	32UNC	-	B0287	-	D2287	H7	2.126	.276	.752	.168	.131	.250	3
#8	-	32UNF	-	B0303	-	D2303	H3	2.126	.276	.752	.168	.131	.250	3
#10	-	24UNC	-	B0322	-	D2322	H2	2.374	.354	.906	.194	.152	.250	3
#10	-	24UNC	B1323	B0323	B2323	D2323	H3	2.374	.354	.906	.194	.152	.250	3
#10	-	24UNC	-	B0325	-	D2325	H5	2.374	.354	.906	.194	.152	.250	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

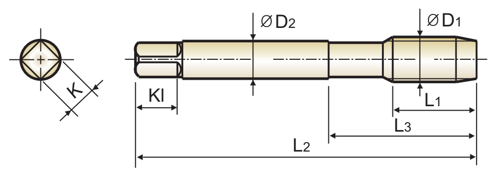
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

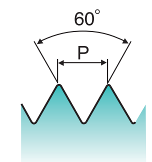
YG TAP INOX

B1/B0/B2/D2 SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Stainless Steels

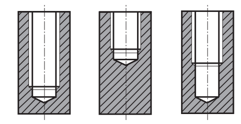
ANSI





Thread Depth / Hole Type

2.5×D



Material groups VA | HSS-E | UNC UNF | USCTI 302A | 2P~3P | Bright | Steam Oxide | TiN | Hardslick | R45

Unit : Inch

Size (D_1)	TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiN	EDP No. Hardslick	Limit	Overall Length (L_2)	Thread Length (L_1)	Neck Length (L_3)	Shank Diameter (D_2)	Square Size (K)	Square Length (Kl)	No. of Flute
#10 -	24UNC	-	B0327	-	D2327	H7	2.374	.354	.906	.194	.152	.250	3
#10 -	32UNF	-	B0342	-	D2342	H2	2.374	.276	.906	.194	.152	.250	3
#10 -	32UNF	B1343	B0343	B2343	D2343	H3	2.374	.276	.906	.194	.152	.250	3
#10 -	32UNF	-	B0344	-	D2344	H4	2.374	.276	.906	.194	.152	.250	3
#10 -	32UNF	-	B0345	-	D2345	H5	2.374	.276	.906	.194	.152	.250	3
#10 -	32UNF	-	B0346	-	D2346	H6	2.374	.276	.906	.194	.152	.250	3
#10 -	32UNF	-	B0347	-	D2347	H7	2.374	.276	.906	.194	.152	.250	3
#12 -	24UNC	-	B0363	-	D2363	H3	2.374	.354	.906	.220	.165	.280	3
#12 -	28UNF	-	B0383	-	D2383	H3	2.374	.276	.906	.220	.165	.280	3
1/4 -	20UNC	-	B0402	-	D2402	H2	2.500	.433	1.000	.255	.191	.310	3
1/4 -	20UNC	B1403	B0403	B2403	D2403	H3	2.500	.433	1.000	.255	.191	.310	3
1/4 -	20UNC	B1405	B0405	B2405	D2405	H5	2.500	.433	1.000	.255	.191	.310	3
1/4 -	20UNC	-	B0407	-	D2407	H7	2.500	.433	1.000	.255	.191	.310	3
1/4 -	28UNF	-	B0422	-	D2422	H2	2.500	.354	1.000	.255	.191	.310	3
1/4 -	28UNF	B1423	B0423	B2423	D2423	H3	2.500	.354	1.000	.255	.191	.310	3
1/4 -	28UNF	-	B0424	-	D2424	H4	2.500	.354	1.000	.255	.191	.310	3
1/4 -	28UNF	-	B0425	-	D2425	H5	2.500	.354	1.000	.255	.191	.310	3
1/4 -	28UNF	-	B0426	-	D2426	H6	2.500	.354	1.000	.255	.191	.310	3
1/4 -	28UNF	-	B0427	-	D2427	H7	2.500	.354	1.000	.255	.191	.310	3
5/16 -	18UNC	B1443	B0443	B2443	D2443	H3	2.720	.472	1.126	.318	.238	.380	3
5/16 -	18UNC	B1445	B0445	B2445	D2445	H5	2.720	.472	1.126	.318	.238	.380	3
5/16 -	18UNC	-	B0447	-	D2447	H7	2.720	.472	1.126	.318	.238	.380	3
5/16 -	24UNF	B1463	B0463	B2463	D2463	H3	2.720	.394	1.126	.318	.238	.380	3
5/16 -	24UNF	-	B0464	-	D2464	H4	2.720	.394	1.126	.318	.238	.380	3
5/16 -	24UNF	-	B0465	-	D2465	H5	2.720	.394	1.126	.318	.238	.380	3
5/16 -	24UNF	-	B0467	-	D2467	H7	2.720	.394	1.126	.318	.238	.380	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

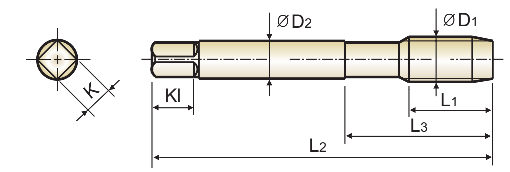
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

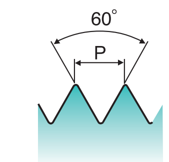
YG TAP INOX

B1/B0/B2/D2 SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Stainless Steels

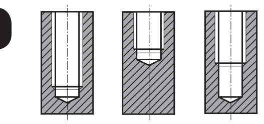
ANSI





Thread Depth / Hole Type

2.5×D



Material groups VA | HSS-E | UNC UNF | USCTI 302A | 2P~3P | Bright | Steam Oxide | TiN | Hardslick | R45

Unit : Inch

Size (D_1)	TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiN	EDP No. Hardslick	Limit	Overall Length (L_2)	Thread Length (L_1)	Neck Length (L_3)	Shank Diameter (D_2)	Square Size (K)	Square Length (Kl)	No. of Flute
3/8 -	16UNC	B1483	B0483	B2483	D2483	H3	2.937	.551	1.252	.381	.286	.440	3
3/8 -	16UNC	B1485	B0485	B2485	D2485	H5	2.937	.551	1.252	.381	.286	.440	3
3/8 -	16UNC	-	B0487	-	D2487	H7	2.937	.551	1.252	.381	.286	.440	3
3/8 -	24UNF	B1503	B0503	B2503	D2503	H3	2.937	.394	1.252	.381	.286	.440	3
3/8 -	24UNF	-	B0504	-	D2504	H4	2.937	.394	1.252	.381	.286	.440	3
3/8 -	24UNF	-	B0505	-	D2505	H5	2.937	.394	1.252	.381	.286	.440	3
7/16 -	14UNC	B1523	B0523	B2523	D2523	H3	3.157	.591	1.850	.323	.242	.410	3
7/16 -	14UNC	B1525	B0525	B2525	D2525	H5	3.157	.591	1.850	.323	.242	.410	3
7/16 -	14UNC	-	B0527	-	D2527	H7	3.157	.591	1.850	.323	.242	.410	3
7/16 -	20UNF	B1543	B0543	B2543	D2543	H3	3.157	.472	1.850	.323	.242	.410	3
7/16 -	20UNF	B1545	B0545	B2545	D2545	H5	3.157	.472	1.850	.323	.242	.410	3
7/16 -	20UNF	-	B0547	-	D2547	H7	3.157	.472	1.850	.323	.242	.410	3
1/2 -	13UNC	B1563	B0563	B2563	D2563	H3	3.374	.630	2.067	.367	.275	.440	3
1/2 -	13UNC	B1565	B0565	B2565	D2565	H5	3.374	.630	2.067	.367	.275	.440	3
1/2 -	13UNC	-	B0567	-	D2567	H7	3.374	.630	2.067	.367	.275	.440	3
1/2 -	20UNF	B1583	B0583	B2583	D2583	H3	3.374	.472	2.067	.367	.275	.440	3
1/2 -	20UNF	-	B0585	-	D2585	H5	3.374	.472	2.067	.367	.275	.440	3
1/2 -	20UNF	-	B0586	-	D2586	H6	3.374	.472	2.067	.367	.275	.440	3
1/2 -	20UNF	-	B0587	-	D2587	H7	3.374	.472	2.067	.367	.275	.440	3
9/16 -	12UNC	B1603	B0603	B2603	D2603	H3	3.594	.709	2.067	.429	.322	.500	3
9/16 -	18UNF	B1623	B0623	B2623	D2623	H3	3.594	.512	2.067	.429	.322	.500	3
5/8 -	11UNC	B1643	B0643	B2643	D2643	H3	3.811	.748	2.205	.480	.360	.560	4
5/8 -	11UNC	B1645	B0645	B2645	D2645	H5	3.811	.748	2.205	.480	.360	.560	4
5/8 -	18UNF	B1663	B0663	B2663	D2663	H3	3.811	.512	2.205	.480	.360	.560	4
5/8 -	18UNF	B1665	B0665	B2665	D2665	H5	3.811	.512	2.205	.480	.360	.560	4
3/4 -	10UNC	B1703	B0703	B2703	D2703	H3	4.252	.827	2.480	.590	.442	.690	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

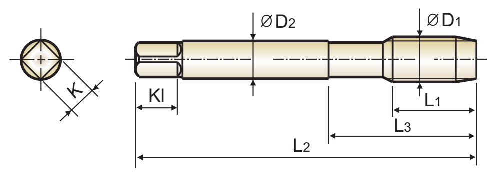
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

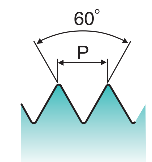
YG TAP INOX

B1/B0/B2/D2 SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Stainless Steels

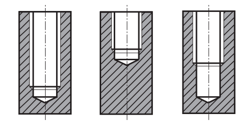
ANSI





Thread Depth / Hole Type

2.5×D



Material groups: VA | HSS-E | UNC UNF | USCTI 302A | 2P~3P | Bright | Steam Oxide | TiN | Hardslick | R45

Unit : Inch

Size		TPI	EDP No.				Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Bright	Steam Oxide	TiN	Hardslick		L2	L1	L3	D2	K	Kl	
3/4	-	10UNC	-	B0706	-	D2706	H6	4.252	.827	2.480	.590	.442	.690	4
3/4	-	16UNF	B1723	B0723	B2723	D2723	H3	4.252	.591	2.480	.590	.442	.690	4
3/4	-	16UNF	B1725	B0725	B2725	D2725	H5	4.252	.591	2.480	.590	.442	.690	4
7/8	-	9UNC	B1744	B0744	B2744	D2744	H4	4.689	.827	2.815	.697	.523	.750	4
7/8	-	14UNF	B1764	B0764	B2764	D2764	H4	4.689	.709	2.815	.697	.523	.750	4
1"	-	8UNC	B1784	B0784	B2784	D2784	H4	5.126	.984	3.091	.800	.600	.810	4
1"	-	12UNF	B1804	B0804	B2804	D2804	H4	5.126	.709	3.091	.800	.600	.810	4

◎ : Excellent ○ : Good

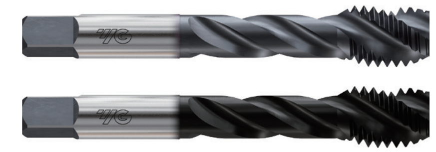
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

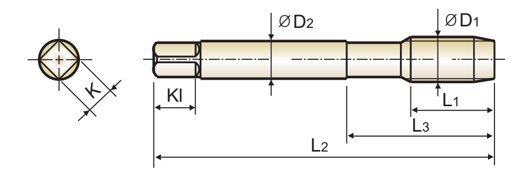
YG TAP INOX

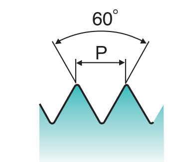
BS/BT SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Stainless Steels



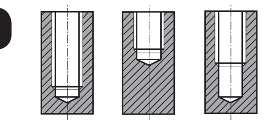
ANSI





Thread Depth / Hole Type

2.5×D



Material groups: VA | HSS-E | M/MF | USCTI 302A | 2P~3P | Steam Oxide | Hardslick | R45

Unit : Inch

Size		Pitch	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Steam Oxide	Hardslick		L2	L1	L3	D2	K	Kl	
M3	x	0.5	BS203	BT203	D3	1.937	.197	.646	.141	.110	.190	3
M3.5	x	0.6	BS224	BT224	D4	2.000	.276	.709	.141	.110	.190	3
M4	x	0.7	BS244	BT244	D4	2.126	.276	.768	.168	.131	.250	3
M5	x	0.8	BS284	BT284	D4	2.374	.354	.933	.194	.152	.250	3
M6	x	1.0	BS315	BT315	D5	2.500	.433	1.000	.255	.191	.310	3
M7	x	1.0	BS345	BT345	D5	2.720	.433	1.126	.318	.238	.380	3
M8	x	1.25	BS365	BT365	D5	2.720	.472	1.126	.318	.238	.380	3
M8	x	1.0	BS375	BT375	D5	2.720	.433	1.126	.318	.238	.380	3
M10	x	1.5	BS426	BT426	D6	2.937	.512	1.252	.381	.286	.440	3
M10	x	1.25	BS435	BT435	D5	2.937	.472	1.252	.381	.286	.440	3
M10	x	1.0	BS445	BT445	D5	2.937	.433	1.252	.381	.286	.440	3
M12	x	1.75	BS506	BT506	D6	3.374	.591	2.067	.367	.275	.440	3
M12	x	1.25	BS525	BT525	D5	3.374	.551	2.067	.367	.275	.440	3
M14	x	2.0	BS547	BT547	D7	3.594	.709	2.067	.429	.322	.500	3
M14	x	1.5	BS556	BT556	D6	3.594	.551	2.067	.429	.322	.500	3
M16	x	2.0	BS607	BT607	D7	3.811	.709	2.205	.480	.360	.560	3
M16	x	1.5	BS616	BT616	D6	3.811	.551	2.205	.480	.360	.560	3
M18	x	2.5	BS657	BT657	D7	4.031	.787	2.205	.542	.406	.630	4
M18	x	1.5	BS676	BT676	D6	4.031	.551	2.205	.542	.406	.630	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

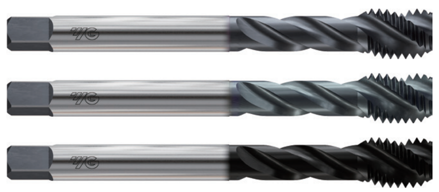
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

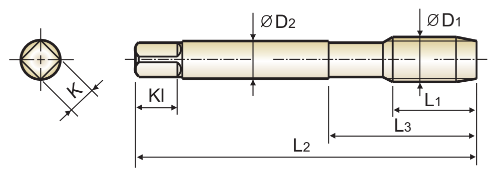
YG TAP INOX

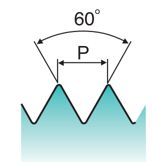
E6/E8/E9 SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Stainless Steels



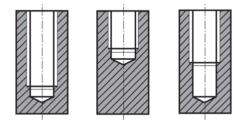
DIN Length-ANSI Shank





Thread Depth / Hole Type

2.5×D



Material groups: VA | HSS-E | M/MF | 2P~3P | Steam Oxide | TiCN | Hardslick | R45

Unit : Inch

Size		Pitch	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Steam Oxide	TiCN	Hardslick		L2	L1	L3	D2	K	Kl	
M3	x	0.5	E6203	E8203	E9203	D3	2.205	.197	.646	.141	.110	.190	3
M3.5	x	0.6	E6224	E8224	E9224	D4	2.205	.276	.709	.141	.110	.190	3
M4	x	0.7	E6244	E8244	E9244	D4	2.480	.276	.768	.168	.131	.250	3
M5	x	0.8	E6284	E8284	E9284	D4	2.756	.354	.933	.194	.152	.250	3
M6	x	1.0	E6315	E8315	E9315	D5	3.150	.433	1.000	.255	.191	.310	3
M7	x	1.0	E6345	E8345	E9345	D5	3.150	.433	1.126	.318	.238	.380	3
M8	x	1.25	E6365	E8365	E9365	D5	3.543	.472	1.126	.318	.238	.380	3
M8	x	1.0	E6375	E8375	E9375	D5	3.543	.433	1.126	.318	.238	.380	3
M10	x	1.5	E6426	E8426	E9426	D6	3.937	.512	1.252	.381	.286	.440	3
M10	x	1.25	E6435	E8435	E9435	D5	3.937	.472	1.252	.381	.286	.440	3
M12	x	1.75	E6506	E8506	E9506	D6	4.331	.591	2.067	.367	.275	.440	3
M12	x	1.25	E6525	E8525	E9525	D5	3.937	.551	2.067	.367	.275	.440	3
M14	x	2.0	E6547	E8547	E9547	D7	4.331	.709	2.067	.429	.322	.500	3
M14	x	1.5	E6556	E8556	E9556	D6	3.937	.551	2.067	.429	.322	.500	3
M16	x	2.0	E6607	E8607	E9607	D7	4.331	.709	2.205	.480	.360	.560	3
M16	x	1.5	E6616	E8616	E9616	D6	3.937	.551	2.205	.480	.360	.560	3
M18	x	2.5	E6657	E8657	E9657	D7	4.921	.787	2.205	.542	.406	.630	4
M18	x	1.5	E6676	E8676	E9676	D6	4.331	.551	2.205	.542	.406	.630	4

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

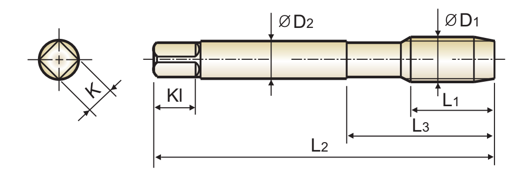
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

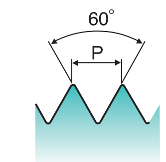
YG TAP INOX

M0/M2 SERIES
M1/M3 SERIES

EXTENDED LENGTH SPIRAL POINT TAPS PLUG STYLE for Stainless Steels

Extended length for greater reach

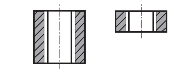




ANSI Long Shank

Thread Depth / Hole Type

3.0×D



Material groups: VA | HSS-PM | UNC UNF | USCTI Long Shank | 4P~5P | TiN | Hardslick

Unit : Inch

Size		TPI	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			TiN 4" OAL	Hardslick 4" OAL		L2	L1	L3	D2	K	Kl	
#4	-	40UNC	M0162	M2162	H2	4.000	.335	.846	.141	.110	.190	2
#6	-	32UNC	M0243	M2243	H3	4.000	.413	1.024	.141	.110	.190	2
#8	-	32UNC	M0283	M2283	H3	4.000	.453	1.122	.168	.131	.250	3
#10	-	24UNC	M0323	M2323	H3	4.000	.531	1.319	.194	.152	.250	3
#10	-	32UNF	M0343	M2343	H3	4.000	.531	1.319	.194	.152	.250	3
1/4	-	20UNC	M0403	M2403	H3	4.000	.591	1.496	.255	.191	.310	3

Unit : Inch

Size		TPI	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			TiN 6" OAL	Hardslick 6" OAL		L2	L1	L3	D2	K	Kl	
#6	-	32UNC	M1243	M3243	H3	6.000	.413	1.024	.141	.110	.190	2
#8	-	32UNC	M1283	M3283	H3	6.000	.453	1.122	.168	.131	.250	3
#10	-	24UNC	M1323	M3323	H3	6.000	.531	1.319	.194	.152	.250	3
#10	-	32UNF	M1343	M3343	H3	6.000	.531	1.319	.194	.152	.250	3
1/4	-	20UNC	M1403	M3403	H3	6.000	.591	1.496	.255	.191	.310	3
1/4	-	28UNF	M1423	M3423	H3	6.000	.591	1.496	.255	.191	.310	3
5/16	-	18UNC	M1443	M3443	H3	6.000	.669	1.693	.318	.238	.380	3
5/16	-	24UNF	M1463	M3463	H3	6.000	.669	1.693	.318	.238	.380	3
3/8	-	16UNC	M1483	M3483	H3	6.000	.748	1.870	.381	.286	.440	3
3/8	-	24UNF	M1503	M3503	H3	6.000	.748	1.870	.381	.286	.440	3
7/16	-	14UNC	M1523	M3523	H3	6.000	.866	2.165	.323	.242	.410	3
7/16	-	20UNF	M1543	M3543	H3	6.000	.866	2.165	.323	.242	.410	3
1/2	-	13UNC	M1563	M3563	H3	6.000	.984	2.480	.367	.275	.440	3
1/2	-	20UNF	M1583	M3583	H3	6.000	.984	2.480	.367	.275	.440	3
9/16	-	12UNC	M1603	M3603	H3	6.000	.984	2.480	.429	.322	.500	3
9/16	-	18UNF	M1623	M3623	H3	6.000	.984	2.480	.429	.322	.500	3
5/8	-	11UNC	M1643	M3643	H3	6.000	1.083	2.717	.480	.360	.560	3

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

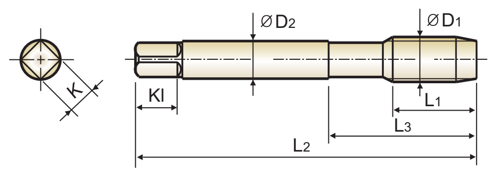
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

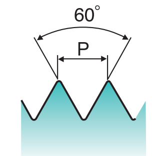
YG TAP INOX

I0/I2/J2 SERIES

SPIRAL POINT TAPS PLUG STYLE for Stainless Steels

ANSI





Thread Depth / Hole Type

3.0×D

Material groups: VA | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Steam Oxide | TiN | Hardslick

Unit : Inch

Size D1		TPI	EDP No. Steam Oxide	EDP No. TiN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#2	-	56UNC	I0082	I2082	J2082	H2	1.752	0.256	0.433	0.1410	0.110	.190	2
#2	-	56UNC	I0083	-	J2083	H3	1.752	0.256	0.433	0.1410	0.110	.190	2
#2	-	56UNC	I0084	-	J2084	H4	1.752	0.256	0.433	0.1410	0.110	.190	2
#3	-	48UNC	I0122	-	J2122	H2	1.811	0.295	0.492	0.1410	0.110	.190	2
#4	-	40UNC	I0162	I2162	J2162	H2	1.874	0.335	0.563	0.1410	0.110	.190	2
#4	-	40UNC	I0163	-	J2163	H3	1.874	0.335	0.563	0.1410	0.110	.190	2
#4	-	40UNC	I0164	-	J2164	H4	1.874	0.335	0.563	0.1410	0.110	.190	2
#4	-	40UNC	I0165	-	J2165	H5	1.874	0.335	0.563	0.1410	0.110	.190	2
#4	-	40UNC	I0166	-	J2166	H6	1.874	0.335	0.563	0.1410	0.110	.190	2
#4	-	48UNF	I0182	-	J2182	H2	1.874	0.335	0.563	0.1410	0.110	.190	2
#4	-	48UNF	I0184	-	J2184	H4	1.874	0.335	0.563	0.1410	0.110	.190	2
#5	-	40UNC	I0202	I2202	J2202	H2	1.937	0.374	0.626	0.1410	0.110	.190	3
#6	-	32UNC	I0243	I2243	J2243	H3	2.000	0.413	0.689	0.1410	0.110	.190	3
#6	-	32UNC	I0244	-	J2244	H4	2.000	0.413	0.689	0.1410	0.110	.190	3
#6	-	32UNC	I0245	-	J2245	H5	2.000	0.413	0.689	0.1410	0.110	.190	3
#6	-	32UNC	I0247	-	J2247	H7	2.000	0.413	0.689	0.1410	0.110	.190	3
#6	-	40UNF	I0262	-	J2262	H2	2.000	0.413	0.689	0.1410	0.110	.190	3
#6	-	40UNF	I0263	-	J2263	H3	2.000	0.413	0.689	0.1410	0.110	.190	3
#8	-	32UNC	I0282	-	J2282	H2	2.126	0.453	0.752	0.1680	0.131	.250	3
#8	-	32UNC	I0283	I2283	J2283	H3	2.126	0.453	0.752	0.1680	0.131	.250	3
#8	-	32UNC	I0284	-	J2284	H4	2.126	0.453	0.752	0.1680	0.131	.250	3
#8	-	32UNC	I0285	-	J2285	H5	2.126	0.453	0.752	0.1680	0.131	.250	3
#8	-	32UNC	I0287	-	J2287	H7	2.126	0.453	0.752	0.1680	0.131	.250	3
#8	-	36UNC	I0302	-	J2302	H2	2.126	0.453	0.752	0.1680	0.131	.250	3
#10	-	24UNC	I0323	I2323	J2323	H3	2.374	0.531	0.906	0.1940	0.152	.250	3
#10	-	24UNC	I0324	-	J2324	H4	2.374	0.531	0.906	0.1940	0.152	.250	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

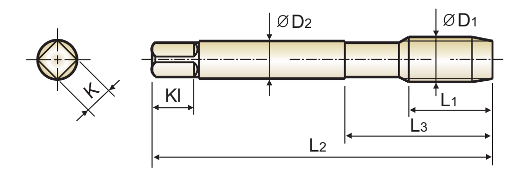
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

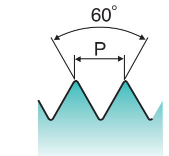
YG TAP INOX

I0/I2/J2 SERIES

SPIRAL POINT TAPS PLUG STYLE for Stainless Steels

ANSI





Thread Depth / Hole Type

3.0×D

Material groups: VA | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Steam Oxide | TiN | Hardslick

Unit : Inch

Size D1		TPI	EDP No. Steam Oxide	EDP No. TiN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#10	-	24UNC	I0325	-	J2325	H5	2.374	0.531	0.906	0.1940	0.152	.250	3
#10	-	32UNF	I0342	-	J2342	H2	2.374	0.531	0.906	0.1940	0.152	.250	3
#10	-	32UNF	I0343	I2343	J2343	H3	2.374	0.531	0.906	0.1940	0.152	.250	3
#10	-	32UNF	I0344	-	J2344	H4	2.374	0.531	0.906	0.1940	0.152	.250	3
#10	-	32UNF	I0345	-	J2345	H5	2.374	0.531	0.906	0.1940	0.152	.250	3
#10	-	32UNF	I0346	-	J2346	H6	2.374	0.531	0.906	0.1940	0.152	.250	3
#10	-	32UNF	I0347	-	J2347	H7	2.374	0.531	0.906	0.1940	0.152	.250	3
#12	-	24UNC	I0363	-	J2363	H3	2.374	0.571	0.906	0.2200	0.165	.280	3
#12	-	28UNF	I0383	-	J2383	H3	2.374	0.571	0.906	0.2200	0.165	.280	3
1/4	-	20UNC	I0402	-	J2402	H2	2.500	0.591	1.000	0.2550	0.191	.310	3
1/4	-	20UNC	I0403	I2403	J2403	H3	2.500	0.591	1.000	0.2550	0.191	.310	3
1/4	-	20UNC	I0405	I2405	J2405	H5	2.500	0.591	1.000	0.2550	0.191	.310	3
1/4	-	20UNC	I0407	-	J2407	H7	2.500	0.591	1.000	0.2550	0.191	.310	3
1/4	-	28UNF	I0422	-	J2422	H2	2.500	0.591	1.000	0.2550	0.191	.310	3
1/4	-	28UNF	I0423	I2423	J2423	H3	2.500	0.591	1.000	0.2550	0.191	.310	3
1/4	-	28UNF	I0424	-	J2424	H4	2.500	0.591	1.000	0.2550	0.191	.310	3
1/4	-	28UNF	I0425	-	J2425	H5	2.500	0.591	1.000	0.2550	0.191	.310	3
1/4	-	28UNF	I0426	-	J2426	H6	2.500	0.591	1.000	0.2550	0.191	.310	3
1/4	-	28UNF	I0427	-	J2427	H7	2.500	0.591	1.000	0.2550	0.191	.310	3
5/16	-	18UNC	I0443	I2443	J2443	H3	2.720	0.669	1.126	0.3180	0.238	.380	3
5/16	-	18UNC	I0445	I2445	J2445	H5	2.720	0.669	1.126	0.3180	0.238	.380	3
5/16	-	18UNC	I0447	-	J2447	H7	2.720	0.669	1.126	0.3180	0.238	.380	3
5/16	-	24UNF	I0463	I2463	J2463	H3	2.720	0.669	1.126	0.3180	0.238	.380	3
5/16	-	24UNF	I0464	-	J2464	H4	2.720	0.669	1.126	0.3180	0.238	.380	3
5/16	-	24UNF	I0465	-	J2465	H5	2.720	0.669	1.126	0.3180	0.238	.380	3
5/16	-	24UNF	I0466	-	J2466	H6	2.720	0.669	1.126	0.3180	0.238	.380	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

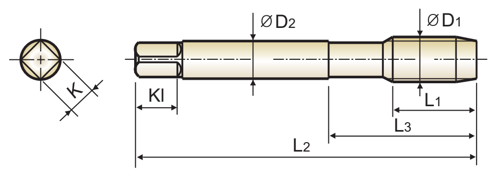
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

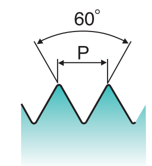
YG TAP INOX

I0/I2/J2 SERIES

SPIRAL POINT TAPS PLUG STYLE for Stainless Steels

ANSI





Thread Depth / Hole Type

3.0×D

Material groups: VA | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Steam Oxide | TiN | Hardslick

Unit : Inch

Size		TPI	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Steam Oxide	TiN	Hardslick		L2	L1	L3	D2	K	Kl	
5/16	-	24UNF	I0467	-	J2467	H7	2.720	0.669	1.126	0.3180	0.238	.380	3
3/8	-	16UNC	I0483	I2483	J2483	H3	2.937	0.748	1.252	0.3810	0.286	.440	3
3/8	-	16UNC	I0485	I2485	J2485	H5	2.937	0.748	1.252	0.3810	0.286	.440	3
3/8	-	16UNC	I0487	-	J2487	H7	2.937	0.748	1.252	0.3810	0.286	.440	3
3/8	-	24UNF	I0503	I2503	J2503	H3	2.937	0.748	1.252	0.3810	0.286	.440	3
3/8	-	24UNF	I0504	-	J2504	H4	2.937	.748	1.252	.381	.286	.440	3
3/8	-	24UNF	I0505	-	J2505	H5	2.937	.748	1.252	.381	.286	.440	3
3/8	-	24UNF	I0507	-	J2507	H7	2.937	.748	1.252	.381	.286	.440	3
7/16	-	14UNC	I0523	I2523	J2523	H3	3.157	.866	1.437	.323	.242	.410	3
7/16	-	14UNC	I0525	I2525	J2525	H5	3.157	.866	1.437	.323	.242	.410	3
7/16	-	20UNF	I0543	I2543	J2543	H3	3.157	.866	1.437	.323	.242	.410	3
7/16	-	20UNF	I0545	I2545	J2545	H5	3.157	.866	1.437	.323	.242	.410	3
1/2	-	13UNC	I0563	I2563	J2563	H3	3.374	.984	1.657	.367	.275	.440	3
1/2	-	13UNC	I0565	I2565	J2565	H5	3.374	.984	1.657	.367	.275	.440	3
1/2	-	13UNC	I0567	-	J2567	H7	3.374	.984	1.657	.367	.275	.440	3
1/2	-	20UNF	I0583	I2583	J2583	H3	3.374	.984	1.657	.367	.275	.440	3
1/2	-	20UNF	I0585	-	J2585	H5	3.374	.984	1.657	.367	.275	.440	3
9/16	-	12UNC	I0603	I2603	J2603	H3	3.594	.984	1.657	.429	.322	.500	3
9/16	-	18UNF	I0623	I2623	J2623	H3	3.594	.984	1.657	.429	.322	.500	3
5/8	-	11UNC	I0643	I2643	J2643	H3	3.811	1.083	1.811	.480	.360	.560	3
5/8	-	11UNC	I0645	I2645	J2645	H5	3.811	1.083	1.811	.480	.360	.560	3
5/8	-	11UNC	I0647	-	J2647	H7	3.811	1.083	1.811	.480	.360	.560	3
5/8	-	18UNF	I0663	-	J2663	H3	3.811	1.083	1.811	.480	.360	.560	3
5/8	-	18UNF	I0665	I2665	J2665	H5	3.811	1.083	1.811	.480	.360	.560	3
5/8	-	18UNF	I0667	-	J2667	H7	3.811	1.083	1.811	.480	.360	.560	3
3/4	-	10UNC	I0703	I2703	J2703	H3	4.252	1.201	2.000	.590	.442	.690	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

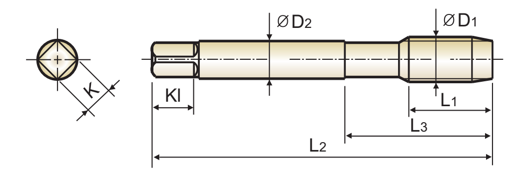
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

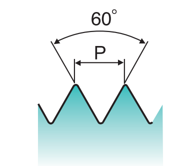
YG TAP INOX

I0/I2/J2 SERIES

SPIRAL POINT TAPS PLUG STYLE for Stainless Steels

ANSI





Thread Depth / Hole Type

3.0×D

Material groups: VA | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Steam Oxide | TiN | Hardslick

Unit : Inch

Size		TPI	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Steam Oxide	TiN	Hardslick		L2	L1	L3	D2	K	Kl	
3/4	-	16UNF	I0725	I2725	J2725	H5	4.252	1.201	2.000	.590	.442	.690	3
7/8	-	9UNC	I0744	I2744	J2744	H4	4.689	1.339	2.220	.697	.523	.750	3
7/8	-	14UNF	I0766	I2766	J2766	H6	4.689	1.339	2.220	.697	.523	.750	3
1"	-	8UNC	I0784	I2784	J2784	H4	5.126	1.496	2.500	.800	.600	.810	3
1"	-	12UNF	I0806	I2806	J2806	H6	5.126	1.496	2.500	.800	.600	.810	3

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

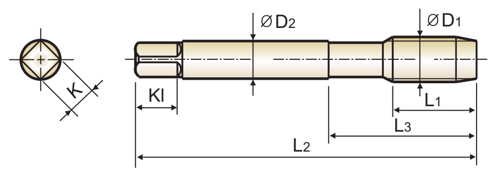
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

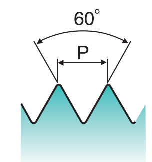
YG TAP INOX

O9 / IA SERIES

SPIRAL POINT TAPS PLUG STYLE for Stainless Steels

ANSI





Thread Depth / Hole Type
3.0×D

Material groups: VA | HSS-E | M/MF | USCTI 302A | 4P~5P | Steam Oxide | Hardslick

Unit : Inch

Size D1	Pitch	EDP No. Steam Oxide	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M3	x 0.5	O9203	IA203	D3	1.937	.197	.646	.141	.110	.190	3
M3.5	x 0.6	O9224	IA224	D4	2.000	.276	.709	.141	.110	.190	3
M4	x 0.7	O9244	IA244	D4	2.126	.276	.768	.168	.131	.250	3
M5	x 0.8	O9284	IA284	D4	2.374	.354	.933	.194	.152	.250	3
M6	x 1.0	O9315	IA315	D5	2.500	.433	1.000	.255	.191	.310	3
M7	x 1.0	O9345	IA345	D5	2.720	.433	1.126	.318	.238	.380	3
M8	x 1.25	O9365	IA365	D5	2.720	.472	1.126	.318	.238	.380	3
M8	x 1.0	O9375	IA375	D5	2.720	.433	1.126	.318	.238	.380	3
M10	x 1.5	O9426	IA426	D6	2.937	.512	1.252	.381	.286	.440	3
M10	x 1.25	O9435	IA435	D5	2.937	.472	1.252	.381	.286	.440	3
M12	x 1.75	O9506	IA506	D5	2.937	.433	1.252	.381	.286	.440	3
M12	x 1.25	O9525	IA525	D6	3.374	.591	2.067	.367	.275	.440	3
M14	x 2.0	O9547	IA547	D5	3.374	.551	2.067	.367	.275	.440	3
M14	x 1.5	O9556	IA556	D7	3.594	.709	2.067	.429	.322	.500	3
M16	x 2.0	O9607	IA607	D6	3.594	.551	2.067	.429	.322	.500	3
M16	x 1.5	O9616	IA616	D7	3.811	.709	2.205	.480	.360	.560	3
M18	x 2.5	O9657	IA657	D6	3.811	.551	2.205	.480	.360	.560	3
M18	x 1.5	O9676	IA676	D6	4.031	.551	2.205	.542	.406	.630	4

◎ : Excellent ○ : Good

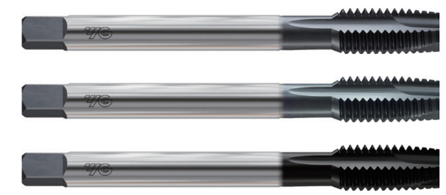
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

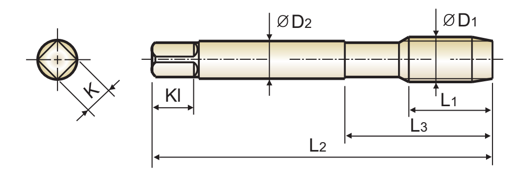
YG TAP INOX

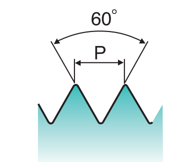
K3 / K5 / K6 SERIES

SPIRAL POINT TAPS PLUG STYLE for Stainless Steels



DIN Length-ANSI Shank





Thread Depth / Hole Type
3.0×D

Material groups: VA | HSS-E | M/MF | 4P~5P | Steam Oxide | TiCN | Hardslick

Unit : Inch

Size D1	Pitch	EDP No. Steam Oxide	EDP No. TiCN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M3	x 0.5	K3203	K5203	K6203	D3	2.205	.374	.646	.141	.110	.190	3
M3.5	x 0.6	K3224	K5224	K6224	D4	2.205	.413	.709	.141	.110	.190	3
M4	x 0.7	K3244	K5244	K6244	D4	2.480	.453	.768	.168	.131	.250	3
M5	x 0.8	K3284	K5284	K6284	D4	2.756	.531	.933	.194	.152	.250	3
M6	x 1.0	K3315	K5315	K6315	D5	3.150	.591	1.000	.255	.191	.310	3
M7	x 1.0	K3345	K5345	K6345	D5	3.150	.669	1.126	.318	.238	.380	3
M8	x 1.25	K3365	K5365	K6365	D5	3.543	.669	1.126	.318	.238	.380	3
M8	x 1.0	K3375	K5375	K6375	D5	3.543	.669	1.126	.318	.238	.380	3
M10	x 1.5	K3426	K5426	K6426	D6	3.937	.748	1.252	.381	.286	.440	3
M10	x 1.25	K3435	K5435	K6435	D5	3.937	.748	1.252	.381	.286	.440	3
M12	x 1.75	K3506	K5506	K6506	D6	4.331	.984	1.657	.367	.275	.440	3
M12	x 1.25	K3525	K5525	K6525	D5	3.937	.984	1.657	.367	.275	.440	3
M14	x 2.0	K3547	K5547	K6547	D7	4.331	.984	1.657	.429	.322	.500	3
M14	x 1.5	K3556	K5556	K6556	D6	3.937	.984	1.657	.429	.322	.500	3
M16	x 2.0	K3607	K5607	K6607	D7	4.331	1.083	1.811	.480	.360	.560	3
M16	x 1.5	K3616	K5616	K6616	D6	3.937	1.083	1.811	.480	.360	.560	3
M18	x 2.5	K3657	K5657	K6657	D7	4.921	1.083	1.811	.542	.406	.630	3
M18	x 1.5	K3676	K5676	K6676	D6	4.331	1.083	1.811	.542	.406	.630	3

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

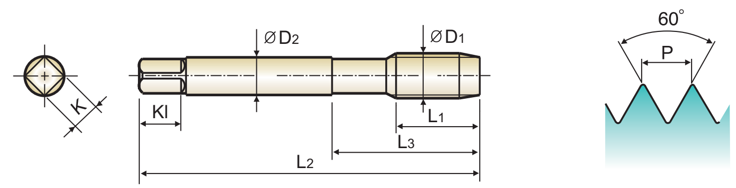
YG TAP INOX

H2 / H4 SERIES

EXTENDED LENGTH SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE LEFT HAND SPIRAL FLUTE, RIGHT HAND CUT

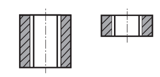
Left hand spiral flute, right hand cut for efficient tapping of deep through holes

ANSI Long Shank



Thread Depth / Hole Type

3.0×D



Material groups: VA | HSS-PM | UNC UNF | USCTI Long Shank | 4P~5P | TiN | Hardslick | L15

Unit : Inch

Size D1	TPI	EDP No. TiN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
1/4	- 20UNC	H2403	H4403	H3	6.000	.591	1.496	.255	.191	.310	2
1/4	- 28UNF	H2423	H4423	H3	6.000	.591	1.496	.255	.191	.310	3
5/16	- 18UNC	H2443	H4443	H3	6.000	.669	1.693	.318	.238	.380	3
3/8	- 16UNC	H2483	H4483	H3	6.000	.748	1.870	.381	.286	.440	3
7/16	- 14UNC	H2523	H4523	H3	6.000	.866	2.165	.323	.242	.410	3
1/2	- 13UNC	H2563	H4563	H3	6.000	.984	2.480	.367	.275	.440	3
5/8	- 11UNC	H2643	H4643	H3	6.000	1.083	2.717	.480	.360	.560	3

◎ : Excellent ○ : Good

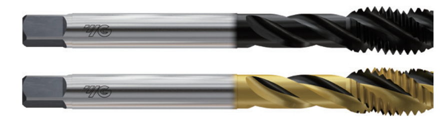
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

YG TAP INOX

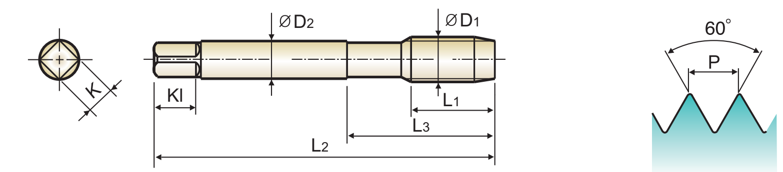
BG / BG-GB SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Stainless Steels



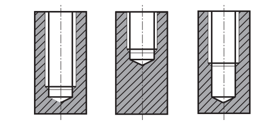
DIN Length-ANSI Shank

Oil Field



Thread Depth / Hole Type

2.5×D



Material groups: VG | HSS-E | UNC UNF | 2P~3P | Hardslick | Gold& Black | R40

Unit : Inch

Size D1	TPI	EDP No. Hardslick	EDP No. Gold-Black	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
1/2	- 13UNC	BG562H	BG562GB	2B	4.331	.787	2.067	.367	.275	.440	3
5/8	- 11UNC	BG642H	BG642GB	2B	4.331	.866	2.205	.480	.360	.560	3
3/4	- 10UNC	BG702H	BG702GB	2B	4.921	.984	2.480	.590	.442	.690	3
7/8	- 9UNC	BG742H	BG742GB	2B	5.512	1.063	2.815	.697	.523	.750	4
1"	- 8UNC	BG782H	BG782GB	2B	6.299	1.181	3.091	.800	.600	.810	4
1-1/8	- 7UNC	BG822H	BG822GB	2B	7.087	1.378	3.543	.896	.672	.880	4
1-1/8	- 8UN	BG832H	BG832GB	2B	7.087	1.181	3.543	.896	.672	.880	4
1-1/4	- 7UNC	BG862H	BG862GB	2B	7.087	1.378	3.543	1.021	.766	1.000	4
1-1/4	- 8UN	BG872H	BG872GB	2B	7.087	1.181	3.543	1.021	.766	1.000	4
1-3/8	- 8UN	BG912H	BG912GB	2B	7.874	1.181	3.937	1.108	.831	1.060	5
1-1/2	- 8UN	BG952H	BG952GB	2B	7.874	1.181	3.937	1.233	.925	1.130	5
1-5/8	- 8UN	BGB22H	BGB22GB	2B	7.874	1.181	3.937	1.305	.979	1.130	5
1-3/4	- 8UN	BGC02H	BGC02GB	2B	7.874	1.181	3.937	1.430	1.072	1.250	6
1-7/8	- 8UN	BGC62H	BGC62GB	2B	8.858	1.299	4.331	1.519	1.139	1.250	6
2"	- 8UN	BGD42H	BGD42GB	2B	8.858	1.299	4.331	1.644	1.233	1.380	6

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		○	○	◎	◎	◎	◎	◎	○	○		◎	◎	◎						

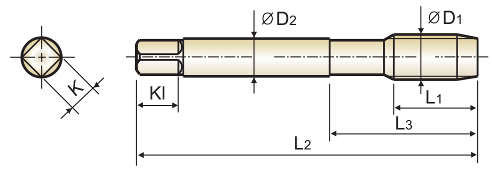
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

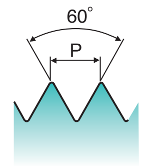
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TAP INOX

BG / BG-GB SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Stainless Steels





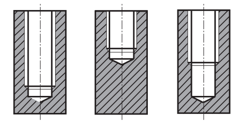
DIN Length-ANSI Shank

Oil Field

Material groups: VG | HSS-E | UNC UNF | 2P~3P | Hardslick | Gold& Black | R40

Thread Depth / Hole Type

2.5×D



Unit : Inch

Size D1	TPI	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
1/2 -	20UNF	BG572H	2B	3.937	.512	2.067	.367	.275	.440	4
5/8 -	18UNF	BG652H	2B	3.937	.591	2.205	.480	.360	.560	4
3/4 -	16UNF	BG712H	2B	4.331	.669	2.480	.590	.442	.690	4
7/8 -	14UNF	BG752H	2B	4.921	.669	2.815	.697	.523	.750	4
1" -	12UNF	BG792H	2B	5.512	.787	3.091	.800	.600	.810	4
1-1/8 -	12UNF	BG842H	2B	5.906	.787	3.150	.896	.672	.880	4
1-1/4 -	12UNF	BG882H	2B	5.906	.787	3.150	1.021	.766	1.000	5
1-3/8 -	6UNC	BG922H	2B	7.874	1.575	3.937	1.108	.831	1.060	5
1-3/8 -	12UNF	BG932H	2B	6.693	.787	3.543	1.108	.831	1.060	5
1-1/2 -	6UNC	BG962H	2B	7.874	1.575	3.937	1.233	.925	1.130	5
1-1/2 -	12UNF	BG972H	2B	6.693	.787	3.543	1.233	.925	1.130	5
1-3/4 -	5UNC	BGC03H	2B	8.661	1.969	4.331	1.430	1.072	1.250	6
2" -	4_1/2UNC	BGD43H	2B	9.843	2.165	4.921	1.644	1.233	1.380	6
2-1/4 -	8UN	BGD44H	2B	9.843	1.299	4.331	1.894	1.420	1.440	6
2-1/4 -	4_1/2UNC	BGD45H	2B	11.024	2.165	5.118	1.894	1.420	1.440	6
2-1/2 -	8UN	BGD46H	2B	10.827	1.299	4.921	2.100	1.575	1.500	6
2-1/2 -	4UNC	BGD47H	2B	12.402	2.362	6.299	2.100	1.575	1.500	6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended		○	○	◎	◎	◎	◎	◎	○	○		◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

YG TAP CAST IRON

- For Cast Iron or Similar Work Materials

SELECTION GUIDE

YG THREADING TOOLS

HSS-PM YG TAP CAST IRON

- For Cast Iron or Similar Work Materials

Please visit globalyg1.com/mat for material search

HOLE TYPE	Max. 3.0xD Blind / Through Hole			
TOOL MATERIAL	HSS-PM			Carbide
CHAMFER LEAD ACC. TO DIN2197	2P-3P			1.5P-2P
FLUTE TYPE	Straight Flute			
SPIRAL FLUTE ANGLE				
SERIES M				
SERIES M/MF	**TR** (p.B174)	**TR-A** (p.B177)	**TR-R** (p.B177)	
SERIES UNC				
SERIES UNC/UNF	**TR** (p.B173)	**TR-A** (p.B175)	**TR-R** (p.B175)	**T0C01** (p.B178)
SERIES UNC/UNF/UNS				
SERIES UNC/UN8				
SERIES NPT				
SERIES NPTF				
SERIES NPS/NPSF				
SURFACE TREATMENT / COATING	TiAlN	TiAlN	TiAlN	Bright
MODEL				

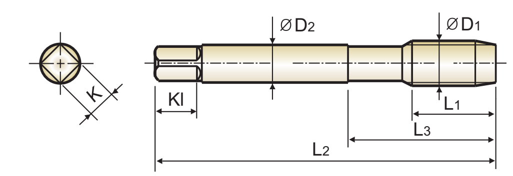
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	TR	TR-A	TR-R	T0C01
P	1	Non-alloy steel	About 0.15% C	Annealed	125					
P	2	Non-alloy steel	About 0.45% C	Annealed	190	13				
P	3	Non-alloy steel	About 0.45% C	Quenched & Tempered	250	25				
P	4	Non-alloy steel	About 0.75% C	Annealed	270	28				
P	5	Non-alloy steel	About 0.75% C	Quenched & Tempered	300	32				
P	6	Low alloy steel		Annealed	180	10				
P	7	Low alloy steel		Quenched & Tempered	275	29				
P	8	Low alloy steel		Quenched & Tempered	300	32				
P	9	Low alloy steel		Quenched & Tempered	350	38				
P	10	High alloyed steel, and tool steel		Annealed	200	15				
P	11	High alloyed steel, and tool steel		Quenched & Tempered	325	35				
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15				
M	13	Stainless steel	Martensitic	Quenched & Tempered	240	23				
M	14	Stainless steel	Austenitic		180	10				
K	15	Grey cast iron	Pearlitic / ferritic		180	10	◎ 50-65	◎ 50-65	◎ 50-65	◎ 35-50
K	16	Grey cast iron	Pearlitic (Martensitic)		260	26	◎ 50-65	◎ 50-65	◎ 50-65	◎ 35-50
K	17	Nodular cast iron	Ferritic		160	3	◎ 25-55	◎ 25-55	◎ 25-55	◎ 12-45
K	18	Nodular cast iron	Pearlitic		250	25	◎ 25-55	◎ 25-55	◎ 25-55	◎ 12-45
K	19	Malleable cast iron	Ferritic		130		○ 25-55	○ 25-55	○ 25-55	○ 12-45
K	20	Malleable cast iron	Pearlitic		230	21	○ 25-55	○ 25-55	○ 25-55	○ 12-45
N	21	Aluminum-wrought alloy	Not Curable		60					○ 50-65
N	22	Aluminum-wrought alloy	Curable	Hardened	100					
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		◎ 45-90	◎ 45-90	◎ 45-90	○ 40-65
N	24	Aluminum-cast, alloyed	≤ 12% Si, Curable	Hardened	90		○ 45-90	○ 45-90	○ 45-90	○ 40-65
N	25	Aluminum-cast, alloyed	> 12% Si, Not Curable		130					
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110					
N	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90					
N	28	Copper and Copper Alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper		100					
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic							
N	30	Non Metallic Materials	Rubber, Wood, etc.							
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15				
S	32	Heat Resistant Super Alloys	Fe Based	Cured	280	30				
S	33	Heat Resistant Super Alloys	Ni or Co Based	Annealed	250	25				
S	34	Heat Resistant Super Alloys	Ni or Co Based	Cured	350	38				
S	35	Heat Resistant Super Alloys	Ni or Co Based	Cast	320	34				
S	36	Titanium Alloys	Pure Titanium		400 Rm					
S	37	Titanium Alloys	Alpha + Beta Alloys	Hardened	1050 Rm					
H	38	Hardened steel		Hardened	550	55				
H	39	Hardened steel		Hardened	630	60				
H	40	Chilled Cast Iron		Cast	400	42				
H	41	Hardened Cast Iron		Hardened	550	55				

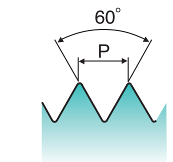
YG TAP CAST IRON

TR SERIES

STRAIGHT FLUTE TAP MODIFIED BOTTOMING STYLE for Cast Iron

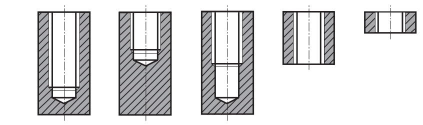
ANSI





Material groups GG | HSS-PM | UNC UNF | USCTI 302A | 2P~3P | TiAlN

Thread Depth / Hole Type
2.0×D



Unit : Inch

Size D1	TPI	EDP No. TiAlN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#10 -	24UNC	**TR323**	H3	2.374	.531	.906	.194	.152	.250	4
#10 -	24UNC	**TR325**	H5	2.374	.531	.906	.194	.152	.250	4
#10 -	32UNF	**TR343**	H3	2.374	.531	.906	.194	.152	.250	4
1/4 -	20UNC	**TR403**	H3	2.500	.591	1.000	.255	.191	.310	4
1/4 -	20UNC	**TR405**	H5	2.500	.591	1.000	.255	.191	.310	4
1/4 -	28UNF	**TR423**	H3	2.500	.591	1.000	.255	.191	.310	4
5/16 -	18UNC	**TR443**	H3	2.720	.669	1.126	.318	.238	.380	4
5/16 -	18UNC	**TR445**	H5	2.720	.669	1.126	.318	.238	.380	4
5/16 -	24UNF	**TR463**	H3	2.720	.669	1.126	.318	.238	.380	4
3/8 -	16UNC	**TR483**	H3	2.937	.748	1.252	.381	.286	.440	4
3/8 -	16UNC	**TR485**	H5	2.937	.748	1.252	.381	.286	.440	4
3/8 -	24UNF	**TR503**	H3	2.937	.748	1.252	.381	.286	.440	4
7/16 -	14UNC	**TR523**	H3	3.157	.866	1.437	.323	.242	.410	4
7/16 -	14UNC	**TR525**	H5	3.157	.866	1.437	.323	.242	.410	4
7/16 -	20UNF	**TR543**	H3	3.157	.866	1.437	.323	.242	.410	4
7/16 -	20UNF	**TR545**	H5	3.157	.866	1.437	.323	.242	.410	4
1/2 -	13UNC	**TR563**	H3	3.374	.984	1.657	.367	.275	.440	4
1/2	13UNC	**TR565**	H5	3.374	.984	1.657	.367	.275	.440	4
1/2	20UNF	**TR583**	H3	3.374	.984	1.657	.367	.275	.440	4
1/2	20UNF	**TR585**	H5	3.374	.984	1.657	.367	.275	.440	4
9/16	12UNC	**TR603**	H3	3.594	.984	1.657	.429	.322	.500	4
9/16	12UNC	**TR605**	H5	3.594	.984	1.657	.429	.322	.500	4
9/16	18UNF	**TR623**	H3	3.594	.984	1.657	.429	.322	.500	4
9/16	18UNF	**TR625**	H5	3.594	.984	1.657	.429	.322	.500	4
5/8	11UNC	**TR643**	H3	3.811	1.083	1.811	.480	.360	.560	4
5/8	11UNC	**TR645**	H5	3.811	1.083	1.811	.480	.360	.560	4
5/8	18UNF	**TR663**	H3	3.811	1.083	1.811	.480	.360	.560	4
5/8	18UNF	**TR665**	H5	3.811	1.083	1.811	.480	.360	.560	4
3/4	10UNC	**TR703**	H3	4.252	1.201	2.000	.590	.442	.690	4
3/4	10UNC	**TR705**	H5	4.252	1.201	2.000	.590	.442	.690	4
3/4	16UNF	**TR723**	H3	4.252	1.201	2.000	.590	.442	.690	4
3/4	16UNF	**TR725**	H5	4.252	1.201	2.000	.590	.442	.690	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended															◎	◎	◎	◎	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○																	

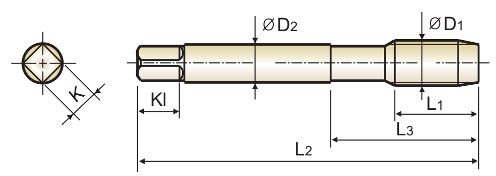
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

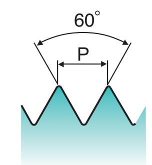
YG TAP CAST IRON

TR SERIES

STRAIGHT FLUTE TAP MODIFIED BOTTOMING STYLE for Cast Iron

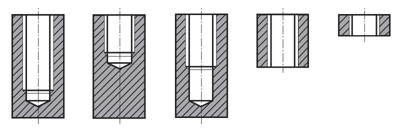
ANSI





Material groups: GG | HSS-PM | M/MF | USCTI 302A | 2P~3P | TiAlN

Thread Depth / Hole Type: 2.0×D



Unit : Inch

Size (D1)		Pitch	EDP No. (TiAlN)	Limit	Overall Length (L2)	Thread Length (L1)	Neck Length (L3)	Shank Diameter (D2)	Square Size (K)	Square Length (Kl)	No. of Flute
M5	x	0.8	**TR284**	D4	2.374	.531	.933	.194	.152	.250	4
M6	x	1.0	**TR315**	D5	2.500	.591	1.000	.255	.191	.310	4
M8	x	1.25	**TR365**	D5	2.720	.669	1.126	.318	.238	.380	4
M10	x	1.5	**TR426**	D6	2.937	.748	1.252	.381	.286	.440	4
M12	x	1.75	**TR506**	D6	3.374	.984	1.657	.367	.275	.440	4
M12	x	1.25	**TR526**	D6	3.374	.984	1.657	.367	.275	.440	4
M14	x	1.5	**TR556**	D6	3.594	.984	1.657	.429	.322	.500	4
M14	x	1.25	**TR566**	D6	3.594	.984	1.657	.429	.322	.500	4
M16	x	1.5	**TR616**	D6	3.811	1.083	1.811	.480	.360	.560	4
M18	x	1.5	**TR676**	D6	4.031	1.083	1.811	.542	.406	.630	4

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended															◎	◎	◎	◎	○	○

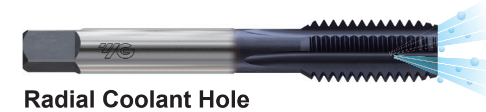
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○																	

YG TAP CAST IRON

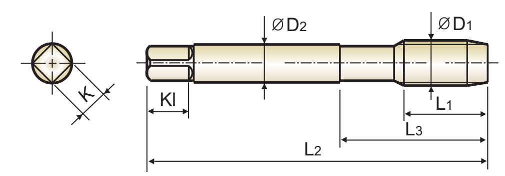
TR-A, TR-R SERIES

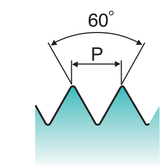
STRAIGHT FLUTE TAP MODIFIED BOTTOMING STYLE for Cast Iron

Through Coolant Hole



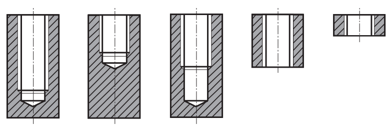
Radial Coolant Hole





Material groups: GG | HSS-PM | UNC UNF | USCTI 302A | 2P~3P | TiAlN

Thread Depth / Hole Type: 3.0×D



Unit : Inch

Size (D1)		TPI	EDP No. Through Coolant Hole	EDP No. Radial Coolant Hole	Limit	Overall Length (L2)	Thread Length (L1)	Neck Length (L3)	Shank Diameter (D2)	Square Size (K)	Square Length (Kl)	No. of Flute
#10	-	24UNC	**TR323A**	**TR323R**	H3	2.374	.531	.906	.194	.152	.250	4
#10	-	24UNC	**TR325A**	**TR325R**	H5	2.374	.531	.906	.194	.152	.250	4
#10	-	32UNF	**TR343A**	**TR343R**	H3	2.374	.531	.906	.194	.152	.250	4
1/4	-	20UNC	**TR403A**	**TR403R**	H3	2.500	.591	1.000	.255	.191	.310	4
1/4	-	20UNC	**TR405A**	**TR405R**	H5	2.500	.591	1.000	.255	.191	.310	4
1/4	-	28UNF	**TR423A**	**TR423R**	H3	2.500	.591	1.000	.255	.191	.310	4
5/16	-	18UNC	**TR443A**	**TR443R**	H3	2.720	.669	1.126	.318	.238	.380	4
5/16	-	18UNC	**TR445A**	**TR445R**	H5	2.720	.669	1.126	.318	.238	.380	4
5/16	-	24UNF	**TR463A**	**TR463R**	H3	2.720	.669	1.126	.318	.238	.380	4
3/8	-	16UNC	**TR483A**	**TR483R**	H3	2.937	.748	1.252	.381	.286	.440	4
3/8	-	16UNC	**TR485A**	**TR485R**	H5	2.937	.748	1.252	.381	.286	.440	4
3/8	-	24UNC	**TR503A**	**TR503R**	H3	2.937	.748	1.252	.381	.286	.440	4
7/16	-	14UNC	**TR523A**	**TR523R**	H3	3.157	.866	1.437	.323	.242	.410	4
7/16	-	14UNC	**TR525A**	**TR525R**	H5	3.157	.866	1.437	.323	.242	.410	4
7/16	-	20UNF	**TR543A**	**TR543R**	H3	3.157	.866	1.437	.323	.242	.410	4
7/16	-	20UNF	**TR545A**	**TR545R**	H5	3.157	.866	1.437	.323	.242	.410	4
1/2	-	13UNC	**TR563A**	**TR563R**	H3	3.374	.984	1.657	.367	.275	.440	4
1/2	-	13UNC	**TR565A**	**TR565R**	H5	3.374	.984	1.657	.367	.275	.440	4
1/2	-	20UNF	**TR583A**	**TR583R**	H3	3.374	.984	1.657	.367	.275	.440	4
1/2	-	20UNF	**TR585A**	**TR585R**	H5	3.374	.984	1.657	.367	.275	.440	4
9/16	-	12UNC	**TR603A**	**TR603R**	H3	3.594	.984	1.657	.429	.322	.500	4
9/16	-	12UNC	**TR605A**	**TR605R**	H5	3.594	.984	1.657	.429	.322	.500	4
9/16	-	18UNF	**TR623A**	**TR623R**	H3	3.594	.984	1.657	.429	.322	.500	4
9/16	-	18UNF	**TR625A**	**TR625R**	H5	3.594	.984	1.657	.429	.322	.500	4
5/8	-	11UNC	**TR643A**	**TR643R**	H3	3.811	1.083	1.811	.480	.360	.560	4
5/8	-	11UNC	**TR645A**	**TR645R**	H5	3.811	1.083	1.811	.480	.360	.560	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended															◎	◎	◎	◎	○	○

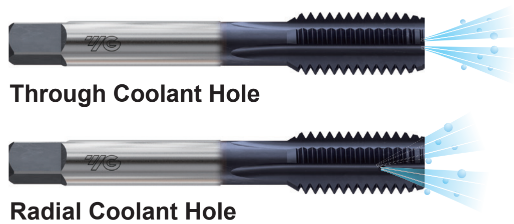
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○																	

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TAP CAST IRON

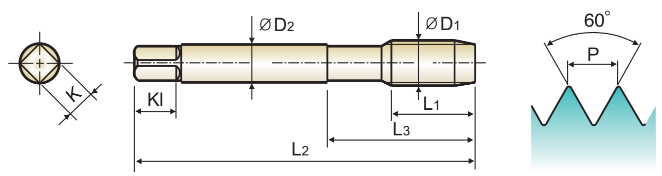
TR-A, TR-R SERIES

STRAIGHT FLUTE TAP MODIFIED BOTTOMING STYLE for Cast Iron



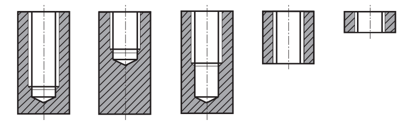
Through Coolant Hole

Radial Coolant Hole



Thread Depth / Hole Type

3.0×D



Material groups: GG | HSS-PM | UNC UNF | USCTI 302A | 2P~3P | TiAlN

Unit : Inch

Size D1	TPI	EDP No. Through Coolant Hole	EDP No. Radial Coolant Hole	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
5/8	- 18UNF	TR663A	TR663R	H3	3.811	1.083	1.811	.480	.360	.560	4
5/8	- 18UNF	TR665A	TR665R	H5	3.811	1.083	1.811	.480	.360	.560	4
3/4	- 10UNC	TR703A	TR703R	H3	4.252	1.201	2.000	.590	.442	.690	4
3/4	- 10UNC	TR705A	TR705R	H5	4.252	1.201	2.000	.590	.442	.690	4
3/4	- 16UNF	TR723A	TR723R	H3	4.252	1.201	2.000	.590	.442	.690	4
3/4	- 16UNF	TR725A	TR725R	H5	4.252	1.201	2.000	.590	.442	.690	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended															◎	◎	◎	◎	○	○

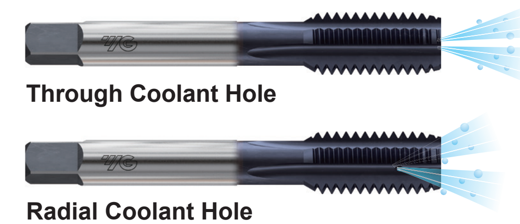
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○																	

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TAP CAST IRON

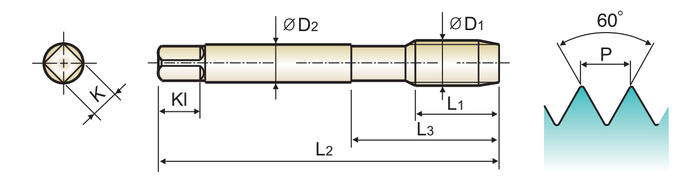
TR-A, TR-R SERIES

STRAIGHT FLUTE TAP MODIFIED BOTTOMING STYLE for Cast Iron



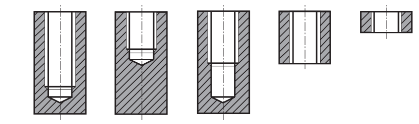
Through Coolant Hole

Radial Coolant Hole



Thread Depth / Hole Type

3.0×D



Material groups: GG | HSS-PM | M/MF | USCTI 302A | 2P~3P | TiAlN

Unit : Inch

Size D1	Pitch	EDP No. Through Coolant Hole	EDP No. Radial Coolant Hole	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M5	x 0.8	TR284A	TR284R	D4	2.374	.531	.933	.194	.152	.250	4
M6	x 1.0	TR315A	TR315R	D5	2.500	.591	1.000	.255	.191	.310	4
M8	x 1.25	TR365A	TR365R	D5	2.720	.669	1.126	.318	.238	.380	4
M10	x 1.5	TR426A	TR426R	D6	2.937	.748	1.252	.381	.286	.440	4
M12	x 1.75	TR506A	TR506R	D6	3.374	.984	1.657	.367	.275	.440	4
M12	x 1.25	TR526A	TR526R	D6	3.374	.984	1.657	.367	.275	.440	4
M14	x 1.5	TR556A	TR556R	D6	3.594	.984	1.657	.429	.322	.500	4
M14	x 1.25	TR566A	TR566R	D6	3.594	.984	1.657	.429	.322	.500	4
M16	x 1.5	TR616A	TR616R	D6	3.811	1.083	1.811	.480	.360	.560	4
M18	x 1.5	TR676A	TR676R	D6	4.031	1.083	1.811	.542	.406	.630	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended															◎	◎	◎	◎	○	○

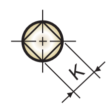
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○																	

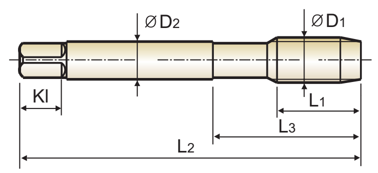
YG TAP CAST IRON

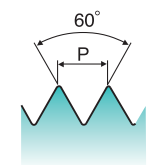
T0C01 SERIES

STRAIGHT FLUTE TAP BOTTOMING STYLE
for Aluminum Alloy & Cast Iron

ANSI

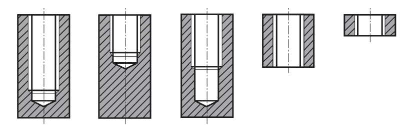






Material groups: GG | CARBIDE | UNC UNF | USCTI 302A | 1.5P~2P | Bright

Thread Depth / Hole Type: 2.0×D



Unit : Inch

Size D1		TPI	EDP No. Bright	Class of Fit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#10	-	24UNC	T0C01322	2B	2.374	.531	.906	.194	.152	.250	4
#10	-	32UNF	T0C01342	2B	2.374	.531	.906	.194	.152	.250	4
#12	-	24UNC	T0C01362	2B	2.374	.571	.906	.220	.165	.280	4
1/4	-	20UNC	T0C01402	2B	2.500	.591	1.000	.255	.191	.310	4
1/4	-	28UNF	T0C01422	2B	2.500	.591	1.000	.255	.191	.310	4
5/16	-	18UNC	T0C01442	2B	2.720	.669	1.126	.318	.238	.380	4
5/16	-	24UNF	T0C01462	2B	2.720	.669	1.126	.318	.238	.380	4
3/8	-	16UNC	T0C01482	2B	2.937	.748	1.252	.381	.286	.440	4
3/8	-	24UNF	T0C01502	2B	2.937	.748	1.252	.381	.286	.440	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended															◎	◎	◎	◎	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○																	

Being the best through innovation

HSS-E

YG TAP ALU

- For long-chipping Aluminum Wrought Alloys

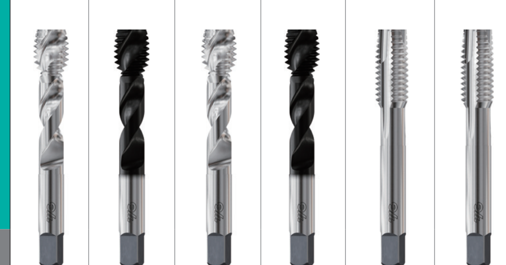
SELECTION GUIDE

YG THREADING TOOLS

HSS-E YG TAP ALU

- For long-chipping Aluminum Wrought Alloys

HOLE TYPE	Max. 2.5xD Blind Hole				Max. 3.0xD Through Hole	
TOOL MATERIAL	HSS-E					
CHAMFER LEAD ACC. TO DIN2197	2P-3P				4P-5P	
FLUTE TYPE	Spiral Flute				Spiral Point	
SPIRAL FLUTE ANGLE	R50				-	
SERIES M						
SERIES M/MF			BW (p.B182)	BX (p.B182)		T2K01 (p.B184)
SERIES UNC						
SERIES UNC/UNF	C0 (p.B181)	D8 (p.B181)			T2496 (p.B183)	
SERIES UNC/UNF/UNS						
SERIES UNC/UN8						
SERIES NPT						
SERIES NPTF						
SERIES NPS/NPSF						
SURFACE TREATMENT / COATING	Bright	HardSlick	Bright	HardSlick	Bright	Bright
MODEL						



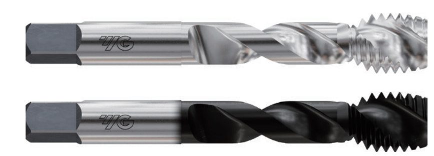
Please visit globalyg1.com/mat for material search

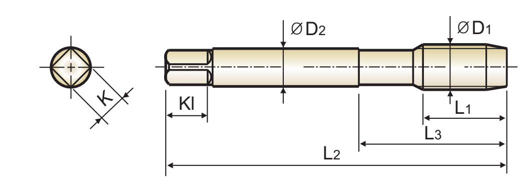
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	C0	D8	BW	BX	T2496	T2K01
P	1	Non-alloy steel	About 0.15% C	Annealed	125							
	2		About 0.45% C	Annealed	190	13						
	3		About 0.45% C	Quenched & Tempered	250	25						
	4		About 0.75% C	Annealed	270	28						
	5		About 0.75% C	Quenched & Tempered	300	32						
	6	Low alloy steel		Annealed	180	10						
	7			Quenched & Tempered	275	29						
	8			Quenched & Tempered	300	32						
	9			Quenched & Tempered	350	38						
	10	High alloyed steel, and tool steel		Annealed	200	15						
	11			Quenched & Tempered	325	35						
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15						
	13		Martensitic	Quenched & Tempered	240	23						
	14		Austenitic		180	10						
K	15	Grey cast iron	Pearlitic / ferritic		180	10						
	16		Pearlitic (Martensitic)		260	26						
	17	Nodular cast iron	Ferritic		160	3						
	18		Pearlitic		250	25						
	19	Malleable cast iron	Ferritic		130							
	20		Pearlitic		230	21						
N	21	Aluminum-wrought alloy	Not Curable		60		◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65
	22		Curable	Hardened	100		◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		◎ 40-65	◎ 45-90	◎ 40-65	◎ 45-90	◎ 40-65	◎ 40-65
	24		≤ 12% Si, Curable	Hardened	90		○ 40-65	○ 45-90	○ 40-65	○ 45-90	○ 40-65	○ 40-65
	25		> 12% Si, Not Curable		130						○ 40-65	○ 40-65
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110							
	27		CuZn, CuSnZn (Brass)		90						○ 30-65	○ 30-65
	28		CuSn, lead-free copper and electrolytic copper		100						○ 30-65	○ 30-65
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic									
	30		Rubber, Wood, etc.									
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15						
	32			Cured	280	30						
	33		Ni or Co Based	Annealed	250	25						
	34			Cured	350	38						
	35			Cast	320	34						
	36	Titanium Alloys	Pure Titanium		400 Rm							
	37		Alpha + Beta Alloys	Hardened	1050 Rm							
H	38	Hardened steel		Hardened	550	55						
	39			Hardened	630	60						
	40	Chilled Cast Iron		Cast	400	42						
	41	Hardened Cast Iron		Hardened	550	55						

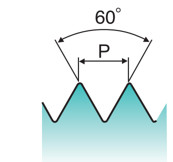
YG TAP ALU

C0 / D8 SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Aluminum Alloys or Die Cast Aluminum



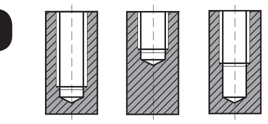




ANSI

Material groups AI | HSS-E | UNC UNF | USCTI 302A | 2P~3P | Bright | Hardslick | R50

Thread Depth / Hole Type: 2.5×D



Unit : Inch

Size D1		TPI	EDP No. Bright	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#4	-	40UNC	C0162	D8162	H2	1.874	.236	.563	.141	.110	.190	2
#4	-	40UNC	C0163	D8163	H3	1.874	.236	.563	.141	.110	.190	2
#6	-	32UNC	C0242	D8242	H2	2.000	.276	.689	.141	.110	.190	2
#6	-	32UNC	C0243	D8243	H3	2.000	.276	.689	.141	.110	.190	2
#8	-	32UNC	C0282	D8282	H2	2.126	.276	.752	.168	.131	.250	2
#8	-	32UNC	C0283	D8283	H3	2.126	.276	.752	.168	.131	.250	2
#10	-	24UNC	C0323	D8323	H3	2.374	.354	.906	.194	.152	.250	2
#10	-	32UNF	C0342	D8342	H2	2.374	.276	.906	.194	.152	.250	2
#10	-	32UNF	C0343	D8343	H3	2.374	.276	.906	.194	.152	.250	2
#10	-	32UNF	C0345	D8345	H5	2.374	.276	.906	.194	.152	.250	2
1/4	-	20UNC	C0403	D8403	H3	2.500	.433	1.000	.255	.191	.310	2
1/4	-	20UNC	C0405	D8405	H5	2.500	.433	1.000	.255	.191	.310	2
1/4	-	28UNF	C0423	D8423	H3	2.500	.354	1.000	.255	.191	.310	2
5/16	-	18UNC	C0443	D8443	H3	2.720	.472	1.126	.318	.238	.380	2
5/16	-	18UNC	C0445	D8445	H5	2.720	.472	1.126	.318	.238	.380	2
5/16	-	24UNF	C0463	D8463	H3	2.720	.394	1.126	.318	.238	.380	2
5/16	-	24UNF	C0465	D8465	H5	2.720	.394	1.126	.318	.238	.380	2
3/8	-	16UNC	C0483	D8483	H3	2.937	.551	1.252	.381	.286	.440	2
3/8	-	16UNC	C0485	D8485	H5	2.937	.551	1.252	.381	.286	.440	2
3/8	-	24UNF	C0503	D8503	H3	2.937	.394	1.252	.381	.286	.440	2
3/8	-	24UNF	C0505	D8505	H5	2.937	.394	1.252	.381	.286	.440	2
1/2	-	13UNC	C0563	D8563	H3	3.374	.630	2.067	.367	.275	.440	2
1/2	-	13UNC	C0565	D8565	H5	3.374	.630	2.067	.367	.275	.440	2
1/2	-	20UNF	C0583	D8583	H3	3.374	.472	2.067	.367	.275	.440	2
5/8	-	11UNC	C0643	D8643	H3	3.811	.748	2.205	.480	.360	.560	3
5/8	-	18UNF	C0663	D8663	H3	3.811	.512	2.205	.480	.360	.560	3
3/4	-	10UNC	C0703	D8703	H3	4.252	.827	2.480	.590	.442	.690	3
3/4	-	16UNF	C0723	D8723	H3	4.252	.591	2.480	.590	.442	.690	3
7/8	-	9UNC	C0744	D8744	H4	4.689	.827	2.815	.697	.523	.750	3
7/8	-	14UNF	C0764	D8764	H4	4.689	.709	2.815	.697	.523	.750	3
1"		8UNC	C0784	D8784	H4	5.126	.984	3.091	.800	.600	.810	3

◎ : Excellent ○ : Good

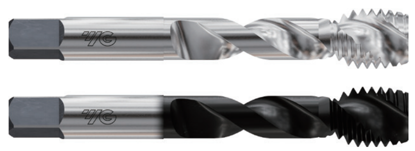
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	○																	

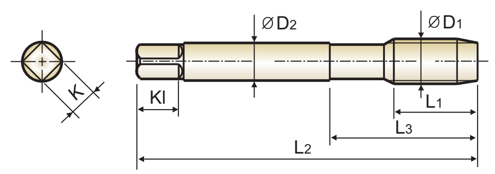
YG TAP ALU

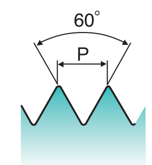
BW / BX SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Aluminum Alloys or Die Cast Aluminum



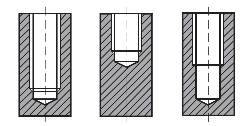
ANSI





Thread Depth / Hole Type

2.5×D



Material groups AI | HSS-E | M/MF | USCTI 302A | 2P~3P | Bright | Hardslick | R50

Unit : Inch

Size			Pitch	EDP No.		Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1				Bright	Hardslick		L2	L1	L3	D2	K	KI	
M3	X	0.5		BW203	BX203	D3	1.937	.197	.646	.141	.110	.190	2
M4	X	0.7		BW244	BX244	D4	2.126	.276	.768	.168	.131	.250	2
M5	X	0.8		BW285	BX285	D5	2.374	.354	.933	.194	.152	.250	2
M6	X	1.0		BW315	BX315	D5	2.500	.433	1.000	.255	.191	.310	2
M8	X	1.25		BW365	BX365	D5	2.720	.472	1.126	.318	.238	.380	2
M10	X	1.5		BW426	BX426	D6	2.937	.512	1.252	.381	.286	.440	2
M10	X	1.25		BW435	BX435	D5	2.937	.472	1.252	.381	.286	.440	2
M12	X	1.75		BW506	BX506	D6	3.374	.591	2.067	.367	.275	.440	2
M12	X	1.5		BW515	BX515	D5	3.374	.591	2.067	.367	.275	.440	2
M12	X	1.25		BW525	BX525	D5	3.374	.551	2.067	.367	.275	.440	2

▶ DIN Length available: Bright Finish F1 Series & Hardslick coated F3 Series

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	○																	

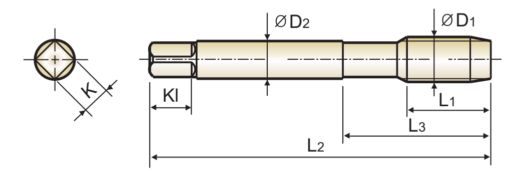
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

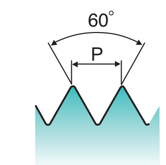
YG TAP ALU

T2496 SERIES

SPIRAL POINT TAPS PLUG STYLE for Aluminum Alloys or Die Cast Aluminum

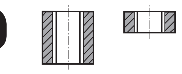
ANSI





Thread Depth / Hole Type

3.0×D



Material groups AI | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Bright

Unit : Inch

Size		TPI	EDP No.	Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Bright		L2	L1	L3	D2	K	KI	
#4	-	40UNC	T2496162	H2	1.874	.335	.563	.141	.110	.190	2
#4	-	40UNC	T2496163	H3	1.874	.335	.563	.141	.110	.190	2
#6	-	32UNC	T2496242	H2	2.000	.413	.689	.141	.110	.190	2
#6	-	32UNC	T2496243	H3	2.000	.413	.689	.141	.110	.190	2
#8	-	32UNC	T2496282	H2	2.126	.453	.752	.168	.131	.250	2
#8	-	32UNC	T2496283	H3	2.126	.453	.752	.168	.131	.250	2
#10	-	24UNC	T2496323	H3	2.374	.531	.906	.194	.152	.250	2
#10	-	32UNF	T2496342	H2	2.374	.531	.906	.194	.152	.250	2
#10	-	32UNF	T2496343	H3	2.374	.531	.906	.194	.152	.250	2
#10	-	32UNF	T2496345	H5	2.374	.531	.906	.194	.152	.250	2
1/4	-	20UNC	T2496403	H3	2.500	.591	1.000	.255	.191	.310	2
1/4	-	20UNC	T2496405	H5	2.500	.591	1.000	.255	.191	.310	2
1/4	-	28UNF	T2496423	H3	2.500	.591	1.000	.255	.191	.310	2
5/16	-	18UNC	T2496443	H3	2.720	.669	1.126	.318	.238	.380	2
5/16	-	18UNC	T2496445	H5	2.720	.669	1.126	.318	.238	.380	2
5/16	-	24UNF	T2496463	H3	2.720	.669	1.126	.318	.238	.380	2
5/16	-	24UNF	T2496465	H5	2.720	.669	1.126	.318	.238	.380	2
3/8	-	16UNC	T2496483	H3	2.937	.748	1.252	.381	.286	.440	3
3/8	-	16UNC	T2496485	H5	2.937	.748	1.252	.381	.286	.440	3
3/8	-	24UNF	T2496503	H3	2.937	.748	1.252	.381	.286	.440	3
3/8	-	24UNF	T2496505	H5	2.937	.748	1.252	.381	.286	.440	3
1/2	-	13UNC	T2496563	H3	3.374	.984	1.657	.367	.275	.440	3
1/2	-	13UNC	T2496565	H5	3.374	.984	1.657	.367	.275	.440	3
1/2	-	20UNF	T2496583	H3	3.374	.984	1.657	.367	.275	.440	3
5/8	-	11UNC	T2496643	H3	3.811	1.083	1.811	.480	.360	.560	3
5/8	-	18UNF	T2496663	H3	3.811	1.083	1.811	.480	.360	.560	3
3/4	-	10UNC	T2496703	H3	4.252	1.201	2.000	.590	.442	.690	3
3/4	-	16UNF	T2496723	H3	4.252	1.201	2.000	.590	.442	.690	3
7/8	-	9UNC	T2496744	H4	4.689	1.339	2.220	.697	.523	.750	3
7/8	-	14UNF	T2496764	H4	4.689	1.339	2.220	.697	.523	.750	3
1"	-	8UNC	T2496784	H4	5.126	1.496	2.500	.800	.600	.810	3

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

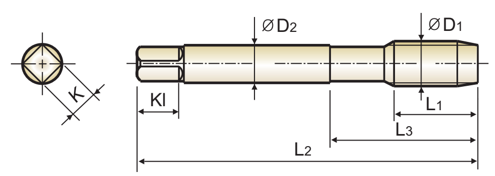
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	○	○		○	○													

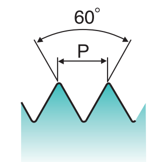
YG TAP ALU

T2K01 SERIES

SPIRAL POINT TAPS PLUG STYLE
for Aluminum Alloys or Die Cast Aluminum

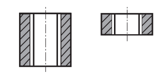
ANSI





Thread Depth / Hole Type

3.0×D



Material groups: Al | HSS-E | M/MF | USCTI 302A | 4P~5P | Bright

Unit : Inch

Size D1		Pitch	EDP No. Bright	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M3	X	0.5	T2K01203	D3	1.937	.374	.646	.141	.110	.190	2
M4	X	0.7	T2K01244	D4	2.126	.453	.768	.168	.131	.250	2
M5	X	0.8	T2K01284	D4	2.374	.531	.933	.194	.152	.250	2
M6	X	1.0	T2K01315	D5	2.500	.591	1.000	.255	.191	.310	2
M8	X	1.25	T2K01365	D5	2.720	.669	1.126	.318	.238	.380	2
M10	X	1.5	T2K01426	D6	2.937	.748	1.252	.381	.286	.440	3
M10	X	1.25	T2K01435	D5	2.937	.748	1.252	.381	.286	.440	3
M12	X	1.75	T2K01506	D6	3.374	.984	1.657	.367	.275	.440	3
M12	X	1.5	T2K01515	D5	3.374	.984	1.657	.367	.275	.440	3
M12	X	1.25	T2K01525	D5	3.374	.984	1.657	.367	.275	.440	3

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	○	○		○	○													

YG TAP Ti / Ni

- For Heat Resistent Super Alloys and Titanium Alloys

SELECTION GUIDE

YG THREADING TOOLS

HSS-PM YG TAP Ti / Ni

- For Heat Resistent Super Alloys and Titanium Alloys

		B3	B5	B6	I3	M8	I5	J6
HOLE TYPE		Max. 2.5xD Blind Hole			Max. 3.0xD Through Hole			
TOOL MATERIAL		HSS-PM						
CHAMFER LEAD ACC. TO DIN2197		2P-3P			4P-5P			
FLUTE TYPE		Spiral Flute			Spiral Point			
SPIRAL FLUTE ANGLE		R15			-			
SERIES	M							
	M/MF							
	UNC							
	UNC/UNF	B3 (p.B187)	B5 (p.B187)	B6 (p.B187)	I3 (p.B189)	M8 (p.B189)	I5 (p.B189)	J6 (p.B189)
	UNC/UNF/UNS							
	UNC/UN8							
	NPT							
	NPTF							
	NPS/NPSF							
SURFACE TREATMENT / COATING		Steam Oxide	TiCN	HardSlick	Steam Oxide	Bright	TiCN	HardSlick
MODEL								

Please visit globalyg1.com/mat for material search

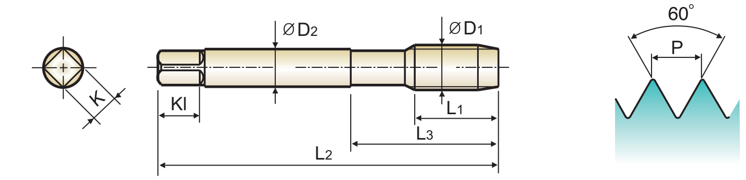
ISO	VDI 3323	Material Description	Composition / Structure	Heat Treatment	HB	HRC	B3	B5	B6	I3	M8	I5	J6
P	1	Non-alloy steel	About 0.15% C	Annealed	125								
P	2	Non-alloy steel	About 0.45% C	Annealed	190	13							
P	3	Non-alloy steel	About 0.45% C	Quenched & Tempered	250	25							
P	4	Non-alloy steel	About 0.75% C	Annealed	270	28							
P	5	Non-alloy steel	About 0.75% C	Quenched & Tempered	300	32							
P	6	Low alloy steel		Annealed	180	10							
P	7	Low alloy steel		Quenched & Tempered	275	29							
P	8	Low alloy steel		Quenched & Tempered	300	32	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 10-35
P	9	Low alloy steel		Quenched & Tempered	350	38	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 10-35
P	10	High alloyed steel, and tool steel		Annealed	200	15							
P	11	High alloyed steel, and tool steel		Quenched & Tempered	325	35							
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15							
M	13	Stainless steel	Martensitic	Quenched & Tempered	240	23							
M	14	Stainless steel	Austenitic		180	10							
K	15	Grey cast iron	Pearlitic / ferritic		180	10							
K	16	Grey cast iron	Pearlitic (Martensitic)		260	26							
K	17	Nodular cast iron	Ferritic		160	3							
K	18	Nodular cast iron	Pearlitic		250	25							
K	19	Malleable cast iron	Ferritic		130								
K	20	Malleable cast iron	Pearlitic		230	21							
N	21	Aluminum-wrought alloy	Not Curable		60								
N	22	Aluminum-wrought alloy	Curable	Hardened	100								
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75								
N	24	Aluminum-cast, alloyed	≤ 12% Si, Curable	Hardened	90								
N	25	Aluminum-cast, alloyed	> 12% Si, Not Curable		130								
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110								
N	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90								
N	28	Copper and Copper Alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper		100								
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic										
N	30	Non Metallic Materials	Rubber, Wood, etc.										
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15
S	32	Heat Resistant Super Alloys	Fe Based	Cured	280	30	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15
S	33	Heat Resistant Super Alloys	Ni or Co Based	Annealed	250	25	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15	◎ 10-15
S	34	Heat Resistant Super Alloys	Ni or Co Based	Cured	350	38	○ 10-15	○ 10-15	○ 10-15	○ 10-15	○ 10-15	○ 10-15	○ 10-15
S	35	Heat Resistant Super Alloys	Ni or Co Based	Cast	320	34	○ 10-15	○ 10-15	○ 10-15	○ 10-15	○ 10-15	○ 10-15	○ 10-15
S	36	Titanium Alloys	Pure Titanium		400 Rm		◎ 3-15	◎ 3-15	◎ 3-15	◎ 3-15	◎ 3-15	◎ 3-15	◎ 3-15
S	37	Titanium Alloys	Alpha + Beta Alloys	Hardened	1050 Rm		○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15
H	38	Hardened steel		Hardened	550	55							
H	39	Hardened steel		Hardened	630	60							
H	40	Chilled Cast Iron		Cast	400	42				○ 3-15	○ 3-15	○ 3-15	○ 3-15
H	41	Hardened Cast Iron		Hardened	550	55							

YG TAP Ti / Ni

B3 / B5 / B6 SERIES

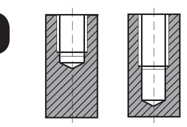
SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Titanium Alloys & Nickel Base Alloys up to 38 ~ 45HRc

ANSI



Thread Depth / Hole Type

2.5×D



Material groups: Ti Ni | HSS-PM | UNC UNF | USCTI 302A | 2P~3P | Steam Oxide | TiCN | Hardslick | R15

Unit : Inch

Size D1		TPI	EDP No. Steam Oxide	EDP No. TiCN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
#2	-	56UNC	B3082	B5082	D6082	H2	1.752	.157	.433	.141	.110	.190	3
#4	-	40UNC	B3162	B5162	D6162	H2	1.874	.236	.563	.141	.110	.190	3
#5	-	40UNC	B3202	B5202	D6202	H2	1.937	.236	.626	.141	.110	.190	3
#6	-	32UNC	B3243	B5243	D6243	H3	2.000	.276	.689	.141	.110	.190	3
#8	-	32UNC	B3283	B5283	D6283	H3	2.126	.276	.752	.168	.131	.250	3
#10	-	24UNC	B3323	B5323	D6323	H3	2.374	.354	.906	.194	.152	.250	3
#10	-	32UNF	B3343	B5343	D6343	H3	2.374	.276	.906	.194	.152	.250	3
1/4	-	20UNC	B3403	B5403	D6403	H3	2.500	.433	1.000	.255	.191	.310	3
1/4	-	20UNC	B3405	B5405	D6405	H5	2.500	.433	1.000	.255	.191	.310	3
1/4	-	28UNF	B3423	B5423	D6423	H3	2.500	.354	1.000	.255	.191	.310	3
1/4	-	28UNF	B3424	B5424	D6424	H4	2.500	.354	1.000	.255	.191	.310	3
5/16	-	18UNC	B3443	B5443	D6443	H3	2.720	.472	1.126	.318	.238	.380	3
5/16	-	18UNC	B3445	B5445	D6445	H5	2.720	.472	1.126	.318	.238	.380	3
5/16	-	24UNF	B3463	B5463	D6463	H3	2.720	.394	1.126	.318	.238	.380	3
3/8	-	16UNC	B3483	B5483	D6483	H3	2.937	.551	1.252	.381	.286	.440	3
3/8	-	16UNC	B3485	B5485	D6485	H5	2.937	.551	1.252	.381	.286	.440	3
3/8	-	24UNF	B3503	B5503	D6503	H3	2.937	.394	1.252	.381	.286	.440	3
3/8	-	24UNF	B3504	B5504	D6504	H4	2.937	.394	1.252	.381	.286	.440	3
7/16	-	14UNC	B3523	B5523	D6523	H3	3.157	.591	1.850	.323	.242	.410	3
7/16	-	14UNC	B3525	B5525	D6525	H5	3.157	.591	1.850	.323	.242	.410	3
7/16	-	20UNF	B3543	B5543	D6543	H3	3.157	.472	1.850	.323	.242	.410	3
7/16	-	20UNF	B3545	B5545	D6545	H5	3.157	.472	1.850	.323	.242	.410	3
1/2	-	13UNC	B3563	B5563	D6563	H3	3.374	.630	2.067	.367	.275	.440	3
1/2	-	13UNC	B3565	B5565	D6565	H5	3.374	.630	2.067	.367	.275	.440	3
1/2	-	20UNF	B3583	B5583	D6583	H3	3.374	.472	2.067	.367	.275	.440	3
1/2	-	20UNF	B3585	B5585	D6585	H5	3.374	.472	2.067	.367	.275	.440	3

▶ TiN Coated Available: H9 Series

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended								○	○											

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended											◎	◎	◎	○	○	◎	○				

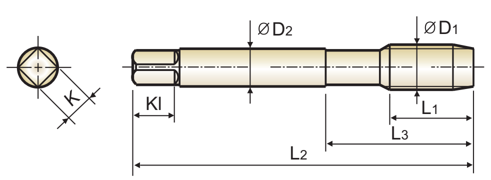
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

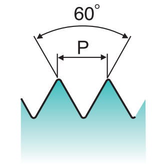
YG TAP Ti / Ni

B3/B5/D6 SERIES

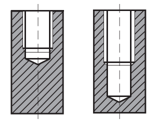
SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE
for Titanium Alloys & Nickel Base Alloys up to 38 ~ 45HRc

ANSI





Thread Depth / Hole Type



2.5×D

Material groups: Ti Ni | HSS-PM | UNC UNF | USCTI 302A | 2P~3P | Steam Oxide | TiCN | Hardslick | R15

Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. TiCN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
9/16 -	12UNC	B3603	B5603	D6603	H3	3.594	.709	2.067	.429	.322	.500	3
9/16 -	12UNC	B3605	B5605	D6605	H5	3.594	.709	2.067	.429	.322	.500	3
9/16 -	18UNF	B3623	B5623	D6623	H3	3.594	.512	2.067	.429	.322	.500	3
9/16 -	18UNF	B3625	B5625	D6625	H5	3.594	.512	2.067	.429	.322	.500	3
5/8 -	11UNC	B3643	B5643	D6643	H3	3.811	.748	2.205	.480	.360	.560	4
5/8 -	11UNC	B3645	B5645	D6645	H5	3.811	.748	2.205	.480	.360	.560	4
5/8 -	18UNF	B3663	B5663	D6663	H3	3.811	.512	2.205	.480	.360	.560	4
5/8 -	18UNF	B3665	B5665	D6665	H5	3.811	.512	2.205	.480	.360	.560	4
3/4 -	10UNC	B3703	B5703	D6703	H3	4.252	.827	2.480	.590	.442	.690	4
3/4 -	10UNC	B3705	B5705	D6705	H5	4.252	.827	2.480	.590	.442	.690	4
3/4 -	16UNF	B3723	B5723	D6723	H3	4.252	.591	2.480	.590	.442	.690	4
3/4 -	16UNF	B3725	B5725	D6725	H5	4.252	.591	2.480	.590	.442	.690	4

▶ TiN Coated Available: H9 Series

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended								○	○											

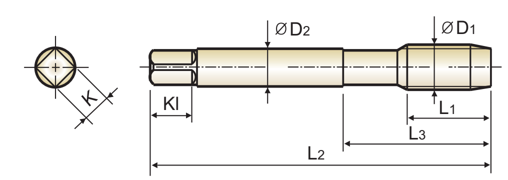
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended											◎	◎	◎	○	○	◎	○				

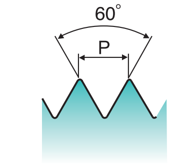
YG TAP Ti / Ni

I3/M8/I5/J6 SERIES

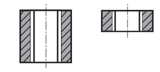
SPIRAL POINT TAPS PLUG STYLE
for Titanium Alloys & Nickel Base Alloys up to 38 ~ 45HRc

ANSI





Thread Depth / Hole Type



3.0×D

Material groups: Ti Ni | HSS-PM | UNC UNF | USCTI 302A | 4P~5P | Bright | Steam Oxide | TiCN | Hardslick

Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. Bright	EDP No. TiCN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
#2 -	56UNC	I3082	M8082	I5082	J6082	H2	1.752	0.256	0.433	0.1410	0.110	.190	2
#4 -	40UNC	I3162	M8162	I5162	J6162	H2	1.874	0.335	0.563	0.1410	0.110	.190	2
#5 -	40UNC	I3202	M8202	I5202	J6202	H2	1.937	0.374	0.626	0.1410	0.110	.190	3
#6 -	32UNC	I3243	M8243	I5243	J6243	H3	2.000	0.413	0.689	0.1410	0.110	.190	3
#8 -	32UNC	I3283	M8283	I5283	J6283	H3	2.126	0.453	0.752	0.1680	0.131	.250	3
#10 -	24UNC	I3323	M8323	I5323	J6323	H3	2.374	0.531	0.906	0.1940	0.152	.250	3
#10 -	32UNF	I3343	M8343	I5343	J6343	H3	2.374	0.531	0.906	0.1940	0.152	.250	3
1/4 -	20UNC	I3403	M8403	I5403	J6403	H3	2.500	0.591	1.000	0.2550	0.191	.310	3
1/4 -	20UNC	I3405	M8405	I5405	J6405	H5	2.500	0.591	1.000	0.2550	0.191	.310	3
1/4 -	28UNF	I3423	M8423	I5423	J6423	H3	2.500	0.591	1.000	0.2550	0.191	.310	3
1/4 -	28UNF	I3424	M8424	I5424	J6424	H4	2.500	0.591	1.000	0.2550	0.191	.310	3
5/16 -	18UNC	I3443	M8443	I5443	J6443	H3	2.720	0.669	1.126	0.3180	0.238	.380	3
5/16 -	18UNC	I3445	M8445	I5445	J6445	H5	2.720	0.669	1.126	0.3180	0.238	.380	3
5/16 -	24UNF	I3463	M8463	I5463	J6463	H3	2.720	0.669	1.126	0.3180	0.238	.380	3
3/8 -	16UNC	I3483	M8483	I5483	J6483	H3	2.937	0.748	1.252	0.3810	0.286	.440	3
3/8 -	16UNC	I3485	M8485	I5485	J6485	H5	2.937	0.748	1.252	0.3810	0.286	.440	3
3/8 -	24UNF	I3503	M8503	I5503	J6503	H3	2.937	0.748	1.252	0.3810	0.286	.440	3
3/8 -	24UNF	I3504	M8504	I5504	J6504	H4	2.937	0.748	1.252	0.3810	0.286	.440	3
7/16 -	14UNC	I3523	M8523	I5523	J6523	H3	3.157	.866	1.437	.323	.242	.410	3
7/16 -	14UNC	I3525	M8525	I5525	J6525	H5	3.157	.866	1.437	.323	.242	.410	3
7/16 -	20UNF	I3543	M8543	I5543	J6543	H3	3.157	.866	1.437	.323	.242	.410	3
7/16 -	20UNF	I3545	M8545	I5545	J6545	H5	3.157	.866	1.437	.323	.242	.410	3
1/2 -	13UNC	I3563	M8563	I5563	J6563	H3	3.374	.984	1.657	.367	.275	.440	3
1/2 -	13UNC	I3565	M8565	I5565	J6565	H5	3.374	.984	1.657	.367	.275	.440	3
1/2 -	20UNF	I3583	M8583	I5583	J6583	H3	3.374	.984	1.657	.367	.275	.440	3
1/2 -	20UNF	I3585	M8585	I5585	J6585	H5	3.374	.984	1.657	.367	.275	.440	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended								○	○											

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended											◎	◎	◎	○	○	◎	○			○	

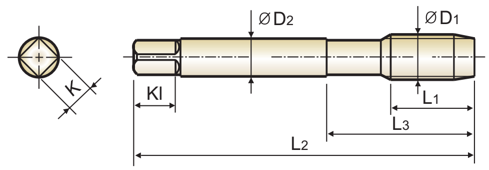
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

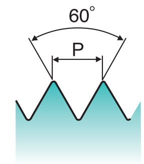
YG TAP Ti / Ni

I3/M8/I5/J6 SERIES

SPIRAL POINT TAPS PLUG STYLE
for Titanium Alloys & Nickel Base Alloys up to 38 ~ 45HRc

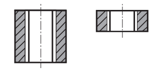
ANSI





Thread Depth / Hole Type

3.0×D



Material groups: Ti Ni

HSS-PM | UNC UNF | USCTI 302A | 4P~5P | Bright | Steam Oxide | TiCN | Hardslick

Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. Bright	EDP No. TiCN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
9/16	- 12UNC	I3603	M8603	I5603	J6603	H3	3.594	.984	1.657	.429	.322	.500	3
9/16	- 12UNC	I3605	M8605	I5605	J6605	H5	3.594	.984	1.657	.429	.322	.500	3
9/16	- 18UNF	I3623	M8623	I5623	J6623	H3	3.594	.984	1.657	.429	.322	.500	3
9/16	- 18UNF	I3625	M8625	I5625	J6625	H5	3.594	.984	1.657	.429	.322	.500	3
5/8	- 11UNC	I3643	M8643	I5643	J6643	H3	3.811	1.083	1.811	.480	.360	.560	3
5/8	- 11UNC	I3645	M8645	I5645	J6645	H5	3.811	1.083	1.811	.480	.360	.560	3
5/8	- 18UNF	I3663	M8663	I5663	J6663	H3	3.811	1.083	1.811	.480	.360	.560	3
5/8	- 18UNF	I3665	M8665	I5665	J6665	H5	3.811	1.083	1.811	.480	.360	.560	3
3/4	- 10UNC	I3703	M8703	I5703	J6703	H3	4.252	1.201	2.000	.590	.442	.690	3
3/4	- 10UNC	I3705	M8705	I5705	J6705	H5	4.252	1.201	2.000	.590	.442	.690	3
3/4	- 16UNF	I3723	M8723	I5723	J6723	H3	4.252	1.201	2.000	.590	.442	.690	3
3/4	- 16UNF	I3725	M8725	I5725	J6725	H5	4.252	1.201	2.000	.590	.442	.690	3

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended								○	○											

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended											◎	◎	◎	○	○	◎	○			○	

Being the best through innovation

HSS-PM

YG TAP HARDENED STEEL

- For Hardened Steels Applications

SELECTION GUIDE

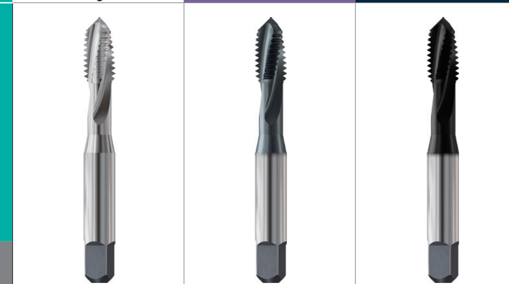
YG THREADING TOOLS

HSS-PM YG TAP HARDENED STEEL

- For Hardened Steels Applications

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

HOLE TYPE	Max. 2.5xD Blind Hole		
TOOL MATERIAL	HSS-PM		
CHAMFER LEAD ACC. TO DIN2197	2P-3P		
FLUTE TYPE	Spiral Flute		
SPIRAL FLUTE ANGLE	R15		
SERIES M			
SERIES M/MF			
SERIES UNC			
SERIES UNC/UNF	**H6** (p.B194)	**H7** (p.B194)	**H8** (p.B194)
SERIES UNC/UNF/UNS			
SERIES UNC/UN8			
SERIES NPT			
SERIES NPTF			
SERIES NPS/NPSF			
SURFACE TREATMENT / COATING	Bright	TiCN	HardSlick
MODEL			

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	H6	H7	H8
P	1	Non-alloy steel	About 0.15% C	Annealed	125				
	2		About 0.45% C	Annealed	190	13			
	3		About 0.45% C	Quenched & Tempered	250	25			
	4		About 0.75% C	Annealed	270	28			
	5		About 0.75% C	Quenched & Tempered	300	32			
	6	Low alloy steel		Annealed	180	10			
	7			Quenched & Tempered	275	29	○ 6-30	○ 10-35	○ 10-35
	8			Quenched & Tempered	300	32	○ 6-30	○ 10-35	○ 10-35
	9			Quenched & Tempered	350	38	◎ 6-30	◎ 10-35	◎ 10-35
	10	High alloyed steel, and tool steel		Annealed	200	15	◎ 6-12	◎ 6-12	◎ 6-12
	11			Quenched & Tempered	325	35	◎ 6-12	◎ 6-12	◎ 6-12
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15			
	13		Martensitic	Quenched & Tempered	240	23			
	14		Austenitic		180	10			
K	15	Grey cast iron	Pearlitic / ferritic		180	10			
	16		Pearlitic (Martensitic)		260	26			
	17	Nodular cast iron	Ferritic		160	3			
	18		Pearlitic		250	25			
	19	Malleable cast iron	Ferritic		130				
	20		Pearlitic		230	21			
N	21	Aluminum-wrought alloy	Not Curable		60				
	22		Curable	Hardened	100				
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75				
	24		≤ 12% Si, Curable	Hardened	90				
	25		> 12% Si, Not Curable		130				
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110				
	27		CuZn, CuSnZn (Brass)		90				
	28		CuSn, lead-free copper and electrolytic copper		100				
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic						
	30		Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15			
	32			Cured	280	30			
	33		Ni or Co Based	Annealed	250	25			
	34			Cured	350	38			
	35			Cast	320	34			
	36	Titanium Alloys	Pure Titanium		400 Rm				
	37		Alpha + Beta Alloys	Hardened	1050 Rm				
H	38	Hardened steel		Hardened	550	55	○ 3-15	○ 3-15	○ 3-15
	39			Hardened	630	60			
	40	Chilled Cast Iron		Cast	400	42	○ 3-15	○ 3-15	○ 3-15
	41	Hardened Cast Iron		Hardened	550	55			

YG YG-1 CO., LTD.

HOLE TYPE	Max. 3.0xD Through Hole									
TOOL MATERIAL	HSS-PM									
CHAMFER LEAD	2P-3P			4P-5P						
FLUTE TYPE	Spiral Flute			Spiral Point						
SPIRAL FLUTE ANGLE	R15			-						
M										
M/MF	**TQ858** (p.B195)	**TK858** (p.B195)	**TR858** (p.B195)					**TQ808** (p.B198)	**TK808** (p.B198)	**TR808** (p.B198)
UNC										
UNC/UNF				**M4** (p.B197)	**M5** (p.B197)	**M6** (p.B197)	**M7** (p.B197)			
UNC/UNF/UNS										
UNC/UN8										
NPT										
NPTF										
NPS/NPSF										
COATING	Steam Oxide	TiCN	HardSlick	Steam Oxide	Bright	TiCN	HardSlick	Steam Oxide	TiCN	HardSlick
MODEL										

ISO / No.	TQ858	TK858	TR858	M4	M5	M6	M7	TQ808	TK808	TR808
P 1										
2										
3										
4										
5										
6										
7	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
8	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
9	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
10	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12
11	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12	◎ 6-12
M 12										
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K 15										
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37										
H 38	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15
39										
40	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15	○ 3-15
41										

YG YG-1 CO., LTD.

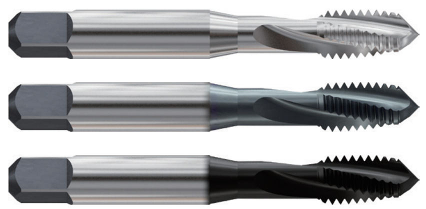
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

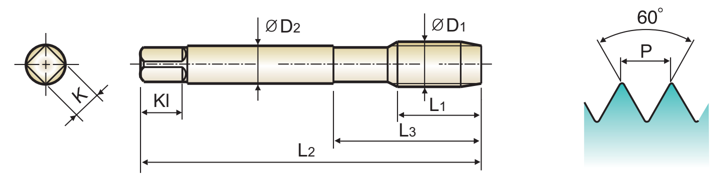
YG TAP HARDENED STEEL

H6 / H7 / H8 SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels up to 25 ~ 45HRc

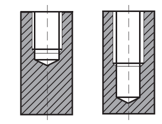
ANSI





Thread Depth / Hole Type

2.5×D



Material groups: HR | HSS-PM | UNC UNF | USCTI 302A | 2P~3P | Bright | TiCN | Hardslick | R15

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. TiCN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
#2	- 56UNC	H6082	H7082	H8082	H2	1.752	.157	.433	.141	.110	.190	3
#4	- 40UNC	H6162	H7162	H8162	H2	1.874	.236	.563	.141	.110	.190	3
#5	- 40UNC	H6202	H7202	H8202	H2	1.937	.236	.626	.141	.110	.190	3
#6	- 32UNC	H6243	H7243	H8243	H3	2.000	.276	.689	.141	.110	.190	3
#8	- 32UNC	H6283	H7283	H8283	H3	2.126	.276	.752	.168	.131	.250	3
#10	- 24UNC	H6323	H7323	H8323	H3	2.374	.354	.906	.194	.152	.250	3
#10	- 32UNF	H6343	H7343	H8343	H3	2.374	.276	.906	.194	.152	.250	3
1/4	- 20UNC	H6405	H7405	H8405	H5	2.500	.433	1.000	.255	.191	.310	3
1/4	- 28UNF	H6424	H7424	H8424	H4	2.500	.354	1.000	.255	.191	.310	3
5/16	- 18UNC	H6445	H7445	H8445	H5	2.720	.472	1.126	.318	.238	.380	3
5/16	- 24UNF	H6464	H7464	H8464	H4	2.720	.394	1.126	.318	.238	.380	3
3/8	- 16UNC	H6485	H7485	H8485	H5	2.937	.551	1.252	.381	.286	.440	3
3/8	- 24UNF	H6504	H7504	H8504	H4	2.937	.394	1.252	.381	.286	.440	3
7/16	- 14UNC	H6525	H7525	H8525	H5	3.157	.591	1.850	.323	.242	.410	3
7/16	- 20UNF	H6545	H7545	H8545	H5	3.157	.472	1.850	.323	.242	.410	3
1/2	- 13UNC	H6565	H7565	H8565	H5	3.374	.630	2.067	.367	.275	.440	3
1/2	- 20UNF	H6585	H7585	H8585	H5	3.374	.472	2.067	.367	.275	.440	3
5/8	- 11UNC	H6645	H7645	H8645	H5	3.811	.748	2.205	.480	.360	.560	4
5/8	- 18UNF	H6665	H7665	H8665	H5	3.811	.512	2.205	.480	.360	.560	4
3/4	- 10UNC	H6705	H7705	H8705	H5	4.252	.827	2.480	.590	.442	.690	4
3/4	- 16UNF	H6725	H7725	H8725	H5	4.252	.591	2.480	.590	.442	.690	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended							○	○	◎	◎	◎									

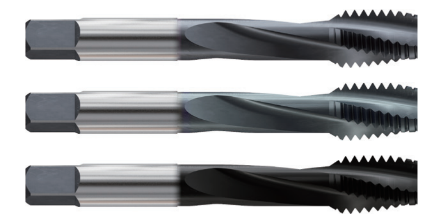
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																		○		○	

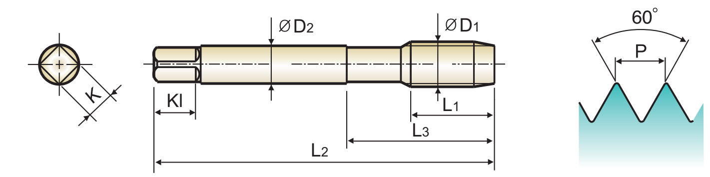
YG TAP HARDENED STEEL

TQ858 / TK858 SERIES
TR858 SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels up to 25 ~ 45HRc

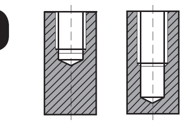
ANSI





Thread Depth / Hole Type

2.5×D



Material groups: HR | HSS-PM | M/MF | USCTI 302A | 2P~3P | Steam Oxide | TiCN | Hardslick | R15

Unit : Inch

Size D1	Pitch	EDP No. Steam Oxide	EDP No. TiCN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
M3	x 0.5	TQ858203	TK858203	TR858203HAR	D3	1.937	.197	.646	.141	.110	.190	3
M4	x 0.7	TQ858244	TK858244	TR858244HAR	D4	2.126	.276	.768	.168	.131	.250	3
M4	x 0.5	TQ858253	TK858253	TR858253HAR	D3	2.126	.276	.768	.168	.131	.250	3
M5	x 0.8	TQ858284	TK858284	TR858284HAR	D4	2.374	.354	.933	.194	.152	.250	3
M5	x 0.5	TQ858293	TK858293	TR858293HAR	D3	2.374	.354	.933	.194	.152	.250	3
M6	x 1.0	TQ858315	TK858315	TR858315HAR	D5	2.500	.433	1.000	.255	.191	.310	3
M6	x 0.75	TQ858324	TK858324	TR858324HAR	D4	2.500	.433	1.000	.255	.191	.310	3
M6	x 0.5	TQ858333	TK858333	TR858333HAR	D3	2.500	.433	1.000	.255	.191	.310	3
M8	x 1.25	TQ858365	TK858365	TR858365HAR	D5	2.720	.472	1.126	.318	.238	.380	3
M8	x 1.0	TQ858375	TK858375	TR858375HAR	D5	2.720	.433	1.126	.318	.238	.380	3
M10	x 1.5	TQ858426	TK858426	TR858426HAR	D6	2.937	.512	1.252	.381	.286	.440	3
M10	x 1.25	TQ858435	TK858435	TR858435HAR	D5	2.937	.472	1.252	.381	.286	.440	3
M10	x 1.0	TQ858445	TK858445	TR858445HAR	D5	2.937	.433	1.252	.381	.286	.440	3
M12	x 1.75	TQ858506	TK858506	TR858506HAR	D6	3.374	.591	2.067	.367	.275	.440	3
M12	x 1.5	TQ858516	TK858516	TR858516HAR	D6	3.374	.591	2.067	.367	.275	.440	3
M12	x 1.25	TQ858526	TK858526	TR858526HAR	D6	3.374	.551	2.067	.367	.275	.440	3
M12	x 1.0	TQ858535	TK858535	TR858535HAR	D5	3.374	.551	2.067	.367	.275	.440	3
M14	x 2.0	TQ858547	TK858547	TR858547HAR	D7	3.594	.709	2.067	.429	.322	.500	3
M14	x 1.5	TQ858556	TK858556	TR858556HAR	D6	3.594	.551	2.067	.429	.322	.500	3
M16	x 2.0	TQ858607	TK858607	TR858607HAR	D7	3.811	.709	2.205	.480	.360	.560	4
M16	x 1.5	TQ858616	TK858616	TR858616HAR	D6	3.811	.551	2.205	.480	.360	.560	4
M18	x 2.5	TQ858657	TK858657	TR858657HAR	D7	4.031	.787	2.205	.542	.406	.630	4
M18	x 1.5	TQ858676	TK858676	TR858676HAR	D6	4.031	.551	2.205	.542	.406	.630	4
M20	x 2.5	TQ858707	TK858707	TR858707HAR	D7	4.469	.787	2.480	.652	.489	.690	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended							○	○	◎	◎	◎									

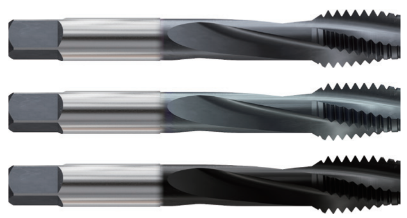
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																		○		○	

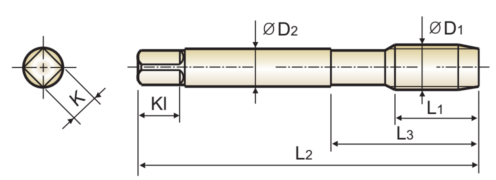
YG TAP HARDENED STEEL

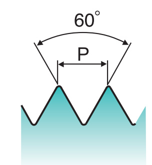
TQ858 / TK858 SERIES
TR858 SERIES

SPIRAL FLUTE TAPS MODIFIED BOTTOMING STYLE for Steels up to 25 ~ 45HRc

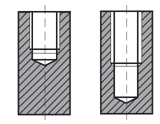
ANSI







Thread Depth / Hole Type
2.5×D



Material groups: HR | HSS-PM | M/MF | USCTI 302A | 2P~3P | Steam Oxide | TiCN | Hardslick | R15

Unit : Inch

Size	Pitch	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Steam Oxide	TiCN	Hardslick		L2	L1	L3	D2	K	KL	
M20 x	1.5	TQ858726	TK858726	TR858726HAR	D6	4.469	.551	2.480	.652	.489	.690	4
M22 x	2.5	TQ858747	TK858747	TR858747HAR	D7	4.689	.787	2.815	.697	.523	.750	4
M22 x	1.5	TQ858766	TK858766	TR858766HAR	D6	4.689	.551	2.815	.697	.523	.750	4
M24 x	3.0	TQ858788	TK858788	TR858788HAR	D8	4.906	.945	2.815	.760	.570	.750	4
M24 x	1.5	TQ858806	TK858806	TR858806HAR	D6	4.906	.551	2.815	.760	.570	.750	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended							○	○	◎	◎	◎									

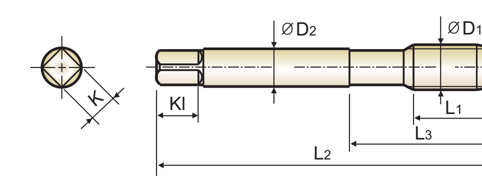
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																		○		○	

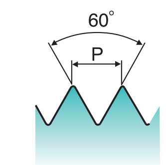
YG TAP HARDENED STEEL

M4/M5/M6/M7 SERIES

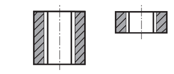
SPIRAL POINT TAPS PLUG STYLE for Steels up to 25 ~ 45HRc

ANSI





Thread Depth / Hole Type
3.0×D



Material groups: HR | HSS-PM | UNC UNF | USCTI 302A | 4P~5P | Bright | Steam Oxide | TiCN | Hardslick

Unit : Inch

Size	TPI	EDP No.				Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Steam Oxide	Bright	TiCN	Hardslick		L2	L1	L3	D2	K	KL	
#2 -	56UNC	M4082	M5082	M6082	M7082	H2	1.752	.256	.433	.141	.110	.190	2
#4 -	40UNC	M4162	M5162	M6162	M7162	H2	1.874	.335	.563	.141	.110	.190	2
#5 -	40UNC	M4202	M5202	M6202	M7202	H2	1.937	.374	.626	.141	.110	.190	3
#6 -	32UNC	M4243	M5243	M6243	M7243	H3	2.000	.413	.689	.141	.110	.190	3
#8 -	32UNC	M4283	M5283	M6283	M7283	H3	2.126	.453	.752	.168	.131	.250	3
#10 -	24UNC	M4323	M5323	M6323	M7323	H3	2.374	.531	.906	.194	.152	.250	3
#10 -	32UNF	M4343	M5343	M6343	M7343	H3	2.374	.531	.906	.194	.152	.250	3
1/4 -	20UNC	M4405	M5405	M6405	M7405	H5	2.500	.591	1.000	.255	.191	.310	3
1/4 -	28UNF	M4424	M5424	M6424	M7424	H4	2.500	.591	1.000	.255	.191	.310	3
5/16 -	18UNC	M4445	M5445	M6445	M7445	H5	2.720	.669	1.126	.318	.238	.380	3
5/16 -	24UNF	M4464	M5464	M6464	M7464	H4	2.720	.669	1.126	.318	.238	.380	3
3/8 -	16UNC	M4485	M5485	M6485	M7485	H5	2.937	.748	1.252	.381	.286	.440	3
3/8 -	24UNF	M4504	M5504	M6504	M7504	H4	2.937	.748	1.252	.381	.286	.440	3
7/16 -	14UNC	M4525	M5525	M6525	M7525	H5	3.157	.866	1.437	.323	.242	.410	3
7/16 -	20UNF	M4545	M5545	M6545	M7545	H5	3.157	.866	1.437	.323	.242	.410	3
1/2 -	13UNC	M4565	M5565	M6565	M7565	H5	3.374	.984	1.657	.367	.275	.440	3
1/2 -	20UNF	M4585	M5585	M6585	M7585	H5	3.374	.984	1.657	.367	.275	.440	3
9/16 -	12UNC	M4605	M5605	M6605	M7605	H5	3.594	.984	1.657	.429	.322	.500	3
9/16 -	18UNF	M4625	M5625	M6625	M7625	H5	3.594	.984	1.657	.429	.322	.500	3
5/8 -	11UNC	M4645	M5645	M6645	M7645	H5	3.811	1.083	1.811	.480	.360	.560	3
5/8 -	18UNF	M4665	M5665	M6665	M7665	H5	3.811	1.083	1.811	.480	.360	.560	3
3/4	10UNC	M4705	M5705	M6705	M7705	H5	4.252	1.201	2.000	.590	.442	.690	3
3/4	16UNF	M4725	M5725	M6725	M7725	H5	4.252	1.201	2.000	.590	.442	.690	3

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended							○	○	◎	◎	◎									

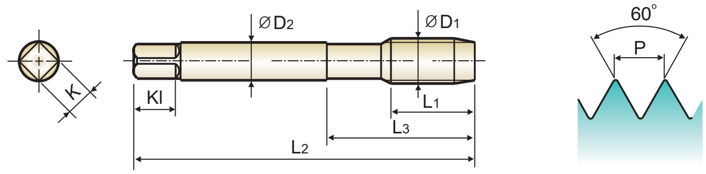
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																		○		○	

YG TAP HARDENED STEEL

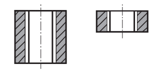
TQ808 / TK808 SERIES
TR808 SERIES

SPIRAL POINT TAPS PLUG STYLE for Steels up to 25 ~ 45HRc

ANSI



Thread Depth / Hole Type



3.0×D

Material groups: HR | HSS-PM | M/MF | USCTI 302A | 4P~5P | Steam Oxide | TiCN | Hardslick

Unit : Inch

Size D1	Pitch	EDP No. Steam Oxide	EDP No. TiCN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
M3	x 0.5	TQ808203	TK808203	TR808203HAR	D3	1.937	.374	.646	.141	.110	.190	3
M4	x 0.7	TQ808244	TK808244	TR808244HAR	D4	2.126	.453	.768	.168	.131	.250	3
M4	x 0.5	TQ808253	TK808253	TR808253HAR	D3	2.126	.453	.768	.168	.131	.250	3
M5	x 0.8	TQ808284	TK808284	TR808284HAR	D4	2.374	.531	.933	.194	.152	.250	3
M5	x 0.5	TQ808293	TK808293	TR808293HAR	D3	2.374	.531	.933	.194	.152	.250	3
M6	x 1.0	TQ808315	TK808315	TR808315HAR	D5	2.500	.591	1.000	.255	.191	.310	3
M6	x 0.75	TQ808324	TK808324	TR808324HAR	D4	2.500	.591	1.000	.255	.191	.310	3
M6	x 0.5	TQ808333	TK808333	TR808333HAR	D3	2.500	.591	1.000	.255	.191	.310	3
M8	x 1.25	TQ808365	TK808365	TR808365HAR	D5	2.720	.669	1.126	.318	.238	.380	3
M8	x 1.0	TQ808375	TK808375	TR808375HAR	D5	2.720	.669	1.126	.318	.238	.380	3
M10	x 1.5	TQ808426	TK808426	TR808426HAR	D6	2.937	.748	1.252	.381	.286	.440	3
M10	x 1.25	TQ808435	TK808435	TR808435HAR	D5	2.937	.748	1.252	.381	.286	.440	3
M10	x 1.0	TQ808445	TK808445	TR808445HAR	D5	2.937	.748	1.252	.381	.286	.440	3
M12	x 1.75	TQ808506	TK808506	TR808506HAR	D6	3.374	.984	1.657	.367	.275	.440	3
M12	x 1.5	TQ808516	TK808516	TR808516HAR	D6	3.374	.984	1.657	.367	.275	.440	3
M12	x 1.25	TQ808526	TK808526	TR808526HAR	D6	3.374	.984	1.657	.367	.275	.440	3
M12	x 1.0	TQ808535	TK808535	TR808535HAR	D5	3.374	.984	1.657	.367	.275	.440	3
M14	x 2.0	TQ808547	TK808547	TR808547HAR	D7	3.594	.984	1.657	.429	.322	.500	3
M14	x 1.5	TQ808556	TK808556	TR808556HAR	D6	3.594	.984	1.657	.429	.322	.500	3
M16	x 2.0	TQ808607	TK808607	TR808607HAR	D7	3.811	1.083	1.811	.480	.360	.560	3
M16	x 1.5	TQ808616	TK808616	TR808616HAR	D6	3.811	1.083	1.811	.480	.360	.560	3
M18	x 2.5	TQ808657	TK808657	TR808657HAR	D7	4.031	1.083	1.811	.542	.406	.630	3
M18	x 1.5	TQ808676	TK808676	TR808676HAR	D6	4.031	1.083	1.811	.542	.406	.630	3
M20	x 2.5	TQ808707	TK808707	TR808707HAR	D7	4.469	1.201	2.000	.652	.489	.690	3
M20	x 1.5	TQ808726	TK808726	TR808726HAR	D6	4.469	1.201	2.000	.652	.489	.690	3
M22	x 2.5	TQ808747	TK808747	TR808747HAR	D7	4.689	1.339	2.220	.697	.523	.750	3
M22	x 1.5	TQ808766	TK808766	TR808766HAR	D6	4.689	1.339	2.220	.697	.523	.750	3
M24	x 3	TQ808788	TK808788	TR808788HAR	D8	4.906	1.339	2.220	.760	.570	.750	4
M24	x 1.5	TQ808806	TK808806	TR808806HAR	D6	4.906	1.339	2.220	.760	.570	.750	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended							○	○	◎	◎	◎									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																		○		○	

HSS-E & HSS

YG TAP GENERAL

- For General Purpose Through and Blind Hole Applications

SELECTION GUIDE

YG THREADING TOOLS

HSS-E & HSS YG TAP GENERAL

- For General Purpose Through and Blind Hole Applications

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HOLE TYPE	Max. 2.0xD Blind /Through Hole		
TOOL MATERIAL	HSS		
CHAMFER LEAD ACC. TO DIN2197	9P/5P/2P		
FLUTE TYPE	Straight Flute		
SPIRAL FLUTE ANGLE	-		
SERIES: M			
M/MF			
UNC			
UNC/UNF			
UNC/UNF/UNS	T7316/T7A16/T7B16 (p.B212~)	T6316 (p.B220)	T8316 (p.B222)
UNC/UN8			
NPT			
NPTF			
NPS/NPSF			
SURFACE TREATMENT / COATING	Bright	Steam Oxide	TiN
	HAND TAP		
MODEL			

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	T7316/T7A16/T7B16	T6316	T8316
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○ 25-50	○ 25-50	○ 50-80
	2		About 0.45% C	Annealed	190	13	○ 25-50	○ 25-50	○ 50-80
	3		About 0.45% C	Quenched & Tempered	250	25	○ 25-50	○ 25-50	○ 50-80
	4		About 0.75% C	Annealed	270	28			
	5		About 0.75% C	Quenched & Tempered	300	32			
	6	Low alloy steel		Annealed	180	10	○ 6-30	○ 6-30	○ 10-35
	7			Quenched & Tempered	275	29			
	8			Quenched & Tempered	300	32			
	9			Quenched & Tempered	350	38			
	10	High alloyed steel, and tool steel		Annealed	200	15			
	11			Quenched & Tempered	325	35			
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○ 12-35	○ 12-35	○ 20-50
	13		Martensitic	Quenched & Tempered	240	23			
	14		Austenitic		180	10			
K	15	Grey cast iron	Pearlitic / ferritic		180	10			
	16		Pearlitic (Martensitic)		260	26			
	17	Nodular cast iron	Ferritic		160	3	○ 12-45	○ 12-45	○ 25-55
	18		Pearlitic		250	25	○ 12-45	○ 12-45	○ 25-55
	19	Malleable cast iron	Ferritic		130				
	20		Pearlitic		230	21			
N	21	Aluminum-wrought alloy	Not Curable		60		○ 50-65	○ 50-65	○ 50-65
	22		Curable	Hardened	100		○ 50-65	○ 50-65	○ 50-65
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○ 40-65	○ 40-65	○ 45-90
	24		≤ 12% Si, Curable	Hardened	90				
	25		> 12% Si, Not Curable		130				
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○ 50-60	○ 50-60	○ 65-100
	27		CuZn, CuSnZn (Brass)		90		○ 30-65	○ 30-65	○ 30-65
	28		CuSn, lead-free copper and electrolytic copper		100				
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic						
	30		Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15			
	32			Cured	280	30			
	33		Ni or Co Based	Annealed	250	25			
	34			Cured	350	38			
	35			Cast	320	34			
	36	Titanium Alloys	Pure Titanium		400 Rm				
	37		Alpha + Beta Alloys	Hardened	1050 Rm				
H	38	Hardened steel		Hardened	550	55			
	39			Hardened	630	60			
	40	Chilled Cast Iron		Cast	400	42			
	41	Hardened Cast Iron		Hardened	550	55			

HOLE TYPE	Max. 2.0xD Blind /Through Hole									
TOOL MATERIAL	HSS									
CHAMFER	9P/5P/2P			5P/2P				4P-5P		
FLUTE TYPE	Straight Flute			Straight Flute						
SPIRAL FLUTE ANGLE	-			-		left hand	left hand	-		
M										
M/MF	T7315 (p.B224)	T6315 (p.B225)	T8315 (p.B226)		T7B15 (p.B228)		T7A15 (p.B230)			
UNC								T7616 (p.B231)	T6616 (p.B231)	T8616 (p.B231)
UNC/UNF				T7326 (p.B227)		T7336 (p.B229)				
UNC/UNF/UNS										
UNC/UN8										
NPT										
NPTF										
NPS/NPSF										
SURFACE TREATMENT / COATING	Bright	Steam Oxide	TiN	Bright	Bright	Bright	Bright	Bright	Steam Oxide	TiN
	HAND TAP							Pulley Tap		

ISO	No.	T7315	T6315	T8315	T7326	T7B15	T7336	T7A15	T7616	T6616	T8616
P	1	○ 25-50	○ 25-50	○ 50-80	○ 25-50	○ 25-50	○ 25-50	○ 25-50	◎ 25-50	◎ 25-50	◎ 50-80
	2	○ 25-50	○ 25-50	○ 50-80	○ 25-50	○ 25-50	○ 25-50	○ 25-50	◎ 25-50	◎ 25-50	◎ 50-80
	3	○ 25-50	○ 25-50	○ 50-80	○ 25-50	○ 25-50	○ 25-50	○ 25-50	◎ 25-50	◎ 25-50	◎ 50-80
	4										
	5										
	6	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 6-30	○ 6-30	◎ 6-30	◎ 6-30	◎ 10-35
	7										
	8										
	9										
	10										
	11										
M	12	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 12-35	○ 12-35	○ 12-35	○ 12-35	○ 20-50
	13										
	14										
K	15										
	16										
	17	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 12-45	○ 12-45	○ 12-45	○ 12-45	○ 25-55
	18	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 12-45	○ 12-45	○ 12-45	○ 12-45	○ 25-55
	19										
	20										
N	21	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65
	22	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65
	23	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 40-65	○ 40-65	○ 40-65	○ 40-65	○ 45-90
	24										
	25										
	26	○ 50-60	○ 50-60	○ 65-100	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 50-60	○ 65-100
	27	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
	28										
	29										
	30										
S	31										
	32										
	33										
	34										
	35										
	36										
	37										
H	38										
	39										
	40										
	41										

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

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YG THREADING TOOLS

HSS-E & HSS YG TAP GENERAL

- For General Purpose Through and Blind Hole Applications

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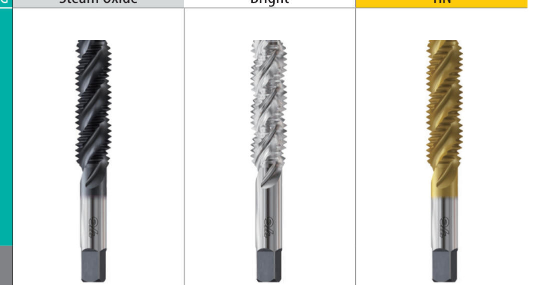
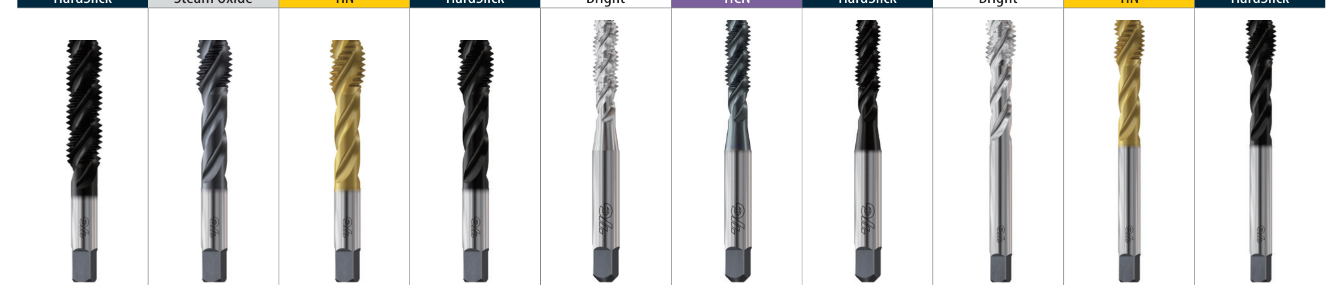
	C2 (p.B232)	C3 (p.B232)	C4 (p.B232)
HOLE TYPE	Max. 2.5xD Blind Hole		
TOOL MATERIAL	HSS-E		
CHAMFER LEAD ACC. TO DIN2197	1.5P-2P		
FLUTE TYPE	Spiral Flute		
SPIRAL FLUTE ANGLE	R45		
SERIES: M			
SERIES: M/MF			
SERIES: UNC			
SERIES: UNC/UNF	C2 (p.B232)	C3 (p.B232)	C4 (p.B232)
SERIES: UNC/UNF/UNS			
SERIES: UNC/UN8			
SERIES: NPT			
SERIES: NPTF			
SERIES: NPS/NPSF			
SURFACE TREATMENT / COATING	Steam Oxide	Bright	TiN
MODEL			

ISO	VDI 3323	Material Description	Composition / Structure	Heat Treatment	HB	HRC	C2	C3	C4
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎ 25-50	◎ 25-50	◎ 50-80
	2		About 0.45% C	Annealed	190	13	◎ 25-50	◎ 25-50	◎ 50-80
	3		About 0.45% C	Quenched & Tempered	250	25	◎ 25-50	◎ 25-50	◎ 50-80
	4		About 0.75% C	Annealed	270	28	○ 6-30	○ 6-30	○ 10-35
	5		About 0.75% C	Quenched & Tempered	300	32	○ 6-30	○ 6-30	○ 10-35
	6	Low alloy steel		Annealed	180	10	◎ 6-30	◎ 6-30	◎ 10-35
	7			Quenched & Tempered	275	29	○ 6-30	○ 6-30	○ 10-35
	8			Quenched & Tempered	300	32	○ 6-30	○ 6-30	○ 10-35
	9			Quenched & Tempered	350	38			
	10	High alloyed steel, and tool steel		Annealed	200	15			
	11			Quenched & Tempered	325	35			
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○ 12-35	○ 12-35	○ 20-50
	13		Martensitic	Quenched & Tempered	240	23	○ 12-35	○ 12-35	○ 20-50
	14		Austenitic		180	10			
K	15	Grey cast iron	Pearlitic / ferritic		180	10			
	16		Pearlitic (Martensitic)		260	26			
	17	Nodular cast iron	Ferritic		160	3	○ 12-45	○ 12-45	○ 25-55
	18		Pearlitic		250	25	○ 12-45	○ 12-45	○ 25-55
	19	Malleable cast iron	Ferritic		130				
	20		Pearlitic		230	21			
N	21	Aluminum-wrought alloy	Not Curable		60				
	22		Curable	Hardened	100				
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○ 40-65	○ 40-65	○ 45-90
	24		≤ 12% Si, Curable	Hardened	90		○ 40-65	○ 40-65	○ 45-90
	25		> 12% Si, Not Curable		130				
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○ 50-60	○ 50-60	○ 65-100
	27		CuZn, CuSnZn (Brass)		90		○ 30-65	○ 30-65	○ 30-65
	28		CuSn, lead-free copper and electrolytic copper		100				
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic						
	30		Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15			
	32			Cured	280	30			
	33		Ni or Co Based	Annealed	250	25			
	34			Cured	350	38			
	35			Cast	320	34			
	36	Titanium Alloys	Pure Titanium		400 Rm				
	37		Alpha + Beta Alloys	Hardened	1050 Rm				
H	38	Hardened steel		Hardened	550	55			
	39			Hardened	630	60			
	40	Chilled Cast Iron		Cast	400	42			
	41	Hardened Cast Iron		Hardened	550	55			

	D9 (p.B232)	F4 (p.B234)	F8 (p.B234)	F6 (p.B234)	G4 (p.B236)	G5 (p.B236)	G6 (p.B236)	G0 (p.B237)	G1 (p.B237)	G2 (p.B237)
HOLE TYPE	Max. 2.5xD Blind Hole									
TOOL MATERIAL	HSS-E									
CHAMFER LEAD	1.5P-2P							2P-3P		
FLUTE TYPE	Spiral Flute									
SPIRAL FLUTE ANGLE	R45	R50						R45		
M										
M/MF					G4 (p.B236)	G5 (p.B236)	G6 (p.B236)			
UNC										
UNC/UNF	D9 (p.B232)	F4 (p.B234)	F8 (p.B234)	F6 (p.B234)				G0 (p.B237)	G1 (p.B237)	G2 (p.B237)
UNC/UNF/UNS										
UNC/UN8										
NPT										
NPTF										
NPS/NPSF										
COATING	HardSlick	Steam Oxide	TiN	HardSlick	Bright	TiCN	HardSlick	Bright	TiN	HardSlick
MODEL										

VDI 3323	D9	F4	F8	F6	G4	G5	G6	G0	G1	G2	ISO
1	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	P
2	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	
3	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	
4	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	
5	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	
6	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	
7	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	
8	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	
9											
10											
11											
12	○ 20-50	○ 12-35	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50	M
13	○ 20-50	○ 12-35	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50	
14											
15											K
16											
17	○ 25-55	○ 12-45	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55	
18	○ 25-55	○ 12-45	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55	
19											
20											
21											N
22											
23	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	
24	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	
25											
26	○ 65-100	○ 50-60	○ 65-100	○ 65-100	○ 50-60	○ 65-100	○ 50-60	○ 65-100	○ 65-100	○ 50-60	
27	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	
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40											
41											

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YG THREADING TOOLS

HSS-E & HSS YG TAP GENERAL

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HOLE TYPE	Max. 2.5xD Blind Hole			
TOOL MATERIAL	HSS			
CHAMFER LEAD ACC. TO DIN2197	4P-5P			1.5P-2P
FLUTE TYPE	Spiral Flute			
SPIRAL FLUTE ANGLE	R50			
SERIES: M				
SERIES: M/MF				
SERIES: UNC				
SERIES: UNC/UNF	T7A96 (p.B239)	T6A96 (p.B239)	T8A96 (p.B239)	T7295 (p.B240)
SERIES: UNC/UNF/UNS				
SERIES: UNC/UN8				
SERIES: NPT				
SERIES: NPTF				
SERIES: NPS/NPSF				
SURFACE TREATMENT / COATING	Bright	Steam Oxide	TiN	Bright
MODEL				

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	T7A96	T6A96	T8A96	T7295
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50
	2		About 0.45% C	Annealed	190	13	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50
	3		About 0.45% C	Quenched & Tempered	250	25	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50
	4		About 0.75% C	Annealed	270	28	○ 6-30	○ 6-30	○ 10-35	○ 6-30
	5		About 0.75% C	Quenched & Tempered	300	32	○ 6-30	○ 6-30	○ 10-35	○ 6-30
	6	Low alloy steel		Annealed	180	10	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30
	7			Quenched & Tempered	275	29	○ 6-30	○ 6-30	○ 10-35	○ 6-30
	8			Quenched & Tempered	300	32	○ 6-30	○ 6-30	○ 10-35	○ 6-30
	9			Quenched & Tempered	350	38				
	10	High alloyed steel, and tool steel		Annealed	200	15				
	11			Quenched & Tempered	325	35				
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○ 12-35	○ 12-35	○ 20-50	○ 12-35
	13		Martensitic	Quenched & Tempered	240	23	○ 12-35	○ 12-35	○ 20-50	○ 12-35
	14		Austenitic		180	10				
K	15	Grey cast iron	Pearlitic / ferritic		180	10				
	16		Pearlitic (Martensitic)		260	26				
	17	Nodular cast iron	Ferritic		160	3	○ 12-45	○ 12-45	○ 25-55	○ 12-45
	18		Pearlitic		250	25	○ 12-45	○ 12-45	○ 25-55	○ 12-45
	19	Malleable cast iron	Ferritic		130					
	20		Pearlitic		230	21				
N	21	Aluminum-wrought alloy	Not Curable		60					
	22		Curable	Hardened	100					
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○ 40-65	○ 40-65	○ 45-90	○ 40-65
	24		≤ 12% Si, Curable	Hardened	90		○ 40-65	○ 40-65	○ 45-90	○ 40-65
	25		> 12% Si, Not Curable		130					
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○ 50-60	○ 65-100	○ 50-60	○ 50-60
	27		CuZn, CuSnZn (Brass)		90		○ 30-65	○ 30-65	○ 30-65	○ 30-65
	28		CuSn, lead-free copper and electrolytic copper		100					
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic							
	30		Rubber, Wood, etc.							
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15				
	32			Cured	280	30				
	33		Ni or Co Based	Annealed	250	25				
	34			Cured	350	38				
	35			Cast	320	34				
	36	Titanium Alloys	Pure Titanium		400 Rm					
	37		Alpha + Beta Alloys	Hardened	1050 Rm					
H	38	Hardened steel		Hardened	550	55				
	39			Hardened	630	60				
	40	Chilled Cast Iron		Cast	400	42				
	41	Hardened Cast Iron		Hardened	550	55				

HOLE TYPE	Max. 2.5xD Blind Hole											
TOOL MATERIAL	HSS											
CHAMFER	1.5P-2P		4P-5P			1.5P-2P			4P-5P		1.5P-2P	
FLUTE TYPE	Spiral Flute											
SPIRAL FLUTE ANGLE	R50											
M												
M/MF			T7A86 (p.B241)	T6A86 (p.B241)	T8A86 (p.B241)	T7A85 (p.B241)	T6A85 (p.B241)	T8A85 (p.B241)				
UNC												
UNC/UNF	T6295 (p.B240)	T8295 (p.B240)							T7D01 (p.B242)	T8D01 (p.B242)	T7D02 (p.B242)	T8D02 (p.B242)
UNC/UNF/UNS												
UNC/UN8												
NPT												
NPTF												
NPS/NPSF												
SURFACE TREATMENT / COATING	Steam Oxide	TiN	Bright	Steam Oxide	TiN	Bright	Steam Oxide	TiN	Bright	TiN	Bright	TiN

VDI	T6295	T8295	T7A86	T6A86	T8A86	T7A85	T6A85	T8A85	T7D01	T8D01	T7D02	T8D02	ISO
1	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	P
2	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	
3	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	
4	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	
5	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	
6	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	
7	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	
8	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 10-35	○ 6-30	○ 10-35	
9													
10													
11													
12	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 12-35	○ 20-50	M
13	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 20-50	○ 12-35	○ 20-50	
14													
15													K
16													
17	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 25-55	○ 12-45	○ 25-55	
18	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 25-55	○ 12-45	○ 25-55	
19													
20													
21													N
22													
23	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 45-90	○ 40-65	○ 45-90	
24	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 45-90	○ 40-65	○ 45-90	
25													
26	○ 65-100	○ 50-60	○ 50-60	○ 65-100	○ 50-60	○ 50-60	○ 65-100	○ 50-60	○ 65-100	○ 50-60	○ 65-100	○ 50-60	
27	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	
28													
29													
30													
31													S
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41													

SELECTION GUIDE

YG THREADING TOOLS

HSS-E & HSS YG TAP GENERAL

- For General Purpose Through and Blind Hole Applications

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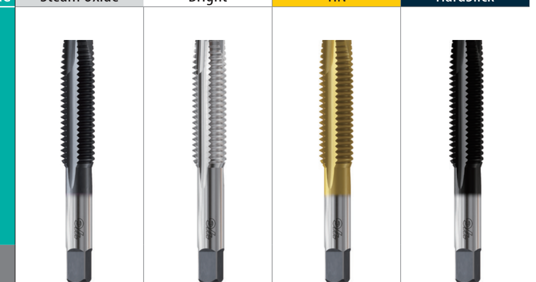
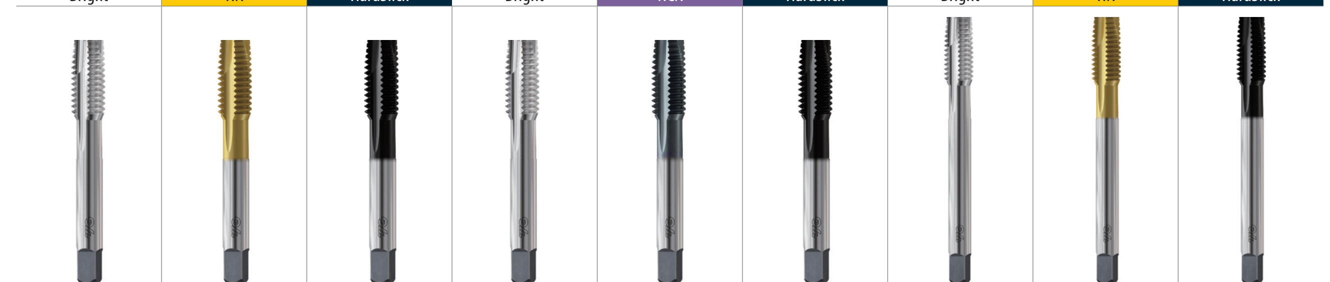
HOLE TYPE	Max. 3.0xD Through Hole
TOOL MATERIAL	HSS-E
CHAMFER LEAD ACC. TO DIN2197	4P-5P
FLUTE TYPE	Spiral Point
SPIRAL FLUTE ANGLE	-

SERIES													
M													
M/MF								L7 (p.B247)	L8 (p.B247)	L9 (p.B247)			
UNC													
UNC/UNF	I9 (p.B243)	J0 (p.B243)	J1 (p.B243)	J7 (p.B243)	K9 (p.B245)	L0 (p.B245)	L1 (p.B245)				L3 (p.B248)	L4 (p.B248)	L5 (p.B248)
UNC/UNF/UNS													
UNC/UN8													
NPT													
NPTF													
NPS/NPSF													
SURFACE TREATMENT / COATING	Steam Oxide	Bright	TiN	HardSlick	Bright	TiN	HardSlick	Bright	TiCN	HardSlick	Bright	TiN	HardSlick

MODEL





ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	I9	J0	J1	J7	K9	L0	L1	L7	L8	L9	L3	L4	L5
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎ 25-50	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	2	Non-alloy steel	About 0.45% C	Annealed	190	13	◎ 25-50	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	3	Non-alloy steel	About 0.45% C	Quenched & Tempered	250	25	◎ 25-50	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
P	4	Non-alloy steel	About 0.75% C	Annealed	270	28	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
P	5	Non-alloy steel	About 0.75% C	Quenched & Tempered	300	32	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
P	6	Low alloy steel		Annealed	180	10	◎ 6-30	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
P	7	Low alloy steel		Quenched & Tempered	275	29	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
P	8	Low alloy steel		Quenched & Tempered	300	32	○ 6-30	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35	○ 6-30	○ 10-35	○ 10-35
P	9	Low alloy steel		Quenched & Tempered	350	38													
P	10	High alloyed steel, and tool steel		Annealed	200	15													
P	11	High alloyed steel, and tool steel		Quenched & Tempered	325	35													
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○ 12-35	○ 12-35	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50
M	13	Stainless steel	Martensitic	Quenched & Tempered	240	23	○ 12-35	○ 12-35	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50	○ 12-35	○ 20-50	○ 20-50
M	14	Stainless steel	Austenitic		180	10													
K	15	Grey cast iron	Pearlitic / ferritic		180	10													
K	16	Grey cast iron	Pearlitic (Martensitic)		260	26													
K	17	Nodular cast iron	Ferritic		160	3	○ 12-45	○ 12-45	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55
K	18	Nodular cast iron	Pearlitic		250	25	○ 12-45	○ 12-45	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55	○ 12-45	○ 25-55	○ 25-55
K	19	Malleable cast iron	Ferritic		130														
K	20	Malleable cast iron	Pearlitic		230	21													
N	21	Aluminum-wrought alloy	Not Curable		60														
N	22	Aluminum-wrought alloy	Curable	Hardened	100														
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○ 40-65	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90
N	24	Aluminum-cast, alloyed	≤ 12% Si, Curable	Hardened	90		○ 40-65	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90
N	25	Aluminum-cast, alloyed	> 12% Si, Not Curable		130														
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○ 50-60	○ 50-60	○ 65-100	○ 65-100	○ 50-60	○ 65-100	○ 65-100	○ 50-60	○ 65-100	○ 65-100	○ 50-60	○ 65-100	○ 65-100
N	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90		○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
N	28	Copper and Copper Alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper		100														
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic																
N	30	Non Metallic Materials	Rubber, Wood, etc.																
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15													
S	32	Heat Resistant Super Alloys	Fe Based	Cured	280	30													
S	33	Heat Resistant Super Alloys	Ni or Co Based	Annealed	250	25													
S	34	Heat Resistant Super Alloys	Ni or Co Based	Cured	350	38													
S	35	Heat Resistant Super Alloys	Ni or Co Based	Cast	320	34													
S	36	Titanium Alloys	Pure Titanium		400 Rm														
S	37	Titanium Alloys	Alpha + Beta Alloys	Hardened	1050 Rm														
H	38	Hardened steel		Hardened	550	55													
H	39	Hardened steel		Hardened	630	60													
H	40	Chilled Cast Iron		Cast	400	42													
H	41	Hardened Cast Iron		Hardened	550	55													

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HOLE TYPE	Max. 3.0xD Through Hole		
TOOL MATERIAL	HSS		
CHAMFER LEAD ACC. TO DIN2197	4P-5P		
FLUTE TYPE	Spiral Point		
SPIRAL FLUTE ANGLE	-		
SERIES: UNC/UNF	T7216 (p.B250)	T6216 (p.B250)	T8216 (p.B250)
SURFACE TREATMENT / COATING	Bright	Steam Oxide	TiN

MODEL

ISO	VDI 3323	Material Description	Composition / Structure	Heat Treatment	HB	HRC	T7216	T6216	T8216
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎ 25-50	◎ 25-50	◎ 50-80
P	2	Non-alloy steel	About 0.45% C	Annealed	190	13	◎ 25-50	◎ 25-50	◎ 50-80
P	3	Non-alloy steel	About 0.45% C	Quenched & Tempered	250	25	◎ 25-50	◎ 25-50	◎ 50-80
P	4	Non-alloy steel	About 0.75% C	Annealed	270	28	○ 6-30	○ 6-30	○ 10-35
P	5	Non-alloy steel	About 0.75% C	Quenched & Tempered	300	32	○ 6-30	○ 6-30	○ 10-35
P	6	Low alloy steel		Annealed	180	10	◎ 6-30	◎ 6-30	◎ 10-35
P	7	Low alloy steel		Quenched & Tempered	275	29	○ 6-30	○ 6-30	○ 10-35
P	8	Low alloy steel		Quenched & Tempered	300	32	○ 6-30	○ 6-30	○ 10-35
P	9	Low alloy steel		Quenched & Tempered	350	38			
P	10	High alloyed steel, and tool steel		Annealed	200	15			
P	11	High alloyed steel, and tool steel		Quenched & Tempered	325	35			
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○ 12-35	○ 12-35	○ 20-50
M	13	Stainless steel	Martensitic	Quenched & Tempered	240	23	○ 12-35	○ 12-35	○ 20-50
M	14	Stainless steel	Austenitic		180	10			
K	15	Grey cast iron	Pearlitic / ferritic		180	10			
K	16	Grey cast iron	Pearlitic (Martensitic)		260	26			
K	17	Nodular cast iron	Ferritic		160	3	○ 12-45	○ 12-45	○ 25-55
K	18	Nodular cast iron	Pearlitic		250	25	○ 12-45	○ 12-45	○ 25-55
K	19	Malleable cast iron	Ferritic		130				
K	20	Malleable cast iron	Pearlitic		230	21			
N	21	Aluminum-wrought alloy	Not Curable		60				
N	22	Aluminum-wrought alloy	Curable	Hardened	100				
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○ 40-65	○ 40-65	○ 45-90
N	24	Aluminum-cast, alloyed	≤ 12% Si, Curable	Hardened	90		○ 40-65	○ 40-65	○ 45-90
N	25	Aluminum-cast, alloyed	> 12% Si, Not Curable		130				
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○ 50-60	○ 50-60	○ 65-100
N	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90		○ 30-65	○ 30-65	○ 30-65
N	28	Copper and Copper Alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper		100				
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic						
N	30	Non Metallic Materials	Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15			
S	32	Heat Resistant Super Alloys	Fe Based	Cured	280	30			
S	33	Heat Resistant Super Alloys	Ni or Co Based	Annealed	250	25			
S	34	Heat Resistant Super Alloys	Ni or Co Based	Cured	350	38			
S	35	Heat Resistant Super Alloys	Ni or Co Based	Cast	320	34			
S	36	Titanium Alloys	Pure Titanium		400 Rm				
S	37	Titanium Alloys	Alpha + Beta Alloys	Hardened	1050 Rm				
H	38	Hardened steel		Hardened	550	55			
H	39	Hardened steel		Hardened	630	60			
H	40	Chilled Cast Iron		Cast	400	42			
H	41	Hardened Cast Iron		Hardened	550	55			

HOLE TYPE	Max. 3.0xD Through Hole								
TOOL MATERIAL	HSS								
CHAMFER LEAD	4P-5P						1.5P-2P		
FLUTE TYPE	Spiral Point								
SPIRAL FLUTE ANGLE	-								
M/MF				T7217 (p.B255)	T6217 (p.B255)	T8217 (p.B255)			
UNC/UNF	T7C16 (p.B254)	T6C16 (p.B254)	T8C16 (p.B254)				T7226 (p.B256)	T6226 (p.B256)	T8226 (p.B256)
COATING	Bright	Steam Oxide	TiN	Bright	Steam Oxide	TiN	Bright	Steam Oxide	TiN

VDI	ISO	T7C16	T6C16	T8C16	T7217	T6217	T8217	T7226	T6226	T8226
1	P	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80
2	P	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80
3	P	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80
4	P	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35
5	P	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35
6	P	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35
7	P	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35
8	P	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35
9	P									
10	P									
11	P									
12	M	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50
13	M	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50
14	M									
15	K									
16	K									
17	K	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55
18	K	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55
19	K									
20	K									
21	N									
22	N									
23	N	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90
24	N	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90
25	N									
26	N	○ 50-60	○ 50-60	○ 65-100	○ 50-60	○ 50-60	○ 65-100	○ 50-60	○ 50-60	○ 65-100
27	N	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
28	N									
29	N									
30	N									
31	S									
32	S									
33	S									
34	S									
35	S									
36	S									
37	S									
38	H									
39	H									
40	H									
41	H									

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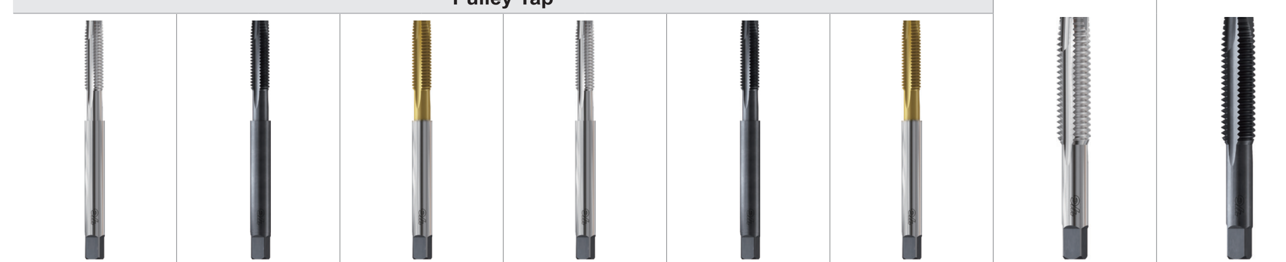
HOLE TYPE	Max. 3.0xD Through Hole		
TOOL MATERIAL	HSS		
CHAMFER LEAD ACC. TO DIN2197	4P-5P		
FLUTE TYPE	Spiral Point		
SPIRAL FLUTE ANGLE	-		
SERIES M			
SERIES M/MF	T7B17 (p.B257)	T6B17 (p.B257)	T8B17 (p.B257)
SERIES UNC			
SERIES UNC/UNF			
SERIES UNC/UNF/UNS			
SERIES UNC/UN8			
SERIES NPT			
SERIES NPTF			
SERIES NPS/NPSF			
SURFACE TREATMENT / COATING	Bright	Steam Oxide	TiN
MODEL			

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	T7B17	T6B17	T8B17
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎ 25-50	◎ 25-50	◎ 50-80
	2		About 0.45% C	Annealed	190	13	◎ 25-50	◎ 25-50	◎ 50-80
	3		About 0.45% C	Quenched & Tempered	250	25	◎ 25-50	◎ 25-50	◎ 50-80
	4		About 0.75% C	Annealed	270	28	○ 6-30	○ 6-30	○ 10-35
	5		About 0.75% C	Quenched & Tempered	300	32	○ 6-30	○ 6-30	○ 10-35
	6	Low alloy steel		Annealed	180	10	◎ 6-30	◎ 6-30	◎ 10-35
	7			Quenched & Tempered	275	29	○ 6-30	○ 6-30	○ 10-35
	8			Quenched & Tempered	300	32	○ 6-30	○ 6-30	○ 10-35
	9			Quenched & Tempered	350	38			
	10	High alloyed steel, and tool steel		Annealed	200	15			
	11			Quenched & Tempered	325	35			
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○ 12-35	○ 12-35	○ 20-50
	13		Martensitic	Quenched & Tempered	240	23	○ 12-35	○ 12-35	○ 20-50
	14		Austenitic		180	10			
K	15	Grey cast iron	Pearlitic / ferritic		180	10			
	16		Pearlitic (Martensitic)		260	26			
	17	Nodular cast iron	Ferritic		160	3	○ 12-45	○ 12-45	○ 25-55
	18		Pearlitic		250	25	○ 12-45	○ 12-45	○ 25-55
	19	Malleable cast iron	Ferritic		130				
	20		Pearlitic		230	21			
N	21	Aluminum-wrought alloy	Not Curable		60				
	22		Curable	Hardened	100				
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○ 40-65	○ 40-65	○ 45-90
	24		≤ 12% Si, Curable	Hardened	90		○ 40-65	○ 40-65	○ 45-90
	25		> 12% Si, Not Curable		130				
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○ 50-60	○ 50-60	○ 65-100
	27		CuZn, CuSnZn (Brass)		90		○ 30-65	○ 30-65	○ 30-65
	28		CuSn, lead-free copper and electrolytic copper		100				
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic						
	30		Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15			
	32			Cured	280	30			
	33		Ni or Co Based	Annealed	250	25			
	34			Cured	350	38			
	35			Cast	320	34			
	36	Titanium Alloys	Pure Titanium		400 Rm				
	37		Alpha + Beta Alloys	Hardened	1050 Rm				
H	38	Hardened steel		Hardened	550	55			
	39			Hardened	630	60			
	40	Chilled Cast Iron		Cast	400	42			
	41	Hardened Cast Iron		Hardened	550	55			

HOLE TYPE	Max. 3.0xD Through Hole							
TOOL MATERIAL	HSS							
CHAMFER LEAD	4P-5P						1.5P-2P	
FLUTE TYPE	Spiral Point							
SPIRAL FLUTE ANGLE	-							
SERIES M								
SERIES M/MF								
SERIES UNC								
SERIES UNC/UNF	T7236 (p.B258)	T6236 (p.B258)	T8236 (p.B258)	T7G36 (p.B258)	T6G36 (p.B258)	T8G36 (p.B258)	T7256 (p.B259)	T6256 (p.B259)
SERIES UNC/UNF/UNS								
SERIES UNC/UN8								
SERIES NPT								
SERIES NPTF								
SERIES NPS/NPSF								
SURFACE TREATMENT / COATING	Bright	Steam Oxide	TiN	Bright	Steam Oxide	TiN	Bright	Steam Oxide
	Pulley Tap							



ISO	VDI 3323	T7236	T6236	T8236	T7G36	T6G36	T8G36	T7256	T6256
P	1	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50
	2	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50
	3	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50	◎ 50-80	◎ 25-50	◎ 25-50
	4	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30
	5	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30
	6	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30	◎ 10-35	◎ 6-30	◎ 6-30
	7	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30
	8	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30
	9								
	10								
	11								
M	12	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35
	13	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35	○ 20-50	○ 12-35	○ 12-35
	14								
K	15								
	16								
	17	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45
	18	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45	○ 25-55	○ 12-45	○ 12-45
	19								
	20								
N	21								
	22								
	23	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65
	24	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65
	25								
	26	○ 50-60	○ 50-60	○ 65-100	○ 50-60	○ 50-60	○ 65-100	○ 50-60	○ 50-60
	27	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65
	28								
	29								
	30								
S	31								
	32								
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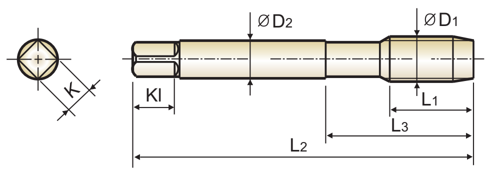
	37								
H	38								
	39								
	40								
	41								

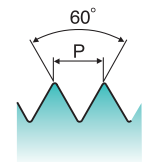
YG TAP GENERAL

T7316 / T7A16 / T7B16 SERIES

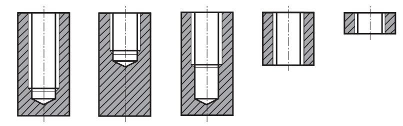
HAND TAP
TAPER, PLUG & BOTTOMING STYLE

ANSI





Thread Depth / Hole Type 2.0×D



Material groups GS | HSS | UNC UNF UNS | USCTI 302 | 9P/5P/2P | Bright

Unit : Inch

Size D1	TPI	EDP No. Bright Taper	EDP No. Bright Plug	EDP No. Bright Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#0	- 80UNF	T7316026	T7316027	T7316028	H1	1.634	.315	.512	.141	.110	.190	2
#0	- 80UNF	-	T7316027H2	T7316028H2	H2	1.634	.315	.512	.141	.110	.190	2
#1	- 64UNC	T7316046	T7316047	T7316048	H1	1.693	.374	.571	.141	.110	.190	2
#1	- 64UNC	-	T7316047H2	T7316048H2	H2	1.693	.374	.571	.141	.110	.190	2
#1	- 72UNF	T7316066	T7316067	T7316068	H1	1.693	.374	.571	.141	.110	.190	2
#1	- 72UNF	-	T7316067H2	T7316068H2	H2	1.693	.374	.571	.141	.110	.190	2
#2	- 56UNC	-	T7A16087H1	T7A16088H1	H1	1.752	.433	.650	.141	.110	.190	2
#2	- 56UNC	T7316086H1	T7316087H1	T7316088H1	H1	1.752	.433	.650	.141	.110	.190	3
#2	- 56UNC	-	T7A16087	T7A16088	H2	1.752	.433	.650	.141	.110	.190	2
#2	- 56UNC	T7316086	T7316087	T7316088	H2	1.752	.433	.650	.141	.110	.190	3
#2	- 64UNF	T7316106	T7316107	T7316108	H2	1.752	.433	.650	.141	.110	.190	3
#3	- 48UNC	-	T7A16127H1	-	H1	1.811	.492	.728	.141	.110	.190	2
#3	- 48UNC	-	T7316127H1	-	H1	1.811	.492	.728	.141	.110	.190	3
#3	- 48UNC	-	T7A16127	T7A16128	H2	1.811	.492	.728	.141	.110	.190	2
#3	- 48UNC	T7316126	T7316127	T7316128	H2	1.811	.492	.728	.141	.110	.190	3
#3	- 56UNF	T7316146	T7316147	T7316148	H2	1.811	.492	.728	.141	.110	.190	3
#4	- 36UNS	T7316156	T7316157	T7316158	H2	1.874	.563	.799	.141	.110	.190	3
#4	- 40UNC	-	T7A16167H1	T7A16168H1	H1	1.874	.563	.799	.1410	.110	.190	2
#4	- 40UNC	T7316166H1	T7316167H1	T7316168H1	H1	1.874	.563	.799	.141	.110	.190	3
#4	- 40UNC	-	T7A16167	T7A16168	H2	1.874	.563	.799	.141	.110	.190	2
#4	- 40UNC	T7316166	T7316167	T7316168	H2	1.874	.563	.799	.141	.110	.190	3
#4	- 48UNF	-	T7316187H1	-	H1	1.874	.563	.799	.141	.110	.190	3
#4	- 48UNF	T7316186	T7316187	T7316188	H2	1.874	.563	.799	.141	.110	.190	3
#5	- 40UNC	-	T7316207H1	T7316208H1	H1	1.937	.626	.882	.141	.110	.190	3
#5	- 40UNC	-	T7A16207	T7A16208	H2	1.937	.626	.882	.141	.110	.190	2
#5	- 40UNC	T7316206	T7316207	T7316208	H2	1.937	.626	.882	.141	.110	.190	3

▶ NEXT PAGE

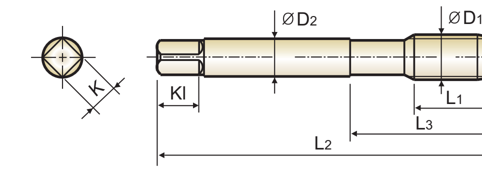
◎ : Excellent ○ : Good

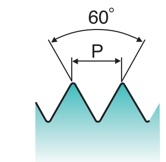
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

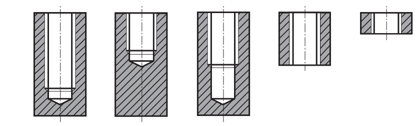
YG TAP GENERAL
T7316 / T7A16 / T7B16 SERIES
HAND TAP
TAPER, PLUG & BOTTOMING STYLE

ANSI





Thread Depth / Hole Type 2.0×D



Material groups GS | HSS | UNC UNF UNS | USCTI 302 | 9P/5P/2P | Bright

Unit : Inch

Size D1	TPI	EDP No. Bright Taper	EDP No. Bright Plug	EDP No. Bright Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#5	- 44UNF	T7316226	T7316227	T7316228	H2	1.937	.626	.882	.141	.110	.190	3
#6	- 32UNC	-	T7A16247H1	T7A16248H1	H1	2.000	.689	.965	.141	.110	.190	2
#6	- 32UNC	T7316246H1	T7316247H1	T7316248H1	H1	2.000	.689	.965	.141	.110	.190	3
#6	- 32UNC	-	T7A16247H2	T7A16248H2	H2	2.000	.689	.965	.141	.110	.190	2
#6	- 32UNC	T7316246H2	T7316247H2	T7316248H2	H2	2.000	.689	.965	.141	.110	.190	3
#6	- 32UNC	-	T7A16247	T7A16248	H3	2.000	.689	.965	.141	.110	.190	2
#6	- 32UNC	T7316246	T7316247	T7316248	H3	2.000	.689	.965	.141	.110	.190	3
#6	- 32UNC	-	T7B16247H7	T7B16248H7	H7	2.000	.689	.965	.141	.110	.190	3
#6	- 40UNF	-	T7B16267H1	-	H1	2.000	.689	.965	.141	.110	.190	3
#6	- 40UNF	-	T7A16267	T7A16268	H2	2.000	.689	.965	.141	.110	.190	2
#6	- 40UNF	T7316266	T7316267	T7316268	H2	2.000	.689	.965	.141	.110	.190	3
#8	- 32UNC	-	T7A16287H1	-	H1	2.126	.752	1.047	.168	.131	.250	2
#8	- 32UNC	T7316286H1	T7316287H1	T7316288H1	H1	2.126	.752	1.047	.168	.131	.250	4
#8	- 32UNC	-	T7A16287H2	T7A16288H2	H2	2.126	.752	1.047	.168	.131	.250	2
#8	- 32UNC	-	T7B16287H2	T7B16288H2	H2	2.126	.752	1.047	.168	.131	.250	3
#8	- 32UNC	T7316286H2	T7316287H2	T7316288H2	H2	2.126	.752	1.047	.168	.131	.250	4
#8	- 32UNC	-	T7A16287	T7A16288	H3	2.126	.752	1.047	.168	.131	.250	2
#8	- 32UNC	-	T7B16287	T7B16288	H3	2.126	.752	1.047	.168	.131	.250	3
#8	- 32UNC	T7316286	T7316287	T7316288	H3	2.126	.752	1.047	.168	.131	.250	4
#8	- 32UNC	-	T7B16287H7	T7B16288H7	H7	2.126	.752	1.047	.168	.131	.250	3
#8	- 32UNC	-	T7316287H7	T7316288H7	H7	2.126	.752	1.047	.168	.131	.250	4
#8	- 36UNF	T7316306	T7316307	T7316308	H2	2.126	.752	1.047	.168	.131	.250	4
#10	- 24UNC	T7316326H1	T7316327H1	T7316328H1	H1	2.374	.906	1.220	.194	.152	.250	4
#10	- 24UNC	-	T7A16327H2	T7A16328H2	H2	2.374	.906	1.220	.194	.152	.250	2
#10	- 24UNC	-	T7B16327H2	-	H2	2.374	.906	1.220	.194	.152	.250	3
#10	- 24UNC	T7316326H2	T7316327H2	T7316328H2	H2	2.374	.906	1.220	.194	.152	.250	4

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◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

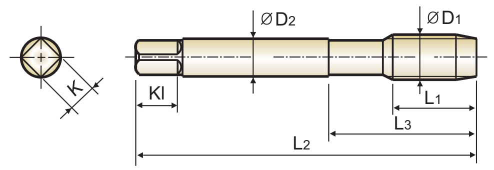
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP TiNi
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

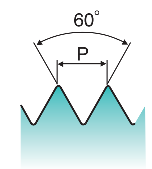
YG TAP GENERAL

T7316 / T7A16 / T7B16 SERIES

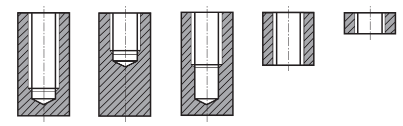
HAND TAP
TAPER, PLUG & BOTTOMING STYLE

ANSI





Thread Depth / Hole Type 2.0×D



Material groups: GS | HSS | UNC UNF UNS | USCTI 302 | 9P/5P/2P | Bright

Unit : Inch

Size D1	TPI	EDP No. Bright Taper	Plug	Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#10	- 24UNC	-	T7A16327	T7A16328	H3	2.374	.906	1.220	.194	.152	.250	2
#10	- 24UNC	-	T7B16327	T7B16328	H3	2.374	.906	1.220	.194	.152	.250	3
#10	- 24UNC	T7316326	T7316327	T7316328	H3	2.374	.906	1.220	.194	.152	.250	4
#10	- 24UNC	-	T7B16327H7	T7B16328H7	H7	2.374	.906	1.220	.194	.152	.250	3
#10	- 24UNC	-	T7316327H7	T7316328H7	H7	2.374	.906	1.220	.194	.152	.250	4
#10	- 32UNF	-	T7A16347H1	T7A16348H1	H1	2.374	.906	1.220	.194	.152	.250	2
#10	- 32UNF	T7316346H1	T7316347H1	T7316348H1	H1	2.374	.906	1.220	.194	.152	.250	4
#10	- 32UNF	-	T7A16347H2	T7A16348H2	H2	2.374	.906	1.220	.194	.152	.250	2
#10	- 32UNF	-	T7B16347H2	T7B16348H2	H2	2.374	.906	1.220	.194	.152	.250	3
#10	- 32UNF	T7316346H2	T7316347H2	T7316348H2	H2	2.374	.906	1.220	.194	.152	.250	4
#10	- 32UNF	-	T7A16347	T7A16348	H3	2.374	.906	1.220	.194	.152	.250	2
#10	- 32UNF	-	T7B16347	T7B16348	H3	2.374	.906	1.220	.194	.152	.250	3
#10	- 32UNF	T7316346	T7316347	T7316348	H3	2.374	.906	1.220	.194	.152	.250	4
#10	- 32UNF	-	T7B16347H7	T7B16348H7	H7	2.374	.906	1.220	.194	.152	.250	3
#10	- 32UNF	T7316346H7	T7316347H7	T7316348H7	H7	2.374	.906	1.220	.194	.152	.250	4
#12	- 24UNC	T7316366	T7316367	T7316368	H3	2.374	.906	1.220	.220	.165	.280	4
#12	- 28UNF	-	T7316387H1	-	H1	2.374	.906	1.220	.220	.165	.280	4
#12	- 28UNF	T7316386	T7316387	T7316388	H3	2.374	.906	1.220	.220	.165	.280	4
1/4	- 20UNC	-	T7B16407H1	-	H1	2.500	1.000	1.354	.255	.191	.310	3
1/4	- 20UNC	T7316406H1	T7316407H1	T7316408H1	H1	2.500	1.000	1.354	.255	.191	.310	4
1/4	- 20UNC	-	T7B16407H2	T7B16408H2	H2	2.500	1.000	1.354	.255	.191	.310	3
1/4	- 20UNC	T7316406H2	T7316407H2	T7316408H2	H2	2.500	1.000	1.354	.255	.191	.310	4
1/4	- 20UNC	-	T7A16407	T7A16408	H3	2.500	1.000	1.354	.255	.191	.310	2
1/4	- 20UNC	-	T7B16407	T7B16408	H3	2.500	1.000	1.354	.255	.191	.310	3
1/4	- 20UNC	T7316406	T7316407	T7316408	H3	2.500	1.000	1.354	.255	.191	.310	4
1/4	- 20UNC	-	T7B16407H5	T7B16408H5	H5	2.500	1.000	1.354	.255	.191	.310	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

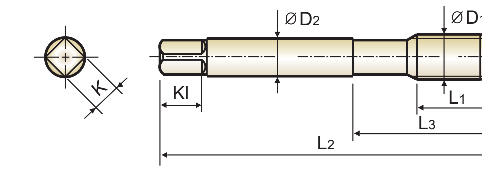
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

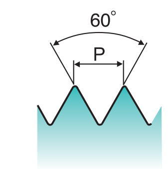
YG TAP GENERAL

T7316 / T7A16 / T7B16 SERIES

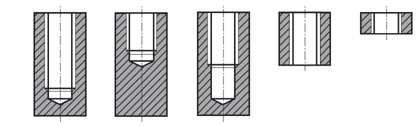
HAND TAP
TAPER, PLUG & BOTTOMING STYLE

ANSI





Thread Depth / Hole Type 2.0×D



Material groups: GS | HSS | UNC UNF UNS | USCTI 302 | 9P/5P/2P | Bright

Unit : Inch

Size D1	TPI	EDP No. Bright Taper	Plug	Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
1/4	- 20UNC	-	T7316407H5	T7316408H5	H5	2.500	1.000	1.354	.255	.191	.310	4
1/4	- 28UNF	-	T7316427H1	T7316428H1	H1	2.500	1.000	1.354	.255	.191	.310	4
1/4	- 28UNF	-	T7316427H2	T7316428H2	H2	2.500	1.000	1.354	.255	.191	.310	4
1/4	- 28UNF	-	T7A16427	T7A16428	H3	2.500	1.000	1.354	.255	.191	.310	2
1/4	- 28UNF	-	T7B16427	T7B16428	H3	2.500	1.000	1.354	.255	.191	.310	3
1/4	- 28UNF	T7316426	T7316427	T7316428	H3	2.500	1.000	1.354	.255	.191	.310	4
1/4	- 28UNF	-	T7316427H4	T7316428H4	H4	2.500	1.000	1.354	.255	.191	.310	4
5/16	- 18UNC	-	T7B16447H1	T7B16448H1	H1	2.720	1.126	1.500	.318	.238	.380	3
5/16	- 18UNC	-	T7316447H1	T7316448H1	H1	2.720	1.126	1.500	.318	.238	.380	4
5/16	- 18UNC	T7316446H2	T7316447H2	T7316448H2	H2	2.720	1.126	1.500	.318	.238	.380	4
5/16	- 18UNC	-	T7A16447	T7A16448	H3	2.720	1.126	1.500	.318	.238	.380	2
5/16	- 18UNC	-	T7B16447	T7B16448	H3	2.720	1.126	1.500	.318	.238	.380	3
5/16	- 18UNC	T7316446	T7316447	T7316448	H3	2.720	1.126	1.500	.318	.238	.380	4
5/16	- 18UNC	-	T7B16447H5	T7B16448H5	H5	2.720	1.126	1.500	.318	.238	.380	3
5/16	- 18UNC	-	T7316447H5	T7316448H5	H5	2.720	1.126	1.500	.318	.238	.380	4
5/16	- 24UNF	-	T7B16467H1	T7B16468H1	H1	2.720	1.126	1.500	.318	.238	.380	3
5/16	- 24UNF	-	T7316467H1	T7316468H1	H1	2.720	1.126	1.500	.318	.238	.380	4
5/16	- 24UNF	-	T7316467H2	T7316468H2	H2	2.720	1.126	1.500	.318	.238	.380	4
5/16	- 24UNF	-	T7B16467	T7B16468	H3	2.720	1.126	1.500	.318	.238	.380	3
5/16	- 24UNF	T7316466	T7316467	T7316468	H3	2.720	1.126	1.500	.318	.238	.380	4
5/16	- 24UNF	-	T7316467H4	T7316468H4	H4	2.720	1.126	1.500	.318	.238	.380	4
3/8	- 16UNC	-	T7B16487H1	T7B16488H1	H1	2.937	1.252	1.646	.381	.286	.440	3
3/8	- 16UNC	-	T7316487H1	T7316488H1	H1	2.937	1.252	1.646	.381	.286	.440	4
3/8	- 16UNC	-	T7316487H2	T7316488H2	H2	2.937	1.252	1.646	.381	.286	.440	4
3/8	- 16UNC	-	T7B16487	T7B16488	H3	2.937	1.252	1.646	.381	.286	.440	3
3/8	- 16UNC	T7316486	T7316487	T7316488	H3	2.937	1.252	1.646	.381	.286	.440	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

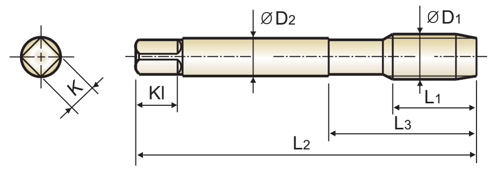
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

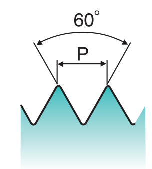
YG TAP GENERAL

T7316 / T7A16 / T7B16 SERIES

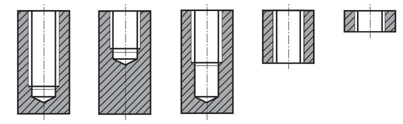
HAND TAP
TAPER, PLUG & BOTTOMING STYLE

ANSI





Thread Depth / Hole Type 2.0×D



Material groups GS | HSS | UNC UNF UNS | USCTI 302 | 9P/5P/2P | Bright

Unit : Inch

Size D1	TPI	EDP No. Bright Taper	Plug	Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
3/8	- 16UNC	-	T7B16487H5	T7B16488H5	H5	2.937	1.252	1.646	.381	.286	.440	3
3/8	- 16UNC	-	T7316487H5	T7316488H5	H5	2.937	1.252	1.646	.381	.286	.440	4
3/8	- 24UNF	-	T7316507H1	T7316508H1	H1	2.937	1.252	1.646	.381	.286	.440	4
3/8	- 24UNF	-	T7316507H2	T7316508H2	H2	2.937	1.252	1.646	.381	.286	.440	4
3/8	- 24UNF	-	T7B16507	T7B16508	H3	2.937	1.252	1.646	.381	.286	.440	3
3/8	- 24UNF	T7316506	T7316507	T7316508	H3	2.937	1.252	1.646	.381	.286	.440	4
3/8	- 24UNF	-	T7316507H4	T7316508H4	H4	2.937	1.252	1.646	.381	.286	.440	4
7/16	- 14UNC	-	T7316527H2	-	H2	3.157	1.437	-	.323	.242	.410	4
7/16	- 14UNC	-	T7B16527	T7B16528	H3	3.157	1.437	-	.323	.242	.410	3
7/16	- 14UNC	T7316526	T7316527	T7316528	H3	3.157	1.437	-	.323	.242	.410	4
7/16	- 14UNC	-	T7316527H5	T7316528H5	H5	3.157	1.437	-	.323	.242	.410	4
7/16	- 20UNF	-	T7316547H2	-	H2	3.157	1.437	-	.323	.242	.410	4
7/16	- 20UNF	-	T7B16547	T7B16548	H3	3.157	1.437	-	.323	.242	.410	3
7/16	- 20UNF	T7316546	T7316547	T7316548	H3	3.157	1.437	-	.323	.242	.410	4
7/16	- 20UNF	-	T7B16547H5	T7B16548H5	H5	3.157	1.437	-	.323	.242	.410	3
7/16	- 20UNF	-	T7316547H5	T7316548H5	H5	3.157	1.437	-	.323	.242	.410	4
1/2	- 13UNC	-	T7316567H1	T7316568H1	H1	3.374	1.657	-	.367	.275	.440	4
1/2	- 13UNC	-	T7316567H2	T7316568H2	H2	3.374	1.657	-	.367	.275	.440	4
1/2	- 13UNC	-	T7B16567	T7B16568	H3	3.374	1.657	-	.367	.275	.440	3
1/2	- 13UNC	T7316566	T7316567	T7316568	H3	3.374	1.657	-	.367	.275	.440	4
1/2	- 13UNC	-	T7316567H5	T7316568H5	H5	3.374	1.657	-	.367	.275	.440	4
1/2	- 20UNF	-	T7316587H1	T7316588H1	H1	3.374	1.657	-	.367	.275	.440	4
1/2	- 20UNF	-	T7B16587	T7B16588	H3	3.374	1.657	-	.367	.275	.440	3
1/2	- 20UNF	T7316586	T7316587	T7316588	H3	3.374	1.657	-	.367	.275	.440	4
1/2	- 20UNF	-	T7316587H5	T7316588H5	H5	3.374	1.657	-	.367	.275	.440	4
9/16	- 12UNC	T7316606	T7316607	T7316608	H3	3.594	1.657	-	.429	.322	.500	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

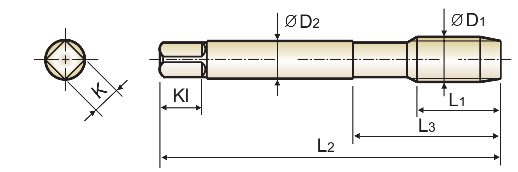
ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

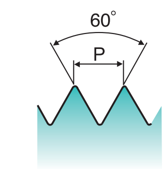
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

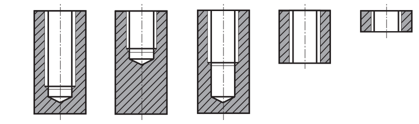
YG TAP GENERAL
T7316 / T7A16 / T7B16 SERIES
HAND TAP
TAPER, PLUG & BOTTOMING STYLE

ANSI





Thread Depth / Hole Type 2.0×D



Material groups GS | HSS | UNC UNF UNS | USCTI 302 | 9P/5P/2P | Bright

Unit : Inch

Size D1	TPI	EDP No. Bright Taper	Plug	Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
9/16	- 12UNC	-	T7316607H5	T7316608H5	H5	3.594	1.657	-	.429	.322	.500	4
9/16	- 18UNF	-	T7316627H2	-	H2	3.594	1.657	-	.429	.322	.500	4
9/16	- 18UNF	T7316626	T7316627	T7316628	H3	3.594	1.657	-	.429	.322	.500	4
9/16	- 18UNF	-	T7316627H5	T7316628H5	H5	3.594	1.657	-	.429	.322	.500	4
5/8	- 11UNC	-	T7316647H1	-	H1	3.811	1.811	-	.480	.360	.560	4
5/8	- 11UNC	-	T7316647H2	T7316648H2	H2	3.811	1.811	-	.480	.360	.560	4
5/8	- 11UNC	T7316646	T7316647	T7316648	H3	3.811	1.811	-	.480	.360	.560	4
5/8	- 11UNC	-	T7316647H5	T7316648H5	H5	3.811	1.811	-	.480	.360	.560	4
5/8	- 18UNF	-	T7316667H1	-	H1	3.811	1.811	-	.480	.360	.560	4
5/8	- 18UNF	-	T7316667H2	-	H2	3.811	1.811	-	.480	.360	.560	4
5/8	- 18UNF	T7316666	T7316667	T7316668	H3	3.811	1.811	-	.480	.360	.560	4
5/8	- 18UNF	-	T7316667H5	T7316668H5	H5	3.811	1.811	-	.480	.360	.560	4
11/16	- 11UNS	T7316A06	T7316A07	T7316A08	H3	4.031	1.811	-	.542	.406	.630	4
11/16	- 16UNS	T7316A26	T7316A27	T7316A28	H3	4.031	1.811	-	.542	.406	.630	4
3/4	- 10UNC	-	T7316707H1	T7316708H1	H1	4.252	2.000	-	.590	.442	.690	4
3/4	- 10UNC	-	T7316707H2	-	H2	4.252	2.000	-	.590	.442	.690	4
3/4	- 10UNC	T7316706	T7316707	T7316708	H3	4.252	2.000	-	.590	.442	.690	4
3/4	- 10UNC	-	T7316707H5	T7316708H5	H5	4.252	2.000	-	.590	.442	.690	4
3/4	- 16UNF	-	T7316727H1	-	H1	4.252	2.000	-	.590	.442	.690	4
3/4	- 16UNF	-	T7316727H2	-	H2	4.252	2.000	-	.590	.442	.690	4
3/4	- 16UNF	T7316726	T7316727	T7316728	H3	4.252	2.000	-	.590	.442	.690	4
3/4	- 16UNF	-	T7316727H5	T7316728H5	H5	4.252	2.000	-	.590	.442	.690	4
7/8	- 9UNC	T7316746	T7316747	T7316748	H4	4.689	2.220	-	.697	.523	.750	4
7/8	- 9UNC	-	T7316747H6	-	H6	4.689	2.220	-	.697	.523	.750	4
7/8	- 14UNF	-	T7316767H2	-	H2	4.689	2.220	-	.697	.523	.750	4
7/8	- 14UNF	T7316766	T7316767	T7316768	H4	4.689	2.220	-	.697	.523	.750	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

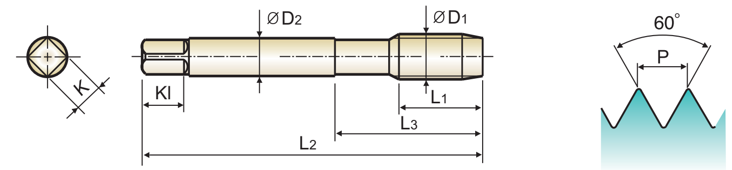
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

YG TAP GENERAL

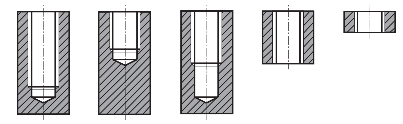
T7316 / T7A16 / T7B16 SERIES

HAND TAP
TAPER, PLUG & BOTTOMING STYLE

ANSI



Thread Depth / Hole Type 2.0×D



Material groups GS | HSS | UNC UNF UNS | USCTI 302 | 9P/5P/2P | Bright

Unit : Inch

Size D1	TPI	EDP No. Bright Taper	Plug	Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
7/8	- 14UNF	-	T7316767H6	-	H6	4.689	2.220	-	.697	.523	.750	4
1"	- 8UNC	-	T7316787H1	T7316788H1	H1	5.126	2.500	-	.800	.600	.810	4
1"	- 8UNC	-	T7316787H2	-	H2	5.126	2.500	-	.800	.600	.810	4
1"	- 8UNC	T7316786	T7316787	T7316788	H4	5.126	2.500	-	.800	.600	.810	4
1"	- 8UNC	-	T7316787H6	-	H6	5.126	2.500	-	.800	.600	.810	4
1"	- 12UNF	T7316806	T7316807	T7316808	H4	5.126	2.500	-	.800	.600	.810	4
1"	- 14UNS	-	T7316817H2	-	H2	5.126	2.500	-	.800	.600	.810	4
1"	- 14UNS	T7316816	T7316817	T7316818	H4	5.126	2.500	-	.800	.600	.810	4
1*1/8	- 7UNC	T7316826	T7316827	T7316828	H4	5.437	2.563	-	.896	.672	.880	4
1*1/8	- 12UNF	T7316846	T7316847	T7316848	H4	5.437	2.563	-	.896	.672	.880	4
1*1/4	- 7UNC	T7316866	T7316867	T7316868	H4	5.752	2.563	-	1.021	.766	1.000	4
1*1/4	- 12UNF	T7316886	T7316887	T7316888	H4	5.752	2.563	-	1.021	.766	1.000	6
1*3/8	- 6UNC	T7316906	T7316907	T7316908	H4	6.063	3.000	-	1.108	.831	1.060	4
1*3/8	- 12UNF	T7316926	T7316927	T7316928	H4	6.063	3.000	-	1.108	.831	1.060	6
1*1/2	- 6UNC	T7316946	T7316947	T7316948	H4	6.374	3.000	-	1.233	.925	1.130	4
1*1/2	- 12UNF	T7316966	T7316967	T7316968	H4	6.374	3.000	-	1.233	.925	1.130	6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

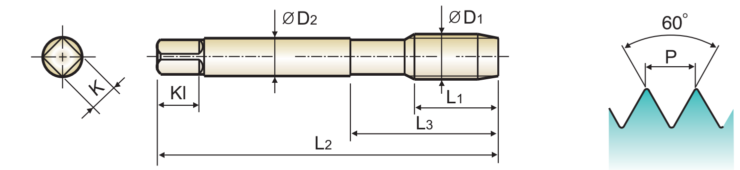
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP TiNi
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TAP GENERAL

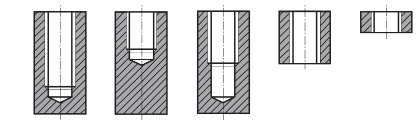
T6316 SERIES

HAND TAP
TAPER, PLUG & BOTTOMING STYLE

ANSI



Thread Depth / Hole Type 2.0×D



Material groups GS | HSS | UNC UNF UNS | USCTI 302 | 9P/5P/2P | Steam Oxide

Unit : Inch

Size D1	TPI	EDP No. Steam Oxide Taper	Plug	Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#0	- 80UNF	T6316026	T6316027	T6316028	H1	1.634	0.315	0.512	0.1410	0.110	.190	2
#1	- 64UNC	T6316046	T6316047	T6316048	H1	1.693	0.374	0.571	0.1410	0.110	.190	2
#1	- 72UNF	T6316066	T6316067	T6316068	H1	1.693	0.374	0.571	0.1410	0.110	.190	2
#2	- 56UNC	T6316086	T6316087	T6316088	H2	1.752	0.433	0.650	0.1410	0.110	.190	3
#3	- 48UNC	T6316126	T6316127	T6316128	H2	1.811	0.492	0.728	0.1410	0.110	.190	3
#3	- 56UNF	T6316146	T6316147	T6316148	H2	1.811	0.492	0.728	0.1410	0.110	.190	3
#4	- 36UNS	T6316156	T6316157	T6316158	H2	1.874	0.563	0.799	0.1410	0.110	.190	3
#4	- 40UNC	T6316166H1	T6316167H1	T6316168H1	H1	1.874	0.563	0.799	0.1410	0.110	.190	3
#4	- 40UNC	T6316166	T6316167	T6316168	H2	1.874	0.563	0.799	0.1410	0.110	.190	3
#5	- 40UNC	T6316206	T6316207	T6316208	H2	1.937	0.626	0.882	0.1410	0.110	.190	3
#5	- 44UNF	T6316226	T6316227	T6316228	H2	1.937	0.626	0.882	0.1410	0.110	.190	3
#6	- 32UNC	T6316246H1	T6316247H1	T6316248H1	H1	2.000	0.689	0.965	0.1410	0.110	.190	3
#6	- 32UNC	T6316246H2	T6316247H2	T6316248H2	H2	2.000	0.689	0.965	0.1410	0.110	.190	3
#6	- 32UNC	T6316246	T6316247	T6316248	H3	2.000	0.689	0.965	0.1410	0.110	.190	3
#6	- 40UNF	T6316266	T6316267	T6316268	H2	2.000	0.689	0.965	0.1410	0.110	.190	3
#8	- 32UNC	T6316286H1	T6316287H1	T6316288H1	H1	2.126	0.752	1.047	0.1680	0.131	.250	4
#8	- 32UNC	T6316286H2	T6316287H2	T6316288H2	H2	2.126	0.752	1.047	0.1680	0.131	.250	4
#8	- 32UNC	T6316286	T6316287	T6316288	H3	2.126	0.752	1.047	0.1680	0.131	.250	4
#8	- 36UNF	T6316306	T6316307	T6316308	H2	2.126	0.752	1.047	0.1680	0.131	.250	4
#10	- 24UNC	T6316326H1	T6316327H1	T6316328H1	H1	2.374	0.906	1.220	0.1940	0.152	.250	4
#10	- 24UNC	T6316326H2	T6316327H2	T6316328H2	H2	2.374	0.906	1.220	0.1940	0.152	.250	4
#10	- 24UNC	T6316326	T6316327	T6316328	H3	2.374	0.906	1.220	0.1940	0.152	.250	4
#10	- 32UNF	T6316346H1	T6316347H1	T6316348H1	H1	2.374	0.906	1.220	0.1940	0.152	.250	4
#10	- 32UNF	T6316346H2	T6316347H2	T6316348H2	H2	2.374	0.906	1.220	0.1940	0.152	.250	4
#10	- 32UNF	T6316346	T6316347	T6316348	H3	2.374	0.906	1.220	0.1940	0.152	.250	4
#12	- 24UNC	T6316366	T6316367	T6316368	H3	2.374	0.906	1.220	0.2200	0.165	.280	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

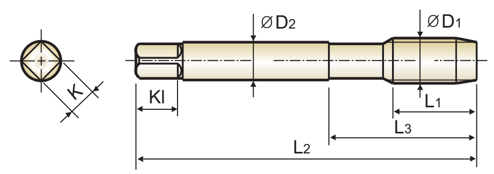
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

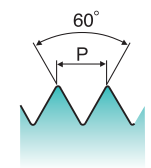
YG TAP GENERAL

T6316 SERIES

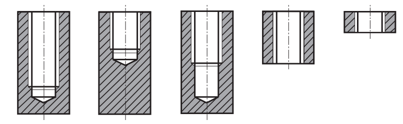
HAND TAP
TAPER, PLUG & BOTTOMING STYLE

ANSI





Thread Depth / Hole Type 2.0×D



Material groups: GS | HSS | UNC UNF UNS | USCTI 302 | 9P/5P/2P | Steam Oxide

Unit : Inch

Size D1	TPI	EDP No. Steam Oxide Taper	Plug	Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#12	28UNF	T6316386	T6316387	T6316388	H3	2.374	0.906	1.220	0.2200	0.165	.280	4
1/4	20UNC	T6316406	T6316407	T6316408	H3	2.500	1.000	1.354	0.2550	0.191	.310	4
1/4	28UNF	T6316426	T6316427	T6316428	H3	2.500	1.000	1.354	0.2550	0.191	.310	4
5/16	18UNC	T6316446H2	T6316447H2	T6316448H2	H2	2.720	1.126	1.500	0.3180	0.238	.380	4
5/16	18UNC	T6316446	T6316447	T6316448	H3	2.720	1.126	1.500	0.3180	0.238	.380	4
5/16	24UNF	T6316466	T6316467	T6316468	H3	2.720	1.126	1.500	0.3180	0.238	.380	4
3/8	16UNC	T6316486	T6316487	T6316488	H3	2.937	1.252	1.646	0.3810	0.286	.440	4
3/8	24UNF	T6316506	T6316507	T6316508	H3	2.937	1.252	1.646	0.3810	0.286	.440	4
7/16	14UNC	T6316526	T6316527	T6316528	H3	3.157	1.437	-	0.3230	0.242	.410	4
7/16	20UNF	T6316546	T6316547	T6316548	H3	3.157	1.437	-	0.3230	0.242	.410	4
1/2	13UNC	T6316566	T6316567	T6316568	H3	3.374	1.657	-	0.3670	0.275	.440	4
1/2	20UNF	T6316586	T6316587	T6316588	H3	3.374	1.657	-	0.3670	0.275	.440	4
9/16	12UNC	T6316606	T6316607	T6316608	H3	3.594	1.657	-	0.4290	0.322	.500	4
9/16	18UNF	T6316626	T6316627	T6316628	H3	3.594	1.657	-	0.4290	0.322	.500	4
5/8	11UNC	T6316646	T6316647	T6316648	H3	3.811	1.811	-	0.4800	0.360	.560	4
5/8	18UNF	T6316666	T6316667	T6316668	H3	3.811	1.811	-	0.4800	0.360	.560	4
11/16	11UNS	T6316A06	T6316A07	T6316A08	H3	4.031	1.811	-	0.5420	0.406	.630	4
11/16	16UNS	T6316A26	T6316A27	T6316A28	H3	4.031	1.811	-	0.5420	0.406	.630	4
3/4	10UNC	T6316706	T6316707	T6316708	H3	4.252	2.000	-	0.5900	0.442	.690	4
3/4	16UNF	T6316726	T6316727	T6316728	H3	4.252	2.000	-	0.5900	0.442	.690	4
7/8	9UNC	T6316746	T6316747	T6316748	H4	4.689	2.220	-	0.6970	0.523	.750	4
7/8	14UNF	T6316766	T6316767	T6316768	H4	4.689	2.220	-	0.6970	0.523	.750	4
1"	8UNC	T6316786	T6316787	T6316788	H4	5.126	2.500	-	0.8000	0.600	.810	4
1"	12UNF	T6316806	T6316807	T6316808	H4	5.126	2.500	-	0.8000	0.600	.810	4

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

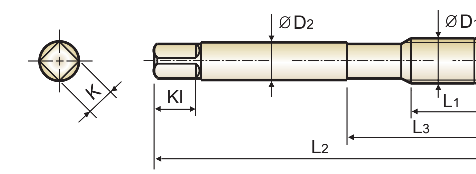
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

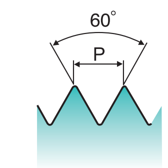
YG TAP GENERAL

T8316 SERIES

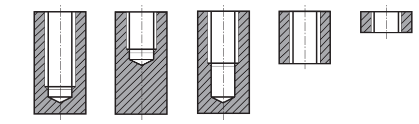
HAND TAP
TAPER, PLUG & BOTTOMING STYLE

ANSI





Thread Depth / Hole Type 2.0×D



Material groups: GS | HSS | UNC UNF UNS | USCTI 302 | 9P/5P/2P | TiN

Unit : Inch

Size D1	TPI	EDP No. TiN Taper	Plug	Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#0	80UNF	-	T8316027	T8316028	H1	1.634	0.315	0.512	0.1410	0.110	.190	2
#1	64UNC	-	T8316047	T8316048	H1	1.693	0.374	0.571	0.1410	0.110	.190	2
#1	72UNF	-	T8316067	T8316068	H1	1.693	0.374	0.571	0.1410	0.110	.190	2
#2	56UNC	-	T8316087	T8316088	H2	1.752	0.433	0.650	0.1410	0.110	.190	3
#4	40UNC	-	T8316167	T8316168	H2	1.874	0.563	0.799	0.1410	0.110	.190	3
#5	40UNC	-	T8316207	T8316208	H2	1.937	0.626	0.882	0.1410	0.110	.190	3
#6	32UNC	-	T8316247	T8316248	H3	2.000	0.689	0.965	0.1410	0.110	.190	3
#6	40UNF	-	T8316267	T8316268	H2	2.000	0.689	0.965	0.1410	0.110	.190	3
#8	32UNC	-	T8316287	T8316288	H3	2.126	0.752	1.047	0.1680	0.131	.250	4
#8	36UNF	-	T8316307	T8316308	H2	2.126	0.752	1.047	0.1680	0.131	.250	4
#10	24UNC	-	T8316327	T8316328	H3	2.374	0.906	1.220	0.1940	0.152	.250	4
#10	32UNF	-	T8316347	T8316348	H3	2.374	0.906	1.220	0.1940	0.152	.250	4
#12	24UNC	-	T8316367	T8316368	H3	2.374	0.906	1.220	0.2200	0.165	.280	4
#12	28UNF	-	T8316387	T8316388	H3	2.374	0.906	1.220	0.2200	0.165	.280	4
1/4	20UNC	-	T8316407	T8316408	H3	2.500	1.000	1.354	0.2550	0.191	.310	4
1/4	28UNF	-	T8316427	T8316428	H3	2.500	1.000	1.354	0.2550	0.191	.310	4
5/16	18UNC	-	T8316447	T8316448	H3	2.720	1.126	1.500	0.3180	0.238	.380	4
5/16	24UNF	-	T8316467	T8316468	H3	2.720	1.126	1.500	0.3180	0.238	.380	4
3/8	16UNC	-	T8316487	T8316488	H3	2.937	1.252	1.646	0.3810	0.286	.440	4
3/8	24UNF	-	T8316507	T8316508	H3	2.937	1.252	1.646	0.3810	0.286	.440	4
7/16	14UNC	-	T8316527	T8316528	H3	3.157	1.437	-	0.3230	0.242	.410	4
7/16	20UNF	-	T8316547	T8316548	H3	3.157	1.437	-	0.3230	0.242	.410	4
1/2	13UNC	-	T8316567	T8316568	H3	3.374	1.657	-	0.3670	0.275	.440	4
1/2	20UNF	-	T8316587	T8316588	H3	3.374	1.657	-	0.3670	0.275	.440	4
9/16	12UNC	-	T8316607	T8316608	H3	3.594	1.657	-	0.4290	0.322	.500	4
9/16	18UNF	-	T8316627	T8316628	H3	3.594	1.657	-	0.4290	0.322	.500	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

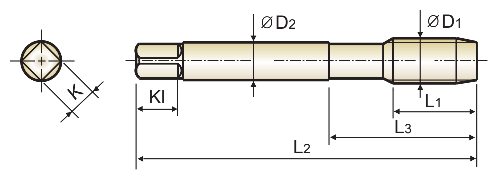
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

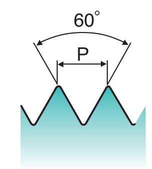
YG TAP GENERAL

T8316 SERIES

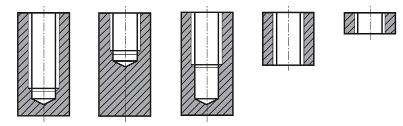
HAND TAP
TAPER, PLUG & BOTTOMING STYLE

ANSI





Thread Depth / Hole Type 2.0×D



Material groups: GS | HSS | UNC UNF UNS | USCTI 302 | 9P/5P/2P | TiN

Unit : Inch

Size D1	TPI	EDP No. TiN Taper	Plug	Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
5/8 -	11UNC	-	T8316647	T8316648	H3	3.811	1.811	-	0.4800	0.360	.560	4
5/8 -	18UNF	-	T8316667	T8316668	H3	3.811	1.811	-	0.4800	0.360	.560	4
3/4 -	10UNC	-	T8316707	T8316708	H3	4.252	2.000	-	0.5900	0.442	.690	4
3/4 -	16UNF	-	T8316727	T8316728	H3	4.252	2.000	-	0.5900	0.442	.690	4
7/8 -	9UNC	-	T8316747	T8316748	H4	4.689	2.220	-	0.6970	0.523	.750	4
7/8 -	14UNF	-	T8316767	T8316768	H4	4.689	2.220	-	0.6970	0.523	.750	4
1" -	8UNC	-	T8316787	T8316788	H4	5.126	2.500	-	0.8000	0.600	.810	4
1" -	12UNF	-	T8316807	T8316808	H4	5.126	2.500	-	0.8000	0.600	.810	4
1" -	14UNS	-	T8316817	T8316818	H4	5.126	2.500	-	0.8000	0.600	.810	4
1-1/8 -	7UNC	-	T8316827	T8316828	H4	5.437	2.563	-	0.8960	0.672	.880	4
1-1/8 -	12UNF	-	T8316847	T8316848	H4	5.437	2.563	-	0.8960	0.672	.880	4
1-1/4 -	7UNC	-	T8316867	T8316868	H4	5.752	2.563	-	1.0210	0.766	1.000	4
1-1/4 -	12UNF	-	T8316887	T8316888	H4	5.752	2.563	-	1.0210	0.766	1.000	6
1-3/8 -	6UNC	-	T8316907	T8316908	H4	6.063	3.000	-	1.1080	0.831	1.060	4
1-3/8 -	12UNF	-	T8316927	T8316928	H4	6.063	3.000	-	1.1080	0.831	1.060	6
1-1/2 -	6UNC	-	T8316947	T8316948	H4	6.374	3.000	-	1.2330	0.925	1.130	4
1-1/2 -	12UNF	-	T8316967	T8316968	H4	6.374	3.000	-	1.2330	0.925	1.130	6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

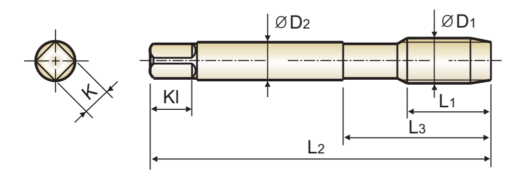
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

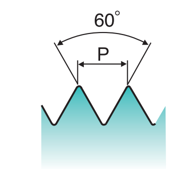
YG TAP GENERAL

T7315 SERIES

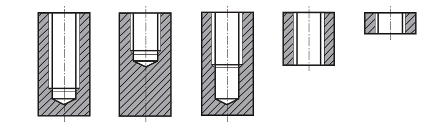
HAND TAP
TAPER, PLUG & BOTTOMING STYLE

ANSI





Thread Depth / Hole Type 2.0×D



Material groups: GS | HSS | M/MF | USCTI 302 | 9P/5P/2P | Bright

Unit : Inch

Size D1	Pitch	EDP No. Bright Taper	Plug	Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M1.6 x	0.35	-	T7315097	-	D3	1.634	0.315	-	0.1410	0.110	.190	3
M2 x	0.4	-	T7315137	T7315138	D3	1.752	0.394	-	0.1410	0.110	.190	3
M2.5 x	0.45	-	T7315177	T7315178	D3	1.811	0.457	-	0.1410	0.110	.190	3
M3 x	0.5	T7315206	T7315207	T7315208	D3	1.937	0.622	-	0.1410	0.110	.190	3
M3.5 x	0.6	-	T7315227	T7315228	D4	2.000	0.705	-	0.1410	0.110	.190	3
M4 x	0.7	T7315246	T7315247	T7315248	D4	2.126	0.756	-	0.1680	0.131	.250	4
M4.5 x	0.75	-	T7315267	T7315268	D4	2.374	0.909	-	0.1940	0.152	.250	4
M5 x	0.8	T7315286	T7315287	T7315288	D4	2.374	0.933	-	0.1940	0.152	.250	4
M6 x	1.0	T7315316	T7315317	T7315318	D5	2.500	0.980	-	0.2550	0.191	.310	4
M7 x	1.0	-	T7315347	T7315348	D5	2.500	1.091	-	.318	.238	.380	4
M8 x	1.25	T7315366	T7315367	T7315368	D5	2.720	1.126	-	.318	.238	.380	4
M8 x	1.0	-	T7315377	T7315378	D5	2.720	1.126	-	.318	.238	.380	4
M10 x	1.5	T7315426	T7315427	T7315428	D6	2.937	1.240	-	.381	.286	.440	4
M10 x	1.25	T7315436	T7315437	T7315438	D5	2.937	1.240	-	.381	.286	.440	4
M10 x	1.0	-	T7315447	T7315448	D5	2.937	1.240	-	.381	.286	.440	4
M12 x	1.75	T7315506	T7315507	T7315508	D6	3.374	1.657	-	.367	.275	.440	4
M12 x	1.5	-	T7315517	T7315518	D6	3.374	1.657	-	.367	.275	.440	4
M12 x	1.25	T7315526	T7315527	T7315528	D5	3.374	1.657	-	.367	.275	.440	4
M14 x	2.0	T7315546	T7315547	T7315548	D7	3.594	1.657	-	.429	.322	.500	4
M14 x	1.5	-	T7315557	T7315558	D6	3.594	1.657	-	.429	.322	.500	4
M14 x	1.25	-	T7315567	T7315568	D5	3.594	1.657	-	.429	.322	.500	4
M16 x	2.0	T7315606	T7315607	T7315608	D7	3.811	1.811	-	.480	.360	.560	4
M16 x	1.5	T7315616	T7315617	T7315618	D6	3.811	1.811	-	.480	.360	.560	4
M18 x	2.5	-	T7315657	T7315658	D7	4.031	1.811	-	.542	.406	.630	4
M18 x	1.5	T7315676	T7315677	T7315678	D6	4.031	1.811	-	.542	.406	.630	4
M20 x	2.5	T7315706	T7315707	T7315708	D7	4.469	2.000	-	.652	.489	.690	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

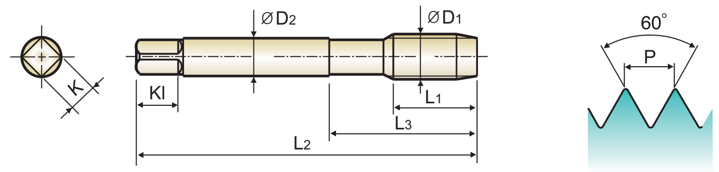
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

YG TAP GENERAL

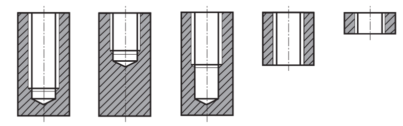
T6315 SERIES

HAND TAP
TAPER, PLUG & BOTTOMING STYLE

ANSI



Thread Depth / Hole Type 2.0×D



Material groups: GS | HSS | M/MF | USCTI 302 | 9P/5P/2P | Steam Oxide

Unit : Inch

Size D1		Pitch	EDP No. Steam Oxide Taper	Plug	Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M2	x	0.4	-	T6315137	T6315138	D3	1.752	.394	-	.141	.110	.190	3
M2.5	x	0.45	-	T6315177	T6315178	D3	1.811	.457	-	.141	.110	.190	3
M3	x	0.5	T6315206	T6315207	T6315208	D3	1.937	.622	-	.141	.110	.190	3
M4	x	0.7	T6315246	T6315247	T6315248	D4	2.126	.756	-	.168	.131	.250	4
M4.5	x	0.75	-	T6315267	T6315268	D4	2.374	.909	-	.194	.152	.250	4
M5	x	0.8	T6315286	T6315287	T6315288	D4	2.374	.933	-	.194	.152	.250	4
M6	x	1.0	T6315316	T6315317	T6315318	D5	2.500	.980	-	.255	.191	.310	4
M7	x	1.0	-	T6315347	T6315348	D5	2.500	1.091	-	.318	.238	.380	4
M8	x	1.25	T6315366	T6315367	T6315368	D5	2.720	1.126	-	.318	.238	.380	4
M8	x	1.0	-	T6315377	T6315378	D5	2.720	1.126	-	.318	.238	.380	4
M10	x	1.5	T6315426	T6315427	T6315428	D6	2.937	1.240	-	.381	.286	.440	4
M10	x	1.25	T6315436	T6315437	T6315438	D5	2.937	1.240	-	.381	.286	.440	4
M12	x	1.75	T6315506	T6315507	T6315508	D6	3.374	1.657	-	.367	.275	.440	4
M12	x	1.25	T6315526	T6315527	T6315528	D5	3.374	1.657	-	.367	.275	.440	4
M14	x	2.0	T6315546	T6315547	T6315548	D7	3.594	1.657	-	.429	.322	.500	4
M16	x	2.0	T6315606	T6315607	T6315608	D7	3.811	1.811	-	.480	.360	.560	4
M16	x	1.5	T6315616	T6315617	T6315618	D6	3.811	1.811	-	.480	.360	.560	4
M18	x	1.5	T6315676	T6315677	T6315678	D6	4.031	1.811	-	.542	.406	.630	4
M20	x	2.5	T6315706	T6315707	T6315708	D7	4.469	2.000	-	.652	.489	.690	4
M20	x	1.5	T6315726	T6315727	T6315728	D6	4.469	2.000	-	.652	.489	.690	4
M24	x	3	T6315786	T6315787	T6315788	D8	4.906	2.220	-	.760	.570	.750	4
M30	x	3.5	T6315946	T6315947	T6315948	D9	5.437	2.563	-	1.021	.766	1.000	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

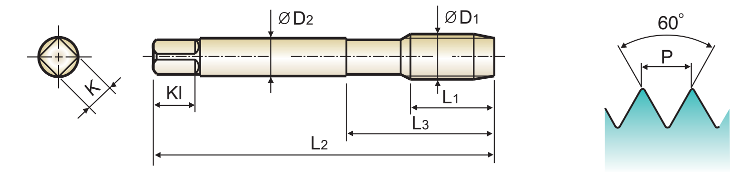
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

YG TAP GENERAL

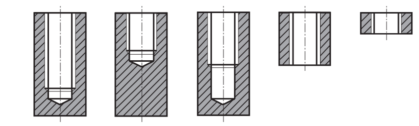
T8315 SERIES

HAND TAP
TAPER, PLUG & BOTTOMING STYLE

ANSI



Thread Depth / Hole Type 2.0×D



Material groups: GS | HSS | M/MF | USCTI 302 | 9P/5P/2P | TiN

Unit : Inch

Size D1		Pitch	EDP No. TiN Taper	Plug	Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M2	x	0.4	-	T8315137	T8315138	D3	1.752	0.394	-	0.1410	0.110	.190	3
M2.5	x	0.45	-	T8315177	T8315178	D3	1.811	0.457	-	0.1410	0.110	.190	3
M3	x	0.5	-	T8315207	T8315208	D3	1.937	0.622	-	0.1410	0.110	.190	3
M4	x	0.7	-	T8315247	T8315248	D4	2.126	0.756	-	0.1680	0.131	.250	4
M4.5	x	0.75	-	T8315267	T8315268	D4	2.374	0.909	-	0.1940	0.152	.250	4
M5	x	0.8	-	T8315287	T8315288	D4	2.374	0.933	-	0.1940	0.152	.250	4
M6	x	1.0	-	T8315317	T8315318	D5	2.500	0.980	-	0.2550	0.191	.310	4
M7	x	1.0	-	T8315347	T8315348	D5	2.500	1.091	-	0.3180	0.238	.380	4
M8	x	1.25	-	T8315367	T8315368	D5	2.720	1.126	-	0.3180	0.238	.380	4
M8	x	1.0	-	T8315377	T8315378	D5	2.720	1.126	-	0.3180	0.238	.380	4
M10	x	1.5	-	T8315427	T8315428	D6	2.937	1.240	-	0.3810	0.286	.440	4
M10	x	1.25	-	T8315437	T8315438	D5	2.937	1.240	-	0.3810	0.286	.440	4
M12	x	1.75	-	T8315507	T8315508	D6	3.374	1.657	-	0.3670	0.275	.440	4
M12	x	1.25	-	T8315527	T8315528	D5	3.374	1.657	-	0.3670	0.275	.440	4
M14	x	2.0	-	T8315547	T8315548	D7	3.594	1.657	-	0.4290	0.322	.500	4
M16	x	2.0	-	T8315607	T8315608	D7	3.811	1.811	-	0.4800	0.360	.560	4
M16	x	1.5	-	T8315617	T8315618	D6	3.811	1.811	-	0.4800	0.360	.560	4
M18	x	1.5	-	T8315677	T8315678	D6	4.031	1.811	-	0.5420	0.406	.630	4
M20	x	2.5	-	T8315707	T8315708	D7	4.469	2.000	-	0.6520	0.489	.690	4
M20	x	1.5	-	T8315727	T8315728	D6	4.469	2.000	-	0.6520	0.489	.690	4
M24	x	3	-	T8315787	T8315788	D8	4.906	2.220	-	0.7600	0.570	.750	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

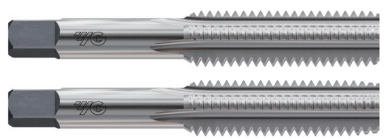
YG TAP GENERAL

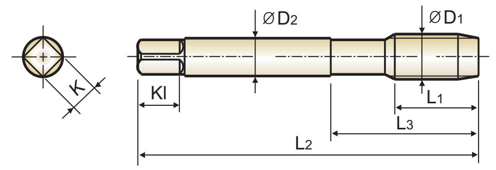
T7326 SERIES

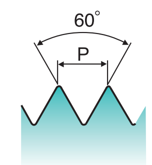
HAND TAP
Oversize Tap

+.005" above the basic pitch diameter

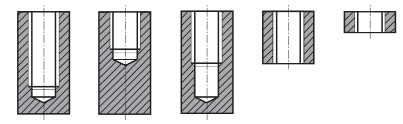
ANSI







Thread Depth / Hole Type 2.0×D



Material groups: GS | HSS | UNC UNF | USCTI 302 | 5P/2P | Bright | +.005" oversize

Unit : Inch

Size D1	TPI	EDP No. Bright Plug	EDP No. Bright Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#6 -	32UNC	T7326247	-	+0.005"	2.000	.689	.965	.141	.110	.190	3
#8 -	32UNC	T7326287	-	+0.005"	2.126	.752	1.047	.168	.131	.250	4
#10 -	24UNC	T7326327	-	+0.005"	2.374	.906	1.220	.194	.152	.250	4
#10 -	32UNF	T7326347	-	+0.005"	2.374	.906	1.220	.194	.152	.250	4
1/4 -	20UNC	T7326407	T7326408	+0.005"	2.500	1.000	1.354	.255	.191	.310	4
1/4 -	28UNF	T7326427	-	+0.005"	2.500	1.000	1.354	.255	.191	.310	4
5/16 -	18UNC	T7326447	T7326448	+0.005"	2.720	1.126	1.500	.318	.238	.380	4
5/16 -	24UNF	T7326467	-	+0.005"	2.720	1.126	1.500	.318	.238	.380	4
3/8 -	16UNC	T7326487	T7326488	+0.005"	2.937	1.252	1.646	.381	.286	.440	4
3/8 -	24UNF	T7326507	-	+0.005"	2.937	1.252	1.646	.381	.286	.440	4
7/16 -	14UNC	T7326527	-	+0.005"	3.157	1.437	-	.323	.242	.410	4
1/2 -	13UNC	T7326567	-	+0.005"	3.374	1.657	-	.367	.275	.440	4
1/2 -	20UNF	T7326587	-	+0.005"	3.374	1.657	-	.367	.275	.440	4
5/8 -	11UNC	T7326647	-	+0.005"	3.811	1.811	-	.480	.360	.560	4
3/4 -	10UNC	T7326707	-	+0.005"	4.252	2.000	-	.590	.442	.690	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP TiNi
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

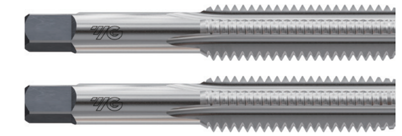
YG TAP GENERAL

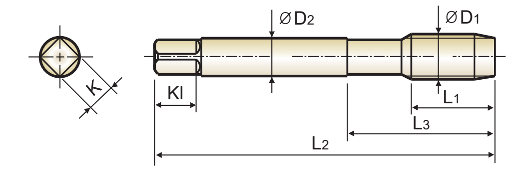
T7B15 SERIES

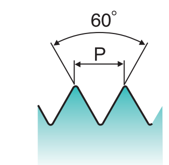
HAND TAP
Oversize Tap

+.127mm above the basic pitch diameter

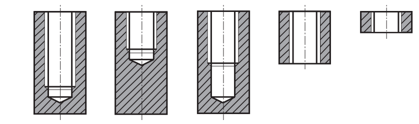
ANSI







Thread Depth / Hole Type 2.0×D



Material groups: GS | HSS | M/MF | USCTI 302 | 5P/2P | Bright | +.127mm oversize

Unit : Inch

Size D1	TPI	EDP No. Bright Plug	EDP No. Bright Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M4 x	0.7	T7B15247	T7B15248	+.127MM	2.126	.756	-	.168	.131	.250	4
M4.5 x	0.75	T7B15267	T7B15268	+.127MM	2.374	.909	-	.194	.152	.250	4
M5 x	0.8	T7B15287	T7B15288	+.127MM	2.374	.933	-	.194	.152	.250	4
M6 x	1.0	T7B15317	T7B15318	+.127MM	2.500	.980	-	.255	.191	.310	4
M7 x	1.0	T7B15347	T7B15348	+.127MM	2.500	1.091	-	.318	.238	.380	4
M8 x	1.25	T7B15367	T7B15368	+.127MM	2.720	1.126	-	.318	.238	.380	4
M8 x	1.0	T7B15377	T7B15378	+.127MM	2.720	1.126	-	.318	.238	.380	4
M10 x	1.5	T7B15427	T7B15428	+.127MM	2.937	1.240	-	.381	.286	.440	4
M10 x	1.25	T7B15437	T7B15438	+.127MM	2.937	1.240	-	.381	.286	.440	4
M12 x	1.75	T7B15507	T7B15508	+.127MM	3.374	1.657	-	.367	.275	.440	4
M12 x	1.25	T7B15527	T7B15528	+.127MM	3.374	1.657	-	.367	.275	.440	4
M16 x	2.0	T7B15607	T7B15608	+.127MM	3.811	1.811	-	.480	.360	.560	4
M20 x	2.5	T7B15707	T7B15708	+.127MM	4.469	2.000	-	.652	.489	.690	4
M24 x	3	T7B15787	T7B15788	+.127MM	4.906	2.220	-	.760	.570	.750	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

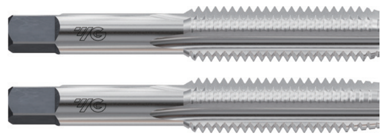
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

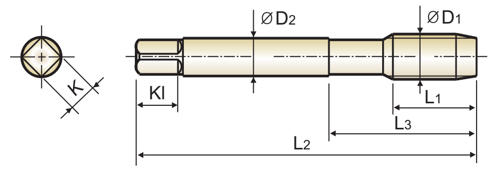
YG TAP GENERAL

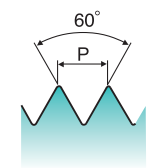
T7336 SERIES

LEFT HAND TAP

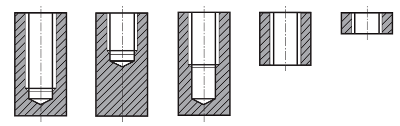
ANSI







Thread Depth / Hole Type 2.0×D



Material groups: GS | HSS | UNC UNF | USCTI 302 | 5P/2P | Bright

Unit : Inch

Size D1		TPI	EDP No. Bright Plug	EDP No. Bright Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#6	-	32UNC	T7336247	T7336248	H3	2.000	.689	.965	.141	.110	.190	3
#6	-	40UNF	T7336267	T7336268	H2	2.000	.689	.965	.141	.110	.190	3
#8	-	32UNC	T7336287	T7336288	H3	2.126	.752	1.047	.168	.131	.250	4
#8	-	36UNF	T7336307	T7336308	H2	2.126	.752	1.047	.168	.131	.250	4
#10	-	24UNC	T7336327	T7336328	H3	2.374	.906	1.220	.194	.152	.250	4
#10	-	32UNF	T7336347	T7336348	H3	2.374	.906	1.220	.194	.152	.250	4
1/4	-	20UNC	T7336407	T7336408	H3	2.500	1.000	1.354	.255	.191	.310	4
1/4	-	28UNF	T7336427	T7336428	H3	2.500	1.000	1.354	.255	.191	.310	4
5/16	-	18UNC	T7336447	T7336448	H3	2.720	1.126	1.500	.318	.238	.380	4
5/16	-	24UNF	T7336467	T7336468	H3	2.720	1.126	1.500	.318	.238	.380	4
3/8	-	16UNC	T7336487	T7336488	H3	2.937	1.252	1.646	.381	.286	.440	4
3/8	-	24UNF	T7336507	T7336508	H3	2.937	1.252	1.646	.381	.286	.440	4
7/16	-	14UNC	T7336527	T7336528	H3	3.157	1.437	-	.323	.242	.410	4
7/16	-	20UNF	T7336547	T7336548	H3	3.157	1.437	-	.323	.242	.410	4
1/2	-	13UNC	T7336567	T7336568	H3	3.374	1.657	-	.367	.275	.440	4
1/2	-	20UNF	T7336587	T7336588	H3	3.374	1.657	-	.367	.275	.440	4
9/16	-	12UNC	T7336607	T7336608	H3	3.594	1.657	-	.429	.322	.500	4
9/16	-	18UNF	T7336627	T7336628	H3	3.594	1.657	-	.429	.322	.500	4
5/8	-	11UNC	T7336647	T7336648	H3	3.811	1.811	-	.480	.360	.560	4
5/8	-	18UNF	T7336667	T7336668	H3	3.811	1.811	-	.480	.360	.560	4
3/4	-	10UNC	T7336707	T7336708	H3	4.252	2.000	-	.590	.442	.690	4
3/4	-	16UNF	T7336727	T7336728	H3	4.252	2.000	-	.590	.442	.690	4
7/8	-	9UNC	T7336747	T7336748	H4	4.689	2.220	-	.697	.523	.750	4
7/8	-	14UNF	T7336767	T7336768	H4	4.689	2.220	-	.697	.523	.750	4
1"	-	8UNC	T7336787	T7336788	H4	5.126	2.500	-	.800	.600	.810	4
1"	-	12UNF	T7336807	T7336808	H4	5.126	2.500	-	.800	.600	.810	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

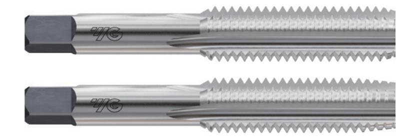
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

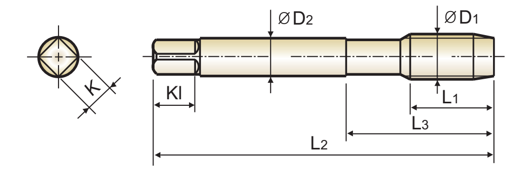
YG TAP GENERAL

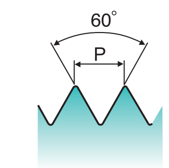
T7A15 SERIES

LEFT HAND TAP

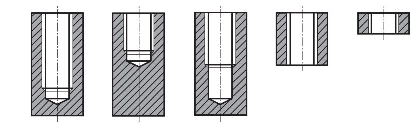
ANSI







Thread Depth / Hole Type 2.0×D



Material groups: GS | HSS | M/MF | USCTI 302 | 5P/2P | Bright

Unit : Inch

Size D1		Pitch	EDP No. Bright Plug	EDP No. Bright Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M3.5	x	0.6	T7A15227	T7A15228	D4	2.000	.705	-	.141	.110	.190	3
M4	x	0.7	T7A15247	T7A15248	D4	2.126	.756	-	.168	.131	.250	4
M4.5	x	0.75	T7A15267	T7A15268	D4	2.126	.909	-	.168	.131	.250	4
M5	x	0.8	T7A15287	T7A15288	D4	2.374	.933	-	.194	.152	.250	4
M6	x	1.0	T7A15317	T7A15318	D5	2.500	.980	-	.255	.191	.310	4
M7	x	1.0	T7A15347	T7A15348	D5	2.720	1.091	-	.318	.238	.380	4
M8	x	1.25	T7A15367	T7A15368	D5	2.720	1.126	-	.318	.238	.380	4
M8	x	1.0	T7A15377	T7A15378	D5	2.720	1.126	-	.318	.238	.380	4
M10	x	1.5	T7A15427	T7A15428	D6	2.937	1.240	-	.381	.286	.440	4
M10	x	1.25	T7A15437	T7A15438	D5	2.937	1.240	-	.381	.286	.440	4
M12	x	1.75	T7A15507	T7A15508	D6	3.374	1.657	-	.367	.275	.440	4
M12	x	1.25	T7A15527	T7A15528	D5	3.374	1.657	-	.367	.275	.440	4
M14	x	2.0	T7A15547	T7A15548	D7	3.594	1.657	-	.429	.322	.500	4
M14	x	1.5	T7A15557	T7A15558	D6	3.594	1.657	-	.429	.322	.500	4
M16	x	2.0	T7A15607	T7A15608	D7	3.811	1.811	-	.480	.360	.560	4
M16	x	1.5	T7A15617	T7A15618	D6	3.811	1.811	-	.480	.360	.560	4
M18	x	2.5	T7A15657	T7A15658	D7	4.031	1.811	-	.542	.406	.630	4
M18	x	1.5	T7A15677	T7A15678	D6	4.031	1.811	-	.542	.406	.630	4
M20	x	2.5	T7A15707	T7A15708	D7	4.469	2.000	-	.652	.489	.690	4
M20	x	1.5	T7A15727	T7A15728	D6	4.469	2.000	-	.652	.489	.690	4
M22	x	2.5	T7A15747	T7A15748	D7	4.689	2.220	-	.697	.523	.750	4
M22	x	1.5	T7A15767	T7A15768	D6	4.689	2.220	-	.697	.523	.750	4
M24	x	3.0	T7A15787	T7A15788	D8	4.906	2.220	-	.760	.570	.750	4
M24	x	2.0	T7A15797	T7A15798	D7	4.906	2.220	-	.760	.570	.750	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

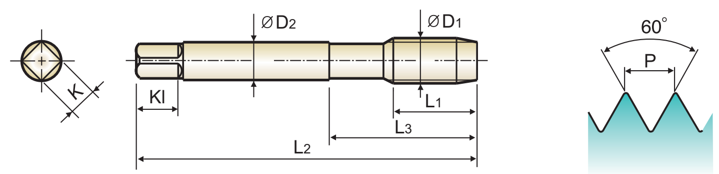
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

YG TAP GENERAL

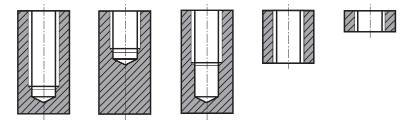
T7616/T6616/T8616 SERIES

STRAIGHT FLUTE PULLEY TAPS, 6" LONG LENGTH PLUG STYLE

ANSI Pulley Tap (ASME B94.9)



Thread Depth / Hole Type 2.0×D



Material groups: GS | HSS | UNC | USCTI | 4P~5P | Bright | Steam Oxide | TiN

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
1/4 -	20UNC	T7616403	T6616403	T8616403	H3	6.000	1.000	1.575	.255	.191	.310	4
5/16 -	18UNC	T7616443	T6616443	T8616443	H3	6.000	1.126	1.850	.318	.238	.380	4
3/8 -	16UNC	T7616483	T6616483	T8616483	H3	6.000	1.252	2.028	.381	.286	.440	4
7/16 -	14UNC	T7616523	T6616523	T8616523	H3	6.000	1.437	1.882	.440	.333	.500	4
1/2 -	13UNC	T7616563	T6616563	T8616563	H3	6.000	1.657	2.520	.507	.380	.560	4
5/8 -	11UNC	T7616643	T6616643	T8616643	H3	6.000	1.811	2.776	.633	.475	.690	4

◎ : Excellent ○ : Good

ISO	P										M			K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○						○					○	○		

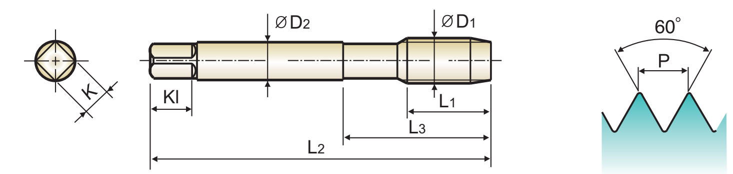
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○			○	○														

YG TAP GENERAL

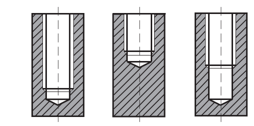
C2/C3/C4/D9 SERIES

SPIRAL FLUTE TAPS BOTTOMING STYLE for General Purpose

ANSI



Thread Depth / Hole Type 2.5×D



Material groups: GS | HSS-E | UNC UNF | USCTI 302 | 1.5P~2P | Bright | Steam Oxide | TiN | Hardslick | R45

Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. Bright	EDP No. TiN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
#4 -	40UNC	C2162	C3162	C4162	D9162	H2	1.874	.563	.799	.141	.110	.190	2
#5 -	40UNC	C2202	C3202	C4202	D9202	H2	1.937	.626	.882	.141	.110	.190	3
#6 -	32UNC	C2243	C3243	C4243	D9243	H3	2.000	.689	.965	.141	.110	.190	3
#8 -	32UNC	C2283	C3283	C4283	D9283	H3	2.126	.752	1.047	.168	.131	.250	3
#10 -	24UNC	C2323	C3323	C4323	D9323	H3	2.374	.906	1.220	.194	.152	.250	3
#10 -	32UNF	C2343	C3343	C4343	D9343	H3	2.374	.906	1.220	.194	.152	.250	3
1/4 -	20UNC	C2403	C3403	C4403	D9403	H3	2.500	1.000	1.354	.255	.191	.310	3
1/4 -	20UNC	C2405	C3405	C4405	D9405	H5	2.500	1.000	1.354	.255	.191	.310	3
1/4 -	28UNF	C2423	C3423	C4423	D9423	H3	2.500	1.000	1.354	.255	.191	.310	3
5/16 -	18UNC	C2443	C3443	C4443	D9443	H3	2.720	1.126	1.500	.318	.238	.380	3
5/16 -	18UNC	C2445	C3445	C4445	D9445	H5	2.720	1.126	1.500	.318	.238	.380	3
5/16 -	24UNF	C2463	C3463	C4463	D9463	H3	2.720	1.126	1.500	.318	.238	.380	3
3/8 -	16UNC	C2483	C3483	C4483	D9483	H3	2.937	1.252	1.646	.381	.286	.440	3
3/8 -	16UNC	C2485	C3485	C4485	D9485	H5	2.937	1.252	1.646	.381	.286	.440	3
3/8 -	24UNF	C2503	C3503	C4503	D9503	H3	2.937	1.252	1.646	.381	.286	.440	3
7/16 -	14UNC	C2523	C3523	C4523	D9523	H3	3.157	1.437	-	.323	.242	.410	3
7/16 -	14UNC	C2525	C3525	C4525	D9525	H5	3.157	1.437	-	.323	.242	.410	3
7/16 -	20UNF	C2543	C3543	C4543	D9543	H3	3.157	1.437	-	.323	.242	.410	3
7/16 -	20UNF	C2545	C3545	C4545	D9545	H5	3.157	1.437	-	.323	.242	.410	3
1/2 -	13UNC	C2563	C3563	C4563	D9563	H3	3.374	1.657	-	.367	.275	.440	3
1/2 -	13UNC	C2565	C3565	C4565	D9565	H5	3.374	1.657	-	.367	.275	.440	3
1/2 -	20UNF	C2583	C3583	C4583	D9583	H3	3.374	1.657	-	.367	.275	.440	3
1/2 -	20UNF	C2585	C3585	C4585	D9585	H5	3.374	1.657	-	.367	.275	.440	3
9/16 -	12UNC	C2605	C3605	C4605	D9605	H5	3.594	1.657	-	.429	.322	.500	3
9/16 -	18UNF	C2625	C3625	C4625	D9625	H5	3.594	1.657	-	.429	.322	.500	3
5/8 -	11UNC	C2643	C3643	C4643	D9643	H3	3.811	1.811	-	.480	.360	.560	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

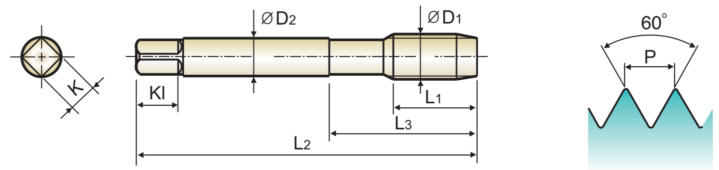
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TAP GENERAL

C2/C3/C4/D9 SERIES

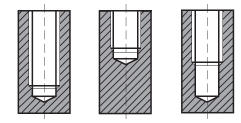
SPIRAL FLUTE TAPS BOTTOMING STYLE for General Purpose

ANSI



Thread Depth / Hole Type

2.5×D



Material groups: GS | HSS-E | UNC UNF | USCTI 302 | 1.5P~2P | Bright | Steam Oxide | TiN | Hardslick | R45

Unit : Inch

Size	TPI	EDP No.				Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Steam Oxide	Bright	TiN	Hardslick		L2	L1	L3	D2	K	KL	
5/8 -	11UNC	C2645	C3645	C4645	D9645	H5	3.811	1.811	-	.480	.360	.560	4
5/8 -	18UNF	C2663	C3663	C4663	D9663	H3	3.811	1.811	-	.480	.360	.560	4
3/4 -	10UNC	C2703	C3703	C4703	D9703	H3	4.252	2.000	-	.590	.442	.690	4
3/4 -	10UNC	C2705	C3705	C4705	D9705	H5	4.252	2.000	-	.590	.442	.690	4
3/4 -	16UNF	C2723	C3723	C4723	D9723	H3	4.252	2.000	-	.590	.442	.690	4
7/8 -	9UNC	C2744	C3744	C4744	D9744	H4	4.689	2.220	-	.697	.523	.750	4
7/8 -	14UNF	C2766	C3766	C4766	D9766	H6	4.689	2.220	-	.697	.523	.750	4
1" -	8UNC	C2784	C3784	C4784	D9784	H4	5.126	2.500	-	.800	.600	.810	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

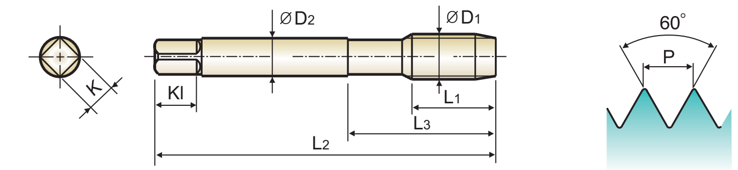
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

YG TAP GENERAL

F4/F8/F6 SERIES

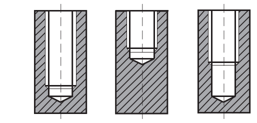
SPIRAL FLUTE TAPS BOTTOMING STYLE for General Purpose

ANSI



Thread Depth / Hole Type

2.5×D



Material groups: GS | HSS-E | UNC UNF | USCTI 302A | 1.5P~2P | Steam Oxide | TiN | Hardslick | R50

Unit : Inch

Size	TPI	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Steam Oxide	TiN	Hardslick		L2	L1	L3	D2	K	KL	
#2 -	56UNC	F4082	F8082	F6082	H2	1.752	.437	.650	.141	.110	.190	2
#4 -	40UNC	F4162	F8162	F6162	H2	1.874	.311	.563	.141	.110	.190	2
#5 -	40UNC	F4202	F8202	F6202	H2	1.937	.311	.626	.141	.110	.190	2
#6 -	32UNC	F4243	F8243	F6243	H3	2.000	.374	.689	.141	.110	.190	2
#8 -	32UNC	F4283	F8283	F6283	H3	2.126	.374	.752	.168	.131	.250	3
#10 -	24UNC	F4323	F8323	F6323	H3	2.374	.500	.906	.194	.152	.250	3
#10 -	32UNF	F4343	F8343	F6343	H3	2.374	.500	.906	.194	.152	.250	3
1/4 -	20UNC	F4403	F8403	F6403	H3	2.500	.626	1.000	.255	.191	.310	3
1/4 -	20UNC	F4405	F8405	F6405	H5	2.500	.626	1.000	.255	.191	.310	3
1/4 -	28UNF	F4423	F8423	F6423	H3	2.500	.626	1.000	.255	.191	.310	3
5/16 -	18UNC	F4443	F8443	F6443	H3	2.720	.689	1.126	.318	.238	.380	3
5/16 -	18UNC	F4445	F8445	F6445	H5	2.720	.689	1.126	.318	.238	.380	3
5/16 -	24UNF	F4463	F8463	F6463	H3	2.720	.689	1.126	.318	.238	.380	3
3/8 -	16UNC	F4483	F8483	F6483	H3	2.937	.748	1.252	.381	.286	.440	3
3/8 -	16UNC	F4485	F8485	F6485	H5	2.937	.748	1.252	.381	.286	.440	3
3/8 -	24UNF	F4503	F8503	F6503	H3	2.937	.748	1.252	.381	.286	.440	3
7/16 -	14UNC	F4523	F8523	F6523	H3	3.157	.874	1.437	.323	.242	.410	3
7/16 -	14UNC	F4525	F8525	F6525	H5	3.157	.874	1.437	.323	.242	.410	3
7/16 -	20UNF	F4543	F8543	F6543	H3	3.157	.874	1.437	.323	.242	.410	3
7/16 -	20UNF	F4545	F8545	F6545	H5	3.157	.874	1.437	.323	.242	.410	3
1/2 -	13UNC	F4563	F8563	F6563	H3	3.374	.937	1.594	.367	.275	.440	3
1/2 -	13UNC	F4565	F8565	F6565	H5	3.374	.937	1.594	.367	.275	.440	3
1/2 -	20UNF	F4583	F8583	F6583	H3	3.374	.937	1.594	.367	.275	.440	3
1/2 -	20UNF	F4585	F8585	F6585	H5	3.374	.937	1.594	.367	.275	.440	3
9/16 -	12UNC	F4603	F8603	F6603	H3	3.594	1.000	1.657	.429	.322	.500	3
9/16 -	12UNC	F4605	F8605	F6605	H5	3.594	1.000	1.657	.429	.322	.500	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

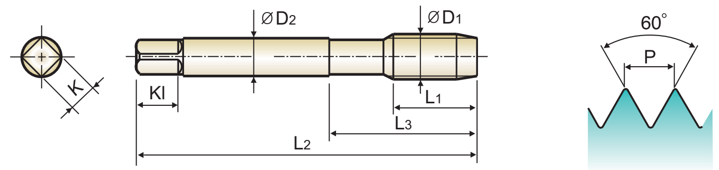
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

YG TAP GENERAL

F4/F8/F6 SERIES

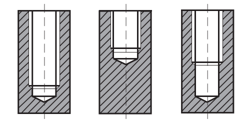
SPIRAL FLUTE TAPS BOTTOMING STYLE for General Purpose

ANSI



Thread Depth / Hole Type

2.5×D



Material groups: GS | HSS-E | UNC UNF | USCTI 302A | 1.5P~2P | Steam Oxide | TiN | Hardslick | R50

Unit : Inch

Size D1	TPI	EDP No. Steam Oxide	EDP No. TiN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
9/16 -	18UNF	F4623	F8623	F6623	H3	3.594	1.000	1.657	.429	.322	.500	3
9/16 -	18UNF	F4625	F8625	F6625	H5	3.594	1.000	1.657	.429	.322	.500	3
5/8 -	11UNC	F4643	F8643	F6643	H3	3.811	1.094	1.811	.480	.360	.560	4
5/8 -	11UNC	F4645	F8645	F6645	H5	3.811	1.094	1.811	.480	.360	.560	4
5/8 -	18UNF	F4663	F8663	F6663	H3	3.811	1.094	1.811	.480	.360	.560	4
5/8 -	18UNF	F4665	F8665	F6665	H5	3.811	1.094	1.811	.480	.360	.560	4
3/4 -	10UNC	F4703	F8703	F6703	H3	4.252	1.220	2.000	.590	.442	.690	4
3/4 -	10UNC	F4705	F8705	F6705	H5	4.252	1.220	2.000	.590	.442	.690	4
3/4 -	16UNF	F4723	F8723	F6723	H3	4.252	1.220	2.000	.590	.442	.690	4
3/4 -	16UNF	F4725	F8725	F6725	H5	4.252	1.220	2.000	.590	.442	.690	4
7/8 -	9UNC	F4744	F8744	F6744	H4	4.689	1.343	2.220	.697	.523	.750	4
7/8 -	9UNC	F4746	F8746	F6746	H6	4.689	1.343	2.220	.697	.523	.750	4
7/8 -	14UNF	F4764	F8764	F6764	H4	4.689	1.343	2.220	.697	.523	.750	4
7/8 -	14UNF	F4766	F8766	F6766	H6	4.689	1.343	2.220	.697	.523	.750	4
1" -	8UNC	F4784	F8784	F6784	H4	5.126	1.500	2.500	.800	.600	.810	4
1" -	8UNC	F4786	F8786	F6786	H6	5.126	1.500	2.500	.800	.600	.810	4
1" -	12UNF	F4806	F8806	F6806	H6	5.126	1.500	2.500	.800	.600	.810	4

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

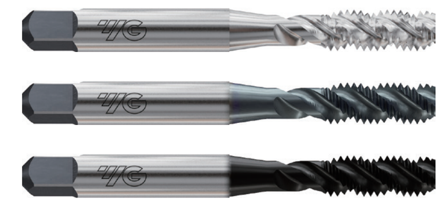
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

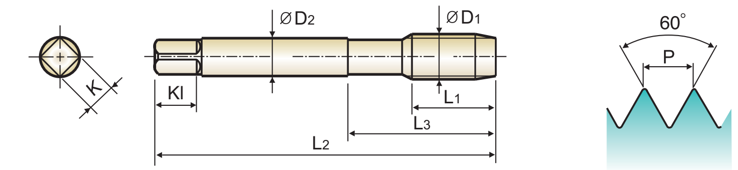
YG TAP GENERAL

G4/G5/G6 SERIES

SPIRAL FLUTE TAPS BOTTOMING STYLE for General Purpose

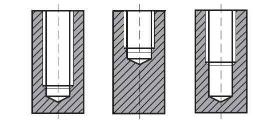
ANSI





Thread Depth / Hole Type

2.5×D



Material groups: GS | HSS-E | M/MF | USCTI 302A | 1.5P~2P | Bright | TiCN | Hardslick | R50

Unit : Inch

Size D1	Pitch	EDP No. Bright	EDP No. TiCN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
M3 x	0.5	G4203	G5203	G6203	D3	1.937	.311	.646	.141	.110	.190	2
M3.5 x	0.6	G4224	G5224	G6224	D4	2.000	.374	.709	.141	.110	.190	2
M4 x	0.7	G4244	G5244	G6244	D4	2.126	.374	.768	.168	.131	.250	3
M5 x	0.8	G4284	G5284	G6284	D4	2.374	.500	.933	.194	.152	.250	3
M6 x	1.0	G4315	G5315	G6315	D5	2.500	.626	1.000	.255	.191	.310	3
M7 x	1.0	G4345	G5345	G6345	D5	2.720	.689	1.126	.318	.238	.380	3
M8 x	1.25	G4365	G5365	G6365	D5	2.720	.689	1.126	.318	.238	.380	3
M8 x	1.0	G4375	G5375	G6375	D5	2.720	.689	1.126	.318	.238	.380	3
M10 x	1.5	G4426	G5426	G6426	D6	2.937	.748	1.252	.381	.286	.440	3
M10 x	1.25	G4435	G5435	G6435	D5	2.937	.748	1.252	.381	.286	.440	3
M12 x	1.75	G4506	G5506	G6506	D6	3.374	.937	1.594	.367	.275	.440	3
M12 x	1.25	G4525	G5525	G6525	D5	3.374	.937	1.594	.367	.275	.440	3

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

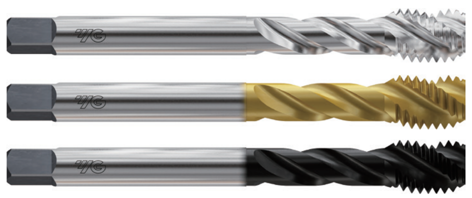
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

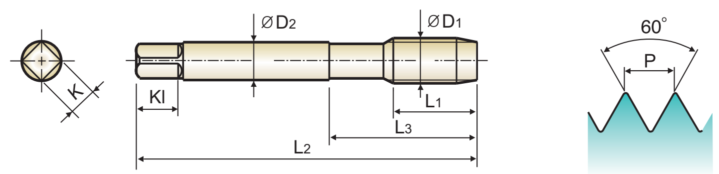
YG TAP GENERAL

G0/G1/G2 SERIES

SPIRAL FLUTE TAPS BOTTOMING STYLE for General Purpose

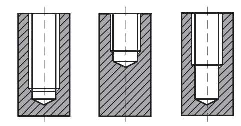


DIN Length-ANSI Shank



Thread Depth / Hole Type

2.5×D



Material groups: GS | HSS-E | UNC UNF | 2P~3P | Bright | TiN | Hardslick | R45

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. TiN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
#2 -	56UNC	G0082	G1082	G2082	H2	1.752	0.437	0.650	0.1410	0.110	.190	2
#4 -	40UNC	G0162	G1162	G2162	H2	2.205	0.311	0.563	0.1410	0.110	.190	2
#5 -	40UNC	G0202	G1202	G2202	H2	2.205	0.311	0.626	0.1410	0.110	.190	3
#6 -	32UNC	G0243	G1243	G2243	H3	2.205	0.374	0.689	0.1410	0.110	.190	3
#8 -	32UNC	G0283	G1283	G2283	H3	2.480	0.374	0.752	0.1680	0.131	.250	3
#10 -	24UNC	G0323	G1323	G2323	H3	2.756	0.500	0.906	0.1940	0.152	.250	3
#10 -	32UNF	G0343	G1343	G2343	H3	2.756	0.500	0.906	0.1940	0.152	.250	3
1/4 -	20UNC	G0403	G1403	G2403	H3	3.150	0.626	1.000	0.2550	0.191	.310	3
1/4 -	20UNC	G0405	G1405	G2405	H5	3.150	0.626	1.000	0.2550	0.191	.310	3
1/4 -	28UNF	G0423	G1423	G2423	H3	3.150	0.626	1.000	0.2550	0.191	.310	3
1/4 -	28UNF	G0443	G1443	G2443	H4	3.150	0.626	1.000	0.2550	0.191	.310	3
5/16 -	18UNC	G0445	G1445	G2445	H5	3.543	0.689	1.126	0.3180	0.238	.380	3
5/16 -	24UNF	G0463	G1463	G2463	H4	3.543	.689	1.126	.318	.238	.380	3
3/8 -	16UNC	G0483	G1483	G2483	H3	3.937	.748	1.252	.381	.286	.440	3
3/8 -	16UNC	G0485	G1485	G2485	H5	3.937	.748	1.252	.381	.286	.440	3
3/8 -	24UNF	G0503	G1503	G2503	H4	3.937	.748	1.252	.381	.286	.440	3
7/16 -	14UNC	G0523	G1523	G2523	H3	3.937	.874	1.437	.323	.242	.410	3
7/16 -	14UNC	G0525	G1525	G2525	H5	3.937	.874	1.437	.323	.242	.410	3
7/16 -	20UNF	G0543	G1543	G2543	H3	3.937	.874	1.437	.323	.242	.410	3
7/16 -	20UNF	G0545	G1545	G2545	H5	3.937	.874	1.437	.323	.242	.410	3
1/2 -	13UNC	G0563	G1563	G2563	H3	4.331	.937	1.594	.367	.275	.440	3
1/2 -	13UNC	G0565	G1565	G2565	H5	4.331	.937	1.594	.367	.275	.440	3
1/2 -	20UNF	G0583	G1583	G2583	H3	3.937	.937	1.594	.367	.275	.440	3
1/2 -	20UNF	G0585	G1585	G2585	H5	3.937	.937	1.594	.367	.275	.440	3
9/16 -	12UNC	G0603	G1603	G2603	H3	4.331	1.000	1.657	.429	.322	.500	3
9/16 -	12UNC	G0605	G1605	G2605	H5	4.331	1.000	1.657	.429	.322	.500	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

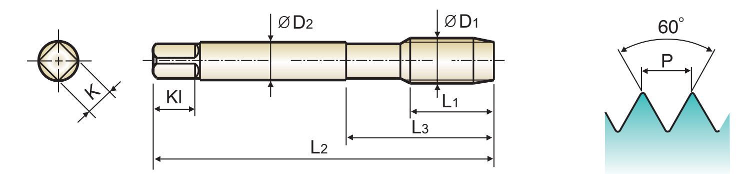
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

YG TAP GENERAL

G0/G1/G2 SERIES

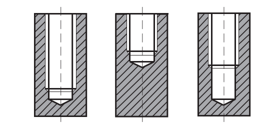
SPIRAL FLUTE TAPS BOTTOMING STYLE for General Purpose

DIN Length-ANSI Shank



Thread Depth / Hole Type

2.5×D



Material groups: GS | HSS-E | UNC UNF | 2P~3P | Bright | TiN | Hardslick | R45

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. TiN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
9/16 -	18UNF	G0623	G1623	G2623	H3	3.937	1.000	1.657	.429	.322	.500	3
9/16 -	18UNF	G0625	G1625	G2625	H5	3.937	1.000	1.657	.429	.322	.500	3
5/8 -	11UNC	G0643	G1643	G2643	H3	4.331	1.094	1.811	.480	.360	.560	4
5/8 -	11UNC	G0645	G1645	G2645	H5	4.331	1.094	1.811	.480	.360	.560	4
5/8 -	18UNF	G0663	G1663	G2663	H3	3.937	1.094	1.811	.480	.360	.560	4
5/8 -	18UNF	G0665	G1665	G2665	H5	3.937	1.094	1.811	.480	.360	.560	4
3/4 -	10UNC	G0703	G1703	G2703	H3	4.921	1.220	2.000	.590	.442	.690	4
3/4 -	10UNC	G0705	G1705	G2705	H5	4.921	1.220	2.000	.590	.442	.690	4
3/4 -	16UNF	G0723	G1723	G2723	H3	4.331	1.220	2.000	.590	.442	.690	4
3/4 -	16UNF	G0725	G1725	G2725	H5	4.331	1.220	2.000	.590	.442	.690	4
7/8 -	9UNC	G0746	G1746	G2746	H6	5.512	1.343	2.220	.697	.523	.750	4
7/8 -	14UNF	G0764	G1764	G2764	H4	4.921	1.343	2.220	.697	.523	.750	4
7/8 -	14UNF	G0766	G1766	G2766	H6	4.921	1.343	2.220	.697	.523	.750	4
1" -	8UNC	G0786	G1786	G2786	H6	6.299	1.500	2.500	.800	.600	.810	4
1" -	12UNF	G0804	G1804	G2804	H4	5.512	1.500	2.500	.800	.600	.810	4
1"	12UNF	G0806	G1806	G2806	H6	5.512	1.500	2.500	.800	.600	.810	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

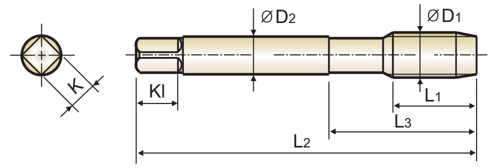
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

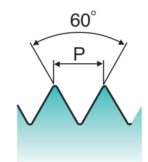
YG TAP GENERAL

T7A96 / T6A96 / T8A96 SERIES

SPIRAL FLUTE TAPS for General Purpose

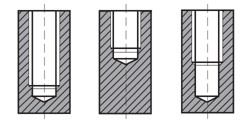
ANSI





Thread Depth / Hole Type

2.5×D



Material groups: GS | HSS | UNC UNF | USCTI 302 | 4P~5P Plug | Bright | Steam Oxide | TiN | R50

Unit : Inch

Size D1		TPI	EDP No. Bright	Steam Oxide	TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
#3	-	48UNC	T7A96122	T6A96122	T8A96122	H2	1.811	.492	.728	.141	.110	.190	2
#4	-	40UNC	T7A96162	T6A96162	T8A96162	H2	1.874	.563	.799	.141	.110	.190	2
#5	-	40UNC	T7A96202	T6A96202	T8A96202	H2	1.937	.626	.882	.141	.110	.190	2
#6	-	32UNC	T7A96242	T6A96242	T8A96242	H2	2.000	.689	.965	.141	.110	.190	2
#6	-	32UNC	T7A96243	T6A96243	T8A96243	H3	2.000	.689	.965	.141	.110	.190	2
#8	-	32UNC	T7A96282	T6A96282	T8A96282	H2	2.126	.752	1.047	.168	.131	.250	3
#8	-	32UNC	T7A96283	T6A96283	T8A96283	H3	2.126	.752	1.047	.168	.131	.250	3
#10	-	24UNC	T7A96323	T6A96323	T8A96323	H3	2.374	.906	1.220	.194	.152	.250	3
#10	-	32UNF	T7A96342	T6A96342	T8A96342	H2	2.374	.906	1.220	.194	.152	.250	3
#10	-	32UNF	T7A96343	T6A96343	T8A96343	H3	2.374	.906	1.220	.194	.152	.250	3
#12	-	24UNC	T7A96363	T6A96363	T8A96363	H3	2.374	.906	1.220	.220	.165	.280	3
1/4	-	20UNC	T7A96403	T6A96403	T8A96403	H3	2.500	1.000	1.354	.255	.191	.310	3
1/4	-	20UNC	T7A96405	T6A96405	T8A96405	H5	2.500	1.000	1.354	.255	.191	.310	3
1/4	-	28UNF	T7A96423	T6A96423	T8A96423	H3	2.500	1.000	1.354	.255	.191	.310	3
5/16	-	18UNC	T7A96443	T6A96443	T8A96443	H3	2.720	1.126	1.500	.318	.238	.380	3
5/16	-	18UNC	T7A96445	T6A96445	T8A96445	H5	2.720	1.126	1.500	.318	.238	.380	3
5/16	-	24UNF	T7A96463	T6A96463	T8A96463	H3	2.720	1.126	1.500	.318	.238	.380	3
3/8	-	16UNC	T7A96483	T6A96483	T8A96483	H3	2.937	1.252	1.646	.381	.286	.440	3
3/8	-	16UNC	T7A96485	T6A96485	T8A96485	H5	2.937	1.252	1.646	.381	.286	.440	3
3/8	-	24UNF	T7A96503	T6A96503	T8A96503	H3	2.937	1.252	1.646	.381	.286	.440	3
7/16	-	14UNC	T7A96523	T6A96523	T8A96523	H3	3.157	1.437	-	.323	.242	.410	3
7/16	-	20UNF	T7A96543	T6A96543	T8A96543	H3	3.157	1.437	-	.323	.242	.410	3
1/2	-	13UNC	T7A96563	T6A96563	T8A96563	H3	3.374	1.657	-	.367	.275	.440	3
1/2	-	13UNC	T7A96565	T6A96565	T8A96565	H5	3.374	1.657	-	.367	.275	.440	3
1/2	-	20UNF	T7A96583	T6A96583	T8A96583	H3	3.374	1.657	-	.367	.275	.440	3
5/8		11UNC	T7A96643	T6A96643	T8A96643	H3	3.811	1.811	-	.480	.360	.560	4
5/8		18UNF	T7A96663	T6A96663	T8A96663	H3	3.811	1.811	-	.480	.360	.560	4
3/4		10UNC	T7A96703	T6A96703	T8A96703	H3	4.252	2.000	-	.590	.442	.690	4
3/4		16UNF	T7A96723	T6A96723	T8A96723	H3	4.252	2.000	-	.590	.442	.690	4

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

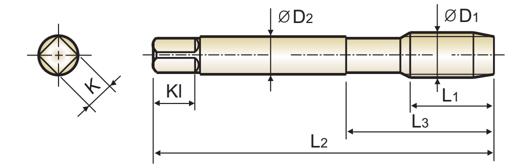
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

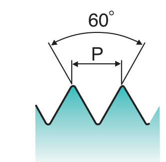
YG TAP GENERAL

T7295 / T6295 / T8295 SERIES

SPIRAL FLUTE TAPS for General Purpose

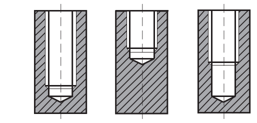
ANSI





Thread Depth / Hole Type

2.5×D



Material groups: GS | HSS | UNC UNF | USCTI 302 | 1.5P~2P Bottoming | Bright | Steam Oxide | TiN | R50

Unit : Inch

Size D1		TPI	EDP No. Bright	Steam Oxide	TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
#3	-	48UNC	T7295122	T6295122	T8295122	H2	1.811	.492	.728	.141	.110	.190	2
#4	-	40UNC	T7295162	T6295162	T8295162	H2	1.874	.563	.799	.141	.110	.190	2
#5	-	40UNC	T7295202	T6295202	T8295202	H2	1.937	.626	.882	.141	.110	.190	2
#6	-	32UNC	T7295242	T6295242	T8295242	H2	2.000	.689	.965	.141	.110	.190	2
#6	-	32UNC	T7295243	T6295243	T8295243	H3	2.000	.689	.965	.141	.110	.190	2
#8	-	32UNC	T7295282	T6295282	T8295282	H2	2.126	.752	1.047	.168	.131	.250	3
#8	-	32UNC	T7295283	T6295283	T8295283	H3	2.126	.752	1.047	.168	.131	.250	3
#10	-	24UNC	T7295323	T6295323	T8295323	H3	2.374	.906	1.220	.194	.152	.250	3
#10	-	32UNF	T7295342	T6295342	T8295342	H2	2.374	.906	1.220	.194	.152	.250	3
#10	-	32UNF	T7295343	T6295343	T8295343	H3	2.374	.906	1.220	.194	.152	.250	3
#12	-	24UNC	T7295363	T6295363	T8295363	H3	2.374	.906	1.220	.220	.165	.280	3
1/4	-	20UNC	T7295403	T6295403	T8295403	H3	2.500	1.000	1.354	.255	.191	.310	3
1/4	-	20UNC	T7295405	T6295405	T8295405	H5	2.500	1.000	1.354	.255	.191	.310	3
1/4	-	28UNF	T7295423	T6295423	T8295423	H3	2.500	1.000	1.354	.255	.191	.310	3
5/16	-	18UNC	T7295443	T6295443	T8295443	H3	2.720	1.126	1.500	.318	.238	.380	3
5/16	-	18UNC	T7295445	T6295445	T8295445	H5	2.720	1.126	1.500	.318	.238	.380	3
5/16	-	24UNF	T7295463	T6295463	T8295463	H3	2.720	1.126	1.500	.318	.238	.380	3
3/8	-	16UNC	T7295483	T6295483	T8295483	H3	2.937	1.252	1.646	.381	.286	.440	3
3/8	-	16UNC	T7295485	T6295485	T8295485	H5	2.937	1.252	1.646	.381	.286	.440	3
3/8	-	24UNF	T7295503	T6295503	T8295503	H3	2.937	1.252	1.646	.381	.286	.440	3
7/16	-	14UNC	T7295523	T6295523	T8295523	H3	3.157	1.437	-	.323	.242	.410	3
7/16	-	14UNC	T7295525	T6295525	T8295525	H5	3.157	1.437	-	.323	.242	.410	3
7/16	-	20UNF	T7295543	T6295543	T8295543	H3	3.157	1.437	-	.323	.242	.410	3
1/2	-	13UNC	T7295563	T6295563	T8295563	H3	3.374	1.657	-	.367	.275	.440	3
1/2	-	13UNC	T7295565	T6295565	T8295565	H5	3.374	1.657	-	.367	.275	.440	3
1/2	-	20UNF	T7295583	T6295583	T8295583	H3	3.374	1.657	-	.367	.275	.440	3
5/8		11UNC	T7295643	T6295643	T8295643	H3	3.811	1.811	-	.480	.360	.560	4
5/8		18UNF	T7295663	T6295663	T8295663	H3	3.811	1.811	-	.480	.360	.560	4
3/4		10UNC	T7295703	T6295703	T8295703	H3	4.252	2.000	-	.590	.442	.690	4
3/4		16UNF	T7295723	T6295723	T8295723	H3	4.252	2.000	-	.590	.442	.690	4

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

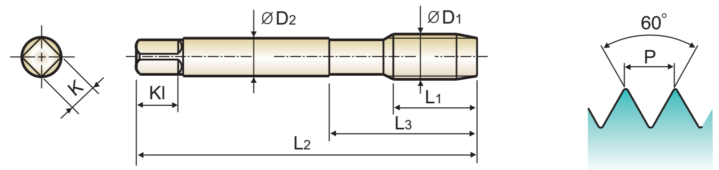
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TAP GENERAL

T7A86/T6A86/T8A86 SERIES
T7A85/T6A85/T8A85 SERIES

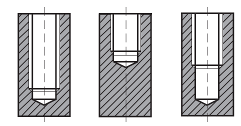
SPIRAL FLUTE TAPS for General Purpose

ANSI



Thread Depth / Hole Type

2.5×D



Material groups GS | HSS | M/MF | USCTI 302 | 4P~5P Plug | 1.5P~2P Bottoming | Bright | Steam Oxide | TiN | R50

Unit : Inch

Size	Pitch	EDP No. Plug Bright	TiCN	Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
D1												
M3 x	0.5	T7A86203	T6A86203	T8A86203	D3	1.937	.602	.622	.141	.110	.190	2
M4 x	0.7	T7A86244	T6A86244	T8A86244	D4	2.067	.732	.752	.168	.131	.250	3
M5 x	0.8	T7A86284	T6A86284	T8A86284	D4	2.303	.874	-	.194	.152	.250	3
M6 x	1.0	T7A86315	T6A86315	T8A86315	D5	2.500	1.000	-	.255	.191	.310	3
M8 x	1.25	T7A86365	T6A86365	T8A86365	D5	2.720	1.126	-	.318	.238	.380	3
M10 x	1.5	T7A86426	T6A86426	T8A86426	D6	2.937	1.252	-	.381	.286	.440	3
M12 x	1.75	T7A86506	T6A86506	T8A86506	D6	1.657	1.657	-	.367	.275	.440	3

Unit : Inch

Size	Pitch	EDP No. Bottom Bright	TiCN	Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
D1												
M3 x	0.5	T7A85203	T6A85203	T8A85203	D3	1.937	.602	.622	.141	.110	.190	2
M4 x	0.7	T7A85244	T6A85244	T8A85244	D4	2.067	.732	.752	.168	.131	.250	3
M5 x	0.8	T7A85284	T6A85284	T8A85284	D4	2.303	.874	-	.194	.152	.250	3
M6 x	1.0	T7A85315	T6A85315	T8A85315	D5	2.500	1.000	-	.255	.191	.310	3
M8 x	1.25	T7A85365	T6A85365	T8A85365	D5	2.720	1.126	-	.318	.238	.380	3
M10 x	1.5	T7A85426	T6A85426	T8A85426	D6	2.937	1.252	-	.381	.286	.440	3
M12 x	1.75	T7A85506	T6A85506	T8A85506	D6	1.657	1.657	-	.367	.275	.440	3

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

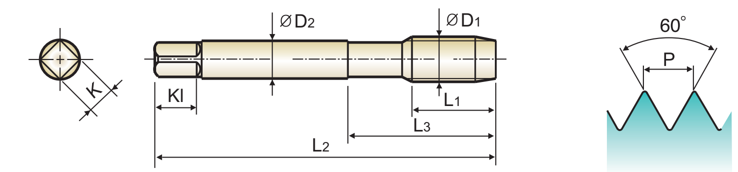
YG TAP GENERAL

T7D01/T8D01 SERIES
T7D02/T8D02 SERIES

SPIRAL FLUTE TAP, 6" EXTENSION

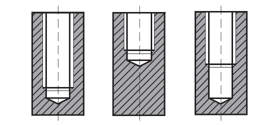
EXTENDED LENGTH FOR GREATER REACH

ANSI Long Shank



Thread Depth / Hole Type

2.5×D



Material groups GS | HSS | UNC UNF | USCTI Long Shank | 4P~5P Plug | 1.5P~2P Bottoming | Bright | TiN | R50

Unit : Inch

Size	TPI	EDP No. Plug Bright	TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
D1											
#6 -	32UNC	T7D01243	T8D01243	H3	6.000	.413	.689	.141	.110	.190	2
#8 -	32UNC	T7D01283	T8D01283	H3	6.000	.453	.752	.168	.131	.250	3
#10 -	24UNC	T7D01323	T8D01323	H3	6.000	.531	.906	.194	.152	.250	3
#10 -	32UNF	T7D01343	T8D01343	H3	6.000	.531	.906	.194	.152	.250	3
1/4 -	20UNC	T7D01403	T8D01403	H3	6.000	.591	1.000	.255	.191	.310	3
1/4 -	28UNF	T7D01423	T8D01423	H3	6.000	.591	1.000	.255	.191	.310	3
5/16 -	18UNC	T7D01443	T8D01443	H3	6.000	.669	1.126	.318	.238	.380	3
3/8 -	16UNC	T7D01483	T8D01483	H3	6.000	.748	1.252	.381	.286	.440	3
7/16 -	14UNC	T7D01523	T8D01523	H3	6.000	.866	1.437	.323	.242	.410	3
1/2 -	13UNC	T7D01563	T8D01563	H3	6.000	.984	1.657	.367	.275	.440	3
5/8 -	11UNC	T7D01643	T8D01643	H3	6.000	1.083	1.811	.480	.360	.560	4

Unit : Inch

Size	TPI	EDP No. Bottom Bright	TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
D1											
#6 -	32UNC	T7D02243	T8D02243	H3	6.000	.413	.689	.141	.110	.190	2
#8 -	32UNC	T7D02283	T8D02283	H3	6.000	.453	.752	.168	.131	.250	3
#10 -	24UNC	T7D02323	T8D02323	H3	6.000	.531	.906	.194	.152	.250	3
#10 -	32UNF	T7D02343	T8D02343	H3	6.000	.531	.906	.194	.152	.250	3
1/4 -	20UNC	T7D02403	T8D02403	H3	6.000	.591	1.000	.255	.191	.310	3
1/4 -	28UNF	T7D02423	T8D02423	H3	6.000	.591	1.000	.255	.191	.310	3
5/16 -	18UNC	T7D02443	T8D02443	H3	6.000	.669	1.126	.318	.238	.380	3
3/8 -	16UNC	T7D02483	T8D02483	H3	6.000	.748	1.252	.381	.286	.440	3
7/16 -	14UNC	T7D02523	T8D02523	H3	6.000	.866	1.437	.323	.242	.410	3
1/2 -	13UNC	T7D02563	T8D02563	H3	6.000	.984	1.657	.367	.275	.440	3
5/8 -	11UNC	T7D02643	T8D02643	H3	6.000	1.083	1.811	.480	.360	.560	4

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

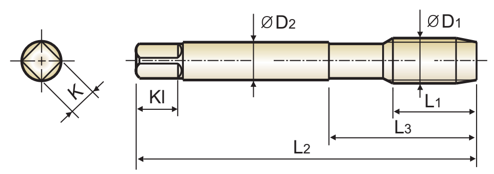
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

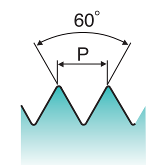
YG TAP GENERAL

I9/J0/J1/J7 SERIES

SPIRAL POINT PLUG STYLE for General Purpose

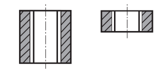
ANSI





Thread Depth / Hole Type

3.0×D



Material groups: GS | HSS-E | UNC UNF | USCTI 302 | 4P~5P | Bright | Steam Oxide | TiN | Hardslick

Unit : Inch

Size		TPI	EDP No.				Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Steam Oxide	Bright	TiN	Hardslick		L2	L1	L3	D2	K	KL	
#2	-	56UNC	I9082	J0082	J1082	J7082	H2	1.752	.433	.650	.141	.110	.190	2
#4	-	40UNC	I9162	J0162	J1162	J7162	H2	1.874	.563	.799	.141	.110	.190	2
#5	-	40UNC	I9202	J0202	J1202	J7202	H2	1.937	.626	.882	.141	.110	.190	2
#6	-	32UNC	I9243	J0243	J1243	J7243	H3	2.000	.689	.965	.141	.110	.190	2
#8	-	32UNC	I9283	J0283	J1283	J7283	H3	2.126	.752	1.047	.168	.131	.250	2
#10	-	24UNC	I9323	J0323	J1323	J7323	H3	2.374	.906	1.220	.194	.152	.250	2
#10	-	32UNF	I9343	J0343	J1343	J7343	H3	2.374	.906	1.220	.194	.152	.250	2
1/4	-	20UNC	I9403	J0403	J1403	J7403	H3	2.500	1.000	1.354	.255	.191	.310	2
1/4	-	20UNC	I9405	J0405	J1405	J7405	H5	2.500	1.000	1.354	.255	.191	.310	2
1/4	-	28UNF	I9423	J0423	J1423	J7423	H3	2.500	1.000	1.354	.255	.191	.310	2
5/16	-	18UNC	I9443	J0443	J1443	J7443	H3	2.720	1.126	1.500	.318	.238	.380	2
5/16	-	18UNC	I9445	J0445	J1445	J7445	H5	2.720	1.126	1.500	.318	.238	.380	2
5/16	-	24UNF	I9463	J0463	J1463	J7463	H3	2.720	1.126	1.500	.318	.238	.380	2
3/8	-	16UNC	I9483	J0483	J1483	J7483	H3	2.937	1.252	1.646	.381	.286	.440	3
3/8	-	16UNC	I9485	J0485	J1485	J7485	H5	2.937	1.252	1.646	.381	.286	.440	3
3/8	-	24UNF	I9503	J0503	J1503	J7503	H3	2.937	1.252	1.646	.381	.286	.440	3
7/16	-	14UNC	I9523	J0523	J1523	J7523	H3	3.157	1.437	-	.323	.242	.410	3
7/16	-	14UNC	I9525	J0525	J1525	J7525	H5	3.157	1.437	-	.323	.242	.410	3
7/16	-	20UNF	I9543	J0543	J1543	J7543	H3	3.157	1.437	-	.323	.242	.410	3
7/16	-	20UNF	I9545	J0545	J1545	J7545	H5	3.157	1.437	-	.323	.242	.410	3
1/2	-	13UNC	I9563	J0563	J1563	J7563	H3	3.374	1.657	-	.367	.275	.440	3
1/2	-	13UNC	I9565	J0565	J1565	J7565	H5	3.374	1.657	-	.367	.275	.440	3
1/2	-	20UNF	I9583	J0583	J1583	J7583	H3	3.374	1.657	-	.367	.275	.440	3
1/2	-	20UNF	I9585	J0585	J1585	J7585	H5	3.374	1.657	-	.367	.275	.440	3
9/16	-	12UNC	I9603	J0603	J1603	J7603	H3	3.594	1.657	-	.429	.322	.500	3
9/16	-	18UNF	I9625	J0625	J1625	J7625	H5	3.594	1.657	-	.429	.322	.500	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

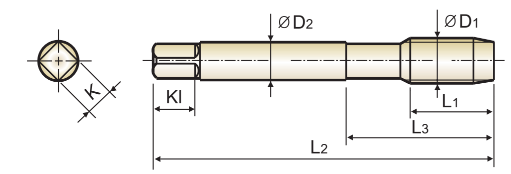
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

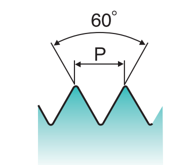
YG TAP GENERAL

I9/J0/J1/J7 SERIES

SPIRAL POINT PLUG STYLE for General Purpose

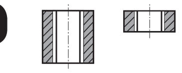
ANSI





Thread Depth / Hole Type

3.0×D



Material groups: GS | HSS-E | UNC UNF | USCTI 302 | 4P~5P | Bright | Steam Oxide | TiN | Hardslick

Unit : Inch

Size		TPI	EDP No.				Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Steam Oxide	Bright	TiN	Hardslick		L2	L1	L3	D2	K	KL	
5/8	-	11UNC	I9643	J0643	J1643	J7643	H3	3.811	1.811	-	.480	.360	.560	3
5/8	-	11UNC	I9645	J0645	J1645	J7645	H5	3.811	1.811	-	.480	.360	.560	3
5/8	-	18UNF	I9665	J0665	J1665	J7665	H5	3.811	1.811	-	.480	.360	.560	3
3/4	-	10UNC	I9703	J0703	J1703	J7703	H3	4.252	2.000	-	.590	.442	.690	3
3/4	-	10UNC	I9705	J0705	J1705	J7705	H5	4.252	2.000	-	.590	.442	.690	3
3/4	-	16UNF	I9725	J0725	J1725	J7725	H5	4.252	2.000	-	.590	.442	.690	3
7/8	-	9UNC	I9744	J0744	J1744	J7744	H4	4.689	2.220	-	.697	.523	.750	3
7/8	-	14UNF	I9766	J0766	J1766	J7766	H6	4.689	2.220	-	.697	.523	.750	3
1"	-	8UNC	I9784	J0784	J1784	J7784	H4	5.126	2.500	-	.800	.600	.810	3

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

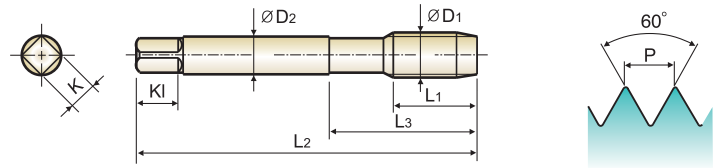
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

YG TAP GENERAL

K9/L0/L1 SERIES

SPIRAL POINT TAPS PLUG STYLE for General Purpose

ANSI



Thread Depth / Hole Type

3.0×D

Material groups GS | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Bright | Steam Oxide | TiN | Hardslick

Unit : Inch

Size	TPI	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Bright	TiN	Hardslick		L2	L1	L3	D2	K	KL	
#2 -	56UNC	K9082	L0082	L1082	H2	1.752	.437	.650	.141	.110	.190	2
#4 -	40UNC	K9162	L0162	L1162	H2	1.874	.311	.563	.141	.110	.190	2
#5 -	40UNC	K9202	L0202	L1202	H2	1.937	.311	.626	.141	.110	.190	2
#6 -	32UNC	K9243	L0243	L1243	H3	2.000	.374	.689	.141	.110	.190	2
#8 -	32UNC	K9283	L0283	L1283	H3	2.126	.374	.752	.168	.131	.250	2
#10 -	24UNC	K9323	L0323	L1323	H3	2.374	.500	.906	.194	.152	.250	2
#10 -	32UNC	K9343	L0343	L1343	H3	2.374	.500	.906	.194	.152	.250	2
1/4 -	20UNC	K9403	L0403	L1403	H3	2.500	.626	1.000	.255	.191	.310	2
1/4 -	20UNC	K9405	L0405	L1405	H5	2.500	.626	1.000	.255	.191	.310	2
1/4 -	28UNF	K9423	L0423	L1423	H3	2.500	.626	1.000	.255	.191	.310	3
5/16 -	18UNC	K9443	L0443	L1443	H3	2.720	.689	1.126	.318	.238	.380	2
5/16 -	18UNC	K9445	L0445	L1445	H5	2.720	.689	1.126	.318	.238	.380	2
5/16 -	24UNF	K9463	L0463	L1463	H3	2.720	.689	1.126	.318	.238	.380	3
3/8 -	16UNC	K9483	L0483	L1483	H3	2.937	.748	1.252	.381	.286	.440	3
3/8 -	16UNC	K9485	L0485	L1485	H5	2.937	.748	1.252	.381	.286	.440	3
3/8 -	24UNF	K9503	L0503	L1503	H3	2.937	.748	1.252	.381	.286	.440	3
7/16 -	14UNC	K9523	L0523	L1523	H3	3.157	.874	1.437	.323	.242	.410	3
7/16 -	14UNC	K9525	L0525	L1525	H5	3.157	.874	1.437	.323	.242	.410	3
7/16 -	20UNF	K9543	L0543	L1543	H3	3.157	.874	1.437	.323	.242	.410	3
7/16 -	20UNF	K9545	L0545	L1545	H5	3.157	.874	1.437	.323	.242	.410	3
1/2 -	13UNC	K9563	L0563	L1563	H3	3.374	.937	1.594	.367	.275	.440	3
1/2 -	13UNC	K9565	L0565	L1565	H5	3.374	.937	1.594	.367	.275	.440	3
1/2 -	20UNF	K9583	L0583	L1583	H3	3.374	.937	1.594	.367	.275	.440	3
1/2 -	20UNF	K9585	L0585	L1585	H5	3.374	.937	1.594	.367	.275	.440	3
9/16 -	12UNC	K9603	L0603	L1603	H3	3.594	1.000	1.657	.429	.322	.500	3
9/16 -	18UNF	K9623	L0623	L1623	H3	3.594	1.000	1.657	.429	.322	.500	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

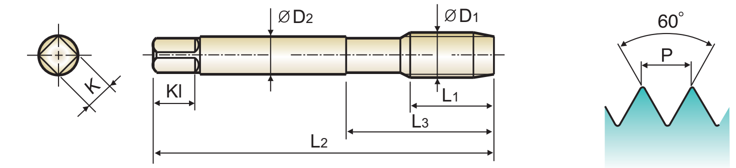
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TAP GENERAL

K9/L0/L1 SERIES

SPIRAL POINT TAPS PLUG STYLE for General Purpose

ANSI



Thread Depth / Hole Type

3.0×D

Material groups GS | HSS-E | UNC UNF | USCTI 302A | 4P~5P | Bright | Steam Oxide | TiN | Hardslick

Unit : Inch

Size	TPI	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Bright	TiN	Hardslick		L2	L1	L3	D2	K	KL	
9/16 -	18UNF	K9625	L0625	L1625	H5	3.594	1.000	1.657	.429	.322	.500	3
5/8 -	11UNC	K9643	L0643	L1643	H3	3.811	1.094	1.811	.480	.360	.560	3
5/8 -	11UNC	K9645	L0645	L1645	H5	3.811	1.094	1.811	.480	.360	.560	3
5/8 -	18UNF	K9663	L0663	L1663	H3	3.811	1.094	1.811	.480	.360	.560	3
5/8 -	18UNF	K9665	L0665	L1665	H5	3.811	1.094	1.811	.480	.360	.560	3
3/4 -	10UNC	K9703	L0703	L1703	H3	4.252	1.220	2.000	.590	.442	.690	3
3/4 -	10UNC	K9705	L0705	L1705	H5	4.252	1.220	2.000	.590	.442	.690	3
3/4 -	16UNF	K9723	L0723	L1723	H3	4.252	1.220	2.000	.590	.442	.690	3
3/4 -	16UNF	K9725	L0725	L1725	H5	4.252	1.220	2.000	.590	.442	.690	3
7/8 -	9UNC	K9746	L0746	L1746	H6	4.689	1.343	2.220	.697	.523	.750	3
7/8 -	14UNF	K9764	L0764	L1764	H4	4.689	1.343	2.220	.697	.523	.750	3
7/8 -	14UNF	K9766	L0766	L1766	H6	4.689	1.343	2.220	.697	.523	.750	3
1" -	8UNC	K9786	L0786	L1786	H6	5.126	1.500	2.500	.800	.600	.810	3
1" -	12UNC	K9806	L0806	L1806	H6	5.126	1.500	2.500	.800	.600	.810	3

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

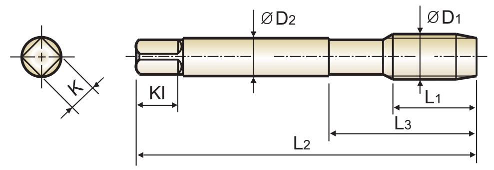
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

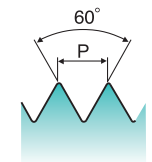
YG TAP GENERAL

L7/L8/L9 SERIES

SPIRAL POINT TAPS PLUG STYLE for General Purpose

ANSI





Material groups: GS | HSS-E | M/MF | USCTI 302A | 4P~5P | Bright | Steam Oxide | TiCN | Hardslick

Thread Depth / Hole Type: 3.0×D

Unit : Inch

Size D1		Pitch	EDP No. Bright	EDP No. TiCN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
M3	x	0.5	L7203	L8203	L9203	D3	1.937	.311	.646	.141	.110	.190	2
M3.5	x	0.6	L7224	L8224	L9224	D4	2.000	.374	.709	.141	.110	.190	2
M4	x	0.7	L7244	L8244	L9244	D4	2.126	.374	.768	.168	.131	.250	2
M5	x	0.8	L7284	L8284	L9284	D4	2.374	.500	.933	.194	.152	.250	2
M6	x	1.0	L7315	L8315	L9315	D5	2.500	.626	1.000	.255	.191	.310	3
M7	x	1.0	L7345	L8345	L9345	D5	2.720	.689	1.126	.318	.238	.380	3
M8	x	1.25	L7365	L8365	L9365	D5	2.720	.689	1.126	.318	.238	.380	3
M8	x	1.0	L7375	L8375	L9375	D5	2.720	.689	1.126	.318	.238	.380	3
M10	x	1.5	L7426	L8426	L9426	D6	2.937	.748	1.252	.381	.286	.440	3
M10	x	1.25	L7435	L8435	L9435	D5	2.937	.748	1.252	.381	.286	.440	3
M12	x	1.75	L7506	L8506	L9506	D6	3.374	.937	1.594	.367	.275	.440	3
M12	x	1.25	L7525	L8525	L9525	D5	3.374	.937	1.594	.367	.275	.440	3

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

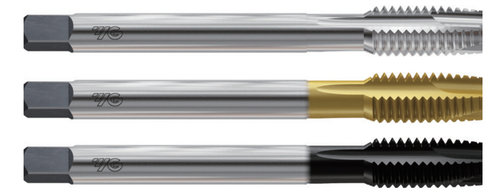
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

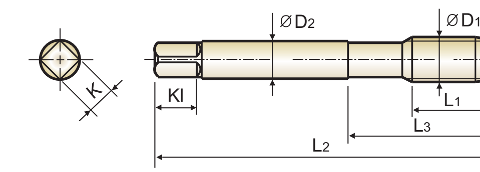
YG TAP GENERAL

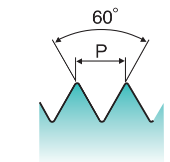
L3/L4/L5 SERIES

SPIRAL POINT TAPS PLUG STYLE for General Purpose



DIN Length-ANSI Shank





Material groups: GS | HSS-E | UNC UNF | 4P~5P | Bright | TiN | Hardslick

Thread Depth / Hole Type: 3.0×D

Unit : Inch

Size D1		TPI	EDP No. Bright	EDP No. TiN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
#2	-	56UNC	L3082	L4082	L5082	H2	1.752	.437	.650	.141	.110	.190	2
#4	-	40UNC	L3162	L4162	L5162	H2	1.874	.311	.563	.141	.110	.190	2
#5	-	40UNC	L3202	L4202	L5202	H2	1.937	.311	.626	.141	.110	.190	3
#6	-	32UNC	L3243	L4243	L5243	H3	2.000	.374	.689	.141	.110	.190	3
#8	-	32UNC	L3283	L4283	L5283	H3	2.126	.374	.752	.168	.131	.250	3
#10	-	24UNC	L3323	L4323	L5323	H3	2.374	.500	.906	.194	.152	.250	3
#10	-	32UNC	L3343	L4343	L5343	H3	2.374	.500	.906	.194	.152	.250	3
1/4	-	20UNC	L3403	L4403	L5403	H3	2.500	.626	1.000	.255	.191	.310	3
1/4	-	20UNC	L3405	L4405	L5405	H5	2.500	.626	1.000	.255	.191	.310	3
1/4	-	28UNF	L3423	L4423	L5423	H3	2.500	.626	1.000	.255	.191	.310	3
5/16	-	18UNC	L3443	L4443	L5443	H3	2.720	.689	1.126	.318	.238	.380	3
5/16	-	18UNC	L3445	L4445	L5445	H5	2.720	.689	1.126	.318	.238	.380	3
5/16	-	24UNF	L3463	L4463	L5463	H3	2.720	.689	1.126	.318	.238	.380	3
3/8	-	16UNC	L3483	L4483	L5483	H3	2.937	.748	1.252	.381	.286	.440	3
3/8	-	16UNC	L3485	L4485	L5485	H5	2.937	.748	1.252	.381	.286	.440	3
3/8	-	24UNF	L3503	L4503	L5503	H3	2.937	.748	1.252	.381	.286	.440	3
7/16	-	14UNC	L3523	L4523	L5523	H3	3.157	.874	1.437	.323	.242	.410	3
7/16	-	14UNC	L3525	L4525	L5525	H5	3.157	.874	1.437	.323	.242	.410	3
7/16	-	20UNF	L3543	L4543	L5543	H3	3.157	.874	1.437	.323	.242	.410	3
7/16	-	20UNF	L3545	L4545	L5545	H5	3.157	.874	1.437	.323	.242	.410	3
1/2	-	13UNC	L3563	L4563	L5563	H3	3.374	.937	1.594	.367	.275	.440	3
1/2	-	13UNC	L3565	L4565	L5565	H5	3.374	.937	1.594	.367	.275	.440	3
1/2	-	20UNF	L3583	L4583	L5583	H3	3.374	.937	1.594	.367	.275	.440	3
1/2	-	20UNF	L3585	L4585	L5585	H5	3.374	.937	1.594	.367	.275	.440	3
9/16	-	12UNC	L3605	L4605	L5605	H5	3.594	1.000	1.657	.429	.322	.500	3
9/16	-	18UNF	L3625	L4625	L5625	H5	3.594	1.000	1.657	.429	.322	.500	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

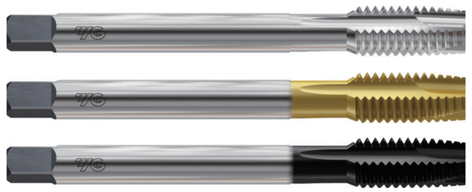
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

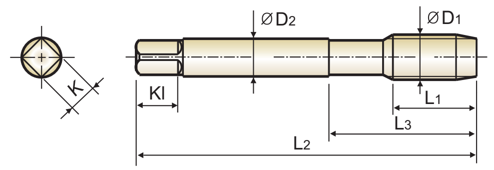
YG TAP GENERAL

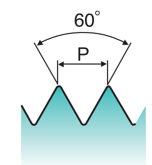
L3/L4/L5 SERIES

SPIRAL POINT TAPS PLUG STYLE for General Purpose



DIN Length-ANSI Shank





Thread Depth / Hole Type
3.0×D

Material groups: GS | HSS-E | UNC UNF | 4P~5P | Bright | TiN | Hardslick

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. TiN	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
5/8 -	11UNC	L3643	L4643	L5643	H3	3.811	1.094	1.811	.480	.360	.560	3
5/8 -	11UNC	L3645	L4645	L5645	H5	3.811	1.094	1.811	.480	.360	.560	3
3/4 -	10UNC	L3703	L4703	L5703	H3	4.252	1.220	2.000	.590	.442	.690	3
3/4 -	10UNC	L3705	L4705	L5705	H5	4.252	1.220	2.000	.590	.442	.690	3
3/4 -	16UNF	L3725	L4725	L5725	H5	4.252	1.220	2.000	.590	.442	.690	3
7/8 -	9UNC	L3746	L4746	L5746	H6	4.689	1.343	2.220	.697	.523	.750	3
7/8 -	14UNF	L3766	L4766	L5766	H6	4.689	1.343	2.220	.697	.523	.750	3
1" -	8UNC	L3786	L4786	L5786	H6	5.126	1.500	2.500	.800	.600	.810	3
1" -	12UNF	L3806	L4806	L5806	H6	5.126	1.500	2.500	.800	.600	.810	3

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

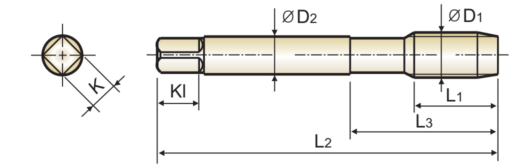
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

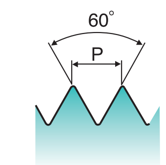
YG TAP GENERAL

T7216/T6216/T8216 SERIES

SPIRAL POINT PLUG STYLE for General Purpose

ANSI





Thread Depth / Hole Type
3.0×D

Material groups: GS | HSS | UNC UNF | USCTI 302 | 4P~5P | Bright | Steam Oxide | TiN

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
#0 -	80UNF	T7216021	T6216021	T8216021	H1	1.634	.315	.512	.141	.110	.190	2
#0 -	80UNF	T7216022	T6216022	T8216022	H2	1.634	.315	.512	.141	.110	.190	2
#0 -	80UNF	T7216023	T6216023	T8216023	H3	1.634	.315	.512	.141	.110	.190	2
#1 -	64UNC	T7216041	T6216041	T8216041	H1	1.693	.374	.571	.141	.110	.190	2
#1 -	64UNC	T7216042	T6216042	T8216042	H2	1.693	.374	.571	.141	.110	.190	2
#1 -	72UNF	T7216061	T6216061	T8216061	H1	1.693	.374	.571	.141	.110	.190	2
#1 -	72UNF	T7216062	T6216062	T8216062	H2	1.693	.374	.571	.141	.110	.190	2
#2 -	56UNC	T7216081	T6216081	T8216081	H1	1.752	.433	.650	.141	.110	.190	2
#2 -	56UNC	T7216082	T6216082	T8216082	H2	1.752	.433	.650	.141	.110	.190	2
#2 -	56UNC	T7216083	T6216083	T8216083	H3	1.752	.433	.650	.141	.110	.190	2
#2 -	56UNC	T7216085	T6216085	T8216085	H5	1.752	.433	.650	.141	.110	.190	2
#2 -	64UNF	T7216101	T6216101	T8216101	H1	1.752	.433	.650	.141	.110	.190	2
#2 -	64UNF	T7216102	T6216102	T8216102	H2	1.752	.433	.650	.141	.110	.190	2
#3 -	48UNC	T7216121	T6216121	T8216121	H1	1.811	.492	.728	.141	.110	.190	2
#3 -	48UNC	T7216122	T6216122	T8216122	H2	1.811	.492	.728	.141	.110	.190	2
#3 -	48UNC	T7216123	T6216123	T8216123	H3	1.811	.492	.728	.141	.110	.190	2
#3 -	48UNC	T7216125	T6216125	T8216125	H5	1.811	.492	.728	.141	.110	.190	2
#3 -	56UNF	T7216141	T6216141	T8216141	H1	1.811	.492	.728	.141	.110	.190	2
#3 -	56UNF	T7216142	T6216142	T8216142	H2	1.811	.492	.728	.141	.110	.190	2
#4 -	40UNC	T7216161	T6216161	T8216161	H1	1.874	.563	.799	.141	.110	.190	2
#4 -	40UNC	T7216162	T6216162	T8216162	H2	1.874	.563	.799	.141	.110	.190	2
#4 -	40UNC	T7216163	T6216163	T8216163	H3	1.874	.563	.799	.141	.110	.190	2
#4 -	40UNC	T7216165	T6216165	T8216165	H5	1.874	.563	.799	.141	.110	.190	2
#4 -	40UNC	T7216167	T6216167	T8216167	H7	1.874	.563	.799	.141	.110	.190	2
#4 -	48UNF	T7216181	T6216181	T8216181	H1	1.874	.563	.799	.141	.110	.190	2
#4 -	48UNF	T7216182	T6216182	T8216182	H2	1.874	.563	.799	.141	.110	.190	2

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

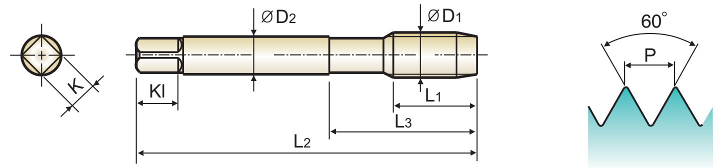
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

YG TAP GENERAL

T7216/T6216/T8216 SERIES
T7C16/T6C16/T8C16 SERIES

SPIRAL POINT PLUG STYLE for General Purpose

ANSI



Thread Depth / Hole Type

3.0×D

Material groups: GS | HSS | UNC UNF | USCTI 302 | 4P~5P | Bright | Steam Oxide | TiN

Unit : Inch

Size	TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
#5 -	40UNC	T7216201	T6216201	T8216201	H1	1.937	.626	.882	.141	.110	.190	2
#5 -	40UNC	T7216202	T6216202	T8216202	H2	1.937	.626	.882	.141	.110	.190	2
#5 -	40UNC	T7216205	T6216205	T8216205	H5	1.937	.626	.882	.141	.110	.190	2
#5 -	44UNF	T7216222	T6216222	T8216222	H2	1.937	.626	.882	.141	.110	.190	2
#6 -	32UNC	T7216241	T6216241	T8216241	H1	2.000	.689	.965	.141	.110	.190	2
#6 -	32UNC	T7216242	T6216242	T8216242	H2	2.000	.689	.965	.141	.110	.190	2
#6 -	32UNC	T7216243	T6216243	T8216243	H3	2.000	.689	.965	.141	.110	.190	2
#6 -	32UNC	T7C16243	T6C16243	T8C16243	H3	2.000	.689	.965	.141	.110	.190	3
#6 -	32UNC	T7216244	T6216244	T8216244	H4	2.000	.689	.965	.141	.110	.190	2
#6 -	32UNC	T7216245	T6216245	T8216245	H5	2.000	.689	.965	.141	.110	.190	2
#6 -	32UNC	T7216247	T6216247	T8216247	H7	2.000	.689	.965	.141	.110	.190	2
#6 -	40UNF	T7216261	T6216261	T8216261	H1	2.000	.689	.965	.141	.110	.190	2
#6 -	40UNF	T7216262	T6216262	T8216262	H2	2.000	.689	.965	.141	.110	.190	2
#6 -	40UNF	T7216265	T6216265	T8216265	H5	2.000	.689	.965	.141	.110	.190	2
#8 -	32UNC	T7216281	T6216281	T8216281	H1	2.126	.752	1.047	.168	.131	.250	2
#8 -	32UNC	T7216282	T6216282	T8216282	H2	2.126	.752	1.047	.168	.131	.250	2
#8 -	32UNC	T7216283	T6216283	T8216283	H3	2.126	.752	1.047	.168	.131	.250	2
#8 -	32UNC	T7C16283	T6C16283	T8C16283	H3	2.126	.752	1.047	.168	.131	.250	3
#8 -	32UNC	T7216284	T6216284	T8216284	H4	2.126	.752	1.047	.168	.131	.250	2
#8 -	32UNC	T7216285	T6216285	T8216285	H5	2.126	.752	1.047	.168	.131	.250	2
#8 -	32UNC	T7216287	T6216287	T8216287	H7	2.126	.752	1.047	.168	.131	.250	2
#8 -	36UNF	T7216301	T6216301	T8216301	H1	2.126	.752	1.047	.168	.131	.250	2
#8 -	36UNF	T7216302	T6216302	T8216302	H2	2.126	.752	1.047	.168	.131	.250	2
#10 -	24UNC	T7216321	T6216321	T8216321	H1	2.374	.906	1.220	.194	.152	.250	2
#10 -	24UNC	T7216322	T6216322	T8216322	H2	2.374	.906	1.220	.194	.152	.250	2
#10 -	24UNC	T7216323	T6216323	T8216323	H3	2.374	.906	1.220	.194	.152	.250	2

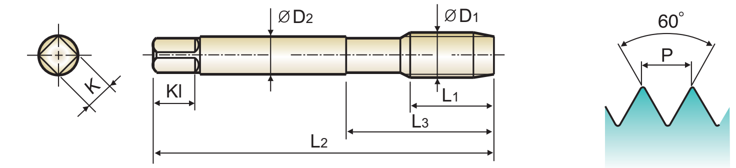
▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

YG TAP GENERAL
T7216/T6216/T8216 SERIES
T7C16/T6C16/T8C16 SERIES
SPIRAL POINT PLUG STYLE for General Purpose
ANSI



Thread Depth / Hole Type
3.0×D
Material groups: GS | HSS | UNC UNF | USCTI 302 | 4P~5P | Bright | Steam Oxide | TiN

Unit : Inch

Size	TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
#10 -	24UNC	T7C16323	T6C16323	T8C16323	H3	2.374	.906	1.220	.194	.152	.250	3
#10 -	24UNC	T7216324	T6216324	T8216324	H4	2.374	.906	1.220	.194	.152	.250	2
#10 -	24UNC	T7216325	T6216325	T8216325	H5	2.374	.906	1.220	.194	.152	.250	2
#10 -	24UNC	T7216327	T6216327	T8216327	H7	2.374	.906	1.220	.194	.152	.250	2
#10 -	32UNF	T7216341	T6216341	T8216341	H1	2.374	.906	1.220	.194	.152	.250	2
#10 -	32UNF	T7216342	T6216342	T8216342	H2	2.374	.906	1.220	.194	.152	.250	2
#10 -	32UNF	T7216343	T6216343	T8216343	H3	2.374	.906	1.220	.194	.152	.250	2
#10 -	32UNF	T7C16343	T6C16343	T8C16343	H3	2.374	.906	1.220	.194	.152	.250	3
#10 -	32UNF	T7216344	T6216344	T8216344	H4	2.374	.906	1.220	.194	.152	.250	2
#10 -	32UNF	T7216345	T6216345	T8216345	H5	2.374	.906	1.220	.194	.152	.250	2
#10 -	32UNF	T7216347	T6216347	T8216347	H7	2.374	.906	1.220	.194	.152	.250	2
#12 -	24UNC	T7216361	T6216361	T8216361	H1	2.374	.906	1.220	.220	.165	.280	2
#12 -	24UNC	T7216363	T6216363	T8216363	H3	2.374	.906	1.220	.220	.165	.280	2
#12 -	28UNF	T7216383	T6216383	T8216383	H3	2.374	.906	1.220	.220	.165	.280	2
1/4 -	20UNC	T7216401	T6216401	T8216401	H1	2.500	1.000	1.354	.255	.191	.310	2
1/4 -	20UNC	T7216402	T6216402	T8216402	H2	2.500	1.000	1.354	.255	.191	.310	2
1/4 -	20UNC	T7216403	T6216403	T8216403	H3	2.500	1.000	1.354	.255	.191	.310	2
1/4 -	20UNC	T7C16403	T6C16403	T8C16403	H3	2.500	1.000	1.354	.255	.191	.310	3
1/4 -	20UNC	T7216405	T6216405	T8216405	H5	2.500	1.000	1.354	.255	.191	.310	2
1/4 -	20UNC	T7C16405	T6C16405	T8C16405	H5	2.500	1.000	1.354	.255	.191	.310	3
1/4 -	28UNF	T7216421	T6216421	T8216421	H1	2.500	1.000	1.354	.255	.191	.310	2
1/4 -	28UNF	T7216422	T6216422	T8216422	H2	2.500	1.000	1.354	.255	.191	.310	2
1/4 -	28UNF	T7C16422	T6C16422	T8C16422	H2	2.500	1.000	1.354	.255	.191	.310	3
1/4 -	28UNF	T7216423	T6216423	T8216423	H3	2.500	1.000	1.354	.255	.191	.310	2
1/4 -	28UNF	T7216424	T6216424	T8216424	H4	2.500	1.000	1.354	.255	.191	.310	2
1/4 -	28UNF	T7C16424	T6C16424	T8C16424	H4	2.500	1.000	1.354	.255	.191	.310	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

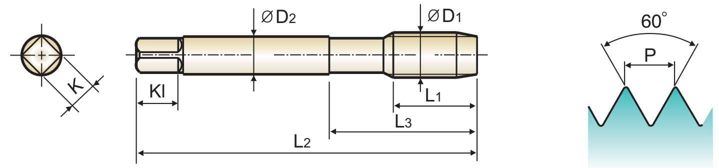
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

YG TAP GENERAL

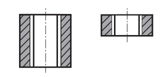
T7216/T6216/T8216 SERIES
T7C16/T6C16/T8C16 SERIES

SPIRAL POINT PLUG STYLE for General Purpose

ANSI



Thread Depth / Hole Type



3.0×D

Material groups: GS | HSS | UNC UNF | USCTI 302 | 4P~5P | Bright | Steam Oxide | TiN

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
5/16 -	18UNC	T7216441	T6216441	T8216441	H1	2.720	1.126	1.500	.318	.238	.380	2
5/16 -	18UNC	T7216442	T6216442	T8216442	H2	2.720	1.126	1.500	.318	.238	.380	2
5/16 -	18UNC	T7216443	T6216443	T8216443	H3	2.720	1.126	1.500	.318	.238	.380	2
5/16 -	18UNC	T7C16443	T6C16443	T8C16443	H3	2.720	1.126	1.500	.318	.238	.380	3
5/16 -	18UNC	T7216445	T6216445	T8216445	H5	2.720	1.126	1.500	.318	.238	.380	2
5/16 -	18UNC	T7C16445	T6C16445	T8C16445	H5	2.720	1.126	1.500	.318	.238	.380	3
5/16 -	24UNF	T7216461	T6216461	T8216461	H1	2.720	1.126	1.500	.318	.238	.380	2
5/16 -	24UNF	T7216462	T6216462	T8216462	H2	2.720	1.126	1.500	.318	.238	.380	2
5/16 -	24UNF	T7C16462	T6C16462	T8C16462	H2	2.720	1.126	1.500	.318	.238	.380	3
5/16 -	24UNF	T7216463	T6216463	T8216463	H3	2.720	1.126	1.500	.318	.238	.380	2
5/16 -	24UNF	T7216464	T6216464	T8216464	H4	2.720	1.126	1.500	.318	.238	.380	2
5/16 -	24UNF	T7C16464	T6C16464	T8C16464	H4	2.720	1.126	1.500	.318	.238	.380	3
3/8 -	16UNC	T7216481	T6216481	T8216481	H1	2.937	1.252	1.646	.381	.286	.440	3
3/8 -	16UNC	T7216482	T6216482	T8216482	H2	2.937	1.252	1.646	.381	.286	.440	3
3/8 -	16UNC	T7216483	T6216483	T8216483	H3	2.937	1.252	1.646	.381	.286	.440	3
3/8 -	16UNC	T7216485	T6216485	T8216485	H5	2.937	1.252	1.646	.381	.286	.440	3
3/8 -	24UNF	T7216501	T6216501	T8216501	H1	2.937	1.252	1.646	.381	.286	.440	3
3/8 -	24UNF	T7216502	T6216502	T8216502	H2	2.937	1.252	1.646	.381	.286	.440	3
3/8 -	24UNF	T7216503	T6216503	T8216503	H3	2.937	1.252	1.646	.381	.286	.440	3
3/8 -	24UNF	T7216504	T6216504	T8216504	H4	2.937	1.252	1.646	.381	.286	.440	3
7/16 -	14UNC	T7216522	T6216522	T8216522	H2	3.157	1.437	-	.323	.242	.410	3
7/16 -	14UNC	T7216523	T6216523	T8216523	H3	3.157	1.437	-	.323	.242	.410	3
7/16 -	14UNC	T7216525	T6216525	T8216525	H5	3.157	1.437	-	.323	.242	.410	3
7/16 -	20UNF	T7216542	T6216542	T8216542	H2	3.157	1.437	-	.323	.242	.410	3
7/16 -	20UNF	T7216543	T6216543	T8216543	H3	3.157	1.437	-	.323	.242	.410	3
7/16 -	20UNF	T7216545	T6216545	T8216545	H5	3.157	1.437	-	.323	.242	.410	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

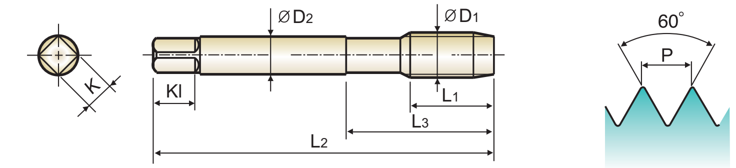
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

YG TAP GENERAL

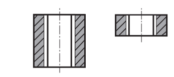
T7216/T6216/T8216 SERIES
T7C16/T6C16/T8C16 SERIES

SPIRAL POINT PLUG STYLE for General Purpose

ANSI



Thread Depth / Hole Type



3.0×D

Material groups: GS | HSS | UNC UNF | USCTI 302 | 4P~5P | Bright | Steam Oxide | TiN

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. Steam Oxide	EDP No. TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
1/2 -	13UNC	T7216561	T6216561	T8216561	H1	3.374	1.657	-	.367	.275	.440	3
1/2 -	13UNC	T7216562	T6216562	T8216562	H2	3.374	1.657	-	.367	.275	.440	3
1/2 -	13UNC	T7216563	T6216563	T8216563	H3	3.374	1.657	-	.367	.275	.440	3
1/2 -	13UNC	T7216565	T6216565	T8216565	H5	3.374	1.657	-	.367	.275	.440	3
1/2 -	20UNF	T7216581	T6216581	T8216581	H1	3.374	1.657	-	.367	.275	.440	3
1/2 -	20UNF	T7216582	T6216582	T8216582	H2	3.374	1.657	-	.367	.275	.440	3
1/2 -	20UNF	T7216583	T6216583	T8216583	H3	3.374	1.657	-	.367	.275	.440	3
1/2 -	20UNF	T7216585	T6216585	T8216585	H5	3.374	1.657	-	.367	.275	.440	3
9/16 -	12UNC	T7216603	T6216603	T8216603	H3	3.594	1.657	-	.429	.322	.500	3
9/16 -	12UNC	T7216605	T6216605	T8216605	H5	3.594	1.657	-	.429	.322	.500	3
9/16 -	18UNF	T7216623	T6216623	T8216623	H3	3.594	1.657	-	.429	.322	.500	3
9/16 -	18UNF	T7216625	T6216625	T8216625	H5	3.594	1.657	-	.429	.322	.500	3
5/8 -	11UNC	T7216643	T6216643	T8216643	H3	3.811	1.811	-	.480	.360	.560	3
5/8 -	11UNC	T7216645	T6216645	T8216645	H5	3.811	1.811	-	.480	.360	.560	3
5/8 -	18UNF	T7216663	T6216663	T8216663	H3	3.811	1.811	-	.480	.360	.560	3
5/8 -	18UNF	T7216665	T6216665	T8216665	H5	3.811	1.811	-	.480	.360	.560	3
3/4 -	10UNC	T7216703	T6216703	T8216703	H3	4.252	2.000	-	.590	.442	.690	3
3/4 -	10UNC	T7216705	T6216705	T8216705	H5	4.252	2.000	-	.590	.442	.690	3
3/4 -	16UNF	T7216723	T6216723	T8216723	H3	4.252	2.000	-	.590	.442	.690	3
3/4 -	16UNF	T7216725	T6216725	T8216725	H5	4.252	2.000	-	.590	.442	.690	3

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

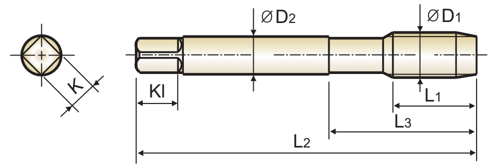
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

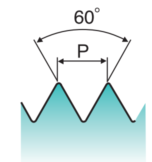
YG TAP GENERAL

T7217/T6217/T8217 SERIES

SPIRAL POINT PLUG STYLE for General Purpose

ANSI





Thread Depth / Hole Type

3.0×D

Material groups GS | HSS | M/MF | USCTI 302 | 4P~5P | Bright | Steam Oxide | TiN

Unit : Inch

Size	Pitch	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Bright	TiCN	Hardslick		L2	L1	L3	D2	K	KL	
M1.6 x	0.35	T7217093	T6217093	T8217093	D3	1.634	.315	-	.141	.110	.190	2
M2 x	0.4	T7217133	T6217133	T8217133	D3	1.752	.394	-	.141	.110	.190	2
M2.5 x	0.45	T7217173	T6217173	T8217173	D3	1.811	.457	-	.141	.110	.190	2
M3 x	0.5	T7217203	T6217203	T8217203	D3	1.937	.622	-	.141	.110	.190	2
M3.5 x	0.6	T7217224	T6217224	T8217224	D4	2.000	.689	-	.141	.110	.190	2
M4 x	0.7	T7217244	T6217244	T8217244	D4	2.126	.756	-	.168	.131	.250	2
M4.5 x	0.75	T7217264	T6217264	T8217264	D4	2.374	.909	-	.194	.152	.250	2
M5 x	0.8	T7217284	T6217284	T8217284	D4	2.374	.933	-	.194	.152	.250	2
M6 x	1.0	T7217315	T6217315	T8217315	D5	2.500	.980	-	.255	.191	.310	2
M7 x	1.0	T7217345	T6217345	T8217345	D5	2.720	1.091	-	.318	.238	.380	2
M8 x	1.25	T7217365	T6217365	T8217365	D5	2.720	1.126	-	.318	.238	.380	2
M8 x	1.0	T7217375	T6217375	T8217375	D5	2.720	1.126	-	.318	.238	.380	2
M10 x	1.5	T7217426	T6217426	T8217426	D6	2.937	1.240	-	.381	.286	.440	3
M10 x	1.25	T7217435	T6217435	T8217435	D5	2.937	1.240	-	.381	.286	.440	3
M12 x	1.75	T7217506	T6217506	T8217506	D6	3.374	1.657	-	.367	.275	.440	3
M12 x	1.25	T7217525	T6217525	T8217525	D5	3.374	1.657	-	.367	.275	.440	3
M14 x	2.0	T7217547	T6217547	T8217547	D7	3.594	1.657	-	.429	.322	.500	3
M14 x	1.5	T7217556	T6217556	T8217556	D6	3.594	1.657	-	.429	.322	.500	3
M16 x	2.0	T7217607	T6217607	T8217607	D7	3.811	1.811	-	.480	.360	.560	3
M16 x	1.5	T7217616	T6217616	T8217616	D6	3.811	1.811	-	.480	.360	.560	3
M18 x	2.5	T7217657	T6217657	T8217657	D7	4.031	1.811	-	.542	.406	.630	3
M20 x	2.5	T7217707	T6217707	T8217707	D7	4.469	2.000	-	.652	.489	.690	3

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

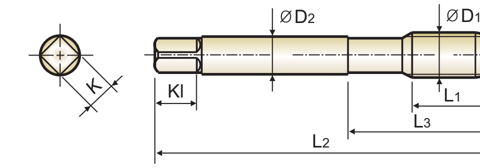
YG TAP GENERAL

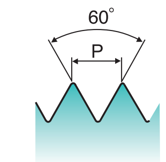
T7226/T6226/T8226 SERIES

SPIRAL POINT PLUG STYLE Oversize Tap

+.005" above the basic pitch diameter

ANSI





Thread Depth / Hole Type

3.0×D

Material groups GS | HSS | UNC UNF | USCTI 302 | 4P~5P | Bright | Steam Oxide | TiN | +.005" oversize

Unit : Inch

Size	TPI	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Bright	Steam Oxide	TiN		L2	L1	L3	D2	K	KL	
#6 -	32UNC	T7226240	T6226240	T8226240	+0.005"	2.000	.689	.965	.141	.110	.190	2
#8 -	32UNC	T7226280	T6226280	T8226280	+0.005"	2.126	.752	1.047	.168	.131	.250	2
#10 -	24UNC	T7226320	T6226320	T8226320	+0.005"	2.374	.906	1.220	.194	.152	.250	2
#10 -	32UNF	T7226340	T6226340	T8226340	+0.005"	2.374	.906	1.220	.194	.152	.250	2
1/4 -	20UNC	T7226400	T6226400	T8226400	+0.005"	2.500	1.000	1.354	.255	.191	.310	2
1/4 -	28UNF	T7226420	T6226420	T8226420	+0.005"	2.500	1.000	1.354	.255	.191	.310	2
5/16 -	18UNC	T7226440	T6226440	T8226440	+0.005"	2.720	1.126	1.500	.318	.238	.380	2
5/16 -	24UNF	T7226460	T6226460	T8226460	+0.005"	2.720	1.126	1.500	.318	.238	.380	2
3/8 -	16UNC	T7226480	T6226480	T8226480	+0.005"	2.937	1.252	1.646	.381	.286	.440	3
3/8 -	24UNF	T7226500	T6226500	T8226500	+0.005"	2.937	1.252	1.646	.381	.286	.440	3
7/16 -	14UNC	T7226520	T6226520	T8226520	+0.005"	3.157	1.437	-	.323	.242	.410	3
7/16 -	20UNF	T7226540	T6226540	T8226540	+0.005"	3.157	1.437	-	.323	.242	.410	3
1/2 -	13UNC	T7226560	T6226560	T8226560	+0.005"	3.374	1.657	-	.367	.275	.440	3
1/2 -	20UNF	T7226580	T6226580	T8226580	+0.005"	3.374	1.657	-	.367	.275	.440	3
5/8 -	11UNC	T7226640	T6226640	T8226640	+0.005"	3.811	1.811	-	.480	.360	.560	3
3/4 -	10UNC	T7226700	T6226700	T8226700	+0.005"	4.252	2.000	-	.590	.442	.690	3

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

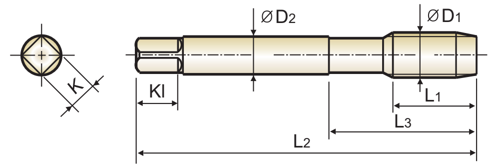
YG TAP GENERAL

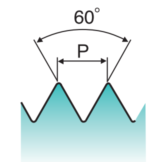
T7B17/T6B17/T8B17 SERIES

SPIRAL POINT PLUG STYLE Oversize Tap

+.127mm above the basic pitch diameter

ANSI





Thread Depth / Hole Type

3.0×D

Material groups: GS | HSS | M/MF | USCTI 302 | 4P~5P | Bright | Steam Oxide | TiN | +.127mm oversize

Unit : Inch

Size			Pitch	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1				Bright	Steam Oxide	TiN		L2	L1	L3	D2	K	KL	
M4	x	0.7		T7B17240	T6B17240	T8B17240	+.127MM	2.126	.756	-	.168	.131	.250	2
M4.5	x	0.75		T7B17260	T6B17260	T8B17260	+.127MM	2.374	.909	-	.194	.152	.250	2
M5	x	0.8		T7B17280	T6B17280	T8B17280	+.127MM	2.374	.933	-	.194	.152	.250	2
M6	x	1.0		T7B17310	T6B17310	T8B17310	+.127MM	2.500	.980	-	.255	.191	.310	2
M7	x	1.0		T7B17340	T6B17340	T8B17340	+.127MM	2.720	1.091	-	.318	.238	.380	2
M8	x	1.25		T7B17360	T6B17360	T8B17360	+.127MM	2.720	1.126	-	.318	.238	.380	2
M8	x	1.0		T7B17370	T6B17370	T8B17370	+.127MM	2.720	1.126	-	.318	.238	.380	2
M10	x	1.5		T7B17420	T6B17420	T8B17420	+.127MM	2.937	1.240	-	.381	.286	.440	3
M10	x	1.25		T7B17430	T6B17430	T8B17430	+.127MM	2.937	1.240	-	.381	.286	.440	3
M12	x	1.75		T7B17500	T6B17500	T8B17500	+.127MM	3.374	1.657	-	.367	.275	.440	3
M16	x	2.0		T7B17600	T6B17600	T8B17600	+.127MM	3.811	1.811	-	.480	.360	.560	3

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

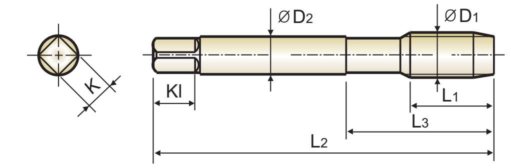
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

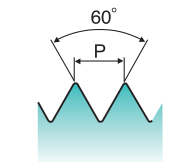
YG TAP GENERAL

T7236/T6236/T8236 SERIES
T7G36/T6G36/T8G36 SERIES

SPIRAL POINT TAP, PULLEY TAPS & 6" EXTENSION

ANSI Pulley Tap (ASME B94.9)





Thread Depth / Hole Type

3.0×D

Material groups: GS | HSS | UNC UNF | USCTI | 4P~5P | Bright | Steam Oxide | TiN

Unit : Inch

Size		TPI	EDP No.			Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Bright	Steam Oxide	TiN		L2	L1	L3	D2	K	KL	
#6	-	32UNC	T7236243	T6236243	T8236243	H3	6.000	.689	.965	.141	.110	.190	2
#8	-	32UNC	T7236283	T6236283	T8236283	H3	6.000	.752	1.047	.168	.131	.250	2
#10	-	24UNC	T7236323	T6236323	T8236323	H3	6.000	.906	1.260	.194	.152	.250	2
#10	-	32UNF	T7236343	T6236343	T8236343	H3	6.000	.906	1.260	.194	.152	.250	2
1/4	-	20UNC	T7236403	T6236403	T8236403	H3	6.000	1.000	1.575	.255	.191	.310	2
1/4	-	28UNF	T7236423	T6236423	T8236423	H3	6.000	1.000	1.575	.255	.191	.310	2
5/16	-	18UNC	T7236443	T6236443	T8236443	H3	6.000	1.126	1.850	.318	.238	.380	2
5/16	-	24UNF	T7236463	T6236463	T8236463	H3	6.000	1.126	1.850	.318	.238	.380	2
3/8	-	16UNC	T7236483	T6236483	T8236483	H3	6.000	1.252	2.028	.381	.286	.440	3
3/8	-	24UNF	T7236503	T6236503	T8236503	H3	6.000	1.252	2.028	.381	.286	.440	3
7/16	-	14UNC	T7236523	T6236523	T8236523	H3	6.000	1.437	2.244	.444	.333	.410	3
7/16	-	20UNF	T7236543	T6236543	T8236543	H3	6.000	1.437	2.244	.444	.333	.410	3
1/2	-	13UNC	T7236563	T6236563	T8236563	H3	6.000	1.657	2.520	.507	.380	.440	3
1/2	-	20UNF	T7236583	T6236583	T8236583	H3	6.000	1.657	2.520	.507	.380	.440	3
5/8	-	11UNC	T7236643	T6236643	T8236643	H3	6.000	1.811	2.776	.633	.475	.560	3
5/16	-	18UNC	T7G36443	T6G36443	T8G36443	H3	6.000	1.126	1.850	.318	.238	.380	3
5/16	-	24UNF	T7G36463	T6G36463	T8G36463	H3	6.000	1.126	1.850	.318	.238	.380	3

▶ 6" EXTENSION (#6~#10)
▶ Pulley Tap (1/4~3/4)

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

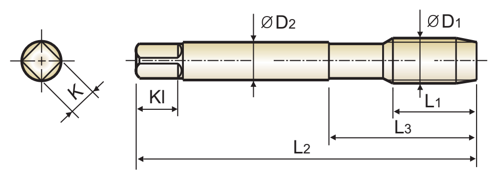
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

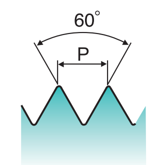
YG TAP GENERAL

T7256/T6256 SERIES

SPIRAL POINT BOTTOMING STYLE for General Purpose

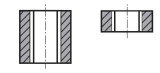
ANSI





Thread Depth / Hole Type

3.0×D



Material groups: GS | HSS | UNC UNF | USCTI 302 | 1.5P~2P | Bright | Steam Oxide

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
#0 -	80UNF	T7256021	T6256021	H1	1.634	.315	.512	.141	.110	.190	2
#0 -	80UNF	T7256022	T6256022	H2	1.634	.315	.512	.141	.110	.190	2
#1 -	64UNC	T7256042	T6256042	H2	1.693	.374	.571	.141	.110	.190	2
#1 -	72UNF	T7256061	T6256061	H1	1.693	.374	.571	.141	.110	.190	2
#1 -	72UNF	T7256062	T6256062	H2	1.693	.374	.571	.141	.110	.190	2
#2 -	56UNC	T7256081	T6256081	H1	1.752	.433	.650	.141	.110	.190	2
#2 -	56UNC	T7256082	T6256082	H2	1.752	.433	.650	.141	.110	.190	2
#3 -	48UNC	T7256122	T6256122	H2	1.811	.492	.728	.141	.110	.190	2
#3 -	56UNF	T7256142	T6256142	H2	1.811	.492	.728	.141	.110	.190	2
#4 -	40UNC	T7256162	T6256162	H2	1.874	.563	.799	.141	.110	.190	2
#4 -	48UNF	T7256182	T6256182	H2	1.874	.563	.799	.141	.110	.190	2
#5 -	40UNC	T7256202	T6256202	H2	1.937	.626	.882	.141	.110	.190	2
#5 -	44UNF	T7256222	T6256222	H2	1.937	.626	.882	.141	.110	.190	2
#6 -	32UNC	T7256242	T6256242	H2	2.000	.689	.965	.141	.110	.190	2
#6 -	32UNC	T7256243	T6256243	H3	2.000	.689	.965	.141	.110	.190	2
#6 -	32UNC	T7256247	T6256247	H7	2.000	.689	.965	.141	.110	.190	2
#6 -	40UNF	T7256262	T6256262	H2	2.000	.689	.965	.141	.110	.190	2
#8 -	32UNC	T7256282	T6256282	H2	2.126	.752	1.047	.168	.131	.250	2
#8 -	32UNC	T7256283	T6256283	H3	2.126	.752	1.047	.168	.131	.250	2
#8 -	32UNC	T7256287	T6256287	H7	2.126	.752	1.047	.168	.131	.250	2
#8 -	36UNF	T7256302	T6256302	H2	2.126	.752	1.047	.168	.131	.250	2
#10 -	24UNC	T7256322	T6256322	H2	2.374	.906	1.220	.194	.152	.250	2
#10 -	24UNC	T7256323	T6256323	H3	2.374	.906	1.220	.194	.152	.250	2
#10 -	32UNF	T7256341	T6256341	H1	2.374	.906	1.220	.194	.152	.250	2
#10 -	32UNF	T7256342	T6256342	H2	2.374	.906	1.220	.194	.152	.250	2
#10 -	32UNF	T7256343	T6256343	H3	2.374	.906	1.220	.194	.152	.250	2

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

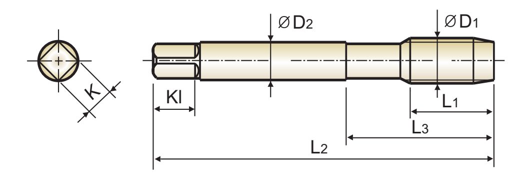
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

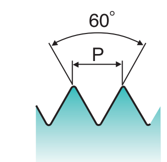
YG TAP GENERAL

T7256/T6256 SERIES

SPIRAL POINT BOTTOMING STYLE for General Purpose

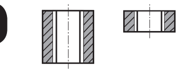
ANSI





Thread Depth / Hole Type

3.0×D



Material groups: GS | HSS | UNC UNF | USCTI 302 | 1.5P~2P | Bright | Steam Oxide

Unit : Inch

Size D1	TPI	EDP No. Bright	EDP No. TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
#12 -	24UNC	T7256363	T6256363	H3	2.374	.906	1.220	.220	.165	.280	2
#12 -	28UNF	T7256383	T6256383	H3	2.374	.906	1.220	.220	.165	.280	2
1/4 -	20UNC	T7256403	T6256403	H3	2.500	1.000	1.354	.255	.191	.310	2
1/4 -	28UNF	T7256422	T6256422	H2	2.500	1.000	1.354	.255	.191	.310	2
1/4 -	28UNF	T7256423	T6256423	H3	2.500	1.000	1.354	.255	.191	.310	2
5/16 -	18UNC	T7256443	T6256443	H3	2.720	1.126	1.500	.318	.238	.380	2
5/16 -	24UNF	T7256463	T6256463	H3	2.720	1.126	1.500	.318	.238	.380	2
3/8 -	16UNC	T7256483	T6256483	H3	2.937	1.252	1.646	.381	.286	.440	3
3/8 -	24UNF	T7256503	T6256503	H3	2.937	1.252	1.646	.381	.286	.440	3
7/16 -	14UNC	T7256523	T6256523	H3	3.157	1.437	-	.323	.242	.410	3
7/16 -	20UNF	T7256543	T6256543	H3	3.157	1.437	-	.323	.242	.410	3
1/2 -	13UNC	T7256563	T6256563	H3	3.374	1.657	-	.367	.275	.440	3
1/2 -	20UNF	T7256583	T6256583	H3	3.374	1.657	-	.367	.275	.440	3
5/8 -	11UNC	T7256643	T6256643	H3	3.811	1.811	-	.480	.360	.560	3
5/8 -	18UNF	T7256663	T6256663	H3	3.811	1.811	-	.480	.360	.560	3
3/4 -	10UNC	T7256703	T6256703	H3	4.252	2.000	-	.590	.442	.690	3
3/4 -	16UNF	T7256723	T6256723	H3	4.252	2.000	-	.590	.442	.690	3

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○				○	○				○	○		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○	○		○	○														

Global Cutting Tool Leader YG-1

THREADING

Being the best through innovation

HSS-PM, HSS-E & HSS

YG TAP FORMING

- For Forming Ductile Materials

SELECTION GUIDE

YG THREADING TOOLS

HSS-PM, HSS-E & HSS YG TAP FORMING

- For Forming Ductile Materials

Please visit globalyg1.com/mat for material search

HOLE TYPE	Max. 3.0xD Blind /Through Hole		
TOOL MATERIAL	HSS-PM	HSS-E	
CHAMFER LEAD ACC. TO DIN2197	2P-3P		4P-5P
FLUTE TYPE	-	-	-
SPIRAL FLUTE ANGLE			
SERIES UNC/UNF	TKR03 (p.B266)	ZF (p.B268)	Z0 (p.B269)
SURFACE TREATMENT / COATING	TiCN	Bright	Bright
MODEL			

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	TKR03	ZF	Z0
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎ 50-80	◎ 25-50	◎ 25-50
P	2	Non-alloy steel	About 0.45% C	Annealed	190	13	◎ 50-80	◎ 25-50	◎ 25-50
P	3	Non-alloy steel	About 0.45% C	Quenched & Tempered	250	25	◎ 50-80		◎ 25-50
P	4	Non-alloy steel	About 0.75% C	Annealed	270	28			
P	5	Non-alloy steel	About 0.75% C	Quenched & Tempered	300	32	◎ 10-35		◎ 6-30
P	6	Low alloy steel		Annealed	180	10			
P	7	Low alloy steel		Quenched & Tempered	275	29			
P	8	Low alloy steel		Quenched & Tempered	300	32			
P	9	Low alloy steel		Quenched & Tempered	350	38			
P	10	High alloyed steel, and tool steel		Annealed	200	15			
P	11	High alloyed steel, and tool steel		Quenched & Tempered	325	35			
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎ 20-50	◎ 12-35	◎ 12-35
M	13	Stainless steel	Martensitic	Quenched & Tempered	240	23	◎ 20-50	◎ 12-35	◎ 12-35
M	14	Stainless steel	Austenitic		180	10	○ 12-15	○ 12-15	○ 12-15
K	15	Grey cast iron	Pearlitic / ferritic		180	10			
K	16	Grey cast iron	Pearlitic (Martensitic)		260	26			
K	17	Nodular cast iron	Ferritic		160	3			
K	18	Nodular cast iron	Pearlitic		250	25			
K	19	Malleable cast iron	Ferritic		130				
K	20	Malleable cast iron	Pearlitic		230	21			
N	21	Aluminum-wrought alloy	Not Curable		60		◎ 50-65	◎ 50-65	◎ 50-65
N	22	Aluminum-wrought alloy	Curable	Hardened	100		◎ 50-65	◎ 50-65	◎ 50-65
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○ 45-90	○ 40-65	○ 40-65
N	24	Aluminum-cast, alloyed	≤ 12% Si, Curable	Hardened	90		○ 45-90	○ 40-65	○ 40-65
N	25	Aluminum-cast, alloyed	> 12% Si, Not Curable		130				
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		◎ 30-65		◎ 30-65
N	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90		◎ 30-65		◎ 30-65
N	28	Copper and Copper Alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper		100				
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic						
N	30	Non Metallic Materials	Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15			
S	32	Heat Resistant Super Alloys	Fe Based	Cured	280	30			
S	33	Heat Resistant Super Alloys	Ni or Co Based	Annealed	250	25			
S	34	Heat Resistant Super Alloys	Ni or Co Based	Cured	350	38			
S	35	Heat Resistant Super Alloys	Ni or Co Based	Cast	320	34			
S	36	Titanium Alloys	Pure Titanium		400 Rm				
S	37	Titanium Alloys	Alpha + Beta Alloys	Hardened	1050 Rm				
H	38	Hardened steel		Hardened	550	55			
H	39	Hardened steel		Hardened	630	60			
H	40	Chilled Cast Iron		Cast	400	42			
H	41	Hardened Cast Iron		Hardened	550	55			

HOLE TYPE	Max. 3.0xD Blind /Through Hole							
TOOL MATERIAL	HSS-E							
CHAMFER LEAD	4P-5P	1.5P-2P		4P-5P		1.5P-2P		4P-5P
FLUTE TYPE	-	-		-		-		-
SERIES M								Z8 (p.B274)
SERIES UNC/UNF	Z1 (p.B269)	Z2 (p.B269)	Z3 (p.B269)	Z4 (p.B272)	Z5 (p.B272)	Z6 (p.B272)	Z7 (p.B272)	
SURFACE TREATMENT / COATING	TiN	Bright	TiN	Bright	TiN	Bright	TiN	Bright

Series: M, MF, UNC, UNC/UNF, UNC/UNF/UNS, UNC/UN8, NPT, NPTF, NPS/NPSF

ISO	VDI 3323	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8
P	1	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50
P	2	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50
P	3	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50
P	4								
P	5	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30
P	6								
P	7								
P	8								
P	9								
P	10								
P	11								
M	12	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35
M	13	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35
M	14	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15
K	15								
K	16								
K	17								
K	18								
K	19								
K	20								
N	21	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65
N	22	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65
N	23	○ 45-90	○ 40-65	○ 45-90	○ 40-65	○ 45-90	○ 40-65	○ 45-90	○ 40-65
N	24	○ 45-90	○ 40-65	○ 45-90	○ 40-65	○ 45-90	○ 40-65	○ 45-90	○ 40-65
N	25								
N	26	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	27	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
N	28								
N	29								
N	30								
S	31								
S	32								
S	33								
S	34								
S	35								
S	36								
S	37								
H	38								
H	39								
H	40								
H	41								

SELECTION GUIDE

YG THREADING TOOLS

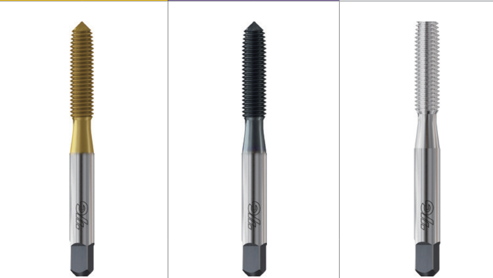
HSS-PM, HSS-E & HSS YG TAP FORMING

- For Forming Ductile Materials

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

							ZA	ZC	Z9	ZB	ZD	T7R01	T8R01	THR01	T7R02	T8R02	THR02
HOLE TYPE							Max. 3.0xD Blind /Through Hole										
TOOL MATERIAL							HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS	HSS	HSS	HSS	HSS	HSS
CHAMFER LEAD ACC. TO DIN2197							4P-5P	4P-5P	1.5P-2P	1.5P-2P	1.5P-2P	4P-5P	4P-5P	4P-5P	1.5P-2P	1.5P-2P	1.5P-2P
FLUTE TYPE							-	-	-	-	-	-	-	-	-	-	-
SPIRAL FLUTE ANGLE																	
SERIES	M						ZA (p.B274)	ZC (p.B274)	Z9 (p.B274)	ZB (p.B274)	ZD (p.B274)						
	M/MF																
	UNC																
	UNC/UNF											T7R01 (p.B275)	T8R01 (p.B275)	THR01 (p.B275)	T7R02 (p.B276)	T8R02 (p.B276)	THR02 (p.B276)
	UNC/UNF/UNS																
	UNC/UN8																
	NPT																
	NPTF																
	NPS/NPSF																
SURFACE TREATMENT / COATING							TiN	TiCN	Bright	TiN	TiCN	Bright	TiN	TiCN	Bright	TiN	TiCN
MODEL																	
ISO	VDI 3323	Material Description	Composition / Structure	Heat Treatment	HB	HRC											
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
	2		About 0.45% C	Annealed	190	13	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
	3		About 0.45% C	Quenched & Tempered	250	25	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80
	4		About 0.75% C	Annealed	270	28											
	5		About 0.75% C	Quenched & Tempered	300	32	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35
	6	Low alloy steel		Annealed	180	10											
	7			Quenched & Tempered	275	29											
	8			Quenched & Tempered	300	32											
	9			Quenched & Tempered	350	38											
	10	High alloyed steel, and tool steel		Annealed	200	15											
	11			Quenched & Tempered	325	35											
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50
	13		Martensitic	Quenched & Tempered	240	23	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50
	14		Austenitic		180	10	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15	○ 12-15
K	15	Grey cast iron	Pearlitic / ferritic		180	10											
	16		Pearlitic (Martensitic)		260	26											
	17	Nodular cast iron	Ferritic		160	3											
	18		Pearlitic		250	25											
	19	Malleable cast iron	Ferritic		130												
	20		Pearlitic		230	21											
N	21	Aluminum-wrought alloy	Not Curable		60		◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65
	22		Curable	Hardened	100		◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65	◎ 50-65
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90
	24		≤ 12% Si, Curable	Hardened	90		○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90	○ 40-65	○ 45-90	○ 45-90
	25		> 12% Si, Not Curable		130												
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
	27		CuZn, CuSnZn (Brass)		90		◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65	◎ 30-65
	28		CuSn, lead-free copper and electrolytic copper		100												
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic														
	30		Rubber, Wood, etc.														
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15											
	32			Cured	280	30											
	33		Ni or Co Based	Annealed	250	25											
	34			Cured	350	38											
	35			Cast	320	34											
	36	Titanium Alloys	Pure Titanium		400 Rm												
	37		Alpha + Beta Alloys	Hardened	1050 Rm												
H	38	Hardened steel		Hardened	550	55											
	39			Hardened	630	60											
	40	Chilled Cast Iron		Cast	400	42											
	41	Hardened Cast Iron		Hardened	550	55											

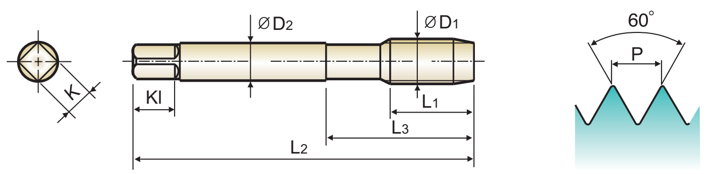



YG TAP FORMING

TKR03 SERIES

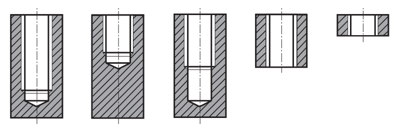
FORMING TAPS MODIFIED BOTTOMING STYLE

ANSI



Material groups GV | HSS-PM | UNC UNF | USCTI 302A | 2P~3P | TiCN

Thread Depth / Hole Type 3.0×D



Unit : Inch

Size D1		TPI	EDP No. Class of fit 2B (TiCN)	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Lobes
#4	-	40UNC	**TKR03163**	H3	1.874	.563	.799	.141	.110	.190	4
#4	-	40UNC	**TKR03165**	H5	1.937	.626	.882	.141	.110	.190	4
#5	-	40UNC	**TKR03203**	H3	2.000	.480	.689	.168	.110	.190	4
#5	-	40UNC	**TKR03205**	H5	2.126	.500	.752	.168	.131	.250	4
#6	-	32UNC	**TKR03243**	H3	2.374	.630	.906	.194	.152	.250	4
#6	-	32UNC	**TKR03245**	H5	2.374	.630	.906	.194	.152	.250	4
#8	-	32UNC	**TKR03283**	H3	2.500	.858	1.000	.255	.191	.310	4
#8	-	32UNC	**TKR03285**	H5	2.500	.858	1.000	.255	.191	.310	4
#10	-	24UNC	**TKR03324**	H4	2.720	.929	1.126	.318	.238	.380	4
#10	-	24UNC	**TKR03326**	H6	2.720	.929	1.126	.318	.238	.380	4
#10	-	32UNF	**TKR03344**	H4	2.937	.980	1.252	.381	.286	.440	4
#10	-	32UNF	**TKR03346**	H6	2.937	.980	1.252	.381	.286	.440	4
1/4	-	20UNC	**TKR03404**	H4	1.874	.563	.799	.141	.110	.190	4
1/4	-	20UNC	**TKR03406**	H6	1.937	.626	.882	.141	.110	.190	4
1/4	-	28UNF	**TKR03424**	H4	2.000	.480	.689	.168	.110	.190	4
1/4	-	28UNF	**TKR03426**	H6	2.126	.500	.752	.168	.131	.250	4
5/16	-	18UNC	**TKR03445**	H5	2.374	.630	.906	.194	.152	.250	4
5/16	-	18UNC	**TKR03447**	H7	2.374	.630	.906	.194	.152	.250	4
5/16	-	24UNF	**TKR03465**	H5	2.500	.858	1.000	.255	.191	.310	4
5/16	-	24UNF	**TKR03467**	H7	2.500	.858	1.000	.255	.191	.310	4
3/8	-	16UNC	**TKR03485**	H5	2.720	.929	1.126	.318	.238	.380	4
3/8	-	16UNC	**TKR03487**	H7	2.720	.929	1.126	.318	.238	.380	4
3/8	-	24UNF	**TKR03505**	H5	2.937	.980	1.252	.381	.286	.440	4
3/8	-	24UNF	**TKR03507**	H7	2.937	.980	1.252	.381	.286	.440	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎		◎							◎	◎	○						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	○	○		◎	◎														

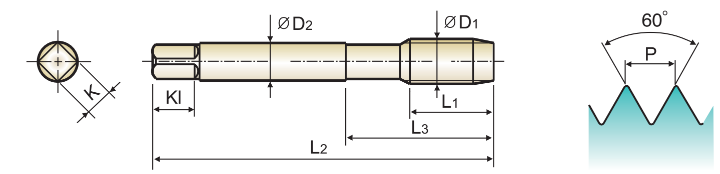
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TAP FORMING

ZF SERIES

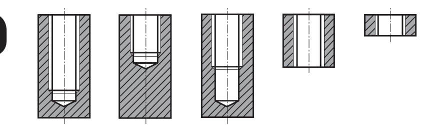
MINIATURE FORMING TAPS MODIFIED BOTTOMING STYLE

ANSI



Material groups GV | HSS-E | UNC UNF | USCTI 302A | 2P~3P | Bright

Thread Depth / Hole Type 3.0×D



Unit : Inch

Size D1		TPI	EDP No. Bright	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Lobes
#00	-	90UNC	**ZFM52**	H2	1.634	.250	-	.141	.110	.190	4
#00	-	90UNC	**ZFM53**	H3	1.634	.250	-	.141	.110	.190	4
#00	-	96UNF	**ZFM82**	H2	1.634	.250	-	.141	.110	.190	4
#00	-	96UNF	**ZFM83**	H3	1.634	.250	-	.141	.110	.190	4
#0	-	80UNF	**ZF022**	H2	1.634	.315	-	.141	.110	.190	4
#0	-	80UNF	**ZF023**	H3	1.634	.315	-	.141	.110	.190	4
#0	-	80UNF	**ZF024**	H4	1.634	.315	-	.141	.110	.190	4
#1	-	64UNC	**ZF042**	H2	1.693	.374	-	.141	.110	.190	4
#1	-	64UNC	**ZF043**	H3	1.693	.374	-	.141	.110	.190	4
#1	-	64UNC	**ZF044**	H4	1.693	.374	-	.141	.110	.190	4
#1	-	72UNF	**ZF062**	H2	1.693	.374	-	.141	.110	.190	4
#1	-	72UNF	**ZF063**	H3	1.693	.374	-	.141	.110	.190	4
#1	-	72UNF	**ZF064**	H4	1.693	.374	-	.141	.110	.190	4
#2	-	56UNC	**ZF082**	H2	1.752	.433	-	.141	.110	.190	4
#2	-	56UNC	**ZF083**	H3	1.752	.433	-	.141	.110	.190	4
#2	-	56UNC	**ZF084**	H4	1.752	.433	-	.141	.110	.190	4
#2	-	64UNF	**ZF102**	H2	1.752	.433	-	.141	.110	.190	4
#2	-	64UNF	**ZF103**	H3	1.752	.433	-	.141	.110	.190	4
#2	-	64UNF	**ZF104**	H4	1.752	.433	-	.141	.110	.190	4
#3	-	48UNC	**ZF122**	H2	1.811	.492	-	.141	.110	.190	4
#3	-	48UNC	**ZF123**	H3	1.811	.492	-	.141	.110	.190	4
#3	-	48UNC	**ZF124**	H4	1.811	.492	-	.141	.110	.190	4
#3	-	48UNC	**ZF125**	H5	1.811	.492	-	.141	.110	.190	4
#3	-	56UNF	**ZF142**	H2	1.811	.492	-	.141	.110	.190	4
#3	-	56UNF	**ZF143**	H3	1.811	.492	-	.141	.110	.190	4
#3	-	56UNF	**ZF144**	H4	1.811	.492	-	.141	.110	.190	4
#3	-	56UNF	**ZF145**	H5	1.811	.492	-	.141	.110	.190	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎										◎	◎	○						

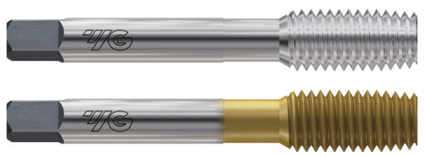
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	○	○																	

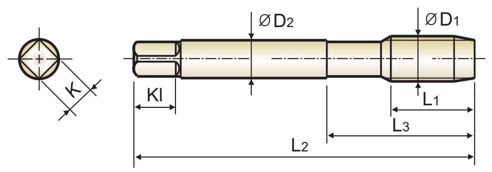
YG TAP FORMING

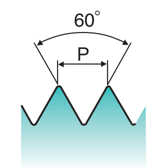
Z0/Z1/Z2/Z3 SERIES

FORMING TAPS PLUG & BOTTOMING STYLE

ANSI





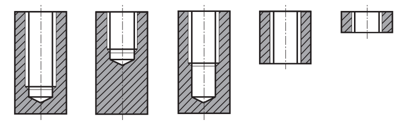


A variety of H Limit

Material groups GV | HSS-E | UNC UNF | USCTI 302A | 4P~5P Plug | 1.5P~2P Bottoming | Bright | TiN

Thread Depth / Hole Type

3.0×D



Unit : Inch

Size D1	TPI	EDP No. Plug Bright	EDP No. Plug TiN	EDP No. Bottom Bright	EDP No. Bottom TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Lobes
#0	80UNF	-	-	Z2022	Z3022	H2	1.634	.315	.512	.141	.110	.190	4
#0	80UNF	-	-	Z2023	Z3023	H3	1.634	.315	.512	.141	.110	.190	4
#1	64UNC	-	-	Z2042	Z3042	H2	1.693	.374	.571	.141	.110	.190	4
#1	72UNF	-	-	Z2062	Z3062	H2	1.693	.374	.571	.141	.110	.190	4
#1	72UNF	-	-	Z2063	Z3063	H3	1.693	.374	.571	.141	.110	.190	4
#2	56UNC	-	-	Z2082	Z3082	H2	1.752	.433	.650	.141	.110	.190	4
#2	56UNC	-	-	Z2083	Z3083	H3	1.752	.433	.650	.141	.110	.190	4
#2	64UNF	-	-	Z2102	Z3102	H2	1.752	.433	.650	.141	.110	.190	4
#3	48UNC	-	-	Z2122	Z3122	H2	1.811	.492	.728	.141	.110	.190	4
#3	48UNC	-	-	Z2123	Z3123	H3	1.811	.492	.728	.141	.110	.190	4
#3	56UNF	-	-	Z2143	Z3143	H3	1.811	.492	.728	.141	.110	.190	4
#4	40UNC	Z0163	Z1163	Z2163	Z3163	H3	1.874	.563	.799	.141	.110	.190	4
#4	40UNC	Z0165	Z1165	Z2165	Z3165	H5	1.874	.563	.799	.141	.110	.190	4
#4	48UNF	Z0183	Z1183	Z2183	Z3183	H3	1.874	.563	.799	.141	.110	.190	4
#4	48UNF	Z0185	Z1185	Z2185	Z3185	H5	1.874	.563	.799	.141	.110	.190	4
#5	40UNC	Z0203	Z1203	Z2203	Z3203	H3	1.937	.626	.882	.141	.110	.190	4
#5	40UNC	Z0205	Z1205	Z2205	Z3205	H5	1.937	.626	.882	.141	.110	.190	4
#5	44UNF	Z0225	Z1225	Z2225	Z3225	H5	1.937	.626	.882	.141	.110	.190	4
#6	32UNC	Z0243	Z1243	Z2243	Z3243	H3	2.000	.480	.689	.141	.110	.190	4
#6	32UNC	Z0245	Z1245	Z2245	Z3245	H5	2.000	.480	.689	.141	.110	.190	4
#6	40UNF	Z0263	Z1263	Z2263	Z3263	H3	2.000	.480	.689	.141	.110	.190	4
#6	40UNF	Z0265	Z1265	Z2265	Z3265	H5	2.000	.480	.689	.141	.110	.190	4
#8	32UNC	Z0283	Z1283	Z2283	Z3283	H3	2.126	.500	.752	.168	.131	.250	4
#8	32UNC	Z0285	Z1285	Z2285	Z3285	H5	2.126	.500	.752	.168	.131	.250	4

▶ Hardslck coating is available on your request (Bright Finish EDP No + H)

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎		◎							◎	◎	○						

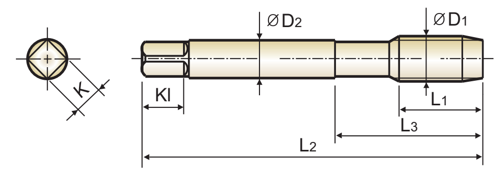
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	○	○		◎	◎														

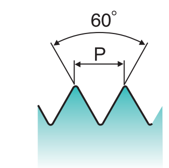
YG TAP FORMING

Z0/Z1/Z2/Z3 SERIES

FORMING TAPS PLUG & BOTTOMING STYLE

ANSI



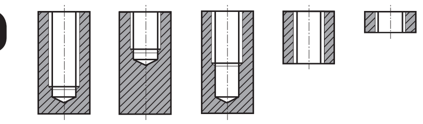


A variety of H Limit

Material groups GV | HSS-E | UNC UNF | USCTI 302A | 4P~5P Plug | 1.5P~2P Bottoming | Bright | TiN

Thread Depth / Hole Type

3.0×D



Unit : Inch

Size D1	TPI	EDP No. Plug Bright	EDP No. Plug TiN	EDP No. Bottom Bright	EDP No. Bottom TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Lobes
#8	36UNF	Z0303	Z1303	Z2303	Z3303	H3	2.126	.500	.752	.168	.131	.250	4
#8	36UNF	Z0305	Z1305	Z2305	Z3305	H5	2.126	.500	.752	.168	.131	.250	4
#10	24UNC	Z0324	Z1324	Z2324	Z3324	H4	2.374	.630	.906	.194	.152	.250	4
#10	24UNC	Z0326	Z1326	Z2326	Z3326	H6	2.374	.630	.906	.194	.152	.250	4
#10	32UNF	Z0344	Z1344	Z2344	Z3344	H4	2.374	.630	.906	.194	.152	.250	4
#10	32UNF	Z0346	Z1346	Z2346	Z3346	H6	2.374	.630	.906	.194	.152	.250	4
#12	24UNC	Z0364	Z1364	Z2364	Z3364	H4	2.374	.630	.906	.220	.165	.280	4
#12	24UNC	Z0366	Z1366	Z2366	Z3366	H6	2.374	.630	.906	.220	.165	.280	4
1/4	20UNC	Z0404	Z1404	Z2404	Z3404	H4	2.500	.858	1.000	.255	.191	.310	4
1/4	20UNC	Z0406	Z1406	Z2406	Z3406	H6	2.500	.858	1.000	.255	.191	.310	4
1/4	28UNF	Z0424	Z1424	Z2424	Z3424	H4	2.500	.858	1.000	.255	.191	.310	4
1/4	28UNF	Z0426	Z1426	Z2426	Z3426	H6	2.720	.858	1.000	.255	.191	.310	4
5/16	18UNC	Z0445	Z1445	Z2445	Z3445	H5	2.720	.929	1.126	.318	.238	.380	4
5/16	18UNC	Z0447	Z1447	Z2447	Z3447	H7	2.720	.929	1.126	.318	.238	.380	4
5/16	24UNF	Z0465	Z1465	Z2465	Z3465	H5	2.720	.929	1.126	.318	.238	.380	4
5/16	24UNF	Z0467	Z1467	Z2467	Z3467	H7	2.937	.929	1.126	.318	.238	.380	4
3/8	16UNC	Z0485	Z1485	Z2485	Z3485	H5	2.937	.980	1.252	.381	.286	.440	4
3/8	16UNC	Z0487	Z1487	Z2487	Z3487	H7	2.937	.980	1.252	.381	.286	.440	4
3/8	24UNF	Z0505	Z1505	Z2505	Z3505	H5	2.937	.980	1.252	.381	.286	.440	4
3/8	24UNF	Z0507	Z1507	Z2507	Z3507	H7	2.937	.980	1.252	.381	.286	.440	4
7/16	14UNC	Z0528	Z1528	Z2528	Z3528	H8	3.157	.949	1.437	.323	.242	.410	4
7/16	20UNF	Z0548	Z1548	Z2548	Z3548	H8	3.157	.949	1.437	.323	.242	.410	4
1/2	13UNC	Z0565	Z1565	Z2565	Z3565	H5	3.374	1.000	1.594	.367	.275	.440	4
1/2	13UNC	Z0568	Z1568	Z2568	Z3568	H8	3.374	1.000	1.594	.367	.275	.440	4

▶ Hardslck coating is available on your request (Bright Finish EDP No + H)

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎		◎							◎	◎	○						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	○	○		◎	◎														

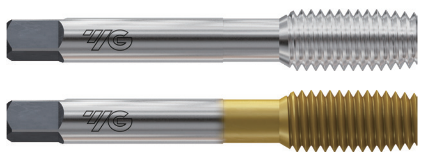
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

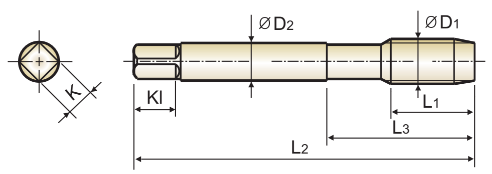
YG TAP FORMING

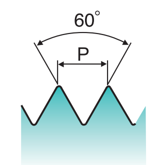
Z0/Z1/Z2/Z3 SERIES

FORMING TAPS PLUG & BOTTOMING STYLE

ANSI



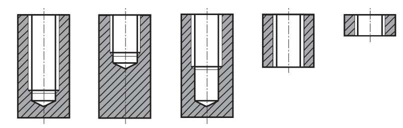




A variety of H Limit

Material groups: GV | HSS-E | UNC UNF | USCTI 302A | 4P~5P Plug | 1.5P~2P Bottoming | Bright | TiN

Thread Depth / Hole Type: 3.0×D



Unit : Inch

Size D1	TPI	EDP No. Plug Bright	Plug TiN	Bottom Bright	Bottom TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Lobes
1/2	- 20UNF	Z0585	Z1585	Z2585	Z3585	H5	3.374	1.000	1.594	.367	.275	.440	4
1/2	- 20UNC	Z0588	Z1588	Z2588	Z3588	H8	3.374	1.000	1.594	.367	.275	.440	4
9/16	- 12UNC	Z0607	Z1607	Z2607	Z3607	H7	3.594	1.000	1.657	.429	.322	.500	4
9/16	- 12UNC	Z0600	Z1600	Z2600	Z3600	H10	3.594	1.000	1.657	.429	.322	.500	4
9/16	- 18UNF	Z0628	Z1628	Z2628	Z3628	H8	3.594	1.000	1.657	.429	.322	.500	4
9/16	- 18UNF	Z0620	Z1620	Z2620	Z3620	H10	3.594	1.000	1.657	.429	.322	.500	4
5/8	- 11UNC	Z0648	Z1648	Z2648	Z3648	H8	3.811	1.000	1.811	.480	.360	.560	4
5/8	- 11UNC	Z0640	Z1640	Z2640	Z3640	H10	3.811	1.000	1.811	.480	.360	.560	4
5/8	- 18UNF	Z0660	Z1660	Z2660	Z3660	H10	3.811	1.000	1.811	.480	.360	.560	4
3/4	- 10UNC	Z0700	Z1700	Z2700	Z3700	H10	4.252	1.000	2.000	.590	.442	.690	4
3/4	- 10UNC	Z070B	Z170B	Z270B	Z370B	H12	4.252	1.000	2.000	.590	.442	.690	4
3/4	- 16UNF	Z0728	Z1728	Z2728	Z3728	H8	4.252	1.000	2.000	.590	.442	.690	4
3/4	- 16UNF	Z0720	Z1720	Z2720	Z3720	H10	4.252	1.000	2.000	.590	.442	.690	4

▶ Hardslck coating is available on your request (Bright Finish EDP No + H)

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎		◎							◎	◎	○						

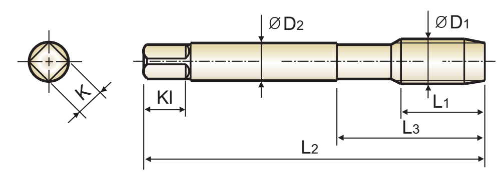
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	○	○		◎	◎														

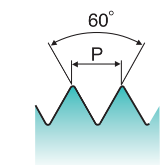
YG TAP FORMING

Z4/Z5/Z6/Z7 SERIES

FORMING TAPS WITH OIL GROOVE PLUG & BOTTOMING STYLE

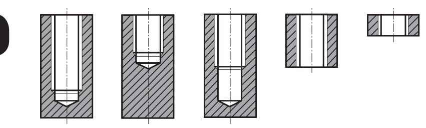
ANSI





Material groups: GV | HSS-E | UNC UNF | USCTI 302A | 4P~5P Plug | 1.5P~2P Bottoming | Bright | TiN

Thread Depth / Hole Type: 3.0×D



Unit : Inch

Size D1	TPI	EDP No. Plug Bright	Plug TiN	Bottom Bright	Bottom TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Lobes
#4	- 40UNC	Z4163	Z5163	Z6163	Z7163	H3	1.874	.563	.799	.141	.110	.190	4
#4	- 40UNC	Z4165	Z5165	Z6165	Z7165	H5	1.874	.563	.799	.141	.110	.190	4
#4	- 48UNF	Z4183	Z5183	Z6183	Z7183	H3	1.874	.563	.799	.141	.110	.190	4
#4	- 48UNF	Z4185	Z5185	Z6185	Z7185	H5	1.874	.563	.799	.141	.110	.190	4
#5	- 40UNC	Z4203	Z5203	Z6203	Z7203	H3	1.937	.626	.882	.141	.110	.190	4
#5	- 40UNC	Z4205	Z5205	Z6205	Z7205	H5	1.937	.626	.882	.141	.110	.190	4
#5	- 44UNF	Z4225	Z5225	Z6225	Z7225	H5	1.937	.626	.882	.141	.110	.190	4
#6	- 32UNC	Z4243	Z5243	Z6243	Z7243	H3	2.000	.480	.689	.141	.110	.190	4
#6	- 32UNC	Z4245	Z5245	Z6245	Z7245	H5	2.000	.480	.689	.141	.110	.190	4
#6	- 40UNF	Z4263	Z5263	Z6263	Z7263	H3	2.000	.480	.689	.141	.110	.190	4
#6	- 40UNF	Z4265	Z5265	Z6265	Z7265	H5	2.000	.480	.689	.141	.110	.190	4
#8	- 32UNC	Z4283	Z5283	Z6283	Z7283	H3	2.126	.500	.752	.168	.131	.250	4
#8	- 32UNC	Z4285	Z5285	Z6285	Z7285	H5	2.126	.500	.752	.168	.131	.250	4
#8	- 36UNF	Z4303	Z5303	Z6303	Z7303	H3	2.126	.500	.752	.168	.131	.250	4
#8	- 36UNF	Z4305	Z5305	Z6305	Z7305	H5	2.126	.500	.752	.168	.131	.250	4
#10	- 24UNC	Z4324	Z5324	Z6324	Z7324	H4	2.374	.630	.906	.194	.152	.250	4
#10	- 24UNC	Z4326	Z5326	Z6326	Z7326	H6	2.374	.630	.906	.194	.152	.250	4
#10	- 32UNF	Z4344	Z5344	Z6344	Z7344	H4	2.374	.630	.906	.194	.152	.250	4
#10	- 32UNF	Z4346	Z5346	Z6346	Z7346	H6	2.374	.630	.906	.194	.152	.250	4
#12	- 24UNC	Z4364	Z5364	Z6364	Z7364	H4	2.374	.630	.906	.220	.165	.280	4
#12	- 24UNC	Z4366	Z5366	Z6366	Z7366	H6	2.374	.630	.906	.220	.165	.280	4
1/4	- 20UNC	Z4404	Z5404	Z6404	Z7404	H4	2.500	.858	1.000	.255	.191	.310	4
1/4	- 20UNC	Z4406	Z5406	Z6406	Z7406	H6	2.500	.858	1.000	.255	.191	.310	4
1/4	- 28UNF	Z4424	Z5424	Z6424	Z7424	H4	2.500	.858	1.000	.255	.191	.310	4
1/4	- 28UNF	Z4426	Z5426	Z6426	Z7426	H6	2.720	.858	1.000	.255	.191	.310	4
5/16	- 18UNC	Z4445	Z5445	Z6445	Z7445	H5	2.720	.929	1.126	.318	.238	.380	4

▶ NEXT PAGE

▶ Hardslck coating is available on your request (Bright Finish EDP No + H)

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎		◎							◎	◎	○						

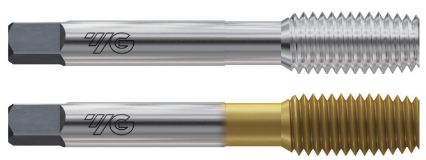
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	○	○		◎	◎														

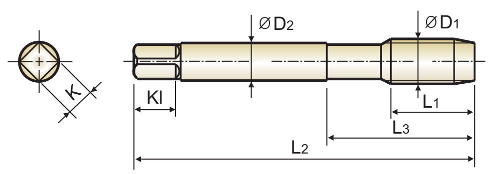
YG TAP FORMING

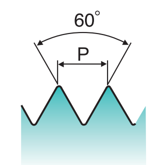
Z4/Z5/Z6/Z7 SERIES

FORMING TAPS WITH OIL GROOVE PLUG & BOTTOMING STYLE

ANSI

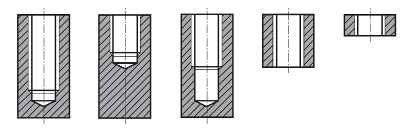






Thread Depth / Hole Type

3.0×D



Material groups: GV | HSS-E | UNC UNF | USCTI 302A | 4P~5P Plug | 1.5P~2P Bottoming | Bright | TiN

Size D1	TPI	EDP No. Plug Bright	EDP No. Plug TiN	EDP No. Bottom Bright	EDP No. Bottom TiN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Lobes
5/16	- 18UNC	Z4447	Z5447	Z6447	Z7447	H7	2.720	.929	1.126	.318	.238	.380	4
5/16	- 24UNF	Z4465	Z5465	Z6465	Z7465	H5	2.720	.929	1.126	.318	.238	.380	4
5/16	- 24UNF	Z4467	Z5467	Z6467	Z7467	H7	2.937	.929	1.126	.318	.238	.380	4
3/8	- 16UNC	Z4485	Z5485	Z6485	Z7485	H5	2.937	.980	1.252	.3810	.286	.440	4
3/8	- 16UNC	Z4487	Z5487	Z6487	Z7487	H7	2.937	.980	1.252	.3810	.286	.440	4
3/8	- 24UNF	Z4505	Z5505	Z6505	Z7505	H5	2.937	.980	1.252	.3810	.286	.440	4
3/8	- 24UNF	Z4507	Z5507	Z6507	Z7507	H7	2.937	.980	1.252	.3810	.286	.440	4
7/16	- 14UNC	Z4528	Z5528	Z6528	Z7528	H8	3.157	.949	1.437	.323	.242	.410	4
7/16	- 20UNF	Z4548	Z5548	Z6548	Z7548	H8	3.157	.949	1.437	.323	.242	.410	4
1/2	- 13UNC	Z4565	Z5565	Z6565	Z7565	H5	3.374	1.000	1.594	.367	.275	.440	4
1/2	- 13UNC	Z4568	Z5568	Z6568	Z7568	H8	3.374	1.000	1.594	.367	.275	.440	4
1/2	- 20UNF	Z4585	Z5585	Z6585	Z7585	H5	3.374	1.000	1.594	.367	.275	.440	4
1/2	- 20UNC	Z4588	Z5588	Z6588	Z7588	H8	3.374	1.000	1.594	.367	.275	.440	4
9/16	- 12UNC	Z4607	Z5607	Z6607	Z7607	H7	3.594	1.000	1.657	.429	.322	.500	4
9/16	- 12UNC	Z4600	Z5600	Z6600	Z7600	H10	3.594	1.000	1.657	.429	.322	.500	4
9/16	- 18UNF	Z4628	Z5628	Z6628	Z7628	H8	3.594	1.000	1.657	.429	.322	.500	4
9/16	- 18UNF	Z4620	Z5620	Z6620	Z7620	H10	3.594	1.000	1.657	.429	.322	.500	4
5/8	- 11UNC	Z4648	Z5648	Z6648	Z7648	H8	3.811	1.000	1.811	.480	.360	.560	4
5/8	- 11UNC	Z4640	Z5640	Z6640	Z7640	H10	3.811	1.000	1.811	.480	.360	.560	4
5/8	- 18UNF	Z4660	Z5660	Z6660	Z7660	H10	3.811	1.000	1.811	.480	.360	.560	4
3/4	- 10UNC	Z4700	Z5700	Z6700	Z7700	H10	4.252	1.000	2.000	.590	.442	.690	4
3/4	- 10UNC	Z470B	Z570B	Z670B	Z770B	H12	4.252	1.000	2.000	.590	.442	.690	4
3/4	- 16UNF	Z4728	Z5728	Z6728	Z7728	H8	4.252	1.000	2.000	.590	.442	.690	4
3/4	- 16UNF	Z4720	Z5720	Z6720	Z7720	H10	4.252	1.000	2.000	.590	.442	.690	4

▶Hardslck coating is available on your request (Bright Finish EDP No + H)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎		◎							◎	◎	○						

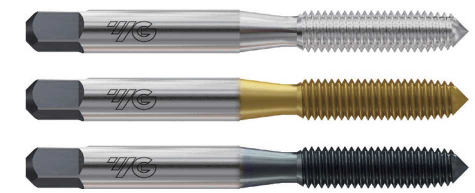
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	○	○		◎	◎														

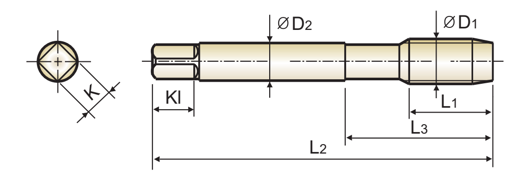
YG TAP FORMING

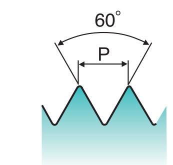
Z8/ZA/ZC SERIES
Z9/ZB/ZD SERIES

FORMING TAPS WITH OIL GROOVE PLUG & BOTTOMING STYLE

ANSI

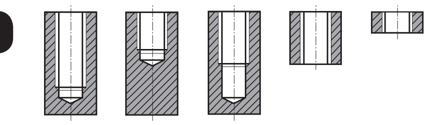






Thread Depth / Hole Type

3.0×D



Material groups: GV | HSS-E | M/MF | USCTI 302A | 4P~5P Plug | 1.5P~2P Bottoming | Bright | TiN | TiCN

Unit : Inch

Size D1		Pitch	EDP No. Plug Bright	EDP No. Plug TiN	EDP No. Plug TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Lobes
M3	x	0.5	Z8205	ZA205	ZC205	D5	1.937	.618	.882	.141	.110	.190	4
M4	x	0.7	Z8246	ZA246	ZC246	D6	2.126	.500	.752	.168	.131	.250	4
M5	x	0.8	Z8287	ZA287	ZC287	D7	2.374	.630	.906	.194	.152	.250	4
M6	x	1.0	Z8318	ZA318	ZC318	D8	2.500	.858	1.000	.255	.191	.310	4
M8	x	1.25	Z8369	ZA369	ZC369	D9	2.720	.929	1.126	.318	.238	.380	4
M10	x	1.5	Z8420	ZA420	ZC420	D10	2.937	.980	1.252	.381	.286	.440	4
M12	x	1.75	Z850A	ZA50A	ZC50A	D11	3.374	1.000	1.594	.367	.275	.440	4

Unit : Inch

Size D1		Pitch	EDP No. Bottom Bright	EDP No. Bottom TiN	EDP No. Bottom TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Lobes
M2	x	0.4	Z9133	ZB133	ZD133	D3	1.752	.394	-	.141	.110	.190	4
M3	x	0.5	Z9205	ZB205	ZD205	D5	1.937	.618	.882	.141	.110	.190	4
M4	x	0.7	Z9246	ZB246	ZD246	D6	2.126	.500	.752	.168	.131	.250	4
M5	x	0.8	Z9287	ZB287	ZD287	D7	2.374	.630	.906	.194	.152	.250	4
M6	x	1.0	Z9318	ZB318	ZD318	D8	2.500	.858	1.000	.255	.191	.310	4
M8	x	1.25	Z9369	ZB369	ZD369	D9	2.720	.929	1.126	.318	.238	.380	4
M10	x	1.5	Z9420	ZB420	ZD420	D10	2.937	.980	1.252	.381	.286	.440	4
M12	x	1.75	Z950A	ZB50A	ZD50A	D11	3.374	1.000	1.594	.367	.275	.440	4

▶Hardslck coating is available on your request (Bright Finish EDP No + H)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎		◎							◎	◎	○						

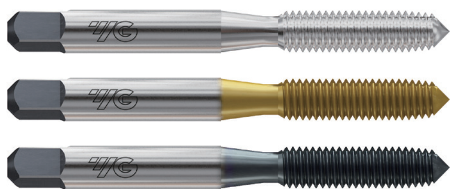
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	○	○		◎	◎														

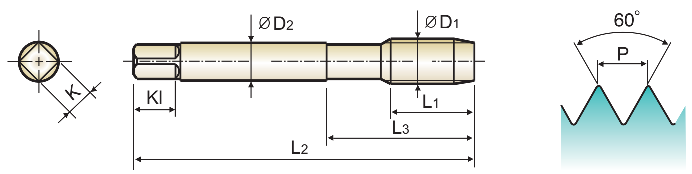
YG TAP FORMING

T7R01/T8R01/THR01 SERIES

FORMING TAPS PLUG STYLE for General Purpose

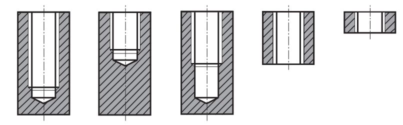
ANSI





Thread Depth / Hole Type

3.0×D



Material groups GV | HSS | UNC UNF | USCTI 302A | 4P~5P Plug | Bright | TiN | TiCN

Unit : Inch

Size D1	TPI	EDP No. Plug Bright	TiN	TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Lobes
#4	- 40UNC	T7R01163	T8R01163	THR01163	H3	1.874	.563	.799	.141	.110	.190	4
#5	- 40UNC	T7R01203	T8R01203	THR01203	H3	1.937	.626	.882	.141	.110	.190	4
#6	- 32UNC	T7R01243	T8R01243	THR01243	H3	2.000	.480	.689	.141	.110	.190	4
#8	- 32UNC	T7R01283	T8R01283	THR01283	H3	2.126	.500	.752	.168	.131	.250	4
#10	- 24UNC	T7R01324	T8R01324	THR01324	H4	2.374	.630	.906	.194	.152	.250	4
#10	- 32UNF	T7R01344	T8R01344	THR01344	H4	2.374	.630	.906	.194	.152	.250	4
1/4	- 20UNC	T7R01404	T8R01404	THR01404	H4	2.500	.858	1.000	.255	.191	.310	4
1/4	- 28UNF	T7R01424	T8R01424	THR01424	H4	2.500	.858	1.000	.255	.191	.310	4
5/16	- 18UNC	T7R01445	T8R01445	THR01445	H5	2.720	.929	1.126	.318	.238	.380	4
3/8	- 16UNC	T7R01485	T8R01485	THR01485	H5	2.937	.980	1.252	.381	.286	.440	4

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎		◎							◎	◎	○						

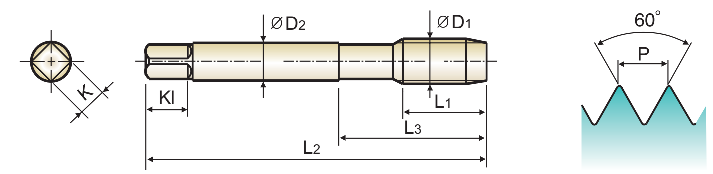
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	○	○		◎	◎														

YG TAP FORMING

T7R02/T8R02/THR02 SERIES

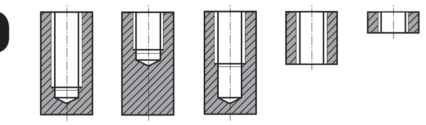
FORMING TAPS BOTTOMING STYLE for General Purpose

ANSI



Thread Depth / Hole Type

3.0×D



Material groups GV | HSS | UNC UNF | USCTI 302A | 1.5P~2P Bottoming | Bright | TiN | TiCN

Unit : Inch

Size D1	TPI	EDP No. Bottoming Bright	TiN	TiCN	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Lobes
#0	- 80UNF	T7R02022	T8R02022	THR02022	H2	1.634	.315	.512	.141	.110	.190	4
#2	- 56UNC	T7R02082	T8R02082	THR02082	H2	1.752	.433	.650	.141	.110	.190	4
#3	- 48UNC	T7R02123	T8R02123	THR02123	H3	1.811	.492	.728	.141	.110	.190	4
#4	- 40UNC	T7R02163	T8R02163	THR02163	H3	1.874	.563	.799	.141	.110	.190	4
#5	- 40UNC	T7R02203	T8R02203	THR02203	H3	1.937	.626	.882	.141	.110	.190	4
#6	- 32UNC	T7R02243	T8R02243	THR02243	H3	2.000	.480	.689	.141	.110	.190	4
#8	- 32UNC	T7R02283	T8R02283	THR02283	H3	2.126	.500	.752	.168	.131	.250	4
#10	- 24UNC	T7R02324	T8R02324	THR02324	H4	2.374	.630	.906	.194	.152	.250	4
#10	- 32UNF	T7R02344	T8R02344	THR02344	H4	2.374	.630	.906	.194	.152	.250	4
1/4	- 20UNC	T7R02404	T8R02404	THR02404	H4	2.500	.858	1.000	.255	.191	.310	4
1/4	- 28UNF	T7R02424	T8R02424	THR02424	H4	2.500	.858	1.000	.255	.191	.310	4
5/16	- 18UNC	T7R02445	T8R02445	THR02445	H5	2.720	.929	1.126	.318	.238	.380	4
3/8	- 16UNC	T7R02485	T8R02485	THR02485	H5	2.937	.980	1.252	.381	.286	.440	4

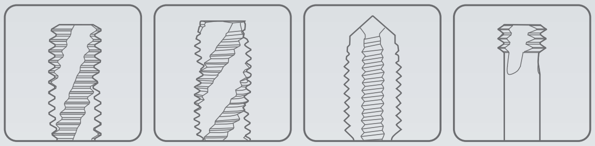
◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎		◎							◎	◎	○						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	○	○		◎	◎														

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

Global Cutting Tool Leader YG-1



THREADING

Being the best through innovation

HSS-E & HSS

SCREW THREAD INSERT TAP

- For Tapping STI Threads

SELECTION GUIDE

YG THREADING TOOLS

HSS-E & HSS SCREW THREAD INSERT TAP

- For Tapping STI Threads

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

HOLE TYPE	Max. 2.5xD Blind Hole		Max. 2.5xD Blind Hole	Max. 3.0xD Through Hole			Max. 2.0xD Blind /Through Hole	
TOOL MATERIAL	HSS-E	HSS	HSS	HSS-E	HSS		HSS-E	
CHAMFER LEAD ACC. TO DIN2197	1.5P-2P		1.5P-2P	4P-5P			4P-5P, 1.5P-2P	
FLUTE TYPE	Spiral Flute		Spiral Flute	Spiral Point			Straight Flute	
SPIRAL FLUTE ANGLE	R40	R50	R50	-				
SERIES M						T7415 (p.B287)		T7405 (p.B290)
SERIES M/MF			T7425 (p.B283)					
SERIES UNC								
SERIES UNC/UNF	ST/SI (p.B280)	T7406 (p.B281)		ST/SI (p.B284)	T7436 (p.B285)		T7426 (p.B288)	
SERIES UNC/UNF/UNS								
SERIES UNC/UN8								
SERIES NPT								
SERIES NPTF								
SERIES NPS/NPSF								
SURFACE TREATMENT / COATING	HardSlick	Bright	Bright	HardSlick	Bright	Bright	Bright	Bright
MODEL								

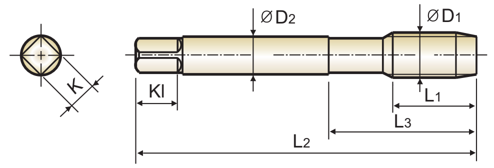
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	ST/SI (p.B280)	T7406 (p.B281)	T7425 (p.B283)	ST/SI (p.B284)	T7436 (p.B285)	T7415 (p.B287)	T7426 (p.B288)	T7405 (p.B290)
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎ 50-80	○ 25-50	○ 25-50	◎ 50-80	○ 25-50	○ 25-50	○ 25-50	○ 25-50
	2		About 0.45% C	Annealed	190	13	◎ 50-80	○ 25-50	○ 25-50	◎ 50-80	○ 25-50	○ 25-50	○ 25-50	○ 25-50
	3		About 0.45% C	Quenched & Tempered	250	25	◎ 50-80	○ 25-50	○ 25-50	◎ 50-80	○ 25-50	○ 25-50	○ 25-50	○ 25-50
	4		About 0.75% C	Annealed	270	28	○ 10-35	○ 6-30	○ 6-30	○ 10-35	○ 6-30	○ 6-30	○ 6-30	○ 6-30
	5		About 0.75% C	Quenched & Tempered	300	32								
	6	Low alloy steel		Annealed	180	10	◎ 10-35	○ 6-30	○ 6-30	◎ 10-35	○ 6-30	○ 6-30	○ 6-30	○ 6-30
	7			Quenched & Tempered	275	29								
	8			Quenched & Tempered	300	32								
	9			Quenched & Tempered	350	38								
	10	High alloyed steel, and tool steel		Annealed	200	15								
	11			Quenched & Tempered	325	35								
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15								
	13		Martensitic	Quenched & Tempered	240	23								
	14		Austenitic		180	10								
K	15	Grey cast iron	Pearlitic / ferritic		180	10	○ 50-65	○ 35-50	○ 35-50	○ 50-65	○ 35-50	○ 35-50	○ 35-50	○ 35-50
	16		Pearlitic (Martensitic)		260	26	○ 50-65	○ 35-50	○ 35-50	○ 50-65	○ 35-50	○ 35-50	○ 35-50	○ 35-50
	17	Nodular cast iron	Ferritic		160	3								
	18		Pearlitic		250	25								
	19	Malleable cast iron	Ferritic		130									
	20		Pearlitic		230	21								
N	21	Aluminum-wrought alloy	Not Curable		60		○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65
	22		Curable	Hardened	100		○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65	○ 50-65
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 40-65	○ 40-65
	24		≤ 12% Si, Curable	Hardened	90		○ 45-90	○ 40-65	○ 40-65	○ 45-90	○ 40-65	○ 40-65	○ 40-65	○ 40-65
	25		> 12% Si, Not Curable		130									
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110									
	27		CuZn, CuSnZn (Brass)		90									
	28		CuSn, lead-free copper and electrolytic copper		100									
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic											
	30		Rubber, Wood, etc.											
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15								
	32			Cured	280	30								
	33		Ni or Co Based	Annealed	250	25								
	34			Cured	350	38								
	35			Cast	320	34								
	36	Titanium Alloys	Pure Titanium		400 Rm									
	37		Alpha + Beta Alloys	Hardened	1050 Rm									
H	38	Hardened steel		Hardened	550	55								
	39			Hardened	630	60								
	40	Chilled Cast Iron		Cast	400	42								
	41	Hardened Cast Iron		Hardened	550	55								

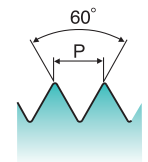
YG SCREW THREAD INSERT TAP

ST/SI SERIES

SPIRAL FLUTE STI TAP BOTTOMING STYLE

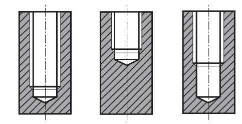
ANSI





Material groups: GS | HSS-E | UNC UNF | USCTI 322 | 1.5P~2P | Hardslick | R40

Thread Depth / Hole Type: 2.5×D



Unit : Inch

Size		TPI	EDP No.	Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Hardslick		L2	L1	L3	D2	K	Kl	
#4	-	40UNC	ST162	2B	2.000	.276	.689	.141	.110	.190	3
#4	-	48UNF	SI182	2B	2.000	.276	.689	.141	.110	.190	3
#5	-	40UNC	ST202	2B	2.126	.276	.752	.168	.131	.250	3
#5	-	44UNF	SI222	2B	2.126	.276	.752	.168	.131	.250	3
#6	-	32UNC	ST242	2B	2.374	.354	.906	.194	.152	.250	3
#6	-	40UNF	SI262	2B	2.126	.276	.752	.168	.131	.250	3
#8	-	32UNC	ST282	2B	2.374	.354	.906	.220	.165	.280	3
#8	-	36UNF	SI302	2B	2.374	.354	.906	.220	.165	.280	3
#10	-	24UNC	ST322	2B	2.500	.433	1.000	.255	.191	.310	3
#10	-	32UNF	SI342	2B	2.500	.433	1.000	.255	.191	.310	3
#12	-	24UNC	ST362	2B	2.720	.472	1.126	.318	.238	.380	3
#12	-	28UNF	SI382	2B	2.720	.472	1.126	.318	.238	.380	3
1/4	-	20UNC	ST402	2B	2.720	.472	1.126	.318	.238	.380	3
1/4	-	28UNF	SI422	2B	2.720	.472	1.126	.318	.238	.380	3
5/16	-	18UNC	ST442	2B	2.937	.551	1.252	.381	.286	.440	3
5/16	-	24UNF	SI462	2B	2.937	.551	1.252	.381	.286	.440	3
3/8	-	16UNC	ST482	2B	3.374	.630	2.067	.367	.275	.440	3
3/8	-	24UNF	SI502	2B	3.157	.591	1.850	.323	.242	.410	3
7/16	-	14UNC	ST522	2B	3.594	.709	2.067	.429	.322	.500	3
7/16	-	20UNF	SI542	2B	3.374	.630	2.067	.367	.275	.440	3
1/2	-	13UNC	ST562	2B	3.811	.748	2.205	.480	.360	.560	3
1/2	-	20UNF	SI582	2B	3.594	.709	2.067	.429	.322	.500	3
9/16	-	12UNC	ST602	2B	4.031	.748	2.205	.542	.406	.630	4
9/16	-	18UNF	SI622	2B	3.811	.748	2.205	.480	.360	.560	4
5/8	-	11UNC	ST642	2B	4.252	.827	2.480	.590	.442	.690	4
5/8	-	18UNF	SI662	2B	4.031	.748	2.205	.542	.406	.630	4
3/4	-	10UNC	ST702	2B	4.689	.827	2.815	.697	.523	.750	4
3/4	-	16UNF	SI722	2B	4.469	.827	2.480	.652	.489	.690	4

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎									○	○				

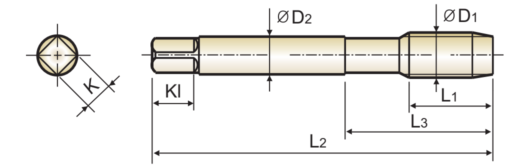
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○	○																	

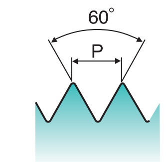
YG SCREW THREAD INSERT TAP

T7406 SERIES

SPIRAL FLUTE STI TAP BOTTOMING STYLE HIGH HELIX for General Purpose

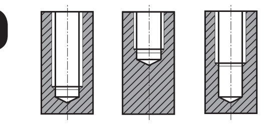
ANSI





Material groups: GS | HSS | UNC UNF | USCTI 322 | 1.5P~2P | Bright | R50

Thread Depth / Hole Type: 2.5×D



Unit : Inch

Size		TPI	EDP No.	Limit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Bright		L2	L1	L3	D2	K	Kl	
#2	-	56UNC	T7406082	H2	1.874	.236	.563	.141	.110	.190	2
#3	-	48UNC	T7406122	H2	1.937	.236	.626	.141	.110	.190	2
#4	-	40UNC	T7406162	H2	2.000	.276	.689	.141	.110	.190	2
#4	-	48UNF	T7406182	H2	2.000	.276	.689	.141	.110	.190	3
#6	-	32UNC	T7406242	H2	2.374	.354	.906	.194	.152	.250	3
#6	-	32UNC	T7406243	H3	2.374	.354	.906	.194	.152	.250	3
#6	-	40UNF	T7406262	H2	2.126	.276	.752	.168	.131	.250	3
#8	-	32UNC	T7406282	H2	2.374	.354	.906	.220	.165	.280	3
#8	-	32UNC	T7406283	H3	2.374	.354	.906	.220	.165	.280	3
#8	-	36UNF	T7406302	H2	2.374	.354	.906	.220	.165	.280	3
#10	-	24UNC	T7406322	H2	2.500	.433	1.000	.255	.191	.310	3
#10	-	24UNC	T7406323	H3	2.500	.433	1.000	.255	.191	.310	3
#10	-	32UNF	T7406342	H2	2.500	.433	1.000	.255	.191	.310	3
#10	-	32UNF	T7406343	H3	2.500	.433	1.000	.255	.191	.310	3
1/4	-	20UNC	T7406402	H2	2.720	.472	1.126	.318	.238	.380	3
1/4	-	20UNC	T7406403	H3	2.720	.472	1.126	.318	.238	.380	3
1/4	-	28UNF	T7406422	H2	2.720	.472	1.126	.318	.238	.380	3
1/4	-	28UNF	T7406423	H3	2.720	.472	1.126	.318	.238	.380	3
5/16	-	18UNC	T7406443	H3	2.937	.551	1.252	.381	.286	.440	3
5/16	-	18UNC	T7406444	H4	2.937	.551	1.252	.381	.286	.440	3
5/16	-	24UNF	T7406462	H2	2.937	.551	1.252	.381	.286	.440	3
5/16	-	24UNF	T7406463	H3	2.937	.551	1.252	.381	.286	.440	3
3/8	-	16UNC	T7406483	H3	3.374	.630	2.067	.367	.275	.440	3
3/8	-	16UNC	T7406484	H4	3.374	.630	2.067	.367	.275	.440	3
3/8	-	24UNF	T7406502	H2	3.157	.591	1.850	.323	.242	.410	3
3/8	-	24UNF	T7406503	H3	3.157	.591	1.850	.323	.242	.410	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○									○	○				

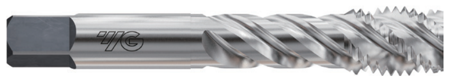
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○	○																	

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG SCREW THREAD INSERT TAP

T7406 SERIES

SPIRAL FLUTE STI TAP BOTTOMING STYLE HIGH HELIX for General Purpose



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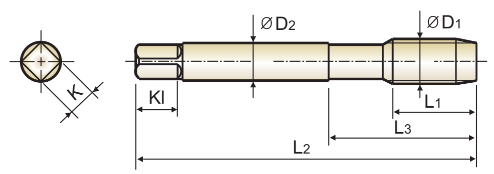
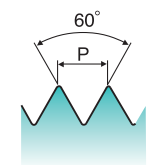
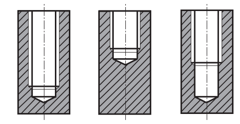




Material groups: GS | HSS | UNC UNF | USCTI 322 | 1.5P~2P | Bright | R50

Thread Depth / Hole Type

2.5×D



Unit : Inch

Size D1	TPI	EDP No. Bright	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
7/16	- 14UNC	T7406523	H3	3.594	.709	2.067	.429	.322	.500	4
7/16	- 14UNC	T7406524	H4	3.594	.709	2.067	.429	.322	.500	4
7/16	- 20UNF	T7406543	H3	3.374	.630	2.067	.367	.275	.440	3
7/16	- 20UNF	T7406544	H4	3.374	.630	2.067	.367	.275	.440	3
1/2	- 13UNC	T7406563	H3	3.811	.748	2.205	.480	.360	.560	4
1/2	- 13UNC	T7406564	H4	3.811	.748	2.205	.480	.360	.560	4
1/2	- 20UNF	T7406583	H3	3.594	.709	2.067	.429	.322	.500	4
1/2	- 20UNF	T7406584	H4	3.594	.709	2.067	.429	.322	.500	4

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○									○	○				

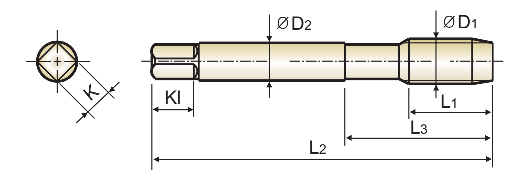
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○	○																	

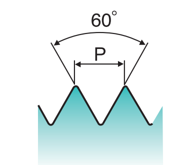
YG SCREW THREAD INSERT TAP

T7425 SERIES

SPIRAL FLUTE STI TAP BOTTOMING STYLE HIGH HELIX for General Purpose

ANSI

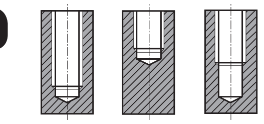




Material groups: GS | HSS | M/MF | USCTI 322A | 1.5P~2P | Bright | R50

Thread Depth / Hole Type

2.5×D



Unit : Inch

Size D1	Pitch	EDP No. Bright	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M2	x 0.4	T7425132	D2	1.811	.236	.563	.141	.110	.190	2
M2.5	x 0.45	T7425172	D2	2.083	.197	.646	.141	.110	.190	2
M3	x 0.5	T7425202	D2	2.000	.276	.709	.141	.110	.190	3
M4	x 0.7	T7425243	D3	2.374	.354	.933	.194	.152	.250	3
M5	x 0.8	T7425283	D3	2.500	.433	1.000	.255	.191	.310	3
M6	x 1.0	T7425313	D3	2.720	.433	1.126	.318	.238	.380	3
M8	x 1.25	T7425363	D3	2.937	.512	1.252	.381	.286	.440	3
M10	x 1.5	T7425424	D4	3.374	.591	2.067	.367	.275	.440	3
M12	x 1.75	T7425504	D4	3.594	.709	2.067	.429	.322	.500	3

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○									○	○				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○	○																	

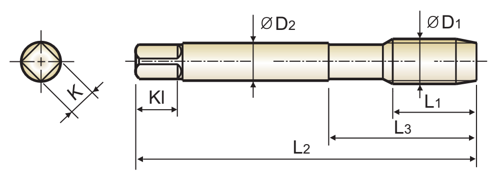
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

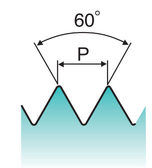
YG SCREW THREAD INSERT TAP

ST/SI SERIES

SPIRAL POINT STI TAP PLUG STYLE

ANSI





Thread Depth / Hole Type
3.0×D

Material groups: GS | HSS-E | UNC UNF | USCTI 322 | 4P~5P | Hardslick

Unit : Inch

Size D1	TPI	EDP No. Hardslick	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#4	40UNC	SI162	2B	2.000	.413	.689	.141	.110	.190	3
#4	48UNF	ST182	2B	2.000	.413	.689	.141	.110	.190	3
#6	32UNC	SI242	2B	2.374	.531	.906	.194	.152	.250	3
#6	40UNF	ST262	2B	2.126	.453	.752	.168	.131	.250	3
#8	32UNC	SI282	2B	2.374	.571	.906	.220	.165	.280	3
#8	36UNF	ST302	2B	2.374	.571	.906	.220	.165	.280	3
#10	24UNC	SI322	2B	2.500	.591	1.000	.255	.191	.310	3
#10	32UNF	ST342	2B	2.500	.591	1.000	.255	.191	.310	3
1/4	20UNC	SI402	2B	2.720	.669	1.126	.318	.238	.380	3
1/4	28UNF	ST422	2B	2.720	.669	1.126	.318	.238	.380	3
5/16	18UNC	SI442	2B	2.937	.748	1.252	.381	.286	.440	3
5/16	24UNF	ST462	2B	2.937	.748	1.252	.381	.286	.440	3
3/8	16UNC	SI482	2B	3.374	.984	1.657	.367	.275	.440	3
3/8	24UNF	ST502	2B	3.157	.866	1.437	.323	.242	.410	3
7/16	14UNC	SI522	2B	3.594	.984	1.657	.429	.322	.500	3
7/16	20UNF	ST542	2B	3.374	.984	1.657	.367	.275	.440	3
1/2	13UNC	SI562	2B	3.811	1.083	1.811	.480	.360	.560	3
1/2	20UNF	ST582	2B	3.594	.984	1.657	.429	.322	.500	3
9/16	12UNC	SI602	2B	4.031	1.083	1.811	.542	.406	.630	3
9/16	18UNF	ST622	2B	3.811	1.083	1.811	.480	.360	.560	3
5/8	11UNC	SI642	2B	4.252	1.201	2.000	.590	.442	.690	3
5/8	18UNF	ST662	2B	4.031	1.083	1.811	.542	.406	.630	3
3/4	10UNC	SI702	2B	4.689	1.339	2.220	.697	.523	.750	3
3/4	16UNF	ST722	2B	4.469	1.201	2.000	.652	.489	.690	3

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○		◎									○	○				

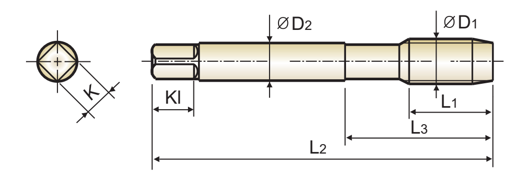
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○	○																	

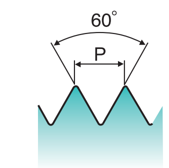
YG SCREW THREAD INSERT TAP

T7436 SERIES

SPIRAL POINT STI TAP PLUG STYLE for General Purpose

ANSI





Thread Depth / Hole Type
3.0×D

Material groups: GS | HSS | UNC UNF | USCTI 322 | 4P~5P | Bright

Unit : Inch

Size D1	TPI	EDP No. Bright	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#2	56UNC	T7436082	H2	1.874	.335	.563	.141	.110	.190	2
#3	48UNC	T7436122	H2	1.937	.374	.626	.141	.110	.190	2
#4	40UNC	T7436161	H1	2.000	.413	.689	.141	.110	.190	2
#4	40UNC	T7436162	H2	2.000	.413	.689	.141	.110	.190	2
#4	48UNF	T7436182	H2	2.000	.413	.689	.141	.110	.190	2
#5	40UNC	T7436202	H2	2.126	.453	.752	.168	.131	.250	2
#6	32UNC	T7436242	H2	2.374	.531	.906	.194	.152	.250	2
#6	32UNC	T7436243	H3	2.374	.531	.906	.194	.152	.250	2
#6	40UNF	T7436262	H2	2.126	.453	.752	.168	.131	.250	2
#8	32UNC	T7436282	H2	2.374	.571	.906	.220	.165	.280	2
#8	32UNC	T7436283	H3	2.374	.571	.906	.220	.165	.280	2
#8	36UNF	T7436302	H2	2.374	.571	.906	.220	.165	.280	2
#10	24UNC	T7436322	H2	2.500	.591	1.000	.255	.191	.310	2
#10	24UNC	T7436323	H3	2.500	.591	1.000	.255	.191	.310	2
#10	32UNF	T7436342	H2	2.500	.591	1.000	.255	.191	.310	2
#10	32UNF	T7436343	H3	2.500	.591	1.000	.255	.191	.310	2
1/4	20UNC	T7436402	H2	2.720	.669	1.126	.318	.238	.380	3
1/4	20UNC	T7436403	H3	2.720	.669	1.126	.318	.238	.380	3
1/4	28UNF	T7436422	H2	2.720	.669	1.126	.318	.238	.380	3
1/4	28UNF	T7436423	H3	2.720	.669	1.126	.318	.238	.380	3
5/16	18UNC	T7436443	H3	2.937	.748	1.252	.381	.286	.440	3
5/16	18UNC	T7436444	H4	2.937	.748	1.252	.381	.286	.440	3
5/16	24UNF	T7436462	H2	2.937	.748	1.252	.381	.286	.440	3
5/16	24UNF	T7436463	H3	2.937	.748	1.252	.381	.286	.440	3
3/8	16UNC	T7436483	H3	3.374	.984	1.657	.367	.275	.440	3
3/8	16UNC	T7436484	H4	3.374	.984	1.657	.367	.275	.440	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○									○	○				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○	○																	

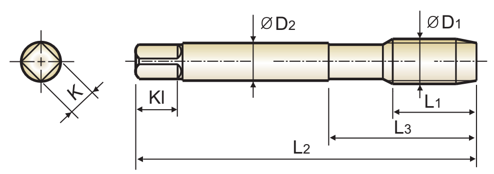
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

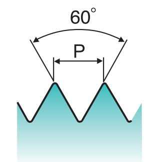
SCREW THREAD INSERT TAP

T7436 SERIES

SPIRAL POINT STI TAP PLUG STYLE for General Purpose

ANSI





Thread Depth / Hole Type
3.0×D

Material groups: GS | HSS | UNC UNF | USCTI 322 | 4P~5P | Bright

Unit : Inch

Size D1		TPI	EDP No. Bright	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
3/8	-	24UNF	T7436502	H2	3.157	.866	1.437	.323	.242	.410	3
3/8	-	24UNF	T7436503	H3	3.157	.866	1.437	.323	.242	.410	3
7/16	-	14UNC	T7436523	H3	3.594	.984	1.657	.429	.322	.500	3
7/16	-	14UNC	T7436524	H4	3.594	.984	1.657	.429	.322	.500	3
7/16	-	20UNF	T7436543	H3	3.374	.984	1.657	.367	.275	.440	3
7/16	-	20UNF	T7436544	H4	3.374	.984	1.657	.367	.275	.440	3
1/2	-	13UNC	T7436563	H3	3.811	1.083	1.811	.480	.360	.560	4
1/2	-	13UNC	T7436564	H4	3.811	1.083	1.811	.480	.360	.560	4
1/2	-	20UNF	T7436583	H3	3.594	.984	1.657	.429	.322	.500	4
1/2	-	20UNF	T7436584	H4	3.594	.984	1.657	.429	.322	.500	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○									○	○				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○	○																	

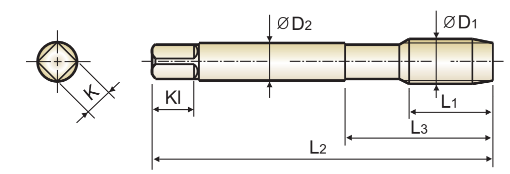
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

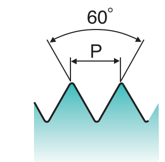
SCREW THREAD INSERT TAP

T7415 SERIES

SPIRAL POINT STI TAP PLUG STYLE for General Purpose

ANSI





Thread Depth / Hole Type
3.0×D

Material groups: GS | HSS | M | USCTI 322A | 4P~5P | Bright

Unit : Inch

Size D1		Pitch	EDP No. Bright	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
M2	x	0.4	T7415132	D2	1.811	.295	.563	.141	.110	.190	2
M2.5	x	0.45	T7415172	D2	1.937	.374	.646	.141	.110	.190	2
M3	x	0.5	T7415202	D2	2.000	.413	.709	.141	.110	.190	3
M4	x	0.7	T7415243	D3	2.374	.531	.933	.194	.152	.250	3
M5	x	0.8	T7415283	D3	2.500	.591	1.000	.255	.191	.310	3
M6	x	1.0	T7415313	D3	2.720	.669	1.126	.318	.238	.380	3
M8	x	1.25	T7415363	D3	2.937	.748	1.252	.381	.286	.440	3
M10	x	1.5	T7415424	D4	3.374	.984	2.067	.367	.275	.440	3
M12	x	1.75	T7415504	D4	3.594	.984	2.067	.429	.322	.500	3

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○									○	○				

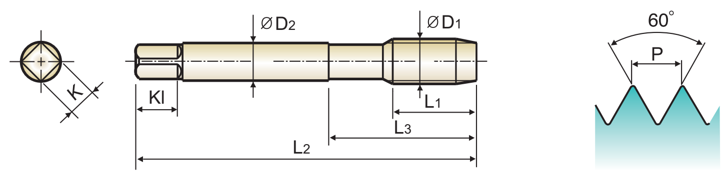
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○	○																	

SCREW THREAD INSERT TAP

T7426 SERIES

STRAIGHT FLUTE STI TAP PLUG AND BOTTOMING STYLE for General Purpose


ANSI



Material groups GS | HSS | UNC UNF | USCTI 322 | 4P~5P Plug | 1.5P~2P Bottoming | Bright

Thread Depth / Hole Type
2.0×D

Unit : Inch

Size D1		TPI	EDP No. Plug	EDP No. Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
#2	-	56UNC	T7426087	T7426088	H2	1.874	.563	.799	.141	.110	.190	3
#3	-	48UNC	T7426127	T7426128	H2	1.937	.626	.882	.141	.110	.190	3
#4	-	40UNC	T7426167H1	T7426168H1	H1	2.000	.689	.965	.141	.110	.190	3
#4	-	40UNC	T7426167	T7426168	H2	2.000	.689	.965	.141	.110	.190	3
#4	-	48UNF	T7426187	T7426188	H2	2.000	.689	.965	.141	.110	.190	3
#5	-	40UNC	T7426207	T7426208	H2	2.126	.752	-	.168	.131	.250	3
#6	-	32UNC	T7426247H2	T7426248H2	H2	2.374	.906	-	.194	.152	.250	3
#6	-	32UNC	T7426247	T7426248	H3	2.374	.906	-	.194	.152	.250	3
#6	-	40UNF	T7426267	T7426268	H2	2.126	.752	1.047	.168	.131	.250	3
#8	-	32UNC	T7426287H2	T7426288H2	H2	2.374	.906	-	.220	.165	.280	3
#8	-	32UNC	T7426287	T7426288	H3	2.374	.906	-	.220	.165	.280	3
#8	-	36UNF	T7426307	T7426308	H2	2.374	.906	-	.220	.165	.280	3
#10	-	24UNC	T7426327H2	T7426328H2	H2	2.500	1.000	-	.255	.191	.310	3
#10	-	24UNC	T7426327	T7426328	H3	2.500	1.000	-	.255	.191	.310	3
#10	-	32UNF	T7426347H2	T7426348H2	H2	2.500	1.000	-	.255	.191	.310	3
#10	-	32UNF	T7426347	T7426348	H3	2.500	1.000	-	.255	.191	.310	3
1/4	-	20UNC	T7426407H2	T7426408H2	H2	2.720	1.126	1.500	.318	.238	.380	3
1/4	-	20UNC	T7426407	T7426408	H3	2.720	1.126	1.500	.318	.238	.380	3
1/4	-	28UNF	T7426427H2	T7426428H2	H2	2.720	1.126	-	.318	.238	.380	3
1/4	-	28UNF	T7426427	T7426428	H3	2.720	1.126	-	.318	.238	.380	3
5/16	-	18UNC	T7426447	T7426448	H3	2.937	1.252	1.646	.381	.286	.440	4
5/16		18UNC	T7426447H4	T7426448H4	H4	2.937	1.252	1.646	.381	.286	.440	4
5/16		24UNF	T7426467H2	T7426468H2	H2	2.937	1.252	-	.381	.286	.440	4
5/16		24UNF	T7426467	T7426468	H3	2.937	1.252	-	.381	.286	.440	4
3/8		16UNC	T7426487	T7426488	H3	3.374	1.657	-	.367	.275	.440	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○									○	○				

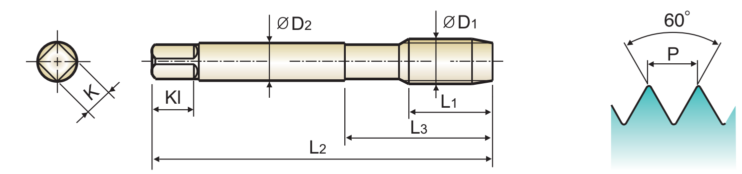
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○	○																	

SCREW THREAD INSERT TAP

T7426 SERIES

STRAIGHT FLUTE STI TAP PLUG AND BOTTOMING STYLE for General Purpose


ANSI



Material groups GS | HSS | UNC UNF | USCTI 322 | 4P~5P Plug | 1.5P~2P Bottoming | Bright

Thread Depth / Hole Type
2.0×D

Unit : Inch

Size D1		TPI	EDP No. Plug	EDP No. Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
3/8	-	16UNC	T7426487H4	T7426488H4	H4	3.374	1.657	-	.367	.275	.440	4
3/8	-	24UNF	T7426507H2	T7426508H2	H2	3.157	1.437	-	.323	.242	.410	4
3/8	-	24UNF	T7426507	T7426508	H3	3.157	1.437	-	.323	.242	.410	4
7/16	-	14UNC	T7426527	T7426528	H3	3.594	1.657	-	.429	.322	.500	4
7/16	-	14UNC	T7426527H4	T7426528H4	H4	3.594	1.657	-	.429	.322	.500	4
7/16	-	20UNF	T7426547	T7426548	H3	3.374	1.657	-	.367	.275	.440	4
7/16	-	20UNF	T7426547H4	T7426548H4	H4	3.374	1.657	-	.367	.275	.440	4
1/2	-	13UNC	T7426567	T7426568	H3	3.811	1.811	-	.480	.360	.560	4
1/2	-	13UNC	T7426567H4	T7426568H4	H4	3.811	1.811	-	.480	.360	.560	4
1/2	-	20UNF	T7426587	T7426588	H3	3.594	1.657	-	.429	.322	.500	4
1/2	-	20UNF	T7426587H4	T7426588H4	H4	3.594	1.657	-	.429	.322	.500	4

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○									○	○				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○	○																	

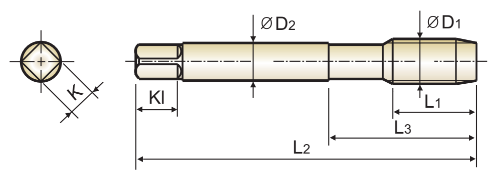
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

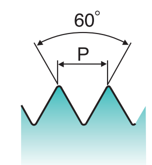
SCREW THREAD INSERT TAP

T7405 SERIES

STRAIGHT FLUTE STI TAP PLUG AND BOTTOMING STYLE for General Purpose

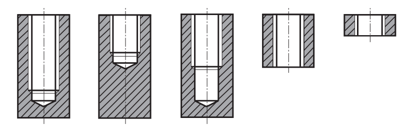
ANSI





Material groups: GS | HSS | M | USCTI 322A | 4P~5P Plug | 1.5P~2P Bottoming | Bright

Thread Depth / Hole Type: 2.0×D



Unit : Inch

Size D1	Pitch	EDP No. Plug	EDP No. Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
M2 x	0.4	T7405137	T7405138	D2	1.811	.492	.728	.141	.110	.190	2
M2.5 x	0.45	T7405177	T7405178	D2	1.937	.626	.882	.141	.110	.190	2
M3 x	0.5	T7405207	T7405208	D2	2.000	.689	.965	.141	.110	.190	3
M4 x	0.7	T7405247	T7405248	D3	2.374	.906	1.220	.194	.152	.250	3
M5 x	0.8	T7405287	T7405288	D3	2.500	1.000	-	.255	.191	.310	3
M6 x	1.0	T7405317	T7405318	D3	2.720	1.126	-	.318	.238	.380	3
M8 x	1.25	T7405367	T7405368	D3	2.937	1.252	1.646	.381	.286	.440	3
M10 x	1.5	T7405427	T7405428	D4	3.374	1.657	-	.367	.275	.440	3
M12 x	1.75	T7405507	T7405508	D4	3.594	1.657	-	.429	.322	.500	3

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○	○		○									○	○				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○	○																	

HSS-E & HSS

PIPE TAP

- For Tapping National Pipe Threads

SELECTION GUIDE

YG THREADING TOOLS

HSS-E & HSS PIPE TAP

- For Tapping National Pipe Threads

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◎ : Excellent ○ : Good

HOLE TYPE	Max. 2.5xD Blind Hole			Max. 2.5xD Blind /Through Hole			Max. 2.0xD Blind /Through Hole			
TOOL MATERIAL	HSS-E			HSS-E			HSS-E			
CHAMFER LEAD ACC. TO DIN2197	2P-3P			2P-3P						
FLUTE TYPE	Spiral Flute			Spiral Flute			Straight Flute			
SPIRAL FLUTE ANGLE	R15			R15						
SERIES: M										
M/MF										
UNC										
UNC/UNF										
UNC/UNF/UNS										
UNC/UN8										
NPT										
NPTF	**Q1** (p.B296)	**Q0** (p.B296)	**Q6** (p.B296)	**Q9** (p.B297)	**R0** (p.B297)	**R1** (p.B297)	**R7** (p.B298)	**R8** (p.B298)	**R9** (p.B298)	**S0** (p.B298)
NPS/NPSF										
SURFACE TREATMENT / COATING	Bright	Steam Oxide	HardSlick	Bright	TiN	HardSlick	Bright	TiN	HardSlick	Nitrided Steam Oxide
MODEL										

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	Q1	Q0	Q6	Q9	R0	R1	R7	R8	R9	S0
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○ 15-40	○ 15-40	○ 15-40	◎ 15-40	◎ 15-40	◎ 15-40	◎ 15-40	◎ 15-40	◎ 15-40	◎ 15-40
	2		About 0.45% C	Annealed	190	13	○ 15-40	○ 15-40	○ 15-40	◎ 15-40	◎ 15-40	◎ 15-40	◎ 15-40	◎ 15-40	◎ 15-40	◎ 15-40
	3		About 0.45% C	Quenched & Tempered	250	25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25
	4		About 0.75% C	Annealed	270	28	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20
	5		About 0.75% C	Quenched & Tempered	300	32	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20	○ 10-20
	6	Low alloy steel		Annealed	180	10	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25	◎ 10-25
	7			Quenched & Tempered	275	29	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25
	8			Quenched & Tempered	300	32	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25
	9			Quenched & Tempered	350	38										
	10	High alloyed steel, and tool steel		Annealed	200	15										
	11			Quenched & Tempered	325	35										
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎ 10-25	◎ 10-25	◎ 10-25							
	13		Martensitic	Quenched & Tempered	240	23	◎ 10-25	◎ 10-25	◎ 10-25							
	14		Austenitic		180	10	○ 10-25	○ 10-25	○ 10-25							
K	15	Grey cast iron	Pearlitic / ferritic		180	10				◎ 15-50	◎ 15-50	◎ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50
	16		Pearlitic (Martensitic)		260	26				◎ 15-50	◎ 15-50	◎ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50
	17	Nodular cast iron	Ferritic		160	3	○ 15-50	○ 15-50	○ 15-50	◎ 15-50	◎ 15-50	◎ 15-50	◎ 15-50	◎ 15-50	◎ 15-50	◎ 15-50
	18		Pearlitic		250	25	○ 15-50	○ 15-50	○ 15-50	◎ 15-50	◎ 15-50	◎ 15-50	◎ 15-50	◎ 15-50	◎ 15-50	◎ 15-50
	19	Malleable cast iron	Ferritic		130											
	20		Pearlitic		230	21										
N	21	Aluminum-wrought alloy	Not Curable		60											
	22		Curable	Hardened	100											
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○ 20-35	○ 20-35	○ 20-35							
	24		≤ 12% Si, Curable	Hardened	90											
	25		> 12% Si, Not Curable		130											
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110											
	27		CuZn, CuSnZn (Brass)		90											
	28		CuSn, lead-free copper and electrolytic copper		100											
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic													
	30		Rubber, Wood, etc.													
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15										
	32			Cured	280	30										
	33		Ni or Co Based	Annealed	250	25										
	34			Cured	350	38										
	35			Cast	320	34										
	36	Titanium Alloys	Pure Titanium		400 Rm											
	37		Alpha + Beta Alloys	Hardened	1050 Rm											
H	38	Hardened steel		Hardened	550	55										
	39			Hardened	630	60										
	40	Chilled Cast Iron		Cast	400	42										
	41	Hardened Cast Iron		Hardened	550	55										

SELECTION GUIDE

YG THREADING TOOLS

HSS-E & HSS PIPE TAP

- For Tapping National Pipe Threads

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◎ : Excellent ○ : Good

	S1	S2	T7L36/T7536	T6L36/T6536	T7505	T6505	TH505	T7546	T8546
HOLE TYPE	Max. 2.0xD Blind /Through Hole			Max. 2.0xD Blind /Through Hole					
TOOL MATERIAL	HSS-E		HSS	HSS			HSS		
CHAMFER LEAD ACC. TO DIN2197	2P-3P		4P~5P	4P~5P	2P-3P		4P-5P	2P-3P	
FLUTE TYPE	Straight Flute			Straight Flute					
SPIRAL FLUTE ANGLE	R15			-					
SERIES	S1 (p.B299) NPTF	S2 (p.B299) NPTF	T7L36/T7536 (p.B300/p.B301) NPS/NPSF	T6L36/T6536 (p.B300/p.B301) NPS/NPSF	T7505 (p.B302) NPT	T6505 (p.B302) NPT	TH505 (p.B302) NPT	T7546 (p.B303) NPTF	T8546 (p.B303) NPTF
SURFACE TREATMENT / COATING	Bright	TiCN	Bright	Steam Oxide	Bright	Steam Oxide	TiCN	Bright	TiN
MODEL									

Series rows M, M/MF, UNC, UNC/UNF, UNC/UNF/UNS, UNC/UN8: no entries.

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRC	S1	S2	T7L36/T7536	T6L36/T6536	T7505	T6505	TH505	T7546	T8546
P	1	Non-alloy steel	About 0.15% C Annealed	125		◎ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40
	2		About 0.45% C Annealed	190	13	◎ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40
	3		About 0.45% C Quenched & Tempered	250	25	◎ 10-25	◎ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25
	4		About 0.75% C Annealed	270	28	○ 10-20	○ 10-20							
	5		About 0.75% C Quenched & Tempered	300	32	○ 10-20	○ 10-20							
	6	Low alloy steel	Annealed	180	10	◎ 10-25	◎ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25
	7		Quenched & Tempered	275	29	○ 10-25	○ 10-25							
	8		Quenched & Tempered	300	32	○ 10-25	○ 10-25							
	9		Quenched & Tempered	350	38									
	10	High alloyed steel, and tool steel	Annealed	200	15									
	11		Quenched & Tempered	325	35									
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15									
	13		Martensitic Quenched & Tempered	240	23									
	14		Austenitic	180	10									
K	15	Grey cast iron	Pearlitic / ferritic	180	10	◎ 15-50	◎ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50
	16		Pearlitic (Martensitic)	260	26	◎ 15-50	◎ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50
	17	Nodular cast iron	Ferritic	160	3	◎ 15-50	◎ 15-50							
	18		Pearlitic	250	25	◎ 15-50	◎ 15-50							
	19	Malleable cast iron	Ferritic	130										
	20		Pearlitic	230	21									
N	21	Aluminum-wrought alloy	Not Curable	60				○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40
	22		Curable Hardened	100				○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75				○ 20-35	○ 20-35	○ 20-35	○ 20-35	○ 20-35	○ 20-35	○ 20-35
	24		≤ 12% Si, Curable Hardened	90										
	25		> 12% Si, Not Curable	130										
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110										
	27		CuZn, CuSnZn (Brass)	90										
	28		CuSn, lead-free copper and electrolytic copper	100										
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic											
	30		Rubber, Wood, etc.											
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15									
	32		Fe Based Cured	280	30									
	33		Ni or Co Based Annealed	250	25									
	34		Ni or Co Based Cured	350	38									
	35		Ni or Co Based Cast	320	34									
	36	Titanium Alloys	Pure Titanium	400 Rm										
	37		Alpha + Beta Alloys Hardened	1050 Rm										
H	38	Hardened steel	Hardened	550	55									
	39		Hardened	630	60									
	40	Chilled Cast Iron	Cast	400	42									
	41	Hardened Cast Iron	Hardened	550	55									

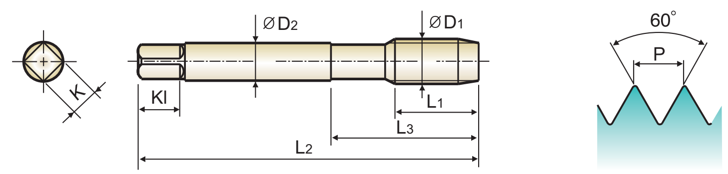
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG PIPE TAP

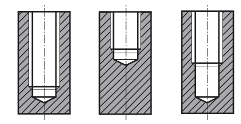
Q1/Q0/Q6 SERIES

TAPER PIPE TAP : SPIRAL FLUTE STANDARD PROJECTION for Steels & Stainless Steels

ANSI



Thread Depth / Hole Type
2.5×D



Material groups: VA | HSS-E | NPTF | USCTI 311 | 2P~3P | Bright | Steam Oxide | Hardslick | R15

Unit : Inch

Size		TPI	EDP No.			Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Bright	Steam Oxide	Hardslick	L2	L1	L3	D2	K	KL	
NPTF1/16	-	27	Q1020	Q0020	Q6020	2.130	.689	-	.312	.234	.380	4
NPTF1/8	-	27	Q1200	Q0200	Q6200	2.130	.736	.906	.437	.328	.380	4
NPTF1/8	-	27	Q1210	Q0210	Q6210	2.130	.748	-	.312	.234	.380	4
NPTF1/4	-	18	Q1400	Q0400	Q6400	2.440	1.063	1.220	.562	.421	.440	4
NPTF3/8	-	18	Q1480	Q0480	Q6480	2.560	1.063	1.220	.700	.531	.500	4
NPTF1/2	-	14	Q1560	Q0560	Q6560	3.130	1.378	-	.687	.515	.630	4
NPTF3/4	-	14	Q1700	Q0700	Q6700	3.250	1.378	-	.906	.679	.690	4
NPTF1"	-	11-1/2	Q1780	Q0780	Q6780	3.750	1.752	-	1.125	.843	.810	4
NPTF1-1/4	-	11-1/2	Q1860	Q0860	Q6860	4.000	1.752	-	1.312	.984	.940	5
NPTF1-1/2	-	11-1/2	Q1960	Q0960	Q6960	4.250	1.752	-	1.500	1.125	1.00	7
NPTF2"	-	11-1/2	Q1D20	Q0D20	Q6D20	4.508	1.752	-	1.875	1.406	1.13	7

▶ These Taps meet both NPT and NPTF Standards.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	◎	○	○	◎	○	○				◎	◎	○			○	○		

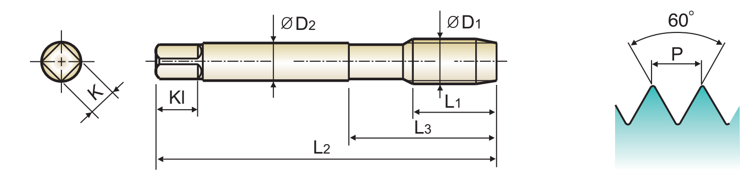
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended			○																		

YG PIPE TAP

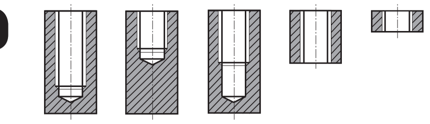
Q9/R0/R1 SERIES

TAPER PIPE TAP : SPIRAL FLUTE STANDARD PROJECTION for Cast Iron & Steels

ANSI



Thread Depth / Hole Type
2.5×D



Material groups: GG | HSS-E | NPTF | USCTI 311 | 2P~3P | Bright | TiN | Hardslick | R15

Unit : Inch

Size		TPI	EDP No.			Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Bright	TiN	Hardslick	L2	L1	L3	D2	K	KL	
NPTF1/16	-	27	Q9020	R0020	R1020	2.130	.689	-	.312	.234	.380	4
NPTF1/8	-	27	Q9200	R0200	R1200	2.130	.736	.906	.437	.328	.380	4
NPTF1/8	-	27	Q9210	R0210	R1210	2.130	.748	-	.312	.234	.380	4
NPTF1/4	-	18	Q9400	R0400	R1400	2.440	1.063	1.220	.562	.421	.440	4
NPTF3/8	-	18	Q9480	R0480	R1480	2.560	1.063	1.220	.700	.531	.500	4
NPTF1/2	-	14	Q9560	R0560	R1560	3.130	1.378	-	.687	.515	.630	4
NPTF3/4	-	14	Q9700	R0700	R1700	3.250	1.378	-	.906	.679	.690	4
NPTF1"	-	11-1/2	Q9780	R0780	R1780	3.750	1.752	-	1.125	.843	.810	4
NPTF1-1/4	-	11-1/2	Q9860	R0860	R1860	4.000	1.752	-	1.312	.984	.940	5
NPTF1-1/2	-	11-1/2	Q9960	R0960	R1960	4.250	1.752	-	1.500	1.125	1.00	7
NPTF2"	-	11-1/2	Q9D20	R0D20	R1D20	4.508	1.752	-	1.875	1.406	1.13	7

▶ These Taps meet both NPT and NPTF Standards.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○							◎	◎	◎	◎		

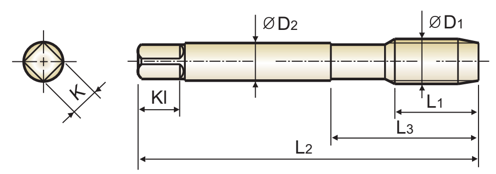
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

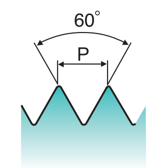
YG PIPE TAP

R7/R8/R9/S0 SERIES

TAPER PIPE TAP : STRAIGHT FLUTE STANDARD PROJECTION for Cast Iron & Steels

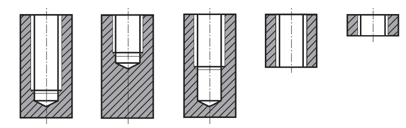
ANSI





Thread Depth / Hole Type

2.0XD



Material groups: GG

HSS-E | NPTF | USCTI 311 | 2P~3P | Bright | TiN | Hardslick | Nitrided Steam Oxide

Unit : Inch

Size	TPI	EDP No.				Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Bright	Steam Oxide	Hardslick	Nitrided Steam Oxide	L2	L1	L3	D2	K	KL	
NPTF1/16	- 27	R7020	R8020	R9020	S0020	2.130	.689	-	.312	.234	.380	4
NPTF1/8	- 27	R7200	R8200	R9200	S0200	2.130	.736	.906	.437	.328	.380	4
NPTF1/8	- 27	R7210	R8210	R9210	S0210	2.130	.748	-	.312	.234	.380	4
NPTF1/4	- 18	R7400	R8400	R9400	S0400	2.440	1.063	1.220	.562	.421	.440	4
NPTF3/8	- 18	R7480	R8480	R9480	S0480	2.560	1.063	1.220	.700	.531	.500	4
NPTF1/2	- 14	R7560	R8560	R9560	S0560	3.130	1.378	-	.687	.515	.630	4
NPTF3/4	- 14	R7700	R8700	R9700	S0700	3.250	1.378	-	.906	.679	.690	5
NPTF1"	- 11-1/2	R7780	R8780	R9780	S0780	3.750	1.752	-	1.125	.843	.810	5
NPTF1-1/4	- 11-1/2	R7860	R8860	R9860	S0860	4.000	1.752	-	1.312	.984	.940	5
NPTF1-1/2	- 11-1/2	R7960	R8960	R9960	S0960	4.250	1.752	-	1.500	1.125	1.00	7
NPTF2"	- 11-1/2	R7D20	R8D20	R9D20	S0D20	4.508	1.752	-	1.875	1.406	1.13	7

▶ These Taps meet both NPT and NPTF Standards.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○							○	○	◎	◎		

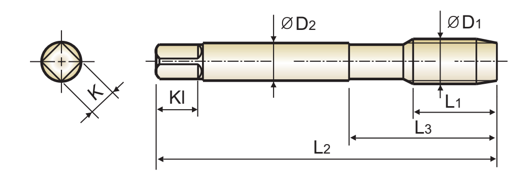
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

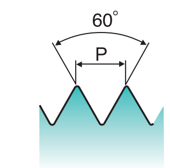
YG PIPE TAP

S1/S2 SERIES

TAPER PIPE TAP : STRAIGHT FLUTE INTERRUPTED THREAD STANDARD PROJECTION for Cast Iron & Steels

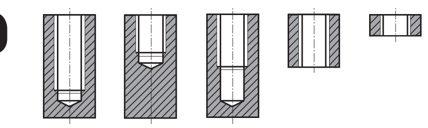
ANSI





Thread Depth / Hole Type

2.0XD



Material groups: GG

HSS-E | NPTF | USCTI 311 | 2P~3P | Bright | TiCN

Unit : Inch

Size	TPI	EDP No.		Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Bright	TiCN	L2	L1	L3	D2	K	KL	
NPTF1/16	- 27	S1020	S2020	2.130	.689	-	.312	.234	.380	5
NPTF1/8	- 27	S1200	S2200	2.130	.736	.906	.437	.328	.380	5
NPTF1/8	- 27	S1210	S2210	2.130	.748	-	.312	.234	.380	5
NPTF1/4	- 18	S1400	S2400	2.440	1.063	1.220	.562	.421	.440	5
NPTF3/8	- 18	S1480	S2480	2.560	1.063	1.220	.700	.531	.500	5
NPTF1/2	- 14	S1560	S2560	3.130	1.378	-	.687	.515	.630	5
NPTF3/4	- 14	S1700	S2700	3.250	1.378	-	.906	.679	.690	5
NPTF1"	- 11-1/2	S1780	S2780	3.750	1.752	-	1.125	.843	.810	5

▶ These Taps meet both NPT and NPTF Standards.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○							◎	◎	◎	◎		

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

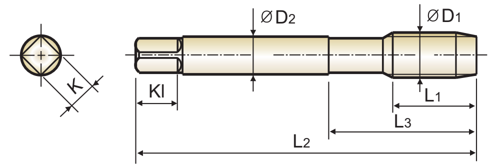
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

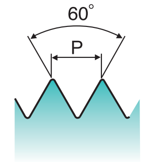
YG PIPE TAP

T7505/T6505/TH505 SERIES

TAPER PIPE TAP: STRAIGHT FLUTE INTERRUPTED STANDARD PROJECTION for General Purpose

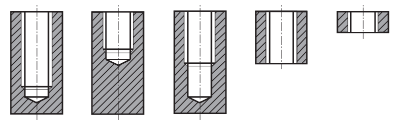
ANSI





Thread Depth / Hole Type

2.0×D



Material groups: GS | HSS | NPT | USCTI 311 | 2P~3P | Bright | Steam Oxide | TiCN

Unit : Inch

Size	TPI	EDP No.			Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Bright	Steam Oxide	TiCN	L2	L1	L3	D2	K	KL	
NPT1/8	27	T7505200	T6505200	TH505200	2.130	.736	.906	.437	.328	.380	5
NPT1/8	27	T7505210	T6505210	TH505210	2.130	.748	-	.312	.234	.380	5
NPT1/4	18	T7505400	T6505400	TH505400	2.440	1.063	1.220	.562	.421	.440	5
NPT3/8	18	T7505480	T6505480	TH505480	2.560	1.063	1.220	.700	.531	.500	5
NPT1/2	14	T7505560	T6505560	TH505560	3.130	1.378	-	.687	.515	.630	5
NPT3/4	14	T7505700	T6505700	TH505700	3.250	1.378	-	.906	.679	.690	5
NPT1"	11-1/2	T7505780	T6505780	TH505780	3.750	1.752	-	1.125	.843	.810	5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○									○	○				

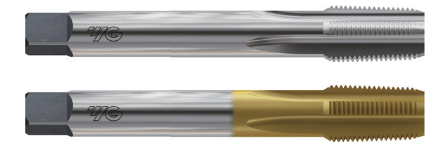
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○																		

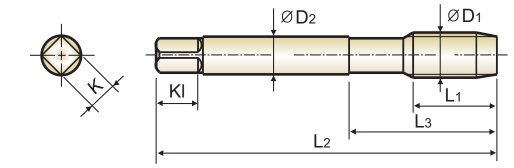
YG PIPE TAP

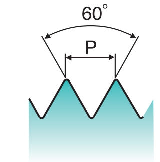
T7546/T8546 SERIES

TAPER PIPE TAP: STRAIGHT FLUTE STANDARD PROJECTION 6" EXTENSION for General Purpose

ANSI

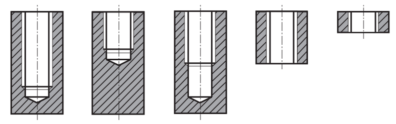






Thread Depth / Hole Type

2.0×D



Material groups: GS | HSS | NPTF | USCTI 311 | 2P~3P | Bright | TiN

Unit : Inch

Size	TPI	EDP No.		Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Bright	TiN	L2	L1	L3	D2	K	KL	
NPTF1/8	27	T7546200	T8546200	6.000	.736	1.339	.437	.328	.380	4
NPTF1/4	18	T7546400	T8546400	6.000	1.063	1.732	.562	.421	.440	4
NPTF3/8	18	T7546480	T8546480	6.000	1.063	1.732	.700	.531	.500	4
NPTF1/2	14	T7546560	T8546560	6.000	1.378	-	.687	.515	.630	4
NPTF3/4	14	T7546700	T8546700	6.000	1.378	-	.906	.679	.690	5
NPTF1"	11-1/2	T7546780	T8546780	6.000	1.752	-	1.125	.843	.810	5

▶ These Taps meet both NPT and NPTF Standards.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○									○	○				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○																		

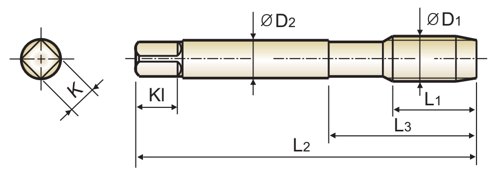
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

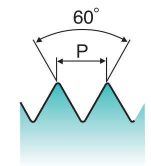
YG PIPE TAP

T7L36/T6L36 SERIES

STRAIGHT PIPE TAP for General Purpose

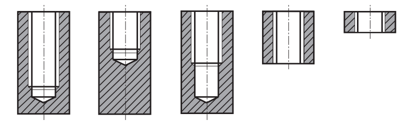
ANSI





Thread Depth / Hole Type

2.0XD



Material groups: GS | HSS | NPS | USCTI 311 | 4P~5P | Bright | Steam Oxide

Unit : Inch

Size		TPI	EDP No.		Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Bright	Steam Oxide	L2	L1	L3	D2	K	KL	
NPS1/8	-	27	T7L36200	T6L36200	2.130	.736	.906	.437	.328	.380	4
NPS1/8	-	27	T7L36210	T6L36210	2.130	.748	-	.312	.234	.380	4
NPS1/4	-	18	T7L36400	T6L36400	2.440	1.063	1.220	.562	.421	.440	4
NPS3/8	-	18	T7L36480	T6L36480	2.560	1.063	1.220	.700	.531	.500	4
NPS1/2	-	14	T7L36560	T6L36560	3.130	1.378	-	.687	.515	.630	4
NPS3/4	-	14	T7L36700	T6L36700	3.250	1.378	-	.906	.679	.690	5
NPS1"	-	11-1/2	T7L36780	T6L36780	3.750	1.752	-	1.125	.843	.810	5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○									○	○				

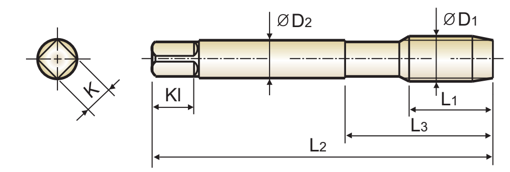
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○																		

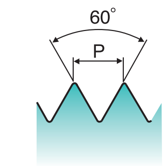
YG PIPE TAP

T7536/T6536 SERIES

STRAIGHT PIPE TAP for General Purpose

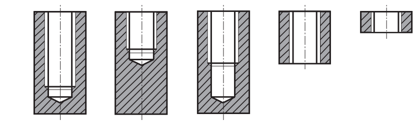
ANSI





Thread Depth / Hole Type

2.0XD



Material groups: GS | HSS | NPSF | USCTI 311 | 4P~5P | Bright | Steam Oxide

Unit : Inch

Size		TPI	EDP No.		Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1			Bright	Steam Oxide	L2	L1	L3	D2	K	KL	
NPSF1/8	-	27	T7536200	T6536200	2.130	.736	.906	.437	.328	.380	4
NPSF1/8	-	27	T7536210	T6536210	2.130	.748	-	.312	.234	.380	4
NPSF1/4	-	18	T7536400	T6536400	2.440	1.063	1.220	.562	.421	.440	4
NPSF3/8	-	18	T7536480	T6536480	2.560	1.063	1.220	.700	.531	.500	4
NPSF1/2	-	14	T7536560	T6536560	3.130	1.378	-	.687	.515	.630	4
NPSF3/4	-	14	T7536700	T6536700	3.250	1.378	-	.906	.679	.690	5
NPSF1"	-	11-1/2	T7536780	T6536780	3.750	1.752	-	1.125	.843	.810	5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○									○	○				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○																		

Global Cutting Tool Leader **YG-1**

THREADING

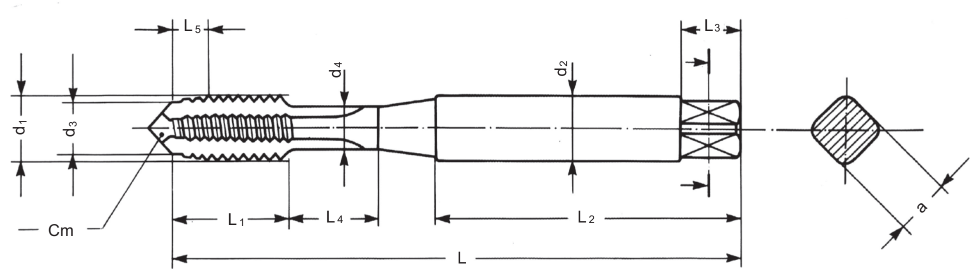
Being the best through innovation

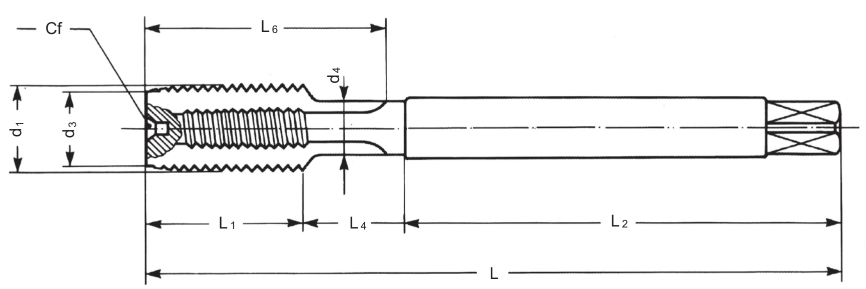
TAPS

TECHNICAL DATA

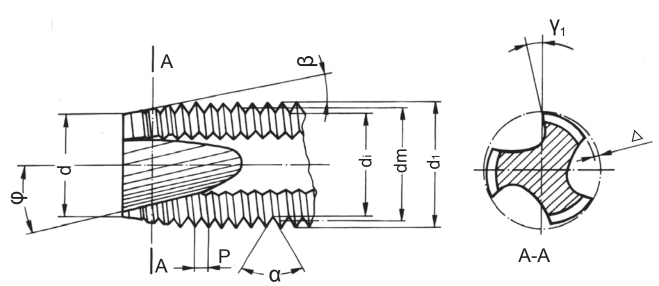
TECHNICAL DATA

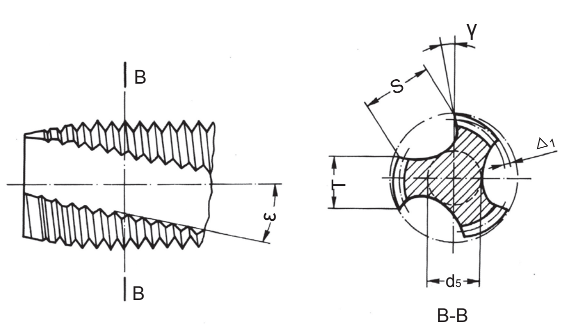
1 TAPS TERMINOLOGY





- d_1 Major diameter
- d_2 Shank diameter
- d_3 Chamfer diameter
- d_4 Neck diameter
- L Total length
- L_1 Thread length
- L_2 Shank length
- L_3 Square length
- L_4 Neck length
- L_5 Chamfer length
- L_6 Flutes length
- a Square size
- Cm Center male
- Cf Center female

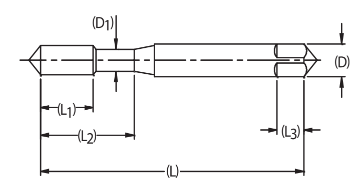




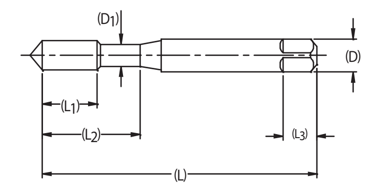
- d_1 Major diameter
- d_m Flank diameter
- d_i Minor diameter
- d_3 Chamfer diameter
- P Pitch
- a Flank angle
- β Chamfer angle
- φ Gun nose angle
- γ Gun nose rake angle in front
- Δ Chamfer relief
- Δ_1 Pitch diameter relief on the land
- γ Rake angle
- T Width of land
- S Flute width
- d_5 Web tickness
- ε Angle of spiral flute

TECHNICAL DATA

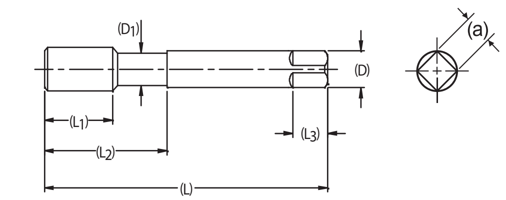
2 MODI TAP BLANK DIMENSION



Blank Design (1)



Blank Design (2)



Blank Design (3)

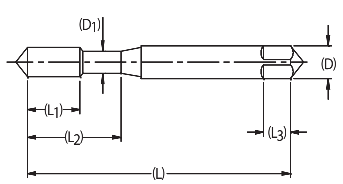
Unified Tap Blank

Nominal Size	Overall Length	Thread Length		Length to neck		Shank Diameter	Neck Diameter	Square Length	Square Size	Blank Design No.
		SF	SP	SF	SP					
	(L)	(L_1)		(L_2)		(D)	(D_1)	(L_3)	(A)	
#2	1.75	.157	.256	.433		.141	.061	.19	.110	1
#3	1.81	.197	.295	.492		.141	.069	.19	.110	1
#4	1.88	.236	.335	.563		.141	.077	.19	.110	1
#5	1.94	.236	.374	.626		.141	.090	.19	.110	1
#6	2.00	.276	.413	.689		.141	.094	.19	.110	1
#8	2.13	.276	.453	.752		.168	.120	.25	.131	1
#10-24	2.38	.354	.531	.906		.194	.131	.25	.152	1
#10-32		.276					.146			1
#12-24	2.38	.354	.571	.906		.220	.157	.28	.165	1
#12-28		.276					.166			1
1/4-20	2.50	.433	.591	1.000		.255	.180	.31	.191	2
1/4-28		.354					.200			2
5/16-18	2.72	.472	.669	1.126		.318	.234	.38	.238	2
5/16-24		.394					.254			2
3/8-16	2.94	.551	.748	1.252		.381	.287	.44	.286	2
3/8-24		.394					.316			2
7/16-14	3.16	.591	.866	1.850	1.437	.323	.311	.41	.242	3
7/16-20		.472								3
1/2-13	3.38	.630	.984	2.067	1.657	.367	.354	.44	.275	3
1/2-20		.472								3
9/16-12	3.59	.709	.984	2.067	1.657	.429	.417	.50	.322	3
9/16-18		.512								3
5/8-11	3.81	.748	1.083	2.205	1.811	.480	.469	.56	.360	3
5/8-18		.512								3
3/4-10	4.25	.827	1.201	2.480	2.000	.590	.577	.69	.442	3
3/4-10		.591								3
7/8-9	4.69	.827	1.339	2.815	2.220	.697	.685	.75	.523	3
7/8-14		.709								3
1-8	5.13	.984	1.496	3.091	2.500	.800	.787	.81	.600	3
1-12		.709								3
1-1/8-7	5.44	1.024	1.535	3.15	2.563	.896	.878	.88	.672	3
1-1/8-12		.787								3
1-1/4-7	5.75	1.024	1.535	3.15	2.563	1.021	1.002	1.00	.766	3
1-1/4-12		.787								3
1-3/8-6	6.06	1.181	1.791	3.583	3.000	1.108	1.089	1.06	.831	3
1-3/8-12		.866								3
1-1/2-6	6.38	1.181	1.791	3.583	3.000	1.233	1.213	1.13	.925	3
1-1/2-12		.866								3

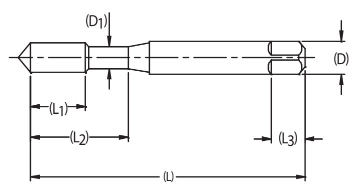
***SF** : Spiral Fluted Taps
***SP** : Spiral Pointed Taps

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

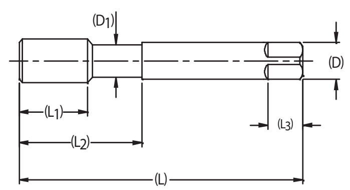
3 MODI TAP BLANK DIMENSION - METRIC



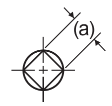
Blank Design (1)



Blank Design (2)



Blank Design (3)



Metric Tap Blank

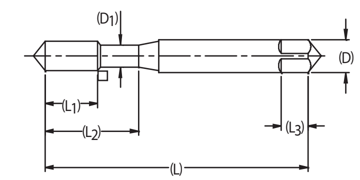
Nominal Size	Overall Length	Thread Length		Length to neck		Shank Diameter	Neck Diameter	Square Length	Square Size	Blank Design No.
		SF	SP	SF	SP					
	(L)	(L1)		(L2)		(D)	(D1)	(L3)	(A)	
M3	1.94	.197	.374	.646		.141	.090	.19	.110	1
M3.5	2.00	.276	.413	.646		.141	.104	.19	.110	1
M4	2.13	.276	.453	.768		.168	.119	.25	.131	1
M4.5	2.38	.354	.531	.933		.194	.135	.25	.152	1
M5	2.38	.354	.531	.933		.194	.152	.25	.152	1
M5.5	2.38	.354	.571	1.000		.220	.189	.28	.165	2
M6	2.50	.433	.591	1.000		.255	.181	.31	.191	2
M7	2.72	.433	.669	1.126		.318	.220	.38	.238	2
M8X 1.25	2.72	.472	.669	1.126		.318	.246	.38	.238	2
M8X 1.0		.433								2
M10X 1.5	2.94	.512	.748	1.252		.381	.310	.44	.286	2
M10X 1.25		.472								2
M12X 1.75	3.38	.591	.984	2.067	1.657	.367	.354	.44	.275	3
M12X 1.25		.551								3
M14X 2.0	3.59	.709	.984	2.067	1.657	.429	.417	.50	.322	3
M14X 1.5		.551								3
M16X 2.0	3.81	.709	1.083	2.205	1.811	.480	.469	.56	.360	3
M16X 1.5		.551								3
M18X 2.5	4.03	.787	1.083	2.205	1.811	.542	.530	.63	.406	3
M18X 1.5		.551								3
M20X 1.5	4.47	.551	1.201	2.48	2.000	.652	.64	.69	.489	3
M20X 2.5		.787								3
M22X 1.5	4.69	.551	1.339	2.815	2.220	.697	.685	.75	.523	3
M22X 2.5		.787								3
M24X 1.5	4.91	.551	1.339	2.815	2.220	.760	.748	.75	.57	3
M24X 3		.945								3
M27X 1.5	5.13	.591	1.496	3.091	2.500	.896	.878	.88	.672	3
M27X 3		.945								3
M30X 1.5	5.44	.591	1.713	3.15	2.854	1.021	1.002	1.00	.766	3
M30X 3.5		1.102								3

***SF** : Spiral Fluted Taps
***SP** : Spiral Pointed Taps

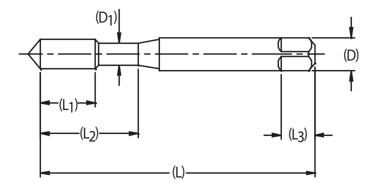
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

TECHNICAL DATA

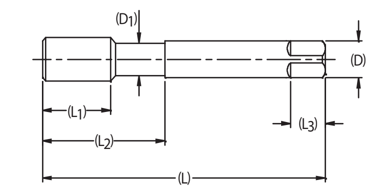
4 HIGH PERFORMANCE TAPS DIN LENGTH / ANSI SHANK - INCH



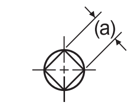
Blank Design (1)



Blank Design (2)



Blank Design (3)

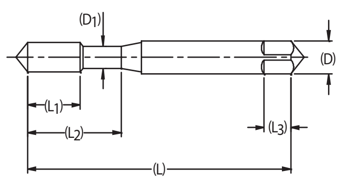


Nominal Size	Overall Length	Thread Length		Length to neck		Shank Diameter	Neck Diameter	Square Length	Square Size	Blank Design No.
		SF	SP	SF	SP					
	(L)	(L1)		(L2)		(D)	(D1)	(L3)	(A)	
#2	1.772	.157	.256	.433		.141	.061	.19	.110	1
#3	1.969	.197	.295	.492		.141	.069	.19	.110	1
#4	2.205	.236	.335	.563		.141	.077	.19	.110	1
#5	2.205	.236	.374	.626		.141	.090	.19	.110	1
#6	2.205	.276	.413	.689		.141	.094	.19	.110	1
#8	2.480	.276	.453	.752		.168	.120	.25	.131	1
#10-24	2.756	.354	.531	.906		.194	.131	.25	.152	1
#10-32		.276					.146			1
#12-24	3.150	.354	.571	.906		.220	.157	.28	.165	1
#12-28		.276					.166			1
1/4-20	3.150	.433	.591	1.000		.255	.180	.31	.191	2
1/4-28		.354					.200			2
5/16-18	3.543	.472	.669	1.126		.318	.234	.38	.238	2
5/16-24		.394					.254			2
3/8-16	3.937	.551	.748	1.252		.381	.287	.44	.286	2
3/8-24		.394					.316			2
7/16-14	3.937	.591	.866	1.850	1.437	.323	.311	.41	.242	3
7/16-20		.472								3
1/2-13	4.331	.630	.984	2.067	1.657	.367	.354	.44	.275	3
1/2-20	3.937	.472								3
9/16-12	4.331	.709	.984	2.067	1.657	.429	.417	.50	.322	3
9/16-18	3.937	.512								3
5/8-11	4.331	.748	1.083	2.205	1.811	.480	.469	.56	.360	3
5/8-18	3.937	.512								3
3/4-10	4.921	.827	1.201	2.480	2.000	.590	.577	.69	.442	3
3/4-10	4.331	.591								3
7/8-9	5.512	.827	1.339	2.815	2.220	.697	.685	.75	.523	3
7/8-14	4.921	.709								3
1-8	6.299	.984	1.496	3.091	2.500	.800	.787	.81	.600	3
1-12	5.512	.709								3

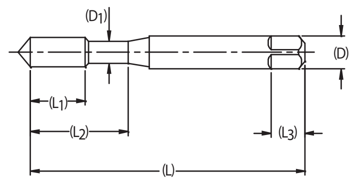
***SF** : Spiral Fluted Taps
***SP** : Spiral Pointed Taps

YG TECHNICAL DATA

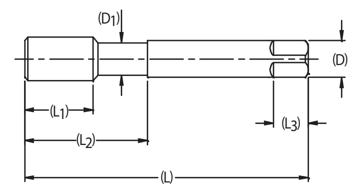
5 HIGH PERFORMANCE TAPS DIN LENGTH / ANSI SHANK - METRIC



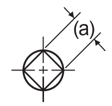
Blank Design (1)



Blank Design (2)



Blank Design (3)

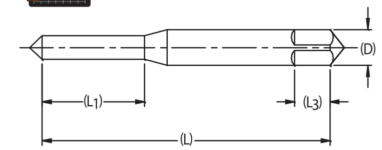


Nominal Size	Overall Length (L)	Thread Length (L1) SF	Thread Length (L1) SP	Length to neck (L2) SF	Length to neck (L2) SP	Shank Diameter (D)	Neck Diameter (D1)	Square Length (L3)	Square Size (A)	Blank Design No.
M3	2.205	.197	.374	.646		.141	.090	.19	.110	1
M3.5	2.205	.276	.413	.646		.141	.104	.19	.110	1
M4	2.480	.276	.453	.768		.168	.119	.25	.131	1
M5	2.756	.354	.531	.933		.194	.152	.25	.152	1
M6	3.150	.433	.591	1.000		.255	.181	.28	.191	2
M8X 1.25	3.543	.472	.669	1.126		.318	.246	.38	.238	2
M8X 1.0		.433								2
M10X 1.5	3.937	.512	.748	1.252		.381	.310	.44	.286	2
M10X 1.25		.472								2
M12X 1.75	4.331	.591	.984	2.067	1.657	.367	.354	.44	.275	3
M12X 1.25	3.937	.551								3
M14X 2.0	4.331	.709	.984	2.067	1.657	.429	.417	.50	.322	3
M14X 1.5	3.937	.551								3
M16X 2.0	4.331	.709	1.083	2.205	1.811	.480	.469	.56	.360	3
M16X 1.5	3.937	.551								3
M18X 2.5	4.921	.787	1.083	2.205	1.811	.542	.530	.63	.406	3
M18X 1.5	4.331	.551								3

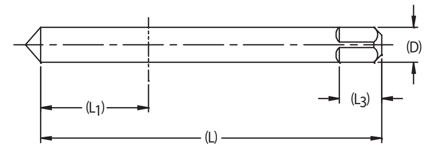
***SF** : Spiral Fluted Taps
***SP** : Spiral Pointed Taps

YG TECHNICAL DATA

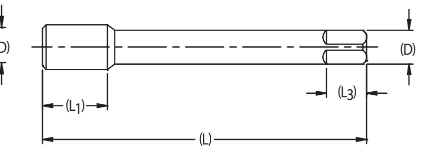
6 YG-1 USCTI 302 TAP BLANK DIMENSION



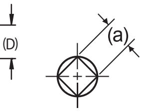
Blank Design (1)



Blank Design (2)



Blank Design (3)



Unified Tap Blank

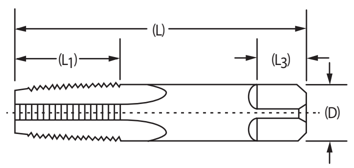
Nominal Size	Overall Length (L)	Thread Length (L1)	Shank Diameter (D)	Square Length (L3)	Square Size (A)	Blank Design No.
#0	1.63	.31	.141	.19	.110	1
#1	1.69	.38	.141	.19	.110	1
#2	1.75	.44	.141	.19	.110	1
#3	1.81	.50	.141	.19	.110	1
#4	1.88	.56	.141	.19	.110	1
#5	1.94	.63	.141	.19	.110	1
#6	2.00	.69	.141	.19	.110	1
#8	2.13	.75	.168	.25	.131	1
#10	2.38	.88	.194	.25	.152	1
#12	2.38	.94	.220	.28	.165	1
1/4	2.50	1.00	.255	.31	.191	2
5/16	2.72	1.13	.318	.38	.238	2
3/8	2.94	1.25	.381	.44	.286	2
7/16	3.16	1.44	.323	.41	.242	3
1/2	3.38	1.66	.367	.44	.275	3
9/16	3.59	1.66	.429	.50	.322	3
5/8	3.81	1.81	.480	.56	.360	3
11/16	4.03	1.81	.542	.63	.406	3
3/4	4.25	2.00	.590	.69	.442	3
13/16	4.47	2.00	.652	.69	.489	3
7/8	4.69	2.22	.697	.75	.523	3
15/16	4.91	2.22	.760	.75	.570	3
1	5.13	2.50	.800	.81	.600	3
1-1/8	5.44	2.56	.896	.88	.672	3
1-1/4	5.75	2.56	1.021	1.00	.766	3
1-3/8	6.06	3.00	1.108	1.06	.831	3
1-1/2	6.38	3.00	1.233	1.13	.925	3

Metric Tap Blank

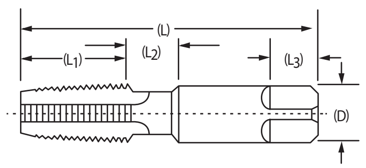
Nominal Size	Overall Length (L)	Thread Length (L1)	Shank Diameter (D)	Square Length (L3)	Square Size (A)	Blank Design No.
M1.6	1.63	.310	.141	.19	.110	1
M1.8	1.69	.380	.141	.19	.110	1
M2	1.75	.440	.141	.19	.110	1
M2.5	1.81	.500	.141	.19	.110	1
M3	1.94	.630	.141	.19	.110	1
M3.5	2.00	.690	.141	.19	.110	1
M4	2.13	.750	.168	.25	.131	1
M4.5	2.38	.880	.194	.25	.152	1
M5	2.38	.880	.194	.25	.152	1
M6	2.50	1.00	.255	.31	.191	2
M7	2.72	1.13	.318	.38	.238	2
M8	2.72	1.13	.318	.38	.238	2
M10	2.94	1.25	.381	.44	.286	2
M12	3.38	1.66	.367	.44	.275	3
M14	3.59	1.66	.429	.50	.322	3
M16	3.81	1.81	.480	.56	.360	3
M18	4.03	1.81	.542	.63	.406	3
M20	4.47	2.00	.652	.69	.489	3
M22	4.69	2.22	.697	.75	.523	3
M24	4.91	2.22	.760	.75	.570	3
M30	5.44	2.56	1.021	1.00	.766	3
M33	5.75	2.56	1.108	1.06	.831	3
M36	6.06	3.00	1.233	1.13	.925	3

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

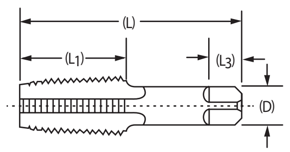
7 STANDARD PIPE TAP DIMENSION (STRAIGHT AND TAPER, GROUND THREAD)



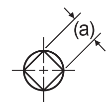
Blank Design (1)



Blank Design (2)



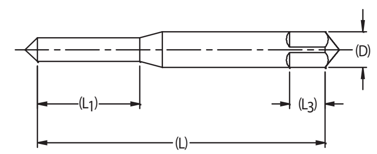
Blank Design (3)



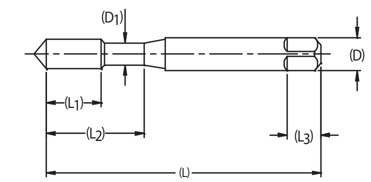
Nominal Size	Overall Length	Thread Length	Shank Diameter	Square Length	Square Size	Optional Neck Length
	(L)	(L1)	(D)	(L3)	(A)	(L2)
1/16	2.13	.69	.3125	.38	.234	.375
1/8	2.13	.75	.3125	.38	.234	…
1/8	2.13	.75	.4375	.38	.328	.375
1/4	2.44	1.06	.5625	.44	.421	.375
3/8	2.56	1.06	.7000	.50	.531	.375
1/2	3.13	1.38	.6875	.63	.515	…
3/4	3.25	1.38	.9063	.69	.679	…
1	3.75	1.75	1.1250	.81	.843	…
1-1/4	4.00	1.75	1.3125	.94	.984	…
1-1/2	4.25	1.75	1.5000	1.00	1.125	…
2	4.25	1.75	1.8750	1.13	1.406	…
2-1/2	5.50	2.56	2.2500	1.25	1.687	…
3	6.00	2.63	2.6250	1.38	1.968	…
3-1/2	6.50	2.69	2.8125	1.50	2.108	…
4	6.75	2.75	3.0000	1.56	2.250	…

TECHNICAL DATA

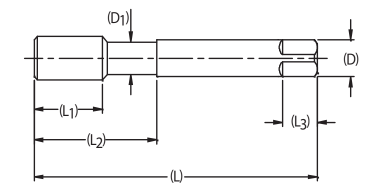
8 STANDARD FORMING TAP DIMENSION



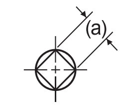
Blank Design (1)



Blank Design (2)



Blank Design (3)



Forming Tap Blank (Inch)

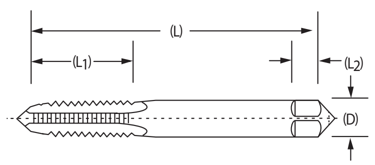
Nominal Size	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Length	Square Size	Blank Design No.
	(L)	(L1)	(L2)	(D)	(L3)	(A)	
#0	1.63	.31	–	.141	.19	.110	1
#1	1.69	.38	–	.141	.19	.110	1
#2	1.75	.44	–	.141	.19	.110	1
#3	1.81	.50	–	.141	.19	.110	1
#4	1.88	.56	–	.141	.19	.110	1
#5	1.94	.63	–	.141	.19	.110	1
#6	2.00	.48	.69	.141	.19	.110	1
#8	2.13	.50	.75	.168	.25	.131	1
#10	2.38	.63	.88	.194	.25	.152	1
#12	2.38	.63	.94	.220	.28	.165	1
1/4	2.50	.86	1.00	.255	.31	.191	2
5/16	2.72	.93	1.13	.318	.38	.238	2
3/8	2.94	.98	1.25	.381	.44	.286	2
7/16	3.16	.95	1.44	.323	.41	.242	3
1/2	3.38	1.00	1.60	.367	.44	.275	3
9/16	3.59	1.00	1.66	.429	.50	.322	3
5/8	3.81	1.00	1.81	.480	.56	.360	3
3/4	4.25	1.00	2.0	.590	.69	.442	3

Forming Tap Blank (Metric)

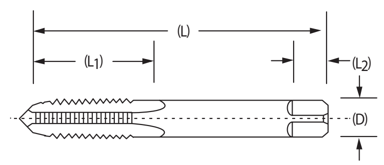
Nominal Size	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Length	Square Size	Blank Design No.
	(L)	(L1)	(L2)	(D)	(L3)	(A)	
M2	1.75	.40	–	.141	.19	.110	1
M3	1.94	.63	–	.141	.19	.110	1
M4	2.13	.50	.75	.168	.25	.131	1
M5	2.38	.63	.88	.194	.25	.152	1
M6	2.50	.86	1.0	.255	.31	.191	2
M8	2.72	.93	1.13	.318	.38	.238	2
M10	2.94	.98	1.25	.381	.44	.286	2
M12	3.38	1.00	1.60	.367	.44	.275	3

YG TECHNICAL DATA

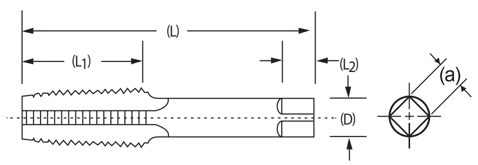
9 STI STRAIGHT TAP DIMENSION



Blank Design (1)



Blank Design (2)



Blank Design (3)

STI Tap blank (Inch)

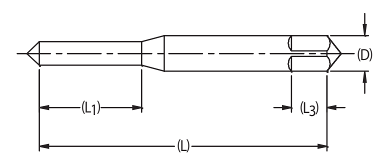
Nominal Size (STI)	Threads per Inch UNC	Threads per Inch UNF	Overall Length (L)	Thread Length (L2)	Shank Diameter (D)	Square Length (L3)	Square Size (A)	Blank Design No.	Table 302 Blank Equivalent
#2	56	–	1.88	.560	.141	.190	.110	1	NO.4
#2		64	1.88	.560	.141	.190	.110	1	NO.4
#3	48	–	1.94	.630	.141	.190	.110	1	NO.5
#3		56	1.94	.630	.141	.190	.110	1	NO.5
#4	40	–	2.00	.690	.141	.190	.110	1	NO.6
#4		48	2.00	.690	.141	.190	.110	1	NO.6
#5	40	–	2.13	.750	.168	.250	.131	1	NO.8
#6	32	–	2.38	.880	.194	.250	.152	1	NO.10
#6		40	2.13	.750	.168	.250	.131	1	NO.8
#8	32	–	2.38	.940	.220	.280	.165	1	NO.12
#8		36	2.38	.940	.220	.280	.165	1	NO.12
#10	24	–	2.50	1.000	.255	.310	.191	2	1/4
#10		32	2.50	1.000	.255	.310	.191	2	1/4
#12	24	–	2.72	1.130	.318	.380	.238	2	5/16
1/4	20	–	2.72	1.130	.318	.380	.238	2	5/16
1/4		28	2.72	1.130	.318	.380	.238	2	5/16
5/16	18	–	2.94	1.250	.381	.440	.286	2	3/8
5/16		24	2.94	1.250	.381	.440	.286	2	3/8
3/8	16	–	3.38	1.660	.367	.440	.275	3	1/2
3/8		24	3.16	1.440	.323	.410	.242	3	7/16
7/16	14	–	3.59	1.660	.429	.500	.322	3	9/16
7/16		20	3.38	1.660	.367	.440	.275	3	1/2
1/2	13	–	3.81	1.810	.480	.560	.360	3	5/8
1/2		20	3.59	1.660	.429	.500	.322	3	9/16

STI Tap blank (Metric)

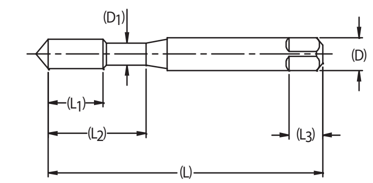
Nominal Size (STI)	Thread Pitch (mm)	Overall Length (L)	Thread Length (L2)	Shank Diameter (D)	Square Length (L3)	Square Size (A)	Blank Design No.	Table 302 Blank Equivalent
M2	0.4	1.81	.50	.141	.190	.110	1	NO.3
M2.5	0.45	1.94	.630	.141	.190	.110	1	NO.5
M3	0.5	2.00	.690	.141	.190	.110	1	NO.6
M4	0.7	2.38	.880	.194	.250	.152	1	NO.10
M5	0.8	2.50	1.000	.255	.310	.191	2	1/4
M6	1	2.72	1.130	.318	.380	.238	2	5/16
M8	1.25	2.94	1.250	.381	.440	.286	2	3/8
M10	1.5	3.38	1.660	.367	.440	.275	3	1/2
M12	1.75	3.59	1.660	.429	.500	.322	3	9/16

YG TECHNICAL DATA

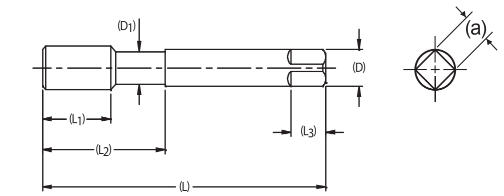
10 STI SPIRAL FLUTE & SPIRAL POINT TAP DIMENSION



Blank Design (1)



Blank Design (2)



Blank Design (3)

STI Tap blank (Inch)

Nominal Size (STI)	Threads per Inch UNC	Threads per Inch UNF	Overall Length (L)	Thread Length SP	Thread Length SF	Neck Length (L2)	Shank Diameter (D)	Square Length (L3)	Square Size (A)	Blank Design No.	Table 302 Blank Equivalent
#2	56	–	1.88	.335	.236	.56	.141	.190	.110	1	NO.4
#2		64	1.88	.335	.236	.56	.141	.190	.110	1	NO.4
#3	48	–	1.94	.374	.236	.63	.141	.190	.110	1	NO.5
#3		56	1.94	.374	.236	.63	.141	.190	.110	1	NO.5
#4	40	–	2.00	.413	.276	.68	.141	.190	.110	1	NO.6
#4		48	2.00	.413	.276	.68	.141	.190	.110	1	NO.6
#5	40	–	2.13	.453	.276	.75	.168	.250	.131	1	NO.8
#6	32	–	2.38	.531	.354	.88	.194	.250	.152	1	NO.10
#6		40	2.13	.453	.276	.75	.168	.250	.131	1	NO.8
#8	32	–	2.38	.571	.354	.94	.220	.280	.165	1	NO.12
#8		36	2.38	.571	.354	.94	.220	.280	.165	1	NO.12
#10	24	–	2.50	.591	.433	1.0	.255	.310	.191	2	1/4
#10		32	2.50	.591	.433	1.0	.255	.310	.191	2	1/4
#12	24	–	2.72	.669	.472	1.13	.318	.380	.238	2	5/16
1/4	20	–	2.72	.669	.472	1.13	.318	.380	.238	2	5/16
1/4		28	2.72	.669	.472	1.13	.318	.380	.238	2	5/16
5/16	18	–	2.94	.748	.551	1.25	.381	.440	.286	2	3/8
5/16		24	2.94	.748	.551	1.25	.381	.440	.286	2	3/8
3/8	16	–	3.38	.984	.630	1.66	.367	.440	.275	3	1/2
3/8		24	3.16	.866	.591	1.44	.323	.410	.242	3	7/16
7/16	14	–	3.59	.984	.709	1.66	.429	.500	.322	3	9/16
7/16		20	3.38	.984	.630	1.66	.367	.440	.275	3	1/2
1/2	13	–	3.81	1.083	.748	1.81	.480	.560	.360	3	5/8
1/2		20	3.59	.984	.709	1.66	.429	.500	.322	3	9/16

STI Tap blank (Metric)

Nominal Size (STI)	Thread Pitch (mm)	Overall Length (L)	Thread Length SP	Thread Length SF	Neck Length (L2)	Shank Diameter (D)	Square Length (L3)	Square Size (A)	Blank Design No.	Table 302 Blank Equivalent
M2	0.4	1.81	.295	.236	.56	.141	.190	.110	1	NO.3
M2.5	0.45	1.94	.374	.197	.63	.141	.190	.110	1	NO.5
M3	0.5	2.00	.413	.276	.69	.141	.190	.110	1	NO.6
M4	0.7	2.38	.531	.354	.93	.194	.250	.152	1	NO.10
M5	0.8	2.50	.591	.433	1.0	.255	.310	.191	2	1/4
M6	1	2.72	.669	.433	1.13	.318	.380	.238	2	5/16
M8	1.25	2.94	.748	.512	1.25	.381	.440	.286	2	3/8
M10	1.5	3.38	.984	.591	2.07	.367	.440	.275	3	1/2
M12	1.75	3.59	.984	.709	2.07	.429	.500	.322	3	9/16

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TECHNICAL DATA

11 TAP RECOMMENDATIONS FOR CLASSES OF THREAD - INCH

Internal Screw Thread Classes and Tap Recommendations

Size	Threads per Inch		Recommended Tap for Class of Thread				Pitch Diameter Limits for Class of Thread				
	UNC	UNF	UNIFIED Class of Thread		American National Class of Thread		MIN. ALL CLASS (BASIC)	UNIFIED Class of Thread		American National Class of Thread	
			CLASS 2	CLASS 3	CLASS 2B	CLASS 3B		MAX. CLASS 2	MAX. CLASS 3	MAX. CLASS 2B	MAX. CLASS 3B
#0	–	80	GH1	GH1	GH2	GH1	.0519	.0536	.0532	.0542	.0536
#1	64	–	GH1	GH1	GH2	GH1	.0629	.0648	.0643	.0655	.0648
#1	–	72	GH1	GH1	GH2	GH1	.0640	.0658	.0653	.0665	.0659
#2	56	–	GH1	GH1	GH2	GH1	.0744	.0764	.0759	.0772	.0765
#2	–	64	GH1	GH1	GH2	GH1	.0759	.0778	.0773	.0786	.0779
#3	48	–	GH1	GH1	GH2	GH1	.0855	.0877	.0871	.0885	.0877
#3	–	56	GH1	GH1	GH2	GH1	.0874	.0894	.8890	.0902	.0895
#4	40	–	GH2	GH1	GH2	GH2	.0958	.0982	.0975	.0991	.0982
#4	–	48	GH1	GH1	GH2	GH1	.0985	.1007	.1001	.1016	.1008
#5	40	–	GH2	GH1	GH2	GH2	.1088	.1112	.1105	.1121	.1113
#5	–	44	GH1	GH1	GH2	GH1	.1102	.1125	.1118	.1134	.1126
#6	32	–	GH2	GH1	GH3	GH2	.1177	.1204	.1196	.1214	.1204
#6	–	40	GH2	GH1	GH2	GH2	.1218	.1242	.1235	.1252	.1243
#8	32	–	GH2	GH1	GH3	GH2	.1437	.1464	.1456	.1475	.1465
#8	–	36	GH2	GH1	GH2	GH2	.1460	.1485	.1478	.1496	.1487
#10	24	–	GH3	GH1	GH3	GH3	.1629	.1662	.1653	.1672	.1661
#10	–	32	GH2	GH1	GH3	GH2	.1697	.1724	.1716	.1736	.1726
#12	24	–	GH3	GH1	GH3	GH3	.1889	.1922	.1913	.1933	.1922
#12	–	28	GH3	GH1	GH3	GH3	.1928	.1959	.1950	.1970	.1959
1/4	20	–	GH3	GH2	GH5	GH3	.2175	.2211	.2201	.2223	.2211
1/4	–	28	GH3	GH1	GH4	GH3	.2268	.2299	.2290	.2311	.2300
5/16	18	–	GH3	GH2	GH5	GH3	.2764	.2805	.2794	.2817	.2803
5/16	—	24	GH3	GH1	GH4	GH3	.2854	.2887	.2878	.2902	.2890
3/8	16	–	GH3	GH2	GH5	GH3	.3344	.3389	.3376	.3401	.3387
3/8	–	24	GH3	GH1	GH4	GH3	.3479	.3512	.3503	.3528	.3516
7/16	14	–	GH5	GH3	GH5	GH3	.3911	.3960	.3947	.3972	.3957
7/16	–	20	GH3	GH1	GH5	GH3	.4050	.4086	.4076	.4104	.4091
1/2	13	–	GH5	GH3	GH5	GH3	.4500	.4552	.4537	.4565	.4548
1/2	–	20	GH3	GH1	GH5	GH3	.4675	.4711	.4701	.4731	.4717
9/16	12	–	GH5	GH3	GH5	GH3	.5084	.5140	.5124	.5152	.5135
9/16	–	18	GH3	GH2	GH5	GH3	.5264	.5305	.5294	.5323	.5308
5/8	11	–	GH5	GH3	GH5	GH3	.5660	.5719	.5702	.5732	.5714
5/8	–	18	GH3	GH2	GH5	GH3	.5889	.5930	.5919	.5949	.5934
3/4	10	–	GH5	GH3	GH5	GH3	.6850	.6914	.6895	.6927	.6907
3/4	–	16	GH3	GH2	GH5	GH3	.7094	.7139	.7126	.7159	.7143
7/8	9	–	GH6	GH4	GH6	GH4	.8028	.8098	.8077	.8110	.8089
7/8	–	14	GH4	GH2	GH6	GH4	.8286	.8335	.8322	.8356	.8339
1	8	–	GH6	GH4	GH6	GH4	.9188	.9264	.9242	.9276	.9254
1	–	12	GH4	GH2	GH6	GH4	.9459	.9515	.9499	.9535	.9516

The above recommended taps normally produce the Class of Thread indicated in average materials when used with reasonable care. However, if the tap specified does not give a satisfactory gage fit in the work, a choice of some other limit tap will be necessary.

YG TECHNICAL DATA

12 TAP RECOMMENDATIONS FOR CLASSES OF THREAD -METRIC

Size	Pitch	Recommended Tap for Class of Thread		Pitch Diameter Limits for Class of Thread (mm)			Pitch Diameter Limits for Class of Thread (inch)		
		4H	6H	Min. (Basic)	Max. 4H	Max. 6H	Min. (Basic)	Max. 4H	Max. 6H
M1.6	0.35	D1	D3	1.373	1.426	1.458	.05406	.05614	.05740
M2	0.40	D1	D3	1.740	1.796	1.830	.06850	.07071	.07205
M2.5	0.45	D1	D3	2.208	2.268	2.303	.08693	.08929	.09067
M3	0.50	D1	D3	2.675	2.738	2.775	.10531	.10780	.10925
M3.5	0.60	D1	D4	3.110	3.181	3.222	.12244	.12524	.12685
M4	0.70	D2	D4	3.545	3.620	3.663	.13957	.14252	.14421
M4.5	0.75	D2	D4	4.013	4.088	4.131	.15789	.16094	.16264
M5	0.80	D2	D4	4.480	4.560	4.605	.17638	.17953	.18130
M6	1.00	D3	D5	5.350	5.445	5.500	.21063	.21437	.21654
M7	1.00	D3	D5	6.350	6.445	6.500	.25000	.25374	.25591
M8	1.25	D3	D5	7.188	7.288	7.348	.28299	.28693	.28929
M10	1.50	D3	D6	9.026	9.138	9.206	.35535	.35976	.36244
M12	1.75	D3	D6	10.863	10.988	11.063	.42768	.43260	.43555
M14	2.00	D3	D7	12.701	12.833	12.913	.50004	.50524	.50839
M16	2.00	D4	D7	14.701	14.833	14.913	.57878	.58398	.58713
M20	2.50	D4	D7	18.376	18.516	18.600	.72346	.72898	.73228
M24	3.00	D4	D8	22.051	22.221	22.316	.86815	.87484	.87858
M30	3.50	D5	D9	27.727	27.907	28.007	1.09161	1.0987	1.10264
M36	4.00	D5	D9	33.402	33.592	33.702	1.31504	1.32252	1.32685

13 TOLERANCE CHART - USCTI

Element	Nominal Diameter Range in Inches		Direction	Tolerance (Inches)
	Over	To (Inc.)		
Overall Length - L	.0520	1.0100	PLUS OR MINUS	.031
	1.0100	4.0100	PLUS OR MINUS	.063
Thread Length - L1	.0520	.2230	PLUS OR MINUS	.047
	.2230	.5100	PLUS OR MINUS	.063
	.5100	1.5100	PLUS OR MINUS	.094
	1.5100	4.0100	PLUS OR MINUS	.125
Square Length - L3	.0520	1.0100	PLUS OR MINUS	.031
	1.0100	4.0100	PLUS OR MINUS	.063
Shank Diameter - D	.0520	.2230	MINUS	.0015
	.2230	.6350	MINUS	.0015
	.6350	1.0100	MINUS	.0020
	1.0100	1.5100	MINUS	.0020
	1.5100	2.0100	MINUS	.0030
	2.0100	4.0100	MINUS	.0030
Square Size - a	.0520	.5100	MINUS	.004
	.5100	1.0100	MINUS	.006
	1.0100	2.0100	MINUS	.008
	2.0100	4.0100	MINUS	.010

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TECHNICAL DATA

14 THREAD LIMITS

Unified Thread, Machine Screw Size - Ground Thread

Size	Thread per Inch			Major Diameter (Inches)			Pitch Diameter Limits (Inches)								
	UNC	UNF	UNS	Basic	Min.	Max.	Basic Pitch Dia.	H1 Limit		H2 Limit		H3 Limit		H7 Limit	
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
#0	–	80	–	.0600	.0605	.0615	.0519	.0519	.0524	.0524	.0529	–	–	–	–
#1	64	–	–	.0730	.0735	.0745	.0629	.0629	.0634	.0634	.0639	–	–	–	–
	–	72	–	.0730	.0735	.0745	.0640	.0640	.0645	.0645	.0650	–	–	–	–
#2	56	–	–	.0860	.0865	.0875	.0744	.0744	.0749	.0749	.0754	–	–	–	–
	–	64	–	.0860	.0865	.0875	.0759	–	–	.0764	.0769	–	–	–	–
#3	48	–	–	.0990	.0100	.1010	.0855	.0855	.0860	.0860	.0865	–	–	–	–
	–	56	–	.0990	.0995	.1005	.0874	.0874	.0879	.0879	.0884	–	–	–	–
#4	–	–	36	.1120	.1135	.1145	.0940	–	–	.0945	.0950	–	–	–	–
	40	–	–	.1120	.1135	.1145	.0958	.0958	.0963	.0963	.0968	–	–	–	–
	–	48	–	.1120	.1130	.1140	.0985	.0985	.0990	.0990	.0995	–	–	–	–
#5	40	–	–	.1250	.1265	.1275	.1088	.1088	.1093	.1093	.1098	–	–	–	–
	–	44	–	.1250	.1260	.1270	.1102	–	–	.1107	.1112	–	–	–	–
#6	32	–	–	.1380	.1400	.1410	.1177	.1177	.1182	.1182	.1187	.1187	.1192	.1207	.1212
	–	40	–	.1380	.1395	.1405	.1218	.1218	.1223	.1223	.1228	—	—	—	—
#8	32	–	–	.1640	.1660	.1670	.1437	.1437	.1442	.1442	.1447	.1447	.1452	.1467	.1472
	–	36	–	.1640	.1655	.1665	.1460	–	–	.1465	.1470	—	—	—	—
#10	24	–	–	.1900	.1930	.1940	.1629	.1629	.1634	.1634	.1639	.1639	.1644	.1659	.1664
	–	32	–	.1900	.1920	.1930	.1697	.1697	.1702	.1702	.1707	.1707	.1712	.1727	.1732
#12	24	–	–	.2160	.2190	.2200	.1889	–	–	–	–	.1899	.1904	–	–
	–	28	–	.2160	.2185	.2195	.1928	–	–	–	–	.1938	.1943	–	–

Lead Tolerance

A maximum lead deviation of plus or minus .0005" within any two threads not farther apart than 1" is permitted

Pitch Diameter Limits

H1 = Basic to basic plus .0005"
H2 = Basic plus .0005" to basic plus .001"
H3 = Basic plus .001" to basic plus .0015"
H7 = Basic plus .003" to basic plus .0035"

Angle Tolerance

24 to 80 threads per inch incl. = 30 plus or minus in 1/2 angle.

YG TECHNICAL DATA

Unified Thread, Machine Screw Size - Ground Thread

Size	Thread per Inch			Major Diameter (Inches)			Pitch Diameter Limits (Inches)													
	UNC	UNF	UNS	Basic	Min.	Max.	Basic Pitch Dia.	H1 Limit		H2 Limit		H3 Limit		H4 Limit		H5 Limit		H6 Limit	
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/4	20	–	–	.2500	.2540	.2550	.2175	.2175	.2180	.2180	.2185	.2185	.2190	–	–	.2195	.2200	–	–
	–	28	–	.2500	.2525	.2535	.2268	.2268	.2273	.2273	.2278	.2278	.2283	.2283	.2288	–	–	–	–
5/16	18	–	–	.3125	.3170	.3180	.2764	.2764	.2769	.2769	.2774	.2774	.2779	–	–	.2784	.2789	–	–
	–	24	–	.3125	.3155	.3165	.2854	.2854	.2859	.2859	.2864	.2864	.2869	.2869	.2874	–	–	–	–
3/8	16	–	–	.3750	.3800	.3810	.3344	.3344	.3349	.3349	.3354	.3354	.3359	–	–	.3364	.3369	–	–
	–	24	–	.3750	.3780	.3790	.3479	.3479	.3484	.3484	.3489	.3489	.3494	.3494	.3499	–	–	–	–
7/16	14	–	–	.4375	.4435	.4445	.3911	–	–	.3916	.3921	.3921	.3926	–	–	.3931	.3936	–	–
	–	20	–	.4375	.4415	.4425	.4050	–	–	–	–	.4060	.4065	–	–	.4070	.4075	–	–
1/2	13	–	–	.5000	.5065	.5075	.4500	.4500	.4505	.4505	.4510	.4510	.4515	–	–	.4520	.4525	–	–
	–	20	–	.5000	.5040	.5050	.4675	.4675	.4680	.4680	.4685	.4685	.4690	–	–	.4695	.4700	–	–
9/16	12	–	–	.5625	.5690	.5700	.5084	–	–	.5089	.5094	.5094	.5099	–	–	.5104	.5109	–	–
	–	18	–	.5625	.5670	.5680	.5264	–	–	.5269	.5274	.5274	.5279	–	–	.5284	.5289	–	–
5/8	11	–	–	.6250	.6320	.6330	.5660	–	–	.5665	.5670	.5670	.5675	–	–	.5680	.5685	–	–
	–	18	–	.6250	.6295	.6305	.5889	–	–	.5894	.5899	.5899	.5904	–	–	.5909	.5914	–	–
11/16	–	–	11	.6875	.6945	.6955	.6285	–	–	–	–	.6295	.6300	–	–	–	–	–	–
	–	–	16	.6875	.6925	.6935	.6469	–	–	.6855	.6860	.6479	.6484	–	–	–	–	–	–
3/4	10	–	–	.7500	.7525	.7590	.6850	.6850	.6855	.7099	.7104	.6860	.6865	–	–	.6870	.6875	–	–
	–	16	–	.7500	.7550	.7560	.7094	.7094	.7099	–	–	.7104	.7109	–	–	.7114	.7119	.8053	–
7/8	9	–	–	.8750	.8835	.8850	.8028	–	–	.8291	.8296	–	–	.8043	.8048	–	–	.8311	.8058
	–	14	–	.8750	.8810	.8820	.8286	–	–	.9193	.9198	–	–	.8301	.8306	–	–	.9213	.8318
1	8	–	–	1.0000	1.0095	1.0110	.9188	–	–	–	–	–	–	.9203	.9208	–	–	–	.9218
	–	12	–	1.0000	1.0065	1.0075	.9459	–	–	–	–	–	–	.9474	.9479	–	–	–	–
	–	–	14	1.0000	1.0060	1.0070	.9536	–	–			–	–	.9551	.9556	–	–		–

Lead Tolerance

A maximum lead deviation of plus or minus .0005" within any two threads not farther apart than 1" is permitted

Pitch Diameter Limits

H1 = Basic to basic plus .0005"
H2 = Basic plus .0005" to basic plus .001"
H3 = Basic plus .001" to basic plus .0015"
H4 = Basic plus .0015" to basic plus .0020"
H5 = Basic plus .0020" to basic plus .0025"
H6 = Basic plus .0025" to basic plus .0030"

Angle Tolerance

THREADS PER INCH	DEVIATION IN HALF ANGLE
6 TO 9 INCL. 10 TO 28 INCL.	25' PLUS OR MINUS 30' PLUS OR MINUS

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TECHNICAL DATA

Metric Thread - Ground Thread

Size	Pitch		Major Diameter (Inches)			Pitch Diameter Limits (Inches)										
	Coarse	Fine	Basic	Min.	Max.	Basic Pitch Dia.	D2 Limit Min.	D2 Limit Max.	D3 Limit Min.	D3 Limit Max.	D4 Limit Min.	D4 Limit Max.	D5 Limit Min.	D5 Limit Max.	D6 Limit Min.	D6 Limit Max.
M2	0.4	–	.0787	.0801	.0811	.0685	.0690	.0696	.0695	.0701	.0700	.0706	–	–	–	–
M2.2	0.45	–	.0866	.0881	.0891	.0751	.0756	.0762	.0761	.0767	.0766	.0772	–	–	–	–
M2.3	0.4	–	.0906	.0919	.0929	.0803	.0808	.0814	.0813	.0819	.0818	.0824	–	–	–	–
M2.6	0.45	–	.1024	.1038	.1048	.0909	.0913	.0919	.0918	.0924	.0923	.0929	–	–	–	–
M3	0.5	–	.1181	.1198	.1208	.1053	.1058	.1064	.1063	.1069	.1068	.1074	.1073	.1079	–	–
	–	0.35	.1181	.1193	.1203	.1092	.1096	.1102	.1101	.1107	.1106	.1112	.1111	.1117	–	–
M3.5	0.6	–	.1378	.1397	.1407	.1225	.1227	.1235	.1232	.1240	.1237	.1245	.1242	.1250	–	–
	–	0.35	.1378	.1389	.1399	.1289	.1293	.1299	.1298	.1304	.1303	.1309	.1308	.1314	–	–
M4	0.7	—	.1575	.1597	.1613	.1396	.1398	.1406	.1403	.1411	.1408	.1416	.1413	.1421	–	–
	–	0.5	.1575	.1591	.1601	.1447	.1451	.1457	.1456	.1462	.1461	.1467	.1466	.1472	–	–
M5	0.8	–	.1969	.1994	.2010	.1764	.1766	.1774	.1771	.1779	.1776	.1784	.1781	.1789	–	–
	–	0.5	.1969	.1985	.1995	.1841	.1845	.1851	.1850	.1856	.1855	.1861	.1861	.1866	–	–
M6	1	—	.2362	.2395	.2411	.2106	.2107	.2117	.2112	.2122	.2117	.2127	.2122	.2132	.2127	.2137
	–	0.75	.2362	.2387	.2403	.2170	.2173	.2181	.2178	.2186	.2183	.2191	.2188	.2196	.2193	.2201
M7	1	–	.2756	.2788	.2804	.2500	.2501	.2511	.2506	.2516	.2511	.2521	.2516	.2526	.2521	.2531
	–	0.75	.2756	.2780	.2796	.2564	.2565	.2575	.2570	.2580	.2575	.2585	.2580	.2590	.2585	.2595
M8	1.25	–	.3150	.3189	.3214	.2830	.2828	.2840	.2833	.2845	.2838	.2850	.2843	.2855	.2848	.2860
	–	1	.3150	.3182	.3198	.2894	.2894	.2904	.2899	.2909	.2904	.2914	.2909	.2919	.2914	.2924
M10	1.5	–	.3937	.3984	.4009	.3553	.3552	.3564	.3557	.3569	.3562	.3574	.3567	.3579	.3572	.3584
	–	1.25	.3937	.3976	.4001	.3617	.3616	.3628	.3621	.3633	.3626	.3638	.3631	.3643	.3636	.3648
		1	.3937	.3969	.3985	.3681	.3682	.3692	.3687	.3697	.3692	.3702	.3697	.3707	.3702	.3712
M12	1.75	–	.4724	.4780	.4805	.4277	.4275	.4287	.4280	.4292	.4285	.4297	.4290	.4302	.4295	.4307
	–	1.5	.4724	.4772	.4797	.4341	.4339	.4351	.4344	.4356	.4349	.4361	.4354	.4366	.4359	.4371
	–	1.25	.4724	.4764	.4789	.4405	.4403	.4415	.4408	.4420	.4413	.4425	.4418	.4430	.4423	.4435

Lead Tolerance

The tap major and pitch diameter conversions have been rounded upward.

A maximum lead deviation of +/- .0005˝ within any two threads not further apart than 1˝ is permitted

Angle Tolerance

PITCH(MM)	DEVIATION IN HALF ANGLE
OVER 0.25 TO 2.5 INCL. OVER 2.5 TO 4.0 INCL.	30' PLUS OR MINUS 25' PLUS OR MINUS

YG TECHNICAL DATA

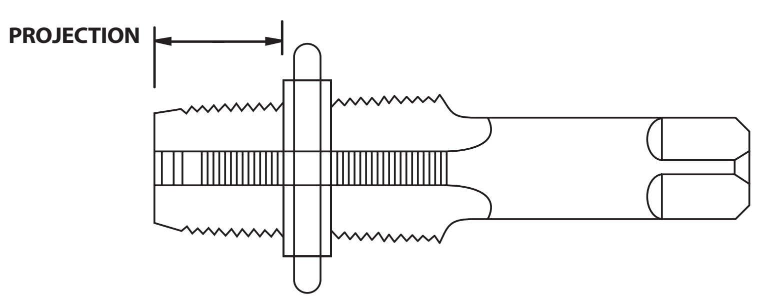
Metric Thread - Ground Thread

Size	Pitch		Major Diameter (Inches)			Pitch Diameter Limits (Inches)								
	Coarse	Fine	Basic	Min.	Max.	Basic Pitch Dia.	D2 Limit Min.	D2 Limit Max.	D3 Limit Min.	D3 Limit Max.	D4 Limit Min.	D4 Limit Max.	D5 Limit Min.	D5 Limit Max.
M14	2	–	.5512	.5575	.5600	.5000	.5015	.5031	.5020	.5036	.5025	.5041	–	–
	–	1.5	.5512	.5559	.5584	.5128	.5147	.5159	.5152	.5164	.5157	.5169	–	–
	–	1.25	.5512	.5551	.5576	.5192	.5211	.5223	.5216	.5228	.5221	.5233	–	–
M16	2	–	.6299	.6363	.6388	.5788	.5802	.5818	.5807	.5823	.5812	.5828	–	–
	–	1.5	.6299	.6347	.6372	.5916	.5934	.5946	.5939	.5951	.5944	.5956	–	–
M18	2.5	–	.7087	.7166	.7191	.6448	.6462	.6478	.6467	.6483	.6472	.6488	–	–
	–	2	.7087	.7150	.7175	.6576	.6590	.6606	.6595	.6611	.6600	.6616	–	–
	–	1.5	.7087	.7134	.7159	.6703	.6722	.6734	.6727	.6739	.6732	.6744	–	–
M20	2.5	–	.7874	.7953	.7976	.7235	.7249	.7265	.7254	.7270	.7259	.7275	–	–
	–	2	.7874	.7937	.7962	.7363	.7377	.7393	.7382	.7398	.7387	.7403	–	–
	–	1.5	.7874	.7921	.7946	.7490	.7509	.7521	.7514	.7526	.7519	.7531	–	–
	–	1	.7874	.7906	.7922	.7618	.7639	.7649	.7644	.7654	.7649	.7659	–	–
M22	2.5	–	.8661	.8741	.8766	.8022	.8037	.8053	.8042	.8058	.8047	.8063	–	–
	–	2	.8661	.8725	.8750	.8150	.8164	.8180	.8169	.8185	.8174	.8190	–	–
	–	1.5	.8661	.8709	.8734	.8278	.8296	.8308	.8301	.8313	.8306	.8318	–	–
	–	1	.8661	.8694	.8710	.8406	.8426	.8436	.8431	.8441	.8436	.8446	–	–
M24	3	–	.9449	.9544	.9583	.8682	.8696	.8712	.8701	.8717	.8706	.8722	.8711	.8727
	–	2	.9449	.9512	.9537	.8938	.8952	.8968	.8957	.8973	.8962	.8978	–	–
	–	1.5	.9449	.9496	.9521	.9065	.9084	.9096	.9089	.9101	.9094	.9106	–	–
	–	1	.9449	.9481	.9497	.9193	.9214	.9224	.9219	.9229	.9224	.9234	–	–
M27	3	–	1.0630	1.0725	1.0764	.9863	.9873	.9893	.9878	.9898	.9883	.9903	.9888	.9908
	–	2	1.0630	1.0693	1.0718	1.0118	1.0133	1.0149	1.0138	1.0154	1.0143	1.0159	–	–
	–	1.5	1.0630	1.0677	1.0702	1.0246	1.0265	1.0277	1.0270	1.0282	1.0275	1.0287	–	–
	–	1	1.0630	1.0662	1.0678	1.0374	1.0393	1.0405	1.0398	1.0410	1.0403	1.0415	–	–
M28	–	2	1.1024	1.1087	1.1112	1.0512	1.0527	1.0543	1.0532	1.0548	1.0537	1.0553	–	–
	–	1.5	1.1024	1.1071	1.1096	1.0640	1.0659	1.0671	1.0664	1.0676	1.0669	1.0681	–	–
	–	1	1.1024	1.1056	1.1072	1.0768	1.0786	1.0798	1.0791	1.0803	1.0796	1.0808	–	–
M30	3.5	–	1.1811	1.1921	1.1961	1.0916	1.0926	1.0946	1.0931	1.0951	1.0936	1.0956	1.0941	1.0961
	–	3	1.1811	1.1906	1.1945	1.1044	1.1054	1.1074	1.1059	1.1079	1.1064	1.1084	1.1069	1.1089
	–	2	1.1811	1.1874	1.1899	1.1300	1.1314	1.1330	1.1319	1.1335	1.1324	1.1340	–	–
	–	1.5	1.1811	1.1858	1.1883	1.1427	1.1446	1.1458	1.1451	1.1463	1.1456	1.1468	–	–
M33	3.5	–	1.2992	1.3103	1.3142	1.2097	1.2108	1.2128	1.2113	1.2133	1.2118	1.2138	1.2123	1.2143
	–	3	1.2992	1.3088	1.3127	1.2225	1.2235	1.2255	1.2240	1.2260	1.2245	1.2265	1.2250	1.2270
	–	2	1.2992	1.3056	1.3081	1.2481	1.2495	1.2511	1.2500	1.2516	1.2505	1.2521	–	–
	–	1.5	1.2992	1.3040	1.3065	1.2609	1.2627	1.2639	1.2632	1.2644	1.2637	1.2649	–	–

Pipe Tap (Limit)

Tap Thread Limits						Reference Dimensions	
Nominal Size Inches	Threads per Inch	Projection* Inches	Projection Tolerance + or -	Taper per Foot Limits		Length	Tap Drill Size** NPT, ANPT, NPTF
				MIN.	MAX.	(L_1)	
1/16	27	.312	.063	.719	.781	.160	C
1/8	27	.312	.063	.719	.781	.1615	Q
1/8	18	.459	.063	.719	.781	.2278	7/16
3/8	18	.454	.063	.719	.781	.240	9/16
1/2	14	.579	.063	.719	.781	.320	45/64
3/4	14	.565	.063	.719	.781	.339	29/32
1	11-1/2	.678	.094	.719	.781	.400	1-9/64
1-1/4	11-1/2	.686	.094	.719	.781	.420	1-31/64
1-1/2	11-1/2	.699	.094	.719	.781	.420	1-23/32
2	11-1/2	.667	.094	.719	.781	.436	2-3/16
2-1/2	8	.925	.094	.734	.781	.682	2-39/64
3	8	.925	.094	.734	.781	.766	3-15/64
3-1/2	8	.938	.125	.734	.781	.821	…
4	8	.950	.125	.734	.781	.844	…

* Distance small end of tap projects through L1 Taper Thread Ring Gage.
** Recommended size given permit direct tapping without reaming the hole, but only give a full thread for approx. the L1 length.



YG TECHNICAL DATA

15 TAP DRILL SIZES - UNIFIED THREAD

Size	Threads Per Inch				Minor Diameter			Tap Drill Diameter (Cutting Tap)				
	UNC	UNF	UNEF	UN	Min. 2B&3B	Max. 2B	Max. 3B	80% Thread	75% Thread	70% Thread	65% Thread	60% Thread
#0	-	80	-	-	.0465	.0514	.0514	.0470	.0478	.0486	.0494	.0503
#1	64	-	-	-	.0561	.0623	.0623	.0568	.0578	.0588	.0598	.0608
	-	72	-	-	.0580	.0635	.0635	.0586	.0595	.0604	.0613	.0622
#2	56	-	-	-	.0667	.0737	.0737	.0674	.0686	.0698	.0709	.0721
	-	64	-	-	.0691	.0753	.0753	.0698	.0708	.0718	.0728	.0738
#3	48	-	-	-	.0764	.0845	.0845	.0774	.0787	.0801	.0814	.0828
	-	56	-	-	.0797	.0865	.0865	.0804	.0816	.0828	.0839	.0851
#4	40	-	-	-	.0849	.0939	.0939	.0860	.0876	.0893	.0909	.0925
	-	48	-	-	.0894	.0968	.0968	.0904	.0917	.0931	.0944	.0958
#5	40	-	-	-	.0979	.1062	.1062	.0990	.1006	.1023	.1039	.1055
	-	44	-	-	.1004	.1079	.1079	.1014	.1029	.1043	.1058	.1073
#6	32	-	-	-	.1040	.1140	.1140	.1055	.1076	.1096	.1116	.1136
	-	40	-	-	.1110	.1190	.1186	.1120	.1136	.1153	.1169	.1185
#8	32	-	-	-	.1300	.1390	.1389	.1315	.1336	.1356	.1376	.1396
	-	36	-	-	.1340	.1420	.1416	.1351	.1369	.1387	.1405	.1424
#10	24	-	-	-	.1450	.1560	.1555	.1467	.1494	.1521	.1548	.1575
	-	32	-	-	.1560	.1640	.1641	.1575	.1596	.1616	.1636	.1656
#12	24	-	-	-	.1710	.1810	.1807	.1727	.1754	.1781	.1808	.1835
	-	28	-	-	.1770	.1860	.1857	.1789	.1812	.1835	.1858	.1882
	-	-	32	-	.1820	.1900	.1895	.1835	.1856	.1876	.1896	.1916
1/4	20	-	-	-	.1960	.2070	.2067	.1980	.2013	.2045	.2078	.2110
	-	28	-	-	.2110	.2200	.2190	.2129	.2152	.2175	.2198	.2222
	-	-	32	-	.2160	.2240	.2229	.2175	.2196	.2216	.2236	.2256
5/16	18	-	-	-	.2520	.2650	.2630	.2548	.2584	.2620	.2656	.2692
	-	-	-	20	.2580	.2700	.2680	.2605	.2638	.2670	.2703	.2735
	-	24	-	-	.2670	.2770	.2754	.2692	.2719	.2746	.2773	.2800
	-	-	-	28	.2740	.2820	.2807	.2754	.2777	.2800	.2823	.2847
	-	-	32	-	.2790	.2860	.2847	.2800	.2821	.2841	.2861	.2881
3/8	16	-	-	-	.3070	.3210	.3182	.3101	.3141	.3182	.3222	.3263
	-	-	-	20	.3210	.3320	.3297	.3230	.3263	.3295	.3328	.3360
	-	24	-	-	.3300	.3400	.3372	.3317	.3344	.3371	.3398	.3425
	-	-	-	28	.3360	.3450	.3426	.3379	.3402	.3425	.3448	.3472
	-	-	32	-	.3410	.3490	.3469	.3425	.3446	.3466	.3486	.3506
7/16	14	-	-	-	.3600	.3760	.3717	.3633	.3679	.3726	.3772	.3818
	-	-	-	16	.3700	.3840	.3800	.3726	.3766	.3807	.3847	.3888
	-	20	-	-	.3830	.3950	.3916	.3855	.3888	.3920	.3953	.3985
	-	-	28	-	.3990	.4070	.4051	.4004	.4027	.4050	.4073	.4097
	-	-	-	32	.4040	.4110	.4094	.4050	.4071	.4091	.4111	.4131
1/2	13	-	-	-	.4170	.4340	.4284	.4201	.4251	.4301	.4351	.4400
	-	-	-	16	.4320	.4460	.4419	.4351	.4391	.4432	.4472	.4513
	-	20	-	-	.4460	.4570	.4537	.4480	.4513	.4545	.4578	.4610
	-	-	28	-	.4610	.4700	.4676	.4629	.4652	.4675	.4698	.4722
	-	-	-	32	.4660	.4740	.4719	.4675	.4696	.4716	.4736	.4756
9/16	12	-	-	-	.4720	.4900	.4843	.4759	.4813	.4867	.4921	.4976
	-	-	-	16	.4950	.5090	.5040	.4976	.5016	.5057	.5097	.5138
	-	18	-	-	.5020	.5150	.5106	.5048	.5084	.5120	.5156	.5192
	-	-	-	20	.5080	.5200	.5162	.5105	.5138	.5170	.5203	.5235
	-	-	24	-	.5170	.5270	.5244	.5192	.5219	.5246	.5273	.5300
	-	-	-	28	.5240	.5320	.5301	.5254	.5277	.5300	.5323	.5347
	-	-	-	32	.5290	.5360	.5344	.5300	.5321	.5341	.5361	.5381
5/8	11	-	-	-	.5270	.5460	.5391	.5305	.5364	.5423	.5482	.5541

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

Size	Threads Per Inch				Minor Diameter			Tap Drill Diameter (Cutting Tap)				
	UNC	UNF	UNEF	UN	Min. 2B&3B	Max. 2B	Max. 3B	80% Thread	75% Thread	70% Thread	65% Thread	60% Thread
5/8	-	-	-	12	.5350	.5530	.5463	.5384	.5438	.5492	.5546	.5601
	-	-	-	16	.5570	.5710	.5662	.5601	.5641	.5682	.5722	.5763
	-	18	-	-	.5650	.5780	.5730	.5673	.5709	.5745	.5781	.5817
	-	-	-	20	.5710	.5820	.5787	.5730	.5763	.5795	.5828	.5860
	-	-	24	-	.5800	.5900	.5869	.5817	.5844	.5871	.5898	.5925
	-	-	-	28	.5860	.5950	.5926	.5879	.5902	.5925	.5948	.5972
	-	-	-	32	.5910	.5980	.5969	.5925	.5946	.5966	.5986	.6006
11/16	-	-	-	12	.5970	.6150	.6085	.6009	.6063	.6117	.6171	.6226
	-	-	-	16	.6200	.6340	.6284	.6226	.6266	.6307	.6347	.6388
	-	-	-	20	.6330	.6450	.6412	.6355	.6388	.6420	.6453	.6485
	-	-	24	-	.6420	.6520	.6494	.6442	.6469	.6496	.6523	.6550
	-	-	-	28	.6490	.6570	.6551	.6504	.6527	.6550	.6573	.6597
	-	-	-	32	.6540	.6610	.6594	.6550	.6571	.6591	.6611	.6631
3/4	10	-	-	-	.6420	.6630	.6545	.6461	.6526	.6591	.6656	.6721
	-	-	-	12	.6600	.6780	.6707	.6634	.6688	.6742	.6796	.6851
	-	16	-	-	.6820	.6960	.6908	.6851	.6891	.6932	.6972	.7013
	-	-	20	-	.6960	.7070	.7037	.6980	.7013	.7045	.7078	.7110
	-	-	-	28	.7110	.7200	.7176	.7129	.7152	.7175	.7198	.7222
	-	-	-	32	.7160	.7240	.7219	.7175	.7196	.7216	.7236	.7256
13/16	-	-	-	12	.7220	.7400	.7329	.7259	.7313	.7367	.7421	.7476
	-	-	-	16	.7450	.7590	.7533	.7476	.7516	.7557	.7597	.7638
	-	-	20	-	.7580	.7700	.7662	.7605	.7638	.7670	.7703	.7735
	-	-	-	28	.7740	.7820	.7801	.7754	.7777	.7800	.7823	.7847
	-	-	-	32	.7790	.7860	.7844	.7800	.7821	.7841	.7861	.7881
7/8	9	-	-	-	.7550	.7780	.7681	.7595	.7668	.7740	.7812	.7884
	-	-	-	12	.7850	.8030	.7948	.7884	.7938	.7992	.8046	.8101
	-	14	-	-	.7980	.8140	.8068	.8008	.8054	.8101	.8147	.8193
	-	-	-	16	.8070	.8210	.8158	.8101	.8141	.8182	.8222	.8263
	-	-	20	-	.8210	.8320	.8287	.8230	.8263	.8295	.8328	.8360
	-	-	-	28	.8360	.8450	.8426	.8379	.8402	.8425	.8448	.8472
	-	-	-	32	.8410	.8490	.8469	.8425	.8446	.8466	.8486	.8506
15/16	-	-	-	12	.8470	.8650	.8575	.8509	.8563	.8617	.8671	.8726
	-	-	-	16	.8700	.8840	.8783	.8726	.8766	.8807	.8847	.8888
	-	-	20	-	.8830	.8950	.8912	.8855	.8888	.8920	.8953	.8985
	-	-	-	28	.8990	.9070	.9051	.9004	.9027	.9050	.9073	.9097
	-	-	-	32	.9040	.9110	.9094	.9050	.9071	.9091	.9111	.9131
1	8	-	-	-	.8650	.8900	.8797	.8701	.8782	.8863	.8945	.9026
	-	12	-	-	.9100	.9280	.9198	.9134	.9188	.9242	.9296	.9351
	-	-	-	16	.9320	.9460	.9408	.9351	.9391	.9432	.9472	.9513
	-	-	20	-	.9460	.9570	.9537	.9480	.9513	.9545	.9578	.9610
	-	-	-	28	.9610	.9700	.9676	.9629	.9652	.9675	.9698	.9722
	-	-	-	32	.9660	.9740	.9719	.9675	.9696	.9716	.9736	.9756
1-1/16	-	-	-	8	.9270	.9520	.9422	.9326	.9407	.9488	.9570	.9651
	-	-	-	12	.9720	.9900	.9823	.9759	.9813	.9867	.9921	.9976
	-	-	-	16	.9950	1.0090	1.0033	.9976	1.0016	1.0057	1.0097	1.0138
	-	-	18	-	1.0020	1.0150	1.0105	1.0048	1.0084	1.0120	1.0156	1.0192
	-	-	-	20	1.0080	1.0200	1.0162	1.0105	1.0138	1.0170	1.0203	1.0235
	-	-	-	28	1.0240	1.0320	1.0301	1.0254	1.0277	1.0300	1.0323	1.0347
1-1/8	7	-	-	-	.9700	.9980	.9875	.9765	.9858	.9951	1.0044	1.0137
	-	-	-	8	.9900	1.0150	1.0047	.9951	1.0032	1.0113	1.0195	1.0276
	-	12	-	-	1.0350	1.0530	1.0448	1.0384	1.0438	1.0492	1.0546	1.0601
	-	-	-	16	1.0570	1.0710	1.0658	1.0601	1.0641	1.0682	1.0722	1.0763
	-	-	18	-	1.0650	1.0780	1.0730	1.0673	1.0709	1.0745	1.0781	1.0817
	-	-	-	20	1.0710	1.0820	1.0787	1.0730	1.0763	1.0795	1.0828	1.0860

YG TECHNICAL DATA

Size	Threads Per Inch				Minor Diameter			Tap Drill Diameter (Cutting Tap)				
	UNC	UNF	UNEF	UN	Min. 2B&3B	Max. 2B	Max. 3B	80% Thread	75% Thread	70% Thread	65% Thread	60% Thread
1-1/8	-	-	-	28	1.0860	1.0950	1.0926	1.0879	1.0902	1.0925	1.0948	1.0972
1-3/16	-	-	-	8	1.0520	1.0770	1.0672	1.0576	1.0657	1.0738	1.0820	1.0901
	-	-	-	12	1.0970	1.1150	1.1073	1.1009	1.1063	1.1117	1.1171	1.1226
	-	-	-	16	1.1200	1.1340	1.1283	1.1226	1.1266	1.1307	1.1347	1.1388
	-	-	18	-	1.1270	1.1400	1.1355	1.1298	1.1334	1.1370	1.1406	1.1442
	-	-	-	20	1.1330	1.1450	1.1412	1.1355	1.1388	1.1420	1.1453	1.1485
	-	-	-	28	1.1490	1.1570	1.1551	1.1504	1.1527	1.1550	1.1573	1.1597
1-1/4	7	-	-	-	1.0950	1.1230	1.1125	1.1015	1.1108	1.1201	1.1294	1.1387
	-	-	-	8	1.1150	1.1400	1.1297	1.1201	1.1282	1.1363	1.1445	1.1526
	-	12	-	-	1.1600	1.1780	1.1698	1.1634	1.1688	1.1742	1.1796	1.1851
	-	-	-	16	1.1820	1.1960	1.1908	1.1851	1.1891	1.1932	1.1972	1.2013
	-	-	18	-	1.1900	1.2030	1.1980	1.1923	1.1959	1.1995	1.2031	1.2067
	-	-	-	20	1.1960	1.2070	1.2037	1.1980	1.2013	1.2045	1.2078	1.2110
	-	-	-	28	1.2110	1.2200	1.2176	1.2129	1.2152	1.2175	1.2198	1.2222
1-5/16	-	-	-	8	1.1770	1.2020	1.1922	1.1826	1.1907	1.1988	1.2070	1.2151
	-	-	-	12	1.2220	1.2400	1.2323	1.2259	1.2313	1.2367	1.2421	1.2476
	-	-	-	16	1.2450	1.2590	1.2533	1.2476	1.2516	1.2557	1.2597	1.2638
	-	-	18	-	1.2520	1.2650	1.2605	1.2548	1.2584	1.2620	1.2656	1.2692
	-	-	-	20	1.2580	1.2700	1.2662	1.2605	1.2638	1.2670	1.2703	1.2735
	-	-	-	28	1.2740	1.2820	1.2801	1.2754	1.2777	1.2800	1.2823	1.2847
1-3/8	6	-	-	-	1.1950	1.2250	1.2146	1.2018	1.2126	1.2235	1.2343	1.2451
	-	-	-	8	1.2400	1.2650	1.2547	1.2451	1.2532	1.2613	1.2695	1.2776
	-	12	-	-	1.2850	1.3030	1.2948	1.2884	1.2938	1.2992	1.3046	1.3101
	-	-	-	16	1.3070	1.3210	1.3158	1.3101	1.3141	1.3182	1.3222	1.3263
	-	-	18	-	1.3150	1.3280	1.3230	1.3173	1.3209	1.3245	1.3281	1.3317
	-	-	-	20	1.3210	1.3320	1.3287	1.3230	1.3263	1.3295	1.3328	1.3360
	-	-	-	28	1.3360	1.3450	1.3426	1.3379	1.3402	1.3425	1.3448	1.3472
1-7/16	-	-	-	6	1.2570	1.2880	1.2771	1.2643	1.2751	1.2860	1.2968	1.3076
	-	-	-	8	1.3020	1.3270	1.3172	1.3076	1.3157	1.3238	1.3320	1.3401
	-	-	-	12	1.3470	1.3650	1.3573	1.3509	1.3563	1.3617	1.3671	1.3726
	-	-	-	16	1.3700	1.3840	1.3783	1.3726	1.3766	1.3807	1.3847	1.3888
	-	-	18	-	1.3770	1.3900	1.3855	1.3798	1.3834	1.3870	1.3906	1.3942
	-	-	-	20	1.3830	1.3950	1.3912	1.3855	1.3888	1.3920	1.3953	1.3985
	-	-	-	28	1.3990	1.4070	1.4051	1.4004	1.4027	1.4050	1.4073	1.4097
1-1/2	6	-	-	-	1.3200	1.3500	1.3396	1.3268	1.3376	1.3485	1.3593	1.3701
	-	-	-	8	1.3650	1.3900	1.3797	1.3701	1.3782	1.3863	1.3945	1.4026
	-	12	-	-	1.4100	1.4280	1.4198	1.4134	1.4188	1.4242	1.4296	1.4351
	-	-	-	16	1.4320	1.4460	1.4408	1.4351	1.4391	1.4432	1.4472	1.4513
	-	-	18	-	1.4400	1.4520	1.4480	1.4423	1.4459	1.4495	1.4531	1.4567
	-	-	-	20	1.4460	1.4570	1.4537	1.4480	1.4513	1.4545	1.4578	1.4610
	-	-	-	28	1.4610	1.4700	1.4676	1.4629	1.4652	1.4675	1.4698	1.4722
1-9/16	-	-	-	6	1.3820	1.4130	1.4021	1.3893	1.4001	1.4110	1.4218	1.4326
	-	-	-	8	1.4270	1.4520	1.4422	1.4326	1.4407	1.4488	1.4570	1.4651
	-	-	-	12	1.4720	1.4900	1.4823	1.4759	1.4813	1.4867	1.4921	1.4976
	-	-	-	16	1.4950	1.5090	1.5033	1.4976	1.5016	1.5057	1.5097	1.5138
	-	-	18	-	1.5020	1.5150	1.5105	1.5048	1.5084	1.5120	1.5156	1.5192
	-	-	-	20	1.5080	1.5200	1.5162	1.5105	1.5138	1.5170	1.5203	1.5235
1-5/8	-	-	-	6	1.4450	1.4750	1.4646	1.4518	1.4626	1.4735	1.4843	1.4951
	-	-	-	8	1.4900	1.5150	1.5047	1.4951	1.5032	1.5113	1.5195	1.5276
	-	-	-	12	1.5350	1.5530	1.5448	1.5384	1.5438	1.5492	1.5546	1.5601
	-	-	-	16	1.5570	1.5710	1.5658	1.5601	1.5641	1.5682	1.5722	1.5763
	-	-	18	-	1.5650	1.5780	1.5730	1.5673	1.5709	1.5745	1.5781	1.5817
	-	-	-	20	1.5710	1.5820	1.5787	1.5730	1.5763	1.5795	1.5828	1.5860
1-11/16	-	-	-	6	1.5070	1.5380	1.5271	1.5143	1.5251	1.5360	1.5468	1.5576

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

TECHNICAL DATA

Size	Threads Per Inch				Minor Diameter			Tap Drill Diameter (Cutting Tap)				
	UNC	UNF	UNEF	UN	Min. 2B&3B	Max. 2B	Max. 3B	80% Thread	75% Thread	70% Thread	65% Thread	60% Thread
1-11/16	-	-	-	8	1.5520	1.5770	1.5672	1.5576	1.5657	1.5738	1.5820	1.5901
	-	-	-	12	1.5970	1.6150	1.6073	1.6009	1.6063	1.6117	1.6171	1.6226
	-	-	-	16	1.6200	1.6340	1.6283	1.6226	1.6266	1.6307	1.6347	1.6388
	-	-	18	-	1.6270	1.6400	1.6355	1.6298	1.6334	1.6370	1.6406	1.6442
	-	-	-	20	1.6330	1.6450	1.6412	1.6355	1.6388	1.6420	1.6453	1.6485
1-3/4	5	-	-	-	1.5340	1.5680	1.5575	1.5422	1.5552	1.5681	1.5811	1.5941
	-	-	-	6	1.5700	1.6000	1.5896	1.5768	1.5876	1.5985	1.6093	1.6201
	-	-	-	8	1.6150	1.6400	1.6297	1.6201	1.6282	1.6363	1.6445	1.6526
	-	-	-	12	1.6600	1.6780	1.6698	1.6634	1.6688	1.6742	1.6796	1.6851
	-	-	-	16	1.6820	1.6960	1.6908	1.6851	1.6891	1.6932	1.6972	1.7013
	-	-	-	20	1.6960	1.7070	1.7037	1.6980	1.7013	1.7045	1.7078	1.7110
1-13/16	-	-	-	6	1.6320	1.6630	1.6521	1.6393	1.6501	1.6610	1.6718	1.6826
	-	-	-	8	1.6770	1.7020	1.6922	1.6826	1.6907	1.6988	1.7070	1.7151
	-	-	-	12	1.7220	1.7400	1.7323	1.7259	1.7313	1.7367	1.7421	1.7476
	-	-	-	16	1.7450	1.7590	1.7533	1.7476	1.7516	1.7557	1.7597	1.7638
	-	-	-	20	1.7580	1.7700	1.7662	1.7605	1.7638	1.7670	1.7703	1.7735
1-7/8	-	-	-	6	1.6950	1.7250	1.7146	1.7018	1.7126	1.7235	1.7343	1.7451
	-	-	-	8	1.7400	1.7650	1.7547	1.7451	1.7532	1.7613	1.7695	1.7776
	-	-	-	12	1.7850	1.8030	1.7948	1.7884	1.7938	1.7992	1.8046	1.8101
	-	-	-	16	1.8070	1.8210	1.8158	1.8101	1.8141	1.8182	1.8222	1.8263
	-	-	-	20	1.8210	1.8320	1.8287	1.8230	1.8263	1.8295	1.8328	1.8360
1-15/16	-	-	-	6	1.7570	1.7880	1.7771	1.7643	1.7751	1.7860	1.7968	1.8076
	-	-	-	8	1.8020	1.8270	1.8172	1.8076	1.8157	1.8238	1.8320	1.8401
	-	-	-	12	1.8470	1.8650	1.8573	1.8509	1.8563	1.8617	1.8671	1.8726
	-	-	-	16	1.8700	1.8840	1.8783	1.8726	1.8766	1.8807	1.8847	1.8888
	-	-	-	20	1.8830	1.8950	1.8912	1.8855	1.8888	1.8920	1.8953	1.8985
2	4 1/2	-	-	-	1.7590	1.7950	1.7861	1.7691	1.7835	1.7979	1.8124	1.8268
	-	-	-	6	1.8200	1.8500	1.8396	1.8268	1.8376	1.8485	1.8593	1.8701
	-	-	-	8	1.8650	1.8900	1.8797	1.8701	1.8782	1.8863	1.8945	1.9026
	-	-	-	12	1.9100	1.9280	1.9198	1.9134	1.9188	1.9242	1.9296	1.9351
	-	-	-	16	1.9320	1.9460	1.9408	1.9351	1.9391	1.9432	1.9472	1.9513
	-	-	-	20	1.9460	1.9570	1.9537	1.9480	1.9513	1.9545	1.9578	1.9610
2-1/8	-	-	-	6	1.9450	1.9750	1.9646	1.9518	1.9626	1.9735	1.9843	1.9951
	-	-	-	8	1.9900	2.0150	2.0047	1.9951	2.0032	2.0113	2.0195	2.0276
	-	-	-	12	2.0350	2.0530	2.0448	2.0384	2.0438	2.0492	2.0546	2.0601
	-	-	-	16	2.0570	2.0710	2.0658	2.0601	2.0641	2.0682	2.0722	2.0763
	-	-	-	20	2.0710	2.0820	2.0787	2.0730	2.0763	2.0795	2.0828	2.0860
2-1/4	4 1/2	-	-	-	2.0090	2.0450	2.0361	2.0191	2.0335	2.0479	2.0624	2.0768
	-	-	-	6	2.0700	2.1000	2.0896	2.0768	2.0876	2.0985	2.1093	2.1201
	-	-	-	8	2.1150	2.1400	2.1297	2.1201	2.1282	2.1363	2.1445	2.1526
	-	-	-	12	2.1600	2.1780	2.1698	2.1634	2.1688	2.1742	2.1796	2.1851
	-	-	-	16	2.1820	2.1960	2.1908	2.1851	2.1891	2.1932	2.1972	2.2013
	-	-	-	20	2.1960	2.2070	2.2037	2.1980	2.2013	2.2045	2.2078	2.2110
2-3/8	-	-	-	6	2.1950	2.2260	2.2146	2.2018	2.2126	2.2235	2.2343	2.2451
	-	-	-	8	2.2400	2.2650	2.2547	2.2451	2.2532	2.2613	2.2695	2.2776
	-	-	-	12	2.2850	2.3030	2.2948	2.2884	2.2938	2.2992	2.3046	2.3101
	-	-	-	16	2.3070	2.3210	2.3158	2.3101	2.3141	2.3182	2.3222	2.3263
	-	-	-	20	2.3210	2.3320	2.3287	2.3230	2.3263	2.3295	2.3328	2.3360
2-1/2	4	-	-	-	2.2290	2.2670	2.2594	2.2402	2.2564	2.2727	2.2889	2.3052
	-	-	-	6	2.3200	2.3500	2.3396	2.3268	2.3376	2.3485	2.3593	2.3701
	-	-	-	8	2.3650	2.3900	2.3797	2.3701	2.3782	2.3863	2.3945	2.4026
	-	-	-	12	2.4100	2.4280	2.4198	2.4134	2.4188	2.4242	2.4296	2.4351
	-	-	-	16	2.4320	2.4460	2.4408	2.4351	2.4391	2.4432	2.4472	2.4513
	-	-	-	20	2.4460	2.4570	2.4537	2.4480	2.4513	2.4545	2.4578	2.4610

TECHNICAL DATA

16 TAP DRILL SIZES - METRIC THREAD

Size	Pitch		Minor dia.		Tap Drill Diameter									
					80% Thread		75% Thread		70% Thread		65% Thread		60% Thread	
	M	MF	Min. 6H	Max. 6H	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH
M1	0.25	–	.729	.798	0.74	.0291	0.76	.0298	0.77	.0304	0.79	.0311	0.81	.0317
	–	0.2	.783	.841	0.79	.0312	0.81	.0317	0.82	.0322	0.83	.0327	0.84	.0332
M1.1	0.25	–	.829	.898	0.84	.0331	0.86	.0337	0.87	.0344	0.89	.0350	0.91	.0356
	–	0.2	.883	.941	0.89	.0351	0.91	.0356	0.92	.0361	0.93	.0367	0.94	.0372
M1.2	0.25	–	.929	.998	0.94	.0370	0.96	.0377	0.97	.0383	0.99	.0389	1.01	.0396
	–	0.2	.983	1.041	0.99	.0391	1.01	.0396	1.02	.0401	1.03	.0406	1.04	.0411
M1.4	0.3	–	1.075	1.159	1.09	.0428	1.11	.0436	1.13	.0444	1.15	.0451	1.17	.0459
	–	0.2	1.183	1.241	1.19	.0469	1.21	.0474	1.22	.0480	1.23	.0485	1.24	.0490
M1.6	0.35	–	1.221	1.321	1.24	.0487	1.26	.0496	1.28	.0505	1.30	.0514	1.33	.0523
	–	0.2	1.383	1.441	1.39	.0548	1.41	.0553	1.42	.0558	1.43	.0563	1.44	.0569
M1.7	0.35	–	1.321	1.421	1.34	.0526	1.36	.0535	1.38	.0544	1.40	.0553	1.43	.0562
	–	0.3	1.375	1.459	1.39	.0547	1.41	.0554	1.43	.0562	1.45	.0570	1.47	.0577
	–	0.25	1.429	1.498	1.44	.0567	1.46	.0573	1.47	.0580	1.49	.0586	1.51	.0593
	–	0.2	1.483	1.541	1.49	.0587	1.51	.0593	1.52	.0598	1.53	.0603	1.54	.0608
M1.8	0.35	–	1.421	1.521	1.44	.0565	1.46	.0574	1.48	.0583	1.50	.0592	1.53	.0601
	–	0.2	1.583	1.641	1.59	.0627	1.61	.0632	1.62	.0637	1.63	.0642	1.64	.0647
M2	0.4	–	1.567	1.679	1.58	.0624	1.61	.0634	1.64	.0644	1.66	.0654	1.69	.0665
	–	0.25	1.729	1.798	1.74	.0685	1.76	.0692	1.77	.0698	1.79	.0704	1.81	.0711
M2.2	0.45	–	1.713	1.838	1.73	.0682	1.76	.0694	1.79	.0705	1.82	.0717	1.85	.0728
	–	0.25	1.929	1.998	1.94	.0764	1.96	.0770	1.97	.0777	1.99	.0783	2.01	.0789
M2.3	0.4	–	1.867	1.979	1.88	.0742	1.91	.0752	1.94	.0762	1.96	.0773	1.99	.0783
	–	0.35	1.921	2.021	1.94	.0762	1.96	.0771	1.98	.0780	2.00	.0789	2.03	.0798
	–	0.25	2.029	2.098	2.04	.0803	2.06	.0810	2.07	.0816	2.09	.0822	2.11	.0829
M2.5	0.45	–	2.013	2.138	2.03	.0800	2.06	.0812	2.09	.0823	2.12	.0835	2.15	.0846
	–	0.35	2.121	2.221	2.14	.0841	2.16	.0850	2.18	.0859	2.20	.0868	2.23	.0877
M2.6	0.45	–	2.113	2.238	2.13	.0840	2.16	.0851	2.19	.0863	2.22	.0874	2.25	.0886
	–	0.35	2.221	2.321	2.24	.0880	2.26	.0889	2.28	.0898	2.30	.0907	2.33	.0916
M3	0.5	–	2.459	2.599	2.48	.0977	2.51	.0989	2.55	.1002	2.58	.1015	2.61	.1028
	–	0.35	2.621	2.721	2.64	.1038	2.66	.1047	2.68	.1056	2.70	.1065	2.73	.1074
M3.5	0.6	–	2.850	3.010	2.88	.1132	2.92	.1148	2.95	.1163	2.99	.1178	3.03	.1194
	–	0.35	3.121	3.221	3.14	.1235	3.16	.1244	3.18	.1253	3.20	.1262	3.23	.1271
M4	0.7	–	3.242	3.422	3.27	.1288	3.32	.1306	3.36	.1324	3.41	.1342	3.45	.1360
	–	0.5	3.459	3.599	3.48	.1370	3.51	.1383	3.55	.1396	3.58	.1409	3.61	.1421
M4.5	0.75	–	3.688	3.878	3.72	.1465	3.77	.1484	3.82	.1503	3.87	.1522	3.92	.1542
	–	0.5	3.959	4.099	3.98	.1567	4.01	.1580	4.05	.1593	4.08	.1605	4.11	.1618
M5	0.9	–	4.026	4.226	4.06	.1600	4.12	.1623	4.18	.1646	4.24	.1669	4.30	.1692
	0.8	–	4.134	4.334	4.17	.1641	4.22	.1662	4.27	.1682	4.32	.1703	4.38	.1723
	–	0.5	4.459	4.599	4.48	.1764	4.51	.1777	4.55	.1790	4.58	.1802	4.61	.1815
M5.5	–	0.9	4.526	4.726	4.56	.1797	4.62	.1820	4.68	.1843	4.74	.1866	4.80	.1889
	–	0.75	4.688	4.878	4.72	.1858	4.77	.1878	4.82	.1897	4.87	.1916	4.92	.1935
	–	0.5	4.959	5.099	4.98	.1961	5.01	.1974	5.05	.1986	5.08	.1999	5.11	.2012
M6	1	–	4.917	5.153	4.96	.1953	5.03	.1979	5.09	.2004	5.16	.2030	5.22	.2055
	–	0.75	5.188	5.378	5.22	.2055	5.27	.2075	5.32	.2094	5.37	.2113	5.42	.2132
	–	0.5	5.459	5.599	5.48	.2158	5.51	.2170	5.55	.2183	5.58	.2196	5.61	.2209
M7	1	–	5.917	6.153	5.96	.2347	6.03	.2372	6.09	.2398	6.16	.2423	6.22	.2449
	–	0.75	6.188	6.378	6.22	.2449	6.27	.2468	6.32	.2487	6.37	.2507	6.42	.2526
	–	0.5	6.459	6.599	6.48	.2551	6.51	.2564	6.55	.2577	6.58	.2590	6.61	.2602
M8	1.25	–	6.647	6.912	6.70	.2638	6.78	.2670	6.86	.2702	6.94	.2734	7.03	.2766
	–	1	6.917	7.153	6.96	.2740	7.03	.2766	7.09	.2792	7.16	.2817	7.22	.2843
	–	0.75	7.188	7.378	7.22	.2843	7.27	.2862	7.32	.2881	7.37	.2900	7.42	.2919
	–	0.5	7.459	7.599	7.48	.2945	7.51	.2958	7.55	.2971	7.58	.2983	7.61	.2996

CARBIDE
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YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

TECHNICAL DATA

Size	Pitch		Minor dia.		Tap Drill Diameter									
					80% Thread		75% Thread		70% Thread		65% Thread		60% Thread	
	M	MF	Min. 6H	Max. 6H	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH
M9	1.25	–	7.647	7.912	7.70	.3032	7.78	.3064	7.86	.3096	7.94	.3128	8.03	.3160
	–	1	7.917	8.153	7.96	.3134	8.03	.3160	8.09	.3185	8.16	.3211	8.22	.3236
	–	0.75	8.188	8.378	8.22	.3236	8.27	.3256	8.32	.3275	8.37	.3294	8.42	.3313
	–	0.5	8.459	8.599	8.48	.3339	8.51	.3352	8.55	.3364	8.58	.3377	8.61	.3390
M10	1.5	–	8.376	8.676	8.44	.3323	8.54	.3362	8.64	.3400	8.73	.3438	8.83	.3477
	–	1.25	8.647	8.912	8.70	.3426	8.78	.3458	8.86	.3490	8.94	.3521	9.03	.3553
	–	1	8.917	9.153	8.96	.3528	9.03	.3553	9.09	.3579	9.16	.3605	9.22	.3630
	–	0.75	9.188	9.378	9.22	.3630	9.27	.3649	9.32	.3669	9.37	.3688	9.42	.3707
	–	0.5	9.459	9.599	9.48	.3732	9.51	.3745	9.55	.3758	9.58	.3771	9.61	.3784
M11	1.5	–	9.376	9.676	9.44	.3717	9.54	.3755	9.64	.3794	9.73	.3832	9.83	.3870
	–	1	9.917	10.153	9.96	.3922	10.03	.3947	10.09	.3973	10.16	.3998	10.22	.4024
	–	0.75	10.188	10.378	10.22	.4024	10.27	.4043	10.32	.4062	10.37	.4081	10.42	.4101
	–	0.5	10.459	10.599	10.48	.4126	10.51	.4139	10.55	.4152	10.58	.4164	10.61	.4177
M12	1.75	–	10.106	10.441	10.18	.4008	10.30	.4053	10.41	.4098	10.52	.4143	10.64	.4187
	–	1.5	10.376	10.676	10.44	.4111	10.54	.4149	10.64	.4187	10.73	.4226	10.83	.4264
	–	1.25	10.647	10.912	10.70	.4213	10.78	.4245	10.86	.4277	10.94	.4309	11.03	.4341
	–	1	10.917	11.153	10.96	.4315	11.03	.4341	11.09	.4366	11.16	.4392	11.22	.4418
	–	0.75	11.188	11.378	11.22	.4418	11.27	.4437	11.32	.4456	11.37	.4475	11.42	.4494
	–	0.5	11.459	11.599	11.48	.4520	11.51	.4533	11.55	.4545	11.58	.4558	11.61	.4571
M13	–	1.75	11.106	11.441	11.18	.4402	11.30	.4447	11.41	.4492	11.52	.4536	11.64	.4581
	–	1.5	11.376	11.676	11.44	.4504	11.54	.4543	11.64	.4581	11.73	.4619	11.83	.4658
	–	1.25	11.647	11.912	11.70	.4607	11.78	.4639	11.86	.4671	11.94	.4703	12.03	.4735
	–	1	11.917	12.153	11.96	.4709	12.03	.4735	12.09	.4760	12.16	.4786	12.22	.4811
	–	0.75	12.188	12.378	12.22	.4811	12.27	.4830	12.32	.4850	12.37	.4869	12.42	.4888
	–	0.5	12.459	12.599	12.48	.4914	12.51	.4926	12.55	.4939	12.58	.4952	12.61	.4965
M14	2	–	11.835	12.210	11.92	.4694	12.05	.4745	12.18	.4796	12.31	.4847	12.44	.4898
	–	1.5	12.376	12.676	12.44	.4898	12.54	.4936	12.64	.4975	12.73	.5013	12.83	.5052
	–	1.25	12.647	12.912	12.70	.5000	12.78	.5032	12.86	.5064	12.94	.5096	13.03	.5128
	–	1	12.917	13.153	12.96	.5103	13.03	.5128	13.09	.5154	13.16	.5179	13.22	.5205
	–	0.75	13.188	13.378	13.22	.5205	13.27	.5224	13.32	.5243	13.37	.5262	13.42	.5282
	–	0.5	13.459	13.599	13.48	.5307	13.51	.5320	13.55	.5333	13.58	.5346	13.61	.5358
M15	–	2	12.835	13.210	12.92	.5087	13.05	.5138	13.18	.5190	13.31	.5241	13.44	.5292
	–	1.5	13.376	13.676	13.44	.5292	13.54	.5330	13.64	.5369	13.73	.5407	13.83	.5445
	–	1.25	13.647	13.912	13.70	.5394	13.78	.5426	13.86	.5458	13.94	.5490	14.03	.5522
	–	1	13.917	14.153	13.96	.5496	14.03	.5522	14.09	.5548	14.16	.5573	14.22	.5599
	–	0.75	14.188	14.378	14.22	.5599	14.27	.5618	14.32	.5637	14.37	.5656	14.42	.5675
	–	0.5	14.459	14.599	14.48	.5701	14.51	.5714	14.55	.5727	14.58	.5739	14.61	.5752
M16	2	–	13.835	14.210	13.92	.5481	14.05	.5532	14.18	.5583	14.31	.5634	14.44	.5685
	–	1.5	14.376	14.676	14.44	.5685	14.54	.5724	14.64	.5762	14.73	.5801	14.83	.5839
	–	1	14.917	15.153	14.96	.5890	15.03	.5916	15.09	.5941	15.16	.5967	15.22	.5992
M17	–	2	14.835	15.210	14.92	.5875	15.05	.5926	15.18	.5977	15.31	.6028	15.44	.6079
	–	1.5	15.376	15.676	15.44	.6079	15.54	.6118	15.64	.6156	15.73	.6194	15.83	.6233
	–	1.25	15.647	15.912	15.70	.6181	15.78	.6213	15.86	.6245	15.94	.6277	16.03	.6309
	–	1	15.917	16.153	15.96	.6284	16.03	.6309	16.09	.6335	16.16	.6360	16.22	.6386
	–	0.75	16.188	16.378	16.22	.6386	16.27	.6405	16.32	.6424	16.37	.6444	16.42	.6463
	–	0.5	16.459	16.599	16.48	.6488	16.51	.6501	16.55	.6514	16.58	.6527	16.61	.6539
M18	2.5	–	15.294	15.744	15.40	.6064	15.56	.6128	15.73	.6192	15.89	.6256	16.05	.6319
	–	2	15.835	16.210	15.92	.6268	16.05	.6319	16.18	.6371	16.31	.6422	16.44	.6473
	–	1.5	16.376	16.676	16.44	.6473	16.54	.6511	16.64	.6550	16.73	.6588	16.83	.6626
	–	1	16.917	17.153	16.96	.6677	17.03	.6703	17.09	.6729	17.16	.6754	17.22	.6780
M19	–	2.5	16.294	16.744	16.40	.6457	16.56	.6521	16.73	.6585	16.89	.6649	17.05	.6713
	–	2	16.835	17.210	16.92	.6662	17.05	.6713	17.18	.6764	17.31	.6815	17.44	.6867

TECHNICAL DATA

Size	Pitch		Minor dia.		Tap Drill Diameter									
					80% Thread		75% Thread		70% Thread		65% Thread		60% Thread	
	M	MF	Min. 6H	Max. 6H	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH
M19	–	1.5	17.376	17.676	17.44	.6867	17.54	.6905	17.64	.6943	17.73	.6982	17.83	.7020
	–	1.25	17.647	17.912	17.70	.6969	17.78	.7001	17.86	.7033	17.94	.7065	18.03	.7097
	–	1	17.917	18.153	17.96	.7071	18.03	.7097	18.09	.7122	18.16	.7148	18.22	.7173
	–	0.75	18.188	18.378	18.22	.7173	18.27	.7193	18.32	.7212	18.37	.7231	18.42	.7250
	–	0.5	18.459	18.599	18.48	.7276	18.51	.7289	18.55	.7301	18.58	.7314	18.61	.7327
M20	2.5	–	17.294	17.744	17.40	.6851	17.56	.6915	17.73	.6979	17.89	.7043	18.05	.7107
	–	2	17.835	18.210	17.92	.7056	18.05	.7107	18.18	.7158	18.31	.7209	18.44	.7260
	–	1.5	18.376	18.676	18.44	.7260	18.54	.7299	18.64	.7337	18.73	.7375	18.83	.7414
	–	1	18.917	19.153	18.96	.7465	19.03	.7490	19.09	.7516	19.16	.7542	19.22	.7567
M21	–	2.5	18.294	18.744	18.40	.7245	18.56	.7309	18.73	.7373	18.89	.7437	19.05	.7501
	–	1.5	19.376	19.676	19.44	.7654	19.54	.7692	19.64	.7731	19.73	.7769	19.83	.7807
	–	1	19.917	20.153	19.96	.7859	20.03	.7884	20.09	.7910	20.16	.7935	20.22	.7961
M22	2.5	–	19.294	19.744	19.40	.7639	19.56	.7702	19.73	.7766	19.89	.7830	20.05	.7894
	–	2	19.835	20.210	19.92	.7843	20.05	.7894	20.18	.7945	20.31	.7997	20.44	.8048
	–	1.5	20.376	20.676	20.44	.8048	20.54	.8086	20.64	.8124	20.73	.8163	20.83	.8201
	–	1	20.917	21.153	20.96	.8252	21.03	.8278	21.09	.8303	21.16	.8329	21.22	.8355
M23	–	2.5	20.294	20.744	20.40	.8032	20.56	.8096	20.73	.8160	20.89	.8224	21.05	.8288
	–	2	20.835	21.210	20.92	.8237	21.05	.8288	21.18	.8339	21.31	.8390	21.44	.8441
	–	1.5	21.376	21.676	21.44	.8441	21.54	.8480	21.64	.8518	21.73	.8556	21.83	.8595
	–	1	21.917	22.153	21.96	.8646	22.03	.8672	22.09	.8697	22.16	.8723	22.22	.8748
M24	3	–	20.752	21.252	20.88	.8221	21.08	.8298	21.27	.8375	21.47	.8452	21.66	.8528
	–	2	21.835	22.210	21.92	.8631	22.05	.8682	22.18	.8733	22.31	.8784	22.44	.8835
	–	1.5	22.376	22.676	22.44	.8835	22.54	.8873	22.64	.8912	22.73	.8950	22.83	.8989
	–	1	22.917	23.153	22.96	.9040	23.03	.9065	23.09	.9091	23.16	.9116	23.22	.9142
M25	–	3	21.752	22.252	21.88	.8615	22.08	.8692	22.27	.8769	22.47	.8845	22.66	.8922
	–	2	22.835	23.210	22.92	.9024	23.05	.9075	23.18	.9127	23.31	.9178	23.44	.9229
	–	1.5	23.376	23.676	23.44	.9229	23.54	.9267	23.64	.9306	23.73	.9344	23.83	.9382
	–	1	23.917	24.153	23.96	.9433	24.03	.9459	24.09	.9485	24.16	.9510	24.22	.9536
M26	–	3	22.752	23.252	22.88	.9009	23.08	.9085	23.27	.9162	23.47	.9239	23.66	.9316
	–	2	23.835	24.210	23.92	.9418	24.05	.9469	24.18	.9520	24.31	.9571	24.44	.9623
	–	1.5	24.376	24.676	24.44	.9623	24.54	.9661	24.64	.9699	24.73	.9738	24.83	.9776
M27	3	–	23.752	24.252	23.88	.9402	24.08	.9479	24.27	.9556	24.47	.9633	24.66	.9709
	–	2.5	24.294	24.744	24.40	.9607	24.56	.9671	24.73	.9735	24.89	.9799	25.05	.9863
	–	2	24.835	25.210	24.92	.9812	25.05	.9863	25.18	.9914	25.31	.9965	25.44	1.0016
	–	1.5	25.376	25.676	25.44	1.0016	25.54	1.0055	25.64	1.0093	25.73	1.0131	25.83	1.0170
	–	1	25.917	26.153	25.96	1.0221	26.03	1.0246	26.09	1.0272	26.16	1.0297	26.22	1.0323
M28	–	3	24.752	25.252	24.88	.9796	25.08	.9873	25.27	.9950	25.47	1.0026	25.66	1.0103
	–	2	25.835	26.210	25.92	1.0205	26.05	1.0256	26.18	1.0308	26.31	1.0359	26.44	1.0410
	–	1.5	26.376	26.676	26.44	1.0410	26.54	1.0448	26.64	1.0487	26.73	1.0525	26.83	1.0563
	–	1	26.917	27.153	26.96	1.0614	27.03	1.0640	27.09	1.0666	27.16	1.0691	27.22	1.0717
M30	3.5	–	26.211	26.771	26.36	1.0379	26.59	1.0469	26.82	1.0558	27.04	1.0648	27.27	1.0737
	–	3	26.752	27.252	26.88	1.0584	27.08	1.0660	27.27	1.0737	27.47	1.0814	27.66	1.0890
	–	2	27.835	28.210	27.92	1.0993	28.05	1.1044	28.18	1.1095	28.31	1.1146	28.44	1.1197
	–	1.5	28.376	28.676	28.44	1.1197	28.54	1.1236	28.64	1.1274	28.73	1.1312	28.83	1.1351
	–	1	28.917	29.153	28.96	1.1402	29.03	1.1427	29.09	1.1453	29.16	1.1479	29.22	1.1504
M32	–	3	28.752	29.252	28.88	1.1371	29.08	1.1448	29.27	1.1524	29.47	1.1601	29.66	1.1678
	–	2	29.835	30.210	29.92	1.1780	30.05	1.1831	30.18	1.1882	30.31	1.1934	30.44	1.1985
	–	1.5	30.376	30.676	30.44	1.1985	30.54	1.2023	30.64	1.2061	30.73	1.2100	30.83	1.2138
M33	3.5	–	29.211	29.771	29.36	1.1560	29.59	1.1650	29.82	1.1739	30.04	1.1829	30.27	1.1918
	–	3	29.752	30.252	29.88	1.1765	30.08	1.1841	30.27	1.1918	30.47	1.1995	30.66	1.2072
	–	2	30.835	31.210	30.92	1.2174	31.05	1.2225	31.18	1.2276	31.31	1.2327	31.44	1.2378
	–	1.5	31.376	31.676	31.44	1.2378	31.54	1.2417	31.64	1.2455	31.73	1.2493	31.83	1.2532
	–	1	31.917	32.153	31.96	1.2583	32.03	1.2609	32.09	1.2634	32.16	1.2660	32.22	1.2685

TECHNICAL DATA

Size	Pitch		Minor dia.		Tap Drill Diameter									
	M	MF	Min. 6H	Max. 6H	80% Thread MM	80% Thread INCH	75% Thread MM	75% Thread INCH	70% Thread MM	70% Thread INCH	65% Thread MM	65% Thread INCH	60% Thread MM	60% Thread INCH
M34	–	3	30.752	31.252	30.88	1.2158	31.08	1.2235	31.27	1.2312	31.47	1.2389	31.66	1.2465
	–	2	31.835	32.210	31.92	1.2568	32.05	1.2619	32.18	1.2670	32.31	1.2721	32.44	1.2772
	–	1.5	32.376	32.676	32.44	1.2772	32.54	1.2810	32.64	1.2849	32.73	1.2887	32.83	1.2926
	–	1	32.917	33.153	32.96	1.2977	33.03	1.3002	33.09	1.3028	33.16	1.3053	33.22	1.3079
M35	–	3	31.752	32.252	31.88	1.2552	32.08	1.2629	32.27	1.2706	32.47	1.2782	32.66	1.2859
	–	1.5	33.376	33.676	33.44	1.3166	33.54	1.3204	33.64	1.3243	33.73	1.3281	33.83	1.3319
	–	1	33.917	34.153	33.96	1.3370	34.03	1.3396	34.09	1.3422	34.16	1.3447	34.22	1.3473
M36	4	–	31.670	32.270	31.84	1.2537	32.10	1.2639	32.36	1.2741	32.62	1.2844	32.88	1.2946
	–	3	32.752	33.252	32.88	1.2946	33.08	1.3023	33.27	1.3099	33.47	1.3176	33.66	1.3253
	–	2	33.835	34.210	33.92	1.3355	34.05	1.3406	34.18	1.3457	34.31	1.3508	34.44	1.3560
	–	1.5	34.376	34.676	34.44	1.3560	34.54	1.3598	34.64	1.3636	34.73	1.3675	34.83	1.3713
	–	1	34.917	35.153	34.96	1.3764	35.03	1.3790	35.09	1.3815	35.16	1.3841	35.22	1.3866
M37	–	1.5	35.376	35.676	35.44	1.3953	35.54	1.3992	35.64	1.4030	35.73	1.4068	35.83	1.4107
	–	1	35.917	36.153	35.96	1.4158	36.03	1.4183	36.09	1.4209	36.16	1.4234	36.22	1.4260
M38	–	4	33.670	34.270	33.84	1.3324	34.10	1.3426	34.36	1.3529	34.62	1.3631	34.88	1.3733
	–	3	34.752	35.252	34.88	1.3733	35.08	1.3810	35.27	1.3887	35.47	1.3963	35.66	1.4040
	–	2	35.835	36.210	35.92	1.4142	36.05	1.4193	36.18	1.4245	36.31	1.4296	36.44	1.4347
	–	1.5	36.376	36.676	36.44	1.4347	36.54	1.4385	36.64	1.4424	36.73	1.4462	36.83	1.4500
M39	4	–	34.670	35.270	34.84	1.3718	35.10	1.3820	35.36	1.3922	35.62	1.4025	35.88	1.4127
	–	3	35.752	36.252	35.88	1.4127	36.08	1.4204	36.27	1.4280	36.47	1.4357	36.66	1.4434
	–	2	36.835	37.210	36.92	1.4536	37.05	1.4587	37.18	1.4638	37.31	1.4689	37.44	1.4741
	–	1.5	37.376	37.676	37.44	1.4741	37.54	1.4779	37.64	1.4817	37.73	1.4856	37.83	1.4894
	–	1	37.917	38.153	37.96	1.4945	38.03	1.4971	38.09	1.4996	38.16	1.5022	38.22	1.5047
M40	–	4	35.670	36.270	35.84	1.4111	36.10	1.4214	36.36	1.4316	36.62	1.4418	36.88	1.4521
	–	3	36.752	37.252	36.88	1.4521	37.08	1.4597	37.27	1.4674	37.47	1.4751	37.66	1.4827
	–	2	37.835	38.210	37.92	1.4930	38.05	1.4981	38.18	1.5032	38.31	1.5083	38.44	1.5134
	–	1.5	38.376	38.676	38.44	1.5134	38.54	1.5173	38.64	1.5211	38.73	1.5249	38.83	1.5288
	–	1	38.917	39.153	38.96	1.5339	39.03	1.5364	39.09	1.5390	39.16	1.5416	39.22	1.5441
M42	4.5	–	37.129	37.799	37.32	1.4694	37.62	1.4809	37.91	1.4924	38.20	1.5039	38.49	1.5155
	–	4	37.670	38.270	37.84	1.4899	38.10	1.5001	38.36	1.5103	38.62	1.5206	38.88	1.5308
	–	3	38.752	39.252	38.88	1.5308	39.08	1.5385	39.27	1.5461	39.47	1.5538	39.66	1.5615
	–	2	39.835	40.210	39.92	1.5717	40.05	1.5768	40.18	1.5819	40.31	1.5871	40.44	1.5922
	–	1.5	40.376	40.676	40.44	1.5922	40.54	1.5960	40.64	1.5998	40.73	1.6037	40.83	1.6075
M45	4.5	–	40.129	40.799	40.32	1.5875	40.62	1.5990	40.91	1.6106	41.20	1.6221	41.49	1.6336
	–	4	40.670	41.270	40.84	1.6080	41.10	1.6182	41.36	1.6285	41.62	1.6387	41.88	1.6489
	–	3	41.752	42.252	41.88	1.6489	42.08	1.6566	42.27	1.6643	42.47	1.6719	42.66	1.6796
	–	2	42.835	43.210	42.92	1.6898	43.05	1.6949	43.18	1.7001	43.31	1.7052	43.44	1.7103
	–	1.5	43.376	43.676	43.44	1.7103	43.54	1.7141	43.64	1.7180	43.73	1.7218	43.83	1.7256
	–	1	43.917	44.153	43.96	1.7307	44.03	1.7333	44.09	1.7359	44.16	1.7384	44.22	1.7410
M46	–	1.5	44.376	44.676	44.44	1.7497	44.54	1.7535	44.64	1.7573	44.73	1.7612	44.83	1.7650
M48	5	–	42.587	43.297	42.80	1.6852	43.13	1.6980	43.45	1.7108	43.78	1.7235	44.10	1.7363
	–	4	43.670	44.270	43.84	1.7261	44.10	1.7363	44.36	1.7466	44.62	1.7568	44.88	1.7670
	–	3	44.752	45.252	44.88	1.7670	45.08	1.7747	45.27	1.7824	45.47	1.7900	45.66	1.7977
	–	2	45.835	46.210	45.92	1.8079	46.05	1.8130	46.18	1.8182	46.31	1.8233	46.44	1.8284
	–	1.5	46.376	46.676	46.44	1.8284	46.54	1.8322	46.64	1.8361	46.73	1.8399	46.83	1.8437
	–	1	46.917	47.153	46.96	1.8488	47.03	1.8514	47.09	1.8540	47.16	1.8565	47.22	1.8591
M50	–	5	44.587	45.297	44.80	1.7639	45.13	1.7767	45.45	1.7895	45.78	1.8023	46.10	1.8151
	–	3	46.752	47.252	46.88	1.8458	47.08	1.8534	47.27	1.8611	47.47	1.8688	47.66	1.8764
	–	2	47.835	48.210	47.92	1.8867	48.05	1.8918	48.18	1.8969	48.31	1.9020	48.44	1.9071
	–	1.5	48.376	48.676	48.44	1.9071	48.54	1.9110	48.64	1.9148	48.73	1.9186	48.83	1.9225
	–	1	48.917	49.153	48.96	1.9276	49.03	1.9301	49.09	1.9327	49.16	1.9353	49.22	1.9378

TECHNICAL DATA

Size	Pitch		Minor dia.		Tap Drill Diameter									
	M	MF	Min. 6H	Max. 6H	80% Thread MM	80% Thread INCH	75% Thread MM	75% Thread INCH	70% Thread MM	70% Thread INCH	65% Thread MM	65% Thread INCH	60% Thread MM	60% Thread INCH
M52	5	–	46.587	47.297	46.80	1.8427	47.13	1.8555	47.45	1.8682	47.78	1.8810	48.10	1.8938
	–	4	47.670	48.270	47.84	1.8836	48.10	1.8938	48.36	1.9040	48.62	1.9143	48.88	1.9245
	–	3	48.752	49.252	48.88	1.9245	49.08	1.9322	49.27	1.9398	49.47	1.9475	49.66	1.9552
	–	2	49.835	50.210	49.92	1.9654	50.05	1.9705	50.18	1.9756	50.31	1.9808	50.44	1.9859
	–	1.5	50.376	50.676	50.44	1.9859	50.54	1.9897	50.64	1.9935	50.73	1.9974	50.83	2.0012
M55	–	4	50.670	51.270	50.84	2.0017	51.10	2.0119	51.36	2.0222	51.62	2.0324	51.88	2.0426
	–	3	51.752	52.252	51.88	2.0426	52.08	2.0503	52.27	2.0580	52.47	2.0656	52.66	2.0733
	–	2	52.835	53.210	52.92	2.0835	53.05	2.0886	53.18	2.0938	53.31	2.0989	53.44	2.1040
	–	1.5	53.376	53.676	53.44	2.1040	53.54	2.1078	53.64	2.1117	53.73	2.1155	53.83	2.1193
M56	5.5	–	50.046	50.796	50.28	1.9797	50.64	1.9938	51.00	2.0078	51.36	2.0219	51.71	2.0360
	–	4	51.670	52.270	51.84	2.0411	52.10	2.0513	52.36	2.0615	52.62	2.0718	52.88	2.0820
	–	3	52.752	53.252	52.88	2.0820	53.08	2.0897	53.27	2.0973	53.47	2.1050	53.66	2.1127
	–	2	53.835	54.210	53.92	2.1229	54.05	2.1280	54.18	2.1331	54.31	2.1382	54.44	2.1434
	–	1.5	54.376	54.676	54.44	2.1434	54.54	2.1472	54.64	2.1510	54.73	2.1549	54.83	2.1587
M58	–	4	53.670	54.270	53.84	2.1198	54.10	2.1300	54.36	2.1403	54.62	2.1505	54.88	2.1607
	–	3	54.752	55.252	54.88	2.1607	55.08	2.1684	55.27	2.1761	55.47	2.1837	55.66	2.1914
	–	2	55.835	56.210	55.92	2.2016	56.05	2.2067	56.18	2.2119	56.31	2.2170	56.44	2.2221
	–	1.5	56.376	56.676	56.44	2.2221	56.54	2.2259	56.64	2.2298	56.73	2.2336	56.83	2.2374
M60	5.5	–	54.046	54.796	54.28	2.1372	54.64	2.1512	55.00	2.1653	55.36	2.1794	55.71	2.1934
	–	4	55.670	56.270	55.84	2.1985	56.10	2.2088	56.36	2.2190	56.62	2.2292	56.88	2.2395
	–	3	56.752	57.252	56.88	2.2395	57.08	2.2471	57.27	2.2548	57.47	2.2625	57.66	2.2701
	–	2	57.835	58.210	57.92	2.2804	58.05	2.2855	58.18	2.2906	58.31	2.2957	58.44	2.3008
	–	1.5	58.376	58.676	58.44	2.3008	58.54	2.3047	58.64	2.3085	58.73	2.3123	58.83	2.3162
M62	–	4	57.670	58.270	57.84	2.2773	58.10	2.2875	58.36	2.2977	58.62	2.3080	58.88	2.3182
	–	3	58.752	59.252	58.88	2.3182	59.08	2.3259	59.27	2.3335	59.47	2.3412	59.66	2.3489
	–	1	60.917	61.153	60.96	2.4000	61.03	2.4026	61.09	2.4051	61.16	2.4077	61.22	2.4103
	–	1.5	60.376	60.676	60.44	2.3796	60.54	2.3834	60.64	2.3872	60.73	2.3911	60.83	2.3949
M64	6	–	57.505	58.305	57.76	2.2742	58.15	2.2895	58.54	2.3049	58.93	2.3202	59.32	2.3356
	–	4	59.670	60.270	59.84	2.3560	60.10	2.3663	60.36	2.3765	60.62	2.3867	60.88	2.3969
	–	3	60.752	61.252	60.88	2.3969	61.08	2.4046	61.27	2.4123	61.47	2.4200	61.66	2.4276
	–	2	61.835	62.210	61.92	2.4379	62.05	2.4430	62.18	2.4481	62.31	2.4532	62.44	2.4583
	–	1.5	62.376	62.676	62.44	2.4583	62.54	2.4621	62.64	2.4660	62.73	2.4698	62.83	2.4737
M65	–	4	60.670	61.270	60.84	2.3954	61.10	2.4056	61.36	2.4159	61.62	2.4261	61.88	2.4363
	–	3	61.752	62.252	61.88	2.4363	62.08	2.4440	62.27	2.4517	62.47	2.4593	62.66	2.4670
	–	2	62.835	63.210	62.92	2.4772	63.05	2.4823	63.18	2.4875	63.31	2.4926	63.44	2.4977
	–	1.5	63.376	63.676	63.44	2.4977	63.54	2.5015	63.64	2.5054	63.73	2.5092	63.83	2.5130

17 TAP DRILL SIZES - UNIFIED THREAD / FORMING TAPS

Size	Threads Per Inch			Minor Diameter			Tap Drill Diameter (Cutting Tap)				
	UNC	UNF	UNEF	Min. 2B&3B	Max. 2B	Max. 3B	75% Thread	70% Thread	65% Thread	60% Thread	55% Thread
#0	-	80	-	.0465	.0514	.0514	.0536	.0541	.0545	.0549	.0553
#1	64	-	-	.0561	.0623	.0623	.0650	.0656	.0661	.0666	.0672
	-	72	-	.0580	.0635	.0635	.0659	.0664	.0669	.0673	.0678
#2	56	-	-	.0667	.0737	.0737	.0769	.0775	.0781	.0787	.0793
	-	64	-	.0691	.0753	.0753	.0780	.0786	.0791	.0796	.0802
#3	48	-	-	.0764	.0845	.0845	.0884	.0891	.0898	.0905	.0912
	-	56	-	.0797	.0865	.0865	.0899	.0905	.0911	.0917	.0923
#4	40	-	-	.0849	.0939	.0939	.0993	.1001	.1010	.1018	.1027
	-	48	-	.0894	.0968	.0968	.1014	.1021	.1028	.1035	.1042
#5	40	-	-	.0979	.1062	.1062	.1123	.1131	.1140	.1148	.1157
	-	44	-	.1004	.1079	.1079	.1134	.1142	.1150	.1157	.1165
#6	32	-	-	.1040	.1140	.1140	.1221	.1231	.1242	.1253	.1263
	-	40	-	.1110	.1190	.1186	.1253	.1261	.1270	.1278	.1287
#8	32	-	-	.1300	.1390	.1389	.1481	.1491	.1502	.1513	.1523
	-	36	-	.1340	.1420	.1416	.1498	.1508	.1517	.1527	.1536
#10	24	-	-	.1450	.1560	.1555	.1688	.1702	.1716	.1730	.1744
	-	32	-	.1560	.1640	.1641	.1741	.1751	.1762	.1773	.1783
#12	24	-	-	.1710	.1810	.1807	.1948	.1962	.1976	.1990	.2004
	-	28	-	.1770	.1860	.1857	.1978	.1990	.2002	.2014	.2026
	-	-	32	.1820	.1900	.1895	.2001	.2011	.2022	.2033	.2043
1/4	20	-	-	.1960	.2070	.2067	.2245	.2262	.2279	.2296	.2313
	-	28	-	.2110	.2200	.2190	.2318	.2330	.2342	.2354	.2366
	-	-	32	.2160	.2240	.2229	.2341	.2351	.2362	.2373	.2383
5/16	18	-	-	.2520	.2650	.2630	.2842	.2861	.2879	.2898	.2917
	-	24	-	.2670	.2770	.2754	.2913	.2927	.2941	.2955	.2969
	-	-	-	.2740	.2820	.2807	.2943	.2955	.2967	.2979	.2991
	-	-	32	.2790	.2860	.2847	.2966	.2976	.2987	.2998	.3008
3/8	16	-	-	.3070	.3210	.3182	.3431	.3453	.3474	.3495	.3516
	-	24	-	.3300	.3400	.3372	.3538	.3552	.3566	.3580	.3594
	-	-	-	.3360	.3450	.3426	.3568	.3580	.3592	.3604	.3616
	-	-	32	.3410	.3490	.3469	.3591	.3601	.3612	.3623	.3633
7/16	14	-	-	.3600	.3760	.3717	.4011	.4035	.4059	.4084	.4108
	-	20	-	.3830	.3950	.3916	.4120	.4137	.4154	.4171	.4188
	-	-	28	.3990	.4070	.4051	.4193	.4205	.4217	.4229	.4241
1/2	13	-	-	.4170	.4340	.4284	.4608	.4634	.4660	.4686	.4712
	-	20	-	.4460	.4570	.4537	.4745	.4762	.4779	.4796	.4813
	-	-	28	.4610	.4700	.4676	.4818	.4830	.4842	.4854	.4866
9/16	12	-	-	.4720	.4900	.4843	.5200	.5228	.5257	.5285	.5313
	-	18	-	.5020	.5150	.5106	.5342	.5361	.5379	.5398	.5417
	-	-	24	.5170	.5270	.5244	.5413	.5427	.5441	.5455	.5469
5/8	11	-	-	.5270	.5460	.5391	.5786	.5817	.5848	.5879	.5910
	-	-	-	.5570	.5710	.5662	.5931	.5953	.5974	.5995	.6016
	-	18	-	.5650	.5780	.5730	.5967	.5986	.6004	.6023	.6042
	-	-	24	.5800	.5900	.5869	.6038	.6052	.6066	.6080	.6094
3/4	10	-	-	.6420	.6630	.6545	.6990	.7024	.7058	.7092	.7126
	-	16	-	.6820	.6960	.6908	.7181	.7203	.7224	.7245	.7266
	-	-	20	.6960	.7070	.7037	.7245	.7262	.7279	.7296	.7313

YG TECHNICAL DATA

Size	Threads Per Inch			Minor Diameter			Tap Drill Diameter (Cutting Tap)				
	UNC	UNF	UNEF	Min. 2B&3B	Max. 2B	Max. 3B	75% Thread	70% Thread	65% Thread	60% Thread	55% Thread
7/8	9	-	-	.7550	.7780	.7681	.8183	.8221	.8259	.8297	.8334
	-	14	-	.7980	.8140	8068	.8386	.8410	.8434	.8459	.8483
	-	-	20	.8210	.8320	.8287	.8495	.8512	.8529	.8546	.8563
1	8	-	-	.8650	.8900	.8797	.9363	.9405	.9448	.9490	.9533
	-	12	-	.9100	.9280	.9198	.9575	.9603	.9632	.9660	.9688
	-	-	20	.9460	.9570	.9537	.9745	.9762	.9779	.9796	.9813
1-1/8	7	-	-	.9700	.9980	.9875	1.0521	1.0570	1.0619	1.0667	1.0716
	-	12	-	1.0350	1.0530	1.0448	1.0825	1.0853	1.0882	1.0910	1.0938
	-	-	18	1.0650	1.0780	1.0730	1.0967	1.0986	1.1004	1.1023	1.1042
1-1/4	7	-	-	1.0950	1.1230	1.1125	1.1771	1.1820	1.1869	1.1917	1.1966
	-	12	-	1.1600	1.1780	1.1698	1.2075	1.2103	1.2132	1.2160	1.2188
	-	-	18	1.1900	1.2030	1.1980	1.2217	1.2236	1.2254	1.2273	1.2292

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TECHNICAL DATA

18 TAP DRILL SIZES - METRIC THREAD / FORMING TAPS

Size	Pitch		Minor dia.		Tap Drill Diameter									
	M	MF	Min. 6H	Max. 6H	75% Thread		70% Thread		65% Thread		60% Thread		55% Thread	
					MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH
M1	0.25	–	0.729	0.798	0.87	.0344	0.88	.0347	0.89	.0350	0.90	.0354	0.91	.0357
	–	0.2	0.783	0.841	0.90	.0354	0.90	.0356	0.91	.0359	0.92	.0362	0.93	.0364
M1.1	0.25	–	0.829	0.898	0.97	.0383	0.98	.0386	0.99	.0390	1.00	.0393	1.01	.0396
	–	0.2	0.883	0.941	1.00	.0393	1.00	.0396	1.01	.0398	1.02	.0401	1.03	.0404
M1.2	0.25	–	0.929	0.998	1.07	.0422	1.08	.0426	1.09	.0429	1.10	.0432	1.11	.0436
	–	0.2	0.983	1.041	1.10	.0432	1.10	.0435	1.11	.0438	1.12	.0440	1.13	.0443
M1.4	0.3	–	1.075	1.159	1.25	.0491	1.26	.0495	1.27	.0499	1.28	.0503	1.29	.0507
	–	0.2	1.183	1.241	1.30	.0511	1.30	.0514	1.31	.0516	1.32	.0519	1.33	.0522
M1.6	0.35	–	1.221	1.321	1.42	.0560	1.43	.0564	1.45	.0569	1.46	.0574	1.47	.0578
	–	0.2	1.383	1.441	1.50	.0590	1.50	.0592	1.51	.0595	1.52	.0598	1.53	.0600
M1.7	0.35	–	1.321	1.421	1.52	.0599	1.53	.0604	1.55	.0608	1.56	.0613	1.57	.0618
	–	0.3	1.375	1.459	1.55	.0609	1.56	.0613	1.57	.0617	1.58	.0621	1.59	.0625
	–	0.25	1.429	1.498	1.57	.0619	1.58	.0622	1.59	.0626	1.60	.0629	1.61	.0632
	–	0.2	1.483	1.541	1.60	.0629	1.60	.0632	1.61	.0634	1.62	.0637	1.63	.0640
M1.8	0.35	–	1.421	1.521	1.62	.0638	1.63	.0643	1.65	.0648	1.66	.0652	1.67	.0657
	–	0.2	1.583	1.641	1.70	.0669	1.70	.0671	1.71	.0674	1.72	.0677	1.73	.0679
M2	0.4	–	1.567	1.679	1.80	.0707	1.81	.0712	1.82	.0718	1.84	.0723	1.85	.0729
	–	0.25	1.729	1.798	1.87	.0737	1.88	.0741	1.89	.0744	1.90	.0747	1.91	.0751
M2.2	0.45	–	1.713	1.838	1.97	.0776	1.99	.0782	2.00	.0788	2.02	.0794	2.03	.0800
	–	0.25	1.929	1.998	2.07	.0816	2.08	.0819	2.09	.0823	2.10	.0826	2.11	.0829
M2.3	0.4	–	1.867	1.979	2.10	.0825	2.11	.0831	2.12	.0836	2.14	.0841	2.15	.0847
	–	0.35	1.921	2.021	2.12	.0835	2.13	.0840	2.15	.0845	2.16	.0849	2.17	.0854
	–	0.25	2.029	2.098	2.17	.0855	2.18	.0859	2.19	.0862	2.20	.0865	2.21	.0869
M2.5	0.45	–	2.013	2.138	2.27	.0894	2.29	.0900	2.30	.0906	2.32	.0912	2.33	.0918
	–	0.35	2.121	2.221	2.32	.0914	2.33	.0919	2.35	.0923	2.36	.0928	2.37	.0933
M2.6	0.45	–	2.113	2.238	2.37	.0933	2.39	.0939	2.40	.0945	2.42	.0951	2.43	.0957
	–	0.35	2.221	2.321	2.42	.0953	2.43	.0958	2.45	.0963	2.46	.0967	2.47	.0972
M3	0.5	–	2.459	2.599	2.75	.1081	2.76	.1087	2.78	.1094	2.80	.1101	2.81	.1107
	–	0.35	2.621	2.721	2.82	.1111	2.83	.1116	2.85	.1120	2.86	.1125	2.87	.1130
M3.5	0.6	–	2.850	3.010	3.19	.1257	3.21	.1266	3.23	.1274	3.26	.1282	3.28	.1290
	–	0.35	3.121	3.221	3.32	.1308	3.33	.1312	3.35	.1317	3.36	.1322	3.37	.1326
M4	0.7	–	3.242	3.422	3.64	.1434	3.67	.1444	3.69	.1453	3.71	.1462	3.74	.1472
	–	0.5	3.459	3.599	3.75	.1474	3.76	.1481	3.78	.1488	3.80	.1494	3.81	.1501
M4.5	0.75	–	3.688	3.878	4.12	.1621	4.14	.1631	4.17	.1641	4.19	.1651	4.22	.1661
	–	0.5	3.959	4.099	4.25	.1671	4.26	.1678	4.28	.1685	4.30	.1691	4.31	.1698
M5	0.9	–	4.026	4.226	4.54	.1788	4.57	.1800	4.60	.1812	4.63	.1824	4.66	.1836
	0.8	–	4.134	4.334	4.59	.1808	4.62	.1819	4.65	.1829	4.67	.1840	4.70	.1851
	–	0.5	4.459	4.599	4.75	.1868	4.76	.1875	4.78	.1881	4.80	.1888	4.81	.1895
M6	1	–	4.917	5.153	5.49	.2161	5.52	.2175	5.56	.2188	5.59	.2202	5.63	.2215
	–	0.75	5.188	5.378	5.62	.2212	5.64	.2222	5.67	.2232	5.69	.2242	5.72	.2252
	–	0.5	5.459	5.599	5.75	.2262	5.76	.2269	5.78	.2275	5.80	.2282	5.81	.2289
M7	1	–	5.917	6.153	6.49	.2555	6.52	.2569	6.56	.2582	6.59	.2595	6.63	.2609
	–	0.75	6.188	6.378	6.62	.2605	6.64	.2615	6.67	.2625	6.69	.2635	6.72	.2645
	–	0.5	6.459	6.599	6.75	.2656	6.76	.2662	6.78	.2669	6.80	.2676	6.81	.2682
M8	1.25	–	6.647	6.912	7.36	.2899	7.41	.2915	7.45	.2932	7.49	.2949	7.53	.2966
	–	1	6.917	7.153	7.49	.2949	7.52	.2962	7.56	.2976	7.59	.2989	7.63	.3002
	–	0.75	7.188	7.378	7.62	.2999	7.64	.3009	7.67	.3019	7.69	.3029	7.72	.3039
	–	0.5	7.459	7.599	7.75	.3049	7.76	.3056	7.78	.3063	7.80	.3069	7.81	.3076
M9	1.25	–	7.647	7.912	8.36	.3292	8.41	.3309	8.45	.3326	8.49	.3343	8.53	.3359
	–	1	7.917	8.153	8.49	.3343	8.52	.3356	8.56	.3369	8.59	.3383	8.63	.3396
	–	0.75	8.188	8.378	8.62	.3393	8.64	.3403	8.67	.3413	8.69	.3423	8.72	.3433
	–	0.5	8.459	8.599	8.75	.3443	8.76	.3450	8.78	.3456	8.80	.3463	8.81	.3470

YG TECHNICAL DATA

Size	Pitch		Minor dia.		Tap Drill Diameter									
	M	MF	Min. 6H	Max. 6H	75% Thread		70% Thread		65% Thread		60% Thread		55% Thread	
					MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH
M10	1.5	–	8.376	8.676	9.24	.3636	9.29	.3656	9.34	.3676	9.39	.3696	9.44	.3716
	–	1.25	8.647	8.912	9.36	.3686	9.41	.3703	9.45	.3719	9.49	.3736	9.53	.3753
	–	1	8.917	9.153	9.49	.3736	9.52	.3750	9.56	.3763	9.59	.3776	9.63	.3790
	–	0.75	9.188	9.378	9.62	.3786	9.64	.3796	9.67	.3806	9.69	.3817	9.72	.3827
	–	0.5	9.459	9.599	9.75	.3837	9.76	.3843	9.78	.3850	9.80	.3857	9.81	.3863
M12	1.75	–	10.106	10.441	11.11	.4373	11.17	.4396	11.23	.4420	11.29	.4443	11.35	.4467
	–	1.5	10.376	10.676	11.24	.4423	11.29	.4443	11.34	.4463	11.39	.4483	11.44	.4504
	–	1.25	10.647	10.912	11.36	.4473	11.41	.4490	11.45	.4507	11.49	.4524	11.53	.4540
	–	1	10.917	11.153	11.49	.4524	11.52	.4537	11.56	.4550	11.59	.4564	11.63	.4577
	–	0.75	11.188	11.378	11.62	.4574	11.64	.4584	11.67	.4594	11.69	.4604	11.72	.4614
	–	0.5	11.459	11.599	11.75	.4624	11.76	.4631	11.78	.4637	11.80	.4644	11.81	.4651
M14	2	–	11.835	12.210	12.98	.5110	13.05	.5137	13.12	.5164	13.18	.5191	13.25	.5217
	–	1.5	12.376	12.676	13.24	.5211	13.29	.5231	13.34	.5251	13.39	.5271	13.44	.5291
	–	1.25	12.647	12.912	13.36	.5261	13.41	.5278	13.45	.5294	13.49	.5311	13.53	.5328
	–	1	12.917	13.153	13.49	.5311	13.52	.5324	13.56	.5338	13.59	.5351	13.63	.5365
	–	0.75	13.188	13.378	13.62	.5361	13.64	.5371	13.67	.5381	13.69	.5391	13.72	.5401
	–	0.5	13.459	13.599	13.75	.5411	13.76	.5418	13.78	.5425	13.80	.5431	13.81	.5438
M16	2	–	13.835	14.210	14.98	.5898	15.05	.5924	15.12	.5951	15.18	.5978	15.25	.6005
	–	1.5	14.376	14.676	15.24	.5998	15.29	.6018	15.34	.6038	15.39	.6058	15.44	.6078
	–	1	14.917	15.153	15.49	.6098	15.52	.6112	15.56	.6125	15.59	.6139	15.63	.6152
M18	2.5	–	15.294	15.744	16.73	.6585	16.81	.6618	16.90	.6652	16.98	.6685	17.07	.6719
	–	2	15.835	16.210	16.98	.6685	17.05	.6712	17.12	.6739	17.18	.6765	17.25	.6792
	–	1.5	16.376	16.676	17.24	.6785	17.29	.6806	17.34	.6826	17.39	.6846	17.44	.6866
	–	1	16.917	17.153	17.49	.6886	17.52	.6899	17.56	.6913	17.59	.6926	17.63	.6939
M20	2.5	–	17.294	17.744	18.73	.7372	18.81	.7406	18.90	.7439	18.98	.7472	19.07	.7506
	–	2	17.835	18.210	18.98	.7472	19.05	.7499	19.12	.7526	19.18	.7553	19.25	.7580
	–	1.5	18.376	18.676	19.24	.7573	19.29	.7593	19.34	.7613	19.39	.7633	19.44	.7653
	–	1	18.917	19.153	19.49	.7673	19.52	.7687	19.56	.7700	19.59	.7713	19.63	.7727
M22	2.5	–	19.294	19.744	20.73	.8159	20.81	.8193	20.90	.8226	20.98	.8260	21.07	.8293
	–	2	19.835	20.210	20.98	.8260	21.05	.8287	21.12	.8313	21.18	.8340	21.25	.8367
	–	1.5	20.376	20.676	21.24	.8360	21.29	.8380	21.34	.8400	21.39	.8420	21.44	.8441
	–	1	20.917	21.153	21.49	.8461	21.52	.8474	21.56	.8487	21.59	.8501	21.63	.8514
M24	3	–	20.752	21.252	22.47	.8846	22.57	.8887	22.67	.8927	22.78	.8967	22.88	.9007
	–	2	21.835	22.210	22.98	.9047	23.05	.9074	23.12	.9101	23.18	.9128	23.25	.9154
	–	1.5	22.376	22.676	23.24	.9148	23.29	.9168	23.34	.9188	23.39	.9208	23.44	.9228
	–	1	22.917	23.153	23.49	.9248	23.52	.9261	23.56	.9275	23.59	.9288	23.63	.9302
M26	–	3	22.752	23.252	24.47	.9634	24.57	.9674	24.67	.9714	24.78	.9754	24.88	.9794
	–	2	23.835	24.210	24.98	.9835	25.05	.9861	25.12	.9888	25.18	.9915	25.25	.9942
	–	1.5	24.376	24.676	25.24	.9935	25.29	.9955	25.34	.9975	25.39	.9995	25.44	1.0015
M27	3	–	23.752	24.252	25.47	1.0028	25.57	1.0068	25.67	1.0108	25.78	1.0148	25.88	1.0188
	–	2.5	24.294	24.744	25.73	1.0128	25.81	1.0161	25.90	1.0195	25.98	1.0228	26.07	1.0262
	–	2	24.835	25.210	25.98	1.0228	26.05	1.0255	26.12	1.0282	26.18	1.0309	26.25	1.0335
	–	1.5	25.376	25.676	26.24	1.0329	26.29	1.0349	26.34	1.0369	26.39	1.0389	26.44	1.0409
	–	1	25.917	26.153	26.49	1.0429	26.52	1.0443	26.56	1.0456	26.59	1.0469	26.63	1.0483
M30	3.5	–	26.211	26.771	28.22	1.1108	28.33	1.1155	28.45	1.1202	28.57	1.1249	28.69	1.1296
	–	3	26.752	27.252	28.47	1.1209	28.57	1.1249	28.67	1.1289	28.78	1.1329	28.88	1.1369
	–	2	27.835	28.210	28.98	1.1409	29.05	1.1436	29.12	1.1463	29.18	1.1490	29.25	1.1517
	–	1.5	28.376	28.676	29.24	1.1510	29.29	1.1530	29.34	1.1550	29.39	1.1570	29.44	1.1590
	–	1	28.917	29.153	29.49	1.1610	29.52	1.1624	29.56	1.1637	29.59	1.1650	29.63	1.1664

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TECHNICAL DATA

19 TAP DRILL SIZES – METRIC, UNIFIED THREAD / STI

Metric

Size	RECOMMENDATION Drill Size Inch	metric (mm)
M2 × 0.4	.0827	2.10
M2.2 × 0.45	.0906	2.30
M2.5 × 0.45	.1024	2.60
M3 × 0.5	.1240	3.15
M3.5 × 0.6	.1457	3.70
M4 × 0.7	.1654	4.20
M5 × 0.8	.2047	5.20
M6 × 1.0	.2480	6.30
M7 × 1.0	.2874	7.30
M8 × 1.0	.3268	8.30
M8 × 1.25	.3307	8.40
M9 × 1.25	.3701	9.40
M10 × 1.25	.4094	10.40
M10 × 1.5	.4134	10.50
M11 × 1.5	.4528	11.50
M12 × 1.25	.4882	12.40
M12 × 1.5	.4921	12.50
M12 × 1.75	.4921	12.50
M14 × 1.5	.5709	14.50
M14 × 2.0	.5709	14.50
M16 × 1.5	.6496	16.50
M16 × 2.0	.6496	16.50
M18 × .5	.7283	18.50
M18 × 2.0	.7283	18.50
M18 × 2.5	.7382	18.75
M20 × 1.5	.8071	20.50
M20 × 2.0	.8071	20.50
M20 × 2.5	.8169	20.75
M22 × 1.5	.8858	22.50
M22 × 2.0	.8858	22.50
M22 × 2.5	.8957	22.75
M24 × 2.0	.9646	24.50
M24 × 3.0	.9843	25.00
M27 × 3.0	1.1024	28.00
M30 × 3.5	1.2205	31.00

Unified

Size	RECOMMENDATION Drill Size Inch	metric (mm)
#2 - 56 UNC	.0906	2.30
#3 - 48 UNC	.1063	2.70
#3 - 56 UNF	.1043	2.65
#4 - 40 UNC	.1181	3.00
#4 - 48 UNF	.1181	3.00
#5 - 40 UNC	.1339	3.40
#5 - 44 UNF	.1299	3.30
#6 - 32 UNC	.1457	3.70
#6 - 40 UNF	.1457	3.70
#8 - 32 UNC	.1732	4.40
#8 - 36 UNF	.1732	4.40
#10 - 24 UNC	.2008	5.10
#10 - 32 UNF	.2008	5.10
#12 - 24 UNC	.2283	5.80
1/4 - 20 UNC	.2638	6.70
1/4 - 28 UNF	.2598	6.60
5/16 - 18 UNC	.3307	8.40
5/16 - 24 UNF	.3228	8.20
3/8 - 16 UNC	.3937	10.00
3/8 - 24 UNF	.3858	9.80
7/16 - 14 UNC	.4528	11.50
7/16 - 20 UNF	.4528	11.50
1/2 - 13 UNC	.5236	13.30
1/2 - 20 UNF	.5157	13.10
9/16 - 12 UNC	.5866	14.90
9/16 - 18 UNF	.5787	14.70
5/8 - 11 UNC	.6496	16.50
5/8 - 18 UNF	.6417	16.30
3/4 - 10 UNC	.7795	19.80
3/4 - 16 UNF	.7677	19.50
7/8 - 9 UNC	.9055	23.00
7/8 - 14 UNF	.8858	22.50
1 - 8 UNC	1.0433	26.50
1 - 12 UNF	1.0236	26.00
1-1/8 - 7 UNC	1.1713	29.75
1-1/8 - 8 UN	1.1417	29.00
1-1/8 - 12 UNF	1.1516	29.25
1-1/4 - 7 UNC	1.2992	33.00
1-1/4 - 8 UN	1.2795	32.50
1-1/4 - 12 UNF	1.2795	32.50
1-3/8 - 6 UNC	1.4173	36.00
1-3/8 - 8 UN	1.3976	35.50
1-3/8 - 12 UNF	1.4173	36.00
1-1/2 - 6 UNC	1.5354	39.00
1-1/2 - 8 UN	1.5354	39.00
1-1/2 - 12 UNF	1.5354	39.00

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
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YG TAP BLUE RING
YG TAP STEEL
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YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

YG TECHNICAL DATA

20 CONVERSION TABLE

SURFACE FEET PER MINUTE TO REVOLUTIONS PER MINUTE

Surface Feet Per Minute	20	25	30	40	50	60	70	80	90	100	110	120	130	140	150
TAP SIZE	Revolutions Per Minute														
#0	1273	1592	1910	2546	3183	3820	4456	5093	5730	6366	7003	7639	8276	8913	9549
#1	1047	1308	1570	2093	2617	3140	3663	4186	4710	5233	5756	6279	6808	7326	7849
#2	888	1110	1333	1777	2221	2665	3109	3554	3999	4222	4886	5330	5774	6218	6662
#3	772	964	1157	1543	1929	2315	2701	3086	3472	3858	4244	4629	5015	5401	5787
#4	682	853	1023	1364	1705	2046	2387	2728	3069	3411	3751	4092	4434	4775	5116
#5	611	764	917	1222	1528	1833	2139	2445	2750	3056	3361	3367	3973	4278	4584
#6	553	691	829	1106	1382	1658	1934	2211	2487	2764	3040	3316	3592	3869	4145
#8	466	583	699	932	1165	1398	1631	1864	2097	2330	2563	2796	3029	3262	3495
#10	402	502	603	804	1005	1205	1406	1607	1808	2009	2210	2411	2612	2813	3014
#12	354	442	531	707	884	1061	1238	1415	1592	1769	1945	2122	2300	2476	2653
1/4	306	382	458	611	764	917	1070	1222	1375	1528	1681	1833	1986	2139	2292
5/16	245	306	367	486	611	733	856	978	1100	1222	1345	1467	1589	1711	1833
3/8	204	255	306	407	509	611	713	815	917	1019	1120	1222	1324	1426	1528
7/16	175	219	262	349	437	524	611	698	786	873	960	1048	1135	1222	1310
1/2	153	191	229	306	382	458	535	611	688	764	840	917	993	1070	1146
9/16	137	172	206	275	344	412	481	550	619	687	756	825	893	963	1031
5/8	122	153	183	244	306	367	428	489	550	611	672	733	794	856	917
3/4	102	128	153	203	255	306	357	407	458	509	560	611	662	713	764
7/8	87	109	131	175	218	252	306	350	392	437	480	524	568	611	655
1	76	96	115	153	191	230	268	306	344	382	420	458	497	535	573

TECHNICAL DATA

20 TROUBLE SHOOTING GUIDE

Specific Problem	Cause	Solution
Dimensional Accuracy		
Oversize Pitch Diameter	Tap	1. Use Proper Limits Of Taps 2. Use Longer Chamfered Taps
	Chip Packing	1. Use Spiral Point Or Spiral Fluted Taps 2. Reduce Number Of Flutes To Provied Extra Chip Room 3. Use Larger Hole Size 4. If Tapping A Hole, Allow Deeper Hole Where Applicable Or Shorten The Thread Length Of The Parts 5. Use Proper Lubricant
	Galling	1. Apply Proper Surface Treatment Such As Hardslick Or Chrome 2. Use Proper Cutting Lubricant 3. Reduce Tapping Speed 4. Use Proper Cutting Angle In Accordance With Material Being Tapped 5. Use Large Hole Size
	Operating Conditions	1. Apply Proper Tapping Speed 2. Correct Alignment Of Tap And Drill Hole 3. Free Cutting Either Tap Or Workpiece 4. Use Proper Tapping Speed To Avoid Torn Or Rough Threads 5. Use Lead Screw Tapper 6. Use Proper Tapping Machine With Suitable Power 7. Avoid Misalignment Of The Tap And Drill Hole From Loose Spindle Or Worn Holder
	Tool Condition	1. Obtain Proper Indexing Angle For The Flutes At The Cutting Edge 2. Grind Proper Cutting Angle And Chamfer Angle 3. Avoid Too Narrow A Land Width 4. Remove Burrs From Regrinding
Oversize Internal Diameter	Hole Size	1. Use Minimum Hole Size 2. Avoid Tapered Hole 3. Use Proper Chamfered Taps
	Galling	1. Galling Solutions 1 Through 4 Above Can Be Applied To This Specific Problem
Undersize Pitch Diameter	Incorrect Tap	1. Use Oversize Taps 2. Apply Proper Chamfer Angle 3. Increase Cutting Angle
	Damaged Thread	1. Use Proper Reversing Speed To Avoid Damaging Tapped Thread On The Way Out Of The Hole
	Left-over Chips	1. Increase Cutting Performance To Avoid Any Left Over Chips In The Hole 2. Remove Left Over Chips From The Hole For Gage Checking
Undersize Internal Diameter	Hole Size	1. USE MAXIMUM DRILL SIZE

TECHNICAL DATA

Specific Problem	Cause	Solution
Tool Life		
Breakage	Incorrect Tap Selection	1. Avoid chip packing in the flutes or the bottom of the hole. Use spiral pointed or spiral fluted taps or fluteless taps. 2. Apply correct surface treatment such as Hardslick or bright
	Excessive Tapping Torque	1. Use larger drill size 2. Try to shorten thread length 3. Increase cutting angle 4. Apply a tap with more thread relief and reduced land width 5. Apply correct surface treatment such as Hardslick
	Operating Conditions	1. Reduce tapping speed 2. Avoid misalignment between tap and the hole and tapered hole 3. Use floating type of tapping holder 4. Use tapping holder with torque adjustment 5. Avoid hitting bottom of the hole with tap
	Tool Condition	1. Do not grind the bottom of the flute 2. Avoid too narrow a land width 3. Remove all worn sections when regrindig the flutes 4. Regrind tool more frequently
Chipping	Incorrect Tap Selection	1. Reduce cutting angle 2. Use a different kind of high-speed steel tap 3. Reduce hardness of the tap 4. Increase chamfer length 5. Avoid chip packing in the flutes or in the bottom of the hole by using spiral fluted or spiral pointed taps
	Wear	1. Reduce tapping speed 2. Avoid misalignment between tap and hole 3. Avoid sudden return of reverse in blind hole tapping 4. Avoid galling 5. Use larger hole size
Wearx	Incorrect Tap Selection	1. Apply specially designed tap for tapping heat treated materal 2. Change to a type of high-speed steel tap that contains vanadium 3. Apply special surface treatment such as TiCN or Hardslick 4. Increase chamfer length
	Operating Conditions	1. Reduce tapping speed 2. Apply proper cutting lubricants 3. Avoid work hardened hole 4. Use larger hole size
	Tool Condition	1. Grind proper cutting angle 2. Avoid hardness reduction from grinding process
Torn or Rough Thread	Chamfer Too Short	1. Increase chamfer length
	Wrong Cutting Angle	1. Apply proper cutting angle

CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

TECHNICAL DATA

Specific Problem	Cause	Solution
Surface Finish		
Torn or Rough Thread	**Galling**	1. Use thread relieved taps 2. Reduce land width 3. Apply surface treatment such as Hardslick or chrome 4. Use proper cutting lubricant 5. Reduce tapping speed 6. Use larger hole size 7. Obtain proper alignment between tap and work
	Chip Packing	1. Use spiral pointed or spiral fluted taps 2. Use larger drill size
Chattering on Tapped Thread	**Tool Free Cutting**	1. Reduce cutting angle 2. Reduce amount of thread relief
	Tool Condition	1. Do not grind the bottom of the flute 2. Avoid too narrow a land width

MILLING TOOLS

CBN END MILLS

i-Xmill CARBIDE END MILLS

i-SMART SOLID CARBIDE MODULAR TYPE END MILLS

X5070 SOLID CARBIDE END MILLS

4G Mill SOLID CARBIDE END MILLS

X-POWER PRO SOLID CARBIDE END MILLS

TitaNox-POWER SOLID CARBIDE END MILLS

JET-POWER SOLID CARBIDE & HSS-PM END MILLS

V7 PLUS A SOLID CARBIDE END MILLS

V7 MILL INOX SOLID CARBIDE END MILLS

ALU-POWER HPC SOLID CARBIDE END MILLS

ALU-POWER SOLID CARBIDE & HSS END MILLS

D-POWER GRAPHITE SOLID CARBIDE END MILLS

STANDARD CARBIDE END MILLS

ONLY ONE COATED PM60 END MILLS

SINE POWER HSS END MILLS

TANK-POWER HSS-PM END MILLS

COBALT & HSS END MILLS

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YG-1 CO., LTD.

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YG MILLING TOOLS

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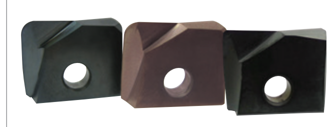
◎ : Excellent
○ : Good

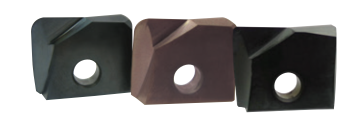
	CBN		i-Xmill Insert (Inch)					
SERIES	ESB94	ESD02	XB1A	XB2C	XB1D	XR1A	XR2A	XR1D
FLUTE	2	2	2	2	2	2	2	2
HELIX ANGLE	30°	0°	-	-	-	-	-	-
CUTTING EDGE SHAPE	BALL NOSE	CORNER RADIUS	BALL NOSE	BALL NOSE	BALL NOSE	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS
SIZE MIN	R0.2	D0.5	R5/32	R5/32	R5/32	D5/16	D5/16	D5/16
SIZE MAX	R1.5	D2.0	R5/8	R5/8	R5/8	D1-1/4	D1-1/4	D1-1/4
PAGE	C45	C46	C52			C55		
LENGTH	-	-	-	-	-	-	-	-
SURFACE TREATMENT	Uncoated	Uncoated	AlTiN	Z-Coating	Diamond	AlTiN	Z-Coating	Diamond
			for GENERAL PURPOSE	for HARDENED STEEL	for GRAPHITE	for GENERAL PURPOSE	for HARDENED STEEL	for GRAPHITE





ISO	VDI 3323	Material Description	HB	HRc	ESB94	ESD02	XB1A	XB2C	XB1D	XR1A	XR2A	XR1D
P	1	Non-alloy steel	125				◎			◎		
	2		190	13			◎			◎		
	3		250	25			◎			◎		
	4		270	28			◎			◎		
	5		300	32			◎			◎		
	6	Low alloy steel	180	10			◎			◎		
	7		275	29			◎			◎		
	8		300	32			◎			◎		
	9		350	38				◎			◎	
	10	High alloyed steel, and tool steel	200	15				○			○	
	11		325	35				○			○	
M	12	Stainless steel	200	15						◎		
	13		240	23						◎		
	14		180	10						◎		
K	15	Grey cast iron	180	10				◎			◎	
	16		260	26				◎			◎	
	17	Nodular cast iron	160	3				◎			◎	
	18		250	25				◎			◎	
	19	Malleable cast iron	130					◎			◎	
	20		230	21				◎			◎	
N	21	Aluminum-wrought alloy	60						○			○
	22		100						○			○
	23	Aluminum-cast, alloyed	75						○			○
	24		90						○			○
	25		130									
	26	Copper and Copper Alloys (Bronze / Brass)	110									
	27		90									
	28		100									
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.							◎			◎
	30											
S	31	Heat Resistant Super Alloys	200	15								
	32		280	30								
	33		250	25								
	34		350	38								
	35		320	34								
	36	Titanium Alloys	400 Rm									
	37		1050 Rm									
H	38	Hardened steel	550	55	◎	◎		○			○	
	39		630	60	◎	◎						
	40	Chilled Cast Iron	400	42								
	41	Hardened Cast Iron	550	55	◎	◎						

	i-Xmill Insert (Metric)						i-Xmill Holder		
SERIES	XB1N	XB2N	XBAD	XRAA	XRBA	XRAD	ZBS ZBT	ZBC	ZRS ZRT
FLUTE	2	2	2	2	2	2	-	-	-
HELIX ANGLE	-	-	-	-	-	-	-	-	-
CUTTING EDGE SHAPE	BALL NOSE	BALL NOSE	BALL NOSE	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	BALL NOSE	BALL NOSE	CORNER RADIUS
SIZE MIN	R4.0	R4.0	R4.0	D8.0	D8.0	D8.0	-	-	-
SIZE MAX	R16.0	R16.0	R16.0	D32.0	D32.0	D32.0	-	-	-
PAGE	C57			C60-C61			in C53 / mm C58	in C54 / mm C59	in C56 / mm C62
LENGTH	FULL RADIUS	-	-	-	-	HIGH FEED	STRAIGHT & TAPER NECK	STRAIGHT NECK	STRAIGHT & TAPER NECK
SURFACE TREATMENT	AlTiN	Z-Coating	Diamond	AlTiN	Z-Coating	Diamond	Steel	Carbide	Steel
	for GENERAL PURPOSE	for HARDENED STEEL	for GRAPHITE	for GENERAL PURPOSE	for HARDENED STEEL	for GRAPHITE			


ISO	VDI 3323	XB1N	XB2N	XBAD	XRAA	XRBA	XRAD	ZBS ZBT	ZBC	ZRS ZRT
P	1	◎			◎					
	2	◎			◎					
	3	◎			◎					
	4	◎			◎					
	5	◎			◎					
	6	◎			◎					
	7	◎			◎					
	8	◎			◎					
	9		◎			◎				
	10		○			○				
	11		◎			○				
M	12	◎			◎					
	13	◎			◎					
	14	◎			◎					
K	15		◎			◎				
	16		◎			◎				
	17		◎			◎				
	18		◎			◎				
	19		◎			◎				
	20		◎			◎				
N	21			○			○			
	22			○			○			
	23			○			○			
	24			○			○			
	25									
	26									
	27									
	28									
	29			◎			◎			
	30									
S	31									
	32									
	33									
	34									
	35									
	36									
	37									
H	38		○			○				
	39									
	40									
	41									

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SELECTION GUIDE

YG MILLING TOOLS

	i-Smart Modular Head					i-Smart Modular Holder		
SERIES	XGMF15	XGMF17	XGMF20	XGMF25	XGMF29	ZMC	ZMS	ZMT
FLUTE	2	4	4	4	6	-	-	-
HELIX ANGLE	30°	30°	27°/30° (MULTIPLE HELIX)	27°/30° (MULTIPLE HELIX)	45°	-	-	-
CUTTING EDGE SHAPE	BALL NOSE	BALL NOSE	CORNER RADIUS	SQUARE	SQUARE	-	-	-
SIZE MIN	R3/16	R3/16	D3/8	D3/8	D3/8	-	-	-
SIZE MAX	R5/8	R5/8	D1-1/4	D1-1/4	D1-1/4	-	-	-
PAGE	C70	C71	C72	C73	C74	C75	C76	C77
LENGTH	-	-	-	-	-	STRAIGHT NECK TYPE	STRAIGHT NECK TYPE	TAPER NECK TYPE
SURFACE TREATMENT	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Carbide	Steel	Steel

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◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	XGMF15	XGMF17	XGMF20	XGMF25	XGMF29	ZMC	ZMS	ZMT
P	1	Non-alloy steel	125		○	○	○	○	○			
	2		190	13	○	○	○	○	○			
	3		250	25	○	○	○	○	○			
	4		270	28	○	○	○	○	○			
	5		300	32	○	○	○	○	○			
	6	Low alloy steel	180	10	○	○	○	○	○			
	7		275	29	○	○	○	○	○			
	8		300	32	○	○	○	○	○			
	9		350	38	◎	◎	◎	◎	◎			
	10	High alloyed steel, and tool steel	200	15	○	○	○	○	○			
	11		325	35	◎	◎	◎	◎	◎			
M	12	Stainless steel	200	15								
	13		240	23								
	14		180	10				○				
K	15	Grey cast iron	180	10	○	○	○	○	○			
	16		260	26	○	○	○	○	○			
	17	Nodular cast iron	160	3	○	○	○	○	○			
	18		250	25	○	○	○	○	○			
	19	Malleable cast iron	130		○	○	○	○	○			
	20		230	21	○	○	○	○	○			
N	21	Aluminum-wrought alloy	60									
	22		100									
	23	Aluminum-cast, alloyed	75									
	24		90									
	25		130									
	26	Copper and Copper Alloys (Bronze / Brass)	110									
	27		90									
	28		100									
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.										
	30											
S	31	Heat Resistant Super Alloys	200	15								
	32		280	30								
	33		250	25								
	34		350	38								
	35		320	34								
	36	Titanium Alloys	400 Rm									
	37		1050 Rm									
H	38	Hardened steel	550	55	○	○	○	○	○			
	39		630	60								
	40	Chilled Cast Iron	400	42	◎	◎	◎	◎	◎			
	41	Hardened Cast Iron	550	55	○	○	○	○	○			

	X5070 (Inch)				X5070 (Metric)						
SERIES	G826	G8A43	G850	G851	G859	G854	G8A46	G8A54	G8A28	G8A38	G8A53
FLUTE	4	2	4	6&8	4	4	2	2	2	2	2
HELIX ANGLE	0°	30°	30°	45°	0°	0°	30°	30°	30°	30°	30°
CUTTING EDGE SHAPE	CORNER RADIUS	BALL NOSE	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE
SIZE MIN	D1/8	R1/64	D1/16	D1/4	D2.0	D2.0	R0.05	R0.25	R0.05	R0.5	R0.2
SIZE MAX	D1/2	R1/4	D3/4	D1	D16.0	D16.0	R2.0	R1.0	R6.0	R12.5	R1.0
PAGE	C86	C87	C88	C89	C90	C91	C92	C96	C97	C98	C99
LENGTH	High Feed	EXTENDED NECK	EXTENDED NECK	-	High Feed	High Feed Long Shank	RIB PROCESSING	RIB PROCESSING	-	STUB LENGTH EXTENDED NECK	MINIATURE
SURFACE TREATMENT	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating

ISO	VDI 3323	G826	G8A43	G850	G851	G859	G854	G8A46	G8A54	G8A28	G8A38	G8A53
P	1											
	2											
	3											
	4											
	5	○	○	○	○	○	○	○	○	○	○	○
	6											
	7											
	8	○	○	○	○	○	○	○	○	○	○	○
	9	○	○	○	○	○	○	○	○	○	○	○
	10											
	11	○	○	○	○	○	○	○	○	○	○	○
M	12											
	13											
	14											
K	15											
	16											
	17											
	18											
	19											
	20											
N	21											
	22											
	23											
	24											
	25											
	26											
	27											
	28											
	29											
	30											
S	31											
	32											
	33											
	34											
	35											
	36											
	37											
H	38	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	39	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	40	○	○	◎	◎	○	○	○	○	○	○	○
	41	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
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SELECTION GUIDE

YG MILLING TOOLS

X5070 (Metric)

SERIES	G8A59	G8A36	G8A50	G8A47	G8A37	G8A39
FLUTE	3	2	2	4	4	6
HELIX ANGLE	30°	30°	30°	30°	30°	45°
CUTTING EDGE SHAPE	BALL NOSE	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS
SIZE MIN	R1.5	D0.3	D0.3	D3.0	D1.0	D6.0
SIZE MAX	R10.0	D20.0	D2.0	D12.0	D20.0	D20.0
PAGE	C100	C101	C103	C104	C105	C106
LENGTH	-	STUB LENGTH EXTENDED NECK	MINIATURE	EXTENDED NECK	EXTENDED NECK	EXTENDED NECK
SURFACE TREATMENT	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating

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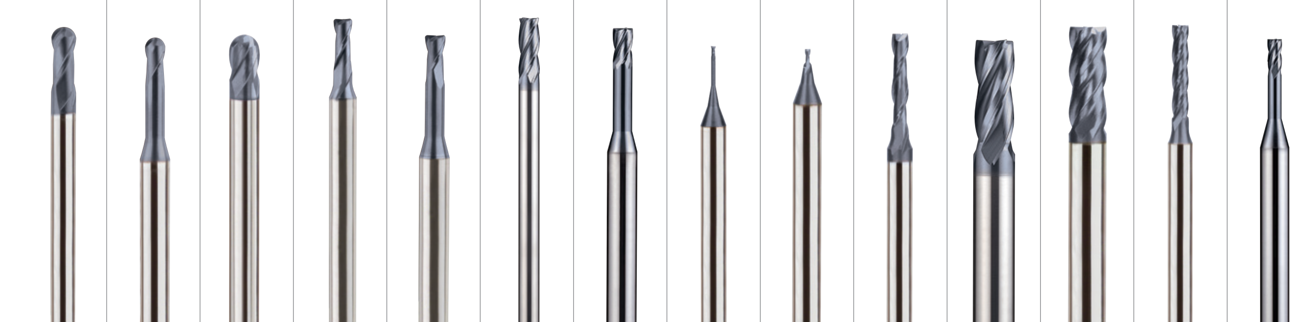
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	G8A59	G8A36	G8A50	G8A47	G8A37	G8A39
P	1	Non-alloy steel	125							
	2		190	13						
	3		250	25						
	4		270	28						
	5		300	32	○	○	○	○	○	○
	6	Low alloy steel	180	10						
	7		275	29						
	8		300	32	○	○	○	○	○	○
	9		350	38	○	○	○	○	○	○
	10	High alloyed steel, and tool steel	200	15						
	11		325	35	○	○	○	○	○	○
M	12	Stainless steel	200	15						
	13		240	23						
	14		180	10						
K	15	Grey cast iron	180	10						
	16		260	26						
	17	Nodular cast iron	160	3						
	18		250	25						
	19	Malleable cast iron	130							
	20		230	21						
N	21	Aluminum-wrought alloy	60							
	22		100							
	23	Aluminum-cast, alloyed	75							
	24		90							
	25		130							
	26	Copper and Copper Alloys (Bronze / Brass)	110							
	27		90							
	28		100							
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.								
	30									
S	31	Heat Resistant Super Alloys	200	15						
	32		280	30						
	33		250	25						
	34		350	38						
	35		320	34						
	36	Titanium Alloys	400 Rm							
	37		1050 Rm							
H	38	Hardened steel	550	55	◎	◎	◎	◎	◎	◎
	39		630	60	◎	◎	◎	◎	◎	◎
	40	Chilled Cast Iron	400	42	○	○	○	○	○	○
	41	Hardened Cast Iron	550	55	◎	◎	◎	◎	◎	◎

4G Mills (Inch)

SERIES	GMF15	GMF16	GMF17	GMF18	GMF19	GMF20	GMF21	GMF22	GMF23	GMF24	GMF25	GMF26	GMF27	GMF28
FLUTE	2	2	4	2	2	4	4	2	2	2	4	4	4	4
HELIX ANGLE	30°	30°	30°	30°	30°	27°/30° (MULTIPLE HELIX)	27°/30° (MULTIPLE HELIX)	30°	30°	30°	27°/30° (MULTIPLE HELIX)	35°/38° (MULTIPLE HELIX)	30°	30°
CUTTING EDGE SHAPE	BALL NOSE	BALL NOSE	BALL NOSE	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE
SIZE MIN	R.002	R.004	R1/16	D3/64	D.008	D3/64	D3/64	D.008	D.004	D3/64	D3/64	D3/64	D3/64	D3/64
SIZE MAX	R3/8	R1/4	R1/4	D3/4	D3/4	D3/4	D3/4	D1/2	D.120	D3/4	D3/4	D3/4	D1	D1/2
PAGE	C130	C132	C135	C136	C139	C145	C147	C152	C155	C158	C161	C162	C163	C166
LENGTH		NECK			NECK		NECK	NECK		LONG LENGTH			LONG LENGTH	NECK
SURFACE TREATMENT	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating



VDI 3323	GMF15	GMF16	GMF17	GMF18	GMF19	GMF20	GMF21	GMF22	GMF23	GMF24	GMF25	GMF26	GMF27	GMF28	ISO
1	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P
2	○	○	○	○	○	○	◎	○	○	○	○	○	○	○	
3	○	○	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
4	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
5	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
7	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
8	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
9	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
10	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
11	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
12								○						○	M
13								○						○	
14								○	○		○	○		○	
15	○	○	○	○	○	○	○	○	○	○	○	○	○	○	K
16	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
17	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
18	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
19	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
20	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
21															N
22															
23															
24															
25															
26															
27															
28															
29															
30															
31															S
32															
33															
34															
35															
36															
37															
38	○	○	○	○	○	○	○	○	○	○	○	○	○	○	H
39															
40	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
41	○	○	○	○	○	○	○	○	○	○	○	○	○	○	

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
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TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SELECTION GUIDE

YG MILLING TOOLS

	4G Mills (Inch)				4G Mills (Metric)				
SERIES	GMF29	G907 G928	G908 G929	G909 G930	SEMD98	SEM846	SEM846	SEMD99	SEME61
FLUTE	6	4&5	4&5	4&5	2	2	2	2	2
HELIX ANGLE	45°	4 Flute : 44°/45° 5 Flute : 44°/44.5°/45°	4 Flute : 44°/45° 5 Flute : 44°/44.5°/45°	4 Flute : 44°/45° 5 Flute : 44°/44.5°/45°	30°	30°	30°	30°	30°
CUTTING EDGE SHAPE	SQUARE	CORNER RADIUS ROUGHING	CORNER RADIUS ROUGHING	CORNER RADIUS ROUGHING	BALL NOSE	BALL NOSE	BALL NOSE	CORNER RADIUS	CORNER RADIUS
SIZE MIN	D1/4	D1/4	D1/4	D1/4	R0.05	R0.05	R0.25	D0.2	D0.2
SIZE MAX	D3/4	D1	D1	D3/4	R12.5	R6.0	R1.0	D20.0	D20.0
PAGE	C168	C169	C170	C171	C172	C177	C185	C188	C194
LENGTH		STUB LENGTH	REGULAR LENGTH	EXTENDED REACH		LONG NECK	LONG NECK (6mm Shank)		LONG NECK
SURFACE TREATMENT	Y-Coating	X-Coating	X-Coating	X-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating
		X-SPEED ROUGHER	X-SPEED ROUGHER	X-SPEED ROUGHER	Call for Availability				

Please visit globalyg1.com/mat for material search

◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	GMF29	G907 G928	G908 G929	G909 G930	SEMD98	SEM846	SEM846	SEMD99	SEME61
P	1	Non-alloy steel	125		○	○	○	○	○	○	○	○	○
	2		190	13	○	○	○	○	○	○	○	○	○
	3		250	25	◎	◎	◎	◎	○	○	○	◎	◎
	4		270	28	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5		300	32	◎	◎	◎	◎	◎	◎	◎	◎	◎
	6	Low alloy steel	180	10	○	○	○	○	○	○	○	○	○
	7		275	29	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8		300	32	◎	◎	◎	◎	◎	◎	◎	◎	◎
	9		350	38	◎	◎	◎	◎	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel	200	15	○	○	○	○	○	○	○	○	○
	11		325	35	◎	◎	◎	◎	◎	◎	◎	◎	◎
M	12	Stainless steel	200	15		○	○	○					
	13		240	23		○	○	○					
	14		180	10		○	○	○					
K	15	Grey cast iron	180	10	○	◎	◎	◎	○	○	○	○	○
	16		260	26	○	◎	◎	◎	○	○	○	○	○
	17	Nodular cast iron	160	3	○	◎	◎	◎	○	○	○	○	○
	18		250	25	○	◎	◎	◎	○	○	○	○	○
	19	Malleable cast iron	130		○	◎	◎	◎	○	○	○	○	○
	20		230	21	○	◎	◎	◎	○	○	○	○	○
N	21	Aluminum-wrought alloy	60										
	22		100										
	23	Aluminum-cast, alloyed	75										
	24		90										
	25		130										
	26	Copper and Copper Alloys (Bronze / Brass)	110			○	○	○					
	27		90			○	○	○					
	28		100			○	○	○					
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.											
	30												
S	31	Heat Resistant Super Alloys	200	15									
	32		280	30									
	33		250	25									
	34		350	38									
	35		320	34									
	36	Titanium Alloys	400 Rm										
	37		1050 Rm										
H	38	Hardened steel	550	55	○				○	○	○	○	○
	39		630	60									
	40	Chilled Cast Iron	400	42	◎	◎	◎	◎	◎	◎	◎	◎	◎
	41	Hardened Cast Iron	550	55	○				○	○	○	○	○

	4G Mills (Metric)													
SERIES	SEME01	SEME64	SEME35	SEME70	SEM845	SEME36	SEME71	SEME72	SEME73	SEME75	G9D75 G9D67	G9D76 G9D68	G9D77 G9D69	GAE53
FLUTE	4	4	2	2	2	4	4	4	4	6	4&5	4&5	4&5	4&5
HELIX ANGLE	27°/30° (MULTIPLE HELIX)	27°/30° (MULTIPLE HELIX)	30°	30°	30°	27°/30°	35°/38°	30°	30°	45°	4 Flute : 44°/45° 5 Flute : 44°/44.5°/45°	4 Flute : 44°/45° 5 Flute : 44°/44.5°/45°	4 Flute : 44°/45° 5 Flute : 44°/44.5°/45°	4 Flute : 44°/45° 5 Flute : 44°/44.5°/45°
CUTTING EDGE SHAPE	CORNER RADIUS	CORNER RADIUS	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	CORNER RADIUS ROUGHING	CORNER RADIUS ROUGHING	CORNER RADIUS ROUGHING	CORNER RADIUS ROUGHING
SIZE MIN	D1.0	D1.0	D0.1	D1.0	D0.1	D0.8	D1.0	D1.0	D1.0	D6.0	D6.0	D6.0	D6.0	D6.0
SIZE MAX	D20.0	D20.0	D25.0	D25.0	D12.0	D25.0	D20.0	D25.0	D12.0	D20.0	D20.0	D20.0	D20.0	D20.0
PAGE	C210	C216	C229	C234	C239	C247	C249	C252	C257	C262	C264	C265	C266	C267
LENGTH		LONG NECK		LONG LENGTH	LONG NECK			LONG LENGTH	LONG NECK		SHORT LENGTH	LONG LENGTH	LONG REACH	SHORT LENGTH
SURFACE TREATMENT	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	X-Coating	X-Coating	X-Coating	X-Coating
	Call for Availability										X-SPEED ROUGHER	X-SPEED ROUGHER	X-SPEED ROUGHER	X-SPEED ROUGHER

VDI 3323	SEME01	SEME64	SEME35	SEME70	SEM845	SEME36	SEME71	SEME72	SEME73	SEME75	G9D75 G9D67	G9D76 G9D68	G9D77 G9D69	GAE53	ISO
1	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P
2	○	◎	○	○	○	○	○	○	○	○	○	○	○	○	
3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
4	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
5	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	
6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
7	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
8	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	
9	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	
10	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
11	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	
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14			○		○	○	○		○			○	○	◎	
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17	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	◎	
18	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	◎	
19	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	◎	
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39	○														
40	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎					
41	○	○	○	○	○	○	○	○	○	○					

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SELECTION GUIDE

YG MILLING TOOLS

X-Power Pro (Inch)

SERIES	GM153	GM207	GM639	GM649	GM212	GM103	GM208
FLUTE	4	4	4	4	4	4	6&8
HELIX ANGLE	30°	30°	30°	30°	30°	45°	45°
CUTTING EDGE SHAPE	SQUARE	SQUARE	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	SQUARE
SIZE MIN	D1/16	D1/8	D1/16	D1/16	D1/4	D3/8	D1/4
SIZE MAX	D1"	D1"	D1/2	D1/2	D1/2	D7/8	D1"
PAGE	C396	C397	C398	C399	C400	C401	C402
LENGTH	MEDIUM LENGTH	MINIATURE	STUB LENGTH	REGULAR LENGTH	LONG LENGTH	LONG REACH	LONG LENGTH
SURFACE TREATMENT	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating

Please visit globalyg1.com/mat for material search

◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	GM153	GM207	GM639	GM649	GM212	GM103	GM208
P	1	Non-alloy steel	125		○	○	○	○	○	○	○
	2		190	13	○	○	○	○	○	○	○
	3		250	25	◎	◎	◎	◎	◎	◎	◎
	4		270	28	◎	◎	◎	◎	◎	◎	◎
	5		300	32	◎	◎	◎	◎	◎	◎	◎
	6	Low alloy steel	180	10	○	○	○	○	○	○	○
	7		275	29	◎	◎	◎	◎	◎	◎	◎
	8		300	32	◎	◎	◎	◎	◎	◎	◎
	9		350	38	◎	◎	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel	200	15	○	○	○	○	○	○	○
	11		325	35	◎	◎	◎	◎	◎	◎	◎
M	12	Stainless steel	200	15	○					○	
	13		240	23	○					○	
	14		180	10	○					○	
K	15	Grey cast iron	180	10							
	16		260	26							
	17	Nodular cast iron	160	3							
	18		250	25							
	19	Malleable cast iron	130								
	20		230	21							
N	21	Aluminum-wrought alloy	60								
	22		100								
	23	Aluminum-cast, alloyed	75								
	24		90								
	25		130								
	26	Copper and Copper Alloys (Bronze / Brass)	110								
	27		90								
	28		100								
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.									
	30										
S	31	Heat Resistant Super Alloys	200	15							
	32		280	30							
	33		250	25							
	34		350	38							
	35		320	34							
	36	Titanium Alloys	400 Rm								
	37		1050 Rm								
H	38	Hardened steel	550	55	○	○	○	○	○	○	○
	39		630	60							
	40	Chilled Cast Iron	400	42	◎	◎	◎	◎	◎	◎	◎
	41	Hardened Cast Iron	550	55	○	○	○	○	○	○	○

YG YG-1 CO., LTD.

X-Power Pro (Inch)

SERIES	GM218	GM668	GM209	GM210	GM961	GM960	GM109	GM963	GM666	GM156	GM967
FLUTE	6&8	6&8	2	4	2	2	2	2	3~5	3~5	2
HELIX ANGLE	45°	45°	30°	30°	30°	30°	15°	30°	20°	20°	30°
CUTTING EDGE SHAPE	SQUARE	CORNER RADIUS	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	ROUGHING	ROUGHING	BALL NOSE
SIZE MIN	D1/4	D1/4	R1/64	R1/16	R1/16	R.012	R1/64	R1/32	D1/4	D1/4	R1/64
SIZE MAX	D1"	D3/4	R3/8	R3/8	R1/2	R. 031	R1/4	R3/16	D1"	D1"	R1/16
PAGE	C402	C403	C404	C405	C406	C407	C408	C409	C410		C411
LENGTH	EXTRA LONG LENGTH	LONG LENGTH	LONG LENGTH	LONG LENGTH	MEDIUM LENGTH	MINIATURE	STUB CUT LENGTH	TAPER NECK	STUB LENGTH FINE PITCH	LONG LENGTH FINE PITCH	RIB PROCESSING
SURFACE TREATMENT	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating

GM218	GM668	GM209	GM210	GM961	GM960	GM109	GM963	GM666	GM156	GM967	VDI 3323	ISO
○	○	○	○	○			○	○	○	○	1	P
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○	○	○	○	○	○	○	○	○	○	○	41	

YG YG-1 CO., LTD.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
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X-POWER PRO END MILLS
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V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
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TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SELECTION GUIDE

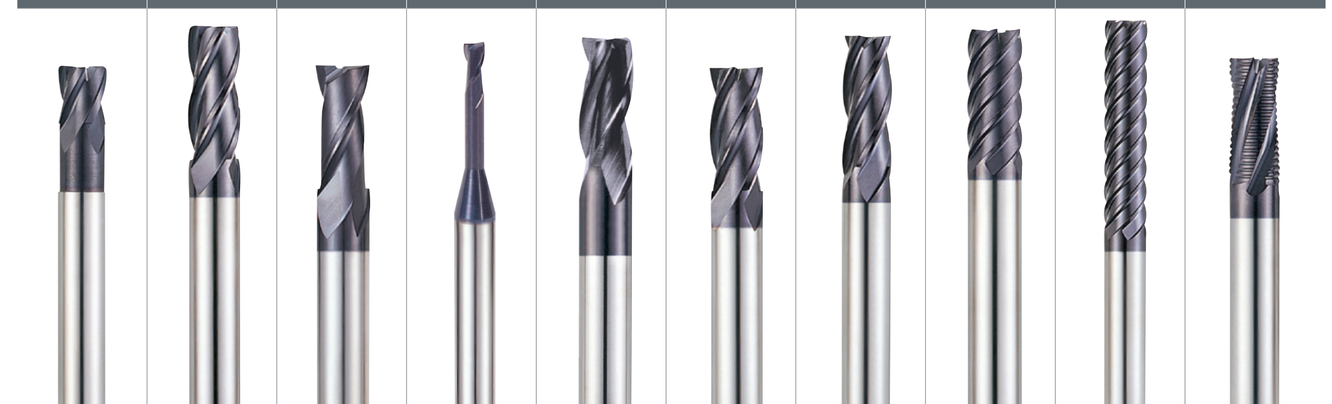
YG MILLING TOOLS

X-Power Pro (Metric)

SERIES	GM876	GM813	GM886	GM902	GM815	GM818	GM8A1
FLUTE	2	2	2	2	4	2	2
HELIX ANGLE	30°	30°	30°	30°	30°	30°	30°
CUTTING EDGE SHAPE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	CORNER RADIUS	CORNER RADIUS
SIZE MIN	R0.5	R0.5	R0.25	R0.5	R1.0	D4.0	D1.0
SIZE MAX	R8.0	R10.0	R3.0	R4.0	R8.0	D12.0	D6.0
PAGE	C412	C413	C414	C416	C417	C418	C419
LENGTH	SHORT LENGTH	LONG LENGTH	RIB PROCESSING	TAPER NECK	LONG LENGTH	LONG LENGTH	RIB PROCESSING
SURFACE TREATMENT	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating

X-Power Pro (Metric)

SERIES	GM839	GM819	GM810	GM883	GM895	GM811	GM817	GM812	GM834	GM814
FLUTE	4	4	2	2	3	4	4	6&8	6	3&4
HELIX ANGLE	30°	30°	30°	30°	38°	30°	30°	45°	45°	20°
CUTTING EDGE SHAPE	CORNER RADIUS	CORNER RADIUS	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	ROUGHING
SIZE MIN	D2.0	D3.0	D0.4	D0.4	D1.0	D2.0	D2.0	D6.0	D6.0	D6.0
SIZE MAX	D12.0	D20.0	D20.0	D6.0	D16.0	D25.0	D20.0	D20.0	D25.0	D20.0
PAGE	C420	C421	C422	C423	C425	C426	C427	C428	C429	C430
LENGTH	STUB LENGTH	LONG LENGTH	SHORT LENGTH	RIB PROCESSING	SHORT LENGTH	SHORT LENGTH	LONG LENGTH	LONG LENGTH	EXTRA LONG LENGTH	LONG LENGTH FINE PITCH
SURFACE TREATMENT	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating



Please visit globalyg1.com/mat for material search

◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	GM876	GM813	GM886	GM902	GM815	GM818	GM8A1
P	1	Non-alloy steel	125		○	○	○	○	○	○	○
	2		190	13	○	○	○	○	○	○	○
	3		250	25	○	○	○	○	○	○	○
	4		270	28	◎	◎	◎	○	◎	◎	◎
	5		300	32	◎	◎	◎	○	◎	◎	◎
	6	Low alloy steel	180	10	○	○	○	○	○	○	○
	7		275	29	◎	◎	◎	○	◎	◎	◎
	8		300	32	◎	◎	◎	◎	◎	◎	◎
	9		350	38	◎	◎	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel	200	15	○	○	○	○	○	○	○
	11		325	35	◎	◎	◎	◎	◎	◎	◎
M	12	Stainless steel	200	15							
	13		240	23							
	14		180	10							
K	15	Grey cast iron	180	10	○	○	○		○	○	○
	16		260	26	○	○	○		○	○	○
	17	Nodular cast iron	160	3	○	○	○		○	○	○
	18		250	25	○	○	○		○	○	○
	19	Malleable cast iron	130		○	○	○		○	○	○
	20		230	21	○	○	○		○	○	○
N	21	Aluminum-wrought alloy	60								
	22		100								
	23	Aluminum-cast, alloyed	75								
	24		90								
	25		130								
	26	Copper and Copper Alloys (Bronze / Brass)	110								
	27		90								
	28		100								
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.									
	30										
S	31	Heat Resistant Super Alloys	200	15							
	32		280	30							
	33		250	25							
	34		350	38							
	35		320	34							
	36	Titanium Alloys	400 Rm								
	37		1050 Rm								
H	38	Hardened steel	550	55	○	○	○	○	○	○	○
	39		630	60					○		
	40	Chilled Cast Iron	400	42	◎	◎	◎	◎	◎	◎	◎
	41	Hardened Cast Iron	550	55	○	○	○	○	○	○	○

ISO	VDI 3323	GM839	GM819	GM810	GM883	GM895	GM811	GM817	GM812	GM834	GM814
P	1	○	○	○	○	○	○	○	○	○	○
	2	○	○	○	○	○	○	○	○	○	○
	3	○	○	○	○	○	○	○	○	○	○
	4	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	6	○	○	○	○	○	○	○	○	○	○
	7	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	9	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	10	○	○	○	○	○	○	○	○	○	○
	11	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
M	12		○	○		○	○				
	13		○	○		○	○				
	14		○	○		○	○				○
K	15	○	○	○	○	○	○	○	○	○	○
	16	○	○	○	○	○	○	○	○	○	○
	17	○	○	○	○	○	○	○	○	○	○
	18	○	○	○	○	○	○	○	○	○	○
	19	○	○	○	○	○	○	○	○	○	○
	20	○	○	○	○	○	○	○	○	○	○
N	21										
	22										
	23										
	24										
	25										
	26										
	27										
	28										
	29										
	30										
S	31										
	32										
	33										
	34										
	35										
	36										
	37										
H	38	○	○	○	○	○	○	○	○	○	○
	39										
	40	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	41	○	○	○	○	○	○	○	○	○	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
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YG MILLING TOOLS

	TitaNox-Power (Inch)						
SERIES	UGMG42	UGMG43	UGMH12	UGMG32	UGMG34	UGMH06	UGMH07
FLUTE (SHANK)	4 (Plain Shank)	4 (Weldon Flat)	5 (Plain Shank)			5 (Plain Shank)	
HELIX ANGLE	43° / 45° (MULTIPLE HELIX)		43°/44°/45° (MULTIPLE HELIX)			43°/44°/45° (MULTIPLE HELIX)	
CUTTING EDGE SHAPE	CORNER RADIUS	CORNER RADIUS	SQUARE	CHAMFER	CORNER RADIUS	SQUARE	CORNER RADIUS
SIZE MIN	1/4	3/8	1/8	1/8	1/8	1/8	1/8
SIZE MAX	1	1	1-1/4	1	1-1/4	1	1
PAGE	C474	C475	C476-C477			C478-C479	
LENGTH	DOUBLE CORE STANDARD LENGTH		STANDARD LENGTH	STANDARD LENGTH		EXTENDED LENGTH	
SURFACE TREATMENT	Y-Coating		Y-Coating			Y-Coating	

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ISO	VDI 3323	Material Description	HB	HRc	UGMG42	UGMG43	UGMH12	UGMG32	UGMG34	UGMH06	UGMH07
P	1	Non-alloy steel	125		○	○	○	○	○	○	○
	2		190	13	○	○	○	○	○	○	○
	3		250	25	○	○	○	○	○	○	○
	4		270	28	○	○	○	○	○	○	○
	5		300	32	○	○	○	○	○	○	○
	6	Low alloy steel	180	10	○	○	○	○	○	○	○
	7		275	29	○	○	○	○	○	○	○
	8		300	32	○	○	○	○	○	○	○
	9		350	38	○	○	○	○	○	○	○
	10	High alloyed steel, and tool steel	200	15	○	○	○	○	○	○	○
	11		325	35	○	○	○	○	○	○	○
M	12	Stainless steel	200	15	◎	◎	◎	◎	◎	◎	◎
	13		240	23	◎	◎	◎	◎	◎	◎	◎
	14		180	10	◎	◎	◎	◎	◎	◎	◎
K	15	Grey cast iron	180	10	○	○	○	○	○	○	○
	16		260	26	○	○	○	○	○	○	○
	17	Nodular cast iron	160	3	○	○	○	○	○	○	○
	18		250	25	○	○	○	○	○	○	○
	19	Malleable cast iron	130		○	○	○	○	○	○	○
	20		230	21	○	○	○	○	○	○	○
N	21	Aluminum-wrought alloy	60								
	22		100								
	23	Aluminum-cast, alloyed	75								
	24		90								
	25		130								
	26	Copper and Copper Alloys (Bronze / Brass)	110								
	27		90								
	28		100								
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.									
	30										
S	31	Heat Resistant Super Alloys	200	15	○	○	○	○	○	○	○
	32		280	30	○	○	○	○	○	○	○
	33		250	25	○	○	○	○	○	○	○
	34		350	38	○	○	○	○	○	○	○
	35		320	34	○	○	○	○	○	○	○
	36	Titanium Alloys	400 Rm		◎	◎	◎	◎	◎	◎	◎
	37		1050 Rm		◎	◎	◎	◎	◎	◎	◎
H	38	Hardened steel	550	55							
	39		630	60							
	40	Chilled Cast Iron	400	42							
	41	Hardened Cast Iron	550	55							

	TitaNox-Power (Inch)		TitaNox-Power (Metric)			JET-POWER (Inch)					
SERIES	EMI42	EMI43	GMG40	GMG24 GMG26	GMG28 GMG30	EH108	EE882	E5075 E5105	E5074 E5104	EH094	EH095
FLUTE (SHANK)	5 (Plain Shank)		4 (Plain Shank)	5 (Plain Shank)		3&4	6 (Weldon)	3	3	3~5	3~5
HELIX ANGLE	38°		43° / 45° (MULTIPLE HELIX)	43°/44°/45° (MULTIPLE HELIX)		50°	35°	35°	35°	30°	30°
CUTTING EDGE SHAPE	SQUARE	CORNER RADIUS	CORNER RADIUS	CHAMFER	CORNER RADIUS	SQUARE	SQUARE	CORNER RADIUS	CORNER RADIUS	ROUGHING	ROUGHING
SIZE MIN	1/4	1/4	6.0	6.0	6.0	D1/8	D3/4	D1/8	D1/8	D1/4	D1/4
SIZE MAX	1	1	25.0	25.0	25.0	D1	D1-1/2	D1	D1	D1	D1
PAGE	C480-C481		C482	C483		C496	C497	C498	C499	C500	C501
LENGTH	STANDARD LENGTH		EXTENDED LENGTH	STANDARD LENGTH		REGULAR LENGTH	REGULAR LENGTH	STUB LENGTH HOSS	REGULAR LENGTH HOSS	STUB LENGTH FINE PITCH	LONG LENGTH FINE PITCH
SURFACE TREATMENT	AlTiN		Y-Coating	Y-Coating		TiAlN	TiAlN	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TiN TiCN TYLON F TYLON E	TiAlN	TiAlN
	TitaNox-Power HPC					U.S.A Stock	Call for Availability	U.S.A Stock		U.S.A Stock	

HSS-PM

VDI 3323	EMI42	EMI43	GMG40	GMG24 GMG26	GMG28 GMG30	EH108	EE882	E5075 E5105	E5074 E5104	EH094	EH095	ISO
1	○	○	○	○	○	○	○	○	○	○	○	P
2	○	○	○	○	○	○	○	○	○	○	○	
3	○	○	○	○	○	◎	◎	◎	◎	◎	◎	
4	○	○	○	○	○	◎	◎	◎	◎	◎	◎	
5	○	○	○	○	○	◎	◎	○	○	◎	◎	
6	○	○	○	○	○	○	○	○	○	○	○	
7	○	○	○	○	○	◎	◎	◎	◎	◎	◎	
8	○	○	○	○	○	◎	◎	○	○	◎	◎	
9	○	○	○	○	○	◎	◎	○	○	◎	◎	
10	○	○	○	○	○	○	○	○	○	○	○	
11	○	○	○	○	○	◎	◎	○	○	◎	◎	
12	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	M
13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
14	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
15	○	○	○	○	○			○	○			K
16	○	○	○	○	○			○	○			
17	○	○	○	○	○			○	○			
18	○	○	○	○	○			○	○			
19	○	○	○	○	○			○	○			
20	○	○	○	○	○			○	○			
21												N
22												
23												
24												
25												
26												
27												
28												
29												
30												
31	◎	◎	○	○	○	○	○			○	○	S
32	◎	◎	○	○	○	○	○			○	○	
33	◎	◎	○	○	○	○	○			○	○	
34	◎	◎	○	○	○	○	○			○	○	
35	◎	◎	○	○	○	○	○			○	○	
36	◎	◎	◎	◎	◎	◎	◎			◎	◎	
37	◎	◎	◎	◎	◎	◎	◎			◎	◎	
38												H
39												
40						○	○			○	○	
41												

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
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	Jet- Power (Inch)		JET-POWER (Metric)						
SERIES	EH969	EH970	EH830	EE515	EH852	EH831	EH917	EH919	EH921
FLUTE (SHANK)	3~6	4~6	3&4	4&6(Weldon)	3~5	3~5	4~6	3~6	4~6
HELIX ANGLE	45°	45°	50°	30°	30°	30°	45°	45°	45°
CUTTING EDGE SHAPE	ROUGHING	ROUGHING	SQUARE	SQUARE	ROUGHING	ROUGHING	ROUGHING	ROUGHING	ROUGHING
SIZE MIN	D3/16	D1/4	D6.0	D3.0	D6.0	D6.0	D6.0	D4.0	D6.0
SIZE MAX	D1	D3/4	D25.0	D25.0	D25.0	D25.0	D20.0	D25.0	D20.0
PAGE	C502	C503	C504	C505	C506	C507	C508	C509	C510
LENGTH	LONG LENGTH FINE PITCH	LONG REACH FINE PITCH	LONG LENGTH	SHORT LENGTH	STUB LENGTH FINE PITCH	LONG LENGTH FINE PITCH	SHORT LENGTH FINE PITCH	LONG LENGTH FINE PITCH	LONG REACH FINE PITCH
SURFACE TREATMENT	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN
	U.S.A Stock		Call for Availability						
				HSS-PM					

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ISO	VDI 3323	Material Description	HB	HRc	EH969	EH970	EH830	EE515	EH852	EH831	EH917	EH919	EH921
P	1	Non-alloy steel	125		○	○	○	○	○	○	○	○	○
	2		190	13	○	○	○	○	○	○	○	○	○
	3		250	25	◎	◎	◎	◎	◎	◎	◎	◎	◎
	4		270	28	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5		300	32	◎	◎	◎	◎	◎	◎	◎	◎	◎
	6	Low alloy steel	180	10	○	○	○	○	○	○	○	○	○
	7		275	29	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8		300	32	◎	◎	◎	◎	◎	◎	◎	◎	◎
	9		350	38	◎	◎	◎	◎	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel	200	15	○	○	○	○	○	○	○	○	○
	11		325	35	◎	◎	◎	◎	◎	◎	◎	◎	◎
M	12	Stainless steel	200	15	◎	◎	◎	◎	◎	◎	◎	◎	◎
	13		240	23	◎	◎	◎	◎	◎	◎	◎	◎	◎
	14		180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	15	Grey cast iron	180	10									
	16		260	26									
	17	Nodular cast iron	160	3									
	18		250	25									
	19	Malleable cast iron	130										
	20		230	21									
N	21	Aluminum-wrought alloy	60										
	22		100										
	23	Aluminum-cast, alloyed	75										
	24		90										
	25		130										
	26	Copper and Copper Alloys (Bronze / Brass)	110										
	27		90										
	28		100										
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.											
	30												
S	31	Heat Resistant Super Alloys	200	15	○	○	○	○	○	○	○	○	○
	32		280	30	○	○	○	○	○	○	○	○	○
	33		250	25	○	○	○	○	○	○	○	○	○
	34		350	38	○	○	○	○	○	○	○	○	○
	35		320	34	○	○	○	○	○	○	○	○	○
	36	Titanium Alloys	400 Rm		◎	◎	◎	◎	◎	◎	◎	◎	◎
	37		1050 Rm		◎	◎	◎	◎	◎	◎	◎	◎	◎
H	38	Hardened steel	550	55									
	39		630	60									
	40	Chilled Cast Iron	400	42	○	○	○	○	○	○	○	○	○
	41	Hardened Cast Iron	550	55									

V7 Plus A(Inch)										
UGMF68	UGMF76	UGMF70	UGMG53	UGMF69	UGMF77	UGMF71	UGMG54	UGMF72	UGMF74	UGMH10
4 (Plain Shank)				4 (Weldon Flat)				4 (Plain Shank)		
35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)
SQUARE	CHAMFER	CORNER RADIUS	BALL NOSE	SQUARE	CHAMFER	CORNER RADIUS	BALL NOSE	SQUARE	CORNER RADIUS	BALL NOSE
1/8	1/4	1/8	1/8	11/32	3/8	3/8	11/32	1/8	1/8	1/8
1	1	1	1	1	1	1	1	1	1	1
C532-C534				C535				C536-C537		
MULTIPLE LENGTH				MULTIPLE LENGTH				EXTENDED REACH		
Y-Coating				Y-Coating				Y-Coating		

VDI 3323	UGMF68	UGMF76	UGMF70	UGMG53	UGMF69	UGMF77	UGMF71	UGMG54	UGMF72	UGMF74	UGMH10	ISO
1	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	P
2	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
4	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
5	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
6	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
7	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
8	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
9	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
11	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
12	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	M
13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
14	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
15	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	K
16	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
17	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
18	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
19	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
20	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
21												N
22												
23												
24												
25												
26												
27												
28												
29												
30												
31	○	○	○	○	○	○	○	○	○	○	○	S
32	○	○	○	○	○	○	○	○	○	○	○	
33	○	○	○	○	○	○	○	○	○	○	○	
34	○	○	○	○	○	○	○	○	○	○	○	
35	○	○	○	○	○	○	○	○	○	○	○	
36	○	○	○	○	○	○	○	○	○	○	○	
37	○	○	○	○	○	○	○	○	○	○	○	
38												H
39												
40												
41												

CARBIDE
HSS
CBN END MILLS
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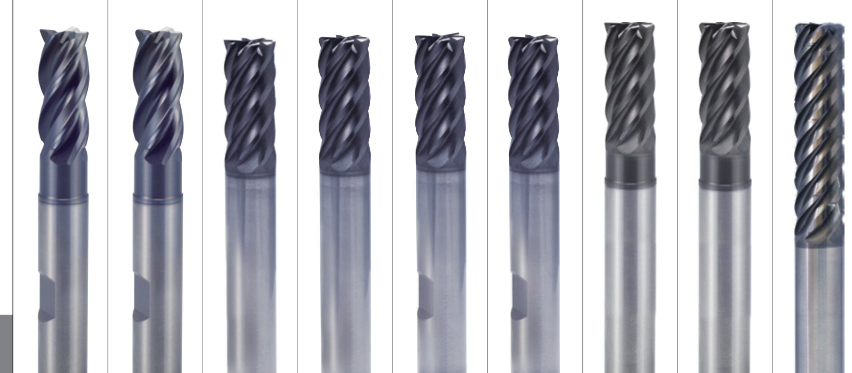
SELECTION GUIDE

YG MILLING TOOLS

V7 Plus A(Inch)

SERIES	UGMF73	UGMF75	UGMG20	UGMG22	UGMG21	UGMG23	UGMH08	UGMH09	GMH72
FLUTE (SHANK)	4 (Weldon Flat)		6 (Plain Shank)		6 (Weldon Flat)		6 (Plain Shank)		
HELIX ANGLE	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	45°	45°	45°	45°	45°	45°	45°
CUTTING EDGE SHAPE	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	CORNER RADIUS
SIZE MIN	3/8	3/8	1/4	1/4	3/8	3/8	1/4	1/4	3/8
SIZE MAX	1	1	1	1	1	1	1	1	1
PAGE	C538		C543-C544		C545		C546-C547		C550
LENGTH	EXTENDED REACH		MULTIPLE LENGTH		MULTIPLE LENGTH		EXTENDED REACH		MULTIPLE LENGTH
SURFACE TREATMENT	Y-Coating		Y-Coating		Y-Coating		Y-Coating		Y-Coating
									CHIP SPLITTER



Please visit globalyg1.com/mat for material search

ISO	VDI 3323	Material Description	HB	HRc	UGMF73	UGMF75	UGMG20	UGMG22	UGMG21	UGMG23	UGMH08	UGMH09	GMH72
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎	◎	◎	◎	◎
P	2	Non-alloy steel	190	13	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	3	Non-alloy steel	250	25	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	4	Non-alloy steel	270	28	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	5	Non-alloy steel	300	32	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	7	Low alloy steel	275	29	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	8	Low alloy steel	300	32	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	9	Low alloy steel	350	38	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	10	High alloyed steel, and tool steel	200	15	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	11	High alloyed steel, and tool steel	325	35	◎	◎	◎	◎	◎	◎	◎	◎	◎
M	12	Stainless steel	200	15	◎	◎	◎	◎	◎	◎	◎	◎	◎
M	13	Stainless steel	240	23	◎	◎	◎	◎	◎	◎	◎	◎	◎
M	14	Stainless steel	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	15	Grey cast iron	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	16	Grey cast iron	260	26	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	17	Nodular cast iron	160	3	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	18	Nodular cast iron	250	25	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	19	Malleable cast iron	130		◎	◎	◎	◎	◎	◎	◎	◎	◎
K	20	Malleable cast iron	230	21	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	21	Aluminum-wrought alloy	60										
N	22	Aluminum-wrought alloy	100										
N	23	Aluminum-cast, alloyed	75										
N	24	Aluminum-cast, alloyed	90										
N	25	Aluminum-cast, alloyed	130										
N	26	Copper and Copper Alloys (Bronze / Brass)	110										
N	27	Copper and Copper Alloys (Bronze / Brass)	90										
N	28	Copper and Copper Alloys (Bronze / Brass)	100										
N	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.											
N	30	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.											
S	31	Heat Resistant Super Alloys	200	15	○	○	○	○	○	○	○	○	○
S	32	Heat Resistant Super Alloys	280	30	○	○	○	○	○	○	○	○	○
S	33	Heat Resistant Super Alloys	250	25	○	○	○	○	○	○	○	○	○
S	34	Heat Resistant Super Alloys	350	38	○	○	○	○	○	○	○	○	○
S	35	Heat Resistant Super Alloys	320	34	○	○	○	○	○	○	○	○	○
S	36	Titanium Alloys	400 Rm		○	○	○	○	○	○	○	○	○
S	37	Titanium Alloys	1050 Rm		○	○	○	○	○	○	○	○	○
H	38	Hardened steel	550	55									
H	39	Hardened steel	630	60									
H	40	Chilled Cast Iron	400	42									
H	41	Hardened Cast Iron	550	55									

V7 Plus A(Metric)

SERIES	GMF52 GMF56	GMF54 GMF58	GMG55	GMF53 GMF57	GMF55 GMF59	GMG56	GMF60	GMF62	GMF61	GMF63	GMG12 GMG14	GMG16 GMG18
FLUTE (SHANK)	4 (Plain Shank)			4 (Weldon Flat)			4 (Plain Shank)		4 (Weldon Flat)		6 (Plain Shank)	
HELIX ANGLE	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	45°	45°
CUTTING EDGE SHAPE	CHAMFER	CORNER RADIUS	BALL NOSE	CHAMFER	CORNER RADIUS	BALL NOSE	CHAMFER	CORNER RADIUS	CHAMFER	CORNER RADIUS	SQUARE	CORNER RADIUS
SIZE MIN	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	6.0
SIZE MAX	25.0	25.0	25.0	25.0	25.0	25.0	20.0	20.0	20.0	20.0	25.0	25.0
PAGE	C539			C540			C541		C542		C548	
LENGTH	MULTIPLE LENGTH			MULTIPLE LENGTH			EXTENDED REACH		EXTENDED REACH		MULTIPLE LENGTH	
SURFACE TREATMENT	Y-Coating			Y-Coating			Y-Coating		Y-Coating		Y-Coating	

ISO	VDI 3323	GMF52 GMF56	GMF54 GMF58	GMG55	GMF53 GMF57	GMF55 GMF59	GMG56	GMF60	GMF62	GMF61	GMF63	GMG12 GMG14	GMG16 GMG18
P	1	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	2	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	4	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	5	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	6	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	7	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	8	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	9	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	11	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
M	12	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
M	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
M	14	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	15	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	16	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	17	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	18	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	19	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	20	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	21												
N	22												
N	23												
N	24												
N	25												
N	26												
N	27												
N	28												
N	29												
N	30												
S	31	○	○	○	○	○	○	○	○	○	○	○	○
S	32	○	○	○	○	○	○	○	○	○	○	○	○
S	33	○	○	○	○	○	○	○	○	○	○	○	○
S	34	○	○	○	○	○	○	○	○	○	○	○	○
S	35	○	○	○	○	○	○	○	○	○	○	○	○
S	36	○	○	○	○	○	○	○	○	○	○	○	○
S	37	○	○	○	○	○	○	○	○	○	○	○	○
H	38												
H	39												
H	40												
H	41												

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SELECTION GUIDE

YG MILLING TOOLS

Please visit globalyg1.com/mat for material search

◎ : Excellent
○ : Good

V7 Plus A (Metric)

				SERIES	GMG13 GMG15	GMG17 GMG19	GMH56	GMH58	GMH57	GMH59
				FLUTE (SHANK)	6 (Flat Shank)		6 (Plain Shank)		6 (Flat Shank)	
				HELIX ANGLE	45˚	45˚	45˚	45˚	45˚	45˚
				CUTTING EDGE SHAPE	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS
				SIZE MIN	6.0	6.0	6.0	6.0	6.0	6.0
				SIZE MAX	25.0	25.0	25.0	25.0	25.0	25.0
				PAGE	C549		C551		C552	
				LENGTH	EXTENDED REACH		EXTENDED REACH		EXTENDED REACH	
				SURFACE TREATMENT	Y-Coating		Y-Coating		Y-Coating	
							CHIP SPLITTER	CHIP SPLITTER	CHIP SPLITTER	CHIP SPLITTER
ISO	VDI 3323	Material Description	HB	HRc						
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎	◎
	2		190	13	◎	◎	◎	◎	◎	◎
	3		250	25	◎	◎	◎	◎	◎	◎
	4		270	28	◎	◎	◎	◎	◎	◎
	5		300	32	◎	◎	◎	◎	◎	◎
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎
	7		275	29	◎	◎	◎	◎	◎	◎
	8		300	32	◎	◎	◎	◎	◎	◎
	9		350	38	◎	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel	200	15	◎	◎	◎	◎	◎	◎
	11		325	35	◎	◎	◎	◎	◎	◎
M	12	Stainless steel	200	15	◎	◎	◎	◎	◎	◎
	13		240	23	◎	◎	◎	◎	◎	◎
	14		180	10	◎	◎	◎	◎	◎	◎
K	15	Grey cast iron	180	10	◎	◎	◎	◎	◎	◎
	16		260	26	◎	◎	◎	◎	◎	◎
	17	Nodular cast iron	160	3	◎	◎	◎	◎	◎	◎
	18		250	25	◎	◎	◎	◎	◎	◎
	19	Malleable cast iron	130		◎	◎	◎	◎	◎	◎
	20		230	21	◎	◎	◎	◎	◎	◎
N	21	Aluminum-wrought alloy	60							
	22		100							
	23	Aluminum-cast, alloyed	75							
	24		90							
	25		130							
	26	Copper and Copper Alloys (Bronze / Brass)	110							
	27		90							
	28		100							
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.								
	30									
S	31	Heat Resistant Super Alloys	200	15	○	○	○	○	○	○
	32		280	30	○	○	○	○	○	○
	33		250	25	○	○	○	○	○	○
	34		350	38	○	○	○	○	○	○
	35		320	34	○	○	○	○	○	○
	36	Titanium Alloys	400 Rm		○	○	○	○	○	○
	37		1050 Rm		○	○	○	○	○	○
H	38	Hardened steel	550	55						
	39		630	60						
	40	Chilled Cast Iron	400	42						
	41	Hardened Cast Iron	550	55						

V7 Mill INOX (Inch) / V7 Mill INOX (Metric)

		V7 Mill INOX (Inch)							V7 Mill INOX (Metric)					
	SERIES	EMC75 EMD60	EMC76 EMD61	EMB12 EMB37	EMB13 EMB38	EMB20	EMB78 EMB79	EMB76 EMB77	EMB41 EMB42	EMB43 EMB44	EMB14 EMB39	EMB15 EMB40	EMB74 EMB75	EMB72 EMB73
	FLUTE (SHANK)	4	4	4	4	4	4	5	4	4	4	4	4	5
	HELIX ANGLE	SINUSOIDAL							SINUSOIDAL					
	CUTTING EDGE SHAPE	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	SQUARE	BALL NOSE	SQUARE	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	BALL NOSE	SQUARE
	SIZE MIN	D1/8	D1/8	D1/8	D1/8	D1/4	R1/16	D1/4	D3.0	D3.0	D3.0	D3.0	R1.5	D6.0
	SIZE MAX	D1	D1	D1	D1	D1	R1/2	D1	D20.0	D20.0	D25.0	D25.0	R12.5	D25.0
	PAGE	C566	C567	C568	C569	C570	C571	C572	C573	C574	C575	C576	C577	C578
	LENGTH	STUB LENGTH	STUB LENGTH	REGULAR LENGTH	REGULAR LENGTH	EXTENDED LENGTH LONG REACH	REGULAR LENGTH	REGULAR LENGTH	SHORT LENGTH	SHORT LENGTH	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH
	SURFACE TREATMENT	AlTiN							AlTiN					
		U.S.A Stock							Call for Availability					
P	1	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	2	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3	○	○	○	○	○	○	○	○	○	○	○	○	○
	4	○	○	○	○	○	○	○	○	○	○	○	○	○
	5	○	○	○	○	○	○	○	○	○	○	○	○	○
	6	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7	○	○	○	○	○	○	○	○	○	○	○	○	○
	8	○	○	○	○	○	○	○	○	○	○	○	○	○
	9	○	○	○	○	○	○	○	○	○	○	○	○	○
	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	11	○	○	○	○	○	○	○	○	○	○	○	○	○
M	12	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	14	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	15													
	16													
	17													
	18													
	19													
	20													
N	21													
	22													
	23													
	24													
	25													
	26													
	27													
	28													
	29													
	30													
S	31	○	○	○	○	○	○	○	○	○	○	○	○	○
	32	○	○	○	○	○	○	○	○	○	○	○	○	○
	33	○	○	○	○	○	○	○	○	○	○	○	○	○
	34	○	○	○	○	○	○	○	○	○	○	○	○	○
	35	○	○	○	○	○	○	○	○	○	○	○	○	○
	36	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	37	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
H	38													
	39													
	40													
	41													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SELECTION GUIDE

YG MILLING TOOLS

ALU-POWER HPC

SERIES	JAG95	JAG97	E5G95	E5G97	JAG96	JAG98	E5G96	E5G98
FLUTE (SHANK)	3		3		3		3	
HELIX ANGLE	37°		37°		37°		37°	
CUTTING EDGE SHAPE	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS
SIZE MIN	1/8	1/8	1/8	1/8	1/4	1/4	1/4	1/4
SIZE MAX	1	1	1	1	1	1	1	1
PAGE	C590-C591		C592-C593		C594		C595	
LENGTH	STANDARD LENGTH		STANDARD LENGTH		EXTENDED NECK		EXTENDED NECK	
SURFACE TREATMENT	DLC		Uncoated		DLC		Uncoated	

Please visit globalyg1.com/mat for material search

◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	JAG95	JAG97	E5G95	E5G97	JAG96	JAG98	E5G96	E5G98
P	1	Non-alloy steel	125									
P	2	Non-alloy steel	190	13								
P	3	Non-alloy steel	250	25								
P	4	Non-alloy steel	270	28								
P	5	Non-alloy steel	300	32								
P	6	Low alloy steel	180	10								
P	7	Low alloy steel	275	29								
P	8	Low alloy steel	300	32								
P	9	Low alloy steel	350	38								
P	10	High alloyed steel, and tool steel	200	15								
P	11	High alloyed steel, and tool steel	325	35								
M	12	Stainless steel	200	15								
M	13	Stainless steel	240	23								
M	14	Stainless steel	180	10								
K	15	Grey cast iron	180	10								
K	16	Grey cast iron	260	26								
K	17	Nodular cast iron	160	3								
K	18	Nodular cast iron	250	25								
K	19	Malleable cast iron	130									
K	20	Malleable cast iron	230	21								
N	21	Aluminum-wrought alloy	60		◎	◎	◎	◎	◎	◎	◎	◎
N	22	Aluminum-wrought alloy	100		◎	◎	◎	◎	◎	◎	◎	◎
N	23	Aluminum-cast, alloyed	75		◎	◎	◎	◎	◎	◎	◎	◎
N	24	Aluminum-cast, alloyed	90		◎	◎	◎	◎	◎	◎	◎	◎
N	25	Aluminum-cast, alloyed	130		○	○	○	○	○	○	○	○
N	26	Copper and Copper Alloys (Bronze / Brass)	110		○	○	○	○	○	○	○	○
N	27	Copper and Copper Alloys (Bronze / Brass)	90		○	○	○	○	○	○	○	○
N	28	Copper and Copper Alloys (Bronze / Brass)	100		○	○	○	○	○	○	○	○
N	29	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)			○	○	○	○	○	○	○	○
N	30	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)										
S	31	Heat Resistant Super Alloys	200	15								
S	32	Heat Resistant Super Alloys	280	30								
S	33	Heat Resistant Super Alloys	250	25								
S	34	Heat Resistant Super Alloys	350	38								
S	35	Heat Resistant Super Alloys	320	34								
S	36	Titanium Alloys	400 Rm									
S	37	Titanium Alloys	1050 Rm									
H	38	Hardened steel	550	55								
H	39	Hardened steel	630	60								
H	40	Chilled Cast Iron	400	42								
H	41	Hardened Cast Iron	550	55								

ALU-POWER HPC / ALU-POWER (Inch)

SERIES	JAI38	E5136	E5138	JAI39	E5137	E5139	E5253	E5254	E5976	E5980	E5981	E5983
FLUTE (SHANK)	3	3		3	3		2 (Weldon)	2	2	3	3	3
HELIX ANGLE	37°	37°		37°	37°		42°	42°	37°	45°	45°	45°
CUTTING EDGE SHAPE	CORNER RADIUS	SQUARE	CORNER RADIUS	CORNER RADIUS	SQUARE	CORNER RADIUS	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	CORNER RADIUS
SIZE MIN	1/8	1/2	1/8	1/4	1/2	1/4	D1/4	D1/16	D1/4	D1/8	D1/8	D1/2
SIZE MAX	1	3/4	1	1	1/2	1	D1	D1	D1	D1	D1	D1
PAGE	C596	C597		C598	C599		C608	C609	C610	C611	C612	
LENGTH	STANDARD LENGTH	STANDARD LENGTH		EXTENDED NECK	EXTENDED NECK	EXTENDED NECK	REGULAR LENGTH	REGULAR LENGTH	EXTENDED NECK	STUB	REGULAR LENGTH	REGULAR LENGTH
SURFACE TREATMENT	DLC	Uncoated		DLC	Uncoated		TiCN / Uncoated	TiCN / Uncoated	TiCN / Uncoated	TiCN / Uncoated	TiCN / Uncoated	TiCN / Uncoated
	CHIP BREAKER						U.S.A Stock					
							BANSHEE					

ISO	VDI 3323	Material Description	HB	HRc	JAI38	E5136	E5138	JAI39	E5137	E5139	E5253	E5254	E5976	E5980	E5981	E5983
P	1	Non-alloy steel	125													
P	2	Non-alloy steel	190	13												
P	3	Non-alloy steel	250	25												
P	4	Non-alloy steel	270	28												
P	5	Non-alloy steel	300	32												
P	6	Low alloy steel	180	10												
P	7	Low alloy steel	275	29												
P	8	Low alloy steel	300	32												
P	9	Low alloy steel	350	38												
P	10	High alloyed steel, and tool steel	200	15												
P	11	High alloyed steel, and tool steel	325	35												
M	12	Stainless steel	200	15												
M	13	Stainless steel	240	23												
M	14	Stainless steel	180	10												
K	15	Grey cast iron	180	10												
K	16	Grey cast iron	260	26												
K	17	Nodular cast iron	160	3												
K	18	Nodular cast iron	250	25												
K	19	Malleable cast iron	130													
K	20	Malleable cast iron	230	21												
N	21	Aluminum-wrought alloy	60		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	22	Aluminum-wrought alloy	100		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	23	Aluminum-cast, alloyed	75		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	24	Aluminum-cast, alloyed	90		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	25	Aluminum-cast, alloyed	130		○	○	○	○	○	○	◎	◎	◎	◎	◎	◎
N	26	Copper and Copper Alloys (Bronze / Brass)	110		○	○	○	○	○	○						
N	27	Copper and Copper Alloys (Bronze / Brass)	90		○	○	○	○	○	○						
N	28	Copper and Copper Alloys (Bronze / Brass)	100		○	○	○	○	○	○						
N	29	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)			○	○	○	○	○	○						
N	30	Non Metallic Materials (Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.)														
S	31	Heat Resistant Super Alloys	200	15												
S	32	Heat Resistant Super Alloys	280	30												
S	33	Heat Resistant Super Alloys	250	25												
S	34	Heat Resistant Super Alloys	350	38												
S	35	Heat Resistant Super Alloys	320	34												
S	36	Titanium Alloys	400 Rm													
S	37	Titanium Alloys	1050 Rm													
H	38	Hardened steel	550	55												
H	39	Hardened steel	630	60												
H	40	Chilled Cast Iron	400	42												
H	41	Hardened Cast Iron	550	55												

SELECTION GUIDE

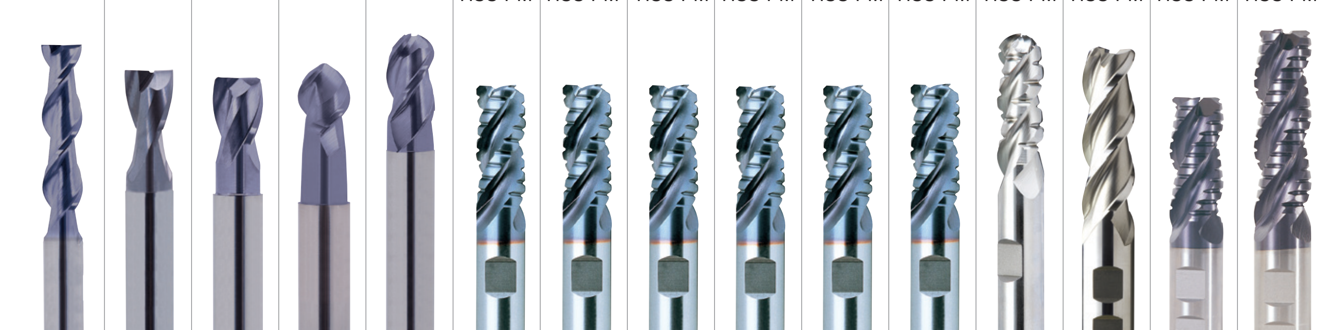
YG MILLING TOOLS

ALU-POWER (Inch)

SERIES	E5982	E5984	E5E44	E5E98	E5E45	E5977	E5985	E5973	E5974	E5978	E5975
FLUTE	3	3	3	3	3	3	3	2	3	2	3
HELIX ANGLE	45°	45°	30°	30°	30°	37°	37°	30°	50°	37°	40°
CUTTING EDGE SHAPE	SQUARE	CORNER RADIUS	ROUGHING	ROUGHING	BALL NOSE ROUGHING	SQUARE	CORNER RADIUS	CORNER RADIUS	BALL NOSE	BALL NOSE	BALL NOSE
SIZE MIN	D1/4	D1/2	D1/4	D1/4	D1/4	D1/4	D1/2	D5/32	R1/8	R1/8	R3/64
SIZE MAX	D1	D1	D1	D1	D1	D1	D1	D3/4	R3/8	R1/2	R5/16
PAGE	C613		C614		C615	C616	C617	C618	C619	C620	C621
LENGTH	LONG LENGTH	LONG LENGTH		NECK		EXTENDED NECK	EXTENDED NECK	NECK	STUB CUT LENGTH NECK	LONG REACH	LONG LENGTH NECK
SURFACE TREATMENT	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN
	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	U.S.A Stock										

ALU-POWER (Metric) / ALU-POWER (Inch) / ALU-POWER (Metric)

SERIES	E5522 EG522	EG930	EG909	EG910	EG908	EK191	EK191	EK226	EK226	EK192	EK192	EK196	EK193 EK132	EP922	EP924
	ALU-POWER (Metric)					ALU-POWER (Inch)								ALU-POWER (Metric)	
FLUTE	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3
HELIX ANGLE	45°	25°	30°	50°	40°	42°	42°	42°	42°	42°	42°	42°	42°	42°	42°
CUTTING EDGE SHAPE	SQUARE	CORNER RADIUS	CORNER RADIUS	BALL NOSE	BALL NOSE	ROUGHING	CORNER RADIUS ROUGHING	ROUGHING	CORNER RADIUS ROUGHING	ROUGHING	CORNER RADIUS ROUGHING	BALL NOSE ROUGHING	CORNER RADIUS	ROUGHING	ROUGHING
SIZE MIN	D3.0	D2.0	D4.0	R3.0	R1.0	D1/2	D3/4	D3/4	D3/4	D1/2	D3/4	R1/4	D1/2	D12.0	D12.0
SIZE MAX	D20.0	D20.0	D20.0	R10.0	R8.0	D2	D1-1/4	D2	D1-1/4	D2	D1-1/4	R5/8	D1-1/2	D32.0	D32.0
PAGE	C622	C623	C624	C625	C626	C627	C583	C628		C629 - C630		C631	C632	C634	C635
LENGTH	LONG LENGTH	STUB CUT LENGTH	STUB CUT LENGTH NECK	STUB CUT LENGTH NECK	LONG LENGTH NECK	REGULAR LENGTH for ALUMINUM	REGULAR LENGTH for ALUMINUM	MEDIUM LENGTH for ALUMINUM	MEDIUM LENGTH for ALUMINUM	LONG LENGTH for ALUMINUM	LONG LENGTH for ALUMINUM	REGULAR LENGTH for ALUMINUM	REGULAR & MEDIUM & LONG LENGTH	SHORT LENGTH for ALUMINUM	LONG LENGTH for ALUMINUM
SURFACE TREATMENT	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiAlN	TiAlN
	Uncoated					Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated		
	Call for Availability					U.S.A Stock								Call for Availability	
						HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM



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◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	E5982	E5984	E5E44	E5E98	E5E45	E5977	E5985	E5973	E5974	E5978	E5975
P	1	Non-alloy steel	125												
P	2	Non-alloy steel	190	13											
P	3	Non-alloy steel	250	25											
P	4	Non-alloy steel	270	28											
P	5	Non-alloy steel	300	32											
P	6	Low alloy steel	180	10											
P	7	Low alloy steel	275	29											
P	8	Low alloy steel	300	32											
P	9	Low alloy steel	350	38											
P	10	High alloyed steel, and tool steel	200	15											
P	11	High alloyed steel, and tool steel	325	35											
M	12	Stainless steel	200	15											
M	13	Stainless steel	240	23											
M	14	Stainless steel	180	10											
K	15	Grey cast iron	180	10											
K	16	Grey cast iron	260	26											
K	17	Nodular cast iron	160	3											
K	18	Nodular cast iron	250	25											
K	19	Malleable cast iron	130												
K	20	Malleable cast iron	230	21											
N	21	Aluminum-wrought alloy	60		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	22	Aluminum-wrought alloy	100		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	23	Aluminum-cast, alloyed	75		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	24	Aluminum-cast, alloyed	90		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	25	Aluminum-cast, alloyed	130		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	26	Copper and Copper Alloys (Bronze / Brass)	110												
N	27	Copper and Copper Alloys (Bronze / Brass)	90												
N	28	Copper and Copper Alloys (Bronze / Brass)	100												
N	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.													
N	30	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.													
S	31	Heat Resistant Super Alloys	200	15											
S	32	Heat Resistant Super Alloys	280	30											
S	33	Heat Resistant Super Alloys	250	25											
S	34	Heat Resistant Super Alloys	350	38											
S	35	Heat Resistant Super Alloys	320	34											
S	36	Titanium Alloys	400 Rm												
S	37	Titanium Alloys	1050 Rm												
H	38	Hardened steel	550	55											
H	39	Hardened steel	630	60											
H	40	Chilled Cast Iron	400	42											
H	41	Hardened Cast Iron	550	55											

VDI 3323	E5522 EG522	EG930	EG909	EG910	EG908	EK191	EK191	EK226	EK226	EK192	EK192	EK196	EK193 EK132	EP922	EP924	ISO
1																P
2																P
3																P
4																P
5																P
6																P
7																P
8																P
9																P
10																P
11																P
12																M
13																M
14																M
15																K
16																K
17																K
18																K
19																K
20																K
21	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	N
22	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	N
23	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	N
24	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	N
25	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	N
26																N
27																N
28																N
29																N
30																N
31																S
32																S
33																S
34																S
35																S
36																S
37																S
38																H
39																H
40																H
41																H

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SELECTION GUIDE

YG MILLING TOOLS

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					D-Power Graphite (Inch)						D-Power Graphite (Inch)		D-Power Graphite (Metric)				STANDARD CARBIDE (Inch)				
				SERIES	EI107	EI099	EI106	EI971	EI972	EIB07	EIB05	EIB06	EI880	EI881	EI451	EI450	UGMF90	E5020	UGMF89	E5021	E5244
				FLUTE	2, 4	2	4	2	2	4	4	4	2	3	2	2	2	2	4	4	2
				HELIX ANGLE	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°
				CUTTING EDGE SHAPE	SQUARE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	CORNER RADIUS	CORNER RADIUS	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE
				SIZE MIN	D1/64	R.0391	R.0391	R.0391	R.0391	R.0156	D1/16	D1/32	R1.0	R1.0	R1.0	R1.0	D1/8	D1/32	D1/16	D1/16	D1/16
				SIZE MAX	D1/2	R1/4	R1/4	R1/4	R5/32	R.0625	D1/2	D3/8	R6.0	R6.0	R6.0	R4.0	D1	D1	D1	D1	D3/4
				PAGE	C650	C651		C652	C653	C654	C655	C656	C657		C658	C659	C668	C669	C670	C671	C672
				LENGTH	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH	LONG LENGTH	LONG REACH	REGULAR LENGTH NECK	REGULAR LENGTH	REGULAR LENGTH NECK	SHORT LENGTH	SHORT LENGTH	LONG LENGTH	LONG REACH	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH	STUB LENGTH
				SURFACE TREATMENT	Diamond	Diamond	Diamond	Diamond	Diamond	Diamond	Diamond	Diamond	Diamond	Diamond	Diamond	Diamond	Y-Coating	Uncoated	Y-Coating	Uncoated	Uncoated
					U.S.A Stock						U.S.A Stock		Call for Availability					TiN / TiCN / TYLON F / TYLON E		TiN / TiCN / TYLON F / TYLON E	TiN / TiCN / TYLON F / TYLON E
ISO	VDI 3323	Material Description	HB	HRc																	
P	1	Non-alloy steel	125														◎	◎	◎	◎	◎
	2		190	13													◎	◎	◎	◎	◎
	3		250	25													◎	◎	◎	◎	◎
	4		270	28													◎	◎	◎	◎	◎
	5		300	32													○	◎	◎	◎	◎
	6	Low alloy steel	180	10													◎	◎	◎	◎	◎
	7		275	29													◎	◎	◎	◎	◎
	8		300	32													○	◎	◎	◎	◎
	9		350	38													◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel	200	15													◎	◎	◎	◎	◎
	11		325	35													○	◎	◎	◎	◎
M	12	Stainless steel	200	15													○	○	○	○	○
	13		240	23													○	○	○	○	○
	14		180	10													○	○	○	○	○
K	15	Grey cast iron	180	10													○	○	○	○	○
	16		260	26													○	○	○	○	○
	17	Nodular cast iron	160	3													○	○	○	○	○
	18		250	25													○	○	○	○	○
	19	Malleable cast iron	130														○	○	○	○	○
	20		230	21													○	○	○	○	○
N	21	Aluminum-wrought alloy	60		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	22		100		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	23	Aluminum-cast, alloyed	75		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	24		90		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	25		130		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	26	Copper and Copper Alloys (Bronze / Brass)	110														○	○	○	○	○
	27		90														○	○	○	○	○
	28		100														○	○	○	○	○
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.			◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎					
	30																				
S	31	Heat Resistant Super Alloys	200	15																	
	32		280	30																	
	33		250	25																	
	34		350	38																	
	35		320	34																	
	36	Titanium Alloys	400 Rm																		
	37		1050 Rm																		
H	38	Hardened steel	550	55																	
	39		630	60																	
	40	Chilled Cast Iron	400	42																	
	41	Hardened Cast Iron	550	55																	

SELECTION GUIDE

YG MILLING TOOLS

STANDARD CARBIDE (Inch)

SERIES	UGMGF57	E5245	E5011	E5012	UGMGF58	E5026	UGMGF59
FLUTE	4	4	2	4	4	2	4
HELIX ANGLE	30°	30°	30°	30°	30°	30°	30°
CUTTING EDGE SHAPE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE
SIZE MIN	D1/16	D1/16	D1/8	D1/8	D1/8	D1/8	D1/8
SIZE MAX	D3/4	D3/4	D1	D1	D1	D1	D1
PAGE	C673	C674	C675	C675	C676	C677	C678
LENGTH	STUB LENGTH	STUB LENGTH	LONG LENGTH	LONG LENGTH	LONG LENGTH	EXTRA LONG LENGTH	EXTRA LONG LENGTH
SURFACE TREATMENT	Y-Coating	Uncoated	Uncoated	Uncoated	Y-Coating	Uncoated	Y-Coating
		TiN TiCN TYLON F TYLON E	TiN TiCN TYLON F TYLON E	TiN TiCN TYLON F TYLON E		TiN TiCN TYLON F TYLON E	

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○ : Good

ISO	VDI 3323	Material Description	HB	HRc	UGMGF57	E5245	E5011	E5012	UGMGF58	E5026	UGMGF59
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎	◎	◎
	2		190	13	◎	◎	◎	◎	◎	◎	◎
	3		250	25	◎	◎	◎	◎	◎	◎	◎
	4		270	28	◎	◎	◎	◎	◎	◎	◎
	5		300	32	○	◎	◎	◎	◎	◎	◎
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎	◎
	7		275	29	◎	◎	◎	◎	◎	◎	◎
	8		300	32	○	◎	◎	◎	◎	◎	◎
	9		350	38	◎	◎	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel	200	15	◎	◎	◎	◎	◎	◎	◎
	11		325	35	○	◎	◎	◎	◎	◎	◎
M	12	Stainless steel	200	15	○	○	○	○	○	○	○
	13		240	23	○	○	○	○	○	○	○
	14		180	10	○	○	○	○	○	○	○
K	15	Grey cast iron	180	10	○	○	○	○	○	○	○
	16		260	26	○	○	○	○	○	○	○
	17	Nodular cast iron	160	3	○	○	○	○	○	○	○
	18		250	25	○	○	○	○	○	○	○
	19	Malleable cast iron	130		○	○	○	○	○	○	○
	20		230	21	○	○	○	○	○	○	○
N	21	Aluminum-wrought alloy	60		○	○	○	○	○	○	○
	22		100		○	○	○	○	○	○	○
	23	Aluminum-cast, alloyed	75		○	○	○	○	○	○	○
	24		90		○	○	○	○	○	○	○
	25		130		○	○	○	○	○	○	○
	26	Copper and Copper Alloys (Bronze / Brass)	110		○	○	○	○	○	○	○
	27		90		○	○	○	○	○	○	○
	28		100		○	○	○	○	○	○	○
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.									
	30										
S	31	Heat Resistant Super Alloys	200	15							
	32		280	30							
	33		250	25							
	34		350	38							
	35		320	34							
	36	Titanium Alloys	400 Rm								
	37		1050 Rm								
H	38	Hardened steel	550	55							
	39		630	60							
	40	Chilled Cast Iron	400	42							
	41	Hardened Cast Iron	550	55							

STANDARD CARBIDE (Inch)

SERIES	E5065	E5022	E5023	E5025	E5024	E5249	E5250	UGMF91	E5014
FLUTE	4	2	4	2	4	2	4	4	2
HELIX ANGLE	30°	30°	30°	30°	30°	30°	30°	30°	45°
CUTTING EDGE SHAPE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE
SIZE MIN	D1/8	D1/32	D1/16	D1/8	D1/8	R1/16	R1/16	R1/16	R1/16
SIZE MAX	D1	D1/2	D1/2	D1/2	D1/2	R1/2	R1/2	R1/2	R1/2
PAGE	C679	C680	C681	C682	C683	C684	C685	C686	C687
LENGTH	EXTRA LONG LENGTH	STUB LENGTH DOUBLE	STUB LENGTH DOUBLE	REGULAR LENGTH DOUBLE	REGULAR LENGTH DOUBLE	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH	LONG LENGTH
SURFACE TREATMENT	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Y-Coating	Uncoated
	TiN TiCN TYLON F	TiN TiCN TYLON F	TiN TiCN TYLON F	TiN TiCN TYLON F	TiN TiCN TYLON F	TiN TiCN TYLON F	TiN TiCN TYLON F		TiN TiCN

ISO	VDI 3323	E5065	E5022	E5023	E5025	E5024	E5249	E5250	UGMF91	E5014
P	1	◎	◎	◎	◎	◎	◎	◎	◎	◎
	2	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3	◎	◎	◎	◎	◎	◎	◎	◎	◎
	4	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5	◎	◎	◎	◎	◎	◎	◎	○	◎
	6	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8	◎	◎	◎	◎	◎	◎	◎	○	◎
	9	◎	◎	◎	◎	◎	◎	◎	○	◎
	10	◎	◎	◎	◎	◎	◎	◎	◎	◎
	11	◎	◎	◎	◎	◎	◎	◎	○	◎
M	12	○	○	○	○	○			○	
	13	○	○	○	○	○			○	
	14	○	○	○	○	○			○	
K	15	○	○	○	○	○	○	○	○	○
	16	○	○	○	○	○	○	○	○	○
	17	○	○	○	○	○	○	○	○	○
	18	○	○	○	○	○	○	○	○	○
	19	○	○	○	○	○	○	○	○	○
	20	○	○	○	○	○	○	○	○	○
N	21	○	○	○	○	○	○	○	○	○
	22	○	○	○	○	○	○	○	○	○
	23	○	○	○	○	○	○	○	○	○
	24	○	○	○	○	○	○	○	○	○
	25	○	○	○	○	○	○	○	○	○
	26	○	○	○	○	○				
	27	○	○	○	○	○				
	28	○	○	○	○	○				
	29									
	30									
S	31									
	32									
	33									
	34									
	35									
	36									
	37									
H	38									
	39									
	40									
	41									

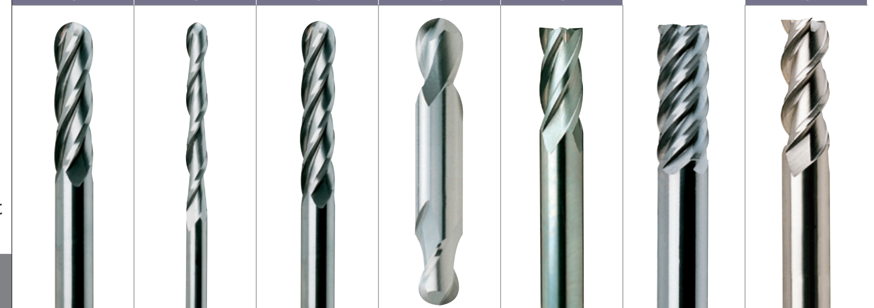
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SELECTION GUIDE

YG MILLING TOOLS

STANDARD CARBIDE(Inch)

SERIES	E5060	E5018	E5062	E5251 E5252	E5216	E5069	E5243
FLUTE	4	2	4	2&4	4	5	3
HELIX ANGLE	30°	30°	30°	30°	30°	45°	45°
CUTTING EDGE SHAPE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	CORNER RADIUS	CORNER RADIUS	SQUARE
SIZE MIN	R1/16	R1/16	R1/16	R7/64	D1/8	D1/4	D1/8
SIZE MAX	R1/2	R1/2	R1/2	R1/4	D1	D1	D1
PAGE	C687	C688	C689	C690	C691	C693	C694
LENGTH	LONG LENGTH	EXTRA LONG LENGTH	EXTRA LONG LENGTH	STUB LENGTH DOUBLE	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH
SURFACE TREATMENT	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	TiN	TiN	TiN	TiN	TiN	TYLON F	TiN
	TiCN	TiCN	TiCN	TiCN	TiCN		TiCN
	TYLON F	TYLON F	TYLON F	TYLON F	TYLON F		TYLON F
	TYLON E	TYLON E	TYLON E	TYLON E	TYLON E		TYLON E



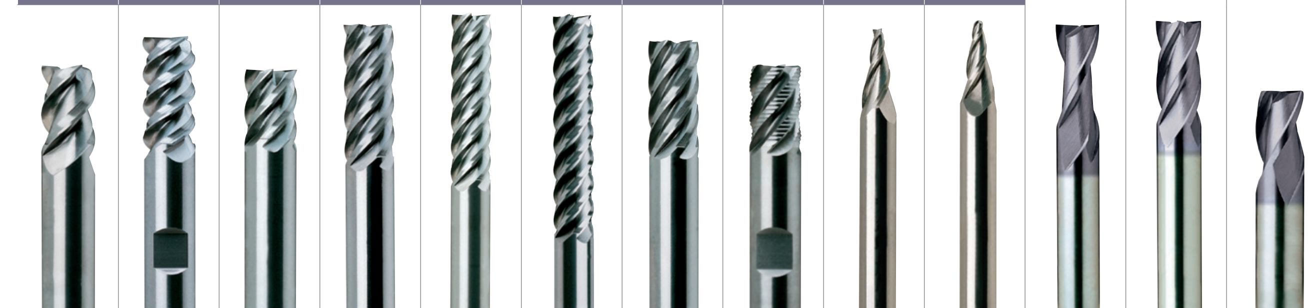
Please visit globalyg1.com/mat for material search

◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	E5060	E5018	E5062	E5251 E5252	E5216	E5069	E5243
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎	◎	◎
	2		190	13	◎	◎	◎	◎	◎	◎	◎
	3		250	25	◎	◎	◎	◎	◎	◎	◎
	4		270	28	◎	◎	◎	◎	◎	◎	◎
	5		300	32	◎	◎	◎	◎	◎	◎	◎
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎	◎
	7		275	29	◎	◎	◎	◎	◎	◎	◎
	8		300	32	◎	◎	◎	◎	◎	◎	◎
	9		350	38	◎	◎	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel	200	15	◎	◎	◎	◎	◎	◎	◎
	11		325	35	◎	◎	◎	◎	◎	◎	◎
M	12	Stainless steel	200	15					○	◎	◎
	13		240	23					○	◎	◎
	14		180	10					○	◎	◎
K	15	Grey cast iron	180	10	○	○	○	○	○	○	○
	16		260	26	○	○	○	○	○	○	○
	17	Nodular cast iron	160	3	○	○	○	○	○	○	○
	18		250	25	○	○	○	○	○	○	○
	19	Malleable cast iron	130		○	○	○	○	○	○	○
	20		230	21	○	○	○	○	○	○	○
N	21	Aluminum-wrought alloy	60		○	○	○	○	○		
	22		100		○	○	○	○	○		
	23	Aluminum-cast, alloyed	75		○	○	○	○	○		
	24		90		○	○	○	○	○		
	25		130		○	○	○	○	○		
	26	Copper and Copper Alloys (Bronze / Brass)	110						○	○	○
	27		90						○	○	○
	28		100						○	○	○
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.									
	30										
S	31	Heat Resistant Super Alloys	200	15						○	○
	32		280	30						○	○
	33		250	25						○	○
	34		350	38						○	○
	35		320	34						○	○
	36	Titanium Alloys	400 Rm							○	○
	37		1050 Rm							○	○
H	38	Hardened steel	550	55							
	39		630	60							
	40	Chilled Cast Iron	400	42						○	○
	41	Hardened Cast Iron	550	55							

STANDARD CARBIDE (Inch) / STANDARD CARBIDE (Metric)

SERIES	E5059	E5246	E5066	E5067	E5068	E5073	E5058	E5056 E5057	E5077	E5078	EH527	EH540	EH882
	STANDARD CARBIDE (Inch)										STANDARD CARBIDE (Metric)		
FLUTE	3	3	5	5	5	5	6	5	3	3	2	4	3
HELIX ANGLE	50°	60°	45°	45°	45°	45°	40°	45°	30°	30°	30°	30°	35°
CUTTING EDGE SHAPE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	ROUGHING	TAPER	TAPER BALL NOSE	SQUARE	SQUARE	CORNER RADIUS
SIZE MIN	D1/4	D1/8	D1/8	D1/8	D1/4	D5/16	D3/16	D3/8	D3/32	R.047	D3.5	D3.5	D3.0
SIZE MAX	D3/4	D1	D1	D1	D1	D1	D3/4	D1	D1/4	R.125	D20.0	D20.0	D20.0
PAGE	C695	C696	C697	C698	C699	C700	C701	C702	C703	C704	C705	C706	C707
LENGTH	STUB & REGULAR & LONG LENGTH	REGULAR LENGTH	STUB LENGTH	REGULAR LENGTH	MEDIUM & LONG LENGTH	EXTRA LONG LENGTH	REGULAR LENGTH	STUB & REGULAR LENGTH			LONG LENGTH	LONG LENGTH	
SURFACE TREATMENT	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	TiAlN	TiAlN	TiAlN
	TiN	TiN	TiN	TiN	TiN	TiN	TiN	TiN	TiN	TiN			
	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN			
	TYLON F	TYLON F	TYLON F	TYLON F	TYLON F	TYLON F	TYLON F	TYLON F	TYLON F	TYLON F			
	TYLON E	TYLON E	TYLON E	TYLON E	TYLON E	TYLON E	TYLON E	TYLON E	TYLON E	TYLON E			



ISO	VDI 3323	E5059	E5246	E5066	E5067	E5068	E5073	E5058	E5056 E5057	E5077	E5078	EH527	EH540	EH882
P	1	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	2	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	4	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	6	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	9	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	11	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
M	12	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	
	13	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	
	14	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	
K	15	○	○	○	○	○	○	○		○	○	○	○	○
	16	○	○	○	○	○	○	○		○	○	○	○	○
	17	○	○	○	○	○	○	○		○	○	○	○	○
	18	○	○	○	○	○	○	○		○	○	○	○	○
	19	○	○	○	○	○	○	○		○	○	○	○	○
	20	○	○	○	○	○	○	○		○	○	○	○	○
N	21									○	○	○	○	◎
	22									○	○	○	○	◎
	23									○	○	○	○	◎
	24									○	○	○	○	◎
	25									○	○	○	○	◎
	26	○	○	○	○	○	○	○		○	○	○	○	◎
	27	○	○	○	○	○	○	○		○	○	○	○	◎
	28	○	○	○	○	○	○	○		○	○	○	○	◎
	29													
	30													
S	31	○	○	○	○	○	○	○						
	32	○	○	○	○	○	○	○						
	33	○	○	○	○	○	○	○						
	34	○	○	○	○	○	○	○						
	35	○	○	○	○	○	○	○						
	36	○	○	○	○	○	○	○	○					
	37	○	○	○	○	○	○	○	○					
H	38													
	39													
	40	○	○	○	○	○	○	○	○	○	○			○
	41													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
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ALU-POWER HPC END MILLS
ALU-POWER END MILLS
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STANDARD CARBIDE
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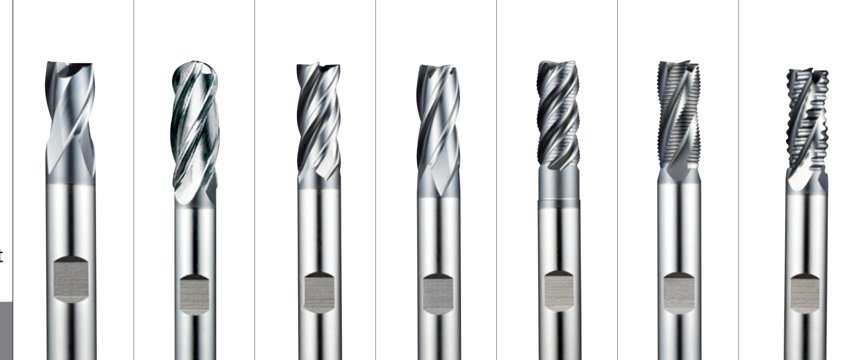
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SELECTION GUIDE

YG MILLING TOOLS

	Only One						
SERIES	GYG64	GYG67	GYG65	GYG66	GYG69	GYG68	GYG70
FLUTE	2	4	4	4	4&5	3-6	3-6
HELIX ANGLE	30°	30°	30°	M-Helix	M-Helix	30°	30°
CUTTING EDGE SHAPE	SQUARE	BALL NOSE	SQUARE	SQUARE	CORNER RADIUS ROUGHING	ROUGHING	ROUGHING
SIZE MIN	D1/8	R1/16	D1/8	D1/8	D1/4	D1/4	D1/4
SIZE MAX	D1	R1/2	D1	D1	D1	D1-1/4	D1-1/4
PAGE	C726	C727	C728	C729	C730	C731	C732
LENGTH	CENTER CUT		CENTER CUT	CENTER CUT	FINE CENTER CUT	FINE CENTER CUT	COARSE CENTER CUT
SURFACE TREATMENT	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating
	PM60	PM60	PM60	PM60	PM60	PM60	PM60

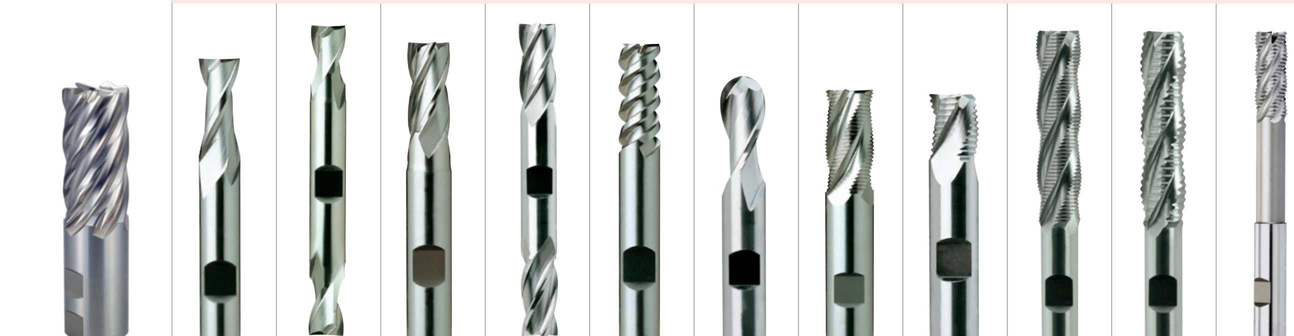


Please visit globalyg1.com/mat for material search

◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	GYG64	GYG67	GYG65	GYG66	GYG69	GYG68	GYG70
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎	◎	◎
	2		190	13	◎	◎	◎	◎	◎	◎	◎
	3		250	25	◎	◎	◎	◎	◎	◎	◎
	4		270	28	◎	◎	◎	◎	◎	◎	◎
	5		300	32	○	○	○	○	○	○	○
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎	◎
	7		275	29	◎	◎	◎	◎	◎	◎	◎
	8		300	32	○	○	○	○	○	○	○
	9		350	38	○	○	○	○	○	○	○
	10	High alloyed steel, and tool steel	200	15	◎	◎	◎	◎	◎	◎	◎
	11		325	35	○	○	○	○	○	○	○
M	12	Stainless steel	200	15							
	13		240	23							
	14		180	10	◎	◎	◎	◎	◎	◎	◎
K	15	Grey cast iron	180	10	◎	◎	◎	◎	◎	◎	◎
	16		260	26	◎	◎	◎	◎	◎	◎	◎
	17	Nodular cast iron	160	3	◎	◎	◎	◎	◎	◎	◎
	18		250	25	◎	◎	◎	◎	◎	◎	◎
	19	Malleable cast iron	130		◎	◎	◎	◎	◎	◎	◎
	20		230	21	◎	◎	◎	◎	◎	◎	◎
N	21	Aluminum-wrought alloy	60								
	22		100								
	23	Aluminum-cast, alloyed	75								
	24		90								
	25		130								
	26	Copper and Copper Alloys (Bronze / Brass)	110		○	○	○	○	○	○	○
	27		90		○	○	○	○	○	○	○
	28		100		○	○	○	○	○	○	○
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.									
	30										
S	31	Heat Resistant Super Alloys	200	15							
	32		280	30							
	33		250	25							
	34		350	38							
	35		320	34							
	36	Titanium Alloys	400 Rm								
	37		1050 Rm								
H	38	Hardened steel	550	55							
	39		630	60							
	40	Chilled Cast Iron	400	42	○	○	○	○	○	○	○
	41	Hardened Cast Iron	550	55							

Sine Power	Tank-Power										
E2F64	E9983	E9984	E9985	E9986	E9988	E9992	E9990	E9991	E9A86	E9A87	E9921
4&6	2	2	4	4	3&4	2	3~6	3~6	3~6	3~6	5~6
35°	30°	30°	30°	30°	60°	30°	30°	30°	30°	30°	35°
SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	BALL NOSE	ROUGHING	ROUGHING	ROUGHING	ROUGHING	ROUGHING
D3/4	D1/8	D1/8	D1/8	D1/8	D1/4	R1/16	D1/4	D1/4	D5/16	D5/16	D1/2
D2	D1	D1	D1	D1	D1	R1/2	D1-1/4	D1-1/4	D1-1/4	D1-1/4	D1-1/4
C741	C746	C747	C74	C749	C750	C751	C752	C753	C754	C755	C756
	REGULAR LENGTH	REGULAR LENGTH DOUBLE	REGULAR LENGTH	REGULAR LENGTH DOUBLE	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH FINE PITCH	REGULAR LENGTH COARSE PITCH	LONG LENGTH FINE PITCH	LONG LENGTH COARSE PITCH	EXTENDED NECK FINE PITCH CENTER CUTTING
Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN
HSSCo8	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM
	U.S.A Stock										



ISO	VDI 3323	E2F64	E9983	E9984	E9985	E9986	E9988	E9992	E9990	E9991	E9A86	E9A87	E9921
P	1		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	2		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	4		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	6		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	9		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	10		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	11		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
M	12												
	13												
	14		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	15		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	16		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	17		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	18		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	19		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	20		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	21												
	22												
	23												
	24												
	25												
	26		○	○	○	○	○	○	○	○	○	○	○
	27		○	○	○	○	○	○	○	○	○	○	○
	28		○	○	○	○	○	○	○	○	○	○	○
	29												
	30												
S	31												
	32												
	33												
	34												
	35												
	36	◎											
	37	◎											
H	38												
	39												
	40												
	41												

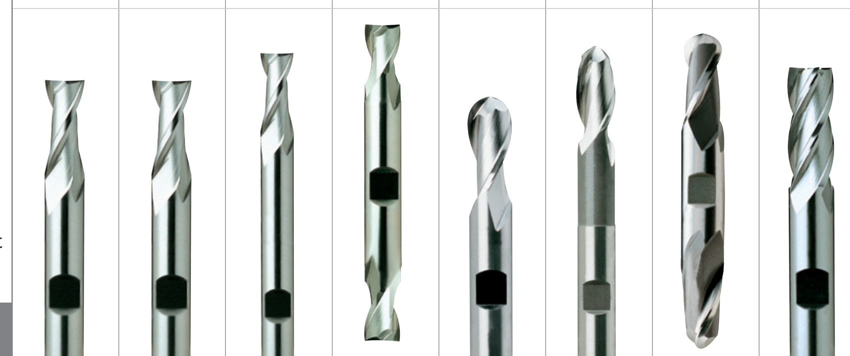
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SELECTION GUIDE

YG MILLING TOOLS

COBALT & HSS (Inch)

	E2030 E1030	E2080 E1080	E2033 E1033	E2050 E1050	E2110 E1110	E2111 E1111	E2112 E1112	E2031 E1031
FLUTE	2	2	2	2	2	2	2	4
HELIX ANGLE	30°	30°	30°	30°	30°	30°	30°	30°
CUTTING EDGE SHAPE	SQUARE	SQUARE	SQUARE	SQUARE	BALL NOSE	BALL NOSE	BALL NOSE	SQUARE
SIZE MIN	D1/8	D1/4	D1/8	D1/8	R1/16	R1/16	R1/16	D1/8
SIZE MAX	D2	D2	D1-1/4	D1	R1	R1/2	R1/2	D1
PAGE	C771	C773	C774	C775	C777	C778	C779	C780
LENGTH	REGULAR LENGTH	LONG LENGTH	EXTENDED LENGTH	REGULAR LENGTH DOUBLE	REGULAR LENGTH	EXTENDED LENGTH	REGULAR LENGTH DOUBLE	REGULAR LENGTH
SURFACE TREATMENT	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS



Please visit globalyg1.com/mat for material search

◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	E2030 E1030	E2080 E1080	E2033 E1033	E2050 E1050	E2110 E1110	E2111 E1111	E2112 E1112	E2031 E1031
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎	◎	◎	◎
	2		190	13	◎	◎	◎	◎	◎	◎	◎	◎
	3		250	25	◎	◎	◎	◎	◎	◎	◎	◎
	4		270	28	◎	◎	◎	◎	◎	◎	◎	◎
	5		300	32	○	○	○	○	○	○	○	○
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎	◎	◎
	7		275	29	◎	◎	◎	◎	◎	◎	◎	◎
	8		300	32	○	○	○	○	○	○	○	○
	9		350	38	○	○	○	○	○	○	○	○
	10	High alloyed steel, and tool steel	200	15	◎	◎	◎	◎	◎	◎	◎	◎
	11		325	35	○	○	○	○	○	○	○	○
M	12	Stainless steel	200	15								
	13		240	23								
	14		180	10								
K	15	Grey cast iron	180	10								
	16		260	26								
	17	Nodular cast iron	160	3								
	18		250	25								
	19	Malleable cast iron	130									
	20		230	21								
N	21	Aluminum-wrought alloy	60		○	○	○	○	○	○	○	○
	22		100		○	○	○	○	○	○	○	○
	23	Aluminum-cast, alloyed	75		○	○	○	○	○	○	○	○
	24		90		○	○	○	○	○	○	○	○
	25		130		○	○	○	○	○	○	○	○
	26	Copper and Copper Alloys (Bronze / Brass)	110		○	○	○	○	○	○	○	○
	27		90		○	○	○	○	○	○	○	○
	28		100		○	○	○	○	○	○	○	○
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.										
	30											
S	31	Heat Resistant Super Alloys	200	15								
	32		280	30								
	33		250	25								
	34		350	38								
	35		320	34								
	36	Titanium Alloys	400 Rm									
	37		1050 Rm									
H	38	Hardened steel	550	55								
	39		630	60								
	40	Chilled Cast Iron	400	42								
	41	Hardened Cast Iron	550	55								

COBALT & HSS (Inch)

	E2032 E1032	E2034 E1034	E2035 E1035	E2036 E1036	E2037 E1037	E2051 E1051	E2031 E1031	E2032 E1032	E2020	E2021	E2069	E2039 E1039	E2042 E1042
FLUTE	6	4	6	4	6	4	4	6&8	4	4	4	4	6
HELIX ANGLE	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°
CUTTING EDGE SHAPE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	BALL NOSE	BALL NOSE	BALL NOSE	SQUARE	SQUARE
SIZE MIN	D5/8	D1/4	D1-1/8	D1/4	D1-1/4	D1/8	D3/4	D1-1/8	R1/16	R1/8	R1/16	D1/8	D1/2
SIZE MAX	D2	D1	D2	D1	D2	D1	D1	D2	R1	R1/2	R1/2	D1-1/2	D2
PAGE	C782	C783		C784		C785	C787		C788	C789	C790	C791	C793
LENGTH	REGULAR LENGTH	LONG LENGTH	LONG LENGTH	EXTRA LONG LENGTH	EXTRA LONG LENGTH	REGULAR LENGTH DOUBLE	REGULAR LENGTH 3/4 SHANK	REGULAR LENGTH 3/4 SHANK	REGULAR LENGTH	LONG LENGTH	REGULAR LENGTH DOUBLE	REGULAR LENGTH CENTER CUTTING	REGULAR LENGTH CENTER CUTTING
SURFACE TREATMENT	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8	HSSCo8	HSSCo8	HSSCo8 & HSS	HSSCo8 & HSS

ISO	VDI 3323	E2032 E1032	E2034 E1034	E2035 E1035	E2036 E1036	E2037 E1037	E2051 E1051	E2031 E1031	E2032 E1032	E2020	E2021	E2069	E2039 E1039	E2042 E1042
P	1	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	2	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	4	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5	○	○	○	○	○	○	○	○	○	○	○	○	○
	6	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8	○	○	○	○	○	○	○	○	○	○	○	○	○
	9	○	○	○	○	○	○	○	○	○	○	○	○	○
	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	11	○	○	○	○	○	○	○	○	○	○	○	○	○
M	12													
	13													
	14													
K	15													
	16													
	17													
	18													
	19													
	20													
N	21	○	○	○	○	○	○	○	○	○	○	○	○	○
	22	○	○	○	○	○	○	○	○	○	○	○	○	○
	23	○	○	○	○	○	○	○	○	○	○	○	○	○
	24	○	○	○	○	○	○	○	○	○	○	○	○	○
	25	○	○	○	○	○	○	○	○	○	○	○	○	○
	26	○	○	○	○	○	○	○	○	○	○	○	○	○
	27	○	○	○	○	○	○	○	○	○	○	○	○	○
	28	○	○	○	○	○	○	○	○	○	○	○	○	○
	29													
	30													
S	31													
	32													
	33													
	34													
	35													
	36													
	37													
H	38													
	39													
	40													
	41													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
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STANDARD COBALT & HSS
TECHNICAL DATA

SELECTION GUIDE

YG MILLING TOOLS

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◎ : Excellent
○ : Good

COBALT & HSS (Inch)

SERIES	E2039 E2042	E2040 E1040	E2162 E1162	E2041 E1041	E2175 E1175	E2053 E1053	E2100 E1100	E2001 E1001
FLUTE	4~8	4	6	4	6	4	6	2
HELIX ANGLE	30°	30°	30°	30°	30°	30°	30°	30°&39°
CUTTING EDGE SHAPE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE
SIZE MIN	D1	D1/4	D1/2	D1/4	D1/2	D1/8	D2	D1/32
SIZE MAX	D2	D1-1/2	D2	D1-1/4	D2	D1	D2	D3/16
PAGE	C794	C795		C796		C797	C799	C800
LENGTH	MEDIUM LENGTH CENTER CUTTING	LONG LENGTH CENTER CUTTING	LONG LENGTH CENTER CUTTING	EXTRA LONG LENGTH CENTER CUTTING	EXTRA LONG LENGTH CENTER CUTTING	REGULAR LENGTH DOUBLE CENTER CUTTING	REGULAR COMBINATION 2" SHANK CENTER CUTTING	STUB LENGTH MINIATURE DOUBLE
SURFACE TREATMENT	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	HSSCo8	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS

ISO	VDI 3323	Material Description	HB	HRc	E2039 E2042	E2040 E1040	E2162 E1162	E2041 E1041	E2175 E1175	E2053 E1053	E2100 E1100	E2001 E1001
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎	◎	◎	◎
	2		190	13	◎	◎	◎	◎	◎	◎	◎	◎
	3		250	25	◎	◎	◎	◎	◎	◎	◎	◎
	4		270	28	◎	◎	◎	◎	◎	◎	◎	◎
	5		300	32	○	○	○	○	○	○	○	○
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎	◎	◎
	7		275	29	◎	◎	◎	◎	◎	◎	◎	◎
	8		300	32	○	○	○	○	○	○	○	○
	9		350	38	○	○	○	○	○	○	○	○
	10	High alloyed steel, and tool steel	200	15	◎	◎	◎	◎	◎	◎	◎	◎
	11		325	35	○	○	○	○	○	○	○	○
M	12	Stainless steel	200	15								
	13		240	23								
	14		180	10								
K	15	Grey cast iron	180	10								
	16		260	26								
	17	Nodular cast iron	160	3								
	18		250	25								
	19	Malleable cast iron	130									
	20		230	21								
N	21	Aluminum-wrought alloy	60		○	○	○	○	○	○	○	○
	22		100		○	○	○	○	○	○	○	○
	23	Aluminum-cast, alloyed	75		○	○	○	○	○	○	○	○
	24		90		○	○	○	○	○	○	○	○
	25		130		○	○	○	○	○	○	○	○
	26	Copper and Copper Alloys (Bronze / Brass)	110		○	○	○	○	○	○	○	○
	27		90		○	○	○	○	○	○	○	○
	28		100		○	○	○	○	○	○	○	○
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.										
	30											
S	31	Heat Resistant Super Alloys	200	15								
	32		280	30								
	33		250	25								
	34		350	38								
	35		320	34								
	36	Titanium Alloys	400 Rm									
	37		1050 Rm									
H	38	Hardened steel	550	55								
	39		630	60								
	40	Chilled Cast Iron	400	42								
	41	Hardened Cast Iron	550	55								

COBALT & HSS (Inch)

SERIES	E2003 E1003	E2005 E1005	E2002 E1002	E2004 E1004	E2006 E1006	E2008 E1008	E2013 E1013	E2015 E1015	E1070	E1071	E1072	E2086	E2085
FLUTE	2	2	4	4	4	2	2	2	2	2	2	4~5	3~5
HELIX ANGLE	30°&39°	30°&39°	30°&39°	30°&39°	30°&39°	30°&39°	30°&39°	30°&39°	42°	42°	42°	30°	30°
CUTTING EDGE SHAPE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	BALL NOSE	BALL NOSE	BALL NOSE	SQUARE	SQUARE	SQUARE	ROUGHING	ROUGHING
SIZE MIN	D1/32	D1/16	D1/16	D1/16	D1/16	R1/32	R1/64	R1/32	D1/4	D1/4	D1/4	D1/4	D1/4
SIZE MAX	D3/16	D3/16	D3/16	D3/16	D3/16	R3/32	R3/32	R3/32	D2	D2	D1-1/2	D1	D1
PAGE	C801	C802	C803	C804	C805	C806	C807	C808	C809	C810		C811	C812
LENGTH	REGULAR LENGTH MINIATURE DOUBLE	LONG LENGTH MINIATURE DOUBLE	STUB LENGTH MINIATURE DOUBLE	REGULAR LENGTH MINIATURE DOUBLE	LONG LENGTH MINIATURE DOUBLE	STUB LENGTH MINIATURE DOUBLE	REGULAR LENGTH MINIATURE DOUBLE	LONG LENGTH MINIATURE DOUBLE	REGULAR & MEDIUM LENGTH ALUMINUM	LONG LENGTH ALUMINUM	EXTRA LONG LENGTH ALUMINUM	STUB LENGTH FINE PITCH CENTER CUTTING	REGULAR LENGTH FINE PITCH CENTER CUTTING
SURFACE TREATMENT	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSS	HSS	HSS	HSSCo8	HSSCo8

ISO	VDI 3323	E2003 E1003	E2005 E1005	E2002 E1002	E2004 E1004	E2006 E1006	E2008 E1008	E2013 E1013	E2015 E1015	E1070	E1071	E1072	E2086	E2085
P	1	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎
	2	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎
	3	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎
	4	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎
	5	○	○	○	○	○	○	○	○				○	○
	6	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎
	7	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎
	8	○	○	○	○	○	○	○	○				○	○
	9	○	○	○	○	○	○	○	○				○	○
	10	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎
	11	○	○	○	○	○	○	○	○				○	○
M	12													
	13													
	14													
K	15													
	16													
	17													
	18													
	19													
	20													
N	21	○	○	○	○	○	○	○	○	◎	◎	◎	○	○
	22	○	○	○	○	○	○	○	○	◎	◎	◎	○	○
	23	○	○	○	○	○	○	○	○	◎	◎	◎	○	○
	24	○	○	○	○	○	○	○	○	◎	◎	◎	○	○
	25	○	○	○	○	○	○	○	○	◎	◎	◎	○	○
	26	○	○	○	○	○	○	○	○				○	○
	27	○	○	○	○	○	○	○	○				○	○
	28	○	○	○	○	○	○	○	○				○	○
	29													
	30													
S	31													
	32													
	33													
	34													
	35													
	36													
	37													
H	38													
	39													
	40													
	41													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SELECTION GUIDE

YG MILLING TOOLS

COBALT & HSS (Inch)

SERIES	E2079	E2077	E2086	E2170	E2171	E2172	E2241	E2195
FLUTE	3~6	4~6	3	3~8	5~8	4~8	3	4~6
HELIX ANGLE	30°	30°	30°	30°	30°	30°	30°	30°
CUTTING EDGE SHAPE	ROUGHING	ROUGHING	ROUGHING	ROUGHING	ROUGHING	ROUGHING	ROUGHING	ROUGHING
SIZE MIN	D1/4	D1/2	D1/4	D1/4	D1	D1/2	D1/4	D1/2
SIZE MAX	D2	D2	D1	D2	D2	D2	D1	D1-1/2
PAGE	C813	C814	C815	C816	C817	C818	C819	C820
LENGTH	REGULAR LENGTH FINE PITCH	LONG LENGTH FINE PITCH	STUB LENGTH FINE PITCH CENTER CUTTING	REGULAR LENGTH COARSE PITCH ROUGHING	MEDIUM LENGTH COARSE PITCH	LONG LENGTH COARSE PITCH	STUB LENGTH COARSE PITCH CENTER CUTTING	REGULAR LENGTH COARSE PITCH CENTER CUTTING
SURFACE TREATMENT	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	HSSCo8	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8	HSSCo8

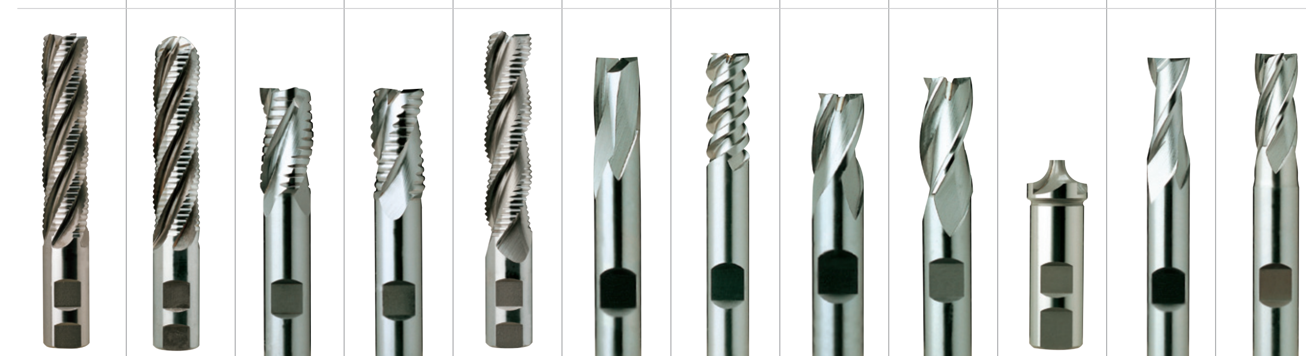
Please visit globalyg1.com/mat for material search

◎ : Excellent
○ : Good

ISO	VDI 3323	Material Description	HB	HRc	E2079	E2077	E2086	E2170	E2171	E2172	E2241	E2195
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎	◎	◎	◎
	2		190	13	◎	◎	◎	◎	◎	◎	◎	◎
	3		250	25	◎	◎	◎	◎	◎	◎	◎	◎
	4		270	28	◎	◎	◎	◎	◎	◎	◎	◎
	5		300	32	○	○	○	○	○	○	○	○
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎	◎	◎
	7		275	29	◎	◎	◎	◎	◎	◎	◎	◎
	8		300	32	○	○	○	○	○	○	○	○
	9		350	38	○	○	○	○	○	○	○	○
	10	High alloyed steel, and tool steel	200	15	◎	◎	◎	◎	◎	◎	◎	◎
	11		325	35	○	○	○	○	○	○	○	○
M	12	Stainless steel	200	15								
	13		240	23								
	14		180	10								
K	15	Grey cast iron	180	10								
	16		260	26								
	17	Nodular cast iron	160	3								
	18		250	25								
	19	Malleable cast iron	130									
	20		230	21								
N	21	Aluminum-wrought alloy	60		○	○	○	○	○	○	○	○
	22		100		○	○	○	○	○	○	○	○
	23	Aluminum-cast, alloyed	75		○	○	○	○	○	○	○	○
	24		90		○	○	○	○	○	○	○	○
	25		130		○	○	○	○	○	○	○	○
	26	Copper and Copper Alloys (Bronze / Brass)	110		○	○	○	○	○	○	○	○
	27		90		○	○	○	○	○	○	○	○
	28		100		○	○	○	○	○	○	○	○
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.										
	30											
S	31	Heat Resistant Super Alloys	200	15								
	32		280	30								
	33		250	25								
	34		350	38								
	35		320	34								
	36	Titanium Alloys	400 Rm									
	37		1050 Rm									
H	38	Hardened steel	550	55								
	39		630	60								
	40	Chilled Cast Iron	400	42								
	41	Hardened Cast Iron	550	55								

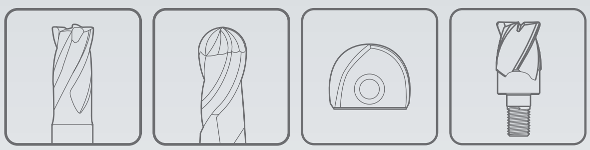
COBALT & HSS (Inch)

SERIES	E2197	E2193 E2125	E2248	E2191	E2226 E2192	E2163 E1163	E2120 E2121	E2160	E2161	E2237 E1237	E2482 E1482	E2483 E1483
FLUTE	4~6	3~6	4~8	3	3	2	3&4	3	3	4	2	4
HELIX ANGLE	30°	30°	30°	37°	37°	15°	60°	30°	30°	0°	30°	30°
CUTTING EDGE SHAPE	ROUGHING	BALL NOSE ROUGHING	ROUGHING & FINISHING	ROUGHING	ROUGHING	SQUARE	SQUARE	SQUARE	SQUARE	CORNER ROUNDING	SQUARE	SQUARE
SIZE MIN	D1/2	R1/8	D1/4	D1/4	D1/2	D1/8	D1/4 D7/8	D1/16	D1/16	D1/4	D2.0 (.0787)	D2.0 (.0787)
SIZE MAX	D1-1/2	R3/4	D2	D1-1/2	D1-1/2	D1	D3/4 D2	D1/4	D1/4	D5/8	D45.0 (1.772)	D45.0 (1.772)
PAGE	C820	C821	C822	C823	C824	C825	C826	C827		C828	C829	C830
LENGTH	LONG LENGTH COARSE PITCH CENTER CUTTING	REGULAR & LONG LENGTH COARSE PITCH	ROUGHING & FINISHING CENTER CUTTING	REGULAR LENGTH ALUMINUM CENTER CUTTING	MEDIUM & LONG LENGTH ALUMINUM CENTER CUTTING	KEYWAY CUTTING	REGULAR LENGTH	SHORT LENGTH THROW AWAY	LONG LENGTH THROW AWAY		REGULAR LENGTH	REGULAR LENGTH
SURFACE TREATMENT	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	HSSCo8	HSSCo8	HSSCo8	HSSCo8	HSSCo8	HSSCo8	HSSCo8	HSSCo8	HSSCo8	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS



ISO	VDI 3323	Material Description	HB	HRc	E2197	E2193 E2125	E2248	E2191	E2226 E2192	E2163 E1163	E2120 E2121	E2160	E2161	E2237 E1237	E2482 E1482	E2483 E1483
P	1	Non-alloy steel	125		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	2		190	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3		250	25	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	4		270	28	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5		300	32	○	○	○	○	○	○	○	○	○	○	○	○
	6	Low alloy steel	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7		275	29	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8		300	32	○	○	○	○	○	○	○	○	○	○	○	○
	9		350	38	○	○	○	○	○	○	○	○	○	○	○	○
	10	High alloyed steel, and tool steel	200	15	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	11		325	35	○	○	○	○	○	○		○	○	○	○	○
M	12	Stainless steel	200	15							○					
	13		240	23							○					
	14		180	10							○					
K	15	Grey cast iron	180	10							○					
	16		260	26							○					
	17	Nodular cast iron	160	3							○					
	18		250	25							○					
	19	Malleable cast iron	130								○					
	20		230	21							○					
N	21	Aluminum-wrought alloy	60		○	○	○	◎	◎	○		○	○	○	○	○
	22		100		○	○	○	◎	◎	○		○	○	○	○	○
	23	Aluminum-cast, alloyed	75		○	○	○	◎	◎	○		○	○	○	○	○
	24		90		○	○	○	◎	◎	○		○	○	○	○	○
	25		130		○	○	○	◎	◎	○		○	○	○	○	○
	26	Copper and Copper Alloys (Bronze / Brass)	110		○	○	○	○	○	○		○	○	○	○	○
	27		90		○	○	○	○	○	○		○	○	○	○	○
	28		100		○	○	○	○	○	○		○	○	○	○	○
	29	Non Metallic Materials Duroplastic, Fiber Reinforced Plastic, Graphite, CFRP, GFRP, etc.														
	30															
S	31	Heat Resistant Super Alloys	200	15												
	32		280	30												
	33		250	25												
	34		350	38												
	35		320	34												
	36	Titanium Alloys	400 Rm													
	37		1050 Rm													
H	38	Hardened steel	550	55												
	39		630	60												
	40	Chilled Cast Iron	400	42												
	41	Hardened Cast Iron	550	55												

Global Cutting Tool Leader **YG-1**



MILLING

Being the best through innovation

CBN (Cubic Boron Nitride) END MILLS

- Cubic Boron Nitride, Machining High Hardened Steels up to HRc70, Mirror Finish

SELECTION GUIDE

YG MILLING TOOLS

SERIES	ESB94	ESD02
FLUTE	2	2
HELIX ANGLE	30°	0°
CUTTING EDGE SHAPE	BALL NOSE	CORNER RADIUS
SIZE MIN	R0.2	D0.5
SIZE MAX	R1.5	D2.0
PAGE	C45	C46
	Uncoated	Uncoated

CBN END MILLS

- Cubic Boron Nitride, Machining High Hardened Steels up to HRc70, Mirror Finish

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p. C47

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	ESB94	ESD02
P	1	Non-alloy steel	About 0.15% C	Annealed	125			
	2		About 0.45% C	Annealed	190	13		
	3		About 0.45% C	Quenched & Tempered	250	25		
	4		About 0.75% C	Annealed	270	28		
	5		About 0.75% C	Quenched & Tempered	300	32		
	6	Low alloy steel		Annealed	180	10		
	7			Quenched & Tempered	275	29		
	8			Quenched & Tempered	300	32		
	9			Quenched & Tempered	350	38		
	10	High alloyed steel, and tool steel		Annealed	200	15		
	11			Quenched & Tempered	325	35		
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15		
	13		Martensitic	Quenched & Tempered	240	23		
	14		Austenitic		180	10		
K	15	Grey cast iron	Pearlitic / ferritic		180	10		
	16		Pearlitic (Martensitic)		260	26		
	17	Nodular cast iron	Ferritic		160	3		
	18		Pearlitic		250	25		
	19	Malleable cast iron	Ferritic		130			
	20		Pearlitic		230	21		
N	21	Aluminum-wrought alloy	Not Curable		60			
	22		Curable	Hardened	100			
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75			
	24		≤ 12% Si, Curable	Hardened	90			
	25		> 12% Si, Not Curable		130			
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110			
	27		CuZn, CuSnZn (Brass)		90			
	28		CuSn, lead-free copper and electrolytic copper		100			
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic					
	30		Rubber, Wood, etc.					
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15		
	32			Cured	280	30		
	33		Ni or Co Based	Annealed	250	25		
	34			Cured	350	38		
	35			Cast	320	34		
	36	Titanium Alloys	Pure Titanium		400 Rm			
	37		Alpha + Beta Alloys	Hardened	1050 Rm			
H	38	Hardened steel		Hardened	550	55	◎	◎
	39			Hardened	630	60	◎	◎
	40	Chilled Cast Iron		Cast	400	42		
	41	Hardened Cast Iron		Hardened	550	55	◎	◎

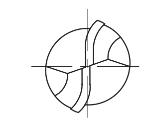
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

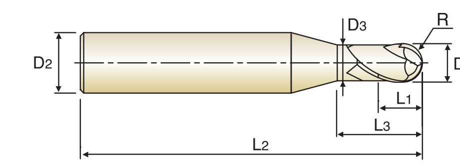
YG CBN END MILLS

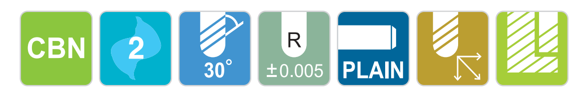
PLAIN SHANK **ESB94 SERIES**

CBN, 2 FLUTE BALL NOSE

- Higher accuracy, better finishes, longer tool life.
- Special geometry improves tool rigidity at high Speed.
- Tighter radius tolerance (±0.005mm) assures higher accuracy.







p.C47

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R (±0.005)	D1		D2	L1	L3	L2	D3
ESB94004012	R0.2	0.4	.0157	4	0.3	1.2	50	0.37
ESB94005015	R0.25	0.5	.0197	4	0.4	1.5	50	0.46
ESB94006015	R0.3	0.6	.0236	4	0.5	1.5	50	0.56
ESB94008020	R0.4	0.8	.0315	4	0.6	2	50	0.76
ESB94010025	R0.5	1.0	.0394	4	0.6	2.5	50	0.95
ESB94010040	R0.5	1.0	.0394	4	0.6	4	50	0.95
ESB94010060	R0.5	1.0	.0394	4	0.6	6	50	0.95
ESB94012030	R0.6	1.2	.0472	4	0.8	3	50	1.15
ESB94015030	R0.75	1.5	.0591	4	0.95	3	50	1.45
ESB94015040	R0.75	1.5	.0591	4	0.95	4	50	1.45
ESB94015060	R0.75	1.5	.0591	4	0.95	6	50	1.45
ESB94020050	R1.0	2.0	.0787	4	1.2	5	50	1.95
ESB94020060	R1.0	2.0	.0787	4	1.2	6	50	1.95
ESB94030060	R1.5	3.0	.1181	4	1.8	6	50	2.85

Radius Tolerance(mm)	Shank Dia. Tolerance
±0.005	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

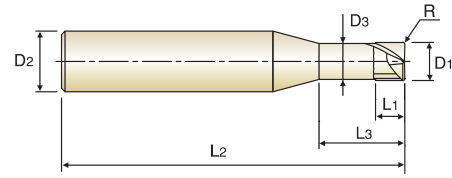
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎		◎

YG CBN END MILLS

PLAIN SHANK **ESD02** SERIES

CBN, 2 FLUTE CORNER RADIUS

- Higher accuracy, better finishes, longer tool life.
- Special geometry improves tool rigidity at high Speed.
- Tighter radius tolerance (±0.005mm) assures higher accuracy.



p.C47

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R (±0.005)	D1		D2	L1	L3	L2	D3
ESD02005052	R0.05	0.5	.0197	4	0.3	2	50	0.46
ESD02005053	R0.05	0.5	.0197	4	0.3	3	50	0.46
ESD02010053	R0.05	1.0	.0394	4	0.7	3	50	0.95
ESD02010055	R0.05	1.0	.0394	4	0.7	5	50	0.95
ESD02010103	R0.1	1.0	.0394	4	0.7	3	50	0.95
ESD02010105	R0.1	1.0	.0394	4	0.7	5	50	0.95
ESD02015105	R0.1	1.5	.0591	4	1.0	5	50	1.45
ESD02015108	R0.1	1.5	.0591	4	1.0	8	50	1.45
ESD02015205	R0.2	1.5	.0591	4	1.0	5	50	1.45
ESD02015208	R0.2	1.5	.0591	4	1.0	8	50	1.45
ESD02020106	R0.1	2.0	.0787	4	1.2	6	50	1.95
ESD02020100	R0.1	2.0	.0787	4	1.2	10	50	1.95
ESD02020206	R0.2	2.0	.0787	4	1.2	6	50	1.95
ESD02020200	R0.2	2.0	.0787	4	1.2	10	50	1.95

Corner Radius Tolerance(mm)	Shank Dia. Tolerance
±0.005	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎		◎

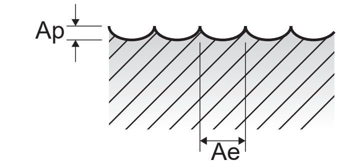
YG CBN END MILLS

RECOMMENDED CUTTING CONDITIONS

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

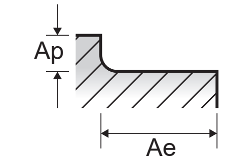
ESB94 SERIES 2 FLUTE BALL NOSE

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 0.4	0.5	0.6	0.8	1.0	1.2	1.5	2.0	3.0
H	38.2-39.1	Non-alloy steel	Ø0.4~Ø0.8 = .0002" Ø1.0~Ø3.0 = .0004"	Ø0.4~Ø0.8 = .0002" Ø1.0~Ø3.0 = .0004"	SFM (Vc)	205	260	310	410	515	620	775	825	820
					IPT (fz)	.0005	.0006	.0008	.0008	.0012	.0012	.0012	.0016	.0016
					RPM	50000	50000	50000	50000	50000	50000	50000	40000	26500
					IPM (FEED)	47	59	79	79	118	118	118	126	83
	39.2-39-3		Ø0.4~Ø0.8 = .0002" Ø1.0~Ø3.0 = .0004"	Ø0.4~Ø0.8 = .0002" Ø1.0~Ø3.0 = .0004"	SFM (Vc)	205	260	310	410	515	620	775	660	665
					IPT (fz)	.0005	.0006	.0008	.0008	.0012	.0012	.0012	.0015	.0016
					RPM	50000	50000	50000	50000	50000	50000	50000	32000	21500
					IPM (FEED)	47	59	79	79	118	118	118	98	67
	41	High alloyed steel, and tool steel	Ø0.4~Ø0.8 = .0002" Ø1.0~Ø3.0 = .0004"	Ø0.4~Ø0.8 = .0002" Ø1.0~Ø3.0 = .0004"	SFM (Vc)	205	260	310	410	515	620	775	825	820
					IPT (fz)	.0005	.0006	.0008	.0008	.0012	.0012	.0012	.0016	.0016
					RPM	50000	50000	50000	50000	50000	50000	50000	40000	26500
					IPM (FEED)	47	59	79	79	118	118	118	126	83



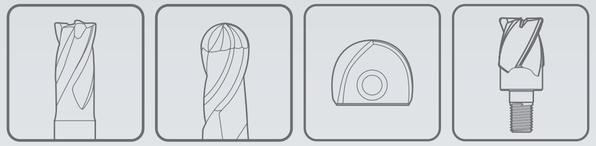
ESD02 SERIES 2FLUTE CORNER RADIUS

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 0.5	1.0	1.5	2.0
H	38.2-39.1	Hardened steel	Ø0.5 = .0039" Ø1.0 = .0079" Ø1.5 = .0158" Ø2.0 = .0236"	Ø0.5 =.0004" Ø1.0 = .0004" Ø1.5 = .0008" Ø2.0 = .0012"	SFM (Vc)	260	445	465	455
					IPT (fz)	.0003	.0005	.0007	.0008
					RPM	50000	43000	30000	22000
					IPM (FEED)	28	39	39	35
	39.2-39.3		Ø0.5 = .0024" Ø1.0 = .0039" Ø1.5 = .0079" Ø2.0 = .0118"	Ø0.5 = .0020" Ø1.0 = .0039" Ø1.5 = .0079" Ø2.0 = .0118"	SFM (Vc)	260	310	295	290
					IPT (fz)	.0002	.0005	.0007	.0011
					RPM	50000	30000	19000	14000
					IPM (FEED)	22	28	28	32
	41	Hardened Cast Iron	Ø0.5 = .0039" Ø1.0 = .0079" Ø1.5 = .0158" Ø2.0 = .0236"	Ø0.5 =.0004" Ø1.0 = .0004" Ø1.5 = .0008" Ø2.0 = .0012"	SFM (Vc)	205	260	310	410
					IPT (fz)	.0005	.0006	.0008	.0008
					RPM	50000	50000	50000	50000
					IPM (FEED)	47	59	79	79



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

Global Cutting Tool Leader **YG-1**



MILLING

CARBIDE INSERT & HOLDER

i-Xmill END MILLS

- Various Applications Type of Inserts Available for General Steels, Pre-Hardened Steels, High Hardened Steels, Stainless Steels and Graphite

SELECTION GUIDE

CARBIDE INSERT & HOLDER i-Xmill END MILLS

Available for General Steels, Pre-Hardened Steels, High Hardened Steels, Stainless Steel and Graphite

	Inch			Inch			Metric						Inch & Metric		
SERIES	XB1A	XB2C	XB1D	XR1A	XR2A	XR1D	XB1N	XB2N	XBAD	XRAA	XRBA	XRAD	ZBS ZBT	ZBC	ZRS ZRT
FLUTE	2	2	2	2	2	2	2	2	2	2	2	2	-	-	-
HELIX ANGLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUTTING EDGE SHAPE	BALL NOSE	BALL NOSE	BALL NOSE	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	BALL NOSE	BALL NOSE	BALL NOSE	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	BALL NOSE	BALL NOSE	CORNER RADIUS
SIZE MIN	R5/32	R5/32	R5/32	D5/16	D5/16	D5/16	R4.0	R4.0	R4.0	D8.0	D8.0	D8.0	-	-	-
SIZE MAX	R5/8	R5/8	R5/8	D1-1/4	D1-1/4	D1-1/4	R16.0	R16.0	R16.0	D32.0	D32.0	D32.0	-	-	-
PAGE	C52			C55			C57			C60-C61			in C53 / mm C58	in C54 / mm C59	in C56 / mm C62
	for GENERAL PURPOSE	for HARDENED STEEL	for GRAPHITE	for GENERAL PURPOSE	for HARDENED STEEL	for GRAPHITE	for GENERAL PURPOSE	for HARDENED STEEL	for GRAPHITE	for GENERAL PURPOSE	for HARDENED STEEL	for GRAPHITE	STRAIGHT & TAPER NECK	STRAIGHT NECK	STRAIGHT & TAPER NECK
	AlTiN	Z-Coating	Diamond	AlTiN	Z-Coating	Diamond	AlTiN	Z-Coating	Diamond	AlTiN	Z-Coating	Diamond	Steel	Carbide	Steel

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	XB1A	XB2C	XB1D	XR1A	XR2A	XR1D	XB1N	XB2N	XBAD	XRAA	XRBA	XRAD	ZBS ZBT	ZBC	ZRS ZRT
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎			◎			◎			◎					
	2		About 0.45% C	Annealed	190	13	◎			◎			◎			◎					
	3		About 0.45% C	Quenched & Tempered	250	25	◎			◎			◎			◎					
	4		About 0.75% C	Annealed	270	28	◎			◎			◎			◎					
	5		About 0.75% C	Quenched & Tempered	300	32	◎			◎			◎			◎					
	6	Low alloy steel		Annealed	180	10	◎			◎			◎			◎					
	7			Quenched & Tempered	275	29	◎			◎			◎			◎					
	8			Quenched & Tempered	300	32	◎			◎			◎			◎					
	9			Quenched & Tempered	350	38		◎			◎			◎			◎				
	10	High alloyed steel, and tool steel		Annealed	200	15		○			○			○			○				
	11			Quenched & Tempered	325	35		○			○			◎			○				
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15				◎			◎			◎					
	13		Martensitic	Quenched & Tempered	240	23				◎			◎			◎					
	14		Austenitic		180	10				◎			◎			◎					
K	15	Grey cast iron	Pearlitic / ferritic		180	10		◎			◎			◎			◎				
	16		Pearlitic (Martensitic)		260	26		◎			◎			◎			◎				
	17	Nodular cast iron	Ferritic		160	3		◎			◎			◎			◎				
	18		Pearlitic		250	25		◎			◎			◎			◎				
	19	Malleable cast iron	Ferritic		130			◎			◎			◎			◎				
	20		Pearlitic		230	21		◎			◎			◎			◎				
N	21	Aluminum-wrought alloy	Not Curable		60				○			○			○			○			
	22		Curable	Hardened	100				○			○			○			○			
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75				○			○			○			○			
	24		≤ 12% Si, Curable	Hardened	90				○			○			○			○			
	25		> 12% Si, Not Curable		130																
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110																
	27		CuZn, CuSnZn (Brass)		90																
	28		CuSn, lead-free copper and electrolytic copper		100																
	29.2	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic						◎			◎			◎			◎			
	30		Rubber, Wood, etc.																		
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15															
	32			Cured	280	30															
	33		Ni or Co Based	Annealed	250	25															
	34			Cured	350	38															
	35			Cast	320	34															
	36	Titanium Alloys	Pure Titanium		400 Rm																
	37		Alpha + Beta Alloys	Hardened	1050 Rm																
H	38	Hardened steel		Hardened	550	55		○			○			○			○				
	39			Hardened	630	60															
	40	Chilled Cast Iron		Cast	400	42															
	41	Hardened Cast Iron		Hardened	550	55															

CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
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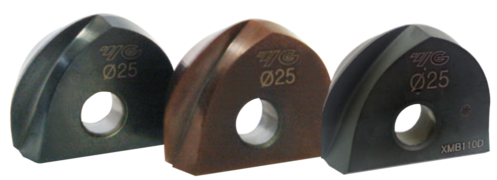
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

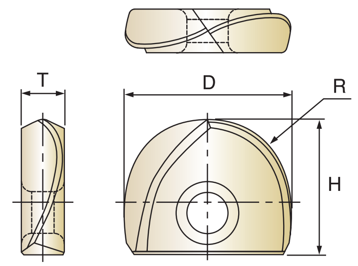
YG *i*-Xmill END MILLS

XB1A SERIES | XB2C SERIES | XB1D SERIES

i-Xmill BALL INSERTS

- Exchangeable End Mill for economic use
- Three Types of Inserts are available
  - For General Purpose (~HRc50)
  - For Hardened Material (HRc40~HRc65)
  - For Graphite
- Special Geometry and extremely abrasive resistant Coating for Excellent Performance





cutting conditions : p.C64

Unit :Inch

EDP No. For General Material	EDP No. For Hardened Material	EDP No. For Graphite	Radius of Ball Nose R	Mill Diameter D	Height H	Thickness T
XB1A020	XB2C020	XB1D020	R5/32	5/16	5/16	.094
XB1A024	XB2C024	XB1D024	R3/16	3/8	3/8	.106
XB1A032	XB2C032	XB1D032	R1/4	1/2	7/16	.126
XB1A040	XB2C040	XB1D040	R5/16	5/8	1/2	.165
XB1A048	XB2C048	XB1D048	R3/8	3/4	5/8	.205
XB1A100	XB2C100	XB1D100	R1/2	1	3/4	.244
XB1A116	XB2C116	XB1D116	R5/8	1-1/4	31/32	.283

- The ball radius tolerance is ±.0004˝ and the set-up accuracy is ±.0008˝

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
XB1A	◎	◎	◎	◎	◎	◎	◎	◎												
XB2C									◎	○	○				◎	◎	◎	◎	◎	◎
XB1D																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
XB1A																					
XB2C																		○			
XB1D	○	○	○	○					◎												

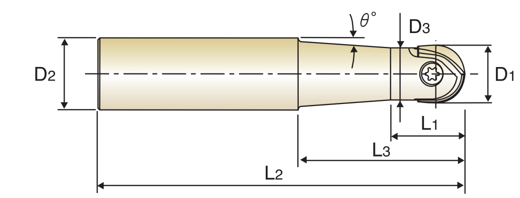
CARBIDE
HSS

YG *i*-Xmill END MILLS

ZBT SERIES | ZBS SERIES

i-Xmill BALL HOLDERS - STEEL

- Premium alloy steel with excellent strength.
- Precise shank, Tolerance (h6).
- Nickel plated, to prevent corrosion and improve lubricity.

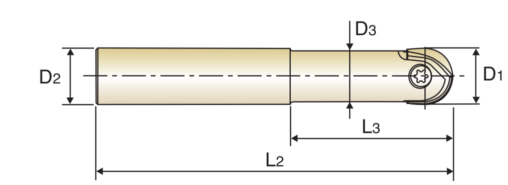


Taper neck Type

Unit :Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Interference Angle θ°	Length Type	Wrench No.	Screw No.
ZBT1020	5/16	1/2	1/2	1-5/8	3-5/8	9/32	4° 33'	Short	TWF07	TX0807
ZBT2020			1	2-1/2	4-3/8		3° 25'	Regular		
ZBT1024	3/8	1/2	5/8	1-1/2	3-9/16	11/32	3° 49'	Short	TWF08	TX1008
ZBT2024			1-1/4	2-5/16	4-3/8		3° 08'	Regular		
ZBT1032	1/2	5/8	11/16	2-3/16	4-3/8	7/16	2° 49'	Short	TWF10	TX1210
ZBT1040	5/8	3/4	13/16	2-9/16	5	9/16	2° 25'	Short	TWF15	TX1615
ZBT1048	3/4	1	1	3-1/8	6	43/64	3° 53'	Short	●TWB20	TX2020
ZBT1100	1	1-1/4	1-1/4	3-9/16	7	29/32	3° 45'	Short	●TWB25	TX2525
ZBT1116	1-1/4	1-1/4	1-9/16	4-3/8	8	1-1/16	1° 30'	Short	●TWB30	TX3030

* ● Required to use T-HANDLE (TWH600)



Straight neck Type

Unit :Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Length Type	Wrench No.	Screw No.
ZBS1032	1/2	1/2	1-3/8	3-1/2	7/16	Short	TWF10	TX1210
ZBS2032			2-3/16	4-3/8		Regular		
ZBS1040	5/8	5/8	1-3/8	3-3/4	9/16	Short	TWF15	TX1615
ZBS2040			2-9/16	5		Regular		
ZBS1048	3/4	3/4	1-9/16	4-3/8	43/64	Short	●TWB20	TX2020
ZBS2048			3	6		Regular		
ZBS1100	1	1	1-3/4	5	29/32	Short	●TWB25	TX2525
ZBS2100			3-9/16	6-3/4		Regular		
ZBS1116	1-1/4	1-1/4	2-1/4	5-1/2	1-1/16	Short	●TWB30	TX3030
ZBS2116			4-3/8	7-3/4		Regular		

* ● Required to use T-HANDLE (TWH600)

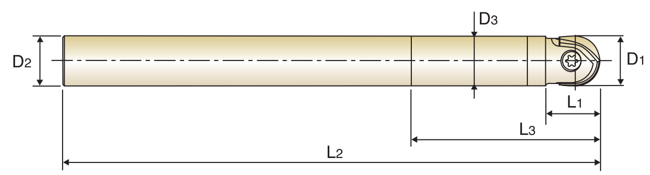
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG i-Xmill END MILLS

ZBC SERIES

i-Xmill BALL HOLDERS - CARBIDE

- Equal tool rigidity like solid carbide end mill that makes the stable and high finishing machining with less vibration.
- The high finishing machining for the deeper part of mold.
- The tool's life of carbide ball holders is longer than steel holder.
- Shrink Fit Holding system can be applied.
- Upon request, the worn holder is able to be regenerated.



Unit :Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Length Type	Wrench No.	Screw No.
ZBCB020	5/16	5/16	1/2	1-9/16	5-1/8	19/64	Long	TWF07	TX0807
ZBCB024	3/8	3/8	5/8	2	5-1/2	23/64	Long	TWF08	TX1008
ZBCB032	1/2	1/2	11/16	2-3/8	5-15/16	31/64	Long	TWF10	TX1210
ZBCB040	5/8	5/8	13/16	3-3/16	7-15/16	39/64	Long	TWF15	TX1615
ZBCD040					9-7/8				
ZBCB048	3/4	3/4	1	3-3/16	7-15/16	47/64	Long	●TWB20	TX2020
ZBCC048				4	9-7/8				
ZBCB100	1	1	1-3/16	4-3/4	9-7/8	63/64	Long	●TWB25	TX2525
ZBCB116	1-1/4	1-1/4	1-9/16	5-15/16	11-7/8	1-15/64	Long	●TWB30	TX3030

* ● Required to use T-HANDLE (TWH600)

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
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V7 MILL INOX
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ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
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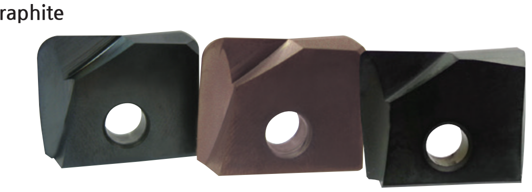
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

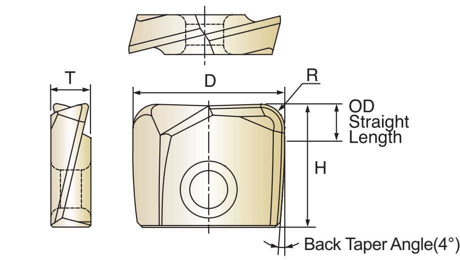
YG i-Xmill END MILLS

XR1A SERIES XR2A SERIES XR1D SERIES

i-Xmill CORNER RADIUS INSERTS

- The optimum geometry of the tool to achieve the better reliability and less vibration and cutting load.
- Interchangeability with i-Xmill ball holder, but the precise cutting is possible with i-Xmill corner radius holder due to higher stability and strength of tool.
- The various and wide cutting range makes it possible to machine over the roughing and finishing.
- Special coating makes high hardness with high thermal stability against oxidation.
- Three Types of Inserts are available
  - For General Purpose (~HRc50)
  - For Hardened Material (HRc40~HRc65)
  - For Graphite





cutting conditions : p.C65

Unit :Inch

EDP No. For General Material	EDP No. For Hardened Material	EDP No. For Graphite	Corner Radius R	Mill Diameter D	Height H	Thickness T	OD Straight Length
XR1A020 01	XR2A020 01	XR1D020 01	R1/64	5/16	5/16	.094	.079
XR1A020 02	XR2A020 02	XR1D020 02	R1/32				
XR1A024 01	XR2A024 01	XR1D024 01	R1/64	3/8	3/8	.106	.118
XR1A024 02	XR2A024 02	XR1D024 02	R1/32				
XR1A024 04	XR2A024 04	XR1D024 04	R1/16				
XR1A032 01	XR2A032 01	XR1D032 01	R1/64	1/2	7/16	.126	.118
XR1A032 02	XR2A032 02	XR1D032 02	R1/32				
XR1A032 04	XR2A032 04	XR1D032 04	R1/16				
XR1A040 01	XR2A040 01	XR1D040 01	R1/64	5/8	1/2	.165	.157
XR1A040 02	XR2A040 02	XR1D040 02	R1/32				
XR1A040 04	XR2A040 04	XR1D040 04	R1/16				
XR1A040 08	XR2A040 08	XR1D040 08	R1/8				
XR1A048 01	XR2A048 01	XR1D048 01	R1/64	3/4	5/8	.205	.157
XR1A048 02	XR2A048 02	XR1D048 02	R1/32				
XR1A048 04	XR2A048 04	XR1D048 04	R1/16				
XR1A048 08	XR2A048 08	XR1D048 08	R1/8				
XR1A100 01	XR2A100 01	XR1D100 01	R1/64	1	3/4	.244	.157
XR1A100 02	XR2A100 02	XR1D100 02	R1/32				
XR1A100 04	XR2A100 04	XR1D100 04	R1/16				
XR1A100 08	XR2A100 08	XR1D100 08	R1/8				
XR1A116 01	XR2A116 01	XR1D116 01	R1/64	1-1/4	29/32	.283	.157
XR1A116 02	XR2A116 02	XR1D116 02	R1/32				
XR1A116 04	XR2A116 04	XR1D116 04	R1/16				
XR1A116 08	XR2A116 08	XR1D116 08	R1/8				

- The other corner radius values are available on request.
- The corner radius tolerance is ±.0006″ and the set-up accuracy is ±.0008″

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
XR1A	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎	◎						
XR2A									◎	○	○				◎	◎	◎	◎	◎	◎
XR1D																				

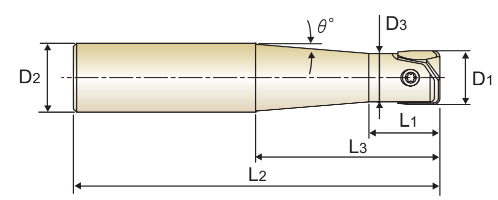
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
XR1A																					
XR2A																		○			
XR1D	○	○	○	○					◎												

YG i-Xmill END MILLS

ZRT SERIES
ZRS SERIES

i-Xmill CORNER RADIUS HOLDERS - STEEL

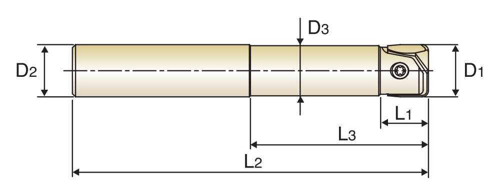
- Premium alloy steel with excellent strength.
- Precise shank, Tolerance (h6).
- Nickel plated, to prevent corrosion and improve lubricity.



Taper neck Type

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Interference Angle θ°	Length Type	Wrench No.	Screw No.
ZRT1032	5/16	1/2	13/32	7/8	4	17/64	13° 58'	Regular	TWF07	TX0807
ZRT2032				2	5-1/8		4° 12'	Long		
ZRT2410	3/8	1/2	17/32	1	4	5/16	9° 27'	Regular	TWF08	TX1008
ZRT2420				2	5-15/16		3° 6'	Long		
ZRT3220	1/2	5/8	5/8	2-3/8	6-5/16	27/64	3° 19'	Long	TWF10	TX1210



Straight neck Type

Unit :Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Length Type	Wrench No.	Screw No.
ZRS1032	1/2	1/2	17/32	1-3/16	4-3/8	7/16	Regular	TWF10	TX1210
ZRS1040	5/8	5/8	5/8	2	5-1/8	19/32	Regular	TWF15	TX1615
ZRS2040				2-9/16	6-1/2		Intermediate		
ZRS1048	3/4	3/4	23/32	2-3/8	5-1/2	23/32	Regular	●TWB20	TX2020
ZRS2048				3-1/8	7-1/8		Intermediate		
ZRS1100	1	1	29/32	2-3/4	5-15/16	31/32	Regular	●TWB25	TX2525
ZRS2100				3-9/16	8		Intermediate		
ZRS1116	1-1/4	1-1/4	1-1/8	3-1/8	6-5/16	1-7/32	Regular	●TWB30	TX3030
ZRS2116				4	8-11/16		Intermediate		

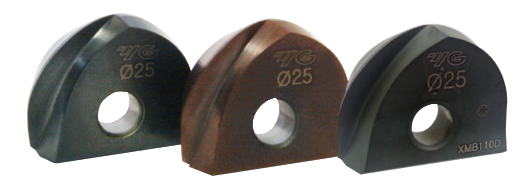
* ● Required to use T-HANDLE (TWH600)

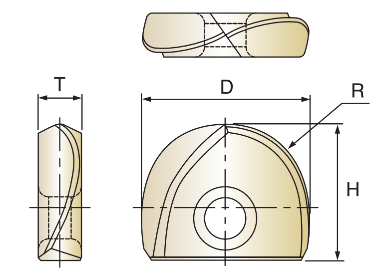
YG i-Xmill END MILLS

XB1N SERIES
XB2N SERIES
XBAD SERIES

i-Xmill BALL INSERTS

- Indexable Ball End Mill for economic use
- Three Types of Inserts are available
  - For General Purpose (~HRc50)
  - For Hardened Material (HRc40~HRc65)
  - For Graphite
- Special Geometry and extremely abrasive resistant Coating for Excellent Performance





cutting conditions : p.C64

Unit : mm

EDP No. For General Material	EDP No. For Hardened Material	EDP No. For Graphite	Radius of Ball Nose R	Mill Diameter D	Height H	Thickness T
XB1N080	XB2N080	XBAD080	R4.0	8.0	8	2.4
XB1N100	XB2N100	XBAD100	R5.0	10.0	9.5	2.7
XB1N120	XB2N120	XBAD120	R6.0	12.0	11	3.2
XB1N160	XB2N160	XBAD160	R8.0	16.0	13	4.2
XB1N200	XB2N200	XBAD200	R10.0	20.0	16	5.2
XB1N250	XB2N250	XBAD250	R12.5	25.0	19.5	6.2
XB1N300	XB2N300	XBAD300	R15.0	30.0	23.5	7.2
XB1N320	XB2N320	XBAD320	R16.0	32.0	24.5	7.2

• The ball radius tolerance is ±0.01mm and the set-up accuracy is ±0.02mm

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
XB1N	◎	◎	◎	◎	◎	◎	◎	◎												
XB2N									◎	○	◎				◎	◎	◎	◎	◎	◎
XBAD																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
XB1N																					
XB2N																		○			
XBAD																		◎	◎	○	◎

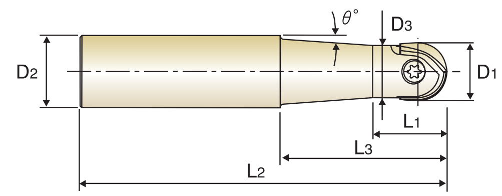
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

i-Xmill END MILLS

ZBT SERIES
ZBS SERIES

i-Xmill BALL HOLDERS - STEEL

- Premium alloy steel with excellent strength.
- Precise shank, Tolerance (h6).
- Nickel plated, to prevent corrosion and improve lubricity.

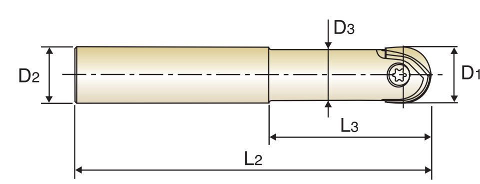


Taper neck Type

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter	Interference Angle	Length Type	Wrench No.	Screw No.
	D1	D2	L1	L3	L2	D3	θ°			
ZBT0801	8.0	12	12	35	90	7.2	4° 43′	Short	TWF07	TX0807
ZBT0802			25	55	110		3° 37′	Regular		
ZBT1001	10.0	12	15	35	90	9	2° 51′	Short	TWF08	TX1008
ZBT1002			30	55	110		2° 17′	Regular		
ZBT1201	12.0	16	17	55	110	10.5	3° 23′	Short	TWF10	TX1210
ZBT1601	16.0	20	20	65	125	14.5	2° 51′	Short	TWF15	TX1615
ZBT2001	20.0	25	25	75	145	18	3° 26′	Short	●TWB20	TX2020
ZBT2501	25.0	32	30	90	170	22.5	4° 03′	Short	●TWB25	TX2525
ZBT3001	30.0 32.0	32	40	110	195	27	1° 38′	Short	●TWB30	TX3030

* ● Required to use T-HANDLE (TWH600)



Straight neck Type

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length Below Shank	Overall Length	Neck Diameter	Length Type	Wrench No.	Screw No.
	D1	D2	L3	L2	D3			
ZBS1201	12.0	12	35	90	0.5	Short	TWF10	TX1210
ZBS1202			55	110		Regular		
ZBS1601	16.0	16	35	95	14.5	Short	TWF15	TX1615
ZBS1602			65	125		Regular		
ZBS2001	20.0	20	40	110	18	Short	●TWB20	TX2020
ZBS2002			75	145		Regular		
ZBS2501	25.0	25	45	125	22.5	Short	●TWB25	TX2525
ZBS2502			90	170		Regular		
ZBS3001	30.0	32	55	140	27	Short	●TWB30	TX3030
ZBS3002	32.0		110	195		Regular		

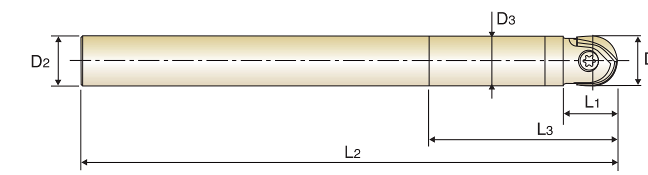
* ● Required to use T-HANDLE (TWH600)

i-Xmill END MILLS

ZBC SERIES

i-Xmill BALL HOLDERS - CARBIDE

- Equal tool rigidity like solid carbide end mill that makes the stable and high finishing machining with less vibration.
- The high finishing machining for the deeper part of mold.
- The tool's life of carbide ball holders is longer than steel holder.
- Shrink Fit Holding system can be applied.
- Upon request, the worn holder is able to be regenerated.



Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter	Length Type	Wrench No.	Screw No.
	D1	D2	L1	L3	L2	D3			
ZBC1080	8.0	8	12	12	130	7.7	Long	TWF07	TX0807
ZBC1100	10.0	10	15	15	140	9.7	Long	TWF08	TX1008
ZBC1120	12.0	12	17	17	150	11.7	Long	TWF10	TX1210
ZBC1160	16.0	16	20	20	200	15.7	Long	TWF15	TX1615
ZBC1200	20.0	20	25	25	200	19.7	Long	●TWB20	TX2020
ZBC1250	25.0	25	30	30	200	24.7	Long	●TWB25	TX2525
ZBC1320	30.0 32.0	32	40	40	250	29.7	Long	●TWB30	TX3030

* ● Required to use T-HANDLE (TWH600)

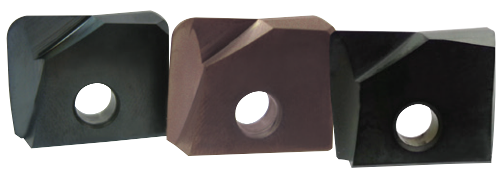
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

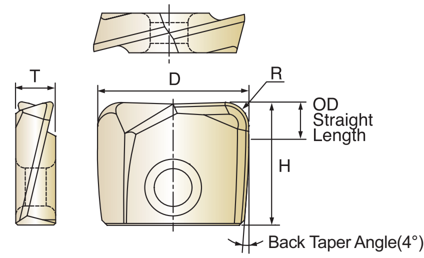
YG *i*-Xmill END MILLS

XRAA SERIES | XRBA SERIES | XRAD SERIES

i-Xmill CORNER RADIUS INSERTS

- The optimum geometry of the tool to achieve the better reliability and less vibration and cutting load.
- Interchangeability with i-Xmill ball holder, but the precise cutting is possible with i-Xmill corner radius holder due to higher stability and strength of tool.
- The various and wide cutting range makes it possible to machine over the roughing and finishing.
- Special coating makes high hardness with high thermal stability against oxidation.
- Three Types of Inserts are available
  - For General Purpose (~HRc50)
  - For Hardened Material (HRc40~HRc65)
  - For Graphite





cutting conditions : p.C65

Unit : mm

EDP No. For General Material	EDP No. For Hardened Material	EDP No. For Graphite	Corner Radius R	Mill Diameter D	Height H	Thickness T	OD Straight Length
XRAA080 03	XRBA080 03	XRAD080 03	R0.3	8.0	8	2.4	2
XRAA080 05	XRBA080 05	XRAD080 05	R0.5				
XRAA080 10	XRBA080 10	XRAD080 10	R1.0				
XRAA100 05	XRBA100 05	XRAD100 05	R0.5	10.0	9.5	2.7	3
XRAA100 10	XRBA100 10	XRAD100 10	R1.0				
XRAA100 20	XRBA100 20	XRAD100 20	R2.0				
XRAA120 05	XRBA120 05	XRAD120 05	R0.5	12.0	11	3.2	3
XRAA120 10	XRBA120 10	XRAD120 10	R1.0				
XRAA120 20	XRBA120 20	XRAD120 20	R2.0				
XRAA130 05	XRBA130 05	XRAD130 05	R0.5	13.0	11.2	3.2	3
XRAA130 10	XRBA130 10	XRAD130 10	R1.0				
XRAA130 20	XRBA130 20	XRAD130 20	R2.0				
XRAA160 05	XRBA160 05	XRAD160 05	R0.5	16.0	13	4.2	4
XRAA160 10	XRBA160 10	XRAD160 10	R1.0				
XRAA160 20	XRBA160 20	XRAD160 20	R2.0				
XRAA170 05	XRBA170 05	XRAD170 05	R0.5	17.0	13	4.2	4
XRAA170 10	XRBA170 10	XRAD170 10	R1.0				
XRAA170 20	XRBA170 20	XRAD170 20	R2.0				

- The other corner radius values are available on request.
- The corner radius tolerance is ±0.015mm and the set-up accuracy is ±0.02mm

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
XRAA	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎	◎						
XRBA									◎	○	○				◎	◎	◎	◎	◎	◎
XRAD																				

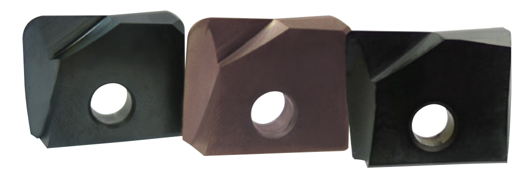
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
XRAA																					
XRBA																		○			
XRAD																		◎	◎	○	◎

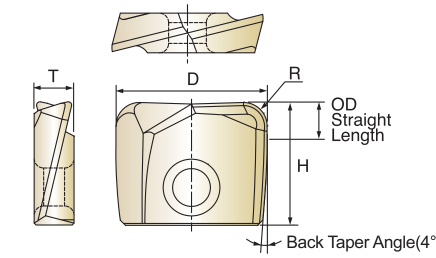
YG *i*-Xmill END MILLS

XRAA SERIES | XRBA SERIES | XRAD SERIES

i-Xmill CORNER RADIUS INSERTS

- The optimum geometry of the tool to achieve the better reliability and less vibration and cutting load.
- Interchangeability with i-Xmill ball holder, but the precise cutting is possible with i-Xmill corner radius holder due to higher stability and strength of tool.
- The various and wide cutting range makes it possible to machine over the roughing and finishing.
- Special coating makes high hardness with high thermal stability against oxidation.
- Three Types of Inserts are available
  - For General Purpose (~HRc50)
  - For Hardened Mat erial (HRc40~HRc65)
  - For Graphite





cutting conditions : p.C65

Unit : mm

EDP No. For General Material	EDP No. For Hardened Material	EDP No. For Graphite	Corner Radius R	Mill Diameter D	Height H	Thickness T	OD Straight Length
XRAA200 05	XRBA200 05	XRAD200 05	R0.5	20.0	16	5.2	4
XRAA200 10	XRBA200 10	XRAD200 10	R1.0				
XRAA200 20	XRBA200 20	XRAD200 20	R2.0				
XRAA210 05	XRBA210 05	XRAD210 05	R0.5	21.0	16	5.2	4
XRAA210 10	XRBA210 10	XRAD210 10	R1.0				
XRAA210 20	XRBA210 20	XRAD210 20	R2.0				
XRAA250 05	XRBA250 05	XRAD250 05	R0.5	25.0	19.5	6.2	4
XRAA250 10	XRBA250 10	XRAD250 10	R1.0				
XRAA250 20	XRBA250 20	XRAD250 20	R2.0				
XRAA260 05	XRBA260 05	XRAD260 05	R0.5	26.0	19.5	6.2	4
XRAA260 10	XRBA260 10	XRAD260 10	R1.0				
XRAA260 20	XRBA260 20	XRAD260 20	R2.0				
XRAA300 05	XRBA300 05	XRAD300 05	R0.5	30.0	23.5	7.2	4
XRAA300 10	XRBA300 10	XRAD300 10	R1.0				
XRAA300 20	XRBA300 20	XRAD300 20	R2.0				
XRAA320 05	XRBA320 05	XRAD320 05	R0.5	32.0	23.5	7.2	4
XRAA320 10	XRBA320 10	XRAD320 10	R1.0				
XRAA320 20	XRBA320 20	XRAD320 20	R2.0				

- The other corner radius values are available on request.
- The corner radius tolerance is ±0.015mm and the set-up accuracy is ±0.02mm

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
XRAA	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎	◎						
XRBA									◎	○	○				◎	◎	◎	◎	◎	◎
XRAD																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
XRAA																					
XRBA																		○			
XRAD																		◎	◎	○	◎

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
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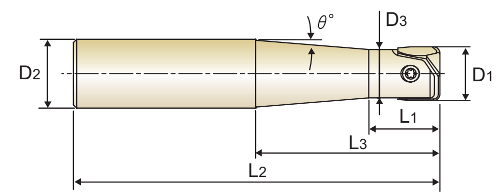
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG i-Xmill END MILLS

ZRT SERIES
ZRS SERIES

i-Xmill CORNER RADIUS HOLDERS - STEEL

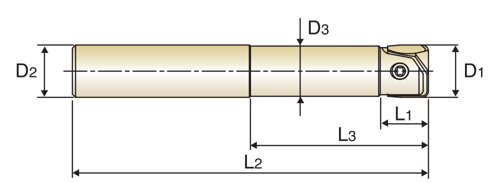
- ▶ Premium alloy steel with excellent strength.
- ▶ Precise shank, Tolerance (h6).
- ▶ Nickel plated, to prevent corrosion and improve lubricity.



Taper neck Type

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter	Interference Angle	Length Type	Wrench No.	Screw No.
	D1	D2	L1	L3	L2	D3	θ°			
ZRT8011	8.0	12	10	22	100	6.7	9°	Regular	TWF07	TX0807
ZRT8021				50	130		2° 43´	Long		
ZRT1001	10.0	12	13	25	100	8.6	4° 45´	Regular	TWF08	TX1008
ZRT1002				50	150		1° 32´	Long		
ZRT1202	12.0 13.0	16	15	60	160	10.2	2° 32´	Long	TWF10	TX1210



Straight neck Type

Unit : mm

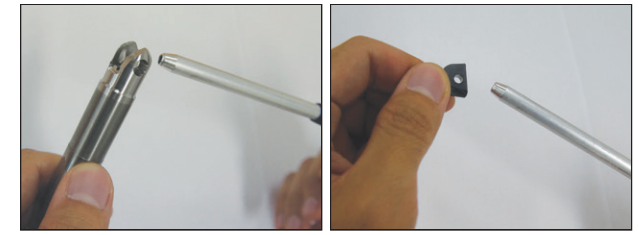
EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter	Length Type	Wrench No.	Screw No.
	D1	D2	L1	L3	L2	D3			
ZRS1120	12.0 13.0	12	13	30	110	11	Regular	TWF10	TX1210
ZRS1160	16.0	16	15	50	130	15	Regular	TWF15	TX1615
ZRS2160	17.0			65	165		Intermediate		
ZRS1200	20.0	20	18	60	140	19	Regular	●TWB20	TX2020
ZRS2200	21.0			80	180		Intermediate		
ZRS1250	25.0	25	23	70	150	24	Regular	●TWB25	TX2525
ZRS2250	26.0			90	200		Intermediate		
ZRS1300	30.0	32	27	80	160	29	Regular	●TWB30	TX3030
ZRS2300				100	220		Intermediate		
ZRS1320	32.0	32	28	80	160	31	Regular	●TWB30	TX3030
ZRS2320				100	220		Intermediate		

* ● Required to use T-HANDLE (TWH600)

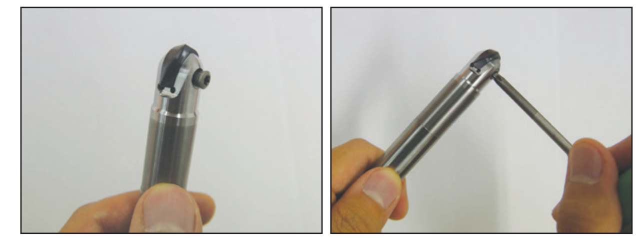
YG i-Xmill END MILLS

RECOMMENDED CUTTING CONDITIONS

ASSEMBLY OF i-Xmill



◀ Make sure to clean the insert and insert seat.



◀ Slide the insert into the slot of the holder.
Tighten the screw using anti-seize compound.

SIZE		CLAMPING TORQUE
ØD		[in • lbs]
Ø5/16	(Ø8)	9.0
Ø3/8	(Ø10)	13.5
Ø1/2	(Ø12~Ø13)	22.5
Ø5/8	(Ø16~Ø17)	31.5
Ø3/4	(Ø20~Ø21)	44.5
Ø1	(Ø25~Ø26)	53.0
Ø1-1/4	(Ø30~Ø32)	58.0

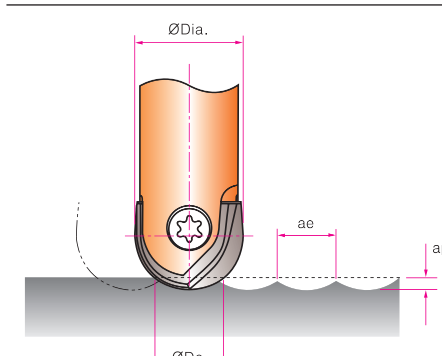
⁎ When the screw is worn out, please change the new screw.
⁎ Please tighten up the screw with recommended torque. (Please refer to the table)
⁎ Don't press down the insert, when the screw is tightened.

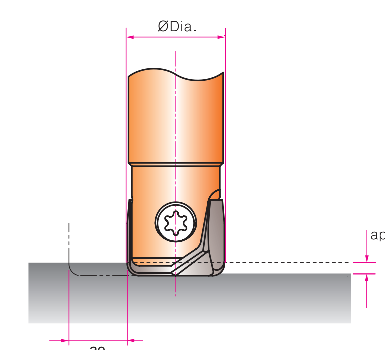
Wrench No.

WRENCH TYPE		PRODUCT NO.	T-HANDLE No.
WING TYPE		TWFT10	–
		TWFT15	–
TORX BIT TYPE		● TWBT20	TWH600 
		● TWBT25	
		● TWBT30	

* ● Required to use T-HANDLE (TWH600)

CUTTING CONDITION
SCHNEIDKONDITIONEN





RPM = revolution per minute (rev/min)
SFM = surface feet per minute (ft/min)
Dia. = diameter of insert (inch)
IPR = feed rate (inch/rev)
IPM = inch per minute penetration rate
De = effective tool diameter (inch)
ap = axial depth of cut (inch)
ae = radial depth of cut (inch)

$$\text{SFM [ft/min]} = \frac{(\text{RPM}) \cdot (\pi) \cdot (\text{Dia.})}{12} \qquad \text{RPM [rev/min]} = \frac{(\text{SFM}) \cdot (12)}{(\pi) \cdot (\text{Dia.})}$$

$$\text{IPM [inch/min]} = (\text{RPM}) \cdot (\text{IPR}) \qquad \text{De [inch]} = 2\sqrt{(\text{ap}) \cdot (\text{Dia. - ap})}$$

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG i-Xmill END MILLS

RECOMMENDED CUTTING CONDITIONS

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

XB1A SERIES BALL INSERTS for General Material

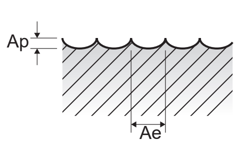
ISO	VDI 3323	Material Description	Parameter	5/16 (8)	3/8 (10)	1/2 (12, 13)	5/8 (16, 17)	3/4 (20, 21)	1 (25, 26)	1-1/4 (30, 32)
				Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing
P	1-4	Non-alloy steel	SFM(Vc)	525~1050	525~1181	525~1247	525~1575	525~1903	525~1969	525~2297
			IPT(fz)	.008~.008	.008~.008	.008~.008	.010~.012	.010~.016	.010~.020	.010~.024
			RPM	6370~12730	5090~11460	4240~10080	3180~9550	2550~9230	2040~7640	1700~7430
			IPM(FEED)	100~200	80~180	70~160	60~230	50~290	40~300	30~350
	5		SFM(Vc)	394~919	394~984	394~1148	394~1247	394~1378	394~1575	394~1804
			IPT(fz)	.008~.008	.008~.008	.008~.008	.010~.012	.010~.016	.010~.020	.010~.024
			RPM	4770~11140	3820~9550	3180~9280	2390~7560	1910~6680	1530~6110	1270~5840
			IPM(FEED)	80~180	60~150	50~150	50~180	40~210	30~240	30~280
	6-7	Low alloy steel	SFM(Vc)	525~1050	525~1181	525~1247	525~1575	525~1903	525~1969	525~2297
			IPT(fz)	.008~.008	.008~.008	.008~.008	.010~.012	.010~.016	.010~.020	.010~.024
			RPM	6370~12730	5090~11460	4240~10080	3180~9550	2550~9230	2040~7640	1700~7430
			IPM(FEED)	100~200	80~180	70~160	60~230	50~290	40~300	30~350
	8		SFM(Vc)	394~919	394~984	394~1148	394~1247	394~1378	394~1575	394~1804
			IPT(fz)	.008~.008	.008~.008	.008~.008	.010~.012	.010~.016	.010~.020	.010~.024
			RPM	4770~11140	3820~9550	3180~9280	2390~7560	1910~6680	1530~6110	1270~5840
			IPM(FEED)	80~180	60~150	50~150	50~180	40~210	30~240	30~280

XB2C SERIES BALL INSERTS for Hardened Material

ISO	VDI 3323	Material Description	Parameter	5/16 (8)	3/8 (10)	1/2 (12, 13)	5/8 (16, 17)	3/4 (20, 21)	1 (25, 26)	1-1/4 (30, 32)
				Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing
P	9	Low alloy steel	SFM(Vc)	328~722	328~853	328~919	328~1148	328~1312	328~1476	328~1640
			IPT(fz)	.006~.008	.006~.008	.006~.008	.008~.012	.008~.016	.008~.020	.008~.024
			RPM	3980~8750	3180~8280	2650~7430	1990~6960	1590~6370	1270~5730	1060~5310
			IPM(FEED)	50~140	40~130	30~120	30~160	30~200	20~230	20~250
	10-11	High alloyed steel, and tool steel	SFM(Vc)	328~722	328~853	328~919	328~1148	328~1312	328~1476	328~1640
			IPT(fz)	.006~.008	.006~.008	.006~.008	.008~.012	.008~.016	.008~.020	.008~.024
			RPM	3980~8750	3180~8280	2650~7430	1990~6960	1590~6370	1270~5730	1060~5310
			IPM(FEED)	50~140	40~130	30~120	30~160	30~200	20~230	20~250
K	15-16	Grey cast iron	SFM(Vc)	525~1050	525~1181	525~1312	525~1640	525~1804	525~2034	525~2362
			IPT(fz)	.012~.012	.012~.012	.012~.012	.014~.016	.014~.016	.014~.020	.014~.024
			RPM	6370~12730	5090~11460	4240~10610	3180~9950	2550~8750	2040~7890	1700~7640
			IPM(FEED)	150~300	120~270	100~250	90~310	70~280	60~310	50~360
	17-18	Nodular cast iron	SFM(Vc)	525~1050	525~1181	525~1312	525~1640	525~1804	525~2034	525~2362
			IPT(fz)	.012~.012	.012~.012	.012~.012	.014~.016	.014~.016	.014~.020	.014~.024
			RPM	6370~12730	5090~11460	4240~10610	3180~9950	2550~8750	2040~7890	1700~7640
			IPM(FEED)	150~300	120~270	100~250	90~310	70~280	60~310	50~360
	19-20	Malleable cast iron	SFM(Vc)	525~1050	525~1181	525~1312	525~1640	525~1804	525~2034	525~2362
			IPT(fz)	.012~.012	.012~.012	.012~.012	.014~.016	.014~.016	.014~.020	.014~.024
			RPM	6370~12730	5090~11460	4240~10610	3180~9950	2550~8750	2040~7890	1700~7640
			IPM(FEED)	150~300	120~270	100~250	90~310	70~280	60~310	50~360
H	38	Hardened steel	SFM(Vc)	262~591	262~656	262~722	262~853	262~1050	262~1181	262~1312
			IPT(fz)	.004~.008	.004~.008	.004~.008	.006~.012	.006~.016	.006~.020	.006~.024
			RPM	3180~7160	2550~6370	2120~5840	1590~5170	1270~5090	1020~4580	850~4240
			IPM(FEED)	30~110	20~100	20~90	20~120	20~160	10~180	10~200

XB1D SERIES BALL INSERTS for Graphite

ISO	VDI 3323	Material Description	Parameter	5/16 (8)	3/8 (10)	1/2 (12, 13)	5/8 (16, 17)	3/4 (20, 21)	1 (25, 26)	1-1/4 (30, 32)
				Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing
N	21~22	Aluminum-wrought alloy	SFM(Vc)	984~1312	984~1312	984~1312	984~1312	984~1575	984~1837	984~2133
			IPT(fz)	.008~.008	.008~.008	.008~.008	.010~.012	.012~.014	.014~.016	.016~.020
			RPM	11940~15920	9550~12730	7960~10610	5970~7960	4770~7640	3820~7130	3180~6900
			IPM(FEED)	190~250	150~200	130~170	120~190	110~210	110~220	100~270
	23~24	Aluminum-cast, alloyed	SFM(Vc)	984~1312	984~1312	984~1312	984~1312	984~1575	984~1837	984~2133
			IPT(fz)	.008~.008	.008~.008	.008~.008	.010~.012	.012~.014	.014~.016	.016~.020
			RPM	11940~15920	9550~12730	7960~10610	5970~7960	4770~7640	3820~7130	3180~6900
			IPM(FEED)	190~250	150~200	130~170	120~190	110~210	110~220	100~270
	29.2	Graphite	SFM(Vc)	984~1312	984~1312	984~1312	984~1312	984~1575	984~1837	984~2133
			IPT(fz)	.008~.008	.008~.008	.008~.008	.010~.012	.012~.014	.014~.016	.016~.020
			RPM	11940~15920	9550~12730	7960~10610	5970~7960	4770~7640	3820~7130	3180~6900
			IPM(FEED)	190~250	150~200	130~170	120~190	110~210	110~220	100~270



ae : Roughing - 0.1 x D
Finishing - Under Ø1/2 : .01"
Under Ø3/4 : .012"
From Ø3/4 : .016"

ap : Roughing - Under Ø5/8 : 0.025 x D
From Ø5/8 : 0.05 x D
Finishing - .004"

▶ When the length of overhang exceeds 4xD, we recommend using the carbide shank holder with 20% lower feed
▶ When using long (long & intermediate type holder) tools, we recommend reducing the feed rate to 70 ~ 85%.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
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STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG i-Xmill END MILLS
RECOMMENDED CUTTING CONDITIONS
SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

XR1A SERIES CORNER RADIUS INSERTS for General Material

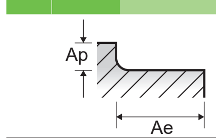
ISO	VDI 3323	Material Description	Parameter	5/16 (8)	3/8 (10)	1/2 (12, 13)	5/8 (16, 17)	3/4 (20, 21)	1 (25, 26)	1-1/4 (30, 32)
				Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing
P	1-4	Non-alloy steel	SFM(Vc)	525~984	525~984	525~984	525~984	525~984	525~984	525~984
			IPT(fz)	.008~.006	.008~.006	.008~.006	.010~.008	.010~.008	.010~.008	.010~.008
			RPM	6370~11940	5090~9550	4240~7960	3180~5970	2550~4770	2040~3820	1700~3180
			IPM(FEED)	100~140	80~110	70~90	60~90	50~80	40~60	30~50
	5		SFM(Vc)	394~919	394~919	394~919	394~919	394~919	394~919	394~919
			IPT(fz)	.008~.006	.008~.006	.008~.006	.010~.008	.010~.008	.010~.008	.010~.008
			RPM	4770~11140	3820~8910	3180~7430	2390~5570	1910~4460	1530~3570	1270~2970
			IPM(FEED)	80~130	60~110	50~90	50~90	40~70	30~60	30~50
	6-7	Low alloy steel	SFM(Vc)	525~984	525~984	525~984	525~984	525~984	525~984	525~984
			IPT(fz)	.008~.006	.008~.006	.008~.006	.010~.008	.010~.008	.010~.008	.010~.008
			RPM	6370~11940	5090~9550	4240~7960	3180~5970	2550~4770	2040~3820	1700~3180
			IPM(FEED)	100~140	80~110	70~90	60~90	50~80	40~60	30~50
	8		SFM(Vc)	394~919	394~919	394~919	394~919	394~919	394~919	394~919
			IPT(fz)	.008~.006	.008~.006	.008~.006	.010~.008	.010~.008	.010~.008	.010~.008
			RPM	4770~11140	3820~8910	3180~7430	2390~5570	1910~4460	1530~3570	1270~2970
			IPM(FEED)	80~130	60~110	50~90	50~90	40~70	30~60	30~50
M	12-14	Stainless steel	SFM(Vc)	295~427	295~427	295~427	295~427	295~427	295~427	295~427
			IPT(fz)	.004~.004	.004~.004	.005~.004	.005~.005	.005~.005	.005~.005	.005~.005
			RPM	3580~5170	2860~4140	2390~3450	1790~2590	1430~2070	1150~1660	950~1380
			IPM(FEED)	30~40	20~40	20~30	20~30	10~20	10~20	10~10

XR2A SERIES CORNER RADIUS INSERTS for Hardened Material

ISO	VDI 3323	Material Description	Parameter	5/16 (8)	3/8 (10)	1/2 (12, 13)	5/8 (16, 17)	3/4 (20, 21)	1 (25, 26)	1-1/4 (30, 32)
				Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing
P	9	Low alloy steel	SFM(Vc)	328~919	328~919	328~919	328~919	328~919	328~919	328~919
			IPT(fz)	.005~.002	.005~.002	.005~.002	.006~.003	.006~.003	.006~.003	.006~.003
			RPM	3980~11140	3180~8910	2650~7430	1990~5570	1590~4460	1270~3570	1060~2970
			IPM(FEED)	40~50	30~40	30~40	20~40	20~30	20~20	10~20
	10-11	High alloyed steel, and tool steel	SFM(Vc)	328~919	328~919	328~919	328~919	328~919	328~919	328~919
			IPT(fz)	.005~.002	.005~.002	.005~.002	.006~.003	.006~.003	.006~.003	.006~.003
			RPM	3980~11140	3180~8910	2650~7430	1990~5570	1590~4460	1270~3570	1060~2970
			IPM(FEED)	40~50	30~40	30~40	20~40	20~30	20~20	10~20
K	15-16	Grey cast iron	SFM(Vc)	525~1247	525~1247	525~1247	525~1247	525~1247	525~1247	525~1247
			IPT(fz)	.012~.008	.012~.008	.012~.008	.014~.012	.014~.012	.014~.012	.014~.012
			RPM	6370~15120	5090~12100	4240~10080	3180~7560	2550~6050	2040~4840	1700~4030
			IPM(FEED)	150~240	120~190	100~160	90~180	70~140	60~110	50~100
	17-18	Nodular cast iron	SFM(Vc)	525~1247	525~1247	525~1247	525~1247	525~1247	525~1247	525~1247
			IPT(fz)	.012~.008	.012~.008	.012~.008	.014~.012	.014~.012	.014~.012	.014~.012
			RPM	6370~15120	5090~12100	4240~10080	3180~7560	2550~6050	2040~4840	1700~4030
			IPM(FEED)	150~240	120~190	100~160	90~180	70~140	60~110	50~100
	19-20	Malleable cast iron	SFM(Vc)	525~1247	525~1247	525~1247	525~1247	525~1247	525~1247	525~1247
			IPT(fz)	.012~.008	.012~.008	.012~.008	.014~.012	.014~.012	.014~.012	.014~.012
			RPM	6370~15120	5090~12100	4240~10080	3180~7560	2550~6050	2040~4840	1700~4030
			IPM(FEED)	150~240	120~190	100~160	90~180	70~140	60~110	50~100
H	38	Hardened steel	SFM(Vc)	262~722	262~722	262~722	262~722	262~722	262~722	262~722
			IPT(fz)	.004~.002	.004~.002	.004~.002	.006~.002	.006~.002	.006~.002	.006~.002
			RPM	3180~8750	2550~7000	2120~5840	1590~4380	1270~3500	1020~2800	850~2330
			IPM(FEED)	30~30	20~30	20~20	20~20	20~20	10~10	10~10

XR1D SERIES CORNER RADIUS INSERTS for Graphite

ISO	VDI 3323	Material Description	Parameter	5/16 (8)	3/8 (10)	1/2 (12, 13)	5/8 (16, 17)	3/4 (20, 21)	1 (25, 26)	1-1/4 (30, 32)
				Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing	Semi ~ finishing
N	21~22	Aluminum-wrought alloy	SFM(Vc)	984~1312	984~1312	984~1312	984~1312	984~1312	984~1312	984~1312
			IPT(fz)	.008~.008	.008~.008	.008~.008	.008~.008	.010~.010	.010~.010	.010~.010
			RPM	11940~15920	9550~12730	7960~10610	5970~7960	4770~6370	3820~5090	3180~4240
			IPM(FEED)	190~250	150~200	130~170	90~130	90~130	80~100	60~80
	23~24	Aluminum-cast, alloyed	SFM(Vc)	984~1312	984~1312	984~1312	984~1312	984~1312	984~1312	984~1312
			IPT(fz)	.008~.008	.008~.008	.008~.008	.008~.008	.010~.010	.010~.010	.010~.010
			RPM	11940~15920	9550~12730	7960~10610	5970~7960	4770~6370	3820~5090	3180~4240
			IPM(FEED)	190~250	150~200	130~170	90~130	90~130	80~100	60~80
	29.2	Graphite	SFM(Vc)	984~1312	984~1312	984~1312	984~1312	984~1312	984~1312	984~1312
			IPT(fz)	.008~.008	.008~.008	.008~.008	.008~.008	.010~.010	.010~.010	.010~.010
			RPM	11940~15920	9550~12730	7960~10610	5970~7960	4770~6370	3820~5090	3180~4240
			IPM(FEED)	190~250	150~200	130~170	90~130	90~130	80~100	60~80



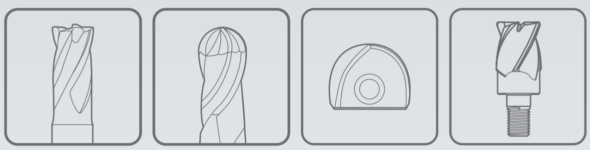
ae : Roughing - 0.1 x D
Finishing - .008"

ap : Roughing - Under Ø5/8 : 0.025 x D
From Ø5/8 : 0.05 x D

Finishing - Under Ø5/8 : .004"
From Ø5/8 : .008"

▶ When the length of overhang exceeds 4xD, we recommend using the carbide shank holder with 20% lower feed
▶ When using long (long & intermediate type holder) tools, we recommend reducing the feed rate to 70 ~ 85%.

Global Cutting Tool Leader **YG-1**



MILLING

Being the best through innovation

SOLID CARBIDE

i-SMART MODULAR TYPE END MILL

- For General Steels, Hardened Steels and Cast Iron

SELECTION GUIDE

MILLING TOOLS

CARBIDE MODULAR HEAD & HOLDER i-SMART END MILLS

- Exchangeable Modular Head for Semi-finishing and finishing on Pre-Hardened Steels up to HRc55

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.C78

SERIES	XGMF15	XGMF17	XGMF20	XGMF25	XGMF29	ZMC	ZMS	ZMT
FLUTE	2	4	4	4	6	-	-	-
HELIX ANGLE	30°	30°	27°/30° (MULTIPLE HELIX)	27°/30° (MULTIPLE HELIX)	45°	-	-	-
CUTTING EDGE SHAPE	BALL NOSE	BALL NOSE	CORNER RADIUS	SQUARE	SQUARE	-	-	-
SIZE MIN	R3/16	R3/16	D3/8	D3/8	D3/8	-	-	-
SIZE MAX	R5/8	R5/8	D1-1/4	D1-1/4	D1-1/4	-	-	-
PAGE	C70	C71	C72	C73	C74	C75	C76	C77
	-	-	-	-	-	STRAIGHT NECK	STRAIGHT NECK	TAPER NECK
	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Carbide	Steel	Steel
								

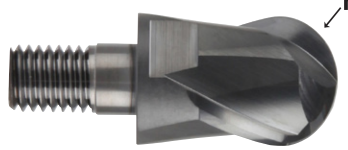
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	XGMF15	XGMF17	XGMF20	XGMF25	XGMF29	ZMC	ZMS	ZMT
P	1	Non-alloy steel	About 0.15% C Annealed	125		○	○	○	○	○			
	2		About 0.45% C Annealed	190	13	○	○	○	○	○			
	3		About 0.45% C Quenched & Tempered	250	25	○	○	○	○	○			
	4		About 0.75% C Annealed	270	28	○	○	○	○	○			
	5		About 0.75% C Quenched & Tempered	300	32	○	○	○	○	○			
	6	Low alloy steel	Annealed	180	10	○	○	○	○	○			
	7		Quenched & Tempered	275	29	○	○	○	○	○			
	8		Quenched & Tempered	300	32	○	○	○	○	○			
	9		Quenched & Tempered	350	38	◎	◎	◎	◎	◎			
	10-11.1	High alloyed steel, and tool steel	Annealed	200	15	○	○	○	○	○			
	11.2		Quenched & Tempered	325	35	◎	◎	◎	◎	◎			
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15								
	13		Martensitic Quenched & Tempered	240	23								
	14.1		Austenitic	180	10				○				
K	15	Grey cast iron	Pearlitic / ferritic	180	10	○	○	○	○	○			
	16		Pearlitic (Martensitic)	260	26	○	○	○	○	○			
	17	Nodular cast iron	Ferritic	160	3	○	○	○	○	○			
	18		Pearlitic	250	25	○	○	○	○	○			
	19	Malleable cast iron	Ferritic	130		○	○	○	○	○			
	20		Pearlitic	230	21	○	○	○	○	○			
N	21	Aluminum-wrought alloy	Not Curable	60									
	22		Curable Hardened	100									
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75									
	24		≤ 12% Si, Curable Hardened	90									
	25		> 12% Si, Not Curable	130									
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110									
	27		CuZn, CuSnZn (Brass)	90									
	28		CuSn, lead-free copper and electrolytic copper	100									
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic										
	30		Rubber, Wood, etc.										
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15								
	32		Fe Based Cured	280	30								
	33		Ni or Co Based Annealed	250	25								
	34		Ni or Co Based Cured	350	38								
	35		Ni or Co Based Cast	320	34								
	36	Titanium Alloys	Pure Titanium	400 Rm									
	37		Alpha + Beta Alloys Hardened	1050 Rm									
H	38.1-38.2	Hardened steel	Hardened	550	55	○	○	○	○	○			
	39		Hardened	630	60								
	40	Chilled Cast Iron	Cast	400	42	◎	◎	◎	◎	◎			
	41	Hardened Cast Iron	Hardened	550	55	○	○	○	○	○			

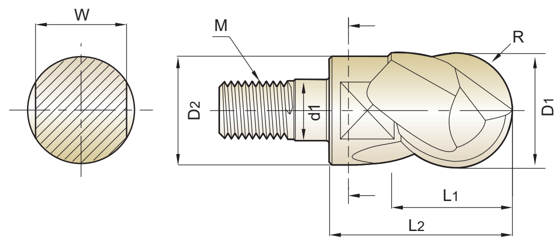
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG i-Smart END MILLS

XGMF15 SERIES

CARBIDE MODULAR HEAD, 2 FLUTE BALL NOSE





CARBIDE | 2 | 30° | R ±.0004 | p. C78

Unit: Inch

EDP No.	Radius of Ball Nose	Mill Diameter	Neck Diameter	Length of Cut	Length Below Shank	Coupling Diameter	Wrench Width	Thread	Wrench
	R	D_1	D_2	L_1	L_2	d_1	W	M	
XGMF15024	R3/16	3/8	.351	3/8	.689	.256	.315	M6	SPIS0810
XGMF15032	R1/4	1/2	.469	1/2	.835	.256	.394	M6	SPIS0810
XGMF15040	R5/16	5/8	.591	5/8	1.004	.335	.512	M8	SPIS1300
XGMF15048	R3/8	3/4	.711	3/4	1.144	.413	.669	M10	SPIS1700
XGMF15100	R1/2	1	.961	1	1.472	.492	.866	M12	SPIS2200
XGMF15116	R5/8	1-1/4	1.221	1-1/4	1.772	.669	1.063	M16	SPIS2700

Radius Tolerance(Inch)	Mill Dia. Tolerance(Inch)
±.0004	0~-.0008

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10-11.1	11.2	12	13	14.1	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	○	◎	○	◎				○	○	○	○	○	○

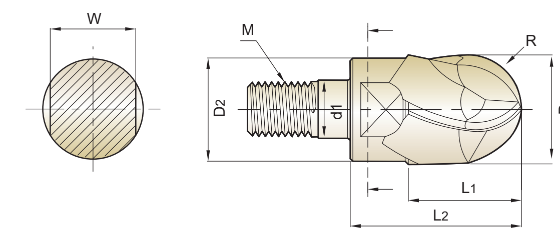
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38.1-38.2	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG i-Smart END MILLS

XGMF17 SERIES

CARBIDE MODULAR HEAD, 4 FLUTE BALL NOSE



CARBIDE | 4 | 30° | R ±.0004 | p. C79

Unit: Inch

EDP No.	Radius of Ball Nose	Mill Diameter	Neck Diameter	Length of Cut	Length Below Shank	Coupling Diameter	Wrench Width	Thread	Wrench
	R	D_1	D_2	L_1	L_2	d_1	W	M	
XGMF17024	R3/16	3/8	.351	3/8	.689	.256	.315	M6	SPIS0810
XGMF17032	R1/4	1/2	.469	1/2	.835	.256	.394	M6	SPIS0810
XGMF17040	R5/16	5/8	.591	5/8	1.004	.335	.512	M8	SPIS1300
XGMF17048	R3/8	3/4	.711	3/4	1.144	.413	.669	M10	SPIS1700
XGMF17100	R1/2	1	.961	1	1.472	.492	.866	M12	SPIS2200
XGMF17116	R5/8	1-1/4	1.221	1-1/4	1.772	.669	1.063	M16	SPIS2700

Radius Tolerance(Inch)	Mill Dia. Tolerance(Inch)
±.0004	0~-.0008

◎ : Excellent ○ : Good

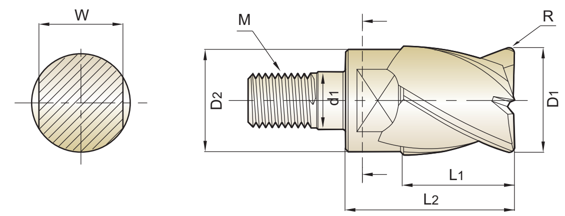
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10-11.1	11.2	12	13	14.1	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	○	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38.1-38.2	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG i-Smart END MILLS

XGMF20 SERIES

CARBIDE MODULAR HEAD, 4 FLUTE MULTIPLE HELIX CORNER RADIUS



CARBIDE | 4 | 27°/30° | R ±.0008 | p. C80

Unit: Inch

EDP No.	Corner Radius	Mill Diameter	Neck Diameter	Length of Cut	Length Below Shank	Coupling Diameter	Wrench Width	Thread	Wrench
	R	D1	D2	L1	L2	d1	W	M	
XGMF20024 012	R.012	3/8	.351	3/8	.689	.256	.315	M6	SPIS0810
XGMF20024 020	R.020	3/8	.351	3/8	.689	.256	.315	M6	SPIS0810
XGMF20024 030	R.030	3/8	.351	3/8	.689	.256	.315	M6	SPIS0810
XGMF20024 040	R.040	3/8	.351	3/8	.689	.256	.315	M6	SPIS0810
XGMF20024 050	R.050	3/8	.351	3/8	.689	.256	.315	M6	SPIS0810
XGMF20024 060	R.060	3/8	.351	3/8	.689	.256	.315	M6	SPIS0810
XGMF20024 080	R.080	3/8	.351	3/8	.689	.256	.315	M6	SPIS0810
XGMF20032 020	R.020	1/2	.469	1/2	.835	.256	.394	M6	SPIS0810
XGMF20032 030	R.030	1/2	.469	1/2	.835	.256	.394	M6	SPIS0810
XGMF20032 040	R.040	1/2	.469	1/2	.835	.256	.394	M6	SPIS0810
XGMF20032 060	R.060	1/2	.469	1/2	.835	.256	.394	M6	SPIS0810
XGMF20032 080	R.080	1/2	.469	1/2	.835	.256	.394	M6	SPIS0810
XGMF20040 020	R.020	5/8	.591	5/8	1.004	.335	.512	M8	SPIS1300
XGMF20040 030	R.030	5/8	.591	5/8	1.004	.335	.512	M8	SPIS1300
XGMF20040 040	R.040	5/8	.591	5/8	1.004	.335	.512	M8	SPIS1300
XGMF20040 060	R.060	5/8	.591	5/8	1.004	.335	.512	M8	SPIS1300
XGMF20040 080	R.080	5/8	.591	5/8	1.004	.335	.512	M8	SPIS1300
XGMF20048 030	R.030	3/4	.711	3/4	1.144	.413	.669	M10	SPIS1700
XGMF20048 040	R.040	3/4	.711	3/4	1.144	.413	.669	M10	SPIS1700
XGMF20048 080	R.080	3/4	.711	3/4	1.144	.413	.669	M10	SPIS1700
XGMF20100 030	R.030	1	.961	1	1.472	.492	.866	M12	SPIS2200
XGMF20100 040	R.040	1	.961	1	1.472	.492	.866	M12	SPIS2200
XGMF20100 080	R.080	1	.961	1	1.472	.492	.866	M12	SPIS2200
XGMF20116 030	R.030	1-1/4	1.221	1-1/4	1.772	.669	1.063	M16	SPIS2700
XGMF20116 040	R.040	1-1/4	1.221	1-1/4	1.772	.669	1.063	M16	SPIS2700
XGMF20116 080	R.080	1-1/4	1.221	1-1/4	1.772	.669	1.063	M16	SPIS2700

Radius Tolerance(Inch)	Mill Dia. Tolerance(Inch)
±.0008	0~-.0012

◎ : Excellent ○ : Good

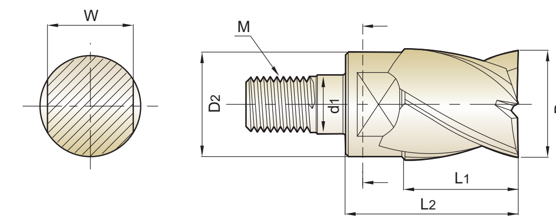
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10-11.1	11.2	12	13	14.1	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	○	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38.1-38.2	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG i-Smart END MILLS

XGMF25 SERIES

CARBIDE MODULAR HEAD, 4 FLUTE MULTIPLE HELIX



CARBIDE | 4 | 27°/30° | p. C81

Unit: Inch

EDP No.	Mill Diameter	Neck Diameter	Length of Cut	Length Below Shank	Coupling Diameter	Wrench Width	Thread	Wrench
	D1	D2	L1	L2	d1	W	M	
XGMF25024	3/8	.351	3/8	.689	.256	.315	M6	SPIS0810
XGMF25032	1/2	.469	1/2	.835	.256	.394	M6	SPIS0810
XGMF25040	5/8	.591	5/8	1.004	.335	.512	M8	SPIS1300
XGMF25048	3/4	.711	3/4	1.144	.413	.669	M10	SPIS1700
XGMF25100	1	.961	1	1.472	.492	.866	M12	SPIS2200
XGMF25116	1-1/4	1.221	1-1/4	1.772	.669	1.063	M16	SPIS2700

Mill Dia. Tolerance(Inch)
0~-.0012

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10-11.1	11.2	12	13	14.1	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	○	◎	○	◎			○	○	○	○	○	○	○

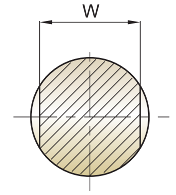
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38.1-38.2	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

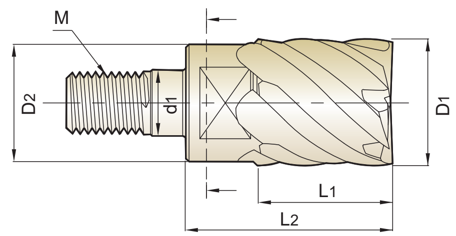
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG i-Smart END MILLS

XGMF29 SERIES

CARBIDE MODULAR HEAD, 6 FLUTE 45º HELIX





p. C82

Unit: Inch

EDP No.	Mill Diameter D1	Neck Diameter D2	Length of Cut L1	Length Below Shank L2	Coupling Diameter d1	Wrench Width W	Thread M	Wrench
XGMF29024	3/8	.351	3/8	.689	.256	.315	M6	SPIS0810
XGMF29032	1/2	.469	1/2	.835	.256	.394	M6	SPIS0810
XGMF29040	5/8	.591	5/8	1.004	.335	.512	M8	SPIS1300
XGMF29048	3/4	.711	3/4	1.144	.413	.669	M10	SPIS1700
XGMF29100	1	.961	1	1.472	.492	.866	M12	SPIS2200
XGMF29116	1-1/4	1.221	1-1/4	1.772	.669	1.063	M16	SPIS2700

Mill Dia. Tolerance(Inch)
0~-.0012

◎ : Excellent ○ : Good

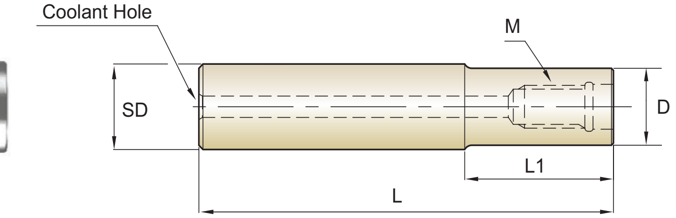
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10-11.1	11.2	12	13	14.1	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	○	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38.1-38.2	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG i-Smart END MILLS

ZMC SERIES

CARBIDE HOLDER, STRAIGHT NECK TYPE



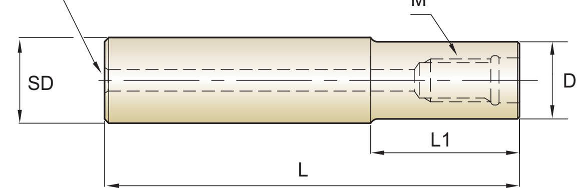
Unit: Inch

EDP No.	Mill Diameter	Shank Diameter SD	Overall Length L	Neck Length L1	Neck Diameter D	Thread Size M	Wrench No.	Coolant Hole
ZMC024A024			2-3/4	25/32				
ZMC024B024	3/8	3/8	3-15/16	1-37/64	23/64	M6	SPIS0810	5/64
ZMC024C024			5-1/8	2-3/4				
ZMC032A032			3-1/8	25/32				
ZMC032B032	1/2	1/2	3-15/16	1-37/64	29/64	M6	SPIS0810	5/64
ZMC032C032			5-1/8	2-3/4				
ZMC040A040			3-15/16	1-37/64				
ZMC040B040	5/8	5/8	5-7/8	3-5/32	19/32	M8	SPIS1300	1/8
ZMC040C040			7-7/8	4-23/32				
ZMC048A048			3-15/16	1-37/64				
ZMC048B048	3/4	3/4	5-7/8	3-5/32	45/64	M10	SPIS1700	5/32
ZMC048C048			7-7/8	4-23/32				
ZMC048D048			9-13/16	6-19/64				
ZMC100A100			5-7/8	2-3/4				
ZMC100B100	1	1	7-7/8	3-15/16	61/64	M12	SPIS2200	13/64
ZMC100C100			9-13/16	5-29/32				
ZMC100D100			11-13/16	7-7/8				
ZMC116A116			5-7/8	2-3/4				
ZMC116B116			7-7/8	4-23/32				
ZMC116C116	1-1/4	1-1/4	9-13/16	5-29/32	1-9/64	M16	SPIS2700	15/64
ZMC116D116			11-13/16	7-7/8				
ZMC116E116			13-3/4	9-27/32				

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG i-Smart END MILLS — **ZMS SERIES**

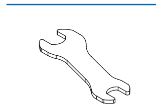
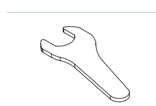
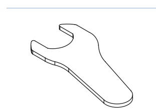
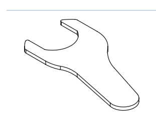
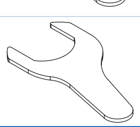
STEEL HOLDER, STRAIGHT NECK TYPE



Unit: Inch

EDP No.	Mill Diameter	Shank Diameter	Overall Length	Neck Length	Neck Diameter	Thread Size	Coolant Hole
		SD	L	L1	D	M	
ZMS024A024	**3/8**	3/8	2-3/4	25/32	23/64	M6	1/8
ZMS032A032	**1/2**	1/2	3-35/64	1-3/16	29/64	M6	1/8
ZMS040A040	**5/8**	5/8	3-15/16	1-3/16	19/32	M8	5/32
ZMS048A048	**3/4**	3/4	3-15/16	1-3/16	45/64	M10	13/64
ZMS100A100	**1**	1	4-17/32	1-37/64	61/64	M12	13/64
ZMS116A116	**1-1/4**	1-1/4	4-59/64	1-37/64	1-9/64	M16	15/64

Wrench

Model	Wrench No.	Wrench Width	Mill Diameter	Clamping Torque [in•lbs]
	SPIS0810	.315	3/8	57.6
		.394	1/2	57.6
	SPIS1300	.512	5/8	88.6
	SPIS1700	.669	3/4	106.3
	SPIS2200	.866	1	132.9
	SPIS2700	1.063	1-1/4	177.1

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
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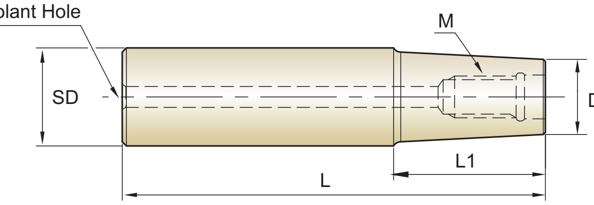
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG i-Smart END MILLS — **ZMT SERIES**

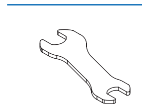
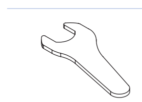
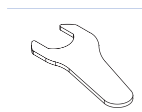
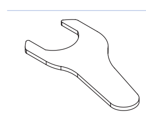
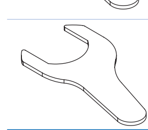
STEEL HOLDER, TAPER NECK TYPE



Unit: Inch

EDP No.	Mill Diameter	Shank Diameter	Overall Length	Neck Length	Neck Diameter	Thread Size	Coolant Hole
		SD	L	L1	D	M	
ZMT024A032	**3/8**	1/2	3-15/16	1-31/32	23/64	M6	1/8
ZMT032A040	**1/2**	5/8	5-1/8	2-3/4	29/64	M6	1/8
ZMT040A048	**5/8**	3/4	5-29/32	3-35/64	19/32	M8	5/32
ZMT048A100	**3/4**	1	6-11/16	3-15/16	45/64	M10	13/64
ZMT100A116	**1**	1-1/4	7-7/8	4-21/64	61/64	M12	13/64
ZMT116A116	**1-1/4**	1-1/4	7-7/8	4-21/64	1-9/64	M16	15/64

Wrench

Model	Wrench No.	Wrench Width	Mill Diameter	Clamping Torque [in•lbs]
	SPIS0810	.315	3/8	57.6
		.394	1/2	57.6
	SPIS1300	.512	5/8	88.6
	SPIS1700	.669	3/4	106.3
	SPIS2200	.866	1	132.9
	SPIS2700	1.063	1-1/4	177.1

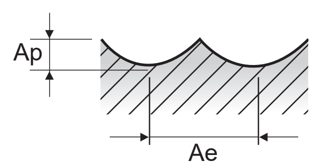
YG i-Smart END MILLS

RECOMMENDED CUTTING CONDITIONS

XGMF15 SERIES — 2 FLUTE BALL NOSE - Plain Cutting

RPM = rev./min. FEED = inch/min.
Vc = ft/min. fz = inch/tooth

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	R3/16×3/8	R1/4×1/2	R5/16×5/8	R3/8×3/4	R1/2×1	R5/8x1-1/4
P	1-5	Non-alloy steel	0.08D	0.03D	SFM(Vc)	558	558	558	558	558	558
					IPT(fz)	0.008	0.008	0.009	0.01	0.011	0.012
					RPM	5680	4260	3410	2840	2130	1700
					IPM(FEED)	89.0	71.1	63.9	59.0	45.3	40.3
	6-8	Low alloy steel	0.08D	0.03D	SFM(Vc)	558	558	558	558	558	558
					IPT(fz)	0.008	0.008	0.009	0.01	0.011	0.012
					RPM	5680	4260	3410	2840	2130	1700
					IPM(FEED)	89.0	71.1	63.9	59.0	45.3	40.3
	9		0.08D	0.03D	SFM(Vc)	541	541	541	541	541	541
					IPT(fz)	0.007	0.007	0.008	0.009	0.009	0.01
					RPM	5510	4140	3310	2760	2070	1650
					IPM(FEED)	75.5	61.2	53.7	49.3	37.6	32.6
	10-11.1	High alloyed steel, and tool steel	0.08D	0.03D	SFM(Vc)	558	558	558	558	558	558
					IPT(fz)	0.008	0.008	0.009	0.01	0.011	0.012
					RPM	5680	4260	3410	2840	2130	1700
					IPM(FEED)	89.0	71.1	63.9	59.0	45.3	40.3
	11.2		0.08D	0.03D	SFM(Vc)	541	541	541	541	541	541
					IPT(fz)	0.007	0.007	0.008	0.009	0.009	0.01
					RPM	5510	4140	3310	2760	2070	1650
					IPM(FEED)	75.5	61.2	53.7	49.3	37.6	32.6
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.08D	0.03D	SFM(Vc)	558	558	558	558	558	558
					IPT(fz)	0.008	0.008	0.009	0.01	0.011	0.012
					RPM	5680	4260	3410	2840	2130	1700
					IPM(FEED)	89.0	71.1	63.9	59.0	45.3	40.3
H	38.1-38.2	Hardened steel	0.08D	0.03D	SFM(Vc)	453	453	453	453	453	453
					IPT(fz)	0.006	0.007	0.007	0.008	0.008	0.009
					RPM	4610	3460	2770	2310	1730	1380
					IPM(FEED)	58.1	46.3	41.2	37.8	28.7	25.1
	40	Chilled Cast Iron	0.08D	0.03D	SFM(Vc)	541	541	541	541	541	541
					IPT(fz)	0.007	0.007	0.008	0.009	0.009	0.01
					RPM	5510	4140	3310	2760	2070	1650
					IPM(FEED)	75.5	61.2	53.7	49.3	37.6	32.6
	41	Hardened Cast Iron	0.08D	0.03D	SFM(Vc)	453	453	453	453	453	453
					IPT(fz)	0.006	0.007	0.007	0.008	0.008	0.009
					RPM	4610	3460	2770	2310	1730	1380
					IPM(FEED)	58.1	46.3	41.2	37.8	28.7	25.1



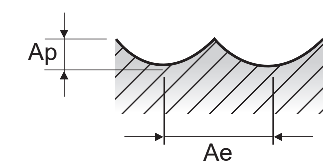
YG i-Smart END MILLS

RECOMMENDED CUTTING CONDITIONS

XGMF17 SERIES — 4 FLUTE BALL NOSE - Plain Cutting

RPM = rev./min. FEED = inch/min.
Vc = ft/min. fz = inch/tooth

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	R3/16×3/8	R1/4×1/2	R5/16×5/8	R3/8×3/4	R1/2×1	R5/8x1-1/4
P	1-5	Non-alloy steel	0.05D	0.02D	SFM(Vc)	968	968	968	968	968	968
					IPT(fz)	0.006	0.006	0.007	0.007	0.007	0.008
					RPM	9860	7390	5920	4930	3700	2960
					IPM(FEED)	229.8	192.1	163	138.9	108.3	93.6
	6-8	Low alloy steel	0.05D	0.02D	SFM(Vc)	968	968	968	968	968	968
					IPT(fz)	0.006	0.006	0.007	0.007	0.007	0.008
					RPM	9860	7390	5920	4930	3700	2960
					IPM(FEED)	229.8	192.1	163	138.9	108.3	93.6
	9		0.05D	0.02D	SFM(Vc)	771	771	771	771	771	771
					IPT(fz)	0.005	0.006	0.006	0.006	0.006	0.007
					RPM	7850	5890	4710	3930	2940	2360
					IPM(FEED)	155.8	129.9	110.6	96.5	76.1	65.3
	10-11.1	High alloyed steel, and tool steel	0.05D	0.02D	SFM(Vc)	968	968	968	968	968	968
					IPT(fz)	0.006	0.006	0.007	0.007	0.007	0.008
					RPM	9860	7390	5920	4930	3700	2960
					IPM(FEED)	229.8	192.1	163	138.9	108.3	93.6
	11.2		0.05D	0.02D	SFM(Vc)	771	771	771	771	771	771
					IPT(fz)	0.005	0.006	0.006	0.006	0.006	0.007
					RPM	7850	5890	4710	3930	2940	2360
					IPM(FEED)	155.8	129.9	110.6	96.5	76.1	65.3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	0.02D	SFM(Vc)	968	968	968	968	968	968
					IPT(fz)	0.006	0.006	0.007	0.007	0.007	0.008
					RPM	9860	7390	5920	4930	3700	2960
					IPM(FEED)	229.8	192.1	163	138.9	108.3	93.6
H	38.1-38.2	Hardened steel	0.05D	0.02D	SFM(Vc)	689	689	689	689	689	689
					IPT(fz)	0.005	0.005	0.005	0.006	0.006	0.006
					RPM	7020	5260	4210	3510	2630	2110
					IPM(FEED)	129.3	107.8	89.5	79.0	62.2	54.7
	40	Chilled Cast Iron	0.05D	0.02D	SFM(Vc)	771	771	771	771	771	771
					IPT(fz)	0.005	0.006	0.006	0.006	0.006	0.007
					RPM	7850	5890	4710	3930	2940	2360
					IPM(FEED)	155.8	129.9	110.6	96.5	76.1	65.3
	41	Hardened Cast Iron	0.05D	0.02D	SFM(Vc)	689	689	689	689	689	689
					IPT(fz)	0.005	0.005	0.005	0.006	0.006	0.006
					RPM	7020	5260	4210	3510	2630	2110
					IPM(FEED)	129.3	107.8	89.5	79.0	62.2	54.7



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
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STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG i-Smart END MILLS

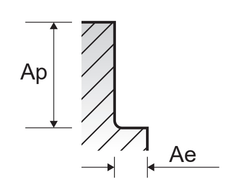
RECOMMENDED CUTTING CONDITIONS

XGMF20 SERIES 4 FLUTE CORNER RADIUS - Side Cutting

RPM = rev./min. Vc = ft/min. FEED = inch/min. fz = inch/tooth

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/8	1/2	5/8	3/4	1	1*1/4
P	1-5	Non-alloy steel	0.05D	0.8D	SFM(Vc)	512	512	512	512	512	512
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	5210	3910	3130	2610	1950	1560
					IPM(FEED)	18.9	14.2	11.3	9.4	7.1	5.7
	6-8	Low alloy steel	0.05D	0.8D	SFM(Vc)	512	512	512	512	512	512
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	5210	3910	3130	2610	1950	1560
					IPM(FEED)	18.9	14.2	11.3	9.4	7.1	5.7
	9		0.05D	0.8D	SFM(Vc)	344	344	344	344	344	344
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	3510	2630	2110	1750	1320	1050
					IPM(FEED)	14.9	11.2	9	7.5	5.6	4.5
	10-11.1	High alloyed steel, and tool steel	0.05D	0.8D	SFM(Vc)	512	512	512	512	512	512
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	5210	3910	3130	2610	1950	1560
					IPM(FEED)	18.9	14.2	11.3	9.4	7.1	5.7
	11.2		0.05D	0.8D	SFM(Vc)	344	344	344	344	344	344
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	3510	2630	2110	1750	1320	1050
					IPM(FEED)	14.9	11.2	9	7.5	5.6	4.5
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.02D	0.8D	SFM(Vc)	512	512	512	512	512	512
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	5210	3910	3130	2610	1950	1560
					IPM(FEED)	18.9	14.2	11.3	9.4	7.1	5.7
H	38.1-38.2	Hardened steel	0.02D	0.8D	SFM(Vc)	207	207	207	207	207	207
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	2110	1580	1260	1050	790	630
					IPM(FEED)	7.3	5.5	4.4	3.6	2.7	2.2
	40	Chilled Cast Iron	0.05D	0.8D	SFM(Vc)	344	344	344	344	344	344
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	3510	2630	2110	1750	1320	1050
					IPM(FEED)	14.9	11.2	9	7.5	5.6	4.5
	41	Hardened Cast Iron	0.02D	0.8D	SFM(Vc)	207	207	207	207	207	207
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	2110	1580	1260	1050	790	630
					IPM(FEED)	7.3	5.5	4.4	3.6	2.7	2.2

* 1.5xD Axial cutting depth should be for DIA over 5/8inch



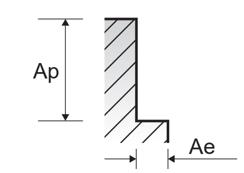
YG i-Smart END MILLS

RECOMMENDED CUTTING CONDITIONS

XGMF25 SERIES 6 FLUTE SQUARE - Side Cutting

RPM = rev./min. Vc = ft/min. FEED = inch/min. fz = inch/tooth

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/8	1/2	5/8	3/4	1	1*1/4
P	1-5	Non-alloy steel	0.05D	0.6D	SFM(Vc)	427	427	427	427	427	427
					IPT(fz)	0.002	0.002	0.002	0.002	0.002	0.002
					RPM	4340	3260	2610	2170	1630	1300
					IPM(FEED)	27.4	20.5	16.4	13.7	10.3	8.2
	6-8	Low alloy steel	0.05D	0.6D	SFM(Vc)	427	427	427	427	427	427
					IPT(fz)	0.002	0.002	0.002	0.002	0.002	0.002
					RPM	4340	3260	2610	2170	1630	1300
					IPM(FEED)	27.4	20.5	16.4	13.7	10.3	8.2
	9		0.05D	0.6D	SFM(Vc)	262	262	262	262	262	262
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	2670	2010	1600	1340	1000	800
					IPM(FEED)	12.6	9.5	7.6	6.3	4.7	3.8
	10-11.1	High alloyed steel, and tool steel	0.05D	0.6D	SFM(Vc)	427	427	427	427	427	427
					IPT(fz)	0.002	0.002	0.002	0.002	0.002	0.002
					RPM	4340	3260	2610	2170	1630	1300
					IPM(FEED)	27.4	20.5	16.4	13.7	10.3	8.2
	11.2		0.05D	0.6D	SFM(Vc)	262	262	262	262	262	262
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	2670	2010	1600	1340	1000	800
					IPM(FEED)	12.6	9.5	7.6	6.3	4.7	3.8
M	14.1	Stainless steel	0.05D	0.6D	SFM(Vc)	217	217	217	217	217	217
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	2210	1650	1320	1100	830	660
					IPM(FEED)	12.2	9.1	7.3	6.1	4.6	3.6
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	0.6D	SFM(Vc)	427	427	427	427	427	427
					IPT(fz)	0.002	0.002	0.002	0.002	0.002	0.002
					RPM	4340	3260	2610	2170	1630	1300
					IPM(FEED)	27.4	20.5	16.4	13.7	10.3	8.2
H	38.1-38.2	Hardened steel	0.05D	0.6D	SFM(Vc)	174	174	174	174	174	174
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	1770	1330	1060	890	660	530
					IPM(FEED)	3.6	2.7	2.2	1.8	1.4	1.1
	40	Chilled Cast Iron	0.05D	0.6D	SFM(Vc)	262	262	262	262	262	262
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	2670	2010	1600	1340	1000	800
					IPM(FEED)	12.6	9.5	7.6	6.3	4.7	3.8
	41	Hardened Cast Iron	0.02D	0.6D	SFM(Vc)	174	174	174	174	174	174
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	1770	1330	1060	890	660	530
					IPM(FEED)	3.6	2.7	2.2	1.8	1.4	1.1



i-Smart END MILLS

RECOMMENDED CUTTING CONDITIONS

XGMF29 SERIES 6 FLUTE SQUARE - Side Cutting

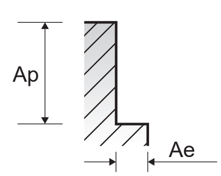
RPM = rev./min. FEED = inch/min.
Vc = ft/min. fz = inch/tooth

Normal

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/8	1/2	5/8	3/4	1	1*1/4
P	1-5	Non-alloy steel	0.1D	0.8D	SFM(Vc)	364	364	364	364	364	364
					IPT(fz)	0.004	0.004	0.004	0.004	0.004	0.004
					RPM	3710	2780	2230	1850	1390	1110
					IPM(FEED)	87.6	65.7	52.6	43.8	32.9	26.3
	6-8	Low alloy steel	0.1D	0.8D	SFM(Vc)	364	364	364	364	364	364
					IPT(fz)	0.004	0.004	0.004	0.004	0.004	0.004
					RPM	3710	2780	2230	1850	1390	1110
					IPM(FEED)	87.6	65.7	52.6	43.8	32.9	26.3
	9		0.1D	0.8D	SFM(Vc)	253	253	253	253	253	253
					IPT(fz)	0.004	0.004	0.004	0.004	0.004	0.004
					RPM	2570	1930	1540	1290	960	770
					IPM(FEED)	57.1	42.9	34.3	28.6	21.4	17.1
	10-11.1	High alloyed steel, and tool steel	0.1D	0.8D	SFM(Vc)	364	364	364	364	364	364
					IPT(fz)	0.004	0.004	0.004	0.004	0.004	0.004
					RPM	3710	2780	2230	1850	1390	1110
					IPM(FEED)	87.6	65.7	52.6	43.8	32.9	26.3
	11.2		0.1D	0.8D	SFM(Vc)	253	253	253	253	253	253
					IPT(fz)	0.004	0.004	0.004	0.004	0.004	0.004
					RPM	2570	1930	1540	1290	960	770
					IPM(FEED)	57.1	42.9	34.3	28.6	21.4	17.1
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.1D	0.8D	SFM(Vc)	364	364	364	364	364	364
					IPT(fz)	0.004	0.004	0.004	0.004	0.004	0.004
					RPM	3710	2780	2230	1850	1390	1110
					IPM(FEED)	87.6	65.7	52.6	43.8	32.9	26.3
H	38.1-38.2	Hardened steel	0.05D	0.6D	SFM(Vc)	108	108	108	108	108	108
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	1100	830	660	550	410	330
					IPM(FEED)	9.1	6.8	5.5	4.6	3.4	2.7
	40	Chilled Cast Iron	0.05D	0.8D	SFM(Vc)	253	253	253	253	253	253
					IPT(fz)	0.004	0.004	0.004	0.004	0.004	0.004
					RPM	2570	1930	1540	1290	960	770
					IPM(FEED)	57.1	42.9	34.3	28.6	21.4	17.1
	41	Hardened Cast Iron	0.05D	0.6D	SFM(Vc)	108	108	108	108	108	108
					IPT(fz)	0.001	0.001	0.001	0.001	0.001	0.001
					RPM	1100	830	660	550	410	330
					IPM(FEED)	9.1	6.8	5.5	4.6	3.4	2.7

High

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/8	1/2	5/8	3/4	1	1*1/4
P	11.2	High alloyed steel, and tool steel	0.05D	0.6D	SFM(Vc)	1089	1089	1089	1089	1089	1089
					IPT(fz)	0.004	0.004	0.004	0.004	0.004	0.004
					RPM	11090	8320	6660	5550	4160	3330
					IPM(FEED)	249	186.7	149.4	124.5	93.4	74.7
H	38.1-38.2	Hardened steel	0.05D	0.4D	SFM(Vc)	545	545	545	545	545	545
					IPT(fz)	0.004	0.004	0.004	0.004	0.004	0.004
					RPM	5550	4160	3330	2770	2080	1660
					IPM(FEED)	124.5	93.4	74.7	62.2	46.7	37.3
	40	Chilled Cast Iron	0.05D	0.6D	SFM(Vc)	1089	1089	1089	1089	1089	1089
					IPT(fz)	0.004	0.004	0.004	0.004	0.004	0.004
					RPM	11090	8320	6660	5550	4160	3330
					IPM(FEED)	249	186.7	149.4	124.5	93.4	74.7
	41	Hardened Cast Iron	0.05D	0.4D	SFM(Vc)	545	545	545	545	545	545
					IPT(fz)	0.004	0.004	0.004	0.004	0.004	0.004
					RPM	5550	4160	3330	2770	2080	1660
					IPM(FEED)	124.5	93.4	74.7	62.2	46.7	37.3



Leading Through Innovation

SOLID CARBIDE

X5070 END MILLS

- For High Hardened Steels (HRc45 to HRc70)
  High Speed Machining and Dry Cutting

SELECTION GUIDE

YG MILLING TOOLS

SOLID CARBIDE X5070 END MILLS

High Hardened Steels HRc45 to HRc70, High Speed Machining, Dry Cutting

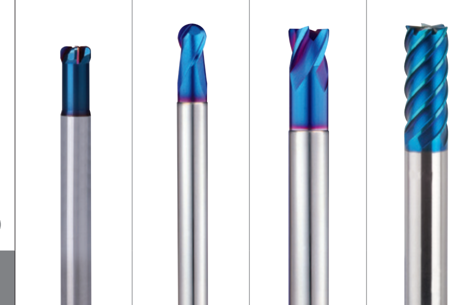
Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p. C107

Inch

SERIES	G826	G8A43	G850	G851
FLUTE	4	2	4	6&8
HELIX ANGLE	0°	30°	30°	45°
CUTTING EDGE SHAPE	CORNER RADIUS	BALL NOSE	CORNER RADIUS	CORNER RADIUS
SIZE MIN	D1/8	R1/64	D1/16	D1/4
SIZE MAX	D1/2	R1/4	D3/4	D1
PAGE	C86	C87	C88	C89
	High Feed	EXTENDED NECK	EXTENDED NECK	-
	Blue Coating	Blue Coating	Blue Coating	Blue Coating



Metric

SERIES	G859	G854	G8A46	G8A54	G8A28	G8A38	G8A53	G8A59	G8A36	G8A50	G8A47	G8A37	G8A39
FLUTE	4	4	2	2	2	2	2	3	2	2	4	4	6
HELIX ANGLE	0°	0°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	45°
CUTTING EDGE SHAPE	CORNER RADIUS	CORNER RADIUS	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS
SIZE MIN	D2.0	D2.0	R0.05	R0.25	R0.05	R0.5	R0.2	R1.5	D0.3	D0.3	D3.0	D1.0	D6.0
SIZE MAX	D16.0	D16.0	R2.0	R1.0	R6.0	R12.5	R1.0	R10.0	D20.0	D2.0	D12.0	D20.0	D20.0
PAGE	C90	C91	C92	C96	C97	C98	C99	C100	C101	C103	C104	C105	C106
	High Feed	High Feed Long Shank	RIB PROCESSING	RIB PROCESSING	-	STUB LENGTH EXTENDED NECK	MINIATURE	-	STUB LENGTH EXTENDED NECK	MINIATURE	EXTENDED NECK	EXTENDED NECK	EXTENDED NECK
	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating	Blue Coating

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	G826	G8A43	G850	G851
P	1	Non-alloy steel	About 0.15% C Annealed	125					
P	2		About 0.45% C Annealed	190	13				
P	3		About 0.45% C Quenched & Tempered	250	25				
P	4		About 0.75% C Annealed	270	28				
P	5		About 0.75% C Quenched & Tempered	300	32	○	○	○	○
P	6	Low alloy steel	Annealed	180	10				
P	7		Quenched & Tempered	275	29				
P	8		Quenched & Tempered	300	32	○	○	○	○
P	9		Quenched & Tempered	350	38	○	○	○	○
P	10	High alloyed steel, and tool steel	Annealed	200	15				
P	11		Quenched & Tempered	325	35	○	○	○	○
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15				
M	13		Martensitic Quenched & Tempered	240	23				
M	14		Austenitic	180	10				
K	15	Grey cast iron	Pearlitic / ferritic	180	10				
K	16		Pearlitic (Martensitic)	260	26				
K	17	Nodular cast iron	Ferritic	160	3				
K	18		Pearlitic	250	25				
K	19	Malleable cast iron	Ferritic	130					
K	20		Pearlitic	230	21				
N	21	Aluminum-wrought alloy	Not Curable	60					
N	22		Curable Hardened	100					
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75					
N	24		≤ 12% Si, Curable Hardened	90					
N	25		> 12% Si, Not Curable	130					
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110					
N	27		CuZn, CuSnZn (Brass)	90					
N	28		CuSn, lead-free copper and electrolytic copper	100					
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic						
N	30		Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15				
S	32		Fe Based Cured	280	30				
S	33		Ni or Co Based Annealed	250	25				
S	34		Ni or Co Based Cured	350	38				
S	35		Ni or Co Based Cast	320	34				
S	36	Titanium Alloys	Pure Titanium	400 Rm					
S	37		Alpha + Beta Alloys Hardened	1050 Rm					
H	38	Hardened steel	Hardened	550	55	◎	◎	◎	◎
H	39		Hardened	630	60	◎	◎	◎	◎
H	40	Chilled Cast Iron	Cast	400	42	○	○	◎	◎
H	41	Hardened Cast Iron	Hardened	550	55	◎	◎	◎	◎

ISO	VDI	G859	G854	G8A46	G8A54	G8A28	G8A38	G8A53	G8A59	G8A36	G8A50	G8A47	G8A37	G8A39
P	1													
P	2													
P	3													
P	4													
P	5	○	○	○	○	○	○	○	○	○	○	○	○	○
P	6													
P	7													
P	8	○	○	○	○	○	○	○	○	○	○	○	○	○
P	9	○	○	○	○	○	○	○	○	○	○	○	○	○
P	10													
P	11	○	○	○	○	○	○	○	○	○	○	○	○	○
M	12													
M	13													
M	14													
K	15													
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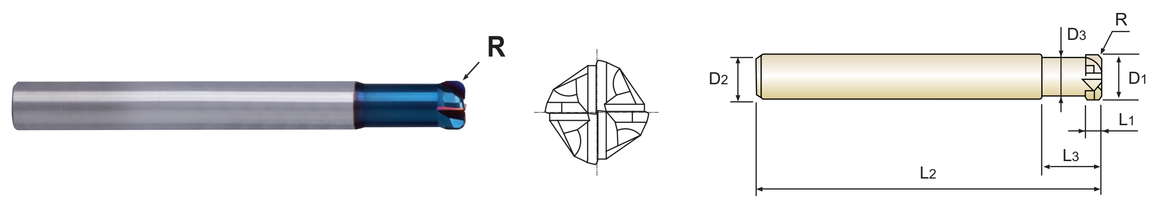
S	37													
H	38	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
H	39	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
H	40	○	○	○	○	○	○	○	○	○	○	○	○	○
H	41	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

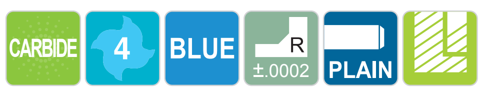
YG X5070 END MILLS

PLAIN SHANK **G826** SERIES

CARBIDE, 4 FLUTE STUB LENGTH CORNER RADIUS HIGH FEED

- ▶ Excellent wear resistance at heavy feed rates on high hardened material.
- ▶ Designed with reduced clearance angles and short flutes for strength.
- ▶ High hardness & heat resistance coating for long life in dry applications.





p.C107-C108

High Feed End Mill

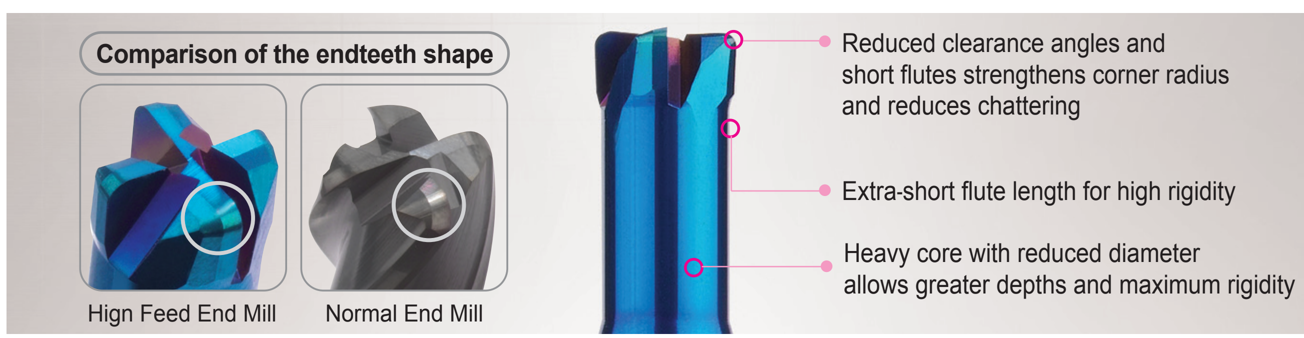
◆ U.S.A Stock

Unit : Inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D1	D2	L1	L3	L2	D3
G826082	R1/32	**1/8**	1/4	.050	3/8	2-1/4	.110
G826124	R1/16	**3/16**	1/4	.075	3/8	2-1/4	.180
G826164	R1/16	**1/4**	1/4	.100	1/2	2-1/2	.220
G826206	R3/32	**5/16**	5/16	.130	5/8	2-1/2	.280
G826246	R3/32	**3/8**	3/8	.150	3/4	2-3/4	.330
G826328	R1/8	**1/2**	1/2	.200	1	3-1/4	.460

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Mill Dia. Tolerance (inch)	Corner Radius Tolerance (inch)	Shank Dia. Tolerance
0~-.0008	±.0002	h5



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

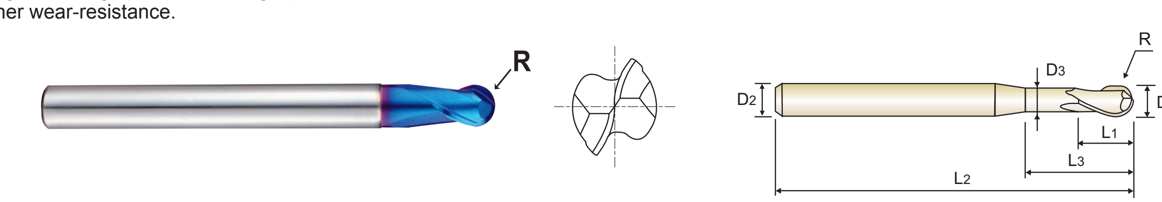
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X5070 END MILLS

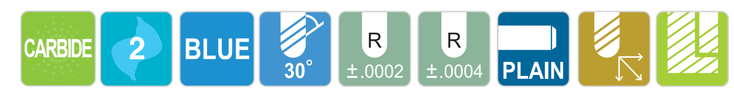
PLAIN SHANK **G8A43** SERIES

CARBIDE, 2 FLUTE STUB LENGTH BALL NOSE with EXTENDED NECK

- ▶ Designed to machine high hardened materials.
- ▶ Suitable for dry cutting, high speed cutting due to newly developed raw-material and new coating.
- ▶ Excellent workpiece finish.
- ▶ Designed for high precision milling operation.
- ▶ Higher wear-resistance.



R1/64~R1/8 R5/32~R1/4



p.C109

◆ U.S.A Stock

Unit : Inch

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D1	D2	L1	L3	L2	D3
G8A43002	R1/64	**1/32**	1/4	1/32	1/16	2	.029
G8A43004	R1/32	**1/16**	1/4	1/16	1/8	2	.059
G8A43006	R3/64	**3/32**	1/4	3/32	3/16	2	.090
G8A43008	R1/16	**1/8**	1/4	1/8	1/4	2-1/2	.121
G8A43012	R3/32	**3/16**	1/4	3/16	3/8	3	.184
G8A43016	R1/8	**1/4**	1/4	1/4	1/2	3-1/2	.246
G8A43020	R5/32	**5/16**	5/16	5/16	5/8	4	.309
G8A43024	R3/16	**3/8**	3/8	3/8	3/4	4	.371
G8A43032	R1/4	**1/2**	1/2	1/2	1	4-1/2	.496

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Size	Radius Tolerance (Inch)	Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
up to Ø1/4	±.0002	0~-.0005	h5
over Ø1/4	±.0004	0~-.0006	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

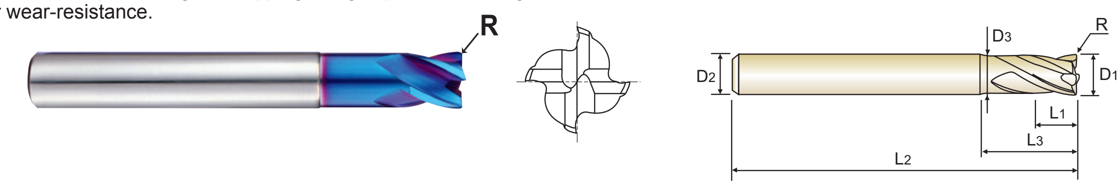
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

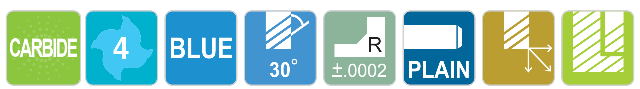
X5070 END MILLS

PLAIN SHANK **G850** SERIES

CARBIDE, 4 FLUTE STUB LENGTH CORNER RADIUSwith EXTENDED NECK

- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting due to newly developed raw-material and new coating.
- Excellent workpiece finish.
- Deep slotting is possible by reduced neck.
- Corner radius for preventing the chipping in high speed machining.
- Higher wear-resistance.





p.C110

◆ U.S.A Stock

Unit : Inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D1	D2	L1	L3	L2	D3
G85004	R.004	1/16	1/8	3/32	-	1-1/2	-
G85008	R.004	1/8	1/4	5/32	1/4	2	.119
G85012	R.004	3/16	1/4	1/4	3/8	2	.181
G85016	R.008	1/4	1/4	5/16	9/16	2	.238
G85020	R.008	5/16	5/16	3/8	3/4	2-1/2	.301
G85024	R.008	3/8	3/8	1/2	1	3	.363
G85032	R.012	1/2	1/2	5/8	1-3/16	3	.488
G85040	R.012	5/8	5/8	3/4	1-1/2	3-1	.613
G85048	R.012	3/4	3/4	1	1-3/4	4	.738

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Size	Corner Radius Tolerance (Inch)	Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
up to Ø1/4	±.0002	0~-.0005	h5
over Ø1/4	±.0004	0~-.0006	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

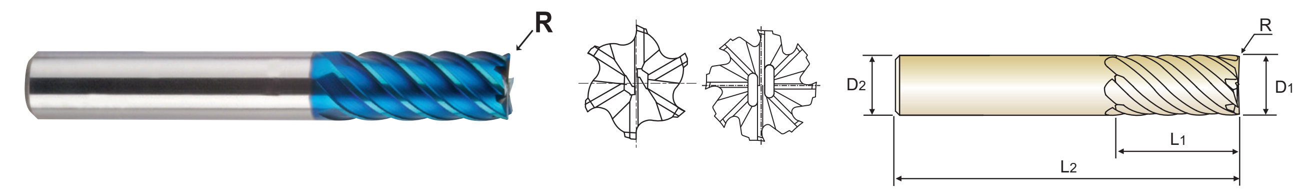
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	◎	◎

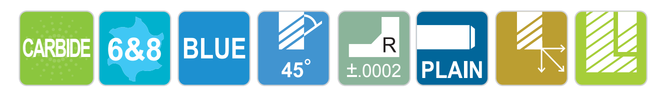
X5070 END MILLS

PLAIN SHANK **G851** SERIES

CARBIDE, 6&8 FLUTE 45° HELIX CORNER RADIUS

- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting due to newly developed raw-material and new coating.
- Excellent workpiece finish.
- Corner radius for preventing the chipping in high speed machining.
- Higher wear-resistance.





p.C111

◆ U.S.A Stock

Unit : Inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
	R	D1	D2	L1	L2	
G85116	R.02	1/4	1/4	1/2	2-1/4	6
G85120	R.02	5/16	5/16	3/4	2-1/2	6
G85125	R.03	3/8	3/8	7/8	2-7/8	6
G85133	R.03	1/2	1/2	1	3-1/4	6
G85140	R.03	5/8	5/8	1-1/4	3-5/8	6
G85141	R.06	5/8	5/8	1-1/4	3-5/8	6
G85148	R.03	3/4	3/4	1-1/2	4-1/8	8
G85149	R.06	3/4	3/4	1-1/2	4-1/8	8
G85164	R.03	1	1	1-3/4	4-1/4	8
G85165	R.06	1	1	1-3/4	4-1/4	8
G85167	R.03	1	1	4-1/8	7	8
G85168	R.06	1	1	4-1/8	7	8

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Size	Corner Radius Tolerance (Inch)	Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
up to Ø1/4	±.0002	0~-.0005	h5
over Ø1/4	±.0004	0~-.0006	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	◎	◎

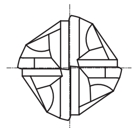
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

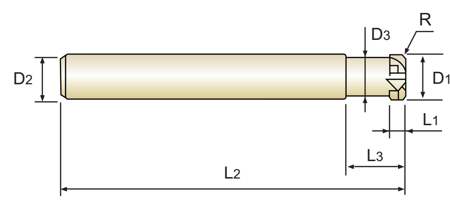
X5070 END MILLS

PLAIN SHANK **G859** SERIES

CARBIDE, 4 FLUTE STUB LENGTH CORNER RADIUS HIGH FEED

- ▶ Excellent wear resistance at heavy feed rates on high hardened material.
- ▶ Designed with reduced clearance angles and short flutes for strength.
- ▶ High hardness & heat resistance coating for long life in dry applications.





CARBIDE 4 BLUE PLAIN R ±0.005 p.C112-C113

High Feed End Mill

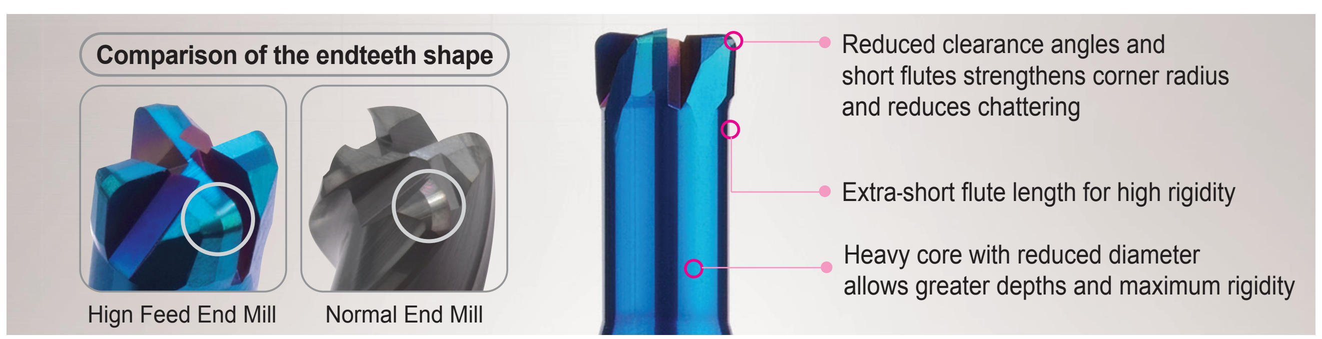
◆ U.S.A Stock

Unit : mm

EDP No.	Corner Radius	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D1		D2	L1	L3	L2	D3
G859020	R0.5	2.0	.0787	6	1	6	50	1.8
G859030	R0.5	3.0	.1181	6	1.2	8	50	2.8
G859040	R0.5	4.0	.1575	6	1.5	10	50	3.8
G859060	R0.5	6.0	.2362	6	2.5	12	60	5.4
G859061	R1.0	6.0	.2362	6	2.5	12	60	5.4
G859081	R1.0	8.0	.3150	8	3.5	16	60	7.2
G859082	R2.0	8.0	.3150	8	3.5	16	60	7.2
G859101	R1.0	10.0	.3937	10	4	20	70	9
G859102	R2.0	10.0	.3937	10	4	20	70	9
G859122	R2.0	12.0	.4724	12	5	25	80	11
G859123	R3.0	12.0	.4724	12	5	25	80	11
G859163	R3.0	16.0	.6299	16	6.5	30	90	15

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Mill Dia. Tolerance (inch)	Corner Radius Tolerance (inch)	Shank Dia. Tolerance
0~-.0008	±.0002	h5



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

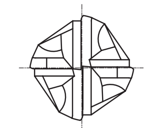
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

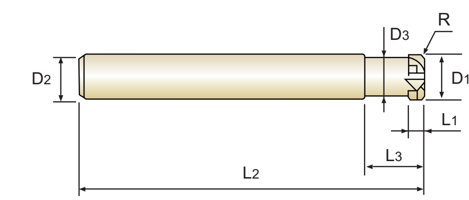
X5070 END MILLS

PLAIN SHANK **G854** SERIES

CARBIDE, 4 FLUTE STUB LENGTH CORNER RADIUS HIGH FEED (Long Shank)

- ▶ Excellent wear resistance at heavy feed rates on high hardened material.
- ▶ Designed with reduced clearance angles and short flutes for strength.
- ▶ High hardness & heat resistance coating for long life in dry applications.





CARBIDE 4 BLUE PLAIN R ±0.005 p.C112-C113

High Feed End Mill

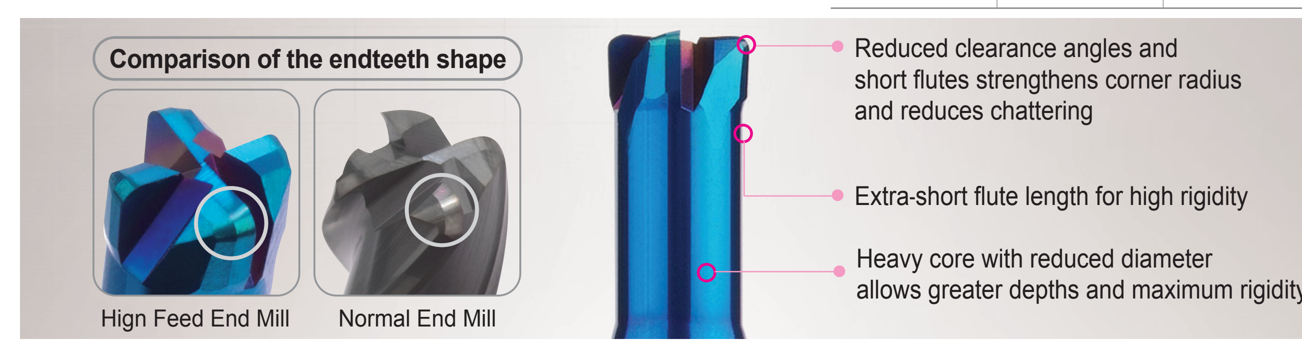
◆ U.S.A Stock

Unit : mm

EDP No.	Corner Radius	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D1		D2	L1	L3	L2	D3
G854020	R0.5	2.0	.0787	6	1	6	70	1.8
G854030	R0.5	3.0	.1181	6	1.2	8	70	2.8
G854040	R0.5	4.0	.1575	6	1.5	10	70	3.8
G854050	R1.0	5.0	.1969	6	2	10	70	4.6
G854060	R0.5	6.0	.2362	6	2.5	12	90	5.4
G854061	R1.0	6.0	.2362	6	2.5	12	90	5.4
G854062	R1.5	6.0	.2362	6	2.5	12	90	5.4
G854081	R1.0	8.0	.3150	8	3.5	16	100	7.2
G854082	R2.0	8.0	.3150	8	3.5	16	100	7.2
G854101	R1.0	10.0	.3937	10	4	20	100	9
G854102	R2.0	10.0	.3937	10	4	20	100	9
G854122	R2.0	12.0	.4724	12	5	25	110	11
G854123	R3.0	12.0	.4724	12	5	25	110	11
G854163	R3.0	16.0	.6299	16	6.5	30	130	15

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Mill Dia. Tolerance (inch)	Corner Radius Tolerance (inch)	Shank Dia. Tolerance
0~-.0008	±.0002	h5



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

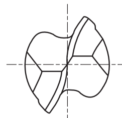
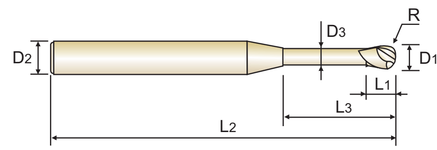
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

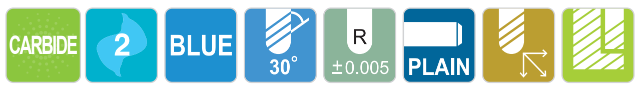
X5070 END MILLS

PLAIN SHANK **G8A46** SERIES

CARBIDE, 2 FLUTE BALL NOSE for RIB PROCESSING

- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finish.
- Designed for high precision milling operation.
- Higher wear-resistance.



p.C114

◆ U.S.A Stock

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter		Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
		Metric	Inch					
	R (±0.005)	D1		D2	L1	L3	L2	D3
G8A46805	R0.05	0.1	.0039	4	0.1	0.3	45	0.085
G8A46806	R0.05	0.1	.0039	4	0.1	0.5	45	0.085
G8A46002	R0.1	0.2	.0079	4	0.2	0.5	45	0.17
G8A46977	R0.1	0.2	.0079	4	0.2	1	45	0.17
G8A46958	R0.1	0.2	.0079	4	0.2	1.5	45	0.17
G8A46003	R0.15	0.3	.0118	4	0.3	1	45	0.27
G8A46959	R0.15	0.3	.0118	4	0.3	2	45	0.27
G8A46986	R0.15	0.3	.0118	4	0.3	3	45	0.27
G8A46004	R0.2	0.4	.0157	4	0.4	1	45	0.37
G8A46960	R0.2	0.4	.0157	4	0.4	2	45	0.37
G8A46961	R0.2	0.4	.0157	4	0.4	3	45	0.37
G8A46981	R0.2	0.4	.0157	4	0.4	4	45	0.37
G8A46987	R0.2	0.4	.0157	4	0.4	5	45	0.37
G8A46005	R0.25	0.5	.0197	4	0.4	2	45	0.45
G8A46804	R0.25	0.5	.0197	4	0.4	2.5	45	0.45
G8A46962	R0.25	0.5	.0197	4	0.4	4	45	0.45
G8A46963	R0.25	0.5	.0197	4	0.4	6	45	0.45
G8A46964	R0.25	0.5	.0197	4	0.4	8	45	0.45
G8A46957	R0.3	0.6	.0236	4	0.5	2	45	0.55
G8A46988	R0.3	0.6	.0236	4	0.5	3	45	0.55
G8A46915	R0.3	0.6	.0236	4	0.5	4	45	0.55
G8A46989	R0.3	0.6	.0236	4	0.5	5	45	0.55
G8A46916	R0.3	0.6	.0236	4	0.5	6	45	0.55
G8A46917	R0.3	0.6	.0236	4	0.5	8	45	0.55

▶NEXT PAGE

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.012	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

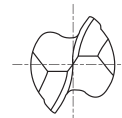
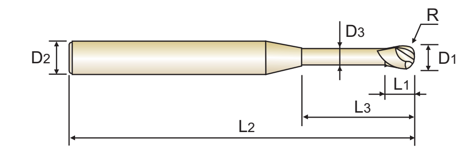
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

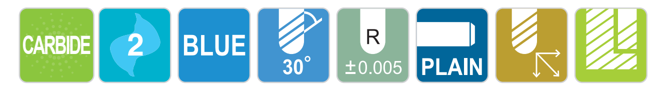
X5070 END MILLS

PLAIN SHANK **G8A46** SERIES

CARBIDE, 2 FLUTE BALL NOSE for RIB PROCESSING

- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finish.
- Designed for high precision milling operation.
- Higher wear-resistance.



p.C114

◆ U.S.A Stock

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter		Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
		Metric	Inch					
	R (±0.005)	D1		D2	L1	L3	L2	D3
G8A46990	R0.3	0.6	.0236	4	0.5	10	45	0.55
G8A46918	R0.4	0.8	.0315	4	0.6	2	45	0.75
G8A46919	R0.4	0.8	.0315	4	0.6	4	45	0.75
G8A46008	R0.4	0.8	.0315	4	0.6	6	45	0.75
G8A46901	R0.4	0.8	.0315	4	0.6	8	45	0.75
G8A46965	R0.4	0.8	.0315	4	0.6	10	45	0.75
G8A46920	R0.5	1.0	.0394	4	0.8	3	45	0.95
G8A46921	R0.5	1.0	.0394	4	0.8	4	45	0.95
G8A46923	R0.5	1.0	.0394	4	0.8	5	45	0.95
G8A46010	R0.5	1.0	.0394	4	0.8	6	45	0.95
G8A46924	R0.5	1.0	.0394	4	0.8	7	45	0.95
G8A46902	R0.5	1.0	.0394	4	0.8	8	45	0.95
G8A46925	R0.5	1.0	.0394	4	0.8	9	45	0.95
G8A46903	R0.5	1.0	.0394	4	0.8	10	45	0.95
G8A46904	R0.5	1.0	.0394	4	0.8	12	45	0.95
G8A46926	R0.5	1.0	.0394	4	0.8	14	50	0.95
G8A46927	R0.5	1.0	.0394	4	0.8	16	50	0.95
G8A46966	R0.5	1.0	.0394	4	0.8	20	55	0.95
G8A46982	R0.6	1.2	.0472	4	1.0	6	45	1.15
G8A46012	R0.6	1.2	.0472	4	1.0	8	45	1.15
G8A46983	R0.6	1.2	.0472	4	1.0	10	45	1.15
G8A46905	R0.6	1.2	.0472	4	1.0	12	45	1.15
G8A46930	R0.75	1.5	.0472	4	1.2	6	45	1.45
G8A46015	R0.75	1.5	.0472	4	1.2	8	45	1.45

▶NEXT PAGE

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.012	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

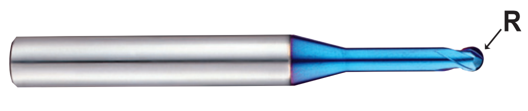
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

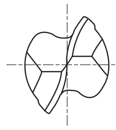
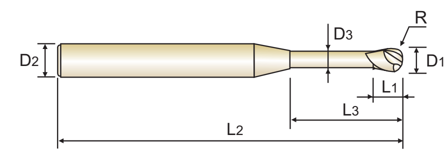
YG X5070 END MILLS

PLAIN SHANK **G8A46** SERIES

CARBIDE, 2 FLUTE BALL NOSE for RIB PROCESSING

- ▶ Designed to machine high hardened materials.
- ▶ Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- ▶ Excellent workpiece finish.
- ▶ Designed for high precision milling operation.
- ▶ Higher wear-resistance.



CARBIDE | 2 | BLUE | 30° | R ±0.005 | PLAIN

p.C114

◆ U.S.A Stock

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter		Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
		Metric	Inch					
	R (±0.005)	D1		D2	L1	L3	L2	D3
G8A46931	R0.75	1.5	.0472	4	1.2	10	45	1.45
G8A46906	R0.75	1.5	.0472	4	1.2	12	45	1.45
G8A46992	R0.75	1.5	.0472	4	1.2	14	50	1.45
G8A46907	R0.75	1.5	.0472	4	1.2	16	50	1.45
G8A46932	R0.75	1.5	.0472	4	1.2	20	55	1.45
G8A46939	R1.0	2.0	.0787	4	1.6	4	45	1.95
G8A46940	R1.0	2.0	.0787	4	1.6	6	45	1.95
G8A46020	R1.0	2.0	.0787	4	1.6	8	45	1.95
G8A46941	R1.0	2.0	.0787	4	1.6	10	45	1.95
G8A46942	R1.0	2.0	.0787	4	1.6	12	50	1.95
G8A46943	R1.0	2.0	.0787	4	1.6	14	50	1.95
G8A46909	R1.0	2.0	.0787	4	1.6	16	50	1.95
G8A46993	R1.0	2.0	.0787	4	1.6	18	55	1.95
G8A46910	R1.0	2.0	.0787	4	1.6	20	55	1.95
G8A46944	R1.0	2.0	.0787	4	1.6	22	60	1.95
G8A46945	R1.0	2.0	.0787	4	1.6	25	60	1.95
G8A46967	R1.0	2.0	.0787	4	1.6	30	70	1.95
G8A46948	R1.5	3.0	.1181	6	2.4	12	50	2.85
G8A46984	R1.5	3.0	.1181	6	2.4	14	55	2.85
G8A46030	R1.5	3.0	.1181	6	2.4	16	55	2.85
G8A46985	R1.5	3.0	.1181	6	2.4	18	60	2.85
G8A46911	R1.5	3.0	.1181	6	2.4	20	60	2.85
G8A46968	R1.5	3.0	.1181	6	2.4	25	65	2.85
G8A46969	R1.5	3.0	.1181	6	2.4	30	70	2.85

▶NEXT PAGE

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.012	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

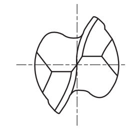
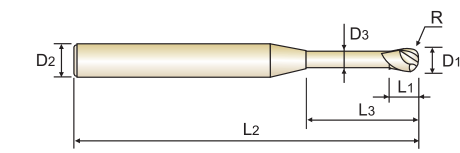
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

YG X5070 END MILLS

PLAIN SHANK **G8A46** SERIES

CARBIDE, 2 FLUTE BALL NOSE for RIB PROCESSING

- ▶ Designed to machine high hardened materials.
- ▶ Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- ▶ Excellent workpiece finish.
- ▶ Designed for high precision milling operation.
- ▶ Higher wear-resistance.

CARBIDE | 2 | BLUE | 30° | R ±0.005 | PLAIN

p.C114

◆ U.S.A Stock

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter		Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
		Metric	Inch					
	R (±0.005)	D1		D2	L1	L3	L2	D3
G8A46970	R1.5	3.0	.1181	6	2.4	35	80	2.85
G8A46950	R2.0	4.0	.1575	6	3.2	12	60	3.85
G8A46040	R2.0	4.0	.1575	6	3.2	16	60	3.85
G8A46912	R2.0	4.0	.1575	6	3.2	20	65	3.85
G8A46913	R2.0	4.0	.1575	6	3.2	25	70	3.85
G8A46971	R2.0	4.0	.1575	6	3.2	30	70	3.85
G8A46972	R2.0	4.0	.1575	6	3.2	35	80	3.85
G8A46973	R2.0	4.0	.1575	6	3.2	40	90	3.85
G8A46974	R2.0	4.0	.1575	6	3.2	45	90	3.85
G8A46975	R2.0	4.0	.1575	6	3.2	50	100	3.85

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.012	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

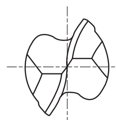
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

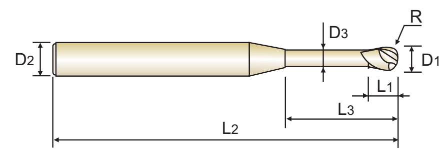
YG X5070 END MILLS

PLAIN SHANK **G8A54** SERIES

CARBIDE, 2 FLUTE BALL NOSE for RIB PROCESSING

- ▶ Designed to machine high hardened materials.
- ▶ Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- ▶ Excellent workpiece finish.
- ▶ Designed for high precision milling operation.
- ▶ Higher wear-resistance.





CARBIDE | 2 | BLUE | 30° | R ±0.005 | PLAIN

p.C114

◆ U.S.A Stock

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter		Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
		Metric	Inch					
	R (±0.005)	D1		D2	L1	L3	L2	D3
G8A54005	R0.25	0.5	.0197	6	0.5	1.5	50	0.45
G8A54901	R0.25	0.5	.0197	6	0.5	3.3	50	0.45
G8A54006	R0.3	0.6	.0236	6	0.6	2	50	0.55
G8A54902	R0.3	0.6	.0236	6	0.6	4	50	0.55
G8A54008	R0.4	0.8	.0315	6	0.8	2.5	50	0.75
G8A54903	R0.4	0.8	.0315	6	0.8	5.5	50	0.75
G8A54010	R0.5	1.0	.0394	6	1	3.3	50	0.95
G8A54904	R0.5	1.0	.0394	6	1	6.7	50	0.95
G8A54905	R0.5	1.0	.0394	6	1	12	50	0.95
G8A54012	R0.6	1.2	.0472	6	1.2	4.4	50	1.15
G8A54906	R0.6	1.2	.0472	6	1.2	8	50	1.15
G8A54015	R0.75	1.5	.0591	6	1.5	5	50	1.45
G8A54907	R0.75	1.5	.0591	6	1.5	9.7	50	1.45
G8A54908	R0.75	1.5	.0591	6	1.5	15	50	1.45
G8A54020	R1.0	2.0	.0787	6	2	6	50	1.95
G8A54909	R1.0	2.0	.0787	6	2	13	50	1.95
G8A54910	R1.0	2.0	.0787	6	2	20	60	1.95

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.012	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

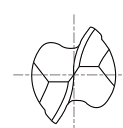
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

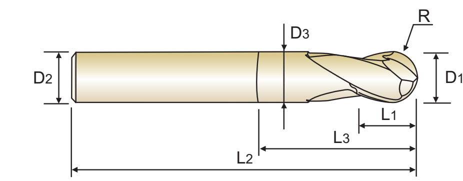
YG X5070 END MILLS

PLAIN SHANK **G8A28** SERIES

CARBIDE, 2 FLUTE BALL NOSE

- ▶ Designed to machine high hardened materials.
- ▶ Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- ▶ Excellent workpiece finish.
- ▶ Designed for high precision milling operation.
- ▶ Higher wear-resistance.





CARBIDE | 2 | BLUE | 30° | R ±0.005 (R0.5~R3) | R ±0.010 (R3.5~R6) | PLAIN

p.C115-C116

◆ U.S.A Stock

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter		Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
		Metric	Inch					
	R	D1		D2	L1	L3	L2	D3
G8A28001	R0.05	0.1	.0039	4	0.2	-	40	-
G8A28002	R0.1	0.2	.0079	4	0.3	-	40	-
G8A28003	R0.15	0.3	.0118	4	0.5	-	40	-
G8A28004	R0.2	0.4	.0157	4	0.6	-	40	-
G8A28005	R0.25	0.5	.0197	4	0.7	-	40	-
G8A28006	R0.3	0.6	.0236	4	0.9	-	40	-
G8A28007	R0.35	0.7	.0276	4	1.1	-	40	-
G8A28008	R0.4	0.8	.0315	4	1.2	-	40	-
G8A28009	R0.45	0.9	.0354	4	1.4	-	40	-
G8A280104S	R0.5	1.0	.0394	4	1.5	3	50	0.95
G8A28010	R0.5	1.0	.0394	6	1.5	3	50	0.95
G8A280154S	R0.75	1.5	.0591	4	2	4	50	1.45
G8A28015	R0.75	1.5	.0591	6	2	4	50	1.45
G8A280204S	R1.0	2.0	.0787	4	2.5	5	50	1.95
G8A28020	R1.0	2.0	.0787	6	2.5	5	50	1.95
G8A280254S	R1.25	2.5	.0984	4	3	7	50	2.4
G8A28025	R1.25	2.5	.0984	6	3	7	50	2.4
G8A28030	R1.5	3.0	.1181	6	4	10	60	2.85
G8A28035	R1.75	3.5	.1378	6	4.5	10	60	3.35
G8A28040	R2.0	4.0	.1575	6	5	10	60	3.85
G8A28045	R2.25	4.5	.1772	6	5.5	10	60	4.35
G8A28050	R2.5	5.0	.1969	6	6	12	60	4.85
G8A28055	R2.75	5.5	.2165	6	6.5	12	60	5.35
G8A28060	R3.0	6.0	.2362	6	7	15	60	5.85
G8A28903	R3.0	6.0	.2362	6	9	30	90	5.85
G8A28901	R4.0	8.0	.3150	8	9	15	60	7.7
G8A28080	R4.0	8.0	.3150	8	9	15	80	7.7
G8A28904	R4.0	8.0	.3150	8	12	30	100	7.7
G8A28902	R5.0	10.0	.3937	10	11	25	60	9.7
G8A28100	R5.0	10.0	.3937	10	11	25	80	9.7
G8A28905	R5.0	10.0	.3937	10	15	30	100	9.7
G8A28120	R6.0	12.0	.4724	12	14	25	80	11.7

Size	Corner Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to R3	±0.005	0 ~ - 0.012	h5
over R3	±0.010	0 ~ - 0.015	

The original bright blue color may discolor during use, however, the performance will not be negatively affected

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

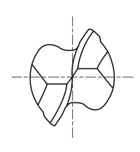
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

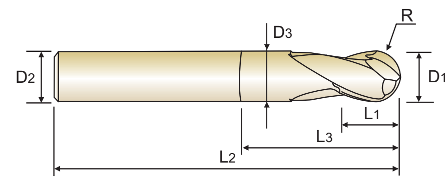
X5070 END MILLS

PLAIN SHANK **G8A38** SERIES

CARBIDE, 2 FLUTE STUB LENGTH BALL NOSE with EXTENDED NECK

- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting due to newly developed raw-material and new coating.
- Excellent workpiece finish.
- Designed for high precision milling operation.
- Higher wear-resistance.





CARBIDE 2 BLUE 30° R ±0.005 R ±0.010 PLAIN

R0.5~R3 R3.5~R12.5

p.C115-C116

◆ U.S.A Stock

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter		Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
		Metric	Inch					
	R	D1		D2	L1	L3	L2	D3
G8A38010	R0.5	1.0	.0394	4	1	2.2	50	0.95
G8A38012	R0.6	1.2	.0472	4	1.2	2.6	50	1.15
G8A38015	R0.75	1.5	.0591	4	1.5	3	50	1.45
G8A380204S	R1.0	2.0	.0787	4	2	4	50	1.95
G8A38020	R1.0	2.0	.0787	6	2	4	50	1.95
G8A38030	R1.5	3.0	.1181	6	3	6	60	2.85
G8A38040	R2.0	4.0	.1575	6	4	8	70	3.85
G8A38050	R2.5	5.0	.1969	6	5	10	80	4.85
G8A38060	R3.0	6.0	.2362	6	6	12	90	5.85
G8A38070	R3.5	7.0	.2756	8	7	14	90	6.7
G8A38080	R4.0	8.0	.3150	8	8	16	100	7.7
G8A38090	R4.5	9.0	.3543	10	9	18	100	8.7
G8A38100	R5.0	10.0	.3937	10	10	20	100	9.7
G8A38120	R6.0	12.0	.4724	12	12	24	110	11.7
G8A38140	R7.0	14.0	.5512	14	14	28	110	13.7
G8A38160	R8.0	16.0	.6299	16	16	32	140	15.7
G8A38180	R9.0	18.0	.7087	18	18	36	140	17.7
G8A38200	R10.0	20.0	.7874	20	20	40	160	19.7
G8A38250	R12.5	25.0	.9843	25	25	50	180	24.7

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Size	Corner Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to R3	±0.005	0 ~ - 0.012	h5
over R3	±0.010	0 ~ - 0.015	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

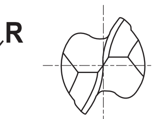
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

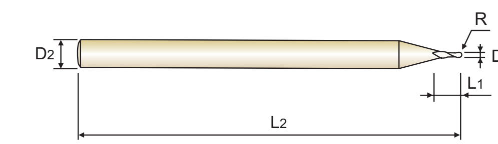
X5070 END MILLS

PLAIN SHANK **G8A53** SERIES

CARBIDE, 2 FLUTE MINIATURE BALL NOSE

- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finish.
- Designed for high precision milling operation.
- Higher wear-resistance.





CARBIDE 2 BLUE 30° R ±0.005 PLAIN

p.C115-C116

◆ U.S.A Stock

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
		Metric	Inch			
	R (±0.005)	D1		D2	L1	L2
G8A53004	R0.2	0.4	.0157	6	0.4	50
G8A53005	R0.25	0.5	.0197	6	0.5	50
G8A53006	R0.3	0.6	.0236	6	0.6	50
G8A53008	R0.4	0.8	.0315	6	0.8	50
G8A53010	R0.5	1.0	.0394	6	1.0	50
G8A53012	R0.6	1.2	.0472	6	1.2	50
G8A53015	R0.75	1.5	.0591	6	1.5	50
G8A53020	R1.0	2.0	.0787	6	2.0	50

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.012	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

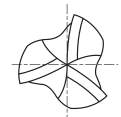
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

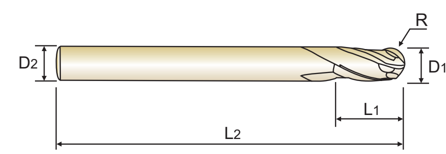
YG X5070 END MILLS

PLAIN SHANK **G8A59** SERIES

CARBIDE, 3 FLUTE BALL NOSE

- ▶ Designed to machine high hardened materials.
- ▶ Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- ▶ Excellent workpiece finish.
- ▶ Designed for high precision milling operation.
- ▶ Higher wear-resistance.





CARBIDE | 3 | BLUE | 30° | R ±0.005 | R ±0.010 | PLAIN

p.C117

◆ U.S.A Stock

R1.5~R3 R4~R10

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Overall Length
	R	D1		D2	L1	L2
G8A59030	R1.5	3.0	.1181	6	8	60
G8A59040	R2.0	4.0	.1575	6	8	70
G8A59050	R2.5	5.0	.1969	6	10	80
G8A59060	R3.0	6.0	.2362	6	12	90
G8A59080	R4.0	8.0	.3150	8	14	100
G8A59100	R5.0	10.0	.3937	10	18	100
G8A59120	R6.0	12.0	.4724	12	22	110
G8A59160	R8.0	16.0	.6299	16	30	140
G8A59200	R10.0	20.0	.7874	20	38	160

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Size	Corner Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to R3	±0.005	0 ~ - 0.012	h5
over R3	±0.010	0 ~ - 0.015	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

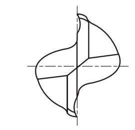
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

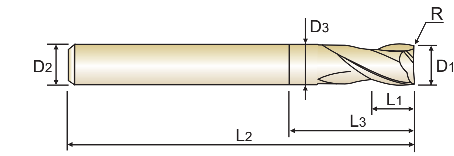
YG X5070 END MILLS

PLAIN SHANK **G8A36** SERIES

CARBIDE, 2 FLUTE STUB LENGTH CORNER RADIUS with EXTENDED NECK

- ▶ Designed to machine high hardened materials.
- ▶ Suitable for dry cutting, high speed cutting due to newly developed raw-material and new coating.
- ▶ Excellent workpiece finish.
- ▶ Deep slotting is possible by reduced neck.
- ▶ Corner radius for preventing the chipping in high speed machining.
- ▶ Higher wear-resistance.





CARBIDE | 2 | BLUE | 30° | R ±0.010 | R ±0.015 | PLAIN

p.C118-C120

◆ U.S.A Stock

Ø0.3~Ø6 Ø8~Ø20

Unit : mm

EDP No.	Corner Radius	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D1		D2	L1	L3	L2	D3
G8A36003	-	0.3	.0118	3	0.45	-	40	-
G8A36004	-	0.4	.0157	3	0.6	-	40	-
G8A36005	R0.05	0.5	.0197	3	0.7	-	40	-
G8A36907	R0.05	0.5	.0197	4	1	-	40	-
G8A36006	R0.05	0.6	.0236	3	0.9	-	40	-
G8A36908	R0.05	0.6	.0236	4	1.2	-	40	-
G8A36909	R0.05	0.7	.0276	4	1.4	-	40	-
G8A36008	R0.05	0.8	.0315	3	1.2	-	40	-
G8A36910	R0.05	0.8	.0315	4	1.6	-	40	-
G8A36911	R0.05	0.9	.0354	4	2	-	40	-
G8A36010	R0.1	1.0	.0394	3	1.5	-	40	-
G8A36901	R0.1	1.0	.0394	4	1.5	-	40	-
G8A36903	R0.1	1.0	.0394	6	1.5	-	40	-
G8A36015	R0.1	1.5	.0591	3	2.2	-	40	-
G8A36904	R0.1	1.5	.0591	6	2.2	-	40	-
G8A36020	R0.1	2.0	.0787	3	3	6	40	1.95
G8A36902	R0.1	2.0	.0787	4	3	6	40	1.95
G8A36905	R0.1	2.0	.0787	6	3	6	40	1.95
G8A36025	R0.1	2.5	.0984	3	4	6	40	2.4
G8A36906	R0.1	2.5	.0984	6	4	6	40	2.4
G8A36030	R0.1	3.0	.1181	6	4	7	45	2.85
G8A36035	R0.1	3.5	.1378	6	5	9	45	3.35
G8A36040	R0.1	4.0	.1575	6	5	9	45	3.85
G8A36045	R0.1	4.5	.1772	6	6	10	45	4.35

▶ NEXT PAGE

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Size	Corner Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to Ø6	±0.010	0 ~ - 0.012	h5
over Ø6	±0.015	0 ~ - 0.015	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

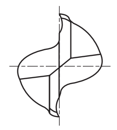
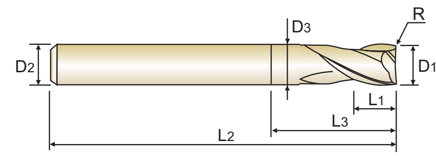
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

X5070 END MILLS

PLAIN SHANK **G8A36** SERIES

CARBIDE, 2 FLUTE STUB LENGTH CORNER RADIUS with EXTENDED NECK

- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting due to newly developed raw-material and new coating.
- Excellent workpiece finish.
- Deep slotting is possible by reduced neck.
- Corner radius for preventing the chipping in high speed machining.
- Higher wear-resistance.

CARBIDE 2 BLUE 30° R ±0.010 R ±0.015 PLAIN

p.C118-C120

◆ U.S.A Stock

Ø0.3~Ø6 Ø8~Ø20

Unit : mm

EDP No.	Corner Radius	Mill Diameter		Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
		Metric	Inch					
	R	D1		D2	L1	L3	L2	D3
G8A36050	R0.2	5.0	.1969	6	6	11	50	4.85
G8A36060	R0.2	6.0	.2362	6	7	14	50	5.85
G8A36080	R0.2	8.0	.3150	8	9	18	60	7.7
G8A36100	R0.2	10.0	.3937	10	12	25	75	9.7
G8A36120	R0.3	12.0	.4724	12	15	30	75	11.7
G8A36160	R0.3	16.0	.6299	16	18	38	90	15.7
G8A36200	R0.3	20.0	.7874	20	24	45	100	19.7

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Size	Corner Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to Ø6	±0.010	0 ~ - 0.012	h5
over Ø6	±0.015	0 ~ - 0.015	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

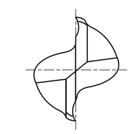
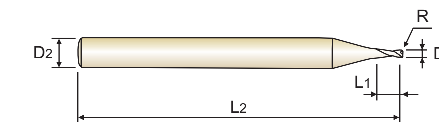
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

X5070 END MILLS

PLAIN SHANK **G8A50** SERIES

CARBIDE, 2 FLUTE MINIATURE CORNER RADIUS

- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finish.
- Corner radius for preventing the chipping in high speed machining.
- Higher wear-resistance.

NG 2 BLUE 30° R ±0.010 PLAIN

p.C121

◆ U.S.A Stock

Unit : mm

EDP No.	Corner Radius	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
		Metric	Inch			
	R (±0.010)	D1		D2	L1	L2
G8A50003	-	0.3	.0118	6	0.45	50
G8A50004	-	0.4	.0157	6	0.6	50
G8A50005	R0.05	0.5	.0197	6	0.7	50
G8A50006	R0.05	0.6	.0236	6	0.9	50
G8A50008	R0.05	0.8	.0315	6	1.2	50
G8A50010	R0.1	1.0	.0394	6	1.5	50
G8A50012	R0.1	1.2	.0472	6	1.8	50
G8A50015	R0.15	1.5	.0591	6	2.2	50
G8A50020	R0.15	2.0	.0787	6	2.2	50

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.012	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

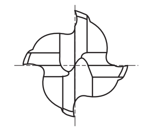
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

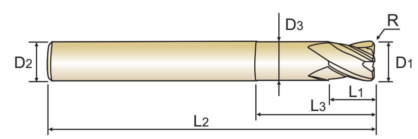
X5070 END MILLS

PLAIN SHANK **G8A47** SERIES

CARBIDE, 4 FLUTE CORNER RADIUS with EXTENDED NECK

- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finish.
- Deep slotting is possible by reduced neck.
- Corner radius for preventing the chipping in high speed machining.
- Higher wear-resistance.





CARBIDE 4 BLUE 30° R ±0.010 R ±0.015 PLAIN

p.C122

◆ U.S.A Stock

Ø1~Ø6 Ø8~Ø12

Unit : mm

EDP No.	Corner Radius	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D1		D2	L1	L3	L2	D3
G8A47916	R0.3	3.0	.1181	6	4	12	55	2.85
G8A47917	R0.3	3.0	.1181	6	4	16	55	2.85
G8A47918	R0.3	3.0	.1181	6	4	20	55	2.85
G8A47030	R0.5	3.0	.1181	6	4	10	55	2.85
G8A47901	R0.5	3.0	.1181	6	4	16	55	2.85
G8A47902	R0.5	3.0	.1181	6	4	20	55	2.85
G8A47919	R0.3	4.0	.1575	6	5	12	55	3.85
G8A47920	R0.3	4.0	.1575	6	5	16	55	3.85
G8A47921	R0.3	4.0	.1575	6	5	20	55	3.85
G8A47040	R0.5	4.0	.1575	6	5	12	55	3.85
G8A47903	R0.5	4.0	.1575	6	5	16	55	3.85
G8A47904	R0.5	4.0	.1575	6	5	20	55	3.85
G8A47922	R1.0	4.0	.1575	6	5	12	55	3.85
G8A47060	R0.5	6.0	.2362	6	7	20	60	5.85
G8A47905	R1.0	6.0	.2362	6	7	20	60	5.85
G8A47906	R1.5	6.0	.2362	6	7	20	60	5.85
G8A47910	R0.5	8.0	.3150	8	9	25	60	7.7
G8A47080	R1.0	8.0	.3150	8	9	25	60	7.7
G8A47907	R1.5	8.0	.3150	8	9	25	60	7.7
G8A47913	R2.0	8.0	.3150	8	9	25	60	7.7
G8A47911	R0.5	10.0	.3937	10	11	32	70	9.7
G8A47100	R1.0	10.0	.3937	10	11	32	70	9.7
G8A47908	R1.5	10.0	.3937	10	11	32	70	9.7
G8A47914	R2.0	10.0	.3937	10	11	32	70	9.7
G8A47912	R0.5	12.0	.4724	12	12	38	80	11.7
G8A47120	R1.0	12.0	.4724	12	12	38	80	11.7
G8A47909	R1.5	12.0	.4724	12	12	38	80	11.7
G8A47915	R2.0	12.0	.4724	12	12	38	80	11.7

Size	Corner Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to Ø6	±0.010	0 ~ - 0.012	h5
over Ø6	±0.015	0 ~ - 0.015	

The original bright blue color may discolor during use, however, the performance will not be negatively affected

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

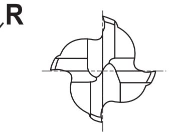
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

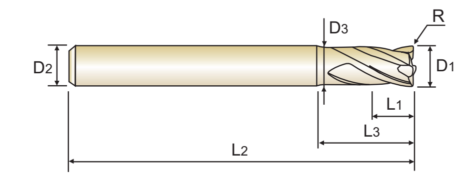
X5070 END MILLS

PLAIN SHANK **G8A37** SERIES

CARBIDE, 4 FLUTE STUB LENGTH CORNER RADIUS with EXTENDED NECK

- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting due to newly developed raw-material and new coating.
- Excellent workpiece finish.
- Deep slotting is possible by reduced neck.
- Corner radius for preventing the chipping in high speed machining.
- Higher wear-resistance.





CARBIDE 4 BLUE 30° R ±0.010 R ±0.015 PLAIN

p.C123

◆ U.S.A Stock

Ø1~Ø6 Ø8~Ø20

Unit : mm

EDP No.	Corner Radius	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D1		D2	L1	L3	L2	D3
G8A37010	R0.1	1.0	.0394	3	1.5	-	40	-
G8A37901	R0.1	1.0	.0394	6	1.5	-	40	-
G8A37015	R0.1	1.5	.0591	3	2.2	-	40	-
G8A37902	R0.1	1.5	.0591	6	2.2	-	40	-
G8A37020	R0.1	2.0	.0787	3	3	6	40	1.95
G8A37903	R0.1	2.0	.0787	6	3	6	40	1.95
G8A37025	R0.1	2.5	.0984	3	4	6	40	2.4
G8A37904	R0.1	2.5	.0984	6	4	6	40	2.4
G8A37030	R0.1	3.0	.1181	6	4	7	45	2.85
G8A37035	R0.1	3.5	.1378	6	5	9	45	3.35
G8A37040	R0.1	4.0	.1575	6	5	9	45	3.85
G8A37045	R0.1	4.5	.1772	6	6	10	45	4.35
G8A37050	R0.2	5.0	.1969	6	6	11	50	4.85
G8A37060	R0.2	6.0	.2362	6	7	14	50	5.85
G8A37080	R0.2	8.0	.3150	8	9	18	60	7.7
G8A37100	R0.2	10.0	.3937	10	12	25	75	9.7
G8A37120	R0.3	12.0	.4724	12	15	30	75	11.7
G8A37160	R0.3	16.0	.6299	16	18	38	90	15.7
G8A37200	R0.3	20.0	.7874	20	24	45	100	19.7

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Size	Corner Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to Ø6	±0.010	0 ~ - 0.012	h5
over Ø6	±0.015	0 ~ - 0.015	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

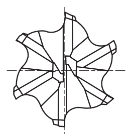
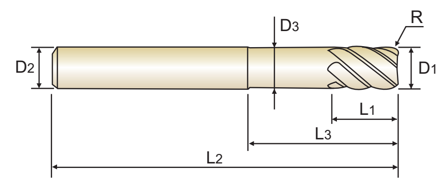
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X5070 END MILLS

PLAIN SHANK **G8A39** SERIES

CARBIDE, 6 FLUTE 45º HELIX CORNER RADIUS with EXTENDED NECK

- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finish.
- Deep slotting is possible by reduced neck.
- Corner radius for preventing the chipping in high speed machining.
- Higher wear-resistance.

CARBIDE 6 BLUE 45° R ±0.010 Ø6 R ±0.015 Ø8~Ø12 PLAIN p.C124

◆ U.S.A Stock

Unit : mm

EDP No.	Corner Radius	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D1		D2	L1	L3	L2	D3
G8A39916	R0.25	6.0	.2362	6	6	14	50	5.85
G8A39060	R0.5	6.0	.2362	6	6	14	50	5.85
G8A39901	R0.5	6.0	.2362	6	13	-	70	-
* G8A39910	R0.5	6.0	.2362	6	26	-	70	-
G8A39080	R0.5	8.0	.3150	8	8	24	60	7.7
G8A39902	R0.5	8.0	.3150	8	19	-	90	-
* G8A39911	R0.5	8.0	.3150	8	36	-	90	-
G8A39903	R0.5	10.0	.3937	10	22	-	100	-
G8A39100	R1.0	10.0	.3937	10	10	30	70	9.7
G8A39904	R1.0	10.0	.3937	10	22	-	100	-
* G8A39912	R1.0	10.0	.3937	10	46	-	100	-
G8A39905	R0.5	12.0	.4724	12	26	-	110	-
G8A39120	R1.0	12.0	.4724	12	12	30	75	11.7
G8A39906	R1.0	12.0	.4724	12	26	-	110	-
* G8A39913	R1.0	12.0	.4724	12	56	-	110	-
G8A39160	R1.0	16.0	.6299	16	32	-	130	-
G8A39907	R1.5	16.0	.6299	16	32	-	130	-
* G8A39914	R1.5	16.0	.6299	16	66	-	130	-
G8A39200	R1.0	20.0	.7874	20	38	-	140	-
G8A39908	R1.5	20.0	.7874	20	38	-	140	-
G8A39909	R2.0	20.0	.7874	20	38	-	140	-
* G8A39915	R2.0	20.0	.7874	20	76	-	140	-

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Size	Corner Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to Ø6	±0.010	0~-0.02	h5
over Ø6	±0.015	(*Extra Long Type : 0~-0.03)	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					○			○	○		○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎	◎	○	◎

YG X5070 END MILLS

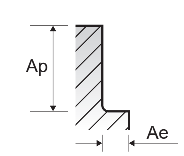
RECOMMENDED CUTTING CONDITIONS

G826 SERIES 4 FLUTE CORNER RADIUS - SIDE CUTTING

HIGH SPEED

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	1/8	3/16	1/4	5/16	3/8	1/2
P	5	Non-alloy steel	32	0.3D	0.1R	SFM (vc)	685	810	820	820	835	850
						IPT (fz)	.0071	.0109	.0144	.0180	.0212	.0277
						RPM	21000	16500	12500	10000	8500	6500
						IPM (feed)	600	720	720	720	720	720
	8-9	Low alloy steel	32-38	0.3D	0.1R	SFM (vc)	685	810	820	820	835	850
						IPT (fz)	.0071	.0109	.0144	.0180	.0212	.0277
						RPM	21000	16500	12500	10000	8500	6500
						IPM (feed)	600	720	720	720	720	720
	11.1	High alloyed steel, and tool steel	35	0.3D	0.1R	SFM (vc)	685	810	820	820	835	850
						IPT (fz)	.0071	.0109	.0144	.0180	.0212	.0277
						RPM	21000	16500	12500	10000	8500	6500
						IPM (feed)	600	720	720	720	720	720
	11.2		44	0.3D	0.1R	SFM (vc)	525	665	655	655	660	655
						IPT (fz)	.0059	.0102	.0138	.0172	.0205	.0275
						RPM	16000	13500	10000	8000	6700	5000
						IPM (feed)	380	550	550	550	550	550
H	38.1	Hardened steel	45-49	0.3D	0.1R	SFM (vc)	525	665	655	655	660	655
						IPT (fz)	.0059	.0102	.0138	.0172	.0205	.0275
						RPM	16000	13500	10000	8000	6700	5000
						IPM (feed)	380	550	550	550	550	550
	38.2		50-55	0.3D	0.1R	SFM (vc)	395	565	555	555	560	565
						IPT (fz)	.0063	.0091	.0124	.0154	.0184	.0244
						RPM	12000	11500	8500	6800	5700	4300
						IPM (feed)	300	420	420	420	420	420
	39.1		56-60	0.3D	0.05R	SFM (vc)	295	395	395	395	395	395
						IPT (fz)	.0047	.0078	.0104	.0130	.0156	.0208
						RPM	9000	8000	6000	4800	4000	3000
						IPM (feed)	170	250	250	250	250	250
	39.2		61-65	0.3D	0.05R	SFM (vc)	215	280	280	280	280	280
						IPT (fz)	.0035	.0066	.0087	.0110	.0132	.0174
						RPM	6500	5700	4300	3400	2850	2150
						IPM (feed)	92	150	150	150	150	150
	40	Chilled Cast Iron	42	0.3D	0.1R	SFM (vc)	525	665	655	655	660	655
						IPT (fz)	.0059	.0102	.0138	.0172	.0205	.0275
						RPM	16000	13500	10000	8000	6700	5000
						IPM (feed)	380	550	550	550	550	550
	41	Hardened Cast Iron	55	0.3D	0.1R	SFM (vc)	395	565	555	555	560	565
						IPT (fz)	.0063	.0091	.0124	.0154	.0184	.0244
						RPM	12000	11500	8500	6800	5700	4300
						IPM (feed)	300	420	420	420	420	420

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X5070 END MILLS — RECOMMENDED CUTTING CONDITIONS

G826 SERIES 4 FLUTE CORNER RADIUS - SIDE CUTTING

NORMAL SPEED

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	1/8	3/16	1/4	5/16	3/8	1/2
P	5	Non-alloy steel	32	0.5D	0.2R	SFM (vc)	295	370	360	370	375	365
						IPT (fz)	.0068	.0103	.0141	.0172	.0204	.0277
						RPM	9000	7500	5500	4500	3800	2800
						IPM (feed)	245	310	310	310	310	310
	8-9	Low alloy steel	32-38	0.5D	0.2R	SFM (vc)	295	370	360	370	375	365
						IPT (fz)	.0068	.0103	.0141	.0172	.0204	.0277
						RPM	9000	7500	5500	4500	3800	2800
						IPM (feed)	245	310	310	310	310	310
	11.1	High alloyed steel, and tool steel	35	0.5D	0.2R	SFM (vc)	295	370	360	370	375	365
						IPT (fz)	.0068	.0103	.0141	.0172	.0204	.0277
						RPM	9000	7500	5500	4500	3800	2800
						IPM (feed)	245	310	310	310	310	310
	11.2		44	0.5D	0.2R	SFM (vc)	215	250	255	255	255	255
						IPT (fz)	.0060	.0098	.0128	.0161	.0192	.0256
						RPM	6500	5100	3900	3100	2600	1950
						IPM (feed)	155	200	200	200	200	200
H	38.1	Hardened steel	45-49	0.5D	0.2R	SFM (vc)	215	250	255	255	255	255
						IPT (fz)	.0060	.0098	.0128	.0161	.0192	.0256
						RPM	6500	5100	3900	3100	2600	1950
						IPM (feed)	155	200	200	200	200	200
	38.2		50-55	0.5D	0.2R	SFM (vc)	140	185	185	180	180	185
						IPT (fz)	.0058	.0092	.0125	.0159	.0189	.0250
						RPM	4300	3800	2800	2200	1850	1400
						IPM (feed)	100	140	140	140	140	140
	39.1		56-60	0.5D	0.1R	SFM (vc)	90	115	115	115	115	115
						IPT (fz)	.0040	.0074	.0100	.0125	.0150	.0199
						RPM	2700	2350	1750	1400	1170	880
						IPM (feed)	43	70	70	70	70	70
	39.2		61-65	0.5D	0.1R	SFM (vc)	60	80	80	80	80	80
						IPT (fz)	.0032	.0045	.0060	.0075	.0089	.0119
						RPM	1800	1650	1250	1000	840	630
						IPM (feed)	23	30	30	30	30	30
	40	Chilled Cast Iron	42	0.5D	0.2R	SFM (vc)	215	250	255	255	255	255
						IPT (fz)	.0060	.0098	.0128	.0161	.0192	.0256
						RPM	6500	5100	3900	3100	2600	1950
						IPM (feed)	155	200	200	200	200	200
	41	Hardened Cast Iron	55	0.5D	0.1R	SFM (vc)	140	185	185	180	180	185
						IPT (fz)	.0058	.0092	.0125	.0159	.0189	.0250
						RPM	4300	3800	2800	2200	1850	1400
						IPM (feed)	100	140	140	140	140	140

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
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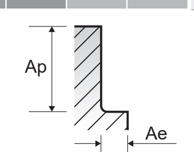
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG X5070 END MILLS — RECOMMENDED CUTTING CONDITIONS

G8A43 SERIES 2 FLUTE BALL NOSE

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	1/32	1/16	3/32	1/8	3/16	1/4	5/16	3/8	1/2
P	5	Non-alloy steel	32	0.05D	0.02D	SFM (vc)	410	815	1220	1085	915	910	910	915	910
						IPT (fz)	.0019	.0023	.0023	.0036	.0061	.0069	.0074	.0078	.0083
						RPM	50000	49700	49700	33100	18600	13900	11100	9300	6950
						IPM (feed)	189	224	224	236	228	191	165	146	116
	8-9	Low alloy steel	32-38	0.05D	0.02D	SFM (vc)	410	815	1220	1085	915	910	910	915	910
						IPT (fz)	.0019	.0023	.0023	.0036	.0061	.0069	.0074	.0078	.0083
						RPM	50000	49700	49700	33100	18600	13900	11100	9300	6950
						IPM (feed)	189	224	224	236	228	191	165	146	116
	11.1	High alloyed steel, and tool steel	35	0.05D	0.02D	SFM (vc)	410	815	1220	1085	915	910	910	915	910
						IPT (fz)	.0019	.0023	.0023	.0036	.0061	.0069	.0074	.0078	.0083
						RPM	50000	49700	49700	33100	18600	13900	11100	9300	6950
						IPM (feed)	189	224	224	236	228	191	165	146	116
	11.2		44	0.05D	0.02D	SFM (vc)	410	780	1175	1040	875	875	875	875	875
						IPT (fz)	.0017	.0020	.0020	.0033	.0054	.0060	.0064	.0069	.0073
						RPM	50000	47800	47800	31800	17800	13400	10700	8900	6680
						IPM (feed)	165	189	189	209	193	161	138	122	98
H	38.1	Hardened steel	45-49	0.05D	0.02D	SFM (vc)	410	780	1175	1040	875	875	875	875	875
						IPT (fz)	.0017	.0020	.0020	.0033	.0054	.0060	.0064	.0069	.0073
						RPM	50000	47800	47800	31800	17800	13400	10700	8900	6680
						IPM (feed)	165	189	189	209	193	161	138	122	98
	38.2		50-55	0.05D	0.02D	SFM (vc)	370	655	980	865	735	720	735	735	735
						IPT (fz)	.0017	.0020	.0020	.0030	.0049	.0055	.0059	.0063	.0067
						RPM	45000	40000	40000	26500	15000	11000	9000	7500	5600
						IPM (feed)	150	158	158	158	148	122	106	95	75
	39.1		56-60	0.05D	0.02D	SFM (vc)	325	575	860	770	665	655	655	650	655
						IPT (fz)	.0015	.0018	.0018	.0026	.0044	.0049	.0053	.0057	.0061
						RPM	40000	35000	35000	23500	13500	10000	8000	6600	5000
						IPM (feed)	118	124	124	124	120	98	85	75	61
	39.2		61-65	0.05D	0.02D	SFM (vc)	285	525	785	685	565	575	575	570	575
						IPT (fz)	.0015	.0017	.0017	.0026	.0043	.0048	.0052	.0056	.0056
						RPM	35000	32000	32000	21000	11500	8800	7000	5800	4400
						IPM (feed)	102	110	110	110	100	85	73	65	49
	39.3		66-70	0.05D	0.02D	SFM (vc)	285	465	700	620	515	525	530	520	525
						IPT (fz)	.0013	.0016	.0016	.0024	.0040	.0043	.0047	.0051	.0051
						RPM	35000	28500	28500	19000	10500	8000	6500	5300	4000
						IPM (feed)	91	91	91	91	83	69	61	54	41
	40	Chilled Cast Iron	42	0.05D	0.02D	SFM (vc)	410	780	1175	1040	875	875	875	875	875
						IPT (fz)	.0017	.0020	.0020	.0033	.0054	.0060	.0064	.0069	.0073
						RPM	50000	47800	47800	31800	17800	13400	10700	8900	6680
						IPM (feed)	165	189	189	209	193	161	138	122	98
	41	Hardened Cast Iron	55	0.05D	0.02D	SFM (vc)	370	655	980	865	735	720	735	735	735
						IPT (fz)	.0017	.0020	.0020	.0030	.0049	.0055	.0059	.0063	.0067
						RPM	45000	40000	40000	26500	15000	11000	9000	7500	5600
						IPM (feed)	150	158	158	158	148	122	106	95	75

SFM = Surface Feet per Minute
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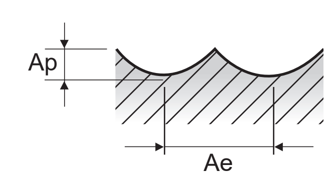
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

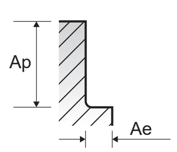
YG X5070 END MILLS RECOMMENDED CUTTING CONDITIONS

G850 SERIES 4 FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	1/16	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4
P	5	Non-alloy steel	32	0.03D	1.0D	SFM (vc)	685	675	810	810	815	805	825	810	805
						IPT (fz)	.0004	.0006	.0010	.0012	.0015	.0018	.0021	.0024	.0026
						RPM	41950	20600	16500	12400	9950	8200	6300	4950	4100
						IPM (feed)	69	52	66	58	60	58	52	48	43
	8-9	Low alloy steel	32-38	0.03D	1.0D	SFM (vc)	685	675	810	810	815	805	825	810	805
						IPT (fz)	.0004	.0006	.0010	.0012	.0015	.0018	.0021	.0024	.0026
						RPM	41950	20600	16500	12400	9950	8200	6300	4950	4100
						IPM (feed)	69	52	66	58	60	58	52	48	43
	11.1	High alloyed steel, and tool steel	35	0.03D	1.0D	SFM (vc)	685	675	810	810	815	805	825	810	805
						IPT (fz)	.0004	.0006	.0010	.0012	.0015	.0018	.0021	.0024	.0026
						RPM	41950	20600	16500	12400	9950	8200	6300	4950	4100
						IPM (feed)	69	52	66	58	60	58	52	48	43
	11.2		44	0.03D	1.0D	SFM (vc)	535	535	645	640	640	635	650	645	640
						IPT (fz)	.0004	.0006	.0010	.0011	.0014	.0016	.0019	.0022	.0025
						RPM	32750	16350	13100	9800	7850	6450	4950	3950	3250
						IPM (feed)	50	37	50	42	43	42	37	35	32
H	38.1	Hardened steel	45-49	0.03D	1.0D	SFM (vc)	535	535	645	640	640	635	650	645	640
						IPT (fz)	.0004	.0006	.0010	.0011	.0014	.0016	.0019	.0022	.0025
						RPM	32750	16350	13100	9800	7850	6450	4950	3950	3250
						IPM (feed)	50	37	50	42	43	42	37	35	32
	38.2		50-55	0.03D	1.0D	SFM (vc)	360	355	425	425	430	420	430	425	420
						IPT (fz)	.0004	.0006	.0009	.0011	.0014	.0016	.0019	.0022	.0026
						RPM	22050	10850	8700	6500	5250	4300	3300	2600	2150
						IPM (feed)	33	25	33	28	29	28	25	23	22
	39.1		56-60	0.03D	1.0D	SFM (vc)	300	295	330	325	330	330	325	325	335
						IPT (fz)	.0003	.0004	.0007	.0009	.0010	.0012	.0014	.0016	.0019
						RPM	18250	9000	6700	5000	4050	3350	2500	2000	1700
						IPM (feed)	21	16	19	17	17	16	14	13	13
	39.2		61-65	0.03D	1.0D	SFM (vc)	225	230	265	260	265	265	260	260	265
						IPT (fz)	.0002	.0004	.0006	.0006	.0008	.0009	.0011	.0014	.0015
						RPM	13850	7100	5350	3950	3250	2700	2000	1600	1350
						IPM (feed)	13	10	12	10	11	10	9	9	8
	39.3		66-70	0.03D	1.0D	SFM (vc)	195	200	230	230	230	225	230	230	225
						IPT (fz)	.0002	.0003	.0005	.0006	.0007	.0008	.0010	.0011	.0013
						RPM	11950	6050	4650	3500	2800	2300	1750	1400	1150
						IPM (feed)	9	7	9	8	8	7	7	6	6
	40	Chilled Cast Iron	42	0.03D	1.0D	SFM (vc)	535	535	645	640	640	635	650	645	640
						IPT (fz)	.0004	.0006	.0010	.0011	.0014	.0016	.0019	.0022	.0025
						RPM	32750	16350	13100	9800	7850	6450	4950	3950	3250
						IPM (feed)	50	37	50	42	43	42	37	35	32
	41	Hardened Cast Iron	55	0.03D	1.0D	SFM (vc)	360	355	425	425	430	420	430	425	420
						IPT (fz)	.0004	.0006	.0009	.0011	.0014	.0016	.0019	.0022	.0026
						RPM	22050	10850	8700	6500	5250	4300	3300	2600	2150
						IPM (feed)	33	25	33	28	29	28	25	23	22

Diameter (Ø) column headings: 1/16 to 3/4.

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



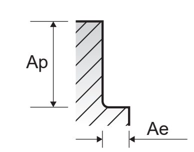
YG X5070 END MILLS RECOMMENDED CUTTING CONDITIONS

G851 SERIES 6 & 8 FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	1/4	5/16	3/8	1/2	5/8	3/4	1
P	5	Non-alloy steel	32	0.05D	1.0D	SFM (vc)	1535	1690	1755	1610	1650	1740	1650
						IPT (fz)	.0014	.0015	.0017	.0023	.0026	.0020	.0021
						RPM	23450	20650	17900	12300	10100	8850	6300
						IPM (feed)	199	191	183	168	159	141	104
	8-9	Low alloy steel	32-38	0.05D	1.0D	SFM (vc)	1535	1690	1755	1610	1650	1740	1650
						IPT (fz)	.0014	.0015	.0017	.0023	.0026	.0020	.0021
						RPM	23450	20650	17900	12300	10100	8850	6300
						IPM (feed)	199	191	183	168	159	141	104
	11.1	High alloyed steel, and tool steel	35	0.05D	1.0D	SFM (vc)	1535	1690	1755	1610	1650	1740	1650
						IPT (fz)	.0014	.0015	.0017	.0023	.0026	.0020	.0021
						RPM	23450	20650	17900	12300	10100	8850	6300
						IPM (feed)	199	191	183	168	159	141	104
	11.2		44	0.05D	1.0D	SFM (vc)	1455	1605	1670	1545	1605	1690	1610
						IPT (fz)	.0014	.0015	.0016	.0021	.0025	.0019	.0022
						RPM	22200	19600	17000	11800	9800	8600	6150
						IPM (feed)	182	175	167	152	147	133	106
H	38.1	Hardened steel	45-49	0.05D	1.0D	SFM (vc)	1455	1605	1670	1545	1605	1690	1610
						IPT (fz)	.0014	.0015	.0016	.0021	.0025	.0019	.0022
						RPM	22200	19600	17000	11800	9800	8600	6150
						IPM (feed)	182	175	167	152	147	133	106
	38.2		50-55	0.05D	1.0D	SFM (vc)	990	1080	1115	990	990	1040	995
						IPT (fz)	.0020	.0022	.0024	.0031	.0037	.0029	.0033
						RPM	15100	13200	11350	7550	6050	5300	3800
						IPM (feed)	182	172	162	141	135	123	100
	39.1		56-60	0.03D	1.0D	SFM (vc)	835	910	935	820	825	865	825
						IPT (fz)	.0016	.0017	.0019	.0025	.0030	.0024	.0026
						RPM	12750	11150	9500	6250	5050	4400	3150
						IPM (feed)	123	115	108	93	92	83	65
	39.2		61-65	0.03D	1.0D	SFM (vc)	650	710	730	655	665	695	655
						IPT (fz)	.0013	.0014	.0015	.0020	.0021	.0015	.0016
						RPM	9900	8700	7450	5000	4050	3550	2500
						IPM (feed)	78	73	69	59	50	44	31
	39.3		66-70	0.03D	1.0D	SFM (vc)	495	540	560	495	490	520	495
						IPT (fz)	.0012	.0013	.0014	.0019	.0019	.0014	.0014
						RPM	7550	6600	5700	3800	3000	2650	1900
						IPM (feed)	54	51	49	43	34	30	22
	40	Chilled Cast Iron	42	0.05D	1.0D	SFM (vc)	1455	1605	1670	1545	1605	1690	1610
						IPT (fz)	.0014	.0015	.0016	.0021	.0025	.0019	.0022
						RPM	22200	19600	17000	11800	9800	8600	6150
						IPM (feed)	182	175	167	152	147	133	106
	41	Hardened Cast Iron	55	0.05D	1.0D	SFM (vc)	990	1080	1115	990	990	1040	995
						IPT (fz)	.0020	.0022	.0024	.0031	.0037	.0029	.0033
						RPM	15100	13200	11350	7550	6050	5300	3800
						IPM (feed)	182	172	162	141	135	123	100

Diameter (Ø) column headings: 1/4 to 1.

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



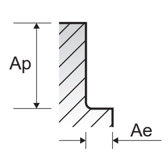
YG X5070 END MILLS RECOMMENDED CUTTING CONDITIONS

G859, G854 SERIES 4 FLUTE CORNER RADIUS - SIDE CUTTING

HIGH SPEED

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	Diameter (Ø) 2	3	4	5	6	8	10	12	16
P	5	Non-alloy steel	32	0.3D	0.1R	SFM (vc)	600	680	700	775	835	825	825	815	825
						IPT (fz)	.0051	.0072	.0101	.0118	.0135	.0182	.0228	.0276	.0364
						RPM	29000	22000	17000	15000	13500	10000	8000	6600	5000
						IPM (feed)	591	630	689	709	728	728	728	728	728
	8-9	Low alloy steel	32-38	0.3D	0.1R	SFM (vc)	600	680	700	775	835	825	825	815	825
						IPT (fz)	.0051	.0072	.0101	.0118	.0135	.0182	.0228	.0276	.0364
						RPM	29000	22000	17000	15000	13500	10000	8000	6600	5000
						IPM (feed)	591	630	689	709	728	728	728	728	728
	11.1	High alloyed steel, and tool steel	35	0.3D	0.1R	SFM (vc)	600	680	700	775	835	825	825	815	825
						IPT (fz)	.0051	.0072	.0101	.0118	.0135	.0182	.0228	.0276	.0364
						RPM	29000	22000	17000	15000	13500	10000	8000	6600	5000
						IPM (feed)	591	630	689	709	728	728	728	728	728
	11.2		44	0.3D	0.1R	SFM (vc)	455	525	535	565	650	660	660	655	645
						IPT (fz)	.0044	.0058	.0091	.0044	.0129	.0172	.0215	.0260	.0353
						RPM	22000	17000	13000	11000	10500	8000	6400	5300	3900
						IPM (feed)	386	394	472	192	543	551	551	551	551
H	38.1	Hardened steel	45-49	0.3D	0.1R	SFM (vc)	455	525	535	565	650	660	660	655	645
						IPT (fz)	.0044	.0058	.0091	.0044	.0129	.0172	.0215	.0260	.0353
						RPM	22000	17000	13000	11000	10500	8000	6400	5300	3900
						IPM (feed)	386	394	472	192	543	551	551	551	551
	38.2		50-55	0.3D	0.1R	SFM (vc)	310	385	455	515	555	560	555	555	545
						IPT (fz)	.0052	.0063	.0082	.0099	.0120	.0159	.0200	.0241	.0328
						RPM	15000	12500	11000	10000	9000	6800	5400	4500	3300
						IPM (feed)	309	315	362	394	433	433	433	433	433
	39.1		56-60	0.3D	0.05R	SFM (vc)	225	295	330	360	395	395	390	395	395
						IPT (fz)	.0040	.0048	.0068	.0084	.0098	.0138	.0176	.0216	.0288
						RPM	11000	9500	8000	7000	6400	4800	3800	3200	2400
						IPM (feed)	175	181	217	236	252	264	268	276	276
	39.2		61-65	0.3D	0.05R	SFM (vc)	180	215	230	255	280	280	280	280	270
						IPT (fz)	.0028	.0036	.0051	.0062	.0079	.0118	.0139	.0158	.0197
						RPM	8700	6900	5600	4900	4500	3400	2700	2250	1650
						IPM (feed)	97	98	114	122	142	161	150	142	130
	40	Chilled Cast Iron	42	0.3D	0.1R	SFM (vc)	455	525	535	565	650	660	660	655	645
						IPT (fz)	.0044	.0058	.0091	.0044	.0129	.0172	.0215	.0260	.0353
						RPM	22000	17000	13000	11000	10500	8000	6400	5300	3900
						IPM (feed)	386	394	472	192	543	551	551	551	551
	41	Hardened Cast Iron	55	0.3D	0.1R	SFM (vc)	310	385	455	515	555	560	555	555	545
						IPT (fz)	.0052	.0063	.0082	.0099	.0120	.0159	.0200	.0241	.0328
						RPM	15000	12500	11000	10000	9000	6800	5400	4500	3300
						IPM (feed)	309	315	362	394	433	433	433	433	433

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

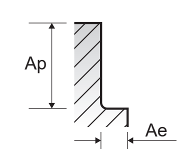
YG X5070 END MILLS RECOMMENDED CUTTING CONDITIONS

G859, G854 SERIES 4 FLUTE CORNER RADIUS - SIDE CUTTING

NORMAL SPEED

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	Diameter (Ø) 2	3	4	5	6	8	10	12	16
P	5	Non-alloy steel	32	0.5D	0.2R	SFM (vc)	280	295	330	335	360	360	360	360	365
						IPT (fz)	.0047	.0067	.0087	.0110	.0130	.0173	.0215	.0259	.0342
						RPM	13500	9550	7950	6500	5800	4350	3500	2900	2200
						IPM (feed)	256	256	276	287	301	301	301	301	301
	8-9	Low alloy steel	32-38	0.5D	0.2R	SFM (vc)	280	295	330	335	360	360	360	360	365
						IPT (fz)	.0047	.0067	.0087	.0110	.0130	.0173	.0215	.0259	.0342
						RPM	13500	9550	7950	6500	5800	4350	3500	2900	2200
						IPM (feed)	256	256	276	287	301	301	301	301	301
	11.1	High alloyed steel, and tool steel	35	0.5D	0.2R	SFM (vc)	280	295	330	335	360	360	360	360	365
						IPT (fz)	.0047	.0067	.0087	.0110	.0130	.0173	.0215	.0259	.0342
						RPM	13500	9550	7950	6500	5800	4350	3500	2900	2200
						IPM (feed)	256	256	276	287	301	301	301	301	301
	11.2		44	0.5D	0.2R	SFM (vc)	195	215	235	245	255	250	255	255	255
						IPT (fz)	.0039	.0059	.0079	.0098	.0118	.0158	.0197	.0235	.0311
						RPM	9550	6900	5750	4800	4100	3050	2450	2050	1550
						IPM (feed)	150	163	181	189	193	193	193	193	193
H	38.1	Hardened steel	45-49	0.5D	0.2R	SFM (vc)	195	215	235	245	255	250	255	255	255
						IPT (fz)	.0039	.0059	.0079	.0098	.0118	.0158	.0197	.0235	.0311
						RPM	9550	6900	5750	4800	4100	3050	2450	2050	1550
						IPM (feed)	150	163	181	189	193	193	193	193	193
	38.2		50-55	0.5D	0.2R	SFM (vc)	115	140	165	175	180	180	180	180	180
						IPT (fz)	.0040	.0059	.0079	.0093	.0119	.0157	.0197	.0238	.0314
						RPM	5500	4550	4000	3400	2900	2200	1750	1450	1100
						IPM (feed)	87	108	126	126	138	138	138	138	138
	39.1		56-60	0.5D	0.1R	SFM (vc)	65	90	105	115	115	115	115	115	115
						IPT (fz)	.0030	.0039	.0052	.0072	.0099	.0130	.0166	.0197	.0261
						RPM	3200	2850	2550	2200	1850	1400	1100	925	700
						IPM (feed)	39	45	53	63	73	73	73	73	73
	39.2		61-65	0.5D	0.1R	SFM (vc)	45	60	70	75	85	80	80	80	80
						IPT (fz)	.0025	.0032	.0040	.0047	.0057	.0078	.0097	.0117	.0155
						RPM	2200	1900	1750	1500	1350	995	795	665	500
						IPM (feed)	22	24	28	28	31	31	31	31	31
	40	Chilled Cast Iron	42	0.5D	0.2R	SFM (vc)	195	215	235	245	255	250	255	255	255
						IPT (fz)	.0039	.0059	.0079	.0098	.0118	.0158	.0197	.0235	.0311
						RPM	9550	6900	5750	4800	4100	3050	2450	2050	1550
						IPM (feed)	150	163	181	189	193	193	193	193	193
	41	Hardened Cast Iron	55	0.5D	0.2R	SFM (vc)	115	140	165	175	180	180	180	180	180
						IPT (fz)	.0040	.0059	.0079	.0093	.0119	.0157	.0197	.0238	.0314
						RPM	5500	4550	4000	3400	2900	2200	1750	1450	1100
						IPM (feed)	87	108	126	126	138	138	138	138	138

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



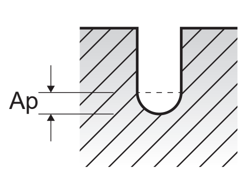
YG X5070 END MILLS

RECOMMENDED CUTTING CONDITIONS

G8A46, G8A54 SERIES — 2 FLUTE BALL NOSE - RIB PROCESSING

ISO	VDI 3323	Material Description	HRc	Parameter	Diameter (Ø) 0.2	0.3	0.4	0.5	0.6	0.8	1	1.2	1.5	2	3	4
P	5	Non-alloy steel	32	SFM (vc)	105	150~155	200~205	175~255	175~250	180~255	180~250	175~230	170~220	175~225	175~255	175~255
				IPT (fz)	.0001	.0002	.0003	.0002~.0005	.0003~.0006	.0004~.0008	.0005~.0010	.0006~.0011	.0008~.0014	.0010~.0019	.0018~.0034	.0022~.0045
				RPM	50000	48000~50000	48000~50000	34100~49500	28600~40700	22000~30800	17600~24200	14300~18700	11000~14300	8500~11000	5700~8200	4300~6200
				IPM (feed)	12~14	19~21	28~31	24~34	23~34	25~35	24~34	23~31	23~30	23~32	29~39	27~39
				Ap (mm)	0.006~0.016	0.010~0.017	0.013~0.032	0.007~0.028	0.007~0.034	0.016~0.064	0.008~0.080	0.024~0.032	0.031~0.048	0.024~0.160	0.064~0.240	0.080~0.320
	8-9	Low alloy steel	32-38	SFM (vc)	105	150~155	200~205	175~255	175~250	180~255	180~250	175~230	170~220	175~225	175~255	175~255
				IPT (fz)	.0001	.0002	.0003	.0002~.0005	.0003~.0006	.0004~.0008	.0005~.0010	.0006~.0011	.0008~.0014	.0010~.0019	.0018~.0034	.0022~.0045
				RPM	50000	48000~50000	48000~50000	34100~49500	28600~40700	22000~30800	17600~24200	14300~18700	11000~14300	8500~11000	5700~8200	4300~6200
				IPM (feed)	12~14	19~21	28~31	24~34	23~34	25~35	24~34	23~31	23~30	23~32	29~39	27~39
				Ap (mm)	0.006~0.016	0.010~0.017	0.013~0.032	0.007~0.028	0.007~0.034	0.016~0.064	0.008~0.080	0.024~0.032	0.031~0.048	0.024~0.160	0.064~0.240	0.080~0.320
	11.1	High alloyed steel, and tool steel	35	SFM (vc)	105	150~155	200~205	175~255	175~250	180~255	180~250	175~230	170~220	175~225	175~255	175~255
				IPT (fz)	.0001	.0002	.0003	.0002~.0005	.0003~.0006	.0004~.0008	.0005~.0010	.0006~.0011	.0008~.0014	.0010~.0019	.0018~.0034	.0022~.0045
				RPM	50000	48000~50000	48000~50000	34100~49500	28600~40700	22000~30800	17600~24200	14300~18700	11000~14300	8500~11000	5700~8200	4300~6200
				IPM (feed)	12~14	19~21	28~31	24~34	23~34	25~35	24~34	23~31	23~30	23~32	29~39	27~39
				Ap (mm)	0.006~0.016	0.010~0.017	0.013~0.032	0.007~0.028	0.007~0.034	0.016~0.064	0.008~0.080	0.024~0.032	0.031~0.048	0.024~0.160	0.064~0.240	0.080~0.320
	11.2		44	SFM (vc)	105	150~155	200~205	175~255	175~250	180~255	180~250	175~230	170~220	175~225	175~255	175~255
				IPT (fz)	.0001	.0002	.0003	.0002~.0005	.0003~.0006	.0004~.0008	.0005~.0010	.0006~.0011	.0008~.0014	.0010~.0019	.0018~.0034	.0022~.0045
				RPM	50000	48000~50000	48000~50000	34100~49500	28600~40700	22000~30800	17600~24200	14300~18700	11000~14300	8500~11000	5700~8200	4300~6200
				IPM (feed)	12~14	19~21	28~31	24~34	23~34	25~35	24~34	23~31	23~30	23~32	29~39	27~39
				Ap (mm)	0.006~0.016	0.010~0.017	0.013~0.032	0.007~0.028	0.007~0.034	0.016~0.064	0.008~0.080	0.024~0.032	0.031~0.048	0.024~0.160	0.064~0.240	0.080~0.320
H	38.1 - 38.2	Hardened steel	45-49 50-55	SFM (vc)	105	150~155	200~205	165~180	165~185	165~180	160~180	150~175	155~180	165~180	165~180	165~180
				IPT (fz)	.0001	.0002	.0002	.0003	.0003~.0004	.0004~.0006	.0005~.0007	.0007~.0009	.0008~.0011	.0011~.0013	.0020~.0025	.0025~.0030
				RPM	50000	48000~50000	48000~50000	31900~35200	26400~29700	19800~22000	15400~17600	12000~14000	10000~11500	7900~8800	5300~5800	3950~4400
				IPM (feed)	10~12	17~18	18~22	19~21	19~21	19~22	19~21	19~21	19~21	19~21	23~26	22~24
				Ap (mm)	0.005~0.013	0.008~0.014	0.011~0.026	0.005~0.023	0.006~0.028	0.013~0.052	0.007~0.065	0.020~0.026	0.025~0.039	0.020~0.130	0.052~0.195	0.065~0.026
	39.1 - 39.2		56-60 61-65	SFM (vc)	105	140~155	190~205	165~180	165~185	165~180	160~180	150~175	155~180	165~180	165~180	160~180
				IPT (fz)	.0001	.0002	.0002	.0002~.0003	.0003~.0004	.0004~.0005	.0005~.0006	.0006~.0008	.0007~.0010	.0010~.0012	.0019~.0023	.0024~.0029
				RPM	50000	46000~50000	46000~50000	31900~35200	26400~29700	19800~22000	15400~17600	12000~14000	10000~11500	7900~8800	5300~5800	3850~4400
				IPM (feed)	9~10	15~17	16~18	17~19	16~19	17~20	17~20	17~19	17~19	17~19	22~24	21~22
				Ap (mm)	0.005~0.012	0.007~0.013	0.010~0.024	0.005~0.021	0.006~0.025	0.012~0.048	0.006~0.060	0.018~0.024	0.023~0.036	0.018~0.120	0.048~0.120	0.060~0.240
	40	Chilled Cast Iron	42	SFM (vc)	105	150~155	200~205	175~255	175~250	180~255	180~250	175~230	170~220	175~225	175~255	175~255
				IPT (fz)	.0001	.0002	.0003	.0002~.0005	.0003~.0006	.0004~.0008	.0005~.0010	.0006~.0011	.0008~.0014	.0010~.0019	.0018~.0034	.0022~.0045
				RPM	50000	48000~50000	48000~50000	34100~49500	28600~40700	22000~30800	17600~24200	14300~18700	11000~14300	8500~11000	5700~8200	4300~6200
				IPM (feed)	12~14	19~21	28~31	24~34	23~34	25~35	24~34	23~31	23~30	23~32	29~39	27~39
				Ap (mm)	0.006~0.016	0.010~0.017	0.013~0.032	0.007~0.028	0.007~0.034	0.016~0.064	0.008~0.080	0.024~0.032	0.031~0.048	0.024~0.160	0.064~0.240	0.080~0.320
	41	Hardened Cast Iron	55	SFM (vc)	105	150~155	200~205	165~180	165~185	165~180	160~180	150~175	155~180	165~180	165~180	165~180
				IPT (fz)	.0001	.0002	.0002	.0003	.0003~.0004	.0004~.0006	.0005~.0007	.0007~.0009	.0008~.0011	.0011~.0013	.0020~.0025	.0025~.0030
				RPM	50000	48000~50000	48000~50000	31900~35200	26400~29700	19800~22000	15400~17600	12000~14000	10000~11500	7900~8800	5300~5800	3950~4400
				IPM (feed)	10~12	17~18	18~22	19~21	19~21	19~22	19~21	19~21	19~21	19~21	23~26	22~24
				Ap (mm)	0.005~0.013	0.008~0.014	0.011~0.026	0.005~0.023	0.006~0.028	0.013~0.052	0.007~0.065	0.020~0.026	0.025~0.039	0.020~0.130	0.052~0.195	0.065~0.026

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG X5070 END MILLS

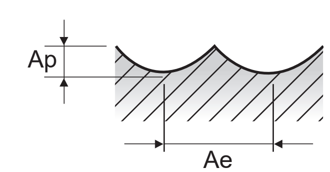
RECOMMENDED CUTTING CONDITIONS

G8A38, G8A28, G8A53 SERIES — 2 FLUTE BALL NOSE

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	Diameter (Ø) 0.2	0.3	0.4	0.5	0.6	0.8	1	1.2	1.5	2
P	5	Non-alloy steel	32	0.05D	0.02D	SFM (vc)	105	155	205	260	310	410	515	620	775	1025
						IPT (fz)	.0005	.0006	.0008	.0010	.0011	.0015	.0019	.0020	.0021	.0023
						RPM	50000	50000	50000	50000	50000	50000	50000	50000	50000	49700
						IPM (feed)	47	59	75	95	114	154	189	201	213	224
	8-9	Low alloy steel	32-38	0.05D	0.02D	SFM (vc)	105	155	205	260	310	410	515	620	775	1025
						IPT (fz)	.0005	.0006	.0008	.0010	.0011	.0015	.0019	.0020	.0021	.0023
						RPM	50000	50000	50000	50000	50000	50000	50000	50000	50000	49700
						IPM (feed)	47	59	75	95	114	154	189	201	213	224
	11.1	High alloyed steel, and tool steel	35	0.05D	0.02D	SFM (vc)	105	155	205	260	310	410	515	620	775	1025
						IPT (fz)	.0005	.0006	.0008	.0010	.0011	.0015	.0019	.0020	.0021	.0023
						RPM	50000	50000	50000	50000	50000	50000	50000	50000	50000	49700
						IPM (feed)	47	59	75	95	114	154	189	201	213	224
	11.2		44	0.05D	0.02D	SFM (vc)	105	155	205	260	310	410	515	595	740	985
						IPT (fz)	.0004	.0005	.0007	.0008	.0010	.0013	.0017	.0018	.0018	.0020
						RPM	50000	50000	50000	50000	50000	50000	50000	48000	48000	47800
						IPM (feed)	41	54	67	83	98	130	165	169	177	189
H	38.1	Hardened steel	45-49	0.05D	0.02D	SFM (vc)	105	155	205	260	310	410	515	595	740	985
						IPT (fz)	.0004	.0005	.0007	.0008	.0010	.0013	.0017	.0018	.0018	.0020
						RPM	50000	50000	50000	50000	50000	50000	50000	48000	48000	47800
						IPM (feed)	41	54	67	83	98	130	165	169	177	189
	38.2		50-55	0.05D	0.02D	SFM (vc)	95	140	185	230	280	370	465	530	665	825
						IPT (fz)	.0004	.0005	.0007	.0008	.0010	.0013	.0017	.0018	.0018	.0020
						RPM	45000	45000	45000	45000	45000	45000	45000	43000	43000	40000
						IPM (feed)	38	47	59	75	87	118	150	152	158	158
	39.1		56-60	0.05D	0.02D	SFM (vc)	80	125	165	205	245	330	410	470	570	720
						IPT (fz)	.0004	.0005	.0006	.0007	.0009	.0012	.0015	.0016	.0016	.0018
						RPM	40000	40000	40000	40000	40000	40000	40000	38000	37000	35000
						IPM (feed)	30	38	47	59	71	95	118	118	122	124
	39.2		61-65	0.05D	0.02D	SFM (vc)	70	110	145	180	215	290	360	420	510	660
						IPT (fz)	.0004	.0005	.0006	.0007	.0009	.0012	.0015	.0016	.0016	.0017
						RPM	35000	35000	35000	35000	35000	35000	35000	34000	33000	32000
						IPM (feed)	27	33	41	51	63	83	102	106	106	110
	39.3		66-70	0.05D	0.02D	SFM (vc)	65	95	130	160	195	260	360	380	460	585
						IPT (fz)	.0003	.0004	.0006	.0007	.0009	.0011	.0013	.0015	.0015	.0016
						RPM	31500	31500	31500	31500	31500	31500	35000	30600	29700	28500
						IPM (feed)	22	28	35	43	55	71	91	91	91	91
	40	Chilled Cast Iron	42	0.05D	0.02D	SFM (vc)	105	155	205	260	310	410	515	595	740	985
						IPT (fz)	.0004	.0005	.0007	.0008	.0010	.0013	.0017	.0018	.0018	.0020
						RPM	50000	50000	50000	50000	50000	50000	50000	48000	48000	47800
						IPM (feed)	41	54	67	83	98	130	165	169	177	189
	41	Hardened Cast Iron	55	0.05D	0.02D	SFM (vc)	95	140	185	230	280	370	465	530	665	825
						IPT (fz)	.0004	.0005	.0007	.0008	.0010	.0013	.0017	.0018	.0018	.0020
						RPM	45000	45000	45000	45000	45000	45000	45000	43000	43000	40000
						IPM (feed)	38	47	59	75	87	118	150	152	158	158

▶ NEXT PAGE

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X5070 END MILLS RECOMMENDED CUTTING CONDITIONS

G8A38, G8A28, G8A53 SERIES 2 FLUTE BALL NOSE

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	Diameter (Ø) 3	4	5	6	8	10	12	16	20
P	5	Non-alloy steel	32	0.05D	0.02D	SFM (vc)	1025	1025	960	860	915	960	860	920	915
						IPT (fz)	.0036	.0047	.0061	.0069	.0074	.0078	.0083	.0093	.0104
						RPM	33100	24900	18600	13900	11100	9300	6950	5570	4450
						IPM (feed)	236	236	228	191	165	146	116	104	93
	8-9	Low alloy steel	32-38	0.05D	0.02D	SFM (vc)	1025	1025	960	860	915	960	860	920	915
						IPT (fz)	.0036	.0047	.0061	.0069	.0074	.0078	.0083	.0093	.0104
						RPM	33100	24900	18600	13900	11100	9300	6950	5570	4450
						IPM (feed)	236	236	228	191	165	146	116	104	93
	11.1	High alloyed steel, and tool steel	35	0.05D	0.02D	SFM (vc)	1025	1025	960	860	915	960	860	920	915
						IPT (fz)	.0036	.0047	.0061	.0069	.0074	.0078	.0083	.0093	.0104
						RPM	33100	24900	18600	13900	11100	9300	6950	5570	4450
						IPM (feed)	236	236	228	191	165	146	116	104	93
	11.2		44	0.05D	0.02D	SFM (vc)	985	985	915	830	880	915	825	880	885
						IPT (fz)	.0033	.0044	.0054	.0060	.0064	.0069	.0073	.0081	.0090
						RPM	31800	23900	17800	13400	10700	8900	6680	5350	4300
						IPM (feed)	209	209	193	161	138	122	98	87	77
H	38.1	Hardened steel	45-49	0.05D	0.02D	SFM (vc)	985	985	915	830	880	915	825	880	885
						IPT (fz)	.0033	.0044	.0054	.0060	.0064	.0069	.0073	.0081	.0090
						RPM	31800	23900	17800	13400	10700	8900	6680	5350	4300
						IPM (feed)	209	209	193	161	138	122	98	87	77
	38.2		50-55	0.05D	0.02D	SFM (vc)	820	825	775	680	740	775	695	740	740
						IPT (fz)	.0030	.0040	.0049	.0055	.0059	.0063	.0067	.0074	.0082
						RPM	26500	20000	15000	11000	9000	7500	5600	4500	3600
						IPM (feed)	158	158	148	122	106	95	75	67	59
	39.1		56-60	0.05D	0.02D	SFM (vc)	725	720	695	620	660	680	620	660	660
						IPT (fz)	.0026	.0035	.0044	.0049	.0053	.0057	.0061	.0066	.0073
						RPM	23500	17500	13500	10000	8000	6600	5000	4000	3200
						IPM (feed)	124	124	120	98	85	75	61	53	47
	39.2		61-65	0.05D	0.02D	SFM (vc)	650	660	595	545	575	600	545	575	575
						IPT (fz)	.0026	.0034	.0043	.0048	.0052	.0056	.0056	.0056	.0057
						RPM	21000	16000	11500	8800	7000	5800	4400	3500	2800
						IPM (feed)	110	110	100	85	73	65	49	39	32
	39.3		66-70	0.05D	0.02D	SFM (vc)	585	600	540	495	535	545	495	530	525
						IPT (fz)	.0024	.0031	.0040	.0043	.0047	.0051	.0051	.0053	.0051
						RPM	19000	14500	10500	8000	6500	5300	4000	3200	2550
						IPM (feed)	91	91	83	69	61	54	41	34	26
	40	Chilled Cast Iron	42	0.05D	0.02D	SFM (vc)	985	985	915	830	880	915	825	880	885
						IPT (fz)	.0033	.0044	.0054	.0060	.0064	.0069	.0073	.0081	.0090
						RPM	31800	23900	17800	13400	10700	8900	6680	5350	4300
						IPM (feed)	209	209	193	161	138	122	98	87	77
	41	Hardened Cast Iron	55	0.05D	0.02D	SFM (vc)	820	825	775	680	740	775	695	740	740
						IPT (fz)	.0030	.0040	.0049	.0055	.0059	.0063	.0067	.0074	.0082
						RPM	26500	20000	15000	11000	9000	7500	5600	4500	3600
						IPM (feed)	158	158	148	122	106	95	75	67	59

SFM = Surface Feet per Minute
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Ap : Inch (Axial Depth of Cut)
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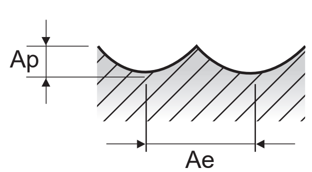

YG X5070 END MILLS RECOMMENDED CUTTING CONDITIONS

G8A59 SERIES 3 FLUTE BALL NOSE

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	Diameter (Ø) 3	4	5	6	8	10	12	16	20
P	5	Non-alloy steel	32	0.05D	0.02D	SFM (vc)	990	995	1030	1115	1115	1115	1120	1105	1115
						IPT (fz)	.0035	.0042	.0048	.0062	.0071	.0079	.0088	.0090	.0088
						RPM	32000	24080	20000	18000	13500	10800	9050	6700	5400
						IPM (feed)	339	303	285	337	289	257	240	181	142
	8-9	Low alloy steel	32-38	0.05D	0.02D	SFM (vc)	990	995	1030	1115	1115	1115	1120	1105	1115
						IPT (fz)	.0035	.0042	.0048	.0062	.0071	.0079	.0088	.0090	.0088
						RPM	32000	24080	20000	18000	13500	10800	9050	6700	5400
						IPM (feed)	339	303	285	337	289	257	240	181	142
	11.1 - 11.2	High alloyed steel, and tool steel	35-44	0.05D	0.02D	SFM (vc)	990	995	1030	1115	1115	1115	1120	1105	1115
						IPT (fz)	.0035	.0042	.0048	.0062	.0071	.0079	.0088	.0090	.0088
						RPM	32000	24080	20000	18000	13500	10800	9050	6700	5400
						IPM (feed)	339	303	285	337	289	257	240	181	142
H	38.1 - 38.2	Hardened steel	45-49 50-55	0.05D	0.02D	SFM (vc)	830	830	865	940	930	940	940	940	940
						IPT (fz)	.0028	.0035	.0043	.0054	.0061	.0066	.0074	.0075	.0075
						RPM	26840	20130	16780	15200	11300	9100	7590	5690	4550
						IPM (feed)	228	214	214	245	207	181	168	128	103
	39.1		56-60	0.05D	0.02D	SFM (vc)	615	615	640	755	760	760	760	760	755
						IPT (fz)	.0028	.0034	.0039	.0048	.0057	.0062	.0069	.0071	.0071
						RPM	19840	14880	12400	12200	9200	7350	6130	4600	3670
						IPM (feed)	169	153	145	177	157	136	126	98	78
	39.2		61-65	0.05D	0.02D	SFM (vc)	580	585	600	685	685	685	685	685	680
						IPT (fz)	.0028	.0034	.0039	.0045	.0053	.0057	.0057	.0057	.0058
						RPM	18680	14220	11670	11100	8320	6660	5530	4160	3300
						IPM (feed)	159	144	137	151	132	113	95	71	57
	39.3		66-70	0.05D	0.02D	SFM (vc)	395	395	410	470	470	470	470	470	470
						IPT (fz)	.0028	.0034	.0039	.0043	.0049	.0056	.0057	.0056	.0057
						RPM	12780	9580	8000	7590	5690	4550	3800	2850	2280
						IPM (feed)	109	98	93	97	84	77	65	48	39
	40	Chilled Cast Iron	42	0.05D	0.02D	SFM (vc)	990	995	1030	1115	1115	1115	1120	1105	1115
						IPT (fz)	.0035	.0042	.0048	.0062	.0071	.0079	.0088	.0090	.0088
						RPM	32000	24080	20000	18000	13500	10800	9050	6700	5400
						IPM (feed)	339	303	285	337	289	257	240	181	142
	41	Hardened Cast Iron	55	0.05D	0.02D	SFM (vc)	830	830	865	940	930	940	940	940	940
						IPT (fz)	.0028	.0035	.0043	.0054	.0061	.0066	.0074	.0075	.0075
						RPM	26840	20130	16780	15200	11300	9100	7590	5690	4550
						IPM (feed)	228	214	214	245	207	181	168	128	103

SFM = Surface Feet per Minute
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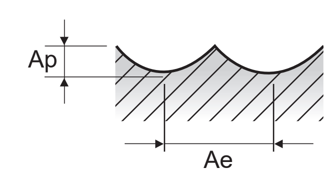

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X5070 END MILLS

RECOMMENDED CUTTING CONDITIONS

G8A36 SERIES — 2 FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	Diameter (Ø) 0.2	0.3	0.4	0.5	0.6	0.8	0.9	1	2
P	5	Non-alloy steel	32	1.0D	0.05D	SFM (vc)	105	155	205	260	310	410	455	495	685
						IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0005
						RPM	50000	50000	50000	50000	50000	50000	49000	48000	33300
						IPM (feed)	5	8	9	15	19	24	26	30	34
	8-9	Low alloy steel	32-38	1.0D	0.05D	SFM (vc)	105	155	205	260	310	410	455	495	685
						IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0005
						RPM	50000	50000	50000	50000	50000	50000	49000	48000	33300
						IPM (feed)	5	8	9	15	19	24	26	30	34
	11.1	High alloyed steel, and tool steel	35	1.0D	0.05D	SFM (vc)	105	155	205	260	310	410	455	495	685
						IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0005
						RPM	50000	50000	50000	50000	50000	50000	49000	48000	33300
						IPM (feed)	5	8	9	15	19	24	26	30	34
	11.2		44	1.0D	0.05D	SFM (vc)	95	140	185	230	280	330	360	390	535
						IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0003	.0005
						RPM	45000	45000	45000	45000	45000	40000	39000	38000	2600
						IPM (feed)	32	38	38	39		38	38	33	30
H	38.1	Hardened steel	45-49	1.0D	0.05D	SFM (vc)	95	140	185	230	280	330	360	390	535
						IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0003	.0005
						RPM	45000	45000	45000	45000	45000	40000	39000	38000	26000
						IPM (feed)	5	6	7	11	14	17	21	22	27
	38.2		50-55	1.0D	0.05D	SFM (vc)	80	125	165	205	245	245	260	265	360
						IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0005
						RPM	40000	40000	40000	40000	40000	30000	27800	25500	17500
						IPM (feed)	4	5	6	9	11	12	13	14	17
	39.1		56-60	1.0D	0.05D	SFM (vc)	70	100	135	170	185	205	210	210	300
						IPT (fz)	.0000	.0000	.0001	.0001	.0001	.0001	.0002	.0002	.0003
						RPM	33000	33000	33000	33000	30000	25000	22700	20500	14500
						IPM (feed)	2	3	4	6	6	7	8	9	10
	39.2		61-65	1.0D	0.05D	SFM (vc)	70	75	105	130	155	155	160	165	225
						IPT (fz)	.0000	.0000	.0000	.0001	.0001	.0001	.0001	.0002	.0003
						RPM	33000	25000	25000	25000	25000	19000	17500	16000	11000
						IPM (feed)	2	2	2	3	4	4	5	5	6
	39.3		66-70	1.0D	0.02D	SFM (vc)	55	60	80	105	125	125	130	130	195
						IPT (fz)	.0000	.0000	.0001	.0001	.0001	.0001	.0001	.0001	.0003
						RPM	26400	20000	20000	20000	20000	15200	14000	12500	9500
						IPM (feed)	1	1	2	2	3	3	4	3	5
	40	Chilled Cast Iron	42	1.0D	0.05D	SFM (vc)	95	140	185	230	280	330	360	390	535
						IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0003	.0005
						RPM	45000	45000	45000	45000	45000	40000	39000	38000	26000
						IPM (feed)	5	6	7	11	14	17	21	22	27
	41	Hardened Cast Iron	55	1.0D	0.05D	SFM (vc)	80	125	165	205	245	245	260	265	360
						IPT (fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0005
						RPM	40000	40000	40000	40000	40000	30000	27800	25500	17500
						IPM (feed)	4	5	6	9	11	12	13	14	17

SFM = Surface Feet per Minute
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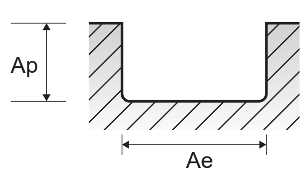

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
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ALU-POWER END MILLS
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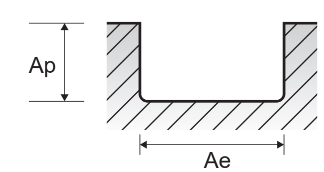
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X5070 END MILLS
RECOMMENDED CUTTING CONDITIONS
G8A36 SERIES — 2 FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	Diameter (Ø) 3	4	5	6	8	10	12	16	20
P	5	Non-alloy steel	32	1.0D	0.05D	SFM (vc)	675	690	810	810	815	805	820	810	805
						IPT (fz)	.0008	.0010	.0012	.0014	.0019	.0022	.0026	.0030	.0033
						RPM	21800	16700	15700	13100	9880	7800	6650	4900	3900
						IPM (feed)	34	35	39	37	37	34	34	29	26
	8-9	Low alloy steel	32-38	1.0D	0.05D	SFM (vc)	675	690	810	810	815	805	820	810	805
						IPT (fz)	.0008	.0010	.0012	.0014	.0019	.0022	.0026	.0030	.0033
						RPM	21800	16700	15700	13100	9880	7800	6650	4900	3900
						IPM (feed)	34	35	39	37	37	34	34	29	26
	11.1	High alloyed steel, and tool steel	35	1.0D	0.05D	SFM (vc)	675	690	810	810	815	805	820	810	805
						IPT (fz)	.0008	.0010	.0012	.0014	.0019	.0022	.0026	.0030	.0033
						RPM	21800	16700	15700	13100	9880	7800	6650	4900	3900
						IPM (feed)	34	35	39	37	37	34	34	29	26
	11.2		44	1.0D	0.05D	SFM (vc)	535	545	645	640	645	635	650	645	640
						IPT (fz)	.0008	.0011	.0013	.0014	.0018	.0022	.0026	.0029	.0034
						RPM	17300	13200	12500	10350	7800	6150	5250	3900	3100
						IPM (feed)	27	28	32	30	28	27	27	23	21
H	38.1	Hardened steel	45-49	1.0D	0.05D	SFM (vc)	535	545	645	640	645	635	650	645	640
						IPT (fz)	.0008	.0011	.0013	.0014	.0018	.0022	.0026	.0029	.0034
						RPM	17300	13200	12500	10350	7800	6150	5250	3900	3100
						IPM (feed)	27	28	32	30	28	27	27	23	21
	38.2		50-55	1.0D	0.05D	SFM (vc)	355	365	430	425	430	425	435	430	425
						IPT (fz)	.0007	.0010	.0012	.0014	.0017	.0020	.0023	.0027	.0034
						RPM	11500	8800	8300	6900	5200	4100	3500	2600	2050
						IPM (feed)	17	17	20	19	18	16	16	14	14
	39.1		56-60	1.0D	0.05D	SFM (vc)	295	295	330	330	330	330	330	330	330
						IPT (fz)	.0005	.0008	.0009	.0010	.0013	.0016	.0019	.0020	.0025
						RPM	9500	7200	6400	5300	4000	3200	2650	2000	1600
						IPM (feed)	10	11	11	11	10	10	10	8	8
	39.2		61-65	1.0D	0.05D	SFM (vc)	230	230	265	260	265	265	260	265	270
						IPT (fz)	.0004	.0006	.0007	.0008	.0011	.0012	.0014	.0016	.0019
						RPM	7500	5600	5100	4200	3200	2550	2100	1600	1300
						IPM (feed)	6	7	7	7	7	6	6	5	5
	39.3		66-70	1.0D	0.02D	SFM (vc)	200	195	230	230	230	225	230	230	225
						IPT (fz)	.0004	.0005	.0006	.0007	.0009	.0009	.0011	.0014	.0014
						RPM	6400	4750	4450	3700	2800	2200	1860	1400	1100
						IPM (feed)	5	5	5	5	5	4	4	4	3
	40	Chilled Cast Iron	42	1.0D	0.05D	SFM (vc)	535	545	645	640	645	635	650	645	640
						IPT (fz)	.0008	.0011	.0013	.0014	.0018	.0022	.0026	.0029	.0034
						RPM	17300	13200	12500	10350	7800	6150	5250	3900	3100
						IPM (feed)	27	28	32	30	28	27	27	23	21
	41	Hardened Cast Iron	55	1.0D	0.05D	SFM (vc)	355	365	430	425	430	425	435	430	425
						IPT (fz)	.0007	.0010	.0012	.0014	.0017	.0020	.0023	.0027	.0034
						RPM	11500	8800	8300	6900	5200	4100	3500	2600	2050
						IPM (feed)	17	17	20	19	18	16	16	14	14

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

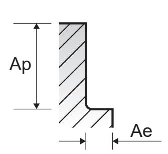


YG X5070 END MILLS RECOMMENDED CUTTING CONDITIONS

G8A36 SERIES 2 FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	Diameter (Ø) 1	2	3	4	5	6	8	10	12	16	20
P	5	Non-alloy steel	32	0.03D	1.0D	SFM (vc)	495	685	675	690	810	810	815	805	820	810	805
						IPT (fz)	.0004	.0007	.0011	.0015	.0018	.0020	.0026	.0030	.0035	.0042	.0047
						RPM	48000	33300	21800	16700	15700	13100	9880	7800	6650	4900	3900
						IPM (feed)	41	47	47	49	57	53	52	47	47	41	37
	8-9	Low alloy steel	32-38	0.03D	1.0D	SFM (vc)	495	685	675	690	810	810	815	805	820	810	805
						IPT (fz)	.0004	.0007	.0011	.0015	.0018	.0020	.0026	.0030	.0035	.0042	.0047
						RPM	48000	33300	21800	16700	15700	13100	9880	7800	6650	4900	3900
						IPM (feed)	41	47	47	49	57	53	52	47	47	41	37
	11.1	High alloyed steel, and tool steel	35	0.03D	1.0D	SFM (vc)	495	685	675	690	810	810	815	805	820	810	805
						IPT (fz)	.0004	.0007	.0011	.0015	.0018	.0020	.0026	.0030	.0035	.0042	.0047
						RPM	48000	33300	21800	16700	15700	13100	9880	7800	6650	4900	3900
						IPM (feed)	41	47	47	49	57	53	52	47	47	41	37
	11.2		44	0.03D	1.0D	SFM (vc)	390	535	535	545	645	640	645	635	650	645	640
						IPT (fz)	.0004	.0007	.0011	.0015	.0018	.0021	.0026	.0031	.0036	.0042	.0048
						RPM	38000	26000	17300	13200	12500	10350	7800	6150	5250	3900	3100
						IPM (feed)	32	38	38	39	45	43	41	38	38	33	30
H	38.1	Hardened steel	45-49	0.03D	1.0D	SFM (vc)	390	535	535	545	645	640	645	635	650	645	640
						IPT (fz)	.0004	.0007	.0011	.0015	.0018	.0021	.0026	.0031	.0036	.0042	.0048
						RPM	38000	26000	17300	13200	12500	10350	7800	6150	5250	3900	3100
						IPM (feed)	32	38	38	39	45	43	41	38	38	33	30
	38.2		50-55	0.03D	1.0D	SFM (vc)	265	360	355	365	430	425	430	425	435	430	425
						IPT (fz)	.0004	.0007	.0010	.0014	.0017	.0020	.0024	.0028	.0033	.0040	.0046
						RPM	25500	17500	11500	8800	8300	6900	5200	4100	3500	2600	2050
						IPM (feed)	20	24	24	25	28	27	25	23	23	21	19
	39.1		56-60	0.03D	1.0D	SFM (vc)	210	300	295	295	330	330	330	330	330	330	330
						IPT (fz)	.0003	.0005	.0008	.0010	.0013	.0015	.0018	.0020	.0025	.0030	.0034
						RPM	20500	14500	9500	7200	6400	5300	4000	3200	2650	2000	1600
						IPM (feed)	12	15	15	15	16	16	14	13	13	12	11
	39.2		61-65	0.03D	1.0D	SFM (vc)	165	225	230	230	265	260	265	265	260	265	270
						IPT (fz)	.0003	.0004	.0006	.0009	.0010	.0012	.0014	.0018	.0021	.0025	.0027
						RPM	16000	11000	7500	5600	5100	4200	3200	2550	2100	1600	1300
						IPM (feed)	8	9	9	10	10	10	9	9	9	8	7
	39.3		66-70	0.03D	1.0D	SFM (vc)	130	195	200	195	230	230	230	225	230	230	225
						IPT (fz)	.0002	.0004	.0005	.0007	.0009	.0009	.0013	.0014	.0016	.0021	.0018
						RPM	12500	9500	6400	4750	4450	3700	2800	2200	1860	1400	1100
						IPM (feed)	5	7	7	7	8	7	7	6	6	6	4
	40	Chilled Cast Iron	42	0.03D	1.0D	SFM (vc)	390	535	535	545	645	640	645	635	650	645	640
						IPT (fz)	.0004	.0007	.0011	.0015	.0018	.0021	.0026	.0031	.0036	.0042	.0048
						RPM	38000	26000	17300	13200	12500	10350	7800	6150	5250	3900	3100
						IPM (feed)	32	38	38	39	45	43	41	38	38	33	30
	41	Hardened Cast Iron	55	0.03D	1.0D	SFM (vc)	265	360	355	365	430	425	430	425	435	430	425
						IPT (fz)	.0004	.0007	.0010	.0014	.0017	.0020	.0024	.0028	.0033	.0040	.0046
						RPM	25500	17500	11500	8800	8300	6900	5200	4100	3500	2600	2050
						IPM (feed)	20	24	24	25	28	27	25	23	23	21	19

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

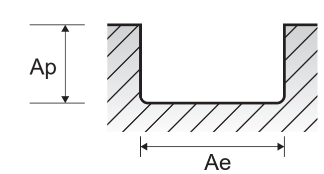


YG X5070 END MILLS RECOMMENDED CUTTING CONDITIONS

G8A50 SERIES 2 FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	Diameter (Ø) 0.3	0.4	0.5	0.6	0.8	1	1.2	1.5	2
P	5	Non-alloy steel	32	1.0D	0.05D	SFM (vc)	155	205	260	310	410	495	520	570	685
						IPT (fz)	.0001	.0001	.0002	.0002	.0002	.0003	.0004	.0004	.0005
						RPM	50000	50000	50000	50000	50000	48000	42000	37000	33300
						IPM (feed)	8	9	15	19	24	30	31	31	34
	8-9	Low alloy steel	32-38	1.0D	0.05D	SFM (vc)	155	205	260	310	410	495	520	570	685
						IPT (fz)	.0001	.0001	.0002	.0002	.0002	.0003	.0004	.0004	.0005
						RPM	50000	50000	50000	50000	50000	48000	42000	37000	33300
						IPM (feed)	8	9	15	19	24	30	31	31	34
	11.1	High alloyed steel, and tool steel	35	1.0D	0.05D	SFM (vc)	155	205	260	310	410	495	520	570	685
						IPT (fz)	.0001	.0001	.0002	.0002	.0002	.0003	.0004	.0004	.0005
						RPM	50000	50000	50000	50000	50000	48000	42000	37000	33300
						IPM (feed)	8	9	15	19	24	30	31	31	34
	11.2		44	1.0D	0.05D	SFM (vc)	140	185	230	280	330	390	420	470	535
						IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0003	.0004	.0004	.0005
						RPM	45000	45000	45000	45000	40000	38000	34000	30500	26000
						IPM (feed)	6	7	11	14	17	22	25	26	27
H	38.1	Hardened steel	45-49	1.0D	0.05D	SFM (vc)	140	185	230	280	330	390	420	470	535
						IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0003	.0004	.0004	.0005
						RPM	45000	45000	45000	45000	40000	38000	34000	30500	26000
						IPM (feed)	6	7	11	14	17	22	25	26	27
	38.2		50-55	1.0D	0.05D	SFM (vc)	125	165	205	245	245	265	280	325	360
						IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0003	.0003	.0004	.0005
						RPM	40000	40000	40000	40000	30000	25500	22500	21000	17500
						IPM (feed)	5	6	9	11	12	14	15	16	17
	39.1		56-60	1.0D	0.02D	SFM (vc)	100	135	170	185	205	210	245	265	300
						IPT (fz)	.0000	.0001	.0001	.0001	.0001	.0002	.0003	.0003	.0003
						RPM	33000	33000	33000	30000	25000	20500	20000	17000	14500
						IPM (feed)	3	4	6	6	7	9	10	10	10
	39.2		61-65	1.0D	0.02D	SFM (vc)	75	105	130	155	155	165	180	200	225
						IPT (fz)	.0000	.0000	.0001	.0001	.0001	.0002	.0002	.0002	.0003
						RPM	25000	25000	25000	25000	19000	16000	14500	13000	11000
						IPM (feed)	2	2	3	4	4	5	6	6	6
	40	Chilled Cast Iron	42	1.0D	0.05D	SFM (vc)	140	185	230	280	330	390	420	470	535
						IPT (fz)	.0001	.0001	.0001	.0002	.0002	.0003	.0004	.0004	.0005
						RPM	45000	45000	45000	45000	40000	38000	34000	30500	26000
						IPM (feed)	6	7	11	14	17	22	25	26	27
	41	Hardened Cast Iron	55	1.0D	0.05D	SFM (vc)	125	165	205	245	245	265	280	325	360
						IPT (fz)	.0001	.0001	.0001	.0001	.0002	.0003	.0003	.0004	.0005
						RPM	40000	40000	40000	40000	30000	25500	22500	21000	17500
						IPM (feed)	5	6	9	11	12	14	15	16	17

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



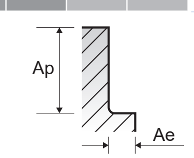
YG X5070 END MILLS RECOMMENDED CUTTING CONDITIONS

G8A47 SERIES 4 FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	1	2	3	4	5	6	8	10	12	16	20
P	5	Non-alloy steel	32	0.03D	1.0D	SFM (vc)	495	685	675	690	810	810	815	805	820	810	805
						IPT (fz)	.0002	.0004	.0006	.0009	.0010	.0012	.0015	.0018	.0021	.0024	.0026
						RPM	48000	33300	21800	16700	15700	13100	9880	7800	6650	4900	3900
						IPM (feed)	47	55	55	57	63	61	59	55	55	47	41
	8-9	Low alloy steel	32-38	0.03D	1.0D	SFM (vc)	495	685	675	690	810	810	815	805	820	810	805
						IPT (fz)	.0002	.0004	.0006	.0009	.0010	.0012	.0015	.0018	.0021	.0024	.0026
						RPM	48000	33300	21800	16700	15700	13100	9880	7800	6650	4900	3900
						IPM (feed)	47	55	55	57	63	61	59	55	55	47	41
	11.1	High alloyed steel, and tool steel	35	0.03D	1.0D	SFM (vc)	495	685	675	690	810	810	815	805	820	810	805
						IPT (fz)	.0002	.0004	.0006	.0009	.0010	.0012	.0015	.0018	.0021	.0024	.0026
						RPM	48000	33300	21800	16700	15700	13100	9880	7800	6650	4900	3900
						IPM (feed)	47	55	55	57	63	61	59	55	55	47	41
	11.2		44	0.03D	1.0D	SFM (vc)	390	535	535	545	645	640	645	635	650	645	640
						IPT (fz)	.0002	.0004	.0006	.0008	.0009	.0011	.0014	.0016	.0019	.0022	.0025
						RPM	38000	26000	17300	13200	12500	10350	7800	6150	5250	3900	3100
						IPM (feed)	33	39	39	41	47	44	43	40	40	35	31
H	38.1	Hardened steel	45-49	0.03D	1.0D	SFM (vc)	390	535	535	545	645	640	645	635	650	645	640
						IPT (fz)	.0002	.0004	.0006	.0008	.0009	.0011	.0014	.0016	.0019	.0022	.0025
						RPM	38000	26000	17300	13200	12500	10350	7800	6150	5250	3900	3100
						IPM (feed)	33	39	39	41	47	44	43	40	40	35	31
	38.2		50-55	0.03D	1.0D	SFM (vc)	265	360	355	365	430	425	430	425	435	430	425
						IPT (fz)	.0002	.0004	.0006	.0008	.0010	.0011	.0013	.0016	.0019	.0022	.0026
						RPM	25500	17500	11500	8800	8300	6900	5200	4100	3500	2600	2050
						IPM (feed)	22	27	27	28	32	30	28	27	27	23	21
	39.1		56-60	0.03D	1.0D	SFM (vc)	210	300	295	295	330	330	330	330	330	330	330
						IPT (fz)	.0002	.0003	.0004	.0006	.0007	.0008	.0010	.0012	.0014	.0016	.0019
						RPM	20500	14500	9500	7200	6400	5300	4000	3200	2650	2000	1600
						IPM (feed)	14	16	16	17	18	18	16	15	15	13	12
	39.2		61-65	0.03D	1.0D	SFM (vc)	165	225	230	230	265	260	265	265	260	265	270
						IPT (fz)	.0001	.0002	.0003	.0005	.0006	.0007	.0008	.0010	.0012	.0014	.0015
						RPM	16000	11000	7500	5600	5100	4200	3200	2550	2100	1600	1300
						IPM (feed)	9	10	10	11	12	11	10	10	10	9	8
	39.3		66-70	0.03D	1.0D	SFM (vc)	130	195	200	195	230	230	230	225	230	230	225
						IPT (fz)	.0001	.0002	.0003	.0004	.0005	.0005	.0007	.0008	.0009	.0011	.0014
						RPM	12500	9500	6400	4750	4450	3700	2800	2200	1860	1400	1100
						IPM (feed)	6	7	7	8	9	8	8	7	7	6	6
	40	Chilled Cast Iron	42	0.03D	1.0D	SFM (vc)	390	535	535	545	645	640	645	635	650	645	640
						IPT (fz)	.0002	.0004	.0006	.0008	.0009	.0011	.0014	.0016	.0019	.0022	.0025
						RPM	38000	26000	17300	13200	12500	10350	7800	6150	5250	3900	3100
						IPM (feed)	33	39	39	41	47	44	43	40	40	35	31
	41	Hardened Cast Iron	55	0.03D	1.0D	SFM (vc)	265	360	355	365	430	425	430	425	435	430	425
						IPT (fz)	.0002	.0004	.0006	.0008	.0010	.0011	.0013	.0016	.0019	.0022	.0026
						RPM	25500	17500	11500	8800	8300	6900	5200	4100	3500	2600	2050
						IPM (feed)	22	27	27	28	32	30	28	27	27	23	21

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



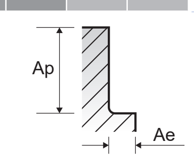
YG X5070 END MILLS RECOMMENDED CUTTING CONDITIONS

G8A37 SERIES 4 FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	1	2	3	4	5	6	8	10	12	16	20
P	5	Non-alloy steel	32	0.03D	1.0D	SFM (vc)	495	685	675	690	810	810	815	805	820	810	805
						IPT (fz)	.0003	.0005	.0008	.0011	.0013	.0015	.0019	.0022	.0026	.0030	.0033
						RPM	48000	33300	21800	16700	15700	13100	9880	7800	6650	4900	3900
						IPM (feed)	58	69	69	71	79	77	74	69	69	59	51
	8-9	Low alloy steel	32-38	0.03D	1.0D	SFM (vc)	495	685	675	690	810	810	815	805	820	810	805
						IPT (fz)	.0003	.0005	.0008	.0011	.0013	.0015	.0019	.0022	.0026	.0030	.0033
						RPM	48000	33300	21800	16700	15700	13100	9880	7800	6650	4900	3900
						IPM (feed)	58	69	69	71	79	77	74	69	69	59	51
	11.1	High alloyed steel, and tool steel	35	0.03D	1.0D	SFM (vc)	495	685	675	690	810	810	815	805	820	810	805
						IPT (fz)	.0003	.0005	.0008	.0011	.0013	.0015	.0019	.0022	.0026	.0030	.0033
						RPM	48000	33300	21800	16700	15700	13100	9880	7800	6650	4900	3900
						IPM (feed)	58	69	69	71	79	77	74	69	69	59	51
	11.2		44	0.03D	1.0D	SFM (vc)	390	535	535	545	645	640	645	635	650	645	640
						IPT (fz)	.0003	.0005	.0007	.0010	.0012	.0013	.0017	.0020	.0024	.0028	.0031
						RPM	38000	26000	17300	13200	12500	10350	7800	6150	5250	3900	3100
						IPM (feed)	41	49	49	51	59	55	53	50	50	43	38
H	38.1	Hardened steel	45-49	0.03D	1.0D	SFM (vc)	390	535	535	545	645	640	645	635	650	645	640
						IPT (fz)	.0003	.0005	.0007	.0010	.0012	.0013	.0017	.0020	.0024	.0028	.0031
						RPM	38000	26000	17300	13200	12500	10350	7800	6150	5250	3900	3100
						IPM (feed)	41	49	49	51	59	55	53	50	50	43	38
	38.2		50-55	0.03D	1.0D	SFM (vc)	265	360	355	365	430	425	430	425	435	430	425
						IPT (fz)	.0003	.0005	.0007	.0010	.0012	.0013	.0017	.0020	.0024	.0028	.0032
						RPM	25500	17500	11500	8800	8300	6900	5200	4100	3500	2600	2050
						IPM (feed)	28	33	33	35	39	37	35	33	33	29	26
	39.1		56-60	0.03D	1.0D	SFM (vc)	210	300	295	295	330	330	330	330	330	330	330
						IPT (fz)	.0002	.0004	.0006	.0007	.0009	.0010	.0013	.0015	.0018	.0021	.0023
						RPM	20500	14500	9500	7200	6400	5300	4000	3200	2650	2000	1600
						IPM (feed)	17	21	21	21	23	22	21	19	19	17	15
	39.2		61-65	0.03D	1.0D	SFM (vc)	165	225	230	230	265	260	265	265	260	265	270
						IPT (fz)	.0002	.0003	.0004	.0006	.0007	.0008	.0010	.0012	.0014	.0017	.0019
						RPM	16000	11000	7500	5600	5100	4200	3200	2550	2100	1600	1300
						IPM (feed)	11	13	13	13	15	14	13	12	12	11	10
	39.3		66-70	0.03D	1.0D	SFM (vc)	130	195	200	195	230	230	230	225	230	230	225
						IPT (fz)	.0001	.0002	.0004	.0005	.0006	.0007	.0009	.0010	.0012	.0014	.0016
						RPM	12500	9500	6400	4750	4450	3700	2800	2200	1860	1400	1100
						IPM (feed)	7	9	9	10	11	10	10	9	9	8	7
	40	Chilled Cast Iron	42	0.03D	1.0D	SFM (vc)	390	535	535	545	645	640	645	635	650	645	640
						IPT (fz)	.0003	.0005	.0007	.0010	.0012	.0013	.0017	.0020	.0024	.0028	.0031
						RPM	38000	26000	17300	13200	12500	10350	7800	6150	5250	3900	3100
						IPM (feed)	41	49	49	51	59	55	53	50	50	43	38
	41	Hardened Cast Iron	55	0.03D	1.0D	SFM (vc)	265	360	355	365	430	425	430	425	435	430	425
						IPT (fz)	.0003	.0005	.0007	.0010	.0012	.0013	.0017	.0020	.0024	.0028	.0032
						RPM	25500	17500	11500	8800	8300	6900	5200	4100	3500	2600	2050
						IPM (feed)	28	33	33	35	39	37	35	33	33	29	26

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

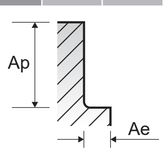
X5070 END MILLS

RECOMMENDED CUTTING CONDITIONS

G8A39 SERIES — 6 FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	HRc	Ae	Ap	Parameter	Ø 6	Ø 8	Ø 10	Ø 12	Ø 16	Ø 20
P	5	Non-alloy steel	32	0.05D	1.0D	SFM (vc)	1535	1650	1650	1610	1650	1650
						IPT (fz)	.0014	.0018	.0020	.0023	.0026	.0028
						RPM	24800	20000	16000	13000	10000	8000
						IPM (feed)	211	217	193	177	158	132
P	8-9	Low alloy steel	32-38	0.05D	1.0D	SFM (vc)	1535	1650	1650	1610	1650	1650
						IPT (fz)	.0014	.0018	.0020	.0023	.0026	.0028
						RPM	24800	20000	16000	13000	10000	8000
						IPM (feed)	211	217	193	177	158	132
P	11.1	High alloyed steel, and tool steel	35	0.05D	1.0D	SFM (vc)	1535	1650	1650	1610	1650	1650
						IPT (fz)	.0014	.0018	.0020	.0023	.0026	.0028
						RPM	24800	20000	16000	13000	10000	8000
						IPM (feed)	211	217	193	177	158	132
P	11.2	High alloyed steel, and tool steel	44	0.05D	1.0D	SFM (vc)	1455	1565	1595	1545	1600	1610
						IPT (fz)	.0014	.0017	.0019	.0021	.0025	.0029
						RPM	23500	19000	15500	12500	9700	7800
						IPM (feed)	193	197	177	161	146	134
H	38.1	Hardened steel	45-49	0.05D	1.0D	SFM (vc)	1455	1565	1595	1545	1600	1610
						IPT (fz)	.0014	.0017	.0019	.0021	.0025	.0029
						RPM	23500	19000	15500	12500	9700	7800
						IPM (feed)	193	197	177	161	146	134
H	38.2	Hardened steel	50-55	0.05D	1.0D	SFM (vc)	990	990	980	990	990	990
						IPT (fz)	.0020	.0025	.0028	.0031	.0037	.0044
						RPM	16000	12000	9500	8000	6000	4800
						IPM (feed)	193	181	161	150	134	126
H	39.1	Hardened steel	56-60	0.03D	1.0D	SFM (vc)	835	825	825	815	825	825
						IPT (fz)	.0016	.0020	.0024	.0025	.0030	.0035
						RPM	13500	10000	8000	6600	5000	4000
						IPM (feed)	130	122	114	98	91	83
H	39.2	Hardened steel	61-65	0.03D	1.0D	SFM (vc)	650	660	660	655	660	660
						IPT (fz)	.0013	.0016	.0018	.0020	.0020	.0021
						RPM	10500	8000	6400	5300	4000	3200
						IPM (feed)	83	79	71	63	49	40
H	39.3	Hardened steel	66-70	0.03D	1.0D	SFM (vc)	495	495	495	495	495	495
						IPT (fz)	.0012	.0015	.0018	.0019	.0019	.0019
						RPM	8000	6000	4800	4000	3000	2400
						IPM (feed)	57	55	51	45	34	27
H	40	Chilled Cast Iron	42	0.05D	1.0D	SFM (vc)	1455	1565	1595	1545	1600	1610
						IPT (fz)	.0014	.0017	.0019	.0021	.0025	.0029
						RPM	23500	19000	15500	12500	9700	7800
						IPM (feed)	193	197	177	161	146	134
H	41	Hardened Cast Iron	55	0.05D	1.0D	SFM (vc)	990	990	980	990	990	990
						IPT (fz)	.0020	.0025	.0028	.0031	.0037	.0044
						RPM	16000	12000	9500	8000	6000	4800
						IPM (feed)	193	181	161	150	134	126

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



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- High Speed Cutting for Pre-Hardened Steels up to HRc55

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p. C268

Inch

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	GMF15	GMF16	GMF17	GMF18	GMF19
			FLUTE			2	2	4	2	2
			HELIX ANGLE			30°	30°	30°	30°	30°
			CUTTING EDGE SHAPE			BALL NOSE	BALL NOSE	BALL NOSE	CORNER RADIUS	CORNER RADIUS
			SIZE MIN			R.002	R.004	R1/16	D3/64	D.008
			SIZE MAX			R3/8	R1/4	R1/4	D3/4	D3/4
			PAGE			C130	C132	C135	C136	C139
							NECK			NECK
						Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating
P	1	Non-alloy steel	About 0.15% C Annealed	125		○	○	○	○	○
	2		About 0.45% C Annealed	190	13	○	○	○	○	○
	3		About 0.45% C Quenched & Tempered	250	25	○	○	○	◎	◎
	4		About 0.75% C Annealed	270	28	◎	◎	◎	◎	◎
	5		About 0.75% C Quenched & Tempered	300	32	◎	◎	◎	◎	◎
	6	Low alloy steel	Annealed	180	10	○	○	○	○	○
	7		Quenched & Tempered	275	29	◎	◎	◎	◎	◎
	8		Quenched & Tempered	300	32	◎	◎	◎	◎	◎
	9		Quenched & Tempered	350	38	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel	Annealed	200	15	○	○	○	○	○
	11		Quenched & Tempered	325	35	◎	◎	◎	◎	◎
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15					
	13		Martensitic Quenched & Tempered	240	23					
	14		Austenitic	180	10					
K	15	Grey cast iron	Pearlitic / ferritic	180	10	○	○	○	○	○
	16		Pearlitic (Martensitic)	260	26	○	○	○	○	○
	17	Nodular cast iron	Ferritic	160	3	○	○	○	○	○
	18		Pearlitic	250	25	○	○	○	○	○
	19	Malleable cast iron	Ferritic	130		○	○	○	○	○
	20		Pearlitic	230	21	○	○	○	○	○
N	21	Aluminum-wrought alloy	Not Curable	60						
	22		Curable Hardened	100						
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75						
	24		≤ 12% Si, Curable Hardened	90						
	25		> 12% Si, Not Curable	130						
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110						
	27		CuZn, CuSnZn (Brass)	90						
	28		CuSn, lead-free copper and electrolytic copper	100						
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic							
	30		Rubber, Wood, etc.							
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15					
	32		Fe Based Cured	280	30					
	33		Ni or Co Based Annealed	250	25					
	34		Ni or Co Based Cured	350	38					
	35		Ni or Co Based Cast	320	34					
	36	Titanium Alloys	Pure Titanium	400 Rm						
	37		Alpha + Beta Alloys Hardened	1050 Rm						
H	38	Hardened steel	Hardened	550	55	○	○	○	○	○
	39		Hardened	630	60					
	40	Chilled Cast Iron	Cast	400	42	◎	◎	◎	◎	◎
	41	Hardened Cast Iron	Hardened	550	55	○	○	○	○	○

Inch

SERIES	GMF20	GMF21	GMF22	GMF23	GMF24	GMF25	GMF26	GMF27	GMF28	GMF29	G907 G928	G908 G929	G909 G930
FLUTE	4	4	2	2	2	4	4	4	4	6	4&5	4&5	4&5
HELIX ANGLE	27°/30° (MULTIPLE HELIX)	27°/30° (MULTIPLE HELIX)	30°	30°	30°	27°/30° (MULTIPLE HELIX)	35°/38° (MULTIPLE HELIX)	30°	30°	45°	4 Flute : 44°/45° 5 Flute : 44°/44.5°/45°	4 Flute : 44°/45° 5 Flute : 44°/44.5°/45°	4 Flute : 44°/45° 5 Flute : 44°/44.5°/45°
CUTTING EDGE SHAPE	CORNER RADIUS	CORNER RADIUS	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	CORNER RADIUS ROUGHING	CORNER RADIUS ROUGHING	CORNER RADIUS ROUGHING
SIZE MIN	D3/64	D3/64	D.008	D.004	D3/64	D3/64	D3/64	D3/64	D3/64	D1/4	D1/4	D1/4	D1/4
SIZE MAX	D3/4	D3/4	D1/2	D.120	D3/4	D3/4	D3/4	D1	D1/2	D3/4	D1	D1	D3/4
PAGE	C145	C147	C152	C155	C158	C161	C162	C163	C166	C168	C169	C170	C171
		NECK	NECK		LONG LENGTH			LONG LENGTH	NECK		STUB LENGTH	REGULAR LENGTH	EXTENDED REACH
	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	X-Coating	X-Coating	X-Coating
											X-SPEED ROUGHER	X-SPEED ROUGHER	X-SPEED ROUGHER
1 P	○	○	○	○	○	○	○	○	○	○	○	○	○
2	○	◎	○	○	○	○	○	○	○	○	○	○	○
3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
4	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
5	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
6	○	○	○	○	○	○	○	○	○	○	○	○	○
7	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
8	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
9	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
10	○	○	○	○	○	○	○	○	○	○	○	○	○
11	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
12 M			○						○		○	○	○
13			○						○		○	○	○
14			○	○		○	○		○		○	○	○
15 K	○	○	○	○	○	○	○	○	○	○	◎	◎	◎
16	○	○	○	○	○	○	○	○	○	○	◎	◎	◎
17	○	○	○	○	○	○	○	○	○	○	◎	◎	◎
18	○	○	○	○	○	○	○	○	○	○	◎	◎	◎
19	○	○	○	○	○	○	○	○	○	○	◎	◎	◎
20	○	○	○	○	○	○	○	○	○	○	◎	◎	◎
21 N													
22													
23													
24													
25													
26											○	○	○
27											○	○	○
28											○	○	○
29													
30													
31 S													
32													
33													
34													
35													
36													
37													
38 H	○	○	○	○	○	○	○	○	○	○			
39													
40	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
41	○	○	○	○	○	○	○	○	○	○			

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
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STANDARD COBALT & HSS
TECHNICAL DATA

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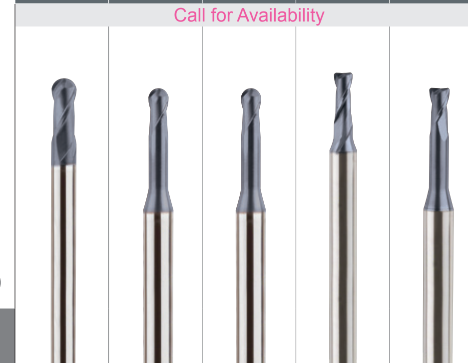
◎ : Excellent ○ : Good

Recommended cutting conditions : p. C268

Metric					
SERIES	SEMD98	SEM846	SEM846	SEMD99	SEME61
FLUTE	2	2	2	2	2
HELIX ANGLE	30°	30°	30°	30°	30°
CUTTING EDGE SHAPE	BALL NOSE	BALL NOSE	BALL NOSE	CORNER RADIUS	CORNER RADIUS
SIZE MIN	R0.05	R0.05	R0.25	D0.2	D0.2
SIZE MAX	R12.5	R6.0	R1.0	D20.0	D20.0
PAGE	C172	C177	C185	C188	C194
		LONG NECK	LONG NECK (6mm Shank)		LONG NECK
	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating

Call for Availability



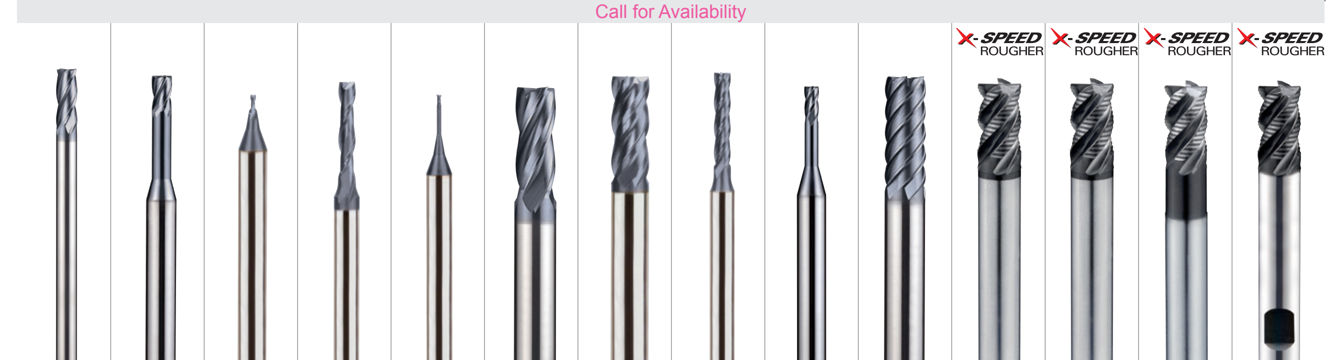
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	SEMD98	SEM846	SEM846	SEMD99	SEME61
P	1	Non-alloy steel	About 0.15% C Annealed	125		○	○	○	○	○
	2		About 0.45% C Annealed	190	13	○	○	○	○	○
	3		About 0.45% C Quenched & Tempered	250	25	○	○	○	◎	◎
	4		About 0.75% C Annealed	270	28	◎	◎	◎	◎	◎
	5		About 0.75% C Quenched & Tempered	300	32	◎	◎	◎	◎	◎
	6	Low alloy steel	Annealed	180	10	○	○	○	○	○
	7		Quenched & Tempered	275	29	◎	◎	◎	◎	◎
	8		Quenched & Tempered	300	32	◎	◎	◎	◎	◎
	9		Quenched & Tempered	350	38	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel	Annealed	200	15	○	○	○	○	○
	11		Quenched & Tempered	325	35	◎	◎	◎	◎	◎
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15					
	13		Martensitic Quenched & Tempered	240	23					
	14		Austenitic	180	10					
K	15	Grey cast iron	Pearlitic / ferritic	180	10	○	○	○	○	○
	16		Pearlitic (Martensitic)	260	26	○	○	○	○	○
	17	Nodular cast iron	Ferritic	160	3	○	○	○	○	○
	18		Pearlitic	250	25	○	○	○	○	○
	19	Malleable cast iron	Ferritic	130		○	○	○	○	○
	20		Pearlitic	230	21	○	○	○	○	○
N	21	Aluminum-wrought alloy	Not Curable	60						
	22		Curable Hardened	100						
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75						
	24		≤ 12% Si, Curable Hardened	90						
	25		> 12% Si, Not Curable	130						
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110						
	27		CuZn, CuSnZn (Brass)	90						
	28		CuSn, lead-free copper and electrolytic copper	100						
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic							
	30		Rubber, Wood, etc.							
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15					
	32		Cured	280	30					
	33		Ni or Co Based Annealed	250	25					
	34		Cured	350	38					
	35		Cast	320	34					
	36	Titanium Alloys	Pure Titanium	400 Rm						
	37		Alpha + Beta Alloys Hardened	1050 Rm						
H	38	Hardened steel	Hardened	550	55	○	○	○	○	○
	39		Hardened	630	60					
	40	Chilled Cast Iron	Cast	400	42	◎	◎	◎	◎	◎
	41	Hardened Cast Iron	Hardened	550	55	○	○	○	○	○

YG YG-1 CO., LTD.

Metric														
SERIES	SEME01	SEME64	SEME35	SEME70	SEM845	SEME36	SEME71	SEME72	SEME73	SEME75	G9D75 G9D67	G9D76 G9D68	G9D77 G9D69	GAE53
FLUTE	4	4	2	2	2	4	4	4	4	6	4&5	4&5	4&5	4&5
HELIX ANGLE	27°/30° (MULTIPLE HELIX)	27°/30° (MULTIPLE HELIX)	30°	30°	30°	27°/30°	35°/38°	30°	30°	45°	4 Flute : 44°/45° 5 Flute : 44°/44.5°/45°	4 Flute : 44°/45° 5 Flute : 44°/44.5°/45°	4 Flute : 44°/45° 5 Flute : 44°/44.5°/45°	4 Flute : 44°/45° 5 Flute : 44°/44.5°/45°
CUTTING EDGE SHAPE	CORNER RADIUS	CORNER RADIUS	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	CORNER RADIUS ROUGHING	CORNER RADIUS ROUGHING	CORNER RADIUS ROUGHING	CORNER RADIUS ROUGHING
SIZE MIN	D1.0	D1.0	D0.1	D1.0	D0.1	D0.8	D1.0	D1.0	D1.0	D6.0	D6.0	D6.0	D6.0	D6.0
SIZE MAX	D20.0	D20.0	D25.0	D25.0	D12.0	D25.0	D20.0	D25.0	D12.0	D20.0	D20.0	D20.0	D20.0	D20.0
PAGE	C210	C216	C229	C234	C239	C247	C249	C252	C257	C262	C264	C265	C266	C267
		LONG NECK		LONG LENGTH	LONG NECK			LONG LENGTH	LONG NECK		SHORT LENGTH	LONG LENGTH	LONG REACH	SHORT LENGTH
	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	X-Coating	X-Coating	X-Coating	X-Coating

Call for Availability

X-SPEED ROUGHER X-SPEED ROUGHER X-SPEED ROUGHER X-SPEED ROUGHER



SEME01	SEME64	SEME35	SEME70	SEM845	SEME36	SEME71	SEME72	SEME73	SEME75	G9D75 G9D67	G9D76 G9D68	G9D77 G9D69	GAE53	VDI 3323	ISO
○	○	○	○	○	○	○	○	○	○	○	○	○	○	1	P
○	◎	○	○	○	○	○	○	○	○	○	○	○	○	2	
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	3	
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	4	
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	5	
○	○	○	○	○	○	○	○	○	○	○	○	○	○	6	
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	7	
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YG YG-1 CO., LTD.

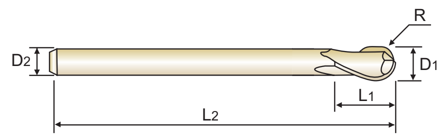
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **GMF15** SERIES

CARBIDE, 2 FLUTE BALL NOSE

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Unique ball nose geometry with superior cutting edges result in decreased cutting forces.
- ▶ Excellent performance when cutting steels, up to HRc55



CARBIDE | 2 | 30° | R ±.0002 (R≤1/8) | R ±.0004 (R>1/8) | PLAIN | p.C268-C269

Unit : Inch

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF15901	R.002	.004	3/16	.008	1-1/2
GMF15902	R.004	.008	3/16	1/64	1-1/2
GMF15903	R.006	.012	3/16	1/32	1-1/2
GMF15904	R.075	.015	3/16	1/32	1-1/2
GMF15905	R.010	.020	3/16	3/64	1-1/2
GMF15906	R.012	.024	3/16	3/64	1-1/2
GMF15907	R.014	.028	3/16	1/16	1-1/2
GMF15908	R.0155	.031	3/16	1/16	1-1/2
GMF15909	R.0175	.035	3/16	5/64	1-1/2
GMF15003	R.0234	3/64	3/16	3/32	2
GMF15910	R.0234	3/64	1/4	3/32	2
GMF15911	R.0234	3/64	1/4	3/32	2-3/4
GMF15004	R1/32	1/16	3/16	5/32	2
GMF15912	R1/32	1/16	1/4	5/32	2
GMF15913	R1/32	1/16	1/4	5/32	2-3/4
GMF15005	R.0391	5/64	1/4	1/8	1-1/2
GMF15914	R.0391	5/64	3/16	3/16	2
GMF15915	R.0391	5/64	1/4	3/16	2
GMF15916	R.0391	5/64	1/4	3/16	3-1/8
GMF15006	R3/64	3/32	1/4	1/4	2-3/8
GMF15917	R3/64	3/32	1/4	1/4	3-1/8
GMF15008	R1/16	1/8	1/4	3/16	1-1/2
GMF15918	R1/16	1/8	3/16	1/4	2-3/8
GMF15919	R1/16	1/8	1/4	1/4	2-3/8
GMF15920	R1/16	1/8	1/4	1/4	3-1/8
GMF15921	R1/16	1/8	1/4	1/4	4
GMF15012	R3/32	3/16	1/4	1/4	2
GMF15922	R3/32	3/16	3/16	5/16	2-3/4
GMF15923	R3/32	3/16	1/4	5/16	2-3/4
GMF15924	R3/32	3/16	3/16	5/16	4
GMF15925	R3/32	3/16	1/4	5/16	4
GMF15926	R3/32	3/16	1/4	5/16	4-1/2

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **GMF15** SERIES

CARBIDE, 2 FLUTE BALL NOSE

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Unique ball nose geometry with superior cutting edges result in decreased cutting forces.
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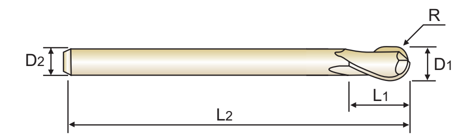

CARBIDE | 2 | 30° | R ±.0002 (R≤1/8) | R ±.0004 (R>1/8) | PLAIN | p.C268-C269

Unit : Inch

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF15013	R.102	13/64	1/4	5/16	2-3/8
GMF15927	R.102	13/64	1/4	3/8	3-1/8
GMF15016	R1/8	1/4	1/4	3/8	2
GMF15928	R1/8	1/4	1/4	3/8	3-1/8
GMF15929	R1/8	1/4	1/4	1/2	3-1/2
GMF15930	R1/8	1/4	1/4	1/2	5
GMF15018	R9/64	9/32	5/16	9/16	3-1/2
GMF15020	R5/32	5/16	5/16	1/2	2
GMF15931	R5/32	5/16	5/16	1/2	3-1/2
GMF15932	R5/32	5/16	5/16	9/16	4
GMF15933	R5/32	5/16	5/16	9/16	6
GMF15024	R3/16	3/8	3/8	5/8	2-3/8
GMF15934	R3/16	3/8	3/8	5/8	3-1/2
GMF15935	R3/16	3/8	3/8	11/16	4
GMF15936	R3/16	3/8	3/8	11/16	5
GMF15937	R3/16	3/8	3/8	11/16	6
GMF15938	R3/16	3/8	3/8	11/16	7
GMF15032	R1/4	1/2	1/2	11/16	3-1/8
GMF15939	R1/4	1/2	1/2	11/16	4
GMF15940	R1/4	1/2	1/2	7/8	4-1/4
GMF15941	R1/4	1/2	1/2	7/8	6
GMF15942	R1/4	1/2	1/2	7/8	8
GMF15036	R9/32	9/16	9/16	1	4
GMF15040	R5/16	5/8	5/8	1	4
GMF15943	R5/16	5/8	5/8	1-3/16	6
GMF15048	R3/8	3/4	3/4	1-3/16	4
GMF15944	R3/8	3/4	3/4	1-1/2	6

Size	Radius Tolerance (Inch)	Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
up to Ø1/4	±.0002	0~-.0005	h5
over Ø1/4	±.0004	0~-.0006	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **GMF16** SERIES

CARBIDE, 2 FLUTE BALL NOSE WITH NECK

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- Unique ball nose geometry with superior cutting edges result in decreased cutting forces.
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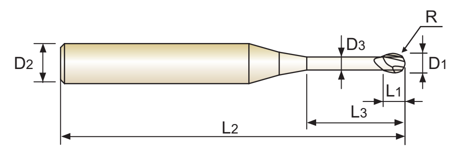

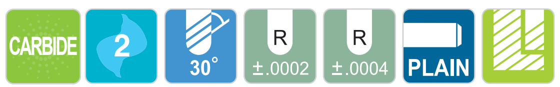

p.C270-C275

R≤1/8 R>1/8

Unit : Inch

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF16901	R.004	.008	3/16	.008	1/64	1-1/2	.006
GMF16902	R.004	.008	3/16	.008	3/64	1-1/2	.006
GMF16903	R.006	.012	3/16	.010	3/64	1-1/2	.010
GMF16904	R.006	.012	3/16	.010	5/64	1-1/2	.010
GMF16905	R.006	.012	3/16	.010	1/8	1-1/2	.010
GMF16906	R.0075	.015	3/16	1/64	3/64	1-1/2	.013
GMF16907	R.0075	.015	3/16	1/64	5/64	1-1/2	.013
GMF16908	R.0075	.015	3/16	1/64	1/8	1-1/2	.013
GMF16909	R.0075	.015	3/16	1/64	5/32	1-1/2	.013
GMF16910	R.010	.020	3/16	1/64	3/64	1-3/4	.018
GMF16911	R.010	.020	3/16	1/64	5/64	1-3/4	.018
GMF16912	R.010	.020	3/16	1/64	1/8	1-3/4	.018
GMF16913	R.010	.020	3/16	1/64	5/32	1-3/4	.018
GMF16914	R.010	.020	3/16	1/64	3/16	1-3/4	.018
GMF16915	R.010	.020	3/16	1/64	1/4	1-3/4	.018
GMF16916	R.010	.020	3/16	1/64	5/16	1-3/4	.018
GMF16917	R.010	.020	3/16	1/64	3/8	1-3/4	.018
GMF16918	R.012	.024	3/16	1/32	5/64	1-3/4	.022
GMF16919	R.012	.024	3/16	1/32	1/8	1-3/4	.022
GMF16920	R.012	.024	3/16	1/32	5/32	1-3/4	.022
GMF16921	R.012	.024	3/16	1/32	3/16	1-3/4	.022
GMF16922	R.012	.024	3/16	1/32	1/4	1-3/4	.022
GMF16923	R.012	.024	3/16	1/32	5/16	1-3/4	.022
GMF16924	R.012	.024	3/16	1/32	3/8	1-3/4	.022
GMF16925	R.012	.024	3/16	1/32	1/2	1-3/4	.022
GMF16002	R1/64	1/32	3/16	1/32	5/64	1-3/4	.029
GMF16926	R1/64	1/32	3/16	1/32	1/8	1-3/4	.029
GMF16927	R1/64	1/32	3/16	1/32	5/32	1-3/4	.029
GMF16928	R1/64	1/32	3/16	1/32	3/16	1-3/4	.029
GMF16929	R1/64	1/32	3/16	1/32	1/4	1-3/4	.029
GMF16930	R1/64	1/32	3/16	1/32	5/16	1-3/4	.029
GMF16931	R1/64	1/32	3/16	1/32	3/8	1-3/4	.029

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◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **GMF16** SERIES

CARBIDE, 2 FLUTE BALL NOSE WITH NECK

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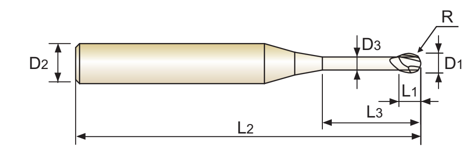

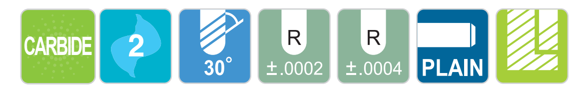

p.C270-C275

R≤1/8 R>1/8

Unit : Inch

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF16003	R.0234	3/64	3/16	3/64	1/8	2	.044
GMF16932	R.0234	3/64	3/16	3/64	5/32	2	.044
GMF16933	R.0234	3/64	3/16	3/64	3/16	2	.044
GMF16934	R.0234	3/64	3/16	3/64	1/4	2	.044
GMF16935	R.0234	3/64	3/16	3/64	5/16	2	.044
GMF16936	R.0234	3/64	3/16	3/64	3/8	2	.044
GMF16937	R.0234	3/64	3/16	3/64	1/2	2	.044
GMF16938	R.0234	3/64	3/16	3/64	9/16	2	.044
GMF16939	R.0234	3/64	3/16	3/64	5/8	2	.044
GMF16940	R.0234	3/64	3/16	3/64	3/4	2	.044
GMF16004	R1/32	1/16	3/16	1/16	5/32	2	.060
GMF16941	R1/32	1/16	3/16	1/16	1/4	2	.060
GMF16942	R1/32	1/16	3/16	1/16	5/16	2	.060
GMF16943	R1/32	1/16	3/16	1/16	3/8	2	.060
GMF16944	R1/32	1/16	3/16	1/16	1/2	2	.060
GMF16945	R1/32	1/16	3/16	1/16	9/16	2	.060
GMF16946	R1/32	1/16	3/16	1/16	5/8	2	.060
GMF16947	R1/32	1/16	3/16	1/16	3/4	2	.060
GMF16005	R.0391	5/64	3/16	5/64	1/4	2	.076
GMF16948	R.0391	5/64	3/16	5/64	5/16	2	.076
GMF16949	R.0391	5/64	3/16	5/64	3/8	2	.076
GMF16950	R.0391	5/64	3/16	5/64	1/2	2	.076
GMF16951	R.0391	5/64	3/16	5/64	9/16	2	.076
GMF16952	R.0391	5/64	3/16	5/64	5/8	2	.076
GMF16953	R.0391	5/64	3/16	5/64	11/16	2	.076
GMF16954	R.0391	5/64	3/16	5/64	3/4	2	.076
GMF16955	R.0391	5/64	3/16	5/64	1	2-3/8	.076
GMF16956	R.0391	5/64	3/16	5/64	1-3/16	2-3/4	.076
GMF16006	R3/64	3/32	3/16	3/32	3/8	2	.089
GMF16957	R3/64	3/32	3/16	3/32	3/4	2	.089
GMF16008	R1/16	1/8	1/4	1/8	5/16	2	.119
GMF16958	R1/16	1/8	1/4	1/8	3/8	2	.119

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◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

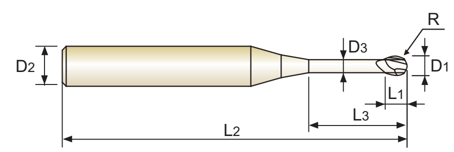
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **GMF16** SERIES

CARBIDE, 2 FLUTE BALL NOSE WITH NECK

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- Unique ball nose geometry with superior cutting edges result in decreased cutting forces.
- Excellent performance when cutting steels, up to HRc55



CARBIDE | 2 | 30° | R ±.0002 (R≤1/8) | R ±.0004 (R〉1/8) | PLAIN | p.C270-C275

Unit : Inch

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D1	D2	L1	L3	L2	D3
GMF16959	R1/16	1/8	1/4	1/8	1/2	2	.119
GMF16960	R1/16	1/8	1/4	1/8	9/16	2-3/8	.119
GMF16961	R1/16	1/8	1/4	1/8	5/8	2-3/8	.119
GMF16962	R1/16	1/8	1/4	1/8	11/16	2-3/8	.119
GMF16963	R1/16	1/8	1/4	1/8	3/4	2-3/8	.119
GMF16964	R1/16	1/8	1/4	1/8	1	2-3/4	.119
GMF16965	R1/16	1/8	1/4	1/8	1-3/16	2-3/4	.119
GMF16966	R1/16	1/8	1/4	1/8	1-3/8	2-3/4	.119
GMF16012	R3/32	3/16	1/4	5/32	3/8	2	.181
GMF16967	R3/32	3/16	1/4	5/32	1/2	2	.181
GMF16968	R3/32	3/16	1/4	5/32	9/16	2-3/8	.181
GMF16969	R3/32	3/16	1/4	5/32	5/8	2-3/8	.181
GMF16970	R3/32	3/16	1/4	5/32	11/16	2-3/8	.181
GMF16971	R3/32	3/16	1/4	5/32	3/4	2-3/8	.181
GMF16972	R3/32	3/16	1/4	5/32	1	2-3/4	.181
GMF16973	R3/32	3/16	1/4	5/32	1-3/16	2-3/4	.181
GMF16974	R3/32	3/16	1/4	5/32	1-3/8	2-3/4	.181
GMF16975	R3/32	3/16	1/4	5/32	1-1/2	3-1/8	.181
GMF16013	R.102	13/64	1/4	1/4	1-3/16	2-3/4	.197
GMF16016	R1/8	1/4	1/4	5/16	3/4	2-3/8	.244
GMF16976	R1/8	1/4	1/4	5/16	1-3/16	2-3/8	.244
GMF16020	R5/32	5/16	5/16	3/8	1	2-3/4	.300
GMF16977	R5/32	5/16	5/16	9/16	1-3/8	4	.300
GMF16024	R3/16	3/8	3/8	1/2	1-3/16	3	.363
GMF16978	R3/16	3/8	3/8	11/16	1-3/16	4	.363
GMF16979	R3/16	3/8	3/8	11/16	1-1/2	4	.363
GMF16032	R1/4	1/2	1/2	9/16	1-1/4	3-1/8	.488
GMF16980	R1/4	1/2	1/2	7/8	1-1/4	4-1/4	.488

Size	Radius Tolerance (Inch)	Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
up to Ø1/4	±.0002	0~-.0005	h5
over Ø1/4	±.0004	0~-.0006	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

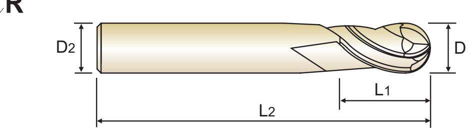
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **GMF17** SERIES

CARBIDE, 4 FLUTE BALL NOSE

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- Unique ball nose geometry with superior cutting edges result in decreased cutting forces.
- Excellent performance when cutting steels, up to HRc55
- Cutting edge strength is increased and part finish is improved due to new End Geometry



CARBIDE | 4 | 30° | R ±.0002 (R1/8) | R ±.0004 (R〉1/8) | PLAIN | p.C276

Unit : Inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	R	D1	D2	L1	L2
GMF17008	R1/16	1/8	1/4	1/8	2-3/8
GMF17012	R3/32	3/16	1/4	5/32	2-3/4
GMF17016	R1/8	1/4	1/4	1/4	3-1/2
GMF17020	R5/32	5/16	5/16	5/16	4
GMF17024	R3/16	3/8	3/8	3/8	4
GMF17032	R1/4	1/2	1/2	1/2	4-1/4

Size	Radius Tolerance (Inch)	Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
up to Ø1/4	±.0002	0~-.0008	h5
over Ø1/4	±.0004		

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

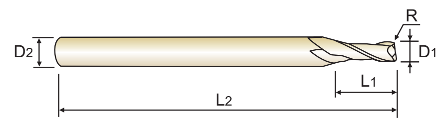
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

PLAIN SHANK **GMF18** SERIES

CARBIDE, 2 FLUTE CORNER RADIUS

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- Excellent performance when cutting steels, up to HRc55
- Available in various length shanks and corner radiuses.



CARBIDE 2 30° R ±.0004 R ±.0006 PLAIN p.C277

D≤1/4 D>1/4

Unit : Inch

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF18003	R.008	3/64	1/4	3/32	2
GMF18901	R.012	3/64	1/4	3/32	2
GMF18004	R.008	1/16	1/4	5/32	2
GMF18902	R.012	1/16	1/4	5/32	2
GMF18903	R.020	1/16	1/4	5/32	2
GMF18005	R.008	5/64	1/4	1/4	2
GMF18904	R.012	5/64	1/4	1/4	2
GMF18905	R.020	5/64	1/4	1/4	2
GMF18008	R.008	1/8	1/4	5/16	2-3/8
GMF18906	R.012	1/8	1/4	5/16	2-3/8
GMF18907	R.020	1/8	1/4	5/16	2-3/8
GMF18940	R.030	1/8	1/4	5/16	2-3/8
GMF18009	R.008	9/64	1/4	3/8	2-3/4
GMF18908	R.012	9/64	1/4	3/8	2-3/4
GMF18909	R.020	9/64	1/4	3/8	2-3/4
GMF18941	R.030	9/64	1/4	3/8	2-3/4
GMF18910	R.040	9/64	1/4	3/8	2-3/4
GMF18013	R.008	13/64	1/4	1/2	3-1/2
GMF18911	R.012	13/64	1/4	1/2	3-1/2
GMF18912	R.020	13/64	1/4	1/2	3-1/2
GMF18942	R.030	13/64	1/4	1/2	3-1/2
GMF18913	R.040	13/64	1/4	1/2	3-1/2
GMF18016	R.008	1/4	1/4	5/8	2-3/8
GMF18914	R.012	1/4	1/4	5/8	2-3/8
GMF18915	R.020	1/4	1/4	5/8	2-3/8
GMF18943	R.030	1/4	1/4	5/8	2-3/8

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◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

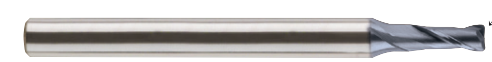
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

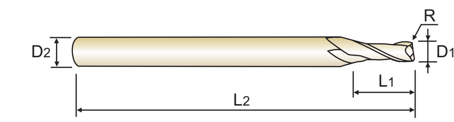
YG 4G MILL END MILLS

PLAIN SHANK **GMF18** SERIES

CARBIDE, 2 FLUTE CORNER RADIUS

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- Excellent performance when cutting steels, up to HRc55
- Available in various length shanks and corner radiuses.





CARBIDE 2 30° R ±.0004 R ±.0006 PLAIN p.C277

D≤1/4 D>1/4

Unit : Inch

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF18916	R.040	1/4	1/4	5/8	2-3/8
GMF18917	R.008	1/4	1/4	5/8	3-1/2
GMF18918	R.012	1/4	1/4	5/8	3-1/2
GMF18919	R.020	1/4	1/4	5/8	3-1/2
GMF18944	R.030	1/4	1/4	5/8	3-1/2
GMF18920	R.040	1/4	1/4	5/8	3-1/2
GMF18020	R.020	5/16	5/16	3/4	2-3/4
GMF18945	R.030	5/16	5/16	3/4	2-3/4
GMF18921	R.040	5/16	5/16	3/4	2-3/4
GMF18922	R.020	5/16	5/16	3/4	4
GMF18946	R.030	5/16	5/16	3/4	4
GMF18923	R.040	5/16	5/16	3/4	4
GMF18924	R.060	5/16	5/16	3/4	4
GMF18925	R.080	5/16	5/16	3/4	4
GMF18024	R.020	3/8	3/8	1	3
GMF18947	R.030	3/8	3/8	1	3
GMF18926	R.040	3/8	3/8	1	3
GMF18927	R.020	3/8	3/8	1	4
GMF18948	R.030	3/8	3/8	1	4
GMF18928	R.040	3/8	3/8	1	4
GMF18929	R.060	3/8	3/8	1	4
GMF18930	R.080	3/8	3/8	1	4
GMF18032	R.020	1/2	1/2	1-3/16	3-1/8
GMF18949	R.030	1/2	1/2	1-3/16	3-1/8
GMF18931	R.040	1/2	1/2	1-3/16	3-1/8
GMF18932	R.020	1/2	1/2	1-3/16	4-1/4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

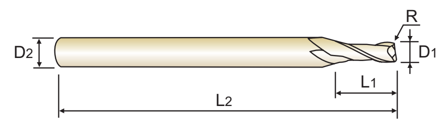
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

PLAIN SHANK **GMF18 SERIES**

CARBIDE, 2 FLUTE CORNER RADIUS

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Excellent performance when cutting steels, up to HRc55
- ▶ Available in various length shanks and corner radiuses.



CARBIDE | 2 | 30° | R ±.0004 | R ±.0006 | PLAIN

D≤1/4 D>1/4

p.C277

Unit : Inch

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF18950	R.030	1/2	1/2	1-3/16	4-1/4
GMF18933	R.040	1/2	1/2	1-3/16	4-1/4
GMF18934	R.060	1/2	1/2	1-3/16	4-1/4
GMF18935	R.080	1/2	1/2	1-3/16	4-1/4
GMF18936	R.100	1/2	1/2	1-3/16	4-1/4
GMF18937	R.118	1/2	1/2	1-3/16	4-1/4
GMF18951	R.030	9/16	5/8	1-3/8	6
GMF18036	R.040	9/16	5/8	1-3/8	6
GMF18952	R.030	5/8	5/8	1-1/4	6
GMF18040	R.040	5/8	5/8	1-1/4	6
GMF18938	R.080	5/8	5/8	1-1/4	6
GMF18953	R.030	3/4	3/4	1-1/2	6
GMF18048	R.040	3/4	3/4	1-1/2	6
GMF18939	R.080	3/4	3/4	1-1/2	6

Size	Radius Tolerance (Inch)	Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
up to Ø1/4	±.0004	0~-.0005	h5
over Ø1/4	±.0006	0~-.0006	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

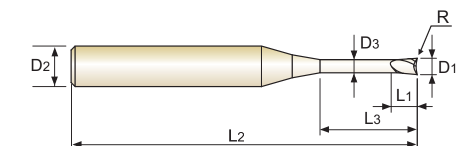
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **GMF19 SERIES**

CARBIDE, 2 FLUTE CORNER RADIUS WITH NECK

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Excellent performance when cutting steels, up to HRc55
- ▶ Available in many more various length shanks and corner radiuses.



CARBIDE | 2 | 30° | R ±.0004 | R ±.0006 | PLAIN

D≤1/4 D>1/4

p.C278-C281

Unit : Inch

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF19901	R.001	.008	3/16	.010	3/64	1-1/2	.006
GMF19902	R.002	.008	3/16	.010	3/64	1-1/2	.006
GMF19903	R.001	.012	3/16	1/64	3/64	1-1/2	.010
GMF19904	R.001	.012	3/16	1/64	5/64	1-1/2	.010
GMF19905	R.002	.012	3/16	1/64	3/64	1-1/2	.010
GMF19906	R.002	.012	3/16	1/64	5/64	1-1/2	.010
GMF19907	R.002	.015	3/16	1/32	3/64	1-1/2	.013
GMF19908	R.002	.015	3/16	1/32	1/16	1-1/2	.013
GMF19909	R.002	.015	3/16	1/32	5/64	1-1/2	.013
GMF19910	R.002	.015	3/16	1/32	3/32	1-1/2	.013
GMF19911	R.004	.015	3/16	1/32	3/64	1-1/2	.013
GMF19912	R.004	.015	3/16	1/32	5/64	1-1/2	.013
GMF19913	R.002	.020	3/16	1/32	3/64	1-3/4	.018
GMF19914	R.002	.020	3/16	1/32	1/16	1-3/4	.018
GMF19915	R.002	.020	3/16	1/32	5/64	1-3/4	.018
GMF19916	R.002	.020	3/16	1/32	5/32	1-3/4	.018
GMF19917	R.004	.020	3/16	1/32	5/64	1-3/4	.018
GMF19918	R.004	.020	3/16	1/32	1/8	1-3/4	.018
GMF19919	R.002	.024	3/16	1/32	1/8	1-3/4	.022
GMF19920	R.002	.024	3/16	1/32	1/4	1-3/4	.022
GMF19921	R.004	.024	3/16	1/32	5/64	1-3/4	.022
GMF19922	R.004	.024	3/16	1/32	5/32	1-3/4	.022
GMF19923	R.004	.024	3/16	1/32	1/4	1-3/4	.022
GMF19924	R.008	.024	3/16	1/32	5/64	1-3/4	.022
GMF19925	R.008	.024	3/16	1/32	5/32	1-3/4	.022
GMF19926	R.008	.024	3/16	1/32	1/4	1-3/4	.022
GMF19927	R.002	.031	3/16	3/64	5/64	1-3/4	.029
GMF19928	R.002	.031	3/16	3/64	5/32	1-3/4	.029
GMF19929	R.002	.031	3/16	3/64	1/4	1-3/4	.029
GMF19930	R.004	.031	3/16	3/64	5/64	1-3/4	.029

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◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

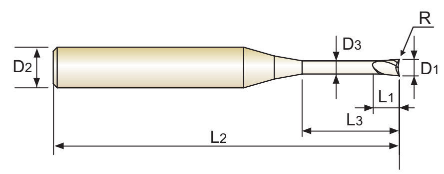
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **GMF19** SERIES

CARBIDE, 2 FLUTE CORNER RADIUS WITH NECK

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- Excellent performance when cutting steels, up to HRc55
- Available in many more various length shanks and corner radiuses.



CARBIDE 2 30° R ±.0004 R ±.0006 PLAIN p.C278-C281

D≤1/4 D〉1/4

Unit : Inch

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF19931	R.004	.031	3/16	3/64	5/32	1-3/4	.029
GMF19932	R.004	.031	3/16	3/64	1/4	1-3/4	.029
GMF19933	R.004	.031	3/16	3/64	5/16	1-3/4	.029
GMF19934	R.008	.031	3/16	3/64	5/32	1-3/4	.029
GMF19935	R.008	.031	3/16	3/64	1/4	1-3/4	.029
GMF19936	R.008	.031	3/16	3/64	5/16	1-3/4	.029
GMF19003	R.002	3/64	3/16	1/16	1/8	2	.044
GMF19937	R.002	3/64	3/16	1/16	5/32	2	.044
GMF19938	R.002	3/64	3/16	1/16	1/4	2	.044
GMF19939	R.004	3/64	3/16	1/16	1/8	2	.044
GMF19940	R.004	3/64	3/16	1/16	5/32	2	.044
GMF19941	R.004	3/64	3/16	1/16	1/4	2	.044
GMF19942	R.004	3/64	3/16	1/16	5/16	2	.044
GMF19943	R.004	3/64	3/16	1/16	3/8	2	.044
GMF19944	R.008	3/64	3/16	1/16	1/8	2	.044
GMF19945	R.008	3/64	3/16	1/16	5/32	2	.044
GMF19946	R.008	3/64	3/16	1/16	1/4	2	.044
GMF19947	R.008	3/64	3/16	1/16	5/16	2	.044
GMF19948	R.008	3/64	3/16	1/16	3/8	2	.044
GMF19949	R.012	3/64	3/16	1/16	5/32	2	.044
GMF19950	R.012	3/64	3/16	1/16	1/4	2	.044
GMF19951	R.012	3/64	3/16	1/16	5/16	2	.044
GMF19952	R.012	3/64	3/16	1/16	3/8	2	.044
GMF19004	R.002	1/16	3/16	3/32	5/32	2	.060
GMF19953	R.002	1/16	3/16	3/32	1/4	2	.060
GMF19954	R.002	1/16	3/16	3/32	5/16	2	.060
GMF19955	R.004	1/16	3/16	3/32	5/32	2	.060
GMF19956	R.004	1/16	3/16	3/32	1/4	2	.060
GMF19957	R.004	1/16	3/16	3/32	5/16	2	.060
GMF19958	R.008	1/16	3/16	3/32	5/32	2	.060

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◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK GMF19 SERIES

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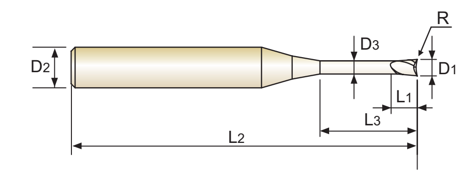

CARBIDE 2 30° R ±.0004 R ±.0006 PLAIN p.C278-C281

D≤1/4 D〉1/4

Unit : Inch

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF19959	R.008	1/16	3/16	3/32	1/4	2	.060
GMF19960	R.008	1/16	3/16	3/32	5/16	2	.060
GMF19961	R.008	1/16	3/16	3/32	3/8	2	.060
GMF19962	R.008	1/16	3/16	3/32	1/2	2	.060
GMF19963	R.012	1/16	3/16	3/32	5/32	2	.060
GMF19964	R.012	1/16	3/16	3/32	1/4	2	.060
GMF19965	R.012	1/16	3/16	3/32	5/16	2	.060
GMF19966	R.012	1/16	3/16	3/32	3/8	2	.060
GMF19967	R.012	1/16	3/16	3/32	1/2	2	.060
GMF19005	R.004	5/64	3/16	1/8	1/4	2	.076
GMF19968	R.004	5/64	3/16	1/8	5/16	2	.076
GMF19969	R.004	5/64	3/16	1/8	3/8	2	.076
GMF19970	R.004	5/64	3/16	1/8	1/2	2	.076
GMF19971	R.008	5/64	3/16	1/8	1/4	2	.076
GMF19972	R.008	5/64	3/16	1/8	5/16	2	.076
GMF19973	R.008	5/64	3/16	1/8	3/8	2	.076
GMF19974	R.008	5/64	3/16	1/8	1/2	2	.076
GMF19975	R.008	5/64	3/16	1/8	5/8	2	.076
GMF19976	R.012	5/64	3/16	1/8	1/4	2	.076
GMF19977	R.012	5/64	3/16	1/8	5/16	2	.076
GMF19978	R.012	5/64	3/16	1/8	3/8	2	.076
GMF19979	R.012	5/64	3/16	1/8	1/2	2	.076
GMF19980	R.012	5/64	3/16	1/8	5/8	2	.076
GMF19981	R.020	5/64	3/16	1/8	1/4	2	.076
GMF19982	R.020	5/64	3/16	1/8	5/16	2	.076
GMF19983	R.020	5/64	3/16	1/8	3/8	2	.076
GMF19984	R.020	5/64	3/16	1/8	1/2	2	.076
GMF19985	R.020	5/64	3/16	1/8	9/16	2	.076
GMF19008	R.004	1/8	1/4	3/16	3/8	2	.119
GMF19986	R.004	1/8	1/4	3/16	1/2	2	.119

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **GMF19 SERIES**

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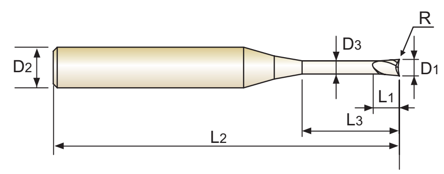

CARBIDE 2 30° R ±.0004 R ±.0006 PLAIN p.C278-C281

D≤1/4 D〉1/4

Unit : Inch

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF19987	R.004	1/8	1/4	3/16	5/8	2-3/8	.119
GMF19988	R.008	1/8	1/4	3/16	5/16	2	.119
GMF19989	R.008	1/8	1/4	3/16	3/8	2	.119
GMF19990	R.008	1/8	1/4	3/16	1/2	2	.119
GMF19991	R.008	1/8	1/4	3/16	5/8	2-3/8	.119
GMF19992	R.008	1/8	1/4	3/16	3/4	2-3/8	.119
GMF19993	R.008	1/8	1/4	3/16	1	2-3/4	.119
GMF19994	R.012	1/8	1/4	3/16	5/16	2	.119
GMF19995	R.012	1/8	1/4	3/16	3/8	2	.119
GMF19996	R.012	1/8	1/4	3/16	1/2	2	.119
GMF19997	R.012	1/8	1/4	3/16	5/8	2-3/8	.119
GMF19998	R.012	1/8	1/4	3/16	3/4	2-3/8	.119
GMF19999	R.020	1/8	1/4	3/16	5/16	2	.119
GMF19801	R.020	1/8	1/4	3/16	3/8	2	.119
GMF19802	R.020	1/8	1/4	3/16	1/2	2	.119
GMF19803	R.020	1/8	1/4	3/16	5/8	2-3/8	.119
GMF19804	R.020	1/8	1/4	3/16	3/4	2-3/8	.119
GMF19805	R.020	1/8	1/4	3/16	1	2-3/4	.119
GMF19845	R.030	1/8	1/4	3/16	3/8	2	.119
GMF19846	R.030	1/8	1/4	3/16	1/2	2	.119
GMF19847	R.030	1/8	1/4	3/16	5/16	2	.119
GMF19848	R.030	1/8	1/4	3/16	3/4	2-3/8	.119
GMF19849	R.030	1/8	1/4	3/16	5/8	2-3/8	.119
GMF19850	R.030	1/8	1/4	3/16	1	2-3/4	.119
GMF19806	R.040	1/8	1/4	3/16	5/16	2	.119
GMF19807	R.040	1/8	1/4	3/16	3/8	2	.119
GMF19808	R.040	1/8	1/4	3/16	1/2	2	.119
GMF19809	R.040	1/8	1/4	3/16	5/8	2-3/8	.119
GMF19810	R.040	1/8	1/4	3/16	3/4	2-3/8	.119
GMF19012	R.004	3/16	1/4	1/4	3/8	2	.181

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **GMF19 SERIES**

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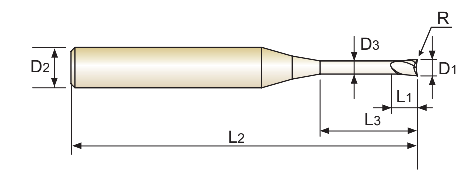


CARBIDE 2 30° R ±.0004 R ±.0006 PLAIN p.C278-C281

D≤1/4 D〉1/4

Unit : Inch

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF19811	R.004	3/16	1/4	1/4	1/2	2	.181
GMF19812	R.004	3/16	1/4	1/4	5/8	2-3/8	.181
GMF19813	R.008	3/16	1/4	1/4	3/8	2	.181
GMF19814	R.008	3/16	1/4	1/4	1/2	2	.181
GMF19815	R.008	3/16	1/4	1/4	5/8	2-3/8	.181
GMF19816	R.008	3/16	1/4	1/4	3/4	2-3/8	.181
GMF19817	R.008	3/16	1/4	1/4	1	2-3/4	.181
GMF19818	R.012	3/16	1/4	1/4	1/2	2	.181
GMF19819	R.012	3/16	1/4	1/4	5/8	2-3/8	.181
GMF19820	R.012	3/16	1/4	1/4	3/4	2-3/8	.181
GMF19821	R.012	3/16	1/4	1/4	1	2-3/4	.181
GMF19822	R.020	3/16	1/4	1/4	3/8	2	.181
GMF19823	R.020	3/16	1/4	1/4	1/2	2	.181
GMF19824	R.020	3/16	1/4	1/4	5/8	2-3/8	.181
GMF19825	R.020	3/16	1/4	1/4	3/4	2-3/8	.181
GMF19826	R.020	3/16	1/4	1/4	1	2-3/4	.181
GMF19827	R.020	3/16	1/4	1/4	1-3/16	2-3/4	.181
GMF19851	R.030	3/16	1/4	1/4	3/8	2	.181
GMF19852	R.030	3/16	1/4	1/4	1/2	2	.181
GMF19853	R.030	3/16	1/4	1/4	5/8	2-3/8	.181
GMF19854	R.030	3/16	1/4	1/4	3/4	2-3/8	.181
GMF19855	R.030	3/16	1/4	1/4	1	2-3/4	.181
GMF19856	R.030	3/16	1/4	1/4	1-3/16	2-3/4	.181
GMF19828	R.040	3/16	1/4	1/4	3/8	2	.181
GMF19829	R.040	3/16	1/4	1/4	1/2	2	.181
GMF19830	R.040	3/16	1/4	1/4	5/8	2-3/8	.181
GMF19831	R.040	3/16	1/4	1/4	3/4	2-3/8	.181
GMF19016	R.008	1/4	1/4	3/8	3/4	2-3/8	.244
GMF19832	R.012	1/4	1/4	3/8	3/4	2-3/8	.244
GMF19833	R.020	1/4	1/4	3/8	3/4	2-3/8	.244

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

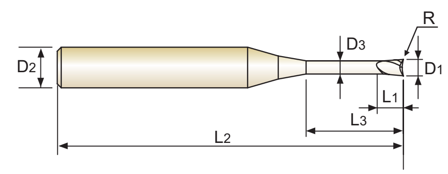
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **GMF19** SERIES

CARBIDE, 2 FLUTE CORNER RADIUS WITH NECK

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- Excellent performance when cutting steels, up to HRc55
- Available in many more various length shanks and corner radiuses.



CARBIDE | 2 | 30° | R ±.0004 (D≤1/4) | R ±.0006 (D>1/4) | PLAIN | p.C278-C281

Unit : Inch

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF19834	R.040	1/4	1/4	3/8	3/4	2-3/8	.244
GMF19835	R.020	1/4	1/4	5/8	1-3/16	3-1/2	.244
GMF19857	R.030	1/4	1/4	3/8	3/4	2-3/8	.244
GMF19858	R.030	1/4	1/4	5/8	1-3/16	3-1/2	.244
GMF19020	R.008	5/16	5/16	1/2	1	2-3/4	.300
GMF19836	R.012	5/16	5/16	1/2	1	2-3/4	.300
GMF19837	R.020	5/16	5/16	1/2	1	2-3/4	.300
GMF19859	R.030	5/16	5/16	1/2	1	2-3/4	.300
GMF19838	R.040	5/16	5/16	1/2	1	2-3/4	.300
GMF19024	R.012	3/8	3/8	5/8	1-3/16	3	.363
GMF19839	R.020	3/8	3/8	5/8	1-3/16	3	.363
GMF19860	R.030	3/8	3/8	5/8	1-3/16	3	.363
GMF19840	R.040	3/8	3/8	5/8	1-3/16	3	.363
GMF19032	R.020	1/2	1/2	11/16	1-1/4	3-1/8	.488
GMF19861	R.030	1/2	1/2	11/16	1-1/4	3-1/8	.488
GMF19841	R.040	1/2	1/2	11/16	1-1/4	3-1/8	.488
GMF19842	R.060	1/2	1/2	11/16	1-1/4	3-1/8	.488
GMF19040	R.020	5/8	5/8	3/4	1-3/8	4	.613
GMF19862	R.030	5/8	5/8	3/4	1-3/8	4	.613
GMF19843	R.040	5/8	5/8	3/4	1-3/8	4	.613
GMF19048	R.020	3/4	3/4	1	1-1/2	4	.738
GMF19863	R.030	3/4	3/4	1	1-1/2	4	.738
GMF19844	R.040	3/4	3/4	1	1-1/2	4	.738

Size	Radius Tolerance (Inch)	Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
up to Ø1/4	±.0004	0~-.0005	h5
over Ø1/4	±.0006	0~-.0006	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

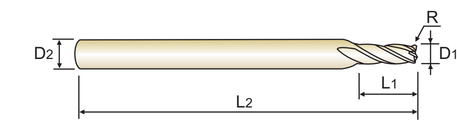
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **GMF20** SERIES

CARBIDE, 4 FLUTE CORNER RADIUS

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- Excellent performance when cutting steels, up to HRc55
- Available in many more various length shanks and corner radiuses.
- Due to Multiple Helix on 1/8" and over diameter end mills, vibration is minimized and tool life increased.
- 4 flute series has new designs to reduce vibrations



CARBIDE | 4 | 27°/30° (D1<Ø1/8, 30° Helix) | R ±.0008 | PLAIN | p.C282

Unit : Inch

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF20003	R.004	3/64	1/4	3/32	2
GMF20005	R.004	5/64	1/4	1/4	2
GMF20901	R.008	5/64	1/4	1/4	2
GMF20008	R.008	1/8	1/4	5/16	2-3/8
GMF20902	R.012	1/8	1/4	5/16	2-3/8
GMF20903	R.020	1/8	1/4	5/16	2-3/8
GMF20933	R.030	1/8	1/4	5/16	2-3/8
GMF20012	R.008	3/16	1/4	3/8	2-3/4
GMF20904	R.012	3/16	1/4	3/8	2-3/4
GMF20905	R.020	3/16	1/4	3/8	2-3/4
GMF20934	R.030	3/16	1/4	3/8	2-3/4
GMF20906	R.040	3/16	1/4	3/8	2-3/4
GMF20013	R.012	13/64	1/4	1/2	3-1/2
GMF20907	R.020	13/64	1/4	1/2	3-1/2
GMF20935	R.030	13/64	1/4	1/2	3-1/2
GMF20016	R.008	1/4	1/4	5/8	3-1/2
GMF20908	R.012	1/4	1/4	5/8	3-1/2
GMF20909	R.020	1/4	1/4	5/8	3-1/2
GMF20936	R.030	1/4	1/4	5/8	3-1/2
GMF20910	R.040	1/4	1/4	5/8	3-1/2
GMF20020	R.012	5/16	5/16	3/4	2-3/4
GMF20911	R.020	5/16	5/16	3/4	2-3/4
GMF20937	R.030	5/16	5/16	3/4	2-3/4
GMF20912	R.040	5/16	5/16	3/4	2-3/4
GMF20913	R.008	5/16	5/16	3/4	4
GMF20914	R.012	5/16	5/16	3/4	4
GMF20915	R.020	5/16	5/16	3/4	4
GMF20938	R.030	5/16	5/16	3/4	4
GMF20916	R.040	5/16	5/16	3/4	4
GMF20917	R.060	5/16	5/16	3/4	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

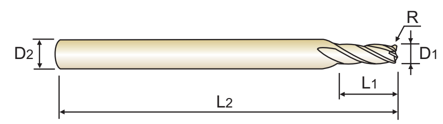
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **GMF20** SERIES

CARBIDE, 4 FLUTE CORNER RADIUS

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Excellent performance when cutting steels, up to HRc55
- ▶ Available in many more various length shanks and corner radiuses.
- ▶ Due to Multiple Helix on 1/8" and over diameter end mills, vibration is minimized and tool life increased.
- ▶ 4 flute series has new designs to reduce vibrations



CARBIDE | 4 | 27°/30° | R ±.0008 | PLAIN | p.C282

D1<Ø1/8, 30° Helix

Unit : Inch

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF20918	R.080	5/16	5/16	3/4	4
GMF20024	R.020	3/8	3/8	1	3
GMF20939	R.030	3/8	3/8	1	3
GMF20919	R.012	3/8	3/8	1	4
GMF20920	R.020	3/8	3/8	1	4
GMF20940	R.030	3/8	3/8	1	4
GMF20921	R.040	3/8	3/8	1	4
GMF20922	R.060	3/8	3/8	1	4
GMF20923	R.080	3/8	3/8	1	4
GMF20032	R.020	1/2	1/2	1-3/16	3-1/8
GMF20941	R.030	1/2	1/2	1-3/16	3-1/8
GMF20924	R.040	1/2	1/2	1-3/16	3-1/8
GMF20925	R.020	1/2	1/2	1-3/16	4-1/4
GMF20942	R.030	1/2	1/2	1-3/16	4-1/4
GMF20926	R.040	1/2	1/2	1-3/16	4-1/4
GMF20927	R.060	1/2	1/2	1-3/16	4-1/4
GMF20928	R.080	1/2	1/2	1-3/16	4-1/4
GMF20040	R.020	5/8	5/8	1-1/4	6
GMF20943	R.030	5/8	5/8	1-1/4	6
GMF20929	R.040	5/8	5/8	1-1/4	6
GMF20930	R.060	5/8	5/8	1-1/4	6
GMF20931	R.080	5/8	5/8	1-1/4	6
GMF20944	R.030	3/4	3/4	1-1/2	6
GMF20048	R.040	3/4	3/4	1-1/2	6
GMF20932	R.080	3/4	3/4	1-1/2	6

Mill Dia. Tolerance (Inch)	Corner Radius Tolerance (Inch)	Shank Dia. Tolerance
0~-.0012	±.0008	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

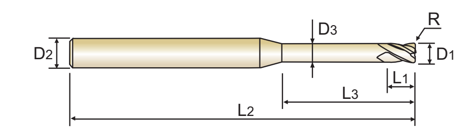
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **GMF21** SERIES

CARBIDE, 4 FLUTE CORNER RADIUS WITH NECK

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Excellent performance when cutting steels, up to HRc55
- ▶ Due to Multiple Helix on 1/8" and over diameter end mills, vibration is minimized and tool life increased.
- ▶ 4 flute series has new designs to reduce vibrations



CARBIDE | 4 | 27°/30° | R ±.0008 | PLAIN | p.C284-C285

D1<Ø1/8, 30° Helix

Unit : Inch

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF21003	R.004	3/64	3/16	1/16	5/32	2	.044
GMF21901	R.004	3/64	3/16	1/16	1/4	2	.044
GMF21902	R.004	3/64	3/16	1/16	5/16	2	.044
GMF21903	R.008	3/64	3/16	1/16	5/32	2	.044
GMF21904	R.008	3/64	3/16	1/16	1/4	2	.044
GMF21905	R.008	3/64	3/16	1/16	5/16	2	.044
GMF21906	R.012	3/64	3/16	1/16	5/32	2	.044
GMF21907	R.012	3/64	3/16	1/16	1/4	2	.044
GMF21908	R.012	3/64	3/16	1/16	5/16	2	.044
GMF21004	R.004	1/16	3/16	3/32	1/4	2	.060
GMF21909	R.004	1/16	3/16	3/32	5/16	2	.060
GMF21910	R.004	1/16	3/16	3/32	3/8	2	.060
GMF21911	R.004	1/16	3/16	3/32	1/2	2	.060
GMF21912	R.008	1/16	3/16	3/32	1/4	2	.060
GMF21913	R.008	1/16	3/16	3/32	5/16	2	.060
GMF21914	R.008	1/16	3/16	3/32	3/8	2	.060
GMF21915	R.008	1/16	3/16	3/32	1/2	2	.060
GMF21916	R.012	1/16	3/16	3/32	1/4	2	.060
GMF21917	R.012	1/16	3/16	3/32	5/16	2	.060
GMF21918	R.012	1/16	3/16	3/32	3/8	2	.060
GMF21919	R.012	1/16	3/16	3/32	1/2	2	.060
GMF21920	R.020	1/16	3/16	3/32	1/4	2	.060
GMF21921	R.020	1/16	3/16	3/32	5/16	2	.060
GMF21922	R.020	1/16	3/16	3/32	3/8	2	.060
GMF21923	R.020	1/16	3/16	3/32	1/2	2	.060
GMF21005	R.004	5/64	3/16	1/8	1/4	2	.076
GMF21924	R.004	5/64	3/16	1/8	5/16	2	.076
GMF21925	R.004	5/64	3/16	1/8	3/8	2	.076
GMF21926	R.004	5/64	3/16	1/8	1/2	2	.076
GMF21927	R.008	5/64	3/16	1/8	1/4	2	.076

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

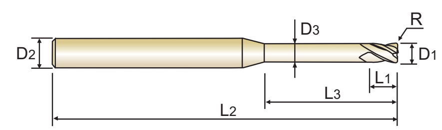
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **GMF21** SERIES

CARBIDE, 4 FLUTE CORNER RADIUS WITH NECK

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- Excellent performance when cutting steels, up to HRc55
- Due to Multiple Helix on 1/8" and over diameter end mills, vibration is minimized and tool life increased.
- 4 flute series has new designs to reduce vibrations



CARBIDE | 4 | 27°/30° | R ±.0008 | PLAIN

p.C284-C285

D1<Ø1/8, 30˚ Helix

Unit : Inch

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF21928	R.008	5/64	3/16	1/8	5/16	2	.076
GMF21929	R.008	5/64	3/16	1/8	3/8	2	.076
GMF21930	R.008	5/64	3/16	1/8	1/2	2	.076
GMF21931	R.012	5/64	3/16	1/8	1/4	2	.076
GMF21932	R.012	5/64	3/16	1/8	5/16	2	.076
GMF21933	R.012	5/64	3/16	1/8	3/8	2	.076
GMF21934	R.012	5/64	3/16	1/8	1/2	2	.076
GMF21935	R.020	5/64	3/16	1/8	1/4	2	.076
GMF21936	R.020	5/64	3/16	1/8	5/16	2	.076
GMF21937	R.020	5/64	3/16	1/8	3/8	2	.076
GMF21938	R.020	5/64	3/16	1/8	1/2	2	.076
GMF21008	R.004	1/8	1/4	3/16	5/16	2	.119
GMF21939	R.004	1/8	1/4	3/16	3/8	2	.119
GMF21940	R.004	1/8	1/4	3/16	1/2	2	.119
GMF21941	R.004	1/8	1/4	3/16	5/8	2-3/8	.119
GMF21942	R.008	1/8	1/4	3/16	3/8	2	.119
GMF21943	R.008	1/8	1/4	3/16	1/2	2	.119
GMF21944	R.008	1/8	1/4	3/16	5/8	2-3/8	.119
GMF21945	R.008	1/8	1/4	3/16	3/4	2-3/8	.119
GMF21946	R.012	1/8	1/4	3/16	5/16	2	.119
GMF21947	R.012	1/8	1/4	3/16	3/8	2	.119
GMF21948	R.012	1/8	1/4	3/16	1/2	2	.119
GMF21949	R.012	1/8	1/4	3/16	5/8	2-3/8	.119
GMF21950	R.012	1/8	1/4	3/16	3/4	2-3/8	.119
GMF21951	R.020	1/8	1/4	3/16	5/16	2	.119
GMF21952	R.020	1/8	1/4	3/16	3/8	2	.119
GMF21953	R.020	1/8	1/4	3/16	1/2	2	.119
GMF21954	R.020	1/8	1/4	3/16	5/8	2-3/8	.119
GMF21955	R.020	1/8	1/4	3/16	3/4	2-3/8	.119
GMF21956	R.020	1/8	1/4	3/16	1	2-3/4	.119

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

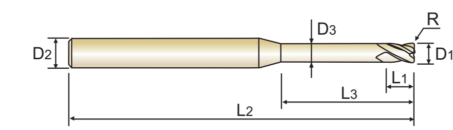
CARBIDE
HSS

4G MILL END MILLS

PLAIN SHANK **GMF21** SERIES

CARBIDE, 4 FLUTE CORNER RADIUS WITH NECK

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- Excellent performance when cutting steels, up to HRc55
- Due to Multiple Helix on 1/8" and over diameter end mills, vibration is minimized and tool life increased.
- 4 flute series has new designs to reduce vibrations



CARBIDE | 4 | 27°/30° | R ±.0008 | PLAIN

p.C284-C285

D1<Ø1/8, 30˚ Helix

Unit : Inch

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF21999	R.030	1/8	1/4	3/16	5/16	2	.119
GMF21801	R.030	1/8	1/4	3/16	3/8	2	.119
GMF21802	R.030	1/8	1/4	3/16	1/2	2	.119
GMF21803	R.030	1/8	1/4	3/16	5/8	2-3/8	.119
GMF21804	R.030	1/8	1/4	3/16	3/4	2-3/8	.119
GMF21805	R.030	1/8	1/4	3/16	1	2-3/4	.119
GMF21957	R.040	1/8	1/4	3/16	5/16	2	.119
GMF21958	R.040	1/8	1/4	3/16	3/8	2	.119
GMF21959	R.040	1/8	1/4	3/16	1/2	2	.119
GMF21960	R.040	1/8	1/4	3/16	5/8	2-3/8	.119
GMF21012	R.004	3/16	1/4	1/4	3/8	2	.181
GMF21961	R.004	3/16	1/4	1/4	1/2	2	.181
GMF21962	R.004	3/16	1/4	1/4	5/8	2-3/8	.181
GMF21963	R.004	3/16	1/4	1/4	3/4	2-3/8	.181
GMF21964	R.008	3/16	1/4	1/4	3/8	2	.181
GMF21965	R.008	3/16	1/4	1/4	1/2	2	.181
GMF21966	R.008	3/16	1/4	1/4	5/8	2-3/8	.181
GMF21967	R.008	3/16	1/4	1/4	3/4	2-3/8	.181
GMF21968	R.008	3/16	1/4	1/4	1	2-3/4	.181
GMF21969	R.012	3/16	1/4	1/4	3/8	2	.181
GMF21970	R.012	3/16	1/4	1/4	1/2	2	.181
GMF21971	R.012	3/16	1/4	1/4	5/8	2-3/8	.181
GMF21972	R.012	3/16	1/4	1/4	3/4	2-3/8	.181
GMF21973	R.012	3/16	1/4	1/4	1	2-3/4	.181
GMF21974	R.020	3/16	1/4	1/4	3/8	2	.181
GMF21975	R.020	3/16	1/4	1/4	1/2	2	.181
GMF21976	R.020	3/16	1/4	1/4	5/8	2-3/8	.181
GMF21977	R.020	3/16	1/4	1/4	3/4	2-3/8	.181
GMF21978	R.020	3/16	1/4	1/4	1	2-3/4	.181
GMF21806	R.030	3/16	1/4	1/4	3/8	2	.181

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **GMF21** SERIES

CARBIDE, 4 FLUTE CORNER RADIUS WITH NECK

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
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- Due to Multiple Helix on 1/8" and over diameter end mills, vibration is minimized and tool life increased.
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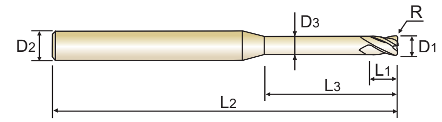

CARBIDE | 4 | 27°/30° | R ±.0008 | PLAIN

p.C284-C285

D1<Ø1/8, 30˚ Helix

Unit : Inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D1	D2	L1	L3	L2	D3
GMF21807	R.030	3/16	1/4	1/4	1/2	2	.181
GMF21808	R.030	3/16	1/4	1/4	5/8	2-3/8	.181
GMF21809	R.030	3/16	1/4	1/4	3/4	2-3/8	.181
GMF21810	R.030	3/16	1/4	1/4	1	2-3/4	.181
GMF21979	R.040	3/16	1/4	1/4	3/8	2	.181
GMF21980	R.040	3/16	1/4	1/4	1/2	2	.181
GMF21981	R.040	3/16	1/4	1/4	5/8	2-3/8	.181
GMF21982	R.040	3/16	1/4	1/4	3/4	2-3/8	.181
GMF21983	R.040	3/16	1/4	1/4	1	2-3/4	.181
GMF21016	R.012	1/4	1/4	3/8	3/4	2-3/8	.244
GMF21984	R.020	1/4	1/4	3/8	3/4	2-3/8	.244
GMF21811	R.030	1/4	1/4	3/8	3/4	2-3/8	.244
GMF21985	R.040	1/4	1/4	3/8	3/4	2-3/8	.244
GMF21020	R.008	5/16	5/16	1/2	1	2-3/4	.300
GMF21986	R.012	5/16	5/16	1/2	1	2-3/4	.300
GMF21987	R.020	5/16	5/16	1/2	1	2-3/4	.300
GMF21988	R.040	5/16	5/16	1/2	1	2-3/4	.300
GMF21989	R.020	5/16	5/16	3/4	1-3/8	4	.300
GMF21812	R.030	5/16	5/16	1/2	1	2-3/4	.300
GMF21813	R.030	5/16	5/16	3/4	1-3/8	4	.300
GMF21024	R.020	3/8	3/8	5/8	1-3/16	3	.363
GMF21990	R.040	3/8	3/8	5/8	1-3/16	3	.363
GMF21991	R.060	3/8	3/8	5/8	1-3/16	3	.363
GMF21992	R.020	3/8	3/8	1	1-1/2	4	.363
GMF21814	R.030	3/8	3/8	5/8	1-3/16	3	.363
GMF21815	R.030	3/8	3/8	1	1-1/2	4	.363
GMF21032	R.020	1/2	1/2	11/16	1-1/4	3-1/8	.488
GMF21816	R.030	1/2	1/2	11/16	1-1/4	3-1/8	.488
GMF21817	R.030	1/2	1/2	1-3/16	1-3/4	4-1/4	.488
GMF21993	R.040	1/2	1/2	11/16	1-1/4	3-1/8	.488

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◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK GMF21 SERIES

CARBIDE, 4 FLUTE CORNER RADIUS WITH NECK

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
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- Due to Multiple Helix on 1/8" and over diameter end mills, vibration is minimized and tool life increased.
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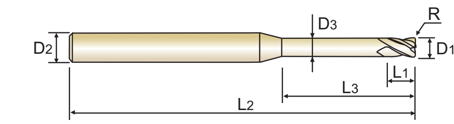


CARBIDE | 4 | 27°/30° | R ±.0008 | PLAIN

p.C284-C285

D1<Ø1/8, 30˚ Helix

Unit : Inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D1	D2	L1	L3	L2	D3
GMF21994	R.060	1/2	1/2	11/16	1-1/4	3-1/8	.488
GMF21995	R.080	1/2	1/2	11/16	1-1/4	3-1/8	.488
GMF21996	R.020	1/2	1/2	1-3/16	1-3/4	4-1/4	.488
GMF21040	R.020	5/8	5/8	3/4	1-3/8	4	.613
GMF21818	R.030	5/8	5/8	3/4	1-3/8	4	.613
GMF21997	R.040	5/8	5/8	3/4	1-3/8	4	.613
GMF21048	R.020	3/4	3/4	1	1-1/2	4	.738
GMF21819	R.030	3/4	3/4	1	1-1/2	4	.738
GMF21998	R.040	3/4	3/4	1	1-1/2	4	.738

Mill Dia. Tolerance (Inch)	Corner Radius Tolerance (Inch)	Shank Dia. Tolerance
0~-.0012	±.0008	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

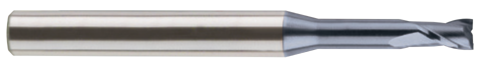
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

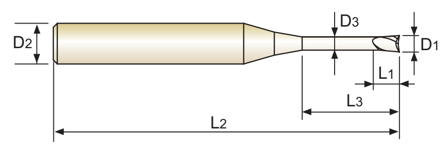
4G MILL END MILLS

PLAIN SHANK **GMF22 SERIES**

CARBIDE, 2 FLUTE WITH NECK

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- Excellent performance when cutting steels, up to HRc55
- Due to Multiple Helix on 1/8" and over diameter end mills, vibration is minimized and tool life increased.
- For 1/32" and under 1/32" diameter sizes, double neck increases tool rigidity and minimizes vibration.
- Excellent for Rib Processing of various depths





CARBIDE 2 30° PLAIN p.C286-C291

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF22901	.008	3/16	.010	3/64	1-1/2	.006
GMF22902	.015	3/16	1/32	3/64	1-1/2	.013
GMF22903	.015	3/16	1/32	5/64	1-1/2	.013
GMF22904	.015	3/16	1/32	1/8	1-1/2	.013
GMF22905	.015	3/16	1/32	5/32	1-1/2	.013
GMF22906	.015	3/16	1/32	3/16	1-1/2	.013
GMF22907	.020	3/16	1/32	5/64	1-3/4	.018
GMF22908	.020	3/16	1/32	1/8	1-3/4	.018
GMF22909	.020	3/16	1/32	5/32	1-3/4	.018
GMF22910	.020	3/16	1/32	3/16	1-3/4	.018
GMF22911	.020	3/16	1/32	1/4	1-3/4	.018
GMF22912	.024	3/16	1/32	5/64	1-3/4	.022
GMF22913	.024	3/16	1/32	1/8	1-3/4	.022
GMF22914	.024	3/16	1/32	5/32	1-3/4	.022
GMF22915	.024	3/16	1/32	3/16	1-3/4	.022
GMF22916	.024	3/16	1/32	1/4	1-3/4	.022
GMF22917	.024	3/16	1/32	5/16	1-3/4	.022
GMF22918	.024	3/16	1/32	3/8	1-3/4	.022
GMF22002	1/32	3/16	3/64	5/64	1-3/4	.029
GMF22919	1/32	3/16	3/64	1/8	1-3/4	.029
GMF22920	1/32	3/16	3/64	5/32	1-3/4	.029
GMF22921	1/32	3/16	3/64	3/16	1-3/4	.029
GMF22922	1/32	3/16	3/64	1/4	1-3/4	.029
GMF22923	1/32	3/16	3/64	5/16	1-3/4	.029
GMF22924	1/32	3/16	3/64	3/8	1-3/4	.029
GMF22003	3/64	3/16	1/16	1/8	2	.044
GMF22925	3/64	3/16	1/16	5/32	2	.044
GMF22926	3/64	3/16	1/16	3/16	2	.044
GMF22927	3/64	3/16	1/16	1/4	2	.044
GMF22928	3/64	3/16	1/16	5/16	2	.044

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **GMF22 SERIES**

CARBIDE, 2 FLUTE WITH NECK

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- Excellent performance when cutting steels, up to HRc55
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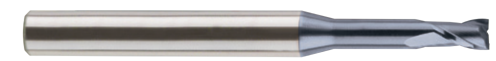
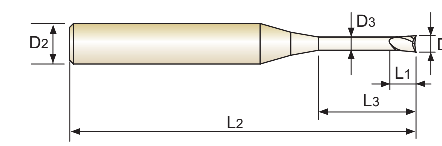
- For 1/32" and under 1/32" diameter sizes, double neck increases tool rigidity and minimizes vibration.
- Excellent for Rib Processing of various depths





CARBIDE 2 30° PLAIN p.C286-C291

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF22929	3/64	3/16	1/16	3/8	2	.044
GMF22930	3/64	3/16	1/16	1/2	2	.044
GMF22931	3/64	3/16	1/16	9/16	2	.044
GMF22932	3/64	3/16	1/16	5/8	2	.044
GMF22933	3/64	3/16	1/16	3/4	2	.044
GMF22004	1/16	3/16	3/32	5/32	2	.060
GMF22934	1/16	3/16	3/32	1/4	2	.060
GMF22935	1/16	3/16	3/32	5/16	2	.060
GMF22936	1/16	3/16	3/32	3/8	2	.060
GMF22937	1/16	3/16	3/32	1/2	2	.060
GMF22938	1/16	3/16	3/32	9/16	2	.060
GMF22939	1/16	3/16	3/32	5/8	2	.060
GMF22940	1/16	3/16	3/32	3/4	2	.060
GMF22005	5/64	3/16	1/8	1/4	2	.076
GMF22941	5/64	3/16	1/8	5/16	2	.076
GMF22942	5/64	3/16	1/8	3/8	2	.076
GMF22943	5/64	3/16	1/8	1/2	2	.076
GMF22944	5/64	3/16	1/8	9/16	2	.076
GMF22945	5/64	3/16	1/8	5/8	2	.076
GMF22946	5/64	3/16	1/8	3/4	2	.076
GMF22006	3/32	3/16	5/32	5/16	2	.089
GMF22947	3/32	3/16	5/32	1/2	2	.089
GMF22948	3/32	3/16	5/32	5/8	2	.089
GMF22949	3/32	3/16	5/32	3/4	2	.089
GMF22008	1/8	1/4	3/16	5/16	2	.119
GMF22950	1/8	1/4	3/16	3/8	2	.119
GMF22951	1/8	1/4	3/16	1/2	2	.119
GMF22952	1/8	1/4	3/16	9/16	2-3/8	.119
GMF22953	1/8	1/4	3/16	5/8	2-3/8	.119
GMF22954	1/8	1/4	3/16	11/16	2-3/8	.119

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

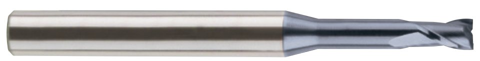
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

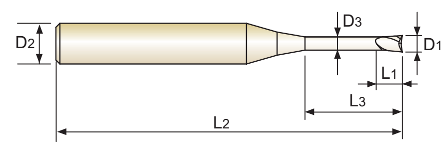
4G MILL END MILLS

PLAIN SHANK **GMF22** SERIES

CARBIDE, 2 FLUTE WITH NECK

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- Excellent performance when cutting steels, up to HRc55
- Due to Multiple Helix on 1/8" and over diameter end mills, vibration is minimized and tool life increased.
- For 1/32" and under 1/32" diameter sizes, double neck increases tool rigidity and minimizes vibration.
- Excellent for Rib Processing of various depths





CARBIDE 2 30° PLAIN

p.C286-C291

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF22955	1/8	1/4	3/16	3/4	2-3/8	.119
GMF22956	1/8	1/4	3/16	1	2-3/4	.119
GMF22012	3/16	1/4	1/4	3/8	2	.181
GMF22957	3/16	1/4	1/4	1/2	2	.181
GMF22958	3/16	1/4	1/4	5/8	2-3/8	.181
GMF22959	3/16	1/4	1/4	11/16	2-3/8	.181
GMF22960	3/16	1/4	1/4	3/4	2-3/8	.181
GMF22961	3/16	1/4	1/4	1	2-3/4	.181
GMF22962	3/16	1/4	1/4	1-3/16	2-3/4	.181
GMF22013	13/64	1/4	5/16	3/4	2-3/8	.197
GMF22963	13/64	1/4	5/16	1-3/16	2-3/4	.197
GMF22964	13/64	1/4	5/16	1-3/8	3	.197
GMF22965	13/64	1/4	5/16	1-1/2	3-1/8	.197
GMF22966	13/64	1/4	5/16	2	3-1/2	.197
GMF22016	1/4	1/4	3/8	5/8	2-3/8	.244
GMF22967	1/4	1/4	3/8	3/4	2-3/8	.244
GMF22968	1/4	1/4	3/8	1-3/16	2-3/4	.244
GMF22020	5/16	5/16	1/2	1	2-3/4	.300
GMF22024	3/8	3/8	5/8	1-3/16	3	.363
GMF22969	3/8	3/8	5/8	1-3/4	4	.363
GMF22032	1/2	1/2	3/4	1-3/8	3-1/8	.488
GMF22970	1/2	1/2	3/4	2	4-1/4	.488

Size	Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
up to Ø1/4	0~-.0005	h5
over Ø1/4	0~-.0006	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

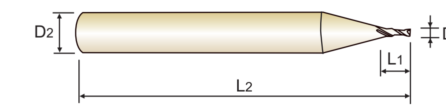
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **GMF23** SERIES

CARBIDE, 2 FLUTE

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- Excellent performance when cutting steels, up to HRc55
- Sharp End tooth geometry allows more efficient cutting



CARBIDE 2 30° PLAIN

p.C292-C293

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF23901	.004	3/16	.008	1-1/2
GMF23902	.008	3/16	1/64	1-1/2
GMF23903	.012	3/16	1/32	1-1/2
GMF23904	.015	3/16	1/32	1-1/2
GMF23905	.020	3/16	3/64	1-1/2
GMF23906	.024	3/16	3/64	1-1/2
GMF23907	.028	3/16	1/16	1-1/2
GMF23908	.031	3/16	1/16	1-1/2
GMF23909	.035	3/16	5/64	1-1/2
GMF23910	.040	1/4	3/32	2
GMF23911	.047	1/4	1/8	2
GMF23004	1/16	1/4	5/32	2
GMF23005	5/64	1/4	1/4	2
GMF23006	3/32	1/4	1/4	2
GMF23008	1/8	1/4	5/16	2
GMF23009	9/64	1/4	3/8	2
GMF23012	3/16	1/4	3/8	2
GMF23013	13/64	1/4	5/8	2-3/8
GMF23016	1/4	1/4	5/8	2-3/8
GMF23017	17/64	5/16	11/16	2-3/8
GMF23018	9/32	5/16	3/4	2-3/8
GMF23020	5/16	5/16	3/4	2-3/4
GMF23022	11/32	3/8	7/8	2-3/4
GMF23023	23/64	3/8	7/8	2-3/4
GMF23024	3/8	3/8	1	3
GMF23026	13/32	1/2	1	3
GMF23028	7/16	1/2	1-3/16	3
GMF23032	1/2	1/2	1-3/16	3-1/8
GMF23036	9/16	9/16	1-3/8	4
GMF23912	9/16	5/8	1-3/8	4
GMF23040	5/8	5/8	1-1/2	4
GMF23048	3/4	3/4	1-3/4	4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎			○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

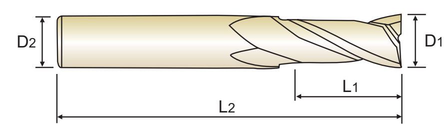
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **GMF23** SERIES

CARBIDE, 2 FLUTE (3/16 SHANK)

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Excellent performance when cutting steels, up to HRc55
- ▶ Sharp End tooth geometry allows more efficient cutting



CARBIDE 2 30° PLAIN p.C292-C293

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF23913	.040	3/16	3/32	2
GMF23914	.047	3/16	1/8	2
GMF23915	.050	3/16	1/8	2
GMF23916	.055	3/16	5/32	2
GMF23917	.060	3/16	5/32	2
GMF23918	.063	3/16	5/32	2
GMF23919	.070	3/16	3/16	2
GMF23920	.079	3/16	1/4	2
GMF23921	.087	3/16	1/4	2
GMF23922	.094	3/16	1/4	2
GMF23923	.098	3/16	5/16	2
GMF23924	.102	3/16	5/16	2
GMF23925	.106	3/16	5/16	2
GMF23926	.110	3/16	5/16	2
GMF23927	.120	3/16	5/16	2

▶ NEXT PAGE

Size	Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
up to Ø1/4	0~-.0005	h5
over Ø1/4	0~-.0006	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎			○	○	○	○	○	○	○

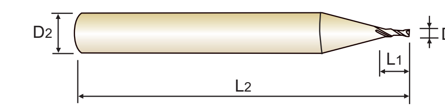
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **GMF23** SERIES

CARBIDE, 2 FLUTE (1/8 Shank)

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Excellent performance when cutting steels, up to HRc55
- ▶ Sharp End tooth geometry allows more efficient cutting



CARBIDE 2 30° PLAIN p.C292-C293

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF23928	.004	1/8	.008	1-1/2
GMF23929	.008	1/8	1/64	1-1/2
GMF23930	.012	1/8	1/32	1-1/2
GMF23931	.015	1/8	1/32	1-1/2
GMF23932	.020	1/8	3/64	1-1/2
GMF23933	.024	1/8	3/64	1-1/2
GMF23934	.028	1/8	1/16	1-1/2
GMF23935	.031	1/8	1/16	1-1/2
GMF23936	.035	1/8	5/64	1-1/2
GMF23937	.040	1/8	3/32	2
GMF23938	.047	1/8	1/8	2
GMF23939	.060	1/8	5/32	2
GMF23940	.079	1/8	1/4	2
GMF23941	.098	1/8	1/4	2
GMF23942	.120	1/8	5/16	2

Size	Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
up to Ø1/4	0~-.0005	h5
over Ø1/4	0~-.0006	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎			○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

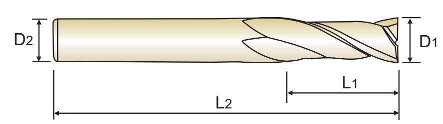
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **GMF24** SERIES

CARBIDE, 2 FLUTE LONG LENGTH

▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
▶ Excellent performance when cutting steels, up to HRc55
▶ Various length of cut and overall length end mills.



CARBIDE | 2 | 30° | PLAIN

p.C294-C297

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF24003	3/64	1/4	1/8	2-3/8
GMF24901	3/64	1/4	5/32	2-3/8
GMF24902	3/64	1/4	1/4	2-3/8
GMF24903	3/64	1/4	5/16	2-3/8
GMF24904	3/64	1/4	3/8	2-3/8
GMF24004	1/16	1/4	1/4	2-3/8
GMF24905	1/16	1/4	5/16	2-3/8
GMF24906	1/16	1/4	3/8	2-3/8
GMF24907	1/16	1/4	1/2	2-3/8
GMF24908	1/16	1/4	5/8	2-3/8
GMF24005	5/64	1/4	5/16	2-3/8
GMF24909	5/64	1/4	3/8	2-3/8
GMF24910	5/64	1/4	1/2	2-3/8
GMF24911	5/64	1/4	5/8	2-3/8
GMF24006	3/32	1/4	5/8	2-3/8
GMF24008	1/8	1/4	3/8	2-3/4
GMF24912	1/8	1/4	1/2	2-3/4
GMF24913	1/8	1/4	5/8	2-3/4
GMF24914	1/8	1/4	3/4	2-3/4
GMF24915	1/8	1/4	1	2-3/4
GMF24012	3/16	1/4	1/2	2-3/4
GMF24916	3/16	1/4	5/8	2-3/4
GMF24917	3/16	1/4	3/4	2-3/4
GMF24918	3/16	1/4	1	2-3/4
GMF24919	3/16	1/4	1-3/16	2-3/4
GMF24013	13/64	1/4	3/4	2-3/4
GMF24920	13/64	1/4	1	2-3/4
GMF24921	13/64	1/4	1-3/16	3-1/8

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

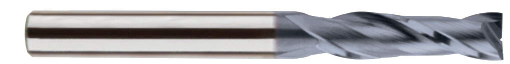
CARBIDE
HSS

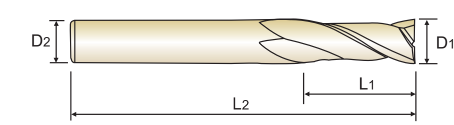
4G MILL END MILLS

PLAIN SHANK **GMF24** SERIES

CARBIDE, 2 FLUTE LONG LENGTH

▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
▶ Excellent performance when cutting steels, up to HRc55
▶ Various length of cut and overall length end mills.





CARBIDE | 2 | 30° | PLAIN

p.C294-C297

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF24922	13/64	1/4	1-1/2	4
GMF24016	1/4	1/4	5/8	2-3/8
GMF24923	1/4	1/4	5/8	3-1/8
GMF24924	1/4	1/4	3/4	2-3/4
GMF24925	1/4	1/4	3/4	3-1/2
GMF24926	1/4	1/4	1	3
GMF24927	1/4	1/4	1-3/16	3-1/8
GMF24928	1/4	1/4	1-3/16	4
GMF24929	1/4	1/4	1-3/16	6
GMF24930	1/4	1/4	1-3/8	3-1/2
GMF24931	1/4	1/4	1-1/2	3-1/2
GMF24932	1/4	1/4	1-3/4	6
GMF24020	5/16	5/16	1	3-1/8
GMF24933	5/16	5/16	1-3/16	3-1/8
GMF24934	5/16	5/16	1-3/8	3-1/2
GMF24935	5/16	5/16	1-1/2	3-1/2
GMF24936	5/16	5/16	1-1/2	4-1/2
GMF24937	5/16	5/16	1-3/4	4
GMF24938	5/16	5/16	2	4
GMF24024	3/8	3/8	1-3/16	3-1/8
GMF24939	3/8	3/8	1-3/16	4
GMF24940	3/8	3/8	1-3/8	3-1/2
GMF24941	3/8	3/8	1-1/2	3-1/2
GMF24942	3/8	3/8	1-1/2	4-1/2
GMF24943	3/8	3/8	1-3/4	4
GMF24944	3/8	3/8	2	4
GMF24945	3/8	3/8	2-3/8	4-1/4
GMF24032	1/2	1/2	1-3/8	3-1/2

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

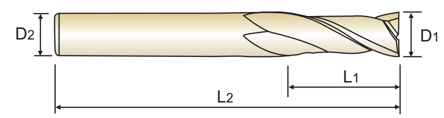
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **GMF24** SERIES

CARBIDE, 2 FLUTE LONG LENGTH

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Excellent performance when cutting steels, up to HRc55
- ▶ Various length of cut and overall length end mills.



CARBIDE 2 30° PLAIN p.C294-C297

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF24946	1/2	1/2	1-1/2	4
GMF24947	1/2	1/2	1-1/2	4-1/2
GMF24948	1/2	1/2	1-3/4	5
GMF24949	1/2	1/2	2	4
GMF24950	1/2	1/2	2-1/8	4-1/4
GMF24951	1/2	1/2	2-3/8	4-1/4
GMF24952	1/2	1/2	2-3/8	6
GMF24040	5/8	5/8	1-1/2	6
GMF24048	3/4	3/4	3-1/2	8
GMF24953	3/4	3/4	4-1/4	8

Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
0~-.0012	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

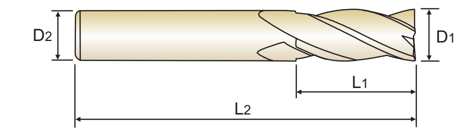
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **GMF25** SERIES

CARBIDE, 4 FLUTE

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Excellent performance when cutting steels, up to HRc55
- ▶ Due to Multiple Helix on 1/8" and over diameter end mills, vibration will be minimized and tool life increased.



CARBIDE 4 27°/30° PLAIN p.C298-C299

D1<Ø1/8, 30° Helix

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF25003	3/64	1/4	3/32	2
GMF25004	1/16	1/4	5/32	2
GMF25005	5/64	1/4	1/4	2
GMF25006	3/32	1/4	1/4	2
GMF25008	1/8	1/4	5/16	2
GMF25009	9/64	1/4	3/8	2
GMF25012	3/16	1/4	3/8	2
GMF25013	13/64	1/4	5/8	2-3/8
GMF25014	7/32	1/4	5/8	2-3/8
GMF25016	1/4	1/4	5/8	2-3/8
GMF25017	17/64	5/16	11/16	2-3/8
GMF25018	9/32	5/16	3/4	2-3/8
GMF25019	19/64	5/16	3/4	2-3/8
GMF25020	5/16	5/16	3/4	2-3/4
GMF25022	11/32	3/8	7/8	2-3/4
GMF25023	23/64	3/8	7/8	2-3/4
GMF25024	3/8	3/8	1	3
GMF25028	7/16	1/2	1-3/16	3
GMF25032	1/2	1/2	1-3/16	3-1/8
GMF25036	9/16	9/16	1-3/8	4
GMF25901	9/16	5/8	1-3/8	4
GMF25040	5/8	5/8	1-1/2	4
GMF25044	11/16	5/8	1-3/4	4
GMF25048	3/4	3/4	1-3/4	4

Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
0~-.0012	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎			○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

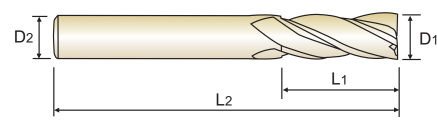
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

PLAIN SHANK **GMF26** SERIES

CARBIDE, 4 FLUTE

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Excellent performance when cutting steels, up to HRc55
- ▶ Due to Multiple Helix on 1/8″and over diameter end mills, vibration will be minimized and tool life increased.
- ▶ Due to gash land geometry used at end tooth, heavy duty cutting can be achieved.
  Various length products Available



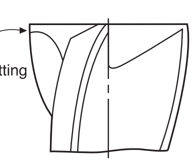
p.C298-C299

D1<Ø1/8, 38° Helix

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF26003	3/64	1/4	3/32	2
GMF26004	1/16	1/4	5/32	2
GMF26005	5/64	1/4	1/4	2
GMF26006	3/32	1/4	1/4	2
GMF26008	1/8	1/4	5/16	2
GMF26012	3/16	1/4	3/8	2
GMF26013	13/64	1/4	5/8	2-3/8
GMF26016	1/4	1/4	5/8	2-3/8
GMF26020	5/16	5/16	3/4	2-3/4
GMF26024	3/8	3/8	1	3
GMF26032	1/2	1/2	1-3/16	3-1/8
GMF26040	5/8	5/8	1-1/4	4
GMF26048	3/4	3/4	1-3/4	4

Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
0~-.0012	h5



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎			○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

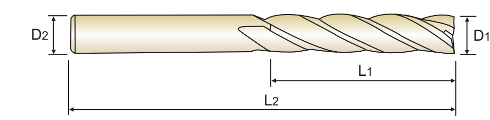
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

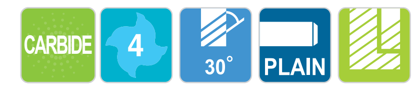
YG 4G MILL END MILLS

PLAIN SHANK **GMF27** SERIES

CARBIDE, 4 FLUTE LONG LENGTH

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Excellent performance when cutting steels, up to HRc55
- ▶ Various length of cut and overall length products available





p.C300-C303

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF27003	3/64	1/4	1/8	2-3/8
GMF27901	3/64	1/4	5/32	2-3/8
GMF27902	3/64	1/4	3/16	2-3/8
GMF27903	3/64	1/4	1/4	2-3/8
GMF27004	1/16	1/4	1/4	2-3/8
GMF27005	5/64	1/4	5/16	2-3/8
GMF27904	5/64	1/4	3/8	2-3/8
GMF27905	5/64	1/4	1/2	2-3/8
GMF27906	5/64	1/4	9/16	2-3/8
GMF27006	3/32	1/4	3/8	2-3/8
GMF27907	3/32	1/4	1/2	2-3/8
GMF27008	1/8	1/4	3/8	2-3/4
GMF27908	1/8	1/4	1/2	2-3/4
GMF27909	1/8	1/4	5/8	2-3/4
GMF27910	1/8	1/4	3/4	2-3/4
GMF27911	1/8	1/4	1	2-3/4
GMF27912	1/8	1/4	1-3/16	2-3/4
GMF27012	3/16	1/4	1/2	2-3/4
GMF27913	3/16	1/4	5/8	2-3/4
GMF27914	3/16	1/4	3/4	2-3/4
GMF27915	3/16	1/4	1	2-3/4
GMF27916	3/16	1/4	1-3/16	2-3/4
GMF27013	13/64	1/4	3/4	2-3/4
GMF27917	13/64	1/4	1	2-3/4
GMF27918	13/64	1/4	1-3/16	3-1/8
GMF27016	1/4	1/4	5/8	2-3/8
GMF27919	1/4	1/4	3/4	2-3/4
GMF27920	1/4	1/4	3/4	3-1/2

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

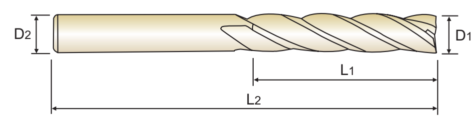
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **GMF27** SERIES

CARBIDE, 4 FLUTE LONG LENGTH

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Excellent performance when cutting steels, up to HRc55
- ▶ Various length of cut and overall length products available



CARBIDE 4 30° PLAIN p.C300-C303

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF27921	1/4	1/4	1	3
GMF27922	1/4	1/4	1-3/16	3-1/8
GMF27923	1/4	1/4	1-3/16	4
GMF27924	1/4	1/4	1-3/8	3-1/2
GMF27925	1/4	1/4	1-1/2	3-1/2
GMF27926	1/4	1/4	1-1/2	4-1/2
GMF27927	1/4	1/4	1-3/4	6
GMF27020	5/16	5/16	1	3-1/8
GMF27928	5/16	5/16	1-3/16	3-1/8
GMF27929	5/16	5/16	1-3/8	3-1/2
GMF27930	5/16	5/16	1-1/2	3-1/2
GMF27931	5/16	5/16	1-3/4	4
GMF27932	5/16	5/16	2	4
GMF27933	5/16	5/16	2	6
GMF27024	3/8	3/8	1-3/16	3-1/8
GMF27934	3/8	3/8	1-3/16	4
GMF27935	3/8	3/8	1-3/8	3-1/2
GMF27936	3/8	3/8	1-1/2	3-1/2
GMF27937	3/8	3/8	1-3/4	4
GMF27938	3/8	3/8	2	4
GMF27032	1/2	1/2	1-3/8	3-1/2
GMF27939	1/2	1/2	1-1/2	4
GMF27940	1/2	1/2	1-3/4	5
GMF27941	1/2	1/2	2	4
GMF27942	1/2	1/2	2-1/8	4-1/4
GMF27943	1/2	1/2	2-3/8	4-1/4
GMF27944	1/2	1/2	2-3/8	6
GMF27036	9/16	5/8	2	4-1/4

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

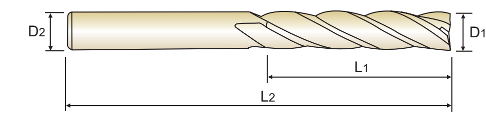
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **GMF27** SERIES

CARBIDE, 4 FLUTE LONG LENGTH

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Excellent performance when cutting steels, up to HRc55
- ▶ Various length of cut and overall length products available



CARBIDE 4 30° PLAIN p.C300-C303

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF27040	5/8	5/8	2	4-1/4
GMF27945	5/8	5/8	2-3/8	4-1/2
GMF27946	5/8	5/8	2-3/4	5
GMF27947	5/8	5/8	2-3/4	6
GMF27048	3/4	3/4	2-3/8	5
GMF27948	3/4	3/4	3-1/2	8
GMF27064	1	1	3-1/2	6

Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
0~-.0012	h5

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

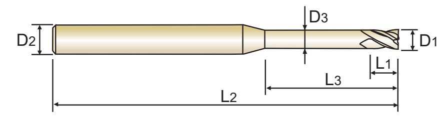
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **GMF28** SERIES

CARBIDE, 4 FLUTE WITH NECK

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Excellent performance when cutting steels, up to HRc55
- ▶ Many more various effective lengths and overall lengths than previous standard products.



CARBIDE 4 30° PLAIN p.C304-C305

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF28003	3/64	3/16	1/16	5/32	2	.044
GMF28901	3/64	3/16	1/16	3/16	2	.044
GMF28902	3/64	3/16	1/16	1/4	2	.044
GMF28903	3/64	3/16	1/16	5/16	2	.044
GMF28004	1/16	3/16	3/32	1/4	2	.060
GMF28904	1/16	3/16	3/32	5/16	2	.060
GMF28905	1/16	3/16	3/32	3/8	2	.060
GMF28906	1/16	3/16	3/32	1/2	2	.060
GMF28907	1/16	3/16	3/32	5/8	2	.060
GMF28005	5/64	3/16	1/8	5/16	2	.076
GMF28908	5/64	3/16	1/8	3/8	2	.076
GMF28909	5/64	3/16	1/8	1/2	2	.076
GMF28910	5/64	3/16	1/8	5/8	2	.076
GMF28008	1/8	1/4	3/16	3/8	2	.119
GMF28911	1/8	1/4	3/16	1/2	2	.119
GMF28912	1/8	1/4	3/16	5/8	2-3/8	.119
GMF28913	1/8	1/4	3/16	3/4	2-3/8	.119
GMF28914	1/8	1/4	3/16	1-3/16	2-3/4	.119
GMF28012	3/16	1/4	1/4	1/2	2	.181
GMF28915	3/16	1/4	1/4	5/8	2-3/8	.181
GMF28916	3/16	1/4	1/4	3/4	2-3/8	.181
GMF28917	3/16	1/4	1/4	1-3/16	2-3/4	.181
GMF28918	3/16	1/4	1/4	1-1/2	3-1/8	.181
GMF28013	13/64	1/4	5/16	3/4	2-3/8	.197
GMF28919	13/64	1/4	5/16	1-1/2	3-1/8	.197
GMF28016	1/4	1/4	3/8	5/8	2-3/8	.244
GMF28920	1/4	1/4	3/8	1-3/16	2-3/4	.244
GMF28020	5/16	5/16	1/2	1	2-3/4	.300

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◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

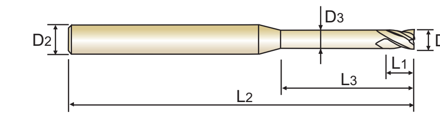
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **GMF28** SERIES

CARBIDE, 4 FLUTE WITH NECK

- ▶ New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- ▶ Excellent performance when cutting steels, up to HRc55
- ▶ Many more various effective lengths and overall lengths than previous standard products.



CARBIDE 4 30° PLAIN p.C304-C305

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GMF28921	5/16	5/16	1/2	1-5/8	4	.300
GMF28024	3/8	3/8	5/8	1-3/16	3	.363
GMF28922	3/8	3/8	5/8	1-3/4	4	.363
GMF28032	1/2	1/2	3/4	1-3/8	3-1/8	.488
GMF28923	1/2	1/2	3/4	2	4-1/4	.488

Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
0~-.0012	h5

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

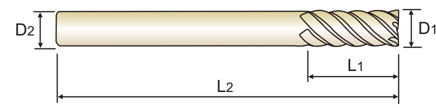
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **GMF29** SERIES

CARBIDE, 6 FLUTE 45° HELIX

- New coating and new tool geometry gives outstanding cutting performance and wear resistance.
- Excellent performance when cutting steels, up to HRc55
- Due to 45 helix angle, better surface finish can be achieved when side cutting.
- Various effective length and overall length products.



CARBIDE 6 45° PLAIN p.C306-C307

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GMF29016	1/4	1/4	5/8	2-3/8
GMF29901	1/4	1/4	1-3/16	3-1/8
GMF29020	5/16	5/16	3/4	2-3/4
GMF29902	5/16	5/16	1-1/2	3-1/2
GMF29024	3/8	3/8	1	3
GMF29903	3/8	3/8	1-1/2	3-1/2
GMF29032	1/2	1/2	1-3/16	3-1/8
GMF29904	1/2	1/2	2	4
GMF29040	5/8	5/8	1-1/2	4
GMF29905	5/8	5/8	2-3/8	4-1/2
GMF29048	3/4	3/4	1-3/4	4
GMF29906	3/4	3/4	2-3/8	4-1/2

Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
0~-.0012	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

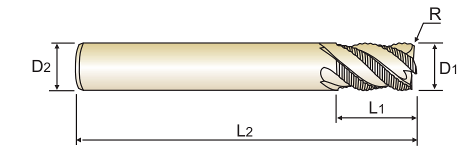
4G MILL END MILLS

X-SPEED ROUGHER

PLAIN SHANK **G907** SERIES
FLAT SHANK **G928** SERIES

CARBIDE, 4&5 FLUTE STUB LENGTH ROUGHING CORNER RADIUS - FINE

- Unique flute design for excellent chip evacuation and vibration reduction.
- Optimal roughing tooth profile to reduce cutting forces.
- Special tool geometry for high feed rate and heavy cutting.
- Strong end tooth design for plunge and pocket milling.
- Custom engineered coating to allow long tool life and excellent chip evacuation.



CARBIDE 4&5 44°/45° PLAIN FLAT p.C308-C309

5 Flute, 44°/44.5°/45°

Unit : Inch

EDP No. PLAIN	EDP No. FLAT	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	No. of Flute
G90716	-	R.020	1/4	1/4	3/8	2	4
G90720	-	R.020	5/16	5/16	7/16	2	4
G90724	G92824	R.020	3/8	3/8	1/2	2-1/4	4
G90732	G92832	R.020	1/2	1/2	5/8	2-1/2	4
G90740	G92840	R.040	5/8	5/8	3/4	3	5
G90748	G92848	R.040	3/4	3/4	1	3-1/4	5
G90764	G92864	R.040	1	1	1-1/4	4	5

Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
0~-.002	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○												◎	

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILL
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

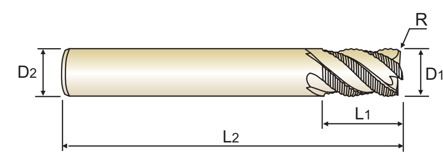
X-SPEED ROUGHER

PLAIN SHANK **G908** SERIES

FLAT SHANK **G929** SERIES

CARBIDE, 4&5 FLUTE REGULAR LENGTH ROUGHING CORNER RADIUS - FINE

- ▶ Unique flute design for excellent chip evacuation and vibration reduction.
- ▶ Optimal roughing tooth profile to reduce cutting forces.
- ▶ Special tool geometry for high feed rate and heavy cutting.
- ▶ Strong end tooth design for plunge and pocket milling.
- ▶ Custom engineered coating to all ng tool life and excellent chip evacuation.



CARBIDE 4&5 44°/45° PLAIN FLAT p.C308-C309

5 Flute, 44°/44.5°/45°

Unit : Inch

EDP No.		Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
PLAIN	FLAT	R	D_1	D_2	L_1	L_2	
G90816	-	R.020	1/4	1/4	5/8	2-1/2	4
G90820	-	R.020	5/16	5/16	3/4	2-1/2	4
G90824	G92924	R.020	3/8	3/8	7/8	2-1/2	4
G90832	G92932	R.020	1/2	1/2	1	3	4
G90840	G92940	R.040	5/8	5/8	1-1/4	3-1/2	5
G90848	G92948	R.040	3/4	3/4	1-5/8	4	5
G90864	G92964	R.040	1	1	1-3/4	4-1/4	5

Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
0~-.002	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○												◎	

YG 4G MILL END MILLS

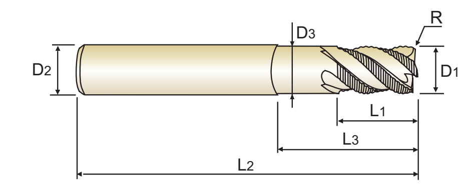
X-SPEED ROUGHER

PLAIN SHANK **G909** SERIES

FLAT SHANK **G930** SERIES

CARBIDE, MULTI FLUTE EXTENDED REACH ROUGHING CORNER RADIUS - FINE

- ▶ Unique flute design for excellent chip evacuation and vibration reduction.
- ▶ Optimal roughing tooth profile to reduce cutting forces.
- ▶ Special tool geometry for high feed rate and heavy cutting.
- ▶ Strong end tooth design for plunge and pocket milling.
- ▶ Custom engineered coating to allow long tool life and excellent chip evacuation.



CARBIDE 4&5 44°/45° PLAIN FLAT p.C308-C309

5 Flute, 44°/44.5°/45°

Unit : Inch

EDP No.		Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter	No. of Flute
PLAIN	FLAT	R	D_1	D_2	L_1	L_3	L_2	D_3	
G90916	-	R.020	1/4	1/4	3/8	7/8	2-1/2	.230	4
G90920	-	R.020	5/16	5/16	7/16	1	2-1/2	.292	4
G90924	G93024	R.020	3/8	3/8	1/2	1	2-3/4	.355	4
G90932	G93032	R.020	1/2	1/2	5/8	1-1/4	3-1/4	.480	4
G90940	G93040	R.040	5/8	5/8	3/4	2	4	.605	5
G90948	G93048	R.040	3/4	3/4	1	2-3/8	4-1/2	.718	5

Mill Dia. Tolerance (Inch)	Shank Dia. Tolerance
0~-.002	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○												◎	

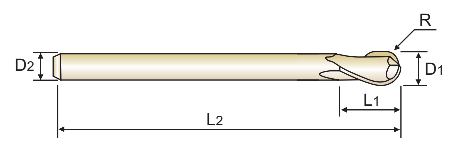
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **SEMD98** SERIES

CARBIDE, 2 FLUTE BALL NOSE (Short, Regular, Long Shank)

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Due to unique ball nose geometry and cutting edges, cutting force decreased, and wear resistance increased.
▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.



CARBIDE | 2 | 30° | R ±0.005 R≤3 | R ±0.010 R>3 | PLAIN

p.C310-C312

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEMD98001S	R0.05	0.1	4	0.1	40	Short
SEMD98001	R0.05	0.1	4	0.2	40	Regular
SEMD980013S	R0.05	0.1	3	0.2	40	3mm Shank
SEMD980015S	R0.075	0.15	4	0.15	40	Short
SEMD980015	R0.075	0.15	4	0.3	40	Regular
SEMD9800153S	R0.075	0.15	3	0.3	40	3mm Shank
SEMD98002S	R0.1	0.2	4	0.2	40	Short
SEMD98002	R0.1	0.2	4	0.4	40	Regular
SEMD980023S	R0.1	0.2	3	0.4	40	3mm Shank
SEMD98003S	R0.15	0.3	4	0.3	40	Short
SEMD98003	R0.15	0.3	4	0.6	40	Regular
SEMD980033S	R0.15	0.3	3	0.6	40	3mm Shank
SEMD98004S	R0.2	0.4	4	0.4	40	Short
SEMD98004	R0.2	0.4	4	0.8	40	Regular
SEMD980043S	R0.2	0.4	3	0.8	40	3mm Shank
SEMD98005S	R0.25	0.5	4	0.5	40	Short
SEMD98005	R0.25	0.5	4	1.0	40	Regular
SEMD980053S	R0.25	0.5	3	1.0	40	3mm Shank
SEMD98006S	R0.3	0.6	4	0.6	40	Short
SEMD98006	R0.3	0.6	4	1.2	40	Regular
SEMD980063S	R0.3	0.6	3	1.2	40	3mm Shank
SEMD98007S	R0.35	0.7	4	0.7	40	Short
SEMD98007	R0.35	0.7	4	1.4	40	Regular
SEMD980073S	R0.35	0.7	3	1.4	40	3mm Shank
SEMD98008S	R0.4	0.8	4	0.8	40	Short
SEMD98008	R0.4	0.8	4	1.6	40	Regular
SEMD980083S	R0.4	0.8	3	1.6	40	3mm Shank
SEMD98009S	R0.45	0.9	4	0.9	40	Short

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS

4G MILL END MILLS

PLAIN SHANK **SEMD98** SERIES

CARBIDE, 2 FLUTE BALL NOSE (Short, Regular, Long Shank)

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
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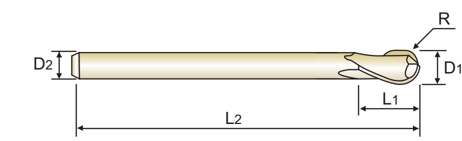

CARBIDE | 2 | 30° | R ±0.005 R≤3 | R ±0.010 R>3 | PLAIN

p.C310-C312

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEMD98009	R0.45	0.9	4	1.8	40	Regular
SEMD980093S	R0.45	0.9	3	1.8	40	3mm Shank
SEMD98010040	R0.5	1.0	6	1.5	40	Short
SEMD980103S	R0.5	1.0	3	2.5	50	3mm Shank
SEMD980104S	R0.5	1.0	4	2.5	50	Regular
SEMD98010	R0.5	1.0	6	2.5	50	Regular
SEMD98010070	R0.5	1.0	6	2.5	70	Long Shank
SEMD98010100	R0.5	1.0	6	2.5	100	Long Shank
SEMD98012040	R0.6	1.2	6	2	40	Short
SEMD980123S	R0.6	1.2	3	3	50	3mm Shank
SEMD980124S	R0.6	1.2	4	3	50	Regular
SEMD98012	R0.6	1.2	6	3	50	Regular
SEMD98012070	R0.6	1.2	6	3	70	Long Shank
SEMD98012100	R0.6	1.2	6	3	100	Long Shank
SEMD98015040	R0.75	1.5	6	2.5	40	Short
SEMD980153S	R0.75	1.5	3	4	50	3mm Shank
SEMD980154S	R0.75	1.5	4	4	50	Regular
SEMD98015	R0.75	1.5	6	4	50	Regular
SEMD98015070	R0.75	1.5	6	4	70	Long Shank
SEMD98015100	R0.75	1.5	6	4	100	Long Shank
SEMD98020040	R1.0	2.0	6	3	40	Short
SEMD980203S	R1.0	2.0	3	5	50	3mm Shank
SEMD980204S	R1.0	2.0	4	5	50	Regular
SEMD98020	R1.0	2.0	6	5	50	Regular
SEMD98020080	R1.0	2.0	6	5	80	Long Shank
SEMD98020100	R1.0	2.0	6	5	100	Long Shank
SEMD98025040	R1.25	2.5	6	4	40	Short
SEMD980253S	R1.25	2.5	3	6	60	3mm Shank

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE, 2 FLUTE BALL NOSE (Short, Regular, Long Shank)

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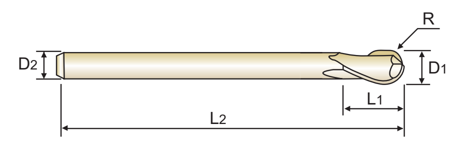

CARBIDE 2 30° R ±0.005 R≤3 R ±0.010 R>3 PLAIN p.C310-C312

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEMD980254S	R1.25	2.5	4	6	60	Regular
SEMD98025	R1.25	2.5	6	6	60	Regular
SEMD98025080	R1.25	2.5	6	6	80	Long Shank
SEMD98025100	R1.25	2.5	6	6	100	Long Shank
SEMD98030040	R1.5	3.0	6	4.5	40	Short
SEMD980303S	R1.5	3.0	3	6	60	3mm Shank
SEMD980304S	R1.5	3.0	4	6	60	Regular
SEMD98030	R1.5	3.0	6	6	60	Regular
SEMD98030080	R1.5	3.0	6	6	80	Long Shank
SEMD98030100	R1.5	3.0	6	6	100	Long Shank
SEMD98035	R1.75	3.5	6	8	70	-
SEMD98040050	R2.0	4.0	6	6	50	Short
SEMD980404S	R2.0	4.0	4	8	70	Regular
SEMD98040	R2.0	4.0	6	8	70	Regular
SEMD980401004S	R2.0	4.0	4	8	100	Long Shank
SEMD980401204S	R2.0	4.0	4	8	120	Long Shank
SEMD98040100	R2.0	4.0	6	8	100	Long Shank
SEMD98040120	R2.0	4.0	6	8	120	Long Shank
SEMD98045	R2.25	4.5	6	9	80	-
SEMD98050060	R2.5	5.0	6	7.5	60	Short
SEMD98050	R2.5	5.0	6	10	80	Regular
SEMD980505S	R2.5	5.0	5	10	80	5mmShank
SEMD98055	R2.75	5.5	6	11	90	-
SEMD98060050	R3.0	6.0	6	9	50	Short
SEMD98060060	R3.0	6.0	6	9	60	Short
SEMD98060080	R3.0	6.0	6	9	80	Short
SEMD98060	R3.0	6.0	6	12	90	Regular
SEMD98060110	R3.0	6.0	6	12	110	Long Shank

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS
PLAIN SHANK SEMD98 SERIES

CARBIDE, 2 FLUTE BALL NOSE (Short, Regular, Long Shank)

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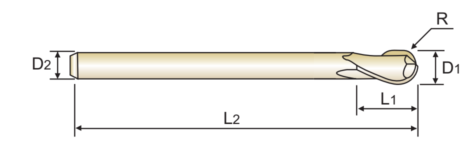

CARBIDE 2 30° R ±0.005 R≤3 R ±0.010 R>3 PLAIN p.C310-C312

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEMD98060130	R3.0	6.0	6	12	130	Long Shank
SEMD98060150	R3.0	6.0	6	12	150	Long Shank
SEMD98065	R3.25	6.5	8	13	90	-
SEMD98070	R3.5	7.0	8	14	90	-
SEMD98080050	R4.0	8.0	8	12	50	Short
SEMD98080060	R4.0	8.0	8	12	60	Short
SEMD98080080	R4.0	8.0	8	12	80	Short
SEMD98080090	R4.0	8.0	8	12	90	Short
SEMD98080	R4.0	8.0	8	14	100	Regular
SEMD98080130	R4.0	8.0	8	14	130	Long Shank
SEMD98080150	R4.0	8.0	8	14	150	Long Shank
SEMD98085	R4.25	8.5	10	16	100	-
SEMD98090	R4.5	9.0	10	18	100	-
SEMD98100050	R5.0	10.0	10	15	50	Short
SEMD98100060	R5.0	10.0	10	15	60	Short
SEMD98100080	R5.0	10.0	10	15	80	Short
SEMD98100090	R5.0	10.0	10	15	90	Short
SEMD98100	R5.0	10.0	10	18	100	Regular
SEMD98100130	R5.0	10.0	10	18	130	Long Shank
SEMD98100150	R5.0	10.0	10	18	150	Long Shank
SEMD98100180	R5.0	10.0	10	18	180	Long Shank
SEMD98100200	R5.0	10.0	10	18	200	Long Shank
SEMD98110	R5.5	11.0	12	20	100	-
SEMD98120060	R6.0	12.0	12	18	60	Short
SEMD98120080	R6.0	12.0	12	18	80	Short
SEMD98120090	R6.0	12.0	12	18	90	Short
SEMD98120100	R6.0	12.0	12	18	100	Short
SEMD98120	R6.0	12.0	12	22	110	Regular

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
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HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
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STANDARD COBALT & HSS
TECHNICAL DATA

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG

4G MILL END MILLS

PLAIN SHANK **SEMD98** SERIES

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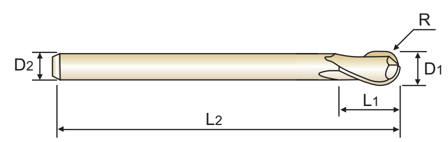

CARBIDE 2 30° R ±0.005 R≤3 R ±0.010 R>3 PLAIN

p.C310-C312

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEMD98120130	R6.0	**12.0**	12	22	130	Long Shank
SEMD98120150	R6.0	**12.0**	12	22	150	Long Shank
SEMD98120180	R6.0	**12.0**	12	22	180	Long Shank
SEMD98120220	R6.0	**12.0**	12	22	200	Long Shank
SEMD98130	R6.5	**13.0**	12	24	100	-
SEMD98140	R7.0	**14.0**	12	26	100	Regular
SEMD9814014S	R7.0	**14.0**	14	26	100	-
SEMD9814016S	R7.0	**14.0**	16	26	100	-
SEMD98150	R7.5	**15.0**	16	28	140	-
SEMD98160100	R8.0	**16.0**	16	24	100	Short
SEMD98160130	R8.0	**16.0**	16	24	130	Short
SEMD98160	R8.0	**16.0**	16	30	150	Regular
SEMD98160180	R8.0	**16.0**	16	30	180	Long Shank
SEMD98160200	R8.0	**16.0**	16	30	200	Long Shank
SEMD98180	R9.0	**18.0**	16	34	150	Regular
SEMD9818018S	R9.0	**18.0**	18	34	150	-
SEMD98200100	R10.0	**20.0**	20	30	100	Short
SEMD98200130	R10.0	**20.0**	20	30	130	Short
SEMD98200	R10.0	**20.0**	20	38	150	Regular
SEMD98200200	R10.0	**20.0**	20	38	200	Long Shank
SEMD98250120	R12.5	**25.0**	25	50	120	Short
SEMD98250	R12.5	**25.0**	25	50	180	Regular

Size	Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to R3	±0.005	0~-0.012	h5
over R3	±0.010	0~-0.015	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG

4G MILL END MILLS

PLAIN SHANK **SEM846** SERIES

CARBIDE, 2 FLUTE LONG NECK BALL NOSE

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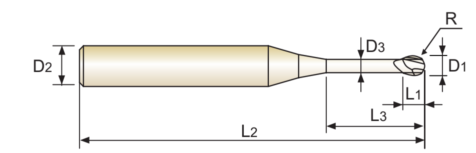

CARBIDE 2 30° R ±0.005 R≤3 R ±0.010 R>3 PLAIN

p.C313-C323

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM846001002	R0.05	**0.1**	4	0.1	0.2	40	0.085
SEM846001003	R0.05	**0.1**	4	0.1	0.3	40	0.085
SEM846001005	R0.05	**0.1**	4	0.1	0.5	40	0.085
SEM84600101	R0.05	**0.1**	4	0.1	1	40	0.085
SEM846002005	R0.1	**0.2**	4	0.2	0.5	40	0.17
SEM84600201	R0.1	**0.2**	4	0.2	1	40	0.17
SEM846002015	R0.1	**0.2**	4	0.2	1.5	40	0.17
SEM84600202	R0.1	**0.2**	4	0.2	2	40	0.17
SEM84600203	R0.1	**0.2**	4	0.2	3	40	0.17
SEM84600301	R0.15	**0.3**	4	0.3	1	40	0.27
SEM846003015	R0.15	**0.3**	4	0.3	1.5	40	0.27
SEM84600302	R0.15	**0.3**	4	0.3	2	40	0.27
SEM846003025	R0.15	**0.3**	4	0.3	2.5	40	0.27
SEM84600303	R0.15	**0.3**	4	0.3	3	40	0.27
SEM84600304	R0.15	**0.3**	4	0.3	4	40	0.27
SEM84600305	R0.15	**0.3**	4	0.3	5	40	0.27
SEM84600401	R0.2	**0.4**	4	0.4	1	40	0.37
SEM846004015	R0.2	**0.4**	4	0.4	1.5	40	0.37
SEM84600402	R0.2	**0.4**	4	0.4	2	40	0.37
SEM846004025	R0.2	**0.4**	4	0.4	2.5	40	0.37
SEM84600403	R0.2	**0.4**	4	0.4	3	40	0.37
SEM84600404	R0.2	**0.4**	4	0.4	4	40	0.37
SEM84600405	R0.2	**0.4**	4	0.4	5	40	0.37
SEM84600406	R0.2	**0.4**	4	0.4	6	40	0.37
SEM84600408	R0.2	**0.4**	4	0.4	8	40	0.37
SEM84600410	R0.2	**0.4**	4	0.4	10	40	0.37
SEM84600501	R0.25	**0.5**	4	0.5	1	45	0.45
SEM846005015	R0.25	**0.5**	4	0.5	1.5	45	0.45

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEM846** SERIES

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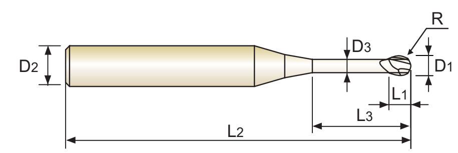

CARBIDE | 2 | 30° | R ±0.005 R≤3 | R ±0.010 R>3 | PLAIN

p.C313-C323

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D1	D2	L1	L3	L2	D3
SEM84600502	R0.25	**0.5**	4	0.5	2	45	0.45
SEM846005025	R0.25	**0.5**	4	0.5	2.5	45	0.45
SEM84600503	R0.25	**0.5**	4	0.5	3	45	0.45
SEM84600504	R0.25	**0.5**	4	0.5	4	45	0.45
SEM84600505	R0.25	**0.5**	4	0.5	5	45	0.45
SEM84600506	R0.25	**0.5**	4	0.5	6	45	0.45
SEM84600508	R0.25	**0.5**	4	0.5	8	45	0.45
SEM84600510	R0.25	**0.5**	4	0.5	10	45	0.45
SEM84600512	R0.25	**0.5**	4	0.5	12	45	0.45
SEM84600514	R0.25	**0.5**	4	0.5	14	45	0.45
SEM84600516	R0.25	**0.5**	4	0.5	16	45	0.45
SEM84600601	R0.3	**0.6**	4	0.6	1	45	0.55
SEM84600602	R0.3	**0.6**	4	0.6	2	45	0.55
SEM84600603	R0.3	**0.6**	4	0.6	3	45	0.55
SEM84600604	R0.3	**0.6**	4	0.6	4	45	0.55
SEM84600605	R0.3	**0.6**	4	0.6	5	45	0.55
SEM84600606	R0.3	**0.6**	4	0.6	6	45	0.55
SEM84600608	R0.3	**0.6**	4	0.6	8	45	0.55
SEM84600610	R0.3	**0.6**	4	0.6	10	45	0.55
SEM84600612	R0.3	**0.6**	4	0.6	12	45	0.55
SEM84600614	R0.3	**0.6**	4	0.6	14	45	0.55
SEM84600616	R0.3	**0.6**	4	0.6	16	45	0.55
SEM84600702	R0.35	**0.7**	4	0.7	2	45	0.65
SEM84600704	R0.35	**0.7**	4	0.7	4	45	0.65
SEM84600706	R0.35	**0.7**	4	0.7	6	45	0.65
SEM84600708	R0.35	**0.7**	4	0.7	8	45	0.65
SEM84600710	R0.35	**0.7**	4	0.7	10	45	0.65
SEM84600712	R0.35	**0.7**	4	0.7	12	45	0.65

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEM846** SERIES

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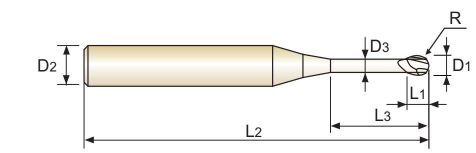

CARBIDE | 2 | 30° | R ±0.005 R≤3 | R ±0.010 R>3 | PLAIN

p.C313-C323

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D1	D2	L1	L3	L2	D3
SEM84600801	R0.4	**0.8**	4	0.8	1	45	0.75
SEM84600802	R0.4	**0.8**	4	0.8	2	45	0.75
SEM84600803	R0.4	**0.8**	4	0.8	3	45	0.75
SEM84600804	R0.4	**0.8**	4	0.8	4	45	0.75
SEM84600805	R0.4	**0.8**	4	0.8	5	45	0.75
SEM84600806	R0.4	**0.8**	4	0.8	6	45	0.75
SEM84600808	R0.4	**0.8**	4	0.8	8	45	0.75
SEM84600810	R0.4	**0.8**	4	0.8	10	45	0.75
SEM84600812	R0.4	**0.8**	4	0.8	12	45	0.75
SEM84600814	R0.4	**0.8**	4	0.8	14	45	0.75
SEM84600816	R0.4	**0.8**	4	0.8	16	45	0.75
SEM84600820	R0.4	**0.8**	4	0.8	20	45	0.75
SEM84600904	R0.45	**0.9**	4	0.9	4	45	0.85
SEM84600906	R0.45	**0.9**	4	0.9	6	45	0.85
SEM84600908	R0.45	**0.9**	4	0.9	8	45	0.85
SEM84600910	R0.45	**0.9**	4	0.9	10	45	0.85
SEM84601002	R0.5	**1.0**	4	1	2	50	0.95
SEM84601003	R0.5	**1.0**	4	1	3	50	0.95
SEM84601004	R0.5	**1.0**	4	1	4	50	0.95
SEM84601005	R0.5	**1.0**	4	1	5	50	0.95
SEM84601006	R0.5	**1.0**	4	1	6	50	0.95
SEM84601007	R0.5	**1.0**	4	1	7	50	0.95
SEM84601008	R0.5	**1.0**	4	1	8	50	0.95
SEM84601009	R0.5	**1.0**	4	1	9	50	0.95
SEM84601010	R0.5	**1.0**	4	1	10	50	0.95
SEM84601012	R0.5	**1.0**	4	1	12	50	0.95
SEM84601014	R0.5	**1.0**	4	1	14	50	0.95
SEM84601016	R0.5	**1.0**	4	1	16	50	0.95

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

PLAIN SHANK **SEM846** SERIES

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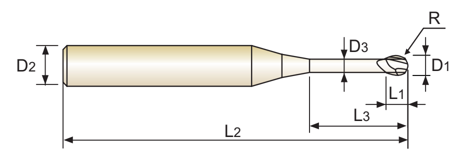

CARBIDE | 2 | 30° | R ±0.005 R≤3 | R ±0.010 R>3 | PLAIN

p.C313-C323

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM84601018	R0.5	1.0	4	1	18	50	0.95
SEM84601020	R0.5	1.0	4	1	20	50	0.95
SEM84601022	R0.5	1.0	4	1	22	60	0.95
SEM84601026	R0.5	1.0	4	1	26	60	0.95
SEM84601030	R0.5	1.0	4	1	30	70	0.95
SEM84601040	R0.5	1.0	4	1	40	80	0.95
SEM84601050	R0.5	1.0	4	1	50	100	0.95
SEM84601204	R0.6	1.2	4	1.2	4	50	1.15
SEM84601206	R0.6	1.2	4	1.2	6	50	1.15
SEM84601208	R0.6	1.2	4	1.2	8	50	1.15
SEM84601210	R0.6	1.2	4	1.2	10	50	1.15
SEM84601212	R0.6	1.2	4	1.2	12	50	1.15
SEM84601216	R0.6	1.2	4	1.2	16	50	1.15
SEM84601220	R0.6	1.2	4	1.2	20	50	1.15
SEM84601226	R0.6	1.2	4	1.2	26	60	1.15
SEM84601406	R0.7	1.4	4	1.4	6	50	1.35
SEM84601408	R0.7	1.4	4	1.4	8	50	1.35
SEM84601410	R0.7	1.4	4	1.4	10	50	1.35
SEM84601412	R0.7	1.4	4	1.4	12	50	1.35
SEM84601416	R0.7	1.4	4	1.4	16	50	1.35
SEM84601503	R0.75	1.5	4	1.5	3	50	1.45
SEM84601504	R0.75	1.5	4	1.5	4	50	1.45
SEM84601505	R0.75	1.5	4	1.5	5	50	1.45
SEM84601506	R0.75	1.5	4	1.5	6	50	1.45
SEM84601507	R0.75	1.5	4	1.5	7	50	1.45
SEM84601508	R0.75	1.5	4	1.5	8	50	1.45
SEM84601510	R0.75	1.5	4	1.5	10	50	1.45
SEM84601512	R0.75	1.5	4	1.5	12	50	1.45

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
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HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

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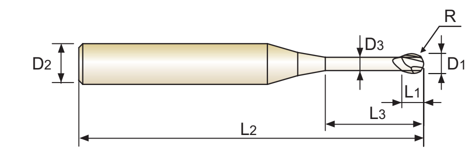


CARBIDE | 2 | 30° | R ±0.005 R≤3 | R ±0.010 R>3 | PLAIN

p.C313-C323

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM84601514	R0.75	1.5	4	1.5	14	50	1.45
SEM84601516	R0.75	1.5	4	1.5	16	50	1.45
SEM84601518	R0.75	1.5	4	1.5	18	50	1.45
SEM84601520	R0.75	1.5	4	1.5	20	50	1.45
SEM84601522	R0.75	1.5	4	1.5	22	60	1.45
SEM84601526	R0.75	1.5	4	1.5	26	60	1.45
SEM84601530	R0.75	1.5	4	1.5	30	70	1.45
SEM84601535	R0.75	1.5	4	1.5	35	70	1.45
SEM84601540	R0.75	1.5	4	1.5	40	80	1.45
SEM84601604	R0.8	1.6	4	1.6	4	50	1.55
SEM84601606	R0.8	1.6	4	1.6	6	50	1.55
SEM84601608	R0.8	1.6	4	1.6	8	50	1.55
SEM84601610	R0.8	1.6	4	1.6	10	50	1.55
SEM84601612	R0.8	1.6	4	1.6	12	50	1.55
SEM84601616	R0.8	1.6	4	1.6	16	50	1.55
SEM84601620	R0.8	1.6	4	1.6	20	50	1.55
SEM84601804	R0.9	1.8	4	1.8	4	50	1.75
SEM84601806	R0.9	1.8	4	1.8	6	50	1.75
SEM84601808	R0.9	1.8	4	1.8	8	50	1.75
SEM84601810	R0.9	1.8	4	1.8	10	50	1.75
SEM84601812	R0.9	1.8	4	1.8	12	50	1.75
SEM84601816	R0.9	1.8	4	1.8	16	50	1.75
SEM84601820	R0.9	1.8	4	1.8	20	50	1.75
SEM84602004	R1.0	2.0	4	2	4	50	1.95
SEM84602006	R1.0	2.0	4	2	6	50	1.95
SEM84602008	R1.0	2.0	4	2	8	50	1.95
SEM84602010	R1.0	2.0	4	2	10	50	1.95
SEM84602012	R1.0	2.0	4	2	12	50	1.95

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

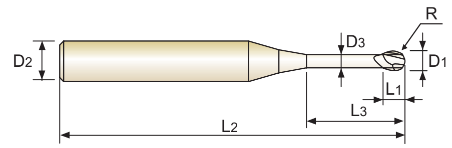
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **SEM846** SERIES

CARBIDE, 2 FLUTE LONG NECK BALL NOSE

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Due to unique ball nose geometry and cutting edges, cutting force decreased, and wear resistance increased.
- ▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.



CARBIDE | 2 | 30° | R ±0.005 (R≤3) | R ±0.010 (R>3) | PLAIN

p.C313-C323

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM84602014	R1.0	2.0	4	2	14	50	1.95
SEM84602016	R1.0	2.0	4	2	16	50	1.95
SEM84602018	R1.0	2.0	4	2	18	50	1.95
SEM84602020	R1.0	2.0	4	2	20	50	1.95
SEM84602022	R1.0	2.0	4	2	22	60	1.95
SEM84602026	R1.0	2.0	4	2	26	60	1.95
SEM84602030	R1.0	2.0	4	2	30	70	1.95
SEM84602035	R1.0	2.0	4	2	35	70	1.95
SEM84602040	R1.0	2.0	4	2	40	80	1.95
SEM84602045	R1.0	2.0	4	2	45	90	1.95
SEM84602050	R1.0	2.0	4	2	50	100	1.95
SEM84602060	R1.0	2.0	4	2	60	110	1.95
SEM84602508	R1.25	2.5	4	2.5	8	50	2.40
SEM84602510	R1.25	2.5	4	2.5	10	50	2.40
SEM84602512	R1.25	2.5	4	2.5	12	50	2.40
SEM84602516	R1.25	2.5	4	2.5	16	50	2.40
SEM84602520	R1.25	2.5	4	2.5	20	50	2.40
SEM84602522	R1.25	2.5	4	2.5	22	60	2.40
SEM84602526	R1.25	2.5	4	2.5	26	60	2.40
SEM84602530	R1.25	2.5	4	2.5	30	70	2.40
SEM84602535	R1.25	2.5	4	2.5	35	70	2.40
SEM84602540	R1.25	2.5	4	2.5	40	80	2.40
SEM84602545	R1.25	2.5	4	2.5	45	90	2.40
SEM84602550	R1.25	2.5	4	2.5	50	100	2.40
SEM84603006	R1.5	3.0	6	3	6	50	2.85
SEM84603008	R1.5	3.0	6	3	8	50	2.85
SEM84603010	R1.5	3.0	6	3	10	50	2.85
SEM84603012	R1.5	3.0	6	3	12	50	2.85

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

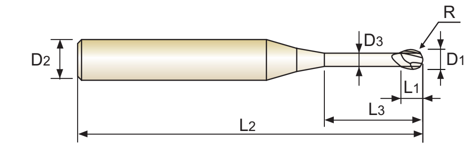
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEM846** SERIES

CARBIDE, 2 FLUTE LONG NECK BALL NOSE

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Due to unique ball nose geometry and cutting edges, cutting force decreased, and wear resistance increased.
- ▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.



CARBIDE | 2 | 30° | R ±0.005 (R≤3) | R ±0.010 (R>3) | PLAIN

p.C313-C323

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM84603014	R1.5	3.0	6	3	14	60	2.85
SEM84603016	R1.5	3.0	6	3	16	60	2.85
SEM84603018	R1.5	3.0	6	3	18	60	2.85
SEM84603020	R1.5	3.0	6	3	20	60	2.85
SEM84603022	R1.5	3.0	6	3	22	65	2.85
SEM84603026	R1.5	3.0	6	3	26	65	2.85
SEM84603030	R1.5	3.0	6	3	30	70	2.85
SEM84603035	R1.5	3.0	6	3	35	70	2.85
SEM84603040	R1.5	3.0	6	3	40	80	2.85
SEM84603045	R1.5	3.0	6	3	45	90	2.85
SEM84603050	R1.5	3.0	6	3	50	100	2.85
SEM84603060	R1.5	3.0	6	3	60	100	2.85
SEM84604008	R2.0	4.0	6	4	8	50	3.85
SEM84604010	R2.0	4.0	6	4	10	50	3.85
SEM84604012	R2.0	4.0	6	4	12	50	3.85
SEM84604014	R2.0	4.0	6	4	14	60	3.85
SEM84604016	R2.0	4.0	6	4	16	60	3.85
SEM84604018	R2.0	4.0	6	4	18	60	3.85
SEM84604020	R2.0	4.0	6	4	20	60	3.85
SEM84604022	R2.0	4.0	6	4	22	65	3.85
SEM84604026	R2.0	4.0	6	4	26	65	3.85
SEM84604030	R2.0	4.0	6	4	30	70	3.85
SEM84604035	R2.0	4.0	6	4	35	70	3.85
SEM84604040	R2.0	4.0	6	4	40	80	3.85
SEM84604045	R2.0	4.0	6	4	45	90	3.85
SEM84604050	R2.0	4.0	6	4	50	100	3.85
SEM84604055	R2.0	4.0	6	4	55	100	3.85
SEM84604060	R2.0	4.0	6	4	60	100	3.85

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◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

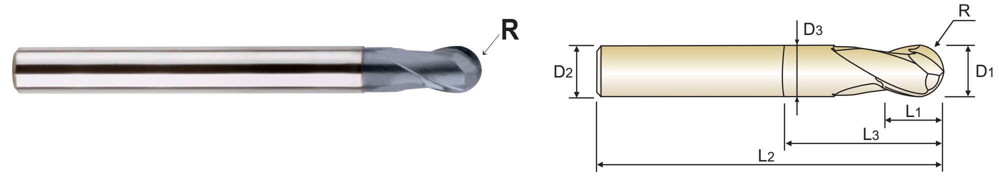
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **SEM846** SERIES

CARBIDE, 2 FLUTE LONG NECK BALL NOSE

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Due to unique ball nose geometry and cutting edges, cutting force decreased, and wear resistance increased.
▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.



CARBIDE | 2 | 30° | R ±0.005 (R≤3) | R ±0.010 (R>3) | PLAIN

p.C313-C323

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM84605015	R2.5	5.0	6	6	15	60	4.85
SEM84605020	R2.5	5.0	6	6	20	60	4.85
SEM84605026	R2.5	5.0	6	6	26	65	4.85
SEM84605030	R2.5	5.0	6	6	30	70	4.85
SEM84605035	R2.5	5.0	6	6	35	70	4.85
SEM84605040	R2.5	5.0	6	6	40	80	4.85
SEM84605045	R2.5	5.0	6	6	45	90	4.85
SEM84605050	R2.5	5.0	6	6	50	100	4.85
SEM84605055	R2.5	5.0	6	6	55	100	4.85
SEM84605060	R2.5	5.0	6	6	60	100	4.85
SEM84606020	R3.0	6.0	6	8	20	60	5.85
SEM84606030	R3.0	6.0	6	8	30	60	5.85
SEM84606020090	R3.0	6.0	6	12	20	90	5.85
SEM84606030090	R3.0	6.0	6	12	30	90	5.85
SEM84608025	R4.0	8.0	8	10	25	70	7.70
SEM84608035	R4.0	8.0	8	10	35	70	7.70
SEM84608025100	R4.0	8.0	8	14	25	100	7.70
SEM84608035100	R4.0	8.0	8	14	35	100	7.70
SEM84610030	R5.0	10.0	10	12	30	75	9.70
SEM84610040	R5.0	10.0	10	12	40	75	9.70
SEM84610030100	R5.0	10.0	10	18	30	100	9.70
SEM84610040100	R5.0	10.0	10	18	40	100	9.70
SEM84612032	R6.0	12.0	12	14	32	80	11.70
SEM84612045	R6.0	12.0	12	14	45	80	11.70
SEM84612032110	R6.0	12.0	12	22	32	110	11.70
SEM84612045110	R6.0	12.0	12	22	45	110	11.70

Size	Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to R3	±0.005	0~-0.012	h5
over R3	±0.010	0~-0.015	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

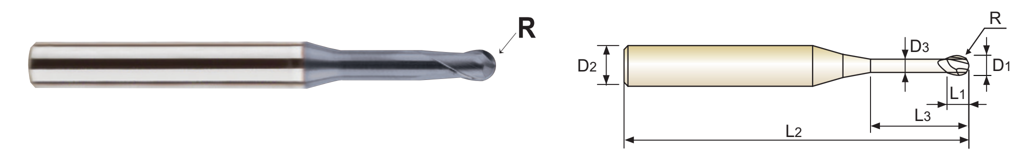
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **SEM846** SERIES

CARBIDE, 2 FLUTE LONG NECK BALL NOSE (6mm shank)

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Due to unique ball nose geometry and cutting edges, cutting force decreased, and wear resistance increased.
▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.



CARBIDE | 2 | 30° | R ±0.005 | PLAIN

p.C313-C323

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM846005016S	R0.25	0.5	6	0.5	1	45	0.45
SEM846005026S	R0.25	0.5	6	0.5	2	45	0.45
SEM846005046S	R0.25	0.5	6	0.5	4	45	0.45
SEM846006016S	R0.3	0.6	6	0.6	1	45	0.55
SEM846006026S	R0.3	0.6	6	0.6	2	45	0.55
SEM846006036S	R0.3	0.6	6	0.6	3	45	0.55
SEM846006046S	R0.3	0.6	6	0.6	4	45	0.55
SEM846006056S	R0.3	0.6	6	0.6	5	45	0.55
SEM846006066S	R0.3	0.6	6	0.6	6	45	0.55
SEM846006086S	R0.3	0.6	6	0.6	8	45	0.55
SEM846006106S	R0.3	0.6	6	0.6	10	45	0.55
SEM846006126S	R0.3	0.6	6	0.6	12	45	0.55
SEM846006146S	R0.3	0.6	6	0.6	14	45	0.55
SEM846006166S	R0.3	0.6	6	0.6	16	45	0.55
SEM846008016S	R0.4	0.8	6	0.8	1	45	0.75
SEM846008026S	R0.4	0.8	6	0.8	2	45	0.75
SEM846008036S	R0.4	0.8	6	0.8	3	45	0.75
SEM846008046S	R0.4	0.8	6	0.8	4	45	0.75
SEM846008056S	R0.4	0.8	6	0.8	5	45	0.75
SEM846008066S	R0.4	0.8	6	0.8	6	45	0.75
SEM846008086S	R0.4	0.8	6	0.8	8	45	0.75
SEM846008106S	R0.4	0.8	6	0.8	10	45	0.75
SEM846008126S	R0.4	0.8	6	0.8	12	45	0.75
SEM846008146S	R0.4	0.8	6	0.8	14	45	0.75
SEM846008166S	R0.4	0.8	6	0.8	16	45	0.75
SEM846008206S	R0.4	0.8	6	0.8	20	45	0.75
SEM846010026S	R0.5	1.0	6	1	2	50	0.95
SEM846010036S	R0.5	1.0	6	1	3	50	0.95

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

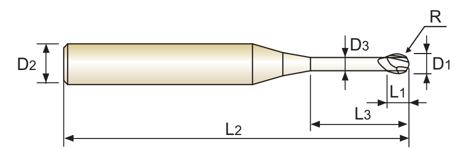
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEM846** SERIES

CARBIDE, 2 FLUTE LONG NECK BALL NOSE (6mm shank)

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Due to unique ball nose geometry and cutting edges, cutting force decreased, and wear resistance increased.
▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.



CARBIDE 2 30° R ±0.005 PLAIN p.C313-C323

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM846010046S	R0.5	1.0	6	1	4	50	0.95
SEM846010056S	R0.5	1.0	6	1	5	50	0.95
SEM846010066S	R0.5	1.0	6	1	6	50	0.95
SEM846010076S	R0.5	1.0	6	1	7	50	0.95
SEM846010086S	R0.5	1.0	6	1	8	50	0.95
SEM846010096S	R0.5	1.0	6	1	9	50	0.95
SEM846010106S	R0.5	1.0	6	1	10	50	0.95
SEM846010126S	R0.5	1.0	6	1	12	50	0.95
SEM846010146S	R0.5	1.0	6	1	14	50	0.95
SEM846010166S	R0.5	1.0	6	1	16	50	0.95
SEM846010186S	R0.5	1.0	6	1	18	50	0.95
SEM846010206S	R0.5	1.0	6	1	20	50	0.95
SEM846010226S	R0.5	1.0	6	1	22	60	0.95
SEM846010266S	R0.5	1.0	6	1	26	60	0.95
SEM846010306S	R0.5	1.0	6	1	30	70	0.95
SEM846015036S	R0.75	1.5	6	1.5	3	50	1.45
SEM846015046S	R0.75	1.5	6	1.5	4	50	1.45
SEM846015066S	R0.75	1.5	6	1.5	6	50	1.45
SEM846015086S	R0.75	1.5	6	1.5	8	50	1.45
SEM846015106S	R0.75	1.5	6	1.5	10	50	1.45
SEM846015126S	R0.75	1.5	6	1.5	12	50	1.45
SEM846015146S	R0.75	1.5	6	1.5	14	50	1.45
SEM846015166S	R0.75	1.5	6	1.5	16	50	1.45
SEM846015186S	R0.75	1.5	6	1.5	18	50	1.45
SEM846015206S	R0.75	1.5	6	1.5	20	50	1.45
SEM846015226S	R0.75	1.5	6	1.5	22	60	1.45
SEM846015266S	R0.75	1.5	6	1.5	26	60	1.45
SEM846015306S	R0.75	1.5	6	1.5	30	70	1.45

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

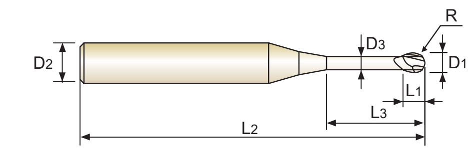
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **SEM846** SERIES

CARBIDE, 2 FLUTE LONG NECK BALL NOSE (6mm shank)

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Due to unique ball nose geometry and cutting edges, cutting force decreased, and wear resistance increased.
▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.



CARBIDE 2 30° R ±0.005 PLAIN p.C313-C323

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM846015356S	R0.75	1.5	6	1.5	35	70	1.45
SEM846015406S	R0.75	1.5	6	1.5	40	80	1.45
SEM846020046S	R1.0	2.0	6	2	4	50	1.95
SEM846020066S	R1.0	2.0	6	2	6	50	1.95
SEM846020086S	R1.0	2.0	6	2	8	50	1.95
SEM846020106S	R1.0	2.0	6	2	10	50	1.95
SEM846020126S	R1.0	2.0	6	2	12	50	1.95
SEM846020146S	R1.0	2.0	6	2	14	50	1.95
SEM846020166S	R1.0	2.0	6	2	16	50	1.95
SEM846020186S	R1.0	2.0	6	2	18	50	1.95
SEM846020206S	R1.0	2.0	6	2	20	50	1.95
SEM846020226S	R1.0	2.0	6	2	22	60	1.95
SEM846020266S	R1.0	2.0	6	2	26	60	1.95
SEM846020306S	R1.0	2.0	6	2	30	70	1.95
SEM846020356S	R1.0	2.0	6	2	35	70	1.95
SEM846020406S	R1.0	2.0	6	2	40	80	1.95
SEM846020456S	R1.0	2.0	6	2	45	90	1.95
SEM846020506S	R1.0	2.0	6	2	50	100	1.95

Mill Dia. Tolerance (mm)	Radius Tolerance (mm)	Shank Dia. Tolerance
0~-0.012	±0.005	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

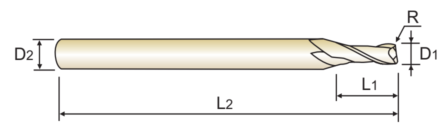
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEMD99** SERIES

CARBIDE, 2 FLUTE CORNER RADIUS (Short, Regular, Long Shank)

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
- ▶Available aashort, regular and long shank end mills.
- ▶Available various corner radius end mills, from 0.02 mm to 5.0mm corner radius.



CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN

p.C324-C325

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEMD99002002	R0.02	0.2	4	0.4	40	-
SEMD99002005	R0.05	0.2	4	0.4	40	-
SEMD99003002	R0.02	0.3	4	0.6	40	-
SEMD99003005	R0.05	0.3	4	0.6	40	-
SEMD99004005	R0.05	0.4	4	0.8	40	-
SEMD9900401	R0.1	0.4	4	0.8	40	-
SEMD99005005	R0.05	0.5	4	1.0	40	-
SEMD9900501	R0.1	0.5	4	1.0	40	-
SEMD99006005	R0.05	0.6	4	1.2	40	-
SEMD9900601	R0.1	0.6	4	1.2	40	-
SEMD9900602	R0.2	0.6	4	1.2	40	-
SEMD99007005	R0.05	0.7	4	1.4	40	-
SEMD9900701	R0.1	0.7	4	1.4	40	-
SEMD9900702	R0.2	0.7	4	1.4	40	-
SEMD99008005	R0.05	0.8	4	1.6	40	-
SEMD9900801	R0.1	0.8	4	1.6	40	-
SEMD9900802	R0.2	0.8	4	1.6	40	-
SEMD99009005	R0.05	0.9	4	1.8	40	-
SEMD9900901	R0.1	0.9	4	1.8	40	-
SEMD99010005	R0.05	1.0	6	2.5	50	-
SEMD9901001	R0.1	1.0	6	2.5	50	-
SEMD9901002	R0.2	1.0	6	2.5	50	-
SEMD9901003	R0.3	1.0	6	2.5	50	-
SEMD99012005	R0.05	1.2	6	3	50	-
SEMD9901201	R0.1	1.2	6	3	50	-
SEMD9901202	R0.2	1.2	6	3	50	-
SEMD9901203	R0.3	1.2	6	3	50	-
SEMD99015005	R0.05	1.5	6	4	50	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

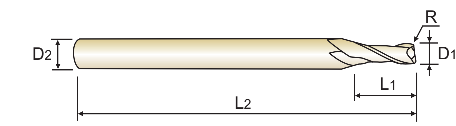
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEMD99** SERIES

CARBIDE, 2 FLUTE CORNER RADIUS (Short, Regular, Long Shank)

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
- ▶Available short, regular and long shank end mills.
- ▶Available various corner radius end mills, from 0.02 mm to 5.0mm corner radius.



CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN

p.C324-C325

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEMD9901501	R0.1	1.5	6	4	50	-
SEMD9901502	R0.2	1.5	6	4	50	-
SEMD9901503	R0.3	1.5	6	4	50	-
SEMD9901505	R0.5	1.5	6	4	50	-
SEMD9902001	R0.1	2.0	6	6	50	-
SEMD9902002	R0.2	2.0	6	6	50	-
SEMD9902003	R0.3	2.0	6	6	50	-
SEMD9902005	R0.5	2.0	6	6	50	-
SEMD9902501	R0.1	2.5	6	7	60	-
SEMD9902502	R0.2	2.5	6	7	60	-
SEMD9902503	R0.3	2.5	6	7	60	-
SEMD9902505	R0.5	2.5	6	7	60	-
SEMD9903001	R0.1	3.0	6	8	60	-
SEMD9903002	R0.2	3.0	6	8	60	-
SEMD9903003	R0.3	3.0	6	8	60	-
SEMD9903005	R0.5	3.0	6	8	60	-
SEMD9903010	R1.0	3.0	6	8	60	-
SEMD9903501	R0.1	3.5	6	10	70	-
SEMD9903502	R0.2	3.5	6	10	70	-
SEMD9903503	R0.3	3.5	6	10	70	-
SEMD9903505	R0.5	3.5	6	10	70	-
SEMD99040014S	R0.1	4.0	4	10	70	4mm Shank
SEMD99040024S	R0.2	4.0	4	10	70	4mm Shank
SEMD99040034S	R0.3	4.0	4	10	70	4mm Shank
SEMD99040054S	R0.5	4.0	4	10	70	4mm Shank
SEMD99040104S	R1.0	4.0	4	10	70	4mm Shank
SEMD99040011004S	R0.1	4.0	4	10	100	4mm Shank
SEMD99040021004S	R0.2	4.0	4	10	100	4mm Shank

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

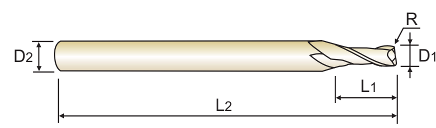
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEMD99** SERIES

CARBIDE, 2 FLUTE CORNER RADIUS (Short, Regular, Long Shank)

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
▶Available short, regular and long shank end mills.
▶Available various corner radius end mills, from 0.02 mm to 5.0mm corner radius.



CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN

p.C324-C325

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEMD99040031004S	R0.3	4.0	4	10	100	4mm Shank
SEMD99040051004S	R0.5	4.0	4	10	100	4mm Shank
SEMD99040101004S	R1.0	4.0	4	10	100	4mm Shank
SEMD9904001	R0.1	4.0	6	10	70	Regular
SEMD9904002	R0.2	4.0	6	10	70	Regular
SEMD9904003	R0.3	4.0	6	10	70	Regular
SEMD9904005	R0.5	4.0	6	10	70	Regular
SEMD9904010	R1.0	4.0	6	10	70	Regular
SEMD9904501	R0.1	4.5	6	11	80	-
SEMD9904502	R0.2	4.5	6	11	80	-
SEMD9904503	R0.3	4.5	6	11	80	-
SEMD9904505	R0.5	4.5	6	11	80	-
SEMD9905001	R0.1	5.0	6	13	90	-
SEMD9905002	R0.2	5.0	6	13	90	-
SEMD9905003	R0.3	5.0	6	13	90	-
SEMD9905005	R0.5	5.0	6	13	90	-
SEMD9905010	R1.0	5.0	6	13	90	-
SEMD9905501	R0.1	5.5	6	13	90	-
SEMD9905502	R0.2	5.5	6	13	90	-
SEMD9905503	R0.3	5.5	6	13	90	-
SEMD9905505	R0.5	5.5	6	13	90	-
SEMD9905510	R1.0	5.5	6	13	90	-
SEMD9906002060	R0.2	6.0	6	15	60	Short
SEMD9906003060	R0.3	6.0	6	15	60	Short
SEMD9906005060	R0.5	6.0	6	15	60	Short
SEMD9906010060	R1.0	6.0	6	15	60	Short
SEMD9906001	R0.1	6.0	6	15	90	Regular
SEMD9906002	R0.2	6.0	6	15	90	Regular

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

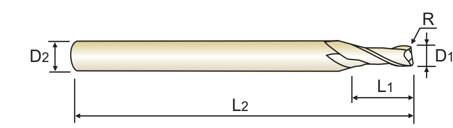
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **SEMD99** SERIES

CARBIDE, 2 FLUTE CORNER RADIUS (Short, Regular, Long Shank)

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
▶Available short, regular and long shank end mills.
▶Available various corner radius end mills, from 0.02 mm to 5.0mm corner radius.



CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN

p.C324-C325

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEMD9906003	R0.3	6.0	6	15	90	Regular
SEMD9906005	R0.5	6.0	6	15	90	Regular
SEMD9906010	R1.0	6.0	6	15	90	Regular
SEMD9906015	R1.5	6.0	6	15	90	Regular
SEMD9906020	R2.0	6.0	6	15	90	Regular
SEMD9906005110	R0.5	6.0	6	15	110	Long Shank
SEMD9906010110	R1.0	6.0	6	15	110	Long Shank
SEMD9906005130	R0.5	6.0	6	15	130	Long Shank
SEMD9906010130	R1.0	6.0	6	15	130	Long Shank
SEMD9907001	R0.1	7.0	8	16	90	-
SEMD9907002	R0.2	7.0	8	16	90	-
SEMD9907003	R0.3	7.0	8	16	90	-
SEMD9907005	R0.5	7.0	8	16	90	-
SEMD9907010	R1.0	7.0	8	16	90	-
SEMD9907020	R2.0	7.0	8	16	90	-
SEMD9908003070	R0.3	8.0	8	20	70	Short
SEMD9908005070	R0.5	8.0	8	20	70	Short
SEMD9908010070	R1.0	8.0	8	20	70	Short
SEMD9908001	R0.1	8.0	8	20	100	Regular
SEMD9908002	R0.2	8.0	8	20	100	Regular
SEMD9908003	R0.3	8.0	8	20	100	Regular
SEMD9908005	R0.5	8.0	8	20	100	Regular
SEMD9908010	R1.0	8.0	8	20	100	Regular
SEMD9908015	R1.5	8.0	8	20	100	Regular
SEMD9908020	R2.0	8.0	8	20	100	Regular
SEMD9908025	R2.5	8.0	8	20	100	Regular
SEMD9908030	R3.0	8.0	8	20	100	Regular
SEMD9908005120	R0.5	8.0	8	20	120	Long Shank

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **SEMD99** SERIES

CARBIDE, 2 FLUTE CORNER RADIUS (Short, Regular, Long Shank)

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
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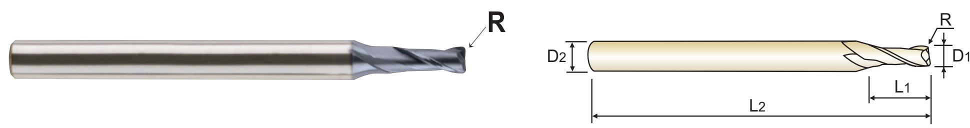

CARBIDE | 2 | 30° | R ±0.010 (R≤6) | R ±0.015 (D>6) | PLAIN

p.C324-C325

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEMD9908010120	R1.0	8.0	8	20	120	Long Shank
SEMD9908015150	R0.5	8.0	8	20	150	Long Shank
SEMD9908010150	R1.0	8.0	8	20	150	Long Shank
SEMD9910003075	R0.3	10.0	10	25	75	Short
SEMD9910005075	R0.5	10.0	10	25	75	Short
SEMD9910010075	R1.0	10.0	10	25	75	Short
SEMD9910001	R0.1	10.0	10	25	100	Regular
SEMD9910002	R0.2	10.0	10	25	100	Regular
SEMD9910003	R0.3	10.0	10	25	100	Regular
SEMD9910005	R0.5	10.0	10	25	100	Regular
SEMD9910010	R1.0	10.0	10	25	100	Regular
SEMD9910015	R1.5	10.0	10	25	100	Regular
SEMD9910020	R2.0	10.0	10	25	100	Regular
SEMD9910025	R2.5	10.0	10	25	100	Regular
SEMD9910030	R3.0	10.0	10	25	100	Regular
SEMD9910040	R4.0	10.0	10	25	100	Regular
SEMD9910005130	R0.5	10.0	10	25	130	Long Shank
SEMD9910010130	R1.0	10.0	10	25	130	Long Shank
SEMD9910005150	R0.5	10.0	10	25	150	Long Shank
SEMD9910010150	R1.0	10.0	10	25	150	Long Shank
SEMD9911002	R0.2	11.0	12	25	110	-
SEMD9911003	R0.3	11.0	12	25	110	-
SEMD9911005	R0.5	11.0	12	25	110	-
SEMD9911010	R1.0	11.0	12	25	110	-
SEMD9911020	R2.0	11.0	12	25	110	-
SEMD9912003080	R0.3	12.0	12	30	80	Short
SEMD9912005080	R0.5	12.0	12	30	80	Short
SEMD9912010080	R1.0	12.0	12	30	80	Short

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **SEMD99** SERIES

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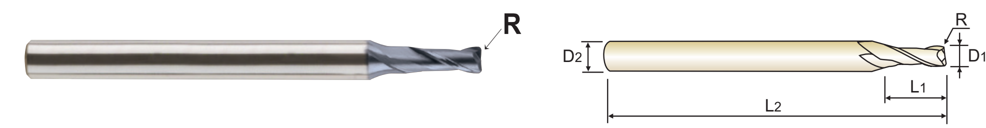


CARBIDE | 2 | 30° | R ±0.010 (R≤6) | R ±0.015 (D>6) | PLAIN

p.C324-C325

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEMD9912001	R0.1	12.0	12	30	110	Regular
SEMD9912002	R0.2	12.0	12	30	110	Regular
SEMD9912003	R0.3	12.0	12	30	110	Regular
SEMD9912005	R0.5	12.0	12	30	110	Regular
SEMD9912010	R1.0	12.0	12	30	110	Regular
SEMD9912015	R1.5	12.0	12	30	110	Regular
SEMD9912020	R2.0	12.0	12	30	110	Regular
SEMD9912025	R2.5	12.0	12	30	110	Regular
SEMD9912030	R3.0	12.0	12	30	110	Regular
SEMD9912040	R4.0	12.0	12	30	110	Regular
SEMD9912050	R5.0	12.0	12	30	110	Regular
SEMD9912005130	R0.5	12.0	12	30	130	Long Shank
SEMD9912010130	R1.0	12.0	12	30	130	Long Shank
SEMD9912005150	R0.5	12.0	12	30	150	Long Shank
SEMD9912010150	R1.0	12.0	12	30	150	Long Shank
SEMD9914005	R0.5	14.0	16	35	150	-
SEMD9914010	R1.0	14.0	16	35	150	-
SEMD9914020	R2.0	14.0	16	35	150	-
SEMD9916005	R0.5	16.0	16	32	150	-
SEMD9916010	R1.0	16.0	16	32	150	-
SEMD9916015	R1.5	16.0	16	32	150	-
SEMD9916020	R2.0	16.0	16	32	150	-
SEMD9920005	R0.5	20.0	20	38	150	-
SEMD9920010	R1.0	20.0	20	38	150	-
SEMD9920015	R1.5	20.0	20	38	150	-
SEMD9920020	R2.0	20.0	20	38	150	-

Size	Corner Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to Ø6	±0.010	0~-0.012	h5
over Ø6	±0.015	0~-0.015	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

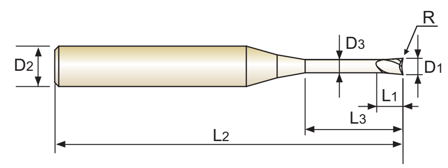
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME61** SERIES

CARBIDE, 2 FLUTE LONG NECK CORNER RADIUS

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
- ▶Available various products like regular length and long shank end mills etc.
- ▶Available various corner radius end mills, from min. 0.02mm corner radius to max. 2.0 mm corner radius.
- ▶Available more various effective length and overall length end mills than previous standard products.



CARBIDE | 2 | 30° | R ±0.010 (R≤6) | R ±0.015 (D>6) | PLAIN

p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME61002002005	R0.02	**0.2**	4	0.3	0.5	40	0.17	-
SEME6100200201	R0.02	**0.2**	4	0.3	1	40	0.17	-
SEME61002002015	R0.02	**0.2**	4	0.3	1.5	40	0.17	-
SEME6100200202	R0.02	**0.2**	4	0.3	2	40	0.17	-
SEME61002005005	R0.05	**0.2**	4	0.3	0.5	40	0.17	-
SEME6100200501	R0.05	**0.2**	4	0.3	1	40	0.17	-
SEME61002005015	R0.05	**0.2**	4	0.3	1.5	40	0.17	-
SEME6100200502	R0.05	**0.2**	4	0.3	2	40	0.17	-
SEME6100300201	R0.02	**0.3**	4	0.5	1	40	0.27	-
SEME6100300202	R0.02	**0.3**	4	0.5	2	40	0.27	-
SEME6100300203	R0.02	**0.3**	4	0.5	3	40	0.27	-
SEME6100300501	R0.05	**0.3**	4	0.5	1	40	0.27	-
SEME6100300502	R0.05	**0.3**	4	0.5	2	40	0.27	-
SEME6100300503	R0.05	**0.3**	4	0.5	3	40	0.27	-
SEME6100400501	R0.05	**0.4**	4	0.6	1	40	0.37	-
SEME61004005015	R0.05	**0.4**	4	0.6	1.5	40	0.37	-
SEME6100400502	R0.05	**0.4**	4	0.6	2	40	0.37	-
SEME61004005025	R0.05	**0.4**	4	0.6	2.5	40	0.37	-
SEME6100400503	R0.05	**0.4**	4	0.6	3	40	0.37	-
SEME6100400504	R0.05	**0.4**	4	0.6	4	40	0.37	-
SEME610040101	R0.1	**0.4**	4	0.6	1	40	0.37	-
SEME6100401015	R0.1	**0.4**	4	0.6	1.5	40	0.37	-
SEME610040102	R0.1	**0.4**	4	0.6	2	40	0.37	-
SEME6100401025	R0.1	**0.4**	4	0.6	2.5	40	0.37	-
SEME610040103	R0.1	**0.4**	4	0.6	3	40	0.37	-
SEME610040104	R0.1	**0.4**	4	0.6	4	40	0.37	-
SEME6100500501	R0.05	**0.5**	4	0.7	1	45	0.45	-
SEME61005005015	R0.05	**0.5**	4	0.7	1.5	45	0.45	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK SEME61 SERIES

CARBIDE, 2 FLUTE LONG NECK CORNER RADIUS

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
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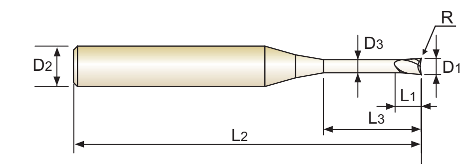
▶Available more various effective length and overall length end mills than previous standard products.



CARBIDE | 2 | 30° | R ±0.010 (R≤6) | R ±0.015 (D>6) | PLAIN

p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME6100500502	R0.05	**0.5**	4	0.7	2	45	0.45	-
SEME61005005025	R0.05	**0.5**	4	0.7	2.5	45	0.45	-
SEME6100500503	R0.05	**0.5**	4	0.7	3	45	0.45	-
SEME6100500504	R0.05	**0.5**	4	0.7	4	45	0.45	-
SEME6100500505	R0.05	**0.5**	4	0.7	5	45	0.45	-
SEME6100500506	R0.05	**0.5**	4	0.7	6	45	0.45	-
SEME610050101	R0.1	**0.5**	4	0.7	1	45	0.45	-
SEME6100501015	R0.1	**0.5**	4	0.7	1.5	45	0.45	-
SEME610050102	R0.1	**0.5**	4	0.7	2	45	0.45	-
SEME6100501025	R0.1	**0.5**	4	0.7	2.5	45	0.45	-
SEME610050103	R0.1	**0.5**	4	0.7	3	45	0.45	-
SEME610050104	R0.1	**0.5**	4	0.7	4	45	0.45	-
SEME610050105	R0.1	**0.5**	4	0.7	5	45	0.45	-
SEME610050106	R0.1	**0.5**	4	0.7	6	45	0.45	-
SEME6100600502	R0.05	**0.6**	4	0.9	2	45	0.55	-
SEME6100600503	R0.05	**0.6**	4	0.9	3	45	0.55	-
SEME6100600504	R0.05	**0.6**	4	0.9	4	45	0.55	-
SEME6100600506	R0.05	**0.6**	4	0.9	6	45	0.55	-
SEME6100600508	R0.05	**0.6**	4	0.9	8	45	0.55	-
SEME6100600510	R0.05	**0.6**	4	0.9	10	45	0.55	-
SEME610060102	R0.1	**0.6**	4	0.9	2	45	0.55	-
SEME610060103	R0.1	**0.6**	4	0.9	3	45	0.55	-
SEME610060104	R0.1	**0.6**	4	0.9	4	45	0.55	-
SEME610060106	R0.1	**0.6**	4	0.9	6	45	0.55	-
SEME610060108	R0.1	**0.6**	4	0.9	8	45	0.55	-
SEME610060110	R0.1	**0.6**	4	0.9	10	45	0.55	-
SEME610060202	R0.2	**0.6**	4	0.9	2	45	0.55	-
SEME610060203	R0.2	**0.6**	4	0.9	3	45	0.55	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

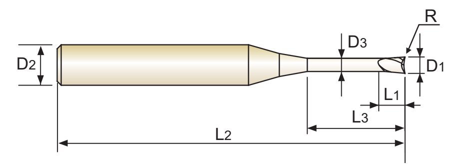
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **SEME61** SERIES

CARBIDE, 2 FLUTE LONG NECK CORNER RADIUS

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
- ▶Available various products like regular length and long shank end mills etc.
- ▶Available various corner radius end mills, from min. 0.02mm corner radius to max. 2.0 mm corner radius.
- ▶Available more various effective length and overall length end mills than previous standard products.



CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN | p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME610060204	R0.2	0.6	4	0.9	4	45	0.55	-
SEME610060206	R0.2	0.6	4	0.9	6	45	0.55	-
SEME610060208	R0.2	0.6	4	0.9	8	45	0.55	-
SEME610060210	R0.2	0.6	4	0.9	10	45	0.55	-
SEME6100700502	R0.05	0.7	4	1.2	2	45	0.65	-
SEME6100700504	R0.05	0.7	4	1.2	4	45	0.65	-
SEME6100700506	R0.05	0.7	4	1.2	6	45	0.65	-
SEME6100700508	R0.05	0.7	4	1.2	8	45	0.65	-
SEME6100700510	R0.05	0.7	4	1.2	10	45	0.65	-
SEME610070102	R0.1	0.7	4	1.2	2	45	0.65	-
SEME610070104	R0.1	0.7	4	1.2	4	45	0.65	-
SEME610070106	R0.1	0.7	4	1.2	6	45	0.65	-
SEME610070108	R0.1	0.7	4	1.2	8	45	0.65	-
SEME610070110	R0.1	0.7	4	1.2	10	45	0.65	-
SEME610070202	R0.2	0.7	4	1.2	2	45	0.65	-
SEME610070204	R0.2	0.7	4	1.2	4	45	0.65	-
SEME610070206	R0.2	0.7	4	1.2	6	45	0.65	-
SEME610070208	R0.2	0.7	4	1.2	8	45	0.65	-
SEME610070210	R0.2	0.7	4	1.2	10	45	0.65	-
SEME6100800502	R0.05	0.8	4	1.2	2	45	0.75	-
SEME6100800503	R0.05	0.8	4	1.2	3	45	0.75	-
SEME6100800504	R0.05	0.8	4	1.2	4	45	0.75	-
SEME6100800506	R0.05	0.8	4	1.2	6	45	0.75	-
SEME6100800508	R0.05	0.8	4	1.2	8	45	0.75	-
SEME6100800510	R0.05	0.8	4	1.2	10	45	0.75	-
SEME610080102	R0.1	0.8	4	1.2	2	45	0.75	-
SEME610080103	R0.1	0.8	4	1.2	3	45	0.75	-
SEME610080104	R0.1	0.8	4	1.2	4	45	0.75	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

PLAIN SHANK **SEME61** SERIES

CARBIDE, 2 FLUTE LONG NECK CORNER RADIUS

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
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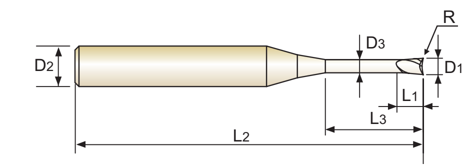

CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN | p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME610080106	R0.1	0.8	4	1.2	6	45	0.75	-
SEME610080108	R0.1	0.8	4	1.2	8	45	0.75	-
SEME610080110	R0.1	0.8	4	1.2	10	45	0.75	-
SEME610080202	R0.2	0.8	4	1.2	2	45	0.75	-
SEME610080203	R0.2	0.8	4	1.2	3	45	0.75	-
SEME610080204	R0.2	0.8	4	1.2	4	45	0.75	-
SEME610080206	R0.2	0.8	4	1.2	6	45	0.75	-
SEME610080208	R0.2	0.8	4	1.2	8	45	0.75	-
SEME610080210	R0.2	0.8	4	1.2	10	45	0.75	-
SEME6101000503	R0.05	1.0	4	1.5	3	50	0.95	-
SEME6101000504	R0.05	1.0	4	1.5	4	50	0.95	-
SEME6101000506	R0.05	1.0	4	1.5	6	50	0.95	-
SEME6101000508	R0.05	1.0	4	1.5	8	50	0.95	-
SEME6101000510	R0.05	1.0	4	1.5	10	50	0.95	-
SEME6101000512	R0.05	1.0	4	1.5	12	50	0.95	-
SEME6101000514	R0.05	1.0	4	1.5	14	50	0.95	-
SEME6101000516	R0.05	1.0	4	1.5	16	50	0.95	-
SEME6101000520	R0.05	1.0	4	1.5	20	50	0.95	-
SEME610100103	R0.1	1.0	4	1.5	3	50	0.95	-
SEME610100104	R0.1	1.0	4	1.5	4	50	0.95	-
SEME610100106	R0.1	1.0	4	1.5	6	50	0.95	-
SEME610100108	R0.1	1.0	4	1.5	8	50	0.95	-
SEME610100110	R0.1	1.0	4	1.5	10	50	0.95	-
SEME610100112	R0.1	1.0	4	1.5	12	50	0.95	-
SEME610100114	R0.1	1.0	4	1.5	14	50	0.95	-
SEME610100116	R0.1	1.0	4	1.5	16	50	0.95	-
SEME610100120	R0.1	1.0	4	1.5	20	50	0.95	-
SEME610100203	R0.2	1.0	4	1.5	3	50	0.95	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME61** SERIES

CARBIDE, 2 FLUTE LONG NECK CORNER RADIUS

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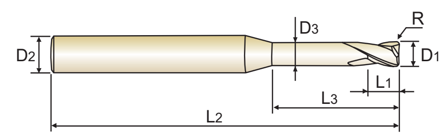

CARBIDE 2 30° R ±0.010 Rs6 R ±0.015 D>6 PLAIN p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME610100204	R0.2	1.0	4	1.5	4	50	0.95	-
SEME610100206	R0.2	1.0	4	1.5	6	50	0.95	-
SEME610100208	R0.2	1.0	4	1.5	8	50	0.95	-
SEME610100210	R0.2	1.0	4	1.5	10	50	0.95	-
SEME610100212	R0.2	1.0	4	1.5	12	50	0.95	-
SEME610100214	R0.2	1.0	4	1.5	14	50	0.95	-
SEME610100216	R0.2	1.0	4	1.5	16	50	0.95	-
SEME610100220	R0.2	1.0	4	1.5	20	50	0.95	-
SEME610100303	R0.3	1.0	4	1.5	3	50	0.95	-
SEME610100304	R0.3	1.0	4	1.5	4	50	0.95	-
SEME610100306	R0.3	1.0	4	1.5	6	50	0.95	-
SEME610100308	R0.3	1.0	4	1.5	8	50	0.95	-
SEME610100310	R0.3	1.0	4	1.5	10	50	0.95	-
SEME610100312	R0.3	1.0	4	1.5	12	50	0.95	-
SEME610100314	R0.3	1.0	4	1.5	14	50	0.95	-
SEME610100316	R0.3	1.0	4	1.5	16	50	0.95	-
SEME610100320	R0.3	1.0	4	1.5	20	50	0.95	-
SEME6101200503	R0.05	1.2	4	1.8	3	50	1.15	-
SEME6101200504	R0.05	1.2	4	1.8	4	50	1.15	-
SEME6101200506	R0.05	1.2	4	1.8	6	50	1.15	-
SEME6101200508	R0.05	1.2	4	1.8	8	50	1.15	-
SEME6101200510	R0.05	1.2	4	1.8	10	50	1.15	-
SEME6101200512	R0.05	1.2	4	1.8	12	50	1.15	-
SEME6101200516	R0.05	1.2	4	1.8	16	50	1.15	-
SEME6101200520	R0.05	1.2	4	1.8	20	50	1.15	-
SEME610120103	R0.1	1.2	4	1.8	3	50	1.15	-
SEME610120104	R0.1	1.2	4	1.8	4	50	1.15	-
SEME610120106	R0.1	1.2	4	1.8	6	50	1.15	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME61** SERIES

CARBIDE, 2 FLUTE LONG NECK CORNER RADIUS

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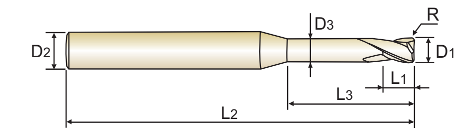

CARBIDE 2 30° R ±0.010 Rs6 R ±0.015 D>6 PLAIN p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME610120108	R0.1	1.2	4	1.8	8	50	1.15	-
SEME610120110	R0.1	1.2	4	1.8	10	50	1.15	-
SEME610120112	R0.1	1.2	4	1.8	12	50	1.15	-
SEME610120116	R0.1	1.2	4	1.8	16	50	1.15	-
SEME610120120	R0.1	1.2	4	1.8	20	50	1.15	-
SEME610120203	R0.2	1.2	4	1.8	3	50	1.15	-
SEME610120204	R0.2	1.2	4	1.8	4	50	1.15	-
SEME610120206	R0.2	1.2	4	1.8	6	50	1.15	-
SEME610120208	R0.2	1.2	4	1.8	8	50	1.15	-
SEME610120210	R0.2	1.2	4	1.8	10	50	1.15	-
SEME610120212	R0.2	1.2	4	1.8	12	50	1.15	-
SEME610120216	R0.2	1.2	4	1.8	16	50	1.15	-
SEME610120220	R0.2	1.2	4	1.8	20	50	1.15	-
SEME610120303	R0.3	1.2	4	1.8	3	50	1.15	-
SEME610120304	R0.3	1.2	4	1.8	4	50	1.15	-
SEME610120306	R0.3	1.2	4	1.8	6	50	1.15	-
SEME610120308	R0.3	1.2	4	1.8	8	50	1.15	-
SEME610120310	R0.3	1.2	4	1.8	10	50	1.15	-
SEME610120312	R0.3	1.2	4	1.8	12	50	1.15	-
SEME610120316	R0.3	1.2	4	1.8	16	50	1.15	-
SEME610120320	R0.3	1.2	4	1.8	20	50	1.15	-
SEME6101500504	R0.05	1.5	4	2.3	4	50	1.45	-
SEME6101500506	R0.05	1.5	4	2.3	6	50	1.45	-
SEME6101500508	R0.05	1.5	4	2.3	8	50	1.45	-
SEME6101500510	R0.05	1.5	4	2.3	10	50	1.45	-
SEME6101500512	R0.05	1.5	4	2.3	12	50	1.45	-
SEME6101500514	R0.05	1.5	4	2.3	14	50	1.45	-
SEME6101500516	R0.05	1.5	4	2.3	16	50	1.45	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **SEME61** SERIES

CARBIDE, 2 FLUTE LONG NECK CORNER RADIUS

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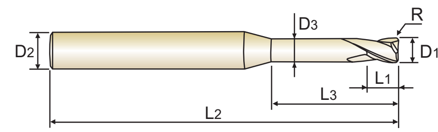
- ▶Available various corner radius end mills, from min. 0.02mm corner radius to max. 2.0 mm corner radius.
- ▶Available more various effective length and overall length end mills than previous standard products.



CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN

p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME6101500520	R0.05	1.5	4	2.3	20	50	1.45	-
SEME6101500522	R0.05	1.5	4	2.3	22	60	1.45	-
SEME6101500526	R0.05	1.5	4	2.3	26	60	1.45	-
SEME610150104	R0.1	1.5	4	2.3	4	50	1.45	-
SEME610150106	R0.1	1.5	4	2.3	6	50	1.45	-
SEME610150108	R0.1	1.5	4	2.3	8	50	1.45	-
SEME610150110	R0.1	1.5	4	2.3	10	50	1.45	-
SEME610150112	R0.1	1.5	4	2.3	12	50	1.45	-
SEME610150114	R0.1	1.5	4	2.3	14	50	1.45	-
SEME610150116	R0.1	1.5	4	2.3	16	50	1.45	-
SEME610150120	R0.1	1.5	4	2.3	20	50	1.45	-
SEME610150122	R0.1	1.5	4	2.3	22	60	1.45	-
SEME610150126	R0.1	1.5	4	2.3	26	60	1.45	-
SEME610150204	R0.2	1.5	4	2.3	4	50	1.45	-
SEME610150206	R0.2	1.5	4	2.3	6	50	1.45	-
SEME610150208	R0.2	1.5	4	2.3	8	50	1.45	-
SEME610150210	R0.2	1.5	4	2.3	10	50	1.45	-
SEME610150212	R0.2	1.5	4	2.3	12	50	1.45	-
SEME610150214	R0.2	1.5	4	2.3	14	50	1.45	-
SEME610150216	R0.2	1.5	4	2.3	16	50	1.45	-
SEME610150220	R0.2	1.5	4	2.3	20	50	1.45	-
SEME610150222	R0.2	1.5	4	2.3	22	60	1.45	-
SEME610150226	R0.2	1.5	4	2.3	26	60	1.45	-
SEME610150304	R0.3	1.5	4	2.3	4	50	1.45	-
SEME610150306	R0.3	1.5	4	2.3	6	50	1.45	-
SEME610150308	R0.3	1.5	4	2.3	8	50	1.45	-
SEME610150310	R0.3	1.5	4	2.3	10	50	1.45	-
SEME610150312	R0.3	1.5	4	2.3	12	50	1.45	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

PLAIN SHANK **SEME61** SERIES

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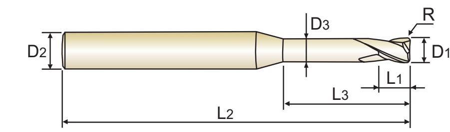

CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN

p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME610150314	R0.3	1.5	4	2.3	14	50	1.45	-
SEME610150316	R0.3	1.5	4	2.3	16	50	1.45	-
SEME610150320	R0.3	1.5	4	2.3	20	50	1.45	-
SEME610150322	R0.3	1.5	4	2.3	22	60	1.45	-
SEME610150326	R0.3	1.5	4	2.3	26	60	1.45	-
SEME610150504	R0.5	1.5	4	2.3	4	50	1.45	-
SEME610150506	R0.5	1.5	4	2.3	6	50	1.45	-
SEME610150508	R0.5	1.5	4	2.3	8	50	1.45	-
SEME610150510	R0.5	1.5	4	2.3	10	50	1.45	-
SEME610150512	R0.5	1.5	4	2.3	12	50	1.45	-
SEME610150514	R0.5	1.5	4	2.3	14	50	1.45	-
SEME610150516	R0.5	1.5	4	2.3	16	50	1.45	-
SEME610150520	R0.5	1.5	4	2.3	20	50	1.45	-
SEME610150522	R0.5	1.5	4	2.3	22	60	1.45	-
SEME610150526	R0.5	1.5	4	2.3	26	60	1.45	-
SEME610200106	R0.1	2.0	4	3	6	50	1.95	-
SEME610200108	R0.1	2.0	4	3	8	50	1.95	-
SEME610200110	R0.1	2.0	4	3	10	50	1.95	-
SEME610200112	R0.1	2.0	4	3	12	50	1.95	-
SEME610200114	R0.1	2.0	4	3	14	50	1.95	-
SEME610200116	R0.1	2.0	4	3	16	50	1.95	-
SEME610200120	R0.1	2.0	4	3	20	50	1.95	-
SEME610200122	R0.1	2.0	4	3	22	60	1.95	-
SEME610200126	R0.1	2.0	4	3	26	60	1.95	-
SEME610200130	R0.1	2.0	4	3	30	70	1.95	-
SEME610200206	R0.2	2.0	4	3	6	50	1.95	-
SEME610200208	R0.2	2.0	4	3	8	50	1.95	-
SEME610200210	R0.2	2.0	4	3	10	50	1.95	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

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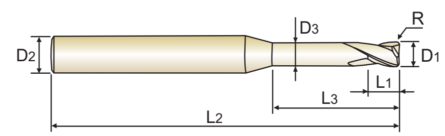

CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN

p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME610200212	R0.2	2.0	4	3	12	50	1.95	-
SEME610200214	R0.2	2.0	4	3	14	50	1.95	-
SEME610200216	R0.2	2.0	4	3	16	50	1.95	-
SEME610200220	R0.2	2.0	4	3	20	50	1.95	-
SEME610200222	R0.2	2.0	4	3	22	60	1.95	-
SEME610200226	R0.2	2.0	4	3	26	60	1.95	-
SEME610200230	R0.2	2.0	4	3	30	70	1.95	-
SEME610200306	R0.3	2.0	4	3	6	50	1.95	-
SEME610200308	R0.3	2.0	4	3	8	50	1.95	-
SEME610200310	R0.3	2.0	4	3	10	50	1.95	-
SEME610200312	R0.3	2.0	4	3	12	50	1.95	-
SEME610200314	R0.3	2.0	4	3	14	50	1.95	-
SEME610200316	R0.3	2.0	4	3	16	50	1.95	-
SEME610200320	R0.3	2.0	4	3	20	50	1.95	-
SEME610200322	R0.3	2.0	4	3	22	60	1.95	-
SEME610200326	R0.3	2.0	4	3	26	60	1.95	-
SEME610200330	R0.3	2.0	4	3	30	70	1.95	-
SEME610200506	R0.5	2.0	4	3	6	50	1.95	-
SEME610200508	R0.5	2.0	4	3	8	50	1.95	-
SEME610200510	R0.5	2.0	4	3	10	50	1.95	-
SEME610200512	R0.5	2.0	4	3	12	50	1.95	-
SEME610200514	R0.5	2.0	4	3	14	50	1.95	-
SEME610200516	R0.5	2.0	4	3	16	50	1.95	-
SEME610200520	R0.5	2.0	4	3	20	50	1.95	-
SEME610200522	R0.5	2.0	4	3	22	60	1.95	-
SEME610200526	R0.5	2.0	4	3	26	60	1.95	-
SEME610200530	R0.5	2.0	4	3	30	70	1.95	-
SEME610250108	R0.1	2.5	4	4	8	50	2.40	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

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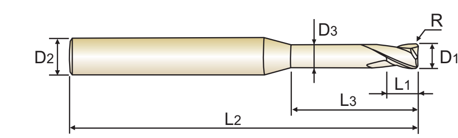

CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN

p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME610250110	R0.1	2.5	4	4	10	50	2.40	-
SEME610250112	R0.1	2.5	4	4	12	50	2.40	-
SEME610250114	R0.1	2.5	4	4	14	50	2.40	-
SEME610250116	R0.1	2.5	4	4	16	50	2.40	-
SEME610250120	R0.1	2.5	4	4	20	50	2.40	-
SEME610250126	R0.1	2.5	4	4	26	60	2.40	-
SEME610250130	R0.1	2.5	4	4	30	70	2.40	-
SEME610250208	R0.2	2.5	4	4	8	50	2.40	-
SEME610250210	R0.2	2.5	4	4	10	50	2.40	-
SEME610250212	R0.2	2.5	4	4	12	50	2.40	-
SEME610250214	R0.2	2.5	4	4	14	50	2.40	-
SEME610250216	R0.2	2.5	4	4	16	50	2.40	-
SEME610250220	R0.2	2.5	4	4	20	50	2.40	-
SEME610250226	R0.2	2.5	4	4	26	60	2.40	-
SEME610250230	R0.2	2.5	4	4	30	70	2.40	-
SEME610250308	R0.3	2.5	4	4	8	50	2.40	-
SEME610250310	R0.3	2.5	4	4	10	50	2.40	-
SEME610250312	R0.3	2.5	4	4	12	50	2.40	-
SEME610250314	R0.3	2.5	4	4	14	50	2.40	-
SEME610250316	R0.3	2.5	4	4	16	50	2.40	-
SEME610250320	R0.3	2.5	4	4	20	50	2.40	-
SEME610250326	R0.3	2.5	4	4	26	60	2.40	-
SEME610250330	R0.3	2.5	4	4	30	70	2.40	-
SEME610250508	R0.5	2.5	6	4	8	50	2.40	-
SEME610250510	R0.5	2.5	6	4	10	50	2.40	-
SEME610250512	R0.5	2.5	6	4	12	50	2.40	-
SEME610250514	R0.5	2.5	6	4	14	50	2.40	-
SEME610250516	R0.5	2.5	6	4	16	50	2.40	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
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X5070 END MILLS
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JET-POWER END MILLS
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ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
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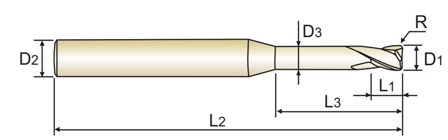


CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN

p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME610250520	R0.5	2.5	6	4	20	50	2.40	-
SEME610250526	R0.5	2.5	6	4	26	60	2.40	-
SEME610250530	R0.5	2.5	6	4	30	70	2.40	-
SEME610300108	R0.1	3.0	6	4.5	8	50	2.85	-
SEME610300110	R0.1	3.0	6	4.5	10	50	2.85	-
SEME610300112	R0.1	3.0	6	4.5	12	50	2.85	-
SEME610300114	R0.1	3.0	6	4.5	14	60	2.85	-
SEME610300116	R0.1	3.0	6	4.5	16	60	2.85	-
SEME610300120	R0.1	3.0	6	4.5	20	60	2.85	-
SEME610300126	R0.1	3.0	6	4.5	26	65	2.85	-
SEME610300130	R0.1	3.0	6	4.5	30	70	2.85	-
SEME610300135	R0.1	3.0	6	4.5	35	70	2.85	-
SEME610300140	R0.1	3.0	6	4.5	40	80	2.85	-
SEME610300208	R0.2	3.0	6	4.5	8	50	2.85	-
SEME610300210	R0.2	3.0	6	4.5	10	50	2.85	-
SEME610300212	R0.2	3.0	6	4.5	12	50	2.85	-
SEME610300214	R0.2	3.0	6	4.5	14	60	2.85	-
SEME610300216	R0.2	3.0	6	4.5	16	60	2.85	-
SEME610300220	R0.2	3.0	6	4.5	20	60	2.85	-
SEME610300226	R0.2	3.0	6	4.5	26	65	2.85	-
SEME610300230	R0.2	3.0	6	4.5	30	70	2.85	-
SEME610300235	R0.2	3.0	6	4.5	35	70	2.85	-
SEME610300240	R0.2	3.0	6	4.5	40	80	2.85	-
SEME610300308	R0.3	3.0	6	4.5	8	50	2.85	-
SEME610300310	R0.3	3.0	6	4.5	10	50	2.85	-
SEME610300312	R0.3	3.0	6	4.5	12	50	2.85	-
SEME610300314	R0.3	3.0	6	4.5	14	60	2.85	-
SEME610300316	R0.3	3.0	6	4.5	16	60	2.85	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

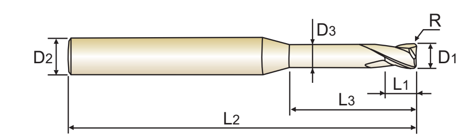
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **SEME61** SERIES

CARBIDE, 2 FLUTE LONG NECK CORNER RADIUS

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
- ▶Available various products like regular length and long shank end mills etc.
- ▶Available various corner radius end mills, from min. 0.02mm corner radius to max. 2.0 mm corner radius.
- ▶Available more various effective length and overall length end mills than previous standard products.



CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN

p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME610300320	R0.3	3.0	6	4.5	20	60	2.85	-
SEME610300326	R0.3	3.0	6	4.5	26	65	2.85	-
SEME610300330	R0.3	3.0	6	4.5	30	70	2.85	-
SEME610300335	R0.3	3.0	6	4.5	35	70	2.85	-
SEME610300340	R0.3	3.0	6	4.5	40	80	2.85	-
SEME610300508	R0.5	3.0	6	4.5	8	50	2.85	-
SEME610300510	R0.5	3.0	6	4.5	10	50	2.85	-
SEME610300512	R0.5	3.0	6	4.5	12	50	2.85	-
SEME610300514	R0.5	3.0	6	4.5	14	60	2.85	-
SEME610300516	R0.5	3.0	6	4.5	16	60	2.85	-
SEME610300520	R0.5	3.0	6	4.5	20	60	2.85	-
SEME610300526	R0.5	3.0	6	4.5	26	65	2.85	-
SEME610300530	R0.5	3.0	6	4.5	30	70	2.85	-
SEME610300535	R0.5	3.0	6	4.5	35	70	2.85	-
SEME610300540	R0.5	3.0	6	4.5	40	80	2.85	-
SEME610301008	R1.0	3.0	6	4.5	8	50	2.85	-
SEME610301010	R1.0	3.0	6	4.5	10	50	2.85	-
SEME610301012	R1.0	3.0	6	4.5	12	50	2.85	-
SEME610301014	R1.0	3.0	6	4.5	14	60	2.85	-
SEME610301016	R1.0	3.0	6	4.5	16	60	2.85	-
SEME610301020	R1.0	3.0	6	4.5	20	60	2.85	-
SEME610301026	R1.0	3.0	6	4.5	26	65	2.85	-
SEME610301030	R1.0	3.0	6	4.5	30	70	2.85	-
SEME610301035	R1.0	3.0	6	4.5	35	70	2.85	-
SEME610301040	R1.0	3.0	6	4.5	40	80	2.85	-
SEME610400110	R0.1	4.0	6	6	10	50	3.85	-
SEME610400112	R0.1	4.0	6	6	12	50	3.85	-
SEME610400114	R0.1	4.0	6	6	14	60	3.85	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME61** SERIES

CARBIDE, 2 FLUTE LONG NECK CORNER RADIUS

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
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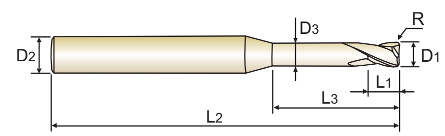

CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN

p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME610400116	R0.1	4.0	6	6	16	60	3.85	-
SEME610400120	R0.1	4.0	6	6	20	60	3.85	-
SEME610400126	R0.1	4.0	6	6	26	65	3.85	-
SEME610400130	R0.1	4.0	6	6	30	70	3.85	-
SEME610400135	R0.1	4.0	6	6	35	70	3.85	-
SEME610400140	R0.1	4.0	6	6	40	80	3.85	-
SEME610400145	R0.1	4.0	6	6	45	90	3.85	-
SEME610400150	R0.1	4.0	6	6	50	100	3.85	-
SEME610400210	R0.2	4.0	6	6	10	50	3.85	-
SEME610400212	R0.2	4.0	6	6	12	50	3.85	-
SEME610400214	R0.2	4.0	6	6	14	60	3.85	-
SEME610400216	R0.2	4.0	6	6	16	60	3.85	-
SEME610400220	R0.2	4.0	6	6	20	60	3.85	-
SEME610400226	R0.2	4.0	6	6	26	65	3.85	-
SEME610400230	R0.2	4.0	6	6	30	70	3.85	-
SEME610400235	R0.2	4.0	6	6	35	70	3.85	-
SEME610400240	R0.2	4.0	6	6	40	80	3.85	-
SEME610400245	R0.2	4.0	6	6	45	90	3.85	-
SEME610400250	R0.2	4.0	6	6	50	100	3.85	-
SEME610400310	R0.3	4.0	6	6	10	50	3.85	-
SEME610400312	R0.3	4.0	6	6	12	50	3.85	-
SEME610400314	R0.3	4.0	6	6	14	50	3.85	-
SEME610400316	R0.3	4.0	6	6	16	50	3.85	-
SEME610400320	R0.3	4.0	6	6	20	50	3.85	-
SEME610400326	R0.3	4.0	6	6	26	65	3.85	-
SEME610400330	R0.3	4.0	6	6	30	70	3.85	-
SEME610400335	R0.3	4.0	6	6	35	70	3.85	-
SEME610400340	R0.3	4.0	6	6	40	80	3.85	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME61** SERIES

CARBIDE, 2 FLUTE LONG NECK CORNER RADIUS

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
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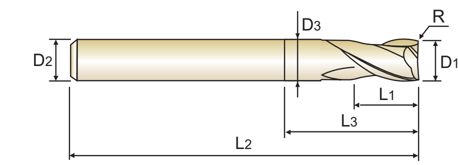
- ▶Available more various effective length and overall length end mills than previous standard products.



CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN

p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME610400345	R0.3	4.0	6	6	45	90	3.85	-
SEME610400350	R0.3	4.0	6	6	50	100	3.85	-
SEME610400510	R0.5	4.0	6	6	10	50	3.85	-
SEME610400512	R0.5	4.0	6	6	12	50	3.85	-
SEME610400514	R0.5	4.0	6	6	14	60	3.85	-
SEME610400516	R0.5	4.0	6	6	16	60	3.85	-
SEME610400520	R0.5	4.0	6	6	20	60	3.85	-
SEME610400526	R0.5	4.0	6	6	26	65	3.85	-
SEME610400530	R0.5	4.0	6	6	30	70	3.85	-
SEME610400535	R0.5	4.0	6	6	35	70	3.85	-
SEME610400540	R0.5	4.0	6	6	40	80	3.85	-
SEME610400545	R0.5	4.0	6	6	45	90	3.85	-
SEME610400550	R0.5	4.0	6	6	50	100	3.85	-
SEME610401010	R1.0	4.0	6	6	10	50	3.85	-
SEME610401012	R1.0	4.0	6	6	12	50	3.85	-
SEME610401014	R1.0	4.0	6	6	14	60	3.85	-
SEME610401016	R1.0	4.0	6	6	16	60	3.85	-
SEME610401020	R1.0	4.0	6	6	20	60	3.85	-
SEME610401026	R1.0	4.0	6	6	26	65	3.85	-
SEME610401030	R1.0	4.0	6	6	30	70	3.85	-
SEME610401035	R1.0	4.0	6	6	35	70	3.85	-
SEME610401040	R1.0	4.0	6	6	40	80	3.85	-
SEME610401045	R1.0	4.0	6	6	45	90	3.85	-
SEME610401050	R1.0	4.0	6	6	50	100	3.85	-
SEME6105001	R0.1	5.0	6	8	15	60	4.85	-
SEME6105002	R0.2	5.0	6	8	15	60	4.85	-
SEME6105003	R0.3	5.0	6	8	15	60	4.85	-
SEME6105005	R0.5	5.0	6	8	15	60	4.85	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **SEME61** SERIES

CARBIDE, 2 FLUTE LONG NECK CORNER RADIUS

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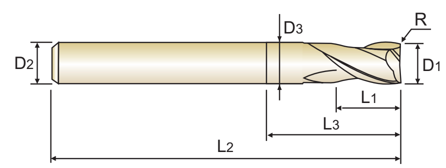


CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN

p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME6105010	R1.0	**5.0**	6	8	15	60	4.85	-
SEME6105015	R1.5	**5.0**	6	8	15	60	4.85	-
SEME6105020	R2.0	**5.0**	6	8	15	60	4.85	-
SEME6106001	R0.1	**6.0**	6	9	20	60	5.85	Regular
SEME6106002	R0.2	**6.0**	6	9	20	60	5.85	Regular
SEME6106003	R0.3	**6.0**	6	9	20	60	5.85	Regular
SEME6106005	R0.5	**6.0**	6	9	20	60	5.85	Regular
SEME6106010	R1.0	**6.0**	6	9	20	60	5.85	Regular
SEME6106015	R1.5	**6.0**	6	9	20	60	5.85	Regular
SEME6106020	R2.0	**6.0**	6	9	20	60	5.85	Regular
SEME6106003090	R0.3	**6.0**	6	15	30	90	5.85	Long Shank
SEME6106005090	R0.5	**6.0**	6	15	30	90	5.85	Long Shank
SEME6106010090	R1.0	**6.0**	6	15	30	90	5.85	Long Shank
SEME6108001	R0.1	**8.0**	8	12	25	70	7.70	Regular
SEME6108002	R0.2	**8.0**	8	12	25	70	7.70	Regular
SEME6108003	R0.3	**8.0**	8	12	25	70	7.70	Regular
SEME6108005	R0.5	**8.0**	8	12	25	70	7.70	Regular
SEME6108010	R1.0	**8.0**	8	12	25	70	7.70	Regular
SEME6108015	R1.5	**8.0**	8	12	25	70	7.70	Regular
SEME6108020	R2.0	**8.0**	8	12	25	70	7.70	Regular
SEME6108003100	R0.3	**8.0**	8	20	35	100	7.70	Long Shank
SEME6108005100	R0.5	**8.0**	8	20	35	100	7.70	Long Shank
SEME6108010100	R1.0	**8.0**	8	20	35	100	7.70	Long Shank
SEME6110001	R0.1	**10.0**	10	15	30	75	9.70	Regular
SEME6110002	R0.2	**10.0**	10	15	30	75	9.70	Regular
SEME6110003	R0.3	**10.0**	10	15	30	75	9.70	Regular
SEME6110005	R0.5	**10.0**	10	15	30	75	9.70	Regular
SEME6110010	R1.0	**10.0**	10	15	30	75	9.70	Regular

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

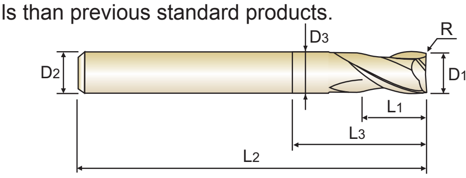
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK SEME61 SERIES

CARBIDE, 2 FLUTE LONG NECK CORNER RADIUS

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
▶Available various products like regular length and long shank end mills etc.
▶Available various corner radius end mills, from min. 0.02mm corner radius to max. 2.0 mm corner radius.
▶Available more various effective length and overall length end mills than previous standard products.



CARBIDE | 2 | 30° | R ±0.010 R≤6 | R ±0.015 D>6 | PLAIN

p.C326-C332

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME6110015	R1.5	**10.0**	10	15	30	75	9.70	Regular
SEME6110020	R2.0	**10.0**	10	15	30	75	9.70	Regular
SEME6110003100	R0.3	**10.0**	10	25	40	100	9.70	Long Shank
SEME6110005100	R0.5	**10.0**	10	25	40	100	9.70	Long Shank
SEME6110010100	R1.0	**10.0**	10	25	40	100	9.70	Long Shank
SEME6112002	R0.2	**12.0**	12	18	32	80	11.70	Regular
SEME6112003	R0.3	**12.0**	12	18	32	80	11.70	Regular
SEME6112005	R0.5	**12.0**	12	18	32	80	11.70	Regular
SEME6112010	R1.0	**12.0**	12	18	32	80	11.70	Regular
SEME6112015	R1.5	**12.0**	12	18	32	80	11.70	Regular
SEME6112020	R2.0	**12.0**	12	18	32	80	11.70	Regular
SEME6112003110	R0.3	**12.0**	12	30	50	110	11.70	Long Shank
SEME6112005110	R0.5	**12.0**	12	30	50	110	11.70	Long Shank
SEME6112010110	R1.0	**12.0**	12	30	50	110	11.70	Long Shank
SEME6116005	R0.5	**16.0**	16	20	35	100	15.70	Regular
SEME6116010	R1.0	**16.0**	16	20	35	100	15.70	Regular
SEME6116005150	R0.5	**16.0**	16	35	50	150	15.70	Long Shank
SEME6116010150	R1.0	**16.0**	16	35	50	150	15.70	Long Shank
SEME6120005	R0.5	**20.0**	20	25	40	100	19.70	Regular
SEME6120010	R1.0	**20.0**	20	25	40	100	19.70	Regular
SEME6120005150	R0.5	**20.0**	20	40	55	150	19.70	Long Shank
SEME6120010150	R1.0	**20.0**	20	40	55	150	19.70	Long Shank

Size	Corner Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to Ø6	±0.010	0~-0.012	h5
over Ø6	±0.015	0~-0.015	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

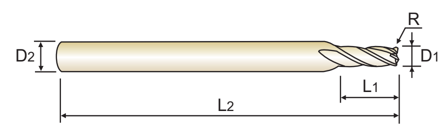
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **SEME01** SERIES

CARBIDE, 4 FLUTE CORNER RADIUS (Short, Regular, Long Shank)

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- ▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.
- ▶Available various products like short, regular and long shank end millls etc.



CARBIDE 4 27°/30° R ±0.02 PLAIN p.C333-C334

D1<Ø3.0, 30° Helix

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEME01010005	R0.05	**1.0**	6	2.5	50	-
SEME0101001	R0.1	**1.0**	6	2.5	50	-
SEME0101002	R0.2	**1.0**	6	2.5	50	-
SEME0101003	R0.3	**1.0**	6	2.5	50	-
SEME01012005	R0.05	**1.2**	6	3	50	-
SEME0101201	R0.1	**1.2**	6	3	50	-
SEME0101202	R0.2	**1.2**	6	3	50	-
SEME0101203	R0.3	**1.2**	6	3	50	-
SEME01015005	R0.05	**1.5**	6	4	50	-
SEME0101501	R0.1	**1.5**	6	4	50	-
SEME0101502	R0.2	**1.5**	6	4	50	-
SEME0101503	R0.3	**1.5**	6	4	50	-
SEME0101505	R0.5	**1.5**	6	4	50	-
SEME0102001	R0.1	**2.0**	6	6	50	-
SEME0102002	R0.2	**2.0**	6	6	50	-
SEME0102003	R0.3	**2.0**	6	6	50	-
SEME0102005	R0.5	**2.0**	6	6	50	-
SEME0102501	R0.1	**2.5**	6	7	60	-
SEME0102502	R0.2	**2.5**	6	7	60	-
SEME0102503	R0.3	**2.5**	6	7	60	-
SEME0102505	R0.5	**2.5**	6	7	60	-
SEME0103001	R0.1	**3.0**	6	8	60	-
SEME0103002	R0.2	**3.0**	6	8	60	-
SEME0103003	R0.3	**3.0**	6	8	60	-
SEME0103005	R0.5	**3.0**	6	8	60	-
SEME0103010	R1.0	**3.0**	6	8	60	-
SEME0103501	R0.1	**3.5**	6	10	70	-
SEME0103502	R0.2	**3.5**	6	10	70	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

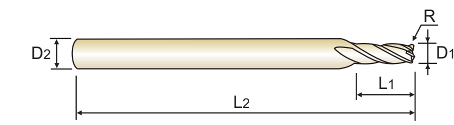
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

PLAIN SHANK **SEME01** SERIES

CARBIDE, 4 FLUTE CORNER RADIUS (Short, Regular, Long Shank)

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- ▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.
- ▶Available various products like short, regular and long shank end millls etc.



CARBIDE 4 27°/30° R ±0.02 PLAIN p.C333-C334

D1<Ø3.0, 30° Helix

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEME0103503	R0.3	**3.5**	6	10	70	-
SEME0103505	R0.5	**3.5**	6	10	70	-
SEME01040014S	R0.1	**4.0**	4	10	70	4mm Shank
SEME01040024S	R0.2	**4.0**	4	10	70	4mm Shank
SEME01040034S	R0.3	**4.0**	4	10	70	4mm Shank
SEME01040054S	R0.5	**4.0**	4	10	70	4mm Shank
SEME01040104S	R1.0	**4.0**	4	10	70	4mm Shank
SEME01040011004S	R0.1	**4.0**	4	10	100	4mm Shank
SEME01040021004S	R0.2	**4.0**	4	10	100	4mm Shank
SEME01040031004S	R0.3	**4.0**	4	10	100	4mm Shank
SEME01040051004S	R0.5	**4.0**	4	10	100	4mm Shank
SEME01040101004S	R1.0	**4.0**	4	10	100	4mm Shank
SEME0104001	R0.1	**4.0**	6	10	70	Regular
SEME0104002	R0.2	**4.0**	6	10	70	Regular
SEME0104003	R0.3	**4.0**	6	10	70	Regular
SEME0104005	R0.5	**4.0**	6	10	70	Regular
SEME0104010	R1.0	**4.0**	6	10	70	Regular
SEME0104501	R0.1	**4.5**	6	11	80	-
SEME0104502	R0.2	**4.5**	6	11	80	-
SEME0104503	R0.3	**4.5**	6	11	80	-
SEME0104505	R0.5	**4.5**	6	11	80	-
SEME0105001	R0.1	**5.0**	6	13	90	-
SEME0105002	R0.2	**5.0**	6	13	90	-
SEME0105003	R0.3	**5.0**	6	13	90	-
SEME0105005	R0.5	**5.0**	6	13	90	-
SEME0105010	R1.0	**5.0**	6	13	90	-
SEME0105501	R0.1	**5.5**	6	13	90	-
SEME0105502	R0.2	**5.5**	6	13	90	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

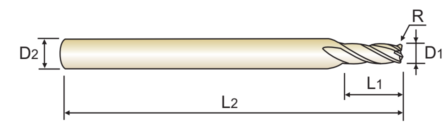
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **SEME01 SERIES**

CARBIDE, 4 FLUTE CORNER RADIUS (Short, Regular, Long Shank)

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- ▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.
- ▶Available various products like short, regular and long shank end millls etc.



CARBIDE | 4 | 27°/30° | R ±0.02 | PLAIN

p.C333-C334

D1<Ø3.0, 30˚ Helix

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEME0105503	R0.3	**5.5**	6	13	90	-
SEME0105505	R0.5	**5.5**	6	13	90	-
SEME0105510	R1.0	**5.5**	6	13	90	-
SEME0106001060	R0.1	**6.0**	6	15	60	Short
SEME0106002060	R0.2	**6.0**	6	15	60	Short
SEME0106001	R0.1	**6.0**	6	15	90	Regular
SEME0106002	R0.2	**6.0**	6	15	90	Regular
SEME0106003	R0.3	**6.0**	6	15	90	Regular
SEME0106005	R0.5	**6.0**	6	15	90	Regular
SEME0106010	R1.0	**6.0**	6	15	90	Regular
SEME0106015	R1.5	**6.0**	6	15	90	Regular
SEME0106020	R2.0	**6.0**	6	15	90	Regular
SEME0106005110	R0.5	**6.0**	6	15	110	Long Shank
SEME0106010110	R1.0	**6.0**	6	15	110	Long Shank
SEME0106005130	R0.5	**6.0**	6	15	130	Long Shank
SEME0106010130	R1.0	**6.0**	6	15	130	Long Shank
SEME0107001	R0.1	**7.0**	8	16	90	-
SEME0107002	R0.2	**7.0**	8	16	90	-
SEME0107003	R0.3	**7.0**	8	16	90	-
SEME0107005	R0.5	**7.0**	8	16	90	-
SEME0107010	R1.0	**7.0**	8	16	90	-
SEME0107020	R2.0	**7.0**	8	16	90	-
SEME0108003070	R0.3	**8.0**	8	20	70	Short
SEME0108005070	R0.5	**8.0**	8	20	70	Short
SEME0108010070	R1.0	**8.0**	8	20	70	Short
SEME0108001	R0.1	**8.0**	8	20	100	Regular
SEME0108002	R0.2	**8.0**	8	20	100	Regular
SEME0108003	R0.3	**8.0**	8	20	100	Regular

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
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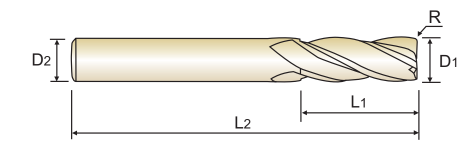
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

PLAIN SHANK **SEME01 SERIES**

CARBIDE, 4 FLUTE CORNER RADIUS (Short, Regular, Long Shank)

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- ▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.
- ▶Available various products like short, regular and long shank end millls etc.



CARBIDE | 4 | 27°/30° | R ±0.02 | PLAIN

p.C333-C334

D1<Ø3.0, 30˚ Helix

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEME0108005	R0.5	**8.0**	8	20	100	Regular
SEME0108010	R1.0	**8.0**	8	20	100	Regular
SEME0108015	R1.5	**8.0**	8	20	100	Regular
SEME0108020	R2.0	**8.0**	8	20	100	Regular
SEME0108025	R2.5	**8.0**	8	20	100	Regular
SEME0108030	R3.0	**8.0**	8	20	100	Regular
SEME0108005120	R0.5	**8.0**	8	20	120	Long Shank
SEME0108010120	R1.0	**8.0**	8	20	120	Long Shank
SEME0108005150	R0.5	**8.0**	8	20	150	Long Shank
SEME0108010150	R1.0	**8.0**	8	20	150	Long Shank
SEME0110003075	R0.3	**10.0**	10	25	75	Short
SEME0110005075	R0.5	**10.0**	10	25	75	Short
SEME0110010075	R1.0	**10.0**	10	25	75	Short
SEME0110001	R0.1	**10.0**	10	25	100	Regular
SEME0110002	R0.2	**10.0**	10	25	100	Regular
SEME0110003	R0.3	**10.0**	10	25	100	Regular
SEME0110005	R0.5	**10.0**	10	25	100	Regular
SEME0110010	R1.0	**10.0**	10	25	100	Regular
SEME0110015	R1.5	**10.0**	10	25	100	Regular
SEME0110020	R2.0	**10.0**	10	25	100	Regular
SEME0110025	R2.5	**10.0**	10	25	100	Regular
SEME0110030	R3.0	**10.0**	10	25	100	Regular
SEME0110040	R4.0	**10.0**	10	25	100	Regular
SEME0110005130	R0.5	**10.0**	10	22	130	Long Shank
SEME0110010130	R1.0	**10.0**	10	22	130	Long Shank
SEME0110005150	R0.5	**10.0**	10	22	150	Long Shank
SEME0110010150	R1.0	**10.0**	10	22	150	Long Shank
SEME0111002	R0.2	**11.0**	12	25	110	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

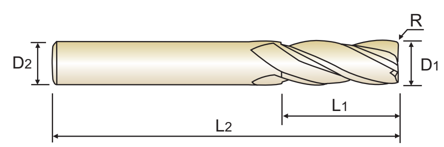
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME01** SERIES

CARBIDE, 4 FLUTE CORNER RADIUS (Short, Regular, Long Shank)

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- ▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.
- ▶Available various products like short, regular and long shank end millls etc.



CARBIDE 4 27°/30° R ±0.02 PLAIN p.C333-C334

D1<Ø3.0, 30˚ Helix

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEME0111003	R0.3	11.0	12	25	110	-
SEME0111005	R0.5	11.0	12	25	110	-
SEME0111010	R1.0	11.0	12	25	110	-
SEME0111020	R2.0	11.0	12	25	110	-
SEME0112003080	R0.3	12.0	12	30	80	Short
SEME0112005080	R0.5	12.0	12	30	80	Short
SEME0112010080	R1.0	12.0	12	30	80	Short
SEME0112001	R0.1	12.0	12	30	110	Regular
SEME0112002	R0.2	12.0	12	30	110	Regular
SEME0112003	R0.3	12.0	12	30	110	Regular
SEME0112005	R0.5	12.0	12	30	110	Regular
SEME0112010	R1.0	12.0	12	30	110	Regular
SEME0112015	R1.5	12.0	12	30	110	Regular
SEME0112020	R2.0	12.0	12	30	110	Regular
SEME0112025	R2.5	12.0	12	30	110	Regular
SEME0112030	R3.0	12.0	12	30	110	Regular
SEME0112040	R4.0	12.0	12	30	110	Regular
SEME0112050	R5.0	12.0	12	30	110	Regular
SEME0112005130	R0.5	12.0	12	30	130	Long Shank
SEME0112010130	R1.0	12.0	12	30	130	Long Shank
SEME0112005150	R0.5	12.0	12	30	130	Long Shank
SEME0112010150	R1.0	12.0	12	30	130	Long Shank
SEME0114005	R0.5	14.0	16	35	150	-
SEME0114010	R1.0	14.0	16	35	150	-
SEME0114020	R2.0	14.0	16	35	150	-
SEME0116005	R0.5	16.0	16	32	150	-
SEME0116010	R1.0	16.0	16	32	150	-
SEME0116015	R1.5	16.0	16	32	150	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	○	○	◎	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

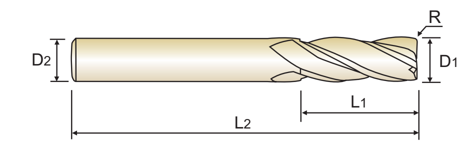
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **SEME01** SERIES

CARBIDE, 4 FLUTE CORNER RADIUS (Short, Regular, Long Shank)

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- ▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.
- ▶Available various products like short, regular and long shank end millls etc.



CARBIDE 4 27°/30° R ±0.02 PLAIN p.C333-C334

D1<Ø3.0, 30˚ Helix

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEME0116020	R2.0	16.0	16	32	150	-
SEME0120005	R0.5	20.0	20	38	150	-
SEME0120010	R1.0	20.0	20	38	150	-
SEME0120015	R1.5	20.0	20	38	150	-
SEME0120020	R2.0	20.0	20	38	150	-

Mill Dia. Tolerance (mm)	Corner Radius Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	±0.02	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	○	○	◎	◎	◎	◎	○	◎				○	○	○	○	○	○

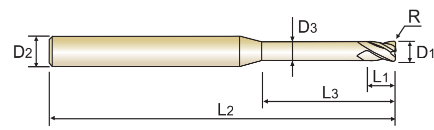
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME64** SERIES

CARBIDE, 4 FLUTE LONG NECK CORNER RADIUS

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- ▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.



CARBIDE | 4 | 27°/30° | R ±0.02 | PLAIN

D1<Ø3.0, 30˚ Helix

p.C335-C339

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME6401000503	R0.05	1.0	4	1.5	3	50	0.95	-
SEME6401000504	R0.05	1.0	4	1.5	4	50	0.95	-
SEME6401000506	R0.05	1.0	4	1.5	6	50	0.95	-
SEME6401000508	R0.05	1.0	4	1.5	8	50	0.95	-
SEME6401000510	R0.05	1.0	4	1.5	10	50	0.95	-
SEME6401000512	R0.05	1.0	4	1.5	12	50	0.95	-
SEME6401000514	R0.05	1.0	4	1.5	14	50	0.95	-
SEME6401000516	R0.05	1.0	4	1.5	16	50	0.95	-
SEME6401000520	R0.05	1.0	4	1.5	20	50	0.95	-
SEME640100103	R0.1	1.0	4	1.5	3	50	0.95	-
SEME640100104	R0.1	1.0	4	1.5	4	50	0.95	-
SEME640100106	R0.1	1.0	4	1.5	6	50	0.95	-
SEME640100108	R0.1	1.0	4	1.5	8	50	0.95	-
SEME640100110	R0.1	1.0	4	1.5	10	50	0.95	-
SEME640100112	R0.1	1.0	4	1.5	12	50	0.95	-
SEME640100114	R0.1	1.0	4	1.5	14	50	0.95	-
SEME640100116	R0.1	1.0	4	1.5	16	50	0.95	-
SEME640100120	R0.1	1.0	4	1.5	20	50	0.95	-
SEME640100203	R0.2	1.0	4	1.5	3	50	0.95	-
SEME640100204	R0.2	1.0	4	1.5	4	50	0.95	-
SEME640100206	R0.2	1.0	4	1.5	6	50	0.95	-
SEME640100208	R0.2	1.0	4	1.5	8	50	0.95	-
SEME640100210	R0.2	1.0	4	1.5	10	50	0.95	-
SEME640100212	R0.2	1.0	4	1.5	12	50	0.95	-
SEME640100214	R0.2	1.0	4	1.5	14	50	0.95	-
SEME640100216	R0.2	1.0	4	1.5	16	50	0.95	-
SEME640100220	R0.2	1.0	4	1.5	20	50	0.95	-
SEME640100303	R0.3	1.0	4	1.5	3	50	0.95	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

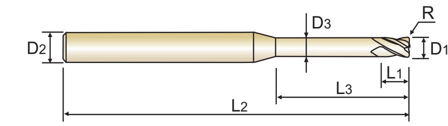
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME64** SERIES

CARBIDE, 4 FLUTE LONG NECK CORNER RADIUS

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- ▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.



CARBIDE | 4 | 27°/30° | R ±0.02 | PLAIN

D1<Ø3.0, 30˚ Helix

p.C335-C339

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME640100304	R0.3	1.0	4	1.5	4	50	0.95	-
SEME640100306	R0.3	1.0	4	1.5	6	50	0.95	-
SEME640100308	R0.3	1.0	4	1.5	8	50	0.95	-
SEME640100310	R0.3	1.0	4	1.5	10	50	0.95	-
SEME640100312	R0.3	1.0	4	1.5	12	50	0.95	-
SEME640100314	R0.3	1.0	4	1.5	14	50	0.95	-
SEME640100316	R0.3	1.0	4	1.5	16	50	0.95	-
SEME640100320	R0.3	1.0	4	1.5	20	50	0.95	-
SEME6401200503	R0.05	1.2	4	1.8	3	50	1.15	-
SEME6401200504	R0.05	1.2	4	1.8	4	50	1.15	-
SEME6401200506	R0.05	1.2	4	1.8	6	50	1.15	-
SEME6401200508	R0.05	1.2	4	1.8	8	50	1.15	-
SEME6401200510	R0.05	1.2	4	1.8	10	50	1.15	-
SEME6401200512	R0.05	1.2	4	1.8	12	50	1.15	-
SEME6401200516	R0.05	1.2	4	1.8	16	50	1.15	-
SEME6401200520	R0.05	1.2	4	1.8	20	50	1.15	-
SEME640120103	R0.1	1.2	4	1.8	3	50	1.15	-
SEME640120104	R0.1	1.2	4	1.8	4	50	1.15	-
SEME640120106	R0.1	1.2	4	1.8	6	50	1.15	-
SEME640120108	R0.1	1.2	4	1.8	8	50	1.15	-
SEME640120110	R0.1	1.2	4	1.8	10	50	1.15	-
SEME640120112	R0.1	1.2	4	1.8	12	50	1.15	-
SEME640120116	R0.1	1.2	4	1.8	16	50	1.15	-
SEME640120120	R0.1	1.2	4	1.8	20	50	1.15	-
SEME640120203	R0.2	1.2	4	1.8	3	50	1.15	-
SEME640120204	R0.2	1.2	4	1.8	4	50	1.15	-
SEME640120206	R0.2	1.2	4	1.8	6	50	1.15	-
SEME640120208	R0.2	1.2	4	1.8	8	50	1.15	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

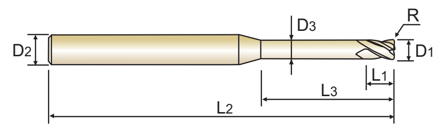
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **SEME64** SERIES

CARBIDE, 4 FLUTE LONG NECK CORNER RADIUS

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.



CARBIDE 4 27°/30° R ±0.02 PLAIN p.C335-C339

D1<Ø3.0, 30˚ Helix

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME640120210	R0.2	1.2	4	1.8	10	50	1.15	-
SEME640120212	R0.2	1.2	4	1.8	12	50	1.15	-
SEME640120216	R0.2	1.2	4	1.8	16	50	1.15	-
SEME640120220	R0.2	1.2	4	1.8	20	50	1.15	-
SEME640120303	R0.3	1.2	4	1.8	3	50	1.15	-
SEME640120304	R0.3	1.2	4	1.8	4	50	1.15	-
SEME640120306	R0.3	1.2	4	1.8	6	50	1.15	-
SEME640120308	R0.3	1.2	4	1.8	8	50	1.15	-
SEME640120310	R0.3	1.2	4	1.8	10	50	1.15	-
SEME640120312	R0.3	1.2	4	1.8	12	50	1.15	-
SEME640120316	R0.3	1.2	4	1.8	16	50	1.15	-
SEME640120320	R0.3	1.2	4	1.8	20	50	1.15	-
SEME6401500504	R0.05	1.5	4	2.3	4	50	1.45	-
SEME6401500506	R0.05	1.5	4	2.3	6	50	1.45	-
SEME6401500508	R0.05	1.5	4	2.3	8	50	1.45	-
SEME6401500510	R0.05	1.5	4	2.3	10	50	1.45	-
SEME6401500512	R0.05	1.5	4	2.3	12	50	1.45	-
SEME6401500514	R0.05	1.5	4	2.3	14	50	1.45	-
SEME6401500516	R0.05	1.5	4	2.3	16	50	1.45	-
SEME6401500520	R0.05	1.5	4	2.3	20	50	1.45	-
SEME6401500522	R0.05	1.5	4	2.3	22	60	1.45	-
SEME6401500526	R0.05	1.5	4	2.3	26	60	1.45	-
SEME640150104	R0.1	1.5	4	2.3	4	50	1.45	-
SEME640150106	R0.1	1.5	4	2.3	6	50	1.45	-
SEME640150108	R0.1	1.5	4	2.3	8	50	1.45	-
SEME640150110	R0.1	1.5	4	2.3	10	50	1.45	-
SEME640150112	R0.1	1.5	4	2.3	12	50	1.45	-
SEME640150114	R0.1	1.5	4	2.3	14	50	1.45	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

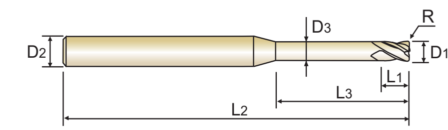
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

PLAIN SHANK SEME64 SERIES

CARBIDE, 4 FLUTE LONG NECK CORNER RADIUS

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.



CARBIDE 4 27°/30° R ±0.02 PLAIN p.C335-C339

D1<Ø3.0, 30˚ Helix

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME640150116	R0.1	1.5	4	2.3	16	50	1.45	-
SEME640150120	R0.1	1.5	4	2.3	20	50	1.45	-
SEME640150122	R0.1	1.5	4	2.3	22	60	1.45	-
SEME640150126	R0.1	1.5	4	2.3	26	60	1.45	-
SEME640150204	R0.2	1.5	4	2.3	4	50	1.45	-
SEME640150206	R0.2	1.5	4	2.3	6	50	1.45	-
SEME640150208	R0.2	1.5	4	2.3	8	50	1.45	-
SEME640150210	R0.2	1.5	4	2.3	10	50	1.45	-
SEME640150212	R0.2	1.5	4	2.3	12	50	1.45	-
SEME640150214	R0.2	1.5	4	2.3	14	50	1.45	-
SEME640150216	R0.2	1.5	4	2.3	16	50	1.45	-
SEME640150220	R0.2	1.5	4	2.3	20	50	1.45	-
SEME640150222	R0.2	1.5	4	2.3	22	60	1.45	-
SEME640150226	R0.2	1.5	4	2.3	26	60	1.45	-
SEME640150304	R0.3	1.5	4	2.3	4	50	1.45	-
SEME640150306	R0.3	1.5	4	2.3	6	50	1.45	-
SEME640150308	R0.3	1.5	4	2.3	8	50	1.45	-
SEME640150310	R0.3	1.5	4	2.3	10	50	1.45	-
SEME640150312	R0.3	1.5	4	2.3	12	50	1.45	-
SEME640150314	R0.3	1.5	4	2.3	14	50	1.45	-
SEME640150316	R0.3	1.5	4	2.3	16	50	1.45	-
SEME640150320	R0.3	1.5	4	2.3	20	50	1.45	-
SEME640150322	R0.3	1.5	4	2.3	22	60	1.45	-
SEME640150326	R0.3	1.5	4	2.3	26	60	1.45	-
SEME640150504	R0.5	1.5	4	2.3	4	50	1.45	-
SEME640150506	R0.5	1.5	4	2.3	6	50	1.45	-
SEME640150508	R0.5	1.5	4	2.3	8	50	1.45	-
SEME640150510	R0.5	1.5	4	2.3	10	50	1.45	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **SEME64** SERIES

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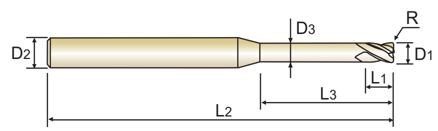

CARBIDE 4 27°/30° R ±0.02 PLAIN p.C335-C339

D1<Ø3.0, 30° Helix

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME640150512	R0.5	1.5	4	2.3	12	50	1.45	-
SEME640150514	R0.5	1.5	4	2.3	14	50	1.45	-
SEME640150516	R0.5	1.5	4	2.3	16	50	1.45	-
SEME640150520	R0.5	1.5	4	2.3	20	50	1.45	-
SEME640150522	R0.5	1.5	4	2.3	22	60	1.45	-
SEME640150526	R0.5	1.5	4	2.3	26	60	1.45	-
SEME640200106	R0.1	2.0	4	3	6	50	1.95	-
SEME640200108	R0.1	2.0	4	3	8	50	1.95	-
SEME640200110	R0.1	2.0	4	3	10	50	1.95	-
SEME640200112	R0.1	2.0	4	3	12	50	1.95	-
SEME640200114	R0.1	2.0	4	3	14	50	1.95	-
SEME640200116	R0.1	2.0	4	3	16	50	1.95	-
SEME640200120	R0.1	2.0	4	3	20	50	1.95	-
SEME640200122	R0.1	2.0	4	3	22	60	1.95	-
SEME640200126	R0.1	2.0	4	3	26	60	1.95	-
SEME640200130	R0.1	2.0	4	3	30	70	1.95	-
SEME640200206	R0.2	2.0	4	3	6	50	1.95	-
SEME640200208	R0.2	2.0	4	3	8	50	1.95	-
SEME640200210	R0.2	2.0	4	3	10	50	1.95	-
SEME640200212	R0.2	2.0	4	3	12	50	1.95	-
SEME640200214	R0.2	2.0	4	3	14	50	1.95	-
SEME640200216	R0.2	2.0	4	3	16	50	1.95	-
SEME640200220	R0.2	2.0	4	3	20	50	1.95	-
SEME640200222	R0.2	2.0	4	3	22	60	1.95	-
SEME640200226	R0.2	2.0	4	3	26	60	1.95	-
SEME640200230	R0.2	2.0	4	3	30	70	1.95	-
SEME640200306	R0.3	2.0	4	3	6	50	1.95	-
SEME640200308	R0.3	2.0	4	3	8	50	1.95	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **SEME64** SERIES

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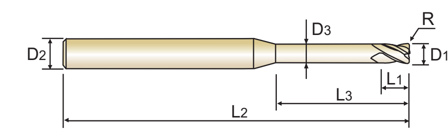

CARBIDE 4 27°/30° R ±0.02 PLAIN p.C335-C339

D1<Ø3.0, 30° Helix

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME640200310	R0.3	2.0	4	3	10	50	1.95	-
SEME640200312	R0.3	2.0	4	3	12	50	1.95	-
SEME640200314	R0.3	2.0	4	3	14	50	1.95	-
SEME640200316	R0.3	2.0	4	3	16	50	1.95	-
SEME640200320	R0.3	2.0	4	3	20	50	1.95	-
SEME640200322	R0.3	2.0	4	3	22	60	1.95	-
SEME640200326	R0.3	2.0	4	3	26	60	1.95	-
SEME640200330	R0.3	2.0	4	3	30	70	1.95	-
SEME640200506	R0.5	2.0	4	3	6	50	1.95	-
SEME640200508	R0.5	2.0	4	3	8	50	1.95	-
SEME640200510	R0.5	2.0	4	3	10	50	1.95	-
SEME640200512	R0.5	2.0	4	3	12	50	1.95	-
SEME640200514	R0.5	2.0	4	3	14	50	1.95	-
SEME640200516	R0.5	2.0	4	3	16	50	1.95	-
SEME640200520	R0.5	2.0	4	3	20	50	1.95	-
SEME640200522	R0.5	2.0	4	3	22	60	1.95	-
SEME640200526	R0.5	2.0	4	3	26	60	1.95	-
SEME640200530	R0.5	2.0	4	3	30	70	1.95	-
SEME640250108	R0.1	2.5	4	4	8	50	2.40	-
SEME640250110	R0.1	2.5	4	4	10	50	2.40	-
SEME640250112	R0.1	2.5	4	4	12	50	2.40	-
SEME640250114	R0.1	2.5	4	4	14	50	2.40	-
SEME640250116	R0.1	2.5	4	4	16	50	2.40	-
SEME640250120	R0.1	2.5	4	4	20	50	2.40	-
SEME640250126	R0.1	2.5	4	4	26	60	2.40	-
SEME640250130	R0.1	2.5	4	4	30	70	2.40	-
SEME640250208	R0.2	2.5	4	4	8	50	2.40	-
SEME640250210	R0.2	2.5	4	4	10	50	2.40	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG

4G MILL END MILLS

PLAIN SHANK **SEME64** SERIES

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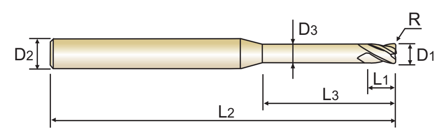


CARBIDE | 4 | 27°/30° | R ±0.02 | PLAIN

D1<Ø3.0, 30° Helix

p.C335-C339

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME640250212	R0.2	2.5	4	4	12	50	2.40	-
SEME640250214	R0.2	2.5	4	4	14	50	2.40	-
SEME640250216	R0.2	2.5	4	4	16	50	2.40	-
SEME640250220	R0.2	2.5	4	4	20	50	2.40	-
SEME640250226	R0.2	2.5	4	4	26	60	2.40	-
SEME640250230	R0.2	2.5	4	4	30	70	2.40	-
SEME640250308	R0.3	2.5	4	4	8	50	2.40	-
SEME640250310	R0.3	2.5	4	4	10	50	2.40	-
SEME640250312	R0.3	2.5	4	4	12	50	2.40	-
SEME640250314	R0.3	2.5	4	4	14	50	2.40	-
SEME640250316	R0.3	2.5	4	4	16	50	2.40	-
SEME640250320	R0.3	2.5	4	4	20	50	2.40	-
SEME640250326	R0.3	2.5	4	4	26	60	2.40	-
SEME640250330	R0.3	2.5	4	4	30	70	2.40	-
SEME640250508	R0.5	2.5	4	4	8	50	2.40	-
SEME640250510	R0.5	2.5	4	4	10	50	2.40	-
SEME640250512	R0.5	2.5	4	4	12	50	2.40	-
SEME640250514	R0.5	2.5	4	4	14	50	2.40	-
SEME640250516	R0.5	2.5	4	4	16	50	2.40	-
SEME640250520	R0.5	2.5	4	4	20	50	2.40	-
SEME640250526	R0.5	2.5	4	4	26	60	2.40	-
SEME640250530	R0.5	2.5	4	4	30	70	2.40	-
SEME640300108	R0.1	3.0	6	4.5	8	50	2.85	-
SEME640300110	R0.1	3.0	6	4.5	10	50	2.85	-
SEME640300112	R0.1	3.0	6	4.5	12	50	2.85	-
SEME640300114	R0.1	3.0	6	4.5	14	60	2.85	-
SEME640300116	R0.1	3.0	6	4.5	16	60	2.85	-
SEME640300120	R0.1	3.0	6	4.5	20	60	2.85	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	○	◎	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

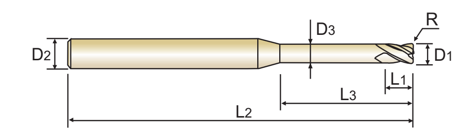
YG

4G MILL END MILLS

PLAIN SHANK SEME64 SERIES

CARBIDE, 4 FLUTE LONG NECK CORNER RADIUS

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.



CARBIDE | 4 | 27°/30° | R ±0.02 | PLAIN

D1<Ø3.0, 30° Helix

p.C335-C339

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME640300126	R0.1	3.0	6	4.5	26	65	2.85	-
SEME640300130	R0.1	3.0	6	4.5	30	70	2.85	-
SEME640300135	R0.1	3.0	6	4.5	35	70	2.85	-
SEME640300140	R0.1	3.0	6	4.5	40	80	2.85	-
SEME640300208	R0.2	3.0	6	4.5	8	50	2.85	-
SEME640300210	R0.2	3.0	6	4.5	10	50	2.85	-
SEME640300212	R0.2	3.0	6	4.5	12	50	2.85	-
SEME640300214	R0.2	3.0	6	4.5	14	60	2.85	-
SEME640300216	R0.2	3.0	6	4.5	16	60	2.85	-
SEME640300220	R0.2	3.0	6	4.5	20	60	2.85	-
SEME640300226	R0.2	3.0	6	4.5	26	65	2.85	-
SEME640300230	R0.2	3.0	6	4.5	30	70	2.85	-
SEME640300235	R0.2	3.0	6	4.5	35	70	2.85	-
SEME640300240	R0.2	3.0	6	4.5	40	80	2.85	-
SEME640300308	R0.3	3.0	6	4.5	8	50	2.85	-
SEME640300310	R0.3	3.0	6	4.5	10	50	2.85	-
SEME640300312	R0.3	3.0	6	4.5	12	50	2.85	-
SEME640300314	R0.3	3.0	6	4.5	14	60	2.85	-
SEME640300316	R0.3	3.0	6	4.5	16	60	2.85	-
SEME640300320	R0.3	3.0	6	4.5	20	60	2.85	-
SEME640300326	R0.3	3.0	6	4.5	26	65	2.85	-
SEME640300330	R0.3	3.0	6	4.5	30	70	2.85	-
SEME640300335	R0.3	3.0	6	4.5	35	70	2.85	-
SEME640300340	R0.3	3.0	6	4.5	40	80	2.85	-
SEME640300508	R0.5	3.0	6	4.5	8	50	2.85	-
SEME640300510	R0.5	3.0	6	4.5	10	50	2.85	-
SEME640300512	R0.5	3.0	6	4.5	12	50	2.85	-
SEME640300514	R0.5	3.0	6	4.5	14	60	2.85	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	○	◎	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **SEME64** SERIES

CARBIDE, 4 FLUTE LONG NECK CORNER RADIUS

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
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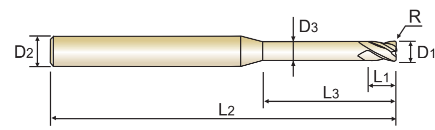
- ▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.



CARBIDE | 4 | 27°/30° | R ±0.02 | PLAIN

D1<Ø3.0, 30˚ Helix

p.C335-C339

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME640300516	R0.5	3.0	6	4.5	16	60	2.85	-
SEME640300520	R0.5	3.0	6	4.5	20	60	2.85	-
SEME640300526	R0.5	3.0	6	4.5	26	65	2.85	-
SEME640300530	R0.5	3.0	6	4.5	30	70	2.85	-
SEME640300535	R0.5	3.0	6	4.5	35	70	2.85	-
SEME640300540	R0.5	3.0	6	4.5	40	80	2.85	-
SEME640301008	R1.0	3.0	6	4.5	8	50	2.85	-
SEME640301010	R1.0	3.0	6	4.5	10	50	2.85	-
SEME640301012	R1.0	3.0	6	4.5	12	50	2.85	-
SEME640301014	R1.0	3.0	6	4.5	14	60	2.85	-
SEME640301016	R1.0	3.0	6	4.5	16	60	2.85	-
SEME640301020	R1.0	3.0	6	4.5	20	60	2.85	-
SEME640301026	R1.0	3.0	6	4.5	26	65	2.85	-
SEME640301030	R1.0	3.0	6	4.5	30	70	2.85	-
SEME640301035	R1.0	3.0	6	4.5	35	70	2.85	-
SEME640301040	R1.0	3.0	6	4.5	40	80	2.85	-
SEME640400110	R0.1	4.0	6	6	10	50	3.85	-
SEME640400112	R0.1	4.0	6	6	12	50	3.85	-
SEME640400114	R0.1	4.0	6	6	14	60	3.85	-
SEME640400116	R0.1	4.0	6	6	16	60	3.85	-
SEME640400120	R0.1	4.0	6	6	20	60	3.85	-
SEME640400126	R0.1	4.0	6	6	26	65	3.85	-
SEME640400130	R0.1	4.0	6	6	30	70	3.85	-
SEME640400135	R0.1	4.0	6	6	35	70	3.85	-
SEME640400140	R0.1	4.0	6	6	40	80	3.85	-
SEME640400145	R0.1	4.0	6	6	45	90	3.85	-
SEME640400150	R0.1	4.0	6	6	50	100	3.85	-
SEME640400210	R0.2	4.0	6	6	10	50	3.85	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS | i-Xmill END MILLS | i-SMART MODULAR END MILLS | X5070 END MILLS | 4G MILL END MILLS | X-POWER PRO END MILLS | TitaNox-POWER END MILLS | JET-POWER END MILLS | V7 PLUS A END MILLS | V7 MILL INOX | ALU-POWER HPC END MILLS | ALU-POWER END MILLS | D-POWER GRAPHITE END MILLS | STANDARD CARBIDE | ONLY ONE COATED PM60 END MILLS | SINE-POWER | TANK-POWER END MILLS | STANDARD COBALT & HSS | TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **SEME64** SERIES

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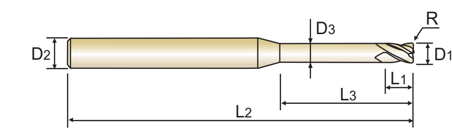

CARBIDE | 4 | 27°/30° | R ±0.02 | PLAIN

D1<Ø3.0, 30˚ Helix

p.C335-C339

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME640400212	R0.2	4.0	6	6	12	50	3.85	-
SEME640400214	R0.2	4.0	6	6	14	60	3.85	-
SEME640400216	R0.2	4.0	6	6	16	60	3.85	-
SEME640400220	R0.2	4.0	6	6	20	60	3.85	-
SEME640400226	R0.2	4.0	6	6	26	65	3.85	-
SEME640400230	R0.2	4.0	6	6	30	70	3.85	-
SEME640400235	R0.2	4.0	6	6	35	70	3.85	-
SEME640400240	R0.2	4.0	6	6	40	80	3.85	-
SEME640400245	R0.2	4.0	6	6	45	90	3.85	-
SEME640400250	R0.2	4.0	6	6	50	100	3.85	-
SEME640400310	R0.3	4.0	6	6	10	50	3.85	-
SEME640400312	R0.3	4.0	6	6	12	50	3.85	-
SEME640400314	R0.3	4.0	6	6	14	60	3.85	-
SEME640400316	R0.3	4.0	6	6	16	60	3.85	-
SEME640400320	R0.3	4.0	6	6	20	60	3.85	-
SEME640400326	R0.3	4.0	6	6	26	65	3.85	-
SEME640400330	R0.3	4.0	6	6	30	70	3.85	-
SEME640400335	R0.3	4.0	6	6	35	70	3.85	-
SEME640400340	R0.3	4.0	6	6	40	80	3.85	-
SEME640400345	R0.3	4.0	6	6	45	90	3.85	-
SEME640400350	R0.3	4.0	6	6	50	100	3.85	-
SEME640400510	R0.5	4.0	6	6	10	50	3.85	-
SEME640400512	R0.5	4.0	6	6	12	50	3.85	-
SEME640400514	R0.5	4.0	6	6	14	60	3.85	-
SEME640400516	R0.5	4.0	6	6	16	60	3.85	-
SEME640400520	R0.5	4.0	6	6	20	60	3.85	-
SEME640400526	R0.5	4.0	6	6	26	65	3.85	-
SEME640400530	R0.5	4.0	6	6	30	70	3.85	-

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **SEME64** SERIES

CARBIDE, 4 FLUTE LONG NECK CORNER RADIUS

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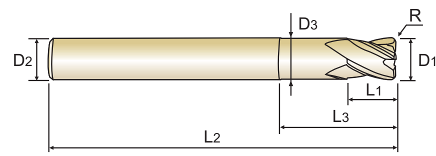

CARBIDE | 4 | 27°/30° | R ±0.02 | PLAIN
D1<Ø3.0, 30˚ Helix

p.C335-C339

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME640400535	R0.5	**4.0**	6	6	35	70	3.85	-
SEME640400540	R0.5	**4.0**	6	6	40	80	3.85	-
SEME640400545	R0.5	**4.0**	6	6	45	90	3.85	-
SEME640400550	R0.5	**4.0**	6	6	50	100	3.85	-
SEME640401010	R1.0	**4.0**	6	6	10	50	3.85	-
SEME640401012	R1.0	**4.0**	6	6	12	50	3.85	-
SEME640401014	R1.0	**4.0**	6	6	14	60	3.85	-
SEME640401016	R1.0	**4.0**	6	6	16	60	3.85	-
SEME640401020	R1.0	**4.0**	6	6	20	60	3.85	-
SEME640401026	R1.0	**4.0**	6	6	26	65	3.85	-
SEME640401030	R1.0	**4.0**	6	6	30	70	3.85	-
SEME640401035	R1.0	**4.0**	6	6	35	70	3.85	-
SEME640401040	R1.0	**4.0**	6	6	40	80	3.85	-
SEME640401045	R1.0	**4.0**	6	6	45	90	3.85	-
SEME640401050	R1.0	**4.0**	6	6	50	100	3.85	-
SEME6405001	R0.1	**5.0**	6	8	15	60	4.85	-
SEME6405002	R0.2	**5.0**	6	8	15	60	4.85	-
SEME6405003	R0.3	**5.0**	6	8	15	60	4.85	-
SEME6405005	R0.5	**5.0**	6	8	15	60	4.85	-
SEME6405010	R1.0	**5.0**	6	8	15	60	4.85	-
SEME6405015	R1.5	**5.0**	6	8	15	60	4.85	-
SEME6405020	R2.0	**5.0**	6	8	15	60	4.85	-
SEME6406001	R0.1	**6.0**	6	9	20	60	5.85	Regular
SEME6406002	R0.2	**6.0**	6	9	20	60	5.85	Regular
SEME6406003	R0.3	**6.0**	6	9	20	60	5.85	Regular
SEME6406005	R0.5	**6.0**	6	9	20	60	5.85	Regular
SEME6406010	R1.0	**6.0**	6	9	20	60	5.85	Regular
SEME6406015	R1.5	**6.0**	6	9	20	60	5.85	Regular

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **SEME64** SERIES

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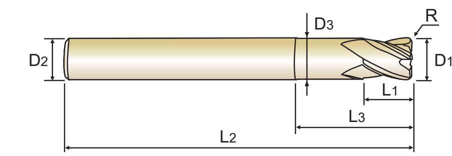


CARBIDE | 4 | 27°/30° | R ±0.02 | PLAIN
D1<Ø3.0, 30˚ Helix

p.C335-C339

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME6406020	R2.0	**6.0**	6	9	20	60	5.85	Regular
SEME6406003090	R0.3	**6.0**	6	15	30	90	5.85	Long Shank
SEME6406005090	R0.5	**6.0**	6	15	30	90	5.85	Long Shank
SEME6406010090	R1.0	**6.0**	6	15	30	90	5.85	Long Shank
SEME6408001	R0.1	**8.0**	8	12	25	70	7.70	Regular
SEME6408002	R0.2	**8.0**	8	12	25	70	7.70	Regular
SEME6408003	R0.3	**8.0**	8	12	25	70	7.70	Regular
SEME6408005	R0.5	**8.0**	8	12	25	70	7.70	Regular
SEME6408010	R1.0	**8.0**	8	12	25	70	7.70	Regular
SEME6408015	R1.5	**8.0**	8	12	25	70	7.70	Regular
SEME6408020	R2.0	**8.0**	8	12	25	70	7.70	Regular
SEME6408003100	R0.3	**8.0**	8	20	35	100	7.70	Long Shank
SEME6408005100	R0.5	**8.0**	8	20	35	100	7.70	Long Shank
SEME6408010100	R1.0	**8.0**	8	20	35	100	8.70	Long Shank
SEME6410001	R0.1	**10.0**	10	15	30	75	9.70	Regular
SEME6410002	R0.2	**10.0**	10	15	30	75	9.70	Regular
SEME6410003	R0.3	**10.0**	10	15	30	75	9.70	Regular
SEME6410005	R0.5	**10.0**	10	15	30	75	9.70	Regular
SEME6410010	R1.0	**10.0**	10	15	30	75	9.70	Regular
SEME6410015	R1.5	**10.0**	10	15	30	75	9.70	Regular
SEME6410020	R2.0	**10.0**	10	15	30	75	9.70	Regular
SEME6410003100	R0.3	**10.0**	10	25	40	100	9.70	Long Shank
SEME6410005100	R0.5	**10.0**	10	25	40	100	9.70	Long Shank
SEME6410010100	R1.0	**10.0**	10	25	40	100	9.70	Long Shank
SEME6412002	R0.2	**12.0**	12	18	32	80	11.70	Regular
SEME6412003	R0.3	**12.0**	12	18	32	80	11.70	Regular
SEME6412005	R0.5	**12.0**	12	18	32	80	11.70	Regular
SEME6412010	R1.0	**12.0**	12	18	32	80	11.70	Regular

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

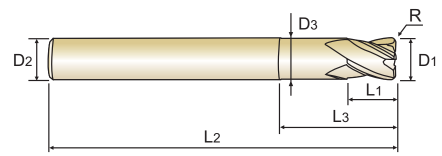
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME64** SERIES

CARBIDE, 4 FLUTE LONG NECK CORNER RADIUS

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.



CARBIDE 4 27°/30° R ±0.02 PLAIN

p.C335-C339

D1<Ø3.0, 30° Helix

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Remark
SEME6412015	R1.5	12.0	12	18	32	80	11.70	Regular
SEME6412020	R2.0	12.0	12	18	32	80	11.70	Regular
SEME6412003110	R0.3	12.0	12	30	50	110	11.70	Long Shank
SEME6412005110	R0.5	12.0	12	30	50	110	11.70	Long Shank
SEME6412010110	R1.0	12.0	12	30	50	110	11.70	Long Shank
SEME6416005	R0.5	16.0	16	20	35	100	15.70	Regular
SEME6416010	R1.0	16.0	16	20	35	100	15.70	Regular
SEME6416005150	R0.5	16.0	20	35	50	150	15.70	Long Shank
SEME6416010150	R1.0	16.0	20	35	50	150	15.70	Long Shank
SEME641600515020	R0.5	16.0	20	35	50	150	15.70	Long Shank
SEME641601015020	R1.0	16.0	20	35	50	150	15.70	Long Shank
SEME6420005	R0.5	20.0	20	25	40	100	19.70	Regular
SEME6420010	R1.0	20.0	20	25	40	100	19.70	Regular
SEME6420005150	R0.5	20.0	20	40	55	150	19.70	Long Shank
SEME6420010150	R1.0	20.0	20	40	55	150	19.70	Long Shank

Mill Dia. Tolerance (mm)	Corner Radius Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	±0.02	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	◎	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

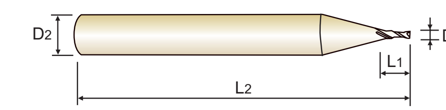
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME35** SERIES

CARBIDE, 2 FLUTE

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resitance.
▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
▶Due to sharp edge geometry at end tooth, cutting ability at working is increased.



CARBIDE 2 30° PLAIN

p.C340-C343

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME35001	0.1	4	0.2	40
SEME350015	0.15	4	0.3	40
SEME35002	0.2	4	0.4	40
SEME350025	0.25	4	0.5	40
SEME35003	0.3	4	0.6	40
SEME350035	0.35	4	0.7	40
SEME35004	0.4	4	0.8	40
SEME350045	0.45	4	0.9	40
SEME35005	0.5	4	1.0	40
SEME350055	0.55	4	1.1	40
SEME35006	0.6	4	1.2	40
SEME350065	0.65	4	1.3	40
SEME35007	0.7	4	1.4	40
SEME350075	0.75	4	1.5	40
SEME35008	0.8	4	1.6	40
SEME350085	0.85	4	1.7	40
SEME35009	0.9	4	1.8	40
SEME350095	0.95	4	2	40
SEME35010	1.0	6	2.5	50
SEME35012	1.2	6	3	50

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎			○	○	○	○	○	○	○

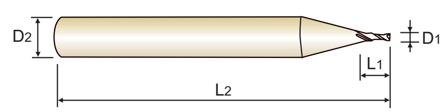
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME35** SERIES

CARBIDE, 2 FLUTE

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resitance.
▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
▶Due to sharp edge geometry at end tooth, cutting ability at working is increased.



CARBIDE 2 30° PLAIN p.C340-C343

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME35015	1.5	6	4	50
SEME35020	2.0	6	6	50
SEME35025	2.5	6	7	50
SEME35030	3.0	6	8	50
SEME35035	3.5	6	10	50
SEME35040	4.0	6	10	50
SEME35045	4.5	6	14	50
SEME35050	5.0	6	15	60
SEME35055	5.5	6	15	60
SEME35060	6.0	6	15	60
SEME35065	6.5	8	18	60
SEME35070	7.0	8	20	60
SEME35075	7.5	8	20	60
SEME35080	8.0	8	20	70
SEME35085	8.5	10	22	70
SEME35090	9.0	10	22	70
SEME35095	9.5	10	24	70
SEME35100	10.0	10	25	75
SEME35105	10.5	12	26	75
SEME35110	11.0	12	30	75
SEME35115	11.5	12	30	80
SEME35120	12.0	12	30	80
SEME35130	13.0	12	35	100
SEME3514012S	14.0	12	35	100
SEME3514014S	14.0	14	35	100
SEME35140	14.0	16	35	100
SEME35150	15.0	16	38	100

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎			○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

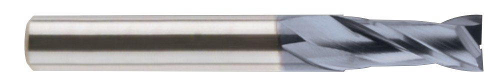
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

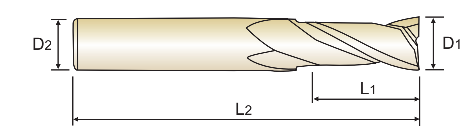
4G MILL END MILLS

PLAIN SHANK SEME35 SERIES

CARBIDE, 2 FLUTE

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resitance.
▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
▶Due to sharp edge geometry at end tooth, cutting ability at working is increased.





CARBIDE 2 30° PLAIN p.C340-C343

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME35160	16.0	16	40	100
SEME35170	17.0	16	42	100
SEME35180	18.0	16	45	100
SEME3518018S	18.0	18	45	100
SEME35190	19.0	20	45	100
SEME35200	20.0	20	45	100
SEME35210	21.0	20	45	100
SEME35220	22.0	20	45	100
SEME35230	23.0	25	50	120
SEME35240	24.0	25	50	120
SEME35250	25.0	25	50	120

▶ NEXT PAGE

Size	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to Ø6	0~-0.012	h5
over Ø6	0~-0.015	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎			○	○	○	○	○	○	○

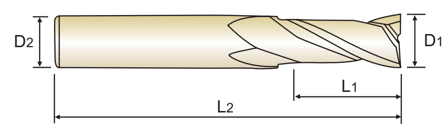
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME35** SERIES

CARBIDE, 2 FLUTE (0.1mm a Unit / 4mm Shank)

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resitance.
▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
▶Due to sharp edge geometry at end tooth, cutting ability at working is increased.



CARBIDE 2 30° PLAIN p.C340-C343

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME350104S	1.0	1.0	2.5	50
SEME350114S	1.1	1.1	3	50
SEME350124S	1.2	1.2	3	50
SEME350134S	1.3	1.3	3	50
SEME350144S	1.4	1.4	4	50
SEME350154S	1.5	1.5	4	50
SEME350164S	1.6	1.6	4	50
SEME350174S	1.7	1.7	4	50
SEME350184S	1.8	1.8	5	50
SEME350194S	1.9	1.9	5	50
SEME350204S	2.0	2.0	6	50
SEME350214S	2.1	2.1	6	50
SEME350224S	2.2	2.2	6	50
SEME350234S	2.3	2.3	6	50
SEME350244S	2.4	2.4	6	50
SEME350254S	2.5	2.5	8	50
SEME350264S	2.6	2.6	8	50
SEME350274S	2.7	2.7	8	50
SEME350284S	2.8	2.8	8	50
SEME350294S	2.9	2.9	8	50
SEME350304S	3.0	3.0	8	50
SEME350354S	3.5	3.5	10	50
SEME350404S	4.0	4.0	10	50
SEME350404S080	4.0	4.0	10	80

▶ NEXT PAGE

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.012	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

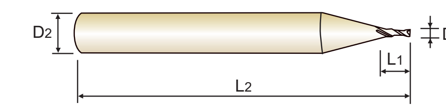
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **SEME35** SERIES

CARBIDE, 2 FLUTE (3mm Shank)

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resitance.
▶Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
▶Due to sharp edge geometry at end tooth, cutting ability at working is increased.



CARBIDE 2 30° PLAIN p.C340-C343

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME350013S	0.1	3	0.2	40
SEME350023S	0.2	3	0.4	40
SEME350033S	0.3	3	0.6	40
SEME350043S	0.4	3	0.8	40
SEME350053S	0.5	3	1.0	40
SEME350063S	0.6	3	1.2	40
SEME350073S	0.7	3	1.4	40
SEME350083S	0.8	3	1.6	40
SEME350093S	0.9	3	1.8	40
SEME350103S	1.0	3	2.5	50
SEME350123S	1.2	3	3	50
SEME350153S	1.5	3	4	50
SEME350203S	2.0	3	6	50
SEME350253S	2.5	3	7	50
SEME350303S	3.0	3	8	50

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.012	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

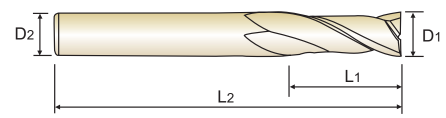
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME70** SERIES

CARBIDE, 2 FLUTE LONG LENGTH

- Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- Available various length of cut and overall length end mills.



CARBIDE | 2 | 30° | PLAIN

p.C344-C350

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME7001003	1.0	6	3	60
SEME7001004	1.0	6	4	60
SEME7001005	1.0	6	5	60
SEME7001006	1.0	6	6	60
SEME7001007	1.0	6	7	60
SEME7001008	1.0	6	8	60
SEME7001010	1.0	6	10	60
SEME7001012	1.0	6	12	60
SEME7001204	1.2	6	4	60
SEME7001206	1.2	6	6	60
SEME7001208	1.2	6	8	60
SEME7001210	1.2	6	10	60
SEME7001212	1.2	6	12	60
SEME7001506	1.5	6	6	60
SEME7001508	1.5	6	8	60
SEME7001510	1.5	6	10	60
SEME7001512	1.5	6	12	60
SEME7001514	1.5	6	14	60
SEME7001516	1.5	6	16	60
SEME7002008	2.0	6	8	60
SEME7002010	2.0	6	10	60
SEME7002012	2.0	6	12	60
SEME7002014	2.0	6	14	60
SEME7002016	2.0	6	16	60
SEME7002510	2.5	6	10	60
SEME7002512	2.5	6	12	60
SEME7002516	2.5	6	16	60
SEME7002520	2.5	6	20	60

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

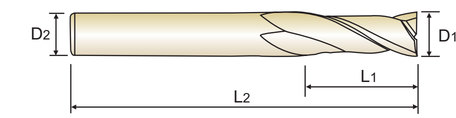
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME70** SERIES

CARBIDE, 2 FLUTE LONG LENGTH

- Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- Available various length of cut and overall length end mills.



CARBIDE | 2 | 30° | PLAIN

p.C344-C350

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME7002526	2.5	6	26	60
SEME70030163S	3.0	3	16	100
SEME7003010	3.0	6	10	70
SEME7003012	3.0	6	12	70
SEME7003014	3.0	6	14	70
SEME7003016	3.0	6	16	70
SEME7003020	3.0	6	20	70
SEME7003026	3.0	6	26	70
SEME7003030	3.0	6	30	70
SEME70040204S	4.0	4	20	100
SEME7004012	4.0	6	12	70
SEME7004016	4.0	6	16	70
SEME7004020	4.0	6	20	70
SEME7004026	4.0	6	26	70
SEME7004030	4.0	6	30	70
SEME7005020	5.0	6	20	70
SEME7005025	5.0	6	25	70
SEME7005025100	5.0	6	25	100
SEME7005030	5.0	6	30	80
SEME7005035	5.0	6	35	90
SEME7005040	5.0	6	40	100
SEME7006015	6.0	6	15	60
SEME7006015080	6.0	6	15	80
SEME7006020	6.0	6	20	70
SEME7006020090	6.0	6	20	90
SEME7006025	6.0	6	25	75
SEME7006030	6.0	6	30	80
SEME7006030100	6.0	6	30	100

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◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

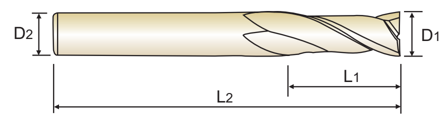
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME70** SERIES

CARBIDE, 2 FLUTE LONG LENGTH

- Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- Available various length of cut and overall length end mills.



CARBIDE 2 30° PLAIN p.C344-C350

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME7006030150	6.0	6	30	150
SEME7006035	6.0	6	35	90
SEME7006040	6.0	6	40	90
SEME7006040120	6.0	6	40	120
SEME7006045	6.0	6	45	150
SEME7008025	8.0	8	25	80
SEME7008030	8.0	8	30	80
SEME7008030100	8.0	8	30	100
SEME7008035	8.0	8	35	90
SEME7008040	8.0	8	40	90
SEME7008040120	8.0	8	40	120
SEME7008040150	8.0	8	40	150
SEME7008045	8.0	8	45	100
SEME7008050	8.0	8	50	100
SEME7008050150	8.0	8	50	150
SEME7010030	10.0	10	30	80
SEME7010030100	10.0	10	30	100
SEME7010035	10.0	10	35	90
SEME7010040	10.0	10	40	90
SEME7010040120	10.0	10	40	120
SEME7010045	10.0	10	45	100
SEME7010050	10.0	10	50	100
SEME7010050150	10.0	10	50	150
SEME7010050200	10.0	10	50	200
SEME7010055	10.0	10	55	150
SEME7010060	10.0	10	60	110
SEME7010060200	10.0	10	60	200
SEME7012035	12.0	12	35	90

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

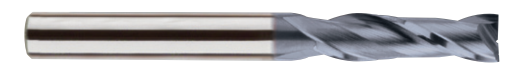
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

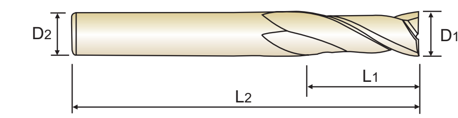
4G MILL END MILLS

PLAIN SHANK **SEME70** SERIES

CARBIDE, 2 FLUTE LONG LENGTH

- Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- Available various length of cut and overall length end mills.





CARBIDE 2 30° PLAIN p.C344-C350

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME7012040	12.0	12	40	100
SEME7012040120	12.0	12	40	120
SEME7012045	12.0	12	45	130
SEME7012050	12.0	12	50	100
SEME7012050150	12.0	12	50	150
SEME7012055	12.0	12	55	110
SEME7012060	12.0	12	60	110
SEME7012060150	12.0	12	60	150
SEME7012060200	12.0	12	60	200
SEME7012065	12.0	12	65	150
SEME7012070	12.0	12	70	120
SEME7012070200	12.0	12	70	200
SEME7014050	14.0	16	50	110
SEME7014060	14.0	16	60	150
SEME7016040	16.0	16	40	150
SEME7016050	16.0	16	50	110
SEME7016050150	16.0	16	50	150
SEME7016060	16.0	16	60	120
SEME7016070	16.0	16	70	130
SEME7016070150	16.0	16	70	150
SEME7016070200	16.0	16	70	200
SEME7016080	16.0	16	80	150
SEME7016090	16.0	16	90	150
SEME70160110	16.0	16	110	200
SEME70160120	16.0	16	120	250
SEME7018050	18.0	20	50	120
SEME7018070	18.0	20	70	130
SEME70180100	18.0	20	100	200

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

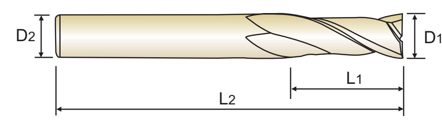
YG

4G MILL END MILLS

PLAIN SHANK **SEME70** SERIES

CARBIDE, 2 FLUTE LONG LENGTH

- ▶ Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶ Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- ▶ Available various length of cut and overall length end mills.



CARBIDE 2 30° PLAIN p.C344-C350

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME7020050	20.0	20	50	110
SEME7020050150	20.0	20	50	150
SEME7020060	20.0	20	60	130
SEME7020070	20.0	20	70	130
SEME7020080	20.0	20	80	150
SEME7020090	20.0	20	90	150
SEME7020090200	20.0	20	90	200
SEME70200110	20.0	20	110	200
SEME70200120	20.0	20	120	250
SEME7022075	22.0	20	75	150
SEME70220110	22.0	20	110	200
SEME7025070	25.0	25	70	150
SEME7025090	25.0	25	90	150
SEME70250110	25.0	25	110	200
SEME70250120	25.0	25	120	250

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

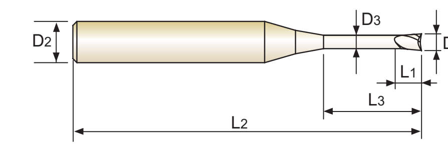
YG

4G MILL END MILLS

PLAIN SHANK **SEM845** SERIES

CARBIDE, 2 FLUTE LONG NECK

- ▶ Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶ Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
- ▶ For 1.0mm and under 1.0mm diameter sizes, designed double neck for increasing tool rigidity and minimizing vibration at working.
- ▶ Available various rib processing due to supplying various effective length and overall length products.



CARBIDE 2 30° PLAIN p.C351-C362

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM845001003	0.1	4	0.15	0.3	40	0.085
SEM845001005	0.1	4	0.15	0.5	40	0.085
SEM84500101	0.1	4	0.15	1	40	0.085
SEM845002005	0.2	4	0.3	0.5	40	0.17
SEM84500201	0.2	4	0.3	1	40	0.17
SEM845002015	0.2	4	0.3	1.5	40	0.17
SEM84500202	0.2	4	0.3	2	40	0.17
SEM84500301	0.3	4	0.5	1	40	0.27
SEM845003015	0.3	4	0.5	1.5	40	0.27
SEM84500302	0.3	4	0.5	2	40	0.27
SEM845003025	0.3	4	0.5	2.5	40	0.27
SEM84500303	0.3	4	0.5	3	40	0.27
SEM84500304	0.3	4	0.5	4	40	0.27
SEM84500305	0.3	4	0.5	5	40	0.27
SEM84500401	0.4	4	0.6	1	40	0.37
SEM845004015	0.4	4	0.6	1.5	40	0.37
SEM84500402	0.4	4	0.6	2	40	0.37
SEM845004025	0.4	4	0.6	2.5	40	0.37
SEM84500403	0.4	4	0.6	3	40	0.37
SEM84500404	0.4	4	0.6	4	40	0.37
SEM84500405	0.4	4	0.6	5	40	0.37
SEM84500406	0.4	4	0.6	6	40	0.37
SEM84500408	0.4	4	0.6	8	40	0.37
SEM84500410	0.4	4	0.6	10	40	0.37
SEM84500501	0.5	4	0.7	1	45	0.45
SEM845005015	0.5	4	0.7	1.5	45	0.45
SEM84500502	0.5	4	0.7	2	45	0.45
SEM845005025	0.5	4	0.7	2.5	45	0.45

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◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

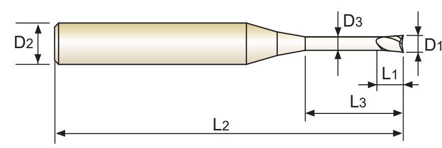
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **SEM845** SERIES

CARBIDE, 2 FLUTE LONG NECK

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
- ▶For 1.0mm and under 1.0mm diameter sizes, designed double neck for increasing tool rigidity and minimizing vibration at working.
- ▶Available various rib processing due to supplying various effective length and overall length products.



CARBIDE 2 30° PLAIN p.C351-C362

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM84500503	0.5	4	0.7	3	45	0.45
SEM84500504	0.5	4	0.7	4	45	0.45
SEM84500505	0.5	4	0.7	5	45	0.45
SEM84500506	0.5	4	0.7	6	45	0.45
SEM84500508	0.5	4	0.7	8	45	0.45
SEM84500510	0.5	4	0.7	10	45	0.45
SEM84500512	0.5	4	0.7	12	45	0.45
SEM84500514	0.5	4	0.7	14	45	0.45
SEM84500516	0.5	4	0.7	16	45	0.45
SEM84500602	0.6	4	0.9	2	45	0.55
SEM84500603	0.6	4	0.9	3	45	0.55
SEM84500604	0.6	4	0.9	4	45	0.55
SEM84500605	0.6	4	0.9	5	45	0.55
SEM84500606	0.6	4	0.9	6	45	0.55
SEM84500608	0.6	4	0.9	8	45	0.55
SEM84500610	0.6	4	0.9	10	45	0.55
SEM84500612	0.6	4	0.9	12	45	0.55
SEM84500614	0.6	4	0.9	14	45	0.55
SEM84500616	0.6	4	0.9	16	45	0.55
SEM84500702	0.7	4	1.2	2	45	0.65
SEM84500704	0.7	4	1.2	4	45	0.65
SEM84500706	0.7	4	1.2	6	45	0.65
SEM84500708	0.7	4	1.2	8	45	0.65
SEM84500710	0.7	4	1.2	10	45	0.65
SEM84500712	0.7	4	1.2	12	45	0.65
SEM84500802	0.8	4	1.2	2	45	0.75
SEM84500803	0.8	4	1.2	3	45	0.75
SEM84500804	0.8	4	1.2	4	45	0.75

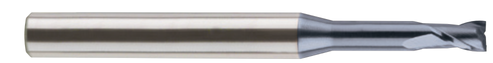
▶ NEXT PAGE

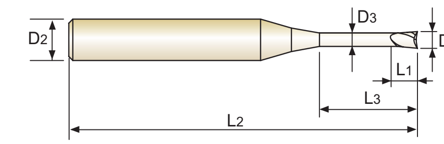
◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
4G MILL END MILLS
PLAIN SHANK SEM845 SERIES
CARBIDE, 2 FLUTE LONG NECK
▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
▶For 1.0mm and under 1.0mm diameter sizes, designed double neck for increasing tool rigidity and minimizing vibration at working.
▶Available various rib processing due to supplying various effective length and overall length products.





CARBIDE 2 30° PLAIN p.C351-C362
◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM84500805	0.8	4	1.2	5	45	0.75
SEM84500806	0.8	4	1.2	6	45	0.75
SEM84500808	0.8	4	1.2	8	45	0.75
SEM84500810	0.8	4	1.2	10	45	0.75
SEM84500812	0.8	4	1.2	12	45	0.75
SEM84500814	0.8	4	1.2	14	45	0.75
SEM84500816	0.8	4	1.2	16	45	0.75
SEM84500820	0.8	4	1.2	20	45	0.75
SEM84500906	0.9	4	1.3	6	45	0.85
SEM84500908	0.9	4	1.3	8	45	0.85
SEM84500910	0.9	4	1.3	10	45	0.85
SEM84501002	1.0	4	1.5	2	50	0.95
SEM84501003	1.0	4	1.5	3	50	0.95
SEM84501004	1.0	4	1.5	4	50	0.95
SEM84501005	1.0	4	1.5	5	50	0.95
SEM84501006	1.0	4	1.5	6	50	0.95
SEM84501007	1.0	4	1.5	7	50	0.95
SEM84501008	1.0	4	1.5	8	50	0.95
SEM84501010	1.0	4	1.5	10	50	0.95
SEM84501012	1.0	4	1.5	12	50	0.95
SEM84501014	1.0	4	1.5	14	50	0.95
SEM84501016	1.0	4	1.5	16	50	0.95
SEM84501018	1.0	4	1.5	18	50	0.95
SEM84501020	1.0	4	1.5	20	50	0.95
SEM84501022	1.0	4	1.5	22	60	0.95
SEM84501026	1.0	4	1.5	26	60	0.95
SEM84501030	1.0	4	1.5	30	70	0.95
SEM84501040	1.0	4	1.5	40	80	0.95

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

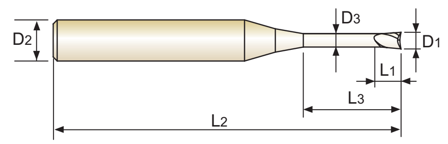
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEM845** SERIES

CARBIDE, 2 FLUTE LONG NECK

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
- ▶For 1.0mm and under 1.0mm diameter sizes, designed double neck for increasing tool rigidity and minimizing vibration at working.
- ▶Available various rib processing due to supplying various effective length and overall length products.



CARBIDE 2 30° PLAIN p.C351-C362

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM84501050	1.0	4	1.5	50	100	0.95
SEM84501204	1.2	4	1.8	4	50	1.15
SEM84501206	1.2	4	1.8	6	50	1.15
SEM84501208	1.2	4	1.8	8	50	1.15
SEM84501210	1.2	4	1.8	10	50	1.15
SEM84501212	1.2	4	1.8	12	50	1.15
SEM84501214	1.2	4	1.8	14	50	1.15
SEM84501216	1.2	4	1.8	16	50	1.15
SEM84501220	1.2	4	1.8	20	50	1.15
SEM84501226	1.2	4	1.8	26	60	1.15
SEM84501230	1.2	4	1.8	30	70	1.15
SEM84501406	1.4	4	2.1	6	50	1.35
SEM84501408	1.4	4	2.1	8	50	1.35
SEM84501410	1.4	4	2.1	10	50	1.35
SEM84501414	1.4	4	2.1	14	50	1.35
SEM84501416	1.4	4	2.1	16	50	1.35
SEM84501420	1.4	4	2.1	20	50	1.35
SEM84501504	1.5	4	2.3	4	50	1.45
SEM84501505	1.5	4	2.3	5	50	1. 45
SEM84501506	1.5	4	2.3	6	50	1.45
SEM84501507	1.5	4	2.3	7	50	1.45
SEM84501508	1.5	4	2.3	8	50	1.45
SEM84501510	1.5	4	2.3	10	50	1.45
SEM84501512	1.5	4	2.3	12	50	1.45
SEM84501514	1.5	4	2.3	14	50	1.45
SEM84501516	1.5	4	2.3	16	50	1.45
SEM84501518	1.5	4	2.3	18	50	1.45
SEM84501520	1.5	4	2.3	20	50	1.45

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **SEM845** SERIES

CARBIDE, 2 FLUTE LONG NECK

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
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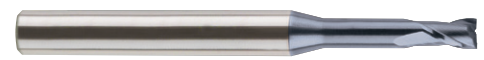

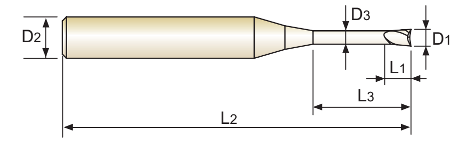

CARBIDE 2 30° PLAIN p.C351-C362

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM84501522	1.5	4	2.3	22	60	1.45
SEM84501526	1.5	4	2.3	26	60	1.45
SEM84501530	1.5	4	2.3	30	70	1.45
SEM84501608	1.6	4	2.3	8	50	1.55
SEM84501610	1.6	4	2.3	10	50	1.55
SEM84501612	1.6	4	2.3	12	50	1.55
SEM84501616	1.6	4	2.3	16	50	1.55
SEM84501620	1.6	4	2.3	20	50	1.55
SEM84501808	1.8	4	2.7	8	50	1.75
SEM84501810	1.8	4	2.7	10	50	1.75
SEM84501812	1.8	4	2.7	12	50	1.75
SEM84501816	1.8	4	2.7	16	50	1.75
SEM84501820	1.8	4	2.7	20	50	1.75
SEM84502006	2.0	4	3	6	50	1.95
SEM84502008	2.0	4	3	8	50	1.95
SEM84502010	2.0	4	3	10	50	1.95
SEM84502012	2.0	4	3	12	50	1.95
SEM84502014	2.0	4	3	14	50	1.95
SEM84502016	2.0	4	3	16	50	1.95
SEM84502018	2.0	4	3	18	50	1.95
SEM84502020	2.0	4	3	20	50	1.95
SEM84502022	2.0	4	3	22	60	1.95
SEM84502026	2.0	4	3	26	60	1.95
SEM84502030	2.0	4	3	30	70	1.95
SEM84502035	2.0	4	3	35	70	1.95
SEM84502040	2.0	4	3	40	80	1.95
SEM84502045	2.0	4	3	45	90	1.95
SEM84502050	2.0	4	3	50	100	1.95

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEM845** SERIES

CARBIDE, 2 FLUTE LONG NECK

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
- ▶For 1.0mm and under 1.0mm diameter sizes, designed double neck for increasing tool rigidity and minimizing vibration at working.
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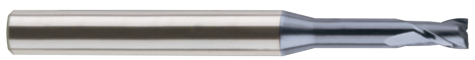
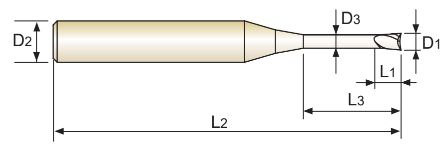




CARBIDE 2 30° PLAIN p.C351-C362

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM84502060	2.0	4	3	60	110	1.95
SEM84502508	2.5	4	4	8	50	2.40
SEM84502510	2.5	4	4	10	50	2.40
SEM84502512	2.5	4	4	12	50	2.40
SEM84502514	2.5	4	4	14	50	2.40
SEM84502516	2.5	4	4	16	50	2.40
SEM84502518	2.5	4	4	18	50	2.40
SEM84502520	2.5	4	4	20	50	2.40
SEM84502522	2.5	4	4	22	60	2.40
SEM84502526	2.5	4	4	26	60	2.40
SEM84502530	2.5	4	4	30	70	2.40
SEM84502535	2.5	4	4	35	70	2.40
SEM84502540	2.5	4	4	40	80	2.40
SEM84502545	2.5	4	4	45	90	2.40
SEM84502550	2.5	4	4	50	100	2.40
SEM84503006	3.0	6	4.5	6	50	2.85
SEM84503008	3.0	6	4.5	8	50	2.85
SEM84503010	3.0	6	4.5	10	50	2.85
SEM84503012	3.0	6	4.5	12	50	2.85
SEM84503014	3.0	6	4.5	14	60	2.85
SEM84503016	3.0	6	4.5	16	60	2.85
SEM84503018	3.0	6	4.5	18	60	2.85
SEM84503020	3.0	6	4.5	20	60	2.85
SEM84503022	3.0	6	4.5	22	65	2.85
SEM84503026	3.0	6	4.5	26	65	2.85
SEM84503030	3.0	6	4.5	30	70	2.85
SEM84503035	3.0	6	4.5	35	70	2.85
SEM84503040	3.0	6	4.5	40	80	2.85

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

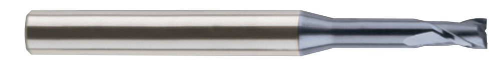
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

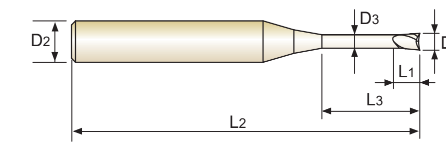
4G MILL END MILLS

PLAIN SHANK SEM845 SERIES

CARBIDE, 2 FLUTE LONG NECK

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
▶For 1.0mm and under 1.0mm diameter sizes, designed double neck for increasing tool rigidity and minimizing vibration at working.
▶Available various rib processing due to supplying various effective length and overall length products.





CARBIDE 2 30° PLAIN p.C351-C362

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM84503045	3.0	6	4.5	45	90	2.85
SEM84503050	3.0	6	4.5	50	100	2.85
SEM84503060	3.0	6	4.5	60	100	2.85
SEM84504008	4.0	6	6	8	50	3.85
SEM84504010	4.0	6	6	10	50	3.85
SEM84504012	4.0	6	6	12	50	3.85
SEM84504014	4.0	6	6	14	60	3.85
SEM84504016	4.0	6	6	16	60	3.85
SEM84504018	4.0	6	6	18	60	3.85
SEM84504020	4.0	6	6	20	60	3.85
SEM84504022	4.0	6	6	22	65	3.85
SEM84504026	4.0	6	6	26	65	3.85
SEM84504030	4.0	6	6	30	70	3.85
SEM84504035	4.0	6	6	35	70	3.85
SEM84504040	4.0	6	6	40	80	3.85
SEM84504045	4.0	6	6	45	90	3.85
SEM84504050	4.0	6	6	50	100	3.85
SEM84504060	4.0	6	6	60	100	3.85
SEM84505016	5.0	6	8	16	60	4.85
SEM84505020	5.0	6	8	20	60	4.85
SEM84505026	5.0	6	8	26	65	4.85
SEM84505030	5.0	6	8	30	70	4.85
SEM84505035	5.0	6	8	35	75	4.85
SEM84505040	5.0	6	8	40	80	4.85
SEM84505050	5.0	6	8	50	90	4.85
SEM84505060	5.0	6	8	60	100	4.85
SEM84506015	6.0	6	9	15	60	5.85
SEM84506020	6.0	6	9	20	60	5.85

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

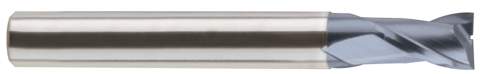
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

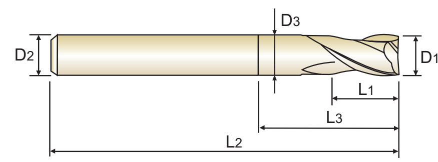
4G MILL END MILLS

PLAIN SHANK **SEM845** SERIES

CARBIDE, 2 FLUTE LONG NECK

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
▶For 1.0mm and under 1.0mm diameter sizes, designed double neck for increasing tool rigidity and minimizing vibration at working.
▶Available various rib processing due to supplying various effective length and overall length products.





CARBIDE 2 30° PLAIN p.C351-C362

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEM84506030	6.0	6	9	30	70	5.85
SEM84506032	6.0	6	9	32	90	5.85
SEM84508025	8.0	8	12	25	70	7.70
SEM84508030	8.0	8	12	30	80	7.70
SEM84508042	8.0	8	12	42	100	7.70
SEM84510030	10.0	10	15	30	75	9.70
SEM84510035	10.0	10	15	35	80	9.70
SEM84510045	10.0	10	15	45	100	9.70
SEM84512035	12.0	12	20	35	80	11.70
SEM84512040	12.0	12	20	40	90	11.70
SEM84512050	12.0	12	20	50	110	11.70

Size	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to Ø6	0~-0.012	h5
over Ø6	0~-0.015	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

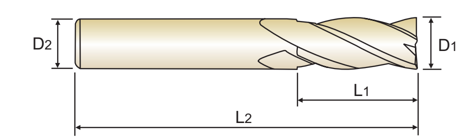
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME36** SERIES

CARBIDE, 4 FLUTE

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.



CARBIDE 4 27°/30° PLAIN p.C363-C365

D1<Ø3.0, 30˚ Helix

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME36008	0.8	4	1.6	40
SEME36009	0.9	4	1.8	40
SEME36010	1.0	6	2.5	50
SEME36012	1.2	6	3	50
SEME36015	1.5	6	4	50
SEME36020	2.0	6	6	50
SEME36025	2.5	6	7	50
SEME36030	3.0	6	8	50
SEME36035	3.5	6	10	50
SEME36040	4.0	6	10	50
SEME36045	4.5	6	14	50
SEME36050	5.0	6	15	60
SEME36055	5.5	6	15	60
SEME36060	6.0	6	15	60
SEME36065	6.5	8	18	60
SEME36070	7.0	8	20	60
SEME36075	7.5	8	20	60
SEME36080	8.0	8	20	70
SEME36085	8.5	10	22	70
SEME36090	9.0	10	22	70
SEME36095	9.5	10	24	70
SEME36100	10.0	10	25	75
SEME36105	10.5	12	26	75
SEME36110	11.0	12	30	75

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎			○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

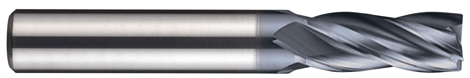
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

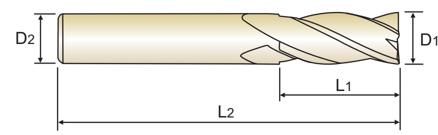
4G MILL END MILLS

PLAIN SHANK **SEME36** SERIES

CARBIDE, 4 FLUTE

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.





CARBIDE | 4 | 27°/30° | PLAIN

p.C363-C365

◇ Call for Availability

D1<Ø3.0, 30˚ Helix

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME36115	11.5	12	30	80
SEME36120	12.0	12	30	80
SEME36130	13.0	12	35	100
SEME3614012S	14.0	12	35	100
SEME3614014S	14.0	14	35	100
SEME36140	14.0	16	35	100
SEME36150	15.0	16	38	100
SEME36160	16.0	16	40	100
SEME36170	17.0	16	42	100
SEME36180	18.0	16	45	100
SEME3618018S	18.0	18	45	100
SEME36190	19.0	20	45	100
SEME36200	20.0	20	45	100
SEME36210	21.0	20	45	100
SEME36220	22.0	20	45	100
SEME36230	23.0	25	50	120
SEME36240	24.0	25	50	120
SEME36250	25.0	25	50	120

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎			○	○	○	○	○	○	○

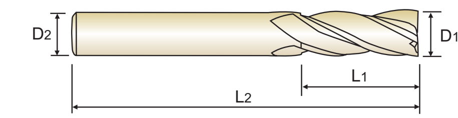
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME71** SERIES

CARBIDE, 4 FLUTE

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.
- Designed equal index flute for long length end mills.
▶Due to gash land geometry used at end tooth, heavy duty cutting can be achieved.
▶Available various length products like short, regular and long length end mills etc.



CARBIDE | 4 | 35°/38° | PLAIN

p.C363-C365

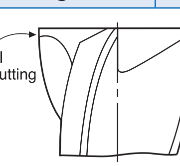
◇ Call for Availability

D1<Ø3.0, Long Length 38˚ Helix

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEME7101001	1.0	6	1	40	Short
SEME7101002	1.0	6	2	40	Short
SEME71010	1.0	6	2.5	50	Regular
SEME7101003	1.0	6	3	50	Long
SEME7101004	1.0	6	4	50	Long
SEME7101006	1.0	6	6	50	Long
SEME7101202	1.2	6	2	40	Short
SEME71012	1.2	6	3	50	Regular
SEME7101204	1.2	6	4	50	Long
SEME7101206	1.2	6	6	50	Long
SEME71015015	1.5	6	1.5	40	Short
SEME7101503	1.5	6	3	40	Short
SEME71015	1.5	6	4	50	Regular
SEME7101506	1.5	6	6	50	Long
SEME7101508	1.5	6	8	50	Long
SEME7101510	1.5	6	10	50	Long
SEME7102002	2.0	6	2	40	Short
SEME7102004	2.0	6	4	40	Short
SEME71020	2.0	6	6	50	Regular
SEME7102008	2.0	6	8	50	Long
SEME7102010	2.0	6	10	50	Long
SEME7102012	2.0	6	12	50	Long
SEME71025025	2.5	6	2.5	40	Short
SEME7102505	2.5	6	5	40	Short

▶ NEXT PAGE



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎			○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

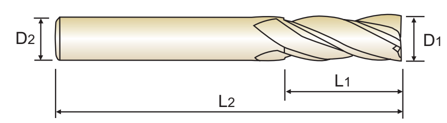
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

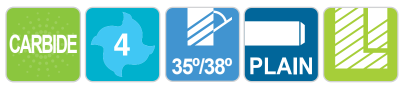
4G MILL END MILLS

PLAIN SHANK **SEME71** SERIES

CARBIDE, 4 FLUTE

- ▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
- ▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.
  - Designed equal index flute for long length end mills.
- ▶Due to gash land geometry used at end tooth, heavy duty cutting can be achieved.
- ▶Available various length products like short, regular and long length end mills etc.





p.C363-C365

◇ Call for Availability

D1<Ø3.0, Long Length
38˚ Helix

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEME71025	2.5	6	7	50	Regular
SEME7102510	2.5	6	10	50	Long
SEME7102512	2.5	6	12	50	Long
SEME7103003	3.0	6	3	40	Short
SEME7103006	3.0	6	6	40	Short
SEME71030	3.0	6	8	50	Regular
SEME7103010	3.0	6	10	50	Long
SEME7103012	3.0	6	12	50	Long
SEME7103014	3.0	6	14	50	Long
SEME7104004	4.0	6	4	40	Short
SEME7104008	4.0	6	8	40	Short
SEME71040	4.0	6	10	50	Regular
SEME7104012	4.0	6	12	50	Long
SEME7104014	4.0	6	14	50	Long
SEME7104016	4.0	6	16	50	Long
SEME7105005	5.0	6	5	50	Short
SEME7105010	5.0	6	10	50	Short
SEME71050	5.0	6	15	60	Regular
SEME7105020	5.0	6	20	60	Long
SEME7105025	5.0	6	25	60	Long
SEME7106006	6.0	6	6	50	Short
SEME7106012	6.0	6	12	50	Short

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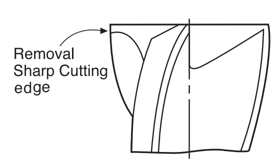


◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎			○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS

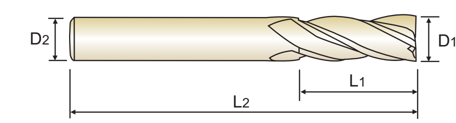
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

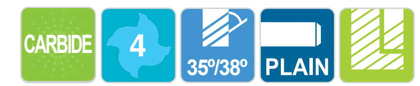
4G MILL END MILLS

PLAIN SHANK SEME71 SERIES

CARBIDE, 4 FLUTE

▶Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
▶Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRc55 and machine parts.
▶Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.
- Designed equal index flute for long length end mills.
▶Due to gash land geometry used at end tooth, heavy duty cutting can be achieved.
▶Available various length products like short, regular and long length end mills etc.





p.C363-C365

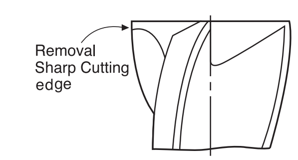
◇ Call for Availability

D1<Ø3.0, Long Length
38˚ Helix

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEME71060	6.0	6	15	60	Regular
SEME7106020	6.0	6	20	60	Long
SEME7106025	6.0	6	25	60	Long
SEME7108016	8.0	8	16	60	Short
SEME71080	8.0	8	20	70	Regular
SEME7108025	8.0	8	25	70	Long
SEME7108030	8.0	8	30	70	Long
SEME7110022	10.0	10	22	65	Short
SEME71100	10.0	10	25	75	Regular
SEME7110030	10.0	10	30	75	Long
SEME7110035	10.0	10	35	75	Long
SEME7112026	12.0	12	26	70	Short
SEME71120	12.0	12	30	80	Regular
SEME7112035	12.0	12	35	80	Long
SEME7112040	12.0	12	40	80	Long
SEME71140	14.0	16	35	100	Regular
SEME7116032	16.0	16	32	100	Short
SEME71160	16.0	16	40	100	Regular
SEME71180	18.0	20	45	100	Regular
SEME71200	20.0	20	45	100	Regular

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h5



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎			○	○	○	○	○	○	○

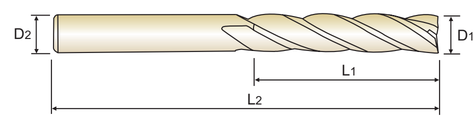
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME72** SERIES

CARBIDE, 4 FLUTE LONG LENGTH

- Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- Available various length of cut and overall length products.



CARBIDE 4 30° PLAIN p.C366-C373

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME7201003	1.0	6	3	60
SEME7201004	1.0	6	4	60
SEME7201005	1.0	6	5	60
SEME7201006	1.0	6	6	60
SEME7201007	1.0	6	7	60
SEME7201008	1.0	6	8	60
SEME7201010	1.0	6	10	60
SEME7201012	1.0	6	12	60
SEME7201204	1.2	6	4	60
SEME7201206	1.2	6	6	60
SEME7201208	1.2	6	8	60
SEME7201210	1.2	6	10	60
SEME7201212	1.2	6	12	60
SEME7201506	1.5	6	6	60
SEME7201508	1.5	6	8	60
SEME7201510	1.5	6	10	60
SEME7201512	1.5	6	12	60
SEME7201514	1.5	6	14	60
SEME7201516	1.5	6	16	60
SEME7202008	2.0	6	8	60
SEME7202010	2.0	6	10	60
SEME7202012	2.0	6	12	60
SEME7202014	2.0	6	14	60
SEME7202016	2.0	6	16	60
SEME7202510	2.5	6	10	60
SEME7202512	2.5	6	12	60
SEME7202516	2.5	6	16	60
SEME7202520	2.5	6	20	60

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

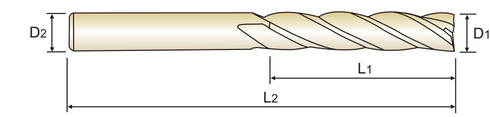
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK SEME72 SERIES

CARBIDE, 4 FLUTE LONG LENGTH

- Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- Available various length of cut and overall length products.



CARBIDE 4 30° PLAIN p.C366-C373

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME7202526	2.5	6	26	60
SEME72030163S	3.0	3	16	100
SEME7203010	3.0	6	10	70
SEME7203012	3.0	6	12	70
SEME7203014	3.0	6	14	70
SEME7203016	3.0	6	16	70
SEME7203020	3.0	6	20	70
SEME7203026	3.0	6	26	70
SEME7203030	3.0	6	30	70
SEME72040204S	4.0	4	20	100
SEME7204012	4.0	6	12	70
SEME7204016	4.0	6	16	70
SEME7204020	4.0	6	20	70
SEME7204026	4.0	6	26	70
SEME7204030	4.0	6	30	70
SEME7205020	5.0	6	20	70
SEME7205025	5.0	6	25	70
SEME7205025100	5.0	6	25	100
SEME7205030	5.0	6	30	80
SEME7205035	5.0	6	35	90
SEME7205040	5.0	6	40	100
SEME7206015	6.0	6	15	60
SEME7206015080	6.0	6	15	80
SEME7206020	6.0	6	20	70
SEME7206020090	6.0	6	20	90
SEME7206025	6.0	6	25	75
SEME7206030	6.0	6	30	80
SEME7206030100	6.0	6	30	100

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◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

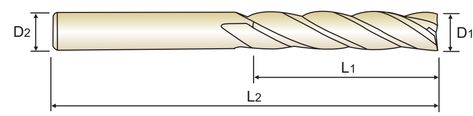
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

PLAIN SHANK **SEME72** SERIES

CARBIDE, 4 FLUTE LONG LENGTH

- Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- Available various length of cut and overall length products.



CARBIDE | 4 | 30° | PLAIN

p.C366-C373

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME7206030150	6.0	6	30	150
SEME7206035	6.0	6	35	90
SEME7206040	6.0	6	40	90
SEME7206040120	6.0	6	40	120
SEME7206045	6.0	6	45	150
SEME7208025	8.0	8	25	80
SEME7208030	8.0	8	30	80
SEME7208030100	8.0	8	30	100
SEME7208035	8.0	8	35	90
SEME7208040	8.0	8	40	90
SEME7208040120	8.0	8	40	120
SEME7208040150	8.0	8	40	150
SEME7208045	8.0	8	45	100
SEME7208050	8.0	8	50	100
SEME7208050150	8.0	8	50	150
SEME7210030	10.0	10	30	80
SEME7210030100	10.0	10	30	100
SEME7210035	10.0	10	35	90
SEME7210040	10.0	10	40	90
SEME7210040120	10.0	10	40	120
SEME7210045	10.0	10	45	100
SEME7210050	10.0	10	50	100
SEME7210050150	10.0	10	50	150
SEME7210050200	10.0	10	50	200
SEME7210055	10.0	10	55	150
SEME7210060	10.0	10	60	110
SEME7210060200	10.0	10	60	200
SEME7212035	12.0	12	35	90

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◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

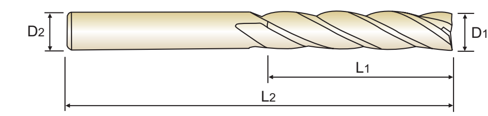
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **SEME72** SERIES

CARBIDE, 4 FLUTE LONG LENGTH

- Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- Available various length of cut and overall length products.



CARBIDE | 4 | 30° | PLAIN

p.C366-C373

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME7212040	12.0	12	40	100
SEME7212040120	12.0	12	40	120
SEME7212045	12.0	12	45	130
SEME7212050	12.0	12	50	100
SEME7212050150	12.0	12	50	150
SEME7212055	12.0	12	55	110
SEME7212060	12.0	12	60	110
SEME7212060150	12.0	12	60	150
SEME7212060200	12.0	12	60	200
SEME7212065	12.0	12	65	150
SEME7212070	12.0	12	70	120
SEME7212070200	12.0	12	70	200
SEME7214050	14.0	16	50	110
SEME7214060	14.0	16	60	150
SEME7216040	16.0	16	40	150
SEME7216050	16.0	16	50	110
SEME7216050150	16.0	16	50	150
SEME7216060	16.0	16	60	120
SEME7216070	16.0	16	70	130
SEME7216070150	16.0	16	70	150
SEME7216070200	16.0	16	70	200
SEME7216080	16.0	16	80	150
SEME7216090	16.0	16	90	150
SEME72160110	16.0	16	110	200
SEME72160120	16.0	16	120	250
SEME7218050	18.0	20	50	120
SEME7218070	18.0	20	70	130
SEME72180100	18.0	20	100	200

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

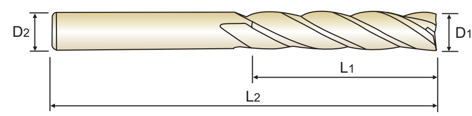
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **SEME72** SERIES

CARBIDE, 4 FLUTE LONG LENGTH

- Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- Available various length of cut and overall length products.



CARBIDE 4 30° PLAIN p.C366-C373

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
SEME7220050	20.0	20	50	110
SEME7220050150	20.0	20	50	150
SEME7220060	20.0	20	60	130
SEME7220070	20.0	20	70	130
SEME7220080	20.0	20	80	150
SEME7220090	20.0	20	90	150
SEME7220090200	20.0	20	90	200
SEME72200110	20.0	20	110	200
SEME72200120	20.0	20	120	250
SEME7222075	22.0	20	75	150
SEME72220110	22.0	20	110	200
SEME7225070	25.0	25	70	150
SEME7225090	25.0	25	90	150
SEME72250110	25.0	25	110	200
SEME72250120	25.0	25	120	250

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

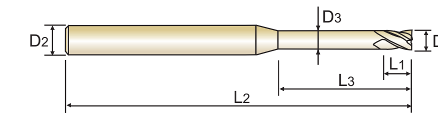
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG 4G MILL END MILLS

PLAIN SHANK **SEME73** SERIES

CARBIDE, 4 FLUTE LONG NECK

- Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- Available various length of cut and overall length products.



CARBIDE 4 30° PLAIN p.C374-C383

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEME7301002	1.0	4	1.5	2	50	0.95
SEME7301003	1.0	4	1.5	3	50	0.95
SEME7301004	1.0	4	1.5	4	50	0.95
SEME7301005	1.0	4	1.5	5	50	0.95
SEME7301006	1.0	4	1.5	6	50	0.95
SEME7301007	1.0	4	1.5	7	50	0.95
SEME7301008	1.0	4	1.5	8	50	0.95
SEME7301010	1.0	4	1.5	10	50	0.95
SEME7301012	1.0	4	1.5	12	50	0.95
SEME7301014	1.0	4	1.5	14	50	0.95
SEME7301016	1.0	4	1.5	16	50	0.95
SEME7301018	1.0	4	1.5	18	50	0.95
SEME7301020	1.0	4	1.5	20	50	0.95
SEME7301022	1.0	4	1.5	22	60	0.95
SEME7301026	1.0	4	1.5	26	60	0.95
SEME7301030	1.0	4	1.5	30	70	0.95
SEME7301040	1.0	4	1.5	40	80	0.95
SEME7301050	1.0	4	1.5	50	100	0.95
SEME7301204	1.2	4	1.8	4	50	1.15
SEME7301206	1.2	4	1.8	6	50	1.15
SEME7301208	1.2	4	1.8	8	50	1.15
SEME7301210	1.2	4	1.8	10	50	1.15
SEME7301212	1.2	4	1.8	12	50	1.15
SEME7301214	1.2	4	1.8	14	50	1.15
SEME7301216	1.2	4	1.8	16	50	1.15
SEME7301220	1.2	4	1.8	20	50	1.15

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

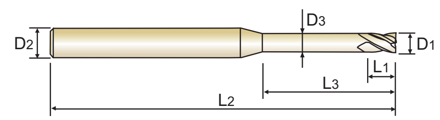
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME73** SERIES

CARBIDE, 4 FLUTE LONG NECK

- ▶ Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶ Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- ▶ Available various length of cut and overall length products.



CARBIDE 4 30° PLAIN p.C374-C383

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEME7301226	1.2	4	1.8	26	60	1.15
SEME7301230	1.2	4	1.8	30	70	1.15
SEME7301504	1.5	4	2.3	4	50	1.45
SEME7301505	1.5	4	2.3	5	50	1.45
SEME7301506	1.5	4	2.3	6	50	1.45
SEME7301507	1.5	4	2.3	7	50	1.45
SEME7301508	1.5	4	2.3	8	50	1.45
SEME7301510	1.5	4	2.3	10	50	1.45
SEME7301512	1.5	4	2.3	12	50	1.45
SEME7301514	1.5	4	2.3	14	50	1.45
SEME7301516	1.5	4	2.3	16	50	1.45
SEME7301518	1.5	4	2.3	18	50	1.45
SEME7301520	1.5	4	2.3	20	50	1.45
SEME7301522	1.5	4	2.3	22	60	1.45
SEME7301526	1.5	4	2.3	26	60	1.45
SEME7301530	1.5	4	2.3	30	70	1.45
SEME7302006	2.0	4	3	6	50	1.95
SEME7302008	2.0	4	3	8	50	1.95
SEME7302010	2.0	4	3	10	50	1.95
SEME7302012	2.0	4	3	12	50	1.95
SEME7302014	2.0	4	3	14	50	1.95
SEME7302016	2.0	4	3	16	50	1.95
SEME7302018	2.0	4	3	18	50	1.95
SEME7302020	2.0	4	3	20	50	1.95
SEME7302022	2.0	4	3	22	60	1.95
SEME7302026	2.0	4	3	26	60	1.95

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◎ : Excellent ○ : Good

ISO	P											M			K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○	

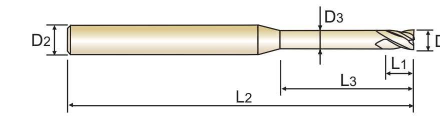
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME73** SERIES

CARBIDE, 4 FLUTE LONG NECK

- ▶ Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶ Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- ▶ Available various length of cut and overall length products.



CARBIDE 4 30° PLAIN p.C374-C383

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEME7302030	2.0	4	3	30	70	1.95
SEME7302035	2.0	4	3	35	70	1.95
SEME7302040	2.0	4	3	40	80	1.95
SEME7302045	2.0	4	3	45	90	1.95
SEME7302050	2.0	4	3	50	100	1.95
SEME7302060	2.0	4	3	60	110	1.95
SEME7302508	2.5	4	4	8	50	2.40
SEME7302510	2.5	4	4	10	50	2.40
SEME7302512	2.5	4	4	12	50	2.40
SEME7302514	2.5	4	4	14	50	2.40
SEME7302516	2.5	4	4	16	50	2.40
SEME7302518	2.5	4	4	18	50	2.40
SEME7302520	2.5	4	4	20	50	2.40
SEME7302522	2.5	4	4	22	60	2.40
SEME7302526	2.5	4	4	26	60	2.40
SEME7302530	2.5	4	4	30	70	2.40
SEME7302535	2.5	4	4	35	70	2.40
SEME7302540	2.5	4	4	40	80	2.40
SEME7302545	2.5	4	4	45	90	2.40
SEME7302550	2.5	4	4	50	100	2.40
SEME7303006	3.0	6	4.5	6	50	2.85
SEME7303008	3.0	6	4.5	8	50	2.85
SEME7303010	3.0	6	4.5	10	50	2.85
SEME7303012	3.0	6	4.5	12	50	2.85
SEME7303014	3.0	6	4.5	14	60	2.85
SEME7303016	3.0	6	4.5	16	60	2.85

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◎ : Excellent ○ : Good

ISO	P											M			K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○	

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

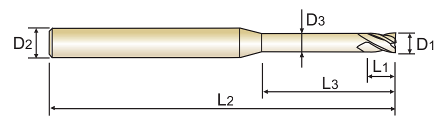
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

PLAIN SHANK **SEME73** SERIES

CARBIDE, 4 FLUTE LONG NECK

- ▶ Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶ Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- ▶ Available various length of cut and overall length products.



CARBIDE 4 30° PLAIN p.C374-C383

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEME7303018	3.0	6	4.5	18	60	2.85
SEME7303020	3.0	6	4.5	20	60	2.85
SEME7303022	3.0	6	4.5	22	65	2.85
SEME7303026	3.0	6	4.5	26	65	2.85
SEME7303030	3.0	6	4.5	30	70	2.85
SEME7303035	3.0	6	4.5	35	70	2.85
SEME7303040	3.0	6	4.5	40	80	2.85
SEME7303045	3.0	6	4.5	45	90	2.85
SEME7303050	3.0	6	4.5	50	100	2.85
SEME7303060	3.0	6	4.5	60	100	2.85
SEME7304008	4.0	6	6	8	50	3.85
SEME7304010	4.0	6	6	10	50	3.85
SEME7304012	4.0	6	6	12	50	3.85
SEME7304014	4.0	6	6	14	60	3.85
SEME7304016	4.0	6	6	16	60	3.85
SEME7304018	4.0	6	6	18	60	3.85
SEME7304020	4.0	6	6	20	60	3.85
SEME7304022	4.0	6	6	22	65	3.85
SEME7304026	4.0	6	6	26	65	3.85
SEME7304030	4.0	6	6	30	70	3.85
SEME7304035	4.0	6	6	35	70	3.85
SEME7304040	4.0	6	6	40	80	3.85
SEME7304045	4.0	6	6	45	90	3.85
SEME7304050	4.0	6	6	50	100	3.85
SEME7304060	4.0	6	6	60	100	3.85
SEME7305016	5.0	6	8	16	60	4.85

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

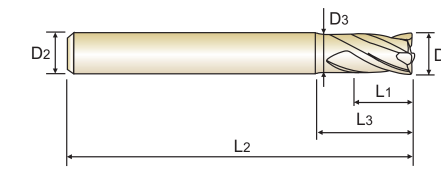
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME73** SERIES

CARBIDE, 4 FLUTE LONG NECK

- ▶ Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- ▶ Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- ▶ Available various length of cut and overall length products.



CARBIDE 4 30° PLAIN p.C374-C383

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
SEME7305020	5.0	6	8	20	60	4.85
SEME7305026	5.0	6	8	26	65	4.85
SEME7305030	5.0	6	8	30	70	4.85
SEME7305035	5.0	6	8	35	75	4.85
SEME7305040	5.0	6	8	40	80	4.85
SEME7305050	5.0	6	8	50	90	4.85
SEME7305060	5.0	6	8	60	100	4.85
SEME7306015	6.0	6	9	15	60	5.85
SEME7306020	6.0	6	9	20	60	5.85
SEME7306030	6.0	6	9	30	70	5.85
SEME7306032	6.0	6	9	32	90	5.85
SEME7308025	8.0	8	12	25	70	7.70
SEME7308030	8.0	8	12	30	80	7.70
SEME7308042	8.0	8	12	42	100	7.70
SEME7310030	10.0	10	15	30	75	9.70
SEME7310035	10.0	10	15	35	80	9.70
SEME7310045	10.0	10	15	45	100	9.70
SEME7312035	12.0	12	20	35	80	11.70
SEME7312040	12.0	12	20	40	90	11.70
SEME7312050	12.0	12	20	50	110	11.70

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

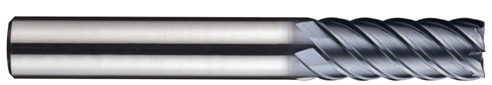
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

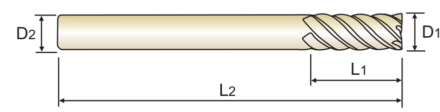
4G MILL END MILLS

PLAIN SHANK **SEME75** SERIES

CARBIDE, 6 FLUTE 45º HELIX (Regular, Long Shank)

- Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- Due to 45 helix angle, better surface roughness can be achieved at side cutting.
- Available various effective length and overall length products.





CARBIDE 6 45° PLAIN p.C384-C387

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEME75060	6.0	6	15	60	Regular
SEME7506020	6.0	6	20	70	Long
SEME7506030	6.0	6	30	80	Long
SEME7506030110	6.0	6	30	110	Long
SEME75080	8.0	8	20	70	Regular
SEME7508030	8.0	8	30	80	Long
SEME7508035	8.0	8	35	90	Long
SEME7508040	8.0	8	40	90	Long
SEME7508040130	8.0	8	40	130	Long
SEME75100	10.0	10	25	75	Regular
SEME7510030	10.0	10	30	80	Long
SEME7510040	10.0	10	40	90	Long
SEME7510050	10.0	10	50	100	Long
SEME7510050150	10.0	10	50	150	Long
SEME75120	12.0	12	30	80	Regular
SEME7512040	12.0	12	40	90	Long
SEME7512050	12.0	12	50	100	Long
SEME7512060	12.0	12	60	110	Long
SEME7512060150	12.0	12	60	150	Long
SEME75160	16.0	16	40	100	Regular
SEME7516050	16.0	16	50	110	Long
SEME7516060	16.0	16	60	120	Long
SEME7516090	16.0	16	90	150	Long
SEME75160110	16.0	16	110	200	Long
SEME75160110250	16.0	16	110	250	Long
SEME75200	20.0	20	45	100	Regular

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

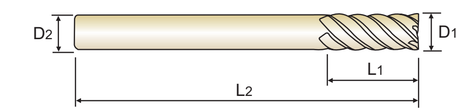
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

4G MILL END MILLS

PLAIN SHANK **SEME75** SERIES

CARBIDE, 6 FLUTE 45º HELIX (Regular, Long Shank)

- Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
- Excellent performance when cutting prehardened steels, up to HRc55 which are used for molds & dies.
- Due to 45 helix angle, better surface roughness can be achieved at side cutting.
- Available various effective length and overall length products.



CARBIDE 6 45° PLAIN p.C384-C387

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Remark
SEME7520060	20.0	20	60	120	Long
SEME7520070	20.0	20	70	130	Long
SEME75200110	20.0	20	110	200	Long
SEME75200110250	20.0	20	110	250	Long
SEME75200110300	20.0	20	110	300	Long

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

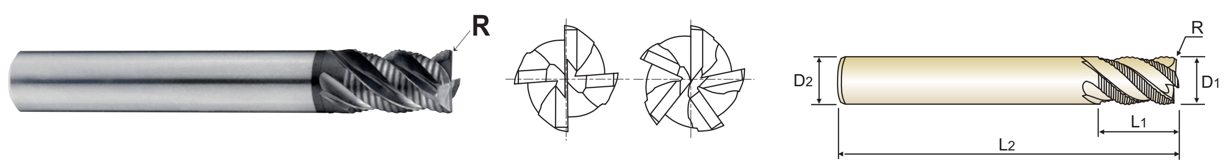
X-SPEED ROUGHER

PLAIN SHANK **G9D75** SERIES

FLAT SHANK **G9D67** SERIES

CARBIDE, 4&5 FLUTE MULTIPLE HELIX SHORT LENGTH ROUGHING CORNER RADIUS

- ▶ Unique flute design for excellent chip evacuation and vibration reduction.
- ▶ Optimal roughing tooth profile to reduce cutting forces.
- ▶ Special tool geometry for high feed rate and heavy cutting.
- ▶ Strong end tooth design for plunge and pocket milling.
- ▶ Custom engineered coating to allow long tool life and excellent chip evacuation.



CARBIDE | 4&5 | 44°/45° | PLAIN | FLAT

p.C388-C389

5 Flute, 44°/44.5°/45°

◇ Call for Availability

Unit : mm

EDP No.		Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
PLAIN	FLAT	R	D_1	D_2	L_1	L_2	
G9D75060	**G9D67060**	R0.5	**6.0**	6	9	57	4
G9D75080	**G9D67080**	R0.5	**8.0**	8	12	63	4
G9D75100	**G9D67100**	R0.5	**10.0**	10	15	72	4
G9D75120	**G9D67120**	R0.5	**12.0**	12	18	83	4
G9D75160	**G9D67160**	R1.0	**16.0**	16	24	92	5
G9D75200	**G9D67200**	R1.0	**20.0**	20	30	104	5

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.05	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○													

YG 4G MILL END MILLS

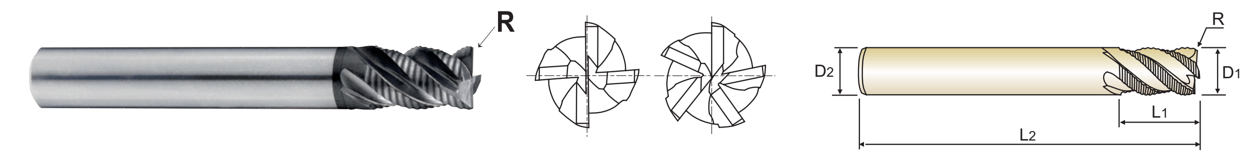
X-SPEED ROUGHER

PLAIN SHANK **G9D76** SERIES

FLAT SHANK **G9D68** SERIES

CARBIDE, 4&5 FLUTE MULTIPLE HELIX LONG LENGTH ROUGHING CORNER RADIUS

- ▶ Unique flute design for excellent chip evacuation and vibration reduction.
- ▶ Optimal roughing tooth profile to reduce cutting forces.
- ▶ Special tool geometry for high feed rate and heavy cutting.
- ▶ Strong end tooth design for plunge and pocket milling.
- ▶ Custom engineered coating to allow long tool life and excellent chip evacuation.



CARBIDE | 4&5 | 44°/45° | PLAIN | FLAT

p.C388-C389

5 Flute, 44°/44.5°/45°

◇ Call for Availability

Unit : mm

EDP No.		Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
PLAIN	FLAT	R	D_1	D_2	L_1	L_2	
G9D76060	**G9D68060**	R0.5	**6.0**	6	12	57	4
G9D76080	**G9D68080**	R0.5	**8.0**	8	16	63	4
G9D76100	**G9D68100**	R0.5	**10.0**	10	20	72	4
G9D76120	**G9D68120**	R0.5	**12.0**	12	24	83	4
G9D76160	**G9D68160**	R1.0	**16.0**	16	32	92	5
G9D76200	**G9D68200**	R1.0	**20.0**	20	40	104	5

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.05	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

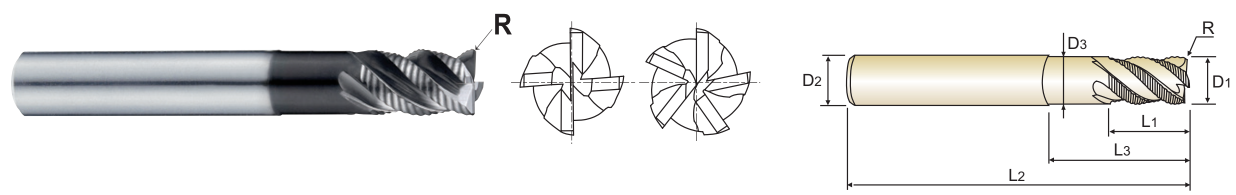
X-SPEED ROUGHER

PLAIN SHANK **G9D77** SERIES

FLAT SHANK **G9D69** SERIES

CARBIDE, 4&5 FLUTE MULTIPLE HELIX LONG REACH ROUGHING CORNER RADIUS

- ▶ Unique flute design for excellent chip evacuation and vibration reduction.
- ▶ Optimal roughing tooth profile to reduce cutting forces.
- ▶ Special tool geometry for high feed rate and heavy cutting.
- ▶ Strong end tooth design for plunge and pocket milling.
- ▶ Custom engineered coating to allow long tool life and excellent chip evacuation.



CARBIDE 4&5 44°/45° PLAIN FLAT

5 Flute, 44°/44.5°/45°

p.C388-C389

◇ Call for Availability

Unit : mm

EDP No.		Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter	No. of Flute
PLAIN	FLAT	R	D_1	D_2	L_1	L_3	L_2	D_3	
G9D77060	G9D69060	R0.5	**6.0**	6	9	18	57	5.50	4
G9D77080	G9D69080	R0.5	**8.0**	8	12	24	63	7.50	4
G9D77100	G9D69100	R0.5	**10.0**	10	15	30	72	9.50	4
G9D77120	G9D69120	R0.5	**12.0**	12	18	36	83	11.50	4
G9D77160	G9D69160	R1.0	**16.0**	16	24	48	100	15.50	5
G9D77200	G9D69200	R1.0	**20.0**	20	30	60	110	19.20	5

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.05	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○													

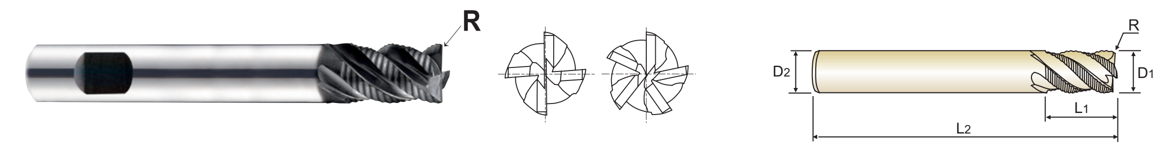
YG 4G MILL END MILLS

X-SPEED ROUGHER

FLAT SHANK **GAE53** SERIES

HSS-PM, 4&5 FLUTE MULTIPLE HELIX SHORT LENGTH ROUGHING CORNER RADIUS

- ▶ Unique flute design for excellent chip evacuation and vibration reduction.
- ▶ Optimal roughing tooth profile to reduce cutting forces.
- ▶ Special tool geometry for high feed rate and heavy cutting.
- ▶ Strong end tooth design for plunge and pocket milling.
- ▶ Custom engineered coating to allow long tool life and excellent chip evacuation.



CARBIDE 4&5 44°/45° FLAT

5 Flute, 44°/44.5°/45°

p.C388-C389

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Overall Length	No. of Flute
FLAT	R	D_1(js12)		D_2(h5)	L_1	L_2	
GAE53060	R0.5	**6.0**	.2362	6	13	57	4
GAE53070	R0.5	**7.0**	.2756	10	16	66	4
GAE53080	R0.5	**8.0**	.3150	10	19	69	4
GAE53090	R0.5	**9.0**	.3543	10	19	69	4
GAE53100	R0.5	**10.0**	.3937	10	22	72	4
GAE53120	R0.5	**12.0**	.4724	12	26	83	4
GAE53140	R1.0	**14.0**	.5512	16	26	83	5
GAE53160	R1.0	**16.0**	.6299	16	32	92	5
GAE53180	R1.0	**18.0**	.7087	20	32	92	5
GAE53200	R1.0	**20.0**	.7874	20	38	104	5

Tolerances according to DIN 7160 & 7161

	Tolerance range in μm					
	Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
js12	± 50	± 60	± 75	± 90	± 105	± 125
h5	0 - 6	0 - 8	0 - 9	0 - 11	0 - 13	0 - 16

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	○	○	◎	○	○	○	○			◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

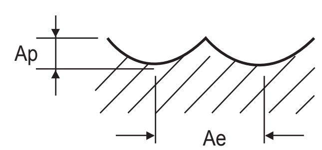
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF15 SERIES 2FLUTE BALL NOSE - PLANE

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	.004	.008	.012	.015	.020	.024	.028	.031	.035	3/64	1/16	5/64
						Diameter (Ø)											
P	1-8	Non-alloy steel Low alloy steel	0.08D	0.05D	SFM(Vc)	40	60	95	115	155	185	215	245	280	370	465	615
					IPT(fz)	.0003	.0005	.0006	.0007	.0009	.0011	.0013	.0015	.0017	.0020	.0021	.0023
					RPM	39400	29530	29530	29490	29530	29530	29530	30480	30370	30240	28350	30050
					IPM(FEED)	21	28	35	44	56	68	79	94	104	122	121	136
	9	Low alloy steel	0.08D	0.05D	SFM(Vc)	40	60	95	125	155	185	215	245	280	355	445	590
					IPT(fz)	.0002	.0004	.0005	.0007	.0008	.0010	.0011	.0013	.0015	.0018	.0018	.0020
					RPM	39370	29530	29530	31500	29530	29530	29530	30480	30370	29030	27210	28910
					IPM(FEED)	19	24	31	42	49	58	68	79	90	102	100	114
	10-11.1	High alloyed steel, and tool steel	0.08D	0.05D	SFM(Vc)	40	60	95	115	155	185	215	245	280	370	465	615
					IPT(fz)	.0003	.0005	.0006	.0007	.0009	.0011	.0013	.0015	.0017	.0020	.0021	.0023
					RPM	39400	29530	29530	29490	29530	29530	29530	30480	30370	30240	28350	30050
					IPM(FEED)	21	28	35	44	56	68	79	94	104	122	121	136
	11.2		0.08D	0.05D	SFM(Vc)	40	60	95	125	155	185	215	245	280	355	445	590
					IPT(fz)	.0002	.0004	.0005	.0007	.0008	.0010	.0011	.0013	.0015	.0018	.0018	.0020
					RPM	39370	29530	29530	31500	29530	29530	29530	30480	30370	29030	27210	28910
					IPM(FEED)	19	24	31	42	49	58	68	79	90	102	100	114
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.08D	0.05D	SFM(Vc)	40	60	95	115	155	185	215	245	280	370	465	615
					IPT(fz)	.0003	.0005	.0006	.0007	.0009	.0011	.0013	.0015	.0017	.0020	.0021	.0023
					RPM	39400	29530	29530	29490	29530	29530	29530	30480	30370	30240	28350	30050
					IPM(FEED)	21	28	35	44	56	68	79	94	104	122	121	136
H	38.1-38.2	Hardened steel	0.08D	0.05D	SFM(Vc)	35	55	85	110	140	165	195	225	250	320	400	495
					IPT(fz)	.0002	.0004	.0005	.0007	.0008	.0010	.0011	.0013	.0015	.0018	.0018	.0020
					RPM	32480	26570	26570	28350	26570	26570	26570	27430	27330	26000	24380	24190
					IPM(FEED)	16	22	28	37	44	51	60	72	81	92	89	95
	40	Chilled Cast Iron	0.08D	0.05D	SFM(Vc)	40	60	95	125	155	185	215	245	280	355	445	590
					IPT(fz)	.0002	.0004	.0005	.0007	.0008	.0010	.0011	.0013	.0015	.0018	.0018	.0020
					RPM	39370	29530	29530	31500	29530	29530	29530	30480	30370	29030	27210	28910
					IPM(FEED)	19	24	31	42	49	58	68	79	90	102	100	114
	41	Hardened Cast Iron	0.08D	0.05D	SFM(Vc)	35	55	85	110	140	165	195	225	250	320	400	495
					IPT(fz)	.0002	.0004	.0005	.0007	.0008	.0010	.0011	.0013	.0015	.0018	.0018	.0020
					RPM	32480	26570	26570	28350	26570	26570	26570	27430	27330	26000	24380	24190
					IPM(FEED)	16	22	28	37	44	51	60	72	81	92	89	95

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

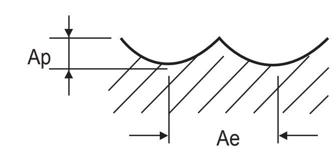
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF15 SERIES 2FLUTE BALL NOSE - PLANE

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/32	1/8	3/16	13/64	1/4	9/32	5/16	3/8	1/2	9/16	5/8	3/4
						Diameter (Ø)											
P	1-8	Non-alloy steel Low alloy steel	0.08D	0.05D	SFM(Vc)	615	615	605	575	515	520	550	575	515	540	550	550
					IPT(fz)	.0029	.0036	.0053	.0061	.0069	.0072	.0075	.0078	.0084	.0088	.0094	.0104
					RPM	24990	18770	12310	10820	7880	7070	6710	5860	3940	3670	3370	2800
					IPM(FEED)	145	134	132	133	108	102	100	92	66	65	63	58
	9	Low alloy steel	0.08D	0.05D	SFM(Vc)	590	590	580	550	495	500	530	550	495	520	530	530
					IPT(fz)	.0026	.0033	.0048	.0054	.0060	.0063	.0064	.0069	.0074	.0082	.0081	.0089
					RPM	24040	18030	11820	10350	7600	6820	6470	5610	3780	3530	3240	2710
					IPM(FEED)	125	118	114	112	92	86	83	77	56	58	52	48
	10-11.1	High alloyed steel, and tool steel	0.08D	0.05D	SFM(Vc)	615	615	605	575	515	520	550	575	515	540	550	550
					IPT(fz)	.0029	.0036	.0053	.0061	.0069	.0072	.0075	.0078	.0084	.0088	.0094	.0104
					RPM	24990	18770	12310	10820	7880	7070	6710	5860	3940	3670	3370	2800
					IPM(FEED)	145	134	132	133	108	102	100	92	66	65	63	58
	11.2		0.08D	0.05D	SFM(Vc)	590	590	580	550	495	500	530	550	495	520	530	530
					IPT(fz)	.0026	.0033	.0048	.0054	.0060	.0063	.0064	.0069	.0074	.0082	.0081	.0089
					RPM	24040	18030	11820	10350	7600	6820	6470	5610	3780	3530	3240	2710
					IPM(FEED)	125	118	114	112	92	86	83	77	56	58	52	48
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.08D	0.05D	SFM(Vc)	615	615	605	575	515	520	550	575	515	540	550	550
					IPT(fz)	.0029	.0036	.0053	.0061	.0069	.0072	.0075	.0078	.0084	.0088	.0094	.0104
					RPM	24990	18770	12310	10820	7880	7070	6710	5860	3940	3670	3370	2800
					IPM(FEED)	145	134	132	133	108	102	100	92	66	65	63	58
H	38.1-38.2	Hardened steel	0.08D	0.05D	SFM(Vc)	495	495	485	465	410	420	445	465	415	435	445	445
					IPT(fz)	.0025	.0030	.0044	.0049	.0055	.0058	.0059	.0063	.0067	.0070	.0075	.0082
					RPM	20160	15120	9920	8720	6240	5680	5440	4720	3170	2970	2720	2270
					IPM(FEED)	99	89	86	86	69	66	64	60	42	42	41	37
	40	Chilled Cast Iron	0.08D	0.05D	SFM(Vc)	590	590	580	550	495	500	530	550	495	520	530	530
					IPT(fz)	.0026	.0033	.0048	.0054	.0060	.0063	.0064	.0069	.0074	.0082	.0081	.0089
					RPM	24040	18030	11820	10350	7600	6820	6470	5610	3780	3530	3240	2710
					IPM(FEED)	125	118	114	112	92	86	83	77	56	58	52	48
	41	Hardened Cast Iron	0.08D	0.05D	SFM(Vc)	495	495	485	465	410	420	445	465	415	435	445	445
					IPT(fz)	.0025	.0030	.0044	.0049	.0055	.0058	.0059	.0063	.0067	.0070	.0075	.0082
					RPM	20160	15120	9920	8720	6240	5680	5440	4720	3170	2970	2720	2270
					IPM(FEED)	99	89	86	86	69	66	64	60	42	42	41	37

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

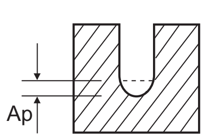
GMF16 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	.008	.008	.012	.012	.012	.015	.015	.015	.015	.020	.020	.020	.020	.020	.020
			LBS	1/64	3/64	3/64	5/64	1/8	3/64	5/64	1/8	5/32	3/64	5/64	1/8	5/32	3/16	1/4
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	105	95	155	140	125	170	150	150	135	175	175	160	160	160	140
			IPT(fz)	.0001	.0001	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0003
			RPM	49210	44290	49210	44290	39370	43040	38740	38740	34440	33660	33660	30300	30300	30300	26930
			IPM(FEED)	13	10	19	15	12	20	16	16	13	27	27	22	22	22	17
			Ap	.0007	.0003	.0007	.0004	.0003	.0009	.0006	.0004	.0004	.0018	.0013	.0007	.0007	.0004	.0004
	9	Low alloy steel	SFM(Vc)	105	95	155	140	125	160	145	145	130	165	165	150	150	150	135
			IPT(fz)	.0001	.0001	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	49210	44290	49210	44290	39370	40730	36660	36660	32590	31790	31790	28610	28610	28610	25430
			IPM(FEED)	12	10	17	14	11	18	14	14	11	22	22	18	18	18	14
			Ap	.0006	.0002	.0006	.0004	.0002	.0008	.0004	.0003	.0003	.0015	.0011	.0006	.0006	.0004	.0004
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	105	95	155	140	125	170	150	150	135	175	175	160	160	160	140
			IPT(fz)	.0001	.0001	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0003
			RPM	49210	44290	49210	44290	39370	43040	38740	38740	34440	33660	33660	30300	30300	30300	26930
			IPM(FEED)	13	10	19	15	12	20	16	16	13	27	27	22	22	22	17
			Ap	.0007	.0003	.0007	.0004	.0003	.0009	.0006	.0004	.0004	.0018	.0013	.0007	.0007	.0004	.0004
	11.2		SFM(Vc)	105	95	155	140	125	160	145	145	130	165	165	150	150	150	135
			IPT(fz)	.0001	.0001	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	49210	44290	49210	44290	39370	40730	36660	36660	32590	31790	31790	28610	28610	28610	25430
			IPM(FEED)	12	10	17	14	11	18	14	14	11	22	22	18	18	18	14
			Ap	.0006	.0002	.0006	.0004	.0002	.0008	.0004	.0003	.0003	.0015	.0011	.0006	.0006	.0004	.0004
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	105	95	155	140	125	170	150	150	135	175	175	160	160	160	140
			IPT(fz)	.0001	.0001	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0003
			RPM	49210	44290	49210	44290	39370	43040	38740	38740	34440	33660	33660	30300	30300	30300	26930
			IPM(FEED)	13	10	19	15	12	20	16	16	13	27	27	22	22	22	17
			Ap	.0007	.0003	.0007	.0004	.0003	.0009	.0006	.0004	.0004	.0018	.0013	.0007	.0007	.0004	.0004
H	38.1-38.2	Hardened steel	SFM(Vc)	90	80	130	120	105	140	125	125	115	145	145	130	130	130	115
			IPT(fz)	.0001	.0001	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	42520	38270	42130	37910	33700	35910	32310	32310	28720	28050	28050	25250	25250	25250	22440
			IPM(FEED)	10	8	14	11	9	14	11	11	9	20	20	16	16	16	13
			Ap	.0004	.0002	.0004	.0002	.0002	.0005	.0003	.0002	.0002	.0010	.0007	.0004	.0004	.0002	.0002
	40	Chilled Cast Iron	SFM(Vc)	105	95	155	140	125	160	145	145	130	165	165	150	150	150	135
			IPT(fz)	.0001	.0001	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	49210	44290	49210	44290	39370	40730	36660	36660	32590	31790	31790	28610	28610	28610	25430
			IPM(FEED)	12	10	17	14	11	18	14	14	11	22	22	18	18	18	14
			Ap	.0006	.0002	.0006	.0004	.0002	.0008	.0004	.0003	.0003	.0015	.0011	.0006	.0006	.0004	.0004
	41	Hardened Cast Iron	SFM(Vc)	90	80	130	120	105	140	125	125	115	145	145	130	130	130	115
			IPT(fz)	.0001	.0001	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	42520	38270	42130	37910	33700	35910	32310	32310	28720	28050	28050	25250	25250	25250	22440
			IPM(FEED)	10	8	14	11	9	14	11	11	9	20	20	16	16	16	13
			Ap	.0004	.0002	.0004	.0002	.0002	.0005	.0003	.0002	.0002	.0010	.0007	.0004	.0004	.0002	.0002

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF16 SERIES 2FLUTE BALL NOSE - SLOTTING

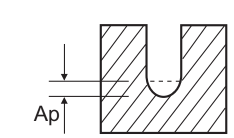
DIA. = Diameter
LBS = Length Below Shank
RPM = rev./min.
FEED = inch/min.

ISO	VDI 3323	Material Description	Parameter	.020	.020	.024	.024	.024	.024	.024	.024	.024	.024	1/32	1/32	1/32	1/32	1/32
			LBS	5/16	3/8	5/64	1/8	5/32	3/16	1/4	5/16	3/8	1/2	5/64	1/8	5/32	3/16	1/4
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	105	105	210	190	190	190	170	170	125	65	280	280	280	255	255
			IPT(fz)	.0003	.0003	.0006	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0007	.0007	.0007	.0006	.0006
			RPM	20200	20200	33660	30300	30300	30300	26930	26930	20200	10100	34470	34470	34470	31020	31020
			IPM(FEED)	11	11	40	32	32	32	25	25	17	7	49	49	49	40	40
			Ap	.0003	.0002	.0015	.0009	.0009	.0009	.0006	.0003	.0003	.0002	.0028	.0020	.0020	.0011	.0011
	9	Low alloy steel	SFM(Vc)	100	100	200	180	180	180	160	160	120	60	265	265	265	240	240
			IPT(fz)	.0002	.0002	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0003	.0006	.0006	.0006	.0006	.0006
			RPM	19070	19070	31790	28610	28610	28610	25430	25430	19070	9540	32550	32550	32550	29300	29300
			IPM(FEED)	10	10	33	26	26	26	21	21	14	6	41	41	41	33	33
			Ap	.0002	.0002	.0013	.0007	.0007	.0007	.0004	.0003	.0003	.0002	.0024	.0017	.0017	.0009	.0009
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	105	105	210	190	190	190	170	170	125	65	280	280	280	255	255
			IPT(fz)	.0003	.0003	.0006	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0007	.0007	.0007	.0006	.0006
			RPM	20200	20200	33660	30300	30300	30300	26930	26930	20200	10100	34470	34470	34470	31020	31020
			IPM(FEED)	11	11	40	32	32	32	25	25	17	7	49	49	49	40	40
			Ap	.0003	.0002	.0015	.0009	.0009	.0009	.0006	.0003	.0003	.0002	.0028	.0020	.0020	.0011	.0011
	11.2		SFM(Vc)	100	100	200	180	180	180	160	160	120	60	265	265	265	240	240
			IPT(fz)	.0002	.0002	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0003	.0006	.0006	.0006	.0006	.0006
			RPM	19070	19070	31790	28610	28610	28610	25430	25430	19070	9540	32550	32550	32550	29300	29300
			IPM(FEED)	10	10	33	26	26	26	21	21	14	6	41	41	41	33	33
			Ap	.0002	.0002	.0013	.0007	.0007	.0007	.0004	.0003	.0003	.0002	.0024	.0017	.0017	.0009	.0009
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	105	105	210	190	190	190	170	170	125	65	280	280	280	255	255
			IPT(fz)	.0003	.0003	.0006	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0007	.0007	.0007	.0006	.0006
			RPM	20200	20200	33660	30300	30300	30300	26930	26930	20200	10100	34470	34470	34470	31020	31020
			IPM(FEED)	11	11	40	32	32	32	25	25	17	7	49	49	49	40	40
			Ap	.0003	.0002	.0015	.0009	.0009	.0009	.0006	.0003	.0003	.0002	.0028	.0020	.0020	.0011	.0011
H	38.1-38.2	Hardened steel	SFM(Vc)	90	90	175	160	160	160	140	140	105	55	235	235	235	210	210
			IPT(fz)	.0003	.0003	.0005	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0006	.0006	.0006	.0005	.0005
			RPM	16830	16830	28050	25250	25250	25250	22440	22440	16830	8420	28720	28720	28720	25850	25850
			IPM(FEED)	9	9	27	22	22	22	17	17	11	5	34	34	34	28	28
			Ap	.0002	.0000	.0008	.0005	.0005	.0005	.0003	.0002	.0002	.0001	.0016	.0011	.0011	.0006	.0006
	40	Chilled Cast Iron	SFM(Vc)	100	100	200	180	180	180	160	160	120	60	265	265	265	240	240
			IPT(fz)	.0002	.0002	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0003	.0006	.0006	.0006	.0006	.0006
			RPM	19070	19070	31790	28610	28610	28610	25430	25430	19070	9540	32550	32550	32550	29300	29300
			IPM(FEED)	10	10	33	26	26	26	21	21	14	6	41	41	41	33	33
			Ap	.0002	.0002	.0013	.0007	.0007	.0007	.0004	.0003	.0003	.0002	.0024	.0017	.0017	.0009	.0009
	41	Hardened Cast Iron	SFM(Vc)	90	90	175	160	160	160	140	140	105	55	235	235	235	210	210
			IPT(fz)	.0003	.0003	.0005	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0006	.0006	.0006	.0005	.0005
			RPM	16830	16830	28050	25250	25250	25250	22440	22440	16830	8420	28720	28720	28720	25850	25850
			IPM(FEED)	9	9	27	22	22	22	17	17	11	5	34	34	34	28	28
			Ap	.0002	.0000	.0008	.0005	.0005	.0005	.0003	.0002	.0002	.0001	.0016	.0011	.0011	.0006	.0006

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



4G MILL END MILLS

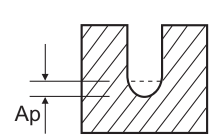
RECOMMENDED CUTTING CONDITIONS

GMF16 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)														
				1/32	1/32	3/64	3/64	3/64	3/64	3/64	3/64	3/64	3/64	3/64	3/64	1/16	1/16	1/16
			LBS	5/16	3/8	1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	3/4	5/32	1/4	5/16
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	255	225	325	325	325	295	295	295	260	260	260	195	370	370	370
			IPT(fz)	.0006	.0006	.0010	.0010	.0010	.0009	.0009	.0009	.0008	.0008	.0008	.0007	.0013	.0013	.0013
			RPM	31020	27580	26510	26510	26510	23860	23860	23860	21210	21210	21210	15900	22580	22580	22580
			IPM(FEED)	40	31	55	55	55	44	44	44	35	35	35	23	59	59	59
			Ap	.0007	.0007	.0042	.0030	.0030	.0017	.0017	.0017	.0011	.0011	.0006	.0006	.0056	.0039	.0039
	9	Low alloy steel	SFM(Vc)	240	215	305	305	305	275	275	275	245	245	245	185	350	350	350
			IPT(fz)	.0006	.0005	.0009	.0009	.0009	.0008	.0008	.0008	.0007	.0007	.0007	.0006	.0012	.0012	.0012
			RPM	29300	26040	25000	25000	25000	22500	22500	22500	20000	20000	20000	15000	21350	21350	21350
			IPM(FEED)	33	26	46	46	46	37	37	37	29	29	29	19	50	50	50
			Ap	.0006	.0006	.0035	.0025	.0025	.0014	.0014	.0014	.0009	.0009	.0005	.0005	.0047	.0033	.0033
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	255	225	325	325	325	295	295	295	260	260	260	195	370	370	370
			IPT(fz)	.0006	.0006	.0010	.0010	.0010	.0009	.0009	.0009	.0008	.0008	.0008	.0007	.0013	.0013	.0013
			RPM	31020	27580	26510	26510	26510	23860	23860	23860	21210	21210	21210	15900	22580	22580	22580
			IPM(FEED)	40	31	55	55	55	44	44	44	35	35	35	23	59	59	59
			Ap	.0007	.0007	.0042	.0030	.0030	.0017	.0017	.0017	.0011	.0011	.0006	.0006	.0056	.0039	.0039
	11.2		SFM(Vc)	240	215	305	305	305	275	275	275	245	245	245	185	350	350	350
			IPT(fz)	.0006	.0005	.0009	.0009	.0009	.0008	.0008	.0008	.0007	.0007	.0007	.0006	.0012	.0012	.0012
			RPM	29300	26040	25000	25000	25000	22500	22500	22500	20000	20000	20000	15000	21350	21350	21350
			IPM(FEED)	33	26	46	46	46	37	37	37	29	29	29	19	50	50	50
			Ap	.0006	.0006	.0035	.0025	.0025	.0014	.0014	.0014	.0009	.0009	.0005	.0005	.0047	.0033	.0033
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	255	225	325	325	325	295	295	295	260	260	260	195	370	370	370
			IPT(fz)	.0006	.0006	.0010	.0010	.0010	.0009	.0009	.0009	.0008	.0008	.0008	.0007	.0013	.0013	.0013
			RPM	31020	27580	26510	26510	26510	23860	23860	23860	21210	21210	21210	15900	22580	22580	22580
			IPM(FEED)	40	31	55	55	55	44	44	44	35	35	35	23	59	59	59
			Ap	.0007	.0007	.0042	.0030	.0030	.0017	.0017	.0017	.0011	.0011	.0006	.0006	.0056	.0039	.0039
H	38.1-38.2	Hardened steel	SFM(Vc)	210	190	270	270	270	245	245	245	215	215	215	160	310	310	310
			IPT(fz)	.0005	.0005	.0009	.0009	.0009	.0008	.0008	.0008	.0007	.0007	.0007	.0006	.0011	.0011	.0011
			RPM	25850	22980	22070	22070	22070	19870	19870	19870	17660	17660	17660	13240	18900	18900	18900
			IPM(FEED)	28	22	38	38	38	31	31	31	24	24	24	16	40	40	40
			Ap	.0004	.0004	.0024	.0017	.0017	.0009	.0009	.0009	.0006	.0006	.0004	.0004	.0031	.0022	.0022
	40	Chilled Cast Iron	SFM(Vc)	240	215	305	305	305	275	275	275	245	245	245	185	350	350	350
			IPT(fz)	.0006	.0005	.0009	.0009	.0009	.0008	.0008	.0008	.0007	.0007	.0007	.0006	.0012	.0012	.0012
			RPM	29300	26040	25000	25000	25000	22500	22500	22500	20000	20000	20000	15000	21350	21350	21350
			IPM(FEED)	33	26	46	46	46	37	37	37	29	29	29	19	50	50	50
			Ap	.0006	.0006	.0035	.0025	.0025	.0014	.0014	.0014	.0009	.0009	.0005	.0005	.0047	.0033	.0033
	41	Hardened Cast Iron	SFM(Vc)	210	190	270	270	270	245	245	245	215	215	215	160	310	310	310
			IPT(fz)	.0005	.0005	.0009	.0009	.0009	.0008	.0008	.0008	.0007	.0007	.0007	.0006	.0011	.0011	.0011
			RPM	25850	22980	22070	22070	22070	19870	19870	19870	17660	17660	17660	13240	18900	18900	18900
			IPM(FEED)	28	22	38	38	38	31	31	31	24	24	24	16	40	40	40
			Ap	.0004	.0004	.0024	.0017	.0017	.0009	.0009	.0009	.0006	.0006	.0004	.0004	.0031	.0022	.0022

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

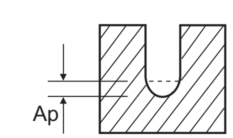
RECOMMENDED CUTTING CONDITIONS

GMF16 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)														
				1/16	1/16	1/16	1/16	1/16	5/64	5/64	5/64	5/64	5/64	5/64	5/64	5/64	5/64	5/64
			LBS	3/8	1/2	9/16	5/8	3/4	1/4	5/16	3/8	1/2	9/16	5/8	11/16	3/4	1	1-3/16
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	330	330	330	330	295	370	370	370	335	335	335	335	335	295	225
			IPT(fz)	.0012	.0012	.0012	.0012	.0010	.0020	.0020	.0020	.0018	.0018	.0018	.0018	.0018	.0016	.0014
			RPM	20320	20320	20320	20320	18070	18140	18140	18140	16330	16330	16330	16330	16330	14510	10890
			IPM(FEED)	48	48	48	48	38	71	71	71	58	58	58	58	58	46	30
			Ap	.0022	.0022	.0014	.0014	.0014	.0049	.0049	.0049	.0028	.0028	.0028	.0018	.0018	.0018	.0011
	9	Low alloy steel	SFM(Vc)	315	315	315	315	280	350	350	350	315	315	315	315	315	280	210
			IPT(fz)	.0011	.0011	.0011	.0011	.0009	.0018	.0018	.0018	.0016	.0016	.0016	.0016	.0016	.0014	.0012
			RPM	19220	19220	19220	19220	17080	17130	17130	17130	15420	15420	15420	15420	15420	13710	10280
			IPM(FEED)	41	41	41	41	32	60	60	60	49	49	49	49	49	39	25
			Ap	.0019	.0019	.0012	.0012	.0012	.0041	.0041	.0041	.0024	.0024	.0024	.0015	.0015	.0015	.0009
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	330	330	330	330	295	370	370	370	335	335	335	335	335	295	225
			IPT(fz)	.0012	.0012	.0012	.0012	.0010	.0020	.0020	.0020	.0018	.0018	.0018	.0018	.0018	.0016	.0014
			RPM	20320	20320	20320	20320	18070	18140	18140	18140	16330	16330	16330	16330	16330	14510	10890
			IPM(FEED)	48	48	48	48	38	71	71	71	58	58	58	58	58	46	30
			Ap	.0022	.0022	.0014	.0014	.0014	.0049	.0049	.0049	.0028	.0028	.0028	.0018	.0018	.0018	.0011
	11.2		SFM(Vc)	315	315	315	315	280	350	350	350	315	315	315	315	315	280	210
			IPT(fz)	.0011	.0011	.0011	.0011	.0009	.0018	.0018	.0018	.0016	.0016	.0016	.0016	.0016	.0014	.0012
			RPM	19220	19220	19220	19220	17080	17130	17130	17130	15420	15420	15420	15420	15420	13710	10280
			IPM(FEED)	41	41	41	41	32	60	60	60	49	49	49	49	49	39	25
			Ap	.0019	.0019	.0012	.0012	.0012	.0041	.0041	.0041	.0024	.0024	.0024	.0015	.0015	.0015	.0009
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	330	330	330	330	295	370	370	370	335	335	335	335	335	295	225
			IPT(fz)	.0012	.0012	.0012	.0012	.0010	.0020	.0020	.0020	.0018	.0018	.0018	.0018	.0018	.0016	.0014
			RPM	20320	20320	20320	20320	18070	18140	18140	18140	16330	16330	16330	16330	16330	14510	10890
			IPM(FEED)	48	48	48	48	38	71	71	71	58	58	58	58	58	46	30
			Ap	.0022	.0022	.0014	.0014	.0014	.0049	.0049	.0049	.0028	.0028	.0028	.0018	.0018	.0018	.0011
H	38.1-38.2	Hardened steel	SFM(Vc)	280	280	280	280	245	310	310	310	280	280	280	280	280	245	185
			IPT(fz)	.0010	.0010	.0010	.0010	.0008	.0017	.0017	.0017	.0015	.0015	.0015	.0015	.0015	.0014	.0012
			RPM	17010	17010	17010	17010	15120	15120	15120	15120	13610	13610	13610	13610	13610	12090	9070
			IPM(FEED)	33	33	33	33	26	51	51	51	41	41	41	41	41	33	22
			Ap	.0013	.0013	.0008	.0008	.0008	.0027	.0027	.0027	.0016	.0016	.0016	.0010	.0010	.0010	.0006
	40	Chilled Cast Iron	SFM(Vc)	315	315	315	315	280	350	350	350	315	315	315	315	315	280	210
			IPT(fz)	.0011	.0011	.0011	.0011	.0009	.0018	.0018	.0018	.0016	.0016	.0016	.0016	.0016	.0014	.0012
			RPM	19220	19220	19220	19220	17080	17130	17130	17130	15420	15420	15420	15420	15420	13710	10280
			IPM(FEED)	41	41	41	41	32	60	60	60	49	49	49	49	49	39	25
			Ap	.0019	.0019	.0012	.0012	.0012	.0041	.0041	.0041	.0024	.0024	.0024	.0015	.0015	.0015	.0009
	41	Hardened Cast Iron	SFM(Vc)	280	280	280	280	245	310	310	310	280	280	280	280	280	245	185
			IPT(fz)	.0010	.0010	.0010	.0010	.0008	.0017	.0017	.0017	.0015	.0015	.0015	.0015	.0015	.0014	.0012
			RPM	17010	17010	17010	17010	15120	15120	15120	15120	13610	13610	13610	13610	13610	12090	9070
			IPM(FEED)	33	33	33	33	26	51	51	51	41	41	41	41	41	33	22
			Ap	.0013	.0013	.0008	.0008	.0008	.0027	.0027	.0027	.0016	.0016	.0016	.0010	.0010	.0010	.0006

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



4G MILL END MILLS

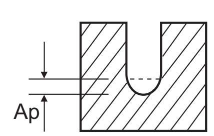
RECOMMENDED CUTTING CONDITIONS

GMF16 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)															
				3/32	3/32	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	3/16	3/16	3/16	3/16
			LBS	3/8	3/4	5/16	3/8	1/2	9/16	5/8	11/16	3/4	1	1-3/16	1-3/8	3/8	1/2	9/16	5/8
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	405	365	425	425	425	425	425	380	380	380	380	340	405	405	405	405
			IPT(fz)	.0024	.0022	.0029	.0029	.0029	.0029	.0029	.0027	.0027	.0027	.0027	.0024	.0039	.0039	.0039	.0039
			RPM	16590	14930	12940	12940	12940	12940	12940	11650	11650	11650	11650	10360	8230	8230	8230	8230
			IPM(FEED)	80	64	76	76	76	76	76	62	62	62	62	49	65	65	65	65
			Ap	.0059	.0034	.0113	.0113	.0079	.0079	.0079	.0045	.0045	.0045	.0028	.0028	.0169	.0169	.0169	.0118
	9	Low alloy steel	SFM(Vc)	385	345	400	400	400	400	400	360	360	360	360	320	385	385	385	385
			IPT(fz)	.0021	.0019	.0026	.0026	.0026	.0026	.0026	.0024	.0024	.0024	.0024	.0021	.0035	.0035	.0035	.0035
			RPM	15640	14080	12190	12190	12190	12190	12190	10970	10970	10970	10970	9750	7810	7810	7810	7810
			IPM(FEED)	66	54	64	64	64	64	64	52	52	52	52	41	55	55	55	55
			Ap	.0049	.0028	.0094	.0094	.0066	.0066	.0066	.0037	.0037	.0037	.0024	.0024	.0141	.0141	.0141	.0098
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	405	365	425	425	425	425	425	380	380	380	380	340	405	405	405	405
			IPT(fz)	.0024	.0022	.0029	.0029	.0029	.0029	.0029	.0027	.0027	.0027	.0027	.0024	.0039	.0039	.0039	.0039
			RPM	16590	14930	12940	12940	12940	12940	12940	11650	11650	11650	11650	10360	8230	8230	8230	8230
			IPM(FEED)	80	64	76	76	76	76	76	62	62	62	62	49	65	65	65	65
			Ap	.0059	.0034	.0113	.0113	.0079	.0079	.0079	.0045	.0045	.0045	.0028	.0028	.0169	.0169	.0169	.0118
	11.2		SFM(Vc)	385	345	400	400	400	400	400	360	360	360	360	320	385	385	385	385
			IPT(fz)	.0021	.0019	.0026	.0026	.0026	.0026	.0026	.0024	.0024	.0024	.0024	.0021	.0035	.0035	.0035	.0035
			RPM	15640	14080	12190	12190	12190	12190	12190	10970	10970	10970	10970	9750	7810	7810	7810	7810
			IPM(FEED)	66	54	64	64	64	64	64	52	52	52	52	41	55	55	55	55
			Ap	.0049	.0028	.0094	.0094	.0066	.0066	.0066	.0037	.0037	.0037	.0024	.0024	.0141	.0141	.0141	.0098
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	405	365	425	425	425	425	425	380	380	380	380	340	405	405	405	405
			IPT(fz)	.0024	.0022	.0029	.0029	.0029	.0029	.0029	.0027	.0027	.0027	.0027	.0024	.0039	.0039	.0039	.0039
			RPM	16590	14930	12940	12940	12940	12940	12940	11650	11650	11650	11650	10360	8230	8230	8230	8230
			IPM(FEED)	80	64	76	76	76	76	76	62	62	62	62	49	65	65	65	65
			Ap	.0059	.0034	.0113	.0113	.0079	.0079	.0079	.0045	.0045	.0045	.0028	.0028	.0169	.0169	.0169	.0118
H	38.1-38.2	Hardened steel	SFM(Vc)	340	305	350	350	350	350	350	315	315	315	315	280	340	340	340	340
			IPT(fz)	.0019	.0018	.0025	.0025	.0025	.0025	.0025	.0022	.0022	.0022	.0022	.0020	.0033	.0033	.0033	.0033
			RPM	13860	12470	10770	10770	10770	10770	10770	9690	9690	9690	9690	8620	6890	6890	6890	6890
			IPM(FEED)	54	44	53	53	53	53	53	43	43	43	43	34	46	46	46	46
			Ap	.0033	.0019	.0063	.0063	.0044	.0044	.0044	.0025	.0025	.0025	.0016	.0016	.0094	.0094	.0094	.0066
	40	Chilled Cast Iron	SFM(Vc)	385	345	400	400	400	400	400	360	360	360	360	320	385	385	385	385
			IPT(fz)	.0021	.0019	.0026	.0026	.0026	.0026	.0026	.0024	.0024	.0024	.0024	.0021	.0035	.0035	.0035	.0035
			RPM	15640	14080	12190	12190	12190	12190	12190	10970	10970	10970	10970	9750	7810	7810	7810	7810
			IPM(FEED)	66	54	64	64	64	64	64	52	52	52	52	41	55	55	55	55
			Ap	.0049	.0028	.0094	.0094	.0066	.0066	.0066	.0037	.0037	.0037	.0024	.0024	.0141	.0141	.0141	.0098
	41	Hardened Cast Iron	SFM(Vc)	340	305	350	350	350	350	350	315	315	315	315	280	340	340	340	340
			IPT(fz)	.0019	.0018	.0025	.0025	.0025	.0025	.0025	.0022	.0022	.0022	.0022	.0020	.0033	.0033	.0033	.0033
			RPM	13860	12470	10770	10770	10770	10770	10770	9690	9690	9690	9690	8620	6890	6890	6890	6890
			IPM(FEED)	54	44	53	53	53	53	53	43	43	43	43	34	46	46	46	46
			Ap	.0033	.0019	.0063	.0063	.0044	.0044	.0044	.0025	.0025	.0025	.0016	.0016	.0094	.0094	.0094	.0066

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



4G MILL END MILLS

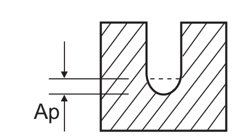
RECOMMENDED CUTTING CONDITIONS

GMF16 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)															
				3/16	3/16	3/16	3/16	3/16	3/16	13/64	1/4	1/4	5/16	5/16	3/8	3/8	3/8	1/2	1/2
			LBS	11/16	3/4	1	1-3/16	1-3/8	1-1/2	13/64	3/4	1-3/16	1	1-3/8	1-3/16	1-3/16	1-1/2	1-1/4	1-1/4
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	405	405	365	365	365	365	355	400	400	400	400	395	395	395	395	395
			IPT(fz)	.0039	.0039	.0035	.0035	.0035	.0035	.0042	.0058	.0058	.0073	.0073	.0084	.0084	.0084	.0094	.0094
			RPM	8230	8230	7410	7410	7410	7410	6720	6140	6140	4890	4890	4040	4040	4040	3020	3020
			IPM(FEED)	65	65	53	53	53	53	57	71	71	72	72	68	68	68	57	57
			Ap	.0118	.0118	.0067	.0067	.0067	.0067	.0073	.0225	.0157	.0197	.0197	.0236	.0236	.0236	.0450	.0450
	9	Low alloy steel	SFM(Vc)	385	385	345	345	345	345	340	385	385	380	380	380	380	380	375	375
			IPT(fz)	.0035	.0035	.0032	.0032	.0032	.0032	.0035	.0051	.0051	.0064	.0064	.0075	.0075	.0075	.0084	.0084
			RPM	7810	7810	7030	7030	7030	7030	6370	5860	5860	4640	4640	3860	3860	3860	2880	2880
			IPM(FEED)	55	55	45	45	45	45	45	60	60	60	60	58	58	58	48	48
			Ap	.0098	.0098	.0056	.0056	.0056	.0056	.0061	.0187	.0131	.0164	.0164	.0197	.0197	.0197	.0375	.0375
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	405	405	365	365	365	365	355	400	400	400	400	395	395	395	395	395
			IPT(fz)	.0039	.0039	.0035	.0035	.0035	.0035	.0042	.0058	.0058	.0073	.0073	.0084	.0084	.0084	.0094	.0094
			RPM	8230	8230	7410	7410	7410	7410	6720	6140	6140	4890	4890	4040	4040	4040	3020	3020
			IPM(FEED)	65	65	53	53	53	53	57	71	71	72	72	68	68	68	57	57
			Ap	.0118	.0118	.0067	.0067	.0067	.0067	.0073	.0225	.0157	.0197	.0197	.0236	.0236	.0236	.0450	.0450
	11.2		SFM(Vc)	385	385	345	345	345	345	340	385	385	380	380	380	380	380	375	375
			IPT(fz)	.0035	.0035	.0032	.0032	.0032	.0032	.0035	.0051	.0051	.0064	.0064	.0075	.0075	.0075	.0084	.0084
			RPM	7810	7810	7030	7030	7030	7030	6370	5860	5860	4640	4640	3860	3860	3860	2880	2880
			IPM(FEED)	55	55	45	45	45	45	45	60	60	60	60	58	58	58	48	48
			Ap	.0098	.0098	.0056	.0056	.0056	.0056	.0061	.0187	.0131	.0164	.0164	.0197	.0197	.0197	.0375	.0375
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	405	405	365	365	365	365	355	400	400	400	400	395	395	395	395	395
			IPT(fz)	.0039	.0039	.0035	.0035	.0035	.0035	.0042	.0058	.0058	.0073	.0073	.0084	.0084	.0084	.0094	.0094
			RPM	8230	8230	7410	7410	7410	7410	6720	6140	6140	4890	4890	4040	4040	4040	3020	3020
			IPM(FEED)	65	65	53	53	53	53	57	71	71	72	72	68	68	68	57	57
			Ap	.0118	.0118	.0067	.0067	.0067	.0067	.0073	.0225	.0157	.0197	.0197	.0236	.0236	.0236	.0450	.0450
H	38.1-38.2	Hardened steel	SFM(Vc)	340	340	305	305	305	305	295	340	340	330	330	330	330	330	325	325
			IPT(fz)	.0033	.0033	.0030	.0030	.0030	.0030	.0036	.0048	.0048	.0063	.0063	.0074	.0074	.0074	.0082	.0082
			RPM	6890	6890	6200	6200	6200	6200	5580	5200	5200	4030	4030	3360	3360	3360	2500	2500
			IPM(FEED)	46	46	37	37	37	37	40	49	49	51	51	50	50	50	41	41
			Ap	.0066	.0066	.0037	.0037	.0037	.0037	.0041	.0125	.0087	.0109	.0190	.0131	.0131	.0131	.0250	.0250
	40	Chilled Cast Iron	SFM(Vc)	385	385	345	345	345	345	340	385	385	380	380	380	380	380	375	375
			IPT(fz)	.0035	.0035	.0032	.0032	.0032	.0032	.0035	.0051	.0051	.0064	.0064	.0075	.0075	.0075	.0084	.0084
			RPM	7810	7810	7030	7030	7030	7030	6370	5860	5860	4640	4640	3860	3860	3860	2880	2880
			IPM(FEED)	55	55	45	45	45	45	45	60	60	60	60	58	58	58	48	48
			Ap	.0098	.0098	.0056	.0056	.0056	.0056	.0061	.0187	.0131	.0164	.0164	.0197	.0197	.0197	.0375	.0375
	41	Hardened Cast Iron	SFM(Vc)	340	340	305	305	305	305	295	340	340	330	330	330	330	330	325	325
			IPT(fz)	.0033	.0033	.0030	.0030	.0030	.0030	.0036	.0048	.0048	.0063	.0063	.0074	.0074	.0074	.0082	.0082
			RPM	6890	6890	6200	6200	6200	6200	5580	5200	5200	4030	4030	3360	3360	3360	2500	2500
			IPM(FEED)	46	46	37	37	37	37	40	49	49	51	51	50	50	50	41	41
			Ap	.0066	.0066	.0037	.0037	.0037	.0037	.0041	.0125	.0087	.0109	.0190	.0131	.0131	.0131	.0250	.0250

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

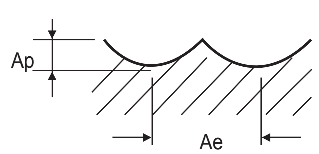
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF17 SERIES 4FLUTE BALL NOSE - PLANE

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	3/16	1/4	5/16	3/8	1/2
P	1-8	Non-alloy steel Low alloy steel	0.05D	0.02D	SFM(Vc)	745	865	940	935	940	940
					IPT(fz)	.0022	.0032	.0040	.0046	.0049	.0055
					RPM	22700	17600	14400	11400	9600	7200
					IPM(FEED)	202	224	231	208	190	159
	9	Low alloy steel	0.05D	0.02D	SFM(Vc)	540	640	755	760	760	760
					IPT(fz)	.0022	.0029	.0036	.0043	.0046	.0051
					RPM	16540	13020	11530	9270	7720	5790
					IPM(FEED)	144	153	167	158	143	119
	10-11.1	High alloyed steel, and tool steel	0.08D	0.02D	SFM(Vc)	745	865	940	935	940	940
					IPT(fz)	.0022	.0032	.0040	.0046	.0049	.0055
					RPM	22700	17600	14400	11400	9600	7200
					IPM(FEED)	202	224	231	208	190	159
	11.2		0.05D	0.02D	SFM(Vc)	540	640	755	760	760	760
					IPT(fz)	.0022	.0029	.0036	.0043	.0046	.0051
					RPM	16540	13020	11530	9270	7720	5790
					IPM(FEED)	144	153	167	158	143	119
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	0.02D	SFM(Vc)	745	865	940	935	940	940
					IPT(fz)	.0022	.0032	.0040	.0046	.0049	.0055
					RPM	22700	17600	14400	11400	9600	7200
					IPM(FEED)	202	224	231	208	190	159
H	38.1-38.2	Hardened steel	0.05D	0.02D	SFM(Vc)	495	600	685	685	685	685
					IPT(fz)	.0022	.0029	.0034	.0040	.0042	.0043
					RPM	15120	12250	10490	8390	6990	5230
					IPM(FEED)	136	144	143	133	119	89
	40	Chilled Cast Iron	0.05D	0.02D	SFM(Vc)	540	640	755	760	760	760
					IPT(fz)	.0022	.0029	.0036	.0043	.0046	.0051
					RPM	16540	13020	11530	9270	7720	5790
					IPM(FEED)	144	153	167	158	143	119
	41	Hardened Cast Iron	0.05D	0.02D	SFM(Vc)	495	600	685	685	685	685
					IPT(fz)	.0022	.0029	.0034	.0040	.0042	.0043
					RPM	15120	12250	10490	8390	6990	5230
					IPM(FEED)	136	144	143	133	119	89

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG 4G MILL END MILLS

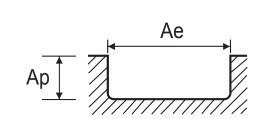
RECOMMENDED CUTTING CONDITIONS

GMF18 SERIES 2FLUTE CORNER RADIUS - SLOTTING

DIA. = Diameter
LBS = Length Below Shank
RPM = rev./min.
FEED = inch/min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 3/64	1/16	5/64	1/8	9/64	13/64	1/4	5/16	3/8	1/2	9/16	5/8	3/4
P	1-8	Non-alloy steel Low alloy steel	1.0D	0.2D	SFM(Vc)	305	340	370	410	430	475	490	490	520	510	515	505	510
					IPT(fz)	.0002	.0002	.0003	.0004	.0005	.0009	.0012	.0018	.0021	.0020	.0021	.0023	.0022
					RPM	25000	20800	18100	12500	11700	8900	7500	6000	5300	3900	3500	3100	2600
					IPM(FEED)	10	9	10	10	12	16	19	22	22	16	15	14	12
	9	Low alloy steel	1.0D	0.2D	SFM(Vc)	195	210	240	265	280	300	310	315	340	345	350	345	340
					IPT(fz)	.0001	.0002	.0002	.0003	.0004	.0007	.0010	.0013	.0015	.0016	.0016	.0016	.0014
					RPM	15870	12760	11650	8090	7540	5620	4760	3830	3440	2630	2390	2120	1720
					IPM(FEED)	4	4	5	5	6	8	9	10	10	9	8	7	5
	10-11.1	High alloyed steel, and tool steel	1.0D	0.2D	SFM(Vc)	305	340	370	410	430	475	490	490	520	510	515	505	510
					IPT(fz)	.0002	.0002	.0003	.0004	.0005	.0009	.0012	.0018	.0021	.0020	.0021	.0023	.0022
					RPM	25000	20800	18100	12500	11700	8900	7500	6000	5300	3900	3500	3100	2600
					IPM(FEED)	10	9	10	10	12	16	19	22	22	16	15	14	12
	11.2		1.0D	0.2D	SFM(Vc)	195	210	240	265	280	300	310	315	340	345	350	345	340
					IPT(fz)	.0001	.0002	.0002	.0003	.0004	.0007	.0010	.0013	.0015	.0016	.0016	.0016	.0014
					RPM	15870	12760	11650	8090	7540	5620	4760	3830	3440	2630	2390	2120	1720
					IPM(FEED)	4	4	5	5	6	8	9	10	10	9	8	7	5
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	0.2D	SFM(Vc)	305	340	370	410	430	475	490	490	520	510	515	505	510
					IPT(fz)	.0002	.0002	.0003	.0004	.0005	.0009	.0012	.0018	.0021	.0020	.0021	.0023	.0022
					RPM	25000	20800	18100	12500	11700	8900	7500	6000	5300	3900	3500	3100	2600
					IPM(FEED)	10	9	10	10	12	16	19	22	22	16	15	14	12
H	38.1-38.2	Hardened steel	1.0D	0.2D	SFM(Vc)	120	130	150	165	175	195	205	210	210	210	215	210	205
					IPT(fz)	.0001	.0001	.0002	.0003	.0003	.0005	.0007	.0009	.0012	.0012	.0012	.0012	.0012
					RPM	9830	8030	7260	4990	4690	3680	3100	2540	2120	1590	1450	1290	1050
					IPM(FEED)	2	2	3	3	3	4	5	5	5	4	4	3	3
	40	Chilled Cast Iron	1.0D	0.2D	SFM(Vc)	195	210	240	265	280	300	310	315	340	345	350	345	340
					IPT(fz)	.0001	.0002	.0002	.0003	.0004	.0007	.0010	.0013	.0015	.0016	.0016	.0016	.0014
					RPM	15870	12760	11650	8090	7540	5620	4760	3830	3440	2630	2390	2120	1720
					IPM(FEED)	4	4	5	5	6	8	9	10	10	9	8	7	5
	41	Hardened Cast Iron	1.0D	0.2D	SFM(Vc)	120	130	150	165	175	195	205	210	210	210	215	210	205
					IPT(fz)	.0001	.0001	.0002	.0003	.0003	.0005	.0007	.0009	.0012	.0012	.0012	.0012	.0012
					RPM	9830	8030	7260	4990	4690	3680	3100	2540	2120	1590	1450	1290	1050
					IPM(FEED)	2	2	3	3	3	4	5	5	5	4	4	3	3

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF19 SERIES 2FLUTE CORNER RADIUS - SLOTTING

DIA. = Diameter
LBS = Length Below Shank
RPM = rev./min.
FEED = inch/min.

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)													
				.008	.012	.012	.015	.015	.015	.015	.020	.020	.020	.020	.020	.024	.024
			LBS	3/64	3/64	5/64	3/64	1/16	5/64	3/32	3/64	1/16	5/64	1/8	5/32	5/64	1/8
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	95	155	140	205	205	185	185	220	220	220	200	200	225	205
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	44290	49210	44290	52490	52490	47240	47240	42320	42320	42320	38090	38090	35830	32240
			IPM(FEED)	5	8	6	8	8	7	7	9	9	9	7	7	10	8
			Ap	.0006	.0017	.0009	.0021	.0021	.0012	.0012	.0040	.0028	.0028	.0016	.0016	.0033	.0019
	9	Low alloy steel	SFM(Vc)	65	100	90	130	130	120	120	145	145	145	130	130	150	135
			IPT(fz)	.0000	.0001	.0000	.0001	.0001	.0000	.0000	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	30560	31500	28350	33600	33600	30240	30240	27560	27560	27560	24800	24800	23620	21260
			IPM(FEED)	2	3	3	4	4	3	3	4	4	4	3	3	4	4
			Ap	.0005	.0013	.0007	.0016	.0016	.0009	.0009	.0030	.0021	.0021	.0012	.0012	.0025	.0015
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	95	155	140	205	205	185	185	220	220	220	200	200	225	205
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	44290	49210	44290	52490	52490	47240	47240	42320	42320	42320	38090	38090	35830	32240
			IPM(FEED)	5	8	6	8	8	7	7	9	9	9	7	7	10	8
			Ap	.0006	.0017	.0009	.0021	.0021	.0012	.0012	.0040	.0028	.0028	.0016	.0016	.0033	.0019
	11.2		SFM(Vc)	65	100	90	130	130	120	120	145	145	145	130	130	150	135
			IPT(fz)	.0000	.0001	.0000	.0001	.0001	.0000	.0000	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	30560	31500	28350	33600	33600	30240	30240	27560	27560	27560	24800	24800	23620	21260
			IPM(FEED)	2	3	3	4	4	3	3	4	4	4	3	3	4	4
			Ap	.0005	.0013	.0007	.0016	.0016	.0009	.0009	.0030	.0021	.0021	.0012	.0012	.0025	.0015
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	95	155	140	205	205	185	185	220	220	220	200	200	225	205
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	44290	49210	44290	52490	52490	47240	47240	42320	42320	42320	38090	38090	35830	32240
			IPM(FEED)	5	8	6	8	8	7	7	9	9	9	7	7	10	8
			Ap	.0006	.0017	.0009	.0021	.0021	.0012	.0012	.0040	.0028	.0028	.0016	.0016	.0033	.0019
H	38.1-38.2	Hardened steel	SFM(Vc)	40	60	55	80	80	75	75	90	90	90	80	80	90	80
			IPT(fz)	.0000	.0001	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	18740	19690	17720	21000	21000	18900	18900	16830	16830	16830	15150	15150	14270	12840
			IPM(FEED)	1	2	2	2	2	2	2	2	2	2	2	2	3	2
			Ap	.0004	.0010	.0006	.0013	.0013	.0007	.0007	.0024	.0017	.0017	.0009	.0009	.0020	.0011
	40	Chilled Cast Iron	SFM(Vc)	65	100	90	130	130	120	120	145	145	145	130	130	150	135
			IPT(fz)	.0000	.0001	.0000	.0001	.0001	.0000	.0000	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	30560	31500	28350	33600	33600	30240	30240	27560	27560	27560	24800	24800	23620	21260
			IPM(FEED)	2	3	3	4	4	3	3	4	4	4	3	3	4	4
			Ap	.0005	.0013	.0007	.0016	.0016	.0009	.0009	.0030	.0021	.0021	.0012	.0012	.0025	.0015
	41	Hardened Cast Iron	SFM(Vc)	40	60	55	80	80	75	75	90	90	90	80	80	90	80
			IPT(fz)	.0000	.0001	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	18740	19690	17720	21000	21000	18900	18900	16830	16830	16830	15150	15150	14270	12840
			IPM(FEED)	1	2	2	2	2	2	2	2	2	2	2	2	3	2
			Ap	.0004	.0010	.0006	.0013	.0013	.0007	.0007	.0024	.0017	.0017	.0009	.0009	.0020	.0011

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
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Ap : Inch (Axial Depth of Cut)
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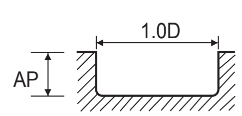


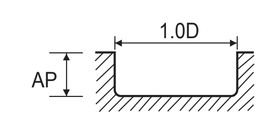
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF19 SERIES 2FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)													
				.024	.024	.031	.031	.031	.031	3/64	3/64	3/64	3/64	3/64	1/16	1/16	1/16
			LBS	5/32	1/4	5/64	5/32	1/4	5/16	1/8	5/32	1/4	5/16	3/8	5/32	1/4	5/16
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	205	180	300	270	270	240	340	340	305	305	305	410	410	410
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002
			RPM	32240	28660	36980	33280	33280	29590	27800	27800	25020	25020	25020	24940	24940	24940
			IPM(FEED)	8	6	10	8	8	7	9	9	8	8	8	11	11	11
			Ap	.0019	.0012	.0062	.0025	.0015	.0015	.0094	.0066	.0037	.0037	.0037	.0125	.0087	.0087
	9	Low alloy steel	SFM(Vc)	135	120	200	180	180	160	225	225	200	200	200	250	250	250
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
			RPM	21260	18900	24380	21950	21950	19510	18140	18140	16330	16330	16330	15310	15310	15310
			IPM(FEED)	4	3	4	4	4	3	4	4	3	3	3	5	5	5
			Ap	.0015	.0009	.0046	.0019	.0012	.0012	.0070	.0049	.0028	.0028	.0028	.0094	.0066	.0066
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	205	180	300	270	270	240	340	340	305	305	305	410	410	410
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002
			RPM	32240	28660	36980	33280	33280	29590	27800	27800	25020	25020	25020	24940	24940	24940
			IPM(FEED)	8	6	10	8	8	7	9	9	8	8	8	11	11	11
			Ap	.0019	.0012	.0062	.0025	.0015	.0015	.0094	.0066	.0037	.0037	.0037	.0125	.0087	.0087
	11.2		SFM(Vc)	135	120	200	180	180	160	225	225	200	200	200	250	250	250
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
			RPM	21260	18900	24380	21950	21950	19510	18140	18140	16330	16330	16330	15310	15310	15310
			IPM(FEED)	4	3	4	4	4	3	4	4	3	3	3	5	5	5
			Ap	.0015	.0009	.0046	.0019	.0012	.0012	.0070	.0049	.0028	.0028	.0028	.0094	.0066	.0066
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	205	180	300	270	270	240	340	340	305	305	305	410	410	410
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002
			RPM	32240	28660	36980	33280	33280	29590	27800	27800	25020	25020	25020	24940	24940	24940
			IPM(FEED)	8	6	10	8	8	7	9	9	8	8	8	11	11	11
			Ap	.0019	.0012	.0062	.0025	.0015	.0015	.0094	.0066	.0037	.0037	.0037	.0125	.0087	.0087
H	38.1-38.2	Hardened steel	SFM(Vc)	80	70	120	110	110	95	135	135	120	120	120	160	160	160
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	12840	11420	14730	13260	13260	11790	11090	11090	9980	9980	9980	9640	9640	9640
			IPM(FEED)	2	2	3	2	2	2	2	2	2	2	2	3	3	3
			Ap	.0011	.0007	.0037	.0015	.0009	.0009	.0056	.0039	.0022	.0022	.0022	.0075	.0052	.0052
	40	Chilled Cast Iron	SFM(Vc)	135	120	200	180	180	160	225	225	200	200	200	250	250	250
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
			RPM	21260	18900	24380	21950	21950	19510	18140	18140	16330	16330	16330	15310	15310	15310
			IPM(FEED)	4	3	4	4	4	3	4	4	3	3	3	5	5	5
			Ap	.0015	.0009	.0046	.0019	.0012	.0012	.0070	.0049	.0028	.0028	.0028	.0094	.0066	.0066
	41	Hardened Cast Iron	SFM(Vc)	80	70	120	110	110	95	135	135	120	120	120	160	160	160
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	12840	11420	14730	13260	13260	11790	11090	11090	9980	9980	9980	9640	9640	9640
			IPM(FEED)	2	2	3	2	2	2	2	2	2	2	2	3	3	3
			Ap	.0011	.0007	.0037	.0015	.0009	.0009	.0056	.0039	.0022	.0022	.0022	.0075	.0052	.0052

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

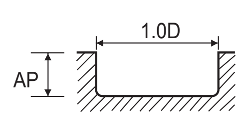
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF19 SERIES 2FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)													
				1/16	1/16	5/64	5/64	5/64	5/64	5/64	5/64	1/8	1/8	1/8	1/8	1/8	1/8
			LBS	3/8	1/2	1/4	5/16	3/8	1/2	9/16	5/8	5/16	3/8	1/2	5/8	3/4	1
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	365	365	445	445	445	400	400	400	490	490	490	490	440	440
			IPT(fz)	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004
			RPM	22450	22450	21770	21770	21770	19590	19590	19590	15020	15020	15020	15020	13520	13520
			IPM(FEED)	9	9	12	12	12	10	10	10	12	12	12	12	10	10
			Ap	.0050	.0050	.0109	.0109	.0109	.0063	.0063	.0063	.0250	.0250	.0175	.0175	.0100	.0100
	9	Low alloy steel	SFM(Vc)	225	225	285	285	285	255	255	255	320	320	320	320	285	285
			IPT(fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003
			RPM	13780	13780	13910	13910	13910	12520	12520	12520	9730	9730	9730	9730	8760	8760
			IPM(FEED)	4	4	6	6	6	5	5	5	6	6	6	6	5	5
			Ap	.0037	.0037	.0082	.0082	.0082	.0047	.0047	.0047	.0187	.0187	.0131	.0131	.0075	.0075
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	365	365	445	445	445	400	400	400	490	490	490	490	440	440
			IPT(fz)	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004
			RPM	22450	22450	21770	21770	21770	19590	19590	19590	15020	15020	15020	15020	13520	13520
			IPM(FEED)	9	9	12	12	12	10	10	10	12	12	12	12	10	10
			Ap	.0050	.0050	.0109	.0109	.0109	.0063	.0063	.0063	.0250	.0250	.0175	.0175	.0100	.0100
	11.2		SFM(Vc)	225	225	285	285	285	255	255	255	320	320	320	320	285	285
			IPT(fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003
			RPM	13780	13780	13910	13910	13910	12520	12520	12520	9730	9730	9730	9730	8760	8760
			IPM(FEED)	4	4	6	6	6	5	5	5	6	6	6	6	5	5
			Ap	.0037	.0037	.0082	.0082	.0082	.0047	.0047	.0047	.0187	.0187	.0131	.0131	.0075	.0075
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	365	365	445	445	445	400	400	400	490	490	490	490	440	440
			IPT(fz)	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0004
			RPM	22450	22450	21770	21770	21770	19590	19590	19590	15020	15020	15020	15020	13520	13520
			IPM(FEED)	9	9	12	12	12	10	10	10	12	12	12	12	10	10
			Ap	.0050	.0050	.0109	.0109	.0109	.0063	.0063	.0063	.0250	.0250	.0175	.0175	.0100	.0100
H	38.1-38.2	Hardened steel	SFM(Vc)	140	140	180	180	180	160	160	160	195	195	195	195	175	175
			IPT(fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0002	.0002
			RPM	8670	8670	8710	8710	8710	7840	7840	7840	5950	5950	5950	5950	5360	5360
			IPM(FEED)	2	2	3	3	3	3	3	3	3	3	3	3	2	2
			Ap	.0030	.0030	.0066	.0066	.0066	.0037	.0037	.0037	.0150	.0150	.0105	.0105	.0060	.0060
	40	Chilled Cast Iron	SFM(Vc)	225	225	285	285	285	255	255	255	320	320	320	320	285	285
			IPT(fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003
			RPM	13780	13780	13910	13910	13910	12520	12520	12520	9730	9730	9730	9730	8760	8760
			IPM(FEED)	4	4	6	6	6	5	5	5	6	6	6	6	5	5
			Ap	.0037	.0037	.0082	.0082	.0082	.0047	.0047	.0047	.0187	.0187	.0131	.0131	.0075	.0075
	41	Hardened Cast Iron	SFM(Vc)	140	140	180	180	180	160	160	160	195	195	195	195	175	175
			IPT(fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0002	.0002
			RPM	8670	8670	8710	8710	8710	7840	7840	7840	5950	5950	5950	5950	5360	5360
			IPM(FEED)	2	2	3	3	3	3	3	3	3	3	3	3	2	2
			Ap	.0030	.0030	.0066	.0066	.0066	.0037	.0037	.0037	.0150	.0150	.0105	.0105	.0060	.0060

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



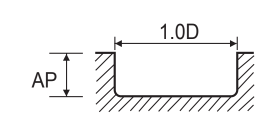
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF19 SERIES 2FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)												
				3/16	3/16	3/16	3/16	3/16	3/16	1/4	1/4	5/16	3/8	1/2	5/8	3/4
				3/8	1/2	5/8	3/4	1	1-3/16	3/4	1-3/16	1	1-3/16	1-1/4	1-3/8	1-1/2
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	565	565	565	565	510	510	590	590	595	620	620	615	620
			IPT(fz)	.0009	.0009	.0009	.0009	.0008	.0008	.0012	.0012	.0017	.0021	.0020	.0024	.0022
			RPM	11550	11550	11550	11550	10390	10390	8980	8980	7260	6300	4720	3750	3150
			IPM(FEED)	21	21	21	21	17	17	22	22	25	26	19	18	14
			Ap	.0375	.0375	.0263	.0263	.0150	.0150	.0500	.0350	.0437	.0525	.1000	.1250	.1500
	9	Low alloy steel	SFM(Vc)	360	360	360	360	325	325	370	370	375	410	415	415	400
			IPT(fz)	.0007	.0007	.0007	.0007	.0006	.0006	.0010	.0010	.0013	.0015	.0016	.0016	.0014
			RPM	7350	7350	7350	7350	6610	6610	5670	5670	4590	4200	3160	2540	2050
			IPM(FEED)	10	10	10	10	8	8	11	11	12	12	10	8	6
			Ap	.0281	.0281	.0197	.0197	.0113	.0113	.0375	.0263	.0328	.0394	.0750	.0937	.1125
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	565	565	565	565	510	510	590	590	595	620	620	615	620
			IPT(fz)	.0009	.0009	.0009	.0009	.0008	.0008	.0012	.0012	.0017	.0021	.0020	.0024	.0022
			RPM	11550	11550	11550	11550	10390	10390	8980	8980	7260	6300	4720	3750	3150
			IPM(FEED)	21	21	21	21	17	17	22	22	25	26	19	18	14
			Ap	.0375	.0375	.0263	.0263	.0150	.0150	.0500	.0350	.0437	.0525	.1000	.1250	.1500
	11.2		SFM(Vc)	360	360	360	360	325	325	370	370	375	410	415	415	400
			IPT(fz)	.0007	.0007	.0007	.0007	.0006	.0006	.0010	.0010	.0013	.0015	.0016	.0016	.0014
			RPM	7350	7350	7350	7350	6610	6610	5670	5670	4590	4200	3160	2540	2050
			IPM(FEED)	10	10	10	10	8	8	11	11	12	12	10	8	6
			Ap	.0281	.0281	.0197	.0197	.0113	.0113	.0375	.0263	.0328	.0394	.0750	.0937	.1125
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	565	565	565	565	510	510	590	590	595	620	620	615	620
			IPT(fz)	.0009	.0009	.0009	.0009	.0008	.0008	.0012	.0012	.0017	.0021	.0020	.0024	.0022
			RPM	11550	11550	11550	11550	10390	10390	8980	8980	7260	6300	4720	3750	3150
			IPM(FEED)	21	21	21	21	17	17	22	22	25	26	19	18	14
			Ap	.0375	.0375	.0263	.0263	.0150	.0150	.0500	.0350	.0437	.0525	.1000	.1250	.1500
H	38.1-38.2	Hardened steel	SFM(Vc)	235	235	235	235	210	210	245	245	250	250	245	255	245
			IPT(fz)	.0005	.0005	.0005	.0005	.0005	.0005	.0007	.0007	.0009	.0011	.0012	.0012	.0012
			RPM	4790	4790	4790	4790	4310	4310	3710	3710	3040	2540	1890	1550	1260
			IPM(FEED)	5	5	5	5	4	4	5	5	6	6	5	4	3
			Ap	.0225	.0225	.0157	.0157	.0090	.0090	.0300	.0210	.0263	.0315	.0600	.0750	.0900
	40	Chilled Cast Iron	SFM(Vc)	360	360	360	360	325	325	370	370	375	410	415	415	400
			IPT(fz)	.0007	.0007	.0007	.0007	.0006	.0006	.0010	.0010	.0013	.0015	.0016	.0016	.0014
			RPM	7350	7350	7350	7350	6610	6610	5670	5670	4590	4200	3160	2540	2050
			IPM(FEED)	10	10	10	10	8	8	11	11	12	12	10	8	6
			Ap	.0281	.0281	.0197	.0197	.0113	.0113	.0375	.0263	.0328	.0394	.0750	.0937	.1125
	41	Hardened Cast Iron	SFM(Vc)	235	235	235	235	210	210	245	245	250	250	245	255	245
			IPT(fz)	.0005	.0005	.0005	.0005	.0005	.0005	.0007	.0007	.0009	.0011	.0012	.0012	.0012
			RPM	4790	4790	4790	4790	4310	4310	3710	3710	3040	2540	1890	1550	1260
			IPM(FEED)	5	5	5	5	4	4	5	5	6	6	5	4	3
			Ap	.0225	.0225	.0157	.0157	.0090	.0090	.0300	.0210	.0263	.0315	.0600	.0750	.0900

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

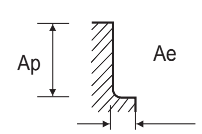
RECOMMENDED CUTTING CONDITIONS

GMF20 SERIES 4FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/64	5/64	1/8	3/16	13/64	1/4	5/16	3/8	1/2	5/8	3/4
P	1-8	Non-alloy steel Low alloy steel	0.05D	2.0D	SFM(Vc)	305	370	410	460	475	490	490	520	510	505	510
					IPT(fz)	.0001	.0002	.0003	.0004	.0005	.0005	.0008	.0009	.0009	.0009	.0009
					RPM	25000	18100	12500	9400	8900	7500	6000	5300	3900	3100	2600
					IPM(FEED)	12	13	13	16	16	16	18	19	13	11	10
	9	Low alloy steel	0.05D	2.0D	SFM(Vc)	195	240	265	295	300	310	315	340	345	345	340
					IPT(fz)	.0001	.0002	.0003	.0005	.0006	.0007	.0009	.0011	.0011	.0011	.0011
					RPM	15870	11650	8090	5960	5620	4760	3830	3440	2630	2120	1720
					IPM(FEED)	9	10	10	12	14	13	14	15	12	9	8
	10-11.1	High alloyed steel, and tool steel	0.05D	2.0D	SFM(Vc)	305	370	410	460	475	490	490	520	510	505	510
					IPT(fz)	.0001	.0002	.0003	.0004	.0005	.0005	.0008	.0009	.0009	.0009	.0009
					RPM	25000	18100	12500	9400	8900	7500	6000	5300	3900	3100	2600
					IPM(FEED)	12	13	13	16	16	16	18	19	13	11	10
	11.2		0.05D	2.0D	SFM(Vc)	195	240	265	295	300	310	315	340	345	345	340
					IPT(fz)	.0001	.0002	.0003	.0005	.0006	.0007	.0009	.0011	.0011	.0011	.0011
					RPM	15870	11650	8090	5960	5620	4760	3830	3440	2630	2120	1720
					IPM(FEED)	9	10	10	12	14	13	14	15	12	9	8
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	2.0D	SFM(Vc)	305	370	410	460	475	490	490	520	510	505	510
					IPT(fz)	.0001	.0002	.0003	.0004	.0005	.0005	.0008	.0009	.0009	.0009	.0009
					RPM	25000	18100	12500	9400	8900	7500	6000	5300	3900	3100	2600
					IPM(FEED)	12	13	13	16	16	16	18	19	13	11	10
H	38.1-38.2	Hardened steel	0.02D	2.0D	SFM(Vc)	120	150	165	190	195	205	210	210	210	210	205
					IPT(fz)	.0001	.0002	.0002	.0004	.0004	.0005	.0007	.0008	.0008	.0009	.0009
					RPM	9830	7260	4990	3830	3680	3100	2540	2120	1590	1290	1050
					IPM(FEED)	5	5	5	6	7	6	7	7	5	5	4
	40	Chilled Cast Iron	0.05D	2.0D	SFM(Vc)	195	240	265	295	300	310	315	340	345	345	340
					IPT(fz)	.0001	.0002	.0003	.0005	.0006	.0007	.0009	.0011	.0011	.0011	.0011
					RPM	15870	11650	8090	5960	5620	4760	3830	3440	2630	2120	1720
					IPM(FEED)	9	10	10	12	14	13	14	15	12	9	8
	41	Hardened Cast Iron	0.02D	2.0D	SFM(Vc)	120	150	165	190	195	205	210	210	210	210	205
					IPT(fz)	.0001	.0002	.0002	.0004	.0004	.0005	.0007	.0008	.0008	.0009	.0009
					RPM	9830	7260	4990	3830	3680	3100	2540	2120	1590	1290	1050
					IPM(FEED)	5	5	5	6	7	6	7	7	5	5	4

Diameter (Ø) columns: 3/64 – 3/4

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



* 1.5XD Axial cutting depth should be for DIA over 5/8 inch

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

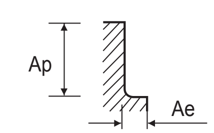
RECOMMENDED CUTTING CONDITIONS

GAE53 SERIES 4&5 FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	6	8	10	12	14	16	18	20
P	1	Non-alloy steel	0.5D	1.5D	SFM(Vc)	200	225	220	225	225	230	225	225
					IPT(fz)	.0007	.0011	.0020	.0024	.0022	.0024	.0028	.0032
					RPM	3250	2750	2150	1800	1550	1400	1200	1100
					IPM(FEED)	9	12	17	17	17	17	17	18
	2		0.5D	1.5D	SFM(Vc)	155	175	175	175	175	180	185	175
					IPT(fz)	.0007	.0011	.0019	.0025	.0023	.0025	.0028	.0032
					RPM	2500	2150	1700	1400	1200	1100	1000	850
					IPM(FEED)	7	9	13	14	14	14	14	14
	3-4		0.5D	1.5D	SFM(Vc)	110	130	125	125	125	125	130	125
					IPT(fz)	.0007	.0011	.0017	.0024	.0022	.0025	.0027	.0031
					RPM	1800	1550	1200	1000	850	750	700	600
					IPM(FEED)	5	7	8	9	9	9	9	9
	5		0.5D	1.5D	SFM(Vc)	95	100	105	105	100	100	100	105
					IPT(fz)	.0007	.0011	.0017	.0022	.0021	.0025	.0027	.0030
					RPM	1500	1200	1000	850	700	600	550	500
					IPM(FEED)	4	5	7	7	7	7	7	7
	6	Low alloy steel	0.5D	1.5D	SFM(Vc)	155	175	175	175	175	180	185	175
					IPT(fz)	.0007	.0011	.0019	.0025	.0023	.0025	.0028	.0032
					RPM	2500	2150	1700	1400	1200	1100	1000	850
					IPM(FEED)	7	9	13	14	14	14	14	14
	7		0.5D	1.5D	SFM(Vc)	110	130	125	125	125	125	130	125
					IPT(fz)	.0007	.0011	.0017	.0024	.0022	.0025	.0027	.0031
					RPM	1800	1550	1200	1000	850	750	700	600
					IPM(FEED)	5	7	8	9	9	9	9	9
	8-9		0.5D	1.5D	SFM(Vc)	95	100	105	105	100	100	100	105
					IPT(fz)	.0007	.0011	.0017	.0022	.0021	.0025	.0027	.0030
					RPM	1500	1200	1000	850	700	600	550	500
					IPM(FEED)	4	5	7	7	7	7	7	7
	10	High alloyed steel, and tool steel	0.5D	1.5D	SFM(Vc)	155	175	175	175	175	180	185	175
					IPT(fz)	.0007	.0011	.0019	.0025	.0023	.0025	.0028	.0032
					RPM	2500	2150	1700	1400	1200	1100	1000	850
					IPM(FEED)	7	9	13	14	14	14	14	14
	11.1		0.5D	1.5D	SFM(Vc)	95	100	105	105	100	100	100	105
					IPT(fz)	.0007	.0011	.0017	.0022	.0021	.0025	.0027	.0030
					RPM	1500	1200	1000	850	700	600	550	500
					IPM(FEED)	4	5	7	7	7	7	7	7
M	14.1-14.2	Stainless steel	0.5D	1.5D	SFM(Vc)	110	120	120	115	125	115	120	125
					IPT(fz)	.0007	.0012	.0017	.0025	.0023	.0028	.0030	.0032
					RPM	1750	1450	1150	950	850	700	650	600
					IPM(FEED)	5	7	8	10	10	10	10	10
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.5D	1.5D	SFM(Vc)	155	175	175	175	175	180	185	175
					IPT(fz)	.0007	.0011	.0019	.0025	.0023	.0025	.0028	.0032
					RPM	2500	2150	1700	1400	1200	1100	1000	850
					IPM(FEED)	7	9	13	14	14	14	14	14

Diameter (Ø) columns: 6 – 20

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



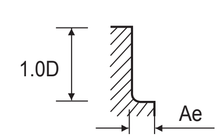
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF21 SERIES 4FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) / LBS													
				3/64	3/64	3/64	1/16	1/16	1/16	1/16	5/64	5/64	5/64	5/64	1/8	1/8	1/8
			LBS	5/32	1/4	5/16	1/4	5/16	3/8	1/2	1/4	5/16	3/8	1/2	5/16	3/8	1/2
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	370	330	330	410	410	365	365	445	445	445	400	490	490	490
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	29980	26990	26990	24940	24940	22450	22450	21770	21770	21770	19590	15020	15020	15020
			IPM(FEED)	15	12	12	14	14	11	11	15	15	15	12	15	15	15
			Ap	.0010	.0006	.0006	.0013	.0013	.0007	.0007	.0017	.0017	.0017	.0009	.0037	.0037	.0026
	9	Low alloy steel	SFM(Vc)	235	210	210	250	250	225	225	285	285	285	255	320	320	320
			IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0003	.0003
			RPM	19050	17140	17140	15310	15310	13780	13780	13910	13910	13910	12520	9730	9730	9730
			IPM(FEED)	10	9	9	10	10	8	8	11	11	11	9	12	12	12
			Ap	.0007	.0004	.0004	.0010	.0010	.0006	.0006	.0012	.0012	.0012	.0007	.0028	.0028	.0020
	10	High alloyed steel, and tool steel	SFM(Vc)	370	330	330	410	410	365	365	445	445	445	400	490	490	490
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	29980	26990	26990	24940	24940	22450	22450	21770	21770	21770	19590	15020	15020	15020
			IPM(FEED)	15	12	12	14	14	11	11	15	15	15	12	15	15	15
			Ap	.0010	.0006	.0006	.0013	.0013	.0007	.0007	.0017	.0017	.0017	.0009	.0037	.0037	.0026
	11.1-11.2		SFM(Vc)	235	210	210	250	250	225	225	285	285	285	255	320	320	320
			IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0003	.0003
			RPM	19050	17140	17140	15310	15310	13780	13780	13910	13910	13910	12520	9730	9730	9730
			IPM(FEED)	10	9	9	10	10	8	8	11	11	11	9	12	12	12
			Ap	.0007	.0004	.0004	.0010	.0010	.0006	.0006	.0012	.0012	.0012	.0007	.0028	.0028	.0020
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	370	330	330	410	410	365	365	445	445	445	400	490	490	490
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	29980	26990	26990	24940	24940	22450	22450	21770	21770	21770	19590	15020	15020	15020
			IPM(FEED)	15	12	12	14	14	11	11	15	15	15	12	15	15	15
			Ap	.0010	.0006	.0006	.0013	.0013	.0007	.0007	.0017	.0017	.0017	.0009	.0037	.0037	.0026
H	38.1-38.2	Hardened steel	SFM(Vc)	145	130	130	160	160	140	140	180	180	180	160	195	195	195
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0001	.0002	.0002	.0002
			RPM	11790	10610	10610	9640	9640	8670	8670	8710	8710	8710	7840	5950	5950	5950
			IPM(FEED)	6	5	5	5	5	4	4	6	6	6	5	6	6	6
			Ap	.0006	.0004	.0004	.0008	.0008	.0004	.0004	.0010	.0010	.0010	.0006	.0022	.0022	.0016
	40	Chilled Cast Iron	SFM(Vc)	235	210	210	250	250	225	225	285	285	285	255	320	320	320
			IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0002	.0002	.0002	.0002	.0003	.0003	.0003
			RPM	19050	17140	17140	15310	15310	13780	13780	13910	13910	13910	12520	9730	9730	9730
			IPM(FEED)	10	9	9	10	10	8	8	11	11	11	9	12	12	12
			Ap	.0007	.0004	.0004	.0010	.0010	.0006	.0006	.0012	.0012	.0012	.0007	.0028	.0028	.0020
	41	Hardened Cast Iron	SFM(Vc)	145	130	130	160	160	140	140	180	180	180	160	195	195	195
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0001	.0002	.0002	.0002
			RPM	11790	10610	10610	9640	9640	8670	8670	8710	8710	8710	7840	5950	5950	5950
			IPM(FEED)	6	5	5	5	5	4	4	6	6	6	5	6	6	6
			Ap	.0006	.0004	.0004	.0008	.0008	.0004	.0004	.0010	.0010	.0010	.0006	.0022	.0022	.0016

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF21 SERIES 4FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Parameter	Diameter (Ø) / LBS																
			1/8	1/8	1/8	3/16	3/16	3/16	3/16	3/16	1/4	5/16	5/16	3/8	3/8	1/2	1/2	5/8	3/4
		LBS	5/8	3/4	1	3/8	1/2	5/8	3/4	1	3/4	1	1 3/8	1 3/16	1 1/2	1 1/4	1 3/4	1 3/8	1 1/2
P	1-8	SFM(Vc)	490	440	440	565	565	565	565	510	590	595	595	620	620	620	620	615	620
		IPT(fz)	.0002	.0002	.0002	.0005	.0005	.0005	.0005	.0004	.0005	.0008	.0008	.0009	.0009	.0008	.0008	.0009	.0009
		RPM	15020	13520	13520	11550	11550	11550	11550	10390	8980	7260	7260	6300	6300	4720	4720	3750	3150
		IPM(FEED)	15	12	12	21	21	21	21	17	19	22	22	23	23	16	16	13	11
		Ap	.0026	.0015	.0015	.0056	.0056	.0039	.0039	.0022	.0075	.0066	.0066	.0079	.0079	.0150	.0105	.0187	.0225
	9	SFM(Vc)	320	285	285	360	360	360	360	325	370	375	375	410	410	415	415	415	400
		IPT(fz)	.0003	.0003	.0003	.0006	.0006	.0006	.0006	.0005	.0007	.0009	.0009	.0011	.0011	.0011	.0011	.0011	.0011
		RPM	9730	8760	8760	7350	7350	7350	7350	6610	5670	4590	4590	4200	4200	3160	3160	2540	2050
		IPM(FEED)	12	9	9	18	18	18	18	14	16	17	17	18	18	14	14	11	9
		Ap	.0020	.0011	.0011	.0042	.0042	.0030	.0030	.0017	.0056	.0049	.0049	.0059	.0059	.0113	.0079	.0141	.0169
	10	SFM(Vc)	490	440	440	565	565	565	565	510	590	595	595	620	620	620	620	615	620
		IPT(fz)	.0002	.0002	.0002	.0005	.0005	.0005	.0005	.0004	.0005	.0008	.0008	.0009	.0009	.0008	.0008	.0009	.0009
		RPM	15020	13520	13520	11550	11550	11550	11550	10390	8980	7260	7260	6300	6300	4720	4720	3750	3150
		IPM(FEED)	15	12	12	21	21	21	21	17	19	22	22	23	23	16	16	13	11
		Ap	.0026	.0015	.0015	.0056	.0056	.0039	.0039	.0022	.0075	.0066	.0066	.0079	.0079	.0150	.0105	.0187	.0225
	11.1-11.2	SFM(Vc)	320	285	285	360	360	360	360	325	370	375	375	410	410	415	415	415	400
		IPT(fz)	.0003	.0003	.0003	.0006	.0006	.0006	.0006	.0005	.0007	.0009	.0009	.0011	.0011	.0011	.0011	.0011	.0011
		RPM	9730	8760	8760	7350	7350	7350	7350	6610	5670	4590	4590	4200	4200	3160	3160	2540	2050
		IPM(FEED)	12	9	9	18	18	18	18	14	16	17	17	18	18	14	14	11	9
		Ap	.0020	.0011	.0011	.0042	.0042	.0030	.0030	.0017	.0056	.0049	.0049	.0059	.0059	.0113	.0079	.0141	.0169
K	15-20	SFM(Vc)	490	440	440	565	565	565	565	510	590	595	595	620	620	620	620	615	620
		IPT(fz)	.0002	.0002	.0002	.0005	.0005	.0005	.0005	.0004	.0005	.0008	.0008	.0009	.0009	.0008	.0008	.0009	.0009
		RPM	15020	13520	13520	11550	11550	11550	11550	10390	8980	7260	7260	6300	6300	4720	4720	3750	3150
		IPM(FEED)	15	12	12	21	21	21	21	17	19	22	22	23	23	16	16	13	11
		Ap	.0026	.0015	.0015	.0056	.0056	.0039	.0039	.0022	.0075	.0066	.0066	.0079	.0079	.0150	.0105	.0187	.0225
H	38.1-38.2	SFM(Vc)	195	175	175	235	235	235	235	210	245	250	250	250	250	245	245	255	245
		IPT(fz)	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0005	.0006	.0006	.0008	.0008	.0008	.0008	.0009	.0008
		RPM	5950	5360	5360	4790	4790	4790	4790	4310	3710	3040	3040	2540	2540	1890	1890	1550	1260
		IPM(FEED)	6	5	5	8	8	8	8	7	8	8	8	8	8	6	6	5	4
		Ap	.0016	.0009	.0009	.0034	.0034	.0024	.0024	.0013	.0045	.0039	.0039	.0047	.0047	.0090	.0063	.0113	.0135
	40	SFM(Vc)	320	285	285	360	360	360	360	325	370	375	375	410	410	415	415	415	400
		IPT(fz)	.0003	.0003	.0003	.0006	.0006	.0006	.0006	.0005	.0007	.0009	.0009	.0011	.0011	.0011	.0011	.0011	.0011
		RPM	9730	8760	8760	7350	7350	7350	7350	6610	5670	4590	4590	4200	4200	3160	3160	2540	2050
		IPM(FEED)	12	9	9	18	18	18	18	14	16	17	17	18	18	14	14	11	9
		Ap	.0020	.0011	.0011	.0042	.0042	.0030	.0030	.0017	.0056	.0049	.0049	.0059	.0059	.0113	.0079	.0141	.0169
	41	SFM(Vc)	195	175	175	235	235	235	235	210	245	250	250	250	250	245	245	255	245
		IPT(fz)	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0005	.0006	.0006	.0008	.0008	.0008	.0008	.0009	.0008
		RPM	5950	5360	5360	4790	4790	4790	4790	4310	3710	3040	3040	2540	2540	1890	1890	1550	1260
		IPM(FEED)	6	5	5	8	8	8	8	7	8	8	8	8	8	6	6	5	4
		Ap	.0016	.0009	.0009	.0034	.0034	.0024	.0024	.0013	.0045	.0039	.0039	.0047	.0047	.0090	.0063	.0113	.0135

SFM = Surface Feet per Minute
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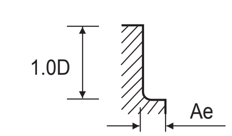


YG 4G MILL END MILLS

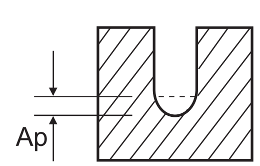
RECOMMENDED CUTTING CONDITIONS

GMF22 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) / LBS													
				.008	.015	.015	.015	.015	.015	.020	.020	.020	.020	.020	.024	.024	.024
			LBS	3/64	3/64	3/64	1/8	5/32	3/16	5/64	1/8	5/32	3/16	1/4	5/64	1/8	5/32
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	70	105	95	95	85	85	140	125	125	125	115	170	150	150
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0003	.0003	.0003	.0003	.0006	.0005	.0005
			RPM	34100	26930	24240	24240	21540	21540	26970	24270	24270	24270	21570	26970	24270	24270
			IPM(FEED)	12	12	10	10	8	8	21	17	17	17	13	30	24	24
			Ap	.0003	.0009	.0006	.0004	.0004	.0004	.0013	.0007	.0007	.0004	.0004	.0015	.0009	.0009
	9	Low alloy steel	SFM(Vc)	65	100	90	90	80	80	135	120	120	120	105	160	145	145
			IPT(fz)	.0001	.0002	.0001	.0001	.0001	.0001	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004
			RPM	32160	25430	22890	22890	20350	20350	25390	22850	22850	22850	20310	25390	22850	22850
			IPM(FEED)	9	9	7	7	5	5	17	13	13	13	11	21	17	17
			Ap	.0002	.0007	.0004	.0003	.0003	.0003	.0010	.0006	.0006	.0004	.0004	.0012	.0007	.0007
	10	High alloyed steel, and tool steel	SFM(Vc)	70	105	95	95	85	85	140	125	125	125	115	170	150	150
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0003	.0003	.0003	.0003	.0006	.0005	.0005
			RPM	34100	26930	24240	24240	21540	21540	26970	24270	24270	24270	21570	26970	24270	24270
			IPM(FEED)	12	12	10	10	8	8	21	17	17	17	13	30	24	24
			Ap	.0003	.0009	.0006	.0004	.0004	.0004	.0013	.0007	.0007	.0004	.0004	.0015	.0009	.0009
	11.1-11.2		SFM(Vc)	65	100	90	90	80	80	135	120	120	120	105	160	145	145
			IPT(fz)	.0001	.0002	.0001	.0001	.0001	.0001	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004
			RPM	32160	25430	22890	22890	20350	20350	25390	22850	22850	22850	20310	25390	22850	22850
			IPM(FEED)	9	9	7	7	5	5	17	13	13	13	11	21	17	17
			Ap	.0002	.0007	.0004	.0003	.0003	.0003	.0010	.0006	.0006	.0004	.0004	.0012	.0007	.0007
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	70	105	95	95	85	85	140	125	125	125	115	170	150	150
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0003	.0003	.0003	.0003	.0006	.0005	.0005
			RPM	34100	26930	24240	24240	21540	21540	26970	24270	24270	24270	21570	26970	24270	24270
			IPM(FEED)	12	12	10	10	8	8	21	17	17	17	13	30	24	24
			Ap	.0003	.0009	.0006	.0004	.0004	.0004	.0013	.0007	.0007	.0004	.0004	.0015	.0009	.0009
H	38.1-38.2	Hardened steel	SFM(Vc)	60	90	80	80	70	70	115	105	105	105	95	140	125	125
			IPT(fz)	.0001	.0002	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0004	.0003	.0003
			RPM	28440	22440	20200	20200	17950	17950	22440	20200	20200	20200	17950	22440	20200	20200
			IPM(FEED)	6	7	6	6	5	5	11	9	9	9	7	16	13	13
			Ap	.0002	.0005	.0003	.0002	.0002	.0002	.0007	.0004	.0004	.0002	.0002	.0008	.0005	.0005
	40	Chilled Cast Iron	SFM(Vc)	65	100	90	90	80	80	135	120	120	120	105	160	145	145
			IPT(fz)	.0001	.0002	.0001	.0001	.0001	.0001	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004
			RPM	32160	25430	22890	22890	20350	20350	25390	22850	22850	22850	20310	25390	22850	22850
			IPM(FEED)	9	9	7	7	5	5	17	13	13	13	11	21	17	17
			Ap	.0002	.0007	.0004	.0003	.0003	.0003	.0010	.0006	.0006	.0004	.0004	.0012	.0007	.0007
	41	Hardened Cast Iron	SFM(Vc)	60	90	80	80	70	70	115	105	105	105	95	140	125	125
			IPT(fz)	.0001	.0002	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0004	.0003	.0003
			RPM	28440	22440	20200	20200	17950	17950	22440	20200	20200	20200	17950	22440	20200	20200
			IPM(FEED)	6	7	6	6	5	5	11	9	9	9	7	16	13	13
			Ap	.0002	.0005	.0003	.0002	.0002	.0002	.0007	.0004	.0004	.0002	.0002	.0008	.0005	.0005

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

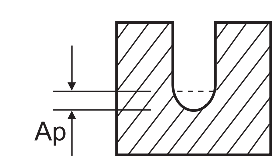
RECOMMENDED CUTTING CONDITIONS

GMF22 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø) / LBS													
			.024	.024	.024	.024	1/32	1/32	1/32	1/32	1/32	1/32	1/32	3/64	3/64	3/64
		LBS	3/16	1/4	5/16	3/8	5/64	1/8	5/32	3/16	1/4	5/16	3/8	1/8	5/32	3/16
P	1-8	SFM(Vc)	150	135	135	100	225	225	225	205	205	205	180	270	270	270
		IPT(fz)	.0005	.0004	.0004	.0004	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0008	.0008	.0008
		RPM	24270	21570	21570	16180	27620	27620	27620	24850	24850	24850	22090	22070	22070	22070
		IPM(FEED)	24	19	19	13	31	31	31	25	25	25	20	37	37	37
		Ap	.0009	.0006	.0003	.0003	.0028	.0020	.0020	.0011	.0011	.0007	.0007	.0042	.0030	.0030
	9	SFM(Vc)	145	130	130	95	215	215	215	190	190	190	170	255	255	255
		IPT(fz)	.0004	.0003	.0003	.0003	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0007	.0007	.0007
		RPM	22850	20310	20310	15240	26000	26000	26000	23400	23400	23400	20800	20860	20860	20860
		IPM(FEED)	17	14	14	9	24	24	24	20	20	20	15	29	29	29
		Ap	.0007	.0004	.0002	.0002	.0022	.0015	.0015	.0009	.0009	.0006	.0006	.0033	.0023	.0023
	10	SFM(Vc)	150	135	135	100	225	225	225	205	205	205	180	270	270	270
		IPT(fz)	.0005	.0004	.0004	.0004	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0008	.0008	.0008
		RPM	24270	21570	21570	16180	27620	27620	27620	24850	24850	24850	22090	22070	22070	22070
		IPM(FEED)	24	19	19	13	31	31	31	25	25	25	20	37	37	37
		Ap	.0009	.0006	.0003	.0003	.0028	.0020	.0020	.0011	.0011	.0007	.0007	.0042	.0030	.0030
	11.1-11.2	SFM(Vc)	145	130	130	95	215	215	215	190	190	190	170	255	255	255
		IPT(fz)	.0004	.0003	.0003	.0003	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0007	.0007	.0007
		RPM	22850	20310	20310	15240	26000	26000	26000	23400	23400	23400	20800	20860	20860	20860
		IPM(FEED)	17	14	14	9	24	24	24	20	20	20	15	29	29	29
		Ap	.0007	.0004	.0002	.0002	.0022	.0015	.0015	.0009	.0009	.0006	.0006	.0033	.0023	.0023
K	15-20	SFM(Vc)	150	135	135	100	225	225	225	205	205	205	180	270	270	270
		IPT(fz)	.0005	.0004	.0004	.0004	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0008	.0008	.0008
		RPM	24270	21570	21570	16180	27620	27620	27620	24850	24850	24850	22090	22070	22070	22070
		IPM(FEED)	24	19	19	13	31	31	31	25	25	25	20	37	37	37
		Ap	.0009	.0006	.0003	.0003	.0028	.0020	.0020	.0011	.0011	.0007	.0007	.0042	.0030	.0030
H	38.1-38.2	SFM(Vc)	125	115	115	85	190	190	190	170	170	170	150	225	225	225
		IPT(fz)	.0003	.0003	.0003	.0002	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0005	.0005	.0005
		RPM	20200	17950	17950	13460	22980	22980	22980	20680	20680	20680	18380	18340	18340	18340
		IPM(FEED)	13	10	10	7	18	18	18	14	14	14	11	19	19	19
		Ap	.0005	.0003	.0002	.0002	.0016	.0011	.0011	.0006	.0006	.0004	.0004	.0024	.0017	.0017
	40	SFM(Vc)	145	130	130	95	215	215	215	190	190	190	170	255	255	255
		IPT(fz)	.0004	.0003	.0003	.0003	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0007	.0007	.0007
		RPM	22850	20310	20310	15240	26000	26000	26000	23400	23400	23400	20800	20860	20860	20860
		IPM(FEED)	17	14	14	9	24	24	24	20	20	20	15	29	29	29
		Ap	.0007	.0004	.0002	.0002	.0022	.0015	.0015	.0009	.0009	.0006	.0006	.0033	.0023	.0023
	41	SFM(Vc)	125	115	115	85	190	190	190	170	170	170	150	225	225	225
		IPT(fz)	.0003	.0003	.0003	.0002	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0005	.0005	.0005
		RPM	20200	17950	17950	13460	22980	22980	22980	20680	20680	20680	18380	18340	18340	18340
		IPM(FEED)	13	10	10	7	18	18	18	14	14	14	11	19	19	19
		Ap	.0005	.0003	.0002	.0002	.0016	.0011	.0011	.0006	.0006	.0004	.0004	.0024	.0017	.0017

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF22 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) / LBS													
				3/64	3/64	3/64	3/64	3/64	3/64	3/64	1/16	1/16	1/16	1/16	1/16	1/16	1/16
			LBS	1/4	5/16	3/8	1/2	9/16	5/8	3/4	5/32	1/4	5/16	3/8	1/2	9/16	5/8
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	245	245	245	215	215	215	160	295	295	295	265	265	265	265
			IPT(fz)	.0008	.0008	.0008	.0007	.0007	.0007	.0006	.0009	.0009	.0009	.0008	.0008	.0008	.0008
			RPM	19870	19870	19870	17660	17660	17660	13240	18140	18140	18140	16330	16330	16330	16330
			IPM(FEED)	30	30	30	24	24	24	16	34	34	34	27	27	27	27
			Ap	.0017	.0017	.0017	.0011	.0011	.0006	.0006	.0056	.0039	.0039	.0022	.0022	.0014	.0014
	9	Low alloy steel	SFM(Vc)	230	230	230	205	205	205	155	280	280	280	250	250	250	250
			IPT(fz)	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0007	.0007	.0007	.0006	.0006	.0006	.0006
			RPM	18780	18780	18780	16690	16690	16690	12520	17100	17100	17100	15390	15390	15390	15390
			IPM(FEED)	23	23	23	18	18	18	12	24	24	24	19	19	19	19
			Ap	.0013	.0013	.0013	.0008	.0008	.0005	.0005	.0044	.0031	.0031	.0017	.0017	.0011	.0011
	10	High alloyed steel, and tool steel	SFM(Vc)	245	245	245	215	215	215	160	295	295	295	265	265	265	265
			IPT(fz)	.0008	.0008	.0008	.0007	.0007	.0007	.0006	.0009	.0009	.0009	.0008	.0008	.0008	.0008
			RPM	19870	19870	19870	17660	17660	17660	13240	18140	18140	18140	16330	16330	16330	16330
			IPM(FEED)	30	30	30	24	24	24	16	34	34	34	27	27	27	27
			Ap	.0017	.0017	.0017	.0011	.0011	.0006	.0006	.0056	.0039	.0039	.0022	.0022	.0014	.0014
	11.1-11.2		SFM(Vc)	230	230	230	205	205	205	155	280	280	280	250	250	250	250
			IPT(fz)	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0007	.0007	.0007	.0006	.0006	.0006	.0006
			RPM	18780	18780	18780	16690	16690	16690	12520	17100	17100	17100	15390	15390	15390	15390
			IPM(FEED)	23	23	23	18	18	18	12	24	24	24	19	19	19	19
			Ap	.0013	.0013	.0013	.0008	.0008	.0005	.0005	.0044	.0031	.0031	.0017	.0017	.0011	.0011
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	245	245	245	215	215	215	160	295	295	295	265	265	265	265
			IPT(fz)	.0008	.0008	.0008	.0007	.0007	.0007	.0006	.0009	.0009	.0009	.0008	.0008	.0008	.0008
			RPM	19870	19870	19870	17660	17660	17660	13240	18140	18140	18140	16330	16330	16330	16330
			IPM(FEED)	30	30	30	24	24	24	16	34	34	34	27	27	27	27
			Ap	.0017	.0017	.0017	.0011	.0011	.0006	.0006	.0056	.0039	.0039	.0022	.0022	.0014	.0014
H	38.1-38.2	Hardened steel	SFM(Vc)	205	205	205	180	180	180	135	245	245	245	225	225	225	225
			IPT(fz)	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0006	.0006	.0006	.0005	.0005	.0005	.0005
			RPM	16510	16510	16510	14670	14670	14670	11010	15120	15120	15120	13610	13610	13610	13610
			IPM(FEED)	16	16	16	12	12	12	8	18	18	18	14	14	14	14
			Ap	.0009	.0009	.0009	.0006	.0006	.0004	.0004	.0031	.0022	.0022	.0013	.0013	.0008	.0008
	40	Chilled Cast Iron	SFM(Vc)	230	230	230	205	205	205	155	280	280	280	250	250	250	250
			IPT(fz)	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0007	.0007	.0007	.0006	.0006	.0006	.0006
			RPM	18780	18780	18780	16690	16690	16690	12520	17100	17100	17100	15390	15390	15390	15390
			IPM(FEED)	23	23	23	18	18	18	12	24	24	24	19	19	19	19
			Ap	.0013	.0013	.0013	.0008	.0008	.0005	.0005	.0044	.0031	.0031	.0017	.0017	.0011	.0011
	41	Hardened Cast Iron	SFM(Vc)	205	205	205	180	180	180	135	245	245	245	225	225	225	225
			IPT(fz)	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0006	.0006	.0006	.0005	.0005	.0005	.0005
			RPM	16510	16510	16510	14670	14670	14670	11010	15120	15120	15120	13610	13610	13610	13610
			IPM(FEED)	16	16	16	12	12	12	8	18	18	18	14	14	14	14
			Ap	.0009	.0009	.0009	.0006	.0006	.0004	.0004	.0031	.0022	.0022	.0013	.0013	.0008	.0008

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
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Ap : Inch (Axial Depth of Cut)
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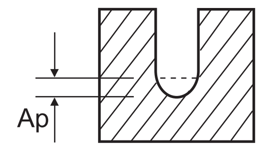
(Depth of Cut per one pass)



YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF22 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) / LBS													
				1/16	5/64	5/64	5/64	5/64	5/64	5/64	5/64	3/32	3/32	3/32	3/32	1/8	1/8
			LBS	3/4	1/4	5/16	3/8	1/2	9/16	5/8	3/4	5/16	1/2	5/8	3/4	5/16	3/8
P	1-8		SFM(Vc)	235	295	295	295	265	265	265	265	315	285	285	285	335	335
			IPT(fz)	.0007	.0011	.0011	.0011	.0010	.0010	.0010	.0010	.0016	.0014	.0014	.0014	.0016	.0016
			RPM	14510	14510	14510	14510	13060	13060	13060	13060	12910	11620	11620	11620	10300	10300
			IPM(FEED)	22	33	33	33	26	26	26	26	40	33	33	33	32	32
			Ap	.0014	.0049	.0049	.0049	.0028	.0028	.0028	.0018	.0059	.0034	.0034	.0034	.0113	.0113
	9		SFM(Vc)	225	280	280	280	250	250	250	250	300	270	270	270	320	320
			IPT(fz)	.0006	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0012	.0010	.0010	.0010	.0012	.0012
			RPM	13680	13710	13710	13710	12340	12340	12340	12340	12180	10960	10960	10960	9730	9730
			IPM(FEED)	15	25	25	25	20	20	20	20	28	23	23	23	22	22
			Ap	.0011	.0038	.0038	.0038	.0022	.0022	.0022	.0014	.0046	.0026	.0026	.0026	.0087	.0087
	10		SFM(Vc)	235	295	295	295	265	265	265	265	315	285	285	285	335	335
			IPT(fz)	.0007	.0011	.0011	.0011	.0010	.0010	.0010	.0010	.0016	.0014	.0014	.0014	.0016	.0016
			RPM	14510	14510	14510	14510	13060	13060	13060	13060	12910	11620	11620	11620	10300	10300
			IPM(FEED)	22	33	33	33	26	26	26	26	40	33	33	33	32	32
			Ap	.0014	.0049	.0049	.0049	.0028	.0028	.0028	.0018	.0059	.0034	.0034	.0034	.0113	.0113
	11.1-11.2		SFM(Vc)	225	280	280	280	250	250	250	250	300	270	270	270	320	320
			IPT(fz)	.0006	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0012	.0010	.0010	.0010	.0012	.0012
			RPM	13680	13710	13710	13710	12340	12340	12340	12340	12180	10960	10960	10960	9730	9730
			IPM(FEED)	15	25	25	25	20	20	20	20	28	23	23	23	22	22
			Ap	.0011	.0038	.0038	.0038	.0022	.0022	.0022	.0014	.0046	.0026	.0026	.0026	.0087	.0087
K	15-20		SFM(Vc)	235	295	295	295	265	265	265	265	315	285	285	285	335	335
			IPT(fz)	.0007	.0011	.0011	.0011	.0010	.0010	.0010	.0010	.0016	.0014	.0014	.0014	.0016	.0016
			RPM	14510	14510	14510	14510	13060	13060	13060	13060	12910	11620	11620	11620	10300	10300
			IPM(FEED)	22	33	33	33	26	26	26	26	40	33	33	33	32	32
			Ap	.0014	.0049	.0049	.0049	.0028	.0028	.0028	.0018	.0059	.0034	.0034	.0034	.0113	.0113
H	38.1-38.2		SFM(Vc)	200	245	245	245	225	225	225	225	265	240	240	240	205	205
			IPT(fz)	.0005	.0008	.0008	.0008	.0007	.0007	.0007	.0007	.0010	.0009	.0009	.0009	.0013	.0013
			RPM	12090	12090	12090	12090	10890	10890	10890	10890	10810	9730	9730	9730	6240	6240
			IPM(FEED)	11	19	19	19	15	15	15	15	21	17	17	17	17	17
			Ap	.0008	.0027	.0027	.0027	.0016	.0016	.0016	.0010	.0033	.0019	.0019	.0019	.0063	.0063
	40		SFM(Vc)	225	280	280	280	250	250	250	250	300	270	270	270	320	320
			IPT(fz)	.0006	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0012	.0010	.0010	.0010	.0012	.0012
			RPM	13680	13710	13710	13710	12340	12340	12340	12340	12180	10960	10960	10960	9730	9730
			IPM(FEED)	15	25	25	25	20	20	20	20	28	23	23	23	22	22
			Ap	.0011	.0038	.0038	.0038	.0022	.0022	.0022	.0014	.0046	.0026	.0026	.0026	.0087	.0087
	41		SFM(Vc)	200	245	245	245	225	225	225	225	265	240	240	240	205	205
			IPT(fz)	.0005	.0008	.0008	.0008	.0007	.0007	.0007	.0007	.0010	.0009	.0009	.0009	.0013	.0013
			RPM	12090	12090	12090	12090	10890	10890	10890	10890	10810	9730	9730	9730	6240	6240
			IPM(FEED)	11	19	19	19	15	15	15	15	21	17	17	17	17	17
			Ap	.0008	.0027	.0027	.0027	.0016	.0016	.0016	.0010	.0033	.0019	.0019	.0019	.0063	.0063

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
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Ap : Inch (Axial Depth of Cut)
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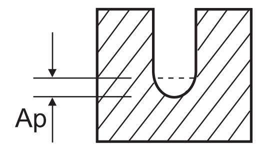
(Depth of Cut per one pass)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
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STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
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TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

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TECHNICAL DATA

YG 4G MILL END MILLS

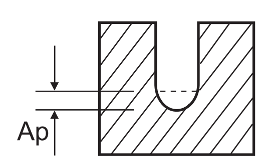
RECOMMENDED CUTTING CONDITIONS

GMF22 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) / LBS													
				1/8	1/8	1/8	1/8	1/8	1/8	3/16	3/16	3/16	3/16	3/16	3/16	3/16	13/64
			LBS	1/2	9/16	5/8	11/16	3/4	1	3/8	1/2	5/8	11/16	3/4	1	1 3/16	3/4
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	335	335	335	305	305	305	330	330	330	330	330	295	295	330
			IPT(fz)	.0016	.0016	.0016	.0014	.0014	.0014	.0032	.0032	.0032	.0032	.0032	.0029	.0029	.0036
			RPM	10300	10300	10300	9270	9270	9270	6720	6720	6720	6720	6720	6050	6050	6200
			IPM(FEED)	32	32	32	26	26	26	43	43	43	43	43	35	35	44
			Ap	.0079	.0079	.0079	.0045	.0045	.0045	.0169	.0169	.0118	.0118	.0118	.0067	.0067	.0128
	9	Low alloy steel	SFM(Vc)	320	320	320	285	285	285	315	315	315	315	315	280	280	315
			IPT(fz)	.0012	.0012	.0012	.0010	.0010	.0010	.0030	.0030	.0030	.0030	.0030	.0027	.0027	.0029
			RPM	9730	9730	9730	8760	8760	8760	6380	6380	6380	6380	6380	5740	5740	5910
			IPM(FEED)	22	22	22	18	18	18	38	38	38	38	38	31	31	34
			Ap	.0061	.0061	.0061	.0035	.0035	.0035	.0131	.0131	.0092	.0092	.0092	.0052	.0052	.0100
	10	High alloyed steel, and tool steel	SFM(Vc)	335	335	335	305	305	305	330	330	330	330	330	295	295	330
			IPT(fz)	.0016	.0016	.0016	.0014	.0014	.0014	.0032	.0032	.0032	.0032	.0032	.0029	.0029	.0036
			RPM	10300	10300	10300	9270	9270	9270	6720	6720	6720	6720	6720	6050	6050	6200
			IPM(FEED)	32	32	32	26	26	26	43	43	43	43	43	35	35	44
			Ap	.0079	.0079	.0079	.0045	.0045	.0045	.0169	.0169	.0118	.0118	.0118	.0067	.0067	.0128
	11.1-11.2		SFM(Vc)	320	320	320	285	285	285	315	315	315	315	315	280	280	315
			IPT(fz)	.0012	.0012	.0012	.0010	.0010	.0010	.0030	.0030	.0030	.0030	.0030	.0027	.0027	.0029
			RPM	9730	9730	9730	8760	8760	8760	6380	6380	6380	6380	6380	5740	5740	5910
			IPM(FEED)	22	22	22	18	18	18	38	38	38	38	38	31	31	34
			Ap	.0061	.0061	.0061	.0035	.0035	.0035	.0131	.0131	.0092	.0092	.0092	.0052	.0052	.0100
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	335	335	335	305	305	305	330	330	330	330	330	295	295	330
			IPT(fz)	.0016	.0016	.0016	.0014	.0014	.0014	.0032	.0032	.0032	.0032	.0032	.0029	.0029	.0036
			RPM	10300	10300	10300	9270	9270	9270	6720	6720	6720	6720	6720	6050	6050	6200
			IPM(FEED)	32	32	32	26	26	26	43	43	43	43	43	35	35	44
			Ap	.0079	.0079	.0079	.0045	.0045	.0045	.0169	.0169	.0118	.0118	.0118	.0067	.0067	.0128
H	38.1-38.2	Hardened steel	SFM(Vc)	205	205	205	185	185	185	275	275	275	275	275	250	250	280
			IPT(fz)	.0013	.0013	.0013	.0012	.0012	.0012	.0023	.0023	.0023	.0023	.0023	.0020	.0020	.0022
			RPM	6240	6240	6240	5610	5610	5610	5630	5630	5630	5630	5630	5060	5060	5230
			IPM(FEED)	17	17	17	14	14	14	25	25	25	25	25	21	21	23
			Ap	.0044	.0044	.0044	.0025	.0025	.0025	.0094	.0094	.0066	.0066	.0066	.0037	.0037	.0071
	40	Chilled Cast Iron	SFM(Vc)	320	320	320	285	285	285	315	315	315	315	315	280	280	315
			IPT(fz)	.0012	.0012	.0012	.0010	.0010	.0010	.0030	.0030	.0030	.0030	.0030	.0027	.0027	.0029
			RPM	9730	9730	9730	8760	8760	8760	6380	6380	6380	6380	6380	5740	5740	5910
			IPM(FEED)	22	22	22	18	18	18	38	38	38	38	38	31	31	34
			Ap	.0061	.0061	.0061	.0035	.0035	.0035	.0131	.0131	.0092	.0092	.0092	.0052	.0052	.0100
	41	Hardened Cast Iron	SFM(Vc)	205	205	205	185	185	185	275	275	275	275	275	250	250	280
			IPT(fz)	.0013	.0013	.0013	.0012	.0012	.0012	.0023	.0023	.0023	.0023	.0023	.0020	.0020	.0022
			RPM	6240	6240	6240	5610	5610	5610	5630	5630	5630	5630	5630	5060	5060	5230
			IPM(FEED)	17	17	17	14	14	14	25	25	25	25	25	21	21	23
			Ap	.0044	.0044	.0044	.0025	.0025	.0025	.0094	.0094	.0066	.0066	.0066	.0037	.0037	.0071

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

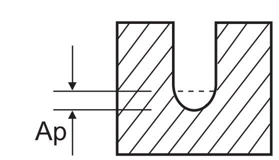
RECOMMENDED CUTTING CONDITIONS

GMF22 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø) / LBS											
			13/64	13/64	13/64	13/64	1/4	1/4	1/4	5/16	3/8	3/8	1/2	1/2
		LBS	1 3/16	1 3/8	1 1/2	2	5/8	3/4	1 3/16	1	1 3/16	1 3/4	1 3/8	2
P	1-8	SFM(Vc)	295	295	295	295	330	330	330	330	330	330	325	325
		IPT(fz)	.0032	.0032	.0032	.0032	.0039	.0039	.0039	.0047	.0055	.0055	.0059	.0059
		RPM	5580	5580	5580	5580	5010	5010	5010	4030	3360	3360	2500	2500
		IPM(FEED)	36	36	36	36	39	39	39	38	37	37	30	30
		Ap	.0073	.0073	.0073	.0046	.0225	.0225	.0157	.0197	.0236	.0236	.0450	.0315
	9	SFM(Vc)	285	285	285	285	310	310	310	315	315	315	310	310
		IPT(fz)	.0026	.0026	.0026	.0026	.0032	.0032	.0032	.0039	.0044	.0044	.0047	.0047
		RPM	5320	5320	5320	5320	4720	4720	4720	3830	3200	3200	2380	2380
		IPM(FEED)	28	28	28	28	31	31	31	30	28	28	22	22
		Ap	.0057	.0057	.0057	.0035	.0175	.0175	.0122	.0153	.0184	.0184	.0350	.0245
	10	SFM(Vc)	295	295	295	295	330	330	330	330	330	330	325	325
		IPT(fz)	.0032	.0032	.0032	.0032	.0039	.0039	.0039	.0047	.0055	.0055	.0059	.0059
		RPM	5580	5580	5580	5580	5010	5010	5010	4030	3360	3360	2500	2500
		IPM(FEED)	36	36	36	36	39	39	39	38	37	37	30	30
		Ap	.0073	.0073	.0073	.0046	.0225	.0225	.0157	.0197	.0236	.0236	.0450	.0315
	11.1-11.2	SFM(Vc)	285	285	285	285	310	310	310	315	315	315	310	310
		IPT(fz)	.0026	.0026	.0026	.0026	.0032	.0032	.0032	.0039	.0044	.0044	.0047	.0047
		RPM	5320	5320	5320	5320	4720	4720	4720	3830	3200	3200	2380	2380
		IPM(FEED)	28	28	28	28	31	31	31	30	28	28	22	22
		Ap	.0057	.0057	.0057	.0035	.0175	.0175	.0122	.0153	.0184	.0184	.0350	.0245
K	15-20	SFM(Vc)	295	295	295	295	330	330	330	330	330	330	325	325
		IPT(fz)	.0032	.0032	.0032	.0032	.0039	.0039	.0039	.0047	.0055	.0055	.0059	.0059
		RPM	5580	5580	5580	5580	5010	5010	5010	4030	3360	3360	2500	2500
		IPM(FEED)	36	36	36	36	39	39	39	38	37	37	30	30
		Ap	.0073	.0073	.0073	.0046	.0225	.0225	.0157	.0197	.0236	.0236	.0450	.0315
H	38.1-38.2	SFM(Vc)	250	250	250	250	270	270	270	270	270	270	270	270
		IPT(fz)	.0020	.0020	.0020	.0020	.0025	.0025	.0025	.0030	.0030	.0030	.0032	.0032
		RPM	4710	4710	4710	4710	4160	4160	4160	3330	2760	2760	2060	2060
		IPM(FEED)	19	19	19	19	21	21	21	20	17	17	13	13
		Ap	.0041	.0041	.0041	.0025	.0125	.0125	.0087	.0109	.0131	.0131	.0250	.0175
	40	SFM(Vc)	285	285	285	285	310	310	310	315	315	315	310	310
		IPT(fz)	.0026	.0026	.0026	.0026	.0032	.0032	.0032	.0039	.0044	.0044	.0047	.0047
		RPM	5320	5320	5320	5320	4720	4720	4720	3830	3200	3200	2380	2380
		IPM(FEED)	28	28	28	28	31	31	31	30	28	28	22	22
		Ap	.0057	.0057	.0057	.0035	.0175	.0175	.0122	.0153	.0184	.0184	.0350	.0245
	41	SFM(Vc)	250	250	250	250	270	270	270	270	270	270	270	270
		IPT(fz)	.0020	.0020	.0020	.0020	.0025	.0025	.0025	.0030	.0030	.0030	.0032	.0032
		RPM	4710	4710	4710	4710	4160	4160	4160	3330	2760	2760	2060	2060
		IPM(FEED)	19	19	19	19	21	21	21	20	17	17	13	13
		Ap	.0041	.0041	.0041	.0025	.0125	.0125	.0087	.0109	.0131	.0131	.0250	.0175

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



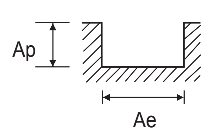
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF23 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	.004	.008	.012	.015	.020	.024	.028	.031	.035	.040	.047	1/16	5/64	3/32
						Diameter (Ø)													
P	1-8	Non-alloy steel Low alloy steel	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	45	85	120	160	185	200	200	205	220	220	225	230	240	265
					IPT(fz)	.00004	.00005	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0004	.0004
					RPM	41300	41300	38400	40900	35400	31500	27600	25400	23800	21200	18100	14200	11700	10800
					IPM(FEED)	4	4	4	5	5	6	6	7	7	7	8	8	8	9
	9	Low alloy steel	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	25	50	70	95	110	120	120	125	130	135	135	140	155	170
					IPT(fz)	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0004
					RPM	24800	24800	23000	24600	21300	18900	16500	15200	14300	12700	10900	8500	7600	6900
					IPM(FEED)	2	2	2	3	3	3	4	4	5	5	5	5	5	6
	10	High alloyed steel, and tool steel	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	45	85	120	160	185	200	200	205	220	220	225	230	240	265
					IPT(fz)	.00004	.00005	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0004	.0004
					RPM	41300	41300	38400	40900	35400	31500	27600	25400	23800	21200	18100	14200	11700	10800
					IPM(FEED)	4	4	4	5	5	6	6	7	7	7	8	8	8	9
	11.1-11.2		1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	25	50	70	95	110	120	120	125	130	135	135	140	155	170
					IPT(fz)	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0004
					RPM	24800	24800	23000	24600	21300	18900	16500	15200	14300	12700	10900	8500	7600	6900
					IPM(FEED)	2	2	2	3	3	3	4	4	5	5	5	5	5	6
M	14.1	Stainless steel	1.0D	0.05D (Up to Ø1/32 : 0.15D)	SFM(Vc)	20	45	60	80	95	100	100	105	110	110	110	115	130	140
					IPT(fz)	.00004	.00004	.00005	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0004
					RPM	20670	20670	19190	20470	17720	15750	13780	12700	11900	10580	9050	7090	6350	5730
					IPM(FEED)	2	2	2	2	2	3	3	4	4	4	4	4	4	5
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	45	85	120	160	185	200	200	205	220	220	225	230	240	265
					IPT(fz)	.00004	.00005	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0004	.0004
					RPM	41300	41300	38400	40900	35400	31500	27600	25400	23800	21200	18100	14200	11700	10800
					IPM(FEED)	4	4	4	5	5	6	6	7	7	7	8	8	8	9
H	38.1-38.2	Hardened steel	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	15	35	50	65	75	80	80	80	85	90	90	95	105	110
					IPT(fz)	.00003	.00003	.00003	.00003	.00004	.00004	.00005	.00005	.0001	.0001	.0001	.0001	.0002	.0002
					RPM	16540	16540	15350	16380	14170	12600	11020	10160	9520	8460	7240	5670	5080	4410
					IPM(FEED)	1	1	1	1	1	1	1	1	1	1	2	1	2	2
	40	Chilled Cast Iron	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	25	50	70	95	110	120	120	125	130	135	135	140	155	170
					IPT(fz)	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0004
					RPM	24800	24800	23000	24600	21300	18900	16500	15200	14300	12700	10900	8500	7600	6900
					IPM(FEED)	2	2	2	3	3	3	4	4	5	5	5	5	5	6
	41	Hardened Cast Iron	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	15	35	50	65	75	80	80	80	85	90	90	95	105	110
					IPT(fz)	.00003	.00003	.00003	.00003	.00004	.00004	.00005	.00005	.0001	.0001	.0001	.0001	.0002	.0002
					RPM	16540	16540	15350	16380	14170	12600	11020	10160	9520	8460	7240	5670	5080	4410
					IPM(FEED)	1	1	1	1	1	1	1	1	1	1	2	1	2	2

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

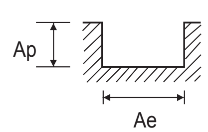
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF23 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Ae	Ap	Parameter	1/8	9/64	3/16	13/64	1/4	17/64	9/32	5/16	11/32	23/64	3/8	13/32	7/16	1/2	9/16	5/8	3/4
					Diameter (Ø)																
P	1-8	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	275	300	320	325	345	350	355	345	350	350	335	340	345	340	355	360	355
				IPT(fz)	.0005	.0007	.0010	.0011	.0013	.0014	.0016	.0019	.0019	.0020	.0021	.0021	.0021	.0022	.0021	.0021	.0021
				RPM	8400	8100	6500	6100	5300	5000	4800	4200	3900	3700	3400	3200	3000	2600	2400	2200	1800
				IPM(FEED)	9	11	13	13	14	14	15	16	15	15	14	13	12	11	10	9	7
	9	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	175	185	195	195	210	210	215	205	205	205	205	215	205	210	220	230	215
				IPT(fz)	.0005	.0007	.0010	.0011	.0014	.0015	.0015	.0017	.0017	.0016	.0017	.0016	.0017	.0017	.0017	.0016	.0016
				RPM	5300	5000	4000	3700	3200	3000	2900	2500	2300	2200	2100	2000	1800	1600	1500	1400	1100
				IPM(FEED)	6	7	8	8	9	9	9	8	8	7	7	6	6	5	5	5	4
	10	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	275	300	320	325	345	350	355	345	350	350	335	340	345	340	355	360	355
				IPT(fz)	.0005	.0007	.0010	.0011	.0013	.0014	.0016	.0019	.0019	.0020	.0021	.0021	.0021	.0022	.0021	.0021	.0021
				RPM	8400	8100	6500	6100	5300	5000	4800	4200	3900	3700	3400	3200	3000	2600	2400	2200	1800
				IPM(FEED)	9	11	13	13	14	14	15	16	15	15	14	13	12	11	10	9	7
	11.1-11.2	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	175	185	195	195	210	210	215	205	205	205	205	215	205	210	220	230	215
				IPT(fz)	.0005	.0007	.0010	.0011	.0014	.0015	.0015	.0017	.0017	.0016	.0017	.0016	.0017	.0017	.0017	.0016	.0016
				RPM	5300	5000	4000	3700	3200	3000	2900	2500	2300	2200	2100	2000	1800	1600	1500	1400	1100
				IPM(FEED)	6	7	8	8	9	9	9	8	8	7	7	6	6	5	5	5	4
M	14.1	1.0D	0.05D (Up to Ø1/32 : 0.15D)	SFM(Vc)	145	155	165	165	175	180	180	175	175	175	175	175	170	170	175	175	175
				IPT(fz)	.0006	.0007	.0009	.0011	.0014	.0014	.0015	.0017	.0018	.0019	.0020	.0020	.0020	.0021	.0021	.0021	.0020
				RPM	4370	4160	3330	3060	2680	2560	2420	2120	1940	1860	1760	1630	1500	1290	1190	1070	880
				IPM(FEED)	5	6	6	7	7	7	7	7	7	7	7	6	6	5	5	5	4
K	15-20	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	275	300	320	325	345	350	355	345	350	350	335	340	345	340	355	360	355
				IPT(fz)	.0005	.0007	.0010	.0011	.0013	.0014	.0016	.0019	.0019	.0020	.0021	.0021	.0021	.0022	.0021	.0021	.0021
				RPM	8400	8100	6500	6100	5300	5000	4800	4200	3900	3700	3400	3200	3000	2600	2400	2200	1800
				IPM(FEED)	9	11	13	13	14	14	15	16	15	15	14	13	12	11	10	9	7
H	38.1-38.2	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	105	115	120	120	125	130	135	140	140	140	140	140	145	145	150	150	140
				IPT(fz)	.0003	.0003	.0004	.0004	.0005	.0008	.0008	.0009	.0010	.0010	.0010	.0011	.0008	.0009	.0010	.0011	.0007
				RPM	3170	3090	2490	2250	1890	1850	1800	1690	1560	1500	1430	1330	1250	1100	1010	910	710
				IPM(FEED)	2	2	2	2	2	3	3	3	3	3	3	3	2	2	2	2	1
	40	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	175	185	195	195	210	210	215	205	205	205	205	215	205	210	220	230	215
				IPT(fz)	.0005	.0007	.0010	.0011	.0014	.0015	.0015	.0017	.0017	.0016	.0017	.0016	.0017	.0017	.0017	.0016	.0016
				RPM	5300	5000	4000	3700	3200	3000	2900	2500	2300	2200	2100	2000	1800	1600	1500	1400	1100
				IPM(FEED)	6	7	8	8	9	9	9	8	8	7	7	6	6	5	5	5	4
	41	1.0D	0.5D (Up to Ø1/8 : 0.2D) (Up to Ø1/32 : 0.15D)	SFM(Vc)	105	115	120	120	125	130	135	140	140	140	140	140	145	145	150	150	140
				IPT(fz)	.0003	.0003	.0004	.0004	.0005	.0008	.0008	.0009	.0010	.0010	.0010	.0011	.0008	.0009	.0010	.0011	.0007
				RPM	3170	3090	2490	2250	1890	1850	1800	1690	1560	1500	1430	1330	1250	1100	1010	910	710
				IPM(FEED)	2	2	2	2	2	3	3	3	3	3	3	3	2	2	2	2	1

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG 4G MILL END MILLS

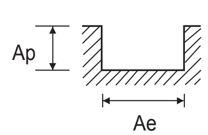
RECOMMENDED CUTTING CONDITIONS

GMF24 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/64	3/64	3/64	3/64	3/64	1/16	1/16	1/16	1/16	1/16	5/64	5/64	5/64
					LOC	1/8	5/32	1/4	5/16	3/8	1/4	5/16	3/8	1/2	5/8	5/16	3/8	1/2
P	1-8	Non-alloy steel Low alloy steel	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	170	170	150	150	150	165	165	145	145	145	190	190	170
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
					RPM	13710	13710	12340	12340	12340	10000	10000	9000	9000	9000	9210	9210	8290
					IPM(FEED)	3	3	3	2	2	3	3	2	2	2	3	3	3
P	9	Low alloy steel	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	135	135	120	120	120	130	130	120	120	120	150	150	135
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002
					RPM	10970	10970	9870	9870	9870	8000	8000	7200	7200	7200	7370	7370	6640
					IPM(FEED)	3	3	2	2	2	2	2	2	2	2	3	3	2
P	10	High alloyed steel, and tool steel	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	170	170	150	150	150	165	165	145	145	145	190	190	170
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
					RPM	13710	13710	12340	12340	12340	10000	10000	9000	9000	9000	9210	9210	8290
					IPM(FEED)	3	3	3	2	2	3	3	2	2	2	3	3	3
P	11.1-11.2	High alloyed steel, and tool steel	1.0D	**0.3D (Up to Ø1/8 : 0.2D)**	SFM(Vc)	135	135	120	120	120	130	130	120	120	120	150	150	135
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002
					RPM	10970	10970	9870	9870	9870	8000	8000	7200	7200	7200	7370	7370	6640
					IPM(FEED)	3	3	2	2	2	2	2	2	2	2	3	3	2
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	170	170	150	150	150	165	165	145	145	145	190	190	170
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
					RPM	13710	13710	12340	12340	12340	10000	10000	9000	9000	9000	9210	9210	8290
					IPM(FEED)	3	3	3	2	2	3	3	2	2	2	3	3	3
H	38.1-38.2	Hardened steel	1.0D	0.05D	SFM(Vc)	85	85	75	75	75	80	80	75	75	75	95	95	85
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001
					RPM	6860	6860	6170	6170	6170	5000	5000	4500	4500	4500	4610	4610	4150
					IPM(FEED)	1.2	1.2	1.0	1.0	0.8	1.0	1.0	0.8	0.8	0.8	1.4	1.4	1.2
H	40	Chilled Cast Iron	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	135	135	120	120	120	130	130	120	120	120	150	150	135
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002
					RPM	10970	10970	9870	9870	9870	8000	8000	7200	7200	7200	7370	7370	6640
					IPM(FEED)	3	3	2	2	2	2	2	2	2	2	3	3	2
H	41	Hardened Cast Iron	1.0D	0.05D	SFM(Vc)	85	85	75	75	75	80	80	75	75	75	95	95	85
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001
					RPM	6860	6860	6170	6170	6170	5000	5000	4500	4500	4500	4610	4610	4150
					IPM(FEED)	1.2	1.2	1.0	1.0	0.8	1.0	1.0	0.8	0.8	0.8	1.4	1.4	1.2

(Column headings: Diameter (Ø) / LOC)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG 4G MILL END MILLS

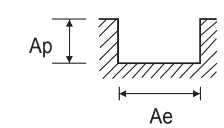
RECOMMENDED CUTTING CONDITIONS

GMF24 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	5/64	3/32	1/8	1/8	1/8	1/8	1/8	3/16	3/16	3/16	3/16	3/16	13/64
					LOC	5/8	5/8	3/8	1/2	5/8	3/4	1	1/2	5/8	3/4	1	1 3/16	3/4
P	1-8	Non-alloy steel Low alloy steel	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	170	190	185	185	185	165	165	180	180	180	160	160	220
					IPT(fz)	.0001	.0002	.0003	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0005	.0004	.0007
					RPM	8290	7640	5670	5670	5670	5100	5100	3630	3630	3630	3270	3270	4130
					IPM(FEED)	2	3	4	4	4	3	3	3	3	3	3	3	6
P	9	Low alloy steel	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	135	150	150	150	150	135	135	140	140	140	130	130	175
					IPT(fz)	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0005	.0004	.0007
					RPM	6640	6150	4600	4600	4600	4140	4140	2890	2890	2890	2600	2600	3270
					IPM(FEED)	2	3	3	3	3	2	2	3	3	3	3	2	5
P	10	High alloyed steel, and tool steel	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	170	190	185	185	185	165	165	180	180	180	160	160	220
					IPT(fz)	.0001	.0002	.0003	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0005	.0004	.0007
					RPM	8290	7640	5670	5670	5670	5100	5100	3630	3630	3630	3270	3270	4130
					IPM(FEED)	2	3	4	4	4	3	3	3	3	3	3	3	6
P	11.1-11.2	High alloyed steel, and tool steel	1.0D	**0.3D (Up to Ø1/8 : 0.2D)**	SFM(Vc)	135	150	150	150	150	135	135	140	140	140	130	130	175
					IPT(fz)	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0005	.0004	.0007
					RPM	6640	6150	4600	4600	4600	4140	4140	2890	2890	2890	2600	2600	3270
					IPM(FEED)	2	3	3	3	3	2	2	3	3	3	3	2	5
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	170	170	190	185	185	185	165	165	180	180	180	160	160
					IPT(fz)	.0002	.0001	.0002	.0003	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0005	.0004
					RPM	8290	8290	7640	5670	5670	5670	5100	5100	3630	3630	3630	3270	3270
					IPM(FEED)	3	2	3	4	4	4	3	3	3	3	3	3	3
H	38.1-38.2	Hardened steel	1.0D	0.05D	SFM(Vc)	85	85	95	95	95	95	85	85	90	90	90	80	80
					IPT(fz)	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004
					RPM	4150	4150	3820	2830	2830	2830	2550	2550	1820	1820	1820	1640	1640
					IPM(FEED)	1.2	1.0	1.4	1.4	1.4	1.4	1.2	1.0	1.4	1.4	1.4	1.2	1.2
H	40	Chilled Cast Iron	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	135	150	150	150	150	135	135	140	140	140	130	130	175
					IPT(fz)	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0005	.0004	.0007
					RPM	6640	6150	4600	4600	4600	4140	4140	2890	2890	2890	2600	2600	3270
					IPM(FEED)	2	3	3	3	3	2	2	3	3	3	3	2	5
H	41	Hardened Cast Iron	1.0D	0.05D	SFM(Vc)	85	95	95	95	95	85	85	90	90	90	80	80	115
					IPT(fz)	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0005
					RPM	4150	3820	2830	2830	2830	2550	2550	1820	1820	1820	1640	1640	2140
					IPM(FEED)	1.0	1.4	1.4	1.4	1.4	1.2	1.0	1.4	1.4	1.4	1.2	1.2	2.0

(Column headings: Diameter (Ø) / LOC)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

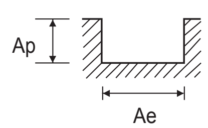
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF24 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Ae	Ap	Parameter	Diameter (Ø) / LOC															
					13/64	13/64	13/64	1/4	1/4	1/4	1/4	1/4	1/4	1/4	5/16	5/16	5/16	5/16	5/16	5/16
				LOC	1	1 3/16	1 1/2	5/8	3/4	1	1 3/16	1 3/8	1 1/2	1 3/4	1	1 3/16	1 3/8	1 1/2	1 3/4	2
P	1-8	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	220	200	200	220	220	220	220	200	200	200	240	240	240	240	215	215
				IPT(fz)	.0007	.0006	.0006	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010
				RPM	4130	3720	3720	3390	3390	3390	3390	3050	3050	3050	2930	2930	2930	2930	2630	2630
				IPM(FEED)	6	5	5	6	6	6	5	5	4	4	8	8	8	7	6	5
	9	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	175	155	155	180	180	180	180	160	160	160	190	190	190	190	170	170
				IPT(fz)	.0007	.0006	.0006	.0010	.0010	.0010	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010
				RPM	3270	2940	2940	2720	2720	2720	2720	2450	2450	2450	2320	2320	2320	2320	2080	2080
				IPM(FEED)	5	4	4	5	5	5	5	4	4	4	6	6	6	5	5	4
	10	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	220	200	200	220	220	220	220	200	200	200	240	240	240	240	215	215
				IPT(fz)	.0007	.0006	.0006	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010
				RPM	4130	3720	3720	3390	3390	3390	3390	3050	3050	3050	2930	2930	2930	2930	2630	2630
				IPM(FEED)	6	5	5	6	6	6	5	5	4	4	8	8	8	7	6	5
	11.1-11.2	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	175	155	155	180	180	180	180	160	160	160	190	190	190	190	170	170
				IPT(fz)	.0007	.0006	.0006	.0010	.0010	.0010	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010
				RPM	3270	2940	2940	2720	2720	2720	2720	2450	2450	2450	2320	2320	2320	2320	2080	2080
				IPM(FEED)	5	4	4	5	5	5	5	4	4	4	6	6	6	5	5	4
K	15-20	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	220	200	200	220	220	220	220	200	200	200	240	240	240	240	215	215
				IPT(fz)	.0007	.0006	.0006	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010
				RPM	4130	3720	3720	3390	3390	3390	3390	3050	3050	3050	2930	2930	2930	2930	2630	2630
				IPM(FEED)	6	5	5	6	6	6	5	5	4	4	8	8	8	7	6	5
H	38.1-38.2	1.0D	0.05D	SFM(Vc)	115	105	105	115	115	115	115	105	105	105	125	125	125	125	115	115
				IPT(fz)	.0005	.0004	.0004	.0007	.0007	.0007	.0006	.0006	.0005	.0005	.0009	.0009	.0009	.0008	.0008	.0007
				RPM	2140	1930	1930	1760	1760	1760	1760	1580	1580	1580	1530	1530	1530	1530	1380	1380
				IPM(FEED)	2.0	1.6	1.6	2.4	2.4	2.4	2.2	2.0	1.6	1.6	2.8	2.8	2.8	2.4	2.2	2.0
	40	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	175	155	155	180	180	180	180	160	160	160	190	190	190	190	170	170
				IPT(fz)	.0007	.0006	.0006	.0010	.0010	.0010	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010
				RPM	3270	2940	2940	2720	2720	2720	2720	2450	2450	2450	2320	2320	2320	2320	2080	2080
				IPM(FEED)	5	4	4	5	5	5	5	4	4	4	6	6	6	5	5	4
	41	1.0D	0.05D	SFM(Vc)	115	105	105	115	115	115	115	105	105	105	125	125	125	125	115	115
				IPT(fz)	.0005	.0004	.0004	.0007	.0007	.0007	.0006	.0006	.0005	.0005	.0009	.0009	.0009	.0008	.0008	.0007
				RPM	2140	1930	1930	1760	1760	1760	1760	1580	1580	1580	1530	1530	1530	1530	1380	1380
				IPM(FEED)	2.0	1.6	1.6	2.4	2.4	2.4	2.2	2.0	1.6	1.6	2.8	2.8	2.8	2.4	2.2	2.0

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



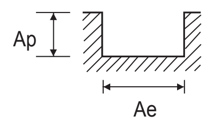
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF24 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Ae	Ap	Parameter	Diameter (Ø) / LOC														
					3/8	3/8	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	1/2	1/2	5/8	3/4	3/4
				LOC	1 3/16	1 3/8	1 1/2	1 3/4	2	2 3/8	1 3/8	1 1/2	1 3/4	2	2 1/8	2 3/8	1 1/2	3 1/2	4 1/4
P	1-8	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	265	265	265	265	240	240	235	235	235	235	235	235	285	265	240
				IPT(fz)	.0015	.0015	.0015	.0013	.0013	.0011	.0015	.0015	.0015	.0013	.0013	.0013	.0016	.0013	.0012
				RPM	2700	2700	2700	2700	2430	2430	1790	1790	1790	1790	1790	1790	1730	1340	1210
				IPM(FEED)	8	8	8	7	6	6	5	5	5	5	5	5	6	3	3
	9	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	215	215	215	215	195	195	195	195	195	195	195	195	215	205	185
				IPT(fz)	.0015	.0015	.0015	.0013	.0012	.0011	.0016	.0016	.0016	.0013	.0013	.0013	.0016	.0011	.0011
				RPM	2200	2200	2200	2200	1980	1980	1490	1490	1490	1490	1490	1490	1300	1050	940
				IPM(FEED)	7	7	7	6	5	4	5	5	5	4	4	4	4	2	2
	10	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	265	265	265	265	240	240	235	235	235	235	235	235	285	265	240
				IPT(fz)	.0015	.0015	.0015	.0013	.0013	.0011	.0015	.0015	.0015	.0013	.0013	.0013	.0016	.0013	.0012
				RPM	2700	2700	2700	2700	2430	2430	1790	1790	1790	1790	1790	1790	1730	1340	1210
				IPM(FEED)	8	8	8	7	6	6	5	5	5	5	5	5	6	3	3
	11.1-11.2	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	215	215	215	215	195	195	195	195	195	195	195	195	215	205	185
				IPT(fz)	.0015	.0015	.0015	.0013	.0012	.0011	.0016	.0016	.0016	.0013	.0013	.0013	.0016	.0011	.0011
				RPM	2200	2200	2200	2200	1980	1980	1490	1490	1490	1490	1490	1490	1300	1050	940
				IPM(FEED)	7	7	7	6	5	4	5	5	5	4	4	4	4	2	2
K	15-20	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	265	265	265	265	240	240	235	235	235	235	235	235	285	265	240
				IPT(fz)	.0015	.0015	.0015	.0013	.0013	.0011	.0015	.0015	.0015	.0013	.0013	.0013	.0016	.0013	.0012
				RPM	2700	2700	2700	2700	2430	2430	1790	1790	1790	1790	1790	1790	1730	1340	1210
				IPM(FEED)	8	8	8	7	6	6	5	5	5	5	5	5	6	3	3
H	38.1-38.2	1.0D	0.05D	SFM(Vc)	130	130	130	130	120	120	120	120	120	120	120	120	135	130	120
				IPT(fz)	.0011	.0011	.0011	.0010	.0010	.0008	.0011	.0011	.0011	.0009	.0009	.0009	.0012	.0009	.0008
				RPM	1330	1330	1330	1330	1200	1200	900	900	900	900	900	900	810	660	600
				IPM(FEED)	3.0	3.0	3.0	2.6	2.4	2.0	2.0	2.0	2.0	1.6	1.6	1.6	2.0	1.2	1.0
	40	1.0D	0.3D (Up to Ø1/8 : 0.2D)	SFM(Vc)	215	215	215	215	195	195	195	195	195	195	195	195	215	205	185
				IPT(fz)	.0015	.0015	.0015	.0013	.0012	.0011	.0016	.0016	.0016	.0013	.0013	.0013	.0016	.0011	.0011
				RPM	2200	2200	2200	2200	1980	1980	1490	1490	1490	1490	1490	1490	1300	1050	940
				IPM(FEED)	7	7	7	6	5	4	5	5	5	4	4	4	4	2	2
	41	1.0D	0.05D	SFM(Vc)	130	130	130	130	120	120	120	120	120	120	120	120	135	130	120
				IPT(fz)	.0011	.0011	.0011	.0010	.0010	.0008	.0011	.0011	.0011	.0009	.0009	.0009	.0012	.0009	.0008
				RPM	1330	1330	1330	1330	1200	1200	900	900	900	900	900	900	810	660	600
				IPM(FEED)	3.0	3.0	3.0	2.6	2.4	2.0	2.0	2.0	2.0	1.6	1.6	1.6	2.0	1.2	1.0

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

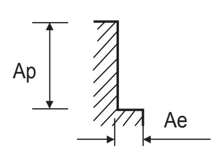
RECOMMENDED CUTTING CONDITIONS

GMF25, 26 SERIES — 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/64	1/16	5/16	3/32	1/8	9/64	3/16	13/64	7/32	1/4
P	1-8	Non-alloy steel Low alloy steel	0.05D	1.0D	SFM(Vc)	280	290	1190	330	345	370	400	405	420	430
					IPT(fz)	.0001	.0002	.0002	.0003	.0003	.0005	.0007	.0008	.0009	.0010
					RPM	22680	17720	14560	13440	10540	10090	8180	7640	7330	6570
					IPM(FEED)	12	11	12	14	13	19	24	25	27	27
	9	Low alloy steel	0.05D	1.0D	SFM(Vc)	165	175	780	210	215	230	245	245	255	260
					IPT(fz)	.0001	.0002	.0002	.0002	.0003	.0005	.0007	.0008	.0009	.0011
					RPM	13610	10630	9520	8610	6570	6230	4960	4580	4410	3970
					IPM(FEED)	7	7	7	9	8	12	15	15	17	17
	10	High alloyed steel, and tool steel	0.05D	1.0D	SFM(Vc)	280	290	1190	330	345	370	400	405	420	430
					IPT(fz)	.0001	.0002	.0002	.0003	.0003	.0005	.0007	.0008	.0009	.0010
					RPM	22680	17720	14560	13440	10540	10090	8180	7640	7330	6570
					IPM(FEED)	12	11	12	14	13	19	24	25	27	27
	11.1-11.2		0.05D	1.0D	SFM(Vc)	165	175	780	210	215	230	245	245	255	260
					IPT(fz)	.0001	.0002	.0002	.0002	.0003	.0005	.0007	.0008	.0009	.0011
					RPM	13610	10630	9520	8610	6570	6230	4960	4580	4410	3970
					IPM(FEED)	7	7	7	9	8	12	15	15	17	17
M	14.1	Stainless steel	0.05D	1.0D	SFM(Vc)	140	145	650	175	180	190	205	205	210	220
					IPT(fz)	.0001	.0002	.0002	.0003	.0003	.0005	.0007	.0008	.0009	.0010
					RPM	11340	8860	7940	7170	5460	5200	4160	3830	3710	3350
					IPM(FEED)	6	6	6	7	7	10	12	13	13	13
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	1.0D	SFM(Vc)	280	290	1190	330	345	370	400	405	420	430
					IPT(fz)	.0001	.0002	.0002	.0003	.0003	.0005	.0007	.0008	.0009	.0010
					RPM	22680	17720	14560	13440	10540	10090	8180	7640	7330	6570
					IPM(FEED)	12	11	12	14	13	19	24	25	27	27
H	38.1-38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	110	115	130	135	130	140	155	150	155	155
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0003	.0003
					RPM	9070	7090	6350	5510	3970	3860	3110	2810	2670	2360
					IPM(FEED)	2	2	2	3	2	3	3	3	3	3
	40	Chilled Cast Iron	0.05D	1.0D	SFM(Vc)	165	175	780	210	215	230	245	245	255	260
					IPT(fz)	.0001	.0002	.0002	.0002	.0003	.0005	.0007	.0008	.0009	.0011
					RPM	13610	10630	9520	8610	6570	6230	4960	4580	4410	3970
					IPM(FEED)	7	7	7	9	8	12	15	15	17	17
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	110	115	130	135	130	140	155	150	155	155
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0003	.0003
					RPM	9070	7090	6350	5510	3970	3860	3110	2810	2670	2360
					IPM(FEED)	2	2	2	3	2	3	3	3	3	3

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



4G MILL END MILLS

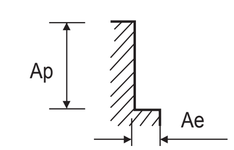
RECOMMENDED CUTTING CONDITIONS

GMF25, 26 SERIES — 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Ae	Ap	Parameter	17/64	9/32	19/64	5/16	11/32	23/64	3/8	7/16	1/2	9/16	5/8	3/4
P	1-8	0.05D	1.0D	SFM(Vc)	435	440	440	435	435	430	420	425	425	445	455	430
				IPT(fz)	.0011	.0012	.0013	.0014	.0014	.0015	.0015	.0016	.0016	.0016	.0016	.0016
				RPM	6290	5980	5650	5290	4830	4590	4280	3710	3240	3030	2770	2200
				IPM(FEED)	28	28	29	30	28	27	27	23	21	19	18	14
	9	0.05D	1.0D	SFM(Vc)	265	265	265	260	260	260	255	260	260	275	280	275
				IPT(fz)	.0011	.0011	.0012	.0013	.0012	.0012	.0012	.0012	.0013	.0012	.0012	.0013
				RPM	3800	3610	3390	3170	2910	2790	2620	2280	1980	1860	1710	1400
				IPM(FEED)	17	16	16	16	15	14	13	11	10	9	9	7
	10	0.05D	1.0D	SFM(Vc)	435	440	440	435	435	430	420	425	425	445	455	430
				IPT(fz)	.0011	.0012	.0013	.0014	.0014	.0015	.0015	.0016	.0016	.0016	.0016	.0016
				RPM	6290	5980	5650	5290	4830	4590	4280	3710	3240	3030	2770	2200
				IPM(FEED)	28	28	29	30	28	27	27	23	21	19	18	14
	11.1-11.2	0.05D	1.0D	SFM(Vc)	265	265	265	260	260	260	255	260	260	275	280	275
				IPT(fz)	.0011	.0011	.0012	.0013	.0012	.0012	.0012	.0012	.0013	.0012	.0012	.0013
				RPM	3800	3610	3390	3170	2910	2790	2620	2280	1980	1860	1710	1400
				IPM(FEED)	17	16	16	16	15	14	13	11	10	9	9	7
M	14.1	0.05D	1.0D	SFM(Vc)	225	225	220	215	220	220	215	215	210	220	225	215
				IPT(fz)	.0011	.0011	.0013	.0014	.0014	.0014	.0015	.0015	.0015	.0015	.0015	.0015
				RPM	3200	3030	2840	2650	2420	2330	2200	1880	1610	1510	1390	1100
				IPM(FEED)	14	14	14	15	14	13	13	11	10	9	8	6
K	15-20	0.05D	1.0D	SFM(Vc)	435	440	440	435	435	430	420	425	425	445	455	430
				IPT(fz)	.0011	.0012	.0013	.0014	.0014	.0015	.0015	.0016	.0016	.0016	.0016	.0016
				RPM	6290	5980	5650	5290	4830	4590	4280	3710	3240	3030	2770	2200
				IPM(FEED)	28	28	29	30	28	27	27	23	21	19	18	14
H	38.1-38.2	0.05D	1.0D	SFM(Vc)	160	165	170	175	175	175	175	180	180	185	185	175
				IPT(fz)	.0004	.0004	.0005	.0006	.0005	.0005	.0006	.0006	.0005	.0006	.0007	.0006
				RPM	2310	2250	2190	2120	1950	1870	1780	1560	1370	1260	1140	890
				IPM(FEED)	4	4	4	5	4	4	4	4	3	3	3	2
	40	0.05D	1.0D	SFM(Vc)	265	265	265	260	260	260	255	260	260	275	280	275
				IPT(fz)	.0011	.0011	.0012	.0013	.0012	.0012	.0012	.0012	.0013	.0012	.0012	.0013
				RPM	3800	3610	3390	3170	2910	2790	2620	2280	1980	1860	1710	1400
				IPM(FEED)	17	16	16	16	15	14	13	11	10	9	9	7
	41	0.05D	1.0D	SFM(Vc)	160	165	170	175	175	175	175	180	180	185	185	175
				IPT(fz)	.0004	.0004	.0005	.0006	.0005	.0005	.0006	.0006	.0005	.0006	.0007	.0006
				RPM	2310	2250	2190	2120	1950	1870	1780	1560	1370	1260	1140	890
				IPM(FEED)	4	4	4	5	4	4	4	4	3	3	3	2

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF27 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)												
						3/64	3/64	3/64	3/64	1/16	5/64	5/64	5/64	5/64	3/32	3/32	1/8	1/8
					LOC	1/8	5/32	3/16	1/4	1/4	5/16	3/8	1/2	9/16	3/8	1/2	3/8	1/2
P	1-8	Non-alloy steel Low alloy steel	0.05D	2.5D	SFM(Vc)	200	200	200	180	215	220	220	195	195	230	210	230	230
					IPT(fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0004
					RPM	16330	16330	16330	14690	13040	10670	10670	9600	9600	9440	8500	7000	7000
					IPM(FEED)	8	8	8	7	8	10	10	8	8	11	10	10	10
	9	Low alloy steel	0.05D	2.5D	SFM(Vc)	115	115	115	105	120	125	125	110	110	135	120	135	135
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003
					RPM	9310	9310	9310	8380	7430	6100	6100	5490	5490	5420	4880	4050	4050
					IPM(FEED)	3	3	3	3	3	4	4	3	3	5	4	5	5
	10	High alloyed steel, and tool steel	0.05D	2.5D	SFM(Vc)	200	200	200	180	215	220	220	195	195	230	210	230	230
					IPT(fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0004
					RPM	16330	16330	16330	14690	13040	10670	10670	9600	9600	9440	8500	7000	7000
					IPM(FEED)	8	8	8	7	8	10	10	8	8	11	10	10	10
	11.1-11.2		0.05D	2.5D	SFM(Vc)	115	115	115	105	120	125	125	110	110	135	120	135	135
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003
					RPM	9310	9310	9310	8380	7430	6100	6100	5490	5490	5420	4880	4050	4050
					IPM(FEED)	3	3	3	3	3	4	4	3	3	5	4	5	5
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	2.5D	SFM(Vc)	200	200	200	180	215	220	220	195	195	230	210	230	230
					IPT(fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0004
					RPM	16330	16330	16330	14690	13040	10670	10670	9600	9600	9440	8500	7000	7000
					IPM(FEED)	8	8	8	7	8	10	10	8	8	11	10	10	10
H	38.1-38.2	Hardened steel	0.02	2.0D	SFM(Vc)	70	70	70	65	75	80	80	70	70	85	75	80	80
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002
					RPM	5710	5710	5710	5140	4560	3810	3810	3430	3430	3370	3030	2490	2490
					IPM(FEED)	2	2	2	1	2	2	2	2	2	3	2	2	2
	40	Chilled Cast Iron	0.05D	2.5D	SFM(Vc)	115	115	115	105	120	125	125	110	110	135	120	135	135
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003
					RPM	9310	9310	9310	8380	7430	6100	6100	5490	5490	5420	4880	4050	4050
					IPM(FEED)	3	3	3	3	3	4	4	3	3	5	4	5	5
	41	Hardened Cast Iron	0.05D	2.5D	SFM(Vc)	70	70	70	65	75	80	80	70	70	85	75	80	80
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002
					RPM	5710	5710	5710	5140	4560	3810	3810	3430	3430	3370	3030	2490	2490
					IPM(FEED)	2	2	2	1	2	2	2	2	2	3	2	2	2

SFM = Surface Feet per Minute
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Ap : Inch (Axial Depth of Cut)
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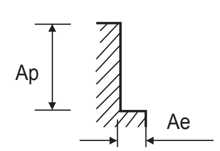


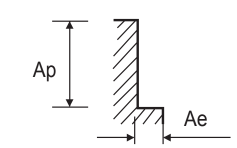
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF27 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)												
						1/8	1/8	1/8	1/8	3/16	3/16	3/16	3/16	3/16	13/64	13/64	13/64	1/4
					LOC	5/8	3/4	1	1-3/16	1/2	5/8	3/4	1	1-3/16	3/4	1	1-3/16	5/8
P	1-8	Non-alloy steel Low alloy steel	0.05D	2.5D	SFM(Vc)	230	205	205	205	245	245	245	225	225	265	265	240	275
					IPT(fz)	.0004	.0003	.0003	.0003	.0006	.0006	.0006	.0006	.0005	.0008	.0008	.0008	.0012
					RPM	7000	6300	6300	6300	5040	5040	5040	4540	4540	4970	4970	4470	4170
					IPM(FEED)	10	8	8	8	11	11	11	10	9	17	17	13	19
	9	Low alloy steel	0.05D	2.5D	SFM(Vc)	135	120	120	120	140	140	140	125	125	150	150	135	155
					IPT(fz)	.0003	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0006	.0006	.0005	.0009
					RPM	4050	3640	3640	3640	2860	2860	2860	2580	2580	2810	2810	2530	2380
					IPM(FEED)	5	4	3	3	5	5	5	4	4	7	7	5	8
	10	High alloyed steel, and tool steel	0.05D	2.5D	SFM(Vc)	230	205	205	205	245	245	245	225	225	265	265	240	275
					IPT(fz)	.0004	.0003	.0003	.0003	.0006	.0006	.0006	.0006	.0005	.0008	.0008	.0008	.0012
					RPM	7000	6300	6300	6300	5040	5040	5040	4540	4540	4970	4970	4470	4170
					IPM(FEED)	10	8	8	8	11	11	11	10	9	17	17	13	19
	11.1-11.2		0.05D	2.5D	SFM(Vc)	135	120	120	120	140	140	140	125	125	150	150	135	155
					IPT(fz)	.0003	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0006	.0006	.0005	.0009
					RPM	4050	3640	3640	3640	2860	2860	2860	2580	2580	2810	2810	2530	2380
					IPM(FEED)	5	4	3	3	5	5	5	4	4	7	7	5	8
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	2.5D	SFM(Vc)	230	205	205	205	245	245	245	225	225	265	265	240	275
					IPT(fz)	.0004	.0003	.0003	.0003	.0006	.0006	.0006	.0006	.0005	.0008	.0008	.0008	.0012
					RPM	7000	6300	6300	6300	5040	5040	5040	4540	4540	4970	4970	4470	4170
					IPM(FEED)	10	8	8	8	11	11	11	10	9	17	17	13	19
H	38.1-38.2	Hardened steel	0.02	2.0D	SFM(Vc)	80	75	75	75	90	90	90	80	80	100	100	90	100
					IPT(fz)	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0006
					RPM	2490	2250	2250	2250	1800	1800	1800	1620	1620	1840	1840	1650	1550
					IPM(FEED)	2	2	2	2	2	2	2	2	2	3	3	3	4
	40	Chilled Cast Iron	0.05D	2.5D	SFM(Vc)	135	120	120	120	140	140	140	125	125	150	150	135	155
					IPT(fz)	.0003	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0006	.0006	.0005	.0009
					RPM	4050	3640	3640	3640	2860	2860	2860	2580	2580	2810	2810	2530	2380
					IPM(FEED)	5	4	3	3	5	5	5	4	4	7	7	5	8
	41	Hardened Cast Iron	0.05D	2.5D	SFM(Vc)	80	75	75	75	90	90	90	80	80	100	100	90	100
					IPT(fz)	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0006
					RPM	2490	2250	2250	2250	1800	1800	1800	1620	1620	1840	1840	1650	1550
					IPM(FEED)	2	2	2	2	2	2	2	2	2	3	3	3	4

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

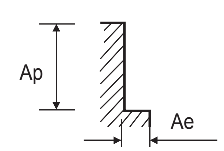
RECOMMENDED CUTTING CONDITIONS

GMF27 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Ae	Ap	Parameter	1/4	1/4	1/4	1/4	1/4	1/4	5/16	5/16	5/16	5/16	5/16	5/16	3/8	3/8	3/8
				LOC	3/4	1	1-3/16	1-3/8	1-1/2	1-3/4	1	1-3/16	1-3/8	1-1/2	1-3/4	2	1-3/16	1-3/8	1-1/2
P	1-8	0.05D	2.5D	SFM(Vc)	275	275	275	245	245	245	275	275	275	275	250	250	290	290	290
				IPT(fz)	.0012	.0012	.0010	.0010	.0009	.0009	.0016	.0016	.0016	.0014	.0014	.0012	.0019	.0019	.0019
				RPM	4170	4170	4170	3760	3760	3760	3390	3390	3390	3390	3050	3050	2960	2960	2960
				IPM(FEED)	19	19	16	15	13	13	22	22	22	19	17	15	23	23	23
	9	0.05D	2.5D	SFM(Vc)	155	155	155	140	140	140	155	155	155	155	140	140	170	170	170
				IPT(fz)	.0009	.0009	.0007	.0007	.0006	.0006	.0011	.0011	.0011	.0010	.0009	.0008	.0013	.0013	.0013
				RPM	2380	2380	2380	2140	2140	2140	1910	1910	1910	1910	1720	1720	1730	1730	1730
				IPM(FEED)	8	8	7	6	6	6	9	9	9	7	7	6	9	9	9
	10	0.05D	2.5D	SFM(Vc)	275	275	275	245	245	245	275	275	275	275	250	250	290	290	290
				IPT(fz)	.0012	.0012	.0010	.0010	.0009	.0009	.0016	.0016	.0016	.0014	.0014	.0012	.0019	.0019	.0019
				RPM	4170	4170	4170	3760	3760	3760	3390	3390	3390	3390	3050	3050	2960	2960	2960
				IPM(FEED)	19	19	16	15	13	13	22	22	22	19	17	15	23	23	23
	11.1-11.2	0.05D	2.5D	SFM(Vc)	155	155	155	140	140	140	155	155	155	155	140	140	170	170	170
				IPT(fz)	.0009	.0009	.0007	.0007	.0006	.0006	.0011	.0011	.0011	.0010	.0009	.0008	.0013	.0013	.0013
				RPM	2380	2380	2380	2140	2140	2140	1910	1910	1910	1910	1720	1720	1730	1730	1730
				IPM(FEED)	8	8	7	6	6	6	9	9	9	7	7	6	9	9	9
K	15-20	0.05D	2.5D	SFM(Vc)	275	275	275	245	245	245	275	275	275	275	250	250	290	290	290
				IPT(fz)	.0012	.0012	.0010	.0010	.0009	.0009	.0016	.0016	.0016	.0014	.0014	.0012	.0019	.0019	.0019
				RPM	4170	4170	4170	3760	3760	3760	3390	3390	3390	3390	3050	3050	2960	2960	2960
				IPM(FEED)	19	19	16	15	13	13	22	22	22	19	17	15	23	23	23
H	38.1-38.2	0.02	2.0D	SFM(Vc)	100	100	100	90	90	90	105	105	105	105	95	95	105	105	105
				IPT(fz)	.0006	.0006	.0006	.0006	.0005	.0005	.0009	.0009	.0009	.0007	.0008	.0007	.0011	.0011	.0011
				RPM	1550	1550	1550	1400	1400	1400	1270	1270	1270	1270	1140	1140	1060	1060	1060
				IPM(FEED)	4	4	3	3	3	3	4	4	4	4	3	3	5	5	5
	40	0.05D	2.5D	SFM(Vc)	155	155	155	140	140	140	155	155	155	155	140	140	170	170	170
				IPT(fz)	.0009	.0009	.0007	.0007	.0006	.0006	.0011	.0011	.0011	.0010	.0009	.0008	.0013	.0013	.0013
				RPM	2380	2380	2380	2140	2140	2140	1910	1910	1910	1910	1720	1720	1730	1730	1730
				IPM(FEED)	8	8	7	6	6	6	9	9	9	7	7	6	9	9	9
	41	0.05D	2.5D	SFM(Vc)	100	100	100	90	90	90	105	105	105	105	95	95	105	105	105
				IPT(fz)	.0006	.0006	.0006	.0006	.0005	.0005	.0009	.0009	.0009	.0007	.0008	.0007	.0011	.0011	.0011
				RPM	1550	1550	1550	1400	1400	1400	1270	1270	1270	1270	1140	1140	1060	1060	1060
				IPM(FEED)	4	4	3	3	3	3	4	4	4	4	3	3	5	5	5

(Column headers 1/4 … 3/8: Diameter (Ø))

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
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STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

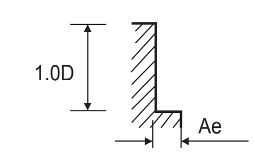
4G MILL END MILLS
RECOMMENDED CUTTING CONDITIONS

GMF27 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/8	3/8	1/2	1/2	1/2	1/2	1/2	1/2	9/16	5/8	5/8	5/8	3/4	3/4	1
					LOC	1-3/4	2	1-3/8	1-1/2	1-3/4	2	2-1/8	2-3/8	2	2	2-3/8	2-3/4	2-3/8	3-1/2	3-1/2
P	1-8	Non-alloy steel Low alloy steel	0.05D	2.5D	SFM(Vc)	290	260	285	285	285	285	285	285	305	320	320	320	295	295	285
					IPT(fz)	.0017	.0016	.0019	.0019	.0019	.0016	.0016	.0016	.0016	.0019	.0017	.0017	.0016	.0014	.0016
					RPM	2960	2660	2180	2180	2180	2180	2180	2180	2080	1960	1960	1960	1490	1490	1090
					IPM(FEED)	20	18	16	16	16	14	14	14	13	15	13	13	10	9	7
	9	Low alloy steel	0.05D	2.5D	SFM(Vc)	170	150	175	175	175	175	175	175	180	175	175	175	170	170	210
					IPT(fz)	.0011	.0011	.0013	.0013	.0013	.0012	.0012	.0012	.0011	.0014	.0012	.0012	.0011	.0010	.0011
					RPM	1730	1550	1320	1320	1320	1320	1320	1320	1210	1080	1080	1080	860	860	800
					IPM(FEED)	8	7	7	7	7	6	6	6	6	6	5	5	4	3	4
	10	High alloyed steel, and tool steel	0.05D	2.5D	SFM(Vc)	290	260	285	285	285	285	285	285	305	320	320	320	295	295	285
					IPT(fz)	.0017	.0016	.0019	.0019	.0019	.0016	.0016	.0016	.0016	.0019	.0017	.0017	.0016	.0014	.0016
					RPM	2960	2660	2180	2180	2180	2180	2180	2180	2080	1960	1960	1960	1490	1490	1090
					IPM(FEED)	20	18	16	16	16	14	14	14	13	15	13	13	10	9	7
	11.1-11.2		0.05D	2.5D	SFM(Vc)	170	150	175	175	175	175	175	175	180	175	175	175	170	170	210
					IPT(fz)	.0011	.0011	.0013	.0013	.0013	.0012	.0012	.0012	.0011	.0014	.0012	.0012	.0011	.0010	.0011
					RPM	1730	1550	1320	1320	1320	1320	1320	1320	1210	1080	1080	1080	860	860	800
					IPM(FEED)	8	7	7	7	7	6	6	6	6	6	5	5	4	3	4
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	2.5D	SFM(Vc)	290	260	285	285	285	285	285	285	305	320	320	320	295	295	285
					IPT(fz)	.0017	.0016	.0019	.0019	.0019	.0016	.0016	.0016	.0016	.0019	.0017	.0017	.0016	.0014	.0016
					RPM	2960	2660	2180	2180	2180	2180	2180	2180	2080	1960	1960	1960	1490	1490	1090
					IPM(FEED)	20	18	16	16	16	14	14	14	13	15	13	13	10	9	7
H	38.1-38.2	Hardened steel	0.02	2.0D	SFM(Vc)	105	95	105	105	105	105	105	105	110	110	110	110	105	105	130
					IPT(fz)	.0009	.0009	.0010	.0010	.0010	.0008	.0008	.0008	.0009	.0011	.0009	.0009	.0009	.0009	.0009
					RPM	1060	950	790	790	790	790	790	790	740	680	680	680	530	530	500
					IPM(FEED)	4	3	3	3	3	3	3	3	3	3	2	2	2	2	2
	40	Chilled Cast Iron	0.05D	2.5D	SFM(Vc)	170	150	175	175	175	175	175	175	180	175	175	175	170	170	210
					IPT(fz)	.0011	.0011	.0013	.0013	.0013	.0012	.0012	.0012	.0011	.0014	.0012	.0012	.0011	.0010	.0011
					RPM	1730	1550	1320	1320	1320	1320	1320	1320	1210	1080	1080	1080	860	860	800
					IPM(FEED)	8	7	7	7	7	6	6	6	6	6	5	5	4	3	4
	41	Hardened Cast Iron	0.05D	2.5D	SFM(Vc)	105	95	105	105	105	105	105	105	110	110	110	110	105	105	130
					IPT(fz)	.0009	.0009	.0010	.0010	.0010	.0008	.0008	.0008	.0009	.0011	.0009	.0009	.0009	.0009	.0009
					RPM	1060	950	790	790	790	790	790	790	740	680	680	680	530	530	500
					IPM(FEED)	4	3	3	3	3	3	3	3	3	3	2	2	2	2	2

(Column headers 3/8 … 1: Diameter (Ø))

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF28 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) / LBS														
				3/64	3/64	3/64	3/64	1/16	1/16	1/16	1/16	1/16	5/64	5/64	5/64	5/64	1/8	1/8
			LBS	5/32	3/16	1/4	5/16	1/4	5/16	3/8	1/2	5/8	5/16	3/8	1/2	5/8	3/8	1/2
P	1-8	Non-alloy steel Low alloy steel	SFM(Vc)	240	240	215	215	265	265	235	235	235	285	285	260	260	330	330
			IPT(fz)	.0002	.0002	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004
			RPM	19650	19650	17690	17690	16060	16060	14460	14460	14460	14010	14010	12610	12610	10110	10110
			IPM(FEED)	12	12	10	10	12	12	10	10	10	13	13	11	11	14	14
			Ae	.0007	.0007	.0004	.0004	.0009	.0009	.0005	.0005	.0003	.0011	.0011	.0007	.0007	.0026	.0019
	9	Low alloy steel	SFM(Vc)	150	150	135	135	165	165	150	150	150	185	185	170	170	205	205
			IPT(fz)	.0002	.0002	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004
			RPM	12200	12200	10980	10980	10110	10110	9100	9100	9100	9140	9140	8230	8230	6300	6300
			IPM(FEED)	7	7	6	6	7	7	6	6	6	8	8	7	7	9	9
			Ae	.0005	.0005	.0003	.0003	.0007	.0007	.0004	.0004	.0002	.0009	.0009	.0005	.0005	.002	.0014
	10	High alloyed steel, and tool steel	SFM(Vc)	240	240	215	215	265	265	235	235	235	285	285	260	260	330	330
			IPT(fz)	.0002	.0002	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004
			RPM	19650	19650	17690	17690	16060	16060	14460	14460	14460	14010	14010	12610	12610	10110	10110
			IPM(FEED)	12	12	10	10	12	12	10	10	10	13	13	11	11	14	14
			Ae	.0007	.0007	.0004	.0004	.0009	.0009	.0005	.0005	.0003	.0011	.0011	.0007	.0007	.0026	.0019
	11.1-11.2		SFM(Vc)	150	150	135	135	165	165	150	150	150	185	185	170	170	205	205
			IPT(fz)	.0002	.0002	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004
			RPM	12200	12200	10980	10980	10110	10110	9100	9100	9100	9140	9140	8230	8230	6300	6300
			IPM(FEED)	7	7	6	6	7	7	6	6	6	8	8	7	7	9	9
			Ae	.0005	.0005	.0003	.0003	.0007	.0007	.0004	.0004	.0002	.0009	.0009	.0005	.0005	.002	.0014
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	240	240	215	215	265	265	235	235	235	285	285	260	260	330	330
			IPT(fz)	.0002	.0002	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004
			RPM	19650	19650	17690	17690	16060	16060	14460	14460	14460	14010	14010	12610	12610	10110	10110
			IPM(FEED)	12	12	10	10	12	12	10	10	10	13	13	11	11	14	14
			Ae	.0007	.0007	.0004	.0004	.0009	.0009	.0005	.0005	.0003	.0011	.0011	.0007	.0007	.0026	.0019
H	38.1-38.2	Hardened steel	SFM(Vc)	95	95	85	85	100	100	90	90	90	125	125	110	110	125	125
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002
			RPM	7560	7560	6800	6800	6140	6140	5530	5530	5530	6050	6050	5440	5440	3810	3810
			IPM(FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3
			Ae	.004	.004	.002	.002	.006	.006	.003	.003	.002	.007	.007	.004	.004	.016	.011
	40	Chilled Cast Iron	SFM(Vc)	150	150	135	135	165	165	150	150	150	185	185	170	170	205	205
			IPT(fz)	.0002	.0002	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004
			RPM	12200	12200	10980	10980	10110	10110	9100	9100	9100	9140	9140	8230	8230	6300	6300
			IPM(FEED)	7	7	6	6	7	7	6	6	6	8	8	7	7	9	9
			Ae	.0005	.0005	.0003	.0003	.0007	.0007	.0004	.0004	.0002	.0009	.0009	.0005	.0005	.002	.0014
	41	Hardened Cast Iron	SFM(Vc)	95	95	85	85	100	100	90	90	90	125	125	110	110	125	125
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002
			RPM	7560	7560	6800	6800	6140	6140	5530	5530	5530	6050	6050	5440	5440	3810	3810
			IPM(FEED)	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3
			Ae	.004	.004	.002	.002	.006	.006	.003	.003	.002	.007	.007	.004	.004	.016	.011

SFM = Surface Feet per Minute
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IPT = Inches Per Tooth
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Ap : Inch (Axial Depth of Cut)
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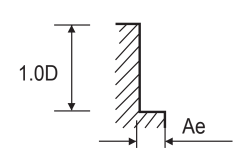


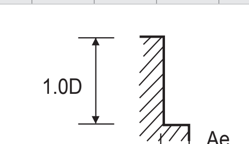
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF28 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Parameter	Diameter (Ø) / LBS																	
			1/8	1/8	1/8	3/16	3/16	3/16	3/16	3/16	13/64	13/64	1/4	1/4	5/16	5/16	3/8	3/8	1/2	1/2
		LBS	5/8	3/4	1-3/16	1/2	5/8	3/4	1-3/16	1-1/2	3/4	1-1/2	5/8	1-3/16	1	1-5/8	1-3/16	1-3/4	1-3/8	2
P	1-8	SFM(Vc)	330	300	300	375	375	375	335	335	390	350	410	410	415	375	400	400	410	410
		IPT(fz)	.0004	.0003	.0003	.0007	.0007	.0007	.0007	.0007	.0009	.0008	.0012	.0012	.0017	.0015	.0018	.0018	.0018	.0018
		RPM	10110	9100	9100	7620	7620	7620	6860	6860	7330	6590	6300	6300	5080	4570	4100	4100	3120	3120
		IPM(FEED)	14	11	11	22	22	22	18	18	28	22	29	29	34	27	30	30	23	23
		Ae	.0019	.0011	.0007	.0039	.0028	.0028	.0016	.0016	.003	.0017	.0052	.0037	.0046	.0026	.0055	.0055	.0105	.0074
	9	SFM(Vc)	205	185	185	230	230	230	205	205	235	210	250	250	250	225	245	245	250	250
		IPT(fz)	.0004	.0003	.0003	.0008	.0008	.0008	.0007	.0007	.0009	.0009	.0012	.0012	.0015	.0013	.0015	.0015	.0015	.0015
		RPM	6300	5670	5670	4650	4650	4650	4190	4190	4390	3950	3810	3810	3040	2740	2520	2520	1900	1900
		IPM(FEED)	9	7	7	14	14	14	11	11	16	13	18	18	18	14	15	15	11	11
		Ae	.0014	.0008	.0005	.003	.0021	.0021	.0012	.0012	.0022	.0013	.0039	.0028	.0035	.002	.0041	.0041	.0079	.0055
	10	SFM(Vc)	330	300	300	375	375	375	335	335	390	350	410	410	415	375	400	400	410	410
		IPT(fz)	.0004	.0003	.0003	.0007	.0007	.0007	.0007	.0007	.0009	.0008	.0012	.0012	.0017	.0015	.0018	.0018	.0018	.0018
		RPM	10110	9100	9100	7620	7620	7620	6860	6860	7330	6590	6300	6300	5080	4570	4100	4100	3120	3120
		IPM(FEED)	14	11	11	22	22	22	18	18	28	22	29	29	34	27	30	30	23	23
		Ae	.0019	.0011	.0007	.0039	.0028	.0028	.0016	.0016	.003	.0017	.0052	.0037	.0046	.0026	.0055	.0055	.0105	.0074
	11.1-11.2	SFM(Vc)	205	185	185	230	230	230	205	205	235	210	250	250	250	225	245	245	250	250
		IPT(fz)	.0004	.0003	.0003	.0008	.0008	.0008	.0007	.0007	.0009	.0009	.0012	.0012	.0015	.0013	.0015	.0015	.0015	.0015
		RPM	6300	5670	5670	4650	4650	4650	4190	4190	4390	3950	3810	3810	3040	2740	2520	2520	1900	1900
		IPM(FEED)	9	7	7	14	14	14	11	11	16	13	18	18	18	14	15	15	11	11
		Ae	.0014	.0008	.0005	.003	.0021	.0021	.0012	.0012	.0022	.0013	.0039	.0028	.0035	.002	.0041	.0041	.0079	.0055
K	15-20	SFM(Vc)	330	300	300	375	375	375	335	335	390	350	410	410	415	375	400	400	410	410
		IPT(fz)	.0004	.0003	.0003	.0007	.0007	.0007	.0007	.0007	.0009	.0008	.0012	.0012	.0017	.0015	.0018	.0018	.0018	.0018
		RPM	10110	9100	9100	7620	7620	7620	6860	6860	7330	6590	6300	6300	5080	4570	4100	4100	3120	3120
		IPM(FEED)	14	11	11	22	22	22	18	18	28	22	29	29	34	27	30	30	23	23
		Ae	.0019	.0011	.0007	.0039	.0028	.0028	.0016	.0016	.003	.0017	.0052	.0037	.0046	.0026	.0055	.0055	.0105	.0074
H	38.1-38.2	SFM(Vc)	125	110	110	145	145	145	130	130	145	130	150	150	165	150	170	170	175	175
		IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0004	.0006	.0006	.0006	.0006	.0007	.0007
		RPM	3810	3430	3430	2960	2960	2960	2670	2670	2690	2420	2270	2270	2030	1820	1710	1710	1320	1320
		IPM(FEED)	3	2	2	2	2	2	2	2	3	3	4	4	5	4	4	4	4	4
		Ae	.011	.006	.004	.024	.017	.017	.009	.009	.018	.010	.031	.022	.028	.016	.033	.033	.063	.044
	40	SFM(Vc)	205	185	185	230	230	230	205	205	235	210	250	250	250	225	245	245	250	250
		IPT(fz)	.0004	.0003	.0003	.0008	.0008	.0008	.0007	.0007	.0009	.0009	.0012	.0012	.0015	.0013	.0015	.0015	.0015	.0015
		RPM	6300	5670	5670	4650	4650	4650	4190	4190	4390	3950	3810	3810	3040	2740	2520	2520	1900	1900
		IPM(FEED)	9	7	7	14	14	14	11	11	16	13	18	18	18	14	15	15	11	11
		Ae	.0014	.0008	.0005	.003	.0021	.0021	.0012	.0012	.0022	.0013	.0039	.0028	.0035	.002	.0041	.0041	.0079	.0055
	41	SFM(Vc)	125	110	110	145	145	145	130	130	145	130	150	150	165	150	170	170	175	175
		IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0004	.0006	.0006	.0006	.0006	.0007	.0007
		RPM	3810	3430	3430	2960	2960	2960	2670	2670	2690	2420	2270	2270	2030	1820	1710	1710	1320	1320
		IPM(FEED)	3	2	2	2	2	2	2	2	3	3	4	4	5	4	4	4	4	4
		Ae	.011	.006	.004	.024	.017	.017	.009	.009	.018	.010	.031	.022	.028	.016	.033	.033	.063	.044

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



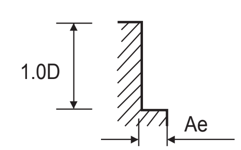
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF29 SERIES — 6FLUTE 45˚ HELIX - SIDE CUTTING (NORMAL SPEED)

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)											
						1/4	1/4	5/16	5/16	3/8	3/8	1/2	1/2	5/8	5/8	3/4	3/4
					LOC	5/8	1-3/16	3/4	1-1/2	1	1-1/2	1-3/16	2	1-1/2	2-3/8	1-3/4	2-3/8
P	1-8	Non-alloy steel	0.1D	1.5D	SFM(Vc)	380	380	365	365	365	365	385	385	365	365	365	365
					IPT(fz)	.0024	.0020	.0031	.0027	.0039	.0039	.0039	.0033	.0039	.0034	.0040	.0034
					RPM	5775	5775	4440	4440	3705	3705	2950	2950	2225	2225	1850	1850
					IPM(FEED)	82	70	83	71	87	87	69	59	53	45	44	37
	9	Low alloy steel	0.05D	1.5D	SFM(Vc)	265	265	255	255	250	250	270	270	255	255	250	250
					IPT(fz)	.0023	.0020	.0031	.0026	.0039	.0039	.0038	.0032	.0039	.0033	.0039	.0033
					RPM	4035	4035	3110	3110	2560	2560	2080	2080	1565	1565	1280	1280
					IPM(FEED)	56	48	57	49	60	60	47	40	37	31	30	25
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM(Vc)	380	380	365	365	365	365	385	385	365	365	365	365
					IPT(fz)	.0024	.0020	.0031	.0027	.0039	.0039	.0039	.0033	.0039	.0034	.0040	.0034
					RPM	5775	5775	4440	4440	3705	3705	2950	2950	2225	2225	1850	1850
					IPM(FEED)	82	70	83	71	87	87	69	59	53	45	44	37
	11.1-11.2		0.05D	1.5D	SFM(Vc)	265	265	255	255	250	250	270	270	255	255	250	250
					IPT(fz)	.0023	.0020	.0031	.0026	.0039	.0039	.0038	.0032	.0039	.0033	.0039	.0033
					RPM	4035	4035	3110	3110	2560	2560	2080	2080	1565	1565	1280	1280
					IPM(FEED)	56	48	57	49	60	60	47	40	37	31	30	25
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.1D	1.5D	SFM(Vc)	380	380	365	365	365	365	385	385	365	365	365	365
					IPT(fz)	.0024	.0020	.0031	.0027	.0039	.0039	.0039	.0033	.0039	.0034	.0040	.0034
					RPM	5775	5775	4440	4440	3705	3705	2950	2950	2225	2225	1850	1850
					IPM(FEED)	82	70	83	71	87	87	69	59	53	45	44	37
H	38.1-38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	105	105	100	100	110	110	115	115	110	110	105	105
					IPT(fz)	.0009	.0008	.0012	.0010	.0014	.0014	.0014	.0012	.0013	.0011	.0015	.0013
					RPM	1640	1640	1230	1230	1105	1105	870	870	685	685	545	545
					IPM(FEED)	9	7	9	7	9	9	7	6	5	5	5	4
	40	Chilled Cast Iron	0.05D	1.5D	SFM(Vc)	265	265	255	255	250	250	270	270	255	255	250	250
					IPT(fz)	.0023	.0020	.0031	.0026	.0039	.0039	.0038	.0032	.0039	.0033	.0039	.0033
					RPM	4035	4035	3110	3110	2560	2560	2080	2080	1565	1565	1280	1280
					IPM(FEED)	56	48	57	49	60	60	47	40	37	31	30	25
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	105	105	100	100	110	110	115	115	110	110	105	105
					IPT(fz)	.0009	.0008	.0012	.0010	.0014	.0014	.0014	.0012	.0013	.0011	.0015	.0013
					RPM	1640	1640	1230	1230	1105	1105	870	870	685	685	545	545
					IPM(FEED)	9	7	9	7	9	9	7	6	5	5	5	4

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

GMF29 SERIES — 6FLUTE 45˚ HELIX - SIDE CUTTING (HIGH SPEED)

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)											
						1/4	1/4	5/16	5/16	3/8	3/8	1/2	1/2	5/8	5/8	3/4	3/4
					LOC	5/8	1-3/16	3/4	1-1/2	1	1-1/2	1-3/16	2	1-1/2	2-3/8	1-3/4	2-3/8
P	9	Non-alloy steel	0.05D	1.5D	SFM(Vc)	1140	1140	1090	1090	1080	1080	1145	1145	1090	1090	1090	1090
					IPT(fz)	.0024	.0020	.0032	.0027	.0039	.0039	.0039	.0034	.0039	.0034	.0040	.0034
					RPM	17455	17455	13335	13335	11005	11005	8735	8735	6670	6670	5555	5555
					IPM(FEED)	249	212	254	216	260	260	206	175	158	134	132	112
	11.1-11.2	High alloyed steel, and tool steel	0.05D	1.5D	SFM(Vc)	1140	1140	1090	1090	1080	1080	1145	1145	1090	1090	1090	1090
					IPT(fz)	.0024	.0020	.0032	.0027	.0039	.0039	.0039	.0034	.0039	.0034	.0040	.0034
					RPM	17455	17455	13335	13335	11005	11005	8735	8735	6670	6670	5555	5555
					IPM(FEED)	249	212	254	216	260	260	206	175	158	134	132	112
H	38.1-38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	570	570	545	545	545	545	570	570	545	545	545	545
					IPT(fz)	.0024	.0020	.0032	.0027	.0040	.0040	.0039	.0034	.0039	.0033	.0038	.0032
					RPM	8735	8735	6670	6670	5555	5555	4365	4365	3340	3340	2785	2785
					IPM(FEED)	125	106	127	108	132	132	103	88	79	67	64	54
	40	Chilled Cast Iron	0.05D	1.5D	SFM(Vc)	1140	1140	1090	1090	1080	1080	1145	1145	1090	1090	1090	1090
					IPT(fz)	.0024	.0020	.0032	.0027	.0039	.0039	.0039	.0034	.0039	.0034	.0040	.0034
					RPM	17455	17455	13335	13335	11005	11005	8735	8735	6670	6670	5555	5555
					IPM(FEED)	249	212	254	216	260	260	206	175	158	134	132	112
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	570	570	545	545	545	545	570	570	545	545	545	545
					IPT(fz)	.0024	.0020	.0032	.0027	.0040	.0040	.0039	.0034	.0039	.0033	.0038	.0032
					RPM	8735	8735	6670	6670	5555	5555	4365	4365	3340	3340	2785	2785
					IPM(FEED)	125	106	127	108	132	132	103	88	79	67	64	54

SFM = Surface Feet per Minute
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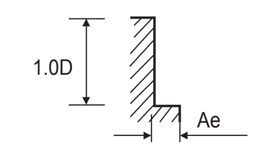
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

G907, G928, G908, G929, G909, G930 SERIES

4&5FLUTE MULTIPLE HELIX CORNER RADIUS - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/4	5/16	3/8	1/2	5/8	3/4	1
						Diameter (Ø)						
P	1-2	Non-alloy steel	1.0D	1.0D	SFM(Vc)	785	735	705	785	735	705	760
					IPT(fz)	.0013	.0018	.0023	.0025	.0026	.0029	.0032
					RPM	12000	9000	7200	6000	4500	3600	2900
					IPM(FEED)	61	65	65	61	59	52	46
	3-5		1.0D	0.8D	SFM(Vc)	695	665	630	705	670	630	680
					IPT(fz)	.0010	.0014	.0018	.0021	.0020	.0022	.0025
					RPM	10600	8100	6400	5400	4100	3200	2600
					IPM(FEED)	43	47	47	45	41	35	33
	6	Low alloy steel	1.0D	1.0D	SFM(Vc)	785	735	705	785	735	705	760
					IPT(fz)	.0013	.0018	.0023	.0025	.0026	.0029	.0032
					RPM	12000	9000	7200	6000	4500	3600	2900
					IPM(FEED)	61	65	65	61	59	52	46
	7-9		1.0D	0.8D	SFM(Vc)	695	665	630	705	670	630	680
					IPT(fz)	.0010	.0014	.0018	.0021	.0020	.0022	.0025
					RPM	10600	8100	6400	5400	4100	3200	2600
					IPM(FEED)	43	47	47	45	41	35	33
	10	High alloyed steel, and tool steel	1.0D	1.0D	SFM(Vc)	785	735	705	785	735	705	760
					IPT(fz)	.0013	.0018	.0023	.0025	.0026	.0029	.0032
					RPM	12000	9000	7200	6000	4500	3600	2900
					IPM(FEED)	61	65	65	61	59	52	46
	11.1-11.2		1.0D	0.8D	SFM(Vc)	695	665	630	705	670	630	680
					IPT(fz)	.0010	.0014	.0018	.0021	.0020	.0022	.0025
					RPM	10600	8100	6400	5400	4100	3200	2600
					IPM(FEED)	43	47	47	45	41	35	33
K	15	Grey cast iron	1.0D	1.0D	SFM(Vc)	785	735	705	785	735	705	760
					IPT(fz)	.0013	.0018	.0023	.0025	.0026	.0029	.0032
					RPM	12000	9000	7200	6000	4500	3600	2900
					IPM(FEED)	61	65	65	61	59	52	46
	16		1.0D	1.0D	SFM(Vc)	695	665	630	705	670	630	680
					IPT(fz)	.0010	.0014	.0018	.0021	.0020	.0022	.0025
					RPM	10600	8100	6400	5400	4100	3200	2600
					IPM(FEED)	43	47	47	45	41	35	33
	17	Nodular cast iron	1.0D	1.0D	SFM(Vc)	785	735	705	785	735	705	760
					IPT(fz)	.0013	.0018	.0023	.0025	.0026	.0029	.0032
					RPM	12000	9000	7200	6000	4500	3600	2900
					IPM(FEED)	61	65	65	61	59	52	46
	18		1.0D	1.0D	SFM(Vc)	695	665	630	705	670	630	680
					IPT(fz)	.0010	.0014	.0018	.0021	.0020	.0022	.0025
					RPM	10600	8100	6400	5400	4100	3200	2600
					IPM(FEED)	43	47	47	45	41	35	33
	19-20	Malleable cast iron	1.0D	1.0D	SFM(Vc)	785	735	705	785	735	705	760
					IPT(fz)	.0013	.0018	.0023	.0025	.0026	.0029	.0032
					RPM	12000	9000	7200	6000	4500	3600	2900
					IPM(FEED)	61	65	65	61	59	52	46
H	40		1.0D	0.8D	SFM(Vc)	695	665	630	705	670	630	680
					IPT(fz)	.0010	.0014	.0018	.0021	.0020	.0022	.0025
					RPM	10600	8100	6400	5400	4100	3200	2600
					IPM(FEED)	43	47	47	45	41	35	33

SFM = Surface Feet per Minute
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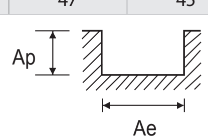


YG 4G MILL END MILLS

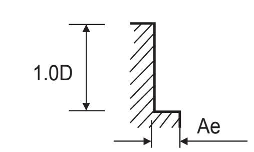
RECOMMENDED CUTTING CONDITIONS

G907, G928, G908, G929, G909, G930 SERIES

4&5FLUTE MULTIPLE HELIX CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/4	5/16	3/8	1/2	5/8	3/4	1
						Diameter (Ø)						
P	1-2	Non-alloy steel	0.5D	1.0D	SFM(Vc)	1035	975	935	1045	980	940	995
					IPT(fz)	.0016	.0022	.0028	.0032	.0032	.0035	.0040
					RPM	15800	11900	9500	8000	6000	4800	3800
					IPM(FEED)	101	106	106	101	97	84	75
	3-5		0.35D	1.0D	SFM(Vc)	935	875	835	930	885	845	890
					IPT(fz)	.0013	.0018	.0023	.0026	.0026	.0028	.0029
					RPM	14300	10700	8500	7100	5400	4300	3400
					IPM(FEED)	73	77	77	73	70	59	49
	6	Low alloy steel	0.5D	1.0D	SFM(Vc)	1035	975	935	1045	980	940	995
					IPT(fz)	.0016	.0022	.0028	.0032	.0032	.0035	.0040
					RPM	15800	11900	9500	8000	6000	4800	3800
					IPM(FEED)	101	106	106	101	97	84	75
	7-9		0.35D	1.0D	SFM(Vc)	935	875	835	930	885	845	890
					IPT(fz)	.0013	.0018	.0023	.0026	.0026	.0028	.0029
					RPM	14300	10700	8500	7100	5400	4300	3400
					IPM(FEED)	73	77	77	73	70	59	49
	10	High alloyed steel, and tool steel	0.5D	1.0D	SFM(Vc)	1035	975	935	1045	980	940	995
					IPT(fz)	.0016	.0022	.0028	.0032	.0032	.0035	.0040
					RPM	15800	11900	9500	8000	6000	4800	3800
					IPM(FEED)	101	106	106	101	97	84	75
	11.1-11.2		0.35D	1.0D	SFM(Vc)	935	875	835	930	885	845	890
					IPT(fz)	.0013	.0018	.0023	.0026	.0026	.0028	.0029
					RPM	14300	10700	8500	7100	5400	4300	3400
					IPM(FEED)	73	77	77	73	70	59	49
K	15	Grey cast iron	0.5D	1.0D	SFM(Vc)	1035	975	935	1045	980	940	995
					IPT(fz)	.0016	.0022	.0028	.0032	.0032	.0035	.0040
					RPM	15800	11900	9500	8000	6000	4800	3800
					IPM(FEED)	101	106	106	101	97	84	75
	16		0.35D	1.0D	SFM(Vc)	935	875	835	930	885	845	890
					IPT(fz)	.0013	.0018	.0023	.0026	.0026	.0028	.0029
					RPM	14300	10700	8500	7100	5400	4300	3400
					IPM(FEED)	73	77	77	73	70	59	49
	17	Nodular cast iron	0.5D	1.0D	SFM(Vc)	1035	975	935	1045	980	940	995
					IPT(fz)	.0016	.0022	.0028	.0032	.0032	.0035	.0040
					RPM	15800	11900	9500	8000	6000	4800	3800
					IPM(FEED)	101	106	106	101	97	84	75
	18		0.35D	1.0D	SFM(Vc)	935	875	835	930	885	845	890
					IPT(fz)	.0013	.0018	.0023	.0026	.0026	.0028	.0029
					RPM	14300	10700	8500	7100	5400	4300	3400
					IPM(FEED)	73	77	77	73	70	59	49
	19-20	Malleable cast iron	0.5D	1.0D	SFM(Vc)	1035	975	935	1045	980	940	995
					IPT(fz)	.0016	.0022	.0028	.0032	.0032	.0035	.0040
					RPM	15800	11900	9500	8000	6000	4800	3800
					IPM(FEED)	101	106	106	101	97	84	75

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

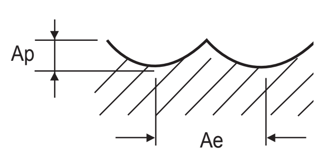
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEMD98 SERIES 2FLUTE BALL NOSE - PLANE

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.5	2.0	2.5
						Diameter (Ø)													
P	1-8	Non-alloy steel	0.08D	0.05D	SFM(Vc)	40	60	95	125	155	185	215	245	280	310	370	465	615	615
					IPT(fz)	.0003	.0005	.0006	.0007	.0009	.0011	.0013	.0015	.0017	.0019	.0020	.0021	.0023	.0029
					RPM	40000	30000	30000	30000	30000	30000	30000	30000	30000	30000	30000	30000	29820	23800
					IPM(FEED)	22	28	35	45	57	69	80	92	103	113	120	128	135	138
	9	Low alloy steel	0.08D	0.05D	SFM(Vc)	40	60	95	125	155	185	215	245	280	310	355	445	590	590
					IPT(fz)	.0002	.0004	.0005	.0007	.0008	.0010	.0011	.0013	.0015	.0017	.0018	.0018	.0020	.0026
					RPM	40000	30000	30000	30000	30000	30000	30000	30000	30000	30000	28800	28800	28680	22900
					IPM(FEED)	20	25	32	40	50	59	69	78	89	99	102	106	113	119
	10-11.1	High alloyed steel, and tool steel	0.08D	0.05D	SFM(Vc)	40	60	95	125	155	185	215	245	280	310	370	465	615	615
					IPT(fz)	.0003	.0005	.0006	.0007	.0009	.0011	.0013	.0015	.0017	.0019	.0020	.0021	.0023	.0029
					RPM	40000	30000	30000	30000	30000	30000	30000	30000	30000	30000	30000	30000	29820	23800
					IPM(FEED)	22	28	35	45	57	69	80	92	103	113	120	128	135	138
	11.2		0.08D	0.05D	SFM(Vc)	40	60	95	125	155	185	215	245	280	310	355	445	590	590
					IPT(fz)	.0002	.0004	.0005	.0007	.0008	.0010	.0011	.0013	.0015	.0017	.0018	.0018	.0020	.0026
					RPM	40000	30000	30000	30000	30000	30000	30000	30000	30000	30000	28800	28800	28680	22900
					IPM(FEED)	20	25	32	40	50	59	69	78	89	99	102	106	113	119
K	15	Grey cast iron Nodular cast iron Malleable cast iron	0.08D	0.05D	SFM(Vc)	40	60	95	125	155	185	215	245	280	310	370	465	615	615
					IPT(fz)	.0003	.0005	.0006	.0007	.0009	.0011	.0013	.0015	.0017	.0019	.0020	.0021	.0023	.0029
					RPM	40000	30000	30000	30000	30000	30000	30000	30000	30000	30000	30000	30000	29820	23800
					IPM(FEED)	22	28	35	45	57	69	80	92	103	113	120	128	135	138
H	38.1-38.2	Hardened steel	0.08D	0.05D	SFM(Vc)	35	55	85	110	140	165	195	225	250	280	320	400	495	495
					IPT(fz)	.0002	.0004	.0005	.0007	.0008	.0010	.0011	.0013	.0015	.0017	.0018	.0018	.0020	.0025
					RPM	33000	27000	27000	27000	27000	27000	27000	27000	27000	27000	25800	25800	24000	19200
					IPM(FEED)	16	23	28	35	45	52	61	71	80	90	91	94	94	94
	40	Chilled Cast Iron	0.08D	0.05D	SFM(Vc)	40	60	95	125	155	185	215	245	280	310	355	445	590	590
					IPT(fz)	.0002	.0004	.0005	.0007	.0008	.0010	.0011	.0013	.0015	.0017	.0018	.0018	.0020	.0026
					RPM	40000	30000	30000	30000	30000	30000	30000	30000	30000	30000	28800	28800	28680	22900
					IPM(FEED)	20	25	32	40	50	59	69	78	89	99	102	106	113	119
	41	Hardened Cast Iron	0.08D	0.05D	SFM(Vc)	35	55	85	110	140	165	195	225	250	280	320	400	495	495
					IPT(fz)	.0002	.0004	.0005	.0007	.0008	.0010	.0011	.0013	.0015	.0017	.0018	.0018	.0020	.0025
					RPM	33000	27000	27000	27000	27000	27000	27000	27000	27000	27000	25800	25800	24000	19200
					IPM(FEED)	16	23	28	35	45	52	61	71	80	90	91	94	94	94

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



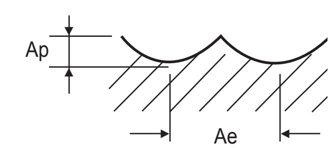
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEMD98 SERIES 2FLUTE BALL NOSE - PLANE

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	8.0	8.5	9.0	10.0
						Diameter (Ø)												
P	1-8	Non-alloy steel	0.08D	0.05D	SFM(Vc)	615	615	615	605	575	555	515	520	520	550	550	550	575
					IPT(fz)	.0036	.0042	.0048	.0053	.0061	.0065	.0069	.0070	.0072	.0074	.0076	.0077	.0078
					RPM	19860	17000	14900	13030	11160	9750	8340	7780	7220	6660	6300	5940	5580
					IPM(FEED)	142	142	142	139	137	126	115	109	104	99	95	91	87
	9	Low alloy steel	0.08D	0.05D	SFM(Vc)	590	590	590	580	550	530	495	500	500	530	530	530	550
					IPT(fz)	.0033	.0038	.0044	.0048	.0054	.0057	.0060	.0061	.0063	.0064	.0066	.0067	.0069
					RPM	19080	16400	14340	12510	10680	9360	8040	7500	6960	6420	6060	5700	5340
					IPM(FEED)	125	125	125	120	116	106	97	92	87	83	80	76	73
	10-11.1	High alloyed steel, and tool steel	0.08D	0.05D	SFM(Vc)	615	615	615	605	575	555	515	520	520	550	550	550	575
					IPT(fz)	.0036	.0042	.0048	.0053	.0061	.0065	.0069	.0070	.0072	.0074	.0076	.0077	.0078
					RPM	19860	17000	14900	13030	11160	9750	8340	7780	7220	6660	6300	5940	5580
					IPM(FEED)	142	142	142	139	137	126	115	109	104	99	95	91	87
	11.2		0.08D	0.05D	SFM(Vc)	590	590	590	580	550	530	495	500	500	530	530	530	550
					IPT(fz)	.0033	.0038	.0044	.0048	.0054	.0057	.0060	.0061	.0063	.0064	.0066	.0067	.0069
					RPM	19080	16400	14340	12510	10680	9360	8040	7500	6960	6420	6060	5700	5340
					IPM(FEED)	125	125	125	120	116	106	97	92	87	83	80	76	73
K	15	Grey cast iron Nodular cast iron Malleable cast iron	0.08D	0.05D	SFM(Vc)	615	615	615	605	575	555	515	520	520	550	550	550	575
					IPT(fz)	.0036	.0042	.0048	.0053	.0061	.0065	.0069	.0070	.0072	.0074	.0076	.0077	.0078
					RPM	19860	17000	14900	13030	11160	9750	8340	7780	7220	6660	6300	5940	5580
					IPM(FEED)	142	142	142	139	137	126	115	109	104	99	95	91	87
H	38.1-38.2	Hardened steel	0.08D	0.05D	SFM(Vc)	495	495	495	485	465	440	410	415	420	445	445	445	465
					IPT(fz)	.0030	.0034	.0039	.0044	.0049	.0052	.0055	.0057	.0058	.0059	.0060	.0062	.0063
					RPM	16000	13700	12000	10500	9000	7800	6600	6200	5800	5400	5100	4800	4500
					IPM(FEED)	94	94	94	92	89	81	73	70	67	64	61	59	57
	40	Chilled Cast Iron	0.08D	0.05D	SFM(Vc)	590	590	590	580	550	530	495	500	500	530	530	530	550
					IPT(fz)	.0033	.0038	.0044	.0048	.0054	.0057	.0060	.0061	.0063	.0064	.0066	.0067	.0069
					RPM	19080	16400	14340	12510	10680	9360	8040	7500	6960	6420	6060	5700	5340
					IPM(FEED)	125	125	125	120	116	106	97	92	87	83	80	76	73
	41	Hardened Cast Iron	0.08D	0.05D	SFM(Vc)	495	495	495	485	465	440	410	415	420	445	445	445	465
					IPT(fz)	.0030	.0034	.0039	.0044	.0049	.0052	.0055	.0057	.0058	.0059	.0060	.0062	.0063
					RPM	16000	13700	12000	10500	9000	7800	6600	6200	5800	5400	5100	4800	4500
					IPM(FEED)	94	94	94	92	89	81	73	70	67	64	61	59	57

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEMD98 SERIES 2FLUTE BALL NOSE - PLANE

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	11.0	12.0	13.0	14.0	15.0	16.0	18.0	20.0	25.0
						Diameter (Ø)								
P	1-8	Non-alloy steel	0.08D	0.05D	SFM(Vc)	555	515	530	540	550	550	555	550	550
					IPT(fz)	.0081	.0084	.0086	.0088	.0091	.0094	.0098	.0104	.0106
					RPM	4875	4170	3960	3750	3550	3340	3005	2670	2130
					IPM(FEED)	79	70	68	66	64	63	59	56	45
	9	Low alloy steel	0.08D	0.05D	SFM(Vc)	530	495	510	520	525	530	535	530	530
					IPT(fz)	.0071	.0074	.0078	.0082	.0087	.0081	.0085	.0089	.0091
					RPM	4670	4000	3800	3600	3400	3210	2895	2580	2060
					IPM(FEED)	66	59	59	59	59	52	49	46	37
	10-11.1	High alloyed steel, and tool steel	0.08D	0.05D	SFM(Vc)	555	515	530	540	550	550	555	550	550
					IPT(fz)	.0081	.0084	.0086	.0088	.0091	.0094	.0098	.0104	.0106
					RPM	4875	4170	3960	3750	3550	3340	3005	2670	2130
					IPM(FEED)	79	70	68	66	64	63	59	56	45
	11.2		0.08D	0.05D	SFM(Vc)	530	495	510	520	525	530	535	530	530
					IPT(fz)	.0071	.0074	.0078	.0082	.0087	.0081	.0085	.0089	.0091
					RPM	4670	4000	3800	3600	3400	3210	2895	2580	2060
					IPM(FEED)	66	59	59	59	59	52	49	46	37
K	15	Grey cast iron Nodular cast iron Malleable cast iron	0.08D	0.05D	SFM(Vc)	555	515	530	540	550	550	555	550	550
					IPT(fz)	.0081	.0084	.0086	.0088	.0091	.0094	.0098	.0104	.0106
					RPM	4875	4170	3960	3750	3550	3340	3005	2670	2130
					IPM(FEED)	79	70	68	66	64	63	59	56	45
H	38.1-38.2	Hardened steel	0.08D	0.05D	SFM(Vc)	445	415	430	435	445	445	450	445	445
					IPT(fz)	.0065	.0067	.0068	.0070	.0072	.0074	.0078	.0082	.0083
					RPM	3930	3360	3200	3030	2870	2700	2430	2160	1730
					IPM(FEED)	51	45	44	43	41	40	38	35	29
	40	Chilled Cast Iron	0.08D	0.05D	SFM(Vc)	530	495	510	520	525	530	535	530	530
					IPT(fz)	.0071	.0074	.0078	.0082	.0087	.0081	.0085	.0089	.0091
					RPM	4670	4000	3800	3600	3400	3210	2895	2580	2060
					IPM(FEED)	66	59	59	59	59	52	49	46	37
	41	Hardened Cast Iron	0.08D	0.05D	SFM(Vc)	445	415	430	435	445	445	450	445	445
					IPT(fz)	.0065	.0067	.0068	.0070	.0072	.0074	.0078	.0082	.0083
					RPM	3930	3360	3200	3030	2870	2700	2430	2160	1730
					IPM(FEED)	51	45	44	43	41	40	38	35	29

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
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Ap : Inch (Axial Depth of Cut)
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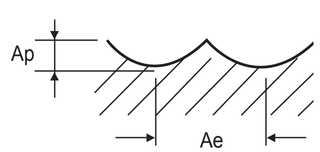


4G MILL END MILLS

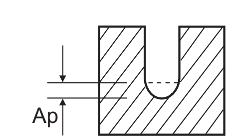
RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
				Diameter (Ø)																
			LBS	0.2	0.3	0.5	1	0.5	1	1.5	2	3	1	1.5	2	2.5	3	4	5	1
P	1-8	Non-alloy steel	SFM(Vc)	50	50	50	45	105	105	95	95	95	155	155	140	140	140	125	95	170
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0001	.0001	.0002
			RPM	50000	50000	50000	45000	50000	50000	45000	45000	45000	50000	50000	45000	45000	45000	40000	30000	41000
			IPM(FEED)	9	9	9	8	13	13	11	11	11	19	19	15	15	15	12	8	19
			Ap	.0004	.0004	.0002	.0001	.0007	.0005	.0003	.0002	.0001	.0007	.0007	.0004	.0003	.0003	.0002	.0001	.0014
	9	Low alloy steel	SFM(Vc)	50	50	50	45	105	105	95	95	95	155	155	140	140	140	125	95	160
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0001	.0001	.0002
			RPM	50000	50000	50000	45000	50000	50000	45000	45000	45000	50000	50000	45000	45000	45000	40000	30000	38800
			IPM(FEED)	8	8	8	7	12	12	10	10	10	17	17	14	14	14	11	7	17
			Ap	.0003	.0003	.0002	.0001	.0006	.0004	.0002	.0002	.0001	.0006	.0006	.0003	.0002	.0002	.0001	.0001	.0011
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	50	50	50	45	105	105	95	95	95	155	155	140	140	140	125	95	170
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0001	.0001	.0002
			RPM	50000	50000	50000	45000	50000	50000	45000	45000	45000	50000	50000	45000	45000	45000	40000	30000	41000
			IPM(FEED)	9	9	9	8	13	13	11	11	11	19	19	15	15	15	12	8	19
			Ap	.0004	.0004	.0002	.0001	.0007	.0005	.0003	.0002	.0001	.0007	.0007	.0004	.0003	.0003	.0002	.0001	.0014
	11.2		SFM(Vc)	50	50	50	45	105	105	95	95	95	155	155	140	140	140	125	95	160
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0001	.0001	.0002
			RPM	50000	50000	50000	45000	50000	50000	45000	45000	45000	50000	50000	45000	45000	45000	40000	30000	38800
			IPM(FEED)	8	8	8	7	12	12	10	10	10	17	17	14	14	14	11	7	17
			Ap	.0003	.0003	.0002	.0001	.0006	.0004	.0002	.0002	.0001	.0006	.0006	.0003	.0002	.0002	.0001	.0001	.0011
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	50	50	50	45	105	105	95	95	95	155	155	140	140	140	125	95	170
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0001	.0001	.0002
			RPM	50000	50000	50000	45000	50000	50000	45000	45000	45000	50000	50000	45000	45000	45000	40000	30000	41000
			IPM(FEED)	9	9	9	8	13	13	11	11	11	19	19	15	15	15	12	8	19
			Ap	.0004	.0004	.0002	.0001	.0007	.0005	.0003	.0002	.0001	.0007	.0007	.0004	.0003	.0003	.0002	.0001	.0014
H	38.1-38.2	Hardened steel	SFM(Vc)	50	50	50	45	90	90	80	80	80	130	130	120	120	120	105	80	140
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0002
			RPM	50000	50000	50000	45000	43200	43200	38880	38880	38880	42800	42800	38520	38520	38520	34240	25680	34200
			IPM(FEED)	7.5	7.5	7.5	6.1	10.2	10.2	8.3	8.3	8.3	14.4	14.4	11.6	11.6	11.6	9.3	6.1	13.4
			Ap	.0002	.0002	.0002	.0000	.0004	.0003	.0002	.0001	.0001	.0004	.0004	.0002	.0002	.0002	.0001	.0001	.0008
	40	Chilled Cast Iron	SFM(Vc)	50	50	50	45	105	105	95	95	95	155	155	140	140	140	125	95	160
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0001	.0001	.0002
			RPM	50000	50000	50000	45000	50000	50000	45000	45000	45000	50000	50000	45000	45000	45000	40000	30000	38800
			IPM(FEED)	8	8	8	7	12	12	10	10	10	17	17	14	14	14	11	7	17
			Ap	.0003	.0003	.0002	.0001	.0006	.0004	.0002	.0002	.0001	.0006	.0006	.0003	.0002	.0002	.0001	.0001	.0011
	41	Hardened Cast Iron	SFM(Vc)	50	50	50	45	90	90	80	80	80	130	130	120	120	120	105	80	140
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0002
			RPM	50000	50000	50000	45000	43200	43200	38880	38880	38880	42800	42800	38520	38520	38520	34240	25680	34200
			IPM(FEED)	7.5	7.5	7.5	6.1	10.2	10.2	8.3	8.3	8.3	14.4	14.4	11.6	11.6	11.6	9.3	6.1	13.4
			Ap	.0002	.0002	.0002	.0000	.0004	.0003	.0002	.0001	.0001	.0004	.0004	.0002	.0002	.0002	.0001	.0001	.0008

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

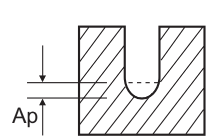
SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
			LBS	1.5	2	2.5	3	4	5	6	8	10	1	1.5	2	2.5	3	4	5	6
P	1-8	Non-alloy steel	SFM(Vc)	170	170	150	150	150	135	135	100	50	175	175	175	175	160	160	160	140
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0003
			RPM	41000	41000	36900	36900	36900	32800	32800	24600	12300	34200	34200	34200	34200	30780	30780	30780	27360
			IPM(FEED)	19	19	16	16	16	12	12	8	4	27	27	27	27	22	22	22	17
			Ap	.0010	.0010	.0006	.0006	.0004	.0004	.0002	.0002	.0002	.0018	.0018	.0013	.0013	.0007	.0007	.0004	.0004
	9	Low alloy steel	SFM(Vc)	160	160	145	145	145	130	130	95	50	165	165	165	165	150	150	150	135
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	38800	38800	34920	34920	34920	31040	31040	23280	11640	32300	32300	32300	32300	29070	29070	29070	25840
			IPM(FEED)	17	17	14	14	14	11	11	7	3	23	23	23	23	19	19	19	15
			Ap	.0008	.0008	.0004	.0004	.0003	.0003	.0002	.0001	.0001	.0014	.0014	.0010	.0010	.0006	.0006	.0004	.0004
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	170	170	150	150	150	135	135	100	50	175	175	175	175	160	160	160	140
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0003
			RPM	41000	41000	36900	36900	36900	32800	32800	24600	12300	34200	34200	34200	34200	30780	30780	30780	27360
			IPM(FEED)	19	19	16	16	16	12	12	8	4	27	27	27	27	22	22	22	17
			Ap	.0010	.0010	.0006	.0006	.0004	.0004	.0002	.0002	.0002	.0018	.0018	.0013	.0013	.0007	.0007	.0004	.0004
	11.2		SFM(Vc)	160	160	145	145	145	130	130	95	50	165	165	165	165	150	150	150	135
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	38800	38800	34920	34920	34920	31040	31040	23280	11640	32300	32300	32300	32300	29070	29070	29070	25840
			IPM(FEED)	17	17	14	14	14	11	11	7	3	23	23	23	23	19	19	19	15
			Ap	.0008	.0008	.0004	.0004	.0003	.0003	.0002	.0001	.0001	.0014	.0014	.0010	.0010	.0006	.0006	.0004	.0004
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	170	170	150	150	150	135	135	100	50	175	175	175	175	160	160	160	140
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0003
			RPM	41000	41000	36900	36900	36900	32800	32800	24600	12300	34200	34200	34200	34200	30780	30780	30780	27360
			IPM(FEED)	19	19	16	16	16	12	12	8	4	27	27	27	27	22	22	22	17
			Ap	.0010	.0010	.0006	.0006	.0004	.0004	.0002	.0002	.0002	.0018	.0018	.0013	.0013	.0007	.0007	.0004	.0004
H	38.1-38.2	Hardened steel	SFM(Vc)	140	140	125	125	125	115	115	85	40	145	145	145	145	130	130	130	115
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0001	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	34200	34200	30780	30780	30780	27360	27360	20520	10260	28500	28500	28500	28500	25650	25650	25650	22800
			IPM(FEED)	13.4	13.4	10.8	10.8	10.8	8.7	8.7	5.7	2.4	20.3	20.3	20.3	20.3	16.3	16.3	16.3	13.0
			Ap	.0006	.0006	.0003	.0003	.0002	.0002	.0001	.0001	.0001	.0010	.0010	.0007	.0007	.0004	.0004	.0002	.0002
	40	Chilled Cast Iron	SFM(Vc)	160	160	145	145	145	130	130	95	50	165	165	165	165	150	150	150	135
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	38800	38800	34920	34920	34920	31040	31040	23280	11640	32300	32300	32300	32300	29070	29070	29070	25840
			IPM(FEED)	17	17	14	14	14	11	11	7	3	23	23	23	23	19	19	19	15
			Ap	.0008	.0008	.0004	.0004	.0003	.0003	.0002	.0001	.0001	.0014	.0014	.0010	.0010	.0006	.0006	.0004	.0004
	41	Hardened Cast Iron	SFM(Vc)	140	140	125	125	125	115	115	85	40	145	145	145	145	130	130	130	115
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0001	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	34200	34200	30780	30780	30780	27360	27360	20520	10260	28500	28500	28500	28500	25650	25650	25650	22800
			IPM(FEED)	13.4	13.4	10.8	10.8	10.8	8.7	8.7	5.7	2.4	20.3	20.3	20.3	20.3	16.3	16.3	16.3	13.0
			Ap	.0006	.0006	.0003	.0003	.0002	.0002	.0001	.0001	.0001	.0010	.0010	.0007	.0007	.0004	.0004	.0002	.0002

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



CARBIDE
HSS

4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

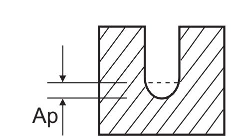
SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Parameter	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7
		LBS	8	10	12	14	16	1	2	3	4	5	6	8	10	12	14	16	2	4	6	8
P	1-8	SFM(Vc)	105	105	55	55	20	210	210	210	190	190	190	170	125	125	65	65	245	220	220	195
		IPT(fz)	.0003	.0003	.0002	.0002	.0002	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0006	.0006	.0006	.0005
		RPM	20520	20520	10260	10260	3420	34200	34200	34200	30780	30780	30780	27360	20520	20520	10260	10260	34200	30780	30780	27360
		IPM(FEED)	11	11	5	5	1	40	40	40	33	33	33	26	17	17	7	7	44	36	36	29
		Ap	.0003	.0002	.0002	.0002	.0002	.0015	.0015	.0015	.0009	.0006	.0006	.0003	.0002	.0002	.0002	.0002	.0025	.0010	.0006	.0006
	9	SFM(Vc)	100	100	50	50	15	200	200	200	180	180	180	160	120	120	60	60	235	210	210	185
		IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0005	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0003	.0003	.0006	.0005	.0005	.0005
		RPM	19380	19380	9690	9690	3230	32300	32300	32300	29070	29070	29070	25840	19380	19380	9690	9690	32300	29070	29070	25840
		IPM(FEED)	10	10	4	4	1	33	33	33	27	27	27	21	14	14	6	6	37	30	30	23
		Ap	.0002	.0002	.0002	.0002	.0002	.0011	.0011	.0011	.0007	.0004	.0004	.0002	.0002	.0002	.0002	.0002	.0019	.0008	.0005	.0005
	10-11.1	SFM(Vc)	105	105	55	55	20	210	210	210	190	190	190	170	125	125	65	65	245	220	220	195
		IPT(fz)	.0003	.0003	.0002	.0002	.0002	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0006	.0006	.0006	.0005
		RPM	20520	20520	10260	10260	3420	34200	34200	34200	30780	30780	30780	27360	20520	20520	10260	10260	34200	30780	30780	27360
		IPM(FEED)	11	11	5	5	1	40	40	40	33	33	33	26	17	17	7	7	44	36	36	29
		Ap	.0003	.0002	.0002	.0002	.0002	.0015	.0015	.0015	.0009	.0006	.0006	.0003	.0002	.0002	.0002	.0002	.0025	.0010	.0006	.0006
	11.2	SFM(Vc)	100	100	50	50	15	200	200	200	180	180	180	160	120	120	60	60	235	210	210	185
		IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0005	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0003	.0003	.0006	.0005	.0005	.0005
		RPM	19380	19380	9690	9690	3230	32300	32300	32300	29070	29070	29070	25840	19380	19380	9690	9690	32300	29070	29070	25840
		IPM(FEED)	10	10	4	4	1	33	33	33	27	27	27	21	14	14	6	6	37	30	30	23
		Ap	.0002	.0002	.0002	.0002	.0002	.0011	.0011	.0011	.0007	.0004	.0004	.0002	.0002	.0002	.0002	.0002	.0019	.0008	.0005	.0005
K	15-20	SFM(Vc)	105	105	55	55	20	210	210	210	190	190	190	170	125	125	65	65	245	220	220	195
		IPT(fz)	.0003	.0003	.0002	.0002	.0002	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0006	.0006	.0006	.0005
		RPM	20520	20520	10260	10260	3420	34200	34200	34200	30780	30780	30780	27360	20520	20520	10260	10260	34200	30780	30780	27360
		IPM(FEED)	11	11	5	5	1	40	40	40	33	33	33	26	17	17	7	7	44	36	36	29
		Ap	.0003	.0002	.0002	.0002	.0002	.0015	.0015	.0015	.0009	.0006	.0006	.0003	.0002	.0002	.0002	.0002	.0025	.0010	.0006	.0006
H	38.1-38.2	SFM(Vc)	90	90	45	45	15	175	175	175	160	160	160	140	105	105	55	55	205	185	185	165
		IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0004
		RPM	17100	17100	8550	8550	2850	28500	28500	28500	25650	25650	25650	22800	17100	17100	8550	8550	28500	25650	25650	22800
		IPM(FEED)	8.5	8.5	3.7	3.7	1.0	27.0	27.0	27.0	21.9	21.9	21.9	17.3	11.4	11.4	4.9	4.9	30.1	24.4	24.4	19.3
		Ap	.0002	.0001	.0001	.0001	.0001	.0008	.0008	.0008	.0005	.0003	.0003	.0002	.0001	.0001	.0001	.0001	.0014	.0006	.0004	.0004
	40	SFM(Vc)	100	100	50	50	15	200	200	200	180	180	180	160	120	120	60	60	235	210	210	185
		IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0005	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0003	.0003	.0006	.0005	.0005	.0005
		RPM	19380	19380	9690	9690	3230	32300	32300	32300	29070	29070	29070	25840	19380	19380	9690	9690	32300	29070	29070	25840
		IPM(FEED)	10	10	4	4	1	33	33	33	27	27	27	21	14	14	6	6	37	30	30	23
		Ap	.0002	.0002	.0002	.0002	.0002	.0011	.0011	.0011	.0007	.0004	.0004	.0002	.0002	.0002	.0002	.0002	.0019	.0008	.0005	.0005
	41	SFM(Vc)	90	90	45	45	15	175	175	175	160	160	160	140	105	105	55	55	205	185	185	165
		IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0004
		RPM	17100	17100	8550	8550	2850	28500	28500	28500	25650	25650	25650	22800	17100	17100	8550	8550	28500	25650	25650	22800
		IPM(FEED)	8.5	8.5	3.7	3.7	1.0	27.0	27.0	27.0	21.9	21.9	21.9	17.3	11.4	11.4	4.9	4.9	30.1	24.4	24.4	19.3
		Ap	.0002	.0001	.0001	.0001	.0001	.0008	.0008	.0008	.0005	.0003	.0003	.0002	.0001	.0001	.0001	.0001	.0014	.0006	.0004	.0004

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

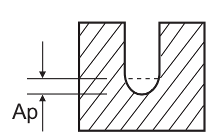
RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9
			LBS	10	12	2	3	4	5	6	8	10	12	14	16	20	4	6	8	10
P	1-8	Non-alloy steel	SFM(Vc)	195	150	280	280	280	255	255	255	225	225	170	170	85	270	270	270	240
			IPT(fz)	.0005	.0005	.0007	.0007	.0007	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0004	.0008	.0008	.0008	.0007
			RPM	27360	20520	34200	34200	34200	30780	30780	30780	27360	27360	20520	20520	10260	29250	29250	29250	26000
			IPM(FEED)	29	19	48	48	48	39	39	39	31	31	20	20	9	44	44	44	35
			Ap	.0004	.0002	.0028	.0020	.0020	.0011	.0011	.0007	.0007	.0004	.0003	.0003	.0003	.0013	.0013	.0008	.0008
	9	Low alloy steel	SFM(Vc)	185	140	265	265	265	240	240	240	215	215	160	160	80	255	255	255	230
			IPT(fz)	.0005	.0004	.0006	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0004	.0004	.0004	.0007	.0007	.0007	.0006
			RPM	25840	19380	32300	32300	32300	29070	29070	29070	25840	25840	19380	19380	9690	27630	27630	27630	24560
			IPM(FEED)	23	15	41	41	41	33	33	33	26	26	17	17	7	37	37	37	29
			Ap	.0003	.0002	.0022	.0015	.0015	.0009	.0009	.0006	.0006	.0003	.0002	.0002	.0002	.0010	.0010	.0006	.0006
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	195	150	280	280	280	255	255	255	225	225	170	170	85	270	270	270	240
			IPT(fz)	.0005	.0005	.0007	.0007	.0007	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0004	.0008	.0008	.0008	.0007
			RPM	27360	20520	34200	34200	34200	30780	30780	30780	27360	27360	20520	20520	10260	29250	29250	29250	26000
			IPM(FEED)	29	19	48	48	48	39	39	39	31	31	20	20	9	44	44	44	35
			Ap	.0004	.0002	.0028	.0020	.0020	.0011	.0011	.0007	.0007	.0004	.0003	.0003	.0003	.0013	.0013	.0008	.0008
	11.2		SFM(Vc)	185	140	265	265	265	240	240	240	215	215	160	160	80	255	255	255	230
			IPT(fz)	.0005	.0004	.0006	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0004	.0004	.0004	.0007	.0007	.0007	.0006
			RPM	25840	19380	32300	32300	32300	29070	29070	29070	25840	25840	19380	19380	9690	27630	27630	27630	24560
			IPM(FEED)	23	15	41	41	41	33	33	33	26	26	17	17	7	37	37	37	29
			Ap	.0003	.0002	.0022	.0015	.0015	.0009	.0009	.0006	.0006	.0003	.0002	.0002	.0002	.0010	.0010	.0006	.0006
K	15-20	Grey cast iron, Nodular cast iron, Malleable cast iron	SFM(Vc)	195	150	280	280	280	255	255	255	225	225	170	170	85	270	270	270	240
			IPT(fz)	.0005	.0005	.0007	.0007	.0007	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0004	.0008	.0008	.0008	.0007
			RPM	27360	20520	34200	34200	34200	30780	30780	30780	27360	27360	20520	20520	10260	29250	29250	29250	26000
			IPM(FEED)	29	19	48	48	48	39	39	39	31	31	20	20	9	44	44	44	35
			Ap	.0004	.0002	.0028	.0020	.0020	.0011	.0011	.0007	.0007	.0004	.0003	.0003	.0003	.0013	.0013	.0008	.0008
H	38.1-38.2	Hardened steel	SFM(Vc)	165	125	235	235	235	210	210	210	190	190	140	140	70	225	225	225	200
			IPT(fz)	.0004	.0004	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0006	.0006	.0006	.0006
			RPM	22800	17100	28500	28500	28500	25650	25650	25650	22800	22800	17100	17100	8550	24390	24390	24390	21680
			IPM(FEED)	19.3	12.6	33.7	33.7	33.7	27.4	27.4	27.4	21.5	21.5	14.2	14.2	6.1	30.5	30.5	30.5	24.0
			Ap	.0002	.0002	.0016	.0011	.0011	.0006	.0006	.0004	.0004	.0002	.0002	.0002	.0002	.0007	.0007	.0004	.0004
	40	Chilled Cast Iron	SFM(Vc)	185	140	265	265	265	240	240	240	215	215	160	160	80	255	255	255	230
			IPT(fz)	.0005	.0004	.0006	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0004	.0004	.0004	.0007	.0007	.0007	.0006
			RPM	25840	19380	32300	32300	32300	29070	29070	29070	25840	25840	19380	19380	9690	27630	27630	27630	24560
			IPM(FEED)	23	15	41	41	41	33	33	33	26	26	17	17	7	37	37	37	29
			Ap	.0003	.0002	.0022	.0015	.0015	.0009	.0009	.0006	.0006	.0003	.0002	.0002	.0002	.0010	.0010	.0006	.0006
	41	Hardened Cast Iron	SFM(Vc)	165	125	235	235	235	210	210	210	190	190	140	140	70	225	225	225	200
			IPT(fz)	.0004	.0004	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0006	.0006	.0006	.0006
			RPM	22800	17100	28500	28500	28500	25650	25650	25650	22800	22800	17100	17100	8550	24390	24390	24390	21680
			IPM(FEED)	19.3	12.6	33.7	33.7	33.7	27.4	27.4	27.4	21.5	21.5	14.2	14.2	6.1	30.5	30.5	30.5	24.0
			Ap	.0002	.0002	.0016	.0011	.0011	.0006	.0006	.0004	.0004	.0002	.0002	.0002	.0002	.0007	.0007	.0004	.0004

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



4G MILL END MILLS

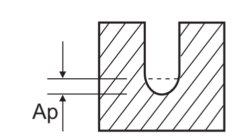
RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø) 1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.2	1.2
		LBS	2	3	4	5	6	7	8	10	12	14	16	18	20	22	26	30	40	50	4	6
P	1-8	SFM(Vc)	315	315	315	315	285	285	285	285	255	255	190	190	190	95	95	95	30	30	325	325
		IPT(fz)	.0010	.0010	.0010	.0010	.0009	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0010	.0010
		RPM	30800	30800	30800	30800	27720	27720	27720	27720	24640	24640	18480	18480	18480	9240	9240	9240	3080	3080	26300	26300
		IPM(FEED)	61	61	61	61	49	49	49	49	39	39	25	25	25	11	11	11	3	3	54	54
		Ap	.0035	.0035	.0025	.0025	.0014	.0014	.0014	.0009	.0009	.0006	.0006	.0004	.0004	.0004	.0004	.0004	.0004	.0002	.0030	.0030
	9	SFM(Vc)	300	300	300	300	270	270	270	270	240	240	180	180	180	90	90	90	30	30	305	305
		IPT(fz)	.0009	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0009	.0009
		RPM	29100	29100	29100	29100	26190	26190	26190	26190	23280	23280	17460	17460	17460	8730	8730	8730	2910	2910	24800	24800
		IPM(FEED)	52	52	52	52	42	42	42	42	33	33	22	22	22	9	9	9	3	3	45	45
		Ap	.0028	.0028	.0019	.0019	.0011	.0011	.0011	.0007	.0007	.0004	.0004	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0023	.0023
	10-11.1	SFM(Vc)	315	315	315	315	285	285	285	285	255	255	190	190	190	95	95	95	30	30	325	325
		IPT(fz)	.0010	.0010	.0010	.0010	.0009	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0010	.0010
		RPM	30800	30800	30800	30800	27720	27720	27720	27720	24640	24640	18480	18480	18480	9240	9240	9240	3080	3080	26300	26300
		IPM(FEED)	61	61	61	61	49	49	49	49	39	39	25	25	25	11	11	11	3	3	54	54
		Ap	.0035	.0035	.0025	.0025	.0014	.0014	.0014	.0009	.0009	.0006	.0006	.0004	.0004	.0004	.0004	.0004	.0004	.0002	.0030	.0030
	11.2	SFM(Vc)	300	300	300	300	270	270	270	270	240	240	180	180	180	90	90	90	30	30	305	305
		IPT(fz)	.0009	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0009	.0009
		RPM	29100	29100	29100	29100	26190	26190	26190	26190	23280	23280	17460	17460	17460	8730	8730	8730	2910	2910	24800	24800
		IPM(FEED)	52	52	52	52	42	42	42	42	33	33	22	22	22	9	9	9	3	3	45	45
		Ap	.0028	.0028	.0019	.0019	.0011	.0011	.0011	.0007	.0007	.0004	.0004	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0023	.0023
K	15-20	SFM(Vc)	315	315	315	315	285	285	285	285	255	255	190	190	190	95	95	95	30	30	325	325
		IPT(fz)	.0010	.0010	.0010	.0010	.0009	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0010	.0010
		RPM	30800	30800	30800	30800	27720	27720	27720	27720	24640	24640	18480	18480	18480	9240	9240	9240	3080	3080	26300	26300
		IPM(FEED)	61	61	61	61	49	49	49	49	39	39	25	25	25	11	11	11	3	3	54	54
		Ap	.0035	.0035	.0025	.0025	.0014	.0014	.0014	.0009	.0009	.0006	.0006	.0004	.0004	.0004	.0004	.0004	.0004	.0002	.0030	.0030
H	38.1-38.2	SFM(Vc)	265	265	265	265	240	240	240	240	210	210	160	160	160	80	80	80	25	25	270	270
		IPT(fz)	.0008	.0008	.0008	.0008	.0007	.0007	.0007	.0007	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0009	.0009
		RPM	25700	25700	25700	25700	23130	23130	23130	23130	20560	20560	15420	15420	15420	7710	7710	7710	2570	2570	21900	21900
		IPM(FEED)	42.3	42.3	42.3	42.3	34.3	34.3	34.3	34.3	27.2	27.2	17.7	17.7	17.7	7.7	7.7	7.7	2.2	2.2	37.4	37.4
		Ap	.0020	.0020	.0014	.0014	.0008	.0008	.0008	.0005	.0005	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0017	.0017
	40	SFM(Vc)	300	300	300	300	270	270	270	270	240	240	180	180	180	90	90	90	30	30	305	305
		IPT(fz)	.0009	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0009	.0009
		RPM	29100	29100	29100	29100	26190	26190	26190	26190	23280	23280	17460	17460	17460	8730	8730	8730	2910	2910	24800	24800
		IPM(FEED)	52	52	52	52	42	42	42	42	33	33	22	22	22	9	9	9	3	3	45	45
		Ap	.0028	.0028	.0019	.0019	.0011	.0011	.0011	.0007	.0007	.0004	.0004	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0023	.0023
	41	SFM(Vc)	265	265	265	265	240	240	240	240	210	210	160	160	160	80	80	80	25	25	270	270
		IPT(fz)	.0008	.0008	.0008	.0008	.0007	.0007	.0007	.0007	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0009	.0009
		RPM	25700	25700	25700	25700	23130	23130	23130	23130	20560	20560	15420	15420	15420	7710	7710	7710	2570	2570	21900	21900
		IPM(FEED)	42.3	42.3	42.3	42.3	34.3	34.3	34.3	34.3	27.2	27.2	17.7	17.7	17.7	7.7	7.7	7.7	2.2	2.2	37.4	37.4
		Ap	.0020	.0020	.0014	.0014	.0008	.0008	.0008	.0005	.0005	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0017	.0017

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)																
				1.2	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5
			LBS	8	10	12	16	20	26	6	8	10	16	4	5	6	7	8	10	12
P	1-8	Non-alloy steel	SFM(Vc)	295	295	295	260	195	100	310	280	280	250	370	370	370	370	335	335	335
			IPT(fz)	.0009	.0009	.0009	.0008	.0007	.0006	.0012	.0011	.0011	.0009	.0013	.0013	.0013	.0013	.0012	.0012	.0012
			RPM	23670	23670	23670	21040	15780	7890	21500	19350	19350	17200	23900	23900	23900	23900	21510	21510	21510
			IPM(FEED)	44	44	44	35	23	10	51	41	41	33	62	62	62	62	50	50	50
			Ap	.0017	.0011	.0011	.0006	.0004	.0004	.0035	.0020	.0020	.0013	.0053	.0037	.0037	.0037	.0021	.0021	.0021
	9	Low alloy steel	SFM(Vc)	275	275	275	245	185	90	295	265	265	235	350	350	350	350	315	315	315
			IPT(fz)	.0008	.0008	.0008	.0007	.0006	.0005	.0011	.0010	.0010	.0009	.0012	.0012	.0012	.0012	.0011	.0011	.0011
			RPM	22320	22320	22320	19840	14880	7440	20300	18270	18270	16240	22600	22600	22600	22600	20340	20340	20340
			IPM(FEED)	37	37	37	29	19	8	43	35	35	28	53	53	53	53	43	43	43
			Ap	.0013	.0008	.0008	.0005	.0003	.0003	.0027	.0015	.0015	.0010	.0041	.0029	.0029	.0029	.0017	.0017	.0017
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	295	295	295	260	195	100	310	280	280	250	370	370	370	370	335	335	335
			IPT(fz)	.0009	.0009	.0009	.0008	.0007	.0006	.0012	.0011	.0011	.0009	.0013	.0013	.0013	.0013	.0012	.0012	.0012
			RPM	23670	23670	23670	21040	15780	7890	21500	19350	19350	17200	23900	23900	23900	23900	21510	21510	21510
			IPM(FEED)	44	44	44	35	23	10	51	41	41	33	62	62	62	62	50	50	50
			Ap	.0017	.0011	.0011	.0006	.0004	.0004	.0035	.0020	.0020	.0013	.0053	.0037	.0037	.0037	.0021	.0021	.0021
	11.2		SFM(Vc)	275	275	275	245	185	90	295	265	265	235	350	350	350	350	315	315	315
			IPT(fz)	.0008	.0008	.0008	.0007	.0006	.0005	.0011	.0010	.0010	.0009	.0012	.0012	.0012	.0012	.0011	.0011	.0011
			RPM	22320	22320	22320	19840	14880	7440	20300	18270	18270	16240	22600	22600	22600	22600	20340	20340	20340
			IPM(FEED)	37	37	37	29	19	8	43	35	35	28	53	53	53	53	43	43	43
			Ap	.0013	.0008	.0008	.0005	.0003	.0003	.0027	.0015	.0015	.0010	.0041	.0029	.0029	.0029	.0017	.0017	.0017
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	295	295	295	260	195	100	310	280	280	250	370	370	370	370	335	335	335
			IPT(fz)	.0009	.0009	.0009	.0008	.0007	.0006	.0012	.0011	.0011	.0009	.0013	.0013	.0013	.0013	.0012	.0012	.0012
			RPM	23670	23670	23670	21040	15780	7890	21500	19350	19350	17200	23900	23900	23900	23900	21510	21510	21510
			IPM(FEED)	44	44	44	35	23	10	51	41	41	33	62	62	62	62	50	50	50
			Ap	.0017	.0011	.0011	.0006	.0004	.0004	.0035	.0020	.0020	.0013	.0053	.0037	.0037	.0037	.0021	.0021	.0021
H	38.1-38.2	Hardened steel	SFM(Vc)	245	245	245	215	165	80	260	235	235	210	310	310	310	310	280	280	280
			IPT(fz)	.0008	.0008	.0008	.0007	.0006	.0005	.0010	.0009	.0009	.0008	.0011	.0011	.0011	.0011	.0010	.0010	.0010
			RPM	19710	19710	19710	17520	13140	6570	18000	16200	16200	14400	20000	20000	20000	20000	18000	18000	18000
			IPM(FEED)	30.3	30.3	30.3	24.0	15.7	6.7	36.8	29.7	29.7	23.6	42.3	42.3	42.3	42.3	34.3	34.3	34.3
			Ap	.0009	.0006	.0006	.0004	.0002	.0002	.0019	.0011	.0011	.0007	.0030	.0021	.0021	.0021	.0012	.0012	.0012
	40	Chilled Cast Iron	SFM(Vc)	275	275	275	245	185	90	295	265	265	235	350	350	350	350	315	315	315
			IPT(fz)	.0008	.0008	.0008	.0007	.0006	.0005	.0011	.0010	.0010	.0009	.0012	.0012	.0012	.0012	.0011	.0011	.0011
			RPM	22320	22320	22320	19840	14880	7440	20300	18270	18270	16240	22600	22600	22600	22600	20340	20340	20340
			IPM(FEED)	37	37	37	29	19	8	43	35	35	28	53	53	53	53	43	43	43
			Ap	.0013	.0008	.0008	.0005	.0003	.0003	.0027	.0015	.0015	.0010	.0041	.0029	.0029	.0029	.0017	.0017	.0017
	41	Hardened Cast Iron	SFM(Vc)	245	245	245	215	165	80	260	235	235	210	310	310	310	310	280	280	280
			IPT(fz)	.0008	.0008	.0008	.0007	.0006	.0005	.0010	.0009	.0009	.0008	.0011	.0011	.0011	.0011	.0010	.0010	.0010
			RPM	19710	19710	19710	17520	13140	6570	18000	16200	16200	14400	20000	20000	20000	20000	18000	18000	18000
			IPM(FEED)	30.3	30.3	30.3	24.0	15.7	6.7	36.8	29.7	29.7	23.6	42.3	42.3	42.3	42.3	34.3	34.3	34.3
			Ap	.0009	.0006	.0006	.0004	.0002	.0002	.0019	.0011	.0011	.0007	.0030	.0021	.0021	.0021	.0012	.0012	.0012

SFM = Surface Feet per Minute
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Ap : mm (Axial Depth of Cut)
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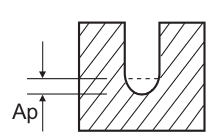
(Depth of Cut per one pass)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
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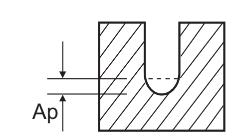
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS
RECOMMENDED CUTTING CONDITIONS
SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø)																			
			1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.8	1.8	1.8	1.8
		LBS	14	16	18	20	22	26	30	35	40	4	6	8	10	12	16	20	4	6	8	10
P	1-8	SFM(Vc)	335	295	295	295	295	220	220	110	110	365	365	365	330	330	330	295	410	410	410	370
		IPT(fz)	.0012	.0010	.0010	.0010	.0010	.0009	.0009	.0008	.0008	.0014	.0014	.0014	.0012	.0012	.0012	.0011	.0016	.0016	.0016	.0014
		RPM	21510	19120	19120	19120	19120	14340	14340	7170	7170	22200	22200	22200	19980	19980	19980	17760	22200	22200	22200	19980
		IPM(FEED)	50	40	40	40	40	26	26	11	11	61	61	61	50	50	50	39	70	70	70	57
		Ap	.0013	.0013	.0013	.0008	.0008	.0006	.0006	.0004	.0004	.0040	.0040	.0040	.0023	.0023	.0014	.0014	.0044	.0044	.0044	.0026
	9	SFM(Vc)	315	280	280	280	280	210	210	105	105	345	345	345	310	310	310	275	390	390	390	350
		IPT(fz)	.0011	.0009	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0012	.0012	.0012	.0011	.0011	.0011	.0010	.0014	.0014	.0014	.0012
		RPM	20340	18080	18080	18080	18080	13560	13560	6780	6780	21000	21000	21000	18900	18900	18900	16800	21000	21000	21000	18900
		IPM(FEED)	43	34	34	34	34	22	22	10	10	51	51	51	42	42	42	33	58	58	58	47
		Ap	.0010	.0010	.0010	.0006	.0006	.0004	.0004	.0003	.0003	.0031	.0031	.0031	.0018	.0018	.0011	.0011	.0035	.0035	.0035	.0020
	10-11.1	SFM(Vc)	335	295	295	295	295	220	220	110	110	365	365	365	330	330	330	295	410	410	410	370
		IPT(fz)	.0012	.0010	.0010	.0010	.0010	.0009	.0009	.0008	.0008	.0014	.0014	.0014	.0012	.0012	.0012	.0011	.0016	.0016	.0016	.0014
		RPM	21510	19120	19120	19120	19120	14340	14340	7170	7170	22200	22200	22200	19980	19980	19980	17760	22200	22200	22200	19980
		IPM(FEED)	50	40	40	40	40	26	26	11	11	61	61	61	50	50	50	39	70	70	70	57
		Ap	.0013	.0013	.0013	.0008	.0008	.0006	.0006	.0004	.0004	.0040	.0040	.0040	.0023	.0023	.0014	.0014	.0044	.0044	.0044	.0026
	11.2	SFM(Vc)	315	280	280	280	280	210	210	105	105	345	345	345	310	310	310	275	390	390	390	350
		IPT(fz)	.0011	.0009	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0012	.0012	.0012	.0011	.0011	.0011	.0010	.0014	.0014	.0014	.0012
		RPM	20340	18080	18080	18080	18080	13560	13560	6780	6780	21000	21000	21000	18900	18900	18900	16800	21000	21000	21000	18900
		IPM(FEED)	43	34	34	34	34	22	22	10	10	51	51	51	42	42	42	33	58	58	58	47
		Ap	.0010	.0010	.0010	.0006	.0006	.0004	.0004	.0003	.0003	.0031	.0031	.0031	.0018	.0018	.0011	.0011	.0035	.0035	.0035	.0020
K	15-20	SFM(Vc)	335	295	295	295	295	220	220	110	110	365	365	365	330	330	330	295	410	410	410	370
		IPT(fz)	.0012	.0010	.0010	.0010	.0010	.0009	.0009	.0008	.0008	.0014	.0014	.0014	.0012	.0012	.0012	.0011	.0016	.0016	.0016	.0014
		RPM	21510	19120	19120	19120	19120	14340	14340	7170	7170	22200	22200	22200	19980	19980	19980	17760	22200	22200	22200	19980
		IPM(FEED)	50	40	40	40	40	26	26	11	11	61	61	61	50	50	50	39	70	70	70	57
		Ap	.0013	.0013	.0013	.0008	.0008	.0006	.0006	.0004	.0004	.0040	.0040	.0040	.0023	.0023	.0014	.0014	.0044	.0044	.0044	.0026
H	38.1-38.2	SFM(Vc)	280	245	245	245	245	185	185	95	95	305	305	305	275	275	275	245	345	345	345	310
		IPT(fz)	.0010	.0009	.0009	.0009	.0009	.0007	.0007	.0006	.0006	.0012	.0012	.0012	.0011	.0011	.0011	.0009	.0013	.0013	.0013	.0012
		RPM	18000	16000	16000	16000	16000	12000	12000	6000	6000	18500	18500	18500	16650	16650	16650	14800	18500	18500	18500	16650
		IPM(FEED)	34.3	27.2	27.2	27.2	27.2	17.7	17.7	7.7	7.7	43.7	43.7	43.7	35.4	35.4	35.4	28.0	48.2	48.2	48.2	39.0
		Ap	.0007	.0007	.0007	.0004	.0004	.0003	.0003	.0002	.0002	.0022	.0022	.0022	.0013	.0013	.0008	.0008	.0025	.0025	.0025	.0014
	40	SFM(Vc)	315	280	280	280	280	210	210	105	105	345	345	345	310	310	310	275	390	390	390	350
		IPT(fz)	.0011	.0009	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0012	.0012	.0012	.0011	.0011	.0011	.0010	.0014	.0014	.0014	.0012
		RPM	20340	18080	18080	18080	18080	13560	13560	6780	6780	21000	21000	21000	18900	18900	18900	16800	21000	21000	21000	18900
		IPM(FEED)	43	34	34	34	34	22	22	10	10	51	51	51	42	42	42	33	58	58	58	47
		Ap	.0010	.0010	.0010	.0006	.0006	.0004	.0004	.0003	.0003	.0031	.0031	.0031	.0018	.0018	.0011	.0011	.0035	.0035	.0035	.0020
	41	SFM(Vc)	280	245	245	245	245	185	185	95	95	305	305	305	275	275	275	245	345	345	345	310
		IPT(fz)	.0010	.0009	.0009	.0009	.0009	.0007	.0007	.0006	.0006	.0012	.0012	.0012	.0011	.0011	.0011	.0009	.0013	.0013	.0013	.0012
		RPM	18000	16000	16000	16000	16000	12000	12000	6000	6000	18500	18500	18500	16650	16650	16650	14800	18500	18500	18500	16650
		IPM(FEED)	34.3	27.2	27.2	27.2	27.2	17.7	17.7	7.7	7.7	43.7	43.7	43.7	35.4	35.4	35.4	28.0	48.2	48.2	48.2	39.0
		Ap	.0007	.0007	.0007	.0004	.0004	.0003	.0003	.0002	.0002	.0022	.0022	.0022	.0013	.0013	.0008	.0008	.0025	.0025	.0025	.0014

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)																
				1.8	1.8	1.8	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
			LBS	12	16	20	6	8	10	12	14	16	18	20	22	26	30	35	40	45
P	1-8	Non-alloy steel	SFM(Vc)	370	370	330	370	370	370	335	335	335	335	335	295	295	295	225	225	110
			IPT(fz)	.0014	.0014	.0013	.0020	.0020	.0020	.0018	.0018	.0018	.0018	.0018	.0016	.0016	.0016	.0014	.0014	.0012
			RPM	19980	19980	17760	18000	18000	18000	16200	16200	16200	16200	16200	14400	14400	14400	10800	10800	5400
			IPM(FEED)	57	57	45	71	71	71	57	57	57	57	57	45	45	45	30	30	13
			Ap	.0026	.0016	.0016	.0071	.0050	.0050	.0028	.0028	.0028	.0018	.0018	.0018	.0018	.0011	.0007	.0007	.0007
	9	Low alloy steel	SFM(Vc)	350	350	310	350	350	350	315	315	315	315	315	280	280	280	210	210	105
			IPT(fz)	.0012	.0012	.0011	.0018	.0018	.0018	.0016	.0016	.0016	.0016	.0016	.0014	.0014	.0014	.0012	.0012	.0011
			RPM	18900	18900	16800	17000	17000	17000	15300	15300	15300	15300	15300	13600	13600	13600	10200	10200	5100
			IPM(FEED)	47	47	37	60	60	60	49	49	49	49	49	38	38	38	25	25	11
			Ap	.0020	.0013	.0013	.0055	.0039	.0039	.0022	.0022	.0022	.0014	.0014	.0014	.0014	.0008	.0006	.0006	.0006
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	370	370	330	370	370	370	335	335	335	335	335	295	295	295	225	225	110
			IPT(fz)	.0014	.0014	.0013	.0020	.0020	.0020	.0018	.0018	.0018	.0018	.0018	.0016	.0016	.0016	.0014	.0014	.0012
			RPM	19980	19980	17760	18000	18000	18000	16200	16200	16200	16200	16200	14400	14400	14400	10800	10800	5400
			IPM(FEED)	57	57	45	71	71	71	57	57	57	57	57	45	45	45	30	30	13
			Ap	.0026	.0016	.0016	.0071	.0050	.0050	.0028	.0028	.0028	.0018	.0018	.0018	.0018	.0011	.0007	.0007	.0007
	11.2		SFM(Vc)	350	350	310	350	350	350	315	315	315	315	315	280	280	280	210	210	105
			IPT(fz)	.0012	.0012	.0011	.0018	.0018	.0018	.0016	.0016	.0016	.0016	.0016	.0014	.0014	.0014	.0012	.0012	.0011
			RPM	18900	18900	16800	17000	17000	17000	15300	15300	15300	15300	15300	13600	13600	13600	10200	10200	5100
			IPM(FEED)	47	47	37	60	60	60	49	49	49	49	49	38	38	38	25	25	11
			Ap	.0020	.0013	.0013	.0055	.0039	.0039	.0022	.0022	.0022	.0014	.0014	.0014	.0014	.0008	.0006	.0006	.0006
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	370	370	330	370	370	370	335	335	335	335	335	295	295	295	225	225	110
			IPT(fz)	.0014	.0014	.0013	.0020	.0020	.0020	.0018	.0018	.0018	.0018	.0018	.0016	.0016	.0016	.0014	.0014	.0012
			RPM	19980	19980	17760	18000	18000	18000	16200	16200	16200	16200	16200	14400	14400	14400	10800	10800	5400
			IPM(FEED)	57	57	45	71	71	71	57	57	57	57	57	45	45	45	30	30	13
			Ap	.0026	.0016	.0016	.0071	.0050	.0050	.0028	.0028	.0028	.0018	.0018	.0018	.0018	.0011	.0007	.0007	.0007
H	38.1-38.2	Hardened steel	SFM(Vc)	310	310	275	310	310	310	280	280	280	280	280	245	245	245	185	185	95
			IPT(fz)	.0012	.0012	.0010	.0017	.0017	.0017	.0015	.0015	.0015	.0015	.0015	.0013	.0013	.0013	.0012	.0012	.0010
			RPM	16650	16650	14800	15000	15000	15000	13500	13500	13500	13500	13500	12000	12000	12000	9000	9000	4500
			IPM(FEED)	39.0	39.0	30.9	50.6	50.6	50.6	40.9	40.9	40.9	40.9	40.9	32.3	32.3	32.3	21.3	21.3	9.1
			Ap	.0014	.0009	.0009	.0039	.0028	.0028	.0016	.0016	.0016	.0010	.0010	.0010	.0010	.0006	.0004	.0004	.0004
	40	Chilled Cast Iron	SFM(Vc)	350	350	310	350	350	350	315	315	315	315	315	280	280	280	210	210	105
			IPT(fz)	.0012	.0012	.0011	.0018	.0018	.0018	.0016	.0016	.0016	.0016	.0016	.0014	.0014	.0014	.0012	.0012	.0011
			RPM	18900	18900	16800	17000	17000	17000	15300	15300	15300	15300	15300	13600	13600	13600	10200	10200	5100
			IPM(FEED)	47	47	37	60	60	60	49	49	49	49	49	38	38	38	25	25	11
			Ap	.0020	.0013	.0013	.0055	.0039	.0039	.0022	.0022	.0022	.0014	.0014	.0014	.0014	.0008	.0006	.0006	.0006
	41	Hardened Cast Iron	SFM(Vc)	310	310	275	310	310	310	280	280	280	280	280	245	245	245	185	185	95
			IPT(fz)	.0012	.0012	.0010	.0017	.0017	.0017	.0015	.0015	.0015	.0015	.0015	.0013	.0013	.0013	.0012	.0012	.0010
			RPM	16650	16650	14800	15000	15000	15000	13500	13500	13500	13500	13500	12000	12000	12000	9000	9000	4500
			IPM(FEED)	39.0	39.0	30.9	50.6	50.6	50.6	40.9	40.9	40.9	40.9	40.9	32.3	32.3	32.3	21.3	21.3	9.1
			Ap	.0014	.0009	.0009	.0039	.0028	.0028	.0016	.0016	.0016	.0010	.0010	.0010	.0010	.0006	.0004	.0004	.0004

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
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Ap : mm (Axial Depth of Cut)
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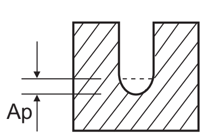
(Depth of Cut per one pass)



YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø)																			
			2.0	2.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.0	3.0	3.0	3.0	3.0	3.0
		LBS	50	60	8	10	12	16	20	22	26	30	35	40	45	50	6	8	10	12	14	16
P	1-8	SFM(Vc)	110	110	405	405	405	365	365	365	325	325	325	245	245	245	425	425	425	425	425	380
		IPT(fz)	.0012	.0012	.0024	.0024	.0024	.0022	.0022	.0022	.0019	.0019	.0019	.0017	.0017	.0017	.0029	.0029	.0029	.0029	.0029	.0026
		RPM	5400	5400	15800	15800	15800	14220	14220	14220	12640	12640	12640	9480	9480	9480	13700	13700	13700	13700	13700	12330
		IPM(FEED)	13	13	76	76	76	61	61	61	48	48	48	32	32	32	81	81	81	81	81	65
		Ap	.0007	.0007	.0062	.0062	.0062	.0035	.0035	.0022	.0022	.0022	.0013	.0013	.0009	.0009	.0106	.0106	.0074	.0074	.0074	.0043
	9	SFM(Vc)	105	105	385	385	385	345	345	345	305	305	305	230	230	230	400	400	400	400	400	360
		IPT(fz)	.0011	.0011	.0021	.0021	.0021	.0019	.0019	.0019	.0017	.0017	.0017	.0015	.0015	.0015	.0026	.0026	.0026	.0026	.0026	.0024
		RPM	5100	5100	14900	14900	14900	13410	13410	13410	11920	11920	11920	8940	8940	8940	12900	12900	12900	12900	12900	11610
		IPM(FEED)	11	11	63	63	63	51	51	51	40	40	40	27	27	27	68	68	68	68	68	55
		Ap	.0006	.0006	.0048	.0048	.0048	.0028	.0028	.0017	.0017	.0017	.0010	.0010	.0007	.0007	.0083	.0083	.0058	.0058	.0058	.0033
	10-11.1	SFM(Vc)	110	110	405	405	405	365	365	365	325	325	325	245	245	245	425	425	425	425	425	380
		IPT(fz)	.0012	.0012	.0024	.0024	.0024	.0022	.0022	.0022	.0019	.0019	.0019	.0017	.0017	.0017	.0029	.0029	.0029	.0029	.0029	.0026
		RPM	5400	5400	15800	15800	15800	14220	14220	14220	12640	12640	12640	9480	9480	9480	13700	13700	13700	13700	13700	12330
		IPM(FEED)	13	13	76	76	76	61	61	61	48	48	48	32	32	32	81	81	81	81	81	65
		Ap	.0007	.0007	.0062	.0062	.0062	.0035	.0035	.0022	.0022	.0022	.0013	.0013	.0009	.0009	.0106	.0106	.0074	.0074	.0074	.0043
	11.2	SFM(Vc)	105	105	385	385	385	345	345	345	305	305	305	230	230	230	400	400	400	400	400	360
		IPT(fz)	.0011	.0011	.0021	.0021	.0021	.0019	.0019	.0019	.0017	.0017	.0017	.0015	.0015	.0015	.0026	.0026	.0026	.0026	.0026	.0024
		RPM	5100	5100	14900	14900	14900	13410	13410	13410	11920	11920	11920	8940	8940	8940	12900	12900	12900	12900	12900	11610
		IPM(FEED)	11	11	63	63	63	51	51	51	40	40	40	27	27	27	68	68	68	68	68	55
		Ap	.0006	.0006	.0048	.0048	.0048	.0028	.0028	.0017	.0017	.0017	.0010	.0010	.0007	.0007	.0083	.0083	.0058	.0058	.0058	.0033
K	15-20	SFM(Vc)	110	110	405	405	405	365	365	365	325	325	325	245	245	245	425	425	425	425	425	380
		IPT(fz)	.0012	.0012	.0024	.0024	.0024	.0022	.0022	.0022	.0019	.0019	.0019	.0017	.0017	.0017	.0029	.0029	.0029	.0029	.0029	.0026
		RPM	5400	5400	15800	15800	15800	14220	14220	14220	12640	12640	12640	9480	9480	9480	13700	13700	13700	13700	13700	12330
		IPM(FEED)	13	13	76	76	76	61	61	61	48	48	48	32	32	32	81	81	81	81	81	65
		Ap	.0007	.0007	.0062	.0062	.0062	.0035	.0035	.0022	.0022	.0022	.0013	.0013	.0009	.0009	.0106	.0106	.0074	.0074	.0074	.0043
H	38.1-38.2	SFM(Vc)	95	95	340	340	340	305	305	305	270	270	270	205	205	205	350	350	350	350	350	315
		IPT(fz)	.0010	.0010	.0019	.0019	.0019	.0017	.0017	.0017	.0016	.0016	.0016	.0014	.0014	.0014	.0025	.0025	.0025	.0025	.0025	.0022
		RPM	4500	4500	13200	13200	13200	11880	11880	11880	10560	10560	10560	7920	7920	7920	11400	11400	11400	11400	11400	10260
		IPM(FEED)	9.1	9.1	51.4	51.4	51.4	41.5	41.5	41.5	32.9	32.9	32.9	21.7	21.7	21.7	56.5	56.5	56.5	56.5	56.5	45.7
		Ap	.0004	.0004	.0035	.0035	.0035	.0020	.0020	.0012	.0012	.0012	.0007	.0007	.0005	.0005	.0059	.0059	.0041	.0041	.0041	.0024
	40	SFM(Vc)	105	105	385	385	385	345	345	345	305	305	305	230	230	230	400	400	400	400	400	360
		IPT(fz)	.0011	.0011	.0021	.0021	.0021	.0019	.0019	.0019	.0017	.0017	.0017	.0015	.0015	.0015	.0026	.0026	.0026	.0026	.0026	.0024
		RPM	5100	5100	14900	14900	14900	13410	13410	13410	11920	11920	11920	8940	8940	8940	12900	12900	12900	12900	12900	11610
		IPM(FEED)	11	11	63	63	63	51	51	51	40	40	40	27	27	27	68	68	68	68	68	55
		Ap	.0006	.0006	.0048	.0048	.0048	.0028	.0028	.0017	.0017	.0017	.0010	.0010	.0007	.0007	.0083	.0083	.0058	.0058	.0058	.0033
	41	SFM(Vc)	95	95	340	340	340	305	305	305	270	270	270	205	205	205	350	350	350	350	350	315
		IPT(fz)	.0010	.0010	.0019	.0019	.0019	.0017	.0017	.0017	.0016	.0016	.0016	.0014	.0014	.0014	.0025	.0025	.0025	.0025	.0025	.0022
		RPM	4500	4500	13200	13200	13200	11880	11880	11880	10560	10560	10560	7920	7920	7920	11400	11400	11400	11400	11400	10260
		IPM(FEED)	9.1	9.1	51.4	51.4	51.4	41.5	41.5	41.5	32.9	32.9	32.9	21.7	21.7	21.7	56.5	56.5	56.5	56.5	56.5	45.7
		Ap	.0004	.0004	.0035	.0035	.0035	.0020	.0020	.0012	.0012	.0012	.0007	.0007	.0005	.0005	.0059	.0059	.0041	.0041	.0041	.0024

SFM = Surface Feet per Minute
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Ap : mm (Axial Depth of Cut)
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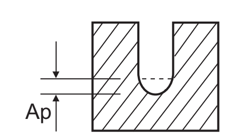


4G MILL END MILLS

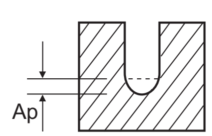
RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
			LBS	18	20	22	26	30	35	40	45	50	60	8	10	12	14	16	18	20	22	26
P	1-8	Non-alloy steel	SFM(Vc)	380	380	380	380	380	340	340	340	255	255	405	405	405	405	405	405	405	365	365
			IPT(fz)	.0026	.0026	.0026	.0026	.0026	.0024	.0024	.0024	.0021	.0021	.0039	.0039	.0039	.0039	.0039	.0039	.0039	.0035	.0035
			RPM	12330	12330	12330	12330	12330	10960	10960	10960	8220	8220	9800	9800	9800	9800	9800	9800	9800	8820	8820
			IPM(FEED)	65	65	65	65	65	52	52	52	34	34	77	77	77	77	77	77	77	63	63
			Ap	.0043	.0043	.0043	.0027	.0027	.0027	.0016	.0016	.0011	.0011	.0142	.0142	.0142	.0099	.0099	.0099	.0099	.0057	.0057
	9	Low alloy steel	SFM(Vc)	360	360	360	360	360	320	320	320	240	240	385	385	385	385	385	385	385	345	345
			IPT(fz)	.0024	.0024	.0024	.0024	.0024	.0021	.0021	.0021	.0018	.0018	.0035	.0035	.0035	.0035	.0035	.0035	.0035	.0032	.0032
			RPM	11610	11610	11610	11610	11610	10320	10320	10320	7740	7740	9300	9300	9300	9300	9300	9300	9300	8370	8370
			IPM(FEED)	55	55	55	55	55	44	44	44	29	29	66	66	66	66	66	66	66	53	53
			Ap	.0033	.0033	.0033	.0021	.0021	.0021	.0013	.0013	.0008	.0008	.0110	.0110	.0110	.0077	.0077	.0077	.0077	.0044	.0044
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	380	380	380	380	380	340	340	340	255	255	405	405	405	405	405	405	405	365	365
			IPT(fz)	.0026	.0026	.0026	.0026	.0026	.0024	.0024	.0024	.0021	.0021	.0039	.0039	.0039	.0039	.0039	.0039	.0039	.0035	.0035
			RPM	12330	12330	12330	12330	12330	10960	10960	10960	8220	8220	9800	9800	9800	9800	9800	9800	9800	8820	8820
			IPM(FEED)	65	65	65	65	65	52	52	52	34	34	77	77	77	77	77	77	77	63	63
			Ap	.0043	.0043	.0043	.0027	.0027	.0027	.0016	.0016	.0011	.0011	.0142	.0142	.0142	.0099	.0099	.0099	.0099	.0057	.0057
	11.2		SFM(Vc)	360	360	360	360	360	320	320	320	240	240	385	385	385	385	385	385	385	345	345
			IPT(fz)	.0024	.0024	.0024	.0024	.0024	.0021	.0021	.0021	.0018	.0018	.0035	.0035	.0035	.0035	.0035	.0035	.0035	.0032	.0032
			RPM	11610	11610	11610	11610	11610	10320	10320	10320	7740	7740	9300	9300	9300	9300	9300	9300	9300	8370	8370
			IPM(FEED)	55	55	55	55	55	44	44	44	29	29	66	66	66	66	66	66	66	53	53
			Ap	.0033	.0033	.0033	.0021	.0021	.0021	.0013	.0013	.0008	.0008	.0110	.0110	.0110	.0077	.0077	.0077	.0077	.0044	.0044
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	380	380	380	380	380	340	340	340	255	255	405	405	405	405	405	405	405	365	365
			IPT(fz)	.0026	.0026	.0026	.0026	.0026	.0024	.0024	.0024	.0021	.0021	.0039	.0039	.0039	.0039	.0039	.0039	.0039	.0035	.0035
			RPM	12330	12330	12330	12330	12330	10960	10960	10960	8220	8220	9800	9800	9800	9800	9800	9800	9800	8820	8820
			IPM(FEED)	65	65	65	65	65	52	52	52	34	34	77	77	77	77	77	77	77	63	63
			Ap	.0043	.0043	.0043	.0027	.0027	.0027	.0016	.0016	.0011	.0011	.0142	.0142	.0142	.0099	.0099	.0099	.0099	.0057	.0057
H	38.1-38.2	Hardened steel	SFM(Vc)	315	315	315	315	315	280	280	280	210	210	340	340	340	340	340	340	340	305	305
			IPT(fz)	.0022	.0022	.0022	.0022	.0022	.0020	.0020	.0020	.0017	.0017	.0034	.0034	.0034	.0034	.0034	.0034	.0034	.0030	.0030
			RPM	10260	10260	10260	10260	10260	9120	9120	9120	6840	6840	8200	8200	8200	8200	8200	8200	8200	7380	7380
			IPM(FEED)	45.7	45.7	45.7	45.7	45.7	36.2	36.2	36.2	23.8	23.8	54.9	54.9	54.9	54.9	54.9	54.9	54.9	44.5	44.5
			Ap	.0024	.0024	.0024	.0015	.0015	.0015	.0009	.0009	.0006	.0006	.0079	.0079	.0079	.0055	.0055	.0055	.0055	.0031	.0031
	40	Chilled Cast Iron	SFM(Vc)	360	360	360	360	360	320	320	320	240	240	385	385	385	385	385	385	385	345	345
			IPT(fz)	.0024	.0024	.0024	.0024	.0024	.0021	.0021	.0021	.0018	.0018	.0035	.0035	.0035	.0035	.0035	.0035	.0035	.0032	.0032
			RPM	11610	11610	11610	11610	11610	10320	10320	10320	7740	7740	9300	9300	9300	9300	9300	9300	9300	8370	8370
			IPM(FEED)	55	55	55	55	55	44	44	44	29	29	66	66	66	66	66	66	66	53	53
			Ap	.0033	.0033	.0033	.0021	.0021	.0021	.0013	.0013	.0008	.0008	.0110	.0110	.0110	.0077	.0077	.0077	.0077	.0044	.0044
	41	Hardened Cast Iron	SFM(Vc)	315	315	315	315	315	280	280	280	210	210	340	340	340	340	340	340	340	305	305
			IPT(fz)	.0022	.0022	.0022	.0022	.0022	.0020	.0020	.0020	.0017	.0017	.0034	.0034	.0034	.0034	.0034	.0034	.0034	.0030	.0030
			RPM	10260	10260	10260	10260	10260	9120	9120	9120	6840	6840	8200	8200	8200	8200	8200	8200	8200	7380	7380
			IPM(FEED)	45.7	45.7	45.7	45.7	45.7	36.2	36.2	36.2	23.8	23.8	54.9	54.9	54.9	54.9	54.9	54.9	54.9	44.5	44.5
			Ap	.0024	.0024	.0024	.0015	.0015	.0015	.0009	.0009	.0006	.0006	.0079	.0079	.0079	.0055	.0055	.0055	.0055	.0031	.0031

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

4G MILL END MILLS

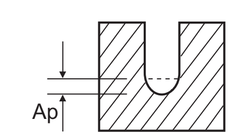
RECOMMENDED CUTTING CONDITIONS

SEM846 SERIES 2FLUTE BALL NOSE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	6.0	6.0	8.0	8.0	10.0	10.0	12.0	12.0
			LBS	30	35	40	45	50	60	15	20	26	30	35	40	50	60	20	30	25	30	30	40	32	45
P	1-8		SFM(Vc)	365	365	365	325	325	325	395	395	355	355	355	355	355	315	400	400	400	400	395	395	395	395
			IPT(fz)	.0035	.0035	.0035	.0032	.0032	.0032	.0047	.0047	.0042	.0042	.0042	.0042	.0042	.0038	.0058	.0058	.0073	.0073	.0084	.0084	.0094	.0094
			RPM	8820	8820	8820	7840	7840	7840	7700	7700	6930	6930	6930	6930	6930	6160	6500	6500	4850	4850	3850	3850	3200	3200
			IPM(FEED)	63	63	63	50	50	50	73	73	59	59	59	59	59	46	75	75	71	71	65	65	60	60
			Ap	.0057	.0035	.0035	.0035	.0035	.0021	.0124	.0124	.0071	.0071	.0071	.0071	.0044	.0044	.0149	.0149	.0198	.0198	.0354	.0248	.0425	.0298
	9		SFM(Vc)	345	345	345	305	305	305	375	375	340	340	340	340	340	300	385	385	380	380	380	380	375	375
			IPT(fz)	.0032	.0032	.0032	.0028	.0028	.0028	.0039	.0039	.0035	.0035	.0035	.0035	.0035	.0031	.0051	.0051	.0064	.0064	.0075	.0075	.0084	.0084
			RPM	8370	8370	8370	7440	7440	7440	7300	7300	6570	6570	6570	6570	6570	5840	6200	6200	4600	4600	3680	3680	3050	3050
			IPM(FEED)	53	53	53	42	42	42	57	57	46	46	46	46	46	37	63	63	59	59	55	55	51	51
			Ap	.0044	.0028	.0028	.0028	.0028	.0017	.0096	.0096	.0055	.0055	.0055	.0055	.0035	.0035	.0116	.0116	.0154	.0154	.0276	.0193	.0331	.0231
	10-11.1		SFM(Vc)	365	365	365	325	325	325	395	395	355	355	355	355	355	315	400	400	400	400	395	395	395	395
			IPT(fz)	.0035	.0035	.0035	.0032	.0032	.0032	.0047	.0047	.0042	.0042	.0042	.0042	.0042	.0038	.0058	.0058	.0073	.0073	.0084	.0084	.0094	.0094
			RPM	8820	8820	8820	7840	7840	7840	7700	7700	6930	6930	6930	6930	6930	6160	6500	6500	4850	4850	3850	3850	3200	3200
			IPM(FEED)	63	63	63	50	50	50	73	73	59	59	59	59	59	46	75	75	71	71	65	65	60	60
			Ap	.0057	.0035	.0035	.0035	.0035	.0021	.0124	.0124	.0071	.0071	.0071	.0071	.0044	.0044	.0149	.0149	.0198	.0198	.0354	.0248	.0425	.0298
	11.2		SFM(Vc)	345	345	345	305	305	305	375	375	340	340	340	340	340	300	385	385	380	380	380	380	375	375
			IPT(fz)	.0032	.0032	.0032	.0028	.0028	.0028	.0039	.0039	.0035	.0035	.0035	.0035	.0035	.0031	.0051	.0051	.0064	.0064	.0075	.0075	.0084	.0084
			RPM	8370	8370	8370	7440	7440	7440	7300	7300	6570	6570	6570	6570	6570	5840	6200	6200	4600	4600	3680	3680	3050	3050
			IPM(FEED)	53	53	53	42	42	42	57	57	46	46	46	46	46	37	63	63	59	59	55	55	51	51
			Ap	.0044	.0028	.0028	.0028	.0028	.0017	.0096	.0096	.0055	.0055	.0055	.0055	.0035	.0035	.0116	.0116	.0154	.0154	.0276	.0193	.0331	.0231
K	15-20		SFM(Vc)	365	365	365	325	325	325	395	395	355	355	355	355	355	315	400	400	400	400	395	395	395	395
			IPT(fz)	.0035	.0035	.0035	.0032	.0032	.0032	.0047	.0047	.0042	.0042	.0042	.0042	.0042	.0038	.0058	.0058	.0073	.0073	.0084	.0084	.0094	.0094
			RPM	8820	8820	8820	7840	7840	7840	7700	7700	6930	6930	6930	6930	6930	6160	6500	6500	4850	4850	3850	3850	3200	3200
			IPM(FEED)	63	63	63	50	50	50	73	73	59	59	59	59	59	46	75	75	71	71	65	65	60	60
			Ap	.0057	.0035	.0035	.0035	.0035	.0021	.0124	.0124	.0071	.0071	.0071	.0071	.0044	.0044	.0149	.0149	.0198	.0198	.0354	.0248	.0425	.0298
H	38.1-38.2		SFM(Vc)	305	305	305	270	270	270	330	330	295	295	295	295	295	265	340	340	330	330	330	330	330	330
			IPT(fz)	.0030	.0030	.0030	.0027	.0027	.0027	.0040	.0040	.0036	.0036	.0036	.0036	.0036	.0032	.0048	.0048	.0063	.0063	.0074	.0074	.0082	.0082
			RPM	7380	7380	7380	6560	6560	6560	6400	6400	5760	5760	5760	5760	5760	5120	5500	5500	4000	4000	3200	3200	2650	2650
			IPM(FEED)	44.5	44.5	44.5	35.2	35.2	35.2	50.6	50.6	40.9	40.9	40.9	40.9	40.9	32.3	52.4	52.4	50.4	50.4	47.2	47.2	43.3	43.3
			Ap	.0031	.0020	.0020	.0020	.0020	.0012	.0069	.0069	.0039	.0039	.0039	.0039	.0025	.0025	.0083	.0083	.0110	.0110	.0197	.0138	.0236	.0165
	40		SFM(Vc)	345	345	345	305	305	305	375	375	340	340	340	340	340	300	385	385	380	380	380	380	375	375
			IPT(fz)	.0032	.0032	.0032	.0028	.0028	.0028	.0039	.0039	.0035	.0035	.0035	.0035	.0035	.0031	.0051	.0051	.0064	.0064	.0075	.0075	.0084	.0084
			RPM	8370	8370	8370	7440	7440	7440	7300	7300	6570	6570	6570	6570	6570	5840	6200	6200	4600	4600	3680	3680	3050	3050
			IPM(FEED)	53	53	53	42	42	42	57	57	46	46	46	46	46	37	63	63	59	59	55	55	51	51
			Ap	.0044	.0028	.0028	.0028	.0028	.0017	.0096	.0096	.0055	.0055	.0055	.0055	.0035	.0035	.0116	.0116	.0154	.0154	.0276	.0193	.0331	.0231
	41		SFM(Vc)	305	305	305	270	270	270	330	330	295	295	295	295	295	265	340	340	330	330	330	330	330	330
			IPT(fz)	.0030	.0030	.0030	.0027	.0027	.0027	.0040	.0040	.0036	.0036	.0036	.0036	.0036	.0032	.0048	.0048	.0063	.0063	.0074	.0074	.0082	.0082
			RPM	7380	7380	7380	6560	6560	6560	6400	6400	5760	5760	5760	5760	5760	5120	5500	5500	4000	4000	3200	3200	2650	2650
			IPM(FEED)	44.5	44.5	44.5	35.2	35.2	35.2	50.6	50.6	40.9	40.9	40.9	40.9	40.9	32.3	52.4	52.4	50.4	50.4	47.2	47.2	43.3	43.3
			Ap	.0031	.0020	.0020	.0020	.0020	.0012	.0069	.0069	.0039	.0039	.0039	.0039	.0025	.0025	.0083	.0083	.0110	.0110	.0197	.0138	.0236	.0165

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



4G MILL END MILLS

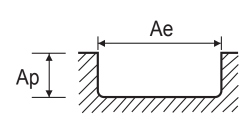
RECOMMENDED CUTTING CONDITIONS

SEMD99 SERIES 2FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.5	2.0	2.5
P	1-8	Non-alloy steel	1.0D	0.2D	SFM(Vc)	90	125	170	185	185	215	245	280	285	305	340	370	385
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0004
					RPM	44000	41000	41000	36000	30000	30000	30000	30000	27600	24800	22000	18000	15000
					IPM(FEED)	6	7	7	7	8	8	8	9	9	10	10	10	11
	9	Low alloy steel	1.0D	0.2D	SFM(Vc)	60	85	110	120	120	145	165	175	185	195	210	240	245
					IPT(fz)	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0003
					RPM	28800	27000	27000	23400	19800	19800	19800	18900	18000	15750	13500	11560	9500
					IPM(FEED)	2	3	3	3	4	4	4	4	4	4	4	5	5
	10-11.1	High alloyed steel, and tool steel	1.0D	0.2D	SFM(Vc)	90	125	170	185	185	215	245	280	285	305	340	370	385
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0004
					RPM	44000	41000	41000	36000	30000	30000	30000	30000	27600	24800	22000	18000	15000
					IPM(FEED)	6	7	7	7	8	8	8	9	9	10	10	10	11
	11.2		1.0D	0.2D	SFM(Vc)	60	85	110	120	120	145	165	175	185	195	210	240	245
					IPT(fz)	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0003
					RPM	28800	27000	27000	23400	19800	19800	19800	18900	18000	15750	13500	11560	9500
					IPM(FEED)	2	3	3	3	4	4	4	4	4	4	4	5	5
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	0.2D	SFM(Vc)	90	125	170	185	185	215	245	280	285	305	340	370	385
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0004
					RPM	44000	41000	41000	36000	30000	30000	30000	30000	27600	24800	22000	18000	15000
					IPM(FEED)	6	7	7	7	8	8	8	9	9	10	10	10	11
H	38.1-38.2	Hardened steel	1.0D	0.2D	SFM(Vc)	35	50	70	75	75	85	100	105	115	120	130	150	155
					IPT(fz)	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002
					RPM	17600	16500	16500	14300	12100	12100	12100	11550	11000	9750	8500	7200	6100
					IPM(FEED)	2	2	2	2	2	2	2	2	2	2	2	3	3
	40	Chilled Cast Iron	1.0D	0.2D	SFM(Vc)	60	85	110	120	120	145	165	175	185	195	210	240	245
					IPT(fz)	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0003
					RPM	28800	27000	27000	23400	19800	19800	19800	18900	18000	15750	13500	11560	9500
					IPM(FEED)	2	3	3	3	4	4	4	4	4	4	4	5	5
	41	Hardened Cast Iron	1.0D	0.2D	SFM(Vc)	35	50	70	75	75	85	100	105	115	120	130	150	155
					IPT(fz)	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002
					RPM	17600	16500	16500	14300	12100	12100	12100	11550	11000	9750	8500	7200	6100
					IPM(FEED)	2	2	2	2	2	2	2	2	2	2	2	3	3

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



4G MILL END MILLS

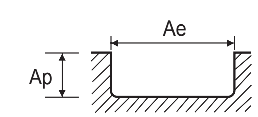
RECOMMENDED CUTTING CONDITIONS

SEMD99 SERIES 2FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Ae	Ap	Parameter	3.0	3.5	4.0	4.5	5.0	5.5	6.0	7.0	8.0	10.0	11.0	12.0	14.0	16.0	20.0
P	1-8	1.0D	0.2D	SFM(Vc)	410	430	440	460	470	485	490	500	495	520	520	510	520	510	520
				IPT(fz)	.0004	.0005	.0006	.0008	.0009	.0011	.0012	.0015	.0018	.0021	.0021	.0020	.0021	.0023	.0022
				RPM	13240	11980	10720	9940	9160	8530	7900	6950	6000	5040	4580	4120	3610	3100	2520
				IPM(FEED)	11	12	13	15	17	18	20	20	21	21	19	17	15	14	11
	9	1.0D	0.2D	SFM(Vc)	265	275	280	295	300	305	310	320	315	340	345	345	350	345	340
				IPT(fz)	.0003	.0004	.0005	.0006	.0007	.0008	.0010	.0011	.0013	.0015	.0016	.0016	.0016	.0016	.0014
				RPM	8560	7690	6820	6310	5800	5420	5040	4420	3800	3280	3030	2780	2440	2100	1640
				IPM(FEED)	6	6	7	7	8	9	10	10	10	10	9	9	8	7	5
	10-11.1	1.0D	0.2D	SFM(Vc)	410	430	440	460	470	485	490	500	495	520	520	510	520	510	520
				IPT(fz)	.0004	.0005	.0006	.0008	.0009	.0011	.0012	.0015	.0018	.0021	.0021	.0020	.0021	.0023	.0022
				RPM	13240	11980	10720	9940	9160	8530	7900	6950	6000	5040	4580	4120	3610	3100	2520
				IPM(FEED)	11	12	13	15	17	18	20	20	21	21	19	17	15	14	11
	11.2	1.0D	0.2D	SFM(Vc)	265	275	280	295	300	305	310	320	315	340	345	345	350	345	340
				IPT(fz)	.0003	.0004	.0005	.0006	.0007	.0008	.0010	.0011	.0013	.0015	.0016	.0016	.0016	.0016	.0014
				RPM	8560	7690	6820	6310	5800	5420	5040	4420	3800	3280	3030	2780	2440	2100	1640
				IPM(FEED)	6	6	7	7	8	9	10	10	10	10	9	9	8	7	5
K	15-20	1.0D	0.2D	SFM(Vc)	410	430	440	460	470	485	490	500	495	520	520	510	520	510	520
				IPT(fz)	.0004	.0005	.0006	.0008	.0009	.0011	.0012	.0015	.0018	.0021	.0021	.0020	.0021	.0023	.0022
				RPM	13240	11980	10720	9940	9160	8530	7900	6950	6000	5040	4580	4120	3610	3100	2520
				IPM(FEED)	11	12	13	15	17	18	20	20	21	21	19	17	15	14	11
H	38.1-38.2	1.0D	0.2D	SFM(Vc)	165	175	175	200	195	200	205	210	210	210	210	210	215	210	205
				IPT(fz)	.0003	.0003	.0004	.0004	.0005	.0006	.0007	.0008	.0009	.0012	.0012	.0012	.0012	.0012	.0012
				RPM	5280	4790	4300	4300	3800	3540	3280	2900	2520	2020	1850	1680	1480	1280	1000
				IPM(FEED)	3	3	3	4	4	4	5	5	5	5	4	4	4	3	2
	40	1.0D	0.2D	SFM(Vc)	265	275	280	295	300	305	310	320	315	340	345	345	350	345	340
				IPT(fz)	.0003	.0004	.0005	.0006	.0007	.0008	.0010	.0011	.0013	.0015	.0016	.0016	.0016	.0016	.0014
				RPM	8560	7690	6820	6310	5800	5420	5040	4420	3800	3280	3030	2780	2440	2100	1640
				IPM(FEED)	6	6	7	7	8	9	10	10	10	10	9	9	8	7	5
	41	1.0D	0.2D	SFM(Vc)	165	175	175	200	195	200	205	210	210	210	210	210	215	210	205
				IPT(fz)	.0003	.0003	.0004	.0004	.0005	.0006	.0007	.0008	.0009	.0012	.0012	.0012	.0012	.0012	.0012
				RPM	5280	4790	4300	4300	3800	3540	3280	2900	2520	2020	1850	1680	1480	1280	1000
				IPM(FEED)	3	3	3	4	4	4	5	5	5	5	4	4	4	3	2

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

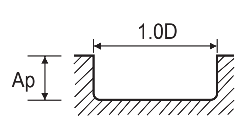
4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME61 SERIES 2FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)															
				0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5
			LBS	0.5	1	1.5	2	1	2	3	1	1.5	2	2.5	3	4	1	1.5	2
P	1-8	Non-alloy steel	SFM(Vc)	105	105	95	95	155	140	140	205	205	205	185	185	185	220	220	220
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	50000	50000	45000	45000	50000	45000	45000	50000	50000	50000	45000	45000	45000	43000	43000	43000
			IPM(FEED)	7	7	6	6	8	6	6	8	8	8	6	6	6	9	9	9
			Ap	.0016	.0011	.0006	.0004	.0017	.0009	.0006	.0031	.0022	.0022	.0013	.0013	.0008	.0039	.0039	.0028
	9	Low alloy steel	SFM(Vc)	70	70	65	65	100	90	90	130	130	130	120	120	120	145	145	145
			IPT(fz)	.00004	.00004	.00004	.00004	.00005	.00005	.00005	.0001	.0001	.0001	.0000	.0000	.0000	.0001	.0001	.0001
			RPM	34500	34500	31050	31050	32000	28800	28800	32000	32000	32000	28800	28800	28800	28000	28000	28000
			IPM(FEED)	3.0	3.0	2.4	2.4	3.3	2.8	2.8	3.3	3.3	3.3	2.8	2.8	2.8	3.7	3.7	3.7
			Ap	.0012	.0008	.0005	.0003	.0013	.0007	.0004	.0024	.0017	.0017	.0009	.0009	.0006	.0030	.0030	.0021
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	105	105	95	95	155	140	140	205	205	205	185	185	185	220	220	220
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	50000	50000	45000	45000	50000	45000	45000	50000	50000	50000	45000	45000	45000	43000	43000	43000
			IPM(FEED)	7	7	6	6	8	6	6	8	8	8	6	6	6	9	9	9
			Ap	.0016	.0011	.0006	.0004	.0017	.0009	.0006	.0031	.0022	.0022	.0013	.0013	.0008	.0039	.0039	.0028
	11.2		SFM(Vc)	70	70	65	65	100	90	90	130	130	130	120	120	120	145	145	145
			IPT(fz)	.00004	.00004	.00004	.00004	.00005	.00005	.00005	.0001	.0001	.0001	.0000	.0000	.0000	.0001	.0001	.0001
			RPM	34500	34500	31050	31050	32000	28800	28800	32000	32000	32000	28800	28800	28800	28000	28000	28000
			IPM(FEED)	3.0	3.0	2.4	2.4	3.3	2.8	2.8	3.3	3.3	3.3	2.8	2.8	2.8	3.7	3.7	3.7
			Ap	.0012	.0008	.0005	.0003	.0013	.0007	.0004	.0024	.0017	.0017	.0009	.0009	.0006	.0030	.0030	.0021
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	105	105	95	95	155	140	140	205	205	205	185	185	185	220	220	220
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	50000	50000	45000	45000	50000	45000	45000	50000	50000	50000	45000	45000	45000	43000	43000	43000
			IPM(FEED)	7	7	6	6	8	6	6	8	8	8	6	6	6	9	9	9
			Ap	.0016	.0011	.0006	.0004	.0017	.0009	.0006	.0031	.0022	.0022	.0013	.0013	.0008	.0039	.0039	.0028
H	38.1-38.2	Hardened steel	SFM(Vc)	45	45	40	40	60	55	55	80	80	80	75	75	75	90	90	90
			IPT(fz)	.00004	.00004	.00004	.00004	.00005	.00004	.00004	.0001	.0001	.0001	.0000	.0000	.0000	.0001	.0001	.0001
			RPM	21150	21150	19040	19040	20000	18000	18000	20000	20000	20000	18000	18000	18000	17100	17100	17100
			IPM(FEED)	2	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2
			Ap	.0009	.0007	.0004	.0002	.0010	.0006	.0004	.0019	.0013	.0013	.0007	.0007	.0005	.0024	.0024	.0017
	40	Chilled Cast Iron	SFM(Vc)	70	70	65	65	100	90	90	130	130	130	120	120	120	145	145	145
			IPT(fz)	.00004	.00004	.00004	.00004	.00005	.00005	.00005	.0001	.0001	.0001	.0000	.0000	.0000	.0001	.0001	.0001
			RPM	34500	34500	31050	31050	32000	28800	28800	32000	32000	32000	28800	28800	28800	28000	28000	28000
			IPM(FEED)	3.0	3.0	2.4	2.4	3.3	2.8	2.8	3.3	3.3	3.3	2.8	2.8	2.8	3.7	3.7	3.7
			Ap	.0012	.0008	.0005	.0003	.0013	.0007	.0004	.0024	.0017	.0017	.0009	.0009	.0006	.0030	.0030	.0021
	41	Hardened Cast Iron	SFM(Vc)	45	45	40	40	60	55	55	80	80	80	75	75	75	90	90	90
			IPT(fz)	.00004	.00004	.00004	.00004	.00005	.00004	.00004	.0001	.0001	.0001	.0000	.0000	.0000	.0001	.0001	.0001
			RPM	21150	21150	19040	19040	20000	18000	18000	20000	20000	20000	18000	18000	18000	17100	17100	17100
			IPM(FEED)	2	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2
			Ap	.0009	.0007	.0004	.0002	.0010	.0006	.0004	.0019	.0013	.0013	.0007	.0007	.0005	.0024	.0024	.0017

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



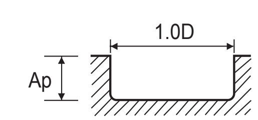
4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME61 SERIES 2FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø)																	
			0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8
		LBS	2.5	3	4	5	6	2	3	4	6	8	10	2	4	6	8	10	2	3
P	1-8	SFM(Vc)	220	200	200	200	175	225	225	205	205	180	135	265	235	235	210	210	300	300
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
		RPM	43000	38700	38700	38700	34400	36400	36400	32760	32760	29120	21840	36400	32760	32760	29120	29120	36400	36400
		IPM(FEED)	9	7	7	7	6	10	10	8	8	6	4	10	8	8	6	6	10	10
		Ap	.0028	.0016	.0016	.0010	.0010	.0033	.0033	.0019	.0012	.0007	.0005	.0055	.0022	.0014	.0014	.0008	.0063	.0044
	9	SFM(Vc)	145	130	130	130	115	150	150	135	135	120	90	175	155	155	140	140	200	200
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
		RPM	28000	25200	25200	25200	22400	24000	24000	21600	21600	19200	14400	24000	21600	21600	19200	19200	24000	24000
		IPM(FEED)	3.7	3.0	3.0	3.0	2.4	4.3	4.3	3.5	3.5	2.8	1.8	4.3	3.5	3.5	2.8	2.8	4.3	4.3
		Ap	.0021	.0012	.0012	.0007	.0007	.0025	.0025	.0014	.0009	.0006	.0004	.0041	.0017	.0010	.0010	.0006	.0047	.0033
	10-11.1	SFM(Vc)	220	200	200	200	175	225	225	205	205	180	135	265	235	235	210	210	300	300
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
		RPM	43000	38700	38700	38700	34400	36400	36400	32760	32760	29120	21840	36400	32760	32760	29120	29120	36400	36400
		IPM(FEED)	9	7	7	7	6	10	10	8	8	6	4	10	8	8	6	6	10	10
		Ap	.0028	.0016	.0016	.0010	.0010	.0033	.0033	.0019	.0012	.0007	.0005	.0055	.0022	.0014	.0014	.0008	.0063	.0044
	11.2	SFM(Vc)	145	130	130	130	115	150	150	135	135	120	90	175	155	155	140	140	200	200
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
		RPM	28000	25200	25200	25200	22400	24000	24000	21600	21600	19200	14400	24000	21600	21600	19200	19200	24000	24000
		IPM(FEED)	3.7	3.0	3.0	3.0	2.4	4.3	4.3	3.5	3.5	2.8	1.8	4.3	3.5	3.5	2.8	2.8	4.3	4.3
		Ap	.0021	.0012	.0012	.0007	.0007	.0025	.0025	.0014	.0009	.0006	.0004	.0041	.0017	.0010	.0010	.0006	.0047	.0033
K	15-20	SFM(Vc)	220	200	200	200	175	225	225	205	205	180	135	265	235	235	210	210	300	300
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
		RPM	43000	38700	38700	38700	34400	36400	36400	32760	32760	29120	21840	36400	32760	32760	29120	29120	36400	36400
		IPM(FEED)	9	7	7	7	6	10	10	8	8	6	4	10	8	8	6	6	10	10
		Ap	.0028	.0016	.0016	.0010	.0010	.0033	.0033	.0019	.0012	.0007	.0005	.0055	.0022	.0014	.0014	.0008	.0063	.0044
H	38.1-38.2	SFM(Vc)	90	80	80	80	70	90	90	80	80	70	55	105	95	95	85	85	120	120
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
		RPM	17100	15390	15390	15390	13680	14500	14500	13050	13050	11600	8700	14500	13050	13050	11600	11600	14500	14500
		IPM(FEED)	2	2	2	2	2	3	3	2	2	2	1	3	2	2	2	2	3	3
		Ap	.0017	.0009	.0009	.0006	.0006	.0020	.0020	.0011	.0007	.0004	.0003	.0033	.0013	.0008	.0008	.0005	.0038	.0026
	40	SFM(Vc)	145	130	130	130	115	150	150	135	135	120	90	175	155	155	140	140	200	200
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
		RPM	28000	25200	25200	25200	22400	24000	24000	21600	21600	19200	14400	24000	21600	21600	19200	19200	24000	24000
		IPM(FEED)	3.7	3.0	3.0	3.0	2.4	4.3	4.3	3.5	3.5	2.8	1.8	4.3	3.5	3.5	2.8	2.8	4.3	4.3
		Ap	.0021	.0012	.0012	.0007	.0007	.0025	.0025	.0014	.0009	.0006	.0004	.0041	.0017	.0010	.0010	.0006	.0047	.0033
	41	SFM(Vc)	90	80	80	80	70	90	90	80	80	70	55	105	95	95	85	85	120	120
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
		RPM	17100	15390	15390	15390	13680	14500	14500	13050	13050	11600	8700	14500	13050	13050	11600	11600	14500	14500
		IPM(FEED)	2	2	2	2	2	3	3	2	2	2	1	3	2	2	2	2	3	3
		Ap	.0017	.0009	.0009	.0006	.0006	.0020	.0020	.0011	.0007	.0004	.0003	.0033	.0013	.0008	.0008	.0005	.0038	.0026

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



4G MILL END MILLS

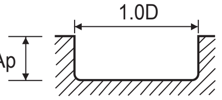
RECOMMENDED CUTTING CONDITIONS

SEME61 SERIES 2FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Material Description	Parameter	0.8	0.8	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.2	1.2	1.2
			LBS	4	6	8	10	3	4	6	8	10	12	14	16	20	3	4	6
P	1-8	Non-alloy steel	SFM(Vc)	300	270	270	240	340	340	305	305	305	275	275	205	205	370	370	370
			IPT(fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
			RPM	36400	32760	32760	29120	33100	33100	29790	29790	29790	26480	26480	19860	19860	29750	29750	29750
			IPM(FEED)	10	8	8	6	11	11	9	9	9	7	7	5	5	11	11	11
			Ap	.0044	.0025	.0016	.0016	.0079	.0055	.0031	.0031	.0020	.0020	.0012	.0012	.0008	.0094	.0066	.0066
	9	Low alloy steel	SFM(Vc)	200	180	180	160	225	225	200	200	200	180	180	135	135	235	235	235
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	24000	21600	21600	19200	21600	21600	19440	19440	19440	17280	17280	12960	12960	18900	18900	18900
			IPM(FEED)	4.3	3.5	3.5	2.8	4.7	4.7	3.7	3.7	3.7	3.0	3.0	2.0	2.0	4.9	4.9	4.9
			Ap	.0033	.0019	.0012	.0012	.0059	.0041	.0024	.0024	.0015	.0015	.0009	.0009	.0006	.0071	.0050	.0050
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	300	270	270	240	340	340	305	305	305	275	275	205	205	370	370	370
			IPT(fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
			RPM	36400	32760	32760	29120	33100	33100	29790	29790	29790	26480	26480	19860	19860	29750	29750	29750
			IPM(FEED)	10	8	8	6	11	11	9	9	9	7	7	5	5	11	11	11
			Ap	.0044	.0025	.0016	.0016	.0079	.0055	.0031	.0031	.0020	.0020	.0012	.0012	.0008	.0094	.0066	.0066
	11.2		SFM(Vc)	200	180	180	160	225	225	200	200	200	180	180	135	135	235	235	235
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	24000	21600	21600	19200	21600	21600	19440	19440	19440	17280	17280	12960	12960	18900	18900	18900
			IPM(FEED)	4.3	3.5	3.5	2.8	4.7	4.7	3.7	3.7	3.7	3.0	3.0	2.0	2.0	4.9	4.9	4.9
			Ap	.0033	.0019	.0012	.0012	.0059	.0041	.0024	.0024	.0015	.0015	.0009	.0009	.0006	.0071	.0050	.0050
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	300	270	270	240	340	340	305	305	305	275	275	205	205	370	370	370
			IPT(fz)	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
			RPM	36400	32760	32760	29120	33100	33100	29790	29790	29790	26480	26480	19860	19860	29750	29750	29750
			IPM(FEED)	10	8	8	6	11	11	9	9	9	7	7	5	5	11	11	11
			Ap	.0044	.0025	.0016	.0016	.0079	.0055	.0031	.0031	.0020	.0020	.0012	.0012	.0008	.0094	.0066	.0066
H	38.1-38.2	Hardened steel	SFM(Vc)	120	110	110	95	135	135	120	120	120	110	110	80	80	145	145	145
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	14500	13050	13050	11600	13200	13200	11880	11880	11880	10560	10560	7920	7920	11700	11700	11700
			IPM(FEED)	3	2	2	2	3	3	2	2	2	2	2	1	1	3	3	3
			Ap	.0026	.0015	.0009	.0009	.0047	.0033	.0019	.0019	.0012	.0012	.0007	.0007	.0005	.0057	.0040	.0040
	40	Chilled Cast Iron	SFM(Vc)	200	180	180	160	225	225	200	200	200	180	180	135	135	235	235	235
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	24000	21600	21600	19200	21600	21600	19440	19440	19440	17280	17280	12960	12960	18900	18900	18900
			IPM(FEED)	4.3	3.5	3.5	2.8	4.7	4.7	3.7	3.7	3.7	3.0	3.0	2.0	2.0	4.9	4.9	4.9
			Ap	.0033	.0019	.0012	.0012	.0059	.0041	.0024	.0024	.0015	.0015	.0009	.0009	.0006	.0071	.0050	.0050
	41	Hardened Cast Iron	SFM(Vc)	120	110	110	95	135	135	120	120	120	110	110	80	80	145	145	145
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	14500	13050	13050	11600	13200	13200	11880	11880	11880	10560	10560	7920	7920	11700	11700	11700
			IPM(FEED)	3	2	2	2	3	3	2	2	2	2	2	1	1	3	3	3
			Ap	.0026	.0015	.0009	.0009	.0047	.0033	.0019	.0019	.0012	.0012	.0007	.0007	.0005	.0057	.0040	.0040

Diameter (Ø) columns.

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS

4G MILL END MILLS

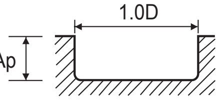
RECOMMENDED CUTTING CONDITIONS

SEME61 SERIES 2FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Parameter	1.2	1.2	1.2	1.2	1.2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.0	2.0	2.0
		LBS	8	10	12	16	20	4	6	8	10	12	14	16	20	22	26	6	8	10
P	1-8	SFM(Vc)	330	330	330	295	220	410	410	365	365	365	365	325	325	325	245	445	445	445
		IPT(fz)	.0002	.0002	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003
		RPM	26780	26780	26780	23800	17850	26400	26400	23760	23760	23760	23760	21120	21120	21120	15840	21600	21600	21600
		IPM(FEED)	9	9	9	7	5	12	12	10	10	10	10	7	7	7	5	12	12	12
		Ap	.0038	.0024	.0024	.0014	.0009	.0118	.0083	.0047	.0047	.0047	.0030	.0030	.0018	.0018	.0012	.0157	.0110	.0110
	9	SFM(Vc)	210	210	210	185	140	250	250	225	225	225	225	200	200	200	150	285	285	285
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
		RPM	17010	17010	17010	15120	11340	16200	16200	14580	14580	14580	14580	12960	12960	12960	9720	13800	13800	13800
		IPM(FEED)	3.9	3.9	3.9	3.1	2.2	5.1	5.1	4.1	4.1	4.1	4.1	3.3	3.3	3.3	2.2	5.5	5.5	5.5
		Ap	.0028	.0018	.0018	.0011	.0007	.0089	.0062	.0035	.0035	.0035	.0022	.0022	.0013	.0013	.0009	.0118	.0083	.0083
	10-11.1	SFM(Vc)	330	330	330	295	220	410	410	365	365	365	365	325	325	325	245	445	445	445
		IPT(fz)	.0002	.0002	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003
		RPM	26780	26780	26780	23800	17850	26400	26400	23760	23760	23760	23760	21120	21120	21120	15840	21600	21600	21600
		IPM(FEED)	9	9	9	7	5	12	12	10	10	10	10	7	7	7	5	12	12	12
		Ap	.0038	.0024	.0024	.0014	.0009	.0118	.0083	.0047	.0047	.0047	.0030	.0030	.0018	.0018	.0012	.0157	.0110	.0110
	11.2	SFM(Vc)	210	210	210	185	140	250	250	225	225	225	225	200	200	200	150	285	285	285
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
		RPM	17010	17010	17010	15120	11340	16200	16200	14580	14580	14580	14580	12960	12960	12960	9720	13800	13800	13800
		IPM(FEED)	3.9	3.9	3.9	3.1	2.2	5.1	5.1	4.1	4.1	4.1	4.1	3.3	3.3	3.3	2.2	5.5	5.5	5.5
		Ap	.0028	.0018	.0018	.0011	.0007	.0089	.0062	.0035	.0035	.0035	.0022	.0022	.0013	.0013	.0009	.0118	.0083	.0083
K	15-20	SFM(Vc)	330	330	330	295	220	410	410	365	365	365	365	325	325	325	245	445	445	445
		IPT(fz)	.0002	.0002	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003
		RPM	26780	26780	26780	23800	17850	26400	26400	23760	23760	23760	23760	21120	21120	21120	15840	21600	21600	21600
		IPM(FEED)	9	9	9	7	5	12	12	10	10	10	10	7	7	7	5	12	12	12
		Ap	.0038	.0024	.0024	.0014	.0009	.0118	.0083	.0047	.0047	.0047	.0030	.0030	.0018	.0018	.0012	.0157	.0110	.0110
H	38.1-38.2	SFM(Vc)	130	130	130	115	85	160	160	140	140	140	140	125	125	125	95	180	180	180
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
		RPM	10530	10530	10530	9360	7020	10200	10200	9180	9180	9180	9180	8160	8160	8160	6120	8640	8640	8640
		IPM(FEED)	2	2	2	2	1	3	3	2	2	2	2	2	2	2	1	3	3	3
		Ap	.0023	.0014	.0014	.0009	.0006	.0071	.0050	.0028	.0028	.0028	.0018	.0018	.0011	.0011	.0007	.0094	.0066	.0066
	40	SFM(Vc)	210	210	210	185	140	250	250	225	225	225	225	200	200	200	150	285	285	285
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
		RPM	17010	17010	17010	15120	11340	16200	16200	14580	14580	14580	14580	12960	12960	12960	9720	13800	13800	13800
		IPM(FEED)	3.9	3.9	3.9	3.1	2.2	5.1	5.1	4.1	4.1	4.1	4.1	3.3	3.3	3.3	2.2	5.5	5.5	5.5
		Ap	.0028	.0018	.0018	.0011	.0007	.0089	.0062	.0035	.0035	.0035	.0022	.0022	.0013	.0013	.0009	.0118	.0083	.0083
	41	SFM(Vc)	130	130	130	115	85	160	160	140	140	140	140	125	125	125	95	180	180	180
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
		RPM	10530	10530	10530	9360	7020	10200	10200	9180	9180	9180	9180	8160	8160	8160	6120	8640	8640	8640
		IPM(FEED)	2	2	2	2	1	3	3	2	2	2	2	2	2	2	1	3	3	3
		Ap	.0023	.0014	.0014	.0009	.0006	.0071	.0050	.0028	.0028	.0028	.0018	.0018	.0011	.0011	.0007	.0094	.0066	.0066

Diameter (Ø) columns.

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

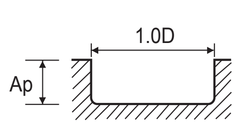
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME61 SERIES 2FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Material Description	Parameter \ Diameter (Ø)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.0
			LBS	12	14	16	20	22	26	30	8	10	12	14	16	20	26	30	8
P	1-8	Non-alloy steel	SFM(Vc)	400	400	400	400	355	355	355	465	465	465	415	415	415	370	370	490
			IPT(fz)	.0003	.0003	.0003	.0003	.0002	.0002	.0002	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0003	.0004
			RPM	19440	19440	19440	19440	17280	17280	17280	18000	18000	18000	16200	16200	16200	14400	14400	15900
			IPM(FEED)	10	10	10	10	8	8	8	13	13	13	10	10	10	8	8	13
			Ap	.0063	.0063	.0063	.0039	.0039	.0039	.0024	.0138	.0138	.0138	.0079	.0079	.0079	.0049	.0049	.0236
	9	Low alloy steel	SFM(Vc)	255	255	255	255	230	230	230	295	295	295	265	265	265	235	235	320
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0003
			RPM	12420	12420	12420	12420	11040	11040	11040	11400	11400	11400	10260	10260	10260	9120	9120	10300
			IPM(FEED)	4.5	4.5	4.5	4.5	3.5	3.5	3.5	5.9	5.9	5.9	4.7	4.7	4.7	3.7	3.7	6.3
			Ap	.0047	.0047	.0047	.0030	.0030	.0030	.0018	.0104	.0104	.0104	.0059	.0059	.0059	.0037	.0037	.0177
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	400	400	400	400	355	355	355	465	465	465	415	415	415	370	370	490
			IPT(fz)	.0003	.0003	.0003	.0003	.0002	.0002	.0002	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0003	.0004
			RPM	19440	19440	19440	19440	17280	17280	17280	18000	18000	18000	16200	16200	16200	14400	14400	15900
			IPM(FEED)	10	10	10	10	8	8	8	13	13	13	10	10	10	8	8	13
			Ap	.0063	.0063	.0063	.0039	.0039	.0039	.0024	.0138	.0138	.0138	.0079	.0079	.0079	.0049	.0049	.0236
	11.2		SFM(Vc)	255	255	255	255	230	230	230	295	295	295	265	265	265	235	235	320
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0003
			RPM	12420	12420	12420	12420	11040	11040	11040	11400	11400	11400	10260	10260	10260	9120	9120	10300
			IPM(FEED)	4.5	4.5	4.5	4.5	3.5	3.5	3.5	5.9	5.9	5.9	4.7	4.7	4.7	3.7	3.7	6.3
			Ap	.0047	.0047	.0047	.0030	.0030	.0030	.0018	.0104	.0104	.0104	.0059	.0059	.0059	.0037	.0037	.0177
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	400	400	400	400	355	355	355	465	465	465	415	415	415	370	370	490
			IPT(fz)	.0003	.0003	.0003	.0003	.0002	.0002	.0002	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0003	.0004
			RPM	19440	19440	19440	19440	17280	17280	17280	18000	18000	18000	16200	16200	16200	14400	14400	15900
			IPM(FEED)	10	10	10	10	8	8	8	13	13	13	10	10	10	8	8	13
			Ap	.0063	.0063	.0063	.0039	.0039	.0039	.0024	.0138	.0138	.0138	.0079	.0079	.0079	.0049	.0049	.0236
H	38.1-38.2	Hardened steel	SFM(Vc)	160	160	160	160	140	140	140	190	190	190	170	170	170	150	150	195
			IPT(fz)	.0002	.0002	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	7780	7780	7780	7780	6910	6910	6910	7320	7320	7320	6590	6590	6590	5860	5860	6300
			IPM(FEED)	3	3	3	3	2	2	2	3	3	3	3	3	3	2	2	3
			Ap	.0038	.0038	.0038	.0024	.0024	.0024	.0014	.0083	.0083	.0083	.0047	.0047	.0047	.0030	.0030	.0142
	40	Chilled Cast Iron	SFM(Vc)	255	255	255	255	230	230	230	295	295	295	265	265	265	235	235	320
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0003
			RPM	12420	12420	12420	12420	11040	11040	11040	11400	11400	11400	10260	10260	10260	9120	9120	10300
			IPM(FEED)	4.5	4.5	4.5	4.5	3.5	3.5	3.5	5.9	5.9	5.9	4.7	4.7	4.7	3.7	3.7	6.3
			Ap	.0047	.0047	.0047	.0030	.0030	.0030	.0018	.0104	.0104	.0104	.0059	.0059	.0059	.0037	.0037	.0177
	41	Hardened Cast Iron	SFM(Vc)	160	160	160	160	140	140	140	190	190	190	170	170	170	150	150	195
			IPT(fz)	.0002	.0002	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	7780	7780	7780	7780	6910	6910	6910	7320	7320	7320	6590	6590	6590	5860	5860	6300
			IPM(FEED)	3	3	3	3	2	2	2	3	3	3	3	3	3	2	2	3
			Ap	.0038	.0038	.0038	.0024	.0024	.0024	.0014	.0083	.0083	.0083	.0047	.0047	.0047	.0030	.0030	.0142

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS

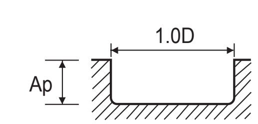
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME61 SERIES 2FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Parameter \ Diameter (Ø)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
		LBS	10	12	14	16	20	26	30	35	40	10	12	14	16	20	26	30	35	40
P	1-8	SFM(Vc)	490	490	490	440	440	440	440	395	395	530	530	530	530	530	475	475	475	475
		IPT(fz)	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0006	.0006	.0006	.0006	.0006	.0006	.0006	.0006	.0006
		RPM	15900	15900	15900	14310	14310	14310	14310	12720	12720	12800	12800	12800	12800	12800	11520	11520	11520	11520
		IPM(FEED)	13	13	13	10	10	10	10	8	8	16	16	16	16	16	13	13	13	13
		Ap	.0165	.0165	.0165	.0094	.0094	.0059	.0059	.0059	.0035	.0315	.0315	.0220	.0220	.0220	.0126	.0126	.0079	.0079
	9	SFM(Vc)	320	320	320	285	285	285	285	255	255	340	340	340	340	340	305	305	305	305
		IPT(fz)	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0002	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0004
		RPM	10300	10300	10300	9270	9270	9270	9270	8240	8240	8200	8200	8200	8200	8200	7380	7380	7380	7380
		IPM(FEED)	6.3	6.3	6.3	5.1	5.1	5.1	5.1	3.9	3.9	7.9	7.9	7.9	7.9	7.9	6.3	6.3	6.3	6.3
		Ap	.0124	.0124	.0124	.0071	.0071	.0044	.0044	.0044	.0027	.0236	.0236	.0165	.0165	.0165	.0094	.0094	.0059	.0059
	10-11.1	SFM(Vc)	490	490	490	440	440	440	440	395	395	530	530	530	530	530	475	475	475	475
		IPT(fz)	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0006	.0006	.0006	.0006	.0006	.0006	.0006	.0006	.0006
		RPM	15900	15900	15900	14310	14310	14310	14310	12720	12720	12800	12800	12800	12800	12800	11520	11520	11520	11520
		IPM(FEED)	13	13	13	10	10	10	10	8	8	16	16	16	16	16	13	13	13	13
		Ap	.0165	.0165	.0165	.0094	.0094	.0059	.0059	.0059	.0035	.0315	.0315	.0220	.0220	.0220	.0126	.0126	.0079	.0079
	11.2	SFM(Vc)	320	320	320	285	285	285	285	255	255	340	340	340	340	340	305	305	305	305
		IPT(fz)	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0002	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0004
		RPM	10300	10300	10300	9270	9270	9270	9270	8240	8240	8200	8200	8200	8200	8200	7380	7380	7380	7380
		IPM(FEED)	6.3	6.3	6.3	5.1	5.1	5.1	5.1	3.9	3.9	7.9	7.9	7.9	7.9	7.9	6.3	6.3	6.3	6.3
		Ap	.0124	.0124	.0124	.0071	.0071	.0044	.0044	.0044	.0027	.0236	.0236	.0165	.0165	.0165	.0094	.0094	.0059	.0059
K	15-20	SFM(Vc)	490	490	490	440	440	440	440	395	395	530	530	530	530	530	475	475	475	475
		IPT(fz)	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0006	.0006	.0006	.0006	.0006	.0006	.0006	.0006	.0006
		RPM	15900	15900	15900	14310	14310	14310	14310	12720	12720	12800	12800	12800	12800	12800	11520	11520	11520	11520
		IPM(FEED)	13	13	13	10	10	10	10	8	8	16	16	16	16	16	13	13	13	13
		Ap	.0165	.0165	.0165	.0094	.0094	.0059	.0059	.0059	.0035	.0315	.0315	.0220	.0220	.0220	.0126	.0126	.0079	.0079
H	38.1-38.2	SFM(Vc)	195	195	195	175	175	175	175	155	155	210	210	210	210	210	190	190	190	190
		IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003
		RPM	6300	6300	6300	5670	5670	5670	5670	5040	5040	5150	5150	5150	5150	5150	4640	4640	4640	4640
		IPM(FEED)	3	3	3	3	3	3	3	2	2	4	4	4	4	4	3	3	3	3
		Ap	.0099	.0099	.0099	.0057	.0057	.0035	.0035	.0035	.0021	.0189	.0189	.0132	.0132	.0132	.0076	.0076	.0047	.0047
	40	SFM(Vc)	320	320	320	285	285	285	285	255	255	340	340	340	340	340	305	305	305	305
		IPT(fz)	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0002	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0004	.0004
		RPM	10300	10300	10300	9270	9270	9270	9270	8240	8240	8200	8200	8200	8200	8200	7380	7380	7380	7380
		IPM(FEED)	6.3	6.3	6.3	5.1	5.1	5.1	5.1	3.9	3.9	7.9	7.9	7.9	7.9	7.9	6.3	6.3	6.3	6.3
		Ap	.0124	.0124	.0124	.0071	.0071	.0044	.0044	.0044	.0027	.0236	.0236	.0165	.0165	.0165	.0094	.0094	.0059	.0059
	41	SFM(Vc)	195	195	195	175	175	175	175	155	155	210	210	210	210	210	190	190	190	190
		IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003
		RPM	6300	6300	6300	5670	5670	5670	5670	5040	5040	5150	5150	5150	5150	5150	4640	4640	4640	4640
		IPM(FEED)	3	3	3	3	3	3	3	2	2	4	4	4	4	4	3	3	3	3
		Ap	.0099	.0099	.0099	.0057	.0057	.0035	.0035	.0035	.0021	.0189	.0189	.0132	.0132	.0132	.0076	.0076	.0047	.0047

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG 4G MILL END MILLS

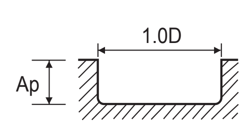
RECOMMENDED CUTTING CONDITIONS

SEME61 SERIES 2FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Material Description	Parameter	4.0	4.0	5.0	6.0	6.0	8.0	8.0	10.0	10.0	12.0	12.0	16.0	16.0	20.0	20.0
			LBS	45	50	15	20	30	25	35	30	40	32	45	35	50	40	55
P	1-8	Non-alloy steel	SFM(Vc)	420	420	565	585	585	595	595	620	620	620	620	615	615	620	620
			IPT(fz)	.0005	.0005	.0009	.0012	.0012	.0017	.0017	.0021	.0021	.0020	.0020	.0024	.0024	.0022	.0022
			RPM	10240	10240	11000	9500	9500	7200	7200	6000	6000	5000	5000	3720	3720	3000	3000
			IPM(FEED)	10	10	20	24	24	25	25	25	25	20	20	18	18	13	13
			Ap	.0079	.0079	.0394	.0331	.0331	.0441	.0441	.0787	.0551	.0945	.0661	.1260	.0882	.1575	.1575
	9	Low alloy steel	SFM(Vc)	270	270	360	370	370	375	375	410	410	415	415	415	415	400	400
			IPT(fz)	.0004	.0004	.0007	.0010	.0010	.0013	.0013	.0015	.0015	.0016	.0016	.0016	.0016	.0014	.0014
			RPM	6560	6560	7000	6000	6000	4550	4550	4000	4000	3340	3340	2520	2520	1950	1950
			IPM(FEED)	5.1	5.1	9.4	11.8	11.8	11.8	11.8	11.8	11.8	10.6	10.6	8.3	8.3	5.5	5.5
			Ap	.0059	.0059	.0295	.0248	.0248	.0331	.0331	.0591	.0413	.0709	.0496	.0945	.0661	.1181	.1181
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	420	420	565	585	585	595	595	620	620	620	620	615	615	620	620
			IPT(fz)	.0005	.0005	.0009	.0012	.0012	.0017	.0017	.0021	.0021	.0020	.0020	.0024	.0024	.0022	.0022
			RPM	10240	10240	11000	9500	9500	7200	7200	6000	6000	5000	5000	3720	3720	3000	3000
			IPM(FEED)	10	10	20	24	24	25	25	25	25	20	20	18	18	13	13
			Ap	.0079	.0079	.0394	.0331	.0331	.0441	.0441	.0787	.0551	.0945	.0661	.1260	.0882	.1575	.1575
	11.2		SFM(Vc)	270	270	360	370	370	375	375	410	410	415	415	415	415	400	400
			IPT(fz)	.0004	.0004	.0007	.0010	.0010	.0013	.0013	.0015	.0015	.0016	.0016	.0016	.0016	.0014	.0014
			RPM	6560	6560	7000	6000	6000	4550	4550	4000	4000	3340	3340	2520	2520	1950	1950
			IPM(FEED)	5.1	5.1	9.4	11.8	11.8	11.8	11.8	11.8	11.8	10.6	10.6	8.3	8.3	5.5	5.5
			Ap	.0059	.0059	.0295	.0248	.0248	.0331	.0331	.0591	.0413	.0709	.0496	.0945	.0661	.1181	.1181
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	420	420	565	585	585	595	595	620	620	620	620	615	615	620	620
			IPT(fz)	.0005	.0005	.0009	.0012	.0012	.0017	.0017	.0021	.0021	.0020	.0020	.0024	.0024	.0022	.0022
			RPM	10240	10240	11000	9500	9500	7200	7200	6000	6000	5000	5000	3720	3720	3000	3000
			IPM(FEED)	10	10	20	24	24	25	25	25	25	20	20	18	18	13	13
			Ap	.0079	.0079	.0394	.0331	.0331	.0441	.0441	.0787	.0551	.0945	.0661	.1260	.0882	.1575	.1575
H	38.1-38.2	Hardened steel	SFM(Vc)	170	170	235	245	245	250	250	250	250	245	245	255	255	245	245
			IPT(fz)	.0003	.0003	.0005	.0007	.0007	.0009	.0009	.0011	.0011	.0012	.0012	.0012	.0012	.0011	.0011
			RPM	4120	4120	4560	3930	3930	3020	3020	2420	2420	2000	2000	1540	1540	1200	1200
			IPM(FEED)	2	2	5	6	6	6	6	6	6	5	5	4	4	3	3
			Ap	.0047	.0047	.0236	.0198	.0198	.0265	.0265	.0472	.0331	.0567	.0397	.0756	.0529	.0945	.0945
	40	Chilled Cast Iron	SFM(Vc)	270	270	360	370	370	375	375	410	410	415	415	415	415	400	400
			IPT(fz)	.0004	.0004	.0007	.0010	.0010	.0013	.0013	.0015	.0015	.0016	.0016	.0016	.0016	.0014	.0014
			RPM	6560	6560	7000	6000	6000	4550	4550	4000	4000	3340	3340	2520	2520	1950	1950
			IPM(FEED)	5.1	5.1	9.4	11.8	11.8	11.8	11.8	11.8	11.8	10.6	10.6	8.3	8.3	5.5	5.5
			Ap	.0059	.0059	.0295	.0248	.0248	.0331	.0331	.0591	.0413	.0709	.0496	.0945	.0661	.1181	.1181
	41	Hardened Cast Iron	SFM(Vc)	170	170	235	245	245	250	250	250	250	245	245	255	255	245	245
			IPT(fz)	.0003	.0003	.0005	.0007	.0007	.0009	.0009	.0011	.0011	.0012	.0012	.0012	.0012	.0011	.0011
			RPM	4120	4120	4560	3930	3930	3020	3020	2420	2420	2000	2000	1540	1540	1200	1200
			IPM(FEED)	2	2	5	6	6	6	6	6	6	5	5	4	4	3	3
			Ap	.0047	.0047	.0236	.0198	.0198	.0265	.0265	.0472	.0331	.0567	.0397	.0756	.0529	.0945	.0945

(Diameter (Ø) spans the columns 4.0 – 20.0)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG 4G MILL END MILLS

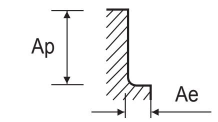
RECOMMENDED CUTTING CONDITIONS

SEME01 SERIES 4FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Ae	Ap	Parameter	1.0	1.2	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
P	1-8	0.05D	2.0D	SFM(Vc)	285	305	340	370	385	410	430	440	460	470
				IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0003	.0003	.0004	.0004	.0005
				RPM	27600	24800	22000	18000	15000	13240	11980	10720	9940	9160
				IPM(FEED)	12	12	12	13	13	13	15	17	17	17
	9	0.05D	2.0D	SFM(Vc)	185	195	210	240	245	265	275	280	295	300
				IPT(fz)	.0001	.0001	.0002	.0002	.0003	.0003	.0004	.0004	.0005	.0006
				RPM	18000	15750	13500	11560	9500	8560	7690	6820	6310	5800
				IPM(FEED)	9	9	9	9	10	10	11	12	13	14
	10-11.1	0.05D	2.0D	SFM(Vc)	285	305	340	370	385	410	430	440	460	470
				IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0003	.0003	.0004	.0004	.0005
				RPM	27600	24800	22000	18000	15000	13240	11980	10720	9940	9160
				IPM(FEED)	12	12	12	13	13	13	15	17	17	17
	11.2	0.05D	2.0D	SFM(Vc)	185	195	210	240	245	265	275	280	295	300
				IPT(fz)	.0001	.0001	.0002	.0002	.0003	.0003	.0004	.0004	.0005	.0006
				RPM	18000	15750	13500	11560	9500	8560	7690	6820	6310	5800
				IPM(FEED)	9	9	9	9	10	10	11	12	13	14
K	15-20	0.05D	2.0D	SFM(Vc)	285	305	340	370	385	410	430	440	460	470
				IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0003	.0003	.0004	.0004	.0005
				RPM	27600	24800	22000	18000	15000	13240	11980	10720	9940	9160
				IPM(FEED)	12	12	12	13	13	13	15	17	17	17
H	38.1-38.2	0.02D	2.0D	SFM(Vc)	115	120	130	150	155	165	175	175	190	195
				IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0004	.0004
				RPM	11000	9750	8500	7200	6100	5280	4790	4300	4050	3800
				IPM(FEED)	5	5	5	5	5	5	5	6	6	7
	40	0.05D	2.0D	SFM(Vc)	185	195	210	240	245	265	275	280	295	300
				IPT(fz)	.0001	.0001	.0002	.0002	.0003	.0003	.0004	.0004	.0005	.0006
				RPM	18000	15750	13500	11560	9500	8560	7690	6820	6310	5800
				IPM(FEED)	9	9	9	9	10	10	11	12	13	14
	41	0.02D	2.0D	SFM(Vc)	115	120	130	150	155	165	175	175	190	195
				IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003	.0004	.0004
				RPM	11000	9750	8500	7200	6100	5280	4790	4300	4050	3800
				IPM(FEED)	5	5	5	5	5	5	5	6	6	7

(Diameter (Ø) spans the columns 1.0 – 5.0)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



* 16mm, axial cutting depth should be 1.5xD

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

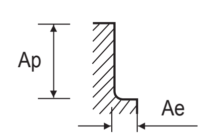
4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME01 SERIES 4FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Ae	Ap	Parameter	Diameter (Ø) 5.5	6.0	7.0	8.0	10.0	11.0	12.0	14.0	16.0	20.0
P	1-8	0.05D	2.0D	SFM(Vc)	485	490	500	495	520	520	510	520	510	520
				IPT(fz)	.0005	.0005	.0006	.0008	.0009	.0009	.0009	.0009	.0009	.0009
				RPM	8530	7900	6950	6000	5040	4580	4120	3610	3100	2520
				IPM(FEED)	17	17	18	18	18	16	14	13	11	9
	9	0.05D	2.0D	SFM(Vc)	305	310	320	315	340	345	345	350	345	340
				IPT(fz)	.0007	.0007	.0008	.0009	.0011	.0011	.0011	.0011	.0011	.0011
				RPM	5420	5040	4420	3800	3280	3030	2780	2440	2100	1640
				IPM(FEED)	14	14	14	14	14	13	13	11	9	7
	10-11.1	0.05D	2.0D	SFM(Vc)	485	490	500	495	520	520	510	520	510	520
				IPT(fz)	.0005	.0005	.0006	.0008	.0009	.0009	.0009	.0009	.0009	.0009
				RPM	8530	7900	6950	6000	5040	4580	4120	3610	3100	2520
				IPM(FEED)	17	17	18	18	18	16	14	13	11	9
	11.2	0.05D	2.0D	SFM(Vc)	305	310	320	315	340	345	345	350	345	340
				IPT(fz)	.0007	.0007	.0008	.0009	.0011	.0011	.0011	.0011	.0011	.0011
				RPM	5420	5040	4420	3800	3280	3030	2780	2440	2100	1640
				IPM(FEED)	14	14	14	14	14	13	13	11	9	7
K	15-20	0.05D	2.0D	SFM(Vc)	485	490	500	495	520	520	510	520	510	520
				IPT(fz)	.0005	.0005	.0006	.0008	.0009	.0009	.0009	.0009	.0009	.0009
				RPM	8530	7900	6950	6000	5040	4580	4120	3610	3100	2520
				IPM(FEED)	17	17	18	18	18	16	14	13	11	9
H	38.1-38.2	0.02D	2.0D	SFM(Vc)	200	205	210	210	210	210	210	215	210	205
				IPT(fz)	.0005	.0005	.0006	.0007	.0008	.0008	.0008	.0008	.0009	.0009
				RPM	3540	3280	2900	2520	2020	1850	1680	1480	1280	1000
				IPM(FEED)	7	7	7	7	7	6	6	5	5	4
	40	0.05D	2.0D	SFM(Vc)	305	310	320	315	340	345	345	350	345	340
				IPT(fz)	.0007	.0007	.0008	.0009	.0011	.0011	.0011	.0011	.0011	.0011
				RPM	5420	5040	4420	3800	3280	3030	2780	2440	2100	1640
				IPM(FEED)	14	14	14	14	14	13	13	11	9	7
	41	0.02D	2.0D	SFM(Vc)	200	205	210	210	210	210	210	215	210	205
				IPT(fz)	.0005	.0005	.0006	.0007	.0008	.0008	.0008	.0008	.0009	.0009
				RPM	3540	3280	2900	2520	2020	1850	1680	1480	1280	1000
				IPM(FEED)	7	7	7	7	7	6	6	5	5	4

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



* 16mm, axial cutting depth should be 1.5xD

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

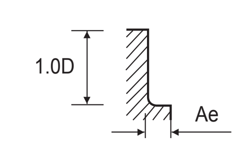
4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME64 SERIES 4FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 1	1	1	1	1	1	1	1	1	1.2	1.2	1.2	1.2	1.2	1.2	1.2
			LBS	4	6	8	10	12	16	20	22	26	3	4	6	8	10	12	16
P	1-8	Non-alloy steel	SFM(Vc)	340	305	305	305	275	205	205	100	100	370	370	370	330	330	330	295
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	33100	29790	29790	29790	26480	19860	19860	9930	9930	29750	29750	29750	26780	26780	26780	23800
			IPM(FEED)	14	11	11	11	9	6	6	3	3	14	14	14	12	12	12	9
			Ae	0.021	0.012	0.012	0.008	0.008	0.005	0.003	0.003	0.003	0.036	0.025	0.025	0.014	0.009	0.009	0.005
	9	Low alloy steel	SFM(Vc)	225	200	200	200	180	135	135	65	65	235	235	235	210	210	210	185
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	21600	19440	19440	19440	17280	12960	12960	6480	6480	18900	18900	18900	17010	17010	17010	15120
			IPM(FEED)	10	8	8	8	7	4	4	2	2	10	10	10	9	9	9	7
			Ae	0.016	0.009	0.009	0.006	0.006	0.003	0.002	0.002	0.002	0.027	0.019	0.019	0.011	0.007	0.007	0.004
	10	High alloyed steel, and tool steel	SFM(Vc)	340	305	305	305	275	205	205	100	100	370	370	370	330	330	330	295
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	33100	29790	29790	29790	26480	19860	19860	9930	9930	29750	29750	29750	26780	26780	26780	23800
			IPM(FEED)	14	11	11	11	9	6	6	3	3	14	14	14	12	12	12	9
			Ae	0.021	0.012	0.012	0.008	0.008	0.005	0.003	0.003	0.003	0.036	0.025	0.025	0.014	0.009	0.009	0.005
	11.1-11.2		SFM(Vc)	225	200	200	200	180	135	135	65	65	235	235	235	210	210	210	185
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	21600	19440	19440	19440	17280	12960	12960	6480	6480	18900	18900	18900	17010	17010	17010	15120
			IPM(FEED)	10	8	8	8	7	4	4	2	2	10	10	10	9	9	9	7
			Ae	0.016	0.009	0.009	0.006	0.006	0.003	0.002	0.002	0.002	0.027	0.019	0.019	0.011	0.007	0.007	0.004
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	340	305	305	305	275	205	205	100	100	370	370	370	330	330	330	295
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	33100	29790	29790	29790	26480	19860	19860	9930	9930	29750	29750	29750	26780	26780	26780	23800
			IPM(FEED)	14	11	11	11	9	6	6	3	3	14	14	14	12	12	12	9
			Ae	0.021	0.012	0.012	0.008	0.008	0.005	0.003	0.003	0.003	0.036	0.025	0.025	0.014	0.009	0.009	0.005
H	38.1-38.2	Hardened steel	SFM(Vc)	135	120	120	120	110	80	80	40	40	145	145	145	130	130	130	115
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	13200	11880	11880	11880	10560	7920	7920	3960	3960	11700	11700	11700	10530	10530	10530	9360
			IPM(FEED)	6	5	5	5	4	2	2	1	1	6	6	6	5	5	5	4
			Ae	0.013	0.007	0.007	0.005	0.005	0.003	0.002	0.002	0.002	0.022	0.015	0.015	0.009	0.005	0.005	0.003
	40	Chilled Cast Iron	SFM(Vc)	225	200	200	200	180	135	135	65	65	235	235	235	210	210	210	185
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	21600	19440	19440	19440	17280	12960	12960	6480	6480	18900	18900	18900	17010	17010	17010	15120
			IPM(FEED)	10	8	8	8	7	4	4	2	2	10	10	10	9	9	9	7
			Ae	0.016	0.009	0.009	0.006	0.006	0.003	0.002	0.002	0.002	0.027	0.019	0.019	0.011	0.007	0.007	0.004
	41	Hardened Cast Iron	SFM(Vc)	135	120	120	120	110	80	80	40	40	145	145	145	130	130	130	115
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	13200	11880	11880	11880	10560	7920	7920	3960	3960	11700	11700	11700	10530	10530	10530	9360
			IPM(FEED)	6	5	5	5	4	2	2	1	1	6	6	6	5	5	5	4
			Ae	0.013	0.007	0.007	0.005	0.005	0.003	0.002	0.002	0.002	0.022	0.015	0.015	0.009	0.005	0.005	0.003

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : mm (Radial Depth of Cut)



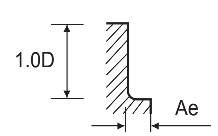
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME64 SERIES 4FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)															
				1.2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2	2	2	2	2
			LBS	20	4	6	8	10	12	14	16	20	22	26	6	8	10	12	14
P	1-8	Non-alloy steel	SFM(Vc)	220	410	410	365	365	365	365	325	325	325	245	445	445	445	400	400
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002
			RPM	17850	26400	26400	23760	23760	23760	23760	21120	21120	21120	15840	21600	21600	21600	19440	19440
			IPM(FEED)	6	15	15	12	12	12	12	9	9	9	6	15	15	15	12	12
			Ae	0.004	0.045	0.032	0.018	0.018	0.018	0.011	0.011	0.007	0.007	0.005	0.06	0.042	0.042	0.024	0.024
	9	Low alloy steel	SFM(Vc)	140	250	250	225	225	225	225	200	200	200	150	285	285	285	255	255
			IPT(fz)	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002
			RPM	11340	16200	16200	14580	14580	14580	14580	12960	12960	12960	9720	13800	13800	13800	12420	12420
			IPM(FEED)	4	11	11	9	9	9	9	7	7	7	5	11	11	11	9	9
			Ae	0.003	0.034	0.024	0.014	0.014	0.014	0.008	0.008	0.005	0.005	0.003	0.045	0.032	0.032	0.018	0.018
	10	High alloyed steel, and tool steel	SFM(Vc)	220	410	410	365	365	365	365	325	325	325	245	445	445	445	400	400
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002
			RPM	17850	26400	26400	23760	23760	23760	23760	21120	21120	21120	15840	21600	21600	21600	19440	19440
			IPM(FEED)	6	15	15	12	12	12	12	9	9	9	6	15	15	15	12	12
			Ae	0.004	0.045	0.032	0.018	0.018	0.018	0.011	0.011	0.007	0.007	0.005	0.06	0.042	0.042	0.024	0.024
	11.1-11.2		SFM(Vc)	140	250	250	225	225	225	225	200	200	200	150	285	285	285	255	255
			IPT(fz)	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002
			RPM	11340	16200	16200	14580	14580	14580	14580	12960	12960	12960	9720	13800	13800	13800	12420	12420
			IPM(FEED)	4	11	11	9	9	9	9	7	7	7	5	11	11	11	9	9
			Ae	0.003	0.034	0.024	0.014	0.014	0.014	0.008	0.008	0.005	0.005	0.003	0.045	0.032	0.032	0.018	0.018
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	220	410	410	365	365	365	365	325	325	325	245	445	445	445	400	400
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002
			RPM	17850	26400	26400	23760	23760	23760	23760	21120	21120	21120	15840	21600	21600	21600	19440	19440
			IPM(FEED)	6	15	15	12	12	12	12	9	9	9	6	15	15	15	12	12
			Ae	0.004	0.045	0.032	0.018	0.018	0.018	0.011	0.011	0.007	0.007	0.005	0.06	0.042	0.042	0.024	0.024
H	38.1-38.2	Hardened steel	SFM(Vc)	85	160	160	140	140	140	140	125	125	125	95	180	180	180	160	160
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002
			RPM	7020	10200	10200	9180	9180	9180	9180	8160	8160	8160	6120	8640	8640	8640	7780	7780
			IPM(FEED)	2	6	6	5	5	5	5	4	4	4	2	6	6	6	5	5
			Ae	0.002	0.027	0.019	0.011	0.011	0.011	0.007	0.007	0.004	0.004	0.003	0.036	0.025	0.025	0.014	0.014
	40	Chilled Cast Iron	SFM(Vc)	140	250	250	225	225	225	225	200	200	200	150	285	285	285	255	255
			IPT(fz)	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002
			RPM	11340	16200	16200	14580	14580	14580	14580	12960	12960	12960	9720	13800	13800	13800	12420	12420
			IPM(FEED)	4	11	11	9	9	9	9	7	7	7	5	11	11	11	9	9
			Ae	0.003	0.034	0.024	0.014	0.014	0.014	0.008	0.008	0.005	0.005	0.003	0.045	0.032	0.032	0.018	0.018
	41	Hardened Cast Iron	SFM(Vc)	85	160	160	140	140	140	140	125	125	125	95	180	180	180	160	160
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002
			RPM	7020	10200	10200	9180	9180	9180	9180	8160	8160	8160	6120	8640	8640	8640	7780	7780
			IPM(FEED)	2	6	6	5	5	5	5	4	4	4	2	6	6	6	5	5
			Ae	0.002	0.027	0.019	0.011	0.011	0.011	0.007	0.007	0.004	0.004	0.003	0.036	0.025	0.025	0.014	0.014

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : mm (Radial Depth of Cut)



YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME64 SERIES 4FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)															
				2	2	2	2	2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3	3	3
			LBS	16	20	22	26	30	8	10	12	14	16	20	26	30	8	10	12
P	1-8	Non-alloy steel	SFM(Vc)	400	400	355	355	355	465	465	465	415	415	415	370	370	490	490	490
			IPT(fz)	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	19440	19440	17280	17280	17280	18000	18000	18000	16200	16200	16200	14400	14400	15900	15900	15900
			IPM(FEED)	12	12	10	10	10	15	15	15	12	12	12	10	10	16	16	16
			Ae	0.024	0.015	0.015	0.015	0.009	0.053	0.053	0.053	0.03	0.03	0.03	0.019	0.019	0.09	0.063	0.063
	9	Low alloy steel	SFM(Vc)	255	255	230	230	230	295	295	295	265	265	265	235	235	320	320	320
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003
			RPM	12420	12420	11040	11040	11040	11400	11400	11400	10260	10260	10260	9120	9120	10300	10300	10300
			IPM(FEED)	9	9	7	7	7	12	12	12	10	10	10	8	8	12	12	12
			Ae	0.018	0.011	0.011	0.011	0.007	0.039	0.039	0.039	0.023	0.023	0.023	0.014	0.014	0.068	0.047	0.047
	10	High alloyed steel, and tool steel	SFM(Vc)	400	400	355	355	355	465	465	465	415	415	415	370	370	490	490	490
			IPT(fz)	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	19440	19440	17280	17280	17280	18000	18000	18000	16200	16200	16200	14400	14400	15900	15900	15900
			IPM(FEED)	12	12	10	10	10	15	15	15	12	12	12	10	10	16	16	16
			Ae	0.024	0.015	0.015	0.015	0.009	0.053	0.053	0.053	0.03	0.03	0.03	0.019	0.019	0.09	0.063	0.063
	11.1-11.2		SFM(Vc)	255	255	230	230	230	295	295	295	265	265	265	235	235	320	320	320
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003
			RPM	12420	12420	11040	11040	11040	11400	11400	11400	10260	10260	10260	9120	9120	10300	10300	10300
			IPM(FEED)	9	9	7	7	7	12	12	12	10	10	10	8	8	12	12	12
			Ae	0.018	0.011	0.011	0.011	0.007	0.039	0.039	0.039	0.023	0.023	0.023	0.014	0.014	0.068	0.047	0.047
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	400	400	355	355	355	465	465	465	415	415	415	370	370	490	490	490
			IPT(fz)	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	19440	19440	17280	17280	17280	18000	18000	18000	16200	16200	16200	14400	14400	15900	15900	15900
			IPM(FEED)	12	12	10	10	10	15	15	15	12	12	12	10	10	16	16	16
			Ae	0.024	0.015	0.015	0.015	0.009	0.053	0.053	0.053	0.03	0.03	0.03	0.019	0.019	0.09	0.063	0.063
H	38.1-38.2	Hardened steel	SFM(Vc)	160	160	140	140	140	190	190	190	170	170	170	150	150	195	195	195
			IPT(fz)	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	7780	7780	6910	6910	6910	7320	7320	7320	6590	6590	6590	5860	5860	6300	6300	6300
			IPM(FEED)	5	5	4	4	4	6	6	6	5	5	5	4	4	6	6	6
			Ae	0.014	0.009	0.009	0.009	0.005	0.032	0.032	0.032	0.018	0.018	0.018	0.011	0.011	0.054	0.038	0.038
	40	Chilled Cast Iron	SFM(Vc)	255	255	230	230	230	295	295	295	265	265	265	235	235	320	320	320
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003
			RPM	12420	12420	11040	11040	11040	11400	11400	11400	10260	10260	10260	9120	9120	10300	10300	10300
			IPM(FEED)	9	9	7	7	7	12	12	12	10	10	10	8	8	12	12	12
			Ae	0.018	0.011	0.011	0.011	0.007	0.039	0.039	0.039	0.023	0.023	0.023	0.014	0.014	0.068	0.047	0.047
	41	Hardened Cast Iron	SFM(Vc)	160	160	140	140	140	190	190	190	170	170	170	150	150	195	195	195
			IPT(fz)	.0002	.0002	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	7780	7780	6910	6910	6910	7320	7320	7320	6590	6590	6590	5860	5860	6300	6300	6300
			IPM(FEED)	5	5	4	4	4	6	6	6	5	5	5	4	4	6	6	6
			Ae	0.014	0.009	0.009	0.009	0.005	0.032	0.032	0.032	0.018	0.018	0.018	0.011	0.011	0.054	0.038	0.038

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
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Ap : Inch (Axial Depth of Cut)
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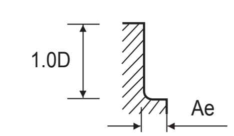


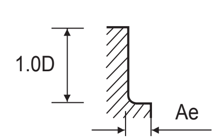
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME64 SERIES 4FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)															
				3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4
			LBS	14	16	20	26	30	35	40	10	12	14	16	20	26	30	35	40
P	1-8	Non-alloy steel	SFM(Vc)	490	440	440	440	440	395	395	530	530	530	530	530	475	475	475	475
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	15900	14310	14310	14310	14310	12720	12720	12800	12800	12800	12800	12800	11520	11520	11520	11520
			IPM(FEED)	16	13	13	13	13	10	10	20	20	20	20	20	16	16	16	16
			Ae	0.063	0.036	0.036	0.023	0.023	0.023	0.014	0.12	0.12	0.084	0.084	0.084	0.048	0.048	0.03	0.03
	9	Low alloy steel	SFM(Vc)	320	285	285	285	285	255	255	340	340	340	340	340	305	305	305	305
			IPT(fz)	.0003	.0003	.0003	.0003	.0003	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0004
			RPM	10300	9270	9270	9270	9270	8240	8240	8200	8200	8200	8200	8200	7380	7380	7380	7380
			IPM(FEED)	12	10	10	10	10	8	8	14	14	14	14	14	11	11	11	11
			Ae	0.047	0.027	0.027	0.017	0.017	0.017	0.01	0.09	0.09	0.063	0.063	0.063	0.036	0.036	0.023	0.023
	10	High alloyed steel, and tool steel	SFM(Vc)	490	440	440	440	440	395	395	530	530	530	530	530	475	475	475	475
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	15900	14310	14310	14310	14310	12720	12720	12800	12800	12800	12800	12800	11520	11520	11520	11520
			IPM(FEED)	16	13	13	13	13	10	10	20	20	20	20	20	16	16	16	16
			Ae	0.063	0.036	0.036	0.023	0.023	0.023	0.014	0.12	0.12	0.084	0.084	0.084	0.048	0.048	0.03	0.03
	11.1-11.2		SFM(Vc)	320	285	285	285	285	255	255	340	340	340	340	340	305	305	305	305
			IPT(fz)	.0003	.0003	.0003	.0003	.0003	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0004
			RPM	10300	9270	9270	9270	9270	8240	8240	8200	8200	8200	8200	8200	7380	7380	7380	7380
			IPM(FEED)	12	10	10	10	10	8	8	14	14	14	14	14	11	11	11	11
			Ae	0.047	0.027	0.027	0.017	0.017	0.017	0.01	0.09	0.09	0.063	0.063	0.063	0.036	0.036	0.023	0.023
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	490	440	440	440	440	395	395	530	530	530	530	530	475	475	475	475
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003
			RPM	15900	14310	14310	14310	14310	12720	12720	12800	12800	12800	12800	12800	11520	11520	11520	11520
			IPM(FEED)	16	13	13	13	13	10	10	20	20	20	20	20	16	16	16	16
			Ae	0.063	0.036	0.036	0.023	0.023	0.023	0.014	0.12	0.12	0.084	0.084	0.084	0.048	0.048	0.03	0.03
H	38.1-38.2	Hardened steel	SFM(Vc)	195	175	175	175	175	155	155	210	210	210	210	210	190	190	190	190
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003
			RPM	6300	5670	5670	5670	5670	5040	5040	5150	5150	5150	5150	5150	4640	4640	4640	4640
			IPM(FEED)	6	5	5	5	5	4	4	6	6	6	6	6	5	5	5	5
			Ae	0.038	0.022	0.022	0.014	0.014	0.014	0.008	0.072	0.072	0.05	0.05	0.05	0.029	0.029	0.018	0.018
	40	Chilled Cast Iron	SFM(Vc)	320	285	285	285	285	255	255	340	340	340	340	340	305	305	305	305
			IPT(fz)	.0003	.0003	.0003	.0003	.0003	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0004
			RPM	10300	9270	9270	9270	9270	8240	8240	8200	8200	8200	8200	8200	7380	7380	7380	7380
			IPM(FEED)	12	10	10	10	10	8	8	14	14	14	14	14	11	11	11	11
			Ae	0.047	0.027	0.027	0.017	0.017	0.017	0.01	0.09	0.09	0.063	0.063	0.063	0.036	0.036	0.023	0.023
	41	Hardened Cast Iron	SFM(Vc)	195	175	175	175	175	155	155	210	210	210	210	210	190	190	190	190
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003
			RPM	6300	5670	5670	5670	5670	5040	5040	5150	5150	5150	5150	5150	4640	4640	4640	4640
			IPM(FEED)	6	5	5	5	5	4	4	6	6	6	6	6	5	5	5	5
			Ae	0.038	0.022	0.022	0.014	0.014	0.014	0.008	0.072	0.072	0.05	0.05	0.05	0.029	0.029	0.018	0.018

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : mm (Radial Depth of Cut)



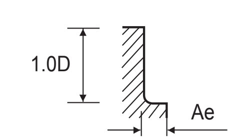
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME64 SERIES 4FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)														
				4	4	5	6	6	8	8	10	10	12	12	16	16	20	20
			LBS	45	50	15	20	30	25	35	30	40	32	45	35	50	40	55
P	1-8	Non-alloy steel	SFM(Vc)	420	420	565	585	585	595	595	620	620	620	620	615	615	620	620
			IPT(fz)	.0003	.0003	.0005	.0005	.0005	.0008	.0008	.0009	.0009	.0008	.0008	.0009	.0009	.0009	.0009
			RPM	10240	10240	11000	9500	9500	7200	7200	6000	6000	5000	5000	3720	3720	3000	3000
			IPM(FEED)	13	13	20	20	20	22	22	22	22	17	17	13	13	11	11
			Ae	0.03	0.03	0.15	0.126	0.126	0.168	0.168	0.3	0.21	0.36	0.252	0.48	0.336	0.6	0.6
	9	Low alloy steel	SFM(Vc)	270	270	360	370	370	375	375	410	410	415	415	415	415	400	400
			IPT(fz)	.0003	.0003	.0006	.0007	.0007	.0009	.0009	.0011	.0011	.0011	.0011	.0011	.0011	.0011	.0011
			RPM	6560	6560	7000	6000	6000	4550	4550	4000	4000	3340	3340	2520	2520	1950	1950
			IPM(FEED)	9	9	17	17	17	17	17	17	17	15	15	11	11	8	8
			Ae	0.023	0.023	0.113	0.095	0.095	0.126	0.126	0.225	0.158	0.27	0.189	0.36	0.252	0.45	0.45
	10	High alloyed steel, and tool steel	SFM(Vc)	420	420	565	585	585	595	595	620	620	620	620	615	615	620	620
			IPT(fz)	.0003	.0003	.0005	.0005	.0005	.0008	.0008	.0009	.0009	.0008	.0008	.0009	.0009	.0009	.0009
			RPM	10240	10240	11000	9500	9500	7200	7200	6000	6000	5000	5000	3720	3720	3000	3000
			IPM(FEED)	13	13	20	20	20	22	22	22	22	17	17	13	13	11	11
			Ae	0.03	0.03	0.15	0.126	0.126	0.168	0.168	0.3	0.21	0.36	0.252	0.48	0.336	0.6	0.6
	11.1-11.2		SFM(Vc)	270	270	360	370	370	375	375	410	410	415	415	415	415	400	400
			IPT(fz)	.0003	.0003	.0006	.0007	.0007	.0009	.0009	.0011	.0011	.0011	.0011	.0011	.0011	.0011	.0011
			RPM	6560	6560	7000	6000	6000	4550	4550	4000	4000	3340	3340	2520	2520	1950	1950
			IPM(FEED)	9	9	17	17	17	17	17	17	17	15	15	11	11	8	8
			Ae	0.023	0.023	0.113	0.095	0.095	0.126	0.126	0.225	0.158	0.27	0.189	0.36	0.252	0.45	0.45
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	420	420	565	585	585	595	595	620	620	620	620	615	615	620	620
			IPT(fz)	.0003	.0003	.0005	.0005	.0005	.0008	.0008	.0009	.0009	.0008	.0008	.0009	.0009	.0009	.0009
			RPM	10240	10240	11000	9500	9500	7200	7200	6000	6000	5000	5000	3720	3720	3000	3000
			IPM(FEED)	13	13	20	20	20	22	22	22	22	17	17	13	13	11	11
			Ae	0.03	0.03	0.15	0.126	0.126	0.168	0.168	0.3	0.21	0.36	0.252	0.48	0.336	0.6	0.6
H	38.1-38.2	Hardened steel	SFM(Vc)	170	170	235	245	245	250	250	250	250	245	245	255	255	245	245
			IPT(fz)	.0002	.0002	.0004	.0005	.0005	.0007	.0007	.0008	.0008	.0008	.0008	.0009	.0009	.0008	.0008
			RPM	4120	4120	4560	3930	3930	3020	3020	2420	2420	2000	2000	1540	1540	1200	1200
			IPM(FEED)	4	4	8	8	8	8	8	8	8	6	6	5	5	4	4
			Ae	0.018	0.018	0.09	0.076	0.076	0.101	0.101	0.18	0.126	0.216	0.151	0.288	0.202	0.36	0.36
	40	Chilled Cast Iron	SFM(Vc)	270	270	360	370	370	375	375	410	410	415	415	415	415	400	400
			IPT(fz)	.0003	.0003	.0006	.0007	.0007	.0009	.0009	.0011	.0011	.0011	.0011	.0011	.0011	.0011	.0011
			RPM	6560	6560	7000	6000	6000	4550	4550	4000	4000	3340	3340	2520	2520	1950	1950
			IPM(FEED)	9	9	17	17	17	17	17	17	17	15	15	11	11	8	8
			Ae	0.023	0.023	0.113	0.095	0.095	0.126	0.126	0.225	0.158	0.27	0.189	0.36	0.252	0.45	0.45
	41	Hardened Cast Iron	SFM(Vc)	170	170	235	245	245	250	250	250	250	245	245	255	255	245	245
			IPT(fz)	.0002	.0002	.0004	.0005	.0005	.0007	.0007	.0008	.0008	.0008	.0008	.0009	.0009	.0008	.0008
			RPM	4120	4120	4560	3930	3930	3020	3020	2420	2420	2000	2000	1540	1540	1200	1200
			IPM(FEED)	4	4	8	8	8	8	8	8	8	6	6	5	5	4	4
			Ae	0.018	0.018	0.09	0.076	0.076	0.101	0.101	0.18	0.126	0.216	0.151	0.288	0.202	0.36	0.36

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : mm (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

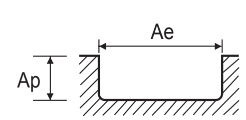
4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME35 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.2	1.5	2
						Diameter (Ø)												
P	1-8	Non-alloy steel	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	45	85	120	160	185	200	200	205	220	220	225	230	240
					IPT(fz)	.00004	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003
					RPM	42000	42000	39000	39000	36000	32000	28000	25000	23500	21500	18000	15000	11560
					IPM(FEED)	3	3	4	4	4	5	6	6	7	7	7	7	8
	9	Low alloy steel	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	25	50	70	95	110	120	120	125	130	135	135	140	155
					IPT(fz)	.00004	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003
					RPM	25200	25200	23400	23400	21600	19200	16800	15000	14100	12900	10800	9000	7560
					IPM(FEED)	2	2	2	2	3	3	3	4	4	4	4	4	5
	10	High alloyed steel, and tool steel	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	45	85	120	160	185	200	200	205	220	220	225	230	240
					IPT(fz)	.00004	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003
					RPM	42000	42000	39000	39000	36000	32000	28000	25000	23500	21500	18000	15000	11560
					IPM(FEED)	3	3	4	4	4	5	6	6	7	7	7	7	8
	11.1-11.2		1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	25	50	70	95	110	120	120	125	130	135	135	140	155
					IPT(fz)	.00004	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003
					RPM	25200	25200	23400	23400	21600	19200	16800	15000	14100	12900	10800	9000	7560
					IPM(FEED)	2	2	2	2	3	3	3	4	4	4	4	4	5
M	14.1	Stainless steel	1D	0.05D (Up to Ø1 : 0.02D)	SFM(Vc)	20	45	60	80	95	100	100	105	110	110	110	115	130
					IPT(fz)	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003
					RPM	21000	21000	19500	19500	18000	16000	14000	12500	11750	10750	9000	7500	6300
					IPM(FEED)	2	2	2	2	2	3	3	3	3	3	3	4	4
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	45	85	120	160	185	200	200	205	220	220	225	230	240
					IPT(fz)	.00004	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003
					RPM	42000	42000	39000	39000	36000	32000	28000	25000	23500	21500	18000	15000	11560
					IPM(FEED)	3	3	4	4	4	5	6	6	7	7	7	7	8
H	38.1-38.2	Hardened steel	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	15	35	50	65	75	80	80	80	85	90	90	95	105
					IPT(fz)	.00002	.00002	.00002	.00002	.00003	.00004	.00005	.0001	.0001	.0001	.0001	.0001	.0001
					RPM	16800	16800	15600	15600	14400	12800	11200	10000	9400	8600	7200	6000	5040
					IPM(FEED)	1	1	1	1	1	1	1	1	1	1	1	1	2
	40	Chilled Cast Iron	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	25	50	70	95	110	120	120	125	130	135	135	140	155
					IPT(fz)	.00004	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003
					RPM	25200	25200	23400	23400	21600	19200	16800	15000	14100	12900	10800	9000	7560
					IPM(FEED)	2	2	2	2	3	3	3	4	4	4	4	4	5
	41	Hardened Cast Iron	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	15	35	50	65	75	80	80	80	85	90	90	95	105
					IPT(fz)	.00002	.00002	.00002	.00002	.00003	.00004	.00005	.0001	.0001	.0001	.0001	.0001	.0001
					RPM	16800	16800	15600	15600	14400	12800	11200	10000	9400	8600	7200	6000	5040
					IPM(FEED)	1	1	1	1	1	1	1	1	1	1	1	1	2

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
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i-Xmill END MILLS
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4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
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V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

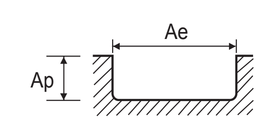
4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME35 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Ae	Ap	Parameter	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9
					Diameter (Ø)													
P	1-8	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	265	275	295	310	320	325	335	345	350	350	350	345	345	345
				IPT(fz)	.0004	.0005	.0006	.0008	.0009	.0010	.0012	.0013	.0014	.0016	.0017	.0019	.0019	.0020
				RPM	10240	8920	8240	7560	6930	6300	5930	5560	5220	4880	4540	4200	3965	3730
				IPM(FEED)	8	9	11	12	13	13	14	15	15	15	15	16	15	15
	9	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	170	170	185	190	195	195	200	210	210	210	210	210	210	210
				IPT(fz)	.0004	.0005	.0007	.0008	.0009	.0010	.0012	.0014	.0014	.0015	.0016	.0016	.0017	.0017
				RPM	6560	5560	5090	4620	4200	3780	3570	3360	3150	2940	2730	2520	2390	2260
				IPM(FEED)	5	6	7	8	8	8	9	9	9	9	9	8	8	8
	10	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	265	275	295	310	320	325	335	345	350	350	350	345	345	345
				IPT(fz)	.0004	.0005	.0006	.0008	.0009	.0010	.0012	.0013	.0014	.0016	.0017	.0019	.0019	.0020
				RPM	10240	8920	8240	7560	6930	6300	5930	5560	5220	4880	4540	4200	3965	3730
				IPM(FEED)	8	9	11	12	13	13	14	15	15	15	15	16	15	15
	11.1-11.2	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	170	170	185	190	195	195	200	210	210	210	210	210	210	210
				IPT(fz)	.0004	.0005	.0007	.0008	.0009	.0010	.0012	.0014	.0014	.0015	.0016	.0016	.0017	.0017
				RPM	6560	5560	5090	4620	4200	3780	3570	3360	3150	2940	2730	2520	2390	2260
				IPM(FEED)	5	6	7	8	8	8	9	9	9	9	9	8	8	8
M	14.1	1D	0.05D (Up to Ø1 : 0.02D)	SFM(Vc)	140	145	155	160	165	165	170	175	180	180	175	175	175	175
				IPT(fz)	.0004	.0005	.0006	.0008	.0009	.0011	.0012	.0013	.0014	.0015	.0016	.0018	.0018	.0019
				RPM	5460	4620	4250	3880	3520	3160	3000	2840	2655	2470	2285	2100	1995	1890
				IPM(FEED)	4	5	6	6	7	7	7	8	8	8	8	8	7	7
K	15-20	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	265	275	295	310	320	325	335	345	350	350	350	345	345	345
				IPT(fz)	.0004	.0005	.0006	.0008	.0009	.0010	.0012	.0013	.0014	.0016	.0017	.0019	.0019	.0020
				RPM	10240	8920	8240	7560	6930	6300	5930	5560	5220	4880	4540	4200	3965	3730
				IPM(FEED)	8	9	11	12	13	13	14	15	15	15	15	16	15	15
H	38.1-38.2	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	110	105	115	120	120	120	120	125	130	135	135	140	140	140
				IPT(fz)	.0002	.0003	.0003	.0003	.0004	.0005	.0005	.0006	.0007	.0007	.0008	.0009	.0009	.0009
				RPM	4200	3360	3150	2940	2630	2320	2160	2000	1920	1840	1760	1680	1600	1520
				IPM(FEED)	2	2	2	2	2	2	2	2	3	3	3	3	3	3
	40	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	170	170	185	190	195	195	200	210	210	210	210	210	210	210
				IPT(fz)	.0004	.0005	.0007	.0008	.0009	.0010	.0012	.0014	.0014	.0015	.0016	.0016	.0017	.0017
				RPM	6560	5560	5090	4620	4200	3780	3570	3360	3150	2940	2730	2520	2390	2260
				IPM(FEED)	5	6	7	8	8	8	9	9	9	9	9	8	8	8
	41	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	110	105	115	120	120	120	120	125	130	135	135	140	140	140
				IPT(fz)	.0002	.0003	.0003	.0003	.0004	.0005	.0005	.0006	.0007	.0007	.0008	.0009	.0009	.0009
				RPM	4200	3360	3150	2940	2630	2320	2160	2000	1920	1840	1760	1680	1600	1520
				IPM(FEED)	2	2	2	2	2	2	2	2	3	3	3	3	3	3

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



4G MILL END MILLS

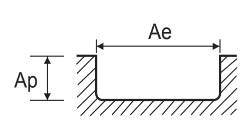
RECOMMENDED CUTTING CONDITIONS

SEME35 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	9.5	10	10.5	11	11.5	12	13	14	15	16
P	1-8	Non-alloy steel	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	340	335	340	340	340	340	350	355	360	365
					IPT(fz)	.0020	.0021	.0021	.0021	.0021	.0021	.0021	.0021	.0021	.0021
					RPM	3495	3260	3130	3000	2870	2740	2605	2470	2335	2200
					IPM(FEED)	14	14	13	13	12	12	11	10	10	9
	9	Low alloy steel	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	210	205	210	210	210	210	215	220	225	225
					IPT(fz)	.0017	.0017	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0017
					RPM	2130	2000	1920	1840	1760	1680	1600	1520	1440	1360
					IPM(FEED)	7	7	6	6	6	5	5	5	5	5
	10	High alloyed steel, and tool steel	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	340	335	340	340	340	340	350	355	360	365
					IPT(fz)	.0020	.0021	.0021	.0021	.0021	.0021	.0021	.0021	.0021	.0021
					RPM	3495	3260	3130	3000	2870	2740	2605	2470	2335	2200
					IPM(FEED)	14	14	13	13	12	12	11	10	10	9
	11.1-11.2		1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	210	205	210	210	210	210	215	220	225	225
					IPT(fz)	.0017	.0017	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0017
					RPM	2130	2000	1920	1840	1760	1680	1600	1520	1440	1360
					IPM(FEED)	7	7	6	6	6	5	5	5	5	5
M	14.1	Stainless steel	1D	0.05D (Up to Ø1 : 0.02D)	SFM(Vc)	175	175	175	170	170	170	170	175	175	175
					IPT(fz)	.0019	.0020	.0020	.0019	.0019	.0019	.0020	.0020	.0021	.0021
					RPM	1785	1680	1600	1520	1440	1360	1285	1210	1135	1060
					IPM(FEED)	7	7	6	6	6	5	5	5	5	5
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	340	335	340	340	340	340	350	355	360	365
					IPT(fz)	.0020	.0021	.0021	.0021	.0021	.0021	.0021	.0021	.0021	.0021
					RPM	3495	3260	3130	3000	2870	2740	2605	2470	2335	2200
					IPM(FEED)	14	14	13	13	12	12	11	10	10	9
H	38.1-38.2	Hardened steel	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	140	140	140	145	145	145	145	150	150	150
					IPT(fz)	.0009	.0009	.0009	.0009	.0010	.0010	.0010	.0009	.0009	.0009
					RPM	1440	1360	1310	1260	1210	1160	1095	1030	965	900
					IPM(FEED)	3	3	2	2	2	2	2	2	2	2
	40	Chilled Cast Iron	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	210	205	210	210	210	210	215	220	225	225
					IPT(fz)	.0017	.0017	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0017
					RPM	2130	2000	1920	1840	1760	1680	1600	1520	1440	1360
					IPM(FEED)	7	7	6	6	6	5	5	5	5	5
	41	Hardened Cast Iron	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	140	140	140	145	145	145	145	150	150	150
					IPT(fz)	.0009	.0009	.0009	.0009	.0010	.0010	.0010	.0009	.0009	.0009
					RPM	1440	1360	1310	1260	1210	1160	1095	1030	965	900
					IPM(FEED)	3	3	2	2	2	2	2	2	2	2

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



4G MILL END MILLS

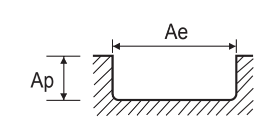
RECOMMENDED CUTTING CONDITIONS

SEME35 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Ae	Ap	Parameter	17	18	19	20	21	22	23	24	25
P	1-8	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	365	360	355	345	350	350	350	350	350
				IPT(fz)	.0021	.0021	.0021	.0021	.0021	.0021	.0020	.0019	.0019
				RPM	2070	1940	1810	1680	1615	1550	1480	1425	1360
				IPM(FEED)	9	8	8	7	7	7	6	6	5
	9	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	225	225	220	220	220	220	220	220	215
				IPT(fz)	.0016	.0016	.0015	.0016	.0016	.0016	.0017	.0017	.0017
				RPM	1285	1210	1135	1060	1015	970	925	885	840
				IPM(FEED)	4	4	4	3	3	3	3	3	3
	10	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	365	360	355	345	350	350	350	350	350
				IPT(fz)	.0021	.0021	.0021	.0021	.0021	.0021	.0020	.0019	.0019
				RPM	2070	1940	1810	1680	1615	1550	1480	1425	1360
				IPM(FEED)	9	8	8	7	7	7	6	6	5
	11.1-11.2	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	225	225	220	220	220	220	220	220	215
				IPT(fz)	.0016	.0016	.0015	.0016	.0016	.0016	.0017	.0017	.0017
				RPM	1285	1210	1135	1060	1015	970	925	885	840
				IPM(FEED)	4	4	4	3	3	3	3	3	3
M	14.1	1D	0.05D (Up to Ø1 : 0.02D)	SFM(Vc)	175	175	175	175	175	175	175	175	175
				IPT(fz)	.0020	.0021	.0020	.0020	.0019	.0019	.0019	.0018	.0018
				RPM	1005	950	895	840	800	775	745	715	680
				IPM(FEED)	4	4	4	3	3	3	3	3	3
K	15-20	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	365	360	355	345	350	350	350	350	350
				IPT(fz)	.0021	.0021	.0021	.0021	.0021	.0021	.0020	.0019	.0019
				RPM	2070	1940	1810	1680	1615	1550	1480	1425	1360
				IPM(FEED)	9	8	8	7	7	7	6	6	5
H	38.1-38.2	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	150	145	145	140	140	140	140	140	140
				IPT(fz)	.0009	.0009	.0009	.0010	.0008	.0009	.0008	.0008	.0007
				RPM	845	790	735	680	650	620	600	570	540
				IPM(FEED)	2	2	1	1	1	1	1	1	1
	40	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	225	225	220	220	220	220	220	220	215
				IPT(fz)	.0016	.0016	.0015	.0016	.0016	.0016	.0017	.0017	.0017
				RPM	1285	1210	1135	1060	1015	970	925	885	840
				IPM(FEED)	4	4	4	3	3	3	3	3	3
	41	1D	0.5D (Up to Ø3 : 0.2D) (Up to Ø1 : 0.15D)	SFM(Vc)	150	145	145	140	140	140	140	140	140
				IPT(fz)	.0009	.0009	.0009	.0010	.0008	.0009	.0008	.0008	.0007
				RPM	845	790	735	680	650	620	600	570	540
				IPM(FEED)	2	2	1	1	1	1	1	1	1

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



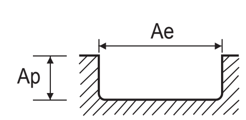
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME70 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)													
						1	1	1	1	1	1	1	1	1.2	1.2	1.2	1.2	1.2	1.5
					LOC	3	4	5	6	7	8	10	12	4	6	8	10	12	6
P	1-8	Non-alloy steel	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	165	165	165	150	150	150	150	130	165	165	150	150	150	175
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
					RPM	16000	16000	16000	14400	14400	14400	14400	12800	13500	13500	12150	12150	12150	11200
					IPM(FEED)	3	3	3	2	2	2	2	2	3	3	2	2	2	3
	9	Low alloy steel	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	130	130	130	120	120	120	120	105	135	135	120	120	120	140
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002
					RPM	12800	12800	12800	11520	11520	11520	11520	10240	10800	10800	9720	9720	9720	8960
					IPM(FEED)	2	2	2	2	2	2	2	1	3	3	2	2	2	3
	10	High alloyed steel, and tool steel	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	165	165	165	150	150	150	150	130	165	165	150	150	150	175
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
					RPM	16000	16000	16000	14400	14400	14400	14400	12800	13500	13500	12150	12150	12150	11200
					IPM(FEED)	3	3	3	2	2	2	2	2	3	3	2	2	2	3
	11.1-11.2		1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	130	130	130	120	120	120	120	105	135	135	120	120	120	140
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002
					RPM	12800	12800	12800	11520	11520	11520	11520	10240	10800	10800	9720	9720	9720	8960
					IPM(FEED)	2	2	2	2	2	2	2	1	3	3	2	2	2	3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	165	165	165	150	150	150	150	130	165	165	150	150	150	175
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
					RPM	16000	16000	16000	14400	14400	14400	14400	12800	13500	13500	12150	12150	12150	11200
					IPM(FEED)	3	3	3	2	2	2	2	2	3	3	2	2	2	3
H	38.1-38.2	Hardened steel	1D	0.05D	SFM(Vc)	80	80	80	75	75	75	75	65	85	85	75	75	75	85
					IPT(fz)	.0006	.0006	.0005	.0007	.0007	.0006	.0006	.0008	.0008	.0006	.0007	.0007	.0006	.0004
					RPM	8000	8000	8000	7200	7200	7200	7200	6400	6750	6750	6080	6080	6080	5600
					IPM(FEED)	9	9	7	11	11	9	9	11	11	9	9	9	7	5
	40	Chilled Cast Iron	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	130	130	130	120	120	120	120	105	135	135	120	120	120	140
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002
					RPM	12800	12800	12800	11520	11520	11520	11520	10240	10800	10800	9720	9720	9720	8960
					IPM(FEED)	2	2	2	2	2	2	2	1	3	3	2	2	2	3
	41	Hardened Cast Iron	1D	0.05D	SFM(Vc)	80	80	80	75	75	75	75	65	85	85	75	75	75	85
					IPT(fz)	.0006	.0006	.0005	.0007	.0007	.0006	.0006	.0008	.0008	.0006	.0007	.0007	.0006	.0004
					RPM	8000	8000	8000	7200	7200	7200	7200	6400	6750	6750	6080	6080	6080	5600
					IPM(FEED)	9	9	7	11	11	9	9	11	11	9	9	9	7	5

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



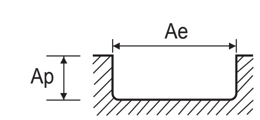
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME70 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Ae	Ap	Parameter	Diameter (Ø)															
					.5	1.5	1.5	1.5	1.5	2	2	2	2	2	2.5	2.5	2.5	2.5	2.5	3
					8	10	12	14	16	8	10	12	14	16	10	12	16	20	26	10
P	1-8	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	155	155	155	155	140	185	185	170	170	170	200	200	180	180	160	195
				IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0002	.0003
				RPM	10080	10080	10080	10080	8960	9070	9070	8160	8160	8160	7700	7700	6930	6930	6160	6350
				IPM(FEED)	3	3	2	2	2	3	3	3	3	2	4	4	3	3	2	4
	9	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	125	125	125	125	110	150	150	135	135	135	160	160	145	145	130	160
				IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0002	.0002	.0002	.0003
				RPM	8060	8060	8060	8060	7170	7260	7260	6530	6530	6530	6200	6200	5580	5580	4960	5150
				IPM(FEED)	2	2	2	2	2	3	3	2	2	2	3	3	3	2	2	3
	10	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	155	155	155	155	140	185	185	170	170	170	200	200	180	180	160	195
				IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0002	.0003
				RPM	10080	10080	10080	10080	8960	9070	9070	8160	8160	8160	7700	7700	6930	6930	6160	6350
				IPM(FEED)	3	3	2	2	2	3	3	3	3	2	4	4	3	3	2	4
	11.1-11.2	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	125	125	125	125	110	150	150	135	135	135	160	160	145	145	130	160
				IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0002	.0002	.0002	.0003
				RPM	8060	8060	8060	8060	7170	7260	7260	6530	6530	6530	6200	6200	5580	5580	4960	5150
				IPM(FEED)	2	2	2	2	2	3	3	2	2	2	3	3	3	2	2	3
K	15-20	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	155	155	155	155	140	185	185	170	170	170	200	200	180	180	160	195
				IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0002	.0003
				RPM	10080	10080	10080	10080	8960	9070	9070	8160	8160	8160	7700	7700	6930	6930	6160	6350
				IPM(FEED)	3	3	2	2	2	3	3	3	3	2	4	4	3	3	2	4
H	38.1-38.2	1D	0.05D	SFM(Vc)	80	80	80	80	70	95	95	85	85	85	100	100	90	90	80	100
				IPT(fz)	.0015	.0015	.0015	.0012	.0014	.0013	.0011	.0012	.0008	.0003	.0022	.0022	.0024	.0024	.0022	.0021
				RPM	5040	5040	5040	5040	4480	4540	4540	4090	4090	4090	3850	3850	3470	3470	3080	3170
				IPM(FEED)	15	15	15	12	12	12	10	10	6	3	17	17	17	17	14	14
	40	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	125	125	125	125	110	150	150	135	135	135	160	160	145	145	130	160
				IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0003	.0003	.0002	.0002	.0002	.0003
				RPM	8060	8060	8060	8060	7170	7260	7260	6530	6530	6530	6200	6200	5580	5580	4960	5150
				IPM(FEED)	2	2	2	2	2	3	3	2	2	2	3	3	3	2	2	3
	41	1D	0.05D	SFM(Vc)	80	80	80	80	70	95	95	85	85	85	100	100	90	90	80	100
				IPT(fz)	.0015	.0015	.0015	.0012	.0014	.0013	.0011	.0012	.0008	.0003	.0022	.0022	.0024	.0024	.0022	.0021
				RPM	5040	5040	5040	5040	4480	4540	4540	4090	4090	4090	3850	3850	3470	3470	3080	3170
				IPM(FEED)	15	15	15	12	12	12	10	10	6	3	17	17	17	17	14	14

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

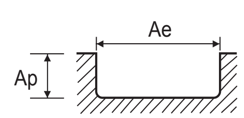
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME70 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)													
						3	3	3	3	3	3	4	4	4	4	4	5	5	5
					LOC	12	14	16	20	26	30	12	16	20	26	30	20	25	30
P	1-8	Non-alloy steel	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	195	195	175	175	175	175	210	210	210	190	190	225	225	205
					IPT(fz)	.0003	.0003	.0003	.0003	.0002	.0002	.0005	.0005	.0005	.0004	.0004	.0007	.0007	.0006
					RPM	6350	6350	5720	5720	5720	5720	5150	5150	5150	4640	4640	4400	4400	3960
					IPM(FEED)	4	4	4	3	3	3	5	5	5	4	4	6	6	5
	9	Low alloy steel	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	160	160	145	145	145	145	170	170	170	150	150	180	180	160
					IPT(fz)	.0003	.0003	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0004	.0004	.0007	.0007	.0006
					RPM	5150	5150	4640	4640	4640	4640	4100	4100	4100	3690	3690	3480	3480	3130
					IPM(FEED)	3	3	3	3	2	2	4	4	4	3	3	5	5	4
	10	High alloyed steel, and tool steel	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	195	195	175	175	175	175	210	210	210	190	190	225	225	205
					IPT(fz)	.0003	.0003	.0003	.0003	.0002	.0002	.0005	.0005	.0005	.0004	.0004	.0007	.0007	.0006
					RPM	6350	6350	5720	5720	5720	5720	5150	5150	5150	4640	4640	4400	4400	3960
					IPM(FEED)	4	4	4	3	3	3	5	5	5	4	4	6	6	5
	11.1-11.2		1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	160	160	145	145	145	145	170	170	170	150	150	180	180	160
					IPT(fz)	.0003	.0003	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0004	.0004	.0007	.0007	.0006
					RPM	5150	5150	4640	4640	4640	4640	4100	4100	4100	3690	3690	3480	3480	3130
					IPM(FEED)	3	3	3	3	2	2	4	4	4	3	3	5	5	4
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	195	195	175	175	175	175	210	210	210	190	190	225	225	205
					IPT(fz)	.0003	.0003	.0003	.0003	.0002	.0002	.0005	.0005	.0005	.0004	.0004	.0007	.0007	.0006
					RPM	6350	6350	5720	5720	5720	5720	5150	5150	5150	4640	4640	4400	4400	3960
					IPM(FEED)	4	4	4	3	3	3	5	5	5	4	4	6	6	5
H	38.1-38.2	Hardened steel	1D	0.05D	SFM(Vc)	100	100	90	90	90	90	105	105	105	95	95	115	115	105
					IPT(fz)	.0021	.0017	.0012	.0012	.0005	.0005	.0002	.0042	.0042	.0037	.0037	.0038	.0030	.0022
					RPM	3170	3170	2850	2850	2850	2850	2580	2580	2580	2320	2320	2280	2280	2050
					IPM(FEED)	14	11	7	7	3	3	1	22	22	17	17	17	14	9
	40	Chilled Cast Iron	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	160	160	145	145	145	145	170	170	170	150	150	180	180	160
					IPT(fz)	.0003	.0003	.0003	.0003	.0003	.0003	.0005	.0005	.0005	.0004	.0004	.0007	.0007	.0006
					RPM	5150	5150	4640	4640	4640	4640	4100	4100	4100	3690	3690	3480	3480	3130
					IPM(FEED)	3	3	3	3	2	2	4	4	4	3	3	5	5	4
	41	Hardened Cast Iron	1D	0.05D	SFM(Vc)	100	100	90	90	90	90	105	105	105	95	95	115	115	105
					IPT(fz)	.0021	.0017	.0012	.0012	.0005	.0005	.0002	.0042	.0042	.0037	.0037	.0038	.0030	.0022
					RPM	3170	3170	2850	2850	2850	2850	2580	2580	2580	2320	2320	2280	2280	2050
					IPM(FEED)	14	11	7	7	3	3	1	22	22	17	17	17	14	9

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME70 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Ae	Ap	Parameter	Diameter (Ø)															
					5	5	6	6	6	6	6	6	6	8	8	8	8	8	8	10
					35	40	15	20	25	30	35	40	45	25	30	35	40	45	50	30
P	1-8	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	205	205	235	235	235	235	210	210	210	235	235	235	235	215	215	255
				IPT(fz)	.0006	.0005	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010	.0015
				RPM	3960	3960	3800	3800	3800	3800	3420	3420	3420	2880	2880	2880	2880	2590	2590	2450
				IPM(FEED)	5	4	7	7	7	6	6	5	5	8	8	8	6	6	5	8
	9	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	160	160	190	190	190	190	170	170	170	190	190	190	190	170	170	205
				IPT(fz)	.0006	.0006	.0010	.0010	.0010	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010	.0015
				RPM	3130	3130	3050	3050	3050	3050	2750	2750	2750	2280	2280	2280	2280	2050	2050	2000
				IPM(FEED)	4	4	6	6	6	5	5	4	4	6	6	6	5	5	4	6
	10	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	205	205	235	235	235	235	210	210	210	235	235	235	235	215	215	255
				IPT(fz)	.0006	.0005	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010	.0015
				RPM	3960	3960	3800	3800	3800	3800	3420	3420	3420	2880	2880	2880	2880	2590	2590	2450
				IPM(FEED)	5	4	7	7	7	6	6	5	5	8	8	8	6	6	5	8
	11.1-11.2	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	160	160	190	190	190	190	170	170	170	190	190	190	190	170	170	205
				IPT(fz)	.0006	.0006	.0010	.0010	.0010	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010	.0015
				RPM	3130	3130	3050	3050	3050	3050	2750	2750	2750	2280	2280	2280	2280	2050	2050	2000
				IPM(FEED)	4	4	6	6	6	5	5	4	4	6	6	6	5	5	4	6
K	15-20	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	205	205	235	235	235	235	210	210	210	235	235	235	235	215	215	255
				IPT(fz)	.0006	.0005	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010	.0015
				RPM	3960	3960	3800	3800	3800	3800	3420	3420	3420	2880	2880	2880	2880	2590	2590	2450
				IPM(FEED)	5	4	7	7	7	6	6	5	5	8	8	8	6	6	5	8
H	38.1-38.2	1D	0.05D	SFM(Vc)	105	105	120	120	120	120	110	110	110	125	125	125	125	110	110	125
				IPT(fz)	.0022	.0010	.0010	.0055	.0044	.0044	.0039	.0039	.0026	.0079	.0079	.0079	.0064	.0071	.0071	.0063
				RPM	2050	2050	1970	1970	1970	1970	1770	1770	1770	1510	1510	1510	1510	1360	1360	1210
				IPM(FEED)	9	4	4	22	17	17	14	14	9	24	24	24	19	19	19	15
	40	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	160	160	190	190	190	190	170	170	170	190	190	190	190	170	170	205
				IPT(fz)	.0006	.0006	.0010	.0010	.0010	.0008	.0008	.0007	.0007	.0013	.0013	.0013	.0011	.0011	.0010	.0015
				RPM	3130	3130	3050	3050	3050	3050	2750	2750	2750	2280	2280	2280	2280	2050	2050	2000
				IPM(FEED)	4	4	6	6	6	5	5	4	4	6	6	6	5	5	4	6
	41	1D	0.05D	SFM(Vc)	105	105	120	120	120	120	110	110	110	125	125	125	125	110	110	125
				IPT(fz)	.0022	.0010	.0010	.0055	.0044	.0044	.0039	.0039	.0026	.0079	.0079	.0079	.0064	.0071	.0071	.0063
				RPM	2050	2050	1970	1970	1970	1970	1770	1770	1770	1510	1510	1510	1510	1360	1360	1210
				IPM(FEED)	9	4	4	22	17	17	14	14	9	24	24	24	19	19	19	15

SFM = Surface Feet per Minute
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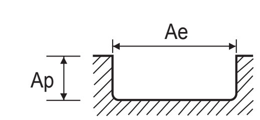

CARBIDE
HSS
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X5070 END MILLS
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TECHNICAL DATA

YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME70 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	10	10	10	10	10	10	12	12	12	12	12	12	12	12
					LOC	35	40	45	50	55	60	35	40	45	50	55	60	65	70
P	1-8	Non-alloy steel	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	255	255	255	255	230	230	245	245	245	245	245	245	225	225
					IPT(fz)	.0015	.0015	.0013	.0013	.0013	.0012	.0015	.0015	.0013	.0013	.0013	.0011	.0011	.0011
					RPM	2450	2450	2450	2450	2210	2210	2000	2000	2000	2000	2000	2000	1800	1800
					IPM(FEED)	8	8	6	6	6	5	6	6	5	5	5	4	4	4
P	9	Low alloy steel	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	205	205	205	205	185	185	205	205	205	205	205	205	185	185
					IPT(fz)	.0015	.0015	.0012	.0012	.0013	.0011	.0016	.0016	.0013	.0013	.0013	.0012	.0012	.0012
					RPM	2000	2000	2000	2000	1800	1800	1670	1670	1670	1670	1670	1670	1500	1500
					IPM(FEED)	6	6	5	5	5	4	5	5	5	5	5	4	4	4
P	10	High alloyed steel, and tool steel	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	255	255	255	255	230	230	245	245	245	245	245	245	225	225
					IPT(fz)	.0015	.0015	.0013	.0013	.0013	.0012	.0015	.0015	.0013	.0013	.0013	.0011	.0011	.0011
					RPM	2450	2450	2450	2450	2210	2210	2000	2000	2000	2000	2000	2000	1800	1800
					IPM(FEED)	8	8	6	6	6	5	6	6	5	5	5	4	4	4
P	11.1-11.2	High alloyed steel, and tool steel	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	205	205	205	205	185	185	205	205	205	205	205	205	185	185
					IPT(fz)	.0015	.0015	.0012	.0012	.0013	.0011	.0016	.0016	.0013	.0013	.0013	.0012	.0012	.0012
					RPM	2000	2000	2000	2000	1800	1800	1670	1670	1670	1670	1670	1670	1500	1500
					IPM(FEED)	6	6	5	5	5	4	5	5	5	5	5	4	4	4
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	255	255	255	255	230	230	245	245	245	245	245	245	225	225
					IPT(fz)	.0015	.0015	.0013	.0013	.0013	.0012	.0015	.0015	.0013	.0013	.0013	.0011	.0011	.0011
					RPM	2450	2450	2450	2450	2210	2210	2000	2000	2000	2000	2000	2000	1800	1800
					IPM(FEED)	8	8	6	6	6	5	6	6	5	5	5	4	4	4
H	38.1-38.2	Hardened steel	1D	0.05D	SFM(Vc)	125	125	125	125	110	110	125	125	125	125	125	125	115	115
					IPT(fz)	.0063	.0041	.0041	.0018	.0079	.0079	.0068	.0173	.0173	.0173	.0173	.0140	.0155	.0155
					RPM	1210	1210	1210	1210	1090	1090	1010	1010	1010	1010	1010	1010	910	910
					IPM(FEED)	15	10	10	4	17	17	14	35	35	35	35	28	28	28
H	40	Chilled Cast Iron	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	205	205	205	205	185	185	205	205	205	205	205	205	185	185
					IPT(fz)	.0015	.0015	.0012	.0012	.0013	.0011	.0016	.0016	.0013	.0013	.0013	.0012	.0012	.0012
					RPM	2000	2000	2000	2000	1800	1800	1670	1670	1670	1670	1670	1670	1500	1500
					IPM(FEED)	6	6	5	5	5	4	5	5	5	5	5	4	4	4
H	41	Hardened Cast Iron	1D	0.05D	SFM(Vc)	125	125	125	125	110	110	125	125	125	125	125	125	115	115
					IPT(fz)	.0063	.0041	.0041	.0018	.0079	.0079	.0068	.0173	.0173	.0173	.0173	.0140	.0155	.0155
					RPM	1210	1210	1210	1210	1090	1090	1010	1010	1010	1010	1010	1010	910	910
					IPM(FEED)	15	10	10	4	17	17	14	35	35	35	35	28	28	28

SFM = Surface Feet per Minute
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Ap : Inch (Axial Depth of Cut)
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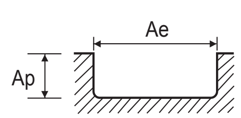

YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME70 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Ae	Ap	Parameter	14	14	16	16	16	16	16	16	16	16	18	18	18	20	20	20
					50	60	40	50	60	70	80	90	110	120	50	70	100	50	60	70
P	1-8	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	265	265	280	280	280	280	280	250	250	250	270	270	245	250	250	250
				IPT(fz)	.0013	.0013	.0016	.0016	.0014	.0014	.0012	.0012	.0012	.0012	.0016	.0013	.0012	.0016	.0016	.0014
				RPM	1850	1850	1700	1700	1700	1700	1700	1530	1530	1530	1450	1450	1310	1220	1220	1220
				IPM(FEED)	5	5	6	6	5	5	4	4	4	4	5	4	3	4	4	3
P	9	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	215	215	210	210	210	210	210	190	190	190	210	210	185	195	195	195
				IPT(fz)	.0013	.0013	.0016	.0016	.0014	.0014	.0012	.0012	.0012	.0012	.0016	.0013	.0012	.0016	.0016	.0014
				RPM	1480	1480	1280	1280	1280	1280	1280	1150	1150	1150	1120	1120	1000	950	950	950
				IPM(FEED)	4	4	4	4	4	4	3	3	3	3	4	3	2	3	3	3
P	10	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	265	265	280	280	280	280	280	250	250	250	270	270	245	250	250	250
				IPT(fz)	.0013	.0013	.0016	.0016	.0014	.0014	.0012	.0012	.0012	.0012	.0016	.0013	.0012	.0016	.0016	.0014
				RPM	1850	1850	1700	1700	1700	1700	1700	1530	1530	1530	1450	1450	1310	1220	1220	1220
				IPM(FEED)	5	5	6	6	5	5	4	4	4	4	5	4	3	4	4	3
P	11.1-11.2	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	215	215	210	210	210	210	210	190	190	190	210	210	185	195	195	195
				IPT(fz)	.0013	.0013	.0016	.0016	.0014	.0014	.0012	.0012	.0012	.0012	.0016	.0013	.0012	.0016	.0016	.0014
				RPM	1480	1480	1280	1280	1280	1280	1280	1150	1150	1150	1120	1120	1000	950	950	950
				IPM(FEED)	4	4	4	4	4	4	3	3	3	3	4	3	2	3	3	3
K	15-20	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	265	265	280	280	280	280	280	250	250	250	270	270	245	250	250	250
				IPT(fz)	.0013	.0013	.0016	.0016	.0014	.0014	.0012	.0012	.0012	.0012	.0016	.0013	.0012	.0016	.0016	.0014
				RPM	1850	1850	1700	1700	1700	1700	1700	1530	1530	1530	1450	1450	1310	1220	1220	1220
				IPM(FEED)	5	5	6	6	5	5	4	4	4	4	5	4	3	4	4	3
H	38.1-38.2	1D	0.05D	SFM(Vc)	130	130	130	130	130	130	130	120	120	120	130	130	115	125	125	125
				IPT(fz)	.0155	.0123	.0140	.0093	.0093	.0093	.0039	.0044	.0044	.0013	.0013	.0202	.0225	.0192	.0192	.0192
				RPM	910	910	800	800	800	800	800	720	720	720	700	700	630	600	600	600
				IPM(FEED)	28	22	22	15	15	15	6	6	6	2	2	28	28	23	23	23
H	40	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	215	215	210	210	210	210	210	190	190	190	210	210	185	195	195	195
				IPT(fz)	.0013	.0013	.0016	.0016	.0014	.0014	.0012	.0012	.0012	.0012	.0016	.0013	.0012	.0016	.0016	.0014
				RPM	1480	1480	1280	1280	1280	1280	1280	1150	1150	1150	1120	1120	1000	950	950	950
				IPM(FEED)	4	4	4	4	4	4	3	3	3	3	4	3	2	3	3	3
H	41	1D	0.05D	SFM(Vc)	130	130	130	130	130	130	130	120	120	120	130	130	115	125	125	125
				IPT(fz)	.0155	.0123	.0140	.0093	.0093	.0093	.0039	.0044	.0044	.0013	.0013	.0202	.0225	.0192	.0192	.0192
				RPM	910	910	800	800	800	800	800	720	720	720	700	700	630	600	600	600
				IPM(FEED)	28	22	22	15	15	15	6	6	6	2	2	28	28	23	23	23

SFM = Surface Feet per Minute
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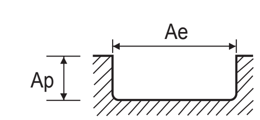

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TECHNICAL DATA

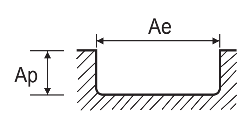
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME70 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 20	20	20	20	22	22	25	25	25	25
					LOC	80	90	110	120	75	110	70	90	110	120
P	1-8	Non-alloy steel	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	250	250	225	225	250	250	255	255	255	255
					IPT(fz)	.0014	.0012	.0013	.0013	.0014	.0013	.0016	.0014	.0014	.0012
					RPM	1220	1220	1100	1100	1100	1100	980	980	980	980
					IPM(FEED)	3	3	3	3	3	3	3	3	3	2
	9	Low alloy steel	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	195	195	175	175	190	190	195	195	195	195
					IPT(fz)	.0014	.0012	.0012	.0012	.0013	.0012	.0016	.0013	.0013	.0012
					RPM	950	950	860	860	840	840	750	750	750	750
					IPM(FEED)	3	2	2	2	2	2	2	2	2	2
	10	High alloyed steel, and tool steel	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	250	250	225	225	250	250	255	255	255	255
					IPT(fz)	.0014	.0012	.0013	.0013	.0014	.0013	.0016	.0014	.0014	.0012
					RPM	1220	1220	1100	1100	1100	1100	980	980	980	980
					IPM(FEED)	3	3	3	3	3	3	3	3	3	2
	11.1-11.2		1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	195	195	175	175	190	190	195	195	195	195
					IPT(fz)	.0014	.0012	.0012	.0012	.0013	.0012	.0016	.0013	.0013	.0012
					RPM	950	950	860	860	840	840	750	750	750	750
					IPM(FEED)	3	2	2	2	2	2	2	2	2	2
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	250	250	225	225	250	250	255	255	255	255
					IPT(fz)	.0014	.0012	.0013	.0013	.0014	.0013	.0016	.0014	.0014	.0012
					RPM	1220	1220	1100	1100	1100	1100	980	980	980	980
					IPM(FEED)	3	3	3	3	3	3	3	3	3	2
H	38.1-38.2	Hardened steel	1D	0.05D	SFM(Vc)	125	125	110	110	125	125	125	125	125	125
					IPT(fz)	.0151	.0151	.0109	.0047	.0046	.0204	.0189	.0189	.0189	.0150
					RPM	600	600	540	540	550	550	480	480	480	480
					IPM(FEED)	18	18	12	5	5	22	18	18	18	14
	40	Chilled Cast Iron	1D	0.3D (Up to Ø3 : 0.4mm)	SFM(Vc)	195	195	175	175	190	190	195	195	195	195
					IPT(fz)	.0014	.0012	.0012	.0012	.0013	.0012	.0016	.0013	.0013	.0012
					RPM	950	950	860	860	840	840	750	750	750	750
					IPM(FEED)	3	2	2	2	2	2	2	2	2	2
	41	Hardened Cast Iron	1D	0.05D	SFM(Vc)	125	125	110	110	125	125	125	125	125	125
					IPT(fz)	.0151	.0151	.0109	.0047	.0046	.0204	.0189	.0189	.0189	.0150
					RPM	600	600	540	540	550	550	480	480	480	480
					IPM(FEED)	18	18	12	5	5	22	18	18	18	14

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG 4G MILL END MILLS

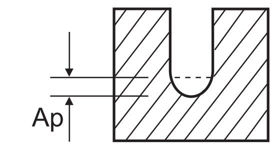
RECOMMENDED CUTTING CONDITIONS

SEM845 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4
			LBS	0.3	0.5	1	0.5	1	1.5	2	1	1.5	2	2.5	3	4	5	1	1.5	2
P	1-8	Non-alloy steel	SFM(Vc)	50	50	45	80	80	70	70	105	105	95	95	95	85	65	115	115	115
			IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004
			RPM	50000	50000	45000	38500	38500	34650	34650	34200	34200	30780	30780	30780	27360	20520	27400	27400	27400
			IPM(FEED)	12	12	10	15	15	12	12	15	15	12	12	12	10	7	21	21	21
			Ap	0.009	0.006	0.002	0.018	0.013	0.007	0.005	0.019	0.019	0.011	0.007	0.007	0.004	0.003	0.036	0.025	0.025
	9	Low alloy steel	SFM(Vc)	50	50	45	75	75	65	65	100	100	90	90	90	80	60	105	105	105
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0003	.0003	.0003
			RPM	46200	46200	41580	36300	36300	32670	32670	32300	32300	29070	29070	29070	25840	19380	25800	25800	25800
			IPM(FEED)	9	9	7	11	11	9	9	11	11	9	9	9	7	5	15	15	15
			Ap	0.007	0.005	0.002	0.014	0.01	0.006	0.004	0.015	0.015	0.008	0.005	0.005	0.003	0.002	0.028	0.02	0.02
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	50	50	45	80	80	70	70	105	105	95	95	95	85	65	115	115	115
			IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004
			RPM	50000	50000	45000	38500	38500	34650	34650	34200	34200	30780	30780	30780	27360	20520	27400	27400	27400
			IPM(FEED)	12	12	10	15	15	12	12	15	15	12	12	12	10	7	21	21	21
			Ap	0.009	0.006	0.002	0.018	0.013	0.007	0.005	0.019	0.019	0.011	0.007	0.007	0.004	0.003	0.036	0.025	0.025
	11.2		SFM(Vc)	50	50	45	75	75	65	65	100	100	90	90	90	80	60	105	105	105
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0003	.0003	.0003
			RPM	46200	46200	41580	36300	36300	32670	32670	32300	32300	29070	29070	29070	25840	19380	25800	25800	25800
			IPM(FEED)	9	9	7	11	11	9	9	11	11	9	9	9	7	5	15	15	15
			Ap	0.007	0.005	0.002	0.014	0.01	0.006	0.004	0.015	0.015	0.008	0.005	0.005	0.003	0.002	0.028	0.02	0.02
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	50	50	45	80	80	70	70	105	105	95	95	95	85	65	115	115	115
			IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004
			RPM	50000	50000	45000	38500	38500	34650	34650	34200	34200	30780	30780	30780	27360	20520	27400	27400	27400
			IPM(FEED)	12	12	10	15	15	12	12	15	15	12	12	12	10	7	21	21	21
			Ap	0.009	0.006	0.002	0.018	0.013	0.007	0.005	0.019	0.019	0.011	0.007	0.007	0.004	0.003	0.036	0.025	0.025
H	38.1-38.2	Hardened steel	SFM(Vc)	40	40	40	65	65	60	60	90	90	80	80	80	70	55	95	95	95
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
			RPM	40600	40600	36540	32100	32100	28890	28890	28500	28500	25650	25650	25650	22800	17100	22800	22800	22800
			IPM(FEED)	7	7	6	8	8	6	6	9	9	7	7	7	6	4	11	11	11
			Ap	0.005	0.004	0.001	0.01	0.007	0.004	0.003	0.011	0.011	0.006	0.004	0.004	0.002	0.002	0.02	0.014	0.014
	40	Chilled Cast Iron	SFM(Vc)	50	50	45	75	75	65	65	100	100	90	90	90	80	60	105	105	105
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0003	.0003	.0003
			RPM	46200	46200	41580	36300	36300	32670	32670	32300	32300	29070	29070	29070	25840	19380	25800	25800	25800
			IPM(FEED)	9	9	7	11	11	9	9	11	11	9	9	9	7	5	15	15	15
			Ap	0.007	0.005	0.002	0.014	0.01	0.006	0.004	0.015	0.015	0.008	0.005	0.005	0.003	0.002	0.028	0.02	0.02
	41	Hardened Cast Iron	SFM(Vc)	40	40	40	65	65	60	60	90	90	80	80	80	70	55	95	95	95
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
			RPM	40600	40600	36540	32100	32100	28890	28890	28500	28500	25650	25650	25650	22800	17100	22800	22800	22800
			IPM(FEED)	7	7	6	8	8	6	6	9	9	7	7	7	6	4	11	11	11
			Ap	0.005	0.004	0.001	0.01	0.007	0.004	0.003	0.011	0.011	0.006	0.004	0.004	0.002	0.002	0.02	0.014	0.014

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

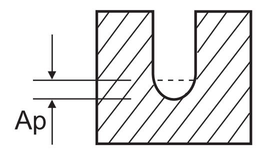
RECOMMENDED CUTTING CONDITIONS

SEM845 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)																
				0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
			LBS	2.5	3	4	5	6	8	10	1	1.5	2	2.5	3	4	5	6	8	10
P	1-8	Non-alloy steel	SFM(Vc)	100	100	100	90	90	70	35	140	140	140	140	125	125	125	115	85	85
			IPT(fz)	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0003	.0003
			RPM	24660	24660	24660	21920	21920	16440	8220	27400	27400	27400	27400	24660	24660	24660	21920	16440	16440
			IPM(FEED)	17	17	17	14	14	9	4	21	21	21	21	17	17	17	14	9	9
			Ap	0.0006	0.0006	0.0004	0.0004	0.0002	0.0002	0.0002	0.0018	0.0018	0.0013	0.0013	0.0007	0.0007	0.0004	0.0004	0.0003	0.0002
	9	Low alloy steel	SFM(Vc)	95	95	95	85	85	65	30	135	135	135	135	120	120	120	105	80	80
			IPT(fz)	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0002
			RPM	23220	23220	23220	20640	20640	15480	7740	25800	25800	25800	25800	23220	23220	23220	20640	15480	15480
			IPM(FEED)	12	12	12	10	10	6	3	17	17	17	17	14	14	14	11	7	7
			Ap	0.0004	0.0004	0.0003	0.0003	0.0002	0.0001	0.0001	0.0014	0.0014	0.0010	0.0010	0.0006	0.0006	0.0004	0.0004	0.0002	0.0002
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	100	100	100	90	90	70	35	140	140	140	140	125	125	125	115	85	85
			IPT(fz)	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0003	.0003
			RPM	24660	24660	24660	21920	21920	16440	8220	27400	27400	27400	27400	24660	24660	24660	21920	16440	16440
			IPM(FEED)	17	17	17	14	14	9	4	21	21	21	21	17	17	17	14	9	9
			Ap	0.0006	0.0006	0.0004	0.0004	0.0002	0.0002	0.0002	0.0018	0.0018	0.0013	0.0013	0.0007	0.0007	0.0004	0.0004	0.0003	0.0002
	11.2		SFM(Vc)	95	95	95	85	85	65	30	135	135	135	135	120	120	120	105	80	80
			IPT(fz)	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0002
			RPM	23220	23220	23220	20640	20640	15480	7740	25800	25800	25800	25800	23220	23220	23220	20640	15480	15480
			IPM(FEED)	12	12	12	10	10	6	3	17	17	17	17	14	14	14	11	7	7
			Ap	0.0004	0.0004	0.0003	0.0003	0.0002	0.0001	0.0001	0.0014	0.0014	0.0010	0.0010	0.0006	0.0006	0.0004	0.0004	0.0002	0.0002
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	100	100	100	90	90	70	35	140	140	140	140	125	125	125	115	85	85
			IPT(fz)	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0003	.0003
			RPM	24660	24660	24660	21920	21920	16440	8220	27400	27400	27400	27400	24660	24660	24660	21920	16440	16440
			IPM(FEED)	17	17	17	14	14	9	4	21	21	21	21	17	17	17	14	9	9
			Ap	0.0006	0.0006	0.0004	0.0004	0.0002	0.0002	0.0002	0.0018	0.0018	0.0013	0.0013	0.0007	0.0007	0.0004	0.0004	0.0003	0.0002
H	38.1-38.2	Hardened steel	SFM(Vc)	85	85	85	75	75	55	30	115	115	115	115	105	105	105	95	70	70
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	20520	20520	20520	18240	18240	13680	6840	22800	22800	22800	22800	20520	20520	20520	18240	13680	13680
			IPM(FEED)	9	9	9	7	7	5	2	11	11	11	11	9	9	9	7	5	5
			Ap	0.0003	0.0003	0.0002	0.0002	0.0001	0.0001	0.0001	0.0010	0.0010	0.0007	0.0007	0.0004	0.0004	0.0002	0.0002	0.0002	0.0001
	40	Chilled Cast Iron	SFM(Vc)	95	95	95	85	85	65	30	135	135	135	135	120	120	120	105	80	80
			IPT(fz)	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0002
			RPM	23220	23220	23220	20640	20640	15480	7740	25800	25800	25800	25800	23220	23220	23220	20640	15480	15480
			IPM(FEED)	12	12	12	10	10	6	3	17	17	17	17	14	14	14	11	7	7
			Ap	0.0004	0.0004	0.0003	0.0003	0.0002	0.0001	0.0001	0.0014	0.0014	0.0010	0.0010	0.0006	0.0006	0.0004	0.0004	0.0002	0.0002
	41	Hardened Cast Iron	SFM(Vc)	85	85	85	75	75	55	30	115	115	115	115	105	105	105	95	70	70
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	20520	20520	20520	18240	18240	13680	6840	22800	22800	22800	22800	20520	20520	20520	18240	13680	13680
			IPM(FEED)	9	9	9	7	7	5	2	11	11	11	11	9	9	9	7	5	5
			Ap	0.0003	0.0003	0.0002	0.0002	0.0001	0.0001	0.0001	0.0010	0.0010	0.0007	0.0007	0.0004	0.0004	0.0002	0.0002	0.0002	0.0001

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
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ALU-POWER END MILLS
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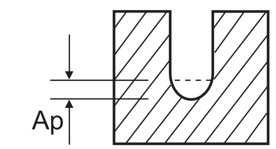
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS
RECOMMENDED CUTTING CONDITIONS
SEM845 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)																			
				0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.8
			LBS	12	14	16	2	3	4	5	6	8	10	12	14	16	2	4	6	8	10	12	2
P	1-8		SFM(Vc)	40	40	15	170	170	150	150	150	135	100	100	50	50	200	180	180	160	160	120	225
			IPT(fz)	.0002	.0002	.0002	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0004	.0003	.0003	.0006	.0005	.0005	.0004	.0004	.0004	.0006
			RPM	8220	8220	2740	27400	27400	24660	24660	24660	21920	16440	16440	8220	8220	27400	24660	24660	21920	21920	16440	27400
			IPM(FEED)	4	4	1	31	31	25	25	25	20	13	13	6	6	31	25	25	20	20	13	31
			Ap	0.005	0.005	0.005	0.038	0.038	0.022	0.014	0.014	0.008	0.005	0.005	0.005	0.005	0.063	0.025	0.016	0.016	0.009	0.006	0.072
	9		SFM(Vc)	40	40	15	160	160	145	145	145	130	95	95	50	50	185	170	170	150	150	110	215
			IPT(fz)	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0003	.0003	.0003	.0005
			RPM	7740	7740	2580	25800	25800	23220	23220	23220	20640	15480	15480	7740	7740	25800	23220	23220	20640	20640	15480	25800
			IPM(FEED)	3	3	1	22	22	17	17	17	14	9	9	4	4	22	17	17	14	14	9	24
			Ap	0.004	0.004	0.004	0.029	0.029	0.017	0.011	0.011	0.006	0.004	0.004	0.004	0.004	0.049	0.02	0.012	0.012	0.007	0.005	0.056
	10-11.1		SFM(Vc)	40	40	15	170	170	150	150	150	135	100	100	50	50	200	180	180	160	160	120	225
			IPT(fz)	.0002	.0002	.0002	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0004	.0003	.0003	.0006	.0005	.0005	.0004	.0004	.0004	.0006
			RPM	8220	8220	2740	27400	27400	24660	24660	24660	21920	16440	16440	8220	8220	27400	24660	24660	21920	21920	16440	27400
			IPM(FEED)	4	4	1	31	31	25	25	25	20	13	13	6	6	31	25	25	20	20	13	31
			Ap	0.005	0.005	0.005	0.038	0.038	0.022	0.014	0.014	0.008	0.005	0.005	0.005	0.005	0.063	0.025	0.016	0.016	0.009	0.006	0.072
	11.2		SFM(Vc)	40	40	15	160	160	145	145	145	130	95	95	50	50	185	170	170	150	150	110	215
			IPT(fz)	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0003	.0003	.0003	.0005
			RPM	7740	7740	2580	25800	25800	23220	23220	23220	20640	15480	15480	7740	7740	25800	23220	23220	20640	20640	15480	25800
			IPM(FEED)	3	3	1	22	22	17	17	17	14	9	9	4	4	22	17	17	14	14	9	24
			Ap	0.004	0.004	0.004	0.029	0.029	0.017	0.011	0.011	0.006	0.004	0.004	0.004	0.004	0.049	0.02	0.012	0.012	0.007	0.005	0.056
K	15-20		SFM(Vc)	40	40	15	170	170	150	150	150	135	100	100	50	50	200	180	180	160	160	120	225
			IPT(fz)	.0002	.0002	.0002	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0004	.0003	.0003	.0006	.0005	.0005	.0004	.0004	.0004	.0006
			RPM	8220	8220	2740	27400	27400	24660	24660	24660	21920	16440	16440	8220	8220	27400	24660	24660	21920	21920	16440	27400
			IPM(FEED)	4	4	1	31	31	25	25	25	20	13	13	6	6	31	25	25	20	20	13	31
			Ap	0.005	0.005	0.005	0.038	0.038	0.022	0.014	0.014	0.008	0.005	0.005	0.005	0.005	0.063	0.025	0.016	0.016	0.009	0.006	0.072
H	38.1-38.2		SFM(Vc)	35	35	10	140	140	125	125	125	115	85	85	40	40	165	150	150	130	130	100	190
			IPT(fz)	.0001	.0001	.0001	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0002	.0004
			RPM	6840	6840	2280	22800	22800	20520	20520	20520	18240	13680	13680	6840	6840	22800	20520	20520	18240	18240	13680	22800
			IPM(FEED)	2	2	1	16	16	13	13	13	10	7	7	3	3	16	13	13	10	10	7	18
			Ap	0.003	0.003	0.003	0.021	0.021	0.012	0.008	0.008	0.005	0.003	0.003	0.003	0.003	0.035	0.014	0.009	0.009	0.005	0.004	0.04
	40		SFM(Vc)	40	40	15	160	160	145	145	145	130	95	95	50	50	185	170	170	150	150	110	215
			IPT(fz)	.0002	.0002	.0002	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0003	.0003	.0003	.0005
			RPM	7740	7740	2580	25800	25800	23220	23220	23220	20640	15480	15480	7740	7740	25800	23220	23220	20640	20640	15480	25800
			IPM(FEED)	3	3	1	22	22	17	17	17	14	9	9	4	4	22	17	17	14	14	9	24
			Ap	0.004	0.004	0.004	0.029	0.029	0.017	0.011	0.011	0.006	0.004	0.004	0.004	0.004	0.049	0.02	0.012	0.012	0.007	0.005	0.056
	41		SFM(Vc)	35	35	10	140	140	125	125	125	115	85	85	40	40	165	150	150	130	130	100	190
			IPT(fz)	.0001	.0001	.0001	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0002	.0004
			RPM	6840	6840	2280	22800	22800	20520	20520	20520	18240	13680	13680	6840	6840	22800	20520	20520	18240	18240	13680	22800
			IPM(FEED)	2	2	1	16	16	13	13	13	10	7	7	3	3	16	13	13	10	10	7	18
			Ap	0.003	0.003	0.003	0.021	0.021	0.012	0.008	0.008	0.005	0.003	0.003	0.003	0.003	0.035	0.014	0.009	0.009	0.005	0.004	0.04

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



YG 4G MILL END MILLS

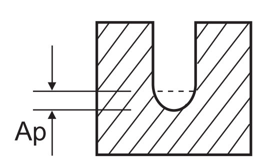
RECOMMENDED CUTTING CONDITIONS

SEM845 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)																
				0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	1	1	1	1
			LBS	3	4	5	6	8	10	12	14	16	20	6	8	10	2	3	4	5
P	1-8	Non-alloy steel	SFM(Vc)	225	225	205	205	205	180	180	135	135	70	205	205	185	255	255	255	255
			IPT(fz)	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0003	.0005	.0005	.0005	.0008	.0008	.0008	.0008
			RPM	27400	27400	24660	24660	24660	21920	21920	16440	16440	8220	22140	22140	19680	24600	24600	24600	24600
			IPM(FEED)	31	31	25	25	25	20	20	13	13	6	23	23	18	41	41	41	41
			Ap	0.05	0.05	0.029	0.029	0.018	0.018	0.011	0.007	0.007	0.007	0.032	0.02	0.02	0.09	0.09	0.063	0.063
	9	Low alloy steel	SFM(Vc)	215	215	190	190	190	170	170	130	130	65	195	195	175	240	240	240	240
			IPT(fz)	.0005	.0005	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0004	.0004	.0004	.0008	.0008	.0008	.0008
			RPM	25800	25800	23220	23220	23220	20640	20640	15480	15480	7740	20970	20970	18640	23300	23300	23300	23300
			IPM(FEED)	24	24	19	19	19	15	15	10	10	4	17	17	14	35	35	35	35
			Ap	0.039	0.039	0.022	0.022	0.014	0.014	0.008	0.006	0.006	0.006	0.025	0.016	0.016	0.07	0.07	0.049	0.049
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	225	225	205	205	205	180	180	135	135	70	205	205	185	255	255	255	255
			IPT(fz)	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0003	.0005	.0005	.0005	.0008	.0008	.0008	.0008
			RPM	27400	27400	24660	24660	24660	21920	21920	16440	16440	8220	22140	22140	19680	24600	24600	24600	24600
			IPM(FEED)	31	31	25	25	25	20	20	13	13	6	23	23	18	41	41	41	41
			Ap	0.05	0.05	0.029	0.029	0.018	0.018	0.011	0.007	0.007	0.007	0.032	0.02	0.02	0.09	0.09	0.063	0.063
	11.2		SFM(Vc)	215	215	190	190	190	170	170	130	130	65	195	195	175	240	240	240	240
			IPT(fz)	.0005	.0005	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0004	.0004	.0004	.0008	.0008	.0008	.0008
			RPM	25800	25800	23220	23220	23220	20640	20640	15480	15480	7740	20970	20970	18640	23300	23300	23300	23300
			IPM(FEED)	24	24	19	19	19	15	15	10	10	4	17	17	14	35	35	35	35
			Ap	0.039	0.039	0.022	0.022	0.014	0.014	0.008	0.006	0.006	0.006	0.025	0.016	0.016	0.07	0.07	0.049	0.049
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	225	225	205	205	205	180	180	135	135	70	205	205	185	255	255	255	255
			IPT(fz)	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0003	.0005	.0005	.0005	.0008	.0008	.0008	.0008
			RPM	27400	27400	24660	24660	24660	21920	21920	16440	16440	8220	22140	22140	19680	24600	24600	24600	24600
			IPM(FEED)	31	31	25	25	25	20	20	13	13	6	23	23	18	41	41	41	41
			Ap	0.05	0.05	0.029	0.029	0.018	0.018	0.011	0.007	0.007	0.007	0.032	0.02	0.02	0.09	0.09	0.063	0.063
H	38.1-38.2	Hardened steel	SFM(Vc)	190	190	170	170	170	150	150	115	115	55	170	170	150	210	210	210	210
			IPT(fz)	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0002	.0004	.0004	.0003	.0006	.0006	.0006	.0006
			RPM	22800	22800	20520	20520	20520	18240	18240	13680	13680	6840	18450	18450	16400	20500	20500	20500	20500
			IPM(FEED)	18	18	14	14	14	11	11	8	8	3	13	13	10	26	26	26	26
			Ap	0.028	0.028	0.016	0.016	0.01	0.01	0.006	0.004	0.004	0.004	0.018	0.011	0.011	0.05	0.05	0.035	0.035
	40	Chilled Cast Iron	SFM(Vc)	215	215	190	190	190	170	170	130	130	65	195	195	175	240	240	240	240
			IPT(fz)	.0005	.0005	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0004	.0004	.0004	.0008	.0008	.0008	.0008
			RPM	25800	25800	23220	23220	23220	20640	20640	15480	15480	7740	20970	20970	18640	23300	23300	23300	23300
			IPM(FEED)	24	24	19	19	19	15	15	10	10	4	17	17	14	35	35	35	35
			Ap	0.039	0.039	0.022	0.022	0.014	0.014	0.008	0.006	0.006	0.006	0.025	0.016	0.016	0.07	0.07	0.049	0.049
	41	Hardened Cast Iron	SFM(Vc)	190	190	170	170	170	150	150	115	115	55	170	170	150	210	210	210	210
			IPT(fz)	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0003	.0002	.0004	.0004	.0003	.0006	.0006	.0006	.0006
			RPM	22800	22800	20520	20520	20520	18240	18240	13680	13680	6840	18450	18450	16400	20500	20500	20500	20500
			IPM(FEED)	18	18	14	14	14	11	11	8	8	3	13	13	10	26	26	26	26
			Ap	0.028	0.028	0.016	0.016	0.01	0.01	0.006	0.004	0.004	0.004	0.018	0.011	0.011	0.05	0.05	0.035	0.035

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



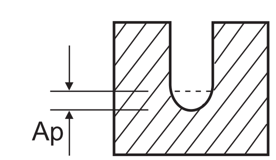
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS
RECOMMENDED CUTTING CONDITIONS
SEM845 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø)																			
			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.2	1.2	1.2	1.2	1.2
		LBS	6	7	8	10	12	14	16	18	20	22	26	30	40	50	4	6	8	10	12	14
P	1-8	SFM(Vc)	230	230	230	230	205	205	150	150	150	75	75	75	25	25	270	270	245	245	245	215
		IPT(fz)	.0008	.0008	.0008	.0008	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0008	.0008	.0008	.0008	.0008	.0007
		RPM	22140	22140	22140	22140	19680	19680	14760	14760	14760	7380	7380	7380	2460	2460	21900	21900	19710	19710	19710	17520
		IPM(FEED)	33	33	33	33	26	26	17	17	17	8	8	8	2	2	37	37	30	30	30	23
		Ap	0.036	0.036	0.036	0.023	0.023	0.014	0.014	0.009	0.009	0.009	0.009	0.009	0.009	0.006	0.076	0.076	0.043	0.027	0.027	0.027
	9	SFM(Vc)	215	215	215	215	190	190	145	145	145	70	70	70	25	25	255	255	230	230	230	205
		IPT(fz)	.0007	.0007	.0007	.0007	.0006	.0006	.0005	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0007	.0007	.0006	.0006	.0006	.0005
		RPM	20970	20970	20970	20970	18640	18640	13980	13980	13980	6990	6990	6990	2330	2330	20700	20700	18630	18630	18630	16560
		IPM(FEED)	28	28	28	28	22	22	15	15	15	6	6	6	2	2	28	28	23	23	23	18
		Ap	0.028	0.028	0.028	0.018	0.018	0.011	0.011	0.007	0.007	0.007	0.007	0.007	0.007	0.005	0.059	0.059	0.034	0.021	0.021	0.021
	10-11.1	SFM(Vc)	230	230	230	230	205	205	150	150	150	75	75	75	25	25	270	270	245	245	245	215
		IPT(fz)	.0008	.0008	.0008	.0008	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0008	.0008	.0008	.0008	.0008	.0007
		RPM	22140	22140	22140	22140	19680	19680	14760	14760	14760	7380	7380	7380	2460	2460	21900	21900	19710	19710	19710	17520
		IPM(FEED)	33	33	33	33	26	26	17	17	17	8	8	8	2	2	37	37	30	30	30	23
		Ap	0.036	0.036	0.036	0.023	0.023	0.014	0.014	0.009	0.009	0.009	0.009	0.009	0.009	0.006	0.076	0.076	0.043	0.027	0.027	0.027
	11.2	SFM(Vc)	215	215	215	215	190	190	145	145	145	70	70	70	25	25	255	255	230	230	230	205
		IPT(fz)	.0007	.0007	.0007	.0007	.0006	.0006	.0005	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0007	.0007	.0006	.0006	.0006	.0005
		RPM	20970	20970	20970	20970	18640	18640	13980	13980	13980	6990	6990	6990	2330	2330	20700	20700	18630	18630	18630	16560
		IPM(FEED)	28	28	28	28	22	22	15	15	15	6	6	6	2	2	28	28	23	23	23	18
		Ap	0.028	0.028	0.028	0.018	0.018	0.011	0.011	0.007	0.007	0.007	0.007	0.007	0.007	0.005	0.059	0.059	0.034	0.021	0.021	0.021
K	15-20	SFM(Vc)	230	230	230	230	205	205	150	150	150	75	75	75	25	25	270	270	245	245	245	215
		IPT(fz)	.0008	.0008	.0008	.0008	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0005	.0004	.0004	.0008	.0008	.0008	.0008	.0008	.0007
		RPM	22140	22140	22140	22140	19680	19680	14760	14760	14760	7380	7380	7380	2460	2460	21900	21900	19710	19710	19710	17520
		IPM(FEED)	33	33	33	33	26	26	17	17	17	8	8	8	2	2	37	37	30	30	30	23
		Ap	0.036	0.036	0.036	0.023	0.023	0.014	0.014	0.009	0.009	0.009	0.009	0.009	0.009	0.006	0.076	0.076	0.043	0.027	0.027	0.027
H	38.1-38.2	SFM(Vc)	190	190	190	190	170	170	125	125	125	65	65	65	20	20	225	225	205	205	205	180
		IPT(fz)	.0006	.0006	.0006	.0006	.0005	.0005	.0004	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0005	.0005	.0005	.0005	.0005	.0004
		RPM	18450	18450	18450	18450	16400	16400	12300	12300	12300	6150	6150	6150	2050	2050	18200	18200	16380	16380	16380	14560
		IPM(FEED)	21	21	21	21	17	17	11	11	11	5	5	5	1	1	19	19	16	16	16	12
		Ap	0.02	0.02	0.02	0.013	0.013	0.008	0.008	0.005	0.005	0.005	0.005	0.005	0.005	0.003	0.042	0.042	0.024	0.015	0.015	0.015
	40	SFM(Vc)	215	215	215	215	190	190	145	145	145	70	70	70	25	25	255	255	230	230	230	205
		IPT(fz)	.0007	.0007	.0007	.0007	.0006	.0006	.0005	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0007	.0007	.0006	.0006	.0006	.0005
		RPM	20970	20970	20970	20970	18640	18640	13980	13980	13980	6990	6990	6990	2330	2330	20700	20700	18630	18630	18630	16560
		IPM(FEED)	28	28	28	28	22	22	15	15	15	6	6	6	2	2	28	28	23	23	23	18
		Ap	0.028	0.028	0.028	0.018	0.018	0.011	0.011	0.007	0.007	0.007	0.007	0.007	0.007	0.005	0.059	0.059	0.034	0.021	0.021	0.021
	41	SFM(Vc)	190	190	190	190	170	170	125	125	125	65	65	65	20	20	225	225	205	205	205	180
		IPT(fz)	.0006	.0006	.0006	.0006	.0005	.0005	.0004	.0004	.0004	.0004	.0004	.0004	.0003	.0003	.0005	.0005	.0005	.0005	.0005	.0004
		RPM	18450	18450	18450	18450	16400	16400	12300	12300	12300	6150	6150	6150	2050	2050	18200	18200	16380	16380	16380	14560
		IPM(FEED)	21	21	21	21	17	17	11	11	11	5	5	5	1	1	19	19	16	16	16	12
		Ap	0.02	0.02	0.02	0.013	0.013	0.008	0.008	0.005	0.005	0.005	0.005	0.005	0.005	0.003	0.042	0.042	0.024	0.015	0.015	0.015

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)

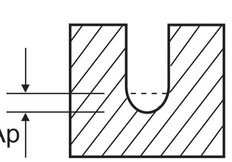


SEM845 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)																
				1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5
			LBS	16	20	26	30	6	8	10	14	16	20	4	5	6	7	8	10	12
P	1-8	Non-alloy steel	SFM(Vc)	215	165	80	80	275	250	250	250	220	220	295	295	295	295	265	265	265
			IPT(fz)	.0007	.0006	.0005	.0005	.0008	.0008	.0008	.0008	.0007	.0007	.0009	.0009	.0009	.0009	.0008	.0008	.0008
			RPM	17520	13140	6570	6570	19200	17280	17280	17280	15360	15360	19200	19200	19200	19200	17280	17280	17280
			IPM(FEED)	23	15	7	7	32	26	26	26	21	21	36	36	36	36	29	29	29
			Ap	0.016	0.011	0.011	0.011	0.088	0.05	0.05	0.032	0.032	0.019	0.135	0.095	0.095	0.095	0.054	0.054	0.054
	9	Low alloy steel	SFM(Vc)	205	155	75	75	260	235	235	235	210	210	280	280	280	280	250	250	250
			IPT(fz)	.0005	.0005	.0004	.0004	.0006	.0006	.0006	.0006	.0005	.0005	.0007	.0007	.0007	.0007	.0006	.0006	.0006
			RPM	16560	12420	6210	6210	18100	16290	16290	16290	14480	14480	18100	18100	18100	18100	16290	16290	16290
			IPM(FEED)	18	12	5	5	22	18	18	18	14	14	25	25	25	25	20	20	20
			Ap	0.013	0.008	0.008	0.008	0.069	0.039	0.039	0.025	0.025	0.015	0.105	0.074	0.074	0.074	0.042	0.042	0.042
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	215	165	80	80	275	250	250	250	220	220	295	295	295	295	265	265	265
			IPT(fz)	.0007	.0006	.0005	.0005	.0008	.0008	.0008	.0008	.0007	.0007	.0009	.0009	.0009	.0009	.0008	.0008	.0008
			RPM	17520	13140	6570	6570	19200	17280	17280	17280	15360	15360	19200	19200	19200	19200	17280	17280	17280
			IPM(FEED)	23	15	7	7	32	26	26	26	21	21	36	36	36	36	29	29	29
			Ap	0.016	0.011	0.011	0.011	0.088	0.05	0.05	0.032	0.032	0.019	0.135	0.095	0.095	0.095	0.054	0.054	0.054
	11.2		SFM(Vc)	205	155	75	75	260	235	235	235	210	210	280	280	280	280	250	250	250
			IPT(fz)	.0005	.0005	.0004	.0004	.0006	.0006	.0006	.0006	.0005	.0005	.0007	.0007	.0007	.0007	.0006	.0006	.0006
			RPM	16560	12420	6210	6210	18100	16290	16290	16290	14480	14480	18100	18100	18100	18100	16290	16290	16290
			IPM(FEED)	18	12	5	5	22	18	18	18	14	14	25	25	25	25	20	20	20
			Ap	0.013	0.008	0.008	0.008	0.069	0.039	0.039	0.025	0.025	0.015	0.105	0.074	0.074	0.074	0.042	0.042	0.042
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	215	165	80	80	275	250	250	250	220	220	295	295	295	295	265	265	265
			IPT(fz)	.0007	.0006	.0005	.0005	.0008	.0008	.0008	.0008	.0007	.0007	.0009	.0009	.0009	.0009	.0008	.0008	.0008
			RPM	17520	13140	6570	6570	19200	17280	17280	17280	15360	15360	19200	19200	19200	19200	17280	17280	17280
			IPM(FEED)	23	15	7	7	32	26	26	26	21	21	36	36	36	36	29	29	29
			Ap	0.016	0.011	0.011	0.011	0.088	0.05	0.05	0.032	0.032	0.019	0.135	0.095	0.095	0.095	0.054	0.054	0.054
H	38.1-38.2	Hardened steel	SFM(Vc)	180	135	70	70	230	210	210	210	185	185	245	245	245	245	225	225	225
			IPT(fz)	.0004	.0004	.0003	.0003	.0005	.0005	.0005	.0005	.0004	.0004	.0006	.0006	.0006	.0006	.0005	.0005	.0005
			RPM	14560	10920	5460	5460	16000	14400	14400	14400	12800	12800	16000	16000	16000	16000	14400	14400	14400
			IPM(FEED)	12	8	3	3	17	14	14	14	11	11	19	19	19	19	15	15	15
			Ap	0.009	0.006	0.006	0.006	0.049	0.028	0.028	0.018	0.018	0.011	0.075	0.053	0.053	0.053	0.03	0.03	0.03
	40	Chilled Cast Iron	SFM(Vc)	205	155	75	75	260	235	235	235	210	210	280	280	280	280	250	250	250
			IPT(fz)	.0005	.0005	.0004	.0004	.0006	.0006	.0006	.0006	.0005	.0005	.0007	.0007	.0007	.0007	.0006	.0006	.0006
			RPM	16560	12420	6210	6210	18100	16290	16290	16290	14480	14480	18100	18100	18100	18100	16290	16290	16290
			IPM(FEED)	18	12	5	5	22	18	18	18	14	14	25	25	25	25	20	20	20
			Ap	0.013	0.008	0.008	0.008	0.069	0.039	0.039	0.025	0.025	0.015	0.105	0.074	0.074	0.074	0.042	0.042	0.042
	41	Hardened Cast Iron	SFM(Vc)	180	135	70	70	230	210	210	210	185	185	245	245	245	245	225	225	225
			IPT(fz)	.0004	.0004	.0003	.0003	.0005	.0005	.0005	.0005	.0004	.0004	.0006	.0006	.0006	.0006	.0005	.0005	.0005
			RPM	14560	10920	5460	5460	16000	14400	14400	14400	12800	12800	16000	16000	16000	16000	14400	14400	14400
			IPM(FEED)	12	8	3	3	17	14	14	14	11	11	19	19	19	19	15	15	15
			Ap	0.009	0.006	0.006	0.006	0.049	0.028	0.028	0.018	0.018	0.011	0.075	0.053	0.053	0.053	0.03	0.03	0.03

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)

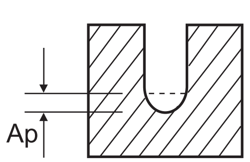
Ap


SEM845 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø)																			
			1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.8	1.8	1.8	1.8	1.8	2	2	2
		LBS	14	16	18	20	22	26	30	8	10	12	16	20	8	10	12	16	20	6	8	10
P	1-8	SFM(Vc)	265	235	235	235	235	180	180	295	265	265	265	235	330	295	295	295	265	295	295	295
		IPT(fz)	.0008	.0007	.0007	.0007	.0007	.0007	.0007	.0009	.0008	.0008	.0008	.0007	.0009	.0008	.0008	.0008	.0007	.0011	.0011	.0011
		RPM	17280	15360	15360	15360	15360	11520	11520	17800	16020	16020	16020	14240	17800	16020	16020	16020	14240	14400	14400	14400
		IPM(FEED)	29	23	23	23	23	15	15	33	27	27	27	21	33	27	27	27	21	32	32	32
		Ap	0.034	0.034	0.034	0.02	0.02	0.014	0.014	0.101	0.058	0.058	0.036	0.036	0.113	0.065	0.065	0.041	0.041	0.18	0.126	0.126
	9	SFM(Vc)	250	225	225	225	225	170	170	275	250	250	250	220	310	280	280	280	250	280	280	280
		IPT(fz)	.0006	.0005	.0005	.0005	.0005	.0005	.0005	.0008	.0007	.0007	.0007	.0006	.0008	.0007	.0007	.0007	.0006	.0009	.0009	.0009
		RPM	16290	14480	14480	14480	14480	10860	10860	16800	15120	15120	15120	13440	16800	15120	15120	15120	13440	13600	13600	13600
		IPM(FEED)	20	16	16	16	16	10	10	26	21	21	21	17	26	21	21	21	17	24	24	24
		Ap	0.026	0.026	0.026	0.016	0.016	0.011	0.011	0.078	0.045	0.045	0.028	0.028	0.088	0.05	0.05	0.032	0.032	0.14	0.098	0.098
	10-11.1	SFM(Vc)	265	235	235	235	235	180	180	295	265	265	265	235	330	295	295	295	265	295	295	295
		IPT(fz)	.0008	.0007	.0007	.0007	.0007	.0007	.0007	.0009	.0008	.0008	.0008	.0007	.0009	.0008	.0008	.0008	.0007	.0011	.0011	.0011
		RPM	17280	15360	15360	15360	15360	11520	11520	17800	16020	16020	16020	14240	17800	16020	16020	16020	14240	14400	14400	14400
		IPM(FEED)	29	23	23	23	23	15	15	33	27	27	27	21	33	27	27	27	21	32	32	32
		Ap	0.034	0.034	0.034	0.02	0.02	0.014	0.014	0.101	0.058	0.058	0.036	0.036	0.113	0.065	0.065	0.041	0.041	0.18	0.126	0.126
	11.2	SFM(Vc)	250	225	225	225	225	170	170	275	250	250	250	220	310	280	280	280	250	280	280	280
		IPT(fz)	.0006	.0005	.0005	.0005	.0005	.0005	.0005	.0008	.0007	.0007	.0007	.0006	.0008	.0007	.0007	.0007	.0006	.0009	.0009	.0009
		RPM	16290	14480	14480	14480	14480	10860	10860	16800	15120	15120	15120	13440	16800	15120	15120	15120	13440	13600	13600	13600
		IPM(FEED)	20	16	16	16	16	10	10	26	21	21	21	17	26	21	21	21	17	24	24	24
		Ap	0.026	0.026	0.026	0.016	0.016	0.011	0.011	0.078	0.045	0.045	0.028	0.028	0.088	0.05	0.05	0.032	0.032	0.14	0.098	0.098
K	15-20	SFM(Vc)	265	235	235	235	235	180	180	295	265	265	265	235	330	295	295	295	265	295	295	295
		IPT(fz)	.0008	.0007	.0007	.0007	.0007	.0007	.0007	.0009	.0008	.0008	.0008	.0007	.0009	.0008	.0008	.0008	.0007	.0011	.0011	.0011
		RPM	17280	15360	15360	15360	15360	11520	11520	17800	16020	16020	16020	14240	17800	16020	16020	16020	14240	14400	14400	14400
		IPM(FEED)	29	23	23	23	23	15	15	33	27	27	27	21	33	27	27	27	21	32	32	32
		Ap	0.034	0.034	0.034	0.02	0.02	0.014	0.014	0.101	0.058	0.058	0.036	0.036	0.113	0.065	0.065	0.041	0.041	0.18	0.126	0.126
H	38.1-38.2	SFM(Vc)	225	200	200	200	200	150	150	245	220	220	220	195	275	245	245	245	220	245	245	245
		IPT(fz)	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0007	.0006	.0006	.0006	.0005	.0007	.0006	.0006	.0006	.0005	.0008	.0008	.0008
		RPM	14400	12800	12800	12800	12800	9600	9600	14800	13320	13320	13320	11840	14800	13320	13320	13320	11840	12000	12000	12000
		IPM(FEED)	15	12	12	12	12	8	8	19	16	16	16	12	19	16	16	16	12	19	19	19
		Ap	0.019	0.019	0.019	0.011	0.011	0.008	0.008	0.056	0.032	0.032	0.02	0.02	0.063	0.036	0.036	0.023	0.023	0.1	0.07	0.07
	40	SFM(Vc)	250	225	225	225	225	170	170	275	250	250	250	220	310	280	280	280	250	280	280	280
		IPT(fz)	.0006	.0005	.0005	.0005	.0005	.0005	.0005	.0008	.0007	.0007	.0007	.0006	.0008	.0007	.0007	.0007	.0006	.0009	.0009	.0009
		RPM	16290	14480	14480	14480	14480	10860	10860	16800	15120	15120	15120	13440	16800	15120	15120	15120	13440	13600	13600	13600
		IPM(FEED)	20	16	16	16	16	10	10	26	21	21	21	17	26	21	21	21	17	24	24	24
		Ap	0.026	0.026	0.026	0.016	0.016	0.011	0.011	0.078	0.045	0.045	0.028	0.028	0.088	0.05	0.05	0.032	0.032	0.14	0.098	0.098
	41	SFM(Vc)	225	200	200	200	200	150	150	245	220	220	220	195	275	245	245	245	220	245	245	245
		IPT(fz)	.0005	.0005	.0005	.0005	.0005	.0004	.0004	.0007	.0006	.0006	.0006	.0005	.0007	.0006	.0006	.0006	.0005	.0008	.0008	.0008
		RPM	14400	12800	12800	12800	12800	9600	9600	14800	13320	13320	13320	11840	14800	13320	13320	13320	11840	12000	12000	12000
		IPM(FEED)	15	12	12	12	12	8	8	19	16	16	16	12	19	16	16	16	12	19	19	19
		Ap	0.019	0.019	0.019	0.011	0.011	0.008	0.008	0.056	0.032	0.032	0.02	0.02	0.063	0.036	0.036	0.023	0.023	0.1	0.07	0.07

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)

Ap


CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

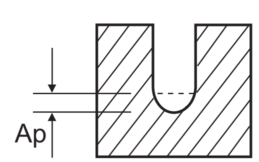
RECOMMENDED CUTTING CONDITIONS

SEM845 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 2	2	2	2	2	2	2	2	2	2	2	2	2	2.5	2.5	2.5	2.5
			LBS	12	14	16	18	20	22	26	30	35	40	45	50	60	8	10	12	14
P	1-8	Non-alloy steel	SFM(Vc)	265	265	265	265	265	235	235	235	180	180	90	90	90	315	315	315	285
			IPT(fz)	.0010	.0010	.0010	.0010	.0010	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0007	.0016	.0016	.0016	.0014
			RPM	12960	12960	12960	12960	12960	11520	11520	11520	8640	8640	4320	4320	4320	12300	12300	12300	11070
			IPM(FEED)	26	26	26	26	26	21	21	21	14	14	6	6	6	38	38	38	31
			Ap	0.072	0.072	0.072	0.045	0.045	0.045	0.045	0.027	0.018	0.018	0.018	0.018	0.018	0.158	0.158	0.158	0.09
	9	Low alloy steel	SFM(Vc)	250	250	250	250	250	225	225	225	170	170	85	85	85	300	300	300	270
			IPT(fz)	.0008	.0008	.0008	.0008	.0008	.0007	.0007	.0007	.0006	.0006	.0005	.0005	.0005	.0012	.0012	.0012	.0010
			RPM	12240	12240	12240	12240	12240	10880	10880	10880	8160	8160	4080	4080	4080	11600	11600	11600	10440
			IPM(FEED)	20	20	20	20	20	16	16	16	10	10	4	4	4	27	27	27	22
			Ap	0.056	0.056	0.056	0.035	0.035	0.035	0.035	0.021	0.014	0.014	0.014	0.014	0.014	0.123	0.123	0.123	0.07
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	265	265	265	265	265	235	235	235	180	180	90	90	90	315	315	315	285
			IPT(fz)	.0010	.0010	.0010	.0010	.0010	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0007	.0016	.0016	.0016	.0014
			RPM	12960	12960	12960	12960	12960	11520	11520	11520	8640	8640	4320	4320	4320	12300	12300	12300	11070
			IPM(FEED)	26	26	26	26	26	21	21	21	14	14	6	6	6	38	38	38	31
			Ap	0.072	0.072	0.072	0.045	0.045	0.045	0.045	0.027	0.018	0.018	0.018	0.018	0.018	0.158	0.158	0.158	0.09
	11.2		SFM(Vc)	250	250	250	250	250	225	225	225	170	170	85	85	85	300	300	300	270
			IPT(fz)	.0008	.0008	.0008	.0008	.0008	.0007	.0007	.0007	.0006	.0006	.0005	.0005	.0005	.0012	.0012	.0012	.0010
			RPM	12240	12240	12240	12240	12240	10880	10880	10880	8160	8160	4080	4080	4080	11600	11600	11600	10440
			IPM(FEED)	20	20	20	20	20	16	16	16	10	10	4	4	4	27	27	27	22
			Ap	0.056	0.056	0.056	0.035	0.035	0.035	0.035	0.021	0.014	0.014	0.014	0.014	0.014	0.123	0.123	0.123	0.07
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	265	265	265	265	265	235	235	235	180	180	90	90	90	315	315	315	285
			IPT(fz)	.0010	.0010	.0010	.0010	.0010	.0009	.0009	.0009	.0008	.0008	.0007	.0007	.0007	.0016	.0016	.0016	.0014
			RPM	12960	12960	12960	12960	12960	11520	11520	11520	8640	8640	4320	4320	4320	12300	12300	12300	11070
			IPM(FEED)	26	26	26	26	26	21	21	21	14	14	6	6	6	38	38	38	31
			Ap	0.072	0.072	0.072	0.045	0.045	0.045	0.045	0.027	0.018	0.018	0.018	0.018	0.018	0.158	0.158	0.158	0.09
H	38.1-38.2	Hardened steel	SFM(Vc)	225	225	225	225	225	200	200	200	150	150	75	75	75	265	265	265	240
			IPT(fz)	.0007	.0007	.0007	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0005	.0010	.0010	.0010	.0009
			RPM	10800	10800	10800	10800	10800	9600	9600	9600	7200	7200	3600	3600	3600	10300	10300	10300	9270
			IPM(FEED)	15	15	15	15	15	12	12	12	8	8	3	3	3	20	20	20	16
			Ap	0.04	0.04	0.04	0.025	0.025	0.025	0.025	0.015	0.01	0.01	0.01	0.01	0.01	0.088	0.088	0.088	0.05
	40	Chilled Cast Iron	SFM(Vc)	250	250	250	250	250	225	225	225	170	170	85	85	85	300	300	300	270
			IPT(fz)	.0008	.0008	.0008	.0008	.0008	.0007	.0007	.0007	.0006	.0006	.0005	.0005	.0005	.0012	.0012	.0012	.0010
			RPM	12240	12240	12240	12240	12240	10880	10880	10880	8160	8160	4080	4080	4080	11600	11600	11600	10440
			IPM(FEED)	20	20	20	20	20	16	16	16	10	10	4	4	4	27	27	27	22
			Ap	0.056	0.056	0.056	0.035	0.035	0.035	0.035	0.021	0.014	0.014	0.014	0.014	0.014	0.123	0.123	0.123	0.07
	41	Hardened Cast Iron	SFM(Vc)	225	225	225	225	225	200	200	200	150	150	75	75	75	265	265	265	240
			IPT(fz)	.0007	.0007	.0007	.0007	.0007	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0005	.0010	.0010	.0010	.0009
			RPM	10800	10800	10800	10800	10800	9600	9600	9600	7200	7200	3600	3600	3600	10300	10300	10300	9270
			IPM(FEED)	15	15	15	15	15	12	12	12	8	8	3	3	3	20	20	20	16
			Ap	0.04	0.04	0.04	0.025	0.025	0.025	0.025	0.015	0.01	0.01	0.01	0.01	0.01	0.088	0.088	0.088	0.05

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



YG 4G MILL END MILLS

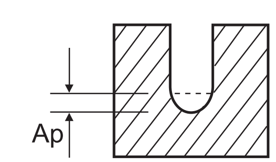
RECOMMENDED CUTTING CONDITIONS

SEM845 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø) 2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3	3	3	3	3	3	3	3	3	3
		LBS	16	18	20	22	26	30	35	40	45	50	6	8	10	12	14	16	18	20	22	26
P	1-8	SFM(Vc)	285	285	285	285	255	255	255	190	190	190	335	335	335	335	335	305	305	305	305	305
		IPT(fz)	.0014	.0014	.0014	.0014	.0012	.0012	.0012	.0011	.0011	.0011	.0016	.0016	.0016	.0016	.0016	.0014	.0014	.0014	.0014	.0014
		RPM	11070	11070	11070	11070	9840	9840	9840	7380	7380	7380	10900	10900	10900	10900	10900	9810	9810	9810	9810	9810
		IPM(FEED)	31	31	31	31	24	24	24	16	16	16	34	34	34	34	34	27	27	27	27	27
		Ap	0.09	0.09	0.09	0.056	0.056	0.056	0.034	0.034	0.023	0.023	0.27	0.27	0.189	0.189	0.189	0.108	0.108	0.108	0.108	0.068
	9	SFM(Vc)	270	270	270	270	240	240	240	180	180	180	320	320	320	320	320	285	285	285	285	285
		IPT(fz)	.0010	.0010	.0010	.0010	.0009	.0009	.0009	.0008	.0008	.0008	.0012	.0012	.0012	.0012	.0012	.0010	.0010	.0010	.0010	.0010
		RPM	10440	10440	10440	10440	9280	9280	9280	6960	6960	6960	10300	10300	10300	10300	10300	9270	9270	9270	9270	9270
		IPM(FEED)	22	22	22	22	17	17	17	11	11	11	24	24	24	24	24	19	19	19	19	19
		Ap	0.07	0.07	0.07	0.044	0.044	0.044	0.026	0.026	0.018	0.018	0.21	0.21	0.147	0.147	0.147	0.084	0.084	0.084	0.084	0.053
	10-11.1	SFM(Vc)	285	285	285	285	255	255	255	190	190	190	335	335	335	335	335	305	305	305	305	305
		IPT(fz)	.0014	.0014	.0014	.0014	.0012	.0012	.0012	.0011	.0011	.0011	.0016	.0016	.0016	.0016	.0016	.0014	.0014	.0014	.0014	.0014
		RPM	11070	11070	11070	11070	9840	9840	9840	7380	7380	7380	10900	10900	10900	10900	10900	9810	9810	9810	9810	9810
		IPM(FEED)	31	31	31	31	24	24	24	16	16	16	34	34	34	34	34	27	27	27	27	27
		Ap	0.09	0.09	0.09	0.056	0.056	0.056	0.034	0.034	0.023	0.023	0.27	0.27	0.189	0.189	0.189	0.108	0.108	0.108	0.108	0.068
	11.2	SFM(Vc)	270	270	270	270	240	240	240	180	180	180	320	320	320	320	320	285	285	285	285	285
		IPT(fz)	.0010	.0010	.0010	.0010	.0009	.0009	.0009	.0008	.0008	.0008	.0012	.0012	.0012	.0012	.0012	.0010	.0010	.0010	.0010	.0010
		RPM	10440	10440	10440	10440	9280	9280	9280	6960	6960	6960	10300	10300	10300	10300	10300	9270	9270	9270	9270	9270
		IPM(FEED)	22	22	22	22	17	17	17	11	11	11	24	24	24	24	24	19	19	19	19	19
		Ap	0.07	0.07	0.07	0.044	0.044	0.044	0.026	0.026	0.018	0.018	0.21	0.21	0.147	0.147	0.147	0.084	0.084	0.084	0.084	0.053
K	15-20	SFM(Vc)	285	285	285	285	255	255	255	190	190	190	335	335	335	335	335	305	305	305	305	305
		IPT(fz)	.0014	.0014	.0014	.0014	.0012	.0012	.0012	.0011	.0011	.0011	.0016	.0016	.0016	.0016	.0016	.0014	.0014	.0014	.0014	.0014
		RPM	11070	11070	11070	11070	9840	9840	9840	7380	7380	7380	10900	10900	10900	10900	10900	9810	9810	9810	9810	9810
		IPM(FEED)	31	31	31	31	24	24	24	16	16	16	34	34	34	34	34	27	27	27	27	27
		Ap	.0035	.0035	.0035	.0022	.0022	.0022	.0013	.0013	.0009	.0009	.0106	.0106	.0074	.0074	.0074	.0043	.0043	.0043	.0043	.0027
H	38.1-38.2	SFM(Vc)	240	240	240	240	210	210	210	160	160	160	205	205	205	205	205	185	185	185	185	185
		IPT(fz)	.0009	.0009	.0009	.0009	.0008	.0008	.0008	.0007	.0007	.0007	.0013	.0013	.0013	.0013	.0013	.0012	.0012	.0012	.0012	.0012
		RPM	9270	9270	9270	9270	8240	8240	8240	6180	6180	6180	6600	6600	6600	6600	6600	5940	5940	5940	5940	5940
		IPM(FEED)	16	16	16	16	13	13	13	9	9	9	18	18	18	18	18	14	14	14	14	14
		Ap	0.05	0.05	0.05	0.031	0.031	0.031	0.019	0.019	0.013	0.013	0.15	0.15	0.105	0.105	0.105	0.06	0.06	0.06	0.06	0.038
	40	SFM(Vc)	270	270	270	270	240	240	240	180	180	180	320	320	320	320	320	285	285	285	285	285
		IPT(fz)	.0010	.0010	.0010	.0010	.0009	.0009	.0009	.0008	.0008	.0008	.0012	.0012	.0012	.0012	.0012	.0010	.0010	.0010	.0010	.0010
		RPM	10440	10440	10440	10440	9280	9280	9280	6960	6960	6960	10300	10300	10300	10300	10300	9270	9270	9270	9270	9270
		IPM(FEED)	22	22	22	22	17	17	17	11	11	11	24	24	24	24	24	19	19	19	19	19
		Ap	0.07	0.07	0.07	0.044	0.044	0.044	0.026	0.026	0.018	0.018	0.21	0.21	0.147	0.147	0.147	0.084	0.084	0.084	0.084	0.053
	41	SFM(Vc)	240	240	240	240	210	210	210	160	160	160	205	205	205	205	205	185	185	185	185	185
		IPT(fz)	.0009	.0009	.0009	.0009	.0008	.0008	.0008	.0007	.0007	.0007	.0013	.0013	.0013	.0013	.0013	.0012	.0012	.0012	.0012	.0012
		RPM	9270	9270	9270	9270	8240	8240	8240	6180	6180	6180	6600	6600	6600	6600	6600	5940	5940	5940	5940	5940
		IPM(FEED)	16	16	16	16	13	13	13	9	9	9	18	18	18	18	18	14	14	14	14	14
		Ap	0.05	0.05	0.05	0.031	0.031	0.031	0.019	0.019	0.013	0.013	0.15	0.15	0.105	0.105	0.105	0.06	0.06	0.06	0.06	0.038

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



YG 4G MILL END MILLS

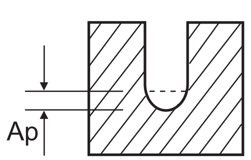
RECOMMENDED CUTTING CONDITIONS

SEM845 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)																
				3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4
			LBS	30	35	40	45	50	60	8	10	12	14	16	18	20	22	26	30	35
P	1-8	Non-alloy steel	SFM(Vc)	305	270	270	270	200	200	330	330	330	330	330	330	330	295	295	295	295
			IPT(fz)	.0014	.0012	.0012	.0012	.0011	.0011	.0032	.0032	.0032	.0032	.0032	.0032	.0032	.0029	.0029	.0029	.0029
			RPM	9810	8720	8720	8720	6540	6540	8000	8000	8000	8000	8000	8000	8000	7200	7200	7200	7200
			IPM(FEED)	27	22	22	22	14	14	51	51	51	51	51	51	51	42	42	42	42
			Ap	0.068	0.068	0.041	0.041	0.027	0.027	0.36	0.36	0.36	0.252	0.252	0.252	0.252	0.144	0.144	0.144	0.09
	9	Low alloy steel	SFM(Vc)	285	255	255	255	190	190	315	315	315	315	315	315	315	280	280	280	280
			IPT(fz)	.0010	.0009	.0009	.0009	.0008	.0008	.0030	.0030	.0030	.0030	.0030	.0030	.0030	.0027	.0027	.0027	.0027
			RPM	9270	8240	8240	8240	6180	6180	7600	7600	7600	7600	7600	7600	7600	6840	6840	6840	6840
			IPM(FEED)	19	15	15	15	10	10	46	46	46	46	46	46	46	37	37	37	37
			Ap	0.053	0.053	0.032	0.032	0.021	0.021	0.28	0.28	0.28	0.196	0.196	0.196	0.196	0.112	0.112	0.112	0.07
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	305	270	270	270	200	200	330	330	330	330	330	330	330	295	295	295	295
			IPT(fz)	.0014	.0012	.0012	.0012	.0011	.0011	.0032	.0032	.0032	.0032	.0032	.0032	.0032	.0029	.0029	.0029	.0029
			RPM	9810	8720	8720	8720	6540	6540	8000	8000	8000	8000	8000	8000	8000	7200	7200	7200	7200
			IPM(FEED)	27	22	22	22	14	14	51	51	51	51	51	51	51	42	42	42	42
			Ap	0.068	0.068	0.041	0.041	0.027	0.027	0.36	0.36	0.36	0.252	0.252	0.252	0.252	0.144	0.144	0.144	0.09
	11.2		SFM(Vc)	285	255	255	255	190	190	315	315	315	315	315	315	315	280	280	280	280
			IPT(fz)	.0010	.0009	.0009	.0009	.0008	.0008	.0030	.0030	.0030	.0030	.0030	.0030	.0030	.0027	.0027	.0027	.0027
			RPM	9270	8240	8240	8240	6180	6180	7600	7600	7600	7600	7600	7600	7600	6840	6840	6840	6840
			IPM(FEED)	19	15	15	15	10	10	46	46	46	46	46	46	46	37	37	37	37
			Ap	0.053	0.053	0.032	0.032	0.021	0.021	0.28	0.28	0.28	0.196	0.196	0.196	0.196	0.112	0.112	0.112	0.07
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	305	270	270	270	200	200	330	330	330	330	330	330	330	295	295	295	295
			IPT(fz)	.0014	.0012	.0012	.0012	.0011	.0011	.0032	.0032	.0032	.0032	.0032	.0032	.0032	.0029	.0029	.0029	.0029
			RPM	9810	8720	8720	8720	6540	6540	8000	8000	8000	8000	8000	8000	8000	7200	7200	7200	7200
			IPM(FEED)	27	22	22	22	14	14	51	51	51	51	51	51	51	42	42	42	42
			Ap	0.068	0.068	0.041	0.041	0.027	0.027	0.36	0.36	0.36	0.252	0.252	0.252	0.252	0.144	0.144	0.144	0.09
H	38.1-38.2	Hardened steel	SFM(Vc)	185	165	165	165	120	120	275	275	275	275	275	275	275	250	250	250	250
			IPT(fz)	.0012	.0011	.0011	.0011	.0009	.0009	.0023	.0023	.0023	.0023	.0023	.0023	.0023	.0020	.0020	.0020	.0020
			RPM	5940	5280	5280	5280	3960	3960	6700	6700	6700	6700	6700	6700	6700	6030	6030	6030	6030
			IPM(FEED)	14	11	11	11	8	8	30	30	30	30	30	30	30	25	25	25	25
			Ap	0.038	0.038	0.023	0.023	0.015	0.015	0.2	0.2	0.2	0.14	0.14	0.14	0.14	0.08	0.08	0.08	0.05
	40	Chilled Cast Iron	SFM(Vc)	285	255	255	255	190	190	315	315	315	315	315	315	315	280	280	280	280
			IPT(fz)	.0010	.0009	.0009	.0009	.0008	.0008	.0030	.0030	.0030	.0030	.0030	.0030	.0030	.0027	.0027	.0027	.0027
			RPM	9270	8240	8240	8240	6180	6180	7600	7600	7600	7600	7600	7600	7600	6840	6840	6840	6840
			IPM(FEED)	19	15	15	15	10	10	46	46	46	46	46	46	46	37	37	37	37
			Ap	0.053	0.053	0.032	0.032	0.021	0.021	0.28	0.28	0.28	0.196	0.196	0.196	0.196	0.112	0.112	0.112	0.07
	41	Hardened Cast Iron	SFM(Vc)	185	165	165	165	120	120	275	275	275	275	275	275	275	250	250	250	250
			IPT(fz)	.0012	.0011	.0011	.0011	.0009	.0009	.0023	.0023	.0023	.0023	.0023	.0023	.0023	.0020	.0020	.0020	.0020
			RPM	5940	5280	5280	5280	3960	3960	6700	6700	6700	6700	6700	6700	6700	6030	6030	6030	6030
			IPM(FEED)	14	11	11	11	8	8	30	30	30	30	30	30	30	25	25	25	25
			Ap	0.038	0.038	0.023	0.023	0.015	0.015	0.2	0.2	0.2	0.14	0.14	0.14	0.14	0.08	0.08	0.08	0.05

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

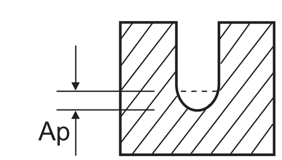
RECOMMENDED CUTTING CONDITIONS

SEM845 SERIES 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Parameter	Diameter (Ø)													
			4	4	4	4	5	5	5	5	5	5	5	5	6	6
		LBS	40	45	50	60	16	20	26	30	35	40	50	60	15	20
P	1-8	SFM(Vc)	295	265	265	265	330	330	295	295	295	295	295	265	330	330
		IPT(fz)	.0029	.0026	.0026	.0026	.0036	.0036	.0032	.0032	.0032	.0032	.0032	.0028	.0039	.0039
		RPM	7200	6400	6400	6400	6400	6400	5760	5760	5760	5760	5760	5120	5300	5300
		IPM(FEED)	42	33	33	33	46	46	37	37	37	37	37	29	42	42
		Ap	0.09	0.09	0.09	0.054	0.315	0.315	0.18	0.18	0.18	0.18	0.113	0.113	0.54	0.378
	9	SFM(Vc)	280	250	250	250	315	315	285	285	285	285	285	250	310	310
		IPT(fz)	.0027	.0024	.0024	.0024	.0029	.0029	.0026	.0026	.0026	.0026	.0026	.0023	.0032	.0032
		RPM	6840	6080	6080	6080	6100	6100	5490	5490	5490	5490	5490	4880	5000	5000
		IPM(FEED)	37	29	29	29	35	35	29	29	29	29	29	23	32	32
		Ap	0.07	0.07	0.07	0.042	0.245	0.245	0.14	0.14	0.14	0.14	0.088	0.088	0.42	0.294
	10-11.1	SFM(Vc)	295	265	265	265	330	330	295	295	295	295	295	265	330	330
		IPT(fz)	.0029	.0026	.0026	.0026	.0036	.0036	.0032	.0032	.0032	.0032	.0032	.0028	.0039	.0039
		RPM	7200	6400	6400	6400	6400	6400	5760	5760	5760	5760	5760	5120	5300	5300
		IPM(FEED)	42	33	33	33	46	46	37	37	37	37	37	29	42	42
		Ap	0.09	0.09	0.09	0.054	0.315	0.315	0.18	0.18	0.18	0.18	0.113	0.113	0.54	0.378
	11.2	SFM(Vc)	280	250	250	250	315	315	285	285	285	285	285	250	310	310
		IPT(fz)	.0027	.0024	.0024	.0024	.0029	.0029	.0026	.0026	.0026	.0026	.0026	.0023	.0032	.0032
		RPM	6840	6080	6080	6080	6100	6100	5490	5490	5490	5490	5490	4880	5000	5000
		IPM(FEED)	37	29	29	29	35	35	29	29	29	29	29	23	32	32
		Ap	0.07	0.07	0.07	0.042	0.245	0.245	0.14	0.14	0.14	0.14	0.088	0.088	0.42	0.294
K	15-20	SFM(Vc)	295	265	265	265	330	330	295	295	295	295	295	265	330	330
		IPT(fz)	.0029	.0026	.0026	.0026	.0036	.0036	.0032	.0032	.0032	.0032	.0032	.0028	.0039	.0039
		RPM	7200	6400	6400	6400	6400	6400	5760	5760	5760	5760	5760	5120	5300	5300
		IPM(FEED)	42	33	33	33	46	46	37	37	37	37	37	29	42	42
		Ap	0.09	0.09	0.09	0.054	0.315	0.315	0.18	0.18	0.18	0.18	0.113	0.113	0.54	0.378
H	38.1-38.2	SFM(Vc)	250	220	220	220	280	280	250	250	250	250	250	225	270	270
		IPT(fz)	.0020	.0018	.0018	.0018	.0022	.0022	.0020	.0020	.0020	.0020	.0020	.0018	.0025	.0025
		RPM	6030	5360	5360	5360	5400	5400	4860	4860	4860	4860	4860	4320	4400	4400
		IPM(FEED)	25	20	20	20	24	24	19	19	19	19	19	15	22	22
		Ap	0.05	0.05	0.05	0.03	0.175	0.175	0.1	0.1	0.1	0.1	0.063	0.063	0.3	0.21
	40	SFM(Vc)	280	250	250	250	315	315	285	285	285	285	285	250	310	310
		IPT(fz)	.0027	.0024	.0024	.0024	.0029	.0029	.0026	.0026	.0026	.0026	.0026	.0023	.0032	.0032
		RPM	6840	6080	6080	6080	6100	6100	5490	5490	5490	5490	5490	4880	5000	5000
		IPM(FEED)	37	29	29	29	35	35	29	29	29	29	29	23	32	32
		Ap	0.07	0.07	0.07	0.042	0.245	0.245	0.14	0.14	0.14	0.14	0.088	0.088	0.42	0.294
	41	SFM(Vc)	250	220	220	220	280	280	250	250	250	250	250	225	270	270
		IPT(fz)	.0020	.0018	.0018	.0018	.0022	.0022	.0020	.0020	.0020	.0020	.0020	.0018	.0025	.0025
		RPM	6030	5360	5360	5360	5400	5400	4860	4860	4860	4860	4860	4320	4400	4400
		IPM(FEED)	25	20	20	20	24	24	19	19	19	19	19	15	22	22
		Ap	0.05	0.05	0.05	0.03	0.175	0.175	0.1	0.1	0.1	0.1	0.063	0.063	0.3	0.21

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



4G MILL END MILLS

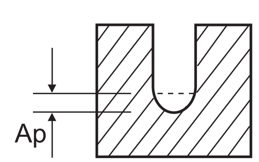
RECOMMENDED CUTTING CONDITIONS

SEM845 SERIES — 2FLUTE SQUARE - SLOTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)										
				6	6	8	8	8	10	10	10	12	12	12
			LBS	30	32	25	30	42	30	35	45	35	40	50
P	1-8	Non-alloy steel	SFM(Vc)	330	295	330	330	295	330	330	330	330	330	330
			IPT(fz)	.0039	.0035	.0047	.0047	.0042	.0055	.0055	.0055	.0059	.0059	.0059
			RPM	5300	4770	4000	4000	3600	3200	3200	3200	2650	2650	2650
			IPM(FEED)	42	34	37	37	30	35	35	35	32	32	32
			Ap	0.378	0.216	0.504	0.504	0.288	0.9	0.63	0.63	1.08	0.756	0.756
	9	Low alloy steel	SFM(Vc)	310	280	315	315	280	315	315	315	310	310	310
			IPT(fz)	.0032	.0029	.0039	.0039	.0035	.0044	.0044	.0044	.0047	.0047	.0047
			RPM	5000	4500	3800	3800	3400	3050	3050	3050	2520	2520	2520
			IPM(FEED)	32	26	30	30	24	27	27	27	24	24	24
			Ap	0.294	0.168	0.392	0.392	0.224	0.7	0.49	0.49	0.84	0.588	0.588
	10-11.1	High alloyed steel, and tool steel	SFM(Vc)	330	295	330	330	295	330	330	330	330	330	330
			IPT(fz)	.0039	.0035	.0047	.0047	.0042	.0055	.0055	.0055	.0059	.0059	.0059
			RPM	5300	4770	4000	4000	3600	3200	3200	3200	2650	2650	2650
			IPM(FEED)	42	34	37	37	30	35	35	35	32	32	32
			Ap	0.378	0.216	0.504	0.504	0.288	0.9	0.63	0.63	1.08	0.756	0.756
	11.2		SFM(Vc)	310	280	315	315	280	315	315	315	310	310	310
			IPT(fz)	.0032	.0029	.0039	.0039	.0035	.0044	.0044	.0044	.0047	.0047	.0047
			RPM	5000	4500	3800	3800	3400	3050	3050	3050	2520	2520	2520
			IPM(FEED)	32	26	30	30	24	27	27	27	24	24	24
			Ap	0.294	0.168	0.392	0.392	0.224	0.7	0.49	0.49	0.84	0.588	0.588
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	330	295	330	330	295	330	330	330	330	330	330
			IPT(fz)	.0039	.0035	.0047	.0047	.0042	.0055	.0055	.0055	.0059	.0059	.0059
			RPM	5300	4770	4000	4000	3600	3200	3200	3200	2650	2650	2650
			IPM(FEED)	42	34	37	37	30	35	35	35	32	32	32
			Ap	0.378	0.216	0.504	0.504	0.288	0.9	0.63	0.63	1.08	0.756	0.756
H	38.1-38.2	Hardened steel	SFM(Vc)	270	245	270	270	245	270	270	270	270	270	270
			IPT(fz)	.0025	.0022	.0030	.0030	.0027	.0030	.0030	.0030	.0032	.0032	.0032
			RPM	4400	3960	3300	3300	2950	2630	2630	2630	2180	2180	2180
			IPM(FEED)	22	18	20	20	16	16	16	16	14	14	14
			Ap	0.21	0.12	0.28	0.28	0.16	0.5	0.35	0.35	0.6	0.42	0.42
	40	Chilled Cast Iron	SFM(Vc)	310	280	315	315	280	315	315	315	310	310	310
			IPT(fz)	.0032	.0029	.0039	.0039	.0035	.0044	.0044	.0044	.0047	.0047	.0047
			RPM	5000	4500	3800	3800	3400	3050	3050	3050	2520	2520	2520
			IPM(FEED)	32	26	30	30	24	27	27	27	24	24	24
			Ap	0.294	0.168	0.392	0.392	0.224	0.7	0.49	0.49	0.84	0.588	0.588
	41	Hardened Cast Iron	SFM(Vc)	270	245	270	270	245	270	270	270	270	270	270
			IPT(fz)	.0025	.0022	.0030	.0030	.0027	.0030	.0030	.0030	.0032	.0032	.0032
			RPM	4400	3960	3300	3300	2950	2630	2630	2630	2180	2180	2180
			IPM(FEED)	22	18	20	20	16	16	16	16	14	14	14
			Ap	0.21	0.12	0.28	0.28	0.16	0.5	0.35	0.35	0.6	0.42	0.42

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(Depth of Cut per one pass)



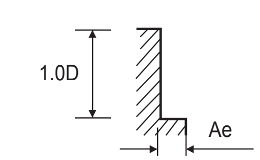
4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME36, SEME71 SERIES — 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)												
						0.8	0.9	1	1.2	1.5	2	2.5	3	3.5	4	4.5	5	5.5
P	1-8	Non-alloy steel	0.05D	1D	SFM(Vc)	260	270	275	280	290	300	330	345	370	390	400	405	420
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0004	.0006	.0007	.0008	.0009
					RPM	31250	29300	26800	22500	18750	14450	12800	11150	10300	9450	8660	7880	7410
					IPM(FEED)	9	10	10	10	11	12	12	13	18	24	24	25	26
	9	Low alloy steel	0.05D	1D	SFM(Vc)	155	165	165	165	175	195	210	215	230	240	245	245	255
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0004	.0006	.0007	.0008	.0009
					RPM	18750	17580	16080	13500	11250	9450	8200	6950	6360	5780	5250	4730	4460
					IPM(FEED)	6	6	6	6	7	7	8	8	11	15	15	15	16
	10-	High alloyed steel, and tool steel	0.05D	1D	SFM(Vc)	260	270	275	280	290	300	330	345	370	390	400	405	420
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0004	.0006	.0007	.0008	.0009
					RPM	31250	29300	26800	22500	18750	14450	12800	11150	10300	9450	8660	7880	7410
					IPM(FEED)	9	10	10	10	11	12	12	13	18	24	24	25	26
	11.1-11.2		0.05D	1D	SFM(Vc)	155	165	165	165	175	195	210	215	230	240	245	245	255
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0004	.0006	.0007	.0008	.0009
					RPM	18750	17580	16080	13500	11250	9450	8200	6950	6360	5780	5250	4730	4460
					IPM(FEED)	6	6	6	6	7	7	8	8	11	15	15	15	16
M	14.1	Stainless steel	0.05D	1D	SFM(Vc)	130	135	140	140	145	160	175	180	190	200	205	205	215
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0004	.0006	.0007	.0008	.0009
					RPM	15630	14650	13400	11250	9380	7880	6830	5780	5310	4850	4400	3950	3750
					IPM(FEED)	5	5	5	5	5	6	7	7	9	12	12	12	13
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	1D	SFM(Vc)	260	270	275	280	290	300	330	345	370	390	400	405	420
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0004	.0006	.0007	.0008	.0009
					RPM	31250	29300	26800	22500	18750	14450	12800	11150	10300	9450	8660	7880	7410
					IPM(FEED)	9	10	10	10	11	12	12	13	18	24	24	25	26
H	38.1-38.2	Hardened steel	0.05D	1D	SFM(Vc)	105	110	110	110	115	130	135	130	140	150	155	150	155
					IPT(fz)	.00003	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003
					RPM	12500	11720	10720	9000	7500	6300	5250	4200	3940	3680	3290	2900	2700
					IPM(FEED)	2	2	2	2	2	2	2	3	3	3	3	3	3
	40	Chilled Cast Iron	0.05D	1D	SFM(Vc)	155	165	165	165	175	195	210	215	230	240	245	245	255
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0004	.0006	.0007	.0008	.0009
					RPM	18750	17580	16080	13500	11250	9450	8200	6950	6360	5780	5250	4730	4460
					IPM(FEED)	6	6	6	6	7	7	8	8	11	15	15	15	16
	41	Hardened Cast Iron	0.05D	1D	SFM(Vc)	105	110	110	110	115	130	135	130	140	150	155	150	155
					IPT(fz)	.00003	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0003	.0003
					RPM	12500	11720	10720	9000	7500	6300	5250	4200	3940	3680	3290	2900	2700
					IPM(FEED)	2	2	2	2	2	2	2	3	3	3	3	3	3

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

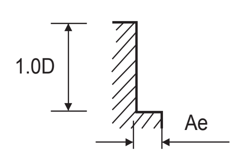
RECOMMENDED CUTTING CONDITIONS

SEME36, SEME71 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12
P	1-8	Non-alloy steel	0.05D	1D	SFM(Vc)	430	435	440	440	435	435	430	430	420	425	425	425	425
					IPT(fz)	.0010	.0011	.0012	.0013	.0014	.0014	.0015	.0015	.0015	.0016	.0016	.0016	.0016
					RPM	6950	6530	6100	5680	5250	4960	4660	4370	4080	3910	3750	3590	3430
					IPM(FEED)	27	28	28	29	29	28	27	26	25	24	23	22	22
	9	Low alloy steel	0.05D	1D	SFM(Vc)	260	265	265	265	260	260	265	260	260	260	260	260	260
					IPT(fz)	.0010	.0011	.0011	.0012	.0012	.0013	.0012	.0012	.0012	.0013	.0012	.0013	.0012
					RPM	4200	3940	3680	3410	3150	2990	2830	2660	2500	2400	2300	2200	2100
					IPM(FEED)	17	17	16	16	16	15	14	13	12	12	11	11	10
	10-	High alloyed steel, and tool steel	0.05D	1D	SFM(Vc)	430	435	440	440	435	435	430	430	420	425	425	425	425
					IPT(fz)	.0010	.0011	.0012	.0013	.0014	.0014	.0015	.0015	.0015	.0016	.0016	.0016	.0016
					RPM	6950	6530	6100	5680	5250	4960	4660	4370	4080	3910	3750	3590	3430
					IPM(FEED)	27	28	28	29	29	28	27	26	25	24	23	22	22
	11.1-11.2		0.05D	1D	SFM(Vc)	260	265	265	265	260	260	265	260	260	260	260	260	260
					IPT(fz)	.0010	.0011	.0011	.0012	.0012	.0013	.0012	.0012	.0012	.0013	.0012	.0013	.0012
					RPM	4200	3940	3680	3410	3150	2990	2830	2660	2500	2400	2300	2200	2100
					IPM(FEED)	17	17	16	16	16	15	14	13	12	12	11	11	10
M	14.1	Stainless steel	0.05D	1D	SFM(Vc)	220	220	225	220	215	220	220	220	215	215	215	215	210
					IPT(fz)	.0010	.0010	.0011	.0012	.0014	.0014	.0014	.0015	.0015	.0015	.0015	.0015	.0014
					RPM	3550	3320	3090	2860	2630	2490	2360	2230	2100	2000	1900	1800	1700
					IPM(FEED)	14	14	14	14	15	14	13	13	12	12	11	11	10
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	1D	SFM(Vc)	430	435	440	440	435	435	430	430	420	425	425	425	425
					IPT(fz)	.0010	.0011	.0012	.0013	.0014	.0014	.0015	.0015	.0015	.0016	.0016	.0016	.0016
					RPM	6950	6530	6100	5680	5250	4960	4660	4370	4080	3910	3750	3590	3430
					IPM(FEED)	27	28	28	29	29	28	27	26	25	24	23	22	22
H	38.1-38.2	Hardened steel	0.05D	1D	SFM(Vc)	155	160	165	170	175	175	175	175	175	175	180	180	180
					IPT(fz)	.0003	.0004	.0004	.0005	.0005	.0005	.0005	.0005	.0005	.0006	.0006	.0006	.0006
					RPM	2500	2400	2300	2200	2100	2000	1900	1800	1700	1640	1580	1510	1450
					IPM(FEED)	3	4	4	4	5	4	4	4	4	4	4	4	3
	40	Chilled Cast Iron	0.05D	1D	SFM(Vc)	260	265	265	265	260	260	265	260	260	260	260	260	260
					IPT(fz)	.0010	.0011	.0011	.0012	.0012	.0013	.0012	.0012	.0012	.0013	.0012	.0013	.0012
					RPM	4200	3940	3680	3410	3150	2990	2830	2660	2500	2400	2300	2200	2100
					IPM(FEED)	17	17	16	16	16	15	14	13	12	12	11	11	10
	41	Hardened Cast Iron	0.05D	1D	SFM(Vc)	155	160	165	170	175	175	175	175	175	175	180	180	180
					IPT(fz)	.0003	.0004	.0004	.0005	.0005	.0005	.0005	.0005	.0005	.0006	.0006	.0006	.0006
					RPM	2500	2400	2300	2200	2100	2000	1900	1800	1700	1640	1580	1510	1450
					IPM(FEED)	3	4	4	4	5	4	4	4	4	4	4	4	3

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME36, SEME71 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Ae	Ap	Parameter	13	14	15	16	17	18	19	20	21	22	23	24	25
P	1-8	0.05D	1D	SFM(Vc)	435	445	450	455	455	450	445	435	435	440	440	440	440
				IPT(fz)	.0016	.0016	.0015	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0015	.0015
				RPM	3260	3090	2920	2750	2590	2430	2260	2100	2020	1940	1860	1780	1700
				IPM(FEED)	21	19	18	17	16	15	14	13	13	12	12	11	10
	9	0.05D	1D	SFM(Vc)	270	275	280	280	280	280	280	275	275	275	275	275	270
				IPT(fz)	.0012	.0012	.0012	.0013	.0012	.0012	.0013	.0013	.0013	.0013	.0012	.0012	.0013
				RPM	2000	1900	1800	1700	1610	1510	1420	1330	1270	1220	1160	1110	1050
				IPM(FEED)	10	9	9	9	8	8	7	7	7	6	6	6	5
	10-	0.05D	1D	SFM(Vc)	435	445	450	455	455	450	445	435	435	440	440	440	440
				IPT(fz)	.0016	.0016	.0015	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0015	.0015
				RPM	3260	3090	2920	2750	2590	2430	2260	2100	2020	1940	1860	1780	1700
				IPM(FEED)	21	19	18	17	16	15	14	13	13	12	12	11	10
	11.1-11.2	0.05D	1D	SFM(Vc)	270	275	280	280	280	280	280	275	275	275	275	275	270
				IPT(fz)	.0012	.0012	.0012	.0013	.0012	.0012	.0013	.0013	.0013	.0013	.0012	.0012	.0013
				RPM	2000	1900	1800	1700	1610	1510	1420	1330	1270	1220	1160	1110	1050
				IPM(FEED)	10	9	9	9	8	8	7	7	7	6	6	6	5
M	14.1	0.05D	1D	SFM(Vc)	215	220	225	230	225	225	220	215	220	220	220	220	220
				IPT(fz)	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0014	.0014
				RPM	1620	1540	1460	1380	1290	1210	1130	1050	1010	970	930	890	850
				IPM(FEED)	9	9	9	8	8	7	7	6	6	6	6	5	5
K	15-20	0.05D	1D	SFM(Vc)	435	445	450	455	455	450	445	435	435	440	440	440	440
				IPT(fz)	.0016	.0016	.0015	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0015	.0015
				RPM	3260	3090	2920	2750	2590	2430	2260	2100	2020	1940	1860	1780	1700
				IPM(FEED)	21	19	18	17	16	15	14	13	13	12	12	11	10
H	38.1-38.2	0.05D	1D	SFM(Vc)	185	185	185	185	185	185	180	175	175	175	180	175	175
				IPT(fz)	.0006	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0005	.0005	.0005
				RPM	1370	1290	1210	1130	1060	990	920	850	820	780	750	710	680
				IPM(FEED)	3	3	3	3	2	2	2	2	2	2	2	1	1
	40	0.05D	1D	SFM(Vc)	270	275	280	280	280	280	280	275	275	275	275	275	270
				IPT(fz)	.0012	.0012	.0012	.0013	.0012	.0012	.0013	.0013	.0013	.0013	.0012	.0012	.0013
				RPM	2000	1900	1800	1700	1610	1510	1420	1330	1270	1220	1160	1110	1050
				IPM(FEED)	10	9	9	9	8	8	7	7	7	6	6	6	5
	41	0.05D	1D	SFM(Vc)	185	185	185	185	185	185	180	175	175	175	180	175	175
				IPT(fz)	.0006	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0005	.0005	.0005	.0005	.0005
				RPM	1370	1290	1210	1130	1060	990	920	850	820	780	750	710	680
				IPM(FEED)	3	3	3	3	2	2	2	2	2	2	2	1	1

Diameter (Ø)

SFM = Surface Feet per Minute
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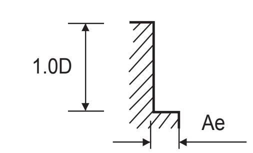
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



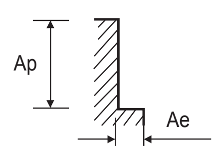
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME72 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1	1	1	1	1	1	1	1	1.2	1.2	1.2	1.2
					LOC	3	4	5	6	7	8	10	12	4	6	8	10
P	1-8	Non-alloy steel	0.05D	2.5D	SFM(Vc)	200	200	200	180	180	180	180	160	200	200	180	180
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
					RPM	19200	19200	19200	17280	17280	17280	17280	15360	16200	16200	14580	14580
					IPM(FEED)	7	7	7	6	6	5	5	4	8	8	7	6
	9	Low alloy steel	0.05D	2.5D	SFM(Vc)	115	115	115	100	100	100	100	90	115	115	105	105
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
					RPM	10940	10940	10940	9850	9850	9850	9850	8760	9230	9230	8310	8310
					IPM(FEED)	3	3	3	2	2	2	2	2	3	3	3	2
	10-	High alloyed steel, and tool steel	0.05D	2.5D	SFM(Vc)	200	200	200	180	180	180	180	160	200	200	180	180
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
					RPM	19200	19200	19200	17280	17280	17280	17280	15360	16200	16200	14580	14580
					IPM(FEED)	7	7	7	6	6	5	5	4	8	8	7	6
	11.1-11.2		0.05D	2.5D	SFM(Vc)	115	115	115	100	100	100	100	90	115	115	105	105
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
					RPM	10940	10940	10940	9850	9850	9850	9850	8760	9230	9230	8310	8310
					IPM(FEED)	3	3	3	2	2	2	2	2	3	3	3	2
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	2.5D	SFM(Vc)	200	200	200	180	180	180	180	160	200	200	180	180
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
					RPM	19200	19200	19200	17280	17280	17280	17280	15360	16200	16200	14580	14580
					IPM(FEED)	7	7	7	6	6	5	5	4	8	8	7	6
H	38.1-38.2	Hardened steel	0.02D	2.0D	SFM(Vc)	70	70	70	60	60	60	60	55	70	70	65	65
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0	.0	.0	.0001	.0001	.0001	.0001
					RPM	6720	6720	6720	6050	6050	6050	6050	5380	5670	5670	5100	5100
					IPM(FEED)	1	1	1	1	1	1	1	1	2	2	1	1
	40	Chilled Cast Iron	0.05D	2.5D	SFM(Vc)	115	115	115	100	100	100	100	90	115	115	105	105
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
					RPM	10940	10940	10940	9850	9850	9850	9850	8760	9230	9230	8310	8310
					IPM(FEED)	3	3	3	2	2	2	2	2	3	3	3	2
	41	Hardened Cast Iron	0.02D	2.0D	SFM(Vc)	70	70	70	60	60	60	60	55	70	70	65	65
					IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0	.0	.0	.0001	.0001	.0001	.0001
					RPM	6720	6720	6720	6050	6050	6050	6050	5380	5670	5670	5100	5100
					IPM(FEED)	1	1	1	1	1	1	1	1	2	2	1	1

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME72 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Ae	Ap	Parameter	Diameter (Ø) 1.2	1.5	1.5	1.5	1.5	1.5	1.5	2	2	2	2	2	2.5
				LOC	12	6	8	10	12	14	16	8	10	12	14	16	10
P	1-8	0.05D	2.5D	SFM(Vc)	180	215	190	190	190	190	170	220	220	195	195	195	230
				IPT(fz)	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0003
				RPM	14580	13800	12420	12420	12420	12420	11040	10580	10580	9530	9530	9530	8990
				IPM(FEED)	6	9	8	7	6	6	5	9	9	8	8	7	10
	9	0.05D	2.5D	SFM(Vc)	105	120	110	110	110	110	95	125	125	110	110	110	135
				IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0002
				RPM	8310	7870	7080	7080	7080	7080	6290	6050	6050	5440	5440	5440	5170
				IPM(FEED)	2	3	3	3	2	2	2	4	4	3	3	3	4
	10-	0.05D	2.5D	SFM(Vc)	180	215	190	190	190	190	170	220	220	195	195	195	230
				IPT(fz)	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0003
				RPM	14580	13800	12420	12420	12420	12420	11040	10580	10580	9530	9530	9530	8990
				IPM(FEED)	6	9	8	7	6	6	5	9	9	8	8	7	10
	11.1-11.2	0.05D	2.5D	SFM(Vc)	105	120	110	110	110	110	95	125	125	110	110	110	135
				IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0002
				RPM	8310	7870	7080	7080	7080	7080	6290	6050	6050	5440	5440	5440	5170
				IPM(FEED)	2	3	3	3	2	2	2	4	4	3	3	3	4
K	15-20	0.05D	2.5D	SFM(Vc)	180	215	190	190	190	190	170	220	220	195	195	195	230
				IPT(fz)	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0003
				RPM	14580	13800	12420	12420	12420	12420	11040	10580	10580	9530	9530	9530	8990
				IPM(FEED)	6	9	8	7	6	6	5	9	9	8	8	7	10
H	38.1-38.2	0.02D	2.0D	SFM(Vc)	65	75	65	65	65	65	60	80	80	70	70	70	85
				IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0002
				RPM	5100	4830	4350	4350	4350	4350	3860	3780	3780	3400	3400	3400	3210
				IPM(FEED)	1	2	2	1	1	1	1	2	2	2	2	2	2
	40	0.05D	2.5D	SFM(Vc)	105	120	110	110	110	110	95	125	125	110	110	110	135
				IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0002
				RPM	8310	7870	7080	7080	7080	7080	6290	6050	6050	5440	5440	5440	5170
				IPM(FEED)	2	3	3	3	2	2	2	4	4	3	3	3	4
	41	0.02D	2.0D	SFM(Vc)	65	75	65	65	65	65	60	80	80	70	70	70	85
				IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0002
				RPM	5100	4830	4350	4350	4350	4350	3860	3780	3780	3400	3400	3400	3210
				IPM(FEED)	1	2	2	1	1	1	1	2	2	2	2	2	2

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
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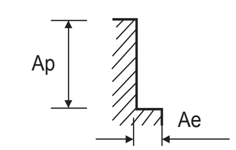

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME72 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	2.5	2.5	2.5	2.5	3	3	3	3	3	3	3	4
					LOC	12	16	20	26	10	12	14	16	20	26	30	12
P	1-8	Non-alloy steel	0.05D	2.5D	SFM(Vc)	230	210	210	185	230	230	230	205	205	205	205	245
					IPT(fz)	.0003	.0003	.0002	.0002	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0006
					RPM	8990	8090	8090	7200	7400	7400	7400	6660	6660	6660	6660	6000
					IPM(FEED)	10	8	7	6	11	11	11	10	9	8	8	13
	9	Low alloy steel	0.05D	2.5D	SFM(Vc)	135	120	120	105	130	130	130	120	120	120	120	140
					IPT(fz)	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0002	.0002	.0002	.0004
					RPM	5170	4650	4650	4130	4280	4280	4280	3860	3860	3860	3860	3410
					IPM(FEED)	4	3	3	2	5	5	5	4	4	3	3	6
	10-	High alloyed steel, and tool steel	0.05D	2.5D	SFM(Vc)	230	210	210	185	230	230	230	205	205	205	205	245
					IPT(fz)	.0003	.0003	.0002	.0002	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0006
					RPM	8990	8090	8090	7200	7400	7400	7400	6660	6660	6660	6660	6000
					IPM(FEED)	10	8	7	6	11	11	11	10	9	8	8	13
	11.1-11.2		0.05D	2.5D	SFM(Vc)	135	120	120	105	130	130	130	120	120	120	120	140
					IPT(fz)	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0002	.0002	.0002	.0004
					RPM	5170	4650	4650	4130	4280	4280	4280	3860	3860	3860	3860	3410
					IPM(FEED)	4	3	3	2	5	5	5	4	4	3	3	6
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	2.5D	SFM(Vc)	230	210	210	185	230	230	230	205	205	205	205	245
					IPT(fz)	.0003	.0003	.0002	.0002	.0004	.0004	.0004	.0004	.0003	.0003	.0003	.0006
					RPM	8990	8090	8090	7200	7400	7400	7400	6660	6660	6660	6660	6000
					IPM(FEED)	10	8	7	6	11	11	11	10	9	8	8	13
H	38.1-38.2	Hardened steel	0.02D	2.0D	SFM(Vc)	85	75	75	65	80	80	80	75	75	75	75	90
					IPT(fz)	.0002	.0002	.0002	.0001	.0003	.0003	.0003	.0003	.0002	.0002	.0002	.0003
					RPM	3210	2890	2890	2570	2640	2640	2640	2380	2380	2380	2380	2150
					IPM(FEED)	2	2	2	1	3	3	3	2	2	2	2	3
	40	Chilled Cast Iron	0.05D	2.5D	SFM(Vc)	135	120	120	105	130	130	130	120	120	120	120	140
					IPT(fz)	.0002	.0002	.0002	.0002	.0003	.0003	.0003	.0003	.0002	.0002	.0002	.0004
					RPM	5170	4650	4650	4130	4280	4280	4280	3860	3860	3860	3860	3410
					IPM(FEED)	4	3	3	2	5	5	5	4	4	3	3	6
	41	Hardened Cast Iron	0.02D	2.0D	SFM(Vc)	85	75	75	65	80	80	80	75	75	75	75	90
					IPT(fz)	.0002	.0002	.0002	.0001	.0003	.0003	.0003	.0003	.0002	.0002	.0002	.0003
					RPM	3210	2890	2890	2570	2640	2640	2640	2380	2380	2380	2380	2150
					IPM(FEED)	2	2	2	1	3	3	3	2	2	2	2	3

(Column headings 2.5 … 4: Diameter (Ø))

SFM = Surface Feet per Minute
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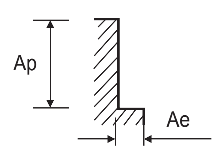

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TECHNICAL DATA

YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME72 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Ae	Ap	Parameter	1.5	1.5	1.5	1.5	1.5	2	2	2	2	2	2	2	2
				LOC	18	20	22	26	30	6	8	10	12	16	18	20	22
P	1-8	0.05D	2.5D	SFM(Vc)	245	245	225	225	265	265	240	240	240	275	275	275	275
				IPT(fz)	.0006	.0006	.0005	.0005	.0008	.0008	.0008	.0008	.0007	.0012	.0012	.0012	.001
				RPM	6000	6000	5400	5400	5120	5120	4610	4610	4610	4420	4420	4420	4420
				IPM(FEED)	13	13	11	11	17	17	14	14	12	20	20	20	17
	9	0.05D	2.5D	SFM(Vc)	140	140	125	125	150	150	135	135	135	155	155	155	155
				IPT(fz)	.0004	.0004	.0004	.0004	.0006	.0006	.0005	.0005	.0005	.0008	.0008	.0008	.0007
				RPM	3410	3410	3070	3070	2900	2900	2610	2610	2610	2520	2520	2520	2520
				IPM(FEED)	6	6	4	4	7	7	5	5	5	9	9	9	7
	10-	0.05D	2.5D	SFM(Vc)	245	245	225	225	265	265	240	240	240	275	275	275	275
				IPT(fz)	.0006	.0006	.0005	.0005	.0008	.0008	.0008	.0008	.0007	.0012	.0012	.0012	.001
				RPM	6000	6000	5400	5400	5120	5120	4610	4610	4610	4420	4420	4420	4420
				IPM(FEED)	13	13	11	11	17	17	14	14	12	20	20	20	17
	11.1-11.2	0.05D	2.5D	SFM(Vc)	140	140	125	125	150	150	135	135	135	155	155	155	155
				IPT(fz)	.0004	.0004	.0004	.0004	.0006	.0006	.0005	.0005	.0005	.0008	.0008	.0008	.0007
				RPM	3410	3410	3070	3070	2900	2900	2610	2610	2610	2520	2520	2520	2520
				IPM(FEED)	6	6	4	4	7	7	5	5	5	9	9	9	7
K	15-20	0.05D	2.5D	SFM(Vc)	245	245	225	225	265	265	240	240	240	275	275	275	275
				IPT(fz)	.0006	.0006	.0005	.0005	.0008	.0008	.0008	.0008	.0007	.0012	.0012	.0012	.001
				RPM	6000	6000	5400	5400	5120	5120	4610	4610	4610	4420	4420	4420	4420
				IPM(FEED)	13	13	11	11	17	17	14	14	12	20	20	20	17
H	38.1-38.2	0.02D	2.0D	SFM(Vc)	90	90	80	80	100	100	90	90	90	100	100	100	100
				IPT(fz)	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0007	.0007	.0007	.0005
				RPM	2150	2150	1930	1930	1900	1900	1710	1710	1710	1640	1640	1640	1640
				IPM(FEED)	3	3	2	2	3	3	3	3	2	4	4	4	4
	40	0.05D	2.5D	SFM(Vc)	140	140	125	125	150	150	135	135	135	155	155	155	155
				IPT(fz)	.0004	.0004	.0004	.0004	.0006	.0006	.0005	.0005	.0005	.0008	.0008	.0008	.0007
				RPM	3410	3410	3070	3070	2900	2900	2610	2610	2610	2520	2520	2520	2520
				IPM(FEED)	6	6	4	4	7	7	5	5	5	9	9	9	7
	41	0.02D	2.0D	SFM(Vc)	90	90	80	80	100	100	90	90	90	100	100	100	100
				IPT(fz)	.0003	.0003	.0003	.0003	.0004	.0004	.0004	.0004	.0004	.0007	.0007	.0007	.0005
				RPM	2150	2150	1930	1930	1900	1900	1710	1710	1710	1640	1640	1640	1640
				IPM(FEED)	3	3	2	2	3	3	3	3	2	4	4	4	4

(Column headings 1.5 … 2: Diameter (Ø))

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
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Ap : Inch (Axial Depth of Cut)
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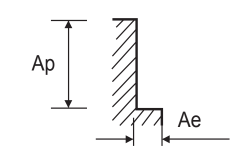


YG 4G MILL END MILLS

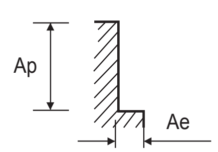
RECOMMENDED CUTTING CONDITIONS

SEME72 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	6	6	6	8	8	8	8	8	8	10	10	10
					LOC	35	40	45	25	30	35	40	45	50	30	35	40
P	1-8	Non-alloy steel	0.05D	2.5D	SFM(Vc)	245	245	245	275	275	275	275	250	250	290	290	290
					IPT(fz)	.001	.0009	.0009	.0016	.0016	.0016	.0014	.0014	.0012	.0019	.0019	.0019
					RPM	3970	3970	3970	3360	3360	3360	3360	3020	3020	2820	2820	2820
					IPM(FEED)	16	14	14	22	22	22	19	17	15	22	22	22
	9	Low alloy steel	0.05D	2.5D	SFM(Vc)	140	140	140	155	155	155	155	140	140	170	170	170
					IPT(fz)	.0007	.0006	.0006	.0011	.0011	.0011	.001	.001	.0008	.0013	.0013	.0013
					RPM	2270	2270	2270	1900	1900	1900	1900	1710	1710	1640	1640	1640
					IPM(FEED)	7	6	6	9	9	9	7	7	6	9	9	9
	10-	High alloyed steel, and tool steel	0.05D	2.5D	SFM(Vc)	245	245	245	275	275	275	275	250	250	290	290	290
					IPT(fz)	.001	.0009	.0009	.0016	.0016	.0016	.0014	.0014	.0012	.0019	.0019	.0019
					RPM	3970	3970	3970	3360	3360	3360	3360	3020	3020	2820	2820	2820
					IPM(FEED)	16	14	14	22	22	22	19	17	15	22	22	22
	11.1-11.2		0.05D	2.5D	SFM(Vc)	140	140	140	155	155	155	155	140	140	170	170	170
					IPT(fz)	.0007	.0006	.0006	.0011	.0011	.0011	.001	.001	.0008	.0013	.0013	.0013
					RPM	2270	2270	2270	1900	1900	1900	1900	1710	1710	1640	1640	1640
					IPM(FEED)	7	6	6	9	9	9	7	7	6	9	9	9
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	2.5D	SFM(Vc)	245	245	245	275	275	275	275	250	250	290	290	290
					IPT(fz)	.001	.0009	.0009	.0016	.0016	.0016	.0014	.0014	.0012	.0019	.0019	.0019
					RPM	3970	3970	3970	3360	3360	3360	3360	3020	3020	2820	2820	2820
					IPM(FEED)	16	14	14	22	22	22	19	17	15	22	22	22
H	38.1-38.2	Hardened steel	0.02D	2.0D	SFM(Vc)	90	90	90	105	105	105	105	95	95	105	105	105
					IPT(fz)	.0006	.0005	.0005	.0009	.0009	.0009	.0007	.0007	.0007	.0011	.0011	.0011
					RPM	1480	1480	1480	1260	1260	1260	1260	1130	1130	1010	1010	1010
					IPM(FEED)	3	3	3	4	4	4	4	3	3	4	4	4
	40	Chilled Cast Iron	0.05D	2.5D	SFM(Vc)	140	140	140	155	155	155	155	140	140	170	170	170
					IPT(fz)	.0007	.0006	.0006	.0011	.0011	.0011	.001	.001	.0008	.0013	.0013	.0013
					RPM	2270	2270	2270	1900	1900	1900	1900	1710	1710	1640	1640	1640
					IPM(FEED)	7	6	6	9	9	9	7	7	6	9	9	9
	41	Hardened Cast Iron	0.02D	2.0D	SFM(Vc)	90	90	90	105	105	105	105	95	95	105	105	105
					IPT(fz)	.0006	.0005	.0005	.0009	.0009	.0009	.0007	.0007	.0007	.0011	.0011	.0011
					RPM	1480	1480	1480	1260	1260	1260	1260	1130	1130	1010	1010	1010
					IPM(FEED)	3	3	3	4	4	4	4	3	3	4	4	4

(Column headers 6–10: Diameter (Ø))

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



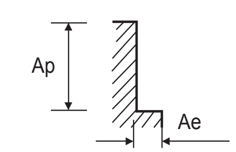
YG 4G MILL END MILLS
RECOMMENDED CUTTING CONDITIONS

SEME72 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Ae	Ap	Parameter	10	10	10	10	12	12	12	12	12	12	12	12	14
				LOC	45	50	55	60	35	40	45	50	55	60	65	70	50
P	1-8	0.05D	2.5D	SFM(Vc)	290	290	260	260	285	285	285	285	285	285	255	255	305
				IPT(fz)	.0016	.0016	.0016	.0015	.0018	.0018	.0016	.0016	.0016	.0014	.0014	.0014	.0016
				RPM	2820	2820	2540	2540	2300	2300	2300	2300	2300	2300	2070	2070	2120
				IPM(FEED)	19	19	17	15	17	17	14	14	14	13	11	11	14
	9	0.05D	2.5D	SFM(Vc)	170	170	155	155	170	170	170	170	170	170	155	155	175
				IPT(fz)	.0011	.0011	.0011	.001	.0014	.0014	.0012	.0012	.0012	.001	.001	.001	.0012
				RPM	1640	1640	1480	1480	1390	1390	1390	1390	1390	1390	1250	1250	1230
				IPM(FEED)	7	7	7	6	8	8	7	7	7	6	5	5	6
	10-	0.05D	2.5D	SFM(Vc)	290	290	260	260	285	285	285	285	285	285	255	255	305
				IPT(fz)	.0016	.0016	.0016	.0015	.0018	.0018	.0016	.0016	.0016	.0014	.0014	.0014	.0016
				RPM	2820	2820	2540	2540	2300	2300	2300	2300	2300	2300	2070	2070	2120
				IPM(FEED)	19	19	17	15	17	17	14	14	14	13	11	11	14
	11.1-11.2	0.05D	2.5D	SFM(Vc)	170	170	155	155	170	170	170	170	170	170	155	155	175
				IPT(fz)	.0011	.0011	.0011	.001	.0014	.0014	.0012	.0012	.0012	.001	.001	.001	.0012
				RPM	1640	1640	1480	1480	1390	1390	1390	1390	1390	1390	1250	1250	1230
				IPM(FEED)	7	7	7	6	8	8	7	7	7	6	5	5	6
K	15-20	0.05D	2.5D	SFM(Vc)	290	290	260	260	285	285	285	285	285	285	255	255	305
				IPT(fz)	.0016	.0016	.0016	.0015	.0018	.0018	.0016	.0016	.0016	.0014	.0014	.0014	.0016
				RPM	2820	2820	2540	2540	2300	2300	2300	2300	2300	2300	2070	2070	2120
				IPM(FEED)	19	19	17	15	17	17	14	14	14	13	11	11	14
H	38.1-38.2	0.02D	2.0D	SFM(Vc)	105	105	95	95	105	105	105	105	105	105	95	95	110
				IPT(fz)	.0009	.0009	.0009	.0008	.001	.001	.0008	.0008	.0008	.0008	.0007	.0007	.0009
				RPM	1010	1010	910	910	840	840	840	840	840	840	760	760	760
				IPM(FEED)	4	4	3	3	3	3	3	3	3	3	2	2	3
	40	0.05D	2.5D	SFM(Vc)	170	170	155	155	170	170	170	170	170	170	155	155	175
				IPT(fz)	.0011	.0011	.0011	.001	.0014	.0014	.0012	.0012	.0012	.001	.001	.001	.0012
				RPM	1640	1640	1480	1480	1390	1390	1390	1390	1390	1390	1250	1250	1230
				IPM(FEED)	7	7	7	6	8	8	7	7	7	6	5	5	6
	41	0.02D	2.0D	SFM(Vc)	105	105	95	95	105	105	105	105	105	105	95	95	110
				IPT(fz)	.0009	.0009	.0009	.0008	.001	.001	.0008	.0008	.0008	.0008	.0007	.0007	.0009
				RPM	1010	1010	910	910	840	840	840	840	840	840	760	760	760
				IPM(FEED)	4	4	3	3	3	3	3	3	3	3	2	2	3

(Column headers 10–14: Diameter (Ø))

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



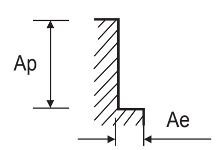
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME72 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)											
						14	16	16	16	16	16	16	16	16	18	18	18
					LOC	60	40	50	60	70	80	90	110	120	50	70	100
P	1-8	Non-alloy steel	0.05D	2.5D	SFM(Vc)	305	320	320	320	320	320	290	290	290	310	310	280
					IPT(fz)	.0016	.002	.002	.0017	.0017	.0015	.0015	.0015	.0015	.0019	.0016	.0015
					RPM	2120	1940	1940	1940	1940	1940	1750	1750	1750	1680	1680	1510
					IPM(FEED)	14	15	15	13	13	11	10	10	10	13	11	9
	9	Low alloy steel	0.05D	2.5D	SFM(Vc)	175	175	175	175	175	175	160	160	160	175	175	160
					IPT(fz)	.0012	.0014	.0014	.0012	.0012	.0011	.001	.001	.001	.0014	.0011	.001
					RPM	1230	1070	1070	1070	1070	1070	960	960	960	940	940	850
					IPM(FEED)	6	6	6	5	5	5	4	4	4	5	4	3
	10-	High alloyed steel, and tool steel	0.05D	2.5D	SFM(Vc)	305	320	320	320	320	320	290	290	290	310	310	280
					IPT(fz)	.0016	.002	.002	.0017	.0017	.0015	.0015	.0015	.0015	.0019	.0016	.0015
					RPM	2120	1940	1940	1940	1940	1940	1750	1750	1750	1680	1680	1510
					IPM(FEED)	14	15	15	13	13	11	10	10	10	13	11	9
	11.1-11.2		0.05D	2.5D	SFM(Vc)	175	175	175	175	175	175	160	160	160	175	175	160
					IPT(fz)	.0012	.0014	.0014	.0012	.0012	.0011	.001	.001	.001	.0014	.0011	.001
					RPM	1230	1070	1070	1070	1070	1070	960	960	960	940	940	850
					IPM(FEED)	6	6	6	5	5	5	4	4	4	5	4	3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	2.5D	SFM(Vc)	305	320	320	320	320	320	290	290	290	310	310	280
					IPT(fz)	.0016	.002	.002	.0017	.0017	.0015	.0015	.0015	.0015	.0019	.0016	.0015
					RPM	2120	1940	1940	1940	1940	1940	1750	1750	1750	1680	1680	1510
					IPM(FEED)	14	15	15	13	13	11	10	10	10	13	11	9
H	38.1-38.2	Hardened steel	0.02D	2.0D	SFM(Vc)	110	110	110	110	110	110	100	100	100	110	110	100
					IPT(fz)	.0009	.001	.001	.0009	.0009	.0008	.0008	.0008	.0008	.0011	.0009	.0009
					RPM	760	670	670	670	670	670	600	600	600	590	590	530
					IPM(FEED)	3	3	3	2	2	2	2	2	2	3	2	2
	40	Chilled Cast Iron	0.05D	2.5D	SFM(Vc)	175	175	175	175	175	175	160	160	160	175	175	160
					IPT(fz)	.0012	.0014	.0014	.0012	.0012	.0011	.001	.001	.001	.0014	.0011	.001
					RPM	1230	1070	1070	1070	1070	1070	960	960	960	940	940	850
					IPM(FEED)	6	6	6	5	5	5	4	4	4	5	4	3
	41	Hardened Cast Iron	0.02D	2.0D	SFM(Vc)	110	110	110	110	110	110	100	100	100	110	110	100
					IPT(fz)	.0009	.001	.001	.0009	.0009	.0008	.0008	.0008	.0008	.0011	.0009	.0009
					RPM	760	670	670	670	670	670	600	600	600	590	590	530
					IPM(FEED)	3	3	3	2	2	2	2	2	2	3	2	2

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



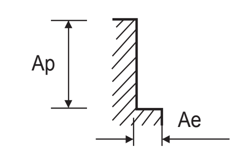
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME72 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Ae	Ap	Parameter	Diameter (Ø)												
					20	20	20	20	20	20	20	22	22	25	25	25	25
				LOC	50	60	70	80	90	110	120	75	110	70	90	110	120
P	1-8	0.05D	2.5D	SFM(Vc)	295	295	295	295	295	260	260	285	285	285	285	285	285
				IPT(fz)	.0019	.0019	.0016	.0016	.0014	.0014	.0014	.0016	.0014	.0019	.0017	.0017	.0014
				RPM	1420	1420	1420	1420	1420	1270	1270	1260	1260	1100	1100	1100	1100
				IPM(FEED)	11	11	9	9	8	7	7	8	7	9	7	7	6
	9	0.05D	2.5D	SFM(Vc)	170	170	170	170	170	150	150	185	185	210	210	210	210
				IPT(fz)	.0013	.0013	.0011	.0011	.001	.001	.001	.0011	.001	.0013	.0011	.0011	.001
				RPM	820	820	820	820	820	730	730	820	820	820	820	820	820
				IPM(FEED)	4	4	4	4	3	3	3	4	3	4	4	4	3
	10-	0.05D	2.5D	SFM(Vc)	295	295	295	295	295	260	260	285	285	285	285	285	285
				IPT(fz)	.0019	.0019	.0016	.0016	.0014	.0014	.0014	.0016	.0014	.0019	.0017	.0017	.0014
				RPM	1420	1420	1420	1420	1420	1270	1270	1260	1260	1100	1100	1100	1100
				IPM(FEED)	11	11	9	9	8	7	7	8	7	9	7	7	6
	11.1-11.2	0.05D	2.5D	SFM(Vc)	170	170	170	170	170	150	150	185	185	210	210	210	210
				IPT(fz)	.0013	.0013	.0011	.0011	.001	.001	.001	.0011	.001	.0013	.0011	.0011	.001
				RPM	820	820	820	820	820	730	730	820	820	820	820	820	820
				IPM(FEED)	4	4	4	4	3	3	3	4	3	4	4	4	3
K	15-20	0.05D	2.5D	SFM(Vc)	295	295	295	295	295	260	260	285	285	285	285	285	285
				IPT(fz)	.0019	.0019	.0016	.0016	.0014	.0014	.0014	.0016	.0014	.0019	.0017	.0017	.0014
				RPM	1420	1420	1420	1420	1420	1270	1270	1260	1260	1100	1100	1100	1100
				IPM(FEED)	11	11	9	9	8	7	7	8	7	9	7	7	6
H	38.1-38.2	0.02D	2.0D	SFM(Vc)	105	105	105	105	105	95	95	115	115	130	130	130	130
				IPT(fz)	.0011	.0011	.0009	.0009	.0008	.0008	.0008	.0009	.0008	.0011	.0009	.0009	.0008
				RPM	500	500	500	500	500	450	450	500	500	500	500	500	500
				IPM(FEED)	2	2	2	2	2	1	1	2	2	2	2	2	2
	40	0.05D	2.5D	SFM(Vc)	170	170	170	170	170	150	150	185	185	210	210	210	210
				IPT(fz)	.0013	.0013	.0011	.0011	.001	.001	.001	.0011	.001	.0013	.0011	.0011	.001
				RPM	820	820	820	820	820	730	730	820	820	820	820	820	820
				IPM(FEED)	4	4	4	4	3	3	3	4	3	4	4	4	3
	41	0.02D	2.0D	SFM(Vc)	105	105	105	105	105	95	95	115	115	130	130	130	130
				IPT(fz)	.0011	.0011	.0009	.0009	.0008	.0008	.0008	.0009	.0008	.0011	.0009	.0009	.0008
				RPM	500	500	500	500	500	450	450	500	500	500	500	500	500
				IPM(FEED)	2	2	2	2	2	1	1	2	2	2	2	2	2

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



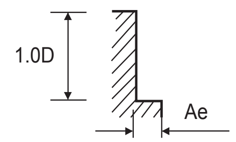
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME73 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)											
				1	1	1	1	1	1	1	1	1	1	1	1
			LBS	2	3	4	5	6	7	8	10	12	14	16	18
P	1-8	Non-alloy steel	SFM(Vc)	225	225	225	225	205	205	205	205	180	180	135	135
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	22000	22000	22000	22000	19800	19800	19800	19800	17600	17600	13200	13200
			IPM(FEED)	12	12	12	12	10	10	10	10	8	8	5	5
			Ae	0.021	0.021	0.015	0.015	0.008	0.008	0.008	0.005	0.005	0.003	0.003	0.002
	9	Low alloy steel	SFM(Vc)	140	140	140	140	125	125	125	125	110	110	85	85
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	13500	13500	13500	13500	12150	12150	12150	12150	10800	10800	8100	8100
			IPM(FEED)	7	7	7	7	6	6	6	6	5	5	3	3
			Ae	0.016	0.016	0.011	0.011	0.006	0.006	0.006	0.004	0.004	0.002	0.002	0.002
	10-	High alloyed steel, and tool steel	SFM(Vc)	225	225	225	225	205	205	205	205	180	180	135	135
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	22000	22000	22000	22000	19800	19800	19800	19800	17600	17600	13200	13200
			IPM(FEED)	12	12	12	12	10	10	10	10	8	8	5	5
			Ae	0.021	0.021	0.015	0.015	0.008	0.008	0.008	0.005	0.005	0.003	0.003	0.002
	11.1-11.2		SFM(Vc)	140	140	140	140	125	125	125	125	110	110	85	85
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	13500	13500	13500	13500	12150	12150	12150	12150	10800	10800	8100	8100
			IPM(FEED)	7	7	7	7	6	6	6	6	5	5	3	3
			Ae	0.016	0.016	0.011	0.011	0.006	0.006	0.006	0.004	0.004	0.002	0.002	0.002
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	225	225	225	225	205	205	205	205	180	180	135	135
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	22000	22000	22000	22000	19800	19800	19800	19800	17600	17600	13200	13200
			IPM(FEED)	12	12	12	12	10	10	10	10	8	8	5	5
			Ae	0.021	0.021	0.015	0.015	0.008	0.008	0.008	0.005	0.005	0.003	0.003	0.002
H	38.1-38.2	Hardened steel	SFM(Vc)	90	90	90	90	80	80	80	80	70	70	55	55
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.00004	.00004	.00004	.00004
			RPM	8500	8500	8500	8500	7650	7650	7650	7650	6800	6800	5100	5100
			IPM(FEED)	2	2	2	2	1.6	1.6	1.6	1.6	1.2	1.2	0.8	0.8
			Ae	0.013	0.013	0.009	0.009	0.005	0.005	0.005	0.003	0.003	0.002	0.002	0.001
	40	Chilled Cast Iron	SFM(Vc)	140	140	140	140	125	125	125	125	110	110	85	85
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	13500	13500	13500	13500	12150	12150	12150	12150	10800	10800	8100	8100
			IPM(FEED)	7	7	7	7	6	6	6	6	5	5	3	3
			Ae	0.016	0.016	0.011	0.011	0.006	0.006	0.006	0.004	0.004	0.002	0.002	0.002
	41	Hardened Cast Iron	SFM(Vc)	90	90	90	90	80	80	80	80	70	70	55	55
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.00004	.00004	.00004	.00004
			RPM	8500	8500	8500	8500	7650	7650	7650	7650	6800	6800	5100	5100
			IPM(FEED)	2	2	2	2	1.6	1.6	1.6	1.6	1.2	1.2	0.8	0.8
			Ae	0.013	0.013	0.009	0.009	0.005	0.005	0.005	0.003	0.003	0.002	0.002	0.001

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : mm (Radial Depth of Cut)



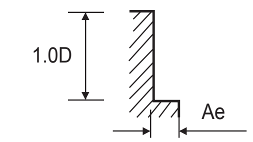
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS
RECOMMENDED CUTTING CONDITIONS

SEME73 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Parameter	Diameter (Ø)												
			1	1	1	1	1	1	1.2	1.2	1.2	1.2	1.2	1.2	1.2
		LBS	20	22	26	30	40	50	4	6	8	10	12	14	16
P	1-8	SFM(Vc)	135	70	70	70	25	25	240	240	215	215	215	195	195
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001
		RPM	13200	6600	6600	6600	2200	2200	19500	19500	17550	17550	17550	15600	15600
		IPM(FEED)	5	2	2	2	1	1	12	12	10	10	10	8	8
		Ae	0.002	0.002	0.002	0.002	0.002	0.002	0.018	0.018	0.01	0.006	0.006	0.006	0.004
	9	SFM(Vc)	85	40	40	40	15	15	150	150	135	135	135	120	120
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001
		RPM	8100	4050	4050	4050	1350	1350	12100	12100	10890	10890	10890	9680	9680
		IPM(FEED)	3	1	1	1	0	0	7	7	6	6	6	5	5
		Ae	0.002	0.002	0.002	0.002	0.002	0.002	0.013	0.013	0.008	0.005	0.005	0.005	0.003
	10-	SFM(Vc)	135	70	70	70	25	25	240	240	215	215	215	195	195
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001
		RPM	13200	6600	6600	6600	2200	2200	19500	19500	17550	17550	17550	15600	15600
		IPM(FEED)	5	2	2	2	1	1	12	12	10	10	10	8	8
		Ae	0.002	0.002	0.002	0.002	0.002	0.002	0.018	0.018	0.01	0.006	0.006	0.006	0.004
	11.1-11.2	SFM(Vc)	85	40	40	40	15	15	150	150	135	135	135	120	120
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001
		RPM	8100	4050	4050	4050	1350	1350	12100	12100	10890	10890	10890	9680	9680
		IPM(FEED)	3	1	1	1	0	0	7	7	6	6	6	5	5
		Ae	0.002	0.002	0.002	0.002	0.002	0.002	0.013	0.013	0.008	0.005	0.005	0.005	0.003
K	15-20	SFM(Vc)	135	70	70	70	25	25	240	240	215	215	215	195	195
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001
		RPM	13200	6600	6600	6600	2200	2200	19500	19500	17550	17550	17550	15600	15600
		IPM(FEED)	5	2	2	2	1	1	12	12	10	10	10	8	8
		Ae	0.002	0.002	0.002	0.002	0.002	0.002	0.018	0.018	0.01	0.006	0.006	0.006	0.004
H	38.1-38.2	SFM(Vc)	55	25	25	25	10	10	95	95	85	85	85	75	75
		IPT(fz)	.00004	.00004	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
		RPM	5100	2550	2550	2550	850	850	7500	7500	6750	6750	6750	6000	6000
		IPM(FEED)	0.8	0.4	0.4	0.4	0.2	0.2	2	2	1.6	1.6	1.6	1.2	1.2
		Ae	0.001	0.001	0.001	0.001	0.001	0.001	0.011	0.011	0.006	0.004	0.004	0.004	0.002
	40	SFM(Vc)	85	40	40	40	15	15	150	150	135	135	135	120	120
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0001	.0001	.0001	.0001	.0001
		RPM	8100	4050	4050	4050	1350	1350	12100	12100	10890	10890	10890	9680	9680
		IPM(FEED)	3	1	1	1	0	0	7	7	6	6	6	5	5
		Ae	0.002	0.002	0.002	0.002	0.002	0.002	0.013	0.013	0.008	0.005	0.005	0.005	0.003
	41	SFM(Vc)	55	25	25	25	10	10	95	95	85	85	85	75	75
		IPT(fz)	.00004	.00004	.00004	.00004	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
		RPM	5100	2550	2550	2550	850	850	7500	7500	6750	6750	6750	6000	6000
		IPM(FEED)	0.8	0.4	0.4	0.4	0.2	0.2	2	2	1.6	1.6	1.6	1.2	1.2
		Ae	0.001	0.001	0.001	0.001	0.001	0.001	0.011	0.011	0.006	0.004	0.004	0.004	0.002

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : mm (Radial Depth of Cut)



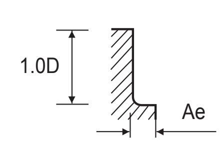
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME73 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 1.2	1.2	1.2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
			LBS	20	26	30	4	5	6	7	8	10	12	14	16
P	1-8	Non-alloy steel	SFM(Vc)	145	70	70	265	265	265	265	235	235	235	235	210
			IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	11700	5850	5850	17000	17000	17000	17000	15300	15300	15300	15300	13600
			IPM(FEED)	5	2	2	13	13	13	13	10	10	10	10	8
			Ae	0.003	0.003	0.003	0.032	0.022	0.022	0.022	0.013	0.013	0.013	0.008	0.008
	9	Low alloy steel	SFM(Vc)	90	45	45	165	165	165	165	150	150	150	150	130
			IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001
			RPM	7260	3630	3630	10700	10700	10700	10700	9630	9630	9630	9630	8560
			IPM(FEED)	3	1	1	8	8	8	8	6	6	6	6	5
			Ae	0.002	0.002	0.002	0.024	0.017	0.017	0.017	0.009	0.009	0.009	0.006	0.006
	10-	High alloyed steel, and tool steel	SFM(Vc)	145	70	70	265	265	265	265	235	235	235	235	210
			IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	11700	5850	5850	17000	17000	17000	17000	15300	15300	15300	15300	13600
			IPM(FEED)	5	2	2	13	13	13	13	10	10	10	10	8
			Ae	0.003	0.003	0.003	0.032	0.022	0.022	0.022	0.013	0.013	0.013	0.008	0.008
	11.1-11.2		SFM(Vc)	90	45	45	165	165	165	165	150	150	150	150	130
			IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001
			RPM	7260	3630	3630	10700	10700	10700	10700	9630	9630	9630	9630	8560
			IPM(FEED)	3	1	1	8	8	8	8	6	6	6	6	5
			Ae	0.002	0.002	0.002	0.024	0.017	0.017	0.017	0.009	0.009	0.009	0.006	0.006
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	145	70	70	265	265	265	265	235	235	235	235	210
			IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	11700	5850	5850	17000	17000	17000	17000	15300	15300	15300	15300	13600
			IPM(FEED)	5	2	2	13	13	13	13	10	10	10	10	8
			Ae	0.003	0.003	0.003	0.032	0.022	0.022	0.022	0.013	0.013	0.013	0.008	0.008
H	38.1-38.2	Hardened steel	SFM(Vc)	55	30	30	100	100	100	100	90	90	90	90	80
			IPT(fz)	.	.	.	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	4500	2250	2250	6500	6500	6500	6500	5850	5850	5850	5850	5200
			IPM(FEED)	0.8	0.4	0.4	2	2	2	2	1.6	1.6	1.6	1.6	1.2
			Ae	0.002	0.002	0.002	0.019	0.013	0.013	0.013	0.008	0.008	0.008	0.005	0.005
	40	Chilled Cast Iron	SFM(Vc)	90	45	45	165	165	165	165	150	150	150	150	130
			IPT(fz)	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001
			RPM	7260	3630	3630	10700	10700	10700	10700	9630	9630	9630	9630	8560
			IPM(FEED)	3	1	1	8	8	8	8	6	6	6	6	5
			Ae	0.002	0.002	0.002	0.024	0.017	0.017	0.017	0.009	0.009	0.009	0.006	0.006
	41	Hardened Cast Iron	SFM(Vc)	55	30	30	100	100	100	100	90	90	90	90	80
			IPT(fz)	.	.	.	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	4500	2250	2250	6500	6500	6500	6500	5850	5850	5850	5850	5200
			IPM(FEED)	0.8	0.4	0.4	2	2	2	2	1.6	1.6	1.6	1.6	1.2
			Ae	0.002	0.002	0.002	0.019	0.013	0.013	0.013	0.008	0.008	0.008	0.005	0.005

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : mm (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

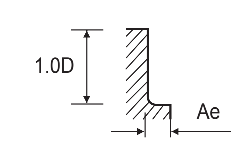
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME73 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 1.5	1.5	1.5	1.5	1.5	2	2	2	2	2	2	2	2
			LBS	18	20	22	26	30	6	8	10	12	16	18	20	22
P	1-8		SFM(Vc)	210	210	210	160	160	285	285	285	260	260	260	260	230
			IPT(fz)	.0002	.0002	.0002	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	13600	13600	13600	10200	10200	13900	13900	13900	12510	12510	12510	12510	11120
			IPM(FEED)	8	8	8	5	5	13	13	13	10	10	10	10	8
			Ae	0.008	0.005	0.005	0.003	0.003	0.042	0.029	0.029	0.017	0.017	0.011	0.011	0.011
	9		SFM(Vc)	130	130	130	100	100	185	185	185	170	170	170	170	150
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	8560	8560	8560	6420	6420	9070	9070	9070	8160	8160	8160	8160	7260
			IPM(FEED)	5	5	5	3	3	8	8	8	6	6	6	6	5
			Ae	0.006	0.004	0.004	0.002	0.002	0.032	0.022	0.022	0.013	0.013	0.008	0.008	0.008
	10-		SFM(Vc)	210	210	210	160	160	285	285	285	260	260	260	260	230
			IPT(fz)	.0002	.0002	.0002	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	13600	13600	13600	10200	10200	13900	13900	13900	12510	12510	12510	12510	11120
			IPM(FEED)	8	8	8	5	5	13	13	13	10	10	10	10	8
			Ae	0.008	0.005	0.005	0.003	0.003	0.042	0.029	0.029	0.017	0.017	0.011	0.011	0.011
	11.1-11.2		SFM(Vc)	130	130	130	100	100	185	185	185	170	170	170	170	150
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	8560	8560	8560	6420	6420	9070	9070	9070	8160	8160	8160	8160	7260
			IPM(FEED)	5	5	5	3	3	8	8	8	6	6	6	6	5
			Ae	0.006	0.004	0.004	0.002	0.002	0.032	0.022	0.022	0.013	0.013	0.008	0.008	0.008
K	15-20		SFM(Vc)	210	210	210	160	160	285	285	285	260	260	260	260	230
			IPT(fz)	.0002	.0002	.0002	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	13600	13600	13600	10200	10200	13900	13900	13900	12510	12510	12510	12510	11120
			IPM(FEED)	8	8	8	5	5	13	13	13	10	10	10	10	8
			Ae	0.008	0.005	0.005	0.003	0.003	0.042	0.029	0.029	0.017	0.017	0.011	0.011	0.011
H	38.1-38.2		SFM(Vc)	80	80	80	60	60	125	125	125	110	110	110	110	100
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	5200	5200	5200	3900	3900	6000	6000	6000	5400	5400	5400	5400	4800
			IPM(FEED)	1.2	1.2	1.2	0.8	0.8	2.4	2.4	2.4	2	2	2	2	1.6
			Ae	0.005	0.003	0.003	0.002	0.002	0.025	0.018	0.018	0.01	0.01	0.006	0.006	0.006
	40		SFM(Vc)	130	130	130	100	100	185	185	185	170	170	170	170	150
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	8560	8560	8560	6420	6420	9070	9070	9070	8160	8160	8160	8160	7260
			IPM(FEED)	5	5	5	3	3	8	8	8	6	6	6	6	5
			Ae	0.006	0.004	0.004	0.002	0.002	0.032	0.022	0.022	0.013	0.013	0.008	0.008	0.008
	41		SFM(Vc)	80	80	80	60	60	125	125	125	110	110	110	110	100
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	5200	5200	5200	3900	3900	6000	6000	6000	5400	5400	5400	5400	4800
			IPM(FEED)	1.2	1.2	1.2	0.8	0.8	2.4	2.4	2.4	2	2	2	2	1.6
			Ae	0.005	0.003	0.003	0.002	0.002	0.025	0.018	0.018	0.01	0.01	0.006	0.006	0.006

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : mm (Radial Depth of Cut)



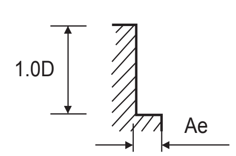
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME73 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)											
				2	2	2	2	2	2	2	2.5	2.5	2.5	2.5	2.5
			LBS	26	30	35	40	45	50	60	8	10	12	14	16
P	1-8	Non-alloy steel	SFM(Vc)	230	230	170	170	85	85	85	310	310	310	280	280
			IPT(fz)	.0002	.0002	.0002	.0002	.0001	.0001	.0001	.0003	.0003	.0003	.0003	.0003
			RPM	11120	11120	8340	8340	4170	4170	4170	12000	12000	12000	10800	10800
			IPM(FEED)	8	8	6	6	2	2	2	14	14	14	11	11
			Ae	0.011	0.006	0.004	0.004	0.004	0.004	0.004	0.037	0.037	0.037	0.021	0.021
	9	Low alloy steel	SFM(Vc)	150	150	110	110	55	55	55	195	195	195	175	175
			IPT(fz)	.0002	.0002	.0002	.0002	.0001	.0001	.0001	.0003	.0003	.0003	.0003	.0003
			RPM	7260	7260	5440	5440	2720	2720	2720	7600	7600	7600	6840	6840
			IPM(FEED)	5	5	3	3	1	1	1	9	9	9	7	7
			Ae	0.008	0.005	0.003	0.003	0.003	0.003	0.003	0.028	0.028	0.028	0.016	0.016
	10-	High alloyed steel, and tool steel	SFM(Vc)	230	230	170	170	85	85	85	310	310	310	280	280
			IPT(fz)	.0002	.0002	.0002	.0002	.0001	.0001	.0001	.0003	.0003	.0003	.0003	.0003
			RPM	11120	11120	8340	8340	4170	4170	4170	12000	12000	12000	10800	10800
			IPM(FEED)	8	8	6	6	2	2	2	14	14	14	11	11
			Ae	0.011	0.006	0.004	0.004	0.004	0.004	0.004	0.037	0.037	0.037	0.021	0.021
	11.1-11.2		SFM(Vc)	150	150	110	110	55	55	55	195	195	195	175	175
			IPT(fz)	.0002	.0002	.0002	.0002	.0001	.0001	.0001	.0003	.0003	.0003	.0003	.0003
			RPM	7260	7260	5440	5440	2720	2720	2720	7600	7600	7600	6840	6840
			IPM(FEED)	5	5	3	3	1	1	1	9	9	9	7	7
			Ae	0.008	0.005	0.003	0.003	0.003	0.003	0.003	0.028	0.028	0.028	0.016	0.016
K	15-20	Grey cast iron, Nodular cast iron, Malleable cast iron	SFM(Vc)	230	230	170	170	85	85	85	310	310	310	280	280
			IPT(fz)	.0002	.0002	.0002	.0002	.0001	.0001	.0001	.0003	.0003	.0003	.0003	.0003
			RPM	11120	11120	8340	8340	4170	4170	4170	12000	12000	12000	10800	10800
			IPM(FEED)	8	8	6	6	2	2	2	14	14	14	11	11
			Ae	0.011	0.006	0.004	0.004	0.004	0.004	0.004	0.037	0.037	0.037	0.021	0.021
H	38.1-38.2	Hardened steel	SFM(Vc)	100	100	75	75	35	35	35	115	115	115	105	105
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	4800	4800	3600	3600	1800	1800	1800	4500	4500	4500	4050	4050
			IPM(FEED)	1.6	1.6	1	1	0.4	0.4	0.4	2.4	2.4	2.4	2	2
			Ae	0.006	0.004	0.003	0.003	0.003	0.003	0.003	0.022	0.022	0.022	0.013	0.013
	40	Chilled Cast Iron	SFM(Vc)	150	150	110	110	55	55	55	195	195	195	175	175
			IPT(fz)	.0002	.0002	.0002	.0002	.0001	.0001	.0001	.0003	.0003	.0003	.0003	.0003
			RPM	7260	7260	5440	5440	2720	2720	2720	7600	7600	7600	6840	6840
			IPM(FEED)	5	5	3	3	1	1	1	9	9	9	7	7
			Ae	0.008	0.005	0.003	0.003	0.003	0.003	0.003	0.028	0.028	0.028	0.016	0.016
	41	Hardened Cast Iron	SFM(Vc)	100	100	75	75	35	35	35	115	115	115	105	105
			IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
			RPM	4800	4800	3600	3600	1800	1800	1800	4500	4500	4500	4050	4050
			IPM(FEED)	1.6	1.6	1	1	0.4	0.4	0.4	2.4	2.4	2.4	2	2
			Ae	0.006	0.004	0.003	0.003	0.003	0.003	0.003	0.022	0.022	0.022	0.013	0.013

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : mm (Radial Depth of Cut)



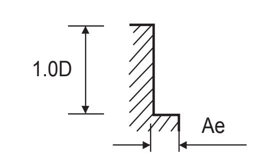
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME73 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Parameter	Diameter (Ø)												
			2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3	3	3	3
		LBS	18	20	22	26	30	35	40	45	50	6	8	10	12
P	1-8	SFM(Vc)	280	280	280	245	245	245	185	185	185	330	330	330	330
		IPT(fz)	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004
		RPM	10800	10800	10800	9600	9600	9600	7200	7200	7200	10700	10700	10700	10700
		IPM(FEED)	11	11	11	9	9	9	6	6	6	15	15	15	15
		Ae	0.021	0.021	0.013	0.013	0.013	0.008	0.008	0.005	0.005	0.063	0.063	0.044	0.044
	9	SFM(Vc)	175	175	175	155	155	155	115	115	115	205	205	205	205
		IPT(fz)	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004
		RPM	6840	6840	6840	6080	6080	6080	4560	4560	4560	6670	6670	6670	6670
		IPM(FEED)	7	7	7	6	6	6	4	4	4	9	9	9	9
		Ae	0.016	0.016	0.016	0.01	0.01	0.006	0.006	0.004	0.004	0.047	0.047	0.033	0.033
	10-	SFM(Vc)	280	280	280	245	245	245	185	185	185	330	330	330	330
		IPT(fz)	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004
		RPM	10800	10800	10800	9600	9600	9600	7200	7200	7200	10700	10700	10700	10700
		IPM(FEED)	11	11	11	9	9	9	6	6	6	15	15	15	15
		Ae	0.021	0.021	0.013	0.013	0.013	0.008	0.008	0.005	0.005	0.063	0.063	0.044	0.044
	11.1-11.2	SFM(Vc)	175	175	175	155	155	155	115	115	115	205	205	205	205
		IPT(fz)	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004
		RPM	6840	6840	6840	6080	6080	6080	4560	4560	4560	6670	6670	6670	6670
		IPM(FEED)	7	7	7	6	6	6	4	4	4	9	9	9	9
		Ae	0.016	0.016	0.01	0.01	0.01	0.006	0.006	0.004	0.004	0.047	0.047	0.033	0.033
K	15-20	SFM(Vc)	280	280	280	245	245	245	185	185	185	330	330	330	330
		IPT(fz)	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004
		RPM	10800	10800	10800	9600	9600	9600	7200	7200	7200	10700	10700	10700	10700
		IPM(FEED)	11	11	11	9	9	9	6	6	6	15	15	15	15
		Ae	.0008	.0008	.0005	.0005	.0005	.0003	.0003	.0002	.0002	.0025	.0025	.0017	.0017
H	38.1-38.2	SFM(Vc)	105	105	105	95	95	95	70	70	70	125	125	125	125
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002
		RPM	4050	4050	4050	3600	3600	3600	2700	2700	2700	4030	4030	4030	4030
		IPM(FEED)	2	2	2	1.6	1.6	1.6	1	1	1	2.8	2.8	2.8	2.8
		Ae	0.013	0.013	0.008	0.008	0.008	0.005	0.005	0.003	0.003	0.038	0.038	0.026	0.026
	40	SFM(Vc)	175	175	175	155	155	155	115	115	115	205	205	205	205
		IPT(fz)	.0003	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0002	.0004	.0004	.0004	.0004
		RPM	6840	6840	6840	6080	6080	6080	4560	4560	4560	6670	6670	6670	6670
		IPM(FEED)	7	7	7	6	6	6	4	4	4	9	9	9	9
		Ae	0.016	0.016	0.01	0.01	0.01	0.006	0.006	0.004	0.004	0.047	0.047	0.033	0.033
	41	SFM(Vc)	105	105	105	95	95	95	70	70	70	125	125	125	125
		IPT(fz)	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002
		RPM	4050	4050	4050	3600	3600	3600	2700	2700	2700	4030	4030	4030	4030
		IPM(FEED)	2	2	2	1.6	1.6	1.6	1	1	1	2.8	2.8	2.8	2.8
		Ae	0.013	0.013	0.008	0.008	0.008	0.005	0.005	0.003	0.003	0.038	0.038	0.026	0.026

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : mm (Radial Depth of Cut)



CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

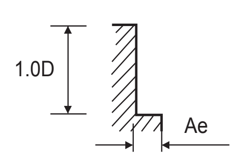
4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME73 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ap	Parameter	Diameter (Ø)											
					3	3	3	3	3	3	3	3	3	3	3	3
				LBS	14	16	18	20	22	26	30	35	40	45	50	60
P	1-8	Non-alloy steel	1.0D	SFM(Vc)	330	300	300	300	300	300	300	265	265	265	200	200
				IPT(fz)	.0004	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003
				RPM	10700	9630	9630	9630	9630	9630	9630	8560	8560	8560	6420	6420
				IPM(FEED)	15	12	12	12	12	12	12	10	10	10	6	6
				Ae	0.044	0.025	0.025	0.025	0.025	0.016	0.016	0.016	0.009	0.009	0.006	0.006
	9	Low alloy steel	1.0D	SFM(Vc)	205	185	185	185	185	185	185	165	165	165	125	125
				IPT(fz)	.0004	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0002
				RPM	6670	6000	6000	6000	6000	6000	6000	5340	5340	5340	4000	4000
				IPM(FEED)	9	8	8	8	8	8	8	6	6	6	4	4
				Ae	0.033	0.019	0.019	0.019	0.019	0.012	0.012	0.012	0.007	0.007	0.005	0.005
	10-	High alloyed steel, and tool steel	1.0D	SFM(Vc)	330	300	300	300	300	300	300	265	265	265	200	200
				IPT(fz)	.0004	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003
				RPM	10700	9630	9630	9630	9630	9630	9630	8560	8560	8560	6420	6420
				IPM(FEED)	15	12	12	12	12	12	12	10	10	10	6	6
				Ae	0.044	0.025	0.025	0.025	0.025	0.016	0.016	0.016	0.009	0.009	0.006	0.006
	11.1-11.2		1.0D	SFM(Vc)	205	185	185	185	185	185	185	165	165	165	125	125
				IPT(fz)	.0004	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0002
				RPM	6670	6000	6000	6000	6000	6000	6000	5340	5340	5340	4000	4000
				IPM(FEED)	9	8	8	8	8	8	8	6	6	6	4	4
				Ae	0.033	0.019	0.019	0.019	0.019	0.012	0.012	0.012	0.007	0.007	0.005	0.005
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	SFM(Vc)	330	300	300	300	300	300	300	265	265	265	200	200
				IPT(fz)	.0004	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003
				RPM	10700	9630	9630	9630	9630	9630	9630	8560	8560	8560	6420	6420
				IPM(FEED)	15	12	12	12	12	12	12	10	10	10	6	6
				Ae	.0017	.001	.001	.001	.001	.0006	.0006	.0006	.0004	.0004	.0002	.0002
H	38.1-38.2	Hardened steel	1.0D	SFM(Vc)	125	110	110	110	110	110	110	100	100	100	75	75
				IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0001	.0001	.0001	.0001
				RPM	4030	3630	3630	3630	3630	3630	3630	3220	3220	3220	2420	2420
				IPM(FEED)	2.8	2.2	2.2	2.2	2.2	2.2	2.2	1.8	1.8	1.8	1.2	1.2
				Ae	0.026	0.015	0.015	0.015	0.015	0.009	0.009	0.009	0.006	0.006	0.004	0.004
	40	Chilled Cast Iron	1.0D	SFM(Vc)	205	185	185	185	185	185	185	165	165	165	125	125
				IPT(fz)	.0004	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002	.0002
				RPM	6670	6000	6000	6000	6000	6000	6000	5340	5340	5340	4000	4000
				IPM(FEED)	9	8	8	8	8	8	8	6	6	6	4	4
				Ae	0.033	0.019	0.019	0.019	0.019	0.012	0.012	0.012	0.007	0.007	0.005	0.005
	41	Hardened Cast Iron	1.0D	SFM(Vc)	125	110	110	110	110	110	110	100	100	100	75	75
				IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0001	.0001	.0001	.0001
				RPM	4030	3630	3630	3630	3630	3630	3630	3220	3220	3220	2420	2420
				IPM(FEED)	2.8	2.2	2.2	2.2	2.2	2.2	2.2	1.8	1.8	1.8	1.2	1.2
				Ae	0.026	0.015	0.015	0.015	0.015	0.009	0.009	0.009	0.006	0.006	0.004	0.004

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : mm (Radial Depth of Cut)



CARBIDE
HSS

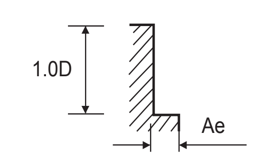
4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME73 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Ap	Parameter	Diameter (Ø)												
				4	4	4	4	4	4	4	4	4	4	4	4	4
			LBS	8	10	12	14	16	18	20	22	26	30	35	40	45
P	1-8	1.0D	SFM(Vc)	375	375	375	375	375	375	375	335	335	335	335	335	300
			IPT(fz)	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0006
			RPM	9070	9070	9070	9070	9070	9070	9070	8160	8160	8160	8160	8160	7260
			IPM(FEED)	27	27	27	27	27	27	27	22	22	22	22	22	17
			Ae	0.084	0.084	0.084	0.059	0.059	0.059	0.059	0.034	0.034	0.034	0.021	0.021	0.021
	9	1.0D	SFM(Vc)	230	230	230	230	230	230	230	205	205	205	205	205	185
			IPT(fz)	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0006
			RPM	5540	5540	5540	5540	5540	5540	5540	4990	4990	4990	4990	4990	4430
			IPM(FEED)	17	17	17	17	17	17	17	13	13	13	13	13	11
			Ae	0.063	0.063	0.063	0.044	0.044	0.044	0.044	0.025	0.025	0.025	0.016	0.016	0.016
	10-	1.0D	SFM(Vc)	375	375	375	375	375	375	375	335	335	335	335	335	300
			IPT(fz)	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0006
			RPM	9070	9070	9070	9070	9070	9070	9070	8160	8160	8160	8160	8160	7260
			IPM(FEED)	27	27	27	27	27	27	27	22	22	22	22	22	17
			Ae	0.084	0.084	0.084	0.059	0.059	0.059	0.059	0.034	0.034	0.034	0.021	0.021	0.021
	11.1-11.2	1.0D	SFM(Vc)	230	230	230	230	230	230	230	205	205	205	205	205	185
			IPT(fz)	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0006
			RPM	5540	5540	5540	5540	5540	5540	5540	4990	4990	4990	4990	4990	4430
			IPM(FEED)	17	17	17	17	17	17	17	13	13	13	13	13	11
			Ae	0.063	0.063	0.063	0.044	0.044	0.044	0.044	0.025	0.025	0.025	0.016	0.016	0.016
K	15-20	1.0D	SFM(Vc)	375	375	375	375	375	375	375	335	335	335	335	335	300
			IPT(fz)	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0006
			RPM	9070	9070	9070	9070	9070	9070	9070	8160	8160	8160	8160	8160	7260
			IPM(FEED)	27	27	27	27	27	27	27	22	22	22	22	22	17
			Ae	0.084	0.084	0.084	0.059	0.059	0.059	0.059	0.034	0.034	0.034	0.021	0.021	0.021
H	38.1-38.2	1.0D	SFM(Vc)	145	145	145	145	145	145	145	130	130	130	130	130	115
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	3530	3530	3530	3530	3530	3530	3530	3180	3180	3180	3180	3180	2820
			IPM(FEED)	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.2	2.2	2.2	2.2	2.2	1.8
			Ae	0.05	0.05	0.05	0.035	0.035	0.035	0.035	0.02	0.02	0.02	0.013	0.013	0.013
	40	1.0D	SFM(Vc)	230	230	230	230	230	230	230	205	205	205	205	205	185
			IPT(fz)	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0007	.0006
			RPM	5540	5540	5540	5540	5540	5540	5540	4990	4990	4990	4990	4990	4430
			IPM(FEED)	17	17	17	17	17	17	17	13	13	13	13	13	11
			Ae	0.063	0.063	0.063	0.044	0.044	0.044	0.044	0.025	0.025	0.025	0.016	0.016	0.016
	41	1.0D	SFM(Vc)	145	145	145	145	145	145	145	130	130	130	130	130	115
			IPT(fz)	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
			RPM	3530	3530	3530	3530	3530	3530	3530	3180	3180	3180	3180	3180	2820
			IPM(FEED)	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.2	2.2	2.2	2.2	2.2	1.8
			Ae	0.05	0.05	0.05	0.035	0.035	0.035	0.035	0.02	0.02	0.02	0.013	0.013	0.013

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : mm (Radial Depth of Cut)



CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

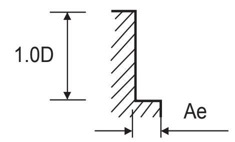
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME73 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ap	Parameter	Diameter (Ø)											
					4	4	5	5	5	5	5	5	5	5	6	6
				LBS	50	60	16	20	26	30	35	40	50	60	15	20
P	1-8	Non-alloy steel	1.0D	SFM(Vc)	300	300	390	390	350	350	350	350	350	310	410	410
				IPT(fz)	.0006	.0006	.0009	.0009	.0009	.0009	.0009	.0009	.0009	.0008	.0012	.0012
				RPM	7260	7260	7560	7560	6800	6800	6800	6800	6800	6050	6670	6670
				IPM(FEED)	17	17	28	28	23	23	23	23	23	18	31	31
				Ae	0.021	0.013	0.074	0.074	0.042	0.042	0.042	0.042	0.026	0.026	0.126	0.088
	9	Low alloy steel	1.0D	SFM(Vc)	185	185	235	235	210	210	210	210	210	185	250	250
				IPT(fz)	.0006	.0006	.0009	.0009	.0009	.0009	.0009	.0009	.0009	.0008	.0012	.0012
				RPM	4430	4430	4530	4530	4080	4080	4080	4080	4080	3620	4030	4030
				IPM(FEED)	11	11	17	17	14	14	14	14	14	11	19	19
				Ae	0.016	0.009	0.055	0.055	0.032	0.032	0.032	0.032	0.02	0.02	0.095	0.066
	10-	High alloyed steel, and tool steel	1.0D	SFM(Vc)	300	300	390	390	350	350	350	350	350	310	410	410
				IPT(fz)	.0006	.0006	.0009	.0009	.0009	.0009	.0009	.0009	.0009	.0008	.0012	.0012
				RPM	7260	7260	7560	7560	6800	6800	6800	6800	6800	6050	6670	6670
				IPM(FEED)	17	17	28	28	23	23	23	23	23	18	31	31
				Ae	0.021	0.013	0.074	0.074	0.042	0.042	0.042	0.042	0.026	0.026	0.126	0.088
	11.1-11.2		1.0D	SFM(Vc)	185	185	235	235	210	210	210	210	210	185	250	250
				IPT(fz)	.0006	.0006	.0009	.0009	.0009	.0009	.0009	.0009	.0009	.0008	.0012	.0012
				RPM	4430	4430	4530	4530	4080	4080	4080	4080	4080	3620	4030	4030
				IPM(FEED)	11	11	17	17	14	14	14	14	14	11	19	19
				Ae	0.016	0.009	0.055	0.055	0.032	0.032	0.032	0.032	0.02	0.02	0.095	0.066
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	SFM(Vc)	300	300	390	390	350	350	350	350	350	310	410	410
				IPT(fz)	.0006	.0006	.0009	.0009	.0009	.0009	.0009	.0009	.0009	.0008	.0012	.0012
				RPM	7260	7260	7560	7560	6800	6800	6800	6800	6800	6050	6670	6670
				IPM(FEED)	17	17	28	28	23	23	23	23	23	18	31	31
				Ae	0.021	0.013	0.074	0.074	0.042	0.042	0.042	0.042	0.026	0.026	0.126	0.088
H	38.1-38.2	Hardened steel	1.0D	SFM(Vc)	115	115	145	145	130	130	130	130	130	115	150	150
				IPT(fz)	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0004
				RPM	2820	2820	2780	2780	2500	2500	2500	2500	2500	2220	2400	2400
				IPM(FEED)	1.8	1.8	3.3	3.3	2.8	2.8	2.8	2.8	2.8	2.2	3.7	3.7
				Ae	0.013	0.008	0.044	0.044	0.025	0.025	0.025	0.025	0.016	0.016	0.076	0.053
	40	Chilled Cast Iron	1.0D	SFM(Vc)	185	185	235	235	210	210	210	210	210	185	250	250
				IPT(fz)	.0006	.0006	.0009	.0009	.0009	.0009	.0009	.0009	.0009	.0008	.0012	.0012
				RPM	4430	4430	4530	4530	4080	4080	4080	4080	4080	3620	4030	4030
				IPM(FEED)	11	11	17	17	14	14	14	14	14	11	19	19
				Ae	0.016	0.009	0.055	0.055	0.032	0.032	0.032	0.032	0.02	0.02	0.095	0.066
	41	Hardened Cast Iron	1.0D	SFM(Vc)	115	115	145	145	130	130	130	130	130	115	150	150
				IPT(fz)	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0004	.0004
				RPM	2820	2820	2780	2780	2500	2500	2500	2500	2500	2220	2400	2400
				IPM(FEED)	1.8	1.8	3.3	3.3	2.8	2.8	2.8	2.8	2.8	2.2	3.7	3.7
				Ae	0.013	0.008	0.044	0.044	0.025	0.025	0.025	0.025	0.016	0.016	0.076	0.053

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : mm (Radial Depth of Cut)



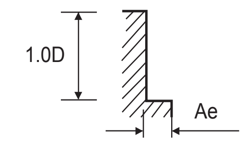
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME73 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Ap	Parameter	Diameter (Ø)										
				6	6	8	8	8	10	10	10	12	12	12
			LBS	30	32	25	30	42	30	35	45	35	40	50
P	1-8	1.0D	SFM(Vc)	410	370	415	415	375	405	405	405	410	410	410
			IPT(fz)	.0012	.0011	.0017	.0017	.0015	.0018	.0018	.0018	.0019	.0019	.0019
			RPM	6670	6000	5040	5040	4540	3910	3910	3910	3300	3300	3300
			IPM(FEED)	31	25	34	34	27	29	29	29	24	24	24
			Ae	0.088	0.05	0.118	0.118	0.067	0.21	0.147	0.147	0.252	0.176	0.176
	9	1.0D	SFM(Vc)	250	225	250	250	225	245	245	245	250	250	250
			IPT(fz)	.0012	.0011	.0015	.0015	.0013	.0015	.0015	.0015	.0015	.0015	.0015
			RPM	4030	3630	3020	3020	2720	2400	2400	2400	2010	2010	2010
			IPM(FEED)	19	16	18	18	14	14	14	14	12	12	12
			Ae	0.066	0.038	0.088	0.088	0.05	0.158	0.11	0.11	0.189	0.132	0.132
	10-	1.0D	SFM(Vc)	410	370	415	415	375	405	405	405	410	410	410
			IPT(fz)	.0012	.0011	.0017	.0017	.0015	.0018	.0018	.0018	.0019	.0019	.0019
			RPM	6670	6000	5040	5040	4540	3910	3910	3910	3300	3300	3300
			IPM(FEED)	31	25	34	34	27	29	29	29	24	24	24
			Ae	0.088	0.05	0.118	0.118	0.067	0.21	0.147	0.147	0.252	0.176	0.176
	11.1-11.2	1.0D	SFM(Vc)	250	225	250	250	225	245	245	245	250	250	250
			IPT(fz)	.0012	.0011	.0015	.0015	.0013	.0015	.0015	.0015	.0015	.0015	.0015
			RPM	4030	3630	3020	3020	2720	2400	2400	2400	2010	2010	2010
			IPM(FEED)	19	16	18	18	14	14	14	14	12	12	12
			Ae	0.066	0.038	0.088	0.088	0.05	0.158	0.11	0.11	0.189	0.132	0.132
K	15-20	1.0D	SFM(Vc)	410	370	415	415	375	405	405	405	410	410	410
			IPT(fz)	.0012	.0011	.0017	.0017	.0015	.0018	.0018	.0018	.0019	.0019	.0019
			RPM	6670	6000	5040	5040	4540	3910	3910	3910	3300	3300	3300
			IPM(FEED)	31	25	34	34	27	29	29	29	24	24	24
			Ae	0.088	0.05	0.118	0.118	0.067	0.21	0.147	0.147	0.252	0.176	0.176
H	38.1-38.2	1.0D	SFM(Vc)	150	135	165	165	150	170	170	170	175	175	175
			IPT(fz)	.0004	.0004	.0006	.0006	.0006	.0006	.0006	.0006	.0007	.0007	.0007
			RPM	2400	2160	2010	2010	1810	1630	1630	1630	1400	1400	1400
			IPM(FEED)	3.7	3	5.1	5.1	4.1	4.1	4.1	4.1	3.7	3.7	3.7
			Ae	0.053	0.03	0.071	0.071	0.04	0.126	0.088	0.088	0.151	0.106	0.106
	40	1.0D	SFM(Vc)	250	225	250	250	225	245	245	245	250	250	250
			IPT(fz)	.0012	.0011	.0015	.0015	.0013	.0015	.0015	.0015	.0015	.0015	.0015
			RPM	4030	3630	3020	3020	2720	2400	2400	2400	2010	2010	2010
			IPM(FEED)	19	16	18	18	14	14	14	14	12	12	12
			Ae	0.066	0.038	0.088	0.088	0.05	0.158	0.11	0.11	0.189	0.132	0.132
	41	1.0D	SFM(Vc)	150	135	165	165	150	170	170	170	175	175	175
			IPT(fz)	.0004	.0004	.0006	.0006	.0006	.0006	.0006	.0006	.0007	.0007	.0007
			RPM	2400	2160	2010	2010	1810	1630	1630	1630	1400	1400	1400
			IPM(FEED)	3.7	3	5.1	5.1	4.1	4.1	4.1	4.1	3.7	3.7	3.7
			Ae	0.053	0.03	0.071	0.071	0.04	0.126	0.088	0.088	0.151	0.106	0.106

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : mm (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

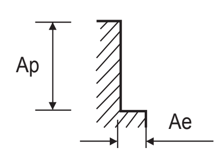
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME75 SERIES 6FLUTE 45˚ HELIX - SIDE CUTTING (NORMAL)

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)										
						6	6	6	8	8	8	8	10	10	10	10
					LOC	15	20	30	20	30	35	40	25	30	40	50
P	1-8	Non-alloy steel	0.1D	1.5D	SFM(Vc)	360	360	360	365	365	365	365	365	365	365	365
					IPT(fz)	.0024	.0024	.002	.0031	.0031	.0031	.0027	.0039	.0039	.0039	.0033
					RPM	5840	5840	5840	4410	4410	4410	4410	3530	3530	3530	3530
					IPM(FEED)	83	83	70	83	83	83	70	83	83	83	70
	9	Low alloy steel	0.05D	1.5D	SFM(Vc)	250	250	250	255	255	255	255	250	250	250	250
					IPT(fz)	.0023	.0023	.002	.0031	.0031	.0031	.0026	.0039	.0039	.0039	.0033
					RPM	4075	4075	4075	3085	3085	3085	3085	2435	2435	2435	2435
					IPM(FEED)	57	57	48	57	57	57	48	57	57	57	48
	10-	High alloyed steel, and tool steel	0.1D	1.5D	SFM(Vc)	360	360	360	365	365	365	365	365	365	365	365
					IPT(fz)	.0024	.0024	.002	.0031	.0031	.0031	.0027	.0039	.0039	.0039	.0033
					RPM	5840	5840	5840	4410	4410	4410	4410	3530	3530	3530	3530
					IPM(FEED)	83	83	70	83	83	83	70	83	83	83	70
	11.1-11.2		0.05D	1.5D	SFM(Vc)	250	250	250	255	255	255	255	250	250	250	250
					IPT(fz)	.0023	.0023	.002	.0031	.0031	.0031	.0026	.0039	.0039	.0039	.0033
					RPM	4075	4075	4075	3085	3085	3085	3085	2435	2435	2435	2435
					IPM(FEED)	57	57	48	57	57	57	48	57	57	57	48
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.1D	1.5D	SFM(Vc)	360	360	360	365	365	365	365	365	365	365	365
					IPT(fz)	.0024	.0024	.002	.0031	.0031	.0031	.0027	.0039	.0039	.0039	.0033
					RPM	5840	5840	5840	4410	4410	4410	4410	3530	3530	3530	3530
					IPM(FEED)	83	83	70	83	83	83	70	83	83	83	70
H	38.1-38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	105	105	105	100	100	100	100	110	110	110	110
					IPT(fz)	.0009	.0009	.0008	.0012	.0012	.0012	.001	.0014	.0014	.0014	.0012
					RPM	1660	1660	1660	1220	1220	1220	1220	1050	1050	1050	1050
					IPM(FEED)	9	9	8	9	9	9	8	9	9	9	8
	40	Chilled Cast Iron	0.05D	1.5D	SFM(Vc)	250	250	250	255	255	255	255	250	250	250	250
					IPT(fz)	.0023	.0023	.002	.0031	.0031	.0031	.0026	.0039	.0039	.0039	.0033
					RPM	4075	4075	4075	3085	3085	3085	3085	2435	2435	2435	2435
					IPM(FEED)	57	57	48	57	57	57	48	57	57	57	48
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	105	105	105	100	100	100	100	110	110	110	110
					IPT(fz)	.0009	.0009	.0008	.0012	.0012	.0012	.001	.0014	.0014	.0014	.0012
					RPM	1660	1660	1660	1220	1220	1220	1220	1050	1050	1050	1050
					IPM(FEED)	9	9	8	9	9	9	8	9	9	9	8

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



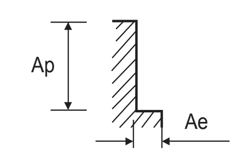
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME75 SERIES 6FLUTE 45˚ HELIX - SIDE CUTTING (NORMAL)

ISO	VDI 3323	Ae	Ap	Parameter	Diameter (Ø)												
					12	12	12	12	16	16	16	16	16	20	20	20	20
				LOC	30	40	50	60	40	50	60	90	110	45	60	70	110
P	1-8	0.1D	1.5D	SFM(Vc)	370	370	370	370	365	365	365	325	325	365	365	365	325
				IPT(fz)	.0039	.0039	.0033	.0029	.004	.004	.0034	.003	.003	.0039	.0039	.0034	.003
				RPM	2980	2980	2980	2980	2205	2205	2205	1985	1985	1765	1765	1765	1585
				IPM(FEED)	70	70	59	52	52	52	44	35	35	42	42	36	28
	9	0.05D	1.5D	SFM(Vc)	260	260	260	260	255	255	255	230	230	250	250	250	225
				IPT(fz)	.0038	.0038	.0032	.0029	.0039	.0039	.0033	.0029	.0029	.0039	.0039	.0033	.003
				RPM	2100	2100	2100	2100	1555	1555	1555	1395	1395	1220	1220	1220	1090
				IPM(FEED)	48	48	41	36	36	36	31	25	25	29	29	24	19
	10-	0.1D	1.5D	SFM(Vc)	370	370	370	370	365	365	365	325	325	365	365	365	325
				IPT(fz)	.0039	.0039	.0033	.0029	.004	.004	.0034	.003	.003	.0039	.0039	.0034	.003
				RPM	2980	2980	2980	2980	2205	2205	2205	1985	1985	1765	1765	1765	1585
				IPM(FEED)	70	70	59	52	52	52	44	35	35	42	42	36	28
	11.1-11.2	0.05D	1.5D	SFM(Vc)	260	260	260	260	255	255	255	230	230	250	250	250	225
				IPT(fz)	.0038	.0038	.0032	.0029	.0039	.0039	.0033	.0029	.0029	.0039	.0039	.0033	.003
				RPM	2100	2100	2100	2100	1555	1555	1555	1395	1395	1220	1220	1220	1090
				IPM(FEED)	48	48	41	36	36	36	31	25	25	29	29	24	19
K	15-20	0.1D	1.5D	SFM(Vc)	370	370	370	370	365	365	365	325	325	365	365	365	325
				IPT(fz)	.0039	.0039	.0033	.0029	.004	.004	.0034	.003	.003	.0039	.0039	.0034	.003
				RPM	2980	2980	2980	2980	2205	2205	2205	1985	1985	1765	1765	1765	1585
				IPM(FEED)	70	70	59	52	52	52	44	35	35	42	42	36	28
H	38.1-38.2	0.05D	1.0D	SFM(Vc)	110	110	110	110	110	110	110	100	100	110	110	110	100
				IPT(fz)	.0014	.0014	.0012	.001	.0013	.0013	.0011	.001	.001	.0014	.0014	.0012	.0011
				RPM	880	880	880	880	670	670	670	610	610	525	525	525	475
				IPM(FEED)	8	8	7	6	5	5	5	4	4	5	5	4	3
	40	0.05D	1.5D	SFM(Vc)	260	260	260	260	255	255	255	230	230	250	250	250	225
				IPT(fz)	.0038	.0038	.0032	.0029	.0039	.0039	.0033	.0029	.0029	.0039	.0039	.0033	.003
				RPM	2100	2100	2100	2100	1555	1555	1555	1395	1395	1220	1220	1220	1090
				IPM(FEED)	48	48	41	36	36	36	31	25	25	29	29	24	19
	41	0.05D	1.0D	SFM(Vc)	110	110	110	110	110	110	110	100	100	110	110	110	100
				IPT(fz)	.0014	.0014	.0012	.001	.0013	.0013	.0011	.001	.001	.0014	.0014	.0012	.0011
				RPM	880	880	880	880	670	670	670	610	610	525	525	525	475
				IPM(FEED)	8	8	7	6	5	5	5	4	4	5	5	4	3

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

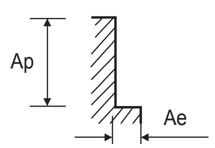
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME75 SERIES 6FLUTE 45˚ HELIX - SIDE CUTTING (HIGH SPEED)

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)											
						6	6	6	8	8	8	8	10	10	10	10	12
					LOC	15	20	30	20	30	35	40	25	30	40	50	30
P	9	Non-alloy steel	0.05D	1.5D	SFM(Vc)	1090	1090	1090	1090	1090	1090	1090	1080	1080	1080	1080	1090
					IPT(fz)	.0024	.0024	.002	.0032	.0032	.0032	.0027	.0039	.0039	.0039	.0034	.0039
					RPM	17640	17640	17640	13230	13230	13230	13230	10480	10480	10480	10480	8820
					IPM(FEED)	252	252	214	252	252	252	214	248	248	248	210	208
	11.1-11.2	High alloyed steel, and tool steel	0.05D	1.5D	SFM(Vc)	1090	1090	1090	1090	1090	1090	1090	1080	1080	1080	1080	1090
					IPT(fz)	.0024	.0024	.002	.0032	.0032	.0032	.0027	.0039	.0039	.0039	.0034	.0039
					RPM	17640	17640	17640	13230	13230	13230	13230	10480	10480	10480	10480	8820
					IPM(FEED)	252	252	214	252	252	252	214	248	248	248	210	208
H	38.1-38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	545	545	545	545	545	545	545	545	545	545	545	545
					IPT(fz)	.0024	.0024	.002	.0032	.0032	.0032	.0027	.004	.004	.004	.0034	.0039
					RPM	8820	8820	8820	6615	6615	6615	6615	5290	5290	5290	5290	4410
					IPM(FEED)	126	126	107	126	126	126	107	126	126	126	107	104
	40	Chilled Cast Iron	0.05D	1.5D	SFM(Vc)	1090	1090	1090	1090	1090	1090	1090	1080	1080	1080	1080	1090
					IPT(fz)	.0024	.0024	.002	.0032	.0032	.0032	.0027	.0039	.0039	.0039	.0034	.0039
					RPM	17640	17640	17640	13230	13230	13230	13230	10480	10480	10480	10480	8820
					IPM(FEED)	252	252	214	252	252	252	214	248	248	248	210	208
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	545	545	545	545	545	545	545	545	545	545	545	545
					IPT(fz)	.0024	.0024	.002	.0032	.0032	.0032	.0027	.004	.004	.004	.0034	.0039
					RPM	8820	8820	8820	6615	6615	6615	6615	5290	5290	5290	5290	4410
					IPM(FEED)	126	126	107	126	126	126	107	126	126	126	107	104

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



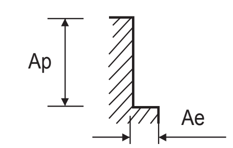
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

SEME75 SERIES 6FLUTE 45˚ HELIX - SIDE CUTTING (HIGH SPEED)

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)											
						12	12	12	16	16	16	16	16	20	20	20	20
					LOC	40	50	60	40	50	60	90	110	45	60	70	110
P	9	Non-alloy steel	0.05D	1.5D	SFM(Vc)	1090	1090	1090	1090	1090	1090	980	980	1090	1090	1090	980
					IPT(fz)	.0039	.0034	.003	.0039	.0039	.0034	.003	.003	.004	.004	.0034	.003
					RPM	8820	8820	8820	6615	6615	6615	5955	5955	5290	5290	5290	4765
					IPM(FEED)	208	177	156	156	156	133	106	106	126	126	107	85
	11.1-11.2	High alloyed steel, and tool steel	0.05D	1.5D	SFM(Vc)	1090	1090	1090	1090	1090	1090	980	980	1090	1090	1090	980
					IPT(fz)	.0039	.0034	.003	.0039	.0039	.0034	.003	.003	.004	.004	.0034	.003
					RPM	8820	8820	8820	6615	6615	6615	5955	5955	5290	5290	5290	4765
					IPM(FEED)	208	177	156	156	156	133	106	106	126	126	107	85
H	38.1-38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	545	545	545	545	545	545	490	490	545	545	545	490
					IPT(fz)	.0039	.0033	.003	.0039	.0039	.0033	.003	.003	.0038	.0038	.0033	.0029
					RPM	4410	4410	4410	3320	3320	3320	2980	2980	2645	2645	2645	2385
					IPM(FEED)	104	88	78	78	78	66	53	53	61	61	52	41
	40	Chilled Cast Iron	0.05D	1.5D	SFM(Vc)	1090	1090	1090	1090	1090	1090	980	980	1090	1090	1090	980
					IPT(fz)	.0039	.0034	.003	.0039	.0039	.0034	.003	.003	.004	.004	.0034	.003
					RPM	8820	8820	8820	6615	6615	6615	5955	5955	5290	5290	5290	4765
					IPM(FEED)	208	177	156	156	156	133	106	106	126	126	107	85
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	545	545	545	545	545	545	490	490	545	545	545	490
					IPT(fz)	.0039	.0033	.003	.0039	.0039	.0033	.003	.003	.0038	.0038	.0033	.0029
					RPM	4410	4410	4410	3320	3320	3320	2980	2980	2645	2645	2645	2385
					IPM(FEED)	104	88	78	78	78	66	53	53	61	61	52	41

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

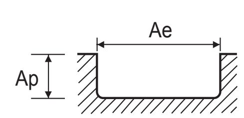
RECOMMENDED CUTTING CONDITIONS

G9D75, G9D67, G9D76, G9D68, G9D77, G9D69 SERIES

4&5FLUTE MULTIPLE HELIX CORNER RADIUS - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6	8	10	12	16	20
P	1-2	Non-alloy steel	0.5D	1.0D	SFM(Vc)	740	740	740	740	740	740
					IPT(fz)	.0013	.0018	.0023	.0025	.0026	.0029
					RPM	12000	9000	7200	6000	4500	3600
					IPM(FEED)	61	65	65	61	59	52
	3-5	Low alloy steel	0.35D	1.0D	SFM(Vc)	655	670	660	670	675	660
					IPT(fz)	.0006	.0008	.001	.0012	.0013	.0016
					RPM	10600	8100	6400	5400	4100	3200
					IPM(FEED)	26	26	26	26	27	26
	6		0.5D	1.0D	SFM(Vc)	740	740	740	740	740	740
					IPT(fz)	.0013	.0018	.0023	.0025	.0026	.0029
					RPM	12000	9000	7200	6000	4500	3600
					IPM(FEED)	61	65	65	61	59	52
	7-9		0.35D	1.0D	SFM(Vc)	655	670	660	670	675	660
					IPT(fz)	.0006	.0008	.001	.0012	.0013	.0016
					RPM	10600	8100	6400	5400	4100	3200
					IPM(FEED)	26	26	26	26	27	26
	10	High alloyed steel, and tool steel	0.5D	1.0D	SFM(Vc)	740	740	740	740	740	740
					IPT(fz)	.0013	.0018	.0023	.0025	.0026	.0029
					RPM	12000	9000	7200	6000	4500	3600
					IPM(FEED)	61	65	65	61	59	52
	11.1		0.35D	1.0D	SFM(Vc)	655	670	660	670	675	660
					IPT(fz)	.0006	.0008	.001	.0012	.0013	.0016
					RPM	10600	8100	6400	5400	4100	3200
					IPM(FEED)	26	26	26	26	27	26
K	15	Stainless steel	0.5D	1.0D	SFM(Vc)	740	740	740	740	740	740
					IPT(fz)	.0013	.0018	.0023	.0025	.0026	.0029
					RPM	12000	9000	7200	6000	4500	3600
					IPM(FEED)	61	65	65	61	59	52
	16	Grey cast iron Nodular cast iron Malleable cast iron	0.35D	1.0D	SFM(Vc)	655	670	660	670	675	660
					IPT(fz)	.0006	.0008	.001	.0012	.0013	.0016
					RPM	10600	8100	6400	5400	4100	3200
					IPM(FEED)	26	26	26	26	27	26
	17	Hardened steel	0.5D	1.0D	SFM(Vc)	740	740	740	740	740	740
					IPT(fz)	.0013	.0018	.0023	.0025	.0026	.0029
					RPM	12000	9000	7200	6000	4500	3600
					IPM(FEED)	61	65	65	61	59	52
	18	Chilled Cast Iron	0.35D	1.0D	SFM(Vc)	655	670	660	670	675	660
					IPT(fz)	.0006	.0008	.001	.0012	.0013	.0016
					RPM	10600	8100	6400	5400	4100	3200
					IPM(FEED)	26	26	26	26	27	26
	19-20	Hardened Cast Iron	0.5D	1.0D	SFM(Vc)	740	740	740	740	740	740
					IPT(fz)	.0013	.0018	.0023	.0025	.0026	.0029
					RPM	12000	9000	7200	6000	4500	3600
					IPM(FEED)	61	65	65	61	59	52

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
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STANDARD COBALT & HSS
TECHNICAL DATA

YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS

G9D75, G9D67, G9D76, G9D68, G9D77, G9D69 SERIES

4&5FLUTE MULTIPLE HELIX CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6	8	10	12	16	20
P	1-2	Non-alloy steel	0.5D	1.0D	SFM(Vc)	975	980	980	990	990	990
					IPT(fz)	.0016	.0022	.0028	.0032	.0032	.0035
					RPM	15800	11900	9500	8000	6000	4800
					IPM(FEED)	101	106	106	101	97	84
	3-5		0.35D	1.0D	SFM(Vc)	885	880	875	880	890	885
					IPT(fz)	.0013	.0018	.0023	.0026	.0026	.0028
					RPM	14300	10700	8500	7100	5400	4300
					IPM(FEED)	73	77	77	73	69	59
	6	Low alloy steel	0.5D	1.0D	SFM(Vc)	975	980	980	990	990	990
					IPT(fz)	.0016	.0022	.0028	.0032	.0032	.0035
					RPM	15800	11900	9500	8000	6000	4800
					IPM(FEED)	101	106	106	101	97	84
	7-9		0.35D	1.0D	SFM(Vc)	885	880	875	880	890	885
					IPT(fz)	.0013	.0018	.0023	.0026	.0026	.0028
					RPM	14300	10700	8500	7100	5400	4300
					IPM(FEED)	73	77	77	73	69	59
	10	High alloyed steel, and tool steel	0.5D	1.0D	SFM(Vc)	975	980	980	990	990	990
					IPT(fz)	15800	11900	9500	8000	6000	4800
					RPM	.0016	.0022	.0028	.0032	.0032	.0035
					IPM(FEED)	101.2	106.3	106.3	101.2	96.5	84.3
	11.1		0.35D	1.0D	SFM(Vc)	885	880	875	880	890	885
					IPT(fz)	.0013	.0018	.0023	.0026	.0026	.0028
					RPM	14300	10700	8500	7100	5400	4300
					IPM(FEED)	73	77	77	73	69	59
K	15	Grey cast iron	0.5D	1.0D	SFM(Vc)	975	980	980	990	990	990
					IPT(fz)	.0016	.0022	.0028	.0032	.0032	.0035
					RPM	15800	11900	9500	8000	6000	4800
					IPM(FEED)	101	106	106	101	97	84
	16		0.35D	1.0D	SFM(Vc)	885	880	875	880	890	885
					IPT(fz)	.0013	.0018	.0023	.0026	.0026	.0028
					RPM	14300	10700	8500	7100	5400	4300
					IPM(FEED)	73	77	77	73	69	59
	17	Nodular cast iron	0.5D	1.0D	SFM(Vc)	975	980	980	990	990	990
					IPT(fz)	.0016	.0022	.0028	.0032	.0032	.0035
					RPM	15800	11900	9500	8000	6000	4800
					IPM(FEED)	101	106	106	101	97	84
	18		0.35D	1.0D	SFM(Vc)	885	880	875	880	890	885
					IPT(fz)	.0013	.0018	.0023	.0026	.0026	.0028
					RPM	14300	10700	8500	7100	5400	4300
					IPM(FEED)	73	77	77	73	69	59
	19-20	Malleable cast iron	0.5D	1.0D	SFM(Vc)	975	980	980	990	990	990
					IPT(fz)	.0016	.0022	.0028	.0032	.0032	.0035
					RPM	15800	11900	9500	8000	6000	4800
					IPM(FEED)	101	106	106	101	97	84

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
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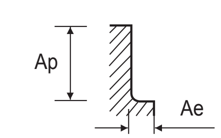
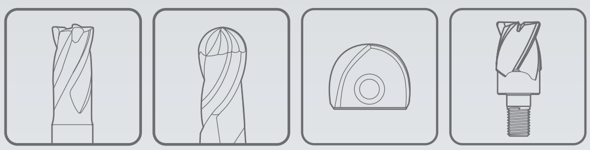


Global Cutting Tool Leader **YG-1**



MILLING

CARBIDE

X-POWER PRO END MILLS

- for Pre-Hardened Steels up to HRc55, Mold & Die, Dry & Wet Cutting

SELECTION GUIDE

MILLING TOOLS

SOLID CARBIDE

X-POWER PRO END MILLS

for Pre-Hardened Steels up to HRc55, Mold & Die, Dry & Wet Cutting

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p. C431

							Inch				
						SERIES	GM153	GM207	GM639	GM649	GM212
						FLUTE	4	4	4	4	4
						HELIX ANGLE	30°	30°	30°	30°	30°
						CUTTING EDGE SHAPE	SQUARE	SQUARE	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS
						SIZE MIN	D1/16	D1/8	D1/16	D1/16	D1/4
						SIZE MAX	D1"	D1"	D1/2	D1/2	D1/2
						PAGE	C396	C397	C398	C399	C400
							REGULAR LENGTH	LONG LENGTH	STUB LENGTH	REGULAR LENGTH	LONG LENGTH
							Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating
ISO	**VDI 3323**	**Material Description**	**Composition / Structure / Heat Treatment**		**HB**	**HRc**					
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○	○	○	○	○
	2		About 0.45% C	Annealed	190	13	○	○	○	○	○
	3		About 0.45% C	Quenched & Tempered	250	25	◎	◎	◎	◎	◎
	4		About 0.75% C	Annealed	270	28	◎	◎	◎	◎	◎
	5		About 0.75% C	Quenched & Tempered	300	32	◎	◎	◎	◎	◎
	6	Low alloy steel		Annealed	180	10	○	○	○	○	○
	7			Quenched & Tempered	275	29	◎	◎	◎	◎	◎
	8			Quenched & Tempered	300	32	◎	◎	◎	◎	◎
	9			Quenched & Tempered	350	38	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel		Annealed	200	15	○	○	○	○	○
	11			Quenched & Tempered	325	35	◎	◎	◎	◎	◎
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○				
	13		Martensitic	Quenched & Tempered	240	23	○				
	14		Austenitic		180	10	○				
K	15	Grey cast iron	Pearlitic / ferritic		180	10					
	16		Pearlitic (Martensitic)		260	26					
	17	Nodular cast iron	Ferritic		160	3					
	18		Pearlitic		250	25					
	19	Malleable cast iron	Ferritic		130						
	20		Pearlitic		230	21					
N	21	Aluminum-wrought alloy	Not Curable		60						
	22		Curable	Hardened	100						
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75						
	24		≤ 12% Si, Curable	Hardened	90						
	25		> 12% Si, Not Curable		130						
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110						
	27		CuZn, CuSnZn (Brass)		90						
	28		CuSn, lead-free copper and electrolytic copper		100						
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic								
	30		Rubber, Wood, etc.								
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15					
	32			Cured	280	30					
	33		Ni or Co Based	Annealed	250	25					
	34			Cured	350	38					
	35			Cast	320	34					
	36	Titanium Alloys	Pure Titanium		400 Rm						
	37		Alpha + Beta Alloys	Hardened	1050 Rm						
H	38	Hardened steel		Hardened	550	55	○	○	○	○	○
	39			Hardened	630	60					
	40	Chilled Cast Iron		Cast	400	42	◎	◎	◎	◎	◎
	41	Hardened Cast Iron		Hardened	550	55	○	○	○	○	○

YG-1 CO., LTD.

Inch														
	GM103	GM208	GM218	GM668	GM209	GM210	GM961	GM960	GM109	GM963	GM666	GM156	GM967	
	4	6&8	6&8	6&8	2	4	2	2	2	2	3~5	3~5	2	
	45°	45°	45°	45°	30°	30°	30°	30°	15°	30°	20°	20°	30°	
	CORNER RADIUS	SQUARE	SQUARE	CORNER RADIUS	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	ROUGHING	ROUGHING	BALL NOSE	
	D3/8	D1/4	D1/4	D1/4	R1/64	R1/16	R1/16	R.012	R1/64	R1/32	D1/4	D1/4	R1/64	
	D7/8	D1"	D1"	D3/4	R3/8	R3/8	R1/2	R.031	R1/4	R3/16	D1"	D1"	R1/16	
	C401	C402		C403	C404	C405	C406	C407	C408	C409	C410		C411	
	LONG REACH	LONG LENGTH	EXTRA LONG LENGTH	LONG LENGTH	LONG LENGTH	LONG LENGTH	MEDIUM LENGTH	MINIATURE	STUB CUT LENGTH	TAPER NECK	STUB LENGTH FINE PITCH	LONG LENGTH FINE PITCH	RIB PROCESSING	
	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	
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SELECTION GUIDE

YG MILLING TOOLS

SOLID CARBIDE X-POWER PRO END MILLS

for Pre-Hardened Steels up to HRc55, Mold & Die, Dry & Wet Cutting

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p. C431

Metric

SERIES	GM876	GM813	GM886	GM902
FLUTE	2	2	2	2
HELIX ANGLE	30°	30°	30°	30°
CUTTING EDGE SHAPE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE
SIZE MIN	R0.5	R0.5	R0.25	R0.5
SIZE MAX	R8.0	R10.0	R3.0	R4.0
PAGE	C412	C413	C414	C416
	SHORT LENGTH	LONG LENGTH	RIB PROCESSING	TAPER NECK
	Y-Coating	Y-Coating	Y-Coating	Y-Coating

Metric

SERIES	GM815	GM818	GM8A1	GM839	GM819	GM810	GM883	GM895	GM811	GM817	GM812	GM834	GM814
FLUTE	4	2	2	4	4	2	2	3	4	4	6&8	6	3&4
HELIX ANGLE	30°	30°	30°	30°	30°	30°	30°	38°	30°	30°	45°	45°	20°
CUTTING EDGE SHAPE	BALL NOSE	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	ROUGHING
SIZE MIN	R1.0	D4.0	D1.0	D2.0	D3.0	D0.4	D0.4	D1.0	D2.0	D2.0	D6.0	D6.0	D6.0
SIZE MAX	R8.0	D12.0	D6.0	D12.0	D20.0	D20.0	D6.0	D16.0	D25.0	D20.0	D20.0	D25.0	D20.0
PAGE	C417	C418	C419	C420	C421	C422	C423	C425	C426	C427	C428	C429	C430
	LONG LENGTH	LONG LENGTH	RIB PROCESSING	STUB LENGTH	LONG LENGTH	SHORT LENGTH	RIB PROCESSING	SHORT LENGTH	SHORT LENGTH	LONG LENGTH	LONG LENGTH	EXTRA LONG LENGTH	LONG LENGTH FINE PITCH
	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	GM876	GM813	GM886	GM902
P	1	Non-alloy steel	About 0.15% C Annealed	125		○	○	○	○
	2		About 0.45% C Annealed	190	13	○	○	○	○
	3		About 0.45% C Quenched & Tempered	250	25	○	○	○	○
	4		About 0.75% C Annealed	270	28	◎	◎	◎	○
	5		About 0.75% C Quenched & Tempered	300	32	◎	◎	◎	○
	6	Low alloy steel	Annealed	180	10	○	○	○	○
	7		Quenched & Tempered	275	29	◎	◎	◎	○
	8		Quenched & Tempered	300	32	◎	◎	◎	◎
	9		Quenched & Tempered	350	38	◎	◎	◎	◎
	10	High alloyed steel, and tool steel	Annealed	200	15	○	○	○	○
	11		Quenched & Tempered	325	35	◎	◎	◎	◎
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15				
	13		Martensitic Quenched & Tempered	240	23				
	14		Austenitic	180	10				
K	15	Grey cast iron	Pearlitic / ferritic	180	10	○	○	○	
	16		Pearlitic (Martensitic)	260	26	○	○	○	
	17	Nodular cast iron	Ferritic	160	3	○	○	○	
	18		Pearlitic	250	25	○	○	○	
	19	Malleable cast iron	Ferritic	130		○	○	○	
	20		Pearlitic	230	21	○	○	○	
N	21	Aluminum-wrought alloy	Not Curable	60					
	22		Curable Hardened	100					
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75					
	24		≤ 12% Si, Curable Hardened	90					
	25		> 12% Si, Not Curable	130					
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110					
	27		CuZn, CuSnZn (Brass)	90					
	28		CuSn, lead-free copper and electrolytic copper	100					
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic						
	30		Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15				
	32		Cured	280	30				
	33		Ni or Co Based Annealed	250	25				
	34		Cured	350	38				
	35		Cast	320	34				
	36	Titanium Alloys	Pure Titanium	400 Rm					
	37		Alpha + Beta Alloys Hardened	1050 Rm					
H	38	Hardened steel	Hardened	550	55	○	○	○	○
	39		Hardened	630	60				
	40	Chilled Cast Iron	Cast	400	42	◎	◎	◎	◎
	41	Hardened Cast Iron	Hardened	550	55	○	○	○	○

ISO	VDI 3323	GM815	GM818	GM8A1	GM839	GM819	GM810	GM883	GM895	GM811	GM817	GM812	GM834	GM814
P	1	○	○	○	○	○	○	○	○	○	○	○	○	○
	2	○	○	○	○	○	○	○	○	○	○	○	○	○
	3	○	○	○	○	○	○	○	○	○	○	○	○	○
	4	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	6	○	○	○	○	○	○	○	○	○	○	○	○	○
	7	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	9	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	10	○	○	○	○	○	○	○	○	○	○	○	○	○
	11	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
M	12					○	○		○	○				
	13					○	○		○	○				
	14					○	○		○	○				○
K	15	○	○	○	○	○	○	○	○	○	○	○	○	○
	16	○	○	○	○	○	○	○	○	○	○	○	○	○
	17	○	○	○	○	○	○	○	○	○	○	○	○	○
	18	○	○	○	○	○	○	○	○	○	○	○	○	○
	19	○	○	○	○	○	○	○	○	○	○	○	○	○
	20	○	○	○	○	○	○	○	○	○	○	○	○	○
N	21													
	22													
	23													
	24													
	25													
	26													
	27													
	28													
	29													
	30													
S	31													
	32													
	33													
	34													
	35													
	36													
	37													
H	38	○	○	○	○	○	○	○	○	○	○	○	○	○
	39	○												
	40	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	41	○	○	○	○	○	○	○	○	○	○	○	○	○

YG YG-1 CO., LTD.

YG YG-1 CO., LTD.

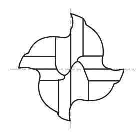
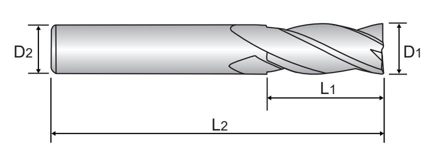
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

X-POWER PRO END MILLS

PLAIN SHANK **GM153** SERIES

CARBIDE, 4 FLUTE REGULAR LENGTH

- ▶ Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- ▶ 4 flute allows for better workpiece finishes.
- ▶ Increased production.

MG 4 30° PLAIN p.C431

Unit : inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GM153004	**1/16**	1/8	3/16	1-1/2
GM153008	**1/8**	1/8	1/2	1-1/2
GM153012	**3/16**	3/16	5/8	2
GM153016	**1/4**	1/4	3/4	2-1/2
GM153020	**5/16**	5/16	13/16	2-1/2
GM153024	**3/8**	3/8	1	2-1/2
GM153028	**7/16**	7/16	1	2-3/4
GM153032	**1/2**	1/2	1	3
GM153040	**5/8**	5/8	1-1/4	3-1/2
GM153048	**3/4**	3/4	1-1/2	4
GM153064	**1**	1	1-1/2	4

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0012	0 ~ -.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○						

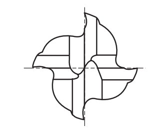
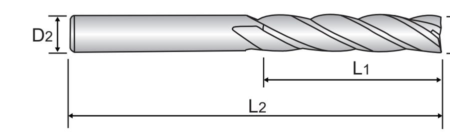
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

X-POWER PRO END MILLS

PLAIN SHANK **GM207** SERIES

CARBIDE, 4 FLUTE LONG LENGTH

- ▶ Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- ▶ 4 flute allows for better workpiece finishes.
- ▶ Increased production.

MG 4 30° PLAIN p.C432

Unit : inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GM207008	**1/8**	1/8	3/4	2-1/4
GM207012	**3/16**	3/16	3/4	2-1/2
GM207016	**1/4**	1/4	1-1/8	3
GM207020	**5/16**	5/16	1-1/8	3
GM207024	**3/8**	3/8	1-1/8	3
GM207032	**1/2**	1/2	2	4
GM207040	**5/8**	5/8	2-1/4	5
GM207048	**3/4**	3/4	2-1/4	5
GM207064	**1**	1	2-1/4	5

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0012	0 ~ -.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

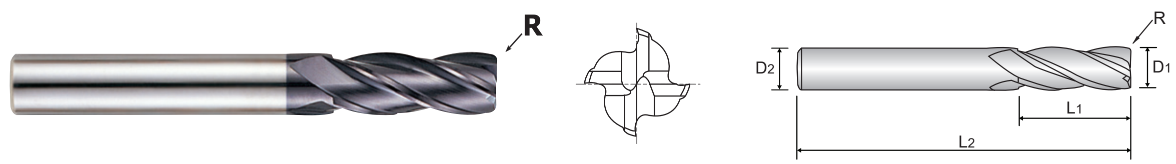
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

X-POWER PRO END MILLS

PLAIN SHANK **GM639 SERIES**

CARBIDE, 4 FLUTE STUB LENGTH CORNER RADIUS

- ▶ Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- ▶ Superior workpiece finishes.
- ▶ Increased feed rate.



MG | 4 | 30° | R ±.001 | PLAIN

p.C433

Unit : inch

EDP No.	Corner Radius R (±.001)	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GM639004	R.008	1/16	1/4	1/8	2-1/4
GM639008	R.01	1/8	1/4	1/4	2-1/4
GM639901	R.02	1/8	1/4	1/4	2-1/4
GM639012	R.01	3/16	1/4	3/8	2-1/2
GM639903	R.02	3/16	1/4	3/8	2-1/2
GM639904	R.03	3/16	1/4	3/8	2-1/2
GM639016	R.01	1/4	1/4	1/2	3
GM639905	R.02	1/4	1/4	1/2	3
GM639906	R.03	1/4	1/4	1/2	3
GM639020	R.02	5/16	5/16	1/2	3
GM639907	R.03	5/16	5/16	1/2	3
GM639908	R.06	5/16	5/16	1/2	3
GM639024	R.02	3/8	3/8	5/8	3
GM639910	R.03	3/8	3/8	5/8	3
GM639911	R.06	3/8	3/8	5/8	3
GM639912	R.09	3/8	3/8	5/8	3
GM639032	R.02	1/2	1/2	5/8	4
GM639913	R.03	1/2	1/2	5/8	4
GM639914	R.06	1/2	1/2	5/8	4
GM639915	R.09	1/2	1/2	5/8	4

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0012	0 ~ -.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎									

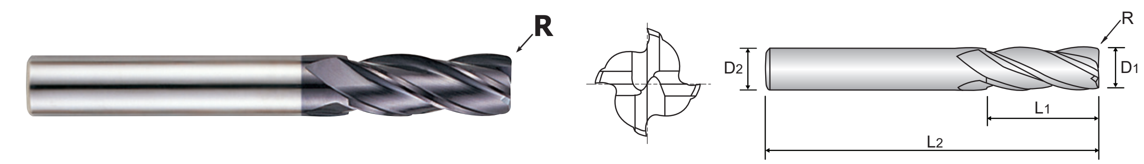
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

X-POWER PRO END MILLS

PLAIN SHANK **GM649 SERIES**

CARBIDE, 4 FLUTE REGULAR LENGTH CORNER RADIUS

- ▶ Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- ▶ Superior workpiece finishes.
- ▶ Increased feed rate.



MG | 4 | 30° | R ±.001 | PLAIN

p.C433

Unit : inch

EDP No.	Corner Radius R (±.001)	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GM649004	R.008	1/16	1/4	3/16	2-1/4
GM649008	R.01	1/8	1/4	1/2	2-1/4
GM649901	R.02	1/8	1/4	1/2	2-1/4
GM649012	R.01	3/16	1/4	5/8	2-1/2
GM649903	R.02	3/16	1/4	5/8	2-1/2
GM649904	R.03	3/16	1/4	5/8	2-1/2
GM649016	R.01	1/4	1/4	3/4	3
GM649905	R.02	1/4	1/4	3/4	3
GM649906	R.03	1/4	1/4	3/4	3
GM649020	R.02	5/16	5/16	13/16	3
GM649907	R.03	5/16	5/16	13/16	3
GM649908	R.06	5/16	5/16	13/16	3
GM649024	R.02	3/8	3/8	1	3
GM649910	R.03	3/8	3/8	1	3
GM649911	R.06	3/8	3/8	1	3
GM649912	R.09	3/8	3/8	1	3
GM649028	R.02	7/16	7/16	1	4
GM649916	R.03	7/16	7/16	1	4
GM649917	R.06	7/16	7/16	1	4
GM649032	R.02	1/2	1/2	1	4
GM649913	R.03	1/2	1/2	1	4
GM649914	R.06	1/2	1/2	1	4
GM649915	R.09	1/2	1/2	1	4

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0012	0 ~ -.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

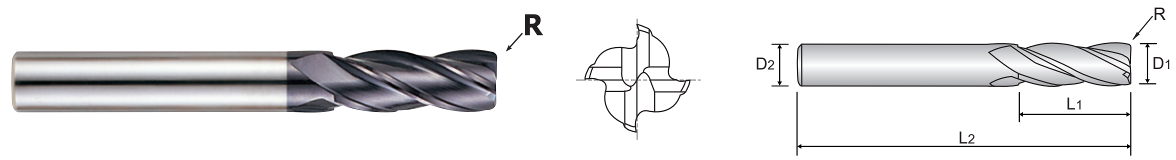
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X-POWER PRO END MILLS

PLAIN SHANK **GM212** SERIES

CARBIDE, 4 FLUTE CORNER RADIUS LONG LENGTH

- ▶ Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- ▶ Superior workpiece finishes.
- ▶ Increased feed rate.



MG | 4 | 30° | R ±.001 | PLAIN

p.C433

Unit : inch

EDP No.	Corner Radius R (±.001)	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GM212016	R.02	1/4	1/4	1-1/8	3
GM212901	R.03	1/4	1/4	1-1/8	3
GM212020	R.02	5/16	5/16	1-1/8	3
GM212902	R.03	5/16	5/16	1-1/8	3
GM212903	R.06	5/16	5/16	1-1/8	3
GM212024	R.02	3/8	3/8	1-1/8	3
GM212905	R.03	3/8	3/8	1-1/8	3
GM212906	R.06	3/8	3/8	1-1/8	3
GM212032	R.02	1/2	1/2	2	4
GM212908	R.03	1/2	1/2	2	4
GM212909	R.06	1/2	1/2	2	4
GM212910	R.09	1/2	1/2	2	4

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0012	0 ~ -.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎									

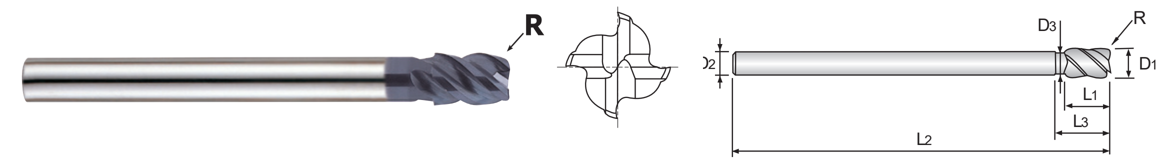
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG X-POWER PRO END MILLS

PLAIN SHANK **GM103** SERIES

CARBIDE, 4 FLUTE 45° HELIX LONG REACH CORNER RADIUS

- ▶ Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- ▶ Superior workpiece finishes.
- ▶ Increased feed rate.



MG | 4 | 45° | R ±.001 | PLAIN

p.C434-C435

Unit : inch

EDP No.	Corner Radius R (±.001)	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2
GM103024	R.02	3/8	5/16	5/8	3/4	5
GM103901	R.04	3/8	5/16	5/8	3/4	5
GM103032	R.02	1/2	3/8	3/4	7/8	6
GM103902	R.04	1/2	3/8	3/4	7/8	6
GM103040	R.02	5/8	1/2	7/8	1	6-1/2
GM103903	R.04	5/8	1/2	7/8	1	6-1/2
GM103048	R.02	3/4	5/8	1	1-1/8	7
GM103904	R.04	3/4	5/8	1	1-1/8	7
GM103056	R.02	7/8	3/4	1-1/4	1-3/8	8

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0012	0 ~ -.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	○	○						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

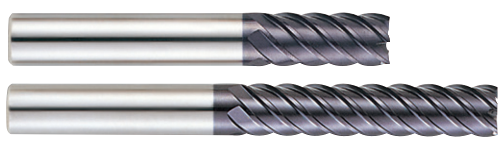
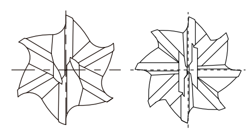
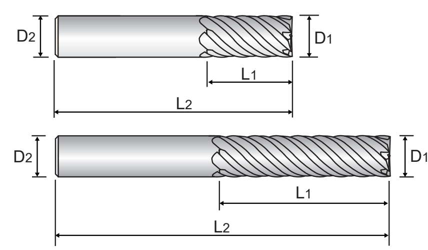
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

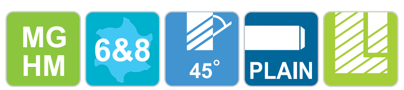
X-POWER PRO END MILLS

LONG LENGTH PLAIN SHANK **GM208 SERIES**
EXTRA LONG LENGTH PLAIN SHANK **GM218 SERIES**

CARBIDE, 6&8 FLUTE 45° HELIX LONG LENGTH & EXTRA LONG LENGTH

- ▶ Designed to machine high hardened materials.
- ▶ High speed cutting and finish milling with high feed rate.
- ▶ Superior workpiece finishes.
- ▶ Superior wear resistant.
- ▶ Suitable for dry milling.
- ▶ Corner Protection against chipping.



p.C436, C437

GM208 series - LONG LENGTH

Unit : inch

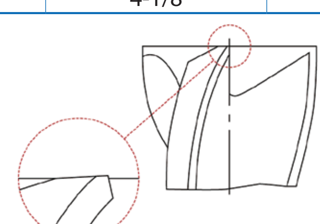
EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	No. of Flute
GM208016	1/4	1/4	1/2	2-1/4	6
GM208020	5/16	5/16	3/4	2-1/2	6
GM208024	3/8	3/8	7/8	2-7/8	6
GM208032	1/2	1/2	1	3-1/4	6
GM208040	5/8	5/8	1-1/4	3-5/8	6
GM208048	3/4	3/4	1-1/2	4-1/8	8
GM208064	1	1	1-3/4	4-1/4	8

GM218 series - EXTRA LONG LENGTH

Unit : inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	No. of Flute
GM218016	1/4	1/4	1	2-3/4	6
GM218020	5/16	5/16	1-1/2	3-5/8	6
GM218024	3/8	3/8	1-3/4	4	6
GM218032	1/2	1/2	2-3/16	4-3/8	6
GM218040	5/8	5/8	2-5/8	5-1/8	6
GM218048	3/4	3/4	2-1/4	5	8
GM218901	3/4	3/4	3-1/4	6	8
GM218902	3/4	3/4	4-1/8	7	8
GM218064	1	1	4-1/8	7	8

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0012	0 ~ -.0003



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎									

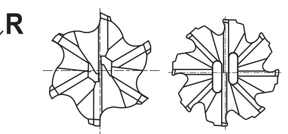
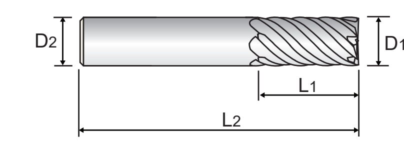
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

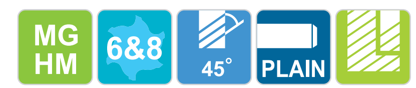
X-POWER PRO END MILLS

PLAIN SHANK **GM668 SERIES**

CARBIDE, 6&8 FLUTE 45° HELIX LONG LENGTH CORNER RADIUS

- ▶ Designed to machine high hardened materials.
- ▶ High speed cutting and finish milling with high feed rate.
- ▶ Superior workpiece finishes.
- ▶ Superior wear resistant.
- ▶ Suitable for dry milling.
- ▶ Corner Protection against chipping.



p.C438

Unit : inch

EDP No.	Corner Radius R	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2
GM668016	R.02	1/4	1/4	1/2	2-1/4	6
GM668020	R.02	5/16	5/16	3/4	2-1/2	6
GM668024	R.02	3/8	3/8	7/8	2-7/8	6
GM668032	R.02	1/2	1/2	1	3-1/4	6
GM668040	R.03	5/8	5/8	1-1/4	3-5/8	6
GM668048	R.03	3/4	3/4	1-1/2	4-1/8	8
GM668901	R.03	3/8	3/8	7/8	2-7/8	6
GM668902	R.03	1/2	1/2	1	3-1/4	6
GM668904	R.06	3/4	3/4	1-1/2	4-1/8	8

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0012	0 ~ -.0003

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

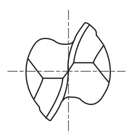
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

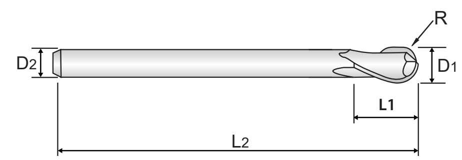
YG X-POWER PRO END MILLS

PLAIN SHANK **GM209** SERIES

CARBIDE, 2 FLUTE LONG LENGTH BALL NOSE

▶ Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
▶ For copy–milling machines.





MG | 2 | 30° | R ±.001 | PLAIN

p.C439

Unit : inch

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	R(±.001)	D_1	D_2	L_1	L_2
GM209901	R 1/64	1/32	1/4	1/32	2-1/2
GM209902	R 1/32	1/16	1/4	1/16	2-1/2
GM209903	R 3/64	3/32	1/4	3/32	2-1/2
GM209008	R 1/16	1/8	1/8	5/16	2-3/8
GM209012	R 3/32	3/16	3/16	3/8	3-1/8
GM209016	R 1/8	1/4	1/4	1/2	3-1/2
GM209020	R 5/32	5/16	5/16	9/16	4
GM209024	R 3/16	3/8	3/8	3/4	4
GM209032	R 1/4	1/2	1/2	7/8	4-1/4
GM209048	R 3/8	3/4	3/4	1-1/2	6-1/4

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0012	0 ~ -.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎									

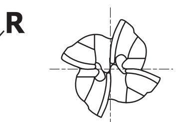
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

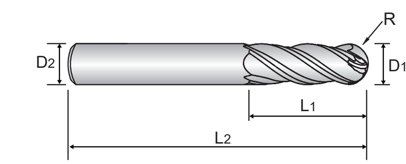
YG X-POWER PRO END MILLS

PLAIN SHANK **GM210** SERIES

CARBIDE, 4 FLUTE LONG LENGTH BALL NOSE

▶ Designed to machine tool steels, alloy steels, mold steels and other high hardened materials.
▶ For copy - milling machines.
▶ 4 Flute design - higher feed than GM209 series





MG | 4 | 30° | R ±.001 | PLAIN

p.C440

Unit : inch

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	R(±.001)	D_1	D_2	L_1	L_2
GM210008	R1/16	1/8	1/8	5/16	2-3/8
GM210012	R3/32	3/16	3/16	3/8	3-1/8
GM210016	R1/8	1/4	1/4	1/2	3-1/2
GM210020	R5/32	5/16	5/16	9/16	4
GM210024	R3/16	3/8	3/8	3/4	4
GM210032	R1/4	1/2	1/2	7/8	4-1/4
GM210040	R5/16	5/8	5/8	1-1/4	5-1/2
GM210048	R3/8	3/4	3/4	1-1/2	6-1/4

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0012	0 ~ -.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

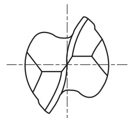
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

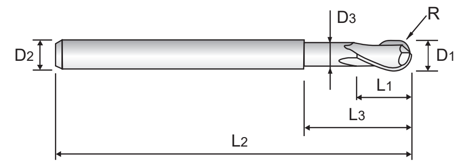
X-POWER PRO END MILLS

PLAIN SHANK **GM961** SERIES

CARBIDE, 2 FLUTE MEDIUM LENGTH BALL NOSE

▶ Deep slotting milling is possible by reduced neck.
▶ High efficiency milling is possible in deep slotting with projection of the end mill being long.





MG | 2 | 30° | R ±.001 | PLAIN

p.C441

Unit : inch

EDP No.	Radius of Ball Nose R (±.001)	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GM961008	R1/16	**1/8**	1/4	5/16	-	2-3/4	-
GM961012	R3/32	**3/16**	1/4	1/2	-	3-1/8	-
GM961016	R1/8	**1/4**	1/4	1/2	7/8	3-1/8	.242
GM961020	R5/32	**5/16**	5/16	9/16	1-1/16	3-1/2	.305
GM961024	R3/16	**3/8**	3/8	3/4	1-1/4	4	.367
GM961032	R1/4	**1/2**	1/2	7/8	1-3/8	4-1/4	.492
GM961064	R1/2	**1**	1	2-1/8	3	7	.992

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0012	0 ~ -.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎									

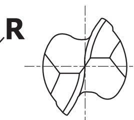
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

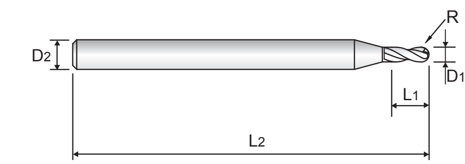
X-POWER PRO END MILLS

PLAIN SHANK **GM960** SERIES

CARBIDE, 2 FLUTE MINIATURE BALL NOSE

▶ High precision milling in medical, optical, electronics and aerospace industrials.
▶ Excellent performance at dry cutting conditon.
▶ Excellent performance on high hardened steel up to HRc70.





MG | 2 | 30° | R ±.0005 | PLAIN

p.C442

Unit : inch

EDP No.	Radius of Ball Nose R (±.0005)	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GM960924	R.0120	**.024**	1/8	.043	2-3/4
GM960931	R.0155	**.031**	1/8	.08	3-1/8
GM960940	R.0200	**.040**	1/8	.1	3-1/8
GM960943	R.0215	**.043**	1/8	.118	3-1/2
GM960947	R.0235	**.047**	1/8	.118	4
GM960952	R.0260	**.052**	1/8	.138	4-1/4
GM960955	R.0275	**.055**	1/8	.138	7
GM960962	R.0310	**.062**	1/8	.157	6-1/4

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0010	0 ~ -.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend					◎			◎	◎		◎									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

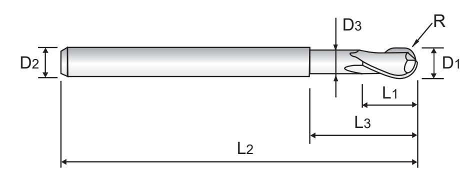
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X-POWER PRO END MILLS

PLAIN SHANK **GM109 SERIES**

CARBIDE, 2 FLUTE 15° HELIX STUB CUT LENGTH BALL NOSE

▶ Deep slotting milling is possible by reduced neck.
▶ High efficiency milling is possible in deep slotting with projection of the end mill being long.



MG | 2 | 15° | R ±.0005 | PLAIN

p.C443

Unit : inch

EDP No.	Radius of Ball Nose R (±.0005)	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GM109002	R1/64	1/32	1/4	1/32	1/16	2	.029
GM109004	R1/32	1/16	1/4	1/16	1/8	2	.059
GM109006	R3/64	3/32	1/4	3/32	3/16	2	.090
GM109008	R1/16	1/8	1/4	1/8	1/4	2-1/2	.121
GM109012	R3/32	3/16	1/4	3/16	3/8	3	.184
GM109016	R1/8	1/4	1/4	1/4	1/2	3-1/2	.246
GM109020	R5/32	5/16	5/16	5/16	5/8	4	.309
GM109024	R3/16	3/8	3/8	3/8	3/4	4	.371
GM109032	R1/4	1/2	1/2	1/2	1	4-1/2	.496

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0012	0 ~ -.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

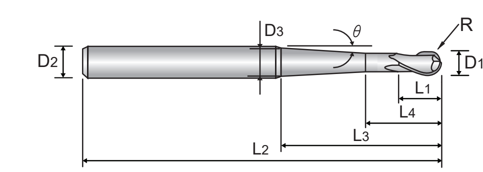
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		◎			◎

YG X-POWER PRO END MILLS

PLAIN SHANK **GM963 SERIES**

CARBIDE, 2 FLUTE BALL NOSE with TAPER NECK

▶ High efficiency milling in deep slotting due to long projection of the end mills.



MG | 2 | 30° | R ±.0005 | PLAIN

p.C444

Unit : inch

EDP No.	Radius of Ball Nose R (±.0005)	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Under Neck Parallel Length L4	Length Below Shank L3	Overall Length L2	Neck Diameter D3	Taper Neck Angle θ
GM963004	R1/32	1/16	1/4	5/32	15/64	7/8	2-3/8	.096	1° 30´
GM963901	R1/32	1/16	1/4	5/32	15/64	1-5/8	3-1/8	.208	3°
GM963008	R1/16	1/8	1/4	1/4	21/64	2-1/16	3-5/8	.216	1° 30´
GM963012	R3/32	3/16	3/8	3/8	29/64	2-3/8	4-3/8	.288	1° 30´
GM963016	R1/8	1/4	3/8	1/2	5/8	2-1/16	4-3/8	.325	1° 30´
GM963020	R5/32	5/16	1/2	9/16	11/16	2-1/16	4-3/4	.385	1° 30´
GM963024	R3/16	3/8	1/2	11/16	13/16	2-3/8	5-1/16	.458	1° 30´

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0012	0 ~ -.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎									

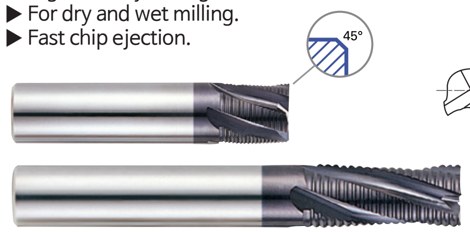
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

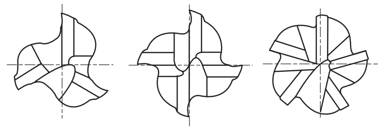
X-POWER PRO END MILLS

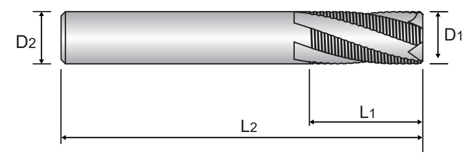
STUB LENGTH PLAIN SHANK **GM666** SERIES
LONG LENGTH PLAIN SHANK **GM156** SERIES

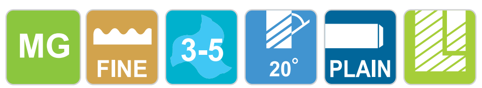
CARBIDE, MULTI FLUTE 20° HELIX STUB & LONG LENGTH FINE PITCH ROUGHING

- ▶ Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- ▶ High velocity milling of hardened steels.
- ▶ For dry and wet milling.
- ▶ Fast chip ejection.









p.C445, 446

GM666 series - STUB LENGTH

Unit : inch

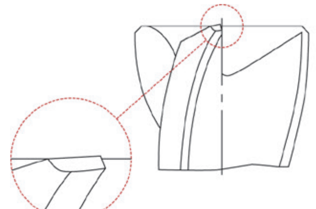
EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	No. of Flute	Chamfer
GM666016	1/4	1/4	5/16	2-1/8	3	.015
GM666020	5/16	5/16	3/8	2-1/4	3	.015
GM666024	3/8	3/8	9/16	2-1/2	3	.015
GM666032	1/2	1/2	5/8	3	4	.024
GM666040	5/8	5/8	7/8	3-1/4	4	.024
GM666048	3/4	3/4	1	3-3/4	4	.024
GM666064	1	1	1	4	5	.024

GM156 series - LONG LENGTH

Unit : inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	No. of Flute	Chamfer
GM156016	1/4	1/4	3/4	2-1/2	3	.015
GM156020	5/16	5/16	3/4	2-1/2	3	.015
GM156024	3/8	3/8	7/8	2-1/2	3	.015
GM156032	1/2	1/2	1	3	4	.024
GM156040	5/8	5/8	1-1/4	3-1/2	4	.024
GM156048	3/4	3/4	1-5/8	4	4	.024
GM156064	1	1	1-3/4	4	5	.024

Mill Dia. (inch)	Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
1/4~3/8	0 ~ -.0022	0 ~ -.0003
1/2~5/8	0 ~ -.0027	
3/4~1	0 ~ -.0033	



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎									

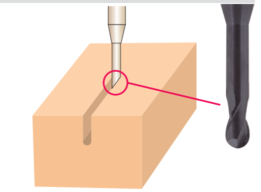
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

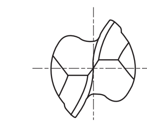
X-POWER PRO END MILLS

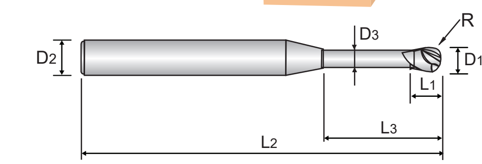
PLAIN SHANK **GM967** SERIES

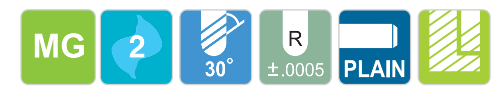
CARBIDE, 2 FLUTE BALL NOSE for RIB PROCESSING

- ▶ For 3-D milling, deep slotting and pocketing.
- ▶ For depths of 6 to 10X cutting diameter.
- ▶ Machine carbon steel, alloy steel, tool steel, die and mold steels.
- ▶ Suitable for high speed cutting and high precision machining.
- ▶ Designed with reinforced shank for higher stability and rigidity.
- ▶ Long neck design for deep machining near walls.









p.C447

Unit : inch

EDP No.	Radius of Ball Nose R (±.0005)	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GM967002	R1/64	1/32	1/8	3/64	7/32	2	.029
GM967901	R1/64	1/32	1/8	3/64	5/16	2	.029
GM967003	R.0234	3/64	1/8	1/16	7/32	2	.045
GM967902	R.0234	3/64	1/8	1/16	9/32	2	.045
GM967903	R.0234	3/64	1/8	1/16	1/2	2	.045
GM967004	R1/32	1/16	1/8	3/32	5/16	2	.060
GM967904	R1/32	1/16	1/8	3/32	1/2	2	.060
GM967905	R1/32	1/16	1/8	3/32	5/8	2	.060
GM967005	R.0391	5/64	1/8	1/8	5/16	2	.076
GM967906	R.0391	5/64	1/8	1/8	5/8	2	.076
GM967907	R.0391	5/64	1/8	1/8	3/4	2	.076
GM967006	R3/64	3/32	1/8	9/64	5/8	2	.090
GM967908	R3/64	3/32	1/8	9/64	3/4	2	.090
GM967008	R1/16	1/8	1/4	3/16	5/8	2-1/4	.120
GM967909	R1/16	1/8	1/4	3/16	3/4	2-1/4	.120

Mill Dia. Tolerance(inch)	Shank Dia. Tolerance
0 ~ -.0006	0 ~ -.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

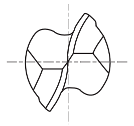
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

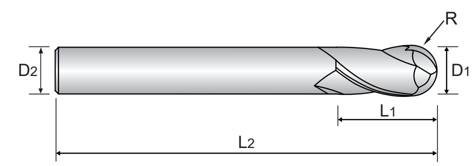
X-POWER PRO END MILLS

PLAIN SHANK **GM876** SERIES

CARBIDE, 2 FLUTE SHORT LENGTH BALL NOSE

▶ Economic type with short overall length
▶ Radius tolerance ±0.02mm & short length of cut





MG HM | 2 | 30° | R ±0.02 | PLAIN

p.C448-C449

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	R(±0.02)	D1	D2	L1	L2
GM876010	R0.5	**1.0**	3	3	38
GM876020	R1.0	**2.0**	6	3	50
GM876030	R1.5	**3.0**	6	4	50
GM876040	R2.0	**4.0**	6	5	54
GM876060	R3.0	**6.0**	6	7	54
GM876080	R4.0	**8.0**	8	9	58
GM876100	R5.0	**10.0**	10	11	66
GM876120	R6.0	**12.0**	12	12	73
GM876160	R8.0	**16.0**	16	16	82

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.03	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

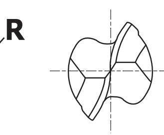
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

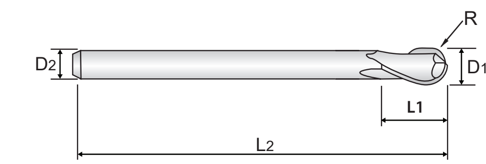
X-POWER PRO END MILLS

PLAIN SHANK **GM813** SERIES

CARBIDE, 2 FLUTE LONG LENGTH BALL NOSE

▶ Designed to machine tool steel, alloy steel, mold steel and other high hardened materials
▶ For copy - milling machines





MG HM | 2 | 30° | R ±0.02 | PLAIN

p.C448-C449

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	R(±0.02)	D1	D2	L1	L2
GM813010	R0.5	**1.0**	4	2.5	50
GM813020	R1.0	**2.0**	6	5	50
GM813030	R1.5	**3.0**	6	8	60
GM813040	R2.0	**4.0**	6	8	70
GM813050	R2.5	**5.0**	6	10	80
GM813060	R3.0	**6.0**	6	12	90
GM813080	R4.0	**8.0**	8	14	100
GM813100	R5.0	**10.0**	10	18	100
GM813120	R6.0	**12.0**	12	22	110
GM813160	R8.0	**16.0**	16	30	140
GM813200	R10.0	**20.0**	20	38	160

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.03	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

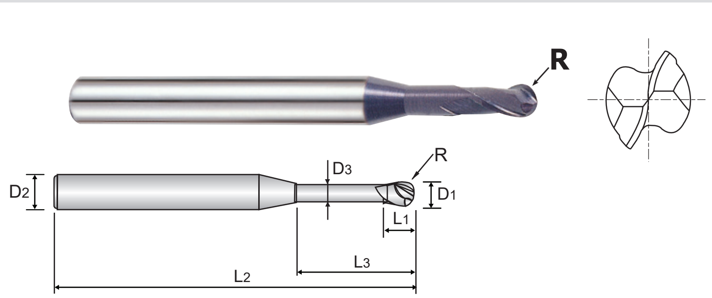
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

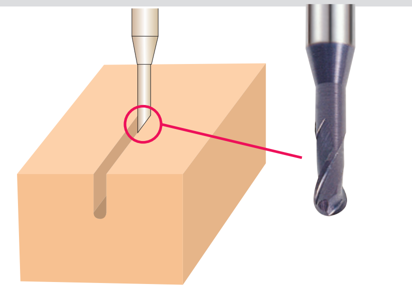
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

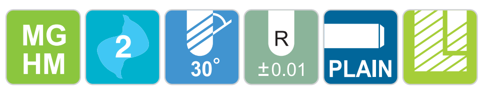
X-POWER PRO END MILLS

PLAIN SHANK **GM886** SERIES

CARBIDE, 2 FLUTE BALL NOSE for RIB PROCESSING







p.C450-C451

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R(±0.01)	D1	D2	L1	L3	L2	D3
GM886005	R0.25	**0.5**	4	0.7	2	45	0.45
GM886962	R0.25	**0.5**	4	0.7	4	45	0.45
GM886957	R0.3	**0.6**	4	0.9	2	45	0.55
GM886915	R0.3	**0.6**	4	0.9	4	45	0.55
GM886916	R0.3	**0.6**	4	0.9	6	45	0.55
GM886919	R0.4	**0.8**	4	1.2	4	45	0.75
GM886008	R0.4	**0.8**	4	1.2	6	45	0.75
GM886921	R0.5	**1.0**	4	1.5	4	45	0.95
GM886923	R0.5	**1.0**	4	1.5	5	45	0.95
GM886010	R0.5	**1.0**	4	1.5	6	45	0.95
GM886902	R0.5	**1.0**	4	1.5	8	45	0.95
GM886903	R0.5	**1.0**	4	1.5	10	45	0.95
GM886904	R0.5	**1.0**	4	1.5	12	45	0.95
GM886927	R0.5	**1.0**	4	1.5	16	50	0.95
GM886012	R0.6	**1.2**	4	1.8	8	45	1.15
GM886930	R0.75	**1.5**	4	2.3	6	45	1.45
GM886015	R0.75	**1.5**	4	2.3	8	45	1.45
GM886931	R0.75	**1.5**	4	2.3	10	45	1.45
GM886906	R0.75	**1.5**	4	2.3	12	45	1.45
GM886940	R1.0	**2.0**	4	3	6	45	1.95
GM886020	R1.0	**2.0**	4	3	8	45	1.95
GM886941	R1.0	**2.0**	4	3	10	45	1.95
GM886942	R1.0	**2.0**	4	3	12	50	1.95
GM886909	R1.0	**2.0**	4	3	16	50	1.95

▶ NEXT PAGE

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.02	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

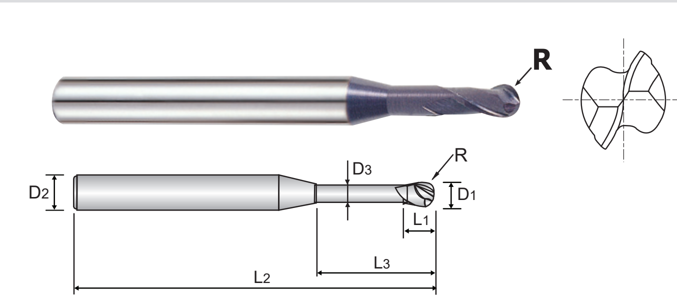
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

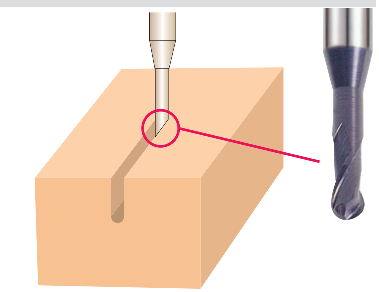
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

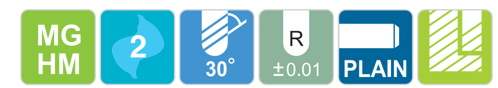
X-POWER PRO END MILLS

PLAIN SHANK **GM886** SERIES

CARBIDE, 2 FLUTE BALL NOSE for RIB PROCESSING







p.C450-C451

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R(±0.01)	D1	D2	L1	L3	L2	D3
GM886910	R1.0	**2.0**	4	3	20	55	1.95
GM886945	R1.0	**2.0**	4	3	25	60	1.95
GM886967	R1.0	**2.0**	4	3	30	70	1.95
GM886947	R1.5	**3.0**	6	4.5	10	50	2.85
GM886948	R1.5	**3.0**	6	4.5	12	50	2.85
GM886030	R1.5	**3.0**	6	4.5	16	55	2.85
GM886911	R1.5	**3.0**	6	4.5	20	60	2.85
GM886968	R1.5	**3.0**	6	4.5	25	65	2.85
GM886040	R2.0	**4.0**	6	6	16	60	3.85
GM886912	R2.0	**4.0**	6	6	20	65	3.85
GM886913	R2.0	**4.0**	6	6	25	70	3.85
GM886971	R2.0	**4.0**	6	6	30	70	3.85
GM886972	R2.0	**4.0**	6	6	35	80	3.85
GM886050	R2.5	**5.0**	6	7.5	16	60	4.85
GM886060	R3.0	**6.0**	6	9	20	80	5.85
GM886954	R3.0	**6.0**	6	9	30	90	5.85

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.02	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

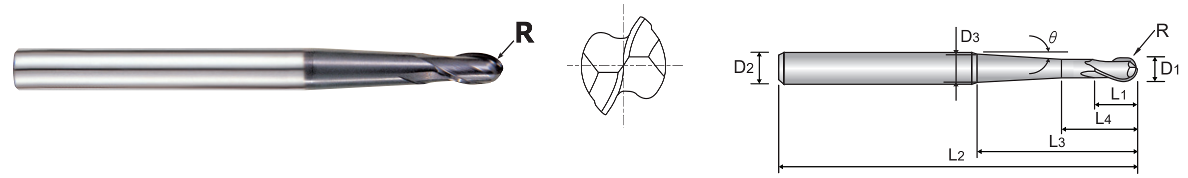
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

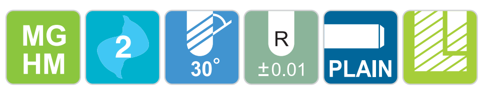
X-POWER PRO END MILLS

PLAIN SHANK **GM902** SERIES

CARBIDE, 2 FLUTE BALL NOSE with TAPER NECK

▶ High efficiency milling in deep slotting due to long projection of the end mills





p.C452-C453

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Under Neck Parallel Length	Length Below Shank	Overall Length	Neck Diameter	Taper Neck Angle
	R(±0.01)	D_1	D_2	L_1	L_4	L_3	L_2	D_3	θ
GM902010	R0.5	**1.0**	6	2	4	23	60	2	1° 30´
GM902901	R0.5	**1.0**	6	2	4	23	60	4.3	5°
GM902902	R0.5	**1.0**	6	2	4	42	80	5	3°
GM902020	R1.0	**2.0**	6	4	6	23	60	2.9	1° 30´
GM902903	R1.0	**2.0**	6	4	6	23	60	5	5°
GM902904	R1.0	**2.0**	6	4	6	41	80	5.7	3°
GM902030	R1.5	**3.0**	6	6	8	32	70	5.6	3°
GM902905	R1.5	**3.0**	6	6	8	52	90	5.3	1° 30´
GM902040	R2.0	**4.0**	6	8	10	28	70	5.9	3°
GM902906	R2.0	**4.0**	6	8	10	49	90	6	1° 30´
GM902060	R3.0	**6.0**	8	12	15	34	90	8	3°
GM902908	R3.0	**6.0**	8	12	15	53	110	8	1° 30´
GM902080	R4.0	**8.0**	10	14	17	36	100	10	3°
GM902909	R4.0	**8.0**	10	14	17	55	120	10	1° 30´

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.03	h6

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

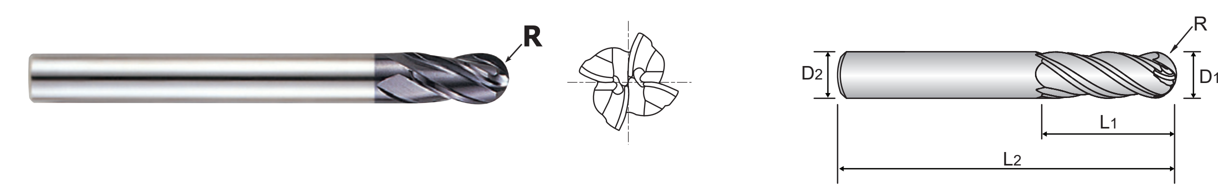
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

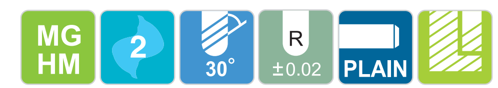
X-POWER PRO END MILLS

PLAIN SHANK **GM815** SERIES

CARBIDE, 4 FLUTE LONG LENGTH BALL NOSE

▶ Designed to machine tool steels, alloy steels, mold steels and other high hardened materials
▶ For copy - milling machines
▶ 4 Flute design - higher feed than GM813 series





p.C454-C455

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	R(±0.02)	D_1	D_2	L_1	L_2
GM815020	R1.0	**2.0**	6	5	50
GM815030	R1.5	**3.0**	6	8	60
GM815040	R2.0	**4.0**	6	8	70
GM815050	R2.5	**5.0**	6	10	80
GM815060	R3.0	**6.0**	6	12	90
GM815080	R4.0	**8.0**	8	14	100
GM815100	R5.0	**10.0**	10	18	100
GM815120	R6.0	**12.0**	12	22	110
GM815160	R8.0	**16.0**	16	30	140

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.03	h6

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

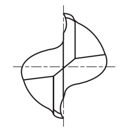
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

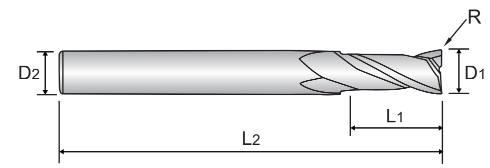
YG X-POWER PRO END MILLS

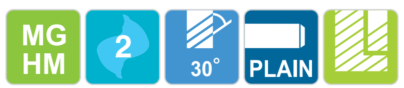
PLAIN SHANK **GM818** SERIES

CARBIDE, 2 FLUTE LONG LENGTH CORNER RADIUS

- Designed to machine tool steels, alloy steels, mold steels and other hardened materials
- Superior workpiece finishes
- Increased feed rates







p.C456

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D_1	Shank Diameter D_2	Length of Cut L_1	Overall Length L_2
GM818911	R0.5	4.0	6	15	50
GM818060	R0.5	6.0	6	20	60
GM818901	R1.0	6.0	6	20	60
GM818080	R0.5	8.0	8	25	70
GM818902	R1.0	8.0	8	25	70
GM818100	R0.5	10.0	10	30	90
GM818905	R1.0	10.0	10	30	90
GM818908	R1.0	12.0	12	30	90

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.03	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

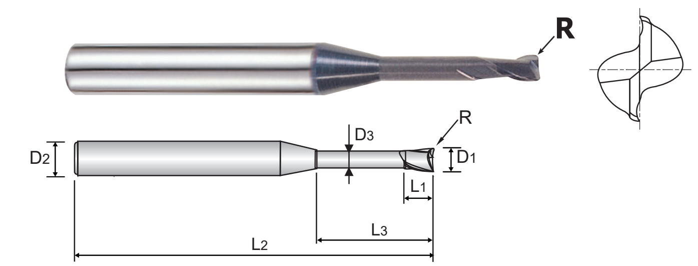
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

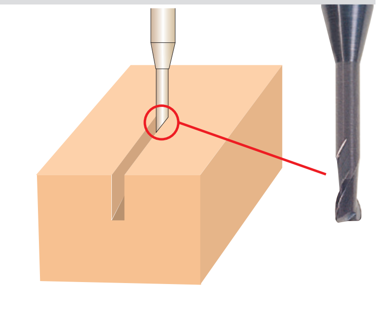
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

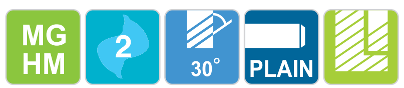
YG X-POWER PRO END MILLS

PLAIN SHANK **GM8A1** SERIES

CARBIDE, 2 FLUTE CORNER RADIUS for RIB PROCESSING







p.C457-C458

Unit : mm

EDP No.	Corner Radius R	Mill Diameter D_1	Shank Diameter D_2	Length of Cut L_1	Length Below Shank L_3	Overall Length L_2	Neck Diameter D_3
GM8A1010	R0.1	1.0	4	1.5	6	45	0.95
GM8A1920	R0.1	1.0	4	1.5	8	45	0.95
GM8A1921	R0.1	1.0	4	1.5	10	45	0.95
GM8A1012	R0.2	1.2	4	1.8	6	45	1.15
GM8A1015	R0.2	1.5	4	2.3	6	45	1.45
GM8A1937	R0.2	1.5	4	2.3	8	45	1.45
GM8A1938	R0.2	1.5	4	2.3	10	45	1.45
GM8A1939	R0.2	1.5	4	2.3	12	45	1.45
GM8A1941	R0.2	1.5	4	2.3	16	50	1.45
GM8A1018	R0.2	1.8	4	2.7	6	45	1.75
GM8A1960	R0.2	2.0	4	3	6	45	1.95
GM8A1020	R0.2	2.0	4	3	8	45	1.95
GM8A1962	R0.2	2.0	4	3	12	45	1.95
GM8A1961	R0.2	2.0	4	3	10	45	1.95
GM8A1964	R0.2	2.0	4	3	16	50	1.95
GM8A1966	R0.2	2.0	4	3	20	55	1.95
GM8A1967	R0.2	2.0	4	3	25	60	1.95
GM8A1969	R0.2	2.5	4	3.7	12	45	2.40
GM8A1981	R0.3	3.0	6	4.5	16	55	2.85
GM8A1983	R0.3	3.0	6	4.5	20	60	2.85
GM8A1984	R0.3	3.0	6	4.5	25	65	2.85
GM8A1976	R0.3	3.0	6	4.5	30	70	2.85
GM8A1985	R0.3	3.0	6	4.5	40	90	2.85
GM8A1040	R0.3	4.0	6	6	12	50	3.85
GM8A1986	R0.3	4.0	6	6	16	60	3.85
GM8A1987	R0.3	4.0	6	6	20	60	3.85
GM8A1060	R0.5	6.0	6	9	20	80	5.85
GM8A1802	R0.5	6.0	6	9	40	100	5.85

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.03	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

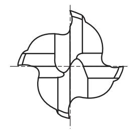
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

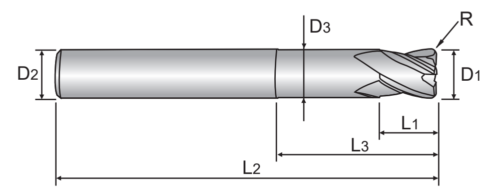
X-POWER PRO END MILLS

PLAIN SHANK **GM839** SERIES

CARBIDE, 4 FLUTE STUB LENGTH CORNER RADIUS

- ▶ Designed to machine tool steels, alloy steels, mold steels and other hardened materials
- ▶ Superior workpiece finishes
- ▶ Increased feed rates





MG HM 4 30° PLAIN p.C459

Unit : mm

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R	D_1	D_2	L_1	L_3	L_2	D_3
GM839020	R0.2	**2.0**	6	2.5	5	50	1.9
GM839030	R0.3	**3.0**	6	4	7	50	2.8
GM839040	R0.4	**4.0**	6	5	9	50	3.7
GM839060	R0.6	**6.0**	6	7	14	55	5.6
GM839080	R0.8	**8.0**	8	10	18	60	7.4
GM839100	R1.0	**10.0**	10	12	25	70	9.4
GM839120	R1.2	**12.0**	12	15	30	80	11.4

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.03	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

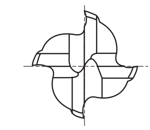
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

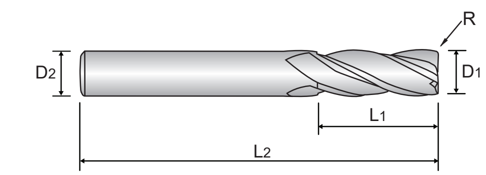
X-POWER PRO END MILLS

PLAIN SHANK **GM819** SERIES

CARBIDE, 4 FLUTE LONG LENGTH CORNER RADIUS

- ▶ Designed to machine tool steels, alloy steels, mold steels and other hardened materials
- ▶ 4 flute allows for better workpiece finishes
- ▶ Increased production





MG HM 4 30° PLAIN p.C460

Unit : mm

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	R	D_1	D_2	L_1	L_2
GM819030	R0.3	**3.0**	6	12	50
GM819040	R0.3	**4.0**	6	15	50
GM819911	R0.5	**4.0**	6	15	50
GM819912	R0.5	**5.0**	6	20	60
GM819060	R0.5	**6.0**	6	20	60
GM819901	R1.0	**6.0**	6	20	60
GM819080	R0.5	**8.0**	8	25	70
GM819902	R1.0	**8.0**	8	25	70
GM819904	R2.0	**8.0**	8	25	70
GM819100	R0.5	**10.0**	10	30	90
GM819905	R1.0	**10.0**	10	30	90
GM819906	R1.5	**10.0**	10	30	90
GM819907	R2.0	**10.0**	10	30	90
GM819120	R0.5	**12.0**	12	30	90
GM819908	R1.0	**12.0**	12	30	90
GM819909	R1.5	**12.0**	12	30	90
GM819910	R2.0	**12.0**	12	30	90
GM819160	R0.5	**16.0**	16	50	110
GM819916	R1.0	**16.0**	16	50	110
GM819918	R2.0	**16.0**	16	50	110
GM819921	R2.0	**20.0**	20	55	110

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.03	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

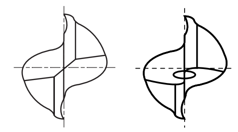
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

X-POWER PRO END MILLS

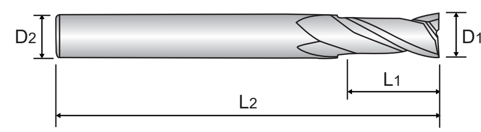
PLAIN SHANK **GM810** SERIES

CARBIDE, 2 FLUTE SHORT LENGTH

▶ High precision milling in medical, optical, electronics and aerospace industries
▶ Excellent performance on hardened steel



up to Ø3mm   over Ø3mm



MG HM | 2 | 30° | PLAIN

p.C461

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GM810004	0.4	3	0.8	40
GM810005	0.5	3	1	40
GM810006	0.6	3	1.2	40
GM810007	0.7	3	1.4	40
GM810008	0.8	3	1.6	40
GM810009	0.9	3	2	40
GM810010	1.0	4	2.5	40
GM810901	1.0	6	2.5	40
GM810012	1.2	4	4	40
GM810014	1.4	4	4	40
GM810015	1.5	4	4	40
GM810902	1.5	6	4	40
GM810020	2.0	4	6	40
GM810903	2.0	6	6	40
GM810025	2.5	4	8	40
GM810030	3.0	6	8	45
GM810035	3.5	6	10	45
GM810040	4.0	6	11	45
GM810050	5.0	6	13	50
GM810060	6.0	6	13	50
GM810070	7.0	8	16	60
GM810080	8.0	8	19	60
GM810090	9.0	10	19	70
GM810100	10.0	10	22	70
GM810110	11.0	12	22	75
GM810120	12.0	12	26	75
GM810140	14.0	14	26	85
GM810160	16.0	16	32	100
GM810180	18.0	18	32	100
GM810200	20.0	20	38	105

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.03	h6

◎ : Excellent ○ : Good

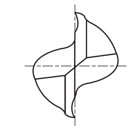
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

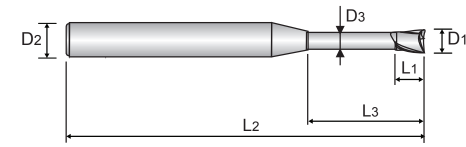
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

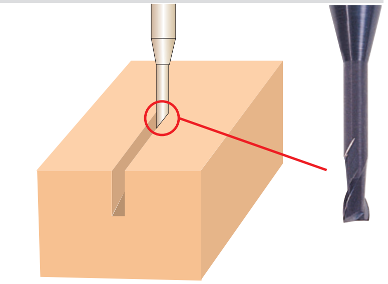
X-POWER PRO END MILLS

PLAIN SHANK **GM883** SERIES

CARBIDE, 2 FLUTE for RIB PROCESSING







MG HM | 2 | 30° | PLAIN

p.C462-C463

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GM883004	0.4	4	0.6	2	45	0.37
GM883005	0.5	4	0.7	2	45	0.45
GM883988	0.5	4	0.7	4	45	0.45
GM883820	0.7	4	1	3	45	0.65
GM883008	0.8	4	1.2	4	45	0.75
GM883908	0.8	4	1.2	6	45	0.75
GM883996	1.0	4	1.5	4	45	0.95
GM883010	1.0	4	1.5	6	45	0.95
GM883912	1.0	4	1.5	8	45	0.95
GM883913	1.0	4	1.5	10	45	0.95
GM883914	1.0	4	1.5	12	45	0.95
GM883997	1.0	4	1.5	16	50	0.95
GM883998	1.0	4	1.5	20	55	0.95
GM883012	1.2	4	1.8	6	45	1.15
GM883015	1.5	4	2.3	6	45	1.45
GM883923	1.5	4	2.3	8	45	1.45
GM883924	1.5	4	2.3	10	45	1.45
GM883925	1.5	4	2.3	12	45	1.45
GM883927	1.5	4	2.3	16	50	1.45
GM883810	1.5	4	2.3	20	55	1.45
GM883946	1.8	4	2.7	12	45	1.75
GM883958	2.0	4	3	6	45	1.95
GM883020	2.0	4	3	8	45	1.95
GM883959	2.0	4	3	10	45	1.95
GM883960	2.0	4	3	12	45	1.95
GM883961	2.0	4	3	14	50	1.95

▶ NEXT PAGE

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.015	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

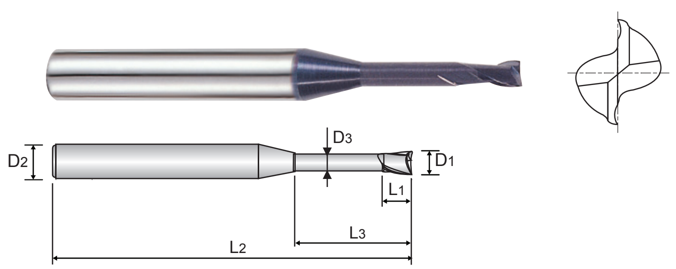
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

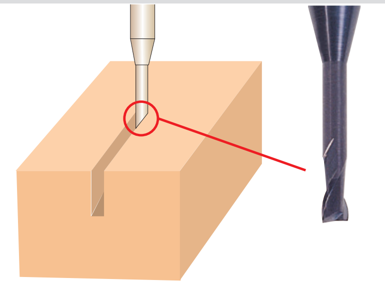
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X-POWER PRO END MILLS

PLAIN SHANK **GM883** SERIES

CARBIDE, 2 FLUTE for RIB PROCESSING





MG HM | 2 | 30° | PLAIN

p.C462-C463

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
GM883962	2.0	4	3	16	50	1.95
GM883964	2.0	4	3	20	55	1.95
GM883966	2.0	4	3	25	60	1.95
GM883814	2.0	4	3	30	70	1.95
GM883970	2.5	4	3.7	16	55	2.40
GM883975	3.0	6	4.5	10	45	2.85
GM883976	3.0	6	4.5	12	45	2.85
GM883978	3.0	6	4.5	16	55	2.85
GM883979	3.0	6	4.5	18	55	2.85
GM883980	3.0	6	4.5	20	60	2.85
GM883981	3.0	6	4.5	25	65	2.85
GM883832	3.0	6	4.5	30	70	2.85
GM883983	3.0	6	4.5	40	90	2.85
GM883801	4.0	6	6	16	60	3.85
GM883802	4.0	6	6	20	60	3.85
GM883803	4.0	6	6	25	70	3.85
GM883834	4.0	6	6	30	70	3.85
GM883836	4.0	6	6	40	90	3.85
GM883838	4.0	6	6	50	100	3.85
GM883807	6.0	6	9	30	90	5.85
GM883809	6.0	6	9	50	110	5.85

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.015	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

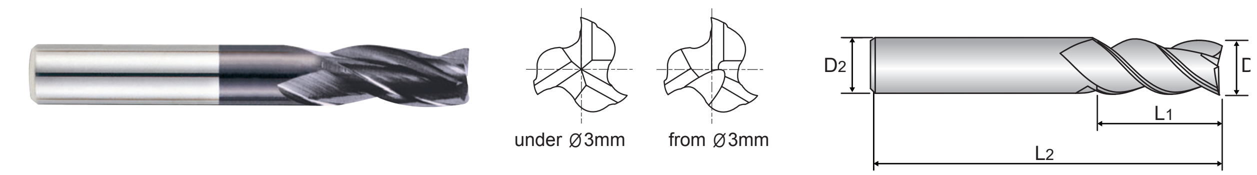
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X-POWER PRO END MILLS

PLAIN SHANK **GM895** SERIES

CARBIDE, 3 FLUTE 38° HELIX SHORT LENGTH

- ▶ Designed to machine tool steels, alloy steels, mold steels and other hardened materials
- ▶ Possesses the advantage of 2 flute and 4 flute end mill
- ▶ Superior workpiece finishes



MG HM | 3 | 38° | PLAIN

p.C464-C465

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GM895010	1.0	3	2.5	38
GM895015	1.5	4	5	50
GM895025	2.5	3	7	38
GM895030	3.0	3	10	38
GM895901	3.0	6	10	50
GM895040	4.0	4	12	50
GM895903	4.0	6	12	50
GM895050	5.0	5	14	50
GM895904	5.0	6	14	57
GM895060	6.0	6	16	57
GM895080	8.0	8	20	63
GM895100	10.0	10	22	72
GM895120	12.0	12	25	73
GM895160	16.0	16	32	82

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.03	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

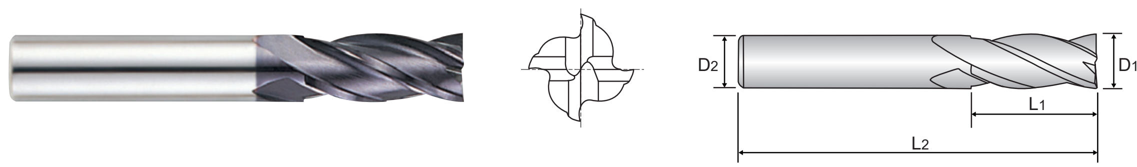
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG X-POWER PRO END MILLS

PLAIN SHANK **GM811** SERIES

CARBIDE, 4 FLUTE SHORT LENGTH

- ▶ Designed to machine tool steels, alloy steels, mold steels and other hardened materials
- ▶ 4 flute allows for better workpiece finishes
- ▶ Increased production



MG HM | 4 | 30° | PLAIN

p.C466

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GM811020	2.0	4	6	40
GM811901	2.0	6	6	40
GM811025	2.5	4	8	40
GM811902	2.5	6	8	40
GM811030	3.0	6	8	45
GM811035	3.5	6	10	45
GM811040	4.0	6	11	45
GM811045	4.5	6	11	45
GM811050	5.0	6	13	50
GM811060	6.0	6	13	50
GM811080	8.0	8	19	60
GM811100	10.0	10	22	70
GM811120	12.0	12	26	75
GM811140	14.0	14	26	85
GM811160	16.0	16	32	100
GM811200	20.0	20	38	105
GM811250	25.0	25	45	120

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.03	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎	○	○	○	○	○	○	○	○	○

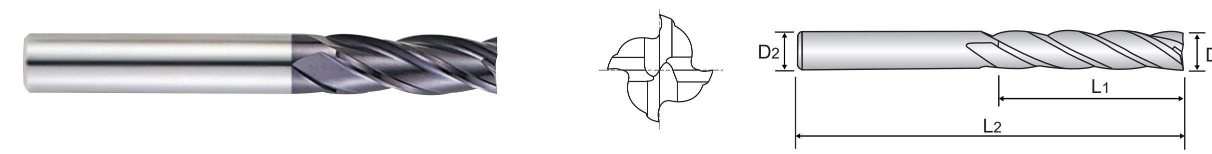
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

YG X-POWER PRO END MILLS

PLAIN SHANK **GM817** SERIES

CARBIDE, 4 FLUTE LONG LENGTH

- ▶ Designed to machine tool steels, alloy steels, mold steels and other hardened materials
- ▶ 4 flute allows for better workpiece finishes
- ▶ Increased production



MG HM | 4 | 30° | PLAIN

p.C467

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GM817020	2.0	4	8	40
GM817030	3.0	6	12	50
GM817040	4.0	6	15	50
GM817050	5.0	6	20	60
GM817060	6.0	6	20	60
GM817080	8.0	8	25	70
GM817100	10.0	10	30	90
GM817120	12.0	12	30	90
GM817140	14.0	16	40	110
GM817160	16.0	16	50	110
GM817200	20.0	20	55	110

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.03	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

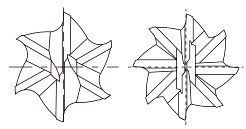
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

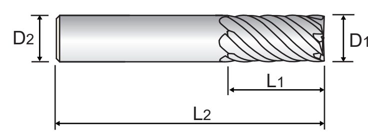
YG X-POWER PRO END MILLS

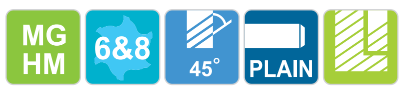
PLAIN SHANK **GM812** SERIES

CARBIDE, 6&8 FLUTE 45° HELIX LONG LENGTH

- ▶ Designed to machine hardened materials
- ▶ High speed cutting and finish milling with high feed rates
- ▶ Superior workpiece finishes
- ▶ Superior wear resistant
- ▶ Suitable for dry milling





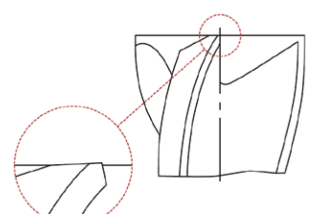


p.C468

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	No. of Flute
GM812060	6.0	6	13	57	6
GM812080	8.0	8	19	63	6
GM812100	10.0	10	22	72	6
GM812120	12.0	12	26	83	6
GM812160	16.0	16	32	92	6
GM812200	20.0	20	38	104	8

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.03	h6



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

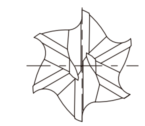
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

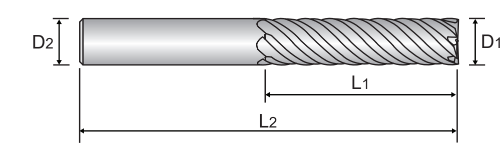
YG X-POWER PRO END MILLS

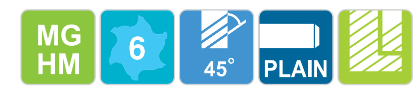
PLAIN SHANK **GM834** SERIES

CARBIDE, 6 FLUTE 45° HELIX EXTRA LONG LENGTH

- ▶ Designed to machine hardened materials
- ▶ High speed cutting and finish milling with high feed rates
- ▶ Superior workpiece finishes
- ▶ Superior wear resistant
- ▶ Suitable for dry milling





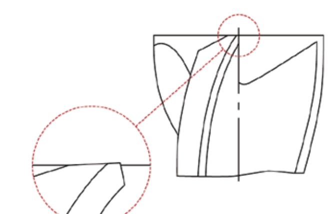


p.C469

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2
GM834060	6.0	6	26	70
GM834080	8.0	8	36	90
GM834100	10.0	10	46	100
GM834120	12.0	12	56	110
GM834160	16.0	16	66	130
GM834200	20.0	20	76	140
GM834250	25.0	25	92	180

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ -0.03	h6



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎				○	○	○	○	○	○

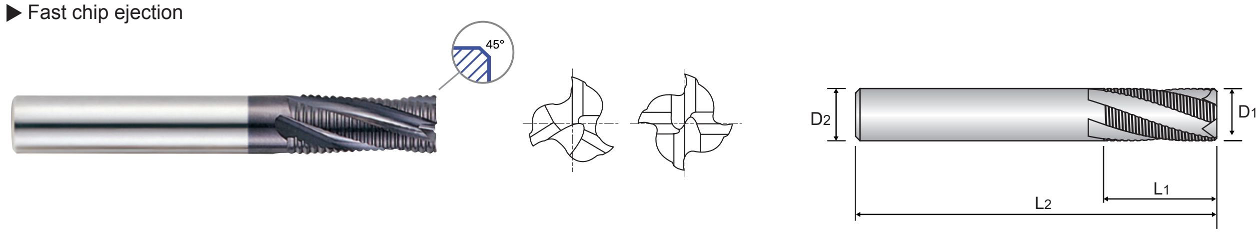
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

CARBIDE, MULTI FLUTE 20° HELIX LONG LENGTH ROUGHING - FINE

- ▶ Designed to machine tool steels, alloy steels, mold steels and other hardened materials
- ▶ High velocity milling of hardened steels
- ▶ For dry and wet milling
- ▶ Fast chip ejection



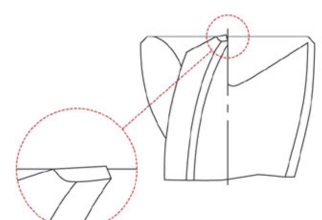
p.C470

Unit : mm

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	No. of Flute	Chamfer
GM814060	6.0	6	16	57	3	0.38
GM814080	8.0	8	16	63	3	0.38
GM814100	10.0	10	22	72	4	0.6
GM814120	12.0	12	26	83	4	0.6
GM814160	16.0	16	32	92	4	0.6
GM814200	20.0	20	38	104	4	0.6

Tolerances according to DIN 7160 & 7161

	Tolerance range in ㎛				
	Nominal-Diameter in ㎛				
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
h10	0 - 40	0 - 48	0 - 58	0 - 70	0 - 84
h6	0 - 6	0 - 8	0 - 9	0 - 11	0 - 13



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	◎	◎	○	◎	◎	◎	○	◎			○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○		◎	○

GM153 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/16	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-4	Non-alloy steel	0.05D	1.0D	SFM(Vc)	210	320	340	400	380	350	395	395	365	395
					IPT(fz)	.0002	.0004	.0009	.0012	.0017	.0019	.0019	.0018	.0019	.0018
					RPM	12840	9780	6930	6110	4650	3570	3020	2410	1860	1510
					IPM(FEED)	12	14	26	29	31	26	23	18	14	11
	5		0.05D	1.0D	SFM(Vc)	135	200	205	240	225	215	240	245	230	240
					IPT(fz)	.0002	.0004	.0009	.0012	.0015	.0015	.0015	.0015	.0015	.0015
					RPM	8250	6110	4180	3670	2750	2190	1830	1500	1170	920
					IPM(FEED)	7	9	16	18	17	13	11	9	7	6
	6-7	Low alloy steel	0.05D	1.0D	SFM(Vc)	210	320	340	400	380	350	395	395	365	395
					IPT(fz)	.0002	.0004	.0009	.0012	.0017	.0019	.0019	.0018	.0019	.0018
					RPM	12840	9780	6930	6110	4650	3570	3020	2410	1860	1510
					IPM(FEED)	12	14	26	29	31	26	23	18	14	11
	8-9		0.05D	1.0D	SFM(Vc)	135	200	205	240	225	215	240	245	230	240
					IPT(fz)	.0002	.0004	.0009	.0012	.0015	.0015	.0015	.0015	.0015	.0015
					RPM	8250	6110	4180	3670	2750	2190	1830	1500	1170	920
					IPM(FEED)	7	9	16	18	17	13	11	9	7	6
	10	High alloyed steel, and tool steel	0.05D	1.0D	SFM(Vc)	210	320	340	400	380	350	395	395	365	395
					IPT(fz)	.0002	.0004	.0009	.0012	.0017	.0019	.0019	.0018	.0019	.0018
					RPM	12840	9780	6930	6110	4650	3570	3020	2410	1860	1510
					IPM(FEED)	12	14	26	29	31	26	23	18	14	11
	11.1-11.2		0.05D	1.0D	SFM(Vc)	135	200	205	240	225	215	240	245	230	240
					IPT(fz)	.0002	.0004	.0009	.0012	.0015	.0015	.0015	.0015	.0015	.0015
					RPM	8250	6110	4180	3670	2750	2190	1830	1500	1170	920
					IPM(FEED)	7	9	16	18	17	13	11	9	7	6
M	12-14.2	Stainless steel	0.05D	1.0D	SFM(Vc)	115	165	170	205	190	180	195	190	180	195
					IPT(fz)	.0002	.0004	.0009	.0011	.0016	.0018	.0018	.0019	.0018	.0017
					RPM	7030	5040	3460	3130	2320	1830	1490	1160	920	750
					IPM(FEED)	6	7	13	14	15	13	11	9	7	5
H	38.1-38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	90	120	125	145	150	145	170	160	145	155
					IPT(fz)	.0001	.0002	.0003	.0004	.0006	.0007	.0007	.0007	.0006	.0005
					RPM	5500	3670	2550	2220	1830	1480	1300	980	740	590
					IPM(FEED)	2	3	3	4	5	4	4	3	2	1
	40	Chilled Cast Iron	0.05D	1.0D	SFM(Vc)	135	200	205	240	225	215	240	245	230	240
					IPT(fz)	.0002	.0004	.0009	.0012	.0015	.0015	.0015	.0015	.0015	.0015
					RPM	8250	6110	4180	3670	2750	2190	1830	1500	1170	920
					IPM(FEED)	7	9	16	18	17	13	11	9	7	6
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	90	120	125	145	150	145	170	160	145	155
					IPT(fz)	.0001	.0002	.0003	.0004	.0006	.0007	.0007	.0007	.0006	.0005
					RPM	5500	3670	2550	2220	1830	1480	1300	980	740	590
					IPM(FEED)	2	3	3	4	5	4	4	3	2	1

(Diameter (Ø) spans the columns 1/16 to 1.)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM207 SERIES 4FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-4	Non-alloy steel	0.05D	2.0D	SFM(Vc)	160	165	190	180	180	200	210	180	195
					IPT(fz)	.0003	.0006	.0008	.0011	.0014	.0013	.0013	.0014	.0017
					RPM	4890	3360	2900	2200	1830	1530	1280	920	750
					IPM(FEED)	5	8	9	10	10	8	7	5	5
	5		0.05D	2.0D	SFM(Vc)	130	130	150	140	150	170	160	145	155
					IPT(fz)	.0003	.0006	.0009	.0011	.0013	.0013	.0014	.0013	.0016
					RPM	3970	2650	2290	1710	1530	1300	980	740	590
					IPM(FEED)	4	6	8	8	8	7	5	4	4
	6-7	Low alloy steel	0.05D	2.0D	SFM(Vc)	160	165	190	180	180	200	210	180	195
					IPT(fz)	.0003	.0006	.0008	.0011	.0014	.0013	.0013	.0014	.0017
					RPM	4890	3360	2900	2200	1830	1530	1280	920	750
					IPM(FEED)	5	8	9	10	10	8	7	5	5
	8-9		0.05D	2.0D	SFM(Vc)	130	130	150	140	150	170	160	145	155
					IPT(fz)	.0003	.0006	.0009	.0011	.0013	.0013	.0014	.0013	.0016
					RPM	3970	2650	2290	1710	1530	1300	980	740	590
					IPM(FEED)	4	6	8	8	8	7	5	4	4
	10	High alloyed steel, and tool steel	0.05D	2.0D	SFM(Vc)	160	165	190	180	180	200	210	180	195
					IPT(fz)	.0003	.0006	.0008	.0011	.0014	.0013	.0013	.0014	.0017
					RPM	4890	3360	2900	2200	1830	1530	1280	920	750
					IPM(FEED)	5	8	9	10	10	8	7	5	5
	11.1-11.2		0.05D	2.0D	SFM(Vc)	130	130	150	140	150	170	160	145	155
					IPT(fz)	.0003	.0006	.0009	.0011	.0013	.0013	.0014	.0013	.0016
					RPM	3970	2650	2290	1710	1530	1300	980	740	590
					IPM(FEED)	4	6	8	8	8	7	5	4	4
H	38.1-38.2	Hardened steel	0.02D	2.0D	SFM(Vc)	80	85	100	95	90	100	100	90	95
					IPT(fz)	.0002	.0004	.0006	.0008	.0011	.0010	.0011	.0011	.0014
					RPM	2450	1730	1530	1160	920	760	610	460	360
					IPM(FEED)	2	3	4	4	4	3	3	2	2
	40	Chilled Cast Iron	0.05D	2.0D	SFM(Vc)	130	130	150	140	150	170	160	145	155
					IPT(fz)	.0003	.0006	.0009	.0011	.0013	.0013	.0014	.0013	.0016
					RPM	3970	2650	2290	1710	1530	1300	980	740	590
					IPM(FEED)	4	6	8	8	8	7	5	4	4
	41	Hardened Cast Iron	0.02D	2.0D	SFM(Vc)	80	85	100	95	90	100	100	90	95
					IPT(fz)	.0002	.0004	.0006	.0008	.0011	.0010	.0011	.0011	.0014
					RPM	2450	1730	1530	1160	920	760	610	460	360
					IPM(FEED)	2	3	4	4	4	3	3	2	2

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM639, GM649, GM212 SERIES 4FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2
P	1-4	Non-alloy steel	0.05D	2.5D	SFM(Vc)	190	180	180	200
					IPT(fz)	.0008	.0011	.0013	.0013
					RPM	2900	2200	1830	1530
					IPM(FEED)	9	10	10	8
	5		0.05D	2.5D	SFM(Vc)	150	140	150	170
					IPT(fz)	.0009	.0011	.0013	.0013
					RPM	2290	1710	1530	1300
					IPM(FEED)	8	8	8	7
	6-7	Low alloy steel	0.05D	2.5D	SFM(Vc)	190	180	180	200
					IPT(fz)	.0008	.0011	.0013	.0013
					RPM	2900	2200	1830	1530
					IPM(FEED)	9	10	10	8
	8-9		0.05D	2.5D	SFM(Vc)	150	140	150	170
					IPT(fz)	.0009	.0011	.0013	.0013
					RPM	2290	1710	1530	1300
					IPM(FEED)	8	8	8	7
	10	High alloyed steel, and tool steel	0.05D	2.5D	SFM(Vc)	190	180	180	200
					IPT(fz)	.0008	.0011	.0013	.0013
					RPM	2900	2200	1830	1530
					IPM(FEED)	9	10	10	8
	11.1-11.2		0.05D	2.5D	SFM(Vc)	150	140	150	170
					IPT(fz)	.0009	.0011	.0013	.0013
					RPM	2290	1710	1530	1300
					IPM(FEED)	8	8	8	7
H	38.1	Hardened steel	0.05D	2.5D	SFM(Vc)	150	140	150	170
					IPT(fz)	.0009	.0011	.0013	.0013
					RPM	2290	1710	1530	1300
					IPM(FEED)	8	8	8	7
	38.2	Hardened steel	0.02D	2.5D	SFM(Vc)	100	95	90	100
					IPT(fz)	.0006	.0008	.0010	.0010
					RPM	1530	1160	920	760
					IPM(FEED)	4	4	4	3
	40	Chilled Cast Iron	0.05D	2.5D	SFM(Vc)	150	140	150	170
					IPT(fz)	.0009	.0011	.0013	.0013
					RPM	2290	1710	1530	1300
					IPM(FEED)	8	8	8	7
	41	Hardened Cast Iron	0.02D	2.5D	SFM(Vc)	100	95	90	100
					IPT(fz)	.0006	.0008	.0010	.0010
					RPM	1530	1160	920	760
					IPM(FEED)	4	4	4	3

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM103 SERIES 4FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 3/8	1/2	5/8	3/4	7/8
P	1-4	Non-alloy steel	0.05D	1.5D	SFM(Vc)	830	830	830	830	830
					IPT(fz)	.0026	.0034	.0038	.0039	.0039
					RPM	8460	6340	5070	4230	3620
					IPM(FEED)	87	87	78	66	56
	5		0.05D	1.5D	SFM(Vc)	830	830	830	830	830
					IPT(fz)	.0016	.0021	.0026	.0031	.0036
					RPM	8460	6340	5070	4230	3620
					IPM(FEED)	53	53	53	53	53
	6-7	Low alloy steel	0.05D	1.5D	SFM(Vc)	830	830	830	830	830
					IPT(fz)	.0026	.0034	.0038	.0039	.0039
					RPM	8460	6340	5070	4230	3620
					IPM(FEED)	87	87	78	66	56
	8-9		0.05D	1.5D	SFM(Vc)	830	830	830	830	830
					IPT(fz)	.0016	.0021	.0026	.0031	.0036
					RPM	8460	6340	5070	4230	3620
					IPM(FEED)	53	53	53	53	53
	10	High alloyed steel, and tool steel	0.05D	1.5D	SFM(Vc)	830	830	830	830	830
					IPT(fz)	.0026	.0034	.0038	.0039	.0039
					RPM	8460	6340	5070	4230	3620
					IPM(FEED)	87	87	78	66	56
	11.1-11.2		0.05D	1.5D	SFM(Vc)	830	830	830	830	830
					IPT(fz)	.0016	.0021	.0026	.0031	.0036
					RPM	8460	6340	5070	4230	3620
					IPM(FEED)	53	53	53	53	53
M	12-14.2	Hardened steel	0.05D	1.5D	SFM(Vc)	615	615	615	615	610
					IPT(fz)	.0016	.0021	.0026	.0032	.0037
					RPM	6270	4700	3760	3130	2660
					IPM(FEED)	40	40	40	40	40
K	38.1-38.2	Hardened steel	0.05D	1.5D	SFM(Vc)	615	615	615	615	610
					IPT(fz)	.0013	.0017	.0021	.0025	.0030
					RPM	6270	4700	3760	3130	2660
					IPM(FEED)	32	32	32	32	32
	40	Chilled Cast Iron	0.05D	1.5D	SFM(Vc)	830	830	830	830	830
					IPT(fz)	.0016	.0021	.0026	.0031	.0036
					RPM	8460	6340	5070	4230	3620
					IPM(FEED)	53	53	53	53	53
	41	Hardened Cast Iron	0.05D	1.5D	SFM(Vc)	615	615	615	615	610
					IPT(fz)	.0013	.0017	.0021	.0025	.0030
					RPM	6270	4700	3760	3130	2660
					IPM(FEED)	32	32	32	32	32

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM103 SERIES 4FLUTE CORNER RADIUS - CONTOURING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 3/8	1/2	5/8	3/4	7/8
P	1-4	Non-alloy steel	0.3D ~ 0.5D	0.1D	SFM(Vc)	830	830	830	1050	830
					IPT(fz)	.0015	.0020	.0024	.0023	.0034
					RPM	8460	6340	5070	5350	3620
					IPM(FEED)	50	50	50	50	50
	5		0.3D ~ 0.5D	0.1D	SFM(Vc)	615	615	615	615	610
					IPT(fz)	.0016	.0021	.0026	.0032	.0037
					RPM	6270	4700	3760	3130	2660
					IPM(FEED)	40	40	40	40	40
	6-7	Low alloy steel	0.3D ~ 0.5D	0.1D	SFM(Vc)	830	830	830	1050	830
					IPT(fz)	.0015	.0020	.0024	.0023	.0034
					RPM	8460	6340	5070	5350	3620
					IPM(FEED)	50	50	50	50	50
	8-9		0.3D ~ 0.5D	0.1D	SFM(Vc)	615	615	615	615	610
					IPT(fz)	.0016	.0021	.0026	.0032	.0037
					RPM	6270	4700	3760	3130	2660
					IPM(FEED)	40	40	40	40	40
	10	High alloyed steel, and tool steel	0.3D ~ 0.5D	0.1D	SFM(Vc)	830	830	830	1050	830
					IPT(fz)	.0015	.0020	.0024	.0023	.0034
					RPM	8460	6340	5070	5350	3620
					IPM(FEED)	50	50	50	50	50
	11.1-11.2		0.3D ~ 0.5D	0.1D	SFM(Vc)	615	615	615	615	610
					IPT(fz)	.0016	.0021	.0026	.0032	.0037
					RPM	6270	4700	3760	3130	2660
					IPM(FEED)	40	40	40	40	40
M	12-14.2	Hardened steel	0.3D ~ 0.5D	0.1D	SFM(Vc)	615	615	615	615	610
					IPT(fz)	.0014	.0018	.0023	.0027	.0032
					RPM	6270	4700	3760	3130	2660
					IPM(FEED)	34	34	34	34	34
K	38.1-38.2	Hardened steel	0.2D ~ 0.3D	0.05D	SFM(Vc)	615	615	615	615	610
					IPT(fz)	.0008	.0011	.0013	.0016	.0019
					RPM	6270	4700	3760	3130	2660
					IPM(FEED)	20	20	20	20	20
	40	Chilled Cast Iron	0.2D ~ 0.3D	0.1D	SFM(Vc)	615	615	615	615	610
					IPT(fz)	.0016	.0021	.0026	.0032	.0037
					RPM	6270	4700	3760	3130	2660
					IPM(FEED)	40	40	40	40	40
	41	Hardened Cast Iron	0.2D ~ 0.3D	0.05D	SFM(Vc)	615	615	615	615	610
					IPT(fz)	.0008	.0011	.0013	.0016	.0019
					RPM	6270	4700	3760	3130	2660
					IPM(FEED)	20	20	20	20	20

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

YG X-POWER PRO END MILLS
RECOMMENDED CUTTING CONDITIONS

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

GM208 SERIES 6&8FLUTE SQUARE - SIDE CUTTING

(NORMAL SPEED)

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-4	Non-alloy steel	0.1D	1.5D	SFM(Vc)	370	350	335	380	350	335	340
					IPT(fz)	.0024	.0031	.0039	.0039	.0040	.0030	.0025
					RPM	5650	4280	3410	2900	2140	1710	1300
					IPM(FEED)	81	81	81	67	51	41	26
	5		0.05D	1.5D	SFM(Vc)	260	245	235	265	245	230	235
					IPT(fz)	.0023	.0031	.0038	.0039	.0040	.0029	.0025
					RPM	3970	2990	2390	2020	1500	1170	900
					IPM(FEED)	55	55	55	47	36	28	18
	6-7	Low alloy steel	0.1D	1.5D	SFM(Vc)	370	350	335	380	350	335	340
					IPT(fz)	.0024	.0031	.0039	.0039	.0040	.0030	.0025
					RPM	5650	4280	3410	2900	2140	1710	1300
					IPM(FEED)	81	81	81	67	51	41	26
	8-9		0.05D	1.5D	SFM(Vc)	260	245	235	265	245	230	235
					IPT(fz)	.0023	.0031	.0038	.0039	.0040	.0029	.0025
					RPM	3970	2990	2390	2020	1500	1170	900
					IPM(FEED)	55	55	55	47	36	28	18
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM(Vc)	370	350	335	380	350	335	340
					IPT(fz)	.0024	.0031	.0039	.0039	.0040	.0030	.0025
					RPM	5650	4280	3410	2900	2140	1710	1300
					IPM(FEED)	81	81	81	67	51	41	26
	11.1-11.2		0.05D	1.5D	SFM(Vc)	260	245	235	265	245	230	235
					IPT(fz)	.0023	.0031	.0038	.0039	.0040	.0029	.0025
					RPM	3970	2990	2390	2020	1500	1170	900
					IPM(FEED)	55	55	55	47	36	28	18
H	38.1	Hardened steel	0.05D	1.5D	SFM(Vc)	260	245	235	265	245	230	235
					IPT(fz)	.0023	.0031	.0038	.0039	.0040	.0029	.0025
					RPM	3970	2990	2390	2020	1500	1170	900
					IPM(FEED)	55	55	55	47	36	28	18
	38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	105	95	100	115	105	100	100
					IPT(fz)	.0009	.0012	.0014	.0014	.0014	.0011	.0010
					RPM	1600	1160	1020	880	640	510	380
					IPM(FEED)	9	9	9	7	5	5	3
	40	Chilled Cast Iron	0.05D	1.5D	SFM(Vc)	260	245	235	265	245	230	235
					IPT(fz)	.0023	.0031	.0038	.0039	.0040	.0029	.0025
					RPM	3970	2990	2390	2020	1500	1170	900
					IPM(FEED)	55	55	55	47	36	28	18
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	105	95	100	115	105	100	100
					IPT(fz)	.0009	.0012	.0014	.0014	.0014	.0011	.0010
					RPM	1600	1160	1020	880	640	510	380
					IPM(FEED)	9	9	9	7	5	5	3

(HIGH SPEED)

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-11.2	Non-alloy steel Low alloy steel High alloyed steel, and tool steel	0.05D	1.5D	SFM(Vc)	1120	1050	1000	1120	1050	1010	1015
					IPT(fz)	.0024	.0032	.0039	.0040	.0039	.0030	.0025
					RPM	17110	12840	10190	8560	6420	5140	3880
					IPM(FEED)	245	245	240	203	152	122	77
H	38.1	Hardened steel	0.05D	1.5D	SFM(Vc)	1120	1050	1000	1120	1050	1010	1015
					IPT(fz)	.0024	.0032	.0039	.0040	.0039	.0030	.0025
					RPM	17110	12840	10190	8560	6420	5140	3880
					IPM(FEED)	245	245	240	203	152	122	77
	38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	560	525	505	560	525	505	505
					IPT(fz)	.0024	.0032	.0040	.0040	.0040	.0029	.0025
					RPM	8560	6420	5140	4280	3210	2570	1930
					IPM(FEED)	122	122	122	102	77	59	39
	40	Chilled Cast Iron	0.05D	1.5D	SFM(Vc)	1120	1050	1000	1120	1050	1010	1015
					IPT(fz)	.0024	.0032	.0039	.0040	.0039	.0030	.0025
					RPM	17110	12840	10190	8560	6420	5140	3880
					IPM(FEED)	245	245	240	203	152	122	77
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	560	525	505	560	525	505	505
					IPT(fz)	.0024	.0032	.0040	.0040	.0040	.0029	.0025
					RPM	8560	6420	5140	4280	3210	2570	1930
					IPM(FEED)	122	122	122	102	77	59	39

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM218 SERIES 6&8FLUTE SQUARE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-9	Non-alloy steel Low alloy steel	0.01D	3.0D	SFM(Vc)	150	140	135	150	140	135	145
					IPT(fz)	.0014	.0018	.0021	.0024	.0026	.0020	.0022
					RPM	2290	1710	1380	1150	860	690	550
					IPM(FEED)	19	18	17	16	13	11	10
	10 - 11.1	High alloyed steel, and tool steel	0.05D	3.0D	SFM(Vc)	150	140	135	150	140	135	145
					IPT(fz)	.0014	.0018	.0021	.0024	.0026	.0020	.0022
					RPM	2290	1710	1380	1150	860	690	550
					IPM(FEED)	19	18	17	16	13	11	10
	11.2		0.01D	3.0D	SFM(Vc)	110	105	100	115	105	100	105
					IPT(fz)	.0014	.0017	.0020	.0021	.0024	.0020	.0021
					RPM	1680	1280	1020	880	640	510	400
					IPM(FEED)	14	13	12	11	9	8	7
H	38.1	Hardened steel	0.01D	3.0D	SFM(Vc)	110	105	100	115	105	100	105
					IPT(fz)	.0014	.0017	.0020	.0021	.0024	.0020	.0021
					RPM	1680	1280	1020	880	640	510	400
					IPM(FEED)	14	13	12	11 0.01D	9	8	7
	38.2	Hardened steel	0.05D	3.0D	SFM(Vc)	95	90	85	90	90	85	90
					IPT(fz)	.0012	.0015	.0018	.0021	.0020	.0018	.0019
					RPM	1450	1100	870	690	550	430	340
					IPM(FEED)	10	10	9	9	7	6	5
	40	Chilled Cast Iron	0.01D	3.0D	SFM(Vc)	110	105	100	115	105	100	105
					IPT(fz)	.0014	.0017	.0020	.0021	.0024	.0020	.0021
					RPM	1680	1280	1020	880	640	510	400
					IPM(FEED)	14	13	12	11	9	8	7
	41	Hardened Cast Iron	0.05D	3.0D	SFM(Vc)	95	90	85	90	90	85	90
					IPT(fz)	.0012	.0015	.0018	.0021	.0020	.0018	.0019
					RPM	1450	1100	870	690	550	430	340
					IPM(FEED)	10	10	9	9	7	6	5

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM668 SERIES 6&8FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/4	5/16	3/8	1/2	5/8	3/4
P	1-11.2	Non-alloy steel Low alloy steel High alloyed steel, and tool steel	0.05D	1.5D	SFM(Vc)	1120	1050	1000	1120	1050	1000
					IPT(fz)	.0024	.0032	.0039	.0040	.0040	.0030
					RPM	17110	12840	10190	8560	6420	5090
					IPM(FEED)	245	245	240	204	153	122
H	38.1	Hardened steel	0.05D	1.5D	SFM(Vc)	1120	1050	1000	1120	1050	1000
					IPT(fz)	.0024	.0032	.0039	.0040	.0040	.0030
					RPM	17110	12840	10190	8560	6420	5090
					IPM(FEED)	245	245	240	204	153	122
	38.2		0.05D	1.5D	SFM(Vc)	560	525	500	560	525	500
					IPT(fz)	.0024	.0032	.0040	.0040	.0040	.0029
					RPM	8560	6420	5090	4280	3210	2550
					IPM(FEED)	122	122	122	102	77	59
	40	Chilled Cast Iron	0.05D	1.5D	SFM(Vc)	1120	1050	1000	1120	1050	1000
					IPT(fz)	.0024	.0032	.0039	.0040	.0040	.0030
					RPM	17110	12840	10190	8560	6420	5090
					IPM(FEED)	245	245	240	204	153	122
	41	Hardened Cast Iron	0.05D	1.5D	SFM(Vc)	560	525	500	560	525	500
					IPT(fz)	.0024	.0032	.0040	.0040	.0040	.0029
					RPM	8560	6420	5090	4280	3210	2550
					IPM(FEED)	122	122	122	102	77	59

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM209 SERIES 2FLUTE BALL NOSE - PROFILE

(NORMAL SPEED)

ISO	VDI 3323	Material Description	Ae	Parameter	1/32	1/16	3/32	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4
P	1-4	Non-alloy steel	0.2D	SFM(Vc)	140	285	390	470	495	560	475	500	545	490	455
				IPT(fz)	.0003	.0004	.0010	.0010	.0018	.0021	.0036	.0043	.0047	.0066	.0078
				RPM	17110	17420	15890	14360	10090	8560	5810	5090	4160	3000	2320
				IPM(FEED)	11	15	33	29	36	36	41	44	39	40	36
	5		0.2D	SFM(Vc)	115	220	290	360	395	455	400	410	425	415	410
				IPT(fz)	.0003	.0004	.0009	.0009	.0016	.0020	.0029	.0037	.0044	.0056	.0066
				RPM	14060	13450	11820	11000	8050	6950	4890	4180	3250	2540	2090
				IPM(FEED)	9	12	21	20	25	27	29	31	29	29	28
	6-7	Low alloy steel	0.2D	SFM(Vc)	140	285	390	470	495	560	475	500	545	490	455
				IPT(fz)	.0003	.0004	.0010	.0010	.0018	.0021	.0036	.0043	.0047	.0066	.0078
				RPM	17110	17420	15890	14360	10090	8560	5810	5090	4160	3000	2320
				IPM(FEED)	11	15	33	29	36	36	41	44	39	40	36
	8-9		0.2D	SFM(Vc)	115	220	290	360	395	455	400	410	425	415	410
				IPT(fz)	.0003	.0004	.0009	.0009	.0016	.0020	.0029	.0037	.0044	.0056	.0066
				RPM	14060	13450	11820	11000	8050	6950	4890	4180	3250	2540	2090
				IPM(FEED)	9	12	21	20	25	27	29	31	29	29	28
	10	High alloyed steel, and tool steel	0.2D	SFM(Vc)	140	285	390	470	495	560	475	500	545	490	455
				IPT(fz)	.0003	.0004	.0010	.0010	.0018	.0021	.0036	.0043	.0047	.0066	.0078
				RPM	17110	17420	15890	14360	10090	8560	5810	5090	4160	3000	2320
				IPM(FEED)	11	15	33	29	36	36	41	44	39	40	36
	11.1-11.2		0.2D	SFM(Vc)	115	220	290	360	395	455	400	410	425	415	410
				IPT(fz)	.0003	.0004	.0009	.0009	.0016	.0020	.0029	.0037	.0044	.0056	.0066
				RPM	14060	13450	11820	11000	8050	6950	4890	4180	3250	2540	2090
				IPM(FEED)	9	12	21	20	25	27	29	31	29	29	28
H	38.1-38.2	Hardened steel	0.1D	SFM(Vc)	50	95	125	165	200	230	190	190	195	210	180
				IPT(fz)	.0003	.0004	.0006	.0006	.0010	.0012	.0018	.0021	.0028	.0032	.0045
				RPM	6110	5810	5090	5040	4080	3510	2320	1940	1490	1280	920
				IPM(FEED)	4	5	7	7	8	8	8	8	8	8	8
	40	Chilled Cast Iron	0.1D	SFM(Vc)	115	220	290	360	395	455	400	410	425	415	410
				IPT(fz)	.0003	.0004	.0009	.0009	.0016	.0020	.0029	.0037	.0044	.0056	.0066
				RPM	14060	13450	11820	11000	8050	6950	4890	4180	3250	2540	2090
				IPM(FEED)	9	12	21	20	25	27	29	31	29	29	28
	41	Hardened Cast Iron	0.1D	SFM(Vc)	50	95	125	165	200	230	190	190	195	210	180
				IPT(fz)	.0003	.0004	.0006	.0006	.0010	.0012	.0018	.0021	.0028	.0032	.0045
				RPM	6110	5810	5090	5040	4080	3510	2320	1940	1490	1280	920
				IPM(FEED)	4	5	7	7	8	8	8	8	8	8	8

Diameter (Ø)

(HIGH SPEED)

ISO	VDI 3323	Material Description	Ae	Parameter	1/32	1/16	3/32	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4
P	1-11.2	Non-alloy steel Low alloy steel High alloyed steel, and tool steel	0.05D	SFM(Vc)	225	415	565	755	1135	1510	1420	1475	1510	1475	1360
				IPT(fz)	.0005	.0006	.0008	.0009	.0017	.0022	.0035	.0044	.0049	.0063	.0079
				RPM	27500	25370	23020	23070	23120	23070	17360	15030	11540	9020	6930
				IPM(FEED)	28	30	38	43	78	100	123	132	114	114	109
H	38.1-38.2	Hardened steel	0.05D	SFM(Vc)	225	415	515	610	650	755	710	680	760	680	635
				IPT(fz)	.0003	.0004	.0005	.0006	.0010	.0012	.0018	.0026	.0031	.0037	.0035
				RPM	27500	25370	20990	18640	13240	11540	8680	6930	5810	4160	3230
				IPM(FEED)	17	19	21	23	26	27	32	36	36	31	23
	40-41	Chilled Cast Iron Hardened Cast Iron	0.05D	SFM(Vc)	225	415	515	610	650	755	710	680	760	680	635
				IPT(fz)	.0003	.0004	.0005	.0006	.0010	.0012	.0018	.0026	.0031	.0037	.0035
				RPM	27500	25370	20990	18640	13240	11540	8680	6930	5810	4160	3230
				IPM(FEED)	17	19	21	23	26	27	32	36	36	31	23

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

Ap
D3/16~D1/4 = .008
D5/16~D3/4 = .012

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM210 SERIES 4FLUTE BALL NOSE - PROFILE

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(NORMAL SPEED)

ISO	VDI 3323	Material Description	Ae	Parameter	1/8	3/16	1/4	5/16	3/8	1/2	5/8
P	1-4	Non-alloy steel	0.2D	SFM(Vc)	470	495	560	475	500	545	490
				IPT(fz)	.0008	.0013	.0016	.0027	.0032	.0035	.0050
				RPM	14360	10090	8560	5810	5090	4160	3000
				IPM(FEED)	44	53	55	62	66	58	60
	5		0.2D	SFM(Vc)	360	395	455	400	410	425	415
				IPT(fz)	.0007	.0012	.0015	.0022	.0028	.0033	.0042
				RPM	11000	8050	6950	4890	4180	3250	2540
				IPM(FEED)	30	37	41	43	46	43	42
	6-7	Low alloy steel	0.2D	SFM(Vc)	470	495	560	475	500	545	490
				IPT(fz)	.0008	.0013	.0016	.0027	.0032	.0035	.0050
				RPM	14360	10090	8560	5810	5090	4160	3000
				IPM(FEED)	44	53	55	62	66	58	60
	8-9		0.2D	SFM(Vc)	360	395	455	400	410	425	415
				IPT(fz)	.0007	.0012	.0015	.0022	.0028	.0033	.0042
				RPM	11000	8050	6950	4890	4180	3250	2540
				IPM(FEED)	30	37	41	43	46	43	42
	10	High alloyed steel, and tool steel	0.2D	SFM(Vc)	470	495	560	475	500	545	490
				IPT(fz)	.0008	.0013	.0016	.0027	.0032	.0035	.0050
				RPM	14360	10090	8560	5810	5090	4160	3000
				IPM(FEED)	44	53	55	62	66	58	60
	11.1-11.2		0.2D	SFM(Vc)	360	395	455	400	410	425	415
				IPT(fz)	.0007	.0012	.0015	.0022	.0028	.0033	.0042
				RPM	11000	8050	6950	4890	4180	3250	2540
				IPM(FEED)	30	37	41	43	46	43	42
H	38.1-38.2	Hardened steel	0.1D	SFM(Vc)	165	200	230	190	190	195	210
				IPT(fz)	.0005	.0007	.0009	.0013	.0016	.0021	.0024
				RPM	5040	4080	3510	2320	1940	1490	1280
				IPM(FEED)	10	12	12	12	12	12	12
	40	Chilled Cast Iron	0.2D	SFM(Vc)	360	395	455	400	410	425	415
				IPT(fz)	.0007	.0012	.0015	.0022	.0028	.0033	.0042
				RPM	11000	8050	6950	4890	4180	3250	2540
				IPM(FEED)	30	37	41	43	46	43	42
	41	Hardened Cast Iron	0.1D	SFM(Vc)	165	200	230	190	190	195	210
				IPT(fz)	.0005	.0007	.0009	.0013	.0016	.0021	.0024
				RPM	5040	4080	3510	2320	1940	1490	1280
				IPM(FEED)	10	12	12	12	12	12	12

AP	~HRc45	HRc45~55
	D1/8 ~ D1/4 = .008 D5/16 ~ D5/8 = .012	D1/8 ~ D1/4 = .008 D5/16 ~ D5/8 = .012

(HIGH SPEED)

ISO	VDI 3323	Material Description	Ae	Parameter	1/8	3/16	1/4	5/16	3/8	1/2	5/8
P	1-11.2	Non-alloy steel Low alloy steel High alloyed steel, and tool steel	0.05D	SFM(Vc)	755	1135	1510	1420	1475	1510	1475
				IPT(fz)	.0007	.0013	.0016	.0027	.0033	.0037	.0047
				RPM	23070	23120	23070	17360	15030	11540	9020
				IPM(FEED)	65	117	150	184	198	171	171
H	38.1-38.2	Hardened steel	0.05D	SFM(Vc)	610	650	755	710	680	760	680
				IPT(fz)	.0005	.0007	.0009	.0014	.0020	.0023	.0028
				RPM	18640	13240	11540	8680	6930	5810	4160
				IPM(FEED)	34	39	41	48	55	55	46
	40-41	Chilled Cast Iron Hardened Cast Iron	0.05D	SFM(Vc)	610	650	755	710	680	760	680
				IPT(fz)	.0005	.0007	.0009	.0014	.0020	.0023	.0028
				RPM	18640	13240	11540	8680	6930	5810	4160
				IPM(FEED)	34	39	41	48	55	55	46

AP	~HRc55
	D1/8 ~ D1/4 = .008 D5/16 ~ D5/8 = .012

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM961 SERIES 2FLUTE BALL NOSE - PROFILE

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(NORMAL SPEED)

ISO	VDI 3323	Material Description	Ae	Parameter	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-11.2	Non-alloy steel Low alloy steel High alloyed steel, and tool steel	0.2D	SFM(Vc)	360	395	455	400	410	425	415	410	435
				IPT(fz)	.0009	.0016	.0020	.0029	.0037	.0044	.0056	.0066	.0083
				RPM	11000	8050	6950	4890	4180	3250	2540	2090	1660
				IPM(FEED)	20	25	27	29	31	29	29	28	28
H	38.1	Hardened steel	0.1D	SFM(Vc)	455	510	620	630	655	785	785	755	805
				IPT(fz)	.0017	.0023	.0026	.0029	.0032	.0036	.0039	.0039	.0049
				RPM	13910	10390	9470	7700	6670	6000	4800	3850	3080
				IPM(FEED)	48	48	50	45	43	43	38	30	30
	38.2		0.1D	SFM(Vc)	445	490	595	605	625	750	750	715	765
				IPT(fz)	.0017	.0023	.0026	.0029	.0033	.0036	.0039	.0039	.0048
				RPM	13600	9980	9090	7400	6370	5730	4580	3640	2920
				IPM(FEED)	45	45	48	43	42	42	36	28	28
	40	Chilled Cast Iron	0.2D	SFM(Vc)	360	395	455	400	410	425	415	410	435
				IPT(fz)	.0009	.0016	.0020	.0029	.0037	.0044	.0056	.0066	.0083
				RPM	11000	8050	6950	4890	4180	3250	2540	2090	1660
				IPM(FEED)	20	25	27	29	31	29	29	28	28
	41	Hardened Cast Iron	0.1D	SFM(Vc)	445	490	595	605	625	750	750	715	765
				IPT(fz)	.0017	.0023	.0026	.0029	.0033	.0036	.0039	.0039	.0048
				RPM	13600	9980	9090	7400	6370	5730	4580	3640	2920
				IPM(FEED)	45	45	48	43	42	42	36	28	28

AP	~HRc45	HRc45~55
	D1/8 ~ D1/4 = .008 D5/16 ~ D5/8 = .012	D1/8 = .006 D3/16 ~ D5/16 = .010 D3/8 ~ D1 = .012

(HIGH SPEED)

ISO	VDI 3323	Material Description	Ae	Parameter	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-11.2	Non-alloy steel Low alloy steel High alloyed steel, and tool steel	0.05D	SFM(Vc)	755	1135	1510	1420	1475	1510	1475	1360	1450
				IPT(fz)	.0009	.0017	.0022	.0035	.0044	.0049	.0063	.0079	.0098
				RPM	23070	23120	23070	17360	15030	11540	9020	6930	5540
				IPM(FEED)	43	78	100	123	132	114	114	109	109
H	38.1	Hardened steel	0.05D	SFM(Vc)	455	510	620	630	655	785	785	755	805
				IPT(fz)	.0027	.0034	.0040	.0044	.0047	.0051	.0055	.0056	.0070
				RPM	13910	10390	9470	7700	6670	6000	4800	3850	3080
				IPM(FEED)	76	72	76	67	63	62	53	43	43
	38.2		0.05D	SFM(Vc)	445	490	595	605	625	750	750	715	765
				IPT(fz)	.0027	.0034	.0040	.0043	.0046	.0050	.0053	.0053	.0067
				RPM	13600	9980	9090	7400	6370	5730	4580	3640	2920
				IPM(FEED)	72	68	72	63	59	58	49	39	39
	40	Chilled Cast Iron	0.05D	SFM(Vc)	755	1135	1510	1420	1475	1510	1475	1360	1450
				IPT(fz)	.0009	.0017	.0022	.0035	.0044	.0049	.0063	.0079	.0098
				RPM	23070	23120	23070	17360	15030	11540	9020	6930	5540
				IPM(FEED)	43	78	100	123	132	114	114	109	109
	41	Hardened Cast Iron	0.05D	SFM(Vc)	445	490	595	605	625	750	750	715	765
				IPT(fz)	.0027	.0034	.0040	.0043	.0046	.0050	.0053	.0053	.0067
				RPM	13600	9980	9090	7400	6370	5730	4580	3640	2920
				IPM(FEED)	72	68	72	63	59	58	49	39	39

AP	~HRc45	HRc45~55
	D1/8 ~ D1/4 = .008 D5/16 ~ D5/8 = .012	D1/8 = .006 D3/16 ~ D5/16 = .010 D3/8 ~ D1 = .012

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM960 SERIES 2FLUTE BALL NOSE - PROFILE

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) .024	.031	.040	.047	.062
P	5, 8-9, 11.1-11.2	Non-alloy steel Low alloy steel High alloyed steel, and tool steela	SFM(Vc)	200	230	275	310	390
			IPT(fz)	.0004	.0005	.0005	.0005	.0006
			RPM	31830	28340	26260	25200	24030
			IPM(FEED)	25	27	27	28	29
H	38.1-38.2	Hardened steel	SFM(Vc)	200	230	275	310	390
			IPT(fz)	.0002	.0003	.0003	.0003	.0004
			RPM	31830	28340	26260	25200	24030
			IPM(FEED)	12	16	17	17	18
	40	Chilled Cast Iron	SFM(Vc)	200	230	275	310	390
			IPT(fz)	.0004	.0005	.0005	.0005	.0006
			RPM	31830	28340	26260	25200	24030
			IPM(FEED)	25	27	27	28	29
	41	Hardened Cast Iron	SFM(Vc)	200	230	275	310	390
			IPT(fz)	.0002	.0003	.0003	.0003	.0004
			RPM	31830	28340	26260	25200	24030
			IPM(FEED)	12	16	17	17	18

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

HRc30~HRc45		HRc45~HRc55	
D<.040	D≥.040	D<.040	D≥.040
Ae = 0.15xD **Ap** = 0.05xD	**Ae** = 0.15xD **Ap** = 0.75xD	**Ae** = 0.1xD **Ap** = 0.05xD	**Ae** = 0.15xD **Ap** = 0.05xD

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM109 SERIES 2FLUTE BALL NOSE - PROFILE

(NORMAL SPEED)

ISO	VDI 3323	Material Description	Ae	Parameter	Diameter (Ø) 1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1
H	38.1	Hardened steel	0.1D	SFM(Vc)	455	510	620	630	655	785	785	755	805
				IPT(fz)	.0017	.0023	.0026	.0029	.0032	.0036	.0039	.0039	.0049
				RPM	13910	10390	9470	7700	6670	6000	4800	3850	3080
				IPM(FEED)	48	48	50	45	43	43	38	30	30
	38.2		0.1D	SFM(Vc)	445	490	595	605	625	750	750	715	765
				IPT(fz)	.0017	.0023	.0026	.0029	.0033	.0036	.0039	.0039	.0048
				RPM	13600	9980	9090	7400	6370	5730	4580	3640	2920
				IPM(FEED)	45	45	48	43	42	42	36	28	28
	41	Hardened Cast Iron	0.1D	SFM(Vc)	445	490	595	605	625	750	750	715	765
				IPT(fz)	.0017	.0023	.0026	.0029	.0033	.0036	.0039	.0039	.0048
				RPM	13600	9980	9090	7400	6370	5730	4580	3640	2920
				IPM(FEED)	45	45	48	43	42	42	36	28	28

(HIGH SPEED)

ISO	VDI 3323	Material Description	Ae	Parameter	Diameter (Ø) 1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1
H	38.1	Hardened steel	0.05D	SFM(Vc)	455	510	620	630	655	785	785	755	805
				IPT(fz)	.0027	.0034	.0040	.0044	.0047	.0051	.0055	.0056	.0070
				RPM	13910	10390	9470	7700	6670	6000	4800	3850	3080
				IPM(FEED)	76	72	76	67	63	62	53	43	43
	38.2		0.05D	SFM(Vc)	445	490	595	605	625	750	750	715	760
				IPT(fz)	.0027	.0034	.0040	.0043	.0046	.0050	.0053	.0053	.0067
				RPM	13600	9980	9090	7400	6370	5730	4580	3640	2900
				IPM(FEED)	72	68	72	63	59	58	49	39	39
	41	Hardened Cast Iron	0.05D	SFM(Vc)	445	490	595	605	625	750	750	715	760
				IPT(fz)	.0027	.0034	.0040	.0043	.0046	.0050	.0053	.0053	.0067
				RPM	13600	9980	9090	7400	6370	5730	4580	3640	2900
				IPM(FEED)	72	68	72	63	59	58	49	39	39

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

Ap
D1/8 = .006
D3/16~D5/16 = .010
D3/8~D1 = .012

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM963 SERIES 2FLUTE BALL NOSE - PROFILE

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

(NORMAL SPEED)

ISO	VDI 3323	Material Description	Ae	Parameter	1/16	1/8	3/16	1/4	5/16	3/8	1/2
P	1-11.2	Non-alloy steel, Low alloy steel, High alloyed steel, and tool steel	0.2D	SFM(Vc)	175	290	315	365	320	325	340
				IPT(fz)	.0004	.0009	.0016	.0019	.0029	.0037	.0044
				RPM	10700	8860	6420	5580	3910	3310	2600
				IPM(FEED)	9	16	20	22	23	25	23
H	38.1	Hardened steel	0.1D	SFM(Vc)	250	365	405	495	505	525	625
				IPT(fz)	.0007	.0017	.0023	.0026	.0029	.0032	.0036
				RPM	15280	11150	8250	7560	6170	5350	4780
				IPM(FEED)	22	38	38	40	36	35	35
	38.2		0.1D	SFM(Vc)	245	355	390	470	475	505	600
				IPT(fz)	.0007	.0017	.0023	.0027	.0030	.0032	.0036
				RPM	14970	10850	7950	7180	5810	5140	4580
				IPM(FEED)	20	37	37	38	35	33	33
	40	Chilled Cast Iron	0.2D	SFM(Vc)	175	290	315	365	320	325	340
				IPT(fz)	.0004	.0009	.0016	.0019	.0029	.0037	.0044
				RPM	10700	8860	6420	5580	3910	3310	2600
				IPM(FEED)	9	16	20	22	23	25	23
	41	Hardened Cast Iron	0.1D	SFM(Vc)	245	355	390	470	475	505	600
				IPT(fz)	.0007	.0017	.0023	.0027	.0030	.0032	.0036
				RPM	14970	10850	7950	7180	5810	5140	4580
				IPM(FEED)	20	37	37	38	35	33	33

AP	~HRc45	HRc45~55
	D1/8 ~ D1/4 = .008 D5/16 ~ D5/8 = .012	D1/8 = .006 D3/16 ~ D5/16 = .010 D3/8 ~ D1 = .012

(HIGH SPEED)

ISO	VDI 3323	Material Description	Ae	Parameter	1/16	1/8	3/16	1/4	5/16	3/8	1/2
P	1-11.2	Non-alloy steel, Low alloy steel, High alloyed steel, and tool steel	0.05D	SFM(Vc)	330	605	905	1210	1135	1180	1210
				IPT(fz)	.0006	.0009	.0017	.0022	.0035	.0044	.0049
				RPM	20170	18490	18440	18490	13870	12020	9240
				IPM(FEED)	24	35	62	80	98	106	91
H	38.1	Hardened steel	0.05D	SFM(Vc)	250	365	405	495	505	525	625
				IPT(fz)	.0010	.0027	.0035	.0040	.0044	.0047	.0051
				RPM	15280	11150	8250	7560	6170	5350	4780
				IPM(FEED)	32	61	57	61	54	50	49
	38.2		0.05D	SFM(Vc)	245	355	390	470	475	505	600
				IPT(fz)	.0011	.0026	.0034	.0041	.0043	.0046	.0050
				RPM	14970	10850	7950	7180	5810	5140	4580
				IPM(FEED)	33	56	54	58	50	48	45
	40	Chilled Cast Iron	0.05D	SFM(Vc)	330	605	905	1210	1135	1180	1210
				IPT(fz)	.0006	.0009	.0017	.0022	.0035	.0044	.0049
				RPM	20170	18490	18440	18490	13870	12020	9240
				IPM(FEED)	24	35	62	80	98	106	91
	41	Hardened Cast Iron	0.05D	SFM(Vc)	245	355	390	470	475	505	600
				IPT(fz)	.0011	.0026	.0034	.0041	.0043	.0046	.0050
				RPM	14970	10850	7950	7180	5810	5140	4580
				IPM(FEED)	33	56	54	58	50	48	45

AP	~HRc45	HRc45~55
	D1/8 ~ D1/4 = .008 D5/16 ~ D5/8 = .012	D1/8 = .006 D3/16 ~ D5/16 = .010 D3/8 ~ D1 = .012

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM666 SERIES 3-5FLUTE Roughing - Side Cutting

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-4	Non-alloy steel	0.3D	1.5D	SFM(Vc)	1105	1025	975	1130	1060	1105	1355
					IPT(fz)	.0019	.0026	.0033	.0030	.0039	.0044	.0036
					RPM	16880	12530	9930	8630	6480	5630	5180
					IPM(FEED)	99	99	99	102	102	99	92
	5		0.3D	1.5D	SFM(Vc)	875	815	805	850	850	935	1020
					IPT(fz)	.0009	.0012	.0015	.0013	.0016	.0016	.0012
					RPM	13370	9960	8200	6490	5200	4760	3900
					IPM(FEED)	36	36	36	34	32	31	24
	6-7	Low alloy steel	0.3D	1.5D	SFM(Vc)	1105	1025	975	1130	1060	1105	1355
					IPT(fz)	.0019	.0026	.0033	.0030	.0039	.0044	.0036
					RPM	16880	12530	9930	8630	6480	5630	5180
					IPM(FEED)	99	99	99	102	102	99	92
	8-9		0.3D	1.5D	SFM(Vc)	875	815	805	850	850	935	1020
					IPT(fz)	.0009	.0012	.0015	.0013	.0016	.0016	.0012
					RPM	13370	9960	8200	6490	5200	4760	3900
					IPM(FEED)	36	36	36	34	32	31	24
	10	High alloyed steel, and tool steel	0.3D	1.5D	SFM(Vc)	1105	1025	975	1130	1060	1105	1355
					IPT(fz)	.0019	.0026	.0033	.0030	.0039	.0044	.0036
					RPM	16880	12530	9930	8630	6480	5630	5180
					IPM(FEED)	99	99	99	102	102	99	92
	11.1		0.3D	1.5D	SFM(Vc)	875	815	805	850	850	935	1020
					IPT(fz)	.0009	.0012	.0015	.0013	.0016	.0016	.0012
					RPM	13370	9960	8200	6490	5200	4760	3900
					IPM(FEED)	36	36	36	34	32	31	24
	11.2		0.3D	1.5D	SFM(Vc)	595	555	540	595	580	575	680
					IPT(fz)	.0009	.0012	.0015	.0013	.0015	.0015	.0012
					RPM	9090	6780	5500	4550	3550	2930	2600
					IPM(FEED)	24	24	24	24	22	18	15
K	38.1-38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	240	210	210	235	215	235	285
					IPT(fz)	.0010	.0013	.0019	.0015	.0013	.0013	.0012
					RPM	3670	2570	2140	1800	1310	1200	1090
					IPM(FEED)	11	10	12	11	7	6	6
	40	Chilled Cast Iron	0.3D	1.5D	SFM(Vc)	595	555	540	595	580	575	680
					IPT(fz)	.0009	.0012	.0015	.0013	.0015	.0015	.0012
					RPM	9090	6780	5500	4550	3550	2930	2600
					IPM(FEED)	24	24	24	24	22	18	15
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	240	210	210	235	215	235	285
					IPT(fz)	.0010	.0013	.0019	.0015	.0013	.0013	.0012
					RPM	3670	2570	2140	1800	1310	1200	1090
					IPM(FEED)	11	10	12	11	7	6	6

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM156 SERIES 3-5FLUTE Roughing - Side Cutting

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-4	Non-alloy steel	0.3D	1.5D	SFM(Vc)	1070	995	950	1100	1030	1070	1320
					IPT(fz)	.0020	.0026	.0033	.0030	.0039	.0044	.0035
					RPM	16350	12160	9680	8400	6300	5450	5040
					IPM(FEED)	96	96	96	99	99	96	89
	5		0.3D	1.5D	SFM(Vc)	850	790	785	825	825	905	990
					IPT(fz)	.0009	.0012	.0015	.0013	.0016	.0016	.0012
					RPM	12990	9660	8000	6300	5040	4610	3780
					IPM(FEED)	35	35	35	33	31	30	23
	6-7	Low alloy steel	0.3D	1.5D	SFM(Vc)	1070	995	950	1100	1030	1070	1320
					IPT(fz)	.0020	.0026	.0033	.0030	.0039	.0044	.0035
					RPM	16350	12160	9680	8400	6300	5450	5040
					IPM(FEED)	96	96	96	99	99	96	89
	8-9		0.3D	1.5D	SFM(Vc)	850	790	785	825	825	905	990
					IPT(fz)	.0009	.0012	.0015	.0013	.0016	.0016	.0012
					RPM	12990	9660	8000	6300	5040	4610	3780
					IPM(FEED)	35	35	35	33	31	30	23
	10	High alloyed steel, and tool steel	0.3D	1.5D	SFM(Vc)	1070	995	950	1100	1030	1070	1320
					IPT(fz)	.0020	.0026	.0033	.0030	.0039	.0044	.0035
					RPM	16350	12160	9680	8400	6300	5450	5040
					IPM(FEED)	96	96	96	99	99	96	89
	11.1		0.3D	1.5D	SFM(Vc)	850	790	785	825	825	905	990
					IPT(fz)	.0009	.0012	.0015	.0013	.0016	.0016	.0012
					RPM	12990	9660	8000	6300	5040	4610	3780
					IPM(FEED)	35	35	35	33	31	30	23
	11.2		0.3D	1.5D	SFM(Vc)	575	540	525	575	570	560	660
					IPT(fz)	.0009	.0012	.0015	.0013	.0015	.0015	.0012
					RPM	8790	6600	5350	4390	3480	2850	2520
					IPM(FEED)	24	24	24	24	21	17	15
K	38.1-38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	235	205	205	230	205	230	275
					IPT(fz)	.0010	.0013	.0019	.0015	.0013	.0013	.0012
					RPM	3590	2510	2090	1760	1250	1170	1050
					IPM(FEED)	11	10	12	11	7	6	6
	40	Chilled Cast Iron	0.3D	1.5D	SFM(Vc)	575	540	525	575	570	560	660
					IPT(fz)	.0009	.0012	.0015	.0013	.0015	.0015	.0012
					RPM	8790	6600	5350	4390	3480	2850	2520
					IPM(FEED)	24	24	24	24	21	17	15
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	235	205	205	230	205	230	275
					IPT(fz)	.0010	.0013	.0019	.0015	.0013	.0013	.0012
					RPM	3590	2510	2090	1760	1250	1170	1050
					IPM(FEED)	11	10	12	11	7	6	6

(Diameter (Ø): 1/4 to 1)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM967 SERIES 2FLUTE BALL NOSE - PROFILE

ISO	VDI 3323	Material Description	Parameter	1/32	3/64	1/16	5/64	3/32	1/8
P	1-4	Non-alloy steel	SFM(Vc)	230~300	240~305	240~310	260~310	245~310	275~345
			IPT(fz)	.0001~.0002	.0002~.0005	.0003~.0007	.0003~.0008	.0004~.0010	.0005~.0012
			RPM	28120~36670	19560~24860	14670~18950	12710~15160	9980~12630	8400~10540
			IPM(FEED)	8~17	8~25	8~25	8~25	8~25	8~25
			Ap	.0006~.0014	.0022~.0039	.0030~.0057	.0035~.0071	.0044~.0093	.0053~.0106
	5		SFM(Vc)	170~210	165~215	175~220	180~225	175~220	190~240
			IPT(fz)	.0001~.0002	.0002~.0004	.0002~.0005	.0002~.0006	.0003~.0007	.0003~.0009
			RPM	20780~25670	13450~17520	10700~13450	8800~11000	7130~8960	5810~7330
			IPM(FEED)	3~10	4~12	4~12	4~12	4~12	4~124
			Ap	.0006~.0014	.0022~.0039	.0030~.0057	.0035~.0071	.0044~.0093	.0053~.0106
	6-7	Low alloy steel	SFM(Vc)	230~300	240~305	240~310	260~310	245~310	275~345
			IPT(fz)	.0001~.0002	.0002~.0005	.0003~.0007	.0003~.0008	.0004~.0010	.0005~.0012
			RPM	28120~36670	19560~24860	14670~18950	12710~15160	9980~12630	8400~10540
			IPM(FEED)	8~17	8~25	8~25	8~25	8~25	8~25
			Ap	.0006~.0014	.0022~.0039	.0030~.0057	.0035~.0071	.0044~.0093	.0053~.0106
	8-9		SFM(Vc)	170~210	165~215	175~220	180~225	175~220	190~240
			IPT(fz)	.0001~.0002	.0002~.0004	.0002~.0005	.0002~.0006	.0003~.0007	.0003~.0009
			RPM	20780~25670	13450~17520	10700~13450	8800~11000	7130~8960	5810~7330
			IPM(FEED)	3~10	4~12	4~12	4~12	4~12	4~124
			Ap	.0006~.0014	.0022~.0039	.0030~.0057	.0035~.0071	.0044~.0093	.0053~.0106
	10	High alloyed steel, and tool steel	SFM(Vc)	230~300	240~305	240~310	260~310	245~310	275~345
			IPT(fz)	.0001~.0002	.0002~.0005	.0003~.0007	.0003~.0008	.0004~.0010	.0005~.0012
			RPM	28120~36670	19560~24860	14670~18950	12710~15160	9980~12630	8400~10540
			IPM(FEED)	8~17	8~25	8~25	8~25	8~25	8~25
			Ap	.0006~.0014	.0022~.0039	.0030~.0057	.0035~.0071	.0044~.0093	.0053~.0106
	11.1-11.2		SFM(Vc)	170~210	165~215	175~220	180~225	175~220	190~240
			IPT(fz)	.0001~.0002	.0002~.0004	.0002~.0005	.0002~.0006	.0003~.0007	.0003~.0009
			RPM	20780~25670	13450~17520	10700~13450	8800~11000	7130~8960	5810~7330
			IPM(FEED)	3~10	4~12	4~12	4~12	4~12	4~124
			Ap	.0006~.0014	.0022~.0039	.0030~.0057	.0035~.0071	.0044~.0093	.0053~.0106
H	38.1-38.2	Hardened steel	SFM(Vc)	105~125	105~135	110~135	115~140	110~135	120~150
			IPT(fz)	.00006~.00013	.0001~.0002	.0002~.0003	.0002~.0003	.0002~.0004	.0003~.0005
			RPM	12840~15280	8560~11000	6720~8250	5620~6850	4480~5500	3670~4580
			IPM(FEED)	2~4	2~4	2~4	2~4	2~4	2~4
			Ap	.0003~.0006	.0004~.0009	.0006~.0012	.0007~.0014	.0009~.0018	.0011~.0022
	40	Chilled Cast Iron	SFM(Vc)	170~210	165~215	175~220	180~225	175~220	190~240
			IPT(fz)	.0001~.0002	.0002~.0004	.0002~.0005	.0002~.0006	.0003~.0007	.0003~.0009
			RPM	20780~25670	13450~17520	10700~13450	8800~11000	7130~8960	5810~7330
			IPM(FEED)	3~10	4~12	4~12	4~12	4~12	4~124
			Ap	.0006~.0014	.0022~.0039	.0030~.0057	.0035~.0071	.0044~.0093	.0053~.0106
	41	Hardened Cast Iron	SFM(Vc)	105~125	105~135	110~135	115~140	110~135	120~150
			IPT(fz)	.00006~.00013	.0001~.0002	.0002~.0003	.0002~.0003	.0002~.0004	.0003~.0005
			RPM	12840~15280	8560~11000	6720~8250	5620~6850	4480~5500	3670~4580
			IPM(FEED)	2~4	2~4	2~4	2~4	2~4	2~4
			Ap	.0003~.0006	.0004~.0009	.0006~.0012	.0007~.0014	.0009~.0018	.0011~.0022

(Diameter (Ø): 1/32 to 1/8)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM876, GM813 SERIES 2 FLUTE BALL NOSE

NORMAL SPEED

ISO	VDI 3323	Material Description	Ae	Parameter	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0
					Diameter (Ø)												
P	1-4	Non-alloy steel	0.2D	SFM(Vc)	180	280	330	410	460	490	525	590	655	740	805	885	950
				IPT(fz)	.0003	.0004	.0010	.0010	.0010	.0014	.0018	.0024	.0035	.0047	.0059	.0071	.0079
				RPM	17470	18110	16010	15910	14880	11890	10190	9540	7940	7180	6510	5370	4610
				IPM(FEED)	11	16	33	33	30	33	36	45	56	68	77	76	73
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
	5		0.2D	SFM(Vc)	150	215	245	310	345	395	425	475	525	590	640	705	755
				IPT(fz)	.0003	.0004	.0009	.0009	.0009	.0013	.0016	.0024	.0031	.0039	.0047	.0055	.0063
				RPM	14550	13910	11890	12030	11160	9580	8250	7680	6370	5730	5180	4280	3660
				IPM(FEED)	9	12	22	22	20	24	26	36	40	45	49	47	46
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
	6-7	Low alloy steel	0.2D	SFM(Vc)	180	280	330	410	460	490	525	590	655	740	805	885	950
				IPT(fz)	.0003	.0004	.0010	.0010	.0010	.0014	.0018	.0024	.0035	.0047	.0059	.0071	.0079
				RPM	17470	18110	16010	15910	14880	11890	10190	9540	7940	7180	6510	5370	4610
				IPM(FEED)	11	16	33	33	30	33	36	45	56	68	77	76	73
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
	8-9		0.2D	SFM(Vc)	150	215	245	310	345	395	425	475	525	590	640	705	755
				IPT(fz)	.0003	.0004	.0009	.0009	.0009	.0013	.0016	.0024	.0031	.0039	.0047	.0055	.0063
				RPM	14550	13910	11890	12030	11160	9580	8250	7680	6370	5730	5180	4280	3660
				IPM(FEED)	9	12	22	22	20	24	26	36	40	45	49	47	46
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
	10	High alloyed steel, and tool steel	0.2D	SFM(Vc)	180	280	330	410	460	490	525	590	655	740	805	885	950
				IPT(fz)	.0003	.0004	.0010	.0010	.0010	.0014	.0018	.0024	.0035	.0047	.0059	.0071	.0079
				RPM	17470	18110	16010	15910	14880	11890	10190	9540	7940	7180	6510	5370	4610
				IPM(FEED)	11	16	33	33	30	33	36	45	56	68	77	76	73
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
	11.1 - 11.2		0.2D	SFM(Vc)	150	215	245	310	345	395	425	475	525	590	640	705	755
				IPT(fz)	.0003	.0004	.0009	.0009	.0009	.0013	.0016	.0024	.0031	.0039	.0047	.0055	.0063
				RPM	14550	13910	11890	12030	11160	9580	8250	7680	6370	5730	5180	4280	3660
				IPM(FEED)	9	12	22	22	20	24	26	36	40	45	49	47	46
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.2D	SFM(Vc)	180	260	330	410	445	475	525	590	655	720	805	870	950
				IPT(fz)	.0003	.0004	.0010	.0010	.0010	.0014	.0018	.0024	.0035	.0047	.0059	.0071	.0079
				RPM	17470	16820	16010	15910	14390	11520	10190	9540	7940	6990	6510	5280	4610
				IPM(FEED)	11	15	33	33	29	32	36	45	56	66	77	75	73
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
H	38.1 - 38.2	Hardened steel	0.1D	SFM(Vc)	65	100	115	130	165	195	215	215	230	230	245	245	260
				IPT(fz)	.0003	.0004	.0006	.0006	.0007	.0008	.0009	.0012	.0017	.0022	.0028	.0036	.0045
				RPM	6310	6470	5580	5050	5340	4730	4170	3480	2790	2230	1980	1490	1260
				IPM(FEED)	4	6	7	6	7	8	8	8	10	10	11	11	11
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
	40	Chilled Cast Iron	0.2D	SFM(Vc)	150	215	245	310	345	395	425	475	525	590	640	705	755
				IPT(fz)	.0003	.0004	.0009	.0009	.0009	.0013	.0016	.0024	.0031	.0039	.0047	.0055	.0063
				RPM	14550	13910	11890	12030	11160	9580	8250	7680	6370	5730	5180	4280	3660
				IPM(FEED)	9	12	22	22	20	24	26	36	40	45	49	47	46
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
	41	Hardened Cast Iron	0.1D	SFM(Vc)	65	100	115	130	165	195	215	215	230	230	245	245	260
				IPT(fz)	.0003	.0004	.0006	.0006	.0007	.0008	.0009	.0012	.0017	.0022	.0028	.0036	.0045
				RPM	6310	6470	5580	5050	5340	4730	4170	3480	2790	2230	1980	1490	1260
				IPM(FEED)	4	6	7	6	7	8	8	8	10	10	11	11	11
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

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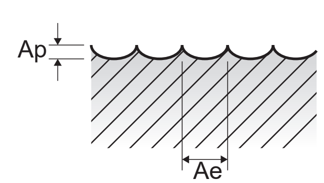


CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

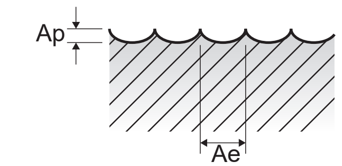
YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM876, GM813 SERIES 2 FLUTE BALL NOSE

HIGH SPEED

ISO	VDI 3323	Material Description	Ae	Parameter	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0
					Diameter (Ø)												
P	1-5	Non-alloy steel	0.05D	SFM(Vc)	295	395	490	605	720	970	1215	1460	1540	1625	1690	1770	1835
				IPT(fz)	.0010	.0012	.0014	.0017	.0019	.0027	.0034	.0037	.0047	.0055	.0063	.0071	.0079
				RPM	28620	25550	23770	23480	23290	23530	23580	23610	18680	15770	13670	10730	8900
				IPM(FEED)	59	60	66	78	88	129	160	177	177	172	172	153	140
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
	6-9	Low alloy steel	0.05D	SFM(Vc)	295	395	490	605	720	970	1215	1460	1540	1625	1690	1770	1835
				IPT(fz)	.0010	.0012	.0014	.0017	.0019	.0027	.0034	.0037	.0047	.0055	.0063	.0071	.0079
				RPM	28620	25550	23770	23480	23290	23530	23580	23610	18680	15770	13670	10730	8900
				IPM(FEED)	59	60	66	78	88	129	160	177	177	172	172	153	140
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
	10 - 11.2	High alloyed steel, and tool steel	0.05D	SFM(Vc)	295	395	490	605	720	970	1215	1460	1540	1625	1690	1770	1835
				IPT(fz)	.0010	.0012	.0014	.0017	.0019	.0027	.0034	.0037	.0047	.0055	.0063	.0071	.0079
				RPM	28620	25550	23770	23480	23290	23530	23580	23610	18680	15770	13670	10730	8900
				IPM(FEED)	59	60	66	78	88	129	160	177	177	172	172	153	140
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	SFM(Vc)	295	395	490	605	720	970	1215	1460	1540	1625	1690	1770	1835
				IPT(fz)	.0010	.0012	.0014	.0017	.0019	.0027	.0034	.0037	.0047	.0055	.0063	.0071	.0079
				RPM	28620	25550	23770	23480	23290	23530	23580	23610	18680	15770	13670	10730	8900
				IPM(FEED)	59	60	66	78	88	129	160	177	177	172	172	153	140
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
H	38.1 - 38.2	Hardened steel	0.05D	SFM(Vc)	295	395	490	540	590	625	690	720	770	805	835	885	920
				IPT(fz)	.0006	.0007	.0009	.0010	.0012	.0016	.0020	.0024	.0030	.0034	.0037	.0041	.0045
				RPM	28620	25550	23770	20960	19080	15160	13390	11640	9340	7810	6750	5370	4460
				IPM(FEED)	36	38	41	43	47	50	53	55	55	53	51	44	40
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
	40	Chilled Cast Iron	0.05D	SFM(Vc)	295	395	490	605	720	970	1215	1460	1540	1625	1690	1770	1835
				IPT(fz)	.0010	.0012	.0014	.0017	.0019	.0027	.0034	.0037	.0047	.0055	.0063	.0071	.0079
				RPM	28620	25550	23770	23480	23290	23530	23580	23610	18680	15770	13670	10730	8900
				IPM(FEED)	59	60	66	78	88	129	160	177	177	172	172	153	140
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
	41	Hardened Cast Iron	0.05D	SFM(Vc)	295	395	490	540	590	625	690	720	770	805	835	885	920
				IPT(fz)	.0006	.0007	.0009	.0010	.0012	.0016	.0020	.0024	.0030	.0034	.0037	.0041	.0045
				RPM	28620	25550	23770	20960	19080	15160	13390	11640	9340	7810	6750	5370	4460
				IPM(FEED)	36	38	41	43	47	50	53	55	55	53	51	44	40
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM886 SERIES 2 FLUTE BALL NOSE RIB PROCESSING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 0.5	0.6	0.8	1.0	1.2	1.4
P	1-4	Non-alloy steel	SFM(Vc)	170~215	200~260	270~345	315~395	310~395	320~395
			IPT(fz)	.0001~.0002	.0001~.0003	.0001~.0003	.0002~.0004	.0002~.0005	.0002~.0006
			RPM	32990~41720	32340~42050	32750~41840	30560~38330	25070~31940	22180~27380
			IPM(FEED)	7~20	9~26	9~26	10~29	10~32	10~32
			Ap	0.023~0.045	0.027~0.054	0.036~0.072	0.045~0.090	0.055~0.100	0.062~0.125
	5		SFM(Vc)	120~155	145~185	195~245	220~280	220~280	225~275
			IPT(fz)	.0001~.0002	.0001~.0002	.0001~.0003	.0001~.0003	.0001~.0004	.0002~.0004
			RPM	23290~30080	23450~29920	23650~29720	21350~27170	17790~22640	15590~19060
			IPM(FEED)	4~11	5~15	5~15	5~16	5~16	5~16
			Ap	0.023~0.045	0.027~0.054	0.036~0.072	0.045~0.090	0.055~0.100	0.062~0.125
	6-7	Low alloy steel	SFM(Vc)	170~215	200~260	270~345	315~395	310~395	320~395
			IPT(fz)	.0001~.0002	.0001~.0003	.0001~.0003	.0002~.0004	.0002~.0005	.0002~.0006
			RPM	32990~41720	32340~42050	32750~41840	30560~38330	25070~31940	22180~27380
			IPM(FEED)	7~20	9~26	9~26	10~29	10~32	10~32
			Ap	0.023~0.045	0.027~0.054	0.036~0.072	0.045~0.090	0.055~0.100	0.062~0.125
	8-9		SFM(Vc)	120~155	145~185	195~245	220~280	220~280	225~275
			IPT(fz)	.0001~.0002	.0001~.0002	.0001~.0003	.0001~.0003	.0001~.0004	.0002~.0004
			RPM	23290~30080	23450~29920	23650~29720	21350~27170	17790~22640	15590~19060
			IPM(FEED)	4~11	5~15	5~15	5~16	5~16	5~16
			Ap	0.023~0.045	0.027~0.054	0.036~0.072	0.045~0.090	0.055~0.100	0.062~0.125
	10	High alloyed steel, and tool steel	SFM(Vc)	170~215	200~260	270~345	315~395	310~395	320~395
			IPT(fz)	.0001~.0002	.0001~.0003	.0001~.0003	.0002~.0004	.0002~.0005	.0002~.0006
			RPM	32990~41720	32340~42050	32750~41840	30560~38330	25070~31940	22180~27380
			IPM(FEED)	7~20	9~26	9~26	10~29	10~32	10~32
			Ap	0.023~0.045	0.027~0.054	0.036~0.072	0.045~0.090	0.055~0.100	0.062~0.125
	11.1 - 11.2		SFM(Vc)	120~155	145~185	195~245	220~280	220~280	225~275
			IPT(fz)	.0001~.0002	.0001~.0002	.0001~.0003	.0001~.0003	.0001~.0004	.0002~.0004
			RPM	23290~30080	23450~29920	23650~29720	21350~27170	17790~22640	15590~19060
			IPM(FEED)	4~11	5~15	5~15	5~16	5~16	5~16
			Ap	0.023~0.045	0.027~0.054	0.036~0.072	0.045~0.090	0.055~0.100	0.062~0.125
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	170~215	200~260	270~345	315~395	310~395	320~395
			IPT(fz)	.0001~.0002	.0001~.0003	.0001~.0003	.0002~.0004	.0002~.0005	.0002~.0006
			RPM	32990~41720	32340~42050	32750~41840	30560~38330	25070~31940	22180~27380
			IPM(FEED)	7~20	9~26	9~26	10~29	10~32	10~32
			Ap	0.023~0.045	0.027~0.054	0.036~0.072	0.045~0.090	0.055~0.100	0.062~0.125
H	38.1 - 38.2	Hardened steel	SFM(Vc)	75~95	95~115	125~155	140~175	140~180	140~175
			IPT(fz)	.0001~.0002	.0002~.0003	.0002~.0003	.0002~.0003	.0002~.0004	.0003~.0004
			RPM	14550~18440	15360~18600	15160~18800	13580~16980	11320~14550	9700~12130
			IPM(FEED)	4~7	5~9	5~9	5~10	5~10	5~10
			Ap	0.005~0.009	0.005~0.011	0.007~0.014	0.009~0.018	0.010~0.022	0.012~0.025
	40	Chilled Cast Iron	SFM(Vc)	120~155	145~185	195~245	220~280	220~280	225~275
			IPT(fz)	.0001~.0002	.0001~.0002	.0001~.0003	.0001~.0003	.0001~.0004	.0002~.0004
			RPM	23290~30080	23450~29920	23650~29720	21350~27170	17790~22640	15590~19060
			IPM(FEED)	4~11	5~15	5~15	5~16	5~16	5~16
			Ap	0.023~0.045	0.027~0.054	0.036~0.072	0.045~0.090	0.055~0.100	0.062~0.125
	41	Hardened Cast Iron	SFM(Vc)	75~95	95~115	125~155	140~175	140~180	140~175
			IPT(fz)	.0001~.0002	.0002~.0003	.0002~.0003	.0002~.0003	.0002~.0004	.0003~.0004
			RPM	14550~18440	15360~18600	15160~18800	13580~16980	11320~14550	9700~12130
			IPM(FEED)	4~7	5~9	5~9	5~10	5~10	5~10
			Ap	0.005~0.009	0.005~0.011	0.007~0.014	0.009~0.018	0.010~0.022	0.012~0.025

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

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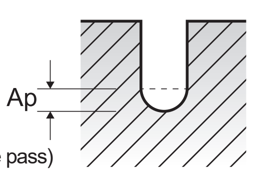


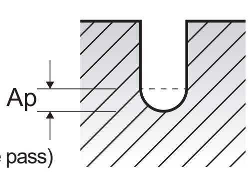
(Depth of cut per one pass)

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM886 SERIES 2 FLUTE BALL NOSE RIB PROCESSING

VDI 3323	Parameter	Diameter (Ø) 1.5	1.6	1.8	2.0	3.0	4.0	5.0	6.0
1-4	SFM(Vc)	310~390	310~405	330~420	335~410	340~420	370~475	370~475	370~475
	IPT(fz)	.0003~.0006	.0003~.0007	.0003~.0007	.0003~.0008	.0005~.0012	.0006~.0014	.0007~.0018	.0009~.0021
	RPM	20050~25230	18800~24560	17790~22640	16250~19890	11000~13580	8980~11520	7180~9220	5980~7680
	IPM(FEED)	10~32	10~32	10~32	10~32	10~32	10~32	10~32	10~32
	Ap	0.070~0.135	0.075~0.145	0.080~0.160	0.090~0.180	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
5	SFM(Vc)	220~285	230~285	235~290	240~290	225~290	250~340	250~335	255~340
	IPT(fz)	.0002~.0004	.0002~.0005	.0002~.0005	.0002~.0006	.0007~.0017	.0009~.0020	.0011~.0025	.0013~.0029
	RPM	14230~18440	13950~17280	12670~15630	11640~14070	7280~9380	6060~8250	4850~6500	4120~5500
	IPM(FEED)	5~16	5~16	5~16	5~16	5~16	5~16	5~16	5~16
	Ap	0.070~0.135	0.075~0.145	0.080~0.160	0.090~0.180	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
6-7	SFM(Vc)	310~390	310~405	330~420	335~410	340~420	370~475	370~475	370~475
	IPT(fz)	.0003~.0006	.0003~.0007	.0003~.0007	.0003~.0008	.0005~.0012	.0006~.0014	.0007~.0018	.0009~.0021
	RPM	20050~25230	18800~24560	17790~22640	16250~19890	11000~13580	8980~11520	7180~9220	5980~7680
	IPM(FEED)	10~32	10~32	10~32	10~32	10~32	10~32	10~32	10~32
	Ap	0.070~0.135	0.075~0.145	0.080~0.160	0.090~0.180	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
8-9	SFM(Vc)	220~285	230~285	235~290	240~290	225~290	250~340	250~335	255~340
	IPT(fz)	.0002~.0004	.0002~.0005	.0002~.0005	.0002~.0006	.0007~.0017	.0009~.0020	.0011~.0025	.0013~.0029
	RPM	14230~18440	13950~17280	12670~15630	11640~14070	7280~9380	6060~8250	4850~6500	4120~5500
	IPM(FEED)	5~16	5~16	5~16	5~16	5~16	5~16	5~16	5~16
	Ap	0.070~0.135	0.075~0.145	0.080~0.160	0.090~0.180	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
10	SFM(Vc)	310~390	310~405	330~420	335~410	340~420	370~475	370~475	370~475
	IPT(fz)	.0003~.0006	.0003~.0007	.0003~.0007	.0003~.0008	.0005~.0012	.0006~.0014	.0007~.0018	.0009~.0021
	RPM	20050~25230	18800~24560	17790~22640	16250~19890	11000~13580	8980~11520	7180~9220	5980~7680
	IPM(FEED)	10~32	10~32	10~32	10~32	10~32	10~32	10~32	10~32
	Ap	0.070~0.135	0.075~0.145	0.080~0.160	0.090~0.180	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
11.1 - 11.2	SFM(Vc)	220~285	230~285	235~290	240~290	225~290	250~340	250~335	255~340
	IPT(fz)	.0002~.0004	.0002~.0005	.0002~.0005	.0002~.0006	.0007~.0017	.0009~.0020	.0011~.0025	.0013~.0029
	RPM	14230~18440	13950~17280	12670~15630	11640~14070	7280~9380	6060~8250	4850~6500	4120~5500
	IPM(FEED)	5~16	5~16	5~16	5~16	5~16	5~16	5~16	5~16
	Ap	0.070~0.135	0.075~0.145	0.080~0.160	0.090~0.180	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
15 - 20	SFM(Vc)	310~390	310~405	330~420	335~410	340~420	370~475	370~475	370~475
	IPT(fz)	.0003~.0006	.0003~.0007	.0003~.0007	.0003~.0008	.0005~.0012	.0006~.0014	.0007~.0018	.0009~.0021
	RPM	20050~25230	18800~24560	17790~22640	16250~19890	11000~13580	8980~11520	7180~9220	5980~7680
	IPM(FEED)	10~32	10~32	10~32	10~32	10~32	10~32	10~32	10~32
	Ap	0.070~0.135	0.075~0.145	0.080~0.160	0.090~0.180	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
38.1 - 38.2	SFM(Vc)	140~175	145~180	145~185	150~185	150~185	170~210	170~210	170~215
	IPT(fz)	.0003~.0005	.0003~.0005	.0003~.0005	.0004~.0006	.0005~.0009	.0006~.0010	.0008~.0013	.0009~.0015
	RPM	9060~11320	8790~10920	7820~9970	7280~8980	4850~5980	4120~5090	3300~4080	2750~3480
	IPM(FEED)	5~10	5~10	5~10	5~10	5~10	5~10	5~10	5~10
	Ap	0.014~0.028	0.015~0.030	0.016~0.032	0.018~0.035	0.028~0.055	0.035~0.070	0.044~0.088	0.053~0.105
40	SFM(Vc)	220~285	230~285	235~290	240~290	225~290	250~340	250~335	255~340
	IPT(fz)	.0002~.0004	.0002~.0005	.0002~.0005	.0002~.0006	.0007~.0017	.0009~.0020	.0011~.0025	.0013~.0029
	RPM	14230~18440	13950~17280	12670~15630	11640~14070	7280~9380	6060~8250	4850~6500	4120~5500
	IPM(FEED)	5~16	5~16	5~16	5~16	5~16	5~16	5~16	5~16
	Ap	0.070~0.135	0.075~0.145	0.080~0.160	0.090~0.180	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
41	SFM(Vc)	140~175	145~180	145~185	150~185	150~185	170~210	170~210	170~215
	IPT(fz)	.0003~.0005	.0003~.0005	.0003~.0005	.0004~.0006	.0005~.0009	.0006~.0010	.0008~.0013	.0009~.0015
	RPM	9060~11320	8790~10920	7820~9970	7280~8980	4850~5980	4120~5090	3300~4080	2750~3480
	IPM(FEED)	5~10	5~10	5~10	5~10	5~10	5~10	5~10	5~10
	Ap	0.014~0.028	0.015~0.030	0.016~0.032	0.018~0.035	0.028~0.055	0.035~0.070	0.044~0.088	0.053~0.105

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



(Depth of cut per one pass)

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM902 SERIES 2 FLUTE BALL NOSE with TAPER NECK

NORMAL SPEED

ISO	VDI 3323	Material Description	Ae	Parameter	Diameter (Ø) 1.0	2.0	3.0	4.0	5.0	6.0	8.0
	5	Non-alloy steel	0.2D	SFM(Vc)	115	195	260	295	310	360	395
				IPT(fz)	.0003	.0006	.0009	.0012	.0016	.0024	.0031
				RPM	11160	9460	8410	7160	6020	5820	4790
				IPM(FEED)	7	11	15	18	19	28	30
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	8-9	Low alloy steel	0.2D	SFM(Vc)	115	195	260	295	310	360	395
				IPT(fz)	.0003	.0006	.0009	.0012	.0016	.0024	.0031
				RPM	11160	9460	8410	7160	6020	5820	4790
				IPM(FEED)	7	11	15	18	19	28	30
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	11.1	High alloyed steel, and tool steel	0.2D	SFM(Vc)	115	195	260	295	310	360	395
				IPT(fz)	.0003	.0006	.0009	.0012	.0016	.0024	.0031
				RPM	11160	9460	8410	7160	6020	5820	4790
				IPM(FEED)	7	11	15	18	19	28	30
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	11.2		0.1D	SFM(Vc)	180	245	330	360	410	445	490
				IPT(fz)	.0005	.0011	.0017	.0020	.0023	.0026	.0030
				RPM	17470	11890	10670	8730	7960	7200	5940
				IPM(FEED)	17	26	36	36	37	38	35
				Ap	0.05	0.10	0.15	0.20	0.25	0.25	0.25
H	38.1	Hardened steel	0.1D	SFM(Vc)	180	245	330	360	410	445	490
				IPT(fz)	.0005	.0011	.0017	.0020	.0023	.0026	.0030
				RPM	17470	11890	10670	8730	7960	7200	5940
				IPM(FEED)	17	26	36	36	37	38	35
				Ap	0.05	0.10	0.15	0.20	0.25	0.25	0.25
	38.2		0.1D	SFM(Vc)	180	245	310	360	410	425	460
				IPT(fz)	.0005	.0010	.0017	.0020	.0023	.0027	.0029
				RPM	17470	11890	10030	8730	7960	6870	5580
				IPM(FEED)	17	24	34	36	37	37	33
				Ap	0.05	0.1	0.2	0.2	0.3	0.3	0.3
	40	Chilled Cast Iron	0.1D	SFM(Vc)	180	245	330	360	410	445	490
				IPT(fz)	.0005	.0011	.0017	.0020	.0023	.0026	.0030
				RPM	17470	11890	10670	8730	7960	7200	5940
				IPM(FEED)	17	26	36	36	37	38	35
				Ap	0.05	0.10	0.15	0.20	0.25	0.25	0.25
	41	Hardened Cast Iron	0.1D	SFM(Vc)	180	245	310	360	410	425	460
				IPT(fz)	.0005	.0010	.0017	.0020	.0023	.0027	.0029
				RPM	17470	11890	10030	8730	7960	6870	5580
				IPM(FEED)	17	24	34	36	37	37	33
				Ap	0.05	0.1	0.2	0.2	0.3	0.3	0.3

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

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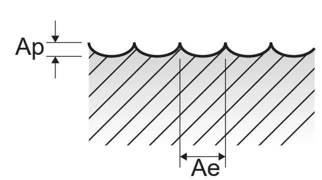


CARBIDE
HSS

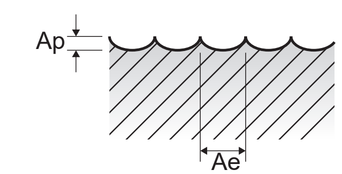
YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM902 SERIES 2 FLUTE BALL NOSE with TAPER NECK

HIGH SPEED

ISO	VDI 3323	Material Description	Ae	Parameter	Diameter (Ø) 1.0	2.0	3.0	4.0	5.0	6.0	8.0
P	1-5	Non-alloy steel	0.05D	SFM(Vc)	215	360	540	720	900	1100	1165
				IPT(fz)	.0010	.0014	.0019	.0028	.0034	.0037	.0047
				RPM	20860	17470	17470	17470	17470	17790	14130
				IPM(FEED)	42	50	66	97	119	133	132
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	6-9	Low alloy steel	0.05D	SFM(Vc)	215	360	540	720	900	1100	1165
				IPT(fz)	.0010	.0014	.0019	.0028	.0034	.0037	.0047
				RPM	20860	17470	17470	17470	17470	17790	14130
				IPM(FEED)	42	50	66	97	119	133	132
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	10 - 11.2	High alloyed steel, and tool steel	0.05D	SFM(Vc)	215	360	540	720	900	1100	1165
				IPT(fz)	.0010	.0014	.0019	.0028	.0034	.0037	.0047
				RPM	20860	17470	17470	17470	17470	17790	14130
				IPM(FEED)	42	50	66	97	119	133	132
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	SFM(Vc)	215	360	540	720	900	1100	1165
				IPT(fz)	.0010	.0014	.0019	.0028	.0034	.0037	.0047
				RPM	20860	17470	17470	17470	17470	17790	14130
				IPM(FEED)	42	50	66	97	119	133	132
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
H	38	Hardened steel	0.05D	SFM(Vc)	180	245	330	360	410	445	490
				IPT(fz)	.0008	.0015	.0027	.0032	.0035	.0040	.0044
				RPM	17470	11890	10670	8730	7960	7200	5940
				IPM(FEED)	26	35	58	55	55	57	53
				Ap	0.05	0.10	0.15	0.20	0.25	0.25	0.25
	38.2		0.05D	SFM(Vc)	180	245	310	360	395	425	460
				IPT(fz)	.0007	.0017	.0026	.0031	.0034	.0040	.0043
				RPM	17470	11890	10030	8730	7670	6870	5580
				IPM(FEED)	23	40	52	54	52	55	48
				Ap	0.05	0.10	0.15	0.20	0.25	0.25	0.25
	40	Chilled Cast Iron	0.05D	SFM(Vc)	215	360	540	720	900	1100	1165
				IPT(fz)	.0010	.0014	.0019	.0028	.0034	.0037	.0047
				RPM	20860	17470	17470	17470	17470	17790	14130
				IPM(FEED)	42	50	66	97	119	133	132
				Ap	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	41	Hardened Cast Iron	0.05D	SFM(Vc)	180	245	310	360	395	425	460
				IPT(fz)	.0007	.0017	.0026	.0031	.0034	.0040	.0043
				RPM	17470	11890	10030	8730	7670	6870	5580
				IPM(FEED)	23	40	52	54	52	55	48
				Ap	0.05	0.10	0.15	0.20	0.25	0.25	0.25

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM815 SERIES 4 FLUTE BALL NOSE

NORMAL SPEED

ISO	VDI 3323	Material Description	Ae	Parameter	2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0
P	1-4	Non-alloy steel	0.2D	SFM(Vc)	345	425	460	490	560	625	690	755	820
				IPT(fz)	.0005	.0008	.0010	.0013	.0018	.0027	.0035	.0044	.0054
				RPM	16740	13750	11160	9510	9060	7580	6700	6110	4970
				IPM(FEED)	34	41	46	51	64	81	95	107	107
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
	5		0.2D	SFM(Vc)	245	330	360	395	445	490	560	605	655
				IPT(fz)	.0004	.0007	.0009	.0012	.0018	.0024	.0029	.0035	.0042
				RPM	11890	10670	8730	7670	7200	5940	5430	4890	3970
				IPM(FEED)	19	28	33	36	51	56	64	69	66
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
	6-7	Low alloy steel	0.2D	SFM(Vc)	345	425	460	490	560	625	690	755	820
				IPT(fz)	.0005	.0008	.0010	.0013	.0018	.0027	.0035	.0044	.0054
				RPM	16740	13750	11160	9510	9060	7580	6700	6110	4970
				IPM(FEED)	34	41	46	51	64	81	95	107	107
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
	8-9		0.2D	SFM(Vc)	245	330	360	395	445	490	560	605	655
				IPT(fz)	.0004	.0007	.0009	.0012	.0018	.0024	.0029	.0035	.0042
				RPM	11890	10670	8730	7670	7200	5940	5430	4890	3970
				IPM(FEED)	19	28	33	36	51	56	64	69	66
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
	10	High alloyed steel, and tool steel	0.2D	SFM(Vc)	345	425	460	490	560	625	690	755	820
				IPT(fz)	.0005	.0008	.0010	.0013	.0018	.0027	.0035	.0044	.0054
				RPM	16740	13750	11160	9510	9060	7580	6700	6110	4970
				IPM(FEED)	34	41	46	51	64	81	95	107	107
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
	11.1 - 11.2		0.2D	SFM(Vc)	245	330	360	395	445	490	560	605	655
				IPT(fz)	.0004	.0007	.0009	.0012	.0018	.0024	.0029	.0035	.0042
				RPM	11890	10670	8730	7670	7200	5940	5430	4890	3970
				IPM(FEED)	19	28	33	36	51	56	64	69	66
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.2D	SFM(Vc)	345	425	460	490	560	625	690	755	820
				IPT(fz)	.0005	.0008	.0010	.0013	.0018	.0027	.0035	.0044	.0054
				RPM	16740	13750	11160	9510	9060	7580	6700	6110	4970
				IPM(FEED)	34	41	46	51	64	81	95	107	107
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
H	38.1 - 39.2	Hardened steel	0.1D	SFM(Vc)	100	150	180	195	215	215	215	230	230
				IPT(fz)	.0003	.0005	.0006	.0007	.0009	.0013	.0016	.0021	.0027
				RPM	4850	4850	4370	3780	3480	2610	2090	1860	1400
				IPM(FEED)	6	9	11	11	12	13	13	16	15
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
	40	Chilled Cast Iron	0.2D	SFM(Vc)	245	330	360	395	445	490	560	605	655
				IPT(fz)	.0004	.0007	.0009	.0012	.0018	.0024	.0029	.0035	.0042
				RPM	11890	10670	8730	7670	7200	5940	5430	4890	3970
				IPM(FEED)	19	28	33	36	51	56	64	69	66
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
	41	Hardened Cast Iron	0.1D	SFM(Vc)	100	150	180	195	215	215	215	230	230
				IPT(fz)	.0003	.0005	.0006	.0007	.0009	.0013	.0016	.0021	.0027
				RPM	4850	4850	4370	3780	3480	2610	2090	1860	1400
				IPM(FEED)	6	9	11	11	12	13	13	16	15
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

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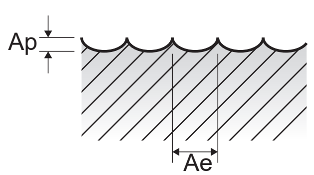


YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

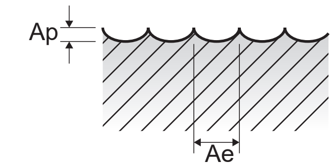
GM815 SERIES 4 FLUTE BALL NOSE

HIGH SPEED

ISO	VDI 3323	Material Description	Ae	Parameter	2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0
P	1-5	Non-alloy steel	0.05D	SFM(Vc)	460	690	900	1130	1360	1445	1510	1590	1655
				IPT(fz)	.0010	.0014	.0021	.0025	.0028	.0035	.0041	.0047	.0054
				RPM	22320	22320	21830	21930	21990	17530	14650	12860	10040
				IPM(FEED)	91	126	179	221	246	248	242	243	215
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
	6-9	Low alloy steel	0.05D	SFM(Vc)	460	690	900	1130	1360	1445	1510	1590	1655
				IPT(fz)	.0010	.0014	.0021	.0025	.0028	.0035	.0041	.0047	.0054
				RPM	22320	22320	21830	21930	21990	17530	14650	12860	10040
				IPM(FEED)	91	126	179	221	246	248	242	243	215
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
	10 - 11.2	High alloyed steel, and tool steel	0.05D	SFM(Vc)	460	690	900	1130	1360	1445	1510	1590	1655
				IPT(fz)	.0010	.0014	.0021	.0025	.0028	.0035	.0041	.0047	.0054
				RPM	22320	22320	21830	21930	21990	17530	14650	12860	10040
				IPM(FEED)	91	126	179	221	246	248	242	243	215
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	SFM(Vc)	460	690	900	1130	1360	1445	1510	1590	1655
				IPT(fz)	.0010	.0014	.0021	.0025	.0028	.0035	.0041	.0047	.0054
				RPM	22320	22320	21830	21930	21990	17530	14650	12860	10040
				IPM(FEED)	91	126	179	221	246	248	242	243	215
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
H	38.1 - 39.2	Hardened steel	0.05D	SFM(Vc)	460	560	590	655	690	720	755	785	820
				IPT(fz)	.0007	.0009	.0013	.0015	.0018	.0022	.0025	.0028	.0031
				RPM	22320	18110	14310	12710	11160	8730	7330	6350	4970
				IPM(FEED)	60	65	72	76	79	77	74	71	62
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
	40	Chilled Cast Iron	0.05D	SFM(Vc)	460	690	900	1130	1360	1445	1510	1590	1655
				IPT(fz)	.0010	.0014	.0021	.0025	.0028	.0035	.0041	.0047	.0054
				RPM	22320	22320	21830	21930	21990	17530	14650	12860	10040
				IPM(FEED)	91	126	179	221	246	248	242	243	215
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
	41	Hardened Cast Iron	0.05D	SFM(Vc)	460	560	590	655	690	720	755	785	820
				IPT(fz)	.0007	.0009	.0013	.0015	.0018	.0022	.0025	.0028	.0031
				RPM	22320	18110	14310	12710	11160	8730	7330	6350	4970
				IPM(FEED)	60	65	72	76	79	77	74	71	62
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3

Diameter (Ø)

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

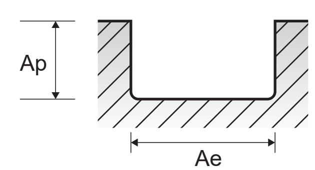


YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM818 SERIES 2 FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 4.0	5.0	6.0	8.0	10.0	12.0
P	1-4	Non-alloy steel	1.0D	0.3D	SFM(Vc)	245	260	260	280	280	280
					IPT(fz)	.0006	.0009	.0013	.0018	.0021	.0020
					RPM	5940	5050	4210	3400	2720	2260
					IPM(FEED)	8	9	11	12	11	9
	5		1.0D	0.3D	SFM(Vc)	150	165	165	180	180	195
					IPT(fz)	.0005	.0007	.0010	.0013	.0015	.0016
					RPM	3640	3200	2670	2180	1750	1580
					IPM(FEED)	4	4	5	6	5	5
	6-7	Low alloy steel	1.0D	0.3D	SFM(Vc)	245	260	260	280	280	280
					IPT(fz)	.0006	.0009	.0013	.0018	.0021	.0020
					RPM	5940	5050	4210	3400	2720	2260
					IPM(FEED)	8	9	11	12	11	9
	8-9		1.0D	0.3D	SFM(Vc)	150	165	165	180	180	195
					IPT(fz)	.0005	.0007	.0010	.0013	.0015	.0016
					RPM	3640	3200	2670	2180	1750	1580
					IPM(FEED)	4	4	5	6	5	5
	10	High alloyed steel, and tool steel	1.0D	0.3D	SFM(Vc)	245	260	260	280	280	280
					IPT(fz)	.0006	.0009	.0013	.0018	.0021	.0020
					RPM	5940	5050	4210	3400	2720	2260
					IPM(FEED)	8	9	11	12	11	9
	11.1 - 11.2		1.0D	0.3D	SFM(Vc)	150	165	165	180	180	195
					IPT(fz)	.0005	.0007	.0010	.0013	.0015	.0016
					RPM	3640	3200	2670	2180	1750	1580
					IPM(FEED)	4	4	5	6	5	5
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	0.3D	SFM(Vc)	245	260	260	280	280	280
					IPT(fz)	.0006	.0009	.0013	.0018	.0021	.0020
					RPM	5940	5050	4210	3400	2720	2260
					IPM(FEED)	8	9	11	12	11	9
H	38.1 - 38.2	Hardened steel	1.0D	0.3D	SFM(Vc)	100	115	115	115	115	115
					IPT(fz)	.0002	.0003	.0004	.0005	.0006	.0008
					RPM	2430	2230	1860	1400	1120	930
					IPM(FEED)	1	1	2	1	1	1
	40	Chilled Cast Iron	1.0D	0.3D	SFM(Vc)	150	165	165	180	180	195
					IPT(fz)	.0005	.0007	.0010	.0013	.0015	.0016
					RPM	3640	3200	2670	2180	1750	1580
					IPM(FEED)	4	4	5	6	5	5
	41	Hardened Cast Iron	1.0D	0.3D	SFM(Vc)	100	115	115	115	115	115
					IPT(fz)	.0002	.0003	.0004	.0005	.0006	.0008
					RPM	2430	2230	1860	1400	1120	930
					IPM(FEED)	1	1	2	1	1	1

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



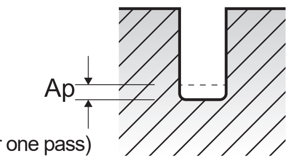
YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM8A1 SERIES 2 FLUTE CORNER RADIUS RIB PROCESSING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 1.0	1.2	1.4	1.5	1.6	1.8
P	1-4	Non-alloy steel	SFM(Vc)	245~305	240~290	240~305	235~300	240~310	255~320
			IPT(fz)	.0002~.0006	.0003~.0008	.0003~.0009	.0004~.0010	.0004~.0010	.0004~.0011
			RPM	23770~29590	19410~23450	16630~21140	15200~19410	14550~18800	13750~17250
			IPM(FEED)	12~34	12~37	12~37	12~37	12~37	12~37
			Ap	0.045~0.090	0.055~0.100	0.062~0.125	0.070~0.135	0.075~0.145	0.080~0.160
	5		SFM(Vc)	170~215	170~215	175~210	170~220	175~220	180~225
			IPT(fz)	.0002~.0006	.0003~.0007	.0003~.0009	.0004~.0009	.0004~.0009	.0004~.001
			RPM	16500~20860	13750~17380	12130~14550	11000~14230	10610~13340	9700~12130
			IPM(FEED)	8~25	8~25	8~25	8~25	8~25	8~25
			Ap	0.045~0.090	0.055~0.100	0.062~0.125	0.070~0.135	0.075~0.145	0.080~0.160
	6-7	Low alloy steel	SFM(Vc)	245~305	240~290	240~305	235~300	240~310	255~320
			IPT(fz)	.0002~.0006	.0003~.0008	.0003~.0009	.0004~.0010	.0004~.0010	.0004~.0011
			RPM	23770~29590	19410~23450	16630~21140	15200~19410	14550~18800	13750~17250
			IPM(FEED)	12~34	12~37	12~37	12~37	12~37	12~37
			Ap	0.045~0.090	0.055~0.100	0.062~0.125	0.070~0.135	0.075~0.145	0.080~0.160
	8-9		SFM(Vc)	170~215	170~215	175~210	170~220	175~220	180~225
			IPT(fz)	.0002~.0006	.0003~.0007	.0003~.0009	.0004~.0009	.0004~.0009	.0004~.001
			RPM	16500~20860	13750~17380	12130~14550	11000~14230	10610~13340	9700~12130
			IPM(FEED)	8~25	8~25	8~25	8~25	8~25	8~25
			Ap	0.045~0.090	0.055~0.100	0.062~0.125	0.070~0.135	0.075~0.145	0.080~0.160
	10	High alloyed steel, and tool steel	SFM(Vc)	245~305	240~290	240~305	235~300	240~310	255~320
			IPT(fz)	.0002~.0006	.0003~.0008	.0003~.0009	.0004~.0010	.0004~.0010	.0004~.0011
			RPM	23770~29590	19410~23450	16630~21140	15200~19410	14550~18800	13750~17250
			IPM(FEED)	12~34	12~37	12~37	12~37	12~37	12~37
			Ap	0.045~0.090	0.055~0.100	0.062~0.125	0.070~0.135	0.075~0.145	0.080~0.160
	11.1 - 11.2		SFM(Vc)	170~215	170~215	175~210	170~220	175~220	180~225
			IPT(fz)	.0002~.0006	.0003~.0007	.0003~.0009	.0004~.0009	.0004~.0009	.0004~.001
			RPM	16500~20860	13750~17380	12130~14550	11000~14230	10610~13340	9700~12130
			IPM(FEED)	8~25	8~25	8~25	8~25	8~25	8~25
			Ap	0.045~0.090	0.055~0.100	0.062~0.125	0.070~0.135	0.075~0.145	0.080~0.160
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	245~305	240~290	240~305	235~300	240~310	255~320
			IPT(fz)	.0002~.0006	.0003~.0008	.0003~.0009	.0004~.0010	.0004~.0010	.0004~.0011
			RPM	23770~29590	19410~23450	16630~21140	15200~19410	14550~18800	13750~17250
			IPM(FEED)	12~34	12~37	12~37	12~37	12~37	12~37
			Ap	0.045~0.090	0.055~0.100	0.062~0.125	0.070~0.135	0.075~0.145	0.080~0.160
H	38.1 - 38.2	Hardened steel	SFM(Vc)	110~135	110~135	110~135	110~135	110~140	110~140
			IPT(fz)	.0001~.0002	.0002~.0002	.0002~.0003	.0002~.0003	.0002~.0003	.0002~.0004
			RPM	10670~13100	8890~10920	7620~9360	7120~8730	6670~8490	5930~7550
			IPM(FEED)	3~5	3~5	3~5	3~5	3~5	3~5
			Ap	0.009~0.018	0.010~0.022	0.012~0.025	0.014~0.028	0.015~0.030	0.016~0.032
	40	Chilled Cast Iron	SFM(Vc)	170~215	170~215	175~210	170~220	175~220	180~225
			IPT(fz)	.0002~.0006	.0003~.0007	.0003~.0009	.0004~.0009	.0004~.0009	.0004~.001
			RPM	16500~20860	13750~17380	12130~14550	11000~14230	10610~13340	9700~12130
			IPM(FEED)	8~25	8~25	8~25	8~25	8~25	8~25
			Ap	0.045~0.090	0.055~0.100	0.062~0.125	0.070~0.135	0.075~0.145	0.080~0.160
	41	Hardened Cast Iron	SFM(Vc)	110~135	110~135	110~135	110~135	110~140	110~140
			IPT(fz)	.0001~.0002	.0002~.0002	.0002~.0003	.0002~.0003	.0002~.0003	.0002~.0004
			RPM	10670~13100	8890~10920	7620~9360	7120~8730	6670~8490	5930~7550
			IPM(FEED)	3~5	3~5	3~5	3~5	3~5	3~5
			Ap	0.009~0.018	0.010~0.022	0.012~0.025	0.014~0.028	0.015~0.030	0.016~0.032

▶ NEXT PAGE

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



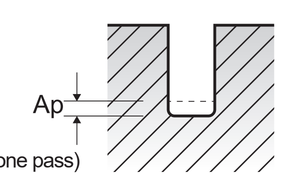
(Depth of cut per one pass)

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM8A1 SERIES 2 FLUTE CORNER RADIUS RIB PROCESSING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 2.0	2.5	3.0	4.0	5.0	6.0
P	1-4	Non-alloy steel	SFM(Vc)	260~315	255~325	260~325	260~325	260~325	260~325
			IPT(fz)	.0005~.0012	.0006~.0015	.0007~.0018	.0009~.0024	.0011~.0029	.0014~.0035
			RPM	12610~15280	9900~12610	8410~10510	6310~7880	5050~6310	4210~5260
			IPM(FEED)	12~37	12~37	12~37	12~37	12~37	12~37
			Ap	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
	5		SFM(Vc)	180~225	180~230	180~230	180~230	180~225	180~230
			IPT(fz)	.0005~.0011	.0006~.0014	.0007~.0017	.0009~.0022	.0011~.0028	.0014~.0033
			RPM	8730~10920	6990~8930	5820~7280	4370~5580	3490~4370	2910~3720
			IPM(FEED)	8~25	8~25	8~25	8~25	8~25	8~25
			Ap	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
	6-7	Low alloy steel	SFM(Vc)	260~315	255~325	260~325	260~325	260~325	260~325
			IPT(fz)	.0005~.0012	.0006~.0015	.0007~.0018	.0009~.0024	.0011~.0029	.0014~.0035
			RPM	12610~15280	9900~12610	8410~10510	6310~7880	5050~6310	4210~5260
			IPM(FEED)	12~37	12~37	12~37	12~37	12~37	12~37
			Ap	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
	8-9		SFM(Vc)	180~225	180~230	180~230	180~230	180~225	180~230
			IPT(fz)	.0005~.0011	.0006~.0014	.0007~.0017	.0009~.0022	.0011~.0028	.0014~.0033
			RPM	8730~10920	6990~8930	5820~7280	4370~5580	3490~4370	2910~3720
			IPM(FEED)	8~25	8~25	8~25	8~25	8~25	8~25
			Ap	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
	10	High alloyed steel, and tool steel	SFM(Vc)	260~315	255~325	260~325	260~325	260~325	260~325
			IPT(fz)	.0005~.0012	.0006~.0015	.0007~.0018	.0009~.0024	.0011~.0029	.0014~.0035
			RPM	12610~15280	9900~12610	8410~10510	6310~7880	5050~6310	4210~5260
			IPM(FEED)	12~37	12~37	12~37	12~37	12~37	12~37
			Ap	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
	11.1 - 11.2		SFM(Vc)	180~225	180~230	180~230	180~230	180~225	180~230
			IPT(fz)	.0005~.0011	.0006~.0014	.0007~.0017	.0009~.0022	.0011~.0028	.0014~.0033
			RPM	8730~10920	6990~8930	5820~7280	4370~5580	3490~4370	2910~3720
			IPM(FEED)	8~25	8~25	8~25	8~25	8~25	8~25
			Ap	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	260~315	255~325	260~325	260~325	260~325	260~325
			IPT(fz)	.0005~.0012	.0006~.0015	.0007~.0018	.0009~.0024	.0011~.0029	.0014~.0035
			RPM	12610~15280	9900~12610	8410~10510	6310~7880	5050~6310	4210~5260
			IPM(FEED)	12~37	12~37	12~37	12~37	12~37	12~37
			Ap	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
H	38.1 - 38.2	Hardened steel	SFM(Vc)	115~145	115~145	115~145	115~145	115~140	115~170
			IPT(fz)	.0003~.0004	.0003~.0005	.0004~.0006	.0005~.0008	.0006~.001	.0008~.001
			RPM	5580~7040	4460~5630	3720~4690	2790~3520	2230~2720	1860~2750
			IPM(FEED)	3~5	3~5	3~5	3~5	3~5	3~5
			Ap	0.018~0.035	0.022~0.045	0.028~0.055	0.036~0.072	0.045~0.090	0.054~0.108
	40	Chilled Cast Iron	SFM(Vc)	180~225	180~230	180~230	180~230	180~225	180~230
			IPT(fz)	.0005~.0011	.0006~.0014	.0007~.0017	.0009~.0022	.0011~.0028	.0014~.0033
			RPM	8730~10920	6990~8930	5820~7280	4370~5580	3490~4370	2910~3720
			IPM(FEED)	8~25	8~25	8~25	8~25	8~25	8~25
			Ap	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
	41	Hardened Cast Iron	SFM(Vc)	115~145	115~145	115~145	115~145	115~140	115~170
			IPT(fz)	.0003~.0004	.0003~.0005	.0004~.0006	.0005~.0008	.0006~.001	.0008~.001
			RPM	5580~7040	4460~5630	3720~4690	2790~3520	2230~2720	1860~2750
			IPM(FEED)	3~5	3~5	3~5	3~5	3~5	3~5
			Ap	0.018~0.035	0.022~0.045	0.028~0.055	0.036~0.072	0.045~0.090	0.054~0.108

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



(Depth of cut per one pass)

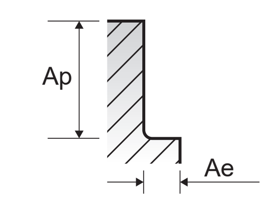
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM839 SERIES 4 FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 2.0	3.0	4.0	6.0	8.0	10.0	12.0
P	1-4	Non-alloy steel	0.05D	1.0D	SFM(Vc)	310	360	410	460	460	445	445
					IPT(fz)	.0002	.0004	.0007	.0012	.0017	.0018	.0019
					RPM	15040	11640	9950	7440	5580	4320	3600
					IPM(FEED)	14	17	30	35	37	32	27
	5		0.05D	1.0D	SFM(Vc)	215	230	245	280	280	280	280
					IPT(fz)	.0002	.0004	.0008	.0012	.0015	.0014	.0014
					RPM	10430	7440	5940	4530	3400	2720	2260
					IPM(FEED)	10	11	18	21	20	16	13
	6-7	Low alloy steel	0.05D	1.0D	SFM(Vc)	310	360	410	460	460	445	445
					IPT(fz)	.0002	.0004	.0007	.0012	.0017	.0018	.0019
					RPM	15040	11640	9950	7440	5580	4320	3600
					IPM(FEED)	14	17	30	35	37	32	27
	8-9		0.05D	1.0D	SFM(Vc)	215	230	245	280	280	280	280
					IPT(fz)	.0002	.0004	.0008	.0012	.0015	.0014	.0014
					RPM	10430	7440	5940	4530	3400	2720	2260
					IPM(FEED)	10	11	18	21	20	16	13
	10	High alloyed steel, and tool steel	0.05D	1.0D	SFM(Vc)	310	360	410	460	460	445	445
					IPT(fz)	.0002	.0004	.0007	.0012	.0017	.0018	.0019
					RPM	15040	11640	9950	7440	5580	4320	3600
					IPM(FEED)	14	17	30	35	37	32	27
	11.1 - 11.2		0.05D	1.0D	SFM(Vc)	215	230	245	280	280	280	280
					IPT(fz)	.0002	.0004	.0008	.0012	.0015	.0014	.0014
					RPM	10430	7440	5940	4530	3400	2720	2260
					IPM(FEED)	10	11	18	21	20	16	13
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	1.0D	SFM(Vc)	310	360	410	460	460	445	445
					IPT(fz)	.0002	.0004	.0007	.0012	.0017	.0018	.0019
					RPM	15040	11640	9950	7440	5580	4320	3600
					IPM(FEED)	14	17	30	35	37	32	27
H	38.1 - 38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	130	130	165	165	180	180	195
					IPT(fz)	.0001	.0002	.0002	.0004	.0006	.0007	.0007
					RPM	6310	4210	4000	2670	2180	1750	1580
					IPM(FEED)	2	3	3	4	6	5	4
	40	Chilled Cast Iron	0.05D	1.0D	SFM(Vc)	215	230	245	280	280	280	280
					IPT(fz)	.0002	.0004	.0008	.0012	.0015	.0014	.0014
					RPM	10430	7440	5940	4530	3400	2720	2260
					IPM(FEED)	10	11	18	21	20	16	13
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	130	130	165	165	180	180	195
					IPT(fz)	.0001	.0002	.0002	.0004	.0006	.0007	.0007
					RPM	6310	4210	4000	2670	2180	1750	1580
					IPM(FEED)	2	3	3	4	6	5	4

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG X-POWER PRO END MILLS

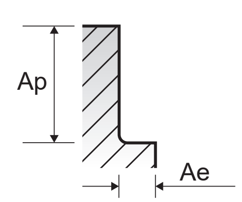
RECOMMENDED CUTTING CONDITIONS

GM819 SERIES 4 FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0
P	1-4	Non-alloy steel	0.05D	2.5D	SFM(Vc)	230	245	260	260	280	280	280	310	280
					IPT(fz)	.0002	.0004	.0005	.0006	.0007	.0009	.0009	.0009	.0009
					RPM	7440	5940	5050	4210	3400	2720	2260	1880	1360
					IPM(FEED)	7	9	10	9	10	10	8	7	5
	5		0.05D	2.5D	SFM(Vc)	150	150	165	165	180	180	195	195	180
					IPT(fz)	.0003	.0004	.0006	.0007	.0010	.0011	.0012	.0012	.0011
					RPM	4850	3640	3200	2670	2180	1750	1580	1180	870
					IPM(FEED)	6	6	8	8	8	8	7	6	4
	6-7	Low alloy steel	0.05D	2.5D	SFM(Vc)	230	245	260	260	280	280	280	310	280
					IPT(fz)	.0002	.0004	.0005	.0006	.0007	.0009	.0009	.0009	.0009
					RPM	7440	5940	5050	4210	3400	2720	2260	1880	1360
					IPM(FEED)	7	9	10	9	10	10	8	7	5
	8-9		0.05D	2.5D	SFM(Vc)	150	150	165	165	180	180	195	195	180
					IPT(fz)	.0003	.0004	.0006	.0007	.0010	.0011	.0012	.0012	.0011
					RPM	4850	3640	3200	2670	2180	1750	1580	1180	870
					IPM(FEED)	6	6	8	8	8	8	7	6	4
	10	High alloyed steel, and tool steel	0.05D	2.5D	SFM(Vc)	230	245	260	260	280	280	280	310	280
					IPT(fz)	.0002	.0004	.0005	.0006	.0007	.0009	.0009	.0009	.0009
					RPM	7440	5940	5050	4210	3400	2720	2260	1880	1360
					IPM(FEED)	7	9	10	9	10	10	8	7	5
	11.1 - 11.2		0.05D	2.5D	SFM(Vc)	150	150	165	165	180	180	195	195	180
					IPT(fz)	.0003	.0004	.0006	.0007	.0010	.0011	.0012	.0012	.0011
					RPM	4850	3640	3200	2670	2180	1750	1580	1180	870
					IPM(FEED)	6	6	8	8	8	8	7	6	4
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	2.5D	SFM(Vc)	230	245	260	260	280	280	280	310	280
					IPT(fz)	.0002	.0004	.0005	.0006	.0007	.0009	.0009	.0009	.0009
					RPM	7440	5940	5050	4210	3400	2720	2260	1880	1360
					IPM(FEED)	7	9	10	9	10	10	8	7	5
H	38.1 - 38.2	Hardened steel	0.02D	2.0D	SFM(Vc)	80	100	115	115	115	115	115	115	115
					IPT(fz)	.0002	.0003	.0004	.0005	.0007	.0008	.0008	.0009	.0009
					RPM	2590	2430	2230	1860	1400	1120	930	700	560
					IPM(FEED)	3	3	4	4	4	4	3	2	2
	40	Chilled Cast Iron	0.05D	2.5D	SFM(Vc)	150	150	165	165	180	180	195	195	180
					IPT(fz)	.0003	.0004	.0006	.0007	.0010	.0011	.0012	.0012	.0011
					RPM	4850	3640	3200	2670	2180	1750	1580	1180	870
					IPM(FEED)	6	6	8	8	8	8	7	6	4
	41	Hardened Cast Iron	0.02D	2.0D	SFM(Vc)	80	100	115	115	115	115	115	115	115
					IPT(fz)	.0002	.0003	.0004	.0005	.0007	.0008	.0008	.0009	.0009
					RPM	2590	2430	2230	1860	1400	1120	930	700	560
					IPM(FEED)	3	3	4	4	4	4	3	2	2

Diameter (Ø) applies to columns 3.0–20.0.

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG X-POWER PRO END MILLS

RECOMMENDED CUTTING CONDITIONS

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

GM810 SERIES 2 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	0.4	0.8	1.0	1.2	1.5
P	5	Non-alloy steel	1.0D	D<1:0.15D D≥1:0.25D	SFM(Vc)	130	215	230	215	195
					IPT(fz)	.0001	.0001	.0002	.0002	.0002
					RPM	31530	26080	22320	17380	12610
					IPM(FEED)	5	6	7	7	6
	8-9	Low alloy steel	1.0D	D<1:0.15D D≥1:0.25D	SFM(Vc)	130	215	230	215	195
					IPT(fz)	.0001	.0001	.0002	.0002	.0002
					RPM	31530	26080	22320	17380	12610
					IPM(FEED)	5	6	7	7	6
	11.1 - 11.2	High alloyed steel, and tool steel	1.0D	D<1:0.15D D≥1:0.25D	SFM(Vc)	130	215	230	215	195
					IPT(fz)	.0001	.0001	.0002	.0002	.0002
					RPM	31530	26080	22320	17380	12610
					IPM(FEED)	5	6	7	7	6
H	38.1 - 38.2	Hardened steel	1.0D	D<1:0.02D D≥1:0.05D	SFM(Vc)	100	165	165	165	150
					IPT(fz)	.00004	.0001	.0001	.0001	.0002
					RPM	24260	20010	16010	13340	9700
					IPM(FEED)	2	3	4	3	3
	40	Chilled Cast Iron	1.0D	D<1:0.15D D≥1:0.25D	SFM(Vc)	130	215	230	215	195
					IPT(fz)	.0001	.0001	.0002	.0002	.0002
					RPM	31530	26080	22320	17380	12610
					IPM(FEED)	5	6	7	7	6
	41	Hardened Cast Iron	1.0D	D<1:0.02D D≥1:0.05D	SFM(Vc)	100	165	165	165	150
					IPT(fz)	.00004	.0001	.0001	.0001	.0002
					RPM	24260	20010	16010	13340	9700
					IPM(FEED)	2	3	4	3	3

Diameter (Ø) applies to columns 0.4–1.5.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0
P	1-4	Non-alloy steel	1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	215	245	280	295	310	310	295	310	330	310
					IPT(fz)	.0004	.0006	.0010	.0013	.0015	.0023	.0025	.0025	.0024	.0025
					RPM	10430	7920	6790	5730	5010	3760	2860	2510	2000	1500
					IPM(FEED)	8	9	13	14	16	17	14	13	10	8
	5		1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	150	150	165	180	180	180	180	180	195	195
					IPT(fz)	.0004	.0006	.0009	.0013	.0016	.0020	.0020	.0019	.0020	.0018
					RPM	7280	4850	4000	3490	2910	2180	1750	1460	1180	950
					IPM(FEED)	6	6	8	9	9	9	7	6	5	4
	6-7	Low alloy steel	1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	215	245	280	295	310	310	295	310	330	310
					IPT(fz)	.0004	.0006	.0010	.0013	.0015	.0023	.0025	.0025	.0024	.0025
					RPM	10430	7920	6790	5730	5010	3760	2860	2510	2000	1500
					IPM(FEED)	8	9	13	14	16	17	14	13	10	8
	8-9		1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	150	150	165	180	180	180	180	180	195	195
					IPT(fz)	.0004	.0006	.0009	.0013	.0016	.0020	.0020	.0019	.0020	.0018
					RPM	7280	4850	4000	3490	2910	2180	1750	1460	1180	950
					IPM(FEED)	6	6	8	9	9	9	7	6	5	4
	10	High alloyed steel, and tool steel	1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	215	245	280	295	310	310	295	310	330	310
					IPT(fz)	.0004	.0006	.0010	.0013	.0015	.0023	.0025	.0025	.0024	.0025
					RPM	10430	7920	6790	5730	5010	3760	2860	2510	2000	1500
					IPM(FEED)	8	9	13	14	16	17	14	13	10	8
	11.1 - 11.2		1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	150	150	165	180	180	180	180	180	195	195
					IPT(fz)	.0004	.0006	.0009	.0013	.0016	.0020	.0020	.0019	.0020	.0018
					RPM	7280	4850	4000	3490	2910	2180	1750	1460	1180	950
					IPM(FEED)	6	6	8	9	9	9	7	6	5	4
M	14.1	Stainless steel	1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	115	130	150	150	165	150	150	150	165	150
					IPT(fz)	.0003	.0006	.0009	.0012	.0015	.0021	.0023	.0023	.0026	.0023
					RPM	5580	4210	3640	2910	2670	1820	1460	1210	1000	730
					IPM(FEED)	4	5	7	7	8	8	7	6	5	3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	215	245	280	295	310	310	295	310	330	310
					IPT(fz)	.0004	.0006	.0010	.0013	.0015	.0023	.0025	.0025	.0024	.0025
					RPM	10430	7920	6790	5730	5010	3760	2860	2510	2000	1500
					IPM(FEED)	8	9	13	14	16	17	14	13	10	8
H	38.1 - 38.2	Hardened steel	1.0D	0.05D	SFM(Vc)	100	100	115	115	115	130	130	130	130	130
					IPT(fz)	.0002	.0003	.0004	.0005	.0007	.0011	.0011	.0011	.0011	.0011
					RPM	4850	3230	2790	2230	1860	1580	1260	1050	790	630
					IPM(FEED)	2	2	2	2	3	4	3	2	2	1
	40	Chilled Cast Iron	1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	150	150	165	180	180	180	180	180	195	195
					IPT(fz)	.0004	.0006	.0009	.0013	.0016	.0020	.0020	.0019	.0020	.0018
					RPM	7280	4850	4000	3490	2910	2180	1750	1460	1180	950
					IPM(FEED)	6	6	8	9	9	9	7	6	5	4
	41	Hardened Cast Iron	1.0D	0.05D	SFM(Vc)	100	100	115	115	115	130	130	130	130	130
					IPT(fz)	.0002	.0003	.0004	.0005	.0007	.0011	.0011	.0011	.0011	.0011
					RPM	4850	3230	2790	2230	1860	1580	1260	1050	790	630
					IPM(FEED)	2	2	2	2	3	4	3	2	2	1

Diameter (Ø) applies to columns 2.0–20.0.

X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM883 SERIES 2 FLUTE RIB PROCESSING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2
P	1-4	Non-alloy steel	SFM(Vc)	135~175	170~215	200~260	235~305	235~220	245~305	245~305	240~290
			IPT(fz)	.0001~.0002	.0001~.0002	.0002~.0003	.0002~.0003	.0002~.0005	.0002~.0005	.0002~.0006	.0003~.0008
			RPM	32750~42450	32990~41720	32340~42050	32570~42280	28500~26680	26410~32880	23770~29590	19410~23450
			IPM(FEED)	8~18	8~18	10~24	10~24	12~26	12~30	12~34	12~37
			Ap	0.007~0.018	0.009~0.022	0.011~0.026	0.012~0.031	0.014~0.035	0.030~0.060	0.045~0.090	0.055~0.100
	5		SFM(Vc)	95~120	120~150	145~180	170~210	170~210	170~220	170~215	170~215
			IPT(fz)	.0001~.0002	.0001~.0002	.0001~.0003	.0001~.0003	.0001~.0004	.0002~.0005	.0002~.0006	.0003~.0007
			RPM	23040~29110	23290~29110	23450~29110	23560~29110	20620~25470	18330~23720	16500~20860	13750~17380
			IPM(FEED)	4~14	4~14	5~18	5~18	5~20	7~22	8~25	8~25
			Ap	0.007~0.018	0.009~0.022	0.011~0.026	0.012~0.031	0.014~0.035	0.030~0.060	0.045~0.090	0.055~0.100
	6-7	Low alloy steel	SFM(Vc)	135~175	170~215	200~260	235~305	235~220	245~305	245~305	240~290
			IPT(fz)	.0001~.0002	.0001~.0002	.0002~.0003	.0002~.0003	.0002~.0005	.0002~.0005	.0002~.0006	.0003~.0008
			RPM	32750~42450	32990~41720	32340~42050	32570~42280	28500~26680	26410~32880	23770~29590	19410~23450
			IPM(FEED)	8~18	8~18	10~24	10~24	12~26	12~30	12~34	12~37
			Ap	0.007~0.018	0.009~0.022	0.011~0.026	0.012~0.031	0.014~0.035	0.030~0.060	0.045~0.090	0.055~0.100
	8-9		SFM(Vc)	95~120	120~150	145~180	170~210	170~210	170~220	170~215	170~215
			IPT(fz)	.0001~.0002	.0001~.0002	.0001~.0003	.0001~.0003	.0001~.0004	.0002~.0005	.0002~.0006	.0003~.0007
			RPM	23040~29110	23290~29110	23450~29110	23560~29110	20620~25470	18330~23720	16500~20860	13750~17380
			IPM(FEED)	4~14	4~14	5~18	5~18	5~20	7~22	8~25	8~25
			Ap	0.007~0.018	0.009~0.022	0.011~0.026	0.012~0.031	0.014~0.035	0.030~0.060	0.045~0.090	0.055~0.100
	10	High alloyed steel, and tool steel	SFM(Vc)	135~175	170~215	200~260	235~305	235~220	245~305	245~305	240~290
			IPT(fz)	.0001~.0002	.0001~.0002	.0002~.0003	.0002~.0003	.0002~.0005	.0002~.0005	.0002~.0006	.0003~.0008
			RPM	32750~42450	32990~41720	32340~42050	32570~42280	28500~26680	26410~32880	23770~29590	19410~23450
			IPM(FEED)	8~18	8~18	10~24	10~24	12~26	12~30	12~34	12~37
			Ap	0.007~0.018	0.009~0.022	0.011~0.026	0.012~0.031	0.014~0.035	0.030~0.060	0.045~0.090	0.055~0.100
	11.1-11.2		SFM(Vc)	95~120	120~150	145~180	170~210	170~210	170~220	170~215	170~215
			IPT(fz)	.0001~.0002	.0001~.0002	.0001~.0003	.0001~.0003	.0001~.0004	.0002~.0005	.0002~.0006	.0003~.0007
			RPM	23040~29110	23290~29110	23450~29110	23560~29110	20620~25470	18330~23720	16500~20860	13750~17380
			IPM(FEED)	4~14	4~14	5~18	5~18	5~20	7~22	8~25	8~25
			Ap	0.007~0.018	0.009~0.022	0.011~0.026	0.012~0.031	0.014~0.035	0.030~0.060	0.045~0.090	0.055~0.100
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	SFM(Vc)	135~175	170~215	200~260	235~305	235~220	245~305	245~305	240~290
			IPT(fz)	.0001~.0002	.0001~.0002	.0002~.0003	.0002~.0003	.0002~.0005	.0002~.0005	.0002~.0006	.0003~.0008
			RPM	32750~42450	32990~41720	32340~42050	32570~42280	28500~26680	26410~32880	23770~29590	19410~23450
			IPM(FEED)	8~18	8~18	10~24	10~24	12~26	12~30	12~34	12~37
			Ap	0.007~0.018	0.009~0.022	0.011~0.026	0.012~0.031	0.014~0.035	0.030~0.060	0.045~0.090	0.055~0.100
H	38.1-38.2	Hardened steel	SFM(Vc)	60~75	75~90	95~110	110~130	110~130	105~120	110~135	110~135
			IPT(fz)	.00004~.0001	.00004~.0001	.0001~.0001	.0001~.0001	.00005~.0001	.0001~.0002	.0001~.0002	.0002~.0002
			RPM	14550~18190	14550~17470	15360~17790	15250~18020	13340~15770	11320~12940	10670~13100	8890~10920
			IPM(FEED)	1~4	1~4	2~5	2~5	2~5	2~5	3~5	3~5
			Ap	0.004~0.008	0.004~0.009	0.005~0.011	0.006~0.013	0.007~0.015	0.008~0.016	0.009~0.018	0.010~0.022
	40	Chilled Cast Iron	SFM(Vc)	95~120	120~150	145~180	170~210	170~210	170~220	170~215	170~215
			IPT(fz)	.0001~.0002	.0001~.0002	.0001~.0003	.0001~.0003	.0001~.0004	.0002~.0005	.0002~.0006	.0003~.0007
			RPM	23040~29110	23290~29110	23450~29110	23560~29110	20620~25470	18330~23720	16500~20860	13750~17380
			IPM(FEED)	4~14	4~14	5~18	5~18	5~20	7~22	8~25	8~25
			Ap	0.007~0.018	0.009~0.022	0.011~0.026	0.012~0.031	0.014~0.035	0.030~0.060	0.045~0.090	0.055~0.100
	41	Hardened Cast Iron	SFM(Vc)	60~75	75~90	95~110	110~130	110~130	105~120	110~135	110~135
			IPT(fz)	.00004~.0001	.00004~.0001	.0001~.0001	.0001~.0001	.00005~.0001	.0001~.0002	.0001~.0002	.0002~.0002
			RPM	14550~18190	14550~17470	15360~17790	15250~18020	13340~15770	11320~12940	10670~13100	8890~10920
			IPM(FEED)	1~4	1~4	2~5	2~5	2~5	2~5	3~5	3~5
			Ap	0.004~0.008	0.004~0.009	0.005~0.011	0.006~0.013	0.007~0.015	0.008~0.016	0.009~0.018	0.010~0.022

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

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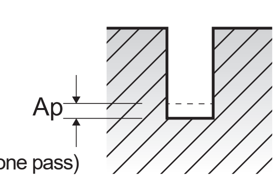


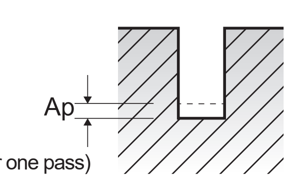
(Depth of cut per one pass)

X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM883 SERIES 2 FLUTE RIB PROCESSING

VDI 3323	Parameter	Diameter (Ø) 1.4	1.5	1.6	1.8	2.0	2.5	3.0	4.0	5.0	6.0
1-4	SFM(Vc)	240~305	235~300	240~310	255~320	260~315	255~325	260~325	260~325	260~325	260~325
	IPT(fz)	.0003~.0009	.0004~.001	.0004~.001	.0004~.0011	.0005~.0012	.0006~.0015	.0007~.0018	.0009~.0024	.0011~.0029	.0014~.0035
	RPM	16630~21140	15200~19410	14550~18800	13750~17250	12610~15280	9900~12610	8410~10510	6310~7880	5050~6310	4210~5260
	IPM(FEED)	12~37	12~37	12~37	12~37	12~37	12~37	12~37	12~37	12~37	12~37
	Ap	0.062~0.125	0.070~0.135	0.075~0.145	0.080~0.160	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
5	SFM(Vc)	175~210	170~220	175~220	180~225	180~225	180~230	180~225	180~230	180~225	180~230
	IPT(fz)	.0003~.0009	.0004~.0009	.0004~.0009	.0004~.001	.0005~.0011	.0006~.0014	.0007~.0017	.0009~.0022	.0011~.0028	.0014~.0033
	RPM	12130~14550	11000~14230	10610~13340	9700~12130	8730~10920	6990~8930	5820~7280	4370~5580	3490~4370	2830~3720
	IPM(FEED)	8~25	8~25	8~25	8~25	8~25	8~25	8~25	8~25	8~25	8~25
	Ap	0.062~0.125	0.070~0.135	0.075~0.145	0.080~.160	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
6-7	SFM(Vc)	240~305	235~300	240~310	255~320	260~315	255~325	260~325	260~325	260~325	260~325
	IPT(fz)	.0003~.0009	.0004~.001	.0004~.001	.0004~.0011	.0005~.0012	.0006~.0015	.0007~.0018	.0009~.0024	.0011~.0029	.0014~.0035
	RPM	16630~21140	15200~19410	14550~18800	13750~17250	12610~15280	9900~12610	8410~10510	6310~7880	5050~6310	4210~5260
	IPM(FEED)	12~37	12~37	12~37	12~37	12~37	12~37	12~37	12~37	12~37	12~37
	Ap	0.062~0.125	0.070~0.135	0.075~0.145	0.080~0.160	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
8-9	SFM(Vc)	175~210	170~220	175~220	180~225	180~225	180~230	180~225	180~230	180~225	180~230
	IPT(fz)	.0003~.0009	.0004~.0009	.0004~.0009	.0004~.001	.0005~.0011	.0006~.0014	.0007~.0017	.0009~.0022	.0011~.0028	.0014~.0033
	RPM	12130~14550	11000~14230	10610~13340	9700~12130	8730~10920	6990~8930	5820~7280	4370~5580	3490~4370	2830~3720
	IPM(FEED)	8~25	8~25	8~25	8~25	8~25	8~25	8~25	8~25	8~25	8~25
	Ap	0.062~0.125	0.070~0.135	0.075~0.145	0.080~.160	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
10	SFM(Vc)	240~305	235~300	240~310	255~320	260~315	255~325	260~325	260~325	260~325	260~325
	IPT(fz)	.0003~.0009	.0004~.001	.0004~.001	.0004~.0011	.0005~.0012	.0006~.0015	.0007~.0018	.0009~.0024	.0011~.0029	.0014~.0035
	RPM	16630~21140	15200~19410	14550~18800	13750~17250	12610~15280	9900~12610	8410~10510	6310~7880	5050~6310	4210~5260
	IPM(FEED)	12~37	12~37	12~37	12~37	12~37	12~37	12~37	12~37	12~37	12~37
	Ap	0.062~0.125	0.070~0.135	0.075~0.145	0.080~0.160	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
11.1-11.2	SFM(Vc)	175~210	170~220	175~220	180~225	180~225	180~230	180~225	180~230	180~225	180~230
	IPT(fz)	.0003~.0009	.0004~.0009	.0004~.0009	.0004~.001	.0005~.0011	.0006~.0014	.0007~.0017	.0009~.0022	.0011~.0028	.0014~.0033
	RPM	12130~14550	11000~14230	10610~13340	9700~12130	8730~10920	6990~8930	5820~7280	4370~5580	3490~4370	2830~3720
	IPM(FEED)	8~25	8~25	8~25	8~25	8~25	8~25	8~25	8~25	8~25	8~25
	Ap	0.062~0.125	0.070~0.135	0.075~0.145	0.080~.160	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
15-20	SFM(Vc)	240~305	235~300	240~310	255~320	260~315	255~325	260~325	260~325	260~325	260~325
	IPT(fz)	.0003~.0009	.0004~.001	.0004~.001	.0004~.0011	.0005~.0012	.0006~.0015	.0007~.0018	.0009~.0024	.0011~.0029	.0014~.0035
	RPM	16630~21140	15200~19410	14550~18800	13750~17250	12610~15280	9900~12610	8410~10510	6310~7880	5050~6310	4210~5260
	IPM(FEED)	12~37	12~37	12~37	12~37	12~37	12~37	12~37	12~37	12~37	12~37
	Ap	0.062~0.125	0.070~0.135	0.075~0.145	0.080~0.160	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
38.1-38.2	SFM(Vc)	110~135	110~135	110~140	110~140	115~145	115~145	115~145	115~145	115~140	115~170
	IPT(fz)	.0002~.0003	.0002~.0003	.0002~.0003	.0002~.0004	.0003~.0004	.0003~.0005	.0004~.0006	.0005~.0008	.0006~.001	.0008~.001
	RPM	7620~9360	7120~8730	6670~8490	5930~7550	5580~7040	4460~5630	3720~4690	2790~3520	2230~2720	1860~2750
	IPM(FEED)	3~5	3~5	3~5	3~5	3~5	3~5	3~5	3~5	3~5	3~5
	Ap	0.012~0.025	0.014~0.028	0.015~0.030	0.016~0.032	0.018~0.035	0.022~0.045	0.028~0.055	0.036~0.072	0.045~0.090	0.054~0.108
40	SFM(Vc)	175~210	170~220	175~220	180~225	180~225	180~230	180~225	180~230	180~225	180~230
	IPT(fz)	.0003~.0009	.0004~.0009	.0004~.0009	.0004~.001	.0005~.0011	.0006~.0014	.0007~.0017	.0009~.0022	.0011~.0028	.0014~.0033
	RPM	12130~14550	11000~14230	10610~13340	9700~12130	8730~10920	6990~8930	5820~7280	4370~5580	3490~4370	2830~3720
	IPM(FEED)	8~25	8~25	8~25	8~25	8~25	8~25	8~25	8~25	8~25	8~25
	Ap	0.062~0.125	0.070~0.135	0.075~0.145	0.080~.160	0.090~0.180	0.112~0.235	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
41	SFM(Vc)	110~135	110~135	110~140	110~140	115~145	115~145	115~145	115~145	115~140	115~170
	IPT(fz)	.0002~.0003	.0002~.0003	.0002~.0003	.0002~.0004	.0003~.0004	.0003~.0005	.0004~.0006	.0005~.0008	.0006~.001	.0008~.001
	RPM	7620~9360	7120~8730	6670~8490	5930~7550	5580~7040	4460~5630	3720~4690	2790~3520	2230~2720	1860~2750
	IPM(FEED)	3~5	3~5	3~5	3~5	3~5	3~5	3~5	3~5	3~5	3~5
	Ap	0.012~0.025	0.014~0.028	0.015~0.030	0.016~0.032	0.018~0.035	0.022~0.045	0.028~0.055	0.036~0.072	0.045~0.090	0.054~0.108

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : mm (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



(Depth of cut per one pass)

YG X-POWER PRO END MILLS

RECOMMENDED CUTTING CONDITIONS

GM895 SERIES 3 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0
						Diameter (Ø)								
P	1-4	Non-alloy steel	1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	260	295	345	360	375	375	375	375	395
					IPT(fz)	.0002	.0003	.0005	.0006	.0008	.0011	.0012	.0012	.0012
					RPM	12610	9540	8370	6990	6060	4550	3640	3030	2400
					IPM(FEED)	8	8	12	12	14	15	13	11	9
	5		1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	165	195	215	215	230	230	230	230	245
					IPT(fz)	.0002	.0003	.0004	.0006	.0008	.0009	.0009	.0009	.0009
					RPM	8010	6310	5220	4170	3720	2790	2230	1860	1490
					IPM(FEED)	5	6	7	7	9	8	6	5	4
	6-7	Low alloy steel	1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	260	295	345	360	375	375	375	375	395
					IPT(fz)	.0002	.0003	.0005	.0006	.0008	.0011	.0012	.0012	.0012
					RPM	12610	9540	8370	6990	6060	4550	3640	3030	2400
					IPM(FEED)	8	8	12	12	14	15	13	11	9
	8-9		1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	165	195	215	215	230	230	230	230	245
					IPT(fz)	.0002	.0003	.0004	.0006	.0008	.0009	.0009	.0009	.0009
					RPM	8010	6310	5220	4170	3720	2790	2230	1860	1490
					IPM(FEED)	5	6	7	7	9	8	6	5	4
	10	High alloyed steel, and tool steel	1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	260	295	345	360	375	375	375	375	395
					IPT(fz)	.0002	.0003	.0005	.0006	.0008	.0011	.0012	.0012	.0012
					RPM	12610	9540	8370	6990	6060	4550	3640	3030	2400
					IPM(FEED)	8	8	12	12	14	15	13	11	9
	11.1 - 11.2		1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	165	195	215	215	230	230	230	230	245
					IPT(fz)	.0002	.0003	.0004	.0006	.0008	.0009	.0009	.0009	.0009
					RPM	8010	6310	5220	4170	3720	2790	2230	1860	1490
					IPM(FEED)	5	6	7	7	9	8	6	5	4
M	14.1	Stainless steel	1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	150	165	1805	180	195	195	195	180	195
					IPT(fz)	.0002	.0003	.0000	.0006	.0008	.0010	.0011	.0011	.0012
					RPM	7280	5340	43780	3490	3150	2370	1890	1460	1180
					IPM(FEED)	3	5	6	6	7	7	7	5	4
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	260	295	345	360	375	375	375	375	395
					IPT(fz)	.0002	.0003	.0005	.0006	.0008	.0011	.0012	.0012	.0012
					RPM	12610	9540	8370	6990	6060	4550	3640	3030	2400
					IPM(FEED)	8	8	12	12	14	15	13	11	9
H	38.1 - 38.2	Hardened steel	1.0D	0.05D	SFM(Vc)	115	115	130	130	130	150	150	165	165
					IPT(fz)	.0001	.0002	.0002	.0003	.0003	.0005	.0005	.0005	.0005
					RPM	5580	3720	3150	2520	2100	1820	1460	1330	1000
					IPM(FEED)	1	2	2	2	2	3	2	2	2
	40	Chilled Cast Iron	1.0D	D≤3:0.2D D>3:0.5D	SFM(Vc)	165	195	215	215	230	230	230	230	245
					IPT(fz)	.0002	.0003	.0004	.0006	.0008	.0009	.0009	.0009	.0009
					RPM	8010	6310	5220	4170	3720	2790	2230	1860	1490
					IPM(FEED)	5	6	7	7	9	8	6	5	4
	41	Hardened Cast Iron	1.0D	0.05D	SFM(Vc)	115	115	130	130	130	150	150	165	165
					IPT(fz)	.0001	.0002	.0002	.0003	.0003	.0005	.0005	.0005	.0005
					RPM	5580	3720	3150	2520	2100	1820	1460	1330	1000
					IPM(FEED)	1	2	2	2	2	3	2	2	2

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

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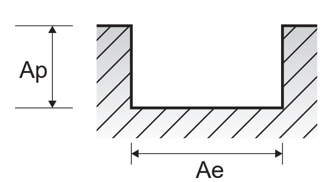

YG X-POWER PRO END MILLS

RECOMMENDED CUTTING CONDITIONS

GM895 SERIES 3 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0
						Diameter (Ø)								
P	1-4	Non-alloy steel	0.05D	1.0D	SFM(Vc)	260	295	345	360	375	375	375	375	395
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0017	.0019	.0019	.0019
					RPM	12610	9540	8370	6990	6060	4550	3640	3030	2400
					IPM(FEED)	9	10	19	20	22	23	20	17	13
	5		0.05D	1.0D	SFM(Vc)	165	195	215	215	230	230	230	230	245
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0015	.0015	.0015	.0015
					RPM	8010	6310	5220	4170	3720	2790	2230	1860	1490
					IPM(FEED)	6	7	12	12	14	13	10	8	7
	6-7	Low alloy steel	0.05D	1.0D	SFM(Vc)	260	295	345	360	375	375	375	375	395
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0017	.0019	.0019	.0019
					RPM	12610	9540	8370	6990	6060	4550	3640	3030	2400
					IPM(FEED)	9	10	19	20	22	23	20	17	13
	8-9		0.05D	1.0D	SFM(Vc)	165	195	215	215	230	230	230	230	245
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0015	.0015	.0015	.0015
					RPM	8010	6310	5220	4170	3720	2790	2230	1860	1490
					IPM(FEED)	6	7	12	12	14	13	10	8	7
	10	High alloyed steel, and tool steel	0.05D	1.0D	SFM(Vc)	260	295	345	360	375	375	375	375	395
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0017	.0019	.0019	.0019
					RPM	12610	9540	8370	6990	6060	4550	3640	3030	2400
					IPM(FEED)	9	10	19	20	22	23	20	17	13
	11.1 - 11.2		0.05D	1.0D	SFM(Vc)	165	195	215	215	230	230	230	230	245
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0015	.0015	.0015	.0015
					RPM	8010	6310	5220	4170	3720	2790	2230	1860	1490
					IPM(FEED)	6	7	12	12	14	13	10	8	7
M	14.1	Stainless steel	0.05D	1.0D	SFM(Vc)	150	165	180	180	195	195	195	180	195
					IPT(fz)	.0002	.0003	.0007	.0009	.0012	.0017	.0018	.0017	.0019
					RPM	7280	5340	4370	3490	3150	2370	1890	1460	1180
					IPM(FEED)	5	6	9	10	11	12	10	8	7
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	1.0D	SFM(Vc)	260	295	345	360	375	375	375	375	395
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0017	.0019	.0019	.0019
					RPM	12610	9540	8370	6990	6060	4550	3640	3030	2400
					IPM(FEED)	9	10	19	20	22	23	20	17	13
H	38.1 - 38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	115	115	130	130	130	150	150	165	165
					IPT(fz)	.0001	.0002	.0002	.0003	.0004	.0006	.0007	.0007	.0007
					RPM	5580	3720	3150	2520	2100	1820	1460	1330	1000
					IPM(FEED)	1	2	2	2	3	3	3	3	2
	40	Chilled Cast Iron	0.05D	1.0D	SFM(Vc)	165	195	215	215	230	230	230	230	245
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0015	.0015	.0015	.0015
					RPM	8010	6310	5220	4170	3720	2790	2230	1860	1490
					IPM(FEED)	6	7	12	12	14	13	10	8	7
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	115	115	130	130	130	150	150	165	165
					IPT(fz)	.0001	.0002	.0002	.0003	.0004	.0006	.0007	.0007	.0007
					RPM	5580	3720	3150	2520	2100	1820	1460	1330	1000
					IPM(FEED)	1	2	2	2	3	3	3	3	2

SFM = Surface Feet per Minute
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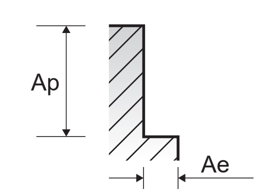
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

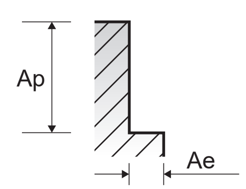
YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM811 SERIES 4 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0	25.0
P	1-4	Non-alloy steel	0.05D	1.0D	SFM(Vc)	260	310	345	360	375	395	375	375	410	395	395
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0016	.0019	.0019	.0019	.0019	.0018
					RPM	12610	10030	8370	6990	6060	4790	3640	3030	2490	1920	1530
					IPM(FEED)	12	14	25	27	29	32	27	23	18	14	11
	5		0.05D	1.0D	SFM(Vc)	180	195	215	215	230	230	230	230	245	245	245
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0015	.0015	.0015	.0015	.0015	.0016
					RPM	8730	6310	5220	4170	3720	2790	2230	1860	1490	1190	950
					IPM(FEED)	8	9	16	16	18	17	13	11	9	7	6
	6-7	Low alloy steel	0.05D	1.0D	SFM(Vc)	260	310	345	360	375	395	375	375	410	395	395
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0016	.0019	.0019	.0019	.0019	.0018
					RPM	12610	10030	8370	6990	6060	4790	3640	3030	2490	1920	1530
					IPM(FEED)	12	14	25	27	29	32	27	23	18	14	11
	8-9		0.05D	1.0D	SFM(Vc)	180	195	215	215	230	230	230	230	245	245	245
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0015	.0015	.0015	.0015	.0015	.0016
					RPM	8730	6310	5220	4170	3720	2790	2230	1860	1490	1190	950
					IPM(FEED)	8	9	16	16	18	17	13	11	9	7	6
	10	High alloyed steel, and tool steel	0.05D	1.0D	SFM(Vc)	260	310	345	360	375	395	375	375	410	395	395
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0016	.0019	.0019	.0019	.0019	.0018
					RPM	12610	10030	8370	6990	6060	4790	3640	3030	2490	1920	1530
					IPM(FEED)	12	14	25	27	29	32	27	23	18	14	11
	11.1 - 11.2		0.05D	1.0D	SFM(Vc)	180	195	215	215	230	230	230	230	245	245	245
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0015	.0015	.0015	.0015	.0015	.0016
					RPM	8730	6310	5220	4170	3720	2790	2230	1860	1490	1190	950
					IPM(FEED)	8	9	16	16	18	17	13	11	9	7	6
M	14.1	Stainless steel	0.05D	1.0D	SFM(Vc)	150	165	180	180	195	195	195	180	195	195	195
					IPT(fz)	.0002	.0004	.0007	.0009	.0011	.0016	.0018	.0017	.0018	.0018	.0018
					RPM	7280	5340	4370	3490	3150	2370	1890	1460	1180	950	760
					IPM(FEED)	6	8	12	13	15	15	14	10	9	7	5
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	1.0D	SFM(Vc)	260	310	345	360	375	395	375	375	410	395	395
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0016	.0019	.0019	.0019	.0019	.0018
					RPM	12610	10030	8370	6990	6060	4790	3640	3030	2490	1920	1530
					IPM(FEED)	12	14	25	27	29	32	27	23	18	14	11
H	38.1 - 38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	115	105	130	130	130	150	165	165	165	165	150
					IPT(fz)	.0001	.0002	.0002	.0003	.0004	.0007	.0006	.0007	.0006	.0006	.0006
					RPM	5580	3400	3150	2520	2100	1820	1600	1330	1000	800	580
					IPM(FEED)	2	2	3	3	3	5	4	4	3	2	1
	40	Chilled Cast Iron	0.05D	1.0D	SFM(Vc)	180	195	215	215	230	230	230	230	245	245	245
					IPT(fz)	.0002	.0004	.0007	.0009	.0012	.0015	.0015	.0015	.0015	.0015	.0016
					RPM	8730	6310	5220	4170	3720	2790	2230	1860	1490	1190	950
					IPM(FEED)	8	9	16	16	18	17	13	11	9	7	6
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	115	105	130	130	130	150	165	165	165	165	150
					IPT(fz)	.0001	.0002	.0002	.0003	.0004	.0007	.0006	.0007	.0006	.0006	.0006
					RPM	5580	3400	3150	2520	2100	1820	1600	1330	1000	800	580
					IPM(FEED)	2	2	3	3	3	5	4	4	3	2	1

(Columns 2.0–25.0: Diameter (Ø))

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS

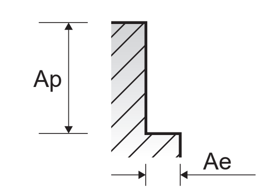
YG X-POWER PRO END MILLS RECOMMENDED CUTTING CONDITIONS

GM817 SERIES 4 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0
P	1-4	Non-alloy steel	0.05D	2.5D	SFM(Vc)	195	215	230	245	260	260	280	260	295	280
					IPT(fz)	.0002	.0004	.0006	.0008	.0012	.0016	.0019	.0019	.0020	.0019
					RPM	9460	6950	5580	4750	4210	3150	2720	2100	1790	1360
					IPM(FEED)	9	10	12	16	19	21	21	16	14	10
	5		0.05D	2.5D	SFM(Vc)	115	130	130	150	150	150	165	165	165	165
					IPT(fz)	.0002	.0003	.0004	.0005	.0008	.0011	.0013	.0014	.0014	.0013
					RPM	5580	4210	3150	2910	2430	1820	1600	1330	1000	800
					IPM(FEED)	4	5	5	6	8	8	8	7	6	4
	6-7	Low alloy steel	0.05D	2.5D	SFM(Vc)	195	215	230	245	260	260	280	260	295	280
					IPT(fz)	.0002	.0004	.0006	.0008	.0012	.0016	.0019	.0019	.0020	.0019
					RPM	9460	6950	5580	4750	4210	3150	2720	2100	1790	1360
					IPM(FEED)	9	10	12	16	19	21	21	16	14	10
	8-9		0.05D	2.5D	SFM(Vc)	115	130	130	150	150	150	165	165	165	165
					IPT(fz)	.0002	.0003	.0004	.0005	.0008	.0011	.0013	.0014	.0014	.0013
					RPM	5580	4210	3150	2910	2430	1820	1600	1330	1000	800
					IPM(FEED)	4	5	5	6	8	8	8	7	6	4
	10	High alloyed steel, and tool steel	0.05D	2.5D	SFM(Vc)	195	215	230	245	260	260	280	260	295	280
					IPT(fz)	.0002	.0004	.0006	.0008	.0012	.0016	.0019	.0019	.0020	.0019
					RPM	9460	6950	5580	4750	4210	3150	2720	2100	1790	1360
					IPM(FEED)	9	10	12	16	19	21	21	16	14	10
	11.1 - 11.2		0.05D	2.5D	SFM(Vc)	115	130	130	150	150	150	165	165	165	165
					IPT(fz)	.0002	.0003	.0004	.0005	.0008	.0011	.0013	.0014	.0014	.0013
					RPM	5580	4210	3150	2910	2430	1820	1600	1330	1000	800
					IPM(FEED)	4	5	5	6	8	8	8	7	6	4
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	2.5D	SFM(Vc)	195	215	230	245	260	260	280	260	295	280
					IPT(fz)	.0002	.0004	.0006	.0008	.0012	.0016	.0019	.0019	.0020	.0019
					RPM	9460	6950	5580	4750	4210	3150	2720	2100	1790	1360
					IPM(FEED)	9	10	12	16	19	21	21	16	14	10
H	38.1 - 38.2	Hardened steel	0.02D	2.0D	SFM(Vc)	65	80	80	100	100	100	100	100	100	100
					IPT(fz)	.0002	.0002	.0003	.0004	.0006	.0008	.0011	.0010	.0010	.0010
					RPM	3150	2590	1940	1940	1620	1210	970	810	610	490
					IPM(FEED)	2	3	3	3	4	4	4	3	2	2
	40	Chilled Cast Iron	0.05D	2.5D	SFM(Vc)	115	130	130	150	150	150	165	165	165	165
					IPT(fz)	.0002	.0003	.0004	.0005	.0008	.0011	.0013	.0014	.0014	.0013
					RPM	5580	4210	3150	2910	2430	1820	1600	1330	1000	800
					IPM(FEED)	4	5	5	6	8	8	8	7	6	4
	41	Hardened Cast Iron	0.02D	2.0D	SFM(Vc)	65	80	80	100	100	100	100	100	100	100
					IPT(fz)	.0002	.0002	.0003	.0004	.0006	.0008	.0011	.0010	.0010	.0010
					RPM	3150	2590	1940	1940	1620	1210	970	810	610	490
					IPM(FEED)	2	3	3	3	4	4	4	3	2	2

(Columns 2.0–20.0: Diameter (Ø))

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



YG X-POWER PRO END MILLS — RECOMMENDED CUTTING CONDITIONS

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)

GM812 SERIES — 6&8 FLUTE - SIDE CUTTING

NORMAL SPEED

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6.0	8.0	10.0	12.0	16.0	20.0
P	1-4	Non-alloy steel	0.1D	1.5D	SFM(Vc)	345	360	360	360	360	345
					IPT(fz)	.0024	.0031	.0039	.0039	.0039	.0029
					RPM	5580	4370	3490	2910	2180	1670
					IPM(FEED)	79	82	82	68	52	40
	5		0.05D	1.5D	SFM(Vc)	245	245	245	245	245	245
					IPT(fz)	.0023	.0031	.0039	.0038	.0039	.0030
					RPM	3960	2970	2380	1980	1490	1190
					IPM(FEED)	56	55	55	46	35	28
	6-7	Low alloy steel	0.1D	1.5D	SFM(Vc)	345	360	360	360	360	345
					IPT(fz)	.0024	.0031	.0039	.0039	.0039	.0029
					RPM	5580	4370	3490	2910	2180	1670
					IPM(FEED)	79	82	82	68	52	40
	8-9		0.05D	1.5D	SFM(Vc)	245	245	245	245	245	245
					IPT(fz)	.0023	.0031	.0039	.0038	.0039	.0030
					RPM	3960	2970	2380	1980	1490	1190
					IPM(FEED)	56	55	55	46	35	28
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM(Vc)	345	360	360	360	360	345
					IPT(fz)	.0024	.0031	.0039	.0039	.0039	.0029
					RPM	5580	4370	3490	2910	2180	1670
					IPM(FEED)	79	82	82	68	52	40
	11.1 - 11.2		0.05D	1.5D	SFM(Vc)	245	245	245	245	245	245
					IPT(fz)	.0023	.0031	.0039	.0038	.0039	.0030
					RPM	3960	2970	2380	1980	1490	1190
					IPM(FEED)	56	55	55	46	35	28
H	38.1	Hardened steel	0.05D	1.5D	SFM(Vc)	245	245	245	245	245	245
					IPT(fz)	.0023	.0031	.0039	.0038	.0039	.0030
					RPM	3960	2970	2380	1980	1490	1190
					IPM(FEED)	56	55	55	46	35	28
	38.2		0.05D	1.0D	SFM(Vc)	100	100	100	100	115	100
					IPT(fz)	.0009	.0012	.0014	.0014	.0014	.0011
					RPM	1620	1210	970	810	700	490
					IPM(FEED)	8	9	8	7	6	4
	40	Chilled Cast Iron	0.05D	1.5D	SFM(Vc)	245	245	245	245	245	245
					IPT(fz)	.0023	.0031	.0039	.0038	.0039	.0030
					RPM	3960	2970	2380	1980	1490	1190
					IPM(FEED)	56	55	55	46	35	28
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	100	100	100	100	115	100
					IPT(fz)	.0009	.0012	.0014	.0014	.0014	.0011
					RPM	1620	1210	970	810	700	490
					IPM(FEED)	8	9	8	7	6	4

HIGH SPEED

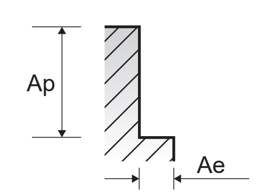
ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6.0	8.0	10.0	12.0	16.0	20.0
P	1-5	Non-alloy steel	0.05D	1.5D	SFM(Vc)	1065	1065	1050	1065	1065	1065
					IPT(fz)	.0024	.0032	.0039	.0039	.0039	.0030
					RPM	17220	12920	10190	8610	6460	5170
					IPM(FEED)	244	247	241	204	153	124
	6-9	Low alloy steel	0.05D	1.5D	SFM(Vc)	1065	1065	1050	1065	1065	1065
					IPT(fz)	.0024	.0032	.0039	.0039	.0039	.0030
					RPM	17220	12920	10190	8610	6460	5170
					IPM(FEED)	244	247	241	204	153	124
	10 - 11.2	High alloyed steel, and tool steel	0.05D	1.5D	SFM(Vc)	1065	1065	1050	1065	1065	1065
					IPT(fz)	.0024	.0032	.0039	.0039	.0039	.0030
					RPM	17220	12920	10190	8610	6460	5170
					IPM(FEED)	244	247	241	204	153	124
H	38.1	Hardened steel	0.05D	1.5D	SFM(Vc)	1065	1065	1050	1065	1065	1065
					IPT(fz)	.0024	.0032	.0039	.0039	.0039	.0030
					RPM	17220	12920	10190	8610	6460	5170
					IPM(FEED)	244	247	241	204	153	124
	38.2		0.05D	1.0D	SFM(Vc)	525	525	525	525	525	525
					IPT(fz)	.0024	.0032	.0040	.0039	.0039	.0029
					RPM	8490	6370	5090	4250	3180	2550
					IPM(FEED)	120	122	122	100	75	59
	40	Chilled Cast Iron	0.05D	1.5D	SFM(Vc)	1065	1065	1050	1065	1065	1065
					IPT(fz)	.0024	.0032	.0039	.0039	.0039	.0030
					RPM	17220	12920	10190	8610	6460	5170
					IPM(FEED)	244	247	241	204	153	124
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	525	525	525	525	525	525
					IPT(fz)	.0024	.0032	.0040	.0039	.0039	.0029
					RPM	8490	6370	5090	4250	3180	2550
					IPM(FEED)	120	122	122	100	75	59

YG X-POWER PRO END MILLS — RECOMMENDED CUTTING CONDITIONS

GM834 SERIES — 6 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6.0	8.0	10.0	12.0	16.0	20.0	25.0
P	1-4	Non-alloy steel	0.01D	3.0D	SFM(Vc)	150	150	150	150	150	150	150
					IPT(fz)	.0014	.0017	.0021	.0023	.0025	.0027	.0029
					RPM	2430	1820	1460	1210	910	730	580
					IPM(FEED)	20	19	19	17	14	12	10
	5		0.01D	3.0D	SFM(Vc)	100	100	100	100	100	100	100
					IPT(fz)	.0014	.0017	.0019	.0021	.0024	.0026	.0027
					RPM	1620	1210	970	810	610	490	390
					IPM(FEED)	13	12	11	10	9	8	6
	6-7	Low alloy steel	0.01D	3.0D	SFM(Vc)	150	150	150	150	150	150	150
					IPT(fz)	.0014	.0017	.0021	.0023	.0025	.0027	.0029
					RPM	2430	1820	1460	1210	910	730	580
					IPM(FEED)	20	19	19	17	14	12	10
	8-9		0.01D	3.0D	SFM(Vc)	100	100	100	100	100	100	100
					IPT(fz)	.0014	.0017	.0019	.0021	.0024	.0026	.0027
					RPM	1620	1210	970	810	610	490	390
					IPM(FEED)	13	12	11	10	9	8	6
	10	High alloyed steel, and tool steel	0.01D	3.0D	SFM(Vc)	150	150	150	150	150	150	150
					IPT(fz)	.0014	.0017	.0021	.0023	.0025	.0027	.0029
					RPM	2430	1820	1460	1210	910	730	580
					IPM(FEED)	20	19	19	17	14	12	10
	11.1 - 11.2		0.01D	3.0D	SFM(Vc)	100	100	100	100	100	100	100
					IPT(fz)	.0014	.0017	.0019	.0021	.0024	.0026	.0027
					RPM	1620	1210	970	810	610	490	390
					IPM(FEED)	13	12	11	10	9	8	6
K	15-20	Grey cast iron, Nodular cast iron, Malleable cast iron	0.01D	3.0D	SFM(Vc)	150	150	150	150	150	150	150
					IPT(fz)	.0014	.0017	.0021	.0023	.0025	.0027	.0029
					RPM	2430	1820	1460	1210	910	730	580
					IPM(FEED)	20	19	19	17	14	12	10
H	38.1 - 38.2	Hardened steel	0.05D	3.0D	SFM(Vc)	80	80	80	80	80	80	80
					IPT(fz)	.0012	.0015	.0019	.0021	.0022	.0024	.0026
					RPM	1290	970	780	650	490	390	310
					IPM(FEED)	9	9	9	8	6	6	5
	40	Chilled Cast Iron	0.01D	3.0D	SFM(Vc)	100	100	100	100	100	100	100
					IPT(fz)	.0014	.0017	.0019	.0021	.0024	.0026	.0027
					RPM	1620	1210	970	810	610	490	390
					IPM(FEED)	13	12	11	10	9	8	6
	41	Hardened Cast Iron	0.05D	3.0D	SFM(Vc)	80	80	80	80	80	80	80
					IPT(fz)	.0012	.0015	.0019	.0021	.0022	.0024	.0026
					RPM	1290	970	780	650	490	390	310
					IPM(FEED)	9	9	9	8	6	6	5

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

X-POWER PRO END MILLS

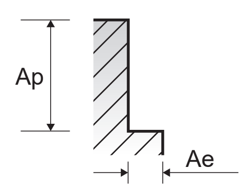
RECOMMENDED CUTTING CONDITIONS

GM814 SERIES

3&4 FLUTE ROUGHING - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6.0	8.0	10.0	12.0	16.0	20.0
P	1-4	Non-alloy steel	0.3D	1.5D	SFM(Vc)	1015	1000	1000	1035	1035	1035
					IPT(fz)	.0020	.0026	.0025	.0029	.0039	.0044
					RPM	16410	12130	9700	8370	6280	5020
					IPM(FEED)	97	96	96	99	99	89
	5		0.3D	1.5D	SFM(Vc)	805	805	820	785	835	785
					IPT(fz)	.0009	.0012	.0011	.0013	.0016	.0015
					RPM	13020	9760	7960	6350	5060	3810
					IPM(FEED)	35	35	35	33	32	24
	6-7	Low alloy steel	0.3D	1.5D	SFM(Vc)	1015	1000	1000	1035	1035	1035
					IPT(fz)	.0020	.0026	.0025	.0029	.0039	.0044
					RPM	16410	12130	9700	8370	6280	5020
					IPM(FEED)	97	96	96	99	99	89
	8-9		0.3D	1.5D	SFM(Vc)	805	805	820	785	835	785
					IPT(fz)	.0009	.0012	.0011	.0013	.0016	.0015
					RPM	13020	9760	7960	6350	5060	3810
					IPM(FEED)	35	35	35	33	32	24
	10	High alloyed steel, and tool steel	0.3D	1.5D	SFM(Vc)	1015	1000	1000	1035	1035	1035
					IPT(fz)	.0020	.0026	.0025	.0029	.0039	.0044
					RPM	16410	12130	9700	8370	6280	5020
					IPM(FEED)	97	96	96	99	99	89
	11.1 - 11.2		0.3D	1.5D	SFM(Vc)	805	805	820	785	835	785
					IPT(fz)	.0009	.0012	.0011	.0013	.0016	.0015
					RPM	13020	9760	7960	6350	5060	3810
					IPM(FEED)	35	35	35	33	32	24
M	14.1	Stainless steel	0.3D	1.5D	SFM(Vc)	540	540	560	540	575	525
					IPT(fz)	8733	6549	5434	4366	3487	2547
					RPM	.0009	.0012	.0011	.0013	.0015	.0015
					IPM(FEED)	23.8	23.3	23.9	23.4	21.4	15.2
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.3D	1.5D	SFM(Vc)	1015	1000	1000	1035	1035	1035
					IPT(fz)	.0020	.0026	.0025	.0029	.0039	.0044
					RPM	16410	12130	9700	8370	6280	5020
					IPM(FEED)	97	96	96	99	99	89
H	38.1 - 38.2	Hardened steel	0.05D	1.0D	SFM(Vc)	215	215	215	215	215	215
					IPT(fz)	.0010	.0013	.0014	.0015	.0013	.0015
					RPM	3480	2610	2090	1740	1300	1040
					IPM(FEED)	11	10	12	11	7	6
	40	Chilled Cast Iron	0.3D	1.5D	SFM(Vc)	805	805	820	785	835	785
					IPT(fz)	.0009	.0012	.0011	.0013	.0016	.0015
					RPM	13020	9760	7960	6350	5060	3810
					IPM(FEED)	35	35	35	33	32	24
	41	Hardened Cast Iron	0.05D	1.0D	SFM(Vc)	215	215	215	215	215	215
					IPT(fz)	.0010	.0013	.0014	.0015	.0013	.0015
					RPM	3480	2610	2090	1740	1300	1040
					IPM(FEED)	11	10	12	11	7	6

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



Being the best through innovation

SOLID CARBIDE

TitaNox-POWER END MILLS

- High Speed Machining for Exotic Materials:
  Titanium, Inconel and Stainless Steels

YG

SELECTION GUIDE

SOLID CARBIDE

TitaNox-Power END MILLS

High Speed Machining for Exotic Materials: Titanium, Inconel and Stainless Steels

Please visit globalyg1.com/mat for material search

Recommended cutting conditions : p.C484

◎ : Excellent ○ : Good

	Inch		
SERIES	UGMG42	UGMG43	UGMH12
SHANK	Plain	Weldon Flat	Plain
FLUTE	4		5
HELIX ANGLE	43° / 45° (MULTIPLE HELIX)		43°/44°/45° (MULTIPLE HELIX)
CUTTING EDGE SHAPE	CORNER RADIUS	CORNER RADIUS	SQUARE
SIZE MIN	1/4	3/8	1/8
SIZE MAX	1	1	1-1/4
PAGE	C474	C475	C476-C477
	DOUBLE CORE STANDARD LENGTH		STANDARD LENGTH
	Y-Coating		Y-Coating

	Inch						Metric		
SERIES	UGMG32	UGMG34	UGMH06	UGMH07	EMI42	EMI43	GMG40	GMG24, GMG26	GMG28, GMG30
SHANK	Plain		Plain		Plain		Plain	Plain	
FLUTE	5		5		5		4	5	
HELIX ANGLE	43°/44°/45° (MULTIPLE HELIX)		43°/44°/45° (MULTIPLE HELIX)		38°		43° / 45° (MULTIPLE HELIX)	43°/44°/45° (MULTIPLE HELIX)	
CUTTING EDGE SHAPE	CHAMFER	CORNER RADIUS	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	CORNER RADIUS	CHAMFER	CORNER RADIUS
SIZE MIN	1/8	1/8	1/8	1/8	1/4	1/4	6.0	6.0	6.0
SIZE MAX	1	1-1/4	1	1	1	1	25.0	25.0	25.0
PAGE	C476-C477		C478-C479		C480-C481		C482	C483	
	STANDARD LENGTH		EXTENDED LENGTH		STANDARD LENGTH		EXTENDED LENGTH	STANDARD LENGTH	
	Y-Coating		Y-Coating		AlTiN		Y-Coating	Y-Coating	
					TitaNox-Power HPC				

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	UGMG42	UGMG43	UGMH12
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○	○	○
	2		About 0.45% C	Annealed	190	13	○	○	○
	3		About 0.45% C	Quenched & Tempered	250	25	○	○	○
	4		About 0.75% C	Annealed	270	28	○	○	○
	5		About 0.75% C	Quenched & Tempered	300	32	○	○	○
	6	Low alloy steel		Annealed	180	10	○	○	○
	7			Quenched & Tempered	275	29	○	○	○
	8			Quenched & Tempered	300	32	○	○	○
	9			Quenched & Tempered	350	38	○	○	○
	10	High alloyed steel, and tool steel		Annealed	200	15	○	○	○
	11			Quenched & Tempered	325	35	○	○	○
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎	◎	◎
	13		Martensitic	Quenched & Tempered	240	23	◎	◎	◎
	14		Austenitic		180	10	◎	◎	◎
K	15	Grey cast iron	Pearlitic / ferritic		180	10	○	○	○
	16		Pearlitic (Martensitic)		260	26	○	○	○
	17	Nodular cast iron	Ferritic		160	3	○	○	○
	18		Pearlitic		250	25	○	○	○
	19	Malleable cast iron	Ferritic		130		○	○	○
	20		Pearlitic		230	21	○	○	○
N	21	Aluminum-wrought alloy	Not Curable		60				
	22		Curable	Hardened	100				
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75				
	24		≤ 12% Si, Curable	Hardened	90				
	25		> 12% Si, Not Curable		130				
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110				
	27		CuZn, CuSnZn (Brass)		90				
	28		CuSn, lead-free copper and electrolytic copper		100				
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic						
	30		Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15	○	○	○
	32			Cured	280	30	○	○	○
	33		Ni or Co Based	Annealed	250	25	○	○	○
	34			Cured	350	38	○	○	○
	35			Cast	320	34	○	○	○
	36	Titanium Alloys	Pure Titanium		400 Rm		◎	◎	◎
	37		Alpha + Beta Alloys	Hardened	1050 Rm		◎	◎	◎
H	38	Hardened steel		Hardened	550	55			
	39			Hardened	630	60			
	40	Chilled Cast Iron		Cast	400	42			
	41	Hardened Cast Iron		Hardened	550	55			

ISO	No.	UGMG32	UGMG34	UGMH06	UGMH07	EMI42	EMI43	GMG40	GMG24, GMG26	GMG28, GMG30
P	1	○	○	○	○	○	○	○	○	○
	2	○	○	○	○	○	○	○	○	○
	3	○	○	○	○	○	○	○	○	○
	4	○	○	○	○	○	○	○	○	○
	5	○	○	○	○	○	○	○	○	○
	6	○	○	○	○	○	○	○	○	○
	7	○	○	○	○	○	○	○	○	○
	8	○	○	○	○	○	○	○	○	○
	9	○	○	○	○	○	○	○	○	○
	10	○	○	○	○	○	○	○	○	○
	11	○	○	○	○	○	○	○	○	○
M	12	◎	◎	◎	◎	◎	◎	◎	◎	◎
	13	◎	◎	◎	◎	◎	◎	◎	◎	◎
	14	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	15	○	○	○	○	○	○	○	○	○
	16	○	○	○	○	○	○	○	○	○
	17	○	○	○	○	○	○	○	○	○
	18	○	○	○	○	○	○	○	○	○
	19	○	○	○	○	○	○	○	○	○
	20	○	○	○	○	○	○	○	○	○
N	21									
	22									
	23									
	24									
	25									
	26									
	27									
	28									
	29									
	30									
S	31	○	○	○	○	◎	◎	○	○	○
	32	○	○	○	○	◎	◎	○	○	○
	33	○	○	○	○	◎	◎	○	○	○
	34	○	○	○	○	◎	◎	○	○	○
	35	○	○	○	○	◎	◎	○	○	○
	36	◎	◎	◎	◎	◎	◎	◎	◎	◎
	37	◎	◎	◎	◎	◎	◎	◎	◎	◎
H	38									
	39									
	40									
	41									

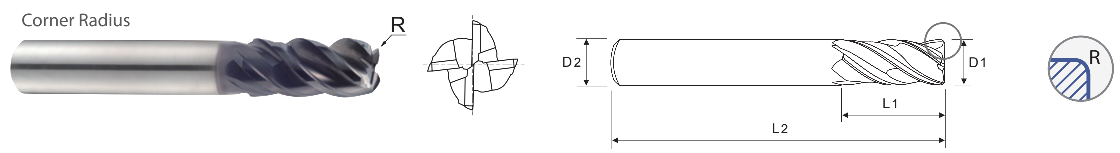
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

TitaNox-POWER END MILLS

CORNER RADIUS **UGMG42** SERIES

CARBIDE, 4-FLUTE DOUBLE CORE STANDARD LENGTH (PLAIN SHANK)

- ▶ Double core end mill has a unique flute design for excellent chip evacuation and higher rigidity.
- ▶ The double core adds stability and aids chip flow, reducing tool deflection, improving dimensional stability and workpiece accuracy.



CARBIDE | 4 | 43°/45° | PLAIN | Y Coating

p.C484-C485

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Corner Radius .010 EDP No.	.015 EDP No.	.030 EDP No.	.060 EDP No.	.090 EDP No.	.125 EDP No.	.190 EDP No.	.250 EDP No.
1/4	1/4	9/16	2-1/2	UGMG42802	UGMG42016	UGMG42901	UGMG42902	-	-	-	-
		3/4	2-1/2	-	-	UGMG42924	UGMG42925	-	-	-	-
		1	3	-	-	UGMG42S926*	UGMG42S927*	-	-	-	-
3/8	3/8	1/2	2-1/2	-	-	UGMG42K998	UGMG42K999	UGMG42K801	-	-	-
		7/8	2-1/2	-	-	UGMG42928	UGMG42929	UGMG42930	-	-	-
		13/16	2-1/2	UGMG42931	-	UGMG42905	UGMG42906	UGMG42907	-	-	-
		1	3	UGMG42932	UGMG42803	UGMG42933	UGMG42934	UGMG42935	-	-	-
		1-1/4	3	UGMG42S936*	UGMG42S804*	UGMG42S937*	UGMG42S938*	UGMG42S939*	-	-	-
1/2	1/2	1	3	UGMG42940		UGMG42908	UGMG42909	UGMG42910	UGMG42911	-	-
		1-1/4	3	UGMG42810	UGMG42811	UGMG42813	UGMG42815	UGMG42816	UGMG42817	-	-
		1-1/4	3-1/2	-	UGMG42805	UGMG42912	UGMG42941	UGMG42942	UGMG42943	-	-
		1-5/8	4	-	-	UGMG42S944*	UGMG42S945*	UGMG42S946*	UGMG42S947*	-	-
		2	4	-	-	UGMG42S806*	UGMG42S807*	UGMG42S808*	UGMG42S809*	-	-
5/8	5/8	1-1/4	3-1/2	-	-	UGMG42040	UGMG42913	UGMG42914	UGMG42915	-	-
		1-5/8	4	-	-	UGMG42948	UGMG42949	UGMG42950	UGMG42951	-	-
		2	4	-	-	UGMG42S952*	UGMG42S953*	UGMG42S954*	UGMG42S955*	-	-
		3-1/4	6	-	-	UGMG42S956*	UGMG42S957*	UGMG42S958*	UGMG42S959*	-	-
3/4	3/4	1-1/2	4	-	-	UGMG42048	UGMG42916	UGMG42917	UGMG42918	UGMG42919	UGMG42960
		1-7/8	4	-	-	UGMG42961	UGMG42962	UGMG42963	UGMG42964	UGMG42965	UGMG42966
		2-1/4	5	-	-	UGMG42967	UGMG42968	UGMG42969	UGMG42970	UGMG42971	UGMG42972
		3-1/4	6	-	-	UGMG42S973*	UGMG42S974*	UGMG42S975*	UGMG42S976*	UGMG42S977*	UGMG42S978*
1	1	2	5	-	-	UGMG42064	UGMG42920	UGMG42921	UGMG42922	UGMG42923	UGMG42979
		2-5/8	5	-	-	UGMG42980	UGMG42981	UGMG42982	UGMG42983	UGMG42984	UGMG42985
		3	6	-	-	UGMG42986	UGMG42987	UGMG42988	UGMG42989	UGMG42990	UGMG42991
		4-1/4	7	-	-	UGMG42S992*	UGMG42S993*	UGMG42S994*	UGMG42S995*	UGMG42S996*	UGMG42S997*

Mill Dia.Tolerance (in)	Shank Dia.Tolerance
0 ~ - .0012	h5 * Shank Dia.≥Ø1/2 : h6

* Feed to be reduced by approximately 50% if L.O.C. (Length Of Cut) is over 3 x D

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○

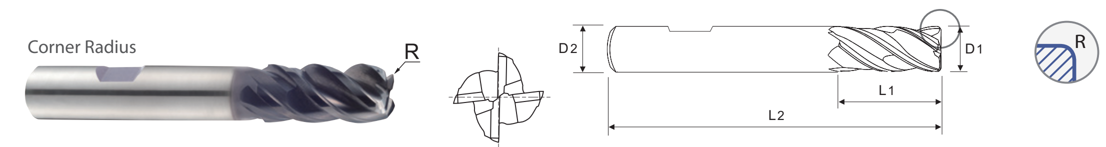
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

TitaNox-POWER END MILLS

CORNER RADIUS **UGMG43** SERIES

CARBIDE, 4-FLUTE STANDARD LENGTH (WELDON FLAT SHANK)

- ▶ Double core end mill has a unique flute design for excellent chip evacuation and higher rigidity.
- ▶ The double core adds stability and aids chip flow, reducing tool deflection, improving dimensional stability and workpiece accuracy.



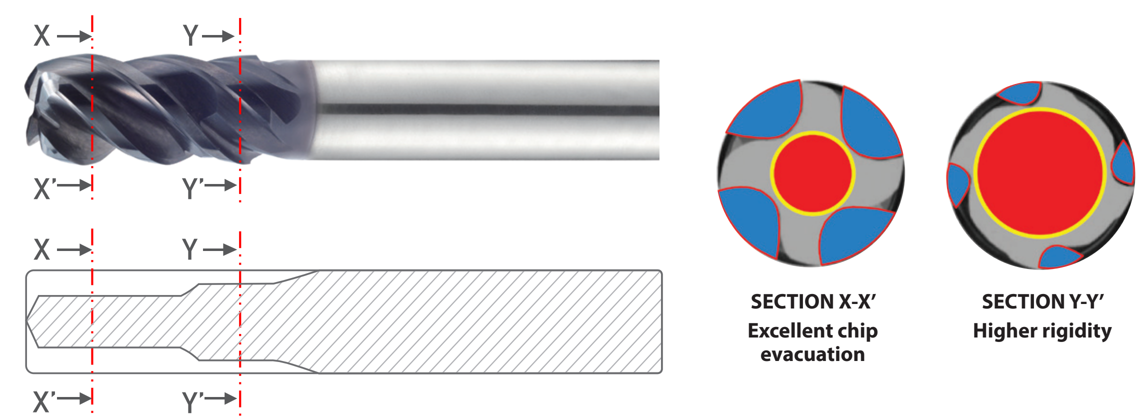
CARBIDE | 4 | 43°/45° | FLAT | Y Coating

p.C484-C485

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Corner Radius .010 EDP No.	.030 EDP No.	.060 EDP No.	.090 EDP No.	.125 EDP No.	.190 EDP No.
3/8	3/8	13/16	2-1/2	UGMG43024	UGMG43905	UGMG43906	UGMG43907	-	-
1/2	1/2	1	3	-	UGMG43908	UGMG43909	UGMG43910	UGMG43911	-
		1-1/4	3	-	UGMG43926	UGMG43927	UGMG43928	UGMG43929	-
		1-1/4	3-1/2	-	UGMG43912	UGMG43924	UGMG43930	UGMG43931	-
5/8	5/8	1-1/4	3-1/2	-	UGMG43040	UGMG43913	UGMG43914	UGMG43915	-
3/4	3/4	1-1/2	4	-	UGMG43048	UGMG43916	UGMG43917	UGMG43818	UGMG43919
1	1	2	5	-	UGMG43064	UGMG43920	UGMG43921	UGMG43922	UGMG43923

Mill Dia.Tolerance (in)	Shank Dia.Tolerance
0 ~ - .0012	h5 * Shank Dia.≥Ø1/2 : h6



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

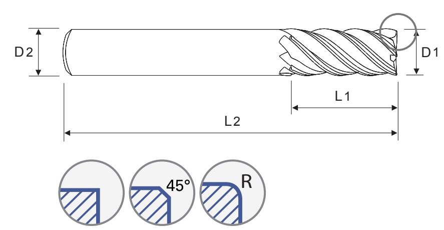
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

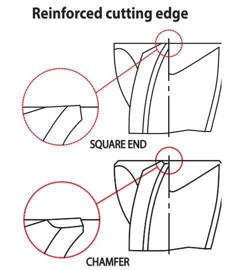
SQUARE **UGMH12** SERIES
CHAMFER **UGMG32** SERIES
CORNER RADIUS **UGMG34** SERIES

TitaNox-POWER END MILLS

CARBIDE, 5-FLUTE STANDARD LENGTH (PLAIN SHANK)

- ▶ Suitable for Titanium, Titanium Alloys, Inconel and Stainless Steels.
- ▶ Optimized flute design for chip evacuation and rigidity when machining difficult-to-cut materials.
- ▶ Special roughing profile for machining Titanium and Titanium Alloys.
- ▶ Longer tool life with special coating.





CARBIDE | 5 | 43°/44°/45° | PLAIN | C x 45° | Y Coating

p.C486

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square EDP No.	Chamfer EDP No.	Corner Radius .015 EDP No.	Corner Radius .030 EDP No.	Corner Radius .060 EDP No.	Corner Radius .090 EDP No.	Corner Radius .125 EDP No.
1/8	1/8	1/4	1-1/2	UGMH12008	UGMG32008	UGMG34008	UGMG34950	-	-	-
		3/8	1-1/2	UGMH12901	UGMG32901	UGMG34901	UGMG34951	-	-	-
		1/2	2-1/2	UGMH12S902*	-	UGMG34S952*	UGMG34S953*	-	-	-
		3/4	2-1/2	UGMH12S903*	-	UGMG34S954*	UGMG34S955*	-	-	-
3/16	3/16	5/16	2	UGMH12012	UGMG32012	UGMG34012	UGMG34956	-	-	-
		9/16	2	UGMH12904	UGMG32902	UGMG34902	UGMG34957	-	-	-
		3/4	2-1/2	UGMH12S905*	-	UGMG34S958*	UGMG34S959*	-	-	-
1/4	1/4	3/8	2	UGMH12016	UGMG32016	UGMG34960	UGMG34016	UGMG34961	-	-
		1/2	2-1/2	UGMH12906	-	UGMG34962	UGMG34963	UGMG34964	-	-
		3/4	2-1/2	UGMH12907	UGMG32903	UGMG34903	UGMG34904	UGMG34905	-	-
		1	3	UGMH12S908*	-	UGMG34S965*	UGMG34S966*	UGMG34S967*	-	-
		1-1/4	3	UGMH12S909*	-	UGMG34S968*	UGMG34S969*	UGMG34S970*	-	-
5/16	5/16	7/16	2"	UGMH12020	UGMG32020	UGMG34971	UGMG34020	UGMG34972	-	-
		13/16	2-1/2	UGMH12910	UGMG32904	UGMG34906	UGMG34907	UGMG34908	-	-
		1	3	UGMH12S911*	-	UGMG34S973*	UGMG34S974*	UGMG34S975*	-	-
3/8	3/8	1/2	2-1/2	UGMH12024	UGMG32024	UGMG34976	UGMG34024	UGMG34909	UGMG34977	-
		1	3	UGMH12912	UGMG32905	UGMG34910	UGMG34911	UGMG34912	UGMG34978	-
		1-1/4	3	UGMH12S913*	-	UGMG34S979*	UGMG34S980*	UGMG34S981*	UGMG34S982*	-
		1-1/2	4	UGMH12S914*	-	UGMG34S983*	UGMG34S984*	UGMG34S985*	UGMG34S986*	-
1/2	1/2	5/8	2-1/2	UGMH12032	UGMG32032	UGMG34032	UGMG34913	UGMG34914	UGMG34987	UGMG34988
		1	3	UGMH12915	UGMG32906	UGMG34915	UGMG34916	UGMG34917	UGMG34918	UGMG34919
		1-1/4	3-1/2	UGMH12916	UGMG32907	UGMG34920	UGMG34921	UGMG34922	UGMG34923	UGMG34924
		1-5/8	4	UGMH12S917*	-	UGMG34S989*	UGMG34S990*	UGMG34S991*	UGMG34S992*	UGMG34S993*
		2	4	UGMH12S918*	-	UGMG34S994*	UGMG34S995*	UGMG34S996*	UGMG34S997*	UGMG34S998*

Mill Dia.Tolerance (in)	Shank Dia.Tolerance
0 ~ - .0012	h5 * Shank Dia.≥Ø1/2 : h6

*Feed to be reduced by approximately 50% if L.O.C. (Length Of Cut) is over 3xD

NEXT PAGE ▶

CHAMFER KEY
UGMG32

Mill Diameter (in.)	Chamfer Size
1/8	.004
3/16	.006
1/4	.007
5/16	.007
3/8	.011
1/2	.015
5/8	.015
3/4	.019
1	.019

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○

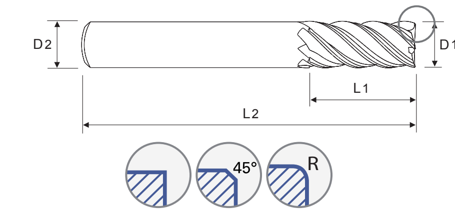
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

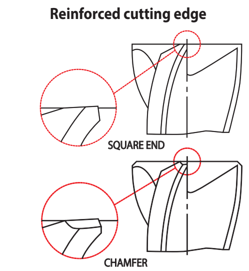
SQUARE **UGMH12** SERIES
CHAMFER **UGMG32** SERIES
CORNER RADIUS **UGMG34** SERIES

TitaNox-POWER END MILLS

CARBIDE, 5-FLUTE STANDARD LENGTH (PLAIN SHANK)

- ▶ Suitable for Titanium, Titanium Alloys, Inconel and Stainless Steels.
- ▶ Optimized flute design for chip evacuation and rigidity when machining difficult-to-cut materials.
- ▶ Special roughing profile for machining Titanium and Titanium Alloys.
- ▶ Longer tool life with special coating.





CARBIDE | 5 | 43°/44°/45° | PLAIN | C x 45° | Y Coating

p.C486

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square EDP No.	Chamfer EDP No.	Corner Radius .015 EDP No.	Corner Radius .030 EDP No.	Corner Radius .060 EDP No.	Corner Radius .090 EDP No.	Corner Radius .125 EDP No.	Corner Radius .190 EDP No.	Corner Radius .250 EDP No.
5/8	5/8	3/4	3	UGMH12040	UGMG32040	-	UGMG34040	UGMG34925	UGMG34999	UGMG34801	-	-
		1-1/4	3-1/2	UGMH12919	UGMG32908	UGMG34926	UGMG34927	UGMG34928	UGMG34929	UGMG34930	-	-
		1-5/8	4	UGMH12920	-	-	UGMG34802	UGMG34803	UGMG34804	UGMG34805	-	-
		2-1/8	4-1/2	UGMH12S921*	-	-	UGMG34S806*	UGMG34S807*	UGMG34S808*	UGMG34S809*	-	-
		2-1/2	5	UGMH12S922*	-	-	UGMG34S810*	UGMG34S811*	UGMG34S812*	UGMG34S813*	-	-
3/4	3/4	1	3-1/2	UGMH12048	UGMG32048	-	UGMG34048	UGMG34931	UGMG34932	UGMG34814	UGMG34815	UGMG34816
		1-1/2	4	UGMH12923	UGMG32909	UGMG34933	UGMG34934	UGMG34935	UGMG34936	UGMG34937	UGMG34938	UGMG34817
		1-7/8	5	UGMH12924	-	-	UGMG34818	UGMG34819	UGMG34820	UGMG34821	UGMG34822	UGMG34823
		2-1/4	5	UGMH12925	-	-	UGMG34824	UGMG34825	UGMG34826	UGMG34827	UGMG34828	UGMG34829
		2-3/4	5	UGMH12S926*	-	-	UGMG34S830*	UGMG34S831*	UGMG34S832*	UGMG34S833*	UGMG34S834*	UGMG34S835*
		3-1/4	6	UGMH12S927*	-	-	UGMG34S836*	UGMG34S837*	UGMG34S838*	UGMG34S839*	UGMG34S840*	UGMG34S841*
1	1	1-1/8	4	UGMH12064	UGMG32064	-	UGMG34064	UGMG34939	UGMG34940	UGMG34842	UGMG34843	UGMG34844
		1-1/2	4	UGMH12928	UGMG32910	UGMG34941	UGMG34942	UGMG34943	UGMG34944	UGMG34945	UGMG34946	UGMG34845
		2	5	UGMH12929	UGMG32911	-	UGMG34947	UGMG34948	UGMG34949	UGMG34846	UGMG34847	UGMG34848
		2-5/8	5	UGMH12930	-	-	UGMG34849	UGMG34850	UGMG34851	UGMG34852	UGMG34853	UGMG34854
		3-1/4	6	UGMH12S931*	-	-	UGMG34S855*	UGMG34S856*	UGMG34S857*	UGMG34S858*	UGMG34S859*	UGMG34S860*
		4-1/4	7	UGMH12S932*	-	-	UGMG34S861*	UGMG34S862*	UGMG34S863*	UGMG34S864*	UGMG34S865*	UGMG34S866*
1-1/4	1-1/4	1-1/2	4-1/2	UGMH12116	-	-		UGMG34116	UGMG34867	UGMG34868	UGMG34869	UGMG34870
		2	4-1/2	UGMH12933	-	-		UGMG34871	UGMG34872	UGMG34873	UGMG34874	UGMG34875
		2-5/8	5-1/2	UGMH12934	-	-		UGMG34876	UGMG34877	UGMG34878	UGMG34879	UGMG34880
		3-1/4	6	UGMH12935	-	-		UGMG34881	UGMG34882	UGMG34883	UGMG34884	UGMG34885
		4-1/2	7	UGMH12S936*	-	-		UGMG34S886*	UGMG34S887*	UGMG34S888*	UGMG34S889*	UGMG34S890*

Mill Dia.Tolerance (in)	Shank Dia.Tolerance
0 ~ - .0012	h5 * Shank Dia.≥Ø1/2 : h6

*Feed to be reduced by approximately 50% if L.O.C. (Length Of Cut) is over 3xD

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

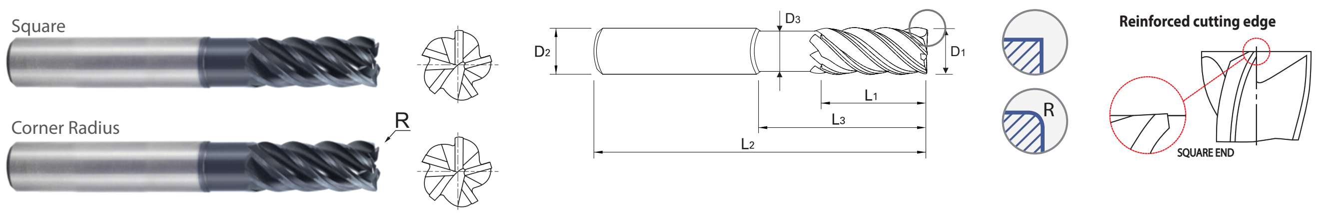
YG TitaNox-POWER END MILLS

SQUARE **UGMH06** SERIES

CORNER RADIUS **UGMH07** SERIES

CARBIDE, 5-FLUTE EXTENDED LENGTH (PLAIN SHANK)

- Suitable for Titanium, Titanium Alloys, Inconel and Stainless Steels.
- Optimized flute design for chip evacuation and rigidity when machining difficult-to-cut materials.
- Special roughing profile for machining Titanium and Titanium Alloys.
- Longer tool life with special coating.



CARBIDE | 5 | 43°/44°/45° | PLAIN | Y Coating

p.C486

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	LBS (L3)	OAL (L2)	Neck Dia (D3)	Square	Corner Radius					
							.030	.060	.090	.125	.190	.250
						EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
1/8	1/8	5/32	3/8	3	.113	UGMH06008	UGMH07008	-	-	-	-	-
		5/32	1/2	3	.113	UGMH06901	UGMH07901	-	-	-	-	-
		5/32	5/8	3	.113	UGMH06902	UGMH07902	-	-	-	-	-
3/16	3/16	7/32	1/2	3	.176	UGMH06012	UGMH07012	-	-	-	-	-
		7/32	3/4	3	.176	UGMH06903	UGMH07903	-	-	-	-	-
		7/32	1	3	.176	UGMH06904	UGMH07904	-	-	-	-	-
1/4	1/4	3/8	3/4	4	.230	UGMH06016	UGMH07016	UGMH07905	-	-	-	-
		3/8	1-1/8	4	.230	UGMH06905	UGMH07906	UGMH07907	-	-	-	-
		3/8	2-1/8	4	.230	UGMH06906	UGMH07908	UGMH07909	-	-	-	-
3/8	3/8	1/2	1-1/8	4	.344	UGMH06024	UGMH07024	UGMH07910	UGMH07911	-	-	-
		1/2	2-1/8	4	.344	UGMH06907	UGMH07912	UGMH07913	UGMH07914	-	-	-
		1/2	3-1/8	5	.344	UGMH06923	UGMH07804	UGMH07805	UGMH07806	-	-	-
		1/2	3-1/8	6	.344	UGMH06908	UGMH07915	UGMH07916	UGMH07917	-	-	-
		1/2	4-1/8	6	.344	UGMH06909	UGMH07918	UGMH07919	UGMH07920	-	-	-
1/2	1/2	5/8	1-1/2	4	.461	UGMH06032	UGMH07032	UGMH07921	UGMH07922	UGMH07923	-	-
		5/8	2-1/4	4	.461	UGMH06910	UGMH07924	UGMH07925	UGMH07926	UGMH07927	-	-
		5/8	3-3/8	5	.461	UGMH06924	UGMH07807	UGMH07808	UGMH07809	UGMH07810	-	-
		5/8	3-3/8	6	.461	UGMH06911	UGMH07928	UGMH07929	UGMH07930	UGMH07931	-	-
		5/8	4-1/8	6	.461	UGMH06912	UGMH07932	UGMH07933	UGMH07934	UGMH07935	-	-
5/8	5/8	3/4	1-5/8	4	.586	UGMH06040	UGMH07040	UGMH07936	UGMH07937	UGMH07938	-	-
		3/4	2-3/8	6	.586	UGMH06913	UGMH07939	UGMH07940	UGMH07941	UGMH07942	-	-
		3/4	3-3/8	6	.586	UGMH06914	UGMH07943	UGMH07944	UGMH07945	UGMH07946	-	-
		3/4	4-1/8	6	.586	UGMH06915	UGMH07947	UGMH07948	UGMH07949	UGMH07950	-	-

Mill Dia.Tolerance (in)	Shank Dia.Tolerance
0 ~ - .0012	h5 * Shank Dia.≥Ø1/2 : h6

Feed to be reduced by approximately 50% if L.O.C. (Length Of Cut) is over 3 x D

NEXT PAGE ▶

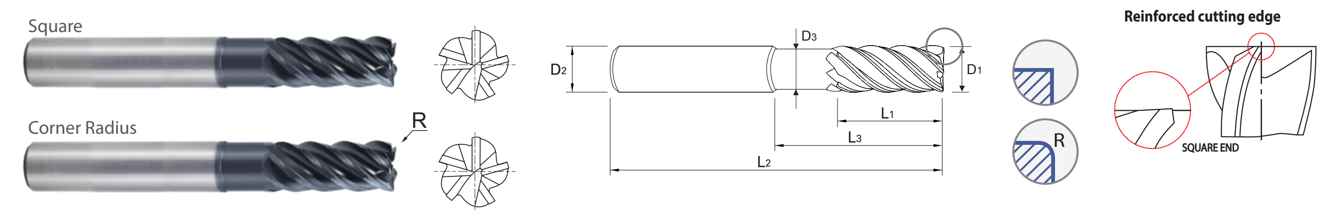
◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG TitaNox-POWER END MILLS
SQUARE UGMH06 SERIES
CORNER RADIUS UGMH07 SERIES
CARBIDE, 5-FLUTE EXTENDED LENGTH (PLAIN SHANK)
Suitable for Titanium, Titanium Alloys, Inconel and Stainless Steels.
Optimized flute design for chip evacuation and rigidity when machining difficult-to-cut materials.
Special roughing profile for machining Titanium and Titanium Alloys.
Longer tool life with special coating.



CARBIDE | 5 | 43°/44°/45° | PLAIN | Y Coating
p.C486

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	LBS (L3)	OAL (L2)	Neck Dia (D3)	Square	Corner Radius					
							.030	.060	.090	.125	.190	.250
						EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
3/4	3/4	1-1/8	2	4	.711	UGMH06048	UGMH07048	UGMH07951	UGMH07952	UGMH07953	UGMH07954	UGMH07955
		1-1/8	2-5/8	5	.711	UGMH06916	UGMH07956	UGMH07957	UGMH07958	UGMH07959	UGMH07960	UGMH07961
		1-1/8	3-1/4	6	.711	UGMH06917	UGMH07962	UGMH07963	UGMH07964	UGMH07965	UGMH07966	UGMH07967
		1-1/8	4-1/4	7	.711	UGMH06918	UGMH07968	UGMH07969	UGMH07970	UGMH07971	UGMH07972	UGMH07973
1	1	1-1/4	2-1/4	4	.961	UGMH06064	UGMH07064	UGMH07974	UGMH07975	UGMH07976	UGMH07977	UGMH07978
		1-1/4	2-5/8	5	.961	UGMH06919	UGMH07979	UGMH07980	UGMH07981	UGMH07982	UGMH07983	UGMH07984
		1-1/4	3-1/4	6	.961	UGMH06920	UGMH07985	UGMH07986	UGMH07987	UGMH07988	UGMH07989	UGMH07990
		1-1/4	4-1/4	7	.961	UGMH06921	UGMH07991	UGMH07992	UGMH07993	UGMH07994	UGMH07995	UGMH07996
		1-1/4	5-1/4	8	.961	UGMH06922	UGMH07997	UGMH07998	UGMH07999	UGMH07801	UGMH07802	UGMH07803

Mill Dia.Tolerance(in)	Shank Dia.Tolerance
0 ~ - .0012	h5 * Shank Dia.≥Ø1/2 : h6

Feed to be reduced by approximately 50% if L.O.C. (Length Of Cut) is over 3 x D

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○

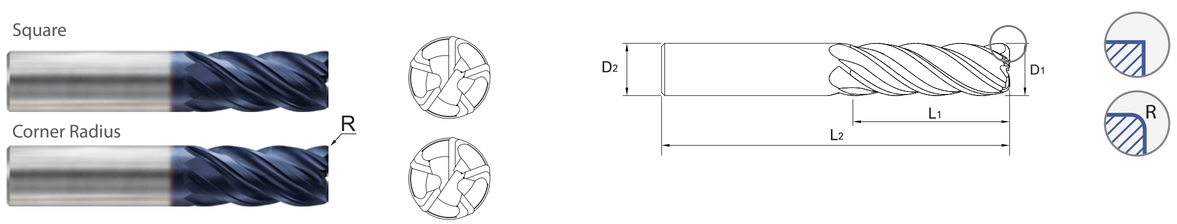
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

TitaNox-POWER END MILLS

SQUARE **EMI42 SERIES**
CORNER RADIUS **EMI43 SERIES**

CARBIDE, 5-FLUTE STANDARD LENGTH (PLAIN SHANK) - *TitaNox-Power HPC*

- New design enhances chip space in heavy cuts, while still maintaining rigidity in peel milling.
- Unequal index design for Chatter-Free cutting
- high performance milling of Stainless Steel, Titanium, and Heat-Resistant Super Alloys



CARBIDE | 5 | 38° | PLAIN | AlTiN

p.C487-C489

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square ● EDP No.	Corner Radius .015 EDP No.	.030 EDP No.	.060 EDP No.	.090 EDP No.	.125 EDP No.	.190 EDP No.	.250 EDP No.
1/4	1/4	3/8	2	EMI42016	EMI43016	EMI43901	EMI43902	-	-	-	-
		1/2	2-1/2	EMI42901	EMI43903	EMI43904	EMI43905	-	-	-	-
		3/4	2-1/2	EMI42902	EMI43906	EMI43907	EMI43908	-	-	-	-
5/16	5/16	7/16	2	EMI42020	EMI43020	EMI43909	-	-	-	-	-
		13/16	2-1/2	EMI42903	EMI43910	EMI43911	-	-	-	-	-
3/8	3/8	1/2	2-1/2	EMI42024	EMI43024	EMI43912	EMI43913	EMI43914	-	-	-
		1	3	EMI42904	EMI43915	EMI43916	EMI43917	EMI43918	-	-	-
		1-1/4	3	EMI42905	EMI43919	EMI43920	EMI43921	EMI43922	-	-	-
1/2	1/2	5/8	2-1/2	EMI42032	EMI43032	EMI43923	EMI43924	EMI43925	EMI43926	-	-
		1	3	EMI42906	EMI43927	EMI43928	EMI43929	EMI43930	EMI43931	-	-
		1-1/4	3	EMI42907	EMI43932	EMI43933	EMI43934	EMI43935	EMI43936	-	-
		1-5/8	4	EMI42908	EMI43937	EMI43938	EMI43939	EMI43940	EMI43941	-	-
5/8	5/8	3/4	3	EMI42040	-	EMI43040	EMI43942	EMI43943	EMI43944	-	-
		1-1/4	3-1/2	EMI42909	EMI43945	EMI43946	EMI43947	EMI43948	EMI43949	-	-
		1-5/8	4	EMI42910	-	EMI43950	EMI43951	EMI43952	EMI43953	-	-
		2-1/8	4-1/2	EMI42911	-	EMI43954	EMI43955	EMI43956	EMI43957	-	-
3/4	3/4	1	3-1/2	EMI42048	-	EMI43048	EMI43958	EMI43959	EMI43960	EMI43961	-
		1-1/2	4	EMI42912	EMI43962	EMI43963	EMI43964	EMI43965	EMI43966	EMI43967	EMI43968
		1-5/8	5	EMI42913	-	EMI43969	EMI43802	EMI43970	EMI43973	EMI43971	EMI43972
		2-1/4	5	EMI42914	EMI43974	EMI43975	EMI43976	EMI43977	EMI43978	EMI43979	EMI43980

Mill Dia.Tolerance (in)	Shank Dia.Tolerance
0 ~ - .0012	h5 * Shank Dia.≥Ø1/2 : h6

Feed to be reduced by approximately 50% if L.O.C. (Length Of Cut) is over 3xD

● TitaNox-Power HPC Square Tools are designed with a true sharp corner while TitaNox-Power Square tools feature a dubbed corner for extra protection

NEXT PAGE ▶

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○

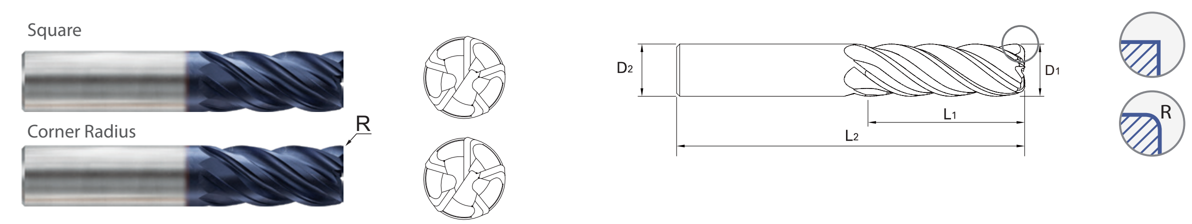
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											◎	◎	◎	◎	◎	◎	◎				

TitaNox-POWER END MILLS

SQUARE EMI42 SERIES
CORNER RADIUS EMI43 SERIES

CARBIDE, 5-FLUTE STANDARD LENGTH (PLAIN SHANK) - TitaNox-Power HPC

- New design enhances chip space in heavy cuts, while still maintaining rigidity in peel milling.
- Unequal index design for Chatter-Free cutting
- high performance milling of Stainless Steel, Titanium, and Heat-Resistant Super Alloys



CARBIDE | 5 | 38° | PLAIN | AlTiN

p.C487-C489

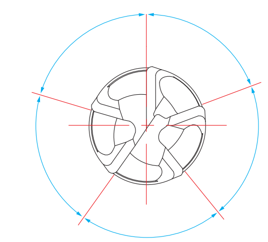
Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square ● EDP No.	Corner Radius .015 EDP No.	.030 EDP No.	.060 EDP No.	.090 EDP No.	.125 EDP No.	.190 EDP No.	.250 EDP No.
1	1	1-1/8	4	EMI42064	-	-	EMI43064	-	EMI43981	-	-
		1-1/2	4	EMI42915	EMI43982	EMI43983	EMI43984	-	EMI43985	-	-
		2	5	EMI42916	EMI43986	EMI43987	EMI43988	EMI43989	EMI43990	-	EMI43991
		2-5/8	5	EMI42917	-	EMI43992	EMI43993	-	EMI43994	-	EMI43995
		3-1/4	6	EMI42918	-	EMI43996	EMI43997	EMI43998	EMI43999	-	EMI43801

Mill Dia.Tolerance (in)	Shank Dia.Tolerance
0 ~ - .0012	h5 * Shank Dia.≥Ø1/2 : h6

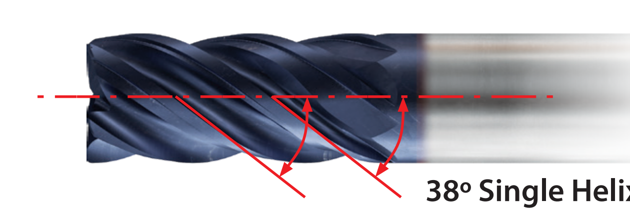
Feed to be reduced by approximately 50% if L.O.C. (Length Of Cut) is over 3xD

● TitaNox-Power HPC Square Tools are designed with a true sharp corner while TitaNox-Power Square tools feature a dubbed corner for extra protection



Unequal Index

Exclusively Designed Unique Geometry applied to Reduce Vibration and also to achieve Excellent surface finish



Core Design

YG-1's High Performance Core Geometries is designed for superior chip evacuation. It's excellent at Slotting & Heavy Profiling.

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○

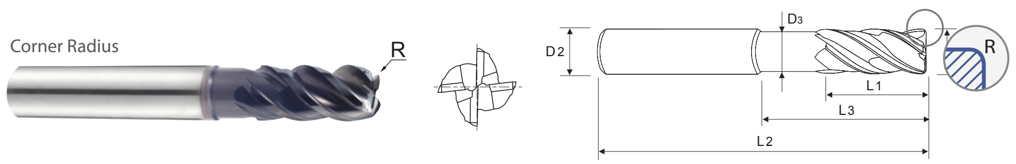
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											◎	◎	◎	◎	◎	◎	◎				

YG TitaNox-POWER END MILLS

CORNER RADIUS **GMG40 SERIES**

CARBIDE, 4-FLUTE DOUBLE CORE EXTENDED LENGTH (PLAIN SHANK)

- Double core end mill has a unique flute design for excellent chip evacuation and higher rigidity.
- The double core adds stability and aids chip flow, reducing tool deflection, improving dimensional stability and workpiece accuracy.



CARBIDE | 4 | 43°/45° | PLAIN | Y Coating

p.C490-C491

Unit : Metric

OD (D1)		SD (D2)	LOC (L1)	LBS (L3)	OAL (L2)	Neck Dia (D3)	Corner Radius 0.50	1.00	1.50	2.00	3.00	3.50	4.00
Metric	Inch						EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
6	.2362	6	13	20	57	5.5	GMG40060	GMG40901	-	-	-	-	-
8	.315	8	19	25	63	7.5	GMG40080	GMG40902	GMG40903	GMG40904	-	-	-
10	.3937	10	22	30	72	9.2	GMG40100	GMG40905	GMG40906	GMG40907	-	-	-
12	.4724	12	26	35	83	11.0	GMG40120	GMG40908	GMG40909	GMG40910	GMG40911	-	-
14	.5512	14	26	35	83	13.0	-	GMG40140	-	GMG40912	-	-	-
16	.6299	16	35	43	92	15.0	-	GMG40160	GMG40913	GMG40914	GMG40915	-	GMG40916
20	.7874	20	44	56	110	19.0	-	GMG40200	GMG40917	GMG40918	GMG40919	GMG40920	GMG40921
25	.9843	25	55	70	130	24.0	-	GMG40250	GMG40922	GMG40923	GMG40924	-	GMG40925

Mill Dia.Tolerance (mm)	Shank Dia.Tolerance
0 ~ - 0.03	h5 * Shank Dia.≥Ø12 : h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○

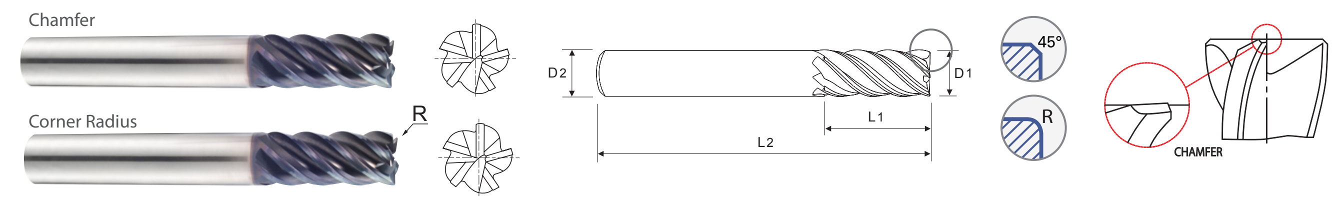
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

YG TitaNox-POWER END MILLS

CHAMFER **GMG24, GMG26 SERIES**
CORNER RADIUS **GMG28, GMG30 SERIES**

CARBIDE, 5-FLUTE EXTENDED LENGTH (PLAIN SHANK)

- Suitable for Titanium, Titanium Alloys, Inconel and Stainless Steels.
- Optimized flute design for chip evacuation and rigidity when machining difficult-to-cut materials.
- Special roughing profile for machining Titanium and Titanium Alloys.
- Longer tool life with special coating.



CARBIDE | 5 | 43°/44°/45° | C x 45° | PLAIN | Y Coating

p.C492

Unit : Metric

OD (D1)		SD (D2)	LOC (L1)	OAL (L2)	Chamfer	Corner Radius 0.30	0.50	1.00	1.50	2.00	2.50	3.00	4.00	5.00
Metric	Inch				EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
6	.2362	6	10	54	GMG24060	-	GMG28060	-	-	-	-	-	-	-
		6	13	57	GMG26060	GMG30060	GMG30901	GMG30902	-	-	-	-	-	-
8	.315	8	12	58	GMG24080	-	GMG28080	-	-	-	-	-	-	-
		8	19	63	GMG26080	-	GMG30080	GMG30903	GMG30904	GMG30905	-	-	-	-
10	.3937	10	14	66	GMG24100	-	GMG28100	-	-	-	-	-	-	-
		10	22	72	GMG26100	-	GMG30100	GMG30906	GMG30907	GMG30908	-	-	-	-
12	.4724	12	16	73	GMG24120	-	GMG28120	-	-	-	-	-	-	-
		12	26	83	GMG26120	-	GMG30120	GMG30909	GMG30910	GMG30911	GMG30912	GMG30913	-	-
16	.6299	16	22	82	GMG24160	-	-	GMG28160	-	-	-	-	-	-
		16	36	92	GMG26160	-	-	GMG30160	GMG30914	GMG30915	GMG30916	GMG30917	GMG30918	-
20	.7874	20	26	92	GMG24200	-	-	GMG28200	-	-	-	-	-	-
		20	44	104	GMG26200	-	-	GMG30200	GMG30919	GMG30920	GMG30921	GMG30922	GMG30923	GMG30924
25	.9843	25	29	100	GMG24250	-	-	GMG28250	-	-	-	-	-	-
		25	54	121	GMG26250	-	-	GMG30250	GMG30925	GMG30926	GMG30927	GMG30928	GMG30929	GMG30930

Mill Dia.Tolerance (mm)	Shank Dia.Tolerance
0 ~ - 0.03	h5 * Shank Dia.≥Ø12 : h6

CHAMFER KEY GMG24 | GMG26

Mill Diameter		Chamfer Size (mm)
Metric	Inch	
6	.2362	0.20
8	.315	0.20
10	.3937	0.30
12	.4724	0.35
16	.6299	0.40
20	.7478	0.50
25	.9843	0.50

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

YG TitaNox-POWER END MILLS

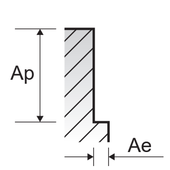
RECOMMENDED CUTTING CONDITIONS

UGMG42, UGMG43 SERIES

4 FLUTES DOUBLE CORE - Side Cutting

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-5	Non-alloy steel	0.4D	1.0D (0.7D)*	SFM (Vc)	525	525	525	525	525	525	525
					IPT (fz)	.0011	.0014	.0017	.0021	.0025	.0030	.0033
					RPM	8020	6420	5350	4010	3210	2670	2010
					IPM (FEED)	35	36	36	34	32	32	27
	6-8	Low alloy steel	0.4D	1.0D (0.7D)*	SFM (Vc)	525	525	525	525	525	525	525
					IPT (fz)	.0011	.0014	.0017	.0021	.0025	.0030	.0033
					RPM	8020	6420	5350	4010	3210	2670	2010
					IPM (FEED)	35	36	36	34	32	32	27
	9	Low alloy steel	0.4D	1.0D (0.7D)*	SFM (Vc)	490	490	490	490	490	490	490
					IPT (fz)	.0010	.0014	.0017	.0019	.0025	.0028	.0033
					RPM	7490	5990	4990	3740	2990	2500	1870
					IPM (FEED)	30	34	34	28	30	28	25
	10	High alloyed steel, and tool steel	0.4D	1.0D (0.7D)*	SFM (Vc)	490	490	490	490	490	490	490
					IPT (fz)	.0011	.0014	.0018	.0021	.0026	.0030	.0033
					RPM	7490	5990	4990	3740	2990	2500	1870
					IPM (FEED)	33	34	36	31	31	30	25
	11.1	High alloyed steel, and tool steel	0.4D	1.0D (0.7D)*	SFM (Vc)	490	490	490	490	490	490	490
					IPT (fz)	.0010	.0014	.0017	.0019	.0025	.0028	.0033
					RPM	7490	5990	4990	3740	2990	2500	1870
					IPM (FEED)	30	34	34	28	30	28	25
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	0.4D	1.0D (0.7D)	SFM (Vc)	510	510	510	510	510	510	510
					IPT (fz)	.0013	.0018	.0022	.0026	.0034	.0037	.0045
					RPM	7790	6230	5190	3900	3120	2600	1950
					IPM (FEED)	41	45	46	41	42	38	35
	14.1	Stainless steel (SUS 316, 316, X5CrNiMo 17 12 2)	0.4D	1.0D (0.7D)*	SFM (Vc)	345	345	345	345	345	345	345
					IPT (fz)	.0010	.0013	.0016	.0019	.0024	.0028	.0032
					RPM	5270	4220	3510	2640	2110	1760	1320
					IPM (FEED)	21	22	22	20	20	20	17
	14.2	Stainless steel (SUS 630, PH 15-5)	0.4D	0.6D	SFM (Vc)	145	145	145	145	145	145	145
					IPT (fz)	.0006	.0008	.0010	.0013	.0016	.0018	.0021
					RPM	2220	1770	1480	1110	890	740	550
					IPM (FEED)	5	6	6	6	6	5	5
K	15-20	Grey cast iron	0.4D	1.0D (0.7D)*	SFM (Vc)	575	575	575	575	575	575	575
					IPT (fz)	.0008	.0011	.0014	.0017	.0021	.0024	.0028
					RPM	8790	7030	5860	4390	3510	2930	2200
					IPM (FEED)	28	31	33	30	29	28	25
S	31-35	Heat Resistant Super Alloys (X12 NiCrSi 36-16, 1.4864, Inconel 718, NiCr20TiAl, 2.4631, NiCu30Al, 2.4375, G-X120Mn12, 1.3401)	0.3D	0.6D	SFM (Vc)	105	105	105	105	105	105	105
					IPT (fz)	.0008	.0010	.0013	.0015	.0019	.0022	.0026
					RPM	1600	1280	1070	800	640	530	400
					IPM (FEED)	5	5	6	5	5	5	4
	36-37	Titanium Alloys (HB 400 Rm, HB 1050Rm TiAl6V4, 3.7165)	0.4D	1.0D (0.7D)*	SFM (Vc)	230	230	230	230	230	230	230
					IPT (fz)	.0013	.0019	.0022	.0026	.0034	.0037	.0045
					RPM	3510	2810	2340	1760	1410	1170	880
					IPM (FEED)	18	21	21	18	19	17	16



NOTES:
- Maximum recommended depth shown
- Finish cuts typically require reduced feed rates and/or higher spindle speed, with radial width of 2% x D1 or less
- Feed to be reduced by approximately 50% if L.O.C.(length of cut) is over 3xD
- Reduce speed and feed recommendations for materials harder than listed
- Recommendations above are based on ideal conditions. Adjust parameters accordingly for smaller taper machining centers or less rigid conditions

* (0.7D): UGMG42K998, UGMG42K999, UGMGK801
0.7D cutting depth for slotting and side cutting applications due to short double-core length

YG TitaNox-POWER END MILLS

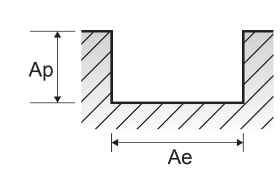
RECOMMENDED CUTTING CONDITIONS

UGMG42, UGMG43 SERIES

4 FLUTES DOUBLE CORE - Slotting

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-5	Non-alloy steel	1.0D	1.0D (0.7D)*	SFM (Vc)	410	410	410	410	410	410	410
					IPT (fz)	.0010	.0013	.0017	.0019	.0025	.0028	.0033
					RPM	6260	5010	4180	3130	2510	2090	1570
					IPM (FEED)	25	26	28	24	25	23	21
	6-8	Low alloy steel	1.0D	1.0D (0.7D)*	SFM (Vc)	410	410	410	410	410	410	410
					IPT (fz)	.0010	.0013	.0017	.0019	.0025	.0028	.0033
					RPM	6260	5010	4180	3130	2510	2090	1570
					IPM (FEED)	25	26	28	24	25	23	21
	9	Low alloy steel	1.0D	1.0D (0.7D)*	SFM (Vc)	395	395	395	395	395	395	395
					IPT (fz)	.0010	.0013	.0017	.0019	.0025	.0028	.0030
					RPM	6040	4830	4020	3020	2410	2010	1510
					IPM (FEED)	24	25	27	23	24	23	18
	10	High alloyed steel, and tool steel	1.0D	1.0D (0.7D)*	SFM (Vc)	410	410	410	410	410	410	410
					IPT (fz)	.0010	.0013	.0017	.0019	.0025	.0028	.0033
					RPM	6260	5010	4180	3130	2510	2090	1570
					IPM (FEED)	25	26	28	24	25	23	21
	11.1	High alloyed steel, and tool steel	1.0D	1.0D (0.7D)*	SFM (Vc)	395	395	395	395	395	395	395
					IPT (fz)	.0010	.0013	.0017	.0019	.0025	.0028	.0030
					RPM	6040	4830	4020	3020	2410	2010	1510
					IPM (FEED)	24	25	27	23	24	23	18
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	1.0D	1.0D (0.7D)	SFM (Vc)	410	410	410	410	410	410	410
					IPT (fz)	.0013	.0018	.0022	.0026	.0032	.0037	.0041
					RPM	6260	5010	4180	3130	2510	2090	1570
					IPM (FEED)	33	36	37	33	32	31	26
	14.1	Stainless steel (SUS 316, 316, X5CrNiMo 17 12 2)	1.0D	1.0D (0.7D)*	SFM (Vc)	280	280	280	280	280	280	280
					IPT (fz)	.0010	.0013	.0016	.0019	.0024	.0028	.0032
					RPM	4280	3420	2850	2140	1710	1430	1070
					IPM (FEED)	17	18	18	16	16	16	14
	14.2	Stainless steel (SUS 630, PH 15-5)	1.0D	0.5D	SFM (Vc)	120	120	120	120	120	120	120
					IPT (fz)	.0006	.0008	.0010	.0013	.0016	.0018	.0021
					RPM	1830	1470	1220	920	730	610	460
					IPM (FEED)	4	5	5	5	5	4	4
K	15-20	Grey cast iron	1.0D	1.0D (0.7D)*	SFM (Vc)	460	460	460	460	460	460	460
					IPT (fz)	.0008	.0011	.0014	.0017	.0021	.0024	.0026
					RPM	7030	5620	4690	3510	2810	2340	1760
					IPM (FEED)	22	25	26	24	24	22	18
S	31-35	Heat Resistant Super Alloys (X12 NiCrSi 36-16, 1.4864, Inconel 718, NiCr20TiAl, 2.4631, NiCu30Al, 2.4375, G-X120Mn12, 1.3401)	1.0D	0.4D	SFM (Vc)	80	80	80	80	80	80	80
					IPT (fz)	.0007	.0009	.0012	.0014	.0017	.0020	.0022
					RPM	1220	980	810	610	490	410	310
					IPM (FEED)	3	4	4	3	3	3	3
	36-37	Titanium Alloys (HB 400 Rm, HB 1050Rm TiAl6V4, 3.7165)	1.0D	1.0D (0.7D)*	SFM (Vc)	180	180	180	180	180	180	180
					IPT (fz)	.0013	.0018	.0022	.0026	.0034	.0037	.0041
					RPM	2750	2200	1830	1380	1100	920	690
					IPM (FEED)	14	16	16	14	15	14	11



NOTES:
- Maximum recommended depth shown
- Finish cuts typically require reduced feed rates and/or higher spindle speed, with radial width of 2% x D1 or less
- Feed to be reduced by approximately 50% if L.O.C.(length of cut) is over 3xD
- Reduce speed and feed recommendations for materials harder than listed
- Recommendations above are based on ideal conditions. Adjust parameters accordingly for smaller taper machining centers or less rigid conditions

* (0.7D): UGMG42K998, UGMG42K999, UGMGK801
0.7D cutting depth for slotting and side cutting applications due to short double-core length

YG TitaNox-POWER END MILLS

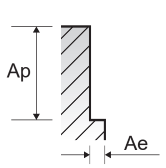
RECOMMENDED CUTTING CONDITIONS

UGMH12, UGMG32, UGMG34, UGMH06, UGMH07 SERIES

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

5 FLUTES - Side Cutting

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	3/16	1/4	5/16	3/8	1/2	9/16	5/8	11/16	3/4	1	1 1/4
P	1-5	Non-alloy steel	0.3D	1.5D	SFM (Vc)	470	470	470	470	470	470	470	470	470	470	470	470
					IPT (fz)	.0004	.0007	.0013	.0015	.0020	.0025	.0027	.0030	.0033	.0035	.0040	.0046
					RPM	14360	9570	7180	5740	4790	3590	3190	2870	2610	2390	1800	1440
					IPM (FEED)	29	33	47	43	48	45	43	43	43	42	36	33
	6-8	Low alloy steel	0.3D	1.5D	SFM (Vc)	470	470	470	470	470	470	470	470	470	470	470	470
					IPT (fz)	.0004	.0007	.0013	.0015	.0020	.0025	.0027	.0030	.0033	.0035	.0040	.0046
					RPM	14360	9570	7180	5740	4790	3590	3190	2870	2610	2390	1800	1440
					IPM (FEED)	29	33	47	43	48	45	43	43	43	42	36	33
	9		0.3D	1.5D	SFM (Vc)	330	330	330	330	330	330	330	330	330	330	330	330
					IPT (fz)	.0004	.0007	.0013	.0015	.0020	.0025	.0027	.0030	.0033	.0035	.0040	.0046
					RPM	10080	6720	5040	4030	3360	2520	2240	2020	1830	1680	1260	1010
					IPM (FEED)	20	24	33	30	34	32	30	30	30	29	25	23
	10	High alloyed steel, and tool steel	0.3D	1.5D	SFM (Vc)	470	470	470	470	470	470	470	470	470	470	470	470
					IPT (fz)	.0004	.0007	.0013	.0015	.0020	.0025	.0027	.0030	.0033	.0035	.0040	.0046
					RPM	14360	9570	7180	5740	4790	3590	3190	2870	2610	2390	1800	1440
					IPM (FEED)	29	33	47	43	48	45	43	43	43	42	36	33
	11.1		0.3D	1.5D	SFM (Vc)	330	330	330	330	330	330	330	330	330	330	330	330
					IPT (fz)	.0004	.0007	.0013	.0015	.0020	.0025	.0027	.0030	.0033	.0035	.0040	.0046
					RPM	10080	6720	5040	4030	3360	2520	2240	2020	1830	1680	1260	1010
					IPM (FEED)	20	24	33	30	34	32	30	30	30	29	25	23
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	0.3D	1.5D	SFM (Vc)	385	385	385	385	385	385	385	385	385	385	385	385
					IPT (fz)	.0003	.0004	.0009	.0010	.0012	.0018	.0020	.0021	.0022	.0024	.0028	.0033
					RPM	11760	7840	5880	4710	3920	2940	2610	2350	2140	1960	1470	1180
					IPM (FEED)	18	16	26	24	24	26	26	25	24	24	21	19
	14.1	Stainless steel (SUS 316, 316, X5CrNiMo 17 12 2)	0.3D	1.5D	SFM (Vc)	270	270	270	270	270	270	270	270	270	270	270	270
					IPT (fz)	.0004	.0005	.0012	.0013	.0015	.0025	.0026	.0027	.0028	.0030	.0035	.0041
					RPM	8250	5500	4130	3300	2750	2060	1830	1650	1500	1380	1030	830
					IPM (FEED)	17	14	25	21	21	26	24	22	21	21	18	17
	14.2	Stainless steel (SUS 630, PH 15-5)	0.3D	1.5D	SFM (Vc)	195	195	195	195	195	195	195	195	195	195	195	195
					IPT (fz)	.0004	.0005	.0012	.0013	.0015	.0025	.0026	.0027	.0028	.0030	.0035	.0041
					RPM	5960	3970	2980	2380	1990	1490	1320	1190	1080	990	740	600
					IPM (FEED)	12	10	18	15	15	19	17	16	15	15	13	12
K	15-20	Grey cast iron	0.3D	1.5D	SFM (Vc)	350	350	350	350	350	350	350	350	350	350	350	350
					IPT (fz)	.0006	.0008	.0017	.0019	.0025	.0031	.0034	.0038	.0041	.0044	.0050	.0057
					RPM	10700	7130	5350	4280	3570	2670	2380	2140	1940	1780	1340	1070
					IPM (FEED)	32	29	45	41	45	41	40	41	40	39	34	30
S	31-35	Heat Resistant Super Alloys (X12 NiCrSi 36-16, 1.4864, Inconel 718, NiCr20TiAl, 2.4631, NiCu30Al, 2.4375, G-X120Mn12, 1.3401)	0.1D	1.5D	SFM (Vc)	100	100	100	100	100	100	100	100	100	100	100	100
					IPT (fz)	.0004	.0005	.0008	.0009	.0011	.0017	.0018	.0019	.0019	.0021	.0024	.0027
					RPM	3060	2040	1530	1220	1020	760	680	610	560	510	380	310
					IPM (FEED)	5	4	5	4	4	5	5	5	4	4	4	3
	36-37	Titanium Alloys (HB 400 Rm, HB 1050Rm TiAl6V4, 3.7165)	0.2D	1.5D	SFM (Vc)	225	225	225	225	225	225	225	225	225	225	225	225
					IPT (fz)	.0004	.0004	.0011	.0011	.0013	.0022	.0023	.0024	.0025	.0027	.0031	.0036
					RPM	6880	4580	3440	2750	2290	1720	1530	1380	1250	1150	860	690
					IPM (FEED)	14	9	19	15	15	19	18	17	16	16	13	12



NOTES:
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- Feed to be reduced by approximately 50% if L.O.C.(length of cut) is over 3xD
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YG TitaNox-POWER END MILLS

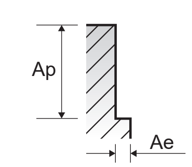
RECOMMENDED CUTTING CONDITIONS

EMI42, EMI43 SERIES

5 FLUTES (TitaNox-Power HPC)
Heavy Side Cutting

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 3/16	1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-5	Non-alloy steel	0.5D	1.5D	SFM (Vc)	500	500	500	500	500	500	500	500
					IPT (fz)	.0013	.0016	.0018	.0022	.0031	.0037	.0043	.0049
					RPM	10190	7640	6110	5090	3820	3060	2550	1910
					IPM (FEED)	66	61	55	56	59	57	55	47
	6-8	Low alloy steel	0.5D	1.5D	SFM (Vc)	500	500	500	500	500	500	500	500
					IPT (fz)	.0013	.0016	.0018	.0022	.0031	.0037	.0043	.0049
					RPM	10190	7640	6110	5090	3820	3060	2550	1910
					IPM (FEED)	66	61	55	56	59	57	55	47
	9		0.5D	1.5D	SFM (Vc)	400	400	400	400	400	400	400	400
					IPT (fz)	.0008	.0012	.0014	.0017	.0024	.0028	.0033	.0038
					RPM	8150	6110	4890	4070	3060	2440	2040	1530
					IPM (FEED)	33	37	34	35	37	34	34	29
	10	High alloyed steel, and tool steel	0.5D	1.5D	SFM (Vc)	450	450	450	450	450	450	450	450
					IPT (fz)	.0013	.0016	.0018	.0022	.0031	.0037	.0043	.0049
					RPM	9170	6880	5500	4580	3440	2750	2290	1720
					IPM (FEED)	60	55	50	50	53	51	49	42
	11.1		0.5D	1.5D	SFM (Vc)	400	400	400	400	400	400	400	400
					IPT (fz)	.0008	.0012	.0014	.0017	.0024	.0028	.0033	.0038
					RPM	8150	6110	4890	4070	3060	2440	2040	1530
					IPM (FEED)	33	37	34	35	37	34	34	29
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	0.5D	1.5D	SFM (Vc)	250	250	250	250	250	250	250	250
					IPT (fz)	.0007	.0010	.0012	.0015	.0021	.0024	.0028	.0032
					RPM	5090	3820	3060	2550	1910	1530	1270	950
					IPM (FEED)	18	19	18	19	20	18	18	15
	14.1	Stainless steel (SUS 316, 316, X5CrNiMo 17 12 2)	0.5D	1.5D	SFM (Vc)	300	300	300	300	300	300	300	300
					IPT (fz)	.0008	.0013	.0014	.0018	.0026	.0028	.0031	.0036
					RPM	6110	4580	3670	3060	2290	1830	1530	1150
					IPM (FEED)	24	30	26	28	30	26	24	21
	14.2	Stainless steel (SUS 630, PH 15-5)	0.5D	1.5D	SFM (Vc)	200	200	200	200	200	200	200	200
					IPT (fz)	.0007	.0010	.0011	.0014	.0021	.0022	.0025	.0029
					RPM	4070	3060	2440	2040	1530	1220	1020	760
					IPM (FEED)	14	15	13	14	16	13	13	11
K	15-20	Grey cast iron	0.5D	1.5D	SFM (Vc)	370	370	370	370	370	370	370	370
					IPT (fz)	.0010	.0014	.0016	.0019	.0026	.0032	.0037	.0042
					RPM	7540	5650	4520	3770	2830	2260	1880	1410
					IPM (FEED)	38	40	36	36	37	36	35	30
S	31-35	Heat Resistant Super Alloys (X12 NiCrSi 36-16, 1.4864, Inconel 718, NiCr20TiAl, 2.4631, NiCu30Al, 2.4375, G-X120Mn12, 1.3401)	0.2D	1.5D	SFM (Vc)	90	90	90	90	90	90	90	90
					IPT (fz)	.0006	.0010	.0012	.0014	.0019	.0021	.0023	.0027
					RPM	1830	1380	1100	920	690	550	460	340
					IPM (FEED)	5	7	7	6	7	6	5	5
	36-37	Titanium Alloys (HB 400 Rm, HB 1050Rm TiAl6V4, 3.7165)	0.5D	1.5D	SFM (Vc)	160	160	160	160	160	160	160	160
					IPT (fz)	.0006	.0010	.0012	.0014	.0019	.0021	.0023	.0027
					RPM	3260	2440	1960	1630	1220	980	810	610
					IPM (FEED)	10	12	12	11	12	10	9	8



NOTES:
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CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

TitaNox-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

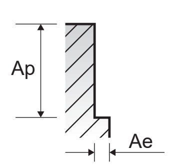
EMI42, EMI43 SERIES

5 FLUTES (TitaNox-Power HPC)

Side Cutting (Peel Milling)

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 3/16	1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-5	Non-alloy steel	0.08D	2.0D	SFM (Vc)	650	650	650	650	650	650	650	650
					IPT (fz)	.0018	.0022	.0026	.0031	.0043	.0051	.0060	.0068
					RPM	13240	9930	7950	6620	4970	3970	3310	2480
					IPM (FEED)	119	109	103	103	107	101	99	84
	6-8	Low alloy steel	0.08D	2.0D	SFM (Vc)	650	650	650	650	650	650	650	650
					IPT (fz)	.0018	.0022	.0026	.0031	.0043	.0051	.0060	.0068
					RPM	13240	9930	7950	6620	4970	3970	3310	2480
					IPM (FEED)	119	109	103	103	107	101	99	84
	9	Low alloy steel	0.08D	2.0D	SFM (Vc)	650	650	650	650	650	650	650	650
					IPT (fz)	.0011	.0017	.0020	.0024	.0033	.0040	.0046	.0053
					RPM	13240	9930	7950	6620	4970	3970	3310	2480
					IPM (FEED)	73	84	80	79	82	79	76	66
	10	High alloyed steel, and tool steel	0.08D	2.0D	SFM (Vc)	580	580	580	580	580	580	580	580
					IPT (fz)	.0018	.0022	.0026	.0031	.0043	.0051	.0060	.0068
					RPM	11820	8860	7090	5910	4430	3540	2950	2220
					IPM (FEED)	106	97	92	92	95	90	89	75
	11.1	High alloyed steel, and tool steel	0.08D	2.0D	SFM (Vc)	550	550	550	550	550	550	550	550
					IPT (fz)	.0011	.0017	.0020	.0024	.0033	.0040	.0046	.0053
					RPM	11200	8400	6720	5600	4200	3360	2800	2100
					IPM (FEED)	62	71	67	67	69	67	64	56
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	0.06D	2.0D	SFM (Vc)	350	350	350	350	350	350	350	350
					IPT (fz)	.0010	.0015	.0016	.0021	.0029	.0034	.0039	.0045
					RPM	7130	5350	4280	3570	2670	2140	1780	1340
					IPM (FEED)	36	40	34	37	39	36	35	30
	14.1	Stainless steel (SUS 316, 316, X5CrNiMo 17 12 2)	0.06D	2.0D	SFM (Vc)	425	425	425	425	425	425	425	425
					IPT (fz)	.0011	.0018	.0019	.0025	.0036	.0039	.0044	.0051
					RPM	8660	6490	5190	4330	3250	2600	2160	1620
					IPM (FEED)	48	58	49	54	59	51	48	41
	14.2	Stainless steel (SUS 630, PH 15-5)	0.06D	2.0D	SFM (Vc)	300	300	300	300	300	300	300	300
					IPT (fz)	.0010	.0014	.0015	.0020	.0029	.0031	.0035	.0041
					RPM	6110	4580	3670	3060	2290	1830	1530	1150
					IPM (FEED)	31	32	28	31	33	28	27	24
K	15-20	Grey cast iron	0.07D	2.0D	SFM (Vc)	550	550	550	550	550	550	550	550
					IPT (fz)	.0014	.0020	.0022	.0027	.0037	.0045	.0052	.0059
					RPM	11200	8400	6720	5600	4200	3360	2800	2100
					IPM (FEED)	78	84	74	76	78	76	73	62
S	31-35	Heat Resistant Super Alloys (X12 NiCrSi 36-16, 1.4864, Inconel 718, NiCr20TiAl, 2.4631, NiCu30Al, 2.4375, G-X120Mn12, 1.3401)	0.04D	2.0D	SFM (Vc)	120	120	120	120	120	120	120	120
					IPT (fz)	.0006	.0010	.0012	.0014	.0019	.0021	.0023	.0027
					RPM	2440	1830	1470	1220	920	730	610	460
					IPM (FEED)	7	9	9	9	9	8	7	6
	36-37	Titanium Alloys (HB 400 Rm, HB 1050Rm TiAl6V4, 3.7165)	0.05D	2.0D	SFM (Vc)	300	300	300	300	300	300	300	300
					IPT (fz)	.0006	.0010	.0012	.0014	.0019	.0021	.0023	.0027
					RPM	6110	4580	3670	3060	2290	1830	1530	1150
					IPM (FEED)	18	23	22	21	22	19	18	16



NOTES:
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CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

TitaNox-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

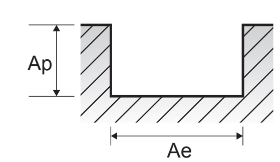
EMI42, EMI43 SERIES

5 FLUTES (TitaNox-Power HPC)

Slotting

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 3/16	1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-5	Non-alloy steel	1.0D	1.0D	SFM (Vc)	275	275	275	275	275	275	275	275
					IPT (fz)	.0010	.0013	.0015	.0018	.0024	.0029	.0034	.0039
					RPM	5600	4200	3360	2800	2100	1680	1400	1050
					IPM (FEED)	28	27	25	25	25	24	24	20
	6-8	Low alloy steel	1.0D	1.0D	SFM (Vc)	275	275	275	275	275	275	275	275
					IPT (fz)	.0010	.0013	.0015	.0018	.0024	.0029	.0034	.0039
					RPM	5600	4200	3360	2800	2100	1680	1400	1050
					IPM (FEED)	28	27	25	25	25	24	24	20
	9	Low alloy steel	1.0D	1.0D	SFM (Vc)	275	275	275	275	275	275	275	275
					IPT (fz)	.0006	.0010	.0011	.0014	.0019	.0023	.0026	.0030
					RPM	5600	4200	3360	2800	2100	1680	1400	1050
					IPM (FEED)	17	21	18	20	20	19	18	16
	10	High alloyed steel, and tool steel	1.0D	0.75D	SFM (Vc)	230	230	230	230	230	230	230	230
					IPT (fz)	.0010	.0013	.0015	.0018	.0024	.0029	.0034	.0039
					RPM	4690	3510	2810	2340	1760	1410	1170	880
					IPM (FEED)	23	23	21	21	21	20	20	17
	11.1	High alloyed steel, and tool steel	1.0D	0.75D	SFM (Vc)	250	250	250	250	250	250	250	250
					IPT (fz)	.0006	.0010	.0011	.0014	.0019	.0023	.0026	.0030
					RPM	5090	3820	3060	2550	1910	1530	1270	950
					IPM (FEED)	15	19	17	18	18	18	17	14
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	1.0D	0.5D	SFM (Vc)	225	225	225	225	225	225	225	225
					IPT (fz)	.0006	.0008	.0009	.0012	.0017	.0019	.0022	.0026
					RPM	4580	3440	2750	2290	1720	1380	1150	860
					IPM (FEED)	14	14	12	14	15	13	13	11
	14.1	Stainless steel (SUS 316, 316, X5CrNiMo 17 12 2)	1.0D	0.5D	SFM (Vc)	250	250	250	250	250	250	250	250
					IPT (fz)	.0006	.0010	.0011	.0014	.0021	.0023	.0025	.0029
					RPM	5090	3820	3060	2550	1910	1530	1270	950
					IPM (FEED)	15	19	17	18	20	18	16	14
	14.2	Stainless steel (SUS 630, PH 15-5)	1.0D	0.5D	SFM (Vc)	200	200	200	200	200	200	200	200
					IPT (fz)	.0006	.0008	.0009	.0011	.0017	.0018	.0020	.0023
					RPM	4070	3060	2440	2040	1530	1220	1020	760
					IPM (FEED)	12	12	11	11	13	11	10	9
K	15-20	Grey cast iron	1.0D	1.0D	SFM (Vc)	260	260	260	260	260	260	260	260
					IPT (fz)	.0008	.0011	.0013	.0015	.0021	.0026	.0030	.0034
					RPM	5300	3970	3180	2650	1990	1590	1320	990
					IPM (FEED)	21	22	21	20	21	21	20	17
S	31-35	Heat Resistant Super Alloys (X12 NiCrSi 36-16, 1.4864, Inconel 718, NiCr20TiAl, 2.4631, NiCu30Al, 2.4375, G-X120Mn12, 1.3401)	1.0D	0.4D	SFM (Vc)	64	64	64	64	64	64	64	64
					IPT (fz)	.0005	.0008	.0010	.0011	.0015	.0017	.0019	.0021
					RPM	1300	980	780	650	490	390	330	240
					IPM (FEED)	3	4	4	4	4	3	3	3
	36-37	Titanium Alloys (HB 400 Rm, HB 1050Rm TiAl6V4, 3.7165)	1.0D	0.5D	SFM (Vc)	160	160	160	160	160	160	160	160
					IPT (fz)	.0005	.0008	.0010	.0011	.0015	.0017	.0019	.0021
					RPM	3260	2440	1960	1630	1220	980	810	610
					IPM (FEED)	8	10	10	9	9	8	8	6



NOTES:
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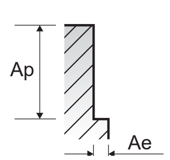
YG TitaNox-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

GMG40 SERIES — 4 FLUTES DOUBLE CORE - Side Cutting

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6.0	8.0	10.0	12.0	14.0	16.0	20.0	25.0
P	1-4	Non-alloy steel	0.4D	1.0D	SFM(Vc)	525	525	525	525	525	525	525	525
					IPT(fz)	.0011	.0014	.0017	.0021	.0023	.0025	.0030	.0033
					RPM	8490	6370	5090	4240	3640	3180	2550	2040
					IPM(FEED)	37	36	35	36	33	32	31	27
	5		0.4D	1.0D	SFM(Vc)	490	490	490	490	490	490	490	490
					IPT(fz)	.0010	.0014	.0017	.0019	.0022	.0025	.0028	.0033
					RPM	7920	5940	4750	3960	3400	2970	2380	1900
					IPM(FEED)	32	33	32	30	30	30	27	25
	6-7	Low alloy steel	0.4D	1.0D	SFM(Vc)	525	525	525	525	525	525	525	525
					IPT(fz)	.0011	.0014	.0017	.0021	.0023	.0025	.0030	.0033
					RPM	8490	6370	5090	4240	3640	3180	2550	2040
					IPM(FEED)	37	36	35	36	33	32	31	27
	8-9		0.4D	1.0D	SFM(Vc)	490	490	490	490	490	490	490	490
					IPT(fz)	.0010	.0014	.0017	.0019	.0022	.0025	.0028	.0033
					RPM	7920	5940	4750	3960	3400	2970	2380	1900
					IPM(FEED)	32	33	32	30	30	30	27	25
	10-11.1	High alloyed steel, and tool steel	0.4D	1.0D	SFM(Vc)	490	490	490	490	490	490	490	490
					IPT(fz)	.0011	.0014	.0018	.0021	.0024	.0026	.0030	.0033
					RPM	7920	5940	4750	3960	3400	2970	2380	1900
					IPM(FEED)	35	33	34	33	33	31	29	25
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	0.4D	1.0D	SFM(Vc)	510	510	510	510	510	510	510	510
					IPT(fz)	.0013	.0018	.0022	.0026	.0030	.0034	.0037	.0045
					RPM	8250	6190	4950	4120	3530	3090	2470	1980
					IPM(FEED)	43	45	44	43	42	42	37	36
	14.1	Stainless steel (SUS 316, 316, X5CrNiMo 17 12 2)	0.4D	1.0D	SFM(Vc)	345	345	345	345	345	345	345	345
					IPT(fz)	.0010	.0013	.0016	.0019	.0022	.0024	.0028	.0032
					RPM	5580	4180	3350	2790	2390	2090	1670	1340
					IPM(FEED)	22	22	21	21	21	20	19	17
	14.2	Stainless steel (SUS 630, PH 15-5)	0.4D	0.6D	SFM(Vc)	145	145	145	145	145	145	145	145
					IPT(fz)	.0006	.0008	.0010	.0013	.0014	.0016	.0018	.0021
					RPM	2340	1760	1410	1170	1000	880	700	560
					IPM(FEED)	6	6	6	6	6	6	5	5
K	15-20	Grey cast iron	0.4D	1.0D	SFM(Vc)	575	575	575	575	575	575	575	575
					IPT(fz)	.0008	.0011	.0014	.0017	.0019	.0021	.0024	.0028
					RPM	9300	6970	5580	4650	3980	3490	2790	2230
					IPM(FEED)	30	31	31	32	30	29	27	25
S	31-35	Heat Resistant Super Alloys (X12 NiCrSi 36-16, 1.4864, Inconel 718, NiCr20TiAl, 2.4631, NiCu30Al, 2.4375, G-X120Mn12, 1.3401)	0.3D	0.6D	SFM(Vc)	105	105	105	105	105	105	105	105
					IPT(fz)	.0008	.0010	.0013	.0015	.0017	.0019	.0022	.0026
					RPM	1700	1270	1020	850	730	640	510	410
					IPM(FEED)	5	5	5	5	5	5	4	4
	36-37	Titanium Alloys (HB 400 Rm, HB 1050Rm TiAl6V4, 3.7165)	0.3D	0.6D	SFM(Vc)	230	230	230	230	230	230	230	230
					IPT(fz)	.0013	.0019	.0022	.0026	.0030	.0034	.0037	.0045
					RPM	3720	2790	2230	1860	1590	1390	1120	890
					IPM(FEED)	19	21	20	19	19	19	17	16



NOTES:
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CARBIDE
HSS
CBN END MILLS
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i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
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ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

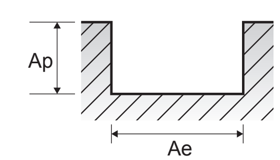
YG TitaNox-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

GMG40 SERIES — 4 FLUTES DOUBLE CORE - Slotting

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6.0	8.0	10.0	12.0	14.0	16.0	20.0	25.0
P	1-4	Non-alloy steel	1.0D	1.0D	SFM(Vc)	410	410	410	410	410	410	410	410
					IPT(fz)	.0010	.0013	.0017	.0019	.0022	.0025	.0028	.0033
					RPM	6630	4970	3980	3310	2840	2490	1990	1590
					IPM(FEED)	27	26	27	25	25	25	22	21
	5		1.0D	1.0D	SFM(Vc)	395	395	395	395	395	395	395	395
					IPT(fz)	.0010	.0013	.0017	.0019	.0022	.0025	.0028	.0030
					RPM	6390	4790	3830	3190	2740	2400	1920	1530
					IPM(FEED)	26	25	26	24	24	24	22	18
	6-7	Low alloy steel	1.0D	1.0D	SFM(Vc)	410	410	410	410	410	410	410	410
					IPT(fz)	.0010	.0013	.0017	.0019	.0022	.0025	.0028	.0033
					RPM	6630	4970	3980	3310	2840	2490	1990	1590
					IPM(FEED)	27	26	27	25	25	25	22	21
	8-9		1.0D	1.0D	SFM(Vc)	395	395	395	395	395	395	395	395
					IPT(fz)	.0010	.0013	.0017	.0019	.0022	.0025	.0028	.0030
					RPM	6390	4790	3830	3190	2740	2400	1920	1530
					IPM(FEED)	26	25	26	24	24	24	22	18
	10-11.1	High alloyed steel, and tool steel	1.0D	1.0D	SFM(Vc)	395	395	395	395	395	395	395	395
					IPT(fz)	.0011	.0014	.0017	.0021	.0023	.0025	.0030	.0033
					RPM	6390	4790	3830	3190	2740	2400	1920	1530
					IPM(FEED)	28	27	26	27	25	24	23	20
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	1.0D	1.0D	SFM(Vc)	410	410	410	410	410	410	410	410
					IPT(fz)	.0013	.0018	.0022	.0026	.0029	.0032	.0037	.0041
					RPM	6630	4970	3980	3310	2840	2490	1990	1590
					IPM(FEED)	34	36	35	34	33	32	29	26
	14.1	Stainless steel (SUS 316, 316, X5CrNiMo 17 12 2)	1.0D	1.0D	SFM(Vc)	280	280	280	280	280	280	280	280
					IPT(fz)	.0010	.0013	.0016	.0019	.0022	.0024	.0028	.0032
					RPM	4530	3400	2720	2260	1940	1700	1360	1090
					IPM(FEED)	18	18	17	17	17	16	15	14
	14.2	Stainless steel (SUS 630, PH 15-5)	1.0D	0.5D	SFM(Vc)	120	120	120	120	120	120	120	120
					IPT(fz)	.0006	.0008	.0010	.0013	.0014	.0016	.0018	.0021
					RPM	1940	1460	1160	970	830	730	580	470
					IPM(FEED)	5	5	5	5	5	5	4	4
K	15-20	Grey cast iron	1.0D	1.0D	SFM(Vc)	460	460	460	460	460	460	460	460
					IPT(fz)	.0008	.0011	.0014	.0017	.0019	.0021	.0024	.0026
					RPM	7440	5580	4460	3720	3190	2790	2230	1790
					IPM(FEED)	24	25	25	25	24	23	21	19
S	31-35	Heat Resistant Super Alloys (X12 NiCrSi 36-16, 1.4864, Inconel 718, NiCr20TiAl, 2.4631, NiCu30Al, 2.4375, G-X120Mn12, 1.3401)	1.0D	0.4D	SFM(Vc)	80	80	80	80	80	80	80	80
					IPT(fz)	.0007	.0009	.0012	.0014	.0016	.0017	.0020	.0022
					RPM	1290	970	780	650	550	490	390	310
					IPM(FEED)	4	3	4	4	4	3	3	3
	36-37	Titanium Alloys (HB 400 Rm, HB 1050Rm TiAl6V4, 3.7165)	1.0D	1.0D	SFM(Vc)	180	180	180	180	180	180	180	180
					IPT(fz)	.0013	.0018	.0022	.0026	.0030	.0034	.0037	.0041
					RPM	2910	2180	1750	1460	1250	1090	870	700
					IPM(FEED)	15	16	15	15	15	15	13	11



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TitaNox-POWER END MILLS

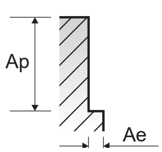
RECOMMENDED CUTTING CONDITIONS

GMG24, GMG26, GMG28, GMG30 SERIES

5 FLUTES - Side Cutting

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	25.0
P	1-4	Non-alloy steel	0.3D	1.5D	SFM (Vc)	475	475	475	475	475	475	475	475	475
					IPT (fz)	.0013	.0015	.0020	.0025	.0027	.0030	.0033	.0035	.0040
					RPM	7680	5760	4610	3840	3290	2880	2560	2300	1840
					IPM (FEED)	50	43	46	48	44	43	42	40	37
	5		0.3D	1.5D	SFM (Vc)	330	330	330	330	330	330	330	330	330
					IPT (fz)	.0013	.0015	.0020	.0025	.0027	.0030	.0033	.0035	.0040
					RPM	5340	4000	3200	2670	2290	2000	1780	1600	1280
					IPM (FEED)	35	30	32	33	31	30	29	28	26
	6-7	Low alloy steel	0.3D	1.5D	SFM (Vc)	475	475	475	475	475	475	475	475	475
					IPT (fz)	.0013	.0015	.0020	.0025	.0027	.0030	.0033	.0035	.0040
					RPM	7680	5760	4610	3840	3290	2880	2560	2300	1840
					IPM (FEED)	50	43	46	48	44	43	42	40	37
	8-9		0.3D	1.5D	SFM (Vc)	330	330	330	330	330	330	330	330	330
					IPT (fz)	.0013	.0015	.0020	.0025	.0027	.0030	.0033	.0035	.0040
					RPM	5340	4000	3200	2670	2290	2000	1780	1600	1280
					IPM (FEED)	35	30	32	33	31	30	29	28	26
	10-11.1	High alloyed steel, and tool steel	0.3D	1.5D	SFM (Vc)	200	200	200	200	200	200	200	200	200
					IPT (fz)	.0009	.0011	.0014	.0017	.0019	.0021	.0023	.0024	.0028
					RPM	3230	2430	1940	1620	1390	1210	1080	970	780
					IPM (FEED)	15	13	14	14	13	13	12	12	11
M	12-13	Stainless steel (SUS 420, X40Cr13, 420)	0.3D	1.5D	SFM (Vc)	385	385	385	385	385	385	385	385	385
					IPT (fz)	.0009	.0010	.0012	.0018	.0020	.0021	.0022	.0024	.0028
					RPM	6230	4670	3740	3110	2670	2330	2080	1870	1490
					IPM (FEED)	28	23	22	28	27	24	23	22	21
	14.1	Stainless steel (SUS 316, 316, X5CrNiMo 17 12 2)	0.3D	1.5D	SFM (Vc)	270	270	270	270	270	270	270	270	270
					IPT (fz)	.0012	.0013	.0015	.0025	.0026	.0027	.0028	.0030	.0035
					RPM	4370	3270	2620	2180	1870	1640	1460	1310	1050
					IPM (FEED)	26	21	20	27	24	22	20	20	18
	14.2	Stainless steel (SUS 630, PH 15-5)	0.3D	1.5D	SFM (Vc)	195	195	195	195	195	195	195	195	195
					IPT (fz)	.0012	.0013	.0015	.0025	.0026	.0027	.0028	.0030	.0035
					RPM	3150	2360	1890	1580	1350	1180	1050	950	760
					IPM (FEED)	19	15	14	20	18	16	15	14	13
K	15-20	Grey cast iron	0.3D	1.5D	SFM (Vc)	350	350	350	350	350	350	350	350	350
					IPT (fz)	.0017	.0019	.0025	.0031	.0034	.0038	.0041	.0044	.0050
					RPM	5660	4240	3400	2830	2430	2120	1890	1700	1360
					IPM (FEED)	48	40	43	44	41	40	39	37	34
S	31-35	Heat Resistant Super Alloys (X12 NiCrSi 36-16, 1.4864, Inconel 718, NiCr20TiAl, 2.4631, NiCu30Al, 2.4375, G-X120Mn12, 1.3401)	0.1D	1.5D	SFM (Vc)	100	100	100	100	100	100	100	100	100
					IPT (fz)	.0008	.0009	.0011	.0017	.0018	.0019	.0019	.0021	.0024
					RPM	1620	1210	970	810	690	610	540	490	390
					IPM (FEED)	6	5	5	7	6	6	5	5	5
	36-37	Titanium Alloys (HB 400 Rm, HB 1050Rm TiAl6V4, 3.7165)	0.3D	1.5D	SFM (Vc)	225	225	225	225	225	225	225	225	225
					IPT (fz)	.0011	.0011	.0013	.0022	.0023	.0024	.0025	.0027	.0031
					RPM	3640	2730	2180	1820	1560	1360	1210	1090	870
					IPM (FEED)	20	15	14	20	18	16	15	15	13



NOTES:
- Maximum recommended depth shown
- Finish cuts typically require reduced feed rates and/or higher spindle speed, with radial width of 2% x D1 or less
- Feed to be reduced by approximately 50% if L.O.C.(length of cut) is over 3xD
- Reduce speed and feed recommendations for materials harder than listed
- Recommendations above are based on ideal conditions. Adjust parameters accordingly for smaller taper machining centers or less rigid conditions

Being the best through innovation

SOLID CARBIDE

JET-POWER END MILLS

- Exotic materials like Stainless Steels, Nickel alloys and Titanium

SELECTION GUIDE

MILLING TOOLS

SOLID CARBIDE JET-POWER END MILLS

Exotic materials like Stainless Steels
Nickel alloys and Titanium

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p. C511

	Inch			
SERIES	EH108	EE882	E5075 E5105	E5074 E5104
FLUTE	3&4	6 (Weldon)	3	3
HELIX ANGLE	50°	35°	35°	35°
CUTTING EDGE SHAPE	SQUARE	SQUARE	CORNER RADIUS	CORNER RADIUS
SIZE MIN	D1/8	D3/4	D1/8	D1/8
SIZE MAX	D1	D1-1/2	D1	D1
PAGE	C496	C497	C498	C499
	REGULAR LENGTH	REGULAR LENGTH	STUB LENGTH HOSS	REGULAR LENGTH HOSS
	TiAlN	TiAlN	Uncoated / TiN / TiCN / TYLON F / TYLON E	Uncoated / TiN / TiCN / TYLON F / TYLON E
	U.S.A Stock	Call for Availability	U.S.A Stock	U.S.A Stock
		HSS-PM		

	Inch				Metric						
SERIES	EH094	EH095	EH969	EH970	EH830	EE515	EH852	EH831	EH917	EH919	EH921
FLUTE	3~5	3~5	3~6	4~6	3&4	4&6(Weldon)	3~5	3~5	4~6	3~6	4~6
HELIX ANGLE	30°	30°	45°	45°	50°	30°	30°	30°	45°	45°	45°
CUTTING EDGE SHAPE	ROUGHING	ROUGHING	ROUGHING	ROUGHING	SQUARE	SQUARE	ROUGHING	ROUGHING	ROUGHING	ROUGHING	ROUGHING
SIZE MIN	D1/4	D1/4	D3/16	D1/4	D6.0	D3.0	D6.0	D6.0	D6.0	D4.0	D6.0
SIZE MAX	D1	D1	D1	D3/4	D25.0	D25.0	D25.0	D25.0	D20.0	D25.0	D20.0
PAGE	C500	C501	C502	C503	C504	C505	C506	C507	C508	C509	C510
	STUB LENGTH FINE PITCH	LONG LENGTH FINE PITCH	LONG LENGTH FINE PITCH	LONG REACH FINE PITCH	LONG LENGTH	SHORT LENGTH	STUB LENGTH FINE PITCH	LONG LENGTH FINE PITCH	FINE PITCH	LONG LENGTH FINE PITCH	LONG REACH FINE PITCH
	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN
	U.S.A Stock				Call for Availability						
						HSS-PM					

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	EH108	EE882	E5075 E5105	E5074 E5104
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○	○	○	○
	2		About 0.45% C	Annealed	190	13	○	○	○	○
	3		About 0.45% C	Quenched & Tempered	250	25	◎	◎	◎	◎
	4		About 0.75% C	Annealed	270	28	◎	◎	◎	◎
	5		About 0.75% C	Quenched & Tempered	300	32	◎	◎	○	○
	6	Low alloy steel		Annealed	180	10	○	○	○	○
	7			Quenched & Tempered	275	29	◎	◎	◎	◎
	8			Quenched & Tempered	300	32	◎	◎	○	○
	9			Quenched & Tempered	350	38	◎	◎	○	○
	10	High alloyed steel, and tool steel		Annealed	200	15	○	○	○	○
	11			Quenched & Tempered	325	35	◎	◎	○	○
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎	◎	◎	◎
	13		Martensitic	Quenched & Tempered	240	23	◎	◎	◎	◎
	14		Austenitic		180	10	◎	◎	◎	◎
K	15	Grey cast iron	Pearlitic / ferritic		180	10			○	○
	16		Pearlitic (Martensitic)		260	26			○	○
	17	Nodular cast iron	Ferritic		160	3			○	○
	18		Pearlitic		250	25			○	○
	19	Malleable cast iron	Ferritic		130				○	○
	20		Pearlitic		230	21			○	○
N	21	Aluminum-wrought alloy	Not Curable		60					
	22		Curable	Hardened	100					
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75					
	24		≤ 12% Si, Curable	Hardened	90					
	25		> 12% Si, Not Curable		130					
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110					
	27		CuZn, CuSnZn (Brass)		90					
	28		CuSn, lead-free copper and electrolytic copper		100					
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic							
	30		Rubber, Wood, etc.							
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15	○	○		
	32			Cured	280	30	○	○		
	33		Ni or Co Based	Annealed	250	25	○	○		
	34			Cured	350	38	○	○		
	35			Cast	320	34	○	○		
	36	Titanium Alloys	Pure Titanium		400 Rm		◎	◎		
	37		Alpha + Beta Alloys	Hardened	1050 Rm		◎	◎		
H	38	Hardened steel		Hardened	550	55				
	39			Hardened	630	60				
	40	Chilled Cast Iron		Cast	400	42	○	○		
	41	Hardened Cast Iron		Hardened	550	55				

VDI 3323	EH094	EH095	EH969	EH970	EH830	EE515	EH852	EH831	EH917	EH919	EH921	ISO
1	○	○	○	○	○	○	○	○	○	○	○	P
2	○	○	○	○	○	○	○	○	○	○	○	
3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
4	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
5	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
6	○	○	○	○	○	○	○	○	○	○	○	
7	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
8	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
9	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
10	○	○	○	○	○	○	○	○	○	○	○	
11	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
12	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	M
13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
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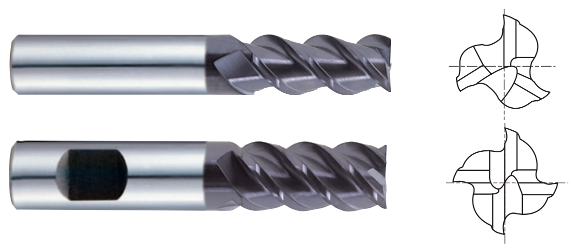
32	○	○	○	○	○	○	○	○	○	○	○	
33	○	○	○	○	○	○	○	○	○	○	○	
34	○	○	○	○	○	○	○	○	○	○	○	
35	○	○	○	○	○	○	○	○	○	○	○	
36	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
37	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
38												H
39												
40	○	○	○	○	○	○	○	○	○	○	○	
41												

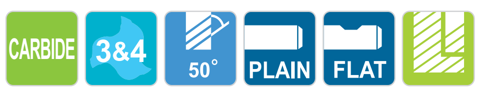
JET-POWER END MILLS

PLAIN SHANK
FLAT SHANK
EH108 SERIES

CARBIDE, 3&4 FLUTE 50° HELIX REGULAR LENGTH

- ▶ Suitable for low hardness materials (under HRc 45), alloy steels, tool steels, carbon steels, prehardened steels, stainless steels, inconel, nimonic, etc.
- ▶ Corner Protection against chipping.





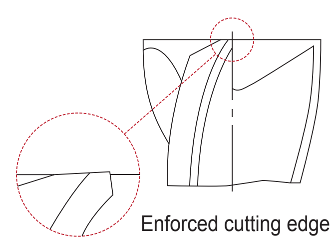
p.C511-C512

◆ U.S.A Stock

Unit : Inch

EDP No. PLAIN	EDP No. FLAT	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
95063	—	**1/8**	1/8	1/2	1-1/2	3
95064	—	**3/16**	3/16	5/8	2	3
95065	—	**1/4**	1/4	3/4	2-1/2	3
95066	—	**5/16**	5/16	13/16	2-1/2	3
—	**95067**	**3/8**	3/8	1	2-1/2	3
95115	—	**7/16**	7/16	1	2-3/4	3
—	**95068**	**1/2**	1/2	1	3	3
—	**95069**	**5/8**	5/8	1-1/4	3-1/2	3
—	**95070**	**3/4**	3/4	1-1/2	4	4
—	**95071**	**1**	1	1-1/2	4	4

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003



Enforced cutting edge

◎ : Excellent ○ : Good

ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11.1	11.2	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35		15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325		200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	◎	◎	◎						

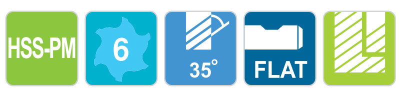
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎			○	

JET-POWER END MILLS

FLAT SHANK
EE882 SERIES

HSS-PM, 6 FLUTE 35° HELIX REGULAR LENGTH

- ▶ Designed to machine low hardness materials (under HRc45), alloy steels, tool steels, carbon steels, prehardened steels, stainless steel, inconel, nimonic, etc.
- ▶ High velocity milling operation and good surface finishes.



p.C513

◇ Call for availability

Unit : Inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
95094	**3/4**	3/4	1-5/8	3-7/8
95095	**7/8**	7/8	1-7/8	4-1/8
95096	**1**	1	2	4-1/2
95097	**1-1/4**	1-1/4	2	4-1/2
95098	**1-1/2**	1-1/4	2	4-1/2

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~+.0010	0~-.0003

◎ : Excellent ○ : Good

ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11.1	11.2	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35		15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325		200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎			○	

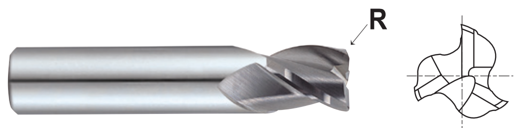
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG JET-POWER END MILLS

PLAIN SHANK Ø1/8~Ø5/16 **E5075** SERIES
FLAT SHANK Ø11/32~Ø1 **E5105** SERIES

CARBIDE, 3 FLUTE 35° HELIX STUB LENGTH CORNER RADIUS - "HOSS"

- ▶ #1 Choice for slotting, ramping & pocket work on stainless, monel & other alloys up to HRc35.
- ▶ Dry milling is recommended on steel alloys to reduce thermal shock and increase the life (YG:TYLON F or E COATING).



CARBIDE | 3 | 35° | PLAIN | FLAT

p.C514-515

◆ U.S.A Stock

Ø1/8~Ø5/16 Ø11/32~Ø1

Unit : Inch

EDP No.					Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	R				
57558	57558TN	57558TC	57558TF	57558TE	.008 ~ .010	1/8	1/8	1/4	1-1/2
57561	57561TN	57561TC	57561TF	57561TE	.008 ~ .010	5/32	3/16	5/16	2
57565	57565TN	57565TC	57565TF	57565TE	.008 ~ .010	3/16	3/16	5/16	2
57570	57570TN	57570TC	57570TF	57570TE	.015 ~ .020	7/32	1/4	3/8	2
57573	57573TN	57573TC	57573TF	57573TE	.015 ~ .020	1/4	1/4	3/8	2
57576	57576TN	57576TC	57576TF	57576TE	.015 ~ .020	9/32	5/16	7/16	2
57579	57579TN	57579TC	57579TF	57579TE	.015 ~ .020	5/16	5/16	7/16	2
57582	57582TN	57582TC	57582TF	57582TE	.015 ~ .020	11/32	3/8	1/2	2
57584	57584TN	57584TC	57584TF	57584TE	.015 ~ .020	3/8	3/8	1/2	2
57588	57588TN	57588TC	57588TF	57588TE	.015 ~ .020	7/16	7/16	9/16	2-1/2
57593	57593TN	57593TC	57593TF	57593TE	.030 ~ .035	1/2	1/2	5/8	2-1/2
57595	57595TN	57595TC	57595TF	57595TE	.030 ~ .035	5/8	5/8	3/4	3
57598	57598TN	57598TC	57598TF	57598TE	.030 ~ .035	3/4	3/4	1	3
57600	57600TN	57600TC	57600TF	57600TE	.030 ~ .035	1	1	1-1/4	3

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003

◎ : Excellent ○ : Good

ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11.1	11.2	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35		15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325		200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	○	○	◎	○	○	○	○		◎	◎	◎	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																					

YG JET-POWER END MILLS

PLAIN SHANK Ø1/8~Ø5/16 **E5074** SERIES
FLAT SHANK Ø11/32~Ø1 **E5104** SERIES

CARBIDE, 3 FLUTE 35° HELIX REGULAR LENGTH CORNER RADIUS - "HOSS"

- ▶ #1 Choice for slotting, ramping & pocket work on stainless, monel & other alloys up to HRc35.
- ▶ Dry milling is recommended on steel alloys to reduce thermal shock and increase the life (YG:TYLON F or E COATING).

CARBIDE | 3 | 35° | PLAIN | FLAT

p.C514-515

◆ U.S.A Stock

aØ1/8~Ø5/16 Ø11/32~Ø1

Unit : Inch

EDP No.					Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	R				
56558	56558TN	56558TC	56558TF	56558TE	.008 ~ .010	1/8	1/8	1/2	1-1/2
56561	56561TN	56561TC	56561TF	56561TE	.008 ~ .010	5/32	3/16	9/16	2
56565	56565TN	56565TC	56565TF	56565TE	.008 ~ .010	3/16	3/16	9/16	2
56570	56570TN	56570TC	56570TF	56570TE	.015 ~ .020	7/32	1/4	3/4	2-1/2
56573	56573TN	56573TC	56573TF	56573TE	.015 ~ .020	1/4	1/4	3/4	2-1/2
56576	56576TN	56576TC	56576TF	56576TE	.015 ~ .020	9/32	5/16	13/16	2-1/2
56579	56579TN	56579TC	56579TF	56579TE	.015 ~ .020	5/16	5/16	13/16	2-1/2
56582	56582TN	56582TC	56582TF	56582TE	.015 ~ .020	11/32	3/8	1	2-1/2
56584	56584TN	56584TC	56584TF	56584TE	.015 ~ .020	3/8	3/8	1	2-1/2
56588	56588TN	56588TC	56588TF	56588TE	.015 ~ .020	7/16	7/16	1	2-3/4
56593	56593TN	56593TC	56593TF	56593TE	.030 ~ .035	1/2	1/2	1-1/4	3
56595	56595TN	56595TC	56595TF	56595TE	.030 ~ .035	5/8	5/8	1-5/8	3-1/2
56598	56598TN	56598TC	56598TF	56598TE	.030 ~ .035	3/4	3/4	1-5/8	4
56600	56600TN	56600TC	56600TF	56600TE	.030 ~ .035	1	1	2	4

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003

◎ : Excellent ○ : Good

ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11.1	11.2	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35		15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325		200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	○	○	◎	○	○	○	○		◎	◎	◎	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																					

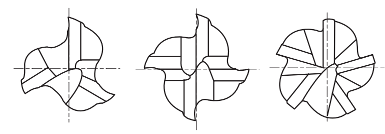
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG JET-POWER END MILLS

PLAIN SHANK **EH094** SERIES

CARBIDE, MULTI FLUTE STUB LENGTH FINE PITCH ROUGHING

- ▶Designed to machine low hardness materials (under HRc45), alloy steels, tool steels, carbon steels, prehardened steels, stainless steel, inconel, nimonic.
- ▶High velocity milling operation.
- ▶Fast chip ejection.



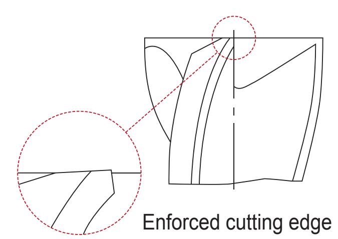
CARBIDE FINE 3-5 30° PLAIN p.C516-517

◆ U.S.A Stock

Unit : Inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
95072	1/4	1/4	5/16	2-1/8	3
95073	5/16	5/16	3/8	2-1/4	3
95074	3/8	3/8	9/16	2-1/2	3
95075	1/2	1/2	5/8	3	4
95076	5/8	5/8	7/8	3-1/4	4
95077	3/4	3/4	1	3-3/4	4
95078	1	1	1	4	5

Mill Dia. (inch)	Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
1/4~3/8	0 ~ -.0022	0~-.0003
1/2~5/8	0 ~ -.0027	
3/4~1	0 ~ -.0033	



◎ : Excellent ○ : Good

ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11.1	11.2	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35		15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325		200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	◎	◎	◎						

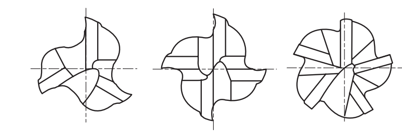
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎			○	

YG JET-POWER END MILLS

PLAIN SHANK **EH095** SERIES

CARBIDE, MULTI FLUTE LONG LENGTH FINE PITCH ROUGHING

- ▶Suitable for low hardness materials (under HRc45), alloy steels, tool steels, carbon steels, prehardened steels, stainless steel, inconel, nimonic, etc.
- ▶High velocity milling operation.
- ▶Fast chip ejection.



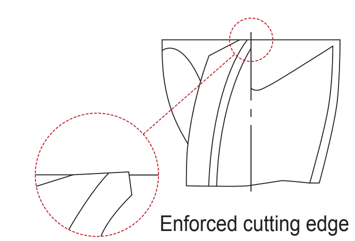
CARBIDE FINE 3-5 30° PLAIN p.C516-517

◆ U.S.A Stock

Unit : Inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
95079	1/4	1/4	3/4	2-1/2	3
95080	5/16	5/16	3/4	2-1/2	3
95081	3/8	3/8	7/8	2-1/2	3
95082	1/2	1/2	1	3	4
95083	5/8	5/8	1-1/4	3-1/2	4
95084	3/4	3/4	1-5/8	4	4
95085	1	1	1-3/4	4	5

Mill Dia. (inch)	Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
1/4~3/8	0 ~ -.0022	0~-.0003
1/2~5/8	0 ~ -.0027	
3/4~1	0 ~ -.0033	



◎ : Excellent ○ : Good

ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11.1	11.2	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35		15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325		200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎			○	

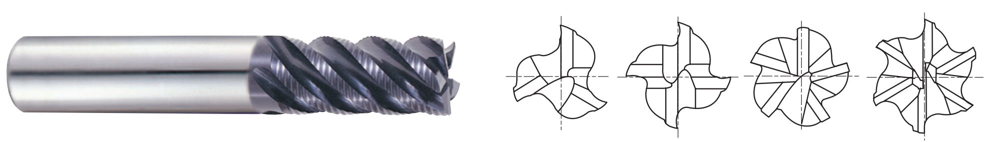
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

JET-POWER END MILLS

PLAIN SHANK **EH969** SERIES

CARBIDE, MULTI FLUTE 45° HELIX LONG LENGTH FINE PITCH ROUGHING

- ▶Suitable for low hardness materials (under HRc45), alloy steels, tool steels, carbon steels, prehardened steels, stainless steel, titanium, inconel, nimonic, etc.
- ▶High chip removed and minimizing breakages of cutting edges.
- ▶Corner Protection against chipping.



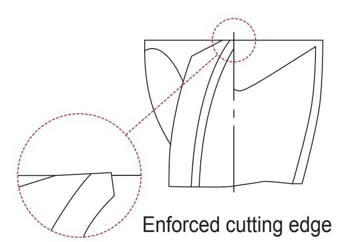
CARBIDE FINE 3-6 45° PLAIN p.C516-517

◆ U.S.A Stock

Unit : Inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
95107	3/16	1/4	1/2	2-1/4	3
95108	1/4	1/4	3/4	2-1/2	4
95109	5/16	5/16	3/4	2-1/2	4
95110	3/8	3/8	7/8	2-1/2	4
95111	1/2	1/2	1	3	4
95112	5/8	5/8	1-1/4	3-1/2	5
95113	3/4	3/4	1-5/8	4	6
95114	1	1	1-3/4	4	6

Mill Dia. (inch)	Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
3/16	0 ~ -.0019	0~-.0003
1/4~3/8	0 ~ -.0022	
1/2~5/8	0 ~ -.0027	
3/4~1	0 ~ -.0033	



◎ : Excellent ○ : Good

ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11.1	11.2	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35		15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325		200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	◎	◎	◎						

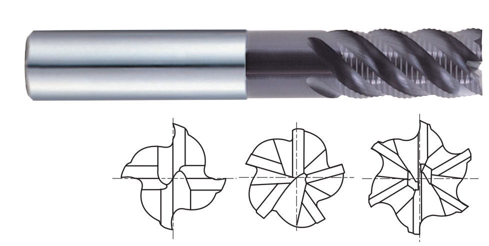
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎			○	

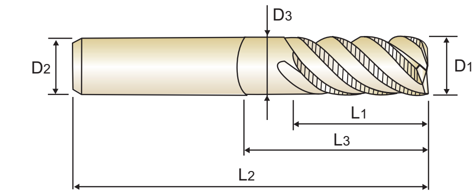
JET-POWER END MILLS

PLAIN SHANK **EH970** SERIES

CARBIDE, MULTI FLUTE 45° HELIX LONG REACH FINE PITCH ROUGHING

- ▶Suitable for low hardness materials (under HRc45), alloy steels, tool steels, carbon steels, prehardened steels, stainless steel, titanium, inconel, nimonic, etc.
- ▶High chip removed and minimizing breakages of cutting edges.
- ▶Corner Protection against chipping.





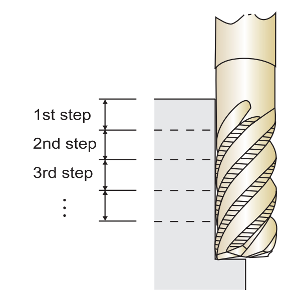
CARBIDE FINE 4-6 45° PLAIN p.C516-517

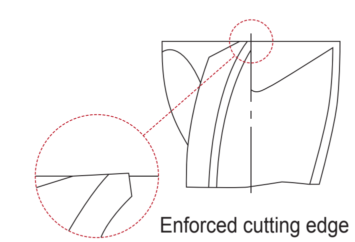
◆ U.S.A Stock

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	No. of Flute
95101	1/4	1/4	3/4	7/8	2-1/2	.230	4
95102	5/16	5/16	3/4	1	2-1/2	.292	4
95103	3/8	3/8	7/8	1-1/4	2-1/2	.355	4
95104	1/2	1/2	1	1-1/2	3	.480	4
95105	5/8	5/8	1-1/4	2	4	.605	5
95106	3/4	3/4	1-5/8	2-3/8	4-3/8	.719	6

Mill Dia. (inch)	Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
1/4~3/8	0 ~ -.0022	0~-.0003
1/2~5/8	0 ~ -.0027	
3/4~1	0 ~ -.0033	





◎ : Excellent ○ : Good

ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11.1	11.2	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35		15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325		200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎			○	

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

JET-POWER END MILLS

PLAIN SHANK **EH830** SERIES

CARBIDE, 3&4 FLUTE 50° HELIX LONG LENGTH

- ▶ Reduces chipping of corner edges
- ▶ Suitable for low hardness materials(under HRc45), alloy steels, tool steels, carbon steels, prehardened steels, stainless steels, Inconel, nimonic, etc

CARBIDE | 3&4 | 50° | PLAIN

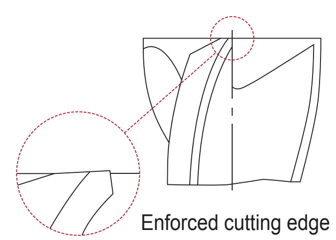
p.C518-519

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter		Shank Diameter	Length of Cut	Overall Length	No. of Flute
	Metric	Inch				
EH830060	6.0	.2362	6	13	50	3
EH830901	6.0	.2362	6	13	50	4
EH830080	8.0	.3150	8	19	60	3
EH830100	10.0	.3937	10	22	70	3
EH830120	12.0	.4724	12	25	75	3
EH830160	16.0	.6299	16	32	90	3
EH830180	18.0	.7087	18	32	90	3
EH830200	20.0	.7874	20	38	100	4
EH830250	25.0	.9843	25	45	120	4

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h6



Enforced cutting edge

◎ : Excellent ○ : Good

ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11.1	11.2	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35		15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325		200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	◎	◎	◎						

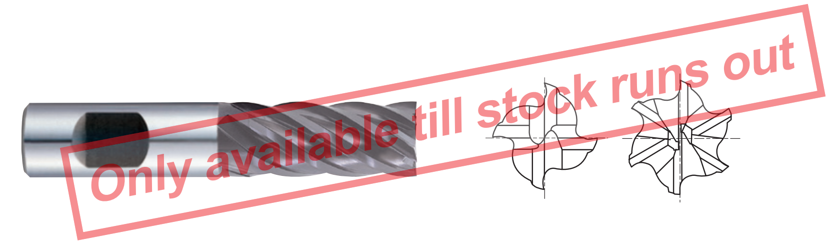
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎			○	

JET-POWER END MILLS

PLAIN SHANK **EE515** SERIES

HSS-PM, 4&6 FLUTE SHORT LENGTH

- ▶ Designed to machine low hardness materials (under HRc45), alloy steels, tool steels, carbon steels, prehardened steels, stainless steel, inconel, nimonic, etc.
- ▶ High velocity milling operation and good surface finishes.



HSS-PM | 4&6 | 30° | FLAT

p.C520

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter		Shank Diameter	Length of Cut	Overall Length	No. of Flute
	Metric	Inch				
EE515030	3.0	.1181	6	8	52	4
EE515040	4.0	.1575	6	11	55	4
EE515050	5.0	.1969	6	13	57	4
EE515060	6.0	.2362	6	13	57	4
EE515080	8.0	.3150	10	19	69	4
EE515100	10.0	.3937	10	22	72	4
EE515120	12.0	.4724	12	26	83	4
EE515140	14.0	.5512	12	26	83	4
EE515160	16.0	.6299	16	32	92	6
EE515180	18.0	.7087	16	32	92	6
EE515200	20.0	.7874	20	38	104	6
EE515250	25.0	.9843	25	45	121	6

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~+0.03	h6

◎ : Excellent ○ : Good

ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11.1	11.2	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35		15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325		200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎			○	

YG JET-POWER END MILLS

PLAIN SHANK **EH852** SERIES

CARBIDE, MULTI FLUTE STUB LENGTH FINE PITCH ROUGHING

- Designed to machine low hardness materials (under HRc45), alloy steels, tool steels, carbon steels, prehardened steels, stainless steel, inconel, nimonic.
- High velocity milling operation.
- Fast chip ejection.

CARBIDE FINE 3-5 30° PLAIN

p.C521-C522

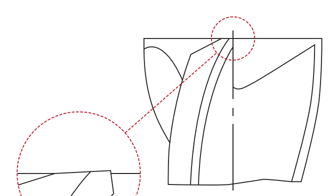
◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Overall Length	No. of Flute
	h10		h6			
EH852060	6.0	.2362	6	7	54	3
EH852070	7.0	.2756	8	8	58	3
EH852080	8.0	.3150	8	9	58	3
EH852090	9.0	.3543	10	13	66	4
EH852100	10.0	.3937	10	14	66	4
EH852120	12.0	.4724	12	16	73	4
EH852140	14.0	.5512	14	18	75	4
EH852160	16.0	.6299	16	22	82	4
EH852180	18.0	.7087	18	24	84	4
EH852200	20.0	.7874	20	26	92	4
EH852250	25.0	.9843	25	25	110	5

Tolerances according to DIN 7160 & 7161

	Tolerance range in μm				
	Nominal-Diameter in mm				
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
h10	0 / − 40	0 / − 48	0 / − 58	0 / − 70	0 / − 84
h6	0 / − 6	0 / − 8	0 / − 9	0 / − 11	0 / − 13



Enforced cutting edge

◎ : Excellent ○ : Good

ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11.1	11.2	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35		15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325		200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎			○	

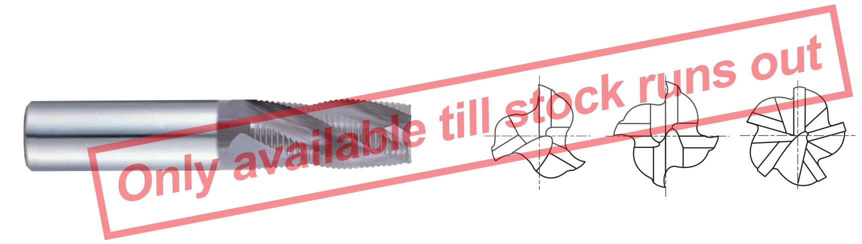
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG JET-POWER END MILLS

PLAIN SHANK **EH831** SERIES

CARBIDE, MULTI FLUTE LONG LENGTH FINE PITCH ROUGHING

- Designed to machine low hardness materials (under HRc45), alloy steels, tool steels, carbon steels, prehardened steels, stainless steel, inconel, nimonic.
- High velocity milling operation.
- Fast chip ejection.



CARBIDE FINE 3-5 30° PLAIN

p.C521-C522

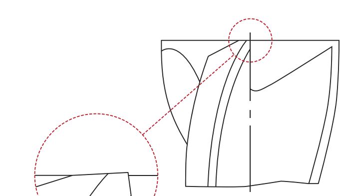
◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Overall Length	No. of Flute
	h10		h6			
EH831060	6.0	.2362	6	16	57	3
EH831070	7.0	.2756	8	16	63	3
EH831080	8.0	.3150	8	16	63	3
EH831090	9.0	.3543	10	19	72	4
EH831100	10.0	.3937	10	22	72	4
EH831120	12.0	.4724	12	26	83	4
EH831140	14.0	.5512	14	26	83	4
EH831160	16.0	.6299	16	32	92	4
EH831180	18.0	.7087	18	32	92	4
EH831200	20.0	.7874	20	38	104	4
EH831250	25.0	.9843	25	45	121	5

Tolerances according to DIN 7160 & 7161

	Tolerance range in μm				
	Nominal-Diameter in mm				
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
h10	0 / − 40	0 / − 48	0 / − 58	0 / − 70	0 / − 84
h6	0 / − 6	0 / − 8	0 / − 9	0 / − 11	0 / − 13



Enforced cutting edge

◎ : Excellent ○ : Good

ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11.1	11.2	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35		15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325		200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎			○	

JET-POWER END MILLS

PLAIN SHANK **EH917** SERIES

CARBIDE, MULTI FLUTE 45° HELIX FINE PITCH ROUGHING

- ▶ High chip removal and minimizing breakages of cutting edges.
- ▶ Suitable for low hardness materials(under HRc45), alloy steels, tool steels, carbon steels, prehardened steels, stainless steels, Inconel, nimonic, etc

CARBIDE FINE 4-6 45° PLAIN p.C523-C524

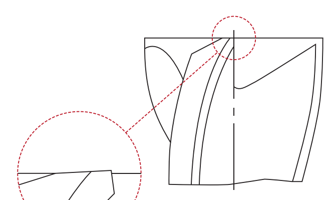
◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Overall Length	No. of Flute
	h10		h6			
EH917060	6.0	.2362	6	7	54	4
EH917080	8.0	.3150	8	9	58	4
EH917100	10.0	.3937	10	14	66	4
EH917120	12.0	.4724	12	16	73	4
EH917160	16.0	.6299	16	22	82	5
EH917200	20.0	.7874	20	26	92	6

Tolerances according to DIN 7160 & 7161

	Tolerance range in μm				
	Nominal-Diameter in mm				
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
h10	0 / – 40	0 / – 48	0 / – 58	0 / – 70	0 / – 84
h6	0 / – 6	0 / – 8	0 / – 9	0 / – 11	0 / – 13



Enforced cutting edge

◎ : Excellent ○ : Good

ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11.1	11.2	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35		15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325		200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎			○	

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

JET-POWER END MILLS

PLAIN SHANK **EH919** SERIES

CARBIDE, MULTI FLUTE 45° HELIX LONG LENGTH FINE PITCH ROUGHING

- ▶ High chip removal and minimizing breakages of cutting edges.
- ▶ Suitable for low hardness materials(under HRc45), alloy steels, tool steels, carbon steels, prehardened steels, stainless steels, Inconel, nimonic, etc

CARBIDE FINE 3-6 45° PLAIN p.C525-C526

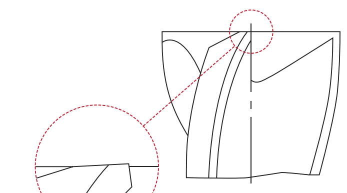
◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Overall Length	No. of Flute
	h10		h6			
EH919040	4.0	.1575	6	11	57	3
EH919050	5.0	.1969	6	13	57	4
EH919060	6.0	.2362	6	16	57	4
EH919070	7.0	.2756	8	16	63	4
EH919080	8.0	.3150	8	16	63	4
EH919090	9.0	.3543	10	19	72	4
EH919100	10.0	.3937	10	22	72	4
EH919120	12.0	.4724	12	26	83	4
EH919140	14.0	.5512	14	26	83	5
EH919160	16.0	.6299	16	32	92	5
EH919200	20.0	.7874	20	38	104	6
EH919250	25.0	.9843	25	45	121	6

Tolerances according to DIN 7160 & 7161

	Tolerance range in μm				
	Nominal-Diameter in mm				
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
h10	0 / – 40	0 / – 48	0 / – 58	0 / – 70	0 / – 84
h6	0 / – 6	0 / – 8	0 / – 9	0 / – 11	0 / – 13



Enforced cutting edge

◎ : Excellent ○ : Good

ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11.1	11.2	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35		15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325		200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎			○	

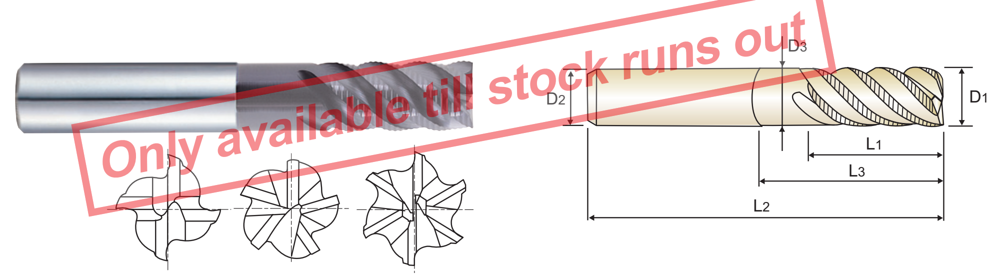
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

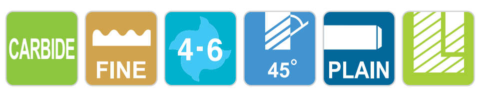
JET-POWER END MILLS

PLAIN SHANK **EH921 SERIES**

CARBIDE, MULTI FLUTE 45° HELIX LONG REACH FINE PITCH ROUGHING

- ▶Suitable for low hardness materials (under HRc45), alloy steels, tool steels, carbon steels, prehardened steels, stainless steel, titanium, inconel, nimonic, etc.
- ▶High chip removed and minimizing breakages of cutting edges.
- ▶Corner Protection against chipping.





p.C523-C524

◇ Call for Availability

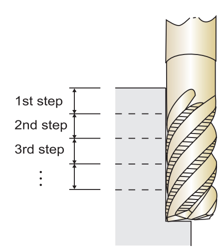
Unit : mm

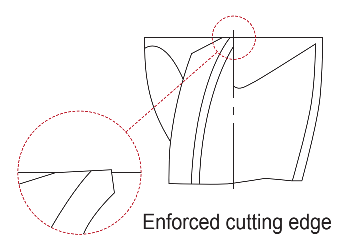
EDP No.	Mill Diameter Metric D1	Mill Diameter Inch	Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3	No. of Flute
EH921060	6.0	.2362	6	16	20	57	5.5	4
EH921080	8.0	.3150	8	16	26	63	7.5	4
EH921100	10.0	.3937	10	22	31	72	9.5	4
EH921120	12.0	.4724	12	26	37	83	11.5	4
EH921160	16.0	.6299	16	32	51	100	15.5	5
EH921200	20.0	.7874	20	38	59	110	19.2	6

Tolerances according to DIN 7160 & 7161

Tolerance range in μm

Nominal-Diameter in mm	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
h10	0 / − 40	0 / − 48	0 / − 58	0 / − 70	0 / − 84
h6	0 / − 6	0 / − 8	0 / − 9	0 / − 11	0 / − 13





Enforced cutting edge

◎ : Excellent ○ : Good

ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11.1	11.2	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35		15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325		200	240	180	180	260	160	250	130	230
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎			○	

CARBIDE
HSS

JET-POWER END MILLS

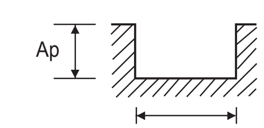
RECOMMENDED CUTTING CONDITIONS

EH108 SERIES 3&4 FLUTE - SLOTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-4	Non-alloy steel	1.0D	0.5D	SFM(Vc)	365	345	320	360	360	345	355
					IPT(fz)	.0007	.0011	.0012	.0012	.0012	.0010	.0008
					RPM	5560	4200	3260	2740	2200	1750	1360
					IPM(FEED)	12	13	12	10	8	7	5
	5		1.0D	0.5D	SFM(Vc)	220	205	195	220	225	215	220
					IPT(fz)	.0008	.0009	.0009	.0009	.0010	.0008	.0007
					RPM	3360	2520	2000	1680	1360	1100	840
					IPM(FEED)	8	7	6	5	4	3	2
	6-7	Low alloy steel	1.0D	0.5D	SFM(Vc)	365	345	320	360	360	345	355
					IPT(fz)	.0007	.0011	.0012	.0012	.0012	.0010	.0008
					RPM	5560	4200	3260	2740	2200	1750	1360
					IPM(FEED)	12	13	12	10	8	7	5
	8-9		1.0D	0.5D	SFM(Vc)	220	205	195	220	225	215	220
					IPT(fz)	.0008	.0009	.0009	.0009	.0010	.0008	.0007
					RPM	3360	2520	2000	1680	1360	1100	840
					IPM(FEED)	8	7	6	5	4	3	2
	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM(Vc)	365	345	320	360	360	345	355
					IPT(fz)	.0007	.0011	.0012	.0012	.0012	.0010	.0008
					RPM	5560	4200	3260	2740	2200	1750	1360
					IPM(FEED)	12	13	12	10	8	7	5
	11.1-11.2		1.0D	0.5D	SFM(Vc)	220	205	195	220	225	215	220
					IPT(fz)	.0008	.0009	.0009	.0009	.0010	.0008	.0007
					RPM	3360	2520	2000	1680	1360	1100	840
					IPM(FEED)	8	7	6	5	4	3	2
M	12-14.2	Stainless steel	1.0D	0.05D	SFM(Vc)	185	170	165	180	170	175	175
					IPT(fz)	.0007	.0010	.0011	.0011	.0013	.0010	.0009
					RPM	2840	2100	1680	1370	1050	880	670
					IPM(FEED)	6	6	6	5	4	3	2
S	31-35	Heat Resistant Super Alloys	1.0D	0.05D	SFM(Vc)	75	70	65	75	70	70	70
					IPT(fz)	.0005	.0006	.0008	.0007	.0008	.0009	.0006
					RPM	1160	840	670	560	420	350	270
					IPM(FEED)	2	2	2	1	1	1	1
	36-37	Titanium Alloys	1.0D	0.05D	SFM(Vc)	100	90	85	95	90	95	90
					IPT(fz)	.0005	.0007	.0008	.0008	.0008	.0006	.0006
					RPM	1500	1090	870	730	550	480	350
					IPM(FEED)	2	2	2	2	1	1	1
H	40	Chilled Cast Iron	1.0D	0.5D	SFM(Vc)	220	205	195	220	225	215	220
					IPT(fz)	.0008	.0009	.0009	.0009	.0010	.0008	.0007
					RPM	3360	2520	2000	1680	1360	1100	840
					IPM(FEED)	8	7	6	5	4	3	2

(Diameter (Ø) columns: 1/4 to 1)



※ The Feed, in long & extra long types, should be reduced by around 50%.

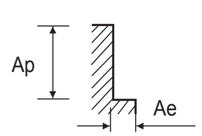
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG JET-POWER END MILLS — RECOMMENDED CUTTING CONDITIONS

EH108 SERIES — 3&4 FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-4	Non-alloy steel	0.5D	1.5D	SFM (Vc)	365	345	320	360	360	345	355
					IPT (fz)	.0009	.0013	.0015	.0015	.0015	.0012	.0011
					RPM	5560	4200	3260	2740	2200	1750	1360
					IPM (FEED)	16	17	15	12	10	9	6
	5		0.5D	1.5D	SFM (Vc)	220	205	195	220	225	215	220
					IPT (fz)	.0010	.0012	.0012	.0012	.0012	.0010	.0009
					RPM	3360	2520	2000	1680	1360	1100	840
					IPM (FEED)	10	9	7	6	5	4	3
	6-7	Low alloy steel	0.5D	1.5D	SFM (Vc)	365	345	320	360	360	345	355
					IPT (fz)	.0009	.0013	.0015	.0015	.0015	.0012	.0011
					RPM	5560	4200	3260	2740	2200	1750	1360
					IPM (FEED)	16	17	15	12	10	9	6
	8-9		0.5D	1.5D	SFM (Vc)	220	205	195	220	225	215	220
					IPT (fz)	.0010	.0012	.0012	.0012	.0012	.0010	.0009
					RPM	3360	2520	2000	1680	1360	1100	840
					IPM (FEED)	10	9	7	6	5	4	3
	10	High alloyed steel, and tool steel	0.5D	1.5D	SFM (Vc)	365	345	320	360	360	345	355
					IPT (fz)	.0009	.0013	.0015	.0015	.0015	.0012	.0011
					RPM	5560	4200	3260	2740	2200	1750	1360
					IPM (FEED)	16	17	15	12	10	9	6
	11.1-11.2		0.5D	1.5D	SFM (Vc)	220	205	195	220	225	215	220
					IPT (fz)	.0010	.0012	.0012	.0012	.0012	.0010	.0009
					RPM	3360	2520	2000	1680	1360	1100	840
					IPM (FEED)	10	9	7	6	5	4	3
M	12-14.2	Stainless steel	0.5D	1.5D	SFM (Vc)	185	170	165	180	170	175	175
					IPT (fz)	.0010	.0014	.0017	.0017	.0017	.0015	.0017
					RPM	2840	2100	1680	1370	1050	880	670
					IPM (FEED)	8	9	9	7	5	5	5
S	31-35	Heat Resistant Super Alloys	0.05D	1.0D	SFM (Vc)	70	70	65	75	70	70	70
					IPT (fz)	.0007	.0008	.0010	.0011	.0011	.0009	.0009
					RPM	1050	840	680	560	420	350	270
					IPM (FEED)	2	2	2	2	1	1	1
	36-37	Titanium Alloys	0.05D	1.0D	SFM (Vc)	90	90	85	95	90	95	90
					IPT (fz)	.0007	.0009	.0011	.0012	.0012	.0008	.0010
					RPM	1360	1090	880	730	550	480	350
					IPM (FEED)	3	3	3	3	2	2	1
H	40	Chilled Cast Iron	0.5D	1.5D	SFM (Vc)	220	205	195	220	225	215	220
					IPT (fz)	.0010	.0012	.0012	.0012	.0012	.0010	.0009
					RPM	3360	2520	2000	1680	1360	1100	840
					IPM (FEED)	10	9	7	6	5	4	3



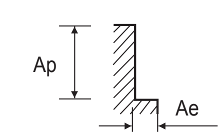
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG JET-POWER END MILLS — RECOMMENDED CUTTING CONDITIONS

EE882 SERIES — 6FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 3/4	7/8	1	1 1/4	1 1/2
P	1-4	Non-alloy steel	0.1D	1.5D	SFM (Vc)	190	165	170	170	170
					IPT (fz)	.0014	.0017	.0017	.0017	.0017
					RPM	960	730	640	520	430
					IPM (FEED)	8	7	7	5	4
	5		0.1D	1.5D	SFM (Vc)	40	40	45	45	40
					IPT (fz)	.0006	.0006	.0006	.0006	.0006
					RPM	215	180	165	130	105
					IPM (FEED)	1	1	1	1	1
	6-7	Low alloy steel	0.1D	1.5D	SFM (Vc)	190	165	170	170	170
					IPT (fz)	.0014	.0017	.0017	.0017	.0017
					RPM	960	730	640	520	430
					IPM (FEED)	8	7	7	5	4
	8-9		0.1D	1.5D	SFM (Vc)	40	40	45	45	40
					IPT (fz)	.0006	.0006	.0006	.0006	.0006
					RPM	215	180	165	130	105
					IPM (FEED)	1	1	1	1	1
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM (Vc)	190	165	170	170	170
					IPT (fz)	.0014	.0017	.0017	.0017	.0017
					RPM	960	730	640	520	430
					IPM (FEED)	8	7	7	5	4
	11.1-11.2		0.1D	1.5D	SFM (Vc)	40	40	45	45	40
					IPT (fz)	.0006	.0006	.0006	.0006	.0006
					RPM	215	180	165	130	105
					IPM (FEED)	1	1	1	1	1
M	12-14.2	Stainless steel	0.1D	1.5D	SFM (Vc)	95	85	85	85	85
					IPT (fz)	.0017	.0020	.0021	.0021	.0020
					RPM	480	365	320	260	215
					IPM (FEED)	5	4	4	3	3
S	31-35	Heat Resistant Super Alloys	0.05D	1.0D	SFM (Vc)	35	35	35	35	35
					IPT (fz)	.0010	.0009	.0009	.0010	.0010
					RPM	170	145	130	105	85
					IPM (FEED)	1	1	1	1	1
	36-37	Titanium Alloys	0.05D	1.0D	SFM (Vc)	45	45	45	45	45
					IPT (fz)	.0011	.0010	.0010	.0010	.0009
					RPM	220	190	170	140	110
					IPM (FEED)	1	1	1	1	1
H	40	Chilled Cast Iron	0.1D	1.5D	SFM (Vc)	40	40	45	45	40
					IPT (fz)	.0006	.0006	.0006	.0006	.0006
					RPM	215	180	165	130	105
					IPM (FEED)	1	1	1	1	1



※ The Feed, in long & extra long types, should be reduced by around 50%.

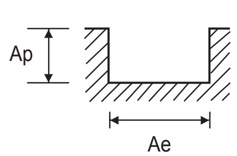
JET-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

E5075, E5105, E5074, E5104 SERIES — 3 FLUTE - SLOTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1
P	1-2	Non-alloy steel	1.0D	0.5D	SFM(Vc)	110	110	110	110	110	110	110	110	110	110
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	3360	2240	1680	1340	1120	960	840	670	560	420
					IPM(FEED)	9	8	9	9	8	9	9	7	8	6
	3-4		1.0D	0.5D	SFM(Vc)	90	90	90	90	90	90	90	90	90	90
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	2750	1830	1380	1100	920	790	690	550	460	340
					IPM(FEED)	7	7	7	7	7	7	7	6	6	5
	5		1.0D	0.5D	SFM(Vc)	70	70	70	70	70	70	70	70	70	70
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	2140	1430	1070	860	710	610	530	430	360	270
					IPM(FEED)	6	5	5	6	5	5	6	5	5	4
	6	Low alloy steel	1.0D	0.5D	SFM(Vc)	110	110	110	110	110	110	110	110	110	110
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	3360	2240	1680	1340	1120	960	840	670	560	420
					IPM(FEED)	9	8	9	9	8	9	9	7	8	6
	7		1.0D	0.5D	SFM(Vc)	90	90	90	90	90	90	90	90	90	90
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	2750	1830	1380	1100	920	790	690	550	460	340
					IPM(FEED)	7	7	7	7	7	7	7	6	6	5
	8-9		1.0D	0.5D	SFM(Vc)	70	70	70	70	70	70	70	70	70	70
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	2140	1430	1070	860	710	610	530	430	360	270
					IPM(FEED)	6	5	5	6	5	5	6	5	5	4
	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM(Vc)	110	110	110	110	110	110	110	110	110	110
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	3360	2240	1680	1340	1120	960	840	670	560	420
					IPM(FEED)	9	8	9	9	8	9	9	7	8	6
	11.1		1.0D	0.5D	SFM(Vc)	70	70	70	70	70	70	70	70	70	70
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	2140	1430	1070	860	710	610	530	430	360	270
					IPM(FEED)	6	5	5	6	5	5	6	5	5	4
M	12-14.2	Stainless steel	1.0D	0.5D	SFM(Vc)	60	60	60	60	60	60	60	60	60	60
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	1830	1220	920	730	610	520	460	370	310	230
					IPM(FEED)	5	4	5	5	5	5	5	4	4	3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	0.5D	SFM(Vc)	90	90	90	90	90	90	90	90	90	90
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	2750	1830	1380	1100	920	790	690	550	460	340
					IPM(FEED)	7	7	7	7	7	7	7	6	6	5



※ The Feed, in long & extra long types, should be reduced by around 50%.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
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V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

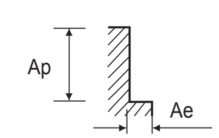
JET-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

E5075, E5105, E5074, E5104 SERIES — 3 FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1
P	1-2	Non-alloy steel	0.5D	1.5D	SFM(Vc)	110	110	110	110	110	110	110	110	110	110
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	3360	2240	1680	1340	1120	960	840	670	560	420
					IPM(FEED)	9	8	9	9	8	9	9	7	8	6
	3-4		0.5D	1.5D	SFM(Vc)	90	90	90	90	90	90	90	90	90	90
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	2750	1830	1380	1100	920	790	690	550	460	340
					IPM(FEED)	7	7	7	7	7	7	7	6	6	5
	5		0.5D	1.5D	SFM(Vc)	70	70	70	70	70	70	70	70	70	70
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	2140	1430	1070	860	710	610	530	430	360	270
					IPM(FEED)	6	5	5	6	5	5	6	5	5	4
	6	Low alloy steel	0.5D	1.5D	SFM(Vc)	110	110	110	110	110	110	110	110	110	110
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	3360	2240	1680	1340	1120	960	840	670	560	420
					IPM(FEED)	9	8	9	9	8	9	9	7	8	6
	7		0.5D	1.5D	SFM(Vc)	90	90	90	90	90	90	90	90	90	90
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	2750	1830	1380	1100	920	790	690	550	460	340
					IPM(FEED)	7	7	7	7	7	7	7	6	6	5
	8-9		0.5D	1.5D	SFM(Vc)	70	70	70	70	70	70	70	70	70	70
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	2140	1430	1070	860	710	610	530	430	360	270
					IPM(FEED)	6	5	5	6	5	5	6	5	5	4
	10	High alloyed steel, and tool steel	0.5D	1.5D	SFM(Vc)	110	110	110	110	110	110	110	110	110	110
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	3360	2240	1680	1340	1120	960	840	670	560	420
					IPM(FEED)	9	8	9	9	8	9	9	7	8	6
	11.1		0.5D	1.5D	SFM(Vc)	70	70	70	70	70	70	70	70	70	70
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	2140	1430	1070	860	710	610	530	430	360	270
					IPM(FEED)	6	5	5	6	5	5	6	5	5	4
M	12-14.2	Stainless steel	0.05D	1.0D	SFM(Vc)	60	60	60	60	60	60	60	60	60	60
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	1830	1220	920	730	610	520	460	370	310	230
					IPM(FEED)	5	4	5	5	5	5	5	4	4	3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.5D	1.5D	SFM(Vc)	90	90	90	90	90	90	90	90	90	90
					IPT(fz)	.0009	.0012	.0017	.0022	.0025	.0030	.0035	.0037	.0045	.0050
					RPM	2750	1830	1380	1100	920	790	690	550	460	340
					IPM(FEED)	7	7	7	7	7	7	7	6	6	5



※ The Feed, in long & extra long types, should be reduced by around 50%.

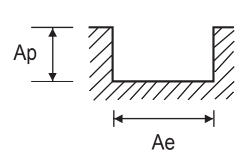
YG JET-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

EH094, EH095, EH969, EH970 SERIES — MULTI FLUTE - SLOTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-4	Non-alloy steel	1.0D	0.5D	SFM (Vc)	1020	950	905	1045	980	1020	1125
					IPT (fz)	.0015	.0020	.0025	.0030	.0032	.0029	.0033
					RPM	15600	11600	9200	8000	6000	5200	4300
					IPM (FEED)	91	91	91	95	95	91	85
	5		1.0D	0.5D	SFM (Vc)	810	755	745	785	785	865	840
					IPT (fz)	.0007	.0009	.0011	.0013	.0012	.0011	.0013
					RPM	12400	9200	7600	6000	4800	4400	3200
					IPM (FEED)	33	33	33	32	30	28	24
	6-7	Low alloy steel	1.0D	0.5D	SFM (Vc)	1020	950	905	1045	980	1020	1125
					IPT (fz)	.0015	.0020	.0025	.0030	.0032	.0029	.0033
					RPM	15600	11600	9200	8000	6000	5200	4300
					IPM (FEED)	91	91	91	95	95	91	85
	8-9		1.0D	0.5D	SFM (Vc)	810	755	745	785	785	865	840
					IPT (fz)	.0007	.0009	.0011	.0013	.0012	.0011	.0013
					RPM	12400	9200	7600	6000	4800	4400	3200
					IPM (FEED)	33	33	33	32	30	28	24
	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM (Vc)	1020	950	905	1045	980	1020	1125
					IPT (fz)	.0015	.0020	.0025	.0030	.0032	.0029	.0033
					RPM	15600	11600	9200	8000	6000	5200	4300
					IPM (FEED)	91	91	91	95	95	91	85
	11.1-11.2		1.0D	0.5D	SFM (Vc)	810	755	745	785	785	865	840
					IPT (fz)	.0007	.0009	.0011	.0013	.0012	.0011	.0013
					RPM	12400	9200	7600	6000	4800	4400	3200
					IPM (FEED)	33	33	33	32	30	28	24
M	12-14.2	Stainless steel	1.0D	D1/4~D3/8:0.25D D1/2~D5/8:0.15D D3/4~D1:0.1D	SFM (Vc)	550	515	500	550	540	490	565
					IPT (fz)	.0007	.0009	.0011	.0013	.0012	.0011	.0013
					RPM	8400	6300	5100	4200	3300	2500	2160
					IPM (FEED)	23	23	23	23	20	17	16
S	31-35	Heat Resistant Super Alloys	1.0D	0.05D	SFM (Vc)	155	145	130	155	130	135	155
					IPT (fz)	.0008	.0010	.0014	.0016	.0011	.0010	.0012
					RPM	2400	1800	1300	1200	800	675	600
					IPM (FEED)	8	7	8	8	4	4	4
	36-37	Titanium Alloys	1.0D	0.05D	SFM (Vc)	205	190	165	205	170	180	205
					IPT (fz)	.0008	.0010	.0015	.0016	.0011	.0010	.0011
					RPM	3150	2350	1700	1560	1040	910	780
					IPM (FEED)	11	10	10	10	6	6	5
H	40	Chilled Cast Iron	1.0D	0.5D	SFM (Vc)	810	755	745	785	785	865	840
					IPT (fz)	.0007	.0009	.0011	.0013	.0012	.0011	.0013
					RPM	12400	9200	7600	6000	4800	4400	3200
					IPM (FEED)	33	33	33	32	30	28	24



※ The Feed, in long & extra long types, should be reduced by around 50%.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

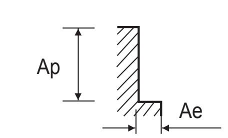
YG JET-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

EH094, EH095, EH969, EH970 SERIES — MULTI FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-4	Non-alloy steel	0.3D	1.5D	SFM (Vc)	1020	950	905	1045	980	1020	1125
					IPT (fz)	.0015	.0020	.0025	.0030	.0032	.0029	.0033
					RPM	15600	11600	9200	8000	6000	5200	4300
					IPM (FEED)	91	91	91	95	95	91	85
	5		0.3D	1.5D	SFM (Vc)	810	755	745	785	785	865	840
					IPT (fz)	.0007	.0009	.0011	.0013	.0012	.0011	.0013
					RPM	12400	9200	7600	6000	4800	4400	3200
					IPM (FEED)	33	33	33	32	30	28	24
	6-7	Low alloy steel	0.3D	1.5D	SFM (Vc)	1020	950	905	1045	980	1020	1125
					IPT (fz)	.0015	.0020	.0025	.0030	.0032	.0029	.0033
					RPM	15600	11600	9200	8000	6000	5200	4300
					IPM (FEED)	91	91	91	95	95	91	85
	8-9		0.3D	1.5D	SFM (Vc)	810	755	745	785	785	865	840
					IPT (fz)	.0007	.0009	.0011	.0013	.0012	.0011	.0013
					RPM	12400	9200	7600	6000	4800	4400	3200
					IPM (FEED)	33	33	33	32	30	28	24
	10	High alloyed steel, and tool steel	0.3D	1.5D	SFM (Vc)	1020	950	905	1045	980	1020	1125
					IPT (fz)	.0015	.0020	.0025	.0030	.0032	.0029	.0033
					RPM	15600	11600	9200	8000	6000	5200	4300
					IPM (FEED)	91	91	91	95	95	91	85
	11.1-11.2		0.3D	1.5D	SFM (Vc)	810	755	745	785	785	865	840
					IPT (fz)	.0007	.0009	.0011	.0013	.0012	.0011	.0013
					RPM	12400	9200	7600	6000	4800	4400	3200
					IPM (FEED)	33	33	33	32	30	28	24
M	12-14.2	Stainless steel	D1/4~D3/8:0.15D D1/2~D5/8:0.1D D3/4~D1:0.05D	1.5D	SFM (Vc)	550	515	500	550	540	490	565
					IPT (fz)	.0007	.0009	.0011	.0013	.0012	.0011	.0013
					RPM	8400	6300	5100	4200	3300	2500	2160
					IPM (FEED)	23	23	23	23	20	17	16
S	31-35	Heat Resistant Super Alloys	0.05D	1.0D	SFM (Vc)	155	145	130	155	130	135	155
					IPT (fz)	.0008	.0010	.0014	.0016	.0011	.0010	.0012
					RPM	2400	1800	1300	1200	800	675	600
					IPM (FEED)	8	7	8	8	4	4	4
	36-37	Titanium Alloys	0.05D	1.0D	SFM (Vc)	205	190	165	205	170	180	205
					IPT (fz)	.0008	.0010	.0015	.0016	.0011	.0010	.0011
					RPM	3150	2350	1700	1560	1040	910	780
					IPM (FEED)	11	10	10	10	6	6	5
H	40	Chilled Cast Iron	0.3D	1.5D	SFM (Vc)	810	755	745	785	785	865	840
					IPT (fz)	.0007	.0009	.0011	.0013	.0012	.0011	.0013
					RPM	12400	9200	7600	6000	4800	4400	3200
					IPM (FEED)	33	33	33	32	30	28	24



※ The Feed, in long & extra long types, should be reduced by around 50%.

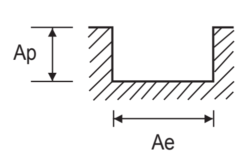
JET-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

EH830 SERIES 3&4 FLUTE - SLOTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6.0	8.0	10.0	12.0	16.0	18.0	20.0	25.0
P	1-4	Non-alloy steel	1.0D	0.5D	SFM (Vc)	345	345	330	345	360	360	345	345
					IPT (fz)	.0007	.0011	.0012	.0012	.0012	.0012	.0007	.0007
					RPM	5570	4180	3180	2790	2190	1950	1670	1340
					IPM (FEED)	13	13	12	10	8	7	6	4
	5		1.0D	0.5D	SFM (Vc)	215	215	215	215	230	230	215	215
					IPT (fz)	.0008	.0009	.0009	.0009	.0010	.0009	.0007	.0007
					RPM	3450	2590	2070	1720	1390	1240	1040	830
					IPM (FEED)	8	7	6	5	4	3	3	2
	6-7	Low alloy steel	1.0D	0.5D	SFM (Vc)	345	345	330	345	360	360	345	345
					IPT (fz)	.0007	.0011	.0012	.0012	.0012	.0012	.0007	.0007
					RPM	5570	4180	3180	2790	2190	1950	1670	1340
					IPM (FEED)	13	13	12	10	8	7	6	4
	8-9		1.0D	0.5D	SFM (Vc)	215	215	215	215	230	230	215	215
					IPT (fz)	.0008	.0009	.0009	.0009	.0010	.0009	.0007	.0007
					RPM	3450	2590	2070	1720	1390	1240	1040	830
					IPM (FEED)	8	7	6	5	4	3	3	2
	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM (Vc)	345	345	330	345	360	360	345	345
					IPT (fz)	.0007	.0011	.0012	.0012	.0012	.0012	.0007	.0007
					RPM	5570	4180	3180	2790	2190	1950	1670	1340
					IPM (FEED)	13	13	12	10	8	7	6	4
	11.1-11.2		1.0D	0.5D	SFM (Vc)	215	215	215	215	230	230	215	215
					IPT (fz)	.0008	.0009	.0009	.0009	.0010	.0009	.0007	.0007
					RPM	3450	2590	2070	1720	1390	1240	1040	830
					IPM (FEED)	8	7	6	5	4	3	3	2
M	12-14.2	Stainless steel	1.0D	0.5D	SFM (Vc)	180	180	180	165	180	180	180	180
					IPT (fz)	.0007	.0010	.0011	.0011	.0013	.0012	.0008	.0009
					RPM	2920	2190	1750	1330	1090	970	880	700
					IPM (FEED)	7	6	6	5	4	3	3	2
S	31-35	Heat Resistant Super Alloys	1.0D	0.05D	SFM (Vc)	65	65	65	65	65	65	65	65
					IPT (fz)	.0004	.0006	.0008	.0007	.0008	.0007	.0006	.0005
					RPM	1060	800	640	530	400	350	320	260
					IPM (FEED)	1	1	1	1	1	1	1	1
	36-37	Titanium Alloys	1.0D	0.05D	SFM (Vc)	175	175	175	170	175	175	175	175
					IPT (fz)	.0007	.0010	.0011	.0011	.0012	.0012	.0008	.0009
					RPM	2840	2100	1680	1370	1050	950	840	670
					IPM (FEED)	6	6	6	5	4	3	3	2
H	40	Chilled Cast Iron	1.0D	0.5D	SFM (Vc)	215	215	215	215	230	230	215	215
					IPT (fz)	.0008	.0009	.0009	.0009	.0010	.0009	.0007	.0007
					RPM	3450	2590	2070	1720	1390	1240	1040	830
					IPM (FEED)	8	7	6	5	4	3	3	2



※ The Feed, in long & extra long types, should be reduced by around 50%.

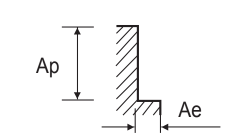
JET-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

EH830 SERIES 3&4 FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6.0	8.0	10.0	12.0	16.0	18.0	20.0	25.0
P	1-4	Non-alloy steel	0.5D	1.5D	SFM (Vc)	345	345	330	345	360	360	345	345
					IPT (fz)	.0009	.0013	.0015	.0015	.0015	.0015	.0011	.0011
					RPM	5570	4180	3180	2790	2190	1950	1670	1340
					IPM (FEED)	16	16	14	13	10	9	7	6
	5		0.5D	1.5D	SFM (Vc)	215	215	215	215	230	230	215	215
					IPT (fz)	.0010	.0012	.0012	.0012	.0011	.0012	.0009	.0009
					RPM	3450	2590	2070	1720	1390	1240	1040	830
					IPM (FEED)	10	9	7	6	5	4	4	3
	6-7	Low alloy steel	0.5D	1.5D	SFM (Vc)	345	345	330	345	360	360	345	345
					IPT (fz)	.0009	.0013	.0015	.0015	.0015	.0015	.0011	.0011
					RPM	5570	4180	3180	2790	2190	1950	1670	1340
					IPM (FEED)	16	16	14	13	10	9	7	6
	8-9		0.5D	1.5D	SFM (Vc)	215	215	215	215	230	230	215	215
					IPT (fz)	.0010	.0012	.0012	.0012	.0011	.0012	.0009	.0009
					RPM	3450	2590	2070	1720	1390	1240	1040	830
					IPM (FEED)	10	9	7	6	5	4	4	3
	10	High alloyed steel, and tool steel	0.5D	1.5D	SFM (Vc)	345	345	330	345	360	360	345	345
					IPT (fz)	.0009	.0013	.0015	.0015	.0015	.0015	.0011	.0011
					RPM	5570	4180	3180	2790	2190	1950	1670	1340
					IPM (FEED)	16	16	14	13	10	9	7	6
	11.1-11.2		0.5D	1.5D	SFM (Vc)	215	215	215	215	230	230	215	215
					IPT (fz)	.0010	.0012	.0012	.0012	.0011	.0012	.0009	.0009
					RPM	3450	2590	2070	1720	1390	1240	1040	830
					IPM (FEED)	10	9	7	6	5	4	4	3
M	12-14.2	Stainless steel	0.5D	1.5D	SFM (Vc)	180	180	180	165	180	180	180	180
					IPT (fz)	.0011	.0017	.0018	.0017	.0019	.0018	.0013	.0013
					RPM	2920	2190	1750	1330	1090	970	880	700
					IPM (FEED)	10	11	10	7	6	5	5	4
S	31-35	Heat Resistant Super Alloys	0.05D	1.0D	SFM (Vc)	65	65	65	65	65	65	65	65
					IPT (fz)	.0007	.0008	.0010	.0011	.0011	.0011	.0009	.0009
					RPM	1060	800	640	530	400	350	320	260
					IPM (FEED)	2	2	2	2	1	1	1	1
	36-37	Titanium Alloys	0.05D	1.0D	SFM (Vc)	180	180	180	165	180	180	180	180
					IPT (fz)	.0011	.0017	.0018	.0017	.0019	.0018	.0013	.0013
					RPM	2920	2190	1750	1330	1090	970	880	700
					IPM (FEED)	10	11	10	7	6	5	5	4
H	40	Chilled Cast Iron	0.5D	1.5D	SFM (Vc)	215	215	215	215	230	230	215	215
					IPT (fz)	.0010	.0012	.0012	.0012	.0011	.0012	.0009	.0009
					RPM	3450	2590	2070	1720	1390	1240	1040	830
					IPM (FEED)	10	9	7	6	5	4	4	3



※ The Feed, in long & extra long types, should be reduced by around 50%.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

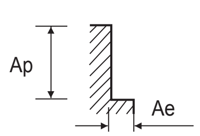
YG JET-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

EE515 SERIES 4&6 FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	25.0
						Diameter (Ø)											
P	1-4	Non-alloy steel	0.1D	1.5D	SFM (Vc)	135	150	155	160	165	165	165	165	165	165	165	165
					IPT (fz)	.0004	.0006	.0008	.0009	.0013	.0017	.0019	.0019	.0015	.0015	.0017	.0018
					RPM	4400	3600	3000	2600	2000	1600	1320	1160	1000	900	800	640
					IPM (FEED)	7	8	9	9	10	11	10	9	9	8	8	7
	5		0.1D	1.5D	SFM (Vc)	35	35	40	35	40	40	40	40	40	40	40	45
					IPT (fz)	.0002	.0003	.0003	.0004	.0005	.0006	.0007	.0009	.0007	.0007	.0008	.0010
					RPM	1100	900	750	600	500	410	340	290	250	225	200	165
					IPM (FEED)	1	1	1	1	1	1	1	1	1	1	1	1
	6-7	Low alloy steel	0.1D	1.5D	SFM (Vc)	135	150	155	160	165	165	165	165	165	165	165	165
					IPT (fz)	.0004	.0006	.0008	.0009	.0013	.0017	.0019	.0019	.0015	.0015	.0017	.0018
					RPM	4400	3600	3000	2600	2000	1600	1320	1160	1000	900	800	640
					IPM (FEED)	7	8	9	9	10	11	10	9	9	8	8	7
	8-9		0.1D	1.5D	SFM (Vc)	35	35	40	35	40	40	40	40	40	40	40	45
					IPT (fz)	.0002	.0003	.0003	.0004	.0005	.0006	.0007	.0009	.0007	.0007	.0008	.0010
					RPM	1100	900	750	600	500	410	340	290	250	225	200	165
					IPM (FEED)	1	1	1	1	1	1	1	1	1	1	1	1
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM (Vc)	135	150	155	160	165	165	165	165	165	165	165	165
					IPT (fz)	.0004	.0006	.0008	.0009	.0013	.0017	.0019	.0019	.0015	.0015	.0017	.0018
					RPM	4400	3600	3000	2600	2000	1600	1320	1160	1000	900	800	640
					IPM (FEED)	7	8	9	9	10	11	10	9	9	8	8	7
	11.1-11.2		0.1D	1.5D	SFM (Vc)	35	35	40	35	40	40	40	40	40	40	40	45
					IPT (fz)	.0002	.0003	.0003	.0004	.0005	.0006	.0007	.0009	.0007	.0007	.0008	.0010
					RPM	1100	900	750	600	500	410	340	290	250	225	200	165
					IPM (FEED)	1	1	1	1	1	1	1	1	1	1	1	1
M	12-14.2	Stainless steel	0.1D	1.5D	SFM (Vc)	70	75	75	80	80	80	80	85	80	85	80	80
					IPT (fz)	.0005	.0007	.0008	.0012	.0015	.0022	.0023	.0026	.0017	.0019	.0021	.0021
					RPM	2200	1800	1500	1300	1000	800	660	580	500	450	400	320
					IPM (FEED)	4	5	5	6	6	7	6	6	5	5	5	4
S	31-37	Heat Resistant Super Alloys Titanium Alloys	0.05D	1.0D	SFM (Vc)	25	30	30	30	35	35	35	35	35	35	35	35
					IPT (fz)	.0003	.0007	.0004	.0005	.0006	.0008	.0009	.0011	.0008	.0009	.0010	.0013
					RPM	880	720	600	480	400	330	270	230	200	180	160	130
					IPM (FEED)	1	2	1	1	1	1	1	1	1	1	1	1
H	40	Chilled Cast Iron	0.1D	1.5D	SFM (Vc)	865	940	980	940	1045	1075	1070	1065	1045	1060	1045	1080
					IPT (fz)	.0002	.0003	.0004	.0005	.0006	.0007	.0008	.0009	.0007	.0007	.0006	.0006
					RPM	1100	900	750	600	500	410	340	290	250	225	200	165
					IPM (FEED)	1	1	1	1	1	1	1	1	1	1	1	1



※ The Feed, in long & extra long types, should be reduced by around 50%.

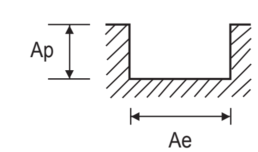
YG JET-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

EH852, EH831 SERIES MULTI FLUTE - SLOTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	25.0
						Diameter (Ø)								
P	1-4	Non-alloy steel	1.0D	0.5D	SFM (Vc)	965	960	950	990	980	990	965	990	1110
					IPT (fz)	.0012	.0016	.0015	.0018	.0021	.0024	.0026	.0027	.0024
					RPM	15600	11620	9200	8010	6800	6010	5200	4810	4300
					IPM (FEED)	55	55	55	57	57	57	55	51	51
	5		1.0D	0.5D	SFM (Vc)	765	760	785	740	750	790	815	740	825
					IPT (fz)	.0005	.0007	.0006	.0008	.0009	.0009	.0009	.0009	.0009
					RPM	12410	9190	7610	6000	5210	4800	4400	3600	3200
					IPM (FEED)	19	20	19	19	20	18	17	14	14
	6-7	Low alloy steel	1.0D	0.5D	SFM (Vc)	965	960	950	990	980	990	965	990	1110
					IPT (fz)	.0012	.0016	.0015	.0018	.0021	.0024	.0026	.0027	.0024
					RPM	15600	11620	9200	8010	6800	6010	5200	4810	4300
					IPM (FEED)	55	55	55	57	57	57	55	51	51
	8-9		1.0D	0.5D	SFM (Vc)	765	760	785	740	750	790	815	740	825
					IPT (fz)	.0005	.0007	.0006	.0008	.0009	.0009	.0009	.0009	.0009
					RPM	12410	9190	7610	6000	5210	4800	4400	3600	3200
					IPM (FEED)	19	20	19	19	20	18	17	14	14
	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM (Vc)	965	960	950	990	980	990	965	990	1110
					IPT (fz)	.0012	.0016	.0015	.0018	.0021	.0024	.0026	.0027	.0024
					RPM	15600	11620	9200	8010	6800	6010	5200	4810	4300
					IPM (FEED)	55	55	55	57	57	57	55	51	51
	11.1-11.2		1.0D	0.5D	SFM (Vc)	765	760	785	740	750	790	815	740	825
					IPT (fz)	.0005	.0007	.0006	.0008	.0009	.0009	.0009	.0009	.0009
					RPM	12410	9190	7610	6000	5210	4800	4400	3600	3200
					IPM (FEED)	19	20	19	19	20	18	17	14	14
M	12-14.2	Stainless steel	1.0D	D4~10:0.25D D12~16:0.15D D18~25:0.1D	SFM (Vc)	520	520	525	520	520	545	505	495	560
					IPT (fz)	.0005	.0007	.0007	.0008	.0009	.0009	.0009	.0009	.0009
					RPM	8380	6290	5090	4190	3590	3300	2710	2400	2170
					IPM (FEED)	13	13	14	13	14	12	10	9	10
S	31-35	Heat Resistant Super Alloys	1.0D	0.05D	SFM (Vc)	150	150	135	145	130	130	130	135	155
					IPT (fz)	.0006	.0008	.0009	.0010	.0009	.0008	.0008	.0009	.0009
					RPM	2390	1790	1310	1190	910	800	710	650	600
					IPM (FEED)	5	4	5	5	3	3	2	2	3
	36-37	Titanium Alloys	1.0D	D4~10:0.25D D12~16:0.15D D18~25:0.1D	SFM (Vc)	520	520	525	520	520	545	505	495	560
					IPT (fz)	.0005	.0007	.0007	.0008	.0009	.0009	.0009	.0009	.0009
					RPM	8380	6290	5090	4190	3590	3300	2710	2400	2170
					IPM (FEED)	13	13	14	13	14	12	10	9	10
H	40	Chilled Cast Iron	1.0D	0.5D	SFM (Vc)	765	760	785	740	750	790	815	740	825
					IPT (fz)	.0005	.0007	.0006	.0008	.0009	.0009	.0009	.0009	.0009
					RPM	12410	9190	7610	6000	5210	4800	4400	3600	3200
					IPM (FEED)	19	20	19	19	20	18	17	14	14



※ The Feed, in long & extra long types, should be reduced by around 50%.

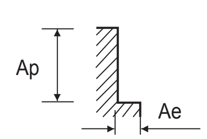
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG JET-POWER END MILLS — RECOMMENDED CUTTING CONDITIONS

EH852, EH831 SERIES — MULTI FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	25.0
P	1-4	Non-alloy steel	0.3D	1.5D	SFM(Vc)	965	960	950	990	980	990	965	990	1110
					IPT(fz)	.0020	.0026	.0025	.0030	.0035	.0039	.0044	.0044	.0039
					RPM	15600	11620	9200	8010	6800	6010	5200	4810	4300
					IPM(FEED)	92	92	91	95	94	95	92	86	85
	5		0.3D	1.5D	SFM(Vc)	765	760	785	740	750	790	815	740	825
					IPT(fz)	.0009	.0012	.0011	.0013	.0016	.0016	.0016	.0015	.0015
					RPM	12410	9190	7610	6000	5210	4800	4400	3600	3200
					IPM(FEED)	34	33	34	31	33	30	28	22	25
	6-7	Low alloy steel	0.3D	1.5D	SFM(Vc)	965	960	950	990	980	990	965	990	1110
					IPT(fz)	.0020	.0026	.0025	.0030	.0035	.0039	.0044	.0044	.0039
					RPM	15600	11620	9200	8010	6800	6010	5200	4810	4300
					IPM(FEED)	92	92	91	95	94	95	92	86	85
	8-9		0.3D	1.5D	SFM(Vc)	765	760	785	740	750	790	815	740	825
					IPT(fz)	.0009	.0012	.0011	.0013	.0016	.0016	.0016	.0015	.0015
					RPM	12410	9190	7610	6000	5210	4800	4400	3600	3200
					IPM(FEED)	34	33	34	31	33	30	28	22	25
	10	High alloyed steel, and tool steel	0.3D	1.5D	SFM(Vc)	965	960	950	990	980	990	965	990	1110
					IPT(fz)	.0020	.0026	.0025	.0030	.0035	.0039	.0044	.0044	.0039
					RPM	15600	11620	9200	8010	6800	6010	5200	4810	4300
					IPM(FEED)	92	92	91	95	94	95	92	86	85
	11.1-11.2		0.3D	1.5D	SFM(Vc)	765	760	785	740	750	790	815	740	825
					IPT(fz)	.0009	.0012	.0011	.0013	.0016	.0016	.0016	.0015	.0015
					RPM	12410	9190	7610	6000	5210	4800	4400	3600	3200
					IPM(FEED)	34	33	34	31	33	30	28	22	25
M	12-14.2	Stainless steel	D4~10:0.15D D12~16:0.1D D18~25:0.05D	1.5D	SFM(Vc)	520	520	525	520	520	545	505	495	560
					IPT(fz)	.0009	.0012	.0011	.0013	.0016	.0015	.0015	.0015	.0015
					RPM	8380	6290	5090	4190	3590	3300	2710	2400	2170
					IPM(FEED)	23	22	22	22	23	20	17	14	16
S	31-35	Heat Resistant Super Alloys	0.05D	1.0D	SFM(Vc)	150	150	135	145	130	130	130	135	155
					IPT(fz)	.0010	.0013	.0015	.0016	.0014	.0013	.0014	.0015	.0015
					RPM	2390	1790	1310	1190	910	800	710	650	600
					IPM(FEED)	7	7	8	8	5	4	4	4	4
	36-37	Titanium Alloys	D4~10:0.15D D12~16:0.1D D18~25:0.05D	1.0D	SFM(Vc)	520	520	525	520	520	545	505	495	560
					IPT(fz)	.0009	.0012	.0011	.0013	.0016	.0015	.0015	.0015	.0015
					RPM	8380	6290	5090	4190	3590	3300	2710	2400	2170
					IPM(FEED)	23	22	22	22	23	20	17	14	16
H	40	Chilled Cast Iron	0.3D	1.5D	SFM(Vc)	765	760	785	740	750	790	815	740	825
					IPT(fz)	.0009	.0012	.0011	.0013	.0016	.0016	.0016	.0015	.0015
					RPM	12410	9190	7610	6000	5210	4800	4400	3600	3200
					IPM(FEED)	34	33	34	31	33	30	28	22	25



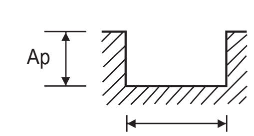
※ The Feed, in long & extra long types, should be reduced by around 50%.

YG JET-POWER END MILLS — RECOMMENDED CUTTING CONDITIONS

EH917, EH921 SERIES — MULTI FLUTE - SLOTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	6.0	8.0	10.0	12.0	16.0	20.0
P	1-4	Non-alloy steel	1.0D	0.5D	SFM(Vc)	965	960	950	990	990	990
					IPT(fz)	.0009	.0012	.0015	.0018	.0019	.0018
					RPM	15600	11620	9200	8010	6010	4810
					IPM(FEED)	54	55	55	57	57	51
	5		1.0D	0.5D	SFM(Vc)	765	760	785	740	790	740
					IPT(fz)	.0004	.0006	.0006	.0008	.0007	.0006
					RPM	12410	9190	7610	6000	4800	3600
					IPM(FEED)	20	20	19	19	18	14
	6-7	Low alloy steel	1.0D	0.5D	SFM(Vc)	965	960	950	990	990	990
					IPT(fz)	.0009	.0012	.0015	.0018	.0019	.0018
					RPM	15600	11620	9200	8010	6010	4810
					IPM(FEED)	54	55	55	57	57	51
	8-9		1.0D	0.5D	SFM(Vc)	765	760	785	740	790	740
					IPT(fz)	.0004	.0006	.0006	.0008	.0007	.0006
					RPM	12410	9190	7610	6000	4800	3600
					IPM(FEED)	20	20	19	19	18	14
	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM(Vc)	965	960	950	990	990	990
					IPT(fz)	.0009	.0012	.0015	.0018	.0019	.0018
					RPM	15600	11620	9200	8010	6010	4810
					IPM(FEED)	54	55	55	57	57	51
	11.1-11.2		1.0D	0.5D	SFM(Vc)	765	760	785	740	790	740
					IPT(fz)	.0004	.0006	.0006	.0008	.0007	.0006
					RPM	12410	9190	7610	6000	4800	3600
					IPM(FEED)	20	20	19	19	18	14
M	12-14.2	Stainless steel	1.0D	D4~10:0.25D D12~16:0.15D D18~25:0.1D	SFM(Vc)	520	520	525	520	545	495
					IPT(fz)	.0004	.0005	.0007	.0008	.0007	.0006
					RPM	8380	6290	5090	4190	3300	2400
					IPM(FEED)	13	13	14	13	12	9
S	31-35	Heat Resistant Super Alloys	1.0D	0.05D	SFM(Vc)	150	150	135	145	130	135
					IPT(fz)	.0005	.0006	.0009	.0010	.0006	.0006
					RPM	2390	1790	1310	1190	800	650
					IPM(FEED)	5	4	5	5	3	2
	36-37	Titanium Alloys	1.0D	D4~10:0.25D D12~16:0.15D D18~25:0.1D	SFM(Vc)	520	520	525	520	545	495
					IPT(fz)	.0004	.0005	.0007	.0008	.0007	.0006
					RPM	8380	6290	5090	4190	3300	2400
					IPM(FEED)	13	13	14	13	12	9
H	40	Chilled Cast Iron	1.0D	0.5D	SFM(Vc)	765	760	785	740	790	740
					IPT(fz)	.0004	.0006	.0006	.0008	.0007	.0006
					RPM	12410	9190	7610	6000	4800	3600
					IPM(FEED)	20	20	19	19	18	14



※ The Feed, in long & extra long types, should be reduced by around 50%.

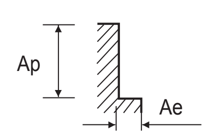
YG JET-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

EH917, EH921 SERIES — MULTI FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6.0	8.0	10.0	12.0	16.0	20.0
P	1-4	Non-alloy steel	0.3D	1.5D	SFM(Vc)	965	960	950	990	990	990
					IPT(fz)	.0015	.0020	.0025	.0030	.0031	.0030
					RPM	15600	11620	9200	8010	6010	4810
					IPM(FEED)	91	91	91	95	95	85
	5		0.3D	1.5D	SFM(Vc)	765	760	785	740	790	740
					IPT(fz)	.0007	.0009	.0011	.0013	.0013	.0010
					RPM	12410	9190	7610	6000	4800	3600
					IPM(FEED)	33	33	34	31	30	22
	6-7	Low alloy steel	0.3D	1.5D	SFM(Vc)	965	960	950	990	990	990
					IPT(fz)	.0015	.0020	.0025	.0030	.0031	.0030
					RPM	15600	11620	9200	8010	6010	4810
					IPM(FEED)	91	91	91	95	95	85
	8-9		0.3D	1.5D	SFM(Vc)	765	760	785	740	790	740
					IPT(fz)	.0007	.0009	.0011	.0013	.0013	.0010
					RPM	12410	9190	7610	6000	4800	3600
					IPM(FEED)	33	33	34	31	30	22
	10	High alloyed steel, and tool steel	0.3D	1.5D	SFM(Vc)	965	960	950	990	990	990
					IPT(fz)	.0015	.0020	.0025	.0030	.0031	.0030
					RPM	15600	11620	9200	8010	6010	4810
					IPM(FEED)	91	91	91	95	95	85
	11.1-11.2		0.3D	1.5D	SFM(Vc)	765	760	785	740	790	740
					IPT(fz)	.0007	.0009	.0011	.0013	.0013	.0010
					RPM	12410	9190	7610	6000	4800	3600
					IPM(FEED)	33	33	34	31	30	22
M	12-14.2	Stainless steel	D4~10:0.15D D12~16:0.1D D18~25:0.05D	1.5D	SFM(Vc)	520	520	525	520	545	495
					IPT(fz)	.0007	.0009	.0011	.0013	.0012	.0010
					RPM	8380	6290	5090	4190	3300	2400
					IPM(FEED)	22	23	22	22	20	14
S	31-35	Heat Resistant Super Alloys	0.05D	1.0D	SFM(Vc)	150	150	135	145	130	135
					IPT(fz)	.0008	.0010	.0015	.0016	.0011	.0010
					RPM	2390	1790	1310	1190	800	650
					IPM(FEED)	8	7	8	8	4	4
	36-37	Titanium Alloys	D4~10:0.15D D12~16:0.1D D18~25:0.05D	1.0D	SFM(Vc)	520	520	525	520	545	495
					IPT(fz)	.0007	.0009	.0011	.0013	.0012	.0010
					RPM	8380	6290	5090	4190	3300	2400
					IPM(FEED)	22	23	22	22	20	14
H	40	Chilled Cast Iron	0.3D	1.5D	SFM(Vc)	765	760	785	740	790	740
					IPT(fz)	.0007	.0009	.0011	.0013	.0013	.0010
					RPM	12410	9190	7610	6000	4800	3600
					IPM(FEED)	33	33	34	31	30	22



※ The Feed, in long & extra long types, should be reduced by around 50%.

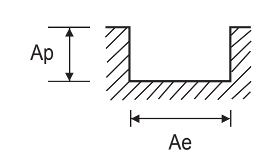
YG JET-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

EH919 SERIES — MULTI FLUTE - SLOTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 4.0	6.0	8.0	10.0	12.0	14.0	16.0	20.0	25.0
P	1-4	Non-alloy steel	1.0D	0.5D	SFM(Vc)	965	965	960	950	990	980	990	990	1110
					IPT(fz)	.0008	.0009	.0012	.0015	.0018	.0017	.0019	.0018	.0020
					RPM	23400	15600	11620	9200	8010	6800	6010	4810	4300
					IPM(FEED)	55	54	55	55	57	56	57	51	51
	5		1.0D	0.5D	SFM(Vc)	770	765	760	785	740	750	790	740	825
					IPT(fz)	.0004	.0004	.0006	.0006	.0008	.0007	.0007	.0006	.0007
					RPM	18620	12410	9190	7610	6000	5210	4800	3600	3200
					IPM(FEED)	20	20	20	19	19	19	18	14	14
	6-7	Low alloy steel	1.0D	0.5D	SFM(Vc)	965	965	960	950	990	980	990	990	1110
					IPT(fz)	.0008	.0009	.0012	.0015	.0018	.0017	.0019	.0018	.0020
					RPM	23400	15600	11620	9200	8010	6800	6010	4810	4300
					IPM(FEED)	55	54	55	55	57	56	57	51	51
	8-9		1.0D	0.5D	SFM(Vc)	770	765	760	785	740	750	790	740	825
					IPT(fz)	.0004	.0004	.0006	.0006	.0008	.0007	.0007	.0006	.0007
					RPM	18620	12410	9190	7610	6000	5210	4800	3600	3200
					IPM(FEED)	20	20	20	19	19	19	18	14	14
	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM(Vc)	965	965	960	950	990	980	990	990	1110
					IPT(fz)	.0008	.0009	.0012	.0015	.0018	.0017	.0019	.0018	.0020
					RPM	23400	15600	11620	9200	8010	6800	6010	4810	4300
					IPM(FEED)	55	54	55	55	57	56	57	51	51
	11.1-11.2		1.0D	0.5D	SFM(Vc)	770	765	760	785	740	750	790	740	825
					IPT(fz)	.0004	.0004	.0006	.0006	.0008	.0007	.0007	.0006	.0007
					RPM	18620	12410	9190	7610	6000	5210	4800	3600	3200
					IPM(FEED)	20	20	20	19	19	19	18	14	14
M	12-14.2	Stainless steel	1.0D	D4~10:0.25D D12~16:0.15D D18~25:0.1D	SFM(Vc)	520	520	520	525	520	520	545	495	560
					IPT(fz)	.0004	.0004	.0005	.0007	.0008	.0007	.0007	.0006	.0007
					RPM	12570	8380	6290	5090	4190	3590	3300	2400	2170
					IPM(FEED)	13	13	13	14	13	13	12	9	10
S	31-35	Heat Resistant Super Alloys	1.0D	0.05D	SFM(Vc)	150	150	150	135	145	130	130	135	155
					IPT(fz)	.0004	.0005	.0006	.0009	.0010	.0007	.0006	.0006	.0007
					RPM	3580	2390	1790	1310	1190	910	800	650	600
					IPM(FEED)	5	5	4	5	5	3	3	2	3
	36-37	Titanium Alloys	1.0D	D4~10:0.25D D12~16:0.15D D18~25:0.1D	SFM(Vc)	520	520	520	525	520	520	545	495	560
					IPT(fz)	.0004	.0004	.0005	.0007	.0008	.0007	.0007	.0006	.0007
					RPM	12570	8380	6290	5090	4190	3590	3300	2400	2170
					IPM(FEED)	13	13	13	14	13	13	12	9	10
H	40	Chilled Cast Iron	1.0D	0.5D	SFM(Vc)	770	765	760	785	740	750	790	740	825
					IPT(fz)	.0004	.0004	.0006	.0006	.0008	.0007	.0007	.0006	.0007
					RPM	18620	12410	9190	7610	6000	5210	4800	3600	3200
					IPM(FEED)	20	20	20	19	19	19	18	14	14



※ The Feed, in long & extra long types, should be reduced by around 50%.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

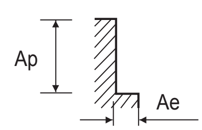
JET-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

EH919 SERIES — MULTI FLUTE - SIDE CUTTING

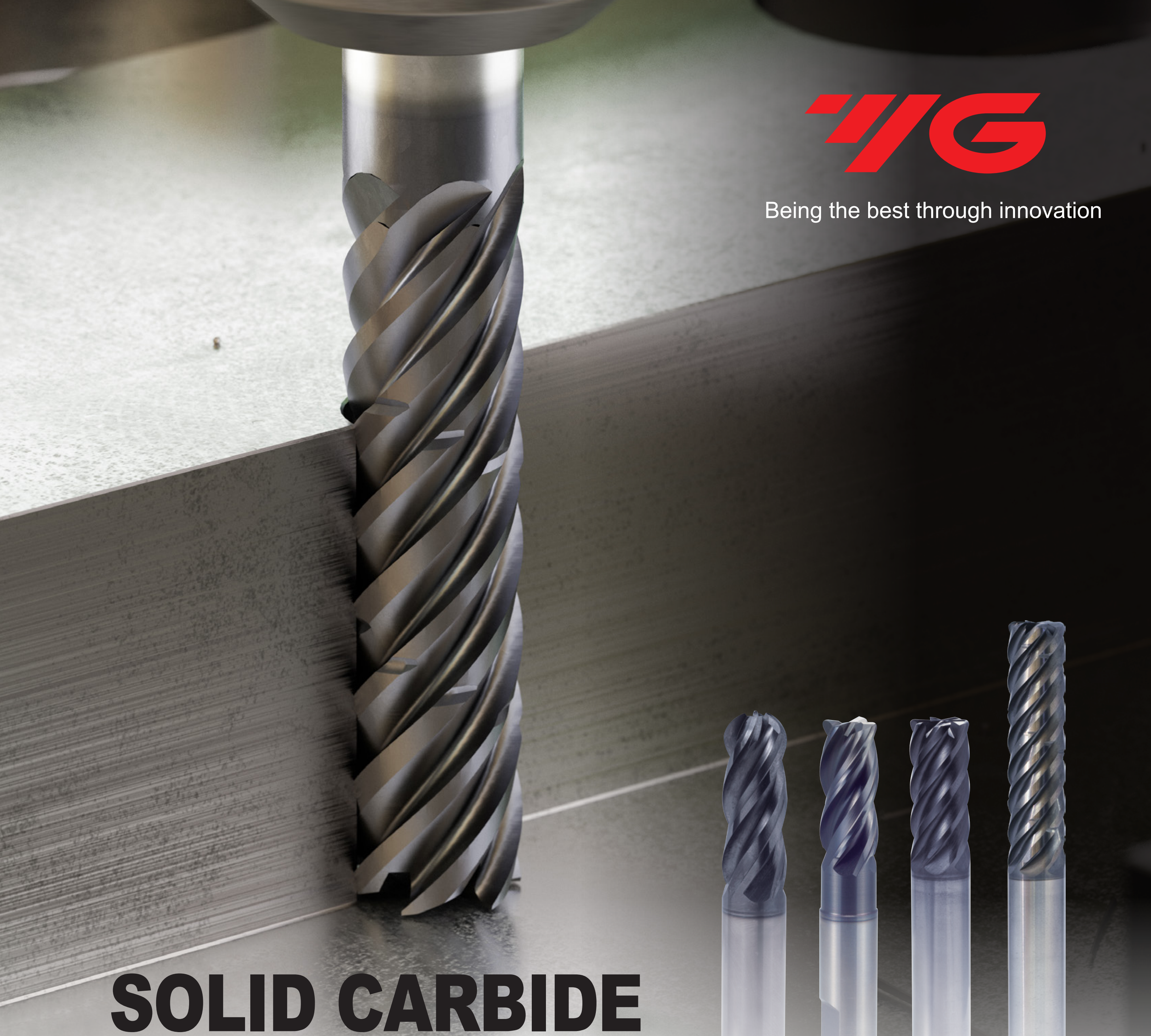
SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 4.0	6.0	8.0	10.0	12.0	14.0	16.0	20.0	25.0
P	1	Non-alloy steel	0.3D	1.5D	SFM (Vc)	965	965	960	950	990	980	990	990	1110
					IPT (fz)	.0013	.0015	.0020	.0025	.0030	.0028	.0031	.0030	.0033
					RPM	23400	15600	11620	9200	8010	6800	6010	4810	4300
					IPM (FEED)	91	91	91	91	95	95	95	85	84
	2-4		0.3D	1.5D	SFM (Vc)	965	965	960	950	990	980	990	990	1110
					IPT (fz)	.0008	.0009	.0012	.0015	.0018	.0017	.0019	.0018	.0020
					RPM	23400	15600	11620	9200	8010	6800	6010	4810	4300
					IPM (FEED)	55	54	55	55	57	56	57	51	51
	5		0.3D	1.5D	SFM (Vc)	770	765	760	785	740	750	790	740	825
					IPT (fz)	.0006	.0007	.0009	.0011	.0013	.0013	.0013	.0010	.0013
					RPM	18620	12410	9190	7610	6000	5210	4800	3600	3200
					IPM (FEED)	33	33	33	34	31	33	30	22	24
	6-7	Low alloy steel	0.3D	1.5D	SFM (Vc)	965	965	960	950	990	980	990	990	1110
					IPT (fz)	.0008	.0009	.0012	.0015	.0018	.0017	.0019	.0018	.0020
					RPM	23400	15600	11620	9200	8010	6800	6010	4810	4300
					IPM (FEED)	55	54	55	55	57	56	57	51	51
	8-9		0.3D	1.5D	SFM (Vc)	770	765	760	785	740	750	790	740	825
					IPT (fz)	.0006	.0007	.0009	.0011	.0013	.0013	.0013	.0010	.0013
					RPM	18620	12410	9190	7610	6000	5210	4800	3600	3200
					IPM (FEED)	33	33	33	34	31	33	30	22	24
	10	High alloyed steel, and tool steel	0.3D	1.5D	SFM (Vc)	965	965	960	950	990	980	990	990	1110
					IPT (fz)	.0008	.0009	.0012	.0015	.0018	.0017	.0019	.0018	.0020
					RPM	23400	15600	11620	9200	8010	6800	6010	4810	4300
					IPM (FEED)	55	54	55	55	57	56	57	51	51
	11.1-11.2		0.3D	1.5D	SFM (Vc)	770	765	760	785	740	750	790	740	825
					IPT (fz)	.0006	.0007	.0009	.0011	.0013	.0013	.0013	.0010	.0013
					RPM	18620	12410	9190	7610	6000	5210	4800	3600	3200
					IPM (FEED)	33	33	33	34	31	33	30	22	24
M	12-14.2	Stainless steel	D4~10:0.15D D12~16:0.1D D18~25:0.05D	1.5D	SFM (Vc)	520	520	520	525	520	520	545	495	560
					IPT (fz)	.0006	.0007	.0009	.0011	.0013	.0013	.0012	.0010	.0013
					RPM	12570	8380	6290	5090	4190	3590	3300	2400	2170
					IPM (FEED)	22	22	23	22	22	23	20	14	16
S	31-35	Heat Resistant Super Alloys	0.05D	1.0D	SFM (Vc)	150	150	150	135	145	130	130	135	155
					IPT (fz)	.0007	.0008	.0010	.0015	.0016	.0011	.0011	.0010	.0012
					RPM	3580	2390	1790	1310	1190	910	800	650	600
					IPM (FEED)	8	8	7	8	8	5	4	4	4
	36-37	Titanium Alloys	D4~10:0.15D D12~16:0.1D D18~25:0.05D	1.0D	SFM (Vc)	520	520	520	525	520	520	545	495	560
					IPT (fz)	.0006	.0007	.0009	.0011	.0013	.0013	.0012	.0010	.0013
					RPM	12570	8380	6290	5090	4190	3590	3300	2400	2170
					IPM (FEED)	22	22	23	22	22	23	20	14	16
H	40	Chilled Cast Iron	0.3D	1.5D	SFM (Vc)	770	765	760	785	740	750	790	740	825
					IPT (fz)	.0004	.0004	.0006	.0006	.0008	.0007	.0007	.0006	.0007
					RPM	18620	12410	9190	7610	6000	5210	4800	3600	3200
					IPM (FEED)	20	20	20	19	19	19	18	14	14



※ The Feed, in long & extra long types, should be reduced by around 50%.

Being the best through innovation



SOLID CARBIDE

V7 PLUS A END MILLS

- High performance carbide end mills for Steels, Cast Iron and Stainless Steels

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SOLID CARBIDE V7 PLUS A END MILLS

High performance carbide end mills for Steels, Cast Iron and Stainless Steels

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◎ : Excellent ○ : Good

Recommended cutting conditions : P 553

SERIES	UGMF68	UGMF76	UGMF70	UGMG53	UGMF69	UGMF77	UGMF71	UGMG54
FLUTE(Shank)	4 (Plain Shank)				4 (Weldon Flat)			
HELIX ANGLE	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)
CUTTING EDGE SHAPE	SQUARE	CHAMFER	CORNER RADIUS	BALL NOSE	SQUARE	CHAMFER	CORNER RADIUS	BALL NOSE
SIZE MIN	1/8	1/4	1/8	1/8	11/32	3/8	3/8	11/32
SIZE MAX	1	1	1	1	1	1	1	1
PAGE	C532-C534				C535			
	MULTIPLE LENGTH				MULTIPLE LENGTH			
	Y-Coating				Y-Coating			

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	UGMF68	UGMF76	UGMF70	UGMG53	UGMF69	UGMF77	UGMF71	UGMG54
P	1	Non-alloy steel	About 0.15% C Annealed	125		◎	◎	◎	◎	◎	◎	◎	◎
	2		About 0.45% C Annealed	190	13	◎	◎	◎	◎	◎	◎	◎	◎
	3		About 0.45% C Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎	◎	◎
	4		About 0.75% C Annealed	270	28	◎	◎	◎	◎	◎	◎	◎	◎
	5		About 0.75% C Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎	◎	◎
	6	Low alloy steel	Annealed	180	10	◎	◎	◎	◎	◎	◎	◎	◎
	7		Quenched & Tempered	275	29	◎	◎	◎	◎	◎	◎	◎	◎
	8		Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎	◎	◎
	9		Quenched & Tempered	350	38	◎	◎	◎	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel	Annealed	200	15	◎	◎	◎	◎	◎	◎	◎	◎
	11		Quenched & Tempered	325	35	◎	◎	◎	◎	◎	◎	◎	◎
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15	◎	◎	◎	◎	◎	◎	◎	◎
	13		Martensitic Quenched & Tempered	240	23	◎	◎	◎	◎	◎	◎	◎	◎
	14		Austenitic	180	10	◎	◎	◎	◎	◎	◎	◎	◎
K	15	Grey cast iron	Pearlitic / ferritic	180	10	◎	◎	◎	◎	◎	◎	◎	◎
	16		Pearlitic (Martensitic)	260	26	◎	◎	◎	◎	◎	◎	◎	◎
	17	Nodular cast iron	Ferritic	160	3	◎	◎	◎	◎	◎	◎	◎	◎
	18		Pearlitic	250	25	◎	◎	◎	◎	◎	◎	◎	◎
	19	Malleable cast iron	Ferritic	130		◎	◎	◎	◎	◎	◎	◎	◎
	20		Pearlitic	230	21	◎	◎	◎	◎	◎	◎	◎	◎
N	21	Aluminum-wrought alloy	Not Curable	60									
	22		Curable Hardened	100									
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75									
	24		≤ 12% Si, Curable Hardened	90									
	25		> 12% Si, Not Curable	130									
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110									
	27		CuZn, CuSnZn (Brass)	90									
	28		CuSn, lead Free copper and electrolytic copper	100									
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic										
	30		Rubber, Wood, etc.										
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15	○	○	○	○	○	○	○	○
	32		Fe Based Cured	280	30	○	○	○	○	○	○	○	○
	33		Ni or Co Based Annealed	250	25	○	○	○	○	○	○	○	○
	34		Ni or Co Based Cured	350	38	○	○	○	○	○	○	○	○
	35		Ni or Co Based Cast	320	34	○	○	○	○	○	○	○	○
	36	Titanium Alloys	Pure Titanium	400 Rm		○	○	○	○	○	○	○	○
	37		Alpha + Beta Alloys Hardened	1050 Rm		○	○	○	○	○	○	○	○
H	38	Hardened steel	Hardened	550	55								
	39		Hardened	630	60								
	40	Chilled Cast Iron	Cast	400	42								
	41	Hardened Cast Iron	Hardened	550	55								

SERIES	UGMF72	UGMF74	UGMH10	UGMF73	UGMF75	UGMG20	UGMG22	UGMG21	UGMG23	UGMH08	UGMH09	GMH72
FLUTE(Shank)	4 (Plain Shank)			4 (Weldon Flat)		6 (Plain Shank)		6 (Weldon Flat)		6 (Plain Shank)		
HELIX ANGLE	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	45°	45°	45°	45°	45°	45°	45°
CUTTING EDGE SHAPE	SQUARE	CORNER RADIUS	BALL NOSE	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	CORNER RADIUS
SIZE MIN	1/8	1/8	1/8	3/8	3/8	1/4	1/4	3/8	3/8	1/4	1/4	3/8
SIZE MAX	1	1	1	1	1	1	1	1	1	1	1	1
PAGE	C536-C537			C538		C543-C544		C545		C546-C547		C550
	EXTENDED REACH			EXTENDED REACH		MULTIPLE LENGTH		MULTIPLE LENGTH		EXTENDED REACH		MULTIPLE LENGTH
	Y-Coating			Y-Coating		Y-Coating		Y-Coating		Y-Coating		Y-Coating

ISO	VDI 3323	UGMF72	UGMF74	UGMH10	UGMF73	UGMF75	UGMG20	UGMG22	UGMG21	UGMG23	UGMH08	UGMH09	GMH72
P	1	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	2	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	4	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	6	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	9	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	11	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
M	12	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	14	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	15	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	16	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	17	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	18	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	19	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	20	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	21												
	22												
	23												
	24												
	25												
	26												
	27												
	28												
	29												
	30												
S	31	○	○	○	○	○	○	○	○	○	○	○	○
	32	○	○	○	○	○	○	○	○	○	○	○	○
	33	○	○	○	○	○	○	○	○	○	○	○	○
	34	○	○	○	○	○	○	○	○	○	○	○	○
	35	○	○	○	○	○	○	○	○	○	○	○	○
	36	○	○	○	○	○	○	○	○	○	○	○	○
	37	○	○	○	○	○	○	○	○	○	○	○	○
H	38												
	39												
	40												
	41												

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
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SOLID CARBIDE V7 PLUS A END MILLS

High performance carbide end mills for Steels, Cast Iron and Stainless Steels

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◎ : Excellent ○ : Good

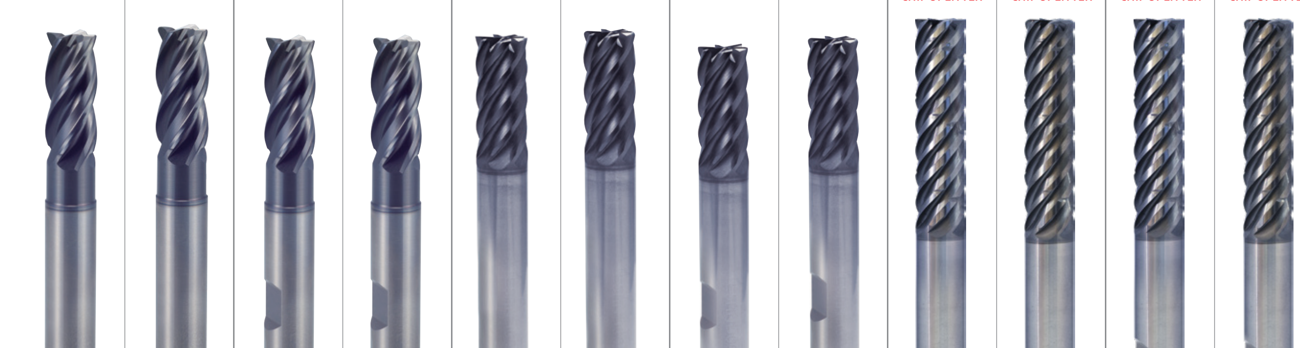
Recommended cutting conditions : P 36

SERIES	GMF52 GMF56	GMF54 GMF58	GMG55	GMF53 GMF57	GMF55 GMF59	GMG56
FLUTE(Shank)	4 (Plain Shank)			4 (Weldon Flat)		
HELIX ANGLE	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)
CUTTING EDGE SHAPE	CHAMFER	CORNER RADIUS	BALL NOSE	CHAMFER	CORNER RADIUS	BALL NOSE
SIZE MIN	3.0	3.0	3.0	3.0	3.0	3.0
SIZE MAX	25.0	25.0	25.0	25.0	25.0	25.0
PAGE	C539			C540		
	MULTIPLE LENGTH			MULTIPLE LENGTH		
	Y-Coating			Y-Coating		

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	GMF52 GMF56	GMF54 GMF58	GMG55	GMF53 GMF57	GMF55 GMF59	GMG56
P	1	Non-alloy steel	About 0.15% C Annealed	125		◎	◎	◎	◎	◎	◎
	2		About 0.45% C Annealed	190	13	◎	◎	◎	◎	◎	◎
	3		About 0.45% C Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎
	4		About 0.75% C Annealed	270	28	◎	◎	◎	◎	◎	◎
	5		About 0.75% C Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎
	6	Low alloy steel	Annealed	180	10	◎	◎	◎	◎	◎	◎
	7		Quenched & Tempered	275	29	◎	◎	◎	◎	◎	◎
	8		Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎
	9		Quenched & Tempered	350	38	◎	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel	Annealed	200	15	◎	◎	◎	◎	◎	◎
	11		Quenched & Tempered	325	35	◎	◎	◎	◎	◎	◎
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15	◎	◎	◎	◎	◎	◎
	13		Martensitic Quenched & Tempered	240	23	◎	◎	◎	◎	◎	◎
	14		Austenitic	180	10	◎	◎	◎	◎	◎	◎
K	15	Grey cast iron	Pearlitic / ferritic	180	10	◎	◎	◎	◎	◎	◎
	16		Pearlitic (Martensitic)	260	26	◎	◎	◎	◎	◎	◎
	17	Nodular cast iron	Ferritic	160	3	◎	◎	◎	◎	◎	◎
	18		Pearlitic	250	25	◎	◎	◎	◎	◎	◎
	19	Malleable cast iron	Ferritic	130		◎	◎	◎	◎	◎	◎
	20		Pearlitic	230	21	◎	◎	◎	◎	◎	◎
N	21	Aluminum-wrought alloy	Not Curable	60							
	22		Curable Hardened	100							
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75							
	24		≤ 12% Si, Curable Hardened	90							
	25		> 12% Si, Not Curable	130							
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110							
	27		CuZn, CuSnZn (Brass)	90							
	28		CuSn, lead Free copper and electrolytic copper	100							
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic								
	30		Rubber, Wood, etc.								
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15	○	○	○	○	○	○
	32		Fe Based Cured	280	30	○	○	○	○	○	○
	33		Ni or Co Based Annealed	250	25	○	○	○	○	○	○
	34		Ni or Co Based Cured	350	38	○	○	○	○	○	○
	35		Ni or Co Based Cast	320	34	○	○	○	○	○	○
	36	Titanium Alloys	Pure Titanium	400 Rm		○	○	○	○	○	○
	37		Alpha + Beta Alloys Hardened	1050 Rm		○	○	○	○	○	○
H	38	Hardened steel	Hardened	550	55						
	39		Hardened	630	60						
	40	Chilled Cast Iron	Cast	400	42						
	41	Hardened Cast Iron	Hardened	550	55						

YG YG-1 CO., LTD.

SERIES	GMF60	GMF62	GMF61	GMF63	GMG12 GMG14	GMG16 GMG18	GMG13 GMG15	GMG17 GMG19	GMH56	GMH58	GMH57	GMH59
FLUTE(Shank)	4 (Plain Shank)		4 (Weldon Flat)		6 (Plain Shank)		6 (Weldon Flat)		6 (Plain Shank)		6 (Weldon Flat)	
HELIX ANGLE	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	35°/37° (MULTIPLE HELIX)	45°	45°	45°	45°	45°	45°	45°	45°
CUTTING EDGE SHAPE	CHAMFER	CORNER RADIUS	CHAMFER	CORNER RADIUS	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS
SIZE MIN	3.0	3.0	3.0	3.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
SIZE MAX	20.0	20.0	20.0	20.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
PAGE	C541		C542		C548		C549		C551		C552	
	EXTENDED REACH		EXTENDED REACH		MULTIPLE LENGTH		MULTIPLE LENGTH		MULTIPLE LENGTH		MULTIPLE LENGTH	
	Y-Coating		Y-Coating		Y-Coating		Y-Coating		Y-Coating		Y-Coating	
									CHIP SPLITTER	CHIP SPLITTER	CHIP SPLITTER	CHIP SPLITTER



VDI	GMF60	GMF62	GMF61	GMF63	GMG12 GMG14	GMG16 GMG18	GMG13 GMG15	GMG17 GMG19	GMH56	GMH58	GMH57	GMH59	ISO
1	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	P
2	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
4	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
5	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
6	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
7	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
8	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
9	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
11	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
12	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	M
13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
14	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
15	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	K
16	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
17	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
18	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
19	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
20	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
21													N
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31	○	○	○	○	○	○	○	○	○	○	○	○	S
32	○	○	○	○	○	○	○	○	○	○	○	○	
33	○	○	○	○	○	○	○	○	○	○	○	○	
34	○	○	○	○	○	○	○	○	○	○	○	○	
35	○	○	○	○	○	○	○	○	○	○	○	○	
36	○	○	○	○	○	○	○	○	○	○	○	○	
37	○	○	○	○	○	○	○	○	○	○	○	○	
38													H
39													
40													
41													

YG YG-1 CO., LTD.

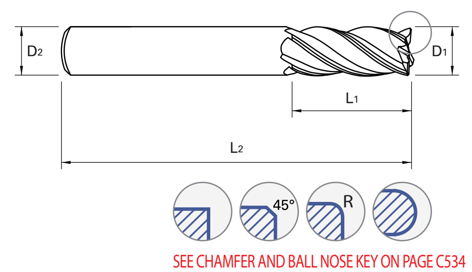
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

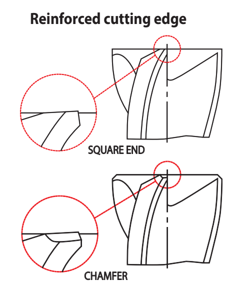
V7 PLUS A END MILLS

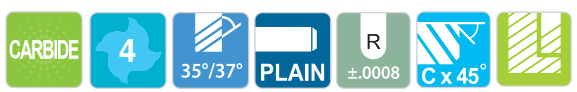
SQUARE **UGMF68** CHAMFER **UGMF76**
CORNER RADIUS **UGMF70** BALL NOSE **UGMG53**

CARBIDE, 4 FLUTE MULTIPLE LENGTH (PLAIN SHANK)

- Special flute geometry and multiple helix eliminate vibrations
- Excellent performance for stainless steels, mild steels, cast iron, low/medium hardness materials and all exotic materials up to HRc40
- Advanced coating for superior performance and tool life







p.C553-C555

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square End	Chamfer	Corner Radius								Ball Nose
						.010	.015	.030	.060	.090	.125	.190	.250	
				EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
1/8	1/8	1/8	1-1/2	UGMF68008		UGMF70008		UGMF70955						UGMG53901
		3/8	1-1/2	UGMF68901		UGMF70901		UGMF70902						UGMG53008
		1/2	2-1/2	UGMF68S915		UGMF70S956		UGMF70S957						UGMG53S902
5/32	3/16	3/16	2	UGMF68010		UGMF70010								UGMG53903
		7/16	2	UGMF68902		UGMF70958								UGMG53010
3/16	3/16	3/16	2	UGMF68012		UGMF70012								UGMG53904
		5/16	2	UGMF68916		UGMF70959		UGMF70960						UGMG53905
		7/16	2	UGMF68903		UGMF70903		UGMF70904						UGMG53012
		5/8	2-1/2	UGMF68S917		UGMF70S961		UGMF70S962						UGMG53S906
7/32	1/4	1/4	2	UGMF68014		UGMF70014								UGMG53907
		7/16	2-1/2	UGMF68904		UGMF70963								UGMG53014
1/4	1/4	3/8	2	UGMF68016	UGMF76016	UGMF70016		UGMF70905	UGMF70906					UGMG53908
		1/2	2-1/2	UGMF68918			UGMF70964	UGMF70965	UGMF70966					UGMG53016
		3/4	2-1/2	UGMF68905	UGMF76902	UGMF70907	UGMF70908	UGMF70909	UGMF70967					UGMG53909
		1	3	UGMF68S919			UGMF70S968	UGMF70S969	UGMF70S970					UGMG53S910
9/32	5/16	5/8	2-1/2	UGMF68018			UGMF70018	UGMF70971	UGMF70972					UGMG53018
		1	3	UGMF68S920			UGMF70S973	UGMF70S974						UGMG53S911
5/16	5/16	7/16	2	UGMF68020				UGMF70020						UGMG53912
		13/16	2-1/2	UGMF68906	UGMF76020	UGMF70910		UGMF70911	UGMF70912					UGMG53020
		1-1/4	3	UGMF68S921			UGMF70S975	UGMF70S976	UGMF70S977					UGMG53S913
11/32	3/8	1/2	2-1/2	UGMF68022				UGMF70022						UGMG53914
		13/16	2-1/2	UGMF68922				UGMF70978						UGMG53022

Mill Dia. Tolerance (inch)	Shank Dia.Tolerance
0 ~ -.0012	h5 (≥ Ø1/2" : h6)

▶ Length of cut in excess of 3xD on 37° single-helix requires feed reduction of approximately 50%

NEXT PAGE ▶

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

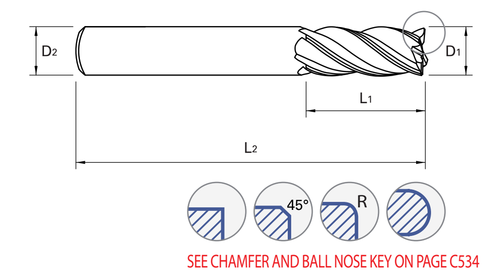
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

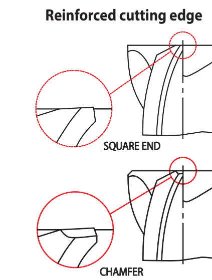
V7 PLUS A END MILLS

SQUARE **UGMF68** CHAMFER **UGMF76**
CORNER RADIUS **UGMF70** BALL NOSE **UGMG53**

CARBIDE, 4 FLUTE MULTIPLE LENGTH (PLAIN SHANK)

- Special flute geometry and multiple helix eliminate vibrations
- Excellent performance for stainless steels, mild steels, cast iron, low/medium hardness materials and all exotic materials up to HRc40
- Advanced coating for superior performance and tool life





p.C553-C555

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square End	Chamfer	Corner Radius								Ball Nose
						.010	.015	.030	.060	.090	.125	.190	.250	
				EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
3/8	3/8	1/2	2-1/2	UGMF68024	UGMF76903	UGMF70024		UGMF70913	UGMF70914	UGMF70979				UGMG53915
		7/8	2-1/2	UGMF68907	UGMF76024	UGMF70915		UGMF70916	UGMF70917	UGMF70980				UGMG53024
		1	3	UGMF68923		UGMF70981		UGMF70982	UGMF70983	UGMF70984				UGMG53916
		1-1/4	3	UGMF68S924		UGMF70S985		UGMF70S986	UGMF70S987	UGMF70S988				UGMG53S917
13/32	7/16	1/2	2-3/4	UGMF68026				UGMF70026						UGMG53026
		15/16	2-3/4	UGMF68925				UGMF70989						UGMG53918
7/16	7/16	5/8	2-1/2	UGMF68028			UGMF70028	UGMF70918	UGMF70990	UGMF70991				UGMG53919
		7/8	2-3/4	UGMF68926	UGMF76028		UGMF70992	UGMF70993	UGMF70994	UGMF70995				UGMG53920
		1	2-3/4	UGMF68908		UGMF70919		UGMF70920	UGMF70921					UGMG53028
15/32	1/2	5/8	2-1/2	UGMF68030				UGMF70030						UGMG53030
		1	3	UGMF68927				UGMF70996						UGMG53921
		1-1/4	3-1/2	UGMF68928				UGMF70997						UGMG53922
1/2	1/2	5/8	2-1/2	UGMF68032	UGMF76032	UGMF70032	UGMF70922	UGMF70923	UGMF70924	UGMF70998	UGMF70999			UGMG53923
		1	3	UGMF68909	UGMF76904	UGMF70925	UGMF70801	UGMF70926	UGMF70927	UGMF70802	UGMF70928			UGMG53032
		1 1/4	3	UGMF68941	UGMF76913	UGMF70899	UGMF70701	UGMF70702	UGMF70703	UGMF70704	UGMF70705			* UGMG53941
		1-1/4	3-1/2	UGMF68910	UGMF76901	UGMF70929	UGMF70930	UGMF70931	UGMF70932	UGMF70803	UGMF70933			UGMG53924
		1-5/8	4	UGMF68S929	UGMF76S905		UGMF70S804	UGMF70S805	UGMF70S806	UGMF70S807	UGMF70S808			UGMG53S925
		2	4	UGMF68S939			UGMF70S889	UGMF70S890	UGMF70S891	UGMF70S892	UGMF70S893			UGMG53S939
		2-1/2	4-1/2	UGMF68S940	UGMF76S906		UGMF70S894	UGMF70S895	UGMF70S896	UGMF70S897	UGMF70S898			UGMG53S940

▶ Length of cut in excess of 3xD on 37° single-helix requires feed reduction of approximately 50%

NEXT PAGE ▶

Mill Dia. Tolerance (inch)	Shank Dia.Tolerance
0 ~ -.0012	h5 (≥ Ø1/2" : h6)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

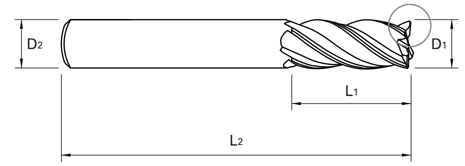
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

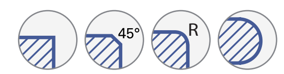
V7 PLUS A END MILLS

SQUARE UGMF68 | CHAMFER UGMF76 | CORNER RADIUS UGMF70 | BALL NOSE UGMG53

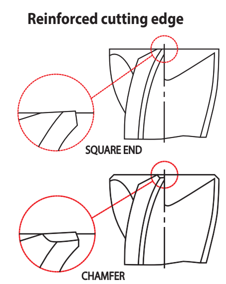
CARBIDE, 4 FLUTE MULTIPLE LENGTH (PLAIN SHANK)

- ▶ Special flute geometry and multiple helix eliminate vibrations
- ▶ Excellent performance for stainless steels, mild steels, cast iron, low/medium hardness materials and all exotic materials up to HRc40
- ▶ Advanced coating for superior performance and tool life





SEE CHAMFER AND BALL NOSE KEY ON PAGE C534



CARBIDE | 4 | 35°/37° | PLAIN | R ±.0008 | C x 45°

p.C553-C555

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square End EDP No.	Chamfer EDP No.	Corner Radius .010 EDP No.	Corner Radius .015 EDP No.	Corner Radius .030 EDP No.	Corner Radius .060 EDP No.	Corner Radius .090 EDP No.	Corner Radius .125 EDP No.	Corner Radius .190 EDP No.	Corner Radius .250 EDP No.	Ball Nose EDP No.
5/8	5/8	3/4	3	UGMF68040		UGMF70040	UGMF70809	UGMF70934	UGMF70935	UGMF70810	UGMF70811			UGMG53926
		1-1/4	3-1/2	UGMF68911	UGMF76040	UGMF70936	UGMF70937	UGMF70938	UGMF70939	UGMF70812	UGMF70940			UGMG53040
		1-5/8	4	UGMF68930	UGMF76907		UGMF70813	UGMF70814	UGMF70815	UGMF70816	UGMF70817			UGMG53927
		2	4	UGMF68S931			UGMF70S818	UGMF70S819	UGMF70S820	UGMF70S821	UGMF70S822			UGMG53S928
		3-1/4	6	UGMF68S932			UGMF70S823	UGMF70S824	UGMF70S825	UGMF70S826	UGMF70S827			UGMG53S929
3/4	3/4	3/4	3	UGMF68048	UGMF76908		UGMF70828	UGMF70048	UGMF70941	UGMF70829	UGMF70830	UGMF70831	UGMF70832	UGMG53930
		1-1/2	4	UGMF68912	UGMF76048		UGMF70942	UGMF70943	UGMF70944	UGMF70833	UGMF70945	UGMF70834	UGMF70835	UGMG53048
		1-7/8	4	UGMF68933			UGMF70836	UGMF70837	UGMF70838	UGMF70839	UGMF70840	UGMF70841	UGMF70842	UGMG53931
		2-1/4	5	UGMF68934	UGMF76909		UGMF70843	UGMF70844	UGMF70845	UGMF70846	UGMF70847	UGMF70848	UGMF70849	UGMG53932
		3-1/4	6	UGMF68S935			UGMF70S850	UGMF70S851	UGMF70S852	UGMF70S853	UGMF70S854	UGMF70S855	UGMF70S856	UGMG53S933
1	1	1	4	UGMF68064	UGMF76910		UGMF70064	UGMF70946	UGMF70947	UGMF70857	UGMF70858	UGMF70859	UGMF70860	UGMG53934
		1-1/2	4	UGMF68913	UGMF76064		UGMF70948	UGMF70949	UGMF70950	UGMF70861	UGMF70951	UGMF70862	UGMF70863	UGMG53064
		2	5	UGMF68914	UGMF76911		UGMF70952	UGMF70953	UGMF70954	UGMF70864	UGMF70865	UGMF70866	UGMF70867	UGMG53935
		2-5/8	5	UGMF68936	UGMF76912		UGMF70868	UGMF70869	UGMF70870	UGMF70871	UGMF70872	UGMF70873	UGMF70874	UGMG53936
		3	6	UGMF68937			UGMF70875	UGMF70876	UGMF70877	UGMF70878	UGMF70879	UGMF70880	UGMF70881	UGMG53937
		4-1/4	7	UGMF68S938			UGMF70S882	UGMF70S883	UGMF70S884	UGMF70S885	UGMF70S886	UGMF70S887	UGMF70S888	UGMG53S938

▶ Length of cut in excess of 3xD on 37° single-helix requires feed reduction of approximately 50%

Mill Dia. Tolerance (inch)	Shank Dia.Tolerance
0 ~ -.0012	h5 (≥ Ø1/2" : h6)

CHAMFER KEY

Mill Diameter	Chamfer Size
1/4	.007
5/16	.007
3/8	.011
7/16	.013
1/2	.013
5/8	.015
3/4	.019
1	.019

BALL NOSE KEY

Mill Diameter	Radius of Ball	Mill Diameter	Radius of Ball
1/8	1/16	11/32	11/64
5/32	5/64	3/8	3/16
3/16	3/32	7/16	7/32
7/32	7/64	1/2	1/4
1/4	1/8	5/8	5/16
9/32	9/64	3/4	3/8
5/16	5/32	1	1/2

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

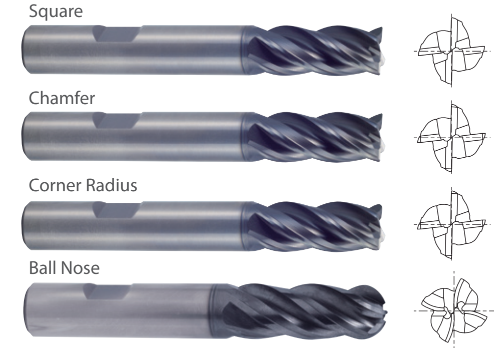
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

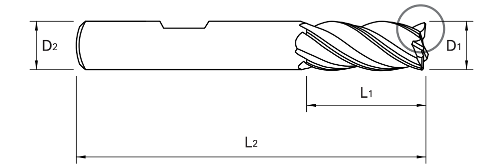
V7 PLUS A END MILLS

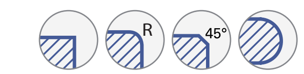
SQUARE UGMF69 | CHAMFER UGMF77 | CORNER RADIUS UGMF71 | BALL NOSE UGMG54

CARBIDE, 4 FLUTE MULTIPLE LENGTH (FLAT SHANK)

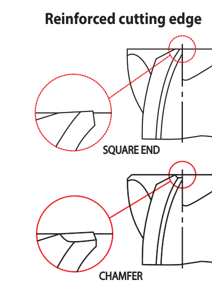
- ▶ Special flute geometry and multiple helix eliminate vibrations
- ▶ Excellent performance for stainless steels, mild steels, cast iron, low/medium hardness materials and all exotic materials up to HRc40
- ▶ Advanced coating for superior performance and tool life







SEE CHAMFER AND BALL NOSE KEY ON PAGE C534



CARBIDE | 4 | 35°/37° | FLAT | R ±.0008 | C x 45°

p.C553-C555

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square End EDP No.	Chamfer EDP No.	Corner Radius .010 EDP No.	Corner Radius .015 EDP No.	Corner Radius .030 EDP No.	Corner Radius .060 EDP No.	Corner Radius .090 EDP No.	Corner Radius .125 EDP No.	Ball Nose EDP No.
11/32	3/8	1/2	2-1/2	UGMF69022								
		13/16	2-1/2									UGMG54022
3/8	3/8	1/2	2-1/2	UGMF69024	UGMF77902	UGMF71024		UGMF71913	UGMF71914			
		7/8	2-1/2	UGMF69907	UGMF77024	UGMF71915		UGMF71916	UGMF71917			UGMG54024
7/16	7/16	5/8	2-1/2	UGMF69028			UGMF71028	UGMF71918				
		1	2-3/4	UGMF69908		UGMF71919		UGMF71920	UGMF71921			UGMG54028
1/2	1/2	5/8	2-1/2	UGMF69032	UGMF77032	UGMF71032	UGMF71922	UGMF71923	UGMF71924			
		1	3	UGMF69909	UGMF77903	UGMF71925		UGMF71926	UGMF70927		UGMF71928	UGMG54032
		1 1/4	3	UGMF69917	UGMF77908	UGMF71985	UGMF71986	UGMF71987	UGMF71988	UGMF71989	UGMF71990	UGMG54903
		1-1/4	3-1/2	UGMF69910	UGMF77901	UGMF71929	UGMF71930	UGMF71931	UGMF71932		UGMF71933	
		2	4	UGMF69S915			UGMF71S955	UGMF71S956	UGMF71S957	UGMF71S958	UGMF71S959	UGMG54S901
		2-1/2	4-1/2	UGMF69S916			UGMF71S960	UGMF71S961	UGMF71S962	UGMF71S963	UGMF71S964	UGMG54S902
5/8	5/8	3/4	3	UGMF69040	UGMF77904	UGMF71040		UGMF71934	UGMF71935			
		1-1/4	3-1/2	UGMF69911	UGMF77040	UGMF71936	UGMF71937	UGMF71938	UGMF71939		UGMF71940	UGMG54040
3/4	3/4	3/4	3	UGMF69048	UGMF77905			UGMF71048	UGMF71941			
		1-1/2	4	UGMF69912	UGMF77048		UGMF71942	UGMF71943	UGMF71944		UGMF71945	UGMG54048
1	1	1	4	UGMF69064	UGMF77906		UGMF71064	UGMF71946	UGMF71947			
		1-1/2	4	UGMF69913	UGMF77064		UGMF71948	UGMF71949	UGMF71950		UGMF71951	UGMG54064
		2	5	UGMF69914	UGMF77907		UGMF71952	UGMF71953	UGMF71954			

▶ Length of cut in excess of 3xD on 37° single-helix requires feed reduction of approximately 50%

Mill Dia. Tolerance (inch)	Shank Dia.Tolerance
0 ~ -.0012	h5 (≥ Ø1/2" : h6)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

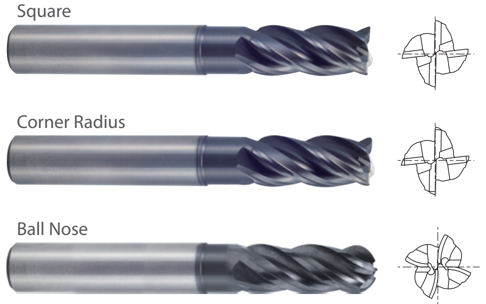
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

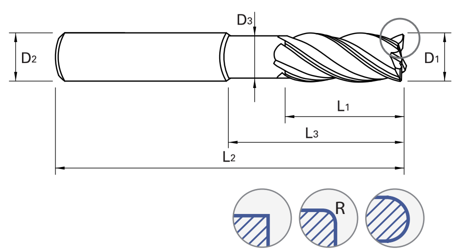
YG V7 PLUS A END MILLS

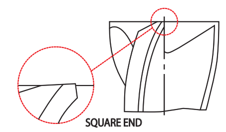
SQUARE **UGMF72** SERIES
CORNER RADIUS **UGMF74** SERIES
BALL NOSE **UGMH10** SERIES

CARBIDE, 4 FLUTE EXTENDED REACH (PLAIN SHANK)

- Special flute geometry and multiple helix eliminate vibrations
- Excellent performance for stainless steels, mild steels, cast iron, low/medium hardness materials and all exotic materials up to HRc40
- Advanced coating for superior performance and tool life







CARBIDE | 4 | 35°/37° | PLAIN | R ±.0008 p.C553-C555

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	LBS (L3)	OAL (L2)	Neck Dia (D3)	Square End	Corner Radius								Ball Nose Mill
							.010	.015	.030	.060	.090	.125	.190	.250	
						EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
1/8	1/8	5/32	3/8	3	.113	UGMF72008	UGMF74008		UGMF74913						UGMH10008
		5/32	1/2	3	.113	UGMF72913	UGMF74914		UGMF74915						UGMH10901
		5/32	5/8	3	.113	UGMF72914	UGMF74916		UGMF74917						UGMH10902
3/16	3/16	7/32	1/2	3	.176	UGMF72012	UGMF74012		UGMF74918						UGMH10012
		7/32	3/4	3	.176	UGMF72915	UGMF74919		UGMF74920						UGMH10903
		7/32	1	3	.176	UGMF72916	UGMF74921		UGMF74922						UGMH10904
1/4	1/4	3/8	3/4	4	.230	UGMF72016		UGMF74016	UGMF74923	UGMF74924					UGMH10016
		3/8	1-1/8	4	.230	UGMF72901		UGMF74901	UGMF74925	UGMF74926					UGMH10905
		3/8	2-1/8	4	.230	UGMF72902		UGMF74902	UGMF74927	UGMF74928					UGMH10906
3/8	3/8	1/2	1-1/8	4	.344	UGMF72024		UGMF74929	UGMF74024	UGMF74930	UGMF74931				UGMH10024
		1/2	2-1/8	4	.344	UGMF72903		UGMF74932	UGMF74903	UGMF74933	UGMF74934				UGMH10907
		1/2	3-1/8	5	.344	UGMF72922		UGMF74815	UGMF74816	UGMF74817	UGMF74818				UGMH10922
		1/2	3-1/8	6	.344	UGMF72904		UGMF74935	UGMF74904	UGMF74936	UGMF74937				UGMH10908
		1/2	4-1/8	6	.344	UGMF72917		UGMF74938	UGMF74939	UGMF74940	UGMF74941				UGMH10909
1/2	1/2	5/8	1-1/2	4	.461	UGMF72032		UGMF74942	UGMF74032	UGMF74943	UGMF74944	UGMF74945			UGMH10032
		5/8	2-1/4	4	.461	UGMF72905		UGMF74946	UGMF74905	UGMF74947	UGMF74948	UGMF74949			UGMH10910
		5/8	3-3/8	5	.461	UGMF72923		UGMF74819	UGMF74820	UGMF74821	UGMF74822	UGMF74823			UGMH10923
		5/8	3-3/8	6	.461	UGMF72906		UGMF74950	UGMF74906	UGMF74951	UGMF74952	UGMF74953			UGMH10911
		5/8	4-1/8	6	.461	UGMF72918		UGMF74954	UGMF74955	UGMF74956	UGMF74957	UGMF74958			UGMH10912

▶ Length of cut in excess of 3xD on 37° single-helix requires feed reduction of approximately 50%

NEXT PAGE ▶

Mill Dia. Tolerance (inch)	Shank Dia.Tolerance
0 ~ -.0012	h5 (≥ Ø1/2" : h6)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

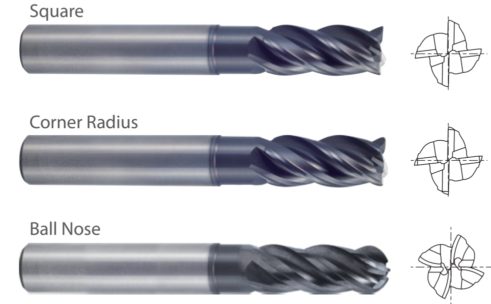
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

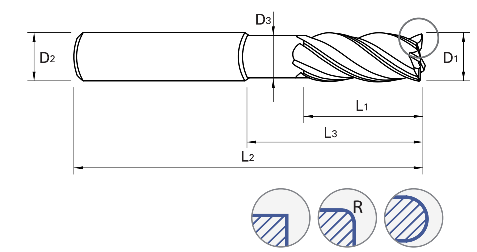
YG V7 PLUS A END MILLS

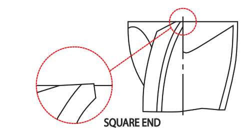
SQUARE **UGMF72** SERIES
CORNER RADIUS **UGMF74** SERIES
BALL NOSE **UGMH10** SERIES

CARBIDE, 4 FLUTE EXTENDED REACH (PLAIN SHANK)

- Special flute geometry and multiple helix eliminate vibrations
- Excellent performance for stainless steels, mild steels, cast iron, low/medium hardness materials and all exotic materials up to HRc40
- Advanced coating for superior performance and tool life







CARBIDE | 4 | 35°/37° | PLAIN | R ±.0008 p.C553-C555

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	LBS (L3)	OAL (L2)	Neck Dia (D3)	Square End	Corner Radius								Ball Nose Mill
							.010	.015	.030	.060	.090	.125	.190	.250	
						EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
5/8	5/8	3/4	1-5/8	4	.586	UGMF72040			UGMF74040	UGMF74959	UGMF74960	UGMF74961			UGMH10040
		3/4	2-3/8	5	.586	UGMF72924			UGMF74824	UGMF74825	UGMF74826	UGMF74827			UGMH10924
		3/4	3-3/8	5	.586	UGMF72925			UGMF74828	UGMF74829	UGMF74830	UGMF74831			UGMH10925
		3/4	2-3/8	6	.586	UGMF72907			UGMF74907	UGMF74962	UGMF74963	UGMF74964			UGMH10913
		3/4	3-3/8	6	.586	UGMF72908			UGMF74908	UGMF74965	UGMF74966	UGMF74967			UGMH10914
		3/4	4-1/8	6	.586	UGMF72919			UGMF74968	UGMF74969	UGMF74970	UGMF74971			UGMH10915
3/4	3/4	1	2	4	.711	UGMF72048			UGMF74048	UGMF74972	UGMF74973	UGMF74974	UGMF74975	UGMF74976	UGMH10048
		1	3	5	.711	UGMF72926			UGMF74832	UGMF74833	UGMF74834	UGMF74835	UGMF74836	UGMF74837	UGMH10926
		1	2-1/2	6	.711	UGMF72920			UGMF74977	UGMF74978	UGMF74979	UGMF74980	UGMF74981	UGMF74982	UGMH10916
		1	3	6	.711	UGMF72909			UGMF74909	UGMF74983	UGMF74984	UGMF74985	UGMF74986	UGMF74987	UGMH10917
		1	4	6	.711	UGMF72910			UGMF74910	UGMF74988	UGMF74989	UGMF74990	UGMF74991	UGMF74992	UGMH10918
1	1	1-1/8	2	4	.961	UGMF72064			UGMF74064	UGMF74993	UGMF74994	UGMF74995	UGMF74996	UGMF74997	UGMH10064
		1-1/8	2-5/8	5	.961	UGMF72927			UGMF74838	UGMF74839	UGMF74840	UGMF74841	UGMF74842	UGMF74843	UGMH10927
		1-1/8	3	5	.961	UGMF72928			UGMF74844	UGMF74845	UGMF74846	UGMF74847	UGMF74848	UGMF74849	UGMH10928
		1-1/8	2-5/8	6	.961	UGMF72921			UGMF74998	UGMF74999	UGMF74801	UGMF74802	UGMF74803	UGMF74804	UGMH10919
		1-1/8	3	6	.961	UGMF72911			UGMF74911	UGMF74805	UGMF74806	UGMF74807	UGMF74808	UGMF74809	UGMH10920
		1-1/8	4	6	.961	UGMF72912			UGMF74912	UGMF74810	UGMF74811	UGMF74812	UGMF74813	UGMF74814	UGMH10921

▶ Length of cut in excess of 3xD on 37° single-helix requires feed reduction of approximately 50%

Mill Dia. Tolerance (inch)	Shank Dia.Tolerance
0 ~ -.0012	h5 (≥ Ø1/2" : h6)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

V7 PLUS A END MILLS

SQUARE **UGMF73** SERIES
CORNER RADIUS **UGMF75** SERIES

CARBIDE, 4 FLUTE EXTENDED REACH (FLAT SHANK)

- Special flute geometry and multiple helix eliminate vibrations
- Excellent performance for stainless steels, mild steels, cast iron, low/medium hardness materials and all exotic materials up to HRc40
- Advanced coating for superior performance and tool life

Square

Corner Radius

D2 D1 L1 L3 L2 R

Reinforced cutting edge

SQUARE END

CARBIDE 4 35°/37° FLAT

p.C553-C554

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	LBS (L3)	OAL (L2)	Neck Dia (D3)	Square End EDP No.	Corner Radius .030 EDP No.
3/8	3/8	1/2	1-1/8	4	.344	UGMF73024	UGMF75024
		1/2	2-1/8	4	.344	UGMF73903	UGMF75903
		1/2	3-1/8	5	.344	UGMF73913	UGMF75913
		1/2	3-1/8	6	.344	UGMF73904	UGMF75904
1/2	1/2	5/8	1-1/2	4	.461	UGMF73032	UGMF75032
		5/8	2-1/4	4	.461	UGMF73905	UGMF75905
		5/8	3-3/8	5	.461	UGMF73914	UGMF75914
		5/8	3-3/8	6	.461	UGMF73906	UGMF75906
5/8	5/8	3/4	1-5/8	4	.586	UGMF73040	UGMF75040
		3/4	2-3/8	5	.586	UGMF73915	UGMF75915
		3/4	3-3/8	5	.586	UGMF73916	UGMF75916
		3/4	2-3/8	6	.586	UGMF73907	UGMF75907
		3/4	3-3/8	6	.586	UGMF73908	UGMF75908
3/4	3/4	1	2	4	.711	UGMF73048	UGMF75048
		1	3	5	.711	UGMF73917	UGMF75917
		1	3	6	.711	UGMF73909	UGMF75909
		1	4	6	.711	UGMF73910	UGMF75910
1	1	1-1/8	2	4	.961	UGMF73064	UGMF75064
		1-1/8	2-5/8	5	.961	UGMF73918	UGMF75918
		1-1/8	3	5	.961	UGMF73919	UGMF75919
		1-1/8	3	6	.961	UGMF73911	UGMF75911
		1-1/8	4	6	.961	UGMF73912	UGMF75912

▸ Length of cut in excess of 3xD on 37° single-helix requires feed reduction of approximately 50%

Mill Dia. Tolerance (inch)	Shank Dia.Tolerance
0 ~ -.0012	h5 (≥ Ø1/2" : h6)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

V7 PLUS A END MILLS

CHAMFER **GMF52 / GMF56** SERIES
CORNER RADIUS **GMF54 / GMF58** SERIES
BALL NOSE **GMG55** SERIES

CARBIDE, 4 FLUTE MULTIPLE LENGTH (PLAIN SHANK)

- Special flute geometry and multiple helix eliminate vibrations
- Excellent performance for stainless steels, mild steels, cast iron, low/medium hardness materials and all exotic materials up to HRc40
- Advanced coating for superior performance and tool life

Chamfer

Corner Radius

Ball Nose

D2 D1 L1 L2 45° R

Reinforced cutting edge

CHAMFER

CARBIDE 4 35°/37° PLAIN R ±0.02 mm C x 45°

p.C558-C560

Unit : Metric

OD (D1) Metric	OD (D1) Inch	SD (D2)	LOC (L1)	OAL (L2)	Chamfer EDP No.	Corner Radius 0.30 EDP No.	Corner Radius 0.50 EDP No.	Corner Radius 1.00 EDP No.	Corner Radius 2.00 EDP No.	Corner Radius 3.00 EDP No.	Ball Nose EDP No.
3.0	.1181	6	7	54	GMF52030	GMF54030	GMF54901				
		6	8	57	GMF56030	GMF58030	GMF58901				GMG55030
4.0	.1575	6	8	54	GMF52040	GMF54040	GMF54902				
		6	11	57	GMF56040	GMF58040	GMF58902				GMG55040
5.0	.1969	6	10	54	GMF52050	GMF54050	GMF54903				
		6	13	57	GMF56050	GMF58050	GMF58903				GMG55050
6.0	.2362	6	10	54	GMF52060	GMF54060	GMF54904	GMF54905			
		6	13	57	GMF56060	GMF58060	GMF58904	GMF58905			GMG55060
8.0	.3150	8	12	58	GMF52080		GMF54080	GMF54906			
		8	19	63	GMF56080		GMF58080	GMF58906			GMG55080
10.0	.3937	10	14	66	GMF52100		GMF54100	GMF54907			
		10	22	72	GMF56100		GMF58100	GMF58907			GMG55100
12.0	.4724	12	16	73	GMF52120		GMF54120	GMF54908	GMF54909		
		12	26	83	GMF56120		GMF58120	GMF58908	GMF58909		GMG55120
14.0	.5512	14	18	75	GMF52140		GMF54140				
		14	26	83	GMF56140		GMF58140				
16.0	.6299	16	22	82	GMF52160			GMF54160	GMF54912	GMF54913	
		16	32	92	GMF56160			GMF58160	GMF58912	GMF58913	GMG55160
18.0	.7087	18	24	84	GMF52180			GMF54180			
		18	32	92	GMF56180			GMF58180			
20.0	.7874	20	26	92	GMF52200			GMF54200	GMF54916	GMF54917	
		20	38	104	GMF56200			GMF58200	GMF58916	GMF58917	GMG55200
25.0	.9843	25	38	104	GMF56250			GMF58250			GMG55250

CHAMFER KEY

Mill Diameter Metric	Mill Diameter Inch	Chamfer Size (mm)
3.0	.1181	0.10
4.0	.1575	0.15
5.0	.1969	0.15
6.0	.2362	0.20
8.0	.3150	0.20
10.0	.3937	0.30
12.0	.4724	0.35
14.0	.5512	0.40
16.0	.6299	0.40
18.0	.7087	0.50
20.0	.7874	0.50
25.0	.9843	0.50

BALL NOSE KEY

Mill Diameter Metric	Mill Diameter Inch	Radius of Ball
3.0	.1181	1.5
4.0	.1575	2.0
5.0	.1969	2.5
6.0	.2362	3.0
8.0	.3150	4.0
10.0	.3937	5.0
12.0	.4724	6.0
16.0	.6299	8.0
20.0	.7874	10.0
25.0	.9843	12.5

Mill Dia. Tolerance (mm)		Shank Dia. Tolerance
Up to Ø12	0 ~ -0.02	h5 (≥ Ø12 : h6)
Over Ø12	0 ~ -0.03	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

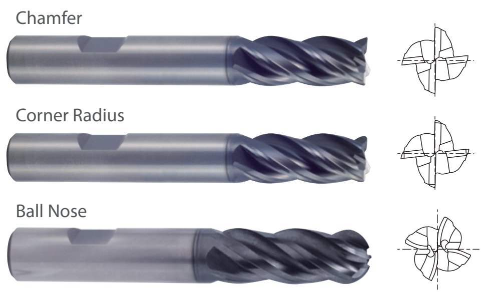
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

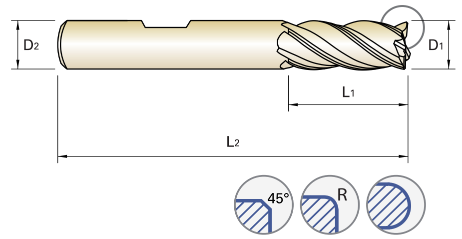
V7 PLUS A END MILLS

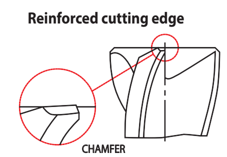
CHAMFER **GMF53 / GMF57 SERIES**
CORNER RADIUS **GMF55 / GMF59 SERIES**
BALL NOSE **GMG56 SERIES**

CARBIDE, 4 FLUTE MULTIPLE LENGTH (FLAT SHANK)

- Special flute geometry and multiple helix eliminate vibrations
- Excellent performance for stainless steels, mild steels, cast iron, low/medium hardness materials and all exotic materials up to HRc40
- Advanced coating for superior performance and tool life







CARBIDE | 4 | 35°/37° | FLAT | R ±0.02mm | C x 45°

p.C558-C560

Unit : Metric

OD (D1) Metric	OD (D1) Inch	SD (D2)	LOC (L1)	OAL (L2)	Chamfer EDP No.	Corner Radius 0.30 EDP No.	Corner Radius 0.50 EDP No.	Corner Radius 1.00 EDP No.	Corner Radius 2.00 EDP No.	Corner Radius 3.00 EDP No.	Ball Nose EDP No.
3.0	.1181	6	7	54	GMF53030	GMF55030	GMF55901				
		6	8	57	GMF57030	GMF59030	GMF59901				GMG56030
4.0	.1575	6	8	54	GMF53040	GMF55040	GMF55902				
		6	11	57	GMF57040	GMF59040	GMF59902				GMG56040
5.0	.1969	6	10	54	GMF53050	GMF55050	GMF55903				
		6	13	57	GMF57050	GMF59050	GMF59903				GMG56050
6.0	.2362	6	10	54	GMF53060	GMF55060	GMF55904	GMF55905			
		6	13	57	GMF57060	GMF59060	GMF59904	GMF59905			GMG56060
8.0	.3150	8	12	58	GMF53080		GMF55080	GMF55906			
		8	19	63	GMF57080		GMF59080	GMF59906			GMG56080
10.0	.3937	10	14	66	GMF53100		GMF55100	GMF55907			
		10	22	72	GMF57100		GMF59100	GMF59907			GMG56100
12.0	.4724	12	16	73	GMF53120		GMF55120	GMF55908	GMF55909		
		12	26	83	GMF57120		GMF59120	GMF59908	GMF59909		GMG56120
14.0	.5512	14	18	75	GMF53140		GMF55140				
		14	26	83	GMF57140		GMF59140				
16.0	.6299	16	22	82	GMF53160			GMF55160	GMF55912	GMF55913	
		16	32	92	GMF57160			GMF59160	GMF59912	GMF59913	GMG56160
18.0	.7087	18	24	84	GMF53180			GMF55180			
		18	32	92	GMF57180			GMF59180			
20.0	.7874	20	26	92	GMF53200			GMF55200	GMF55916	GMF55917	
		20	38	104	GMF57200			GMF59200	GMF59916	GMF59917	GMG56200
25.0	.9843	25	38	104	GMF57250			GMF59250			GMG56250

CHAMFER KEY

Mill Diameter Metric	Mill Diameter Inch	Chamfer Size (mm)
3.0	.1181	0.10
4.0	.1575	0.15
5.0	.1969	0.15
6.0	.2362	0.20
8.0	.3150	0.20
10.0	.3937	0.30
12.0	.4724	0.35
14.0	.5512	0.40
16.0	.6299	0.40
18.0	.7087	0.50
20.0	.7874	0.50
25.0	.9843	0.50

BALL NOSE KEY

Mill Diameter Metric	Mill Diameter Inch	Radius of Ball
3.0	.1181	1.5
4.0	.1575	2.0
5.0	.1969	2.5
6.0	.2362	3.0
8.0	.3150	4.0
10.0	.3937	5.0
12.0	.4724	6.0
16.0	.6299	8.0
20.0	.7874	10.0
25.0	.9843	12.5

Mill Dia. Tolerance (mm)		Shank Dia. Tolerance
Up to Ø12	0 ~ -0.02	h5 (≥ Ø12 : h6)
Over Ø12	0 ~ -0.03	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

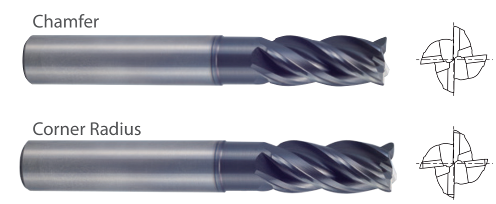
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

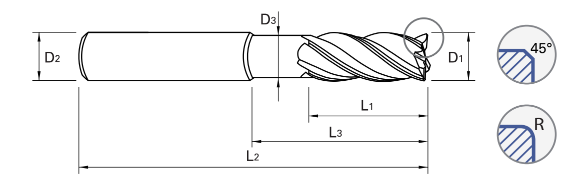
V7 PLUS A END MILLS

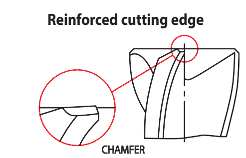
CHAMFER **GMF60 SERIES**
CORNER RADIUS **GMF62 SERIES**

CARBIDE, 4 FLUTE EXTENDED REACH (PLAIN SHANK)

- Special flute geometry and multiple helix eliminate vibrations
- Excellent performance for stainless steels, mild steels, cast iron, low/medium hardness materials and all exotic materials up to HRc40
- Advanced coating for superior performance and tool life







MG HM | 4 | 35°/37° | PLAIN | C x 45°

p.C558-C559

Unit : Metric

OD (D1) Metric	OD (D1) Inch	SD (D2)	LOC (L1)	LBS (L3)	OAL (L2)	Neck Dia (D3)	Chamfer EDP No.	Corner Radius 0.30 EDP No.	Corner Radius 0.50 EDP No.	Corner Radius 1.00 EDP No.	Corner Radius 2.00 EDP No.	Corner Radius 3.00 EDP No.
3.0	.1181	6	7	12	54	2.7	GMF60030	GMF62030	GMF62901			
		6	7	17	57	2.7	GMF60901	GMF62902	GMF62903			
		6	8	14	57	2.7	GMF60902					
4.0	.1575	6	8	15	57	3.7	GMF60040	GMF62040	GMF62904			
		6	8	22	63	3.7	GMF60903	GMF62905	GMF62906			
		6	11	16	57	3.7	GMF60904					
5.0	.1969	6	10	17	57	4.7	GMF60050	GMF62050	GMF62907			
		6	10	27	67	4.7	GMF60905	GMF62908	GMF62909			
		6	13	18	57	4.7	GMF60906					
6.0	.2362	6	10	15	57	5.5	GMF60060	GMF62060	GMF62910	GMF62911		
		6	10	20	62	5.5	GMF60907	GMF62912	GMF62913	GMF62914		
		6	10	32	74	5.5	GMF60908	GMF62915	GMF62916	GMF62917		
		6	13	21	57	5.5	GMF60909					
8.0	.3150	8	12	20	63	7.5	GMF60080		GMF62080	GMF62918		
		8	12	30	73	7.5	GMF60910		GMF62919	GMF62920		
		8	12	46	90	7.5	GMF60911		GMF62921	GMF62922		
		8	19	27	63	7.5	GMF60912					
10.0	.3937	10	14	25	72	9.2	GMF60100		GMF62100	GMF62923		
		10	14	35	82	9.2	GMF60913		GMF62924	GMF62925		
		10	14	55	102	9.2	GMF60914		GMF62926	GMF62927		
		10	22	32	72	9.2	GMF60915					
12.0	.4724	12	16	30	83	11.0	GMF60120		GMF62120	GMF62928	GMF62929	
		12	16	40	93	11.0	GMF60916		GMF62930	GMF62931	GMF62932	
		12	16	64	117	11.0	GMF60917		GMF62933	GMF62934	GMF62935	
		12	26	38	83	11.0	GMF60918					
16.0	.6299	16	22	38	92	15.0	GMF60160			GMF62160	GMF62936	GMF62937
		16	22	55	109	15.0	GMF60919			GMF62938	GMF62939	GMF62940
		16	22	87	141	15.0	GMF60920			GMF62941	GMF62942	GMF62943
		16	32	44	92	15.0	GMF60921					
20.0	.7874	20	26	50	104	19.0	GMF60200			GMF62200	GMF62944	GMF62945
		20	26	70	124	19.0	GMF60922			GMF62946	GMF62947	GMF62948
		20	26	110	164	19.0	GMF60923			GMF62949	GMF62950	GMF62951
		20	38	54	104	19.0	GMF60924					

CHAMFER KEY

Mill Diameter Metric	Mill Diameter Inch	Chamfer Size (mm)
3.0	.1181	0.10
4.0	.1575	0.15
5.0	.1969	0.15
6.0	.2362	0.20
8.0	.3150	0.20
10.0	.3937	0.30
12.0	.4724	0.35
16.0	.6299	0.40
20.0	.7874	0.50

Mill Dia. Tolerance (mm)		Shank Dia. Tolerance
Up to Ø12	0 ~ -0.02	h5
Over Ø12	0 ~ -0.03	(≥ Ø12 : h6)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

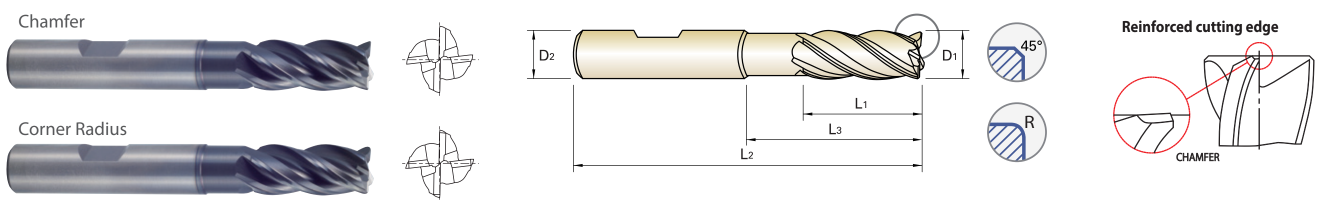
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG V7 PLUS A END MILLS

CHAMFER **GMF61** SERIES
CORNER RADIUS **GMF63** SERIES

CARBIDE, 4 FLUTE EXTENDED REACH(FLAT SHANK)

- ▶ Special flute geometry and multiple helix eliminate vibrations
- ▶ Excellent performance for stainless steels, mild steels, cast iron, low/medium hardness materials and all exotic materials up to HRc40
- ▶ Advanced coating for superior performance and tool life



CARBIDE | 4 | 35°/37° | FLAT | C x 45°

p.C558-C559

Unit : Metric

OD (D1) Metric	OD (D1) Inch	SD (D2)	LOC (L1)	LBS (L3)	OAL (L2)	Neck Dia (D3)	Chamfer 0.10 EDP No.	Corner Radius 0.30 EDP No.	0.50 EDP No.	1.00 EDP No.	2.00 EDP No.	3.00 EDP No.
3.0	.1181	6	7	12	54	2.7	GMF61030	GMF63030	GMF63901			
		6	7	17	57	2.7	GMF61901	GMF63902	GMF63903			
		6	8	14	57	2.7	GMF61902					
4.0	.1575	6	8	15	57	3.7	GMF61040	GMF63040	GMF63904			
		6	8	22	63	3.7	GMF61903	GMF63905	GMF63906			
		6	11	16	57	3.7	GMF61904					
5.0	.1969	6	10	17	57	4.7	GMF61050	GMF63050	GMF63907			
		6	10	27	67	4.7	GMF61905	GMF63908	GMF63909			
		6	13	18	57	4.7	GMF61906					
6.0	.2362	6	10	15	57	5.5	GMF61060	GMF63060	GMF63910	GMF63911		
		6	10	20	62	5.5	GMF61907	GMF63912	GMF63913	GMF63914		
		6	10	32	74	5.5	GMF61908	GMF63915	GMF63916	GMF63917		
		6	13	21	57	5.5	GMF61909					
8.0	.3150	8	12	20	63	7.5	GMF61080		GMF63080	GMF63918		
		8	12	30	73	7.5	GMF61910		GMF63919	GMF63920		
		8	12	46	90	7.5	GMF61911		GMF63921	GMF63922		
		8	19	27	63	7.5	GMF61912					
10.0	.3937	10	14	25	72	9.2	GMF61100		GMF63100	GMF63923		
		10	14	35	82	9.2	GMF61913		GMF63924	GMF63925		
		10	14	55	102	9.2	GMF61914		GMF63926	GMF63927		
		10	22	32	72	9.2	GMF61915					
12.0	.4724	12	16	30	83	11.0	GMF61120		GMF63120	GMF63928	GMF63929	
		12	16	40	93	11.0	GMF61916		GMF63930	GMF63931	GMF63932	
		12	16	64	117	11.0	GMF61917		GMF63933	GMF63934	GMF63935	
		12	26	38	83	11.0	GMF61918					
16.0	.6299	16	22	38	92	15.0	GMF61160			GMF63160	GMF63936	GMF63937
		16	22	55	109	15.0	GMF61919			GMF63938	GMF63939	GMF63940
		16	22	87	141	15.0	GMF61920			GMF63941	GMF63942	GMF63943
		16	32	44	92	15.0	GMF61921					
20.0	.7874	20	26	50	104	19.0	GMF61200			GMF63200	GMF63944	GMF63945
		20	26	70	124	19.0	GMF61922			GMF63946	GMF63947	GMF63948
		20	26	110	164	19.0	GMF61923			GMF63949	GMF63950	GMF63951
		20	38	54	104	19.0	GMF61924					

CHAMFER KEY		
Mill Diameter Metric	Mill Diameter Inch	Chamfer Size (mm)
3.0	.1181	0.10
4.0	.1575	0.15
5.0	.1969	0.15
6.0	.2362	0.20
8.0	.3150	0.20
10.0	.3937	0.30
12.0	.4724	0.35
16.0	.6299	0.40
20.0	.7874	0.50

Mill Dia. Tolerance (mm)		Shank Dia. Tolerance
Up to Ø12	0 ~ -0.02	h5
Over Ø12	0 ~ -0.03	(≥ Ø12 : h6)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

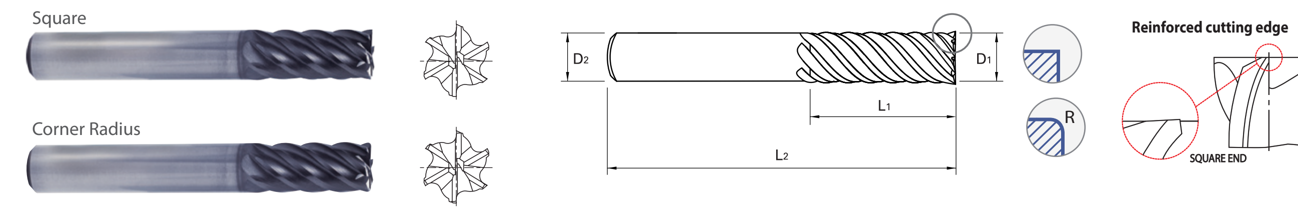
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

YG V7 PLUS A END MILLS

SQUARE **UGMG20** SERIES
CORNER RADIUS **UGMG22** SERIES

CARBIDE, 6 FLUTE MULTIPLE LENGTH (PLAIN SHANK)

- ▶ The unique geometry of the variable pitch provides the best chatter free tool for high speed and trochoidal milling
- ▶ Excellent performance for Stainless Steels, Mild Steels, Cast Iron, Low/Medium hardness materials under HRc40



CARBIDE | 6 | 45° | PLAIN

p.C556

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square End EDP No.	Corner Radius .015 EDP No.	.030 EDP No.	.060 EDP No.	.090 EDP No.	.120 EDP No.	.125 EDP No.	.190 EDP No.	.250 EDP No.
1/4	1/4	1/2	2-1/2	UGMG20914	UGMG22956	UGMG22957	UGMG22958					
		3/4	2-1/2	UGMG20016	UGMG22016	UGMG22959	UGMG22960					
		1-1/8	3	UGMG20901	UGMG22901	UGMG22902	UGMG22961					
		1-1/2	4	UGMG20902	UGMG22903	UGMG22904	UGMG22962					
5/16	5/16	3/4	2-1/2	UGMG20020	UGMG22020							
		1-1/4	3	UGMG20903	UGMG22905	UGMG22906						
		1-5/8	4	UGMG20904	UGMG22907	UGMG22908						
3/8	3/8	5/8	2-1/2	UGMG20915	UGMG22963	UGMG22964	UGMG22965	UGMG22966				
		1	3	UGMG20024	UGMG22024	UGMG22909	UGMG22910	UGMG22967				
		1-1/2	4	UGMG20905	UGMG22911	UGMG22912	UGMG22913	UGMG22968				
		2	4	UGMG20906	UGMG22914	UGMG22915	UGMG22916	UGMG22969				
1/2	1/2	5/8	3	UGMG20916	UGMG22970	UGMG22971	UGMG22972	UGMG22973		UGMG22974		
		1	3	UGMG20917	UGMG22032	UGMG22917	UGMG22918	UGMG22975		UGMG22976		
		1	3-1/4	UGMG20032								
		1-1/4	3	UGMG20930	UGMG22880	UGMG22881	UGMG22882	UGMG22883	UGMG22884	UGMG22885		
		1-1/4	3-1/2	UGMG20907	UGMG22977	UGMG22919	UGMG22920	UGMG22921	UGMG22922	UGMG22978		
		1-5/8	4	UGMG20918	UGMG22979	UGMG22980	UGMG22981	UGMG22982		UGMG22983		
		2	4	UGMG20908	UGMG22984	UGMG22923	UGMG22924	UGMG22925	UGMG22926	UGMG22985		
		2-5/8	5	UGMG20919	UGMG22986	UGMG22987	UGMG22988	UGMG22989		UGMG22990		
		3	5	UGMG20909	UGMG22991	UGMG22927	UGMG22928	UGMG22929	UGMG22930	UGMG22992		

NEXT PAGE ▶

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-.0012	h5 (≥ Ø12 : h6)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

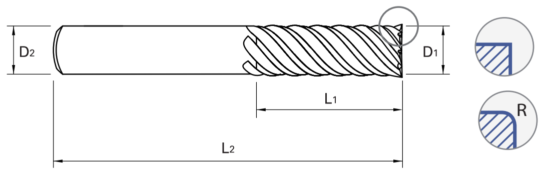
V7 PLUS A END MILLS

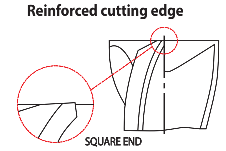
SQUARE **UGMG20** SERIES

CORNER RADIUS **UGMG22** SERIES

CARBIDE, 6 FLUTE MULTIPLE LENGTH (PLAIN SHANK)

- The unique geometry of the variable pitch provides the best chatter free tool for high speed and trochoidal milling
- Excellent performance for Stainless Steels, Mild Steels, Cast Iron, Low/Medium hardness materials under HRc40





CARBIDE 6 45° PLAIN p.C556

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square End	Corner Radius							
					.015	.030	.060	.090	.120	.125	.190	.250
				EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
5/8	5/8	3/4	3	UGMG20920	UGMG22993	UGMG22994	UGMG22995	UGMG22996		UGMG22997		
		1-1/4	3-1/2	UGMG20040	UGMG22998	UGMG22040	UGMG22931	UGMG22932	UGMG22933	UGMG22999		
		1-7/8	4	UGMG20921	UGMG22801	UGMG22802	UGMG22803	UGMG22804		UGMG22805		
		2	4	UGMG20910	UGMG22806	UGMG22934	UGMG22935	UGMG22936	UGMG22937	UGMG22807		
		2-5/8	5	UGMG20922	UGMG22808	UGMG22809	UGMG22810	UGMG22811		UGMG22812		
		3	5	UGMG20911	UGMG22813	UGMG22938	UGMG22939	UGMG22940	UGMG22941	UGMG22814		
3/4	3/4	1	3-1/2	UGMG20923	UGMG22815	UGMG22816	UGMG22817	UGMG22818		UGMG22819	UGMG22820	UGMG22821
		1-1/2	4	UGMG20048	UGMG22822	UGMG22048	UGMG22942	UGMG22943	UGMG22944	UGMG22823	UGMG22824	UGMG22825
		1-7/8	5	UGMG20924	UGMG22826	UGMG22827	UGMG22828	UGMG22829		UGMG22830	UGMG22831	UGMG22832
		2-1/4	5	UGMG20925	UGMG22833	UGMG22834	UGMG22835	UGMG22836		UGMG22837	UGMG22838	UGMG22839
		2-3/4	5	UGMG20926	UGMG22840	UGMG22841	UGMG22842	UGMG22843		UGMG22844	UGMG22845	UGMG22846
		3	5-1/2	UGMG20912	UGMG22847	UGMG22945	UGMG22946	UGMG22947	UGMG22948	UGMG22848	UGMG22849	UGMG22850
1	1	1-1/2	4	UGMG20064	UGMG22851	UGMG22064	UGMG22949	UGMG22950	UGMG22951	UGMG22852	UGMG22853	UGMG22854
		2	5	UGMG20927	UGMG22855	UGMG22856	UGMG22857	UGMG22858		UGMG22859	UGMG22860	UGMG22861
		2-5/8	5	UGMG20928	UGMG22862	UGMG22863	UGMG22864	UGMG22865		UGMG22866	UGMG22867	UGMG22868
		3-1/4	6	UGMG20929	UGMG22869	UGMG22870	UGMG22871	UGMG22872		UGMG22873	UGMG22874	UGMG22875
		4	7	UGMG20913	UGMG22876	UGMG22952	UGMG22953	UGMG22954	UGMG22955	UGMG22877	UGMG22878	UGMG22879

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-.0012	h5 (≥ Ø12 : h6)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

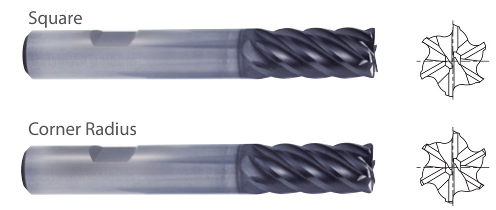
V7 PLUS A END MILLS

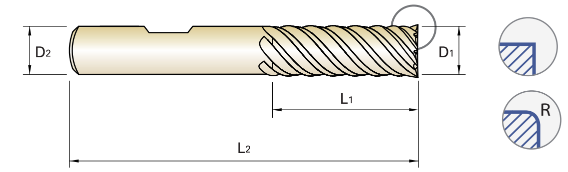
SQUARE **UGMG21** SERIES

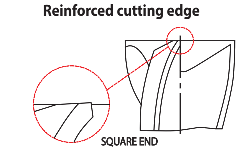
CORNER RADIUS **UGMG23** SERIES

CARBIDE, 6 FLUTE MULTIPLE LENGTH (FLAT SHANK)

- The unique geometry of the variable pitch provides the best chatter free tool for high speed and trochoidal milling
- Excellent performance for Stainless Steels, Mild Steels, Cast Iron, Low/Medium hardness materials under HRc40







CARBIDE 6 45° FLAT p.C556

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square End	Corner Radius				
					.015	.030	.060	.090	.120
				EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
3/8	3/8	1	3	UGMG21024	UGMG23024	UGMG23909	UGMG23910		
		1-1/2	4	UGMG21905	UGMG23911	UGMG23912	UGMG23913		
		2	4	UGMG21906	UGMG23914	UGMG23915	UGMG23916		
1/2	1/2	1	3	UGMG21914	UGMG23032	UGMG23917	UGMG23918		
		1	3-1/4	UGMG21032					
		1-1/4	3	UGMG21915	UGMG23956	UGMG23957	UGMG23958	UGMG23959	UGMG23960
		1-1/4	3-1/2	UGMG21907		UGMG23919	UGMG23920	UGMG23921	UGMG23922
		2	4	UGMG21908		UGMG23923	UGMG23924	UGMG23925	UGMG23926
		3	5	UGMG21909		UGMG23927	UGMG23928	UGMG23929	UGMG23930
5/8	5/8	1-1/4	3-1/2	UGMG21040		UGMG23040	UGMG23931	UGMG23932	UGMG23933
		2	4	UGMG21910		UGMG23934	UGMG23935	UGMG23936	UGMG23937
		3	5	UGMG21911		UGMG23938	UGMG23939	UGMG23940	UGMG23941
3/4	3/4	1-1/2	4	UGMG21048		UGMG23048	UGMG23942	UGMG23943	UGMG23944
		3	5-1/2	UGMG21912		UGMG23945	UGMG23946	UGMG23947	UGMG23948
1	1	1-1/2	4	UGMG21064		UGMG23064	UGMG23949	UGMG23950	UGMG23951
		4	7	UGMG21913		UGMG23952	UGMG23953	UGMG23954	UGMG23955

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-.0012	h5 (≥ Ø12 : h6)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

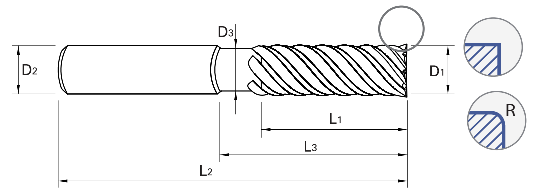
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

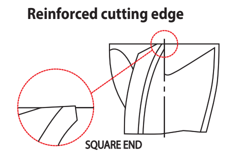
V7 PLUS A END MILLS

SQUARE **UGMH08** SERIES
CORNER RADIUS **UGMH09** SERIES

CARBIDE, 6 FLUTE EXTENDED REACH (PLAIN SHANK)

▶The unique geometry of the variable pitch provides the best chatter free tool for high speed and trochoidal milling
▶Excellent performance for Stainless Steels, Mild Steels, Cast Iron, Low/Medium hardness materials under HRc40





CARBIDE 6 45° PLAIN p.C556

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	LBS (L3)	OAL (L2)	Neck Dia (D3)	Square End	Corner Radius					
							.030	.060	.090	.125	.190	.250
						EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
1/4	1/4	3/8	3/4	4	.230	UGMH08016	UGMH09016	UGMH09901				
		3/8	1-1/8	4	.230	UGMH08901	UGMH09902	UGMH09903				
		3/8	2-1/8	4	.230	UGMH08902	UGMH09904	UGMH09905				
3/8	3/8	1/2	1-1/8	4	.344	UGMH08024	UGMH09024	UGMH09906	UGMH09907			
		1/2	2-1/8	4	.344	UGMH08903	UGMH09908	UGMH09909	UGMH09910			
		1/2	3-1/8	5	.344	UGMH08919	UGMH09999	UGMH09801	UGMH09802			
		1/2	3-1/8	6	.344	UGMH08904	UGMH09911	UGMH09912	UGMH09913			
		1/2	4-1/8	6	.344	UGMH08905	UGMH09914	UGMH09915	UGMH09916			
1/2	1/2	5/8	1-1/2	4	.461	UGMH08032	UGMH09032	UGMH09917	UGMH09918	UGMH09919		
		5/8	2-1/4	4	.461	UGMH08906	UGMH09920	UGMH09921	UGMH09922	UGMH09923		
		5/8	3-3/8	5	.461	UGMH08920	UGMH09803	UGMH09804	UGMH09805	UGMH09806		
		5/8	3-3/8	6	.461	UGMH08907	UGMH09924	UGMH09925	UGMH09926	UGMH09927		
		5/8	4-1/8	6	.461	UGMH08908	UGMH09928	UGMH09929	UGMH09930	UGMH09931		
5/8	5/8	3/4	1-5/8	4	.586	UGMH08040	UGMH09040	UGMH09932	UGMH09933	UGMH09934		
		3/4	2-3/8	5	.586	UGMH08921	UGMH09807	UGMH09808	UGMH09809	UGMH09810		
		3/4	3-3/8	5	.586	UGMH08922	UGMH09811	UGMH09812	UGMH09813	UGMH09814		
		3/4	2-3/8	6	.586	UGMH08909	UGMH09935	UGMH09936	UGMH09937	UGMH09938		
		3/4	3-3/8	6	.586	UGMH08910	UGMH09939	UGMH09940	UGMH09941	UGMH09942		
		3/4	4-1/8	6	.586	UGMH08911	UGMH09943	UGMH09944	UGMH09945	UGMH09946		

NEXT PAGE ▶

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-.0012	h5 (≥ Ø12 : h6)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

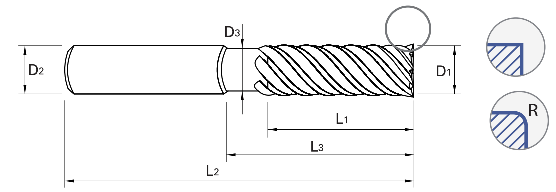
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

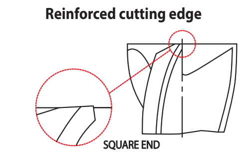
V7 PLUS A END MILLS

SQUARE UGMH08 SERIES
CORNER RADIUS UGMH09 SERIES

CARBIDE, 6 FLUTE EXTENDED REACH (PLAIN SHANK)

▶The unique geometry of the variable pitch provides the best chatter free tool for high speed and trochoidal milling
▶Excellent performance for Stainless Steels, Mild Steels, Cast Iron, Low/Medium hardness materials under HRc40





CARBIDE 6 45° PLAIN p.C556

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	LBS (L3)	OAL (L2)	Neck Dia (D3)	Square End	Corner Radius					
							.030	.060	.090	.125	.190	.250
						EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
3/4	3/4	1-1/8	2	4	.711	UGMH08048	UGMH09048	UGMH09947	UGMH09948	UGMH09949	UGMH09950	UGMH09951
		1-1/8	2-5/8	5	.711	UGMH08912	UGMH09952	UGMH09953	UGMH09954	UGMH09955	UGMH09956	UGMH09957
		1-1/8	3-1/4	6	.711	UGMH08913	UGMH09958	UGMH09959	UGMH09960	UGMH09961	UGMH09962	UGMH09963
		1-1/8	4-1/4	7	.711	UGMH08914	UGMH09964	UGMH09965	UGMH09966	UGMH09967	UGMH09968	UGMH09969
1	1	1-1/4	2-1/4	4	.961	UGMH08064	UGMH09064	UGMH09970	UGMH09971	UGMH09972	UGMH09973	UGMH09974
		1-1/4	2-5/8	5	.961	UGMH08915	UGMH09975	UGMH09976	UGMH09977	UGMH09978	UGMH09979	UGMH09980
		1-1/4	3-1/4	6	.961	UGMH08916	UGMH09981	UGMH09982	UGMH09983	UGMH09984	UGMH09985	UGMH09986
		1-1/4	4-1/4	7	.961	UGMH08917	UGMH09987	UGMH09988	UGMH09989	UGMH09990	UGMH09991	UGMH09992
		1-1/4	5-1/4	8	.961	UGMH08918	UGMH09993	UGMH09994	UGMH09995	UGMH09996	UGMH09997	UGMH09998

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-.0012	h5 (≥ Ø12 : h6)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

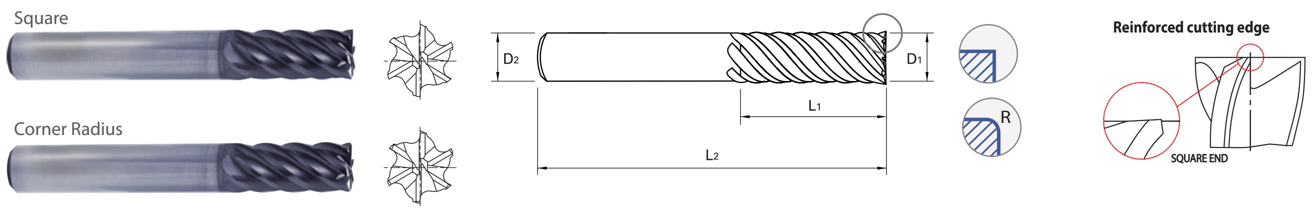
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

YG V7 PLUS A END MILLS

SQUARE **GMG12 / GMG14** SERIES
CORNER RADIUS **GMG16 / GMG18** SERIES

CARBIDE, 6 FLUTE MULTIPLE LENGTH (PLAIN SHANK)

- The unique geometry of the variable pitch provides the best chatter free tool for high speed and trochoidal milling
- Excellent performance for Stainless Steels, Mild Steels, Cast Iron, Low/Medium hardness materials under HRc40



CARBIDE | 6 | 45° | PLAIN p.C561

Unit : Metric

OD (D1) Metric	OD (D1) Inch	SD (D2)	LOC (L1)	OAL (L2)	Square End EDP No.	Corner Radius 0.50 EDP No.	1.00 EDP No.	1.50 EDP No.	2.00 EDP No.	3.00 EDP No.	4.00 EDP No.	5.00 EDP No.
6.0	0.2362	6	13	57	GMG12060	GMG16060	GMG16901					
		6	24	75	GMG14060	GMG18060	GMG18901					
8.0	0.3150	8	19	63	GMG12080	GMG16080	GMG16902					
		8	32	75	GMG14080	GMG18080	GMG18902		GMG18903			
10.0	0.3937	10	22	72	GMG12100	GMG16100	GMG16903	GMG16904	GMG16905			
		10	40	100	GMG14100	GMG18100	GMG18904	GMG18905	GMG18906			
12.0	0.4724	12	26	83	GMG12120	GMG16120	GMG16906	GMG16907	GMG16908	GMG16909		
		12	48	120	GMG14120	GMG18120	GMG18907	GMG18908	GMG18909	GMG18910		
16.0	0.6299	16	32	92	GMG12160		GMG16160	GMG16910	GMG16911	GMG16912		
		16	64	140	GMG14160		GMG18160	GMG18911	GMG18912	GMG18913		
20.0	0.7874	20	38	104	GMG12200		GMG16200	GMG16913	GMG16914	GMG16915		
		20	80	150	GMG14200		GMG18200	GMG18914	GMG18915	GMG18916	GMG18917	GMG18918
25.0	0.9843	25	44	104	GMG12250		GMG16250	GMG16916	GMG16917	GMG16918		
		25	100	170	GMG14250		GMG18250	GMG18919	GMG18920	GMG18921	GMG18922	GMG18923

Mill Dia. Tolerance (mm)			Shank Dia. Tolerance
Up to 3xD		Over 3xD	
Up to Ø12	0 ~ -0.02	0 ~ -0.03	h5 (≥ Ø12 : h6)
Over Ø12	0 ~ -0.03		

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

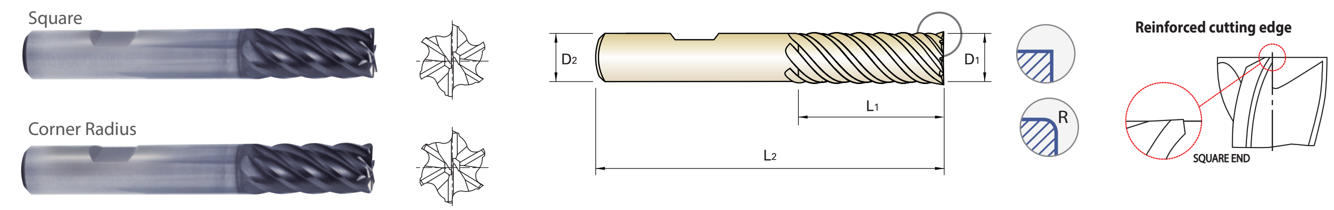
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

YG V7 PLUS A END MILLS

SQUARE **GMG13 / GMG15** SERIES
CORNER RADIUS **GMG17 / GMG19** SERIES

CARBIDE, 6 FLUTE MULTIPLE LENGTH (FLAT SHANK)

- The unique geometry of the variable pitch provides the best chatter free tool for high speed and trochoidal milling
- Excellent performance for Stainless Steels, Mild Steels, Cast Iron, Low/Medium hardness materials under HRc40



CARBIDE | 6 | 45° | FLAT p.C561

Unit : Metric

OD (D1) Metric	OD (D1) Inch	SD (D2)	LOC (L1)	OAL (L2)	Square End EDP No.	Corner Radius 0.50 EDP No.	1.00 EDP No.	1.50 EDP No.	2.00 EDP No.	3.00 EDP No.	4.00 EDP No.	5.00 EDP No.
6.0	0.2362	6	13	57	GMG13060	GMG17060	GMG17901					
		6	24	75	GMG15060	GMG19060	GMG19901					
8.0	0.3150	8	19	63	GMG13080	GMG17080	GMG17902					
		8	32	75	GMG15080	GMG19080	GMG19902		GMG19903			
10.0	0.3937	10	22	72	GMG13100	GMG17100	GMG17903	GMG17904	GMG17905			
		10	40	100	GMG15100	GMG19100	GMG19904	GMG19905	GMG19906			
12.0	0.4724	12	26	83	GMG13120	GMG17120	GMG17906	GMG17907	GMG17908	GMG17909		
		12	48	120	GMG15120	GMG19120	GMG19907	GMG19908	GMG19909	GMG19910		
16.0	0.6299	16	32	92	GMG13160		GMG17160	GMG17910	GMG17911	GMG17912		
		16	64	140	GMG15160		GMG19160	GMG19911	GMG19912	GMG19913		
20.0	0.7874	20	38	104	GMG13200		GMG17200	GMG17913	GMG17914	GMG17915		
		20	80	150	GMG15200		GMG19200	GMG19914	GMG19915	GMG19916	GMG19917	GMG19918
25.0	0.9843	25	44	104	GMG13250		GMG17250	GMG17916	GMG17917	GMG17918		
		25	100	170	GMG15250		GMG19250	GMG19919	GMG19920	GMG19921	GMG19922	GMG19923

Mill Dia. Tolerance (mm)			Shank Dia. Tolerance
Up to 3xD		Over 3xD	
Up to Ø12	0 ~ -0.02	0 ~ -0.03	h5 (≥ Ø12 : h6)
Over Ø12	0 ~ -0.03		

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

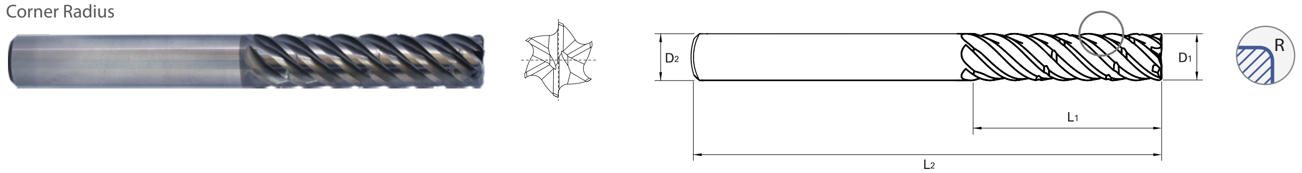
YG V7 PLUS A END MILLS

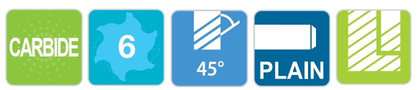
CORNER RADIUS **GMH72 SERIES**

CARBIDE, 6 FLUTE CHIP SPLITTER (PLAIN SHANK)

▶Special chip splitter design for better chip removal shortened chip length at high axial machining
▶High Performance for Steels, Stainless Steels and Cast Iron

Corner Radius





p.C556

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Corner Radius .015 EDP No.	Corner Radius .030 EDP No.	Corner Radius .060 EDP No.	Corner Radius .125 EDP No.
3/8	3/8	5/8	2-1/2	◇ GMH72901	GMH72902		
3/8	3/8	1	2-1/2	◇ GMH72903			
3/8	3/8	1-1/8	3	GMH72024	GMH72904		
1/2	1/2	1-1/4	3		◇ GMH72905	◇ GMH72906	
1/2	1/2	1-1/2	3-1/2		◇ GMH72907	◇ GMH72908	
1/2	1/2	1-5/8	4	GMH72032	GMH72909	GMH72910	
1/2	1/2	2	4		GMH72911	GMH72912	
5/8	5/8	1-1/4	3-1/2		◇ GMH72913	◇ GMH72914	
5/8	5/8	1-7/8	4		◇ GMH72915	◇ GMH72916	
5/8	5/8	2	4	GMH72040	GMH72917	GMH72918	◇ GMH72919
5/8	5/8	2-3/16	4-1/2		◇ GMH72920	◇ GMH72921	
5/8	5/8	2-5/8	5		GMH72922	GMH72923	
3/4	3/4	1-1/2	4		◇ GMH72924	◇ GMH72925	◇ GMH72926
3/4	3/4	1-7/8	4-1/2		GMH72927	GMH72928	
3/4	3/4	2-1/4	5	GMH72048	GMH72929	GMH72930	GMH72931
3/4	3/4	2-3/4	5		◇ GMH72932	GMH72933	◇ GMH72934
3/4	3/4	3	6		GMH72935	◇ GMH72936	
1	1	2	5		◇ GMH72937	◇ GMH72938	◇ GMH72939
1	1	2-1/2	5-1/2		◇ GMH72942	◇ GMH72943	
1	1	3-1/4	6	GMH72064	GMH72944	GMH72945	GMH72946
1	1	3-1/2	6-1/2		◇ GMH72940	◇ GMH72941	
1	1	4	7			◇ GMH72947	

◇ : Call for Availability

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-.0012	h5 (≥ Ø12 : h6)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

YG V7 PLUS A END MILLS

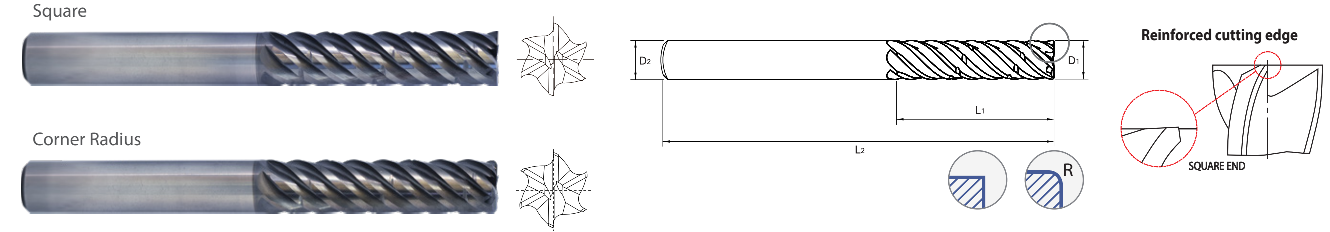
SQUARE **GMH56 SERIES**
CORNER RADIUS **GMH58 SERIES**

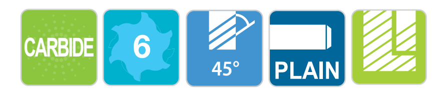
CARBIDE, 6 FLUTE CHIP SPLITTER (PLAIN SHANK)

▶Special chip splitter design for better chip removal shortened chip length at high axial machining
▶High Performance for Steels, Stainless Steels and Cast Iron

Square

Corner Radius





p.C562

Unit : Metric

OD (D1) Metric	OD (D1) Inch	SD (D2)	LOC (L1)	OAL (L2)	Square End EDP No.	Corner Radius 0.50 EDP No.	Corner Radius 1.00 EDP No.	Corner Radius 1.50 EDP No.	Corner Radius 2.00 EDP No.	Corner Radius 3.00 EDP No.	Corner Radius 4.00 EDP No.	Corner Radius 5.00 EDP No.
6.0	.2363	6	24	75	GMH56060	GMH58060	GMH58901					
8.0	.3150	8	32	75	GMH56080	GMH58080	GMH58902		GMH58903			
10.0	.3937	10	40	100	GMH56100	GMH58100	GMH58904	GMH58905	GMH58906			
12.0	.4724	12	48	120	GMH56120	GMH58120	GMH58907	GMH58908	GMH58909	GMH58910		
16.0	.6299	16	64	140	GMH56160		GMH58160	GMH58911	GMH58912	GMH58913		
20.0	.7874	20	80	150	GMH56200		GMH58200	GMH58914	GMH58915	GMH58916	GMH58917	GMH58918
25.0	.9843	25	100	170	GMH56250		GMH58250	GMH58919	GMH58920	GMH58921	GMH58922	GMH58923

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0 ~ -0.03	h5 (≥ Ø12 : h6)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

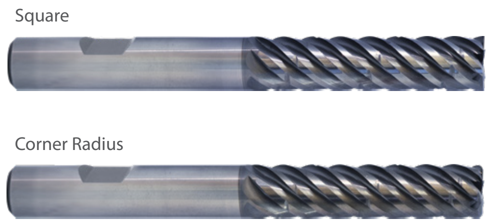
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

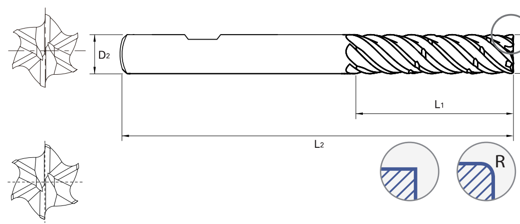
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

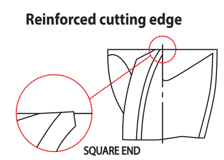
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

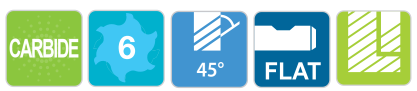
CARBIDE, 6 FLUTE CHIP SPLITTER (FLAT SHANK)

- Special chip splitter design for better chip removal shortened chip length at high axial machining
- High Performance for Steels, Stainless Steels and Cast Iron









p.C562

Unit : Metric

OD (D_1) Metric	OD (D_1) Inch	SD (D_2)	LOC (L_1)	OAL (L_2)	Square End EDP No.	Corner Radius 0.50 EDP No.	1.00 EDP No.	1.50 EDP No.	2.00 EDP No.	3.00 EDP No.	4.00 EDP No.	5.00 EDP No.
6.0	.2363	6	24	75	GMH57060	GMH59060	GMH59901					
8.0	.3150	8	32	75	GMH57080	GMH59080	GMH59902		GMH59903			
10.0	.3937	10	40	100	GMH57100	GMH59100	GMH59904	GMH59905	GMH59906			
12.0	.4724	12	48	120	GMH57120	GMH59120	GMH59907	GMH59908	GMH59909	GMH59910		
16.0	.6299	16	64	140	GMH57160		GMH59160	GMH59911	GMH59912	GMH59913		
20.0	.7874	20	80	150	GMH57200		GMH59200	GMH59914	GMH59915	GMH59916	GMH59917	GMH59918
25.0	.9843	25	100	170	GMH57250		GMH59250	GMH59919	GMH59920	GMH59921	GMH59922	GMH59923

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0 ~ -0.03	h5 (≥ Ø12 : h6)

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	○	○				

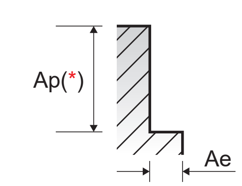
UGMF68, UGMF69, UGMF70, UGMF71, UGMF72 UGMF73, UGMF74, UGMF75, UGMF76, UGMF77 SERIES

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

4 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/8	5/32	3/16	7/32	1/4	9/32	5/16	11/32	3/8	7/16	1/2	5/8	3/4	1
P	1-4	Non-alloy steel	0.5D	1.5D (1.2D)	SFM	500	500	500	500	500	500	500	525	550	550	550	550	550	550
					IPT	.0002	.0003	.0004	.0005	.0006	.0008	.0011	.0013	.0015	.0017	.0019	.0021	.0026	.0025
					RPM	15250	12200	10170	8710	7630	6780	6100	5830	5620	4810	4210	3370	2810	2110
					IPM	12	15	18	19	19	23	26	30	34	32	31	28	29	21
	5	Low alloy steel	0.5D	1.5D (1.2D)	SFM	350	350	350	350	350	350	350	370	385	385	385	385	385	385
					IPT	.0002	.0003	.0004	.0005	.0006	.0008	.0011	.0013	.0015	.0017	.0018	.0021	.0026	.0025
					RPM	10730	8580	7150	6130	5360	4770	4290	4090	3910	3350	2930	2350	1960	1470
					IPM	8	11	12	13	14	16	18	21	23	22	22	20	20	15
	6-7		0.5D	1.5D (1.2D)	SFM	500	500	500	500	500	500	500	525	550	550	550	550	550	550
					IPT	.0002	.0003	.0004	.0005	.0006	.0008	.0011	.0013	.0015	.0017	.0019	.0021	.0026	.0025
					RPM	15250	12200	10170	8710	7630	6780	6100	5830	5620	4810	4210	3370	2810	2110
					IPM	12	15	18	19	19	23	26	30	34	32	31	28	29	21
	8-9		0.5D	1.5D (1.2D)	SFM	350	350	350	350	350	350	350	370	385	385	385	385	385	385
					IPT	.0002	.0003	.0004	.0005	.0006	.0008	.0011	.0013	.0015	.0017	.0018	.0021	.0026	.0025
					RPM	10730	8580	7150	6130	5360	4770	4290	4090	3910	3350	2930	2350	1960	1470
					IPM	8	11	12	13	14	16	18	21	23	22	22	20	20	15
	10-11.1	High alloyed steel, and tool steel	0.5D	1.5D (1.2D)	SFM	210	210	210	210	210	210	210	220	230	230	230	230	230	230
					IPT	.0001	.0002	.0003	.0004	.0004	.0006	.0007	.0009	.0011	.0012	.0013	.0015	.0018	.0018
					RPM	6420	5130	4280	3670	3210	2850	2570	2450	2340	2010	1760	1410	1170	880
					IPM	3	5	5	5	6	7	8	9	10	9	9	8	8	6
M	12-13	Stainless steel	0.5D	1.5D (1.2D)	SFM	500	500	500	500	500	500	500	525	550	550	550	550	550	550
					IPT	.0002	.0003	.0004	.0005	.0006	.0008	.0011	.0013	.0015	.0017	.0019	.0021	.0026	.0025
					RPM	15250	12200	10170	8710	7630	6780	6100	5830	5620	4810	4210	3370	2810	2110
					IPM	12	15	18	19	19	23	26	30	34	32	31	28	29	21
	14.1		0.5D	1.5D (1.2D)	SFM	350	350	350	350	350	350	350	370	385	385	385	385	385	385
					IPT	.0002	.0003	.0004	.0005	.0006	.0008	.0011	.0013	.0015	.0017	.0018	.0021	.0026	.0025
					RPM	10730	8580	7150	6130	5360	4770	4290	4090	3910	3350	2930	2350	1960	1470
					IPM	8	11	12	13	14	16	18	21	23	22	22	20	20	15
	14.2		0.5D	1.5D (1.2D)	SFM	310	310	310	310	310	310	310	310	310	310	310	310	310	310
					IPT	.0002	.0003	.0005	.0006	.0007	.0009	.0011	.0015	.0019	.0020	.0022	.0024	.0030	.0030
					RPM	9540	7630	6360	5450	4770	4240	3810	3470	3180	2720	2380	1910	1590	1190
					IPM	8	10	13	13	14	15	17	21	24	22	21	19	19	14
K	15-20	Grey cast iron	0.5D	1.5D (1.2D)	SFM	365	365	365	365	365	365	365	385	405	405	405	405	405	405
					IPT	.0002	.0004	.0006	.0007	.0008	.0011	.0013	.0016	.0019	.0021	.0023	.0026	.0032	.0031
					RPM	11220	8970	7480	6410	5610	4990	4490	4290	4120	3530	3090	2470	2060	1540
					IPM	11	14	16	17	18	21	24	28	31	29	28	25	26	19
S	31-35	Heat Resistant Super Alloys	0.25D	1.0D	SFM	85	85	85	85	85	85	85	85	85	85	85	85	85	85
					IPT	.0002	.0003	.0003	.0004	.0005	.0006	.0007	.0010	.0013	.0014	.0015	.0017	.0021	.0020
					RPM	2600	2080	1730	1480	1300	1150	1040	950	870	740	650	520	430	330
					IPM	2	2	2	2	2	3	3	4	5	4	4	4	4	3
	36-37	Titanium Alloys	0.35D	1.0D	SFM	190	190	190	190	190	190	190	190	190	190	190	190	190	190
					IPT	.0002	.0003	.0004	.0005	.0006	.0008	.0010	.0013	.0017	.0018	.0020	.0022	.0027	.0027
					RPM	5810	4650	3870	3320	2900	2580	2320	2110	1940	1660	1450	1160	970	730
					IPM	4	5	7	7	7	8	9	11	13	12	11	10	10	8

*( ) : Short length & Neck type



NOTES:
- Feed to be reduced by approximately 50% if L.O.C. (Length Of Cut) is over 3xD
- The above recommendations are based on ideal conditions; for smaller taper machining centers or less rigid conditions please adjust parameters accordingly on diameters greater than 1/2"
- In profile operations, engaging more that 2xD, reduce the radial depth of cut by 50%-60%
- Finish cuts typically require reduced cutting feeds and speeds; also, it is recommended the radial width of cut (AE) should not exceed 2%xD1

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG V7 PLUS A END MILLS

RECOMMENDED CUTTING CONDITIONS

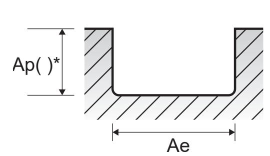
UGMF68, UGMF69, UGMF70, UGMF71, UGMF72 UGMF73, UGMF74, UGMF75, UGMF76, UGMF77 SERIES

4 FLUTE - SLOTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/8	5/32	3/16	7/32	1/4	9/32	5/16	11/32	3/8	7/16	1/2	5/8	3/4	1
P	1-4	Non-alloy steel	1.0D	1.0D (0.8D)	SFM (Vc)	500	500	500	500	500	500	500	525	550	550	550	550	550	550
					IPT (fz)	.0002	.0003	.0004	.0005	.0006	.0008	.0011	.0013	.0015	.0017	.0019	.0021	.0026	.0025
					RPM	15250	12200	10170	8710	7630	6780	6100	5830	5620	4810	4210	3370	2810	2110
					IPM (FEED)	12	15	18	19	19	23	26	30	34	32	31	28	29	21
	5	Low alloy steel	1.0D	1.0D (0.8D)	SFM (Vc)	350	350	350	350	350	350	350	370	385	385	385	385	385	385
					IPT (fz)	.0002	.0003	.0004	.0005	.0006	.0008	.0011	.0013	.0015	.0017	.0018	.0021	.0026	.0025
					RPM	10730	8580	7150	6130	5360	4770	4290	4090	3910	3350	2930	2350	1960	1470
					IPM (FEED)	8	11	12	13	14	16	18	21	23	22	22	20	20	15
	6-7		1.0D	1.0D (0.8D)	SFM (Vc)	500	500	500	500	500	500	500	525	550	550	550	550	550	550
					IPT (fz)	.0002	.0003	.0004	.0005	.0006	.0008	.0011	.0013	.0015	.0017	.0019	.0021	.0026	.0025
					RPM	15250	12200	10170	8710	7630	6780	6100	5830	5620	4810	4210	3370	2810	2110
					IPM (FEED)	12	15	18	19	19	23	26	30	34	32	31	28	29	21
	8-9		1.0D	1.0D (0.8D)	SFM (Vc)	350	350	350	350	350	350	350	370	385	385	385	385	385	385
					IPT (fz)	.0002	.0003	.0004	.0005	.0006	.0008	.0011	.0013	.0015	.0017	.0018	.0021	.0026	.0025
					RPM	10730	8580	7150	6130	5360	4770	4290	4090	3910	3350	2930	2350	1960	1470
					IPM (FEED)	8	11	12	13	14	16	18	21	23	22	22	20	20	15
	10-11.1	High alloyed steel, and tool steel	1.0D	1.0D (0.8D)	SFM (Vc)	210	210	210	210	210	210	210	220	230	230	230	230	230	230
					IPT (fz)	.0001	.0002	.0003	.0004	.0004	.0006	.0007	.0009	.0011	.0012	.0013	.0015	.0018	.0018
					RPM	6420	5130	4280	3670	3210	2850	2570	2450	2340	2010	1760	1410	1170	880
					IPM (FEED)	3	5	5	5	6	7	8	9	10	9	9	8	8	6
M	12-13	Stainless steel	1.0D	1.0D (0.8D)	SFM (Vc)	485	485	485	485	485	485	485	485	485	485	485	485	485	485
					IPT (fz)	.0002	.0002	.0004	.0004	.0005	.0007	.0009	.0011	.0013	.0014	.0015	.0018	.0022	.0022
					RPM	14852	11882	9901	8487	7426	6601	5941	5401	4951	4243	3713	2970	2475	1857
					IPM (FEED)	9.36	11.23	14.03	14.7	15.2	18.48	20.58	23.81	26.51	24.39	22.8	21.05	21.44	16.08
	14.1		1.0D	1.0D (0.8D)	SFM (Vc)	350	350	350	350	350	350	350	370	385	385	385	385	385	385
					IPT (fz)	.0002	.0003	.0004	.0005	.0006	.0008	.0011	.0013	.0015	.0017	.0018	.0021	.0026	.0025
					RPM	10730	8580	7150	6130	5360	4770	4290	4090	3910	3350	2930	2350	1960	1470
					IPM (FEED)	8	11	12	13	14	16	18	21	23	22	22	20	20	15
	14.2		1.0D	1.0D (0.8D)	SFM (Vc)	310	310	310	310	310	310	310	310	310	310	310	310	310	310
					IPT (fz)	.0002	.0003	.0005	.0006	.0007	.0009	.0011	.0015	.0019	.0020	.0022	.0024	.0030	.0030
					RPM	9540	7630	6360	5450	4770	4240	3810	3470	3180	2720	2380	1910	1590	1190
					IPM (FEED)	8	10	13	13	14	15	17	21	24	22	21	19	19	14
K	15-20	Grey cast iron	1.0D	1.0D (0.8D)	SFM (Vc)	365	365	365	365	365	365	365	385	405	405	405	405	405	405
					IPT (fz)	.0002	.0004	.0006	.0007	.0008	.0011	.0013	.0016	.0019	.0021	.0023	.0026	.0032	.0031
					RPM	11220	8970	7480	6410	5610	4990	4490	4290	4120	3530	3090	2470	2060	1540
					IPM (FEED)	11	14	16	17	18	21	24	28	31	29	28	25	26	19
S	31-35	Heat Resistant Super Alloys	1.0D	0.5D	SFM (Vc)	85	85	85	85	85	85	85	85	85	85	85	85	85	85
					IPT (fz)	.0002	.0003	.0003	.0004	.0005	.0006	.0007	.0010	.0013	.0014	.0015	.0017	.0021	.0020
					RPM	2600	2080	1730	1480	1300	1150	1040	950	870	740	650	520	430	330
					IPM (FEED)	2	2	2	2	2	3	3	4	5	4	4	4	4	3
	36-37	Titanium Alloys	1.0D	0.5D	SFM (Vc)	190	190	190	190	190	190	190	190	190	190	190	190	190	190
					IPT (fz)	.0002	.0003	.0004	.0005	.0006	.0008	.0010	.0013	.0017	.0018	.0020	.0022	.0027	.0027
					RPM	5810	4650	3870	3320	2900	2580	2320	2110	1940	1660	1450	1160	970	730
					IPM (FEED)	4	5	7	7	7	8	9	11	13	12	11	10	10	8

*( ) : Short length & Neck type



NOTES:
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- In profile operations, engaging more that 2xD, reduce the radial depth of cut by 50%-60%
- Finish cuts typically require reduced cutting feeds and speeds; also, it is recommended the radial width of cut (AE) should not exceed 2%xD1

YG V7 PLUS A END MILLS

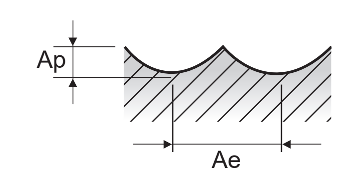
RECOMMENDED CUTTING CONDITIONS

UGMG53, UGMG54, UGMH10 SERIES

4 FLUTE BALL NOSE

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/8	3/16	13/64	1/4	5/16	3/8	1/2	5/8	11/16	3/4	1
P	1-4	Non-alloy steel	0.5D	1.0D	SFM (Vc)	530	530	530	530	530	530	530	530	530	530	530
					IPT (fz)	.0010	.0011	.0012	.0016	.0024	.0026	.0028	.0030	.0032	.0035	.0039
					RPM	16230	10820	9990	8110	6490	5410	4060	3250	2950	2710	2030
					IPM (FEED)	64	46	47	51	61	55	45	38	37	38	32
	5	Low alloy steel	0.5D	1.0D	SFM (Vc)	370	370	370	370	370	370	370	370	370	370	370
					IPT (fz)	.0010	.0011	.0012	.0016	.0024	.0026	.0028	.0029	.0031	.0035	.0039
					RPM	11340	7560	6980	5670	4540	3780	2830	2260	2060	1890	1420
					IPM (FEED)	45	32	33	36	43	39	31	26	26	27	22
	6-7		0.5D	1.0D	SFM (Vc)	530	530	530	530	530	530	530	530	530	530	530
					IPT (fz)	.0010	.0011	.0012	.0016	.0024	.0026	.0028	.0030	.0032	.0035	.0039
					RPM	16230	10820	9990	8110	6490	5410	4060	3250	2950	2710	2030
					IPM (FEED)	64	46	47	51	61	55	45	38	37	38	32
	8-9		0.5D	1.0D	SFM (Vc)	370	370	370	370	370	370	370	370	370	370	370
					IPT (fz)	.0010	.0011	.0012	.0016	.0024	.0026	.0028	.0029	.0031	.0035	.0039
					RPM	11340	7560	6980	5670	4540	3780	2830	2260	2060	1890	1420
					IPM (FEED)	45	32	33	36	43	39	31	26	26	27	22
	10-11.1	High alloyed steel, and tool steel	0.5D	1.0D	SFM (Vc)	225	225	225	225	225	225	225	225	225	225	225
					IPT (fz)	.0007	.0007	.0008	.0011	.0017	.0018	.0019	.0020	.0022	.0025	.0028
					RPM	6820	4540	4190	3410	2730	2270	1700	1360	1240	1140	850
					IPM (FEED)	18	14	14	15	18	16	13	11	11	11	9
M	12-13	Stainless steel	0.5D	1.0D	SFM (Vc)	255	255	255	255	255	255	255	255	255	255	255
					IPT (fz)	.0006	.0006	.0010	.0012	.0016	.0018	.0020	.0021	.0023	.0023	.0023
					RPM	7730	5150	4760	3870	3090	2580	1930	1550	1410	1290	970
					IPM (FEED)	18	12	19	18	19	18	15	13	13	12	9
	14.1		0.5D	1.0D	SFM (Vc)	280	280	280	280	280	280	280	280	280	280	280
					IPT (fz)	.0008	.0008	.0010	.0016	.0018	.0020	.0022	.0024	.0025	.0026	.0027
					RPM	8530	5680	5250	4260	3410	2840	2130	1710	1550	1420	1070
					IPM (FEED)	27	18	21	28	24	22	18	16	16	15	11
	14.2		0.5D	1.0D	SFM (Vc)	255	255	255	255	255	255	255	255	255	255	255
					IPT (fz)	.0008	.0008	.0010	.0016	.0018	.0020	.0022	.0024	.0025	.0026	.0027
					RPM	7730	5150	4760	3870	3090	2580	1930	1550	1410	1290	970
					IPM (FEED)	24	16	19	25	22	20	17	15	14	13	10
K	15-20	Grey cast iron	0.5D	1.0D	SFM (Vc)	390	390	390	390	390	390	390	390	390	390	390
					IPT (fz)	.0012	.0013	.0015	.0020	.0029	.0032	.0034	.0037	.0039	.0044	.0049
					RPM	11920	7950	7330	5960	4770	3970	2980	2380	2170	1990	1490
					IPM (FEED)	58	41	43	47	56	51	41	35	34	35	29
S	31-35	Heat Resistant Super Alloys	0.2D	0.3D	SFM (Vc)	70	70	70	70	70	70	70	70	70	70	70
					IPT (fz)	.0006	.0006	.0007	.0011	.0012	.0014	.0015	.0017	.0018	.0018	.0019
					RPM	2110	1410	1300	1050	840	700	530	420	380	350	260
					IPM (FEED)	5	3	3	5	4	4	3	3	3	2	2
	36-37	Titanium Alloys	0.5D	0.3D	SFM (Vc)	155	155	155	155	155	155	155	155	155	155	155
					IPT (fz)	.0007	.0007	.0009	.0015	.0016	.0018	.0019	.0021	.0023	.0023	.0024
					RPM	4710	3140	2900	2350	1880	1570	1180	940	860	780	590
					IPM (FEED)	13	9	10	14	12	11	9	8	8	7	6



YG V7 PLUS A END MILLS

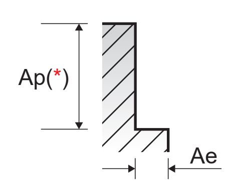
RECOMMENDED CUTTING CONDITIONS

UGMG20, UGMG21, UGMG22 UGMG23, UGMH08, UGMH09 SERIES

6 FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-4	Non-alloy steel	0.05D	2.0D	SFM (Vc)	985	985	985	985	985	985	985
					IPT (fz)	.0027	.0046	.0057	.0068	.0080	.0089	.0091
					RPM	15040	12030	10020	7520	6010	5010	3760
					IPM (FEED)	242	330	341	307	287	266	206
	5	Low alloy steel	0.05D	2.0D	SFM (Vc)	665	665	665	665	665	665	665
					IPT (fz)	.0020	.0034	.0042	.0050	.0059	.0066	.0069
					RPM	10180	8140	6780	5090	4070	3390	2540
					IPM (FEED)	120	163	170	154	143	134	105
	6-7		0.05D	2.0D	SFM (Vc)	985	985	985	985	985	985	985
					IPT (fz)	.0027	.0046	.0057	.0068	.0080	.0089	.0091
					RPM	15040	12030	10020	7520	6010	5010	3760
					IPM (FEED)	242	330	341	307	287	266	206
	8-9		0.05D	2.0D	SFM (Vc)	665	665	665	665	665	665	665
					IPT (fz)	.0020	.0034	.0042	.0050	.0059	.0066	.0069
					RPM	10180	8140	6780	5090	4070	3390	2540
					IPM (FEED)	120	163	170	154	143	134	105
	10-11.1	High alloyed steel, and tool steel	0.05D	2.0D	SFM (Vc)	330	330	330	330	330	330	330
					IPT (fz)	.0016	.0028	.0035	.0041	.0048	.0054	.0057
					RPM	5010	4010	3340	2510	2010	1670	1250
					IPM (FEED)	49	67	69	62	58	54	43
M	12-13	Stainless steel	0.05D	2.0D	SFM (Vc)	700	700	700	700	700	700	700
					IPT (fz)	.0019	.0033	.0041	.0049	.0058	.0064	.0066
					RPM	10680	8550	7120	5340	4270	3560	2670
					IPM (FEED)	124	170	175	158	147	136	106
	14.1		0.05D	2.0D	SFM (Vc)	480	480	480	480	480	480	480
					IPT (fz)	.0016	.0028	.0035	.0041	.0048	.0054	.0056
					RPM	7370	5890	4910	3680	2950	2460	1840
					IPM (FEED)	71	99	102	91	86	79	62
	14.2		0.05D	2.0D	SFM (Vc)	440	440	440	440	440	440	440
					IPT (fz)	.0016	.0028	.0035	.0041	.0048	.0054	.0056
					RPM	6720	5380	4480	3360	2690	2240	1680
					IPM (FEED)	65	90	93	83	78	73	56
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	2.0D	SFM (Vc)	740	740	740	740	740	740	740
					IPT (fz)	.0032	.0055	.0068	.0082	.0095	.0106	.0110
					RPM	11310	9050	7540	5650	4520	3770	2830
					IPM (FEED)	218	297	308	277	259	240	186
S	31-35	Heat Resistant Super Alloys	0.05D	2.0D	SFM (Vc)	110	110	110	110	110	110	110
					IPT (fz)	.0013	.0022	.0028	.0032	.0038	.0044	.0045
					RPM	1650	1320	1100	830	660	550	410
					IPM (FEED)	13	17	18	16	15	15	11
	36-37	Titanium Alloys	0.05D	2.0D	SFM (Vc)	380	380	380	380	380	380	380
					IPT (fz)	.0013	.0022	.0028	.0033	.0038	.0045	.0046
					RPM	5820	4660	3880	2910	2330	1940	1460
					IPM (FEED)	45	61	64	57	53	52	40



(*) : If product's Length of Cut(L.O.C) is below 2D, it must be applied L.O.C x 90%

YG V7 PLUS A END MILLS

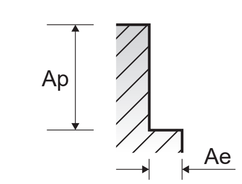
RECOMMENDED CUTTING CONDITIONS

GMH72 SERIES

6 FLUTE CHIP SPLITTER - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 3/8	1/2	5/8	3/4	1
P	1-4	Non-alloy steel	0.05D	3.0D	SFM (Vc)	985	985	985	985	985
					IPT (fz)	.0057	.0068	.0080	.0089	.0091
					RPM	10020	7520	6010	5010	3760
					IPM (FEED)	341	307	287	266	206
	5	Low alloy steel	0.05D	3.0D	SFM (Vc)	665	665	665	665	665
					IPT (fz)	.0042	.0050	.0059	.0066	.0069
					RPM	6780	5090	4070	3390	2540
					IPM (FEED)	170	154	143	134	105
	6-7		0.05D	3.0D	SFM (Vc)	985	985	985	985	985
					IPT (fz)	.0057	.0068	.0080	.0089	.0091
					RPM	10020	7520	6010	5010	3760
					IPM (FEED)	341	307	287	266	206
	8-9		0.05D	3.0D	SFM (Vc)	665	665	665	665	665
					IPT (fz)	.0042	.0050	.0059	.0066	.0069
					RPM	6780	5090	4070	3390	2540
					IPM (FEED)	170	154	143	134	105
	10-11.1	High alloyed steel, and tool steel	0.05D	3.0D	SFM (Vc)	330	330	330	330	330
					IPT (fz)	.0035	.0041	.0048	.0054	.0057
					RPM	3340	2510	2010	1670	1250
					IPM (FEED)	69	62	58	54	43
M	12-13	Stainless steel	0.05D	3.0D	SFM (Vc)	700	700	700	700	700
					IPT (fz)	.0041	.0049	.0058	.0064	.0066
					RPM	7120	5340	4270	3560	2670
					IPM (FEED)	175	158	147	136	106
	14.1		0.05D	3.0D	SFM (Vc)	480	480	480	480	480
					IPT (fz)	.0035	.0041	.0048	.0054	.0056
					RPM	4910	3680	2950	2460	1840
					IPM (FEED)	102	91	86	79	62
	14.2		0.05D	3.0D	SFM (Vc)	440	440	440	440	440
					IPT (fz)	.0035	.0041	.0048	.0054	.0056
					RPM	4480	3360	2690	2240	1680
					IPM (FEED)	93	83	78	73	56
K	15-20	Grey cast iron	0.05D	3.0D	SFM (Vc)	740	740	740	740	740
					IPT (fz)	.0068	.0082	.0095	.0106	.0110
					RPM	7540	5650	4520	3770	2830
					IPM (FEED)	308	277	259	240	186
S	31-35	Heat Resistant Super Alloys	0.05D	3.0D	SFM (Vc)	110	110	110	110	110
					IPT (fz)	.0028	.0032	.0038	.0044	.0045
					RPM	1100	830	660	550	410
					IPM (FEED)	18	16	15	15	11
	36-37	Titanium Alloys	0.05D	3.0D	SFM (Vc)	380	380	380	380	380
					IPT (fz)	.0028	.0033	.0038	.0045	.0046
					RPM	3880	2910	2330	1940	1460
					IPM (FEED)	64	57	53	52	40



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG V7 PLUS A END MILLS

RECOMMENDED CUTTING CONDITIONS

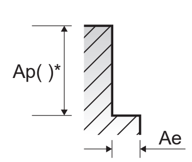
GMF52, GMF53, GMF54, GMF55, GMF56, GMF57 GMF58, GMF59, GMF60, GMF61, GMF62, GMF63 SERIES

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

4 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)											
						3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	25.0
P	1-4	Non-alloy steel	0.5D	1.5D (1.2D)	SFM (Vc)	500	500	500	500	500	550	550	550	550	550	550	550
					IPT (fz)	.0002	.0003	.0004	.0006	.0011	.0015	.0019	.0019	.0021	.0023	.0026	.0025
					RPM	16130	12100	9680	8060	6050	5350	4460	3820	3340	2970	2670	2140
					IPM (FEED)	13	15	17	20	26	32	33	29	28	28	27	22
	5	Low alloy steel	0.5D	1.5D (1.2D)	SFM (Vc)	350	350	350	350	350	385	385	385	385	385	385	385
					IPT (fz)	.0002	.0003	.0004	.0006	.0011	.0015	.0018	.0019	.0021	.0023	.0026	.0025
					RPM	11350	8520	6810	5680	4260	3720	3100	2660	2330	2070	1860	1490
					IPM (FEED)	9	11	12	14	18	22	23	21	19	19	19	15
	6-7		0.5D	1.5D (1.2D)	SFM (Vc)	500	500	500	500	500	550	550	550	550	550	550	550
					IPT (fz)	.0002	.0003	.0004	.0006	.0011	.0015	.0019	.0019	.0021	.0023	.0026	.0025
					RPM	16130	12100	9680	8060	6050	5350	4460	3820	3340	2970	2670	2140
					IPM (FEED)	13	15	17	20	26	32	33	29	28	28	27	22
	8-9		0.5D	1.5D (1.2D)	SFM (Vc)	350	350	350	350	350	385	385	385	385	385	385	385
					IPT (fz)	.0002	.0003	.0004	.0006	.0011	.0015	.0018	.0019	.0021	.0023	.0026	.0025
					RPM	11350	8520	6810	5680	4260	3720	3100	2660	2330	2070	1860	1490
					IPM (FEED)	9	11	12	14	18	22	23	21	19	19	19	15
	10-11.1	High alloyed steel, and tool steel	0.5D	1.5D (1.2D)	SFM (Vc)	210	210	210	210	210	230	230	230	230	230	230	230
					IPT (fz)	.0001	.0002	.0003	.0004	.0008	.0011	.0013	.0013	.0015	.0016	.0018	.0018
					RPM	6790	5090	4070	3400	2550	2230	1860	1590	1390	1240	1110	890
					IPM (FEED)	3	5	5	6	8	9	9	9	8	8	8	6
M	12-13	Stainless steel	0.5D	1.5D (1.2D)	SFM (Vc)	485	485	485	485	485	485	485	485	485	485	485	485
					IPT (fz)	.0002	.0002	.0004	.0005	.0009	.0013	.0015	.0017	.0018	.0020	.0022	.0022
					RPM	15700	11780	9420	7850	5890	4710	3930	3370	2940	2620	2360	1880
					IPM (FEED)	10	11	13	16	20	25	24	22	21	21	20	16
	14.1		0.5D	1.5D (1.2D)	SFM (Vc)	350	350	350	350	350	350	350	350	350	350	350	350
					IPT (fz)	.0002	.0003	.0005	.0007	.0011	.0019	.0022	.0023	.0024	.0028	.0030	.0030
					RPM	11250	8440	6750	5620	4220	3370	2810	2410	2110	1870	1690	1350
					IPM (FEED)	9	11	14	16	19	26	24	22	21	21	20	16
	14.2		0.5D	1.5D (1.2D)	SFM (Vc)	310	310	310	310	310	310	310	310	310	310	310	310
					IPT (fz)	.0002	.0003	.0005	.0007	.0011	.0019	.0022	.0023	.0024	.0027	.0030	.0030
					RPM	10080	7560	6050	5040	3780	3020	2520	2160	1890	1680	1510	1210
					IPM (FEED)	8	10	12	14	17	23	22	20	18	18	18	14
K	15-20	Grey cast iron	0.5D	1.5D (1.2D)	SFM (Vc)	365	365	365	365	365	405	405	405	405	405	405	405
					IPT (fz)	.0002	.0004	.0006	.0008	.0013	.0019	.0023	.0024	.0026	.0029	.0032	.0031
					RPM	11880	8910	7130	5940	4460	3920	3260	2800	2450	2180	1960	1570
					IPM (FEED)	11	14	16	19	24	30	30	27	25	25	25	19
S	31-35	Heat Resistant Super Alloys	0.25D	1.0D	SFM (Vc)	85	85	85	85	85	85	85	85	85	85	85	85
					IPT (fz)	.0002	.0003	.0003	.0005	.0008	.0013	.0015	.0016	.0017	.0019	.0021	.0021
					RPM	2760	2070	1660	1380	1040	830	690	590	520	460	410	330
					IPM (FEED)	2	2	2	3	3	4	4	4	4	3	4	3
	36-37	Titanium Alloys	0.35D	1.0D	SFM (Vc)	190	190	190	190	190	190	190	190	190	190	190	190
					IPT (fz)	.0002	.0003	.0004	.0006	.0010	.0017	.0020	.0021	.0022	.0024	.0027	.0027
					RPM	6150	4620	3690	3080	2310	1850	1540	1320	1150	1030	920	740
					IPM (FEED)	4	5	6	8	9	12	12	11	10	10	10	8

*( ) : Short length & Neck type



NOTES:

- Feed to be reduced by approximately 50% if L.O.C. (Length Of Cut) is over 3xD
- The above recommendations are based on ideal conditions; for smaller taper machining centers or less rigid conditions please adjust parameters accordingly on diameters greater than 1/2"
- In profile operations, engaging more that 2xD, reduce the radial depth of cut by 50%-60%
- Finish cuts typically require reduced cutting feeds and speeds; also, it is recommended the radial width of cut (AE) should not exceed 2%xD1

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG V7 PLUS A END MILLS

RECOMMENDED CUTTING CONDITIONS

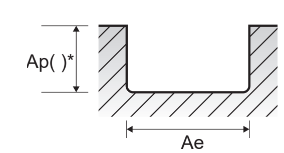
GMF52, GMF53, GMF54, GMF55, GMF56, GMF57 GMF58, GMF59, GMF60, GMF61, GMF62, GMF63 SERIES

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

4 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)											
						3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	25.0
P	1-4	Non-alloy steel	1.0D	1.0D (0.8D)	SFM (Vc)	500	500	500	500	500	550	550	550	550	550	550	550
					IPT (fz)	.0002	.0003	.0004	.0006	.0011	.0015	.0019	.0019	.0021	.0023	.0026	.0025
					RPM	16130	12100	9680	8060	6050	5350	4460	3820	3340	2970	2670	2140
					IPM (FEED)	13	15	17	20	26	32	33	29	28	28	27	22
	5	Low alloy steel	1.0D	1.0D (0.8D)	SFM (Vc)	350	350	350	350	350	385	385	385	385	385	385	385
					IPT (fz)	.0002	.0003	.0004	.0006	.0011	.0015	.0018	.0019	.0021	.0023	.0026	.0025
					RPM	11350	8520	6810	5680	4260	3720	3100	2660	2330	2070	1860	1490
					IPM (FEED)	9	11	12	14	18	22	23	21	19	19	19	15
	6-7		1.0D	1.0D (0.8D)	SFM (Vc)	500	500	500	500	500	550	550	550	550	550	550	550
					IPT (fz)	.0002	.0003	.0004	.0006	.0011	.0015	.0019	.0019	.0021	.0023	.0026	.0025
					RPM	16130	12100	9680	8060	6050	5350	4460	3820	3340	2970	2670	2140
					IPM (FEED)	13	15	17	20	26	32	33	29	28	28	27	22
	8-9		1.0D	1.0D (0.8D)	SFM (Vc)	350	350	350	350	350	385	385	385	385	385	385	385
					IPT (fz)	.0002	.0003	.0004	.0006	.0011	.0015	.0018	.0019	.0021	.0023	.0026	.0025
					RPM	11350	8520	6810	5680	4260	3720	3100	2660	2330	2070	1860	1490
					IPM (FEED)	9	11	12	14	18	22	23	21	19	19	19	15
	10-11.1	High alloyed steel, and tool steel	1.0D	1.0D (0.8D)	SFM (Vc)	210	210	210	210	210	230	230	230	230	230	230	230
					IPT (fz)	.0001	.0002	.0003	.0004	.0008	.0011	.0013	.0013	.0015	.0016	.0018	.0018
					RPM	6790	5090	4070	3400	2550	2230	1860	1590	1390	1240	1110	890
					IPM (FEED)	3	5	5	6	8	9	9	9	8	8	8	6
M	12-13	Stainless steel	1.0D	1.0D (0.8D)	SFM (Vc)	485	485	485	485	485	485	485	485	485	485	485	485
					IPT (fz)	.0002	.0002	.0004	.0005	.0009	.0013	.0015	.0017	.0018	.0020	.0022	.0022
					RPM	15700	11780	9420	7850	5890	4710	3930	3370	2940	2620	2360	1880
					IPM (FEED)	10	11	13	16	20	25	24	22	21	21	20	16
	14.1		1.0D	1.0D (0.8D)	SFM (Vc)	350	350	350	350	350	350	350	350	350	350	350	350
					IPT (fz)	.0002	.0003	.0005	.0007	.0011	.0019	.0022	.0023	.0024	.0028	.0030	.0030
					RPM	11250	8440	6750	5620	4220	3370	2810	2410	2110	1870	1690	1350
					IPM (FEED)	9	11	14	16	19	26	24	22	21	21	20	16
	14.2		1.0D	1.0D (0.8D)	SFM (Vc)	310	310	310	310	310	310	310	310	310	310	310	310
					IPT (fz)	.0002	.0003	.0005	.0007	.0011	.0019	.0022	.0023	.0024	.0027	.0030	.0030
					RPM	10080	7560	6050	5040	3780	3020	2520	2160	1890	1680	1510	1210
					IPM (FEED)	8	10	12	14	17	23	22	20	18	18	18	14
K	15-20	Grey cast iron	1.0D	1.0D (0.8D)	SFM (Vc)	365	365	365	365	365	405	405	405	405	405	405	405
					IPT (fz)	.0002	.0004	.0006	.0008	.0013	.0019	.0023	.0024	.0026	.0029	.0032	.0031
					RPM	11880	8910	7130	5940	4460	3920	3260	2800	2450	2180	1960	1570
					IPM (FEED)	11	14	16	19	24	30	30	27	25	25	25	19
S	31-35	Heat Resistant Super Alloys	1.0D	0.5D	SFM (Vc)	85	85	85	85	85	85	85	85	85	85	85	85
					IPT (fz)	.0002	.0003	.0003	.0005	.0008	.0013	.0015	.0016	.0017	.0019	.0021	.0021
					RPM	2760	2070	1660	1380	1040	830	690	590	520	460	410	330
					IPM (FEED)	2	2	2	3	3	4	4	4	4	3	4	3
	36-37	Titanium Alloys	1.0D	0.5D	SFM (Vc)	190	190	190	190	190	190	190	190	190	190	190	190
					IPT (fz)	.0002	.0003	.0004	.0006	.0010	.0017	.0020	.0021	.0022	.0024	.0027	.0027
					RPM	6150	4620	3690	3080	2310	1850	1540	1320	1150	1030	920	740
					IPM (FEED)	4	5	6	8	9	12	12	11	10	10	10	8

*( ) : Short length & Neck type



NOTES:

- Feed to be reduced by approximately 50% if L.O.C. (Length Of Cut) is over 3xD
- The above recommendations are based on ideal conditions; for smaller taper machining centers or less rigid conditions please adjust parameters accordingly on diameters greater than 1/2"
- In profile operations, engaging more that 2xD, reduce the radial depth of cut by 50%-60%
- Finish cuts typically require reduced cutting feeds and speeds; also, it is recommended the radial width of cut (AE) should not exceed 2%xD1

YG V7 PLUS A END MILLS

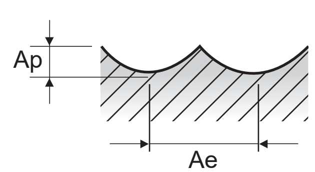
RECOMMENDED CUTTING CONDITIONS

GMG55, GMG56 SERIES — 4 FLUTE BALL NOSE

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	18.0	20.0	25.0
P	1-4	Non-alloy steel	0.5D	1.0D	SFM(Vc)	530	530	530	530	530	530	530	530	530	530	530
					IPT(fz)	.0010	.0011	.0012	.0016	.0024	.0026	.0028	.0030	.0032	.0035	.0039
					RPM	17190	12890	10310	8590	6450	5160	4300	3220	2870	2580	2060
					IPM(FEED)	68	55	49	54	61	53	47	38	36	37	32
	5	Low alloy steel	0.5D	1.0D	SFM(Vc)	370	370	370	370	370	370	370	370	370	370	370
					IPT(fz)	.0010	.0011	.0012	.0016	.0024	.0026	.0028	.0029	.0031	.0035	.0039
					RPM	11990	8990	7190	6000	4500	3600	3000	2250	2000	1800	1440
					IPM(FEED)	47	38	34	38	42	37	33	26	25	25	22
	6-7		0.5D	1.0D	SFM(Vc)	530	530	530	530	530	530	530	530	530	530	530
					IPT(fz)	.0010	.0011	.0012	.0016	.0024	.0026	.0028	.0030	.0032	.0035	.0039
					RPM	17190	12890	10310	8590	6450	5160	4300	3220	2870	2580	2060
					IPM(FEED)	68	55	49	54	61	53	47	38	36	37	32
	8-9		0.5D	1.0D	SFM(Vc)	370	370	370	370	370	370	370	370	370	370	370
					IPT(fz)	.0010	.0011	.0012	.0016	.0024	.0026	.0028	.0029	.0031	.0035	.0039
					RPM	11990	8990	7190	6000	4500	3600	3000	2250	2000	1800	1440
					IPM(FEED)	47	38	34	38	42	37	33	26	25	25	22
	10-11.1	High alloyed steel, and tool steel	0.5D	1.0D	SFM(Vc)	225	225	225	225	225	225	225	225	225	225	225
					IPT(fz)	.0007	.0007	.0008	.0011	.0017	.0018	.0019	.0020	.0022	.0025	.0028
					RPM	7220	5410	4330	3610	2710	2170	1800	1350	1200	1080	870
					IPM(FEED)	19	16	14	16	18	15	14	11	11	11	10
M	12-13	Stainless steel	0.5D	1.0D	SFM(Vc)	255	255	255	255	255	255	255	255	255	255	255
					IPT(fz)	.0006	.0006	.0010	.0012	.0016	.0018	.0020	.0021	.0023	.0023	.0023
					RPM	8170	6130	4900	4090	3060	2450	2040	1530	1360	1230	980
					IPM(FEED)	19	14	19	19	19	17	16	13	13	11	9
	14.1		0.5D	1.0D	SFM(Vc)	280	280	280	280	280	280	280	280	280	280	280
					IPT(fz)	.0008	.0008	.0010	.0016	.0018	.0020	.0022	.0024	.0025	.0026	.0027
					RPM	9020	6760	5410	4510	3380	2710	2260	1690	1500	1350	1080
					IPM(FEED)	28	21	21	29	24	21	20	16	15	14	12
	14.2		0.5D	1.0D	SFM(Vc)	255	255	255	255	255	255	255	255	255	255	255
					IPT(fz)	.0008	.0008	.0010	.0016	.0018	.0020	.0022	.0024	.0025	.0026	.0027
					RPM	8170	6130	4900	4090	3060	2450	2040	1530	1360	1230	980
					IPM(FEED)	26	19	19	26	22	19	18	14	14	13	11
K	15-20	Grey cast iron	0.5D	1.0D	SFM(Vc)	390	390	390	390	390	390	390	390	390	390	390
					IPT(fz)	.0012	.0013	.0015	.0020	.0029	.0032	.0034	.0037	.0039	.0044	.0049
					RPM	12630	9470	7580	6310	4740	3790	3160	2370	2100	1890	1520
					IPM(FEED)	62	49	44	50	55	48	43	35	33	33	30
S	31-35	Heat Resistant Super Alloys	0.2D	0.3D	SFM(Vc)	70	70	70	70	70	70	70	70	70	70	70
					IPT(fz)	.0006	.0006	.0007	.0011	.0012	.0014	.0015	.0017	.0018	.0018	.0019
					RPM	2230	1670	1340	1110	840	670	560	420	370	330	270
					IPM(FEED)	5	4	4	5	4	4	3	3	3	2	2
	36-37	Titanium Alloys	0.5D	0.3D	SFM(Vc)	155	155	155	155	155	155	155	155	155	155	155
					IPT(fz)	.0007	.0007	.0009	.0015	.0016	.0018	.0019	.0021	.0023	.0023	.0024
					RPM	4990	3740	2990	2490	1870	1500	1250	940	830	750	600
					IPM(FEED)	14	11	10	15	12	11	10	8	8	7	6

Diameter (Ø)



YG V7 PLUS A END MILLS

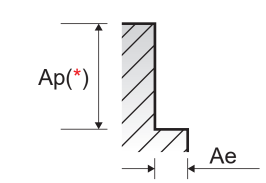
RECOMMENDED CUTTING CONDITIONS

GMG12, GMG13, GMG14, GMG15 GMG16, GMG17, GMG18, GMG19 SERIES — 6 FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	6.0	8.0	10.0	12.0	16.0	20.0	25.0
P	1-4	Non-alloy steel	0.05D	2.0D	SFM(Vc)	985	985	985	985	985	985	985
					IPT(fz)	.0027	.0046	.0057	.0068	.0080	.0089	.0091
					RPM	15920	11940	9550	7960	5970	4780	3820
					IPM(FEED)	256	327	325	325	285	254	209
	5	Low alloy steel	0.05D	2.0D	SFM(Vc)	665	665	665	665	665	665	665
					IPT(fz)	.0020	.0034	.0042	.0050	.0059	.0066	.0069
					RPM	10770	8080	6460	5390	4040	3230	2590
					IPM(FEED)	127	162	162	163	142	127	106
	6-7		0.05D	2.0D	SFM(Vc)	985	985	985	985	985	985	985
					IPT(fz)	.0027	.0046	.0057	.0068	.0080	.0089	.0091
					RPM	15920	11940	9550	7960	5970	4780	3820
					IPM(FEED)	256	327	325	325	285	254	209
	8-9		0.05D	2.0D	SFM(Vc)	665	665	665	665	665	665	665
					IPT(fz)	.0020	.0034	.0042	.0050	.0059	.0066	.0069
					RPM	10770	8080	6460	5390	4040	3230	2590
					IPM(FEED)	127	162	162	163	142	127	106
	10-11.1	High alloyed steel, and tool steel	0.05D	2.0D	SFM(Vc)	330	330	330	330	330	330	330
					IPT(fz)	.0016	.0028	.0035	.0041	.0048	.0054	.0057
					RPM	5310	3980	3180	2650	1990	1590	1270
					IPM(FEED)	51	67	66	66	58	52	43
M	12-13	Stainless steel	0.05D	2.0D	SFM(Vc)	700	700	700	700	700	700	700
					IPT(fz)	.0019	.0033	.0041	.0049	.0058	.0064	.0066
					RPM	11300	8480	6780	5650	4240	3390	2710
					IPM(FEED)	131	168	167	167	146	130	108
	14.1		0.05D	2.0D	SFM(Vc)	480	480	480	480	480	480	480
					IPT(fz)	.0016	.0028	.0035	.0041	.0048	.0054	.0056
					RPM	7800	5850	4680	3900	2920	2340	1870
					IPM(FEED)	76	98	97	97	85	76	63
	14.2		0.05D	2.0D	SFM(Vc)	440	440	440	440	440	440	440
					IPT(fz)	.0016	.0028	.0035	.0041	.0048	.0054	.0056
					RPM	7110	5330	4270	3550	2670	2130	1710
					IPM(FEED)	69	89	89	88	77	69	57
K	15-20	Grey cast iron	0.05D	2.0D	SFM(Vc)	740	740	740	740	740	740	740
					IPT(fz)	.0032	.0055	.0068	.0082	.0095	.0106	.0110
					RPM	11940	8950	7160	5970	4480	3580	2870
					IPM(FEED)	230	294	292	293	256	228	188
S	31-35	Heat Resistant Super Alloys	0.05D	2.0D	SFM(Vc)	110	110	110	110	110	110	110
					IPT(fz)	.0013	.0022	.0028	.0032	.0038	.0044	.0045
					RPM	1750	1310	1050	880	660	530	420
					IPM(FEED)	14	17	17	17	15	14	11
	36-37	Titanium Alloys	0.05D	2.0D	SFM(Vc)	380	380	380	380	380	380	380
					IPT(fz)	.0013	.0022	.0028	.0033	.0038	.0045	.0046
					RPM	6150	4620	3690	3080	2310	1850	1480
					IPM(FEED)	48	60	61	60	53	49	41

Diameter (Ø)



(*) : If product's Length of Cut(L.O.C) is below 2D, it must be applied L.O.C x 90%

V7 PLUS A END MILLS

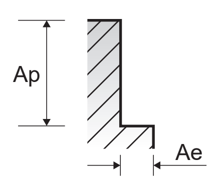
RECOMMENDED CUTTING CONDITIONS

GMH56, GMH58, GMH57, GMH59 SERIES

6 FLUTE CHIP SPLITTER - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6.0	8.0	10.0	12.0	16.0	20.0	25.0
P	1-4	Non-alloy steel	0.05D	3.0D	SFM (Vc)	985	985	985	985	985	985	985
					IPT (fz)	.0027	.0046	.0057	.0068	.0080	.0089	.0091
					RPM	15920	11940	9550	7960	5970	4780	3820
					IPM (FEED)	256	327	325	325	285	254	209
	5	Low alloy steel	0.05D	3.0D	SFM (Vc)	665	665	665	665	665	665	665
					IPT (fz)	.0020	.0034	.0042	.0050	.0059	.0066	.0069
					RPM	10770	8080	6460	5390	4040	3230	2590
					IPM (FEED)	127	162	162	163	142	127	106
	6-7		0.05D	3.0D	SFM (Vc)	985	985	985	985	985	985	985
					IPT (fz)	.0027	.0046	.0057	.0068	.0080	.0089	.0091
					RPM	15920	11940	9550	7960	5970	4780	3820
					IPM (FEED)	256	327	325	325	285	254	209
	8-9		0.05D	3.0D	SFM (Vc)	665	665	665	665	665	665	665
					IPT (fz)	.0020	.0034	.0042	.0050	.0059	.0066	.0069
					RPM	10770	8080	6460	5390	4040	3230	2590
					IPM (FEED)	127	162	162	163	142	127	106
	10-11.1	High alloyed steel, and tool steel	0.05D	3.0D	SFM (Vc)	330	330	330	330	330	330	330
					IPT (fz)	.0016	.0028	.0035	.0041	.0048	.0054	.0057
					RPM	5310	3980	3180	2650	1990	1590	1270
					IPM (FEED)	51	67	66	66	58	52	43
M	12-13	Stainless steel	0.05D	3.0D	SFM (Vc)	700	700	700	700	700	700	700
					IPT (fz)	.0019	.0033	.0041	.0049	.0058	.0064	.0066
					RPM	11300	8480	6780	5650	4240	3390	2710
					IPM (FEED)	131	168	167	167	146	130	108
	14.1		0.05D	3.0D	SFM (Vc)	480	480	480	480	480	480	480
					IPT (fz)	.0016	.0028	.0035	.0041	.0048	.0054	.0056
					RPM	7800	5850	4680	3900	2920	2340	1870
					IPM (FEED)	76	98	97	97	85	76	63
	14.2		0.05D	3.0D	SFM (Vc)	440	440	440	440	440	440	440
					IPT (fz)	.0016	.0028	.0035	.0041	.0048	.0054	.0056
					RPM	7110	5330	4270	3550	2670	2130	1710
					IPM (FEED)	69	89	89	88	77	69	57
K	15-20	Grey cast iron	0.05D	3.0D	SFM (Vc)	740	740	740	740	740	740	740
					IPT (fz)	.0032	.0055	.0068	.0082	.0095	.0106	.0110
					RPM	11940	8950	7160	5970	4480	3580	2870
					IPM (FEED)	230	294	292	293	256	228	188
S	31-35	Heat Resistant Super Alloys	0.05D	3.0D	SFM (Vc)	110	110	110	110	110	110	110
					IPT (fz)	.0013	.0022	.0028	.0032	.0038	.0044	.0045
					RPM	1750	1310	1050	880	660	530	420
					IPM (FEED)	14	17	17	17	15	14	11
	36-37	Titanium Alloys	0.05D	3.0D	SFM (Vc)	380	380	380	380	380	380	380
					IPT (fz)	.0013	.0022	.0028	.0033	.0038	.0045	.0046
					RPM	6150	4620	3690	3080	2310	1850	1480
					IPM (FEED)	48	60	61	60	53	49	41



Being the best through innovation

SOLID CARBIDE

V7 MILL INOX END MILLS

- Silent Cutting of Stainless Steels up to HRc40.
  Designed as Variable Leads, YG-1's Patent.

SELECTION GUIDE

YG MILLING TOOLS

SOLID CARBIDE V7 MILL INOX END MILLS

- Silent Cutting of Stainless Steels up to HRc40. Designed as Variable Leads, YG-1's Patent.

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : C579

	Inch				Inch			Metric					
SERIES	EMC75 EMD60	EMC76 EMD61	EMB12 EMB37	EMB13 EMB38	EMB20	EMB78 EMB79	EMB76 EMB77	EMB41 EMB42	EMB43 EMB44	EMB14 EMB39	EMB15 EMB40	EMB74 EMB75	EMB72 EMB73
FLUTE	4	4	4	4	4	4	5	4	4	4	4	4	5
HELIX ANGLE	SINUSOIDAL	SINUSOIDAL	SINUSOIDAL	SINUSOIDAL	SINUSOIDAL	SINUSOIDAL	SINUSOIDAL	SINUSOIDAL	SINUSOIDAL	SINUSOIDAL	SINUSOIDAL	SINUSOIDAL	SINUSOIDAL
CUTTING EDGE SHAPE	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	SQUARE	BALL NOSE	SQUARE	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	BALL NOSE	SQUARE
SIZE MIN	D1/8	D1/8	D1/8	D1/8	D1/4	R1/16	D1/4	D3.0	D3.0	D3.0	D3.0	R1.5	D6.0
SIZE MAX	D1	D1	D1	D1	D1	R1/2	D1	D20.0	D20.0	D25.0	D25.0	R12.5	D25.0
PAGE	C566	C567	C568	C569	C570	C571	C572	C573	C574	C575	C576	C577	C578
	STUB LENGTH	STUB LENGTH	REGULAR LENGTH	REGULAR LENGTH	EXTENDED LENGTH LONG REACH	REGULAR LENGTH	REGULAR LENGTH	SHORT LENGTH	SHORT LENGTH	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH
	AlTiN				AlTiN			AlTiN					
	U.S.A Stock				U.S.A Stock			Call for Availability					

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	EMC75 EMD60	EMC76 EMD61	EMB12 EMB37	EMB13 EMB38	EMB20	EMB78 EMB79	EMB76 EMB77	EMB41 EMB42	EMB43 EMB44	EMB14 EMB39	EMB15 EMB40	EMB74 EMB75	EMB72 EMB73
P	1	Non-alloy steel	About 0.15% C Annealed	125		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	2		About 0.45% C Annealed	190	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3		About 0.45% C Quenched & Tempered	250	25	○	○	○	○	○	○	○	○	○	○	○	○	○
	4		About 0.75% C Annealed	270	28	○	○	○	○	○	○	○	○	○	○	○	○	○
	5		About 0.75% C Quenched & Tempered	300	32	○	○	○	○	○	○	○	○	○	○	○	○	○
	6	Low alloy steel	Annealed	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7		Quenched & Tempered	275	29	○	○	○	○	○	○	○	○	○	○	○	○	○
	8		Quenched & Tempered	300	32	○	○	○	○	○	○	○	○	○	○	○	○	○
	9		Quenched & Tempered	350	38	○	○	○	○	○	○	○	○	○	○	○	○	○
	10	High alloyed steel, and tool steel	Annealed	200	15	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	11		Quenched & Tempered	325	35	○	○	○	○	○	○	○	○	○	○	○	○	○
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	13		Martensitic Quenched & Tempered	240	23	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	14		Austenitic	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	15	Grey cast iron	Pearlitic / ferritic	180	10													
	16		Pearlitic (Martensitic)	260	26													
	17	Nodular cast iron	Ferritic	160	3													
	18		Pearlitic	250	25													
	19	Malleable cast iron	Ferritic	130														
	20		Pearlitic	230	21													
N	21	Aluminum-wrought alloy	Not Curable	60														
	22		Curable Hardened	100														
	23	Aluminum-cast, alloyed	≤12% Si, Not Curable	75														
	24		≤12% Si, Curable Hardened	90														
	25		>12% Si, Not Curable	130														
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110														
	27		CuZn, CuSnZn (Brass)	90														
	28		CuSn, lead Free copper and electrolytic copper	100														
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic															
	30		Rubber, Wood, etc.															
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15	○	○	○	○	○	○	○	○	○	○	○	○	○
	32		Fe Based Cured	280	30	○	○	○	○	○	○	○	○	○	○	○	○	○
	33		Ni or Co Based Annealed	250	25	○	○	○	○	○	○	○	○	○	○	○	○	○
	34		Ni or Co Based Cured	350	38	○	○	○	○	○	○	○	○	○	○	○	○	○
	35		Ni or Co Based Cast	320	34	○	○	○	○	○	○	○	○	○	○	○	○	○
	36	Titanium Alloys	Pure Titanium	400 Rm		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	37		Alpha + Beta Alloys Hardened	1050 Rm		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
H	38	Hardened steel	Hardened	550	55													
	39		Hardened	630	60													
	40	Chilled Cast Iron	Cast	400	42													
	41	Hardened Cast Iron	Hardened	550	55													

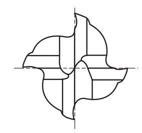
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG V7 MILL INOX END MILLS

PLAIN SHANK **EMC75** SERIES
FLAT SHANK **EMD60** SERIES

CARBIDE, 4 FLUTE STUB LENGTH

▶ Special flute geometry eliminates vibrations
▶ Designed for mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material
▶ Excellent work piece finishes
▶ Higher speeds, deeper cuts and metal removal rates

CARBIDE 4 PLAIN FLAT

p.C579-C580

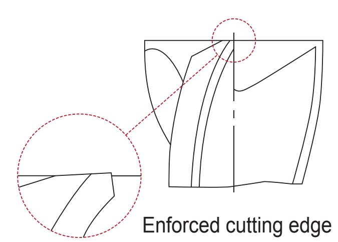
◆ U.S.A Stock

Unit : Inch

EDP No. PLAIN	EDP No. FLAT	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
EMC75008	-	1/8	1/8	1/8	1-1/2
EMC75010	-	5/32	3/16	3/16	2
EMC75012	-	3/16	3/16	3/16	2
EMC75014	-	7/32	1/4	1/4	2
EMC75016	-	1/4	1/4	1/4	2
EMC75020	-	5/16	5/16	5/16	2
-	EMD60024	3/8	3/8	3/8	2
-	EMD60028	7/16	7/16	7/16	2-1/2
-	EMD60032	1/2	1/2	1/2	2-1/2
-	EMD60040	5/8	5/8	5/8	3
-	EMD60048	3/4	3/4	3/4	3
-	EMD60064	1	1	1	4

▶ Shanks 3/8˝ and over come standard with Flats.

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



Enforced cutting edge

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	○	○	○	◎	○	○	○	◎	○	◎	◎	◎						

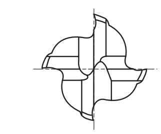
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

YG V7 MILL INOX END MILLS

PLAIN SHANK **EMC76** SERIES
FLAT SHANK **EMD61** SERIES

CARBIDE, 4 FLUTE STUB LENGTH CORNER RADIUS

▶ Special flute geometry eliminates vibrations
▶ Designed for mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material
▶ Excellent work piece finishes
▶ Higher speeds, deeper cuts and metal removal rates



CARBIDE 4 PLAIN FLAT

p.C579-C580

◆ U.S.A Stock

Unit : Inch

EDP No. PLAIN	EDP No. FLAT	Corner Radius R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
EMC76008	-	R.015	1/8	1/8	1/8	1-1/2
EMC76010	-	R.015	5/32	3/16	3/16	2
EMC76012	-	R.015	3/16	3/16	3/16	2
EMC76014	-	R.020	7/32	1/4	1/4	2
EMC76016	-	R.020	1/4	1/4	1/4	2
EMC76020	-	R.020	5/16	5/16	5/16	2
-	EMD61024	R.020	3/8	3/8	3/8	2
-	EMD61028	R.020	7/16	7/16	7/16	2-1/2
-	EMD61032	R.030	1/2	1/2	1/2	2-1/2
-	EMD61040	R.040	5/8	5/8	5/8	3
-	EMD61048	R.040	3/4	3/4	3/4	3
-	EMD61064	R.040	1	1	1	4

▶ Shanks 3/8˝ and over come standard with Flats.

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	○	○	○	◎	○	○	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

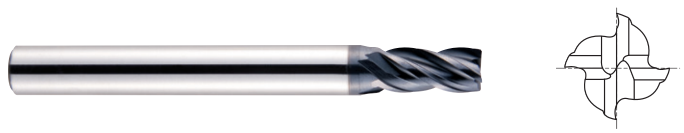
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

V7 MILL INOX END MILLS

PLAIN SHANK **EMB12** SERIES
FLAT SHANK **EMB37** SERIES

CARBIDE, 4 FLUTE REGULAR LENGTH

- Special flute geometry eliminates vibrations
- Designed for mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material
- Excellent work piece finishes
- Higher speeds, deeper cuts and metal removal rates



CARBIDE 4 PLAIN FLAT p.C579-C580

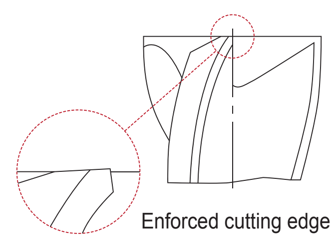
◆ U.S.A Stock

Unit : Inch

EDP No. PLAIN	EDP No. FLAT	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
EMB12008	-	1/8	1/8	3/8	1-1/2
EMB12010	-	5/32	3/16	7/16	2
EMB12012	-	3/16	3/16	7/16	2
EMB12014	-	7/32	1/4	7/16	2-1/2
EMB12016	-	1/4	1/4	1/2	2-1/2
EMB12018	-	9/32	5/16	5/8	2-1/2
EMB12020	-	5/16	5/16	13/16	2-1/2
EMB12022	-	11/32	3/8	13/16	2-1/2
-	EMB37024	3/8	3/8	7/8	2-1/2
-	EMB37026	13/32	7/16	15/16	2-3/4
-	EMB37028	7/16	7/16	1	2-3/4
-	EMB37030	15/32	1/2	1	3
-	EMB37032	1/2	1/2	1	3
-	EMB37036	9/16	9/16	1-1/8	3-1/2
-	EMB37040	5/8	5/8	1-1/4	3-1/2
-	EMB37048	3/4	3/4	1-1/2	4
-	EMB37064	1	1	1-1/2	4

▶ Shanks 3/8″ and over come standard with Flats.

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



Enforced cutting edge

◎ : Excellent ○ : Good

ISO	P										M			K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	○	○	○	◎	○	○	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

CARBIDE
HSS

V7 MILL INOX END MILLS

PLAIN SHANK **EMB13** SERIES
FLAT SHANK **EMB38** SERIES

CARBIDE, 4 FLUTE REGULAR LENGTH CORNER RADIUS

- Special flute geometry eliminates vibrations
- Designed for mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material
- Excellent work piece finishes
- Higher speeds, deeper cuts and metal removal rates

CARBIDE 4 PLAIN FLAT p.C579-C580

◆ U.S.A Stock

Unit : Inch

EDP No. PLAIN	EDP No. FLAT	Corner Radius R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
EMB13008	-	R.015	1/8	1/8	3/8	1-1/2
EMB13012	-	R.015	3/16	3/16	7/16	2
EMB13016	-	R.020	1/4	1/4	1/2	2-1/2
EMB13020	-	R.020	5/16	5/16	13/16	2-1/2
-	EMB38024	R.020	3/8	3/8	7/8	2-1/2
-	EMB38028	R.020	7/16	7/16	1	2-3/4
-	EMB38032	R.030	1/2	1/2	1	3
-	EMB38036	R.030	9/16	9/16	1-1/8	3-1/2
-	EMB38040	R.040	5/8	5/8	1-1/4	3-1/2
-	EMB38048	R.040	3/4	3/4	1-1/2	4
-	EMB38064	R.040	1	1	1-1/2	4

▶ Shanks 3/8″ and over come standard with Flats.

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6

◎ : Excellent ○ : Good

ISO	P										M			K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	○	○	○	◎	○	○	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

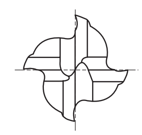
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

V7 MILL INOX END MILLS

PLAIN SHANK
FLAT SHANK
EMB20 SERIES

CARBIDE, 4 FLUTE EXTENDED LENGTH, LONG REACH

- Higher speeds, deeper cuts and metal removal rates.
- Improved surface finishes
- New "NANO" AlTiN coating



CARBIDE | 4 | PLAIN | FLAT

p.C579-C580

◆ U.S.A Stock

Unit : Inch

EDP No. PLAIN	EDP No. FLAT	Mill Diameter	Shank Diameter	Length of Cut	Reach Length	Overall Length
EMB20160	-	1/4	1/4	3/8	1-1/4	4
-	EMB20240	3/8	3/8	1/2	1-7/8	4
-	EMB20320	1/2	1/2	5/8	2-1/4	4
-	EMB20400	5/8	5/8	3/4	2-1/4	4-1/8
-	EMB20401	5/8	5/8	3/4	3-1/4	5
-	EMB20480	3/4	3/4	1	2-1/4	4-1/4
-	EMB20481	3/4	3/4	1	3-1/4	5-1/2
-	EMB20640	1	1	1-1/8	2-1/4	4-1/2
-	EMB20641	1	1	1-1/8	3-1/4	5-1/2
-	EMB20642	1	1	1-1/8	4-1/4	6-1/2

- Shanks 3/8″ and over come standard with Flats.

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	○	○	○	◎	○	○	○	◎	○	◎	◎	◎						

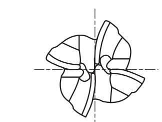
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

V7 MILL INOX END MILLS

PLAIN SHANK **EMB78 SERIES**
FLAT SHANK **EMB79 SERIES**

CARBIDE, 4 FLUTE REGULAR LENGTH BALL NOSE

- Special flute geometry eliminates vibrations
- Designed for mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material
- Excellent work piece finishes
- Higher speeds, deeper cuts and metal removal rates



CARBIDE | 4 | R ±.0004" | PLAIN | FLAT

p.C583

◆ U.S.A Stock

Unit : Inch

EDP No. PLAIN	EDP No. FLAT	Radius of Ball Nose R (±.0004)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
EMB78008	-	R1/16	1/8	1/8	3/8	1-1/2
EMB78010	-	R5/64	5/32	3/16	7/16	2
EMB78012	-	R3/32	3/16	3/16	7/16	2
EMB78016	-	R1/8	1/4	1/4	1/2	2-1/2
EMB78020	-	R5/32	5/16	5/16	13/16	2-1/2
-	EMB79024	R3/16	3/8	3/8	7/8	2-1/2
-	EMB79032	R1/4	1/2	1/2	1	3
-	EMB79040	R5/16	5/8	5/8	1-1/4	3-1/2
-	EMB79048	R3/8	3/4	3/4	1-1/2	4
-	EMB79064	R1/2	1	1	1-1/2	4

- Shanks 3/8″ and over come standard with Flats.

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	○	○	○	◎	○	○	○	◎	○	◎	◎	◎						

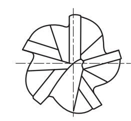
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

V7 MILL INOX END MILLS

PLAIN SHANK **EMB76** SERIES
FLAT SHANK **EMB77** SERIES

CARBIDE, 5 FLUTE REGULAR LENGTH

- ▶ Special flute geometry eliminates vibrations
- ▶ Designed for mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates

CARBIDE 5 PLAIN FLAT p.C585

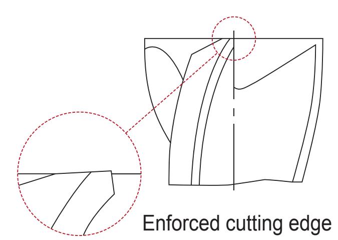
◆ U.S.A Stock

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT				
EMB76016	-	1/4	1/4	1/2	2-1/2
EMB76020	-	5/16	5/16	13/16	2-1/2
EMB76024	EMB77024	3/8	3/8	7/8	2-1/2
-	EMB77032	1/2	1/2	1	3
-	EMB77036	9/16	9/16	1-1/8	3-1/2
-	EMB77040	5/8	5/8	1-1/4	3-1/2
-	EMB77048	3/4	3/4	1-1/2	4
-	EMB77064	1	1	1-1/2	4

▶ Shanks 3/8˝ and over come standard with Flats.

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6



Enforced cutting edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	○	○	○	◎	○	○	○	◎	○	◎	◎	◎						

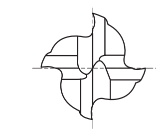
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

V7 MILL INOX END MILLS

PLAIN SHANK **EMB41** SERIES
FLAT SHANK **EMB42** SERIES

CARBIDE, 4 FLUTE SHORT LENGTH

- ▶ Special flute geometry eliminates vibrations
- ▶ Designed for mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material
- ▶ Excellent work piece finishes
- ▶ Higher speeds, deeper cuts and metal removal rates

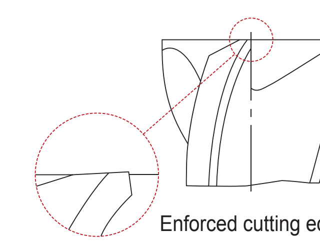
CARBIDE 4 PLAIN FLAT p.C581-C582

◇ Call for Availability

Unit : mm

EDP No.		Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	Metric	Inch			
EMB41030	EMB42030	3.0	.1181	6	7	54
EMB41040	EMB42040	4.0	.1575	6	8	54
EMB41050	EMB42050	5.0	.1969	6	10	54
EMB41060	EMB42060	6.0	.2362	6	10	54
EMB41080	EMB42080	8.0	.3150	8	12	58
EMB41100	EMB42100	10.0	.3937	10	14	66
EMB41120	EMB42120	12.0	.4724	12	16	73
EMB41140	EMB42140	14.0	.5512	14	18	75
EMB41160	EMB42160	16.0	.6299	16	22	82
EMB41180	EMB42180	18.0	.7087	18	24	84
EMB41200	EMB42200	20.0	.7874	20	26	92

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h6



Enforced cutting edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	○	○	○	◎	○	○	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

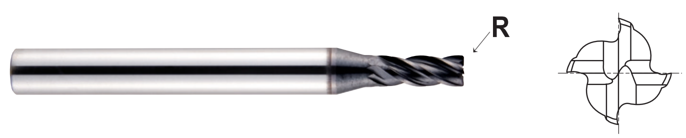
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

V7 MILL INOX END MILLS

PLAIN SHANK **EMB43** SERIES
FLAT SHANK **EMB44** SERIES

CARBIDE, 4 FLUTE SHORT LENGTH CORNER RADIUS

- Special flute geometry eliminates vibrations
- Designed for mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material
- Excellent work piece finishes
- Higher speeds, deeper cuts and metal removal rates



CARBIDE 4 PLAIN FLAT p.C581-C582

◇ Call for Availability

Unit : mm

EDP No. PLAIN	EDP No. FLAT	Corner Radius R	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Overall Length
EMB43030	EMB44030	R0.3	3.0	.1181	6	7	54
EMB43040	EMB44040	R0.3	4.0	.1575	6	8	54
EMB43050	EMB44050	R0.3	5.0	.1969	6	10	54
EMB43060	EMB44060	R0.5	6.0	.2362	6	10	54
EMB43080	EMB44080	R0.5	8.0	.3150	8	12	58
EMB43100	EMB44100	R0.5	10.0	.3937	10	14	66
EMB43120	EMB44120	R0.7	12.0	.4724	12	16	73
EMB43140	EMB44140	R0.7	14.0	.5512	14	18	75
EMB43160	EMB44160	R1.0	16.0	.6299	16	22	82
EMB43180	EMB44180	R1.0	18.0	.7087	18	24	84
EMB43200	EMB44200	R1.0	20.0	.7874	20	26	92

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	○	○	○	◎	○	○	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

V7 MILL INOX END MILLS

PLAIN SHANK **EMB14** SERIES
FLAT SHANK **EMB39** SERIES

CARBIDE, 4 FLUTE REGULAR LENGTH

- Special flute geometry eliminates vibrations
- Designed for mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material
- Excellent work piece finishes
- Higher speeds, deeper cuts and metal removal rates

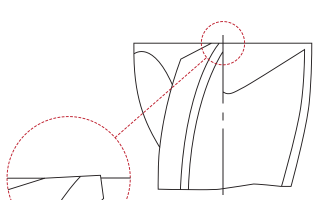
CARBIDE 4 PLAIN FLAT p.C581-C582

◇ Call for Availability

Unit : mm

EDP No. PLAIN	EDP No. FLAT	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Overall Length
EMB14030	-	3.0	.1181	6	8	57
EMB14040	-	4.0	.1575	6	11	57
EMB14050	-	5.0	.1969	6	13	57
EMB14060	-	6.0	.2362	6	13	57
EMB14080	-	8.0	.3150	8	19	63
EMB14100	-	10.0	.3937	10	22	72
-	EMB39120	12.0	.4724	12	26	83
-	EMB39140	14.0	.5512	14	26	83
-	EMB39160	16.0	.6299	16	32	92
-	EMB39180	18.0	.7087	18	32	92
-	EMB39200	20.0	.7874	20	38	104
-	EMB39250	25.0	.9800	25	38	104

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h6



Enforced cutting edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	○	○	○	◎	○	○	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

YG V7 MILL INOX END MILLS

PLAIN SHANK **EMB15** SERIES
FLAT SHANK **EMB40** SERIES

CARBIDE, 4 FLUTE REGULAR LENGTH CORNER RADIUS

- ▶Special flute geometry eliminates vibrations
- ▶Designed for mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material
- ▶Excellent work piece finishes
- ▶Higher speeds, deeper cuts and metal removal rates

CARBIDE 4 PLAIN FLAT p.C581-C582

◇ Call for Availability

Unit : mm

EDP No.		Corner Radius	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	R	Metric	Inch			
EMB15030	-	R0.3	3.0	.1181	6	8	57
EMB15040	-	R0.3	4.0	.1575	6	11	57
EMB15050	-	R0.3	5.0	.1969	6	13	57
EMB15060	-	R0.5	6.0	.2362	6	13	57
EMB15080	-	R0.5	8.0	.3150	8	19	63
EMB15100	-	R0.5	10.0	.3937	10	22	72
-	EMB40120	R0.7	12.0	.4724	12	26	83
-	EMB40140	R0.7	14.0	.5512	14	26	83
-	EMB40160	R1.0	16.0	.6299	16	32	92
-	EMB40180	R1.0	18.0	.7087	18	32	92
-	EMB40200	R1.0	20.0	.7874	20	38	104
-	EMB40250	R1.0	25.0	.9800	25	38	104

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	○	○	○	◎	○	○	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG V7 MILL INOX END MILLS

PLAIN SHANK **EMB74** SERIES
FLAT SHANK **EMB75** SERIES

CARBIDE, 4 FLUTE REGULAR LENGTH BALL NOSE

- ▶Special flute geometry eliminates vibrations
- ▶Designed for mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material
- ▶Excellent work piece finishes
- ▶Higher speeds, deeper cuts and metal removal rates

CARBIDE 4 R ±0.01 PLAIN FLAT p.C584

◇ Call for Availability

Unit : mm

EDP No.		Radius of Ball Nose	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	R (±0.01)	Metric	Inch			
EMB74030	EMB75030	R1.5	3.0	.1181	6	8	57
EMB74040	EMB75040	R2.0	4.0	.1575	6	11	57
EMB74050	EMB75050	R2.5	5.0	.1969	6	13	57
EMB74060	EMB75060	R3.0	6.0	.2362	6	13	57
EMB74080	EMB75080	R4.0	8.0	.3150	8	19	63
EMB74100	EMB75100	R5.0	10.0	.3937	10	22	72
EMB74120	EMB75120	R6.0	12.0	.4724	12	26	83
EMB74160	EMB75160	R8.0	16.0	.6299	16	32	92
EMB74200	EMB75200	R10.0	20.0	.7874	20	38	104
EMB74250	EMB75250	R12.5	25.0	.9800	25	38	104

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	○	○	○	◎	○	○	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

V7 MILL INOX END MILLS

PLAIN SHANK **EMB72 SERIES**
FLAT SHANK **EMB73 SERIES**

CARBIDE, 5 FLUTE REGULAR LENGTH

- ▶Special flute geometry eliminates vibrations
- ▶Designed for mild steels, stainless steel, cast iron, tool steels, titanium alloys, prehardened steels and low hardness material
- ▶Excellent work piece finishes
- ▶Higher speeds, deeper cuts and metal removal rates

CARBIDE 5 PLAIN FLAT

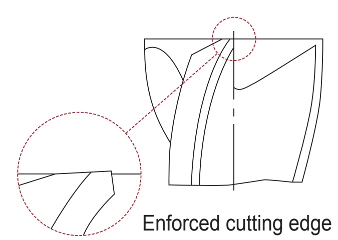
p.C586

◇ Call for Availability

Unit : mm

EDP No. PLAIN	EDP No. FLAT	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Overall Length
EMB72060	EMB73060	6.0	.2362	6	13	57
EMB72080	EMB73080	8.0	.3150	8	19	63
EMB72100	EMB73100	10.0	.3937	10	22	72
EMB72120	EMB73120	12.0	.4724	12	26	83
EMB72140	EMB73140	14.0	.5512	14	26	83
EMB72160	EMB73160	16.0	.6299	16	32	92
EMB72180	EMB73180	18.0	.7087	18	32	92
EMB72200	EMB73200	20.0	.7874	20	38	104
EMB72250	EMB73250	25.0	.9800	25	38	104

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h6



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	○	○	○	◎	○	○	○	◎	○	◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend											○	○	○	○	○	◎	◎				

V7 MILL INOX END MILLS

RECOMMENDED CUTTING CONDITIONS

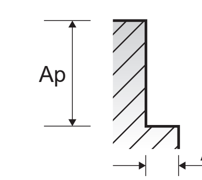
EMC75, EMD60, EMC76, EMD61, EMB12 EMB37, EMB13, EMB38, EMB20 SERIES

4 FLUTES - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	1
P	1-2	Non-alloy steel	0.5D	1.5D (1.2D) [0.6D]	SFM (Vc)	415	415	415	415	415	460	460	460	460	460	460
					IPT (fz)	.0002	.0003	.0005	.0006	.0011	.0015	.0019	.0021	.0023	.0026	.0025
					RPM	12735	8490	6370	5100	4245	4010	3500	3110	2800	2340	1755
					IPM (FEED)	10	11	12	13	18	25	26	26	26	24	17
	6	Low alloy steel	0.5D	1.5D (1.2D) [0.6D]	SFM (Vc)	415	415	415	415	415	460	460	460	460	460	460
					IPT (fz)	.0002	.0003	.0005	.0006	.0011	.0015	.0019	.0021	.0023	.0026	.0025
					RPM	12735	8490	6370	5100	4245	4010	3500	3110	2800	2340	1755
					IPM (FEED)	10	11	12	13	18	25	26	26	26	24	17
	10	High alloyed steel, and tool steel	0.5D	1.5D (1.2D) [0.6D]	SFM (Vc)	415	415	415	415	415	460	460	460	460	460	460
					IPT (fz)	.0002	.0003	.0005	.0006	.0011	.0015	.0019	.0021	.0023	.0026	.0025
					RPM	12735	8490	6370	5100	4245	4010	3500	3110	2800	2340	1755
					IPM (FEED)	10	11	12	13	18	25	26	26	26	24	17
M	12-13	Stainless steel	0.5D	1.5D (1.2D) [0.6D]	SFM (Vc)	440	590	445	440	440	440	440	440	440	440	440
					IPT (fz)	.0001	.0002	.0004	.0005	.0009	.0014	.0016	.0018	.0020	.0022	.0022
					RPM	13475	12000	6815	5390	4490	3850	3370	2990	2700	2250	1685
					IPM (FEED)	8	8	10	11	15	21	21	21	21	19	15
	14.1		0.5D	1.5D (1.2D) [0.6D]	SFM (Vc)	315	315	315	315	315	315	315	315	315	315	315
					IPT (fz)	.0002	.0003	.0005	.0007	.0012	.0019	.0022	.0025	.0028	.0030	.0031
					RPM	9625	6385	4810	3850	3210	2750	2400	2140	1925	1600	1200
					IPM (FEED)	7	8	10	11	15	21	21	21	21	19	15
S	31-35	Heat Resistant Super Alloys	0.35D	1.0D [0.6D]	SFM (Vc)	85	85	85	85	85	85	85	85	85	85	80
					IPT (fz)	.0002	.0003	.0005	.0007	.0012	.0019	.0022	.0025	.0027	.0031	.0034
					RPM	2565	1685	1285	1025	855	735	640	570	510	425	315
					IPM (FEED)	2	2	3	3	4	6	6	6	6	5	4
	36-37	Titanium Alloys	0.5D	1.5D (1.2D) [0.6D]	SFM (Vc)	270	270	270	270	270	275	270	270	270	275	270
					IPT (fz)	.0002	.0004	.0006	.0008	.0014	.0022	.0025	.0029	.0032	.0035	.0036
					RPM	8320	5550	4160	3330	2770	2380	2080	1850	1660	1390	1040
					IPM (FEED)	8	8	10	11	15	21	21	21	21	19	15

∗( ) : Short length Type
∗[ ] : Stub length Type



∗1.2 x D Axial cutting depth should be applied for Short length series DIA over 5/16mm
∗0.6 x D Axial cutting depth should be applied for Stub length series.

V7 MILL INOX END MILLS

RECOMMENDED CUTTING CONDITIONS

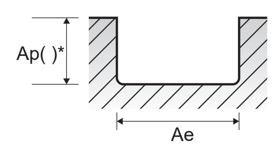
EMC75, EMD60, EMC76, EMD61, EMB12 EMB37, EMB13, EMB38, EMB20 SERIES

4 FLUTE - SLOTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	1
P	1-2	Non-alloy steel	1.0D	1.0D [0.6D]	SFM (Vc)	415	415	415	415	415	460	460	460	460	460	460
					IPT (fz)	.0002	.0003	.0005	.0006	.0011	.0015	.0019	.0021	.0023	.0026	.0025
					RPM	12735	8490	6370	5100	4245	4010	3500	3110	2800	2340	1755
					IPM (FEED)	10	11	12	13	18	25	26	26	26	24	17
	6	Low alloy steel	1.0D	1.0D [0.6D]	SFM (Vc)	415	415	415	415	415	460	460	460	460	460	460
					IPT (fz)	.0002	.0003	.0005	.0006	.0011	.0015	.0019	.0021	.0023	.0026	.0025
					RPM	12735	8490	6370	5100	4245	4010	3500	3110	2800	2340	1755
					IPM (FEED)	10	11	12	13	18	25	26	26	26	24	17
	10	High alloyed steel, and tool steel	1.0D	1.0D [0.6D]	SFM (Vc)	415	415	415	415	415	460	460	460	460	460	460
					IPT (fz)	.0002	.0003	.0005	.0006	.0011	.0015	.0019	.0021	.0023	.0026	.0025
					RPM	12735	8490	6370	5100	4245	4010	3500	3110	2800	2340	1755
					IPM (FEED)	10	11	12	13	18	25	26	26	26	24	17
M	12-13	Stainless steel	1.0D	1.0D [0.6D]	SFM (Vc)	440	590	445	440	440	440	440	440	440	440	440
					IPT (fz)	.0001	.0002	.0004	.0005	.0009	.0014	.0016	.0018	.0020	.0022	.0022
					RPM	13475	12000	6815	5390	4490	3850	3370	2990	2700	2250	1685
					IPM (FEED)	8	8	10	11	15	21	21	21	21	19	15
	14.1		1.0D	1.0D [0.6D]	SFM (Vc)	315	315	315	315	315	315	315	315	315	315	315
					IPT (fz)	.0002	.0003	.0005	.0007	.0012	.0019	.0022	.0025	.0028	.0030	.0031
					RPM	9625	6385	4810	3850	3210	2750	2400	2140	1925	1600	1200
					IPM (FEED)	7	8	10	11	15	21	21	21	21	19	15
S	31-35	Heat Resistant Super Alloys	1.0D	0.5D	SFM (Vc)	85	85	85	85	85	85	85	85	85	85	80
					IPT (fz)	.0002	.0003	.0005	.0007	.0012	.0019	.0022	.0025	.0027	.0031	.0034
					RPM	2565	1685	1285	1025	855	735	640	570	510	425	315
					IPM (FEED)	2	2	3	3	4	6	6	6	6	5	4
	36-37	Titanium Alloys	1.0D	1.0D [0.6D]	SFM (Vc)	270	270	270	270	270	275	270	270	270	275	270
					IPT (fz)	.0002	.0004	.0006	.0008	.0014	.0022	.0025	.0029	.0032	.0035	.0036
					RPM	8320	5550	4160	3330	2770	2380	2080	1850	1660	1390	1040
					IPM (FEED)	8	8	10	11	15	21	21	21	21	19	15

*( ) : Short length Type
*[ ] : Stub length Type



*1.2 x D Axial cutting depth should be applied for Short length series DIA over 5/16mm
*0.6 x D Axial cutting depth should be applied for Stub length series.

V7 MILL INOX END MILLS
RECOMMENDED CUTTING CONDITIONS

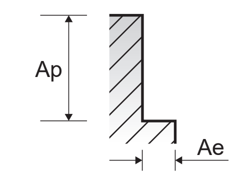
EMB41, EMB42, EMB43, EMB44 EMB14, EMB39, EMB15, EMB40 SERIES

4 FLUTES - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	25.0
P	1-2	Non-alloy steel	0.5D	1.5D (1.2D)	SFM (Vc)	415	415	415	415	415	460	460	460	460	460	460	460
					IPT (fz)	.0002	.0003	.0005	.0006	.0011	.0015	.0018	.0019	.0021	.0023	.0026	.0025
					RPM	13480	10110	8090	6740	5050	4460	3710	3180	2790	2480	2230	1780
					IPM (FEED)	11	13	15	17	22	27	27	24	23	23	23	18
	6	Low alloy steel	0.5D	1.5D (1.2D)	SFM (Vc)	415	415	415	415	415	460	460	460	460	460	460	460
					IPT (fz)	.0002	.0003	.0005	.0006	.0011	.0015	.0018	.0019	.0021	.0023	.0026	.0025
					RPM	13480	10110	8090	6740	5050	4460	3710	3180	2790	2480	2230	1780
					IPM (FEED)	11	13	15	17	22	27	27	24	23	23	23	18
	10	High alloyed steel, and tool steel	0.5D	1.5D (1.2D)	SFM (Vc)	415	415	415	415	415	460	460	460	460	460	460	460
					IPT (fz)	.0002	.0003	.0005	.0006	.0011	.0015	.0018	.0019	.0021	.0023	.0026	.0025
					RPM	13480	10110	8090	6740	5050	4460	3710	3180	2790	2480	2230	1780
					IPM (FEED)	11	13	15	17	22	27	27	24	23	23	23	18
M	12-13	Stainless steel	0.5D	1.5D (1.2D)	SFM (Vc)	440	590	445	440	440	440	440	440	440	440	440	440
					IPT (fz)	.0001	.0002	.0004	.0005	.0009	.0013	.0016	.0017	.0018	.0020	.0022	.0022
					RPM	14260	14260	8660	7130	5350	4280	3570	3060	2670	2380	2140	1710
					IPM (FEED)	8	10	12	14	18	23	22	20	19	19	19	15
	14.1		0.5D	1.5D (1.2D)	SFM (Vc)	315	315	315	315	315	315	315	315	315	315	315	315
					IPT (fz)	.0002	.0003	.0005	.0007	.0011	.0019	.0022	.0023	.0025	.0028	.0030	.0031
					RPM	10190	7600	6110	5100	3820	3060	2550	2180	1910	1700	1530	1220
					IPM (FEED)	8	10	12	14	17	23	22	20	19	19	19	15
S	31-35	Heat Resistant Super Alloys	0.35D	1.0D	SFM (Vc)	85	85	85	85	85	85	85	85	85	85	85	80
					IPT (fz)	.0002	.0003	.0005	.0007	.0012	.0019	.0022	.0024	.0025	.0027	.0030	.0034
					RPM	2720	2010	1630	1360	1020	820	680	580	510	450	410	320
					IPM (FEED)	2	2	3	4	5	6	6	6	5	5	5	4
	36-37	Titanium Alloys	0.5D	1.5D (1.2D)	SFM (Vc)	315	315	315	315	270	315	315	315	315	315	315	315
					IPT (fz)	.0002	.0003	.0005	.0007	.0014	.0019	.0022	.0023	.0025	.0028	.0030	.0031
					RPM	10190	7600	6110	5100	3280	3060	2550	2180	1910	1700	1530	1220
					IPM (FEED)	8	10	12	14	18	23	22	20	19	19	19	15

*( ) : Short length Type



*1.2 x D Axial cutting depth should be applied for Short length series DIA over 5/16mm

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG V7 MILL INOX END MILLS

RECOMMENDED CUTTING CONDITIONS

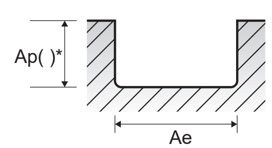
EMB41, EMB42, EMB43, EMB44 EMB14, EMB39, EMB15, EMB40 SERIES

4 FLUTE - SLOTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	25.0
P	1-2	Non-alloy steel	1.0D	1.0D	SFM	415	415	415	415	415	460	460	460	460	460	460	460
					IPT	.0002	.0003	.0005	.0006	.0011	.0015	.0018	.0019	.0021	.0023	.0026	.0025
					RPM	13480	10110	8090	6740	5050	4460	3710	3180	2790	2480	2230	1780
					IPM	11	13	15	17	22	27	27	24	23	23	23	18
P	6	Low alloy steel	1.0D	1.0D	SFM	415	415	415	415	415	460	460	460	460	460	460	460
					IPT	.0002	.0003	.0005	.0006	.0011	.0015	.0018	.0019	.0021	.0023	.0026	.0025
					RPM	13480	10110	8090	6740	5050	4460	3710	3180	2790	2480	2230	1780
					IPM	11	13	15	17	22	27	27	24	23	23	23	18
P	10	High alloyed steel, and tool steel	1.0D	1.0D	SFM	415	415	415	415	415	460	460	460	460	460	460	460
					IPT	.0002	.0003	.0005	.0006	.0011	.0015	.0018	.0019	.0021	.0023	.0026	.0025
					RPM	13480	10110	8090	6740	5050	4460	3710	3180	2790	2480	2230	1780
					IPM	11	13	15	17	22	27	27	24	23	23	23	18
M	12-13	Stainless steel	1.0D	1.0D	SFM	440	590	445	440	440	440	440	440	440	440	440	440
					IPT	.0001	.0002	.0004	.0005	.0009	.0013	.0016	.0017	.0018	.0020	.0022	.0022
					RPM	14260	14260	8660	7130	5350	4280	3570	3060	2670	2380	2140	1710
					IPM	8	10	12	14	18	23	22	20	19	19	19	15
M	14.1	Stainless steel	1.0D	1.0D	SFM	315	315	315	315	315	315	315	315	315	315	315	315
					IPT	.0002	.0003	.0005	.0007	.0011	.0019	.0022	.0023	.0025	.0028	.0030	.0031
					RPM	10190	7600	6110	5100	3820	3060	2550	2180	1910	1700	1530	1220
					IPM	8	10	12	14	17	23	22	20	19	19	19	15
S	31-35	Heat Resistant Super Alloys	1.0D	0.5D	SFM	85	85	85	85	85	85	85	85	85	85	85	80
					IPT	.0002	.0003	.0005	.0007	.0012	.0019	.0022	.0024	.0025	.0027	.0030	.0034
					RPM	2720	2010	1630	1360	1020	820	680	580	510	450	410	320
					IPM	2	2	3	4	5	6	6	6	5	5	5	4
S	36-37	Titanium Alloys	1.0D	1.0D	SFM	315	315	315	315	270	315	315	315	315	315	315	315
					IPT	.0002	.0003	.0005	.0007	.0014	.0019	.0022	.0023	.0025	.0028	.0030	.0031
					RPM	10190	7600	6110	5100	3280	3060	2550	2180	1910	1700	1530	1220
					IPM	8	10	12	14	18	23	22	20	19	19	19	15

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



*( ) : Short length Type

*1.2 x D Axial cutting depth should be applied for Short length series DIA over 5/16mm

YG V7 MILL INOX END MILLS

RECOMMENDED CUTTING CONDITIONS

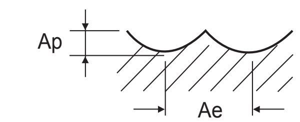
EMB78, EMB79 SERIES

4 FLUTES - PLANE

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	1
P	1-2	Non-alloy steel	0.5D	1.0D	SFM	445	445	445	445	445	445	440	445	445	445	440
					IPT	.0010	.0012	.0015	.0023	.0024	.0026	.0028	.0028	.0029	.0035	.0039
					RPM	13530	9020	6770	5410	4510	3870	3380	3010	2710	2260	1690
					IPM	53	43	41	51	43	40	37	34	32	32	27
P	6	Low alloy steel	0.5D	1.0D	SFM	445	445	445	445	445	445	440	445	445	445	440
					IPT	.0010	.0012	.0015	.0023	.0024	.0026	.0028	.0028	.0029	.0035	.0039
					RPM	13530	9020	6770	5410	4510	3870	3380	3010	2710	2260	1690
					IPM	53	43	41	51	43	40	37	34	32	32	27
P	10	High alloyed steel, and tool steel	0.5D	1.0D	SFM	445	445	445	445	445	445	440	445	445	445	440
					IPT	.0010	.0012	.0015	.0023	.0024	.0026	.0028	.0028	.0029	.0035	.0039
					RPM	13530	9020	6770	5410	4510	3870	3380	3010	2710	2260	1690
					IPM	53	43	41	51	43	40	37	34	32	32	27
M	12-13	Stainless steel	0.5D	1.0D	SFM	230	230	230	230	230	230	230	230	230	230	230
					IPT	.0006	.0010	.0012	.0016	.0018	.0019	.0020	.0021	.0021	.0023	.0023
					RPM	7020	4680	3510	2810	2340	2010	1750	1560	1400	1170	880
					IPM	16	18	16	18	17	15	14	13	12	11	8
M	14.1	Stainless steel	0.5D	1.0D	SFM	255	255	255	255	255	255	255	255	255	255	255
					IPT	.0008	.0010	.0016	.0018	.0020	.0021	.0022	.0023	.0024	.0026	.0028
					RPM	7770	5180	3880	3110	2590	2220	1940	1730	1550	1290	970
					IPM	24	20	25	22	20	18	17	16	15	13	11
S	31-35	Heat Resistant Super Alloys	0.2D	0.3D	SFM	100	100	100	100	100	100	100	100	100	100	100
					IPT	.0004	.0004	.0006	.0010	.0011	.0013	.0015	.0017	.0018	.0021	.0020
					RPM	3010	2010	1500	1200	1000	860	750	670	600	500	380
					IPM	5	3	4	5	4	4	5	5	4	4	3
S	36-37	Titanium Alloys	0.5D	1.0D	SFM	180	180	180	180	180	180	180	180	180	180	180
					IPT	.0005	.0006	.0008	.0012	.0012	.0014	.0016	.0016	.0017	.0024	.0027
					RPM	5510	3680	2760	2210	1840	1580	1380	1230	1100	920	690
					IPM	10	9	9	10	9	9	9	8	8	9	7

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute
Ap : Inch (Axial Depth of Cut)
Ae : Inch (Radial Depth of Cut)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

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STANDARD COBALT & HSS
TECHNICAL DATA

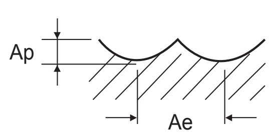
YG V7 MILL INOX END MILLS

RECOMMENDED CUTTING CONDITIONS

EMB74, EMB75 SERIES

4 FLUTES - PLANE

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	18.0	20.0	25.0
P	1-2	Non-alloy steel	0.5D	1.0D	SFM (Vc)	445	445	445	460	445	440	445	440	440	440	440
					IPT (fz)	.0010	.0010	.0012	.0015	.0023	.0024	.0027	.0029	.0031	.0035	.0039
					RPM	14320	10740	8590	7460	5370	4290	3580	2680	2380	2140	1710
					IPM (FEED)	56	42	41	45	50	41	39	31	30	30	27
	6	Low alloy steel	0.5D	1.0D	SFM (Vc)	445	445	445	460	445	440	445	440	440	440	440
					IPT (fz)	.0010	.0010	.0012	.0015	.0023	.0024	.0027	.0029	.0031	.0035	.0039
					RPM	14320	10740	8590	7460	5370	4290	3580	2680	2380	2140	1710
					IPM (FEED)	56	42	41	45	50	41	39	31	30	30	27
	10	High alloyed steel, and tool steel	0.5D	1.0D	SFM (Vc)	445	445	445	460	445	440	445	440	440	440	440
					IPT (fz)	.0010	.0010	.0012	.0015	.0023	.0024	.0027	.0029	.0031	.0035	.0039
					RPM	14320	10740	8590	7460	5370	4290	3580	2680	2380	2140	1710
					IPM (FEED)	56	42	41	45	50	41	39	31	30	30	27
M	12-13	Stainless steel	0.5D	1.0D	SFM (Vc)	230	230	230	230	230	230	230	230	230	230	230
					IPT (fz)	.0006	.0006	.0010	.0012	.0016	.0018	.0020	.0021	.0023	.0023	.0023
					RPM	7420	5570	4450	3710	2780	2220	1850	1390	1230	1110	890
					IPM (FEED)	17	13	17	17	17	16	15	12	11	10	8
	14.1		0.5D	1.0D	SFM (Vc)	255	255	255	255	255	255	255	255	255	255	255
					IPT (fz)	.0008	.0008	.0010	.0016	.0018	.0020	.0022	.0024	.0025	.0026	.0027
					RPM	8220	6160	4930	4110	3080	2460	2050	1540	1370	1230	980
					IPM (FEED)	26	19	19	26	22	19	18	15	14	13	11
S	31-35	Heat Resistant Super Alloys	0.2D	0.3D	SFM (Vc)	100	100	100	100	100	100	100	95	100	95	100
					IPT (fz)	.0004	.0004	.0004	.0006	.0010	.0010	.0015	.0018	.0020	.0021	.0021
					RPM	3180	2380	1910	1590	1190	950	790	590	530	470	380
					IPM (FEED)	6	4	3	4	5	4	5	4	4	4	3
	36-37	Titanium Alloys	0.5D	1.0D	SFM (Vc)	180	180	180	180	180	180	180	180	180	180	180
					IPT (fz)	.0005	.0005	.0006	.0008	.0012	.0012	.0016	.0017	.0019	.0024	.0027
					RPM	5830	4370	3500	2910	2180	1750	1450	1090	970	870	700
					IPM (FEED)	11	8	8	9	10	8	9	7	7	8	7



CARBIDE
HSS

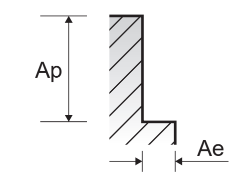
YG V7 MILL INOX END MILLS

RECOMMENDED CUTTING CONDITIONS

EMB76, EMB77 SERIES

5 FLUTES - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	1
P	1-2	Non-alloy steel	0.25D	1.25D	SFM (Vc)	450	450	450	450	450	450	450	450	450
					IPT (fz)	.0013	.0015	.0020	.0022	.0025	.0027	.0030	.0035	.0040
					RPM	6870	5490	4580	3920	3430	3050	2750	2290	1720
					IPM (FEED)	46	41	46	44	43	42	41	40	34
	6	Low alloy steel	0.25D	1.25D	SFM (Vc)	450	450	450	450	450	450	450	450	450
					IPT (fz)	.0013	.0015	.0020	.0022	.0025	.0027	.0030	.0035	.0040
					RPM	6870	5490	4580	3920	3430	3050	2750	2290	1720
					IPM (FEED)	46	41	46	44	43	42	41	40	34
	10	High alloyed steel, and tool steel	0.25D	1.25D	SFM (Vc)	450	450	450	450	450	450	450	450	450
					IPT (fz)	.0013	.0015	.0020	.0022	.0025	.0027	.0030	.0035	.0040
					RPM	6870	5490	4580	3920	3430	3050	2750	2290	1720
					IPM (FEED)	46	41	46	44	43	42	41	40	34
M	12-13	Stainless steel	0.25D	1.25D	SFM (Vc)	350	350	350	350	350	350	350	350	350
					IPT (fz)	.0012	.0012	.0015	.0016	.0017	.0025	.0027	.0030	.0035
					RPM	5310	4250	3540	3040	2660	2360	2130	1770	1330
					IPM (FEED)	32	27	26	24	22	30	28	26	23
	14.1		0.25D	1.25D	SFM (Vc)	375	375	375	375	375	375	375	375	375
					IPT (fz)	.0012	.0013	.0015	.0020	.0025	.0026	.0027	.0030	.0035
					RPM	5710	4570	3810	3270	2860	2540	2290	1900	1430
					IPM (FEED)	34	29	29	33	36	33	31	29	25
S	31-35	Heat Resistant Super Alloys	0.25D	1.0D	SFM (Vc)	90	90	90	90	90	90	90	90	90
					IPT (fz)	.0007	.0008	.0010	.0012	.0014	.0018	.0019	.0024	.0030
					RPM	1350	1080	900	770	680	600	540	450	340
					IPM (FEED)	4	4	5	5	5	5	5	5	5
	36-37	Titanium Alloys	0.25D	1.25D	SFM (Vc)	275	275	275	275	275	275	275	275	275
					IPT (fz)	.0012	.0012	.0015	.0017	.0020	.0022	.0025	.0030	.0035
					RPM	4200	3360	2800	2400	2100	1860	1680	1400	1050
					IPM (FEED)	25	21	21	21	21	21	21	21	18



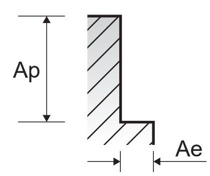
V7 MILL INOX END MILLS

RECOMMENDED CUTTING CONDITIONS

EMB72, EMB73 SERIES

5 FLUTES - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6.0	8.0	10.0	12.0	14.0	16.0	20.0
P	1-2	Non-alloy steel	0.25D	1.25D	SFM (Vc)	445	445	445	445	445	445	445
					IPT (fz)	.0013	.0015	.0020	.0025	.0027	.0030	.0035
					RPM	7160	5370	4300	3580	3070	2690	2150
					IPM (FEED)	48	40	42	44	42	40	38
	6	Low alloy steel	0.25D	1.25D	SFM (Vc)	450	450	450	450	450	450	450
					IPT (fz)	.0013	.0015	.0020	.0022	.0025	.0027	.0035
					RPM	6870	5490	4580	3920	3430	3050	2290
					IPM (FEED)	46	41	46	44	43	42	40
	10	High alloyed steel, and tool steel	0.25D	1.25D	SFM (Vc)	450	450	450	450	450	450	450
					IPT (fz)	.0013	.0015	.0020	.0022	.0025	.0027	.0035
					RPM	6870	5490	4580	3920	3430	3050	2290
					IPM (FEED)	46	41	46	44	43	42	40
M	12-13	Stainless steel	0.25D	1.25D	SFM (Vc)	345	345	345	475	345	345	345
					IPT (fz)	.0012	.0013	.0015	.0017	.0025	.0027	.0030
					RPM	5570	4180	3340	3850	2390	2090	1670
					IPM (FEED)	33	26	25	33	30	28	25
	14.1		0.25D	1.25D	SFM (Vc)	375	380	375	375	380	380	375
					IPT (fz)	.0012	.0013	.0015	.0025	.0026	.0027	.0030
					RPM	6100	4580	3660	3050	2620	2290	1830
					IPM (FEED)	36	29	27	38	33	31	27
S	31-35	Heat Resistant Super Alloys	0.25D	1.0D	SFM (Vc)	80	80	80	80	80	80	80
					IPT (fz)	.0007	.0008	.0010	.0014	.0018	.0019	.0023
					RPM	1330	1000	800	660	570	500	400
					IPM (FEED)	4	4	4	5	5	5	5
	36-37	Titanium Alloys	0.25D	1.25D	SFM (Vc)	280	280	280	280	280	280	280
					IPT (fz)	.0012	.0012	.0015	.0020	.0022	.0025	.0030
					RPM	4510	3380	2710	2260	1930	1690	1350
					IPM (FEED)	27	21	20	22	22	21	20



SOLID CARBIDE

ALU-POWER HPC
END MILLS

- For Aluminium, Aluminum Die Cast, Non-ferrous Alloys and Plastics

SELECTION GUIDE

MILLING TOOLS

SOLID CARBIDE ALU-POWER HPC END MILLS

3-Flute, High-Performance, For Aluminum, Aluminum Die Cast, Non-Ferrous Alloys And Plastics

Please visit globalyg1.com/mat for material search

Recommended cutting conditions : p.C600

◎ : Excellent ○ : Good

SERIES	JAG95	JAG97	E5G95	E5G97
FLUTE	3		3	
HELIX ANGLE	37°		37°	
CUTTING EDGE SHAPE	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS
SIZE MIN	1/8	1/8	1/8	1/8
SIZE MAX	1	1	1	1
PAGE	C590-C591		C592-C593	
	STANDARD LENGTH		STANDARD LENGTH	
	DLC		Uncoated	

SERIES	JAG96	JAG98	E5G96	E5G98	JAI38	E5136	E5138	JAI39	E5137	E5139
FLUTE	3		3		3	3		3	3	
HELIX ANGLE	37°		37°		37°	37°		37°	37°	
CUTTING EDGE SHAPE	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	CORNER RADIUS	SQUARE	CORNER RADIUS	CORNER RADIUS	SQUARE	CORNER RADIUS
SIZE MIN	1/4	1/4	1/4	1/4	1/8	1/2	1/8	1/4	1/2	1/4
SIZE MAX	1	1	1	1	1	3/4	1	1	1/2	1
PAGE	C594		C595		C596	C597		C598	C599	
	EXTENDED NECK		EXTENDED NECK		STANDARD LENGTH	STANDARD LENGTH		EXTENDED NECK	EXTENDED NECK	EXTENDED NECK
	DLC		Uncoated		DLC	Uncoated		DLC	Uncoated	
					CHIP BREAKER					

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	JAG95	JAG97	E5G95	E5G97
P	1	Non-alloy steel	About 0.15% C	Annealed	125					
	2		About 0.45% C	Annealed	190	13				
	3		About 0.45% C	Quenched & Tempered	250	25				
	4		About 0.75% C	Annealed	270	28				
	5		About 0.75% C	Quenched & Tempered	300	32				
	6	Low alloy steel		Annealed	180	10				
	7			Quenched & Tempered	275	29				
	8			Quenched & Tempered	300	32				
	9			Quenched & Tempered	350	38				
	10	High alloyed steel, and tool steel		Annealed	200	15				
	11			Quenched & Tempered	325	35				
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15				
	13		Martensitic	Quenched & Tempered	240	23				
	14		Austenitic		180	10				
K	15	Grey cast iron	Pearlitic / ferritic		180	10				
	16		Pearlitic (Martensitic)		260	26				
	17	Nodular cast iron	Ferritic		160	3				
	18		Pearlitic		250	25				
	19	Malleable cast iron	Ferritic		130					
	20		Pearlitic		230	21				
N	21	Aluminum-wrought alloy	Not Curable		60		◎	◎	◎	◎
	22		Curable	Hardened	100		◎	◎	◎	◎
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		◎	◎	◎	◎
	24		≤ 12% Si, Curable	Hardened	90		◎	◎	◎	◎
	25		> 12% Si, Not Curable		130		○	○	○	○
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○	○	○	○
	27		CuZn, CuSnZn (Brass)		90		○	○	○	○
	28		CuSn, lead-free copper and electrolytic copper		100		○	○	○	○
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic				○	○	○	○
	30		Rubber, Wood, etc.							
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15				
	32			Cured	280	30				
	33		Ni or Co Based	Annealed	250	25				
	34			Cured	350	38				
	35			Cast	320	34				
	36	Titanium Alloys	Pure Titanium		400 Rm					
	37		Alpha + Beta Alloys	Hardened	1050 Rm					
H	38	Hardened steel		Hardened	550	55				
	39			Hardened	630	60				
	40	Chilled Cast Iron		Cast	400	42				
	41	Hardened Cast Iron		Hardened	550	55				

VDI 3323	JAG96	JAG98	E5G96	E5G98	JAI38	E5136	E5138	JAI39	E5137	E5139
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23	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
24	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
25	○	○	○	○	○	○	○	○	○	○
26	○	○	○	○	○	○	○	○	○	○
27	○	○	○	○	○	○	○	○	○	○
28	○	○	○	○	○	○	○	○	○	○
29	○	○	○	○	○	○	○	○	○	○
30										
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CARBIDE
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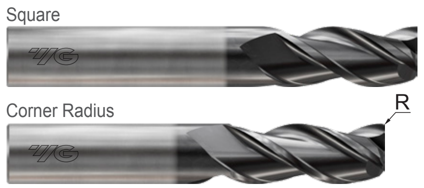
TECHNICAL DATA

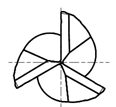
ALU-POWER HPC END MILLS

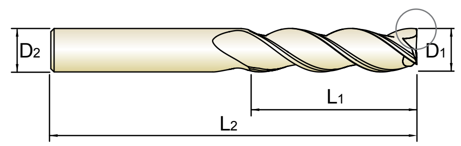
SQUARE **JAG95** SERIES
CORNER RADIUS **JAG97** SERIES

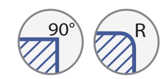
CARBIDE, 3-FLUTE STANDARD LENGTH – DLC COATED

- ▶ Balanced cutting with less vibration
- ▶ Ability to run at higher speeds with less heat in aluminum
- ▶ More efficient chip evacuation
- ▶ Ability to counteract extreme radial forces
- ▶ DLC Coating provides edge strength and unsurpassed tool life









CARBIDE | 3 | 37° | PLAIN | DLC

p.C600

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square End EDP No.	Corner Radius .010 EDP No.	.030 EDP No.	.060 EDP No.	.090 EDP No.	.120 EDP No.	.190 EDP No.	.250 EDP No.
1/8	1/8	1/4	1-1/2	JAG95008	JAG97008	JAG97901					
		3/8	1-1/2	JAG95901	JAG97902	JAG97903					
3/16	3/16	5/16	2	JAG95012	JAG97012	JAG97904					
		9/16	2	JAG95902	JAG97905	JAG97906					
1/4	1/4	3/8	2	JAG95016	JAG97016	JAG97907	JAG97908				
		5/8	2-1/2	JAG95903	JAG97909	JAG97910	JAG97911				
		7/8	3	JAG95929	JAG97892	JAG97893	JAG97894				
		1-1/4	3-1/4	JAG95904	JAG97912	JAG97913	JAG97914				
5/16	5/16	7/16	2	JAG95020	JAG97020	JAG97915	JAG97916	JAG97917			
		5/8	2-1/2	JAG95905	JAG97918	JAG97919	JAG97920	JAG97921			
		13/16	3	JAG95930	JAG97895	JAG97896	JAG97897	JAG97898			
		1-1/4	3-1/2	JAG95906	JAG97922	JAG97923	JAG97924	JAG97925			
3/8	3/8	1/2	2	JAG95024	JAG97024	JAG97926	JAG97927	JAG97928	JAG97929		
		1	2-1/2	JAG95907	JAG97930	JAG97931	JAG97932	JAG97933	JAG97934		
		1-1/2	3-1/2	JAG95908	JAG97935	JAG97936	JAG97937	JAG97938	JAG97939		
		2	4	JAG95909	JAG97940	JAG97941	JAG97942	JAG97943	JAG97944		
7/16	7/16	9/16	2-1/2	JAG95028	JAG97028	JAG97945	JAG97946	JAG97947	JAG97948		
		1-1/4	2-3/4	JAG95910	JAG97949	JAG97950	JAG97951	JAG97952	JAG97953		
		2	4	JAG95911	JAG97954	JAG97955	JAG97956	JAG97957	JAG97958		

NEXT PAGE ▶

Outside Diameter Tolerences (inch)		Shank Dimeter Tolerance
Diameter	Tolerance	
1/8 – 3/16	+0/-.00032	h6
1/4 – 3/8	+0/-.00035	
1/2 – 5/8	+0/-.00043	
3/4 – 1	+0/-.00051	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
Recommended	◎	◎	◎	◎	○	○	○	○	○													

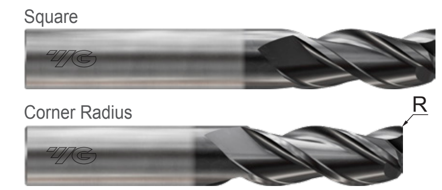
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

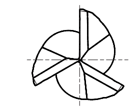
ALU-POWER HPC END MILLS

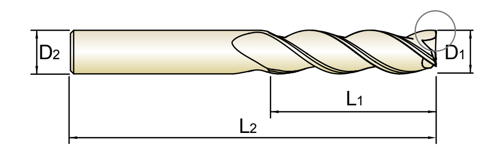
SQUARE **JAG95** SERIES
CORNER RADIUS **JAG97** SERIES

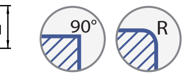
CARBIDE, 3-FLUTE STANDARD LENGTH – DLC COATED

- ▶ Balanced cutting with less vibration
- ▶ Ability to run at higher speeds with less heat in aluminum
- ▶ More efficient chip evacuation
- ▶ Ability to counteract extreme radial forces
- ▶ DLC Coating provides edge strength and unsurpassed tool life









CARBIDE | 3 | 37° | PLAIN | DLC

p.C600

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square End EDP No.	Corner Radius .010 EDP No.	.030 EDP No.	.060 EDP No.	.090 EDP No.	.120 EDP No.	.190 EDP No.	.250 EDP No.
1/2	1/2	5/8	2-1/2	JAG95032	JAG97032	JAG97959	JAG97960	JAG97961	JAG97962	JAG97963	
		1	3	JAG95927	JAG97879	JAG97880	JAG97881	JAG97882	JAG97883	JAG97884	
		1-1/4	3	JAG95912	JAG97964	JAG97965	JAG97966	JAG97967	JAG97968	JAG97969	
		1-5/8	4	JAG95913	JAG97970	JAG97971	JAG97972	JAG97973	JAG97974	JAG97975	
		2	4	JAG95914	JAG97976	JAG97977	JAG97978	JAG97979	JAG97980	JAG97981	
		2-1/2	5	JAG95915	JAG97982	JAG97983	JAG97984	JAG97985	JAG97986	JAG97987	
		3	5	JAG95916	JAG97988	JAG97989	JAG97990	JAG97991	JAG97992	JAG97993	
5/8	5/8	3/4	3	JAG95040	JAG97040	JAG97994	JAG97995	JAG97996	JAG97997	JAG97998	
		1-5/8	3-1/2	JAG95917	JAG97999	JAG97801	JAG97802	JAG97803	JAG97804	JAG97805	
		2-1/2	5	JAG95918	JAG97806	JAG97807	JAG97808	JAG97809	JAG97810	JAG97811	
		3	5-1/4	JAG95919	JAG97812	JAG97813	JAG97814	JAG97815	JAG97816	JAG97817	
3/4	3/4	1	3	JAG95048	JAG97048	JAG97818	JAG97819	JAG97820	JAG97821	JAG97822	JAG97823
		1-5/8	4	JAG95920	JAG97824	JAG97825	JAG97826	JAG97827	JAG97828	JAG97829	JAG97830
		2-1/4	5	JAG95921	JAG97831	JAG97832	JAG97833	JAG97834	JAG97835	JAG97836	JAG97837
		3-1/4	6	JAG95922	JAG97838	JAG97839	JAG97840	JAG97841	JAG97842	JAG97843	JAG97844
		4	6-1/4	JAG95923	JAG97845	JAG97846	JAG97847	JAG97848	JAG97849	JAG97850	JAG97851
1	1	1-1/4	3	JAG95064	JAG97064	JAG97852	JAG97853	JAG97854	JAG97855	JAG97856	JAG97857
		1-1/4	4	JAG95928	JAG97885	JAG97886	JAG97887	JAG97888	JAG97889	JAG97890	JAG97891
		2	5	JAG95924	JAG97858	JAG97859	JAG97860	JAG97861	JAG97862	JAG97863	JAG97864
		3-1/4	6	JAG95925	JAG97865	JAG97866	JAG97867	JAG97868	JAG97869	JAG97870	JAG97871
		4	7	JAG95926	JAG97872	JAG97873	JAG97874	JAG97875	JAG97876	JAG97877	JAG97878

Outside Diameter Tolerences (inch)		Shank Dimeter Tolerance
Diameter	Tolerance	
1/8 – 3/16	+0/-.00032	h6
1/4 – 3/8	+0/-.00035	
1/2 – 5/8	+0/-.00043	
3/4 – 1	+0/-.00051	

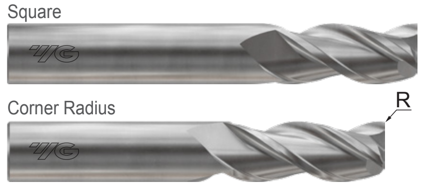
◎ : Excellent ○ : Good

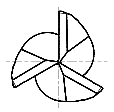
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

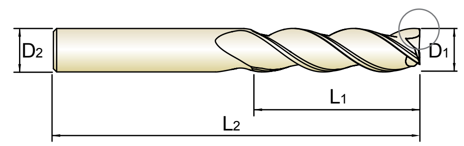
ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
Recommended	◎	◎	◎	◎	○	○	○	○	○													

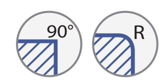
CARBIDE, 3-FLUTE STANDARD LENGTH – UNCOATED

- ▶ Balanced cutting with less vibration
- ▶ Ability to run at higher speeds with less heat in aluminum
- ▶ More efficient chip evacuation
- ▶ Ability to counteract extreme radial forces









p.C600

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square End	Corner Radius						
					.010	.030	.060	.090	.120	.190	.250
				EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
1/8	1/8	1/4	1-1/2	E5G95008	E5G97008	E5G97901					
		3/8	1-1/2	E5G95901	E5G97902	E5G97903					
3/16	3/16	5/16	2	E5G95012	E5G97012	E5G97904					
		9/16	2	E5G95902	E5G97905	E5G97906					
1/4	1/4	3/8	2	E5G95016	E5G97016	E5G97907	E5G97908				
		5/8	2-1/2	E5G95903	E5G97909	E5G97910	E5G97911				
		7/8	3	E5G95929	E5G97892	E5G97893	E5G97894				
		1-1/4	3-1/4	E5G95904	E5G97912	E5G97913	E5G97914				
5/16	5/16	7/16	2	E5G95020	E5G97020	E5G97915	E5G97916	E5G97917			
		5/8	2-1/2	E5G95905	E5G97918	E5G97919	E5G97920	E5G97921			
		13/16	3	E5G95930	E5G97895	E5G97896	E5G97897	E5G97898			
		1-1/4	3-1/2	E5G95906	E5G97922	E5G97923	E5G97924	E5G97925			
3/8	3/8	1/2	2	E5G95024	E5G97024	E5G97926	E5G97927	E5G97928	E5G97929		
		1	2-1/2	E5G95907	E5G97930	E5G97931	E5G97932	E5G97933	E5G97934		
		1-1/2	3-1/2	E5G95908	E5G97935	E5G97936	E5G97937	E5G97938	E5G97939		
		2	4	E5G95909	E5G97940	E5G97941	E5G97942	E5G97943	E5G97944		
7/16	7/16	9/16	2-1/2	E5G95028	E5G97028	E5G97945	E5G97946	E5G97947	E5G97948		
		1-1/4	2-3/4	E5G95910	E5G97949	E5G97950	E5G97951	E5G97952	E5G97953		
		2	4	E5G95911	E5G97954	E5G97955	E5G97956	E5G97957	E5G97958		

NEXT PAGE ▶

Outside Diameter Tolerences (inch)		Shank Dimeter Tolerance
Diameter	Tolerance	
1/8 – 3/16	+0/-.00032	h6
1/4 – 3/8	+0/-.00035	
1/2 – 5/8	+0/-.00043	
3/4 – 1	+0/-.00051	

◎ : Excellent ○ : Good

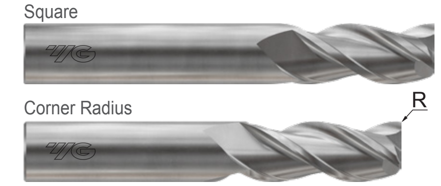
ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

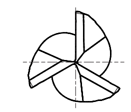
ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
Recommended	◎	◎	◎	◎	○	○	○	○	○													

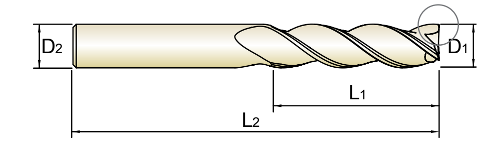
YG ALU-POWER HPC END MILLS
SQUARE E5G95 SERIES
CORNER RADIUS E5G97 SERIES

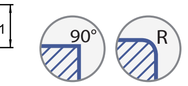
CARBIDE, 3-FLUTE STANDARD LENGTH – UNCOATED

- ▶ Balanced cutting with less vibration
- ▶ Ability to run at higher speeds with less heat in aluminum
- ▶ More efficient chip evacuation
- ▶ Ability to counteract extreme radial forces









p.C600

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square End	Corner Radius						
					.010	.030	.060	.090	.120	.190	.250
				EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
1/2	1/2	5/8	2-1/2	E5G95032	E5G97032	E5G97959	E5G97960	E5G97961	E5G97962	E5G97963	
		1	3	E5G95927	E5G97879	E5G97880	E5G97881	E5G97882	E5G97883	E5G97884	
		1-1/4	3	E5G95912	E5G97964	E5G97965	E5G97966	E5G97967	E5G97968	E5G97969	
		1-5/8	4	E5G95913	E5G97970	E5G97971	E5G97972	E5G97973	E5G97974	E5G97975	
		2	4	E5G95914	E5G97976	E5G97977	E5G97978	E5G97979	E5G97980	E5G97981	
		2-1/2	5	E5G95915	E5G97982	E5G97983	E5G97984	E5G97985	E5G97986	E5G97987	
		3	5	E5G95916	E5G97988	E5G97989	E5G97990	E5G97991	E5G97992	E5G97993	
5/8	5/8	3/4	3	E5G95040	E5G97040	E5G97994	E5G97995	E5G97996	E5G97997	E5G97998	
		1-5/8	3-1/2	E5G95917	E5G97999	E5G97801	E5G97802	E5G97803	E5G97804	E5G97805	
		2-1/2	5	E5G95918	E5G97806	E5G97807	E5G97808	E5G97809	E5G97810	E5G97811	
		3	5-1/4	E5G95919	E5G97812	E5G97813	E5G97814	E5G97815	E5G97816	E5G97817	
3/4	3/4	1	3	E5G95048	E5G97048	E5G97818	E5G97819	E5G97820	E5G97821	E5G97822	E5G97823
		1-5/8	4	E5G95920	E5G97824	E5G97825	E5G97826	E5G97827	E5G97828	E5G97829	E5G97830
		2-1/4	5	E5G95921	E5G97831	E5G97832	E5G97833	E5G97834	E5G97835	E5G97836	E5G97837
		3-1/4	6	E5G95922	E5G97838	E5G97839	E5G97840	E5G97841	E5G97842	E5G97843	E5G97844
		4	6-1/4	E5G95923	E5G97845	E5G97846	E5G97847	E5G97848	E5G97849	E5G97850	E5G97851
1	1	1-1/4	3	E5G95064	E5G97064	E5G97852	E5G97853	E5G97854	E5G97855	E5G97856	E5G97857
		1-1/4	4	E5G95928	E5G97885	E5G97886	E5G97887	E5G97888	E5G97889	E5G97890	E5G97891
		2	5	E5G95924	E5G97858	E5G97859	E5G97860	E5G97861	E5G97862	E5G97863	E5G97864
		3-1/4	6	E5G95925	E5G97865	E5G97866	E5G97867	E5G97868	E5G97869	E5G97870	E5G97871
		4	7	E5G95926	E5G97872	E5G97873	E5G97874	E5G97875	E5G97876	E5G97877	E5G97878

Outside Diameter Tolerences (inch)		Shank Dimeter Tolerance
Diameter	Tolerance	
1/8 – 3/16	+0/-.00032	h6
1/4 – 3/8	+0/-.00035	
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3/4 – 1	+0/-.00051	

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
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HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
Recommended	◎	◎	◎	◎	○	○	○	○	○													

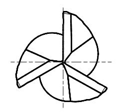
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

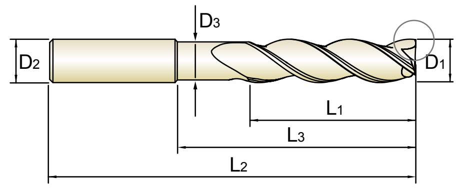
ALU-POWER HPC END MILLS

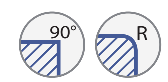
SQUARE **JAG96** SERIES
CORNER RADIUS **JAG98** SERIES

CARBIDE, 3-FLUTE EXTENDED LENGTH – DLC COATED

- ▶ Balanced cutting with less vibration
- ▶ Ability to run at higher speeds with less heat in aluminum
- ▶ More efficient chip evacuation
- ▶ Ability to counteract extreme radial forces
- ▶ DLC Coating provides edge strength and unsurpassed tool life







p.C600

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	LBS (L3)	OAL (L2)	Neck Dia. (D3)	Square End	Corner Radius .010	.030	.060	.090	.120	.190	.250
						EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
1/4	1/4	3/8	3/4	2-1/2	.220	JAG96016	JAG98016	JAG98901	JAG98902				
		3/8	1-1/8	3	.220	JAG96901	JAG98903	JAG98904	JAG98905				
3/8	3/8	1/2	1-1/8	3	.345	JAG96024	JAG98024	JAG98906	JAG98907	JAG98908	JAG98909		
		1/2	2-1/8	4	.345	JAG96902	JAG98910	JAG98911	JAG98912	JAG98913	JAG98914		
1/2	1/2	5/8	1-3/8	3	.470	JAG96032	JAG98032	JAG98915	JAG98916	JAG98917	JAG98918	JAG98919	
		5/8	2-1/4	4	.470	JAG96903	JAG98920	JAG98921	JAG98922	JAG98923	JAG98924	JAG98925	
		5/8	3-3/8	5	.470	JAG96904	JAG98926	JAG98927	JAG98928	JAG98929	JAG98930	JAG98931	
		5/8	4-1/4	6	.470	JAG96905	JAG98932	JAG98933	JAG98934	JAG98935	JAG98936	JAG98937	
5/8	5/8	3/4	1-5/8	4	.585	JAG96040	JAG98040	JAG98938	JAG98939	JAG98940	JAG98941	JAG98942	
		3/4	3-3/8	6	.585	JAG96906	JAG98943	JAG98944	JAG98945	JAG98946	JAG98947	JAG98948	
3/4	3/4	1	2	4	.710	JAG96048	JAG98048	JAG98949	JAG98950	JAG98951	JAG98952	JAG98953	JAG98954
		1	3-3/8	6	.710	JAG96907	JAG98955	JAG98956	JAG98957	JAG98958	JAG98959	JAG98960	JAG98961
		1	5	7	.710	JAG96908	JAG98962	JAG98963	JAG98964	JAG98965	JAG98966	JAG98967	JAG98968
1	1	1-1/4	2-5/8	5	.960	JAG96064	JAG98064	JAG98969	JAG98970	JAG98971	JAG98972	JAG98973	JAG98974
		1-1/4	3-3/8	6	.960	JAG96909	JAG98975	JAG98976	JAG98977	JAG98978	JAG98979	JAG98980	JAG98981
		1-1/4	4-3/8	7	.960	JAG96910	JAG98982	JAG98983	JAG98984	JAG98985	JAG98986	JAG98987	JAG98988
		1-1/4	6	9	.960	JAG96911	JAG98989	JAG98990	JAG98991	JAG98992	JAG98993	JAG98994	JAG98995

Outside Diameter Tolerences (inch)		Shank Dimeter Tolerance
Diameter	Tolerance	
1/8 – 3/16	+0/-.00032	h6
1/4 – 3/8	+0/-.00035	
1/2 – 5/8	+0/-.00043	
3/4 – 1	+0/-.00051	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

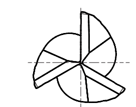
ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
Recommended	◎	◎	◎	◎	○	○	○	○	○													

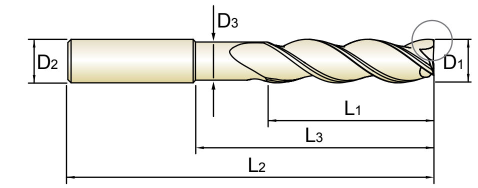
ALU-POWER HPC END MILLS

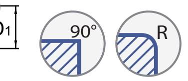
SQUARE **E5G96** SERIES
CORNER RADIUS **E5G98** SERIES

CARBIDE, 3-FLUTE EXTENDED LENGTH – UNCOATED

- ▶ Balanced cutting with less vibration
- ▶ Ability to run at higher speeds with less heat in aluminum
- ▶ More efficient chip evacuation
- ▶ Ability to counteract extreme radial forces







p.C600

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	LBS (L3)	OAL (L2)	Neck Dia. (D3)	Square End	Corner Radius .010	.030	.060	.090	.120	.190	.250
						EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	EDP No.
1/4	1/4	3/8	3/4	2-1/2	.220	E5G96016	E5G98016	E5G98901	E5G98902				
		3/8	1-1/8	3	.220	E5G96901	E5G98903	E5G98904	E5G98905				
3/8	3/8	1/2	1-1/8	3	.345	E5G96024	E5G98024	E5G98906	E5G98907	E5G98908	E5G98909		
		1/2	2-1/8	4	.345	E5G96902	E5G98910	E5G98911	E5G98912	E5G98913	E5G98914		
1/2	1/2	5/8	1-3/8	3	.470	E5G96032	E5G98032	E5G98915	E5G98916	E5G98917	E5G98918	E5G98919	
		5/8	2-1/4	4	.470	E5G96903	E5G98920	E5G98921	E5G98922	E5G98923	E5G98924	E5G98925	
		5/8	3-3/8	5	.470	E5G96904	E5G98926	E5G98927	E5G98928	E5G98929	E5G98930	E5G98931	
		5/8	4-1/4	6	.470	E5G96905	E5G98932	E5G98933	E5G98934	E5G98935	E5G98936	E5G98937	
5/8	5/8	3/4	1-5/8	4	.585	E5G96040	E5G98040	E5G98938	E5G98939	E5G98940	E5G98941	E5G98942	
		3/4	3-3/8	6	.585	E5G96906	E5G98943	E5G98944	E5G98945	E5G98946	E5G98947	E5G98948	
3/4	3/4	1	2	4	.710	E5G96048	E5G98048	E5G98949	E5G98950	E5G98951	E5G98952	E5G98953	E5G98954
		1	3-3/8	6	.710	E5G96907	E5G98955	E5G98956	E5G98957	E5G98958	E5G98959	E5G98960	E5G98961
		1	5	7	.710	E5G96908	E5G98962	E5G98963	E5G98964	E5G98965	E5G98966	E5G98967	E5G98968
1	1	1-1/4	2-5/8	5	.960	E5G96064	E5G98064	E5G98969	E5G98970	E5G98971	E5G98972	E5G98973	E5G98974
		1-1/4	3-3/8	6	.960	E5G96909	E5G98975	E5G98976	E5G98977	E5G98978	E5G98979	E5G98980	E5G98981
		1-1/4	4-3/8	7	.960	E5G96910	E5G98982	E5G98983	E5G98984	E5G98985	E5G98986	E5G98987	E5G98988
		1-1/4	6	9	.960	E5G96911	E5G98989	E5G98990	E5G98991	E5G98992	E5G98993	E5G98994	E5G98995

Outside Diameter Tolerences (inch)		Shank Dimeter Tolerance
Diameter	Tolerance	
1/8 – 3/16	+0/-.00032	h6
1/4 – 3/8	+0/-.00035	
1/2 – 5/8	+0/-.00043	
3/4 – 1	+0/-.00051	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
Recommended	◎	◎	◎	◎	○	○	○	○	○													

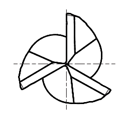
ALU-POWER HPC END MILLS

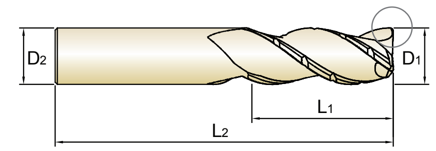
CORNER RADIUS **JAI38 SERIES**

CARBIDE, 3-FLUTE STANDARD LENGTH - CHIP BREAKER - DLC COATED

- ▶ Balanced cutting with less vibration
- ▶ Ability to run at higher speeds with less heat in aluminum
- ▶ Chip Breaker Improves chip evacuation by shortening the chip length
- ▶ Ability to counteract extreme radial forces
- ▶ DLC Coating provides edge strength and unsurpassed tool life

Corner Radius





CARBIDE | 3 | 37° | PLAIN | DLC | p.C601

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Corner Radius .010 EDP No.	Corner Radius .030 EDP No.	Corner Radius .060 EDP No.	Corner Radius .120 EDP No.
1/8	1/8	1/4	1-1/2	JAI38008 ◇			
		3/8	1-1/2	JAI38901 ◇			
		1/2	2-1/2	JAI38902 ◇			
3/16	3/16	5/16	2	JAI38012 ◇			
		9/16	2	JAI38903 ◇	JAI38904 ◇		
1/4	1/4	3/8	2	JAI38016 ◇	JAI38905		
		5/8	2-1/2	JAI38906 ◇	JAI38907		
		1-1/4	3-1/4	JAI38908 ◇	JAI38909	JAI38910 ◇	
3/8	3/8	1/2	2	JAI38024	JAI38911		
		1	2-1/2	JAI38912	JAI38913	JAI38914 ◇	
		1-1/2	3-1/2	JAI38915	JAI38916	JAI38917 ◇	
		2	4			JAI38918	
1/2	1/2	5/8	2-1/2	JAI38032	JAI38919	JAI38920	
		1-1/4	3	JAI38921	JAI38922	JAI38923	
		1-5/8	4	JAI38924	JAI38925	JAI38926	
		2	4	JAI38927	JAI38928	JAI38929	
		2-1/2	5		JAI38930	JAI38931	
		3	5		JAI38932		
5/8	5/8	3/4	3			JAI38040	
		1-5/8	3-1/2			JAI38933	
		2-1/2	5		JAI38934		
3/4	3/4	1	3	JAI38048	JAI38935	JAI38936	
		1-5/8	4	JAI38937	JAI38938	JAI38939	JAI38940
		2-1/4	5		JAI38941	JAI38942	JAI38943
1	1	1-1/4	3	JAI38064			
		2	5	JAI38944	JAI38945	JAI38946	
		3-1/4	6	JAI38947			

◇ : Call for availability

Outside Diameter Tolerences (inch) Diameter	Tolerance	Shank Dimeter Tolerance
1/8 – 3/16	+0/-.00032	h6
1/4 – 3/8	+0/-.00035	
1/2 – 5/8	+0/-.00043	
3/4 – 1	+0/-.00051	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630		400	550
Recommended	◎	◎	◎	◎	○	○	○	○	○													

ALU-POWER HPC END MILLS

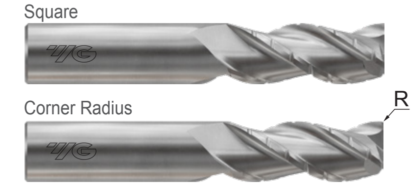
SQUARE **E5136 SERIES**
CORNER RADIUS **E5138 SERIES**

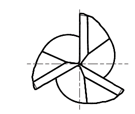
CARBIDE, 3-FLUTE STANDARD LENGTH - CHIP BREAKER - UNCOATED

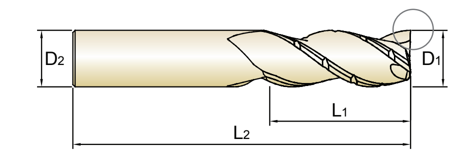
- ▶ Balanced cutting with less vibration
- ▶ Ability to run at higher speeds with less heat in aluminum
- ▶ Chip Breaker Improves chip evacuation by shortening the chip length
- ▶ Ability to counteract extreme radial forces

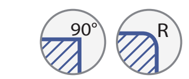
Square

Corner Radius









CARBIDE | 3 | 37° | PLAIN | UNCOATED | p.C601

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	OAL (L2)	Square End EDP No.	Corner Radius .010 EDP No.	Corner Radius .030 EDP No.	Corner Radius .060 EDP No.	Corner Radius .120 EDP No.
1/8	1/8	1/4	1-1/2		E5138008 ◇			
		3/8	1-1/2		E5138901 ◇			
		1/2	2-1/2		E5138902 ◇			
3/16	3/16	5/16	2		E5138012 ◇			
		9/16	2		E5138903 ◇	E5138904 ◇		
1/4	1/4	3/8	2		E5138016 ◇	E5138905 ◇		
		5/8	2-1/2		E5138906 ◇	E5138907 ◇		
		1-1/4	3-1/4		E5138908 ◇	E5138909	E5138910 ◇	
3/8	3/8	1/2	2		E5138024	E5138911		
		1	2-1/2		E5138912	E5138913	E5138914 ◇	
		1-1/2	3-1/2		E5138915	E5138916	E5138917 ◇	
		2	4				E5138918	
1/2	1/2	5/8	2-1/2		E5138032	E5138919	E5138920	
		1-1/4	3	E5136032	E5138921	E5138922	E5138923	
		1-5/8	4		E5138924	E5138925	E5138926	
		2	4	E5136901	E5138927	E5138928	E5138929	
		2-1/2	5			E5138930	E5138931	
		3	5	E5136902		E5138932		
5/8	5/8	3/4	3	E5136040			E5138040	
		1-5/8	3-1/2				E5138933	
		2-1/2	5			E5138934		
3/4	3/4	1	3	E5136048	E5138048	E5138935	E5138936	
		1-5/8	4	E5136903	E5138937	E5138938	E5138939	E5138940
		2-1/4	5			E5138941	E5138942	E5138943
1	1	1-1/4	3		E5138064			
		2	5		E5138944	E5138945	E5138946	
		3-1/4	6		E5138947			

◇ : Call for availability

Outside Diameter Tolerences (inch) Diameter	Tolerance	Shank Dimeter Tolerance
1/8 – 3/16	+0/-.00032	h6
1/4 – 3/8	+0/-.00035	
1/2 – 5/8	+0/-.00043	
3/4 – 1	+0/-.00051	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

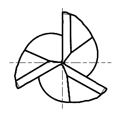
ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630		400	550
Recommended	◎	◎	◎	◎	○	○	○	○	○													

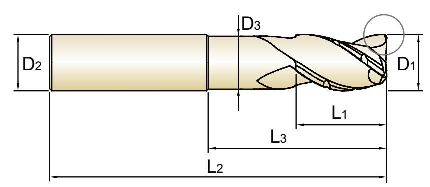
ALU-POWER HPC END MILLS

CORNER RADIUS **JAI39** SERIES

CARBIDE, 3-FLUTE EXTENDED LENGTH - CHIP BREAKER - DLC COATED

- ▶ Balanced cutting with less vibration
- ▶ Ability to run at higher speeds with less heat in aluminum
- ▶ Chip Breaker Improves chip evacuation by shortening the chip length
- ▶ Ability to counteract extreme radial forces
- ▶ DLC Coating provides edge strength and unsurpassed tool life





p.C601

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	LBS (L3)	Neck Dia. (D3)	OAL (L2)	Corner Radius .010 EDP No.	Corner Radius .030 EDP No.	Corner Radius .060 EDP No.
1/4	1/4	3/8	3/4	.220	2-1/2	JAI39016		
3/8	3/8	1/2	1-1/8	.345	3		JAI39024	
		1/2	2-1/8	.345	4		JAI39901	
1/2	1/2	5/8	1-3/8	.470	3		JAI39032	JAI39902
		5/8	2-1/4	.470	4		JAI39903	JAI39904
		5/8	3-3/8	.470	5		JAI39905	JAI39906
		5/8	4-1/4	.470	6	JAI39907	JAI39908	JAI39909
3/4	3/4	1	2	.710	4		JAI39048	JAI39910
		1	3-3/8	.710	6		JAI39911	JAI39912
		1	5	.710	7		JAI39913	JAI39914
1	1	1-1/4	4-3/8	.960	7	JAI39064		

Outside Diameter Tolerences (inch) Diameter	Tolerance	Shank Dimeter Tolerance
1/8 – 3/16	+0/-.00032	h6
1/4 – 3/8	+0/-.00035	
1/2 – 5/8	+0/-.00043	
3/4 – 1	+0/-.00051	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
Recommended	◎	◎	◎	◎	○	○	○	○	○													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

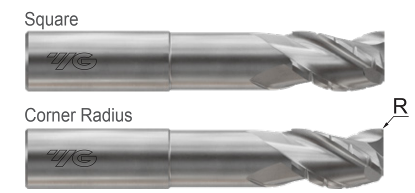
ALU-POWER HPC END MILLS

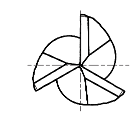
SQUARE **E5137** SERIES

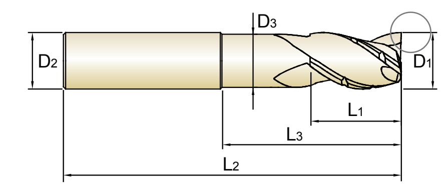
CORNER RADIUS **E5139** SERIES

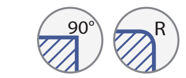
CARBIDE, 3-FLUTE EXTENDED LENGTH - CHIP BREAKER - UNCOATED

- ▶ Balanced cutting with less vibration
- ▶ Ability to run at higher speeds with less heat in aluminum
- ▶ Chip Breaker Improves chip evacuation by shortening the chip length
- ▶ Ability to counteract extreme radial forces









p.C601

Unit : Inch

OD (D1)	SD (D2)	LOC (L1)	LBS (L3)	Neck Dia. (D3)	OAL (L2)	Square End EDP No.	Corner Radius .010 EDP No.	Corner Radius .030 EDP No.	Corner Radius .060 EDP No.
1/4	1/4	3/8	3/4	.220	2-1/2		E5139016		
3/8	3/8	1/2	1-1/8	.345	3			E5139024	
		1/2	2-1/8	.345	4			E5139901	
1/2	1/2	5/8	1-3/8	.470	3	E5137032		E5139032	E5139902
		5/8	2-1/4	.470	4	E5137901		E5139903	E5139904
		5/8	3-3/8	.470	5			E5139905	E5139906
		5/8	4-1/4	.470	6		E5139907	E5139908	E5139909
3/4	3/4	1	2	.710	4			E5139048	E5139910
		1	3-3/8	.710	6			E5139911	E5139912
		1	5	.710	7			E5139913	E5139914
1	1	1-1/4	4-3/8	.960	7		E5139064		

Outside Diameter Tolerences (inch) Diameter	Tolerance	Shank Dimeter Tolerance
1/8 – 3/16	+0/-.00032	h6
1/4 – 3/8	+0/-.00035	
1/2 – 5/8	+0/-.00043	
3/4 – 1	+0/-.00051	

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
Recommended	◎	◎	◎	◎	○	○	○	○	○													

YG ALU-POWER HPC END MILLS

RECOMMENDED CUTTING CONDITIONS

JAG96, JAG98, JAG95, JAG97 SERIES — DLC Coated
E5G95, E5G97, E5G96, E5G98 SERIES — Uncoated

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

3 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Hardness (HB)	Ae	Ap	Parameter	Mill Diameter (Ø) 1/8	1/4	3/8	1/2	5/8	3/4	1
N	21-22	Aluminum-wrought alloy	60 / 100	1.0D	1.0D	SFM (Vc)	2000	2000	2000	2000	2000	2000	2000
						IPT (fz)	.0010	.0030	.0045	.0060	.0066	.0075	.0100
						RPM	61100	30500	20400	15300	12200	10200	7600
						IPM (FEED)	183	275	275	275	242	230	228
	23-25	Aluminum-cast, alloyed	75 / 90 / 130	1.0D	1.0D	SFM (Vc)	600	600	600	600	600	600	600
						IPT (fz)	.0010	.0030	.0045	.0060	.0066	.0075	.0100
						RPM	18340	9170	6110	4580	3670	3060	2290
						IPM (FEED)	55	83	83	83	73	69	69
	26-28	Copper and Copper Alloys (Bronze / Brass)	110 / 90 / 100	1.0D	1.0D	SFM (Vc)	880	880	880	880	880	880	880
						IPT (fz)	.0008	.0020	.0040	.0050	.0055	.0060	.0070
						RPM	26890	13450	8960	6720	5380	4480	3360
						IPM (FEED)	65	81	108	101	89	81	71
	29.1	Non Metallic Materials (Duroplastic)	-	1.0D	1.0D	SFM (Vc)	1670	1670	1670	1670	1670	1670	1670
						IPT (fz)	.0015	.0040	.0075	.0100	.0110	.0120	.0140
						RPM	51040	25520	17010	12760	10210	8510	6380
						IPM (FEED)	230	306	383	383	337	306	268

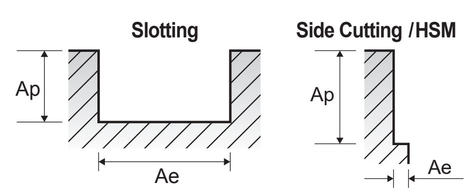
3 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Hardness (HB)	Ae	Ap	Parameter	Mill Diameter (Ø) 1/8	1/4	3/8	1/2	5/8	3/4	1
N	21-22	Aluminum-wrought alloy	60 / 100	1.5D	0.5D	SFM (Vc)	3000	3000	3000	3000	3000	3000	3000
						IPT (fz)	.0010	.0030	.0045	.0060	.0066	.0075	.0100
						RPM	91700	45800	30600	23000	18300	15300	11500
						IPM (FEED)	275	412	413	414	362	344	345
	23-25	Aluminum-cast, alloyed	75 / 130	1.5D	0.5D	SFM (Vc)	800	800	800	800	800	800	800
						IPT (fz)	.0010	.0030	.0045	.0060	.0066	.0075	.0100
						RPM	24450	12220	8150	6110	4890	4080	3060
						IPM (FEED)	73	110	110	110	97	92	92
	26-28	Copper and Copper Alloys (Bronze / Brass)	110 / 90 / 100	1.5D	0.5D	SFM (Vc)	1150	1150	1150	1150	1150	1150	1150
						IPT (fz)	.0008	.0020	.0040	.0050	.0055	.0060	.0070
						RPM	35140	17570	11720	8790	7030	5860	4390
						IPM (FEED)	84	105	141	132	116	105	92
	29.1	Non Metallic Materials (Duroplastic)	-	1.5D	0.5D	SFM (Vc)	2070	2070	2070	2070	2070	2070	2070
						IPT (fz)	.0015	.0040	.0075	.0100	.0110	.0120	.0140
						RPM	63260	31630	21090	15820	12650	10540	7910
						IPM (FEED)	285	380	474	474	418	380	332

3 FLUTE - SIDE CUTTING HSM (Light)

ISO	VDI 3323	Material Description	Hardness (HB)	Ae	Ap	Parameter	Mill Diameter (Ø) 1/8	1/4	3/8	1/2	5/8	3/4	1
N	21-22	Aluminum-wrought alloy	60 / 100	2.0D	0.05D	SFM (Vc)	8000	8000	8000	8000	8000	8000	8000
						IPT (fz)	.0021	.0055	.0105	.0140	.0150	.0165	.0195
						RPM	244500	122200	81500	61100	48900	40700	30600
						IPM (FEED)	1540	2016	2567	2566	2201	2015	1790
	23-25	Aluminum-cast, alloyed	75 /130	2.0D	0.05D	SFM (Vc)	1200	1200	1200	1200	1200	1200	1200
						IPT (fz)	.0021	.0055	.0105	.0140	.0150	.0165	.0195
						RPM	36670	18340	12220	9170	7330	6110	4580
						IPM (FEED)	231	303	385	385	330	303	268
	26-28	Copper and Copper Alloys (Bronze / Brass)	110 / 90 / 100	2.0D	0.05D	SFM (Vc)	1850	1850	1850	1850	1850	1850	1850
						IPT (fz)	.0017	.0045	.0085	.0115	.0130	.0140	.0160
						RPM	56540	28270	18850	14130	11310	9420	7070
						IPM (FEED)	288	382	481	488	441	396	339
	29.1	Non Metallic Materials (Duroplastic)	-	2.0D	0.05D	SFM (Vc)	3350	3350	3350	3350	3350	3350	3350
						IPT (fz)	.0034	.0090	.0170	.0230	.0250	.0275	.0320
						RPM	102380	51190	34130	25590	20480	17060	12800
						IPM (FEED)	1044	1382	1740	1766	1536	1408	1229

NOTES:
- All cutting data are target values
- Maximum recommended depth shown
- Finish cuts typically require reduced feed rates and/or higher spindle speed, with radial width of 2% x D or less
- Reduce speed and feed recommendations for materials harder than listed
- Reduce cut depth and feed by 50% for long-flute or long-reach tools
- Above recommendations are based on ideal conditions. Adjust parameters accordingly for smaller taper machining centers or less rigid conditions
- HSM = high-speed machining



YG ALU-POWER HPC END MILLS

RECOMMENDED CUTTING CONDITIONS

JAI38, JAI39 SERIES — DLC Coated
E5I36, E5I38, E5I37, E5I39 SERIES — Uncoated

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

3 FLUTE CHIP BREAKER - SLOTTING

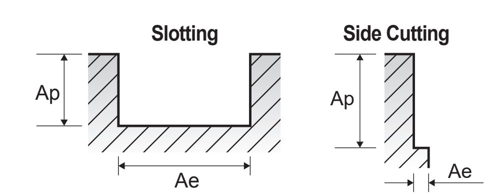
ISO	VDI 3323	Material Description	Hardness (HB)	Ae	Ap	Parameter	Outside Diameter (Ø) 1/8	1/4	3/8	1/2	5/8	3/4	1
N	21-22	Aluminum-wrought alloy	60 / 100	1.0D	1.0D	SFM (Vc)	2000	2000	2000	2000	2000	2000	2000
						IPT (fz)	.0010	.0030	.0045	.0060	.0066	.0075	.0100
						RPM	61100	30500	20400	15300	12200	10200	7600
						IPM (FEED)	183	275	275	275	242	230	228
	23-25	Aluminum-cast, alloyed	75 /130	1.0D	1.0D	SFM (Vc)	600	600	600	600	600	600	600
						IPT (fz)	.0010	.0030	.0045	.0060	.0066	.0075	.0100
						RPM	18340	9170	6110	4580	3670	3060	2290
						IPM (FEED)	55	83	83	83	73	69	69
	26-28	Copper and Copper Alloys (Bronze / Brass)	110 / 90 / 100	1.0D	1.0D	SFM (Vc)	880	880	880	880	880	880	880
						IPT (fz)	.0008	.0020	.0040	.0050	.0055	.0060	.0070
						RPM	26890	13450	8960	6720	5380	4480	3360
						IPM (FEED)	65	81	108	101	89	81	71
	29.1	Non Metallic Materials (Duroplastic)	-	1.0D	1.0D	SFM (Vc)	1670	1670	1670	1670	1670	1670	1670
						IPT (fz)	.0015	.0040	.0075	.0100	.0110	.0120	.0140
						RPM	51040	25520	17010	12760	10210	8510	6380
						IPM (FEED)	230	306	383	383	337	306	268

3 FLUTE CHIP BREAKER - SIDE CUTTING

ISO	VDI 3323	Material Description	Hardness (HB)	Ae	Ap	Parameter	Outside Diameter (Ø) 1/8	1/4	3/8	1/2	5/8	3/4	1
N	21-22	Aluminum-wrought alloy	60 / 100	1.5D	0.5D	SFM (Vc)	3000	3000	3000	3000	3000	3000	3000
						IPT (fz)	.0010	.0030	.0045	.0060	.0066	.0075	.0100
						RPM	91700	45800	30600	23000	18300	15300	11500
						IPM (FEED)	275	412	413	414	362	344	345
	23-25	Aluminum-cast, alloyed	75 /130	1.5D	0.5D	SFM (Vc)	800	800	800	800	800	800	800
						IPT (fz)	.0010	.0030	.0045	.0060	.0066	.0075	.0100
						RPM	24450	12220	8150	6110	4890	4080	3060
						IPM (FEED)	73	110	110	110	97	92	92
	26-28	Copper and Copper Alloys (Bronze / Brass)	110 / 90 / 100	1.5D	0.5D	SFM (Vc)	1150	1150	1150	1150	1150	1150	1150
						IPT (fz)	.0008	.0020	.0040	.0050	.0055	.0060	.0070
						RPM	35140	17570	11720	8790	7030	5860	4390
						IPM (FEED)	84	105	141	132	116	105	92
	29.1	Non Metallic Materials (Duroplastic)	-	1.5D	0.5D	SFM (Vc)	2070	2070	2070	2070	2070	2070	2070
						IPT (fz)	.0015	.0040	.0075	.0100	.0110	.0120	.0140
						RPM	63260	31630	21090	15820	12650	10540	7910
						IPM (FEED)	285	380	474	474	418	380	332

NOTES:
- All cutting data are target values
- Maximum recommended depth shown
- Finish cuts typically require reduced feed rates and/or higher spindle speed, with radial width of 2% x D or less
- Reduce speed and feed recommendations for materials harder than listed
- Reduce cut depth and feed by 50% for long-flute or long-reach tools
- Above recommendations are based on ideal conditions. Adjust parameters accordingly for smaller taper machining centers or less rigid conditions
- HSM = high-speed machining

Tech Tip : The tables above are based on common machining calculations.
We realize that shops may not have RPM capability shown in the tables
To adapt the tables to machining conditions available, use the following calculation:
(Recommended Feed (IPM) / Recommended RPM) X Available RPM = IPM
Example for 1/8" Side Milling in N21-22 WorkPiece Materials:
(275 IPM / 91700 RPM) X 15,000 = 45 IPM



CARBIDE
HSS
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STANDARD CARBIDE
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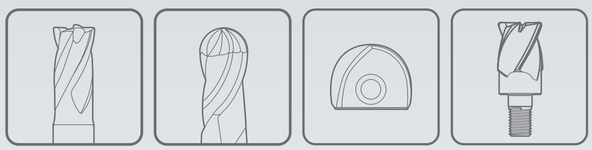
STANDARD COBALT & HSS
TECHNICAL DATA

Global Cutting Tool Leader **YG-1**



MILLING

Being the best through innovation

SOLID CARBIDE

ALU-POWER END MILLS

- For Silent Cutting of Aluminium Alloys, Mirror Surface

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
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ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SELECTION GUIDE

YG MILLING TOOLS

SOLID CARBIDE & HSS ALU POWER END MILLS

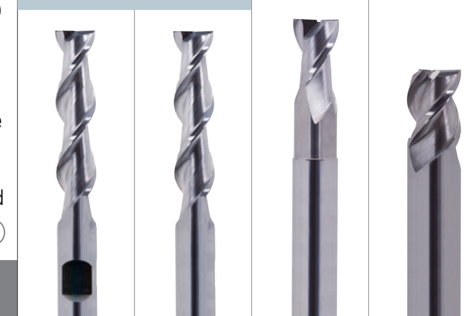
for Silent Cutting of Aluminium Alloys, Mirror Surface

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p. C636

	Inch				Inch												
SERIES	E5253	E5254	E5976	E5980	E5981	E5983	E5982	E5984	E5E44	E5E98	E5E45	E5977	E5985	E5973	E5974	E5978	E5975
FLUTE	2 (Weldon)	2	2	3	3	3	3	3	3	3	3	3	3	2	3	2	3
HELIX ANGLE	42°	42°	37°	45°	45°	45°	45°	45°	30°	30°	30°	37°	37°	30°	50°	37°	40°
CUTTING EDGE SHAPE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	CORNER RADIUS	SQUARE	CORNER RADIUS	ROUGHING	ROUGHING	BALL NOSE ROUGHING	SQUARE	CORNER RADIUS	CORNER RADIUS	BALL NOSE	BALL NOSE	BALL NOSE
SIZE MIN	D1/4	D1/16	D1/4	D1/8	D1/8	D1/2	D1/4	D1/2	D1/4	D1/4	D1/4	D1/4	D1/2	D5/32	R1/8	R1/8	R3/64
SIZE MAX	D1	D1	D1	D1	D1	D1	D1	D1	D1	D1	D1	D1	D1	D3/4	R3/8	R1/2	R5/16
PAGE	C608	C609	C610	C611	C612		C613		C614		C615	C616	C617	C618	C619	C620	C621
	REGULAR LENGTH	REGULAR LENGTH	EXTENDED NECK	STUB	REGULAR LENGTH	REGULAR LENGTH	LONG LENGTH	LONG LENGTH		NECK		EXTENDED NECK	EXTENDED NECK	NECK	STUB CUT LENGTH NECK	LONG REACH	LONG LENGTH NECK
	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN
	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	U.S.A Stock				U.S.A Stock												
	BANSHEE																



ISO	VDI 3323	Material Description	Composition / Structure	Heat Treatment	HB	HRc	E5253	E5254	E5976	E5980	E5981	E5983	E5982	E5984	E5E44	E5E98	E5E45	E5977	E5985	E5973	E5974	E5978	E5975
P	1	Non-alloy steel	About 0.15% C	Annealed	125																		
P	2	Non-alloy steel	About 0.45% C	Annealed	190	13																	
P	3	Non-alloy steel	About 0.45% C	Quenched & Tempered	250	25																	
P	4	Non-alloy steel	About 0.75% C	Annealed	270	28																	
P	5	Non-alloy steel	About 0.75% C	Quenched & Tempered	300	32																	
P	6	Low alloy steel		Annealed	180	10																	
P	7	Low alloy steel		Quenched & Tempered	275	29																	
P	8	Low alloy steel		Quenched & Tempered	300	32																	
P	9	Low alloy steel		Quenched & Tempered	350	38																	
P	10	High alloyed steel, and tool steel		Annealed	200	15																	
P	11	High alloyed steel, and tool steel		Quenched & Tempered	325	35																	
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15																	
M	13	Stainless steel	Martensitic	Quenched & Tempered	240	23																	
M	14	Stainless steel	Austenitic		180	10																	
K	15	Grey cast iron	Pearlitic / ferritic		180	10																	
K	16	Grey cast iron	Pearlitic (Martensitic)		260	26																	
K	17	Nodular cast iron	Ferritic		160	3																	
K	18	Nodular cast iron	Pearlitic		250	25																	
K	19	Malleable cast iron	Ferritic		130																		
K	20	Malleable cast iron	Pearlitic		230	21																	
N	21	Aluminum-wrought alloy	Not Curable		60		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	22	Aluminum-wrought alloy	Curable	Hardened	100		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	24	Aluminum-cast, alloyed	≤ 12% Si, Curable	Hardened	90		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	25	Aluminum-cast, alloyed	> 12% Si, Not Curable		130		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110																		
N	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90																		
N	28	Copper and Copper Alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper		100																		
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic																				
N	30	Non Metallic Materials	Rubber, Wood, etc.																				
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15																	
S	32	Heat Resistant Super Alloys	Fe Based	Cured	280	30																	
S	33	Heat Resistant Super Alloys	Ni or Co Based	Annealed	250	25																	
S	34	Heat Resistant Super Alloys	Ni or Co Based	Cured	350	38																	
S	35	Heat Resistant Super Alloys	Ni or Co Based	Cast	320	34																	
S	36	Titanium Alloys	Pure Titanium		400 Rm																		
S	37	Titanium Alloys	Alpha + Beta Alloys	Hardened	1050 Rm																		
H	38	Hardened steel		Hardened	550	55																	
H	39	Hardened steel		Hardened	630	60																	
H	40	Chilled Cast Iron		Cast	400	42																	
H	41	Hardened Cast Iron		Hardened	550	55																	

SELECTION GUIDE

YG MILLING TOOLS

SOLID CARBIDE & HSS

ALU POWER END MILLS

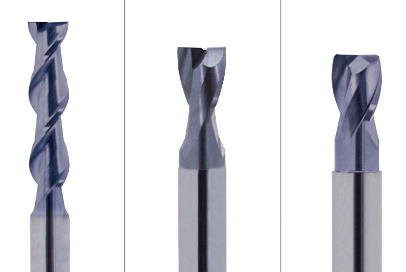
for Silent Cutting of Aluminium Alloys, Mirror Surface

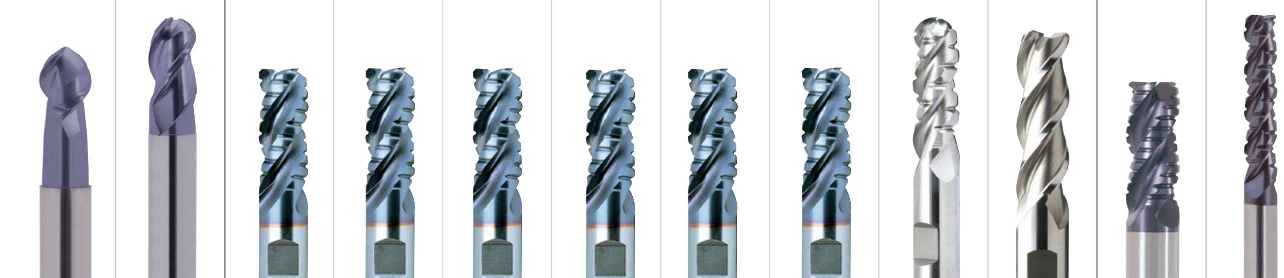
Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p. C636

	Metric			Metric		HSS-PM Inch										HSS-PM Metric	
SERIES	E5522 EG522	EG930	EG909	EG910	EG908	EK191	EK191	EK226	EK226	EK192	EK192	EK196	EK193 EK132	EP922	EP924
FLUTE	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3
HELIX ANGLE	45°	25°	30°	50°	40°	42°	42°	42°	42°	42°	42°	42°	42°	42°	42°
CUTTING EDGE SHAPE	SQUARE	CORNER RADIUS	CORNER RADIUS	BALL NOSE	BALL NOSE	ROUGHING	CORNER RADIUS ROUGHING	ROUGHING	CORNER RADIUS ROUGHING	ROUGHING	CORNER RADIUS ROUGHING	BALL NOSE ROUGHING	CORNER RADIUS	ROUGHING	ROUGHING
SIZE MIN	D3.0	D2.0	D4.0	R3.0	R1.0	D1/2	D3/4	D3/4	D3/4	D1/2	D3/4	R1/4	D1/2	D12.0	D12.0
SIZE MAX	D20.0	D20.0	D20.0	R10.0	R8.0	D2	D1-1/4	D2	D1-1/4	D2	D1-1/4	R5/8	D1-1/2	D32.0	D32.0
PAGE	C622	C623	C624	C625	C626	C627	C583	C628		C629 - C630		C631	C632	C634	C635
	LONG LENGTH	STUB CUT LENGTH	STUB CUT LENGTH NECK	STUB CUT LENGTH NECK	LONG LENGTH NECK	REGULAR LENGTH for ALUMINUM	REGULAR LENGTH for ALUMINUM	MEDIUM LENGTH for ALUMINUM	MEDIUM LENGTH for ALUMINUM	LONG LENGTH for ALUMINUM	LONG LENGTH for ALUMINUM	REGULAR LENGTH for ALUMINUM	REGULAR & MEDIUM & LONG LENGTH	SHORT LENGTH for ALUMINUM	LONG LENGTH for ALUMINUM
	TiCN / Uncoated	TiCN	TiCN	TiCN	TiCN	TiCN / Uncoated	TiCN / Uncoated	TiCN / Uncoated	TiCN / Uncoated	TiCN / Uncoated	TiCN / Uncoated	TiCN / Uncoated	TiCN / Uncoated	TiAlN	TiAlN
		Call for Availability		Call for Availability		U.S.A Stock								Call for Availability	
						HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM





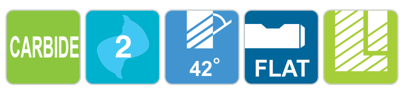
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	E5522 EG522	EG930	EG909	EG910	EG908	EK191	EK191	EK226	EK226	EK192	EK192	EK196	EK193 EK132	EP922	EP924
P	1	Non-alloy steel	About 0.15% C	Annealed	125																
	2		About 0.45% C	Annealed	190	13															
	3		About 0.45% C	Quenched & Tempered	250	25															
	4		About 0.75% C	Annealed	270	28															
	5		About 0.75% C	Quenched & Tempered	300	32															
	6	Low alloy steel		Annealed	180	10															
	7			Quenched & Tempered	275	29															
	8			Quenched & Tempered	300	32															
	9			Quenched & Tempered	350	38															
	10	High alloyed steel, and tool steel		Annealed	200	15															
	11			Quenched & Tempered	325	35															
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15															
	13		Martensitic	Quenched & Tempered	240	23															
	14		Austenitic		180	10															
K	15	Grey cast iron	Pearlitic / ferritic		180	10															
	16		Pearlitic (Martensitic)		260	26															
	17	Nodular cast iron	Ferritic		160	3															
	18		Pearlitic		250	25															
	19	Malleable cast iron	Ferritic		130																
	20		Pearlitic		230	21															
N	21	Aluminum-wrought alloy	Not Curable		60		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	22		Curable	Hardened	100		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	24		≤ 12% Si, Curable	Hardened	90		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	25		> 12% Si, Not Curable		130		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110																
	27		CuZn, CuSnZn (Brass)		90																
	28		CuSn, lead-free copper and electrolytic copper		100																
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic																		
	30		Rubber, Wood, etc.																		
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15															
	32			Cured	280	30															
	33		Ni or Co Based	Annealed	250	25															
	34			Cured	350	38															
	35			Cast	320	34															
	36	Titanium Alloys	Pure Titanium		400 Rm																
	37		Alpha + Beta Alloys	Hardened	1050 Rm																
H	38	Hardened steel		Hardened	550	55															
	39			Hardened	630	60															
	40	Chilled Cast Iron		Cast	400	42															
	41	Hardened Cast Iron		Hardened	550	55															

YG ALU-POWER END MILLS

FLAT SHANK **E5253** SERIES

CARBIDE, 2 FLUTE 42° HELIX REGULAR LENGTH - "BANSHEE"

- High velocity milling of aluminum & other non ferrous materials.
- Excellent plunging capabilities.
- Improved surface roughness-cylindrical margin which is controlled tightly.
- Maximum-metal removal rate.
- Superior chip evacuation.
- Mirror face-excellent surface finish.



p.C636

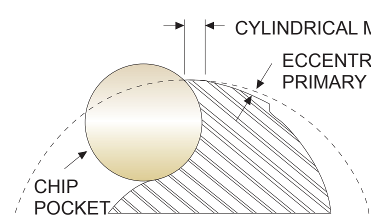
◆ U.S.A Stock

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
17574	17574TC	1/4	3/8	3/4	2-1/2
17580	17580TC	5/16	3/8	13/16	2-1/2
17584	17584TC	3/8	3/8	1	2-1/2
17593	17593TC	1/2	1/2	1	3
18593	18593TC	1/2	1/2	2	4
17901	17901TC	1/2	1/2	1-1/4	3-1/4
17595	17595TC	5/8	5/8	1-1/4	3-1/2
17598	17598TC	3/4	3/4	1-1/2	4
18598	18598TC	3/4	3/4	3	5-1/2
17600	17600TC	1	1	1-1/2	4
18600	18600TC	1	1	3	5-1/2

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003

- High performance in machining aluminum and non-ferrous materials
- Special designed geometry with high rigidity cutting edge
- Improved surface roughness - cylindrical margin which is controlled tightly.
- Excellent chip removal - higher rake angle, higher helix angle(42°), bigger chip pocket.



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

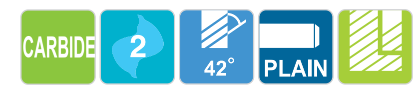
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

YG ALU-POWER END MILLS

PLAIN SHANK **E5254** SERIES

CARBIDE, 2 FLUTE 42° HELIX REGULAR LENGTH - "BANSHEE"

- High velocity milling of aluminum & other non ferrous materials.
- Excellent plunging capabilities.
- Improved surface roughness-cylindrical margin which is controlled tightly.
- Maximum-metal removal rate.
- Superior chip evacuation.
- Mirror face-excellent surface finish.



p.C636

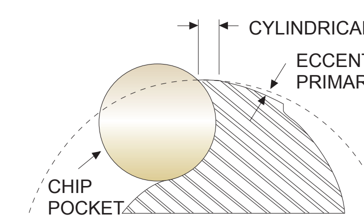
◆ U.S.A Stock

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
21554	21554TC	1/16	1/8	1/8	1-1/2
21556	21556TC	3/32	1/8	1/4	1-1/2
21601	21601TC	1/8	1/4	5/16	1-3/4
21566	21566TC	3/16	1/4	7/16	2
21574	21574TC	1/4	3/8	3/4	2-1/2
21580	21580TC	5/16	3/8	13/16	2-1/2
21584	21584TC	3/8	3/8	1	2-1/2
21588	21588TC	7/16	7/16	1	2-3/4
21593	21593TC	1/2	1/2	1	3
21904	21904TC	1/2	1/2	1-1/4	3
21901	21901TC	1/2	1/2	2	4
21595	21595TC	5/8	5/8	1-1/4	3-1/2
21598	21598TC	3/4	3/4	1-1/2	4
21902	21902TC	3/4	3/4	3	5-1/2
21600	21600TC	1	1	1-1/2	4
21903	21903TC	1	1	3	5-1/2

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003

- High performance in machining aluminum and non-ferrous materials
- Special designed geometry with high rigidity cutting edge
- Improved surface roughness - cylindrical margin which is controlled tightly.
- Excellent chip removal - higher rake angle, higher helix angle(42°), bigger chip pocket.



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

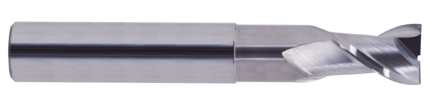
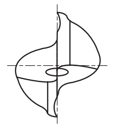
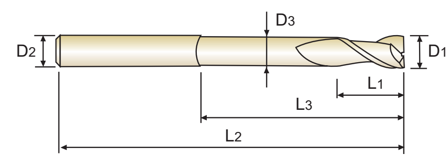
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

ALU-POWER END MILLS

PLANE SHANK **E5976 SERIES**

CARBIDE, 2 FLUTE 37° HELIX with EXTENDED NECK

- ▶High velocity milling of aluminum & other non-ferrous materials.
- ▶Excellent plunging capabilities.
- ▶Improved surface roughness-cylindrical margin which is controlled tightly.
- ▶Maximum-metal removal rate.
- ▶Superior chip evacuation.
- ▶Mirror face-excellent surface finish.

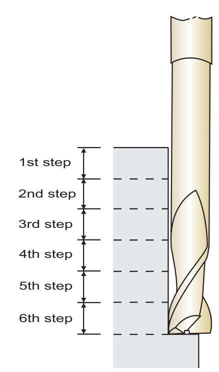
CARBIDE 2 37° PLAIN p.C639

◆ U.S.A Stock

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
UNCOATED	TiCN COATED	D1	D2	L1	L3	L2	D3
39573	39573TC	1/4	1/4	3/8	2-1/4	4	.220
39584	39584TC	3/8	3/8	1/2	2-1/4	4	.345
39593	39593TC	1/2	1/2	5/8	2-1/4	5	.470
39908	39908TC	1/2	1/2	5/8	3-1/4	6	.470
39901	39901TC	1/2	1/2	5/8	4	6	.470
39595	39595TC	5/8	5/8	3/4	2-1/4	5	.585
39902	39902TC	5/8	5/8	3/4	3-1/4	6	.585
39903	39903TC	5/8	5/8	3/4	4-1/4	7	.585
39598	39598TC	3/4	3/4	1	2-1/4	5	.710
39904	39904TC	3/4	3/4	1	3-1/4	6	.710
39905	39905TC	3/4	3/4	1	4-1/4	7	.710
39600	39600TC	1	1	1-1/8	2-1/4	5	.960
39906	39906TC	1	1	1-1/8	3-1/4	6	.960
39907	39907TC	1	1	1-1/8	4-1/4	7	.960

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0005	0~-.0003



STEP MILLING

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

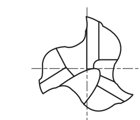
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

ALU-POWER END MILLS

PLAIN SHANK **E5980 SERIES**

CARBIDE, 3 FLUTE 45° HELIX STUB LENGTH

- ▶Designed to machine aluminium at high speed condition.
- ▶Improved surface roughness-cylindrical margin which is controlled tightly.
- ▶Mirror face-excellent surface finish.

CARBIDE 3 45° PLAIN p.C637

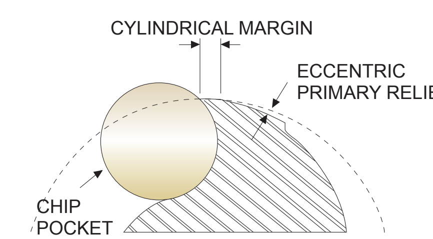
◆ U.S.A Stock

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiCN COATED				
25558	25558TC	1/8	1/8	1/4	1-1/2
25565	25565TC	3/16	3/16	5/16	2
25573	25573TC	1/4	1/4	3/8	2
25579	25579TC	5/16	5/16	7/16	2
25584	25584TC	3/8	3/8	1/2	2
25588	25588TC	7/16	7/16	9/16	2-1/2
25593	25593TC	1/2	1/2	5/8	2-1/2
25595	25595TC	5/8	5/8	3/4	3
25598	25598TC	3/4	3/4	1	3
25600	25600TC	1	1	1-1/4	3

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0005	0~-.0003

- High performance in machining aluminum and non-ferrous materials
- Special designed geometry with high rigidity cutting edge
- Improved surface roughness - cylindrical margin which is controlled tightly.
- Excellent chip removal - higher rake angle, higher helix angle(45°), bigger chip pocket.



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

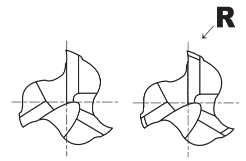
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

YG ALU-POWER END MILLS

PLAIN SHANK **E5981 SERIES**
PLAIN SHANK **E5983 SERIES**

CARBIDE, 3 FLUTE 45° HELIX REGULAR LENGTH & CORNER RADIUS

- ▶High velocity milling of aluminum & other non-ferrous materials.
- ▶3flute and 45° helix allow harmonic balance at high speed condition and smooth cutting.
- ▶Improved surface roughness-cylindrical margin which is controlled tightly
- ▶Maximum-metal removal rate.
- ▶Superior chip evacuation.
- ▶Mirror face-excellent surface finish.



CARBIDE 3 45° PLAIN p.C637

◆ U.S.A Stock

■ SQUARE

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
28558	28558TC	1/8	1/8	3/8	1-1/2
28565	28565TC	3/16	3/16	9/16	2
28573	28573TC	1/4	1/4	5/8	2-1/2
28579	28579TC	5/16	5/16	5/8	2-1/2
28584	28584TC	3/8	3/8	1	2-1/2
28588	28588TC	7/16	7/16	1-1/4	2-3/4
28593	28593TC	1/2	1/2	1-1/4	3
28595	28595TC	5/8	5/8	1-5/8	3-1/2
28598	28598TC	3/4	3/4	1-5/8	4
28600	28600TC	1	1	2	5

■ CORNER RADIUS

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Corner Radius R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
EA50321	EA50321C	R.060	1/2	1/2	1-1/4	3
EA50401	EA50401C	R.060	5/8	5/8	1-5/8	3-1/2
EA50481	EA50481C	R.060	3/4	3/4	1-5/8	4
EA50641	EA50641C	R.065	1	1	2	5
EA20321	EA20321C	R.120	1/2	1/2	1-1/4	3
EA20401	EA20401C	R.120	5/8	5/8	1-5/8	3-1/2
EA20481	EA20481C	R.120	3/4	3/4	1-5/8	4
EA20641	EA20641C	R.120	1	1	2	5

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0005	0~-.0003

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

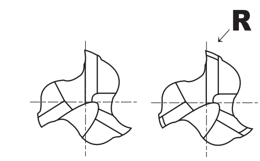
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG ALU-POWER END MILLS

PLAIN SHANK **E5982 SERIES**
PLAIN SHANK **E5984 SERIES**

CARBIDE, 3 FLUTE 45° HELIX LONG LENGTH & CORNER RADIUS

- ▶High velocity milling of aluminum & other non-ferrous materials.
- ▶3flute and 45° helix allow harmonic balance at high speed condition and smooth cutting.
- ▶Improved surface roughness-cylindrical margin which is controlled tightly
- ▶Maximum-metal removal rate.
- ▶Superior chip evacuation.
- ▶Mirror face-excellent surface finish.



CARBIDE 3 45° PLAIN p.C637

◆ U.S.A Stock

■ SQUARE

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
36573	36573TC	1/4	1/4	1-1/4	3-1/4
36579	36579TC	5/16	5/16	1-1/4	3-1/2
36584	36584TC	3/8	3/8	1-1/2	3-1/2
36588	36588TC	7/16	7/16	2	4
36593	36593TC	1/2	1/2	2	4
36595	36595TC	5/8	5/8	2-1/2	5
36598	36598TC	3/4	3/4	3-1/4	6
36600	36600TC	1	1	3-1/4	6

■ CORNER RADIUS

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Corner Radius R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
EA60321	EA60321C	R.060	1/2	1/2	2	4
EA60401	EA60401C	R.060	5/8	5/8	2-1/2	5
EA60481	EA60481C	R.060	3/4	3/4	3-1/4	6
EA60641	EA60641C	R.060	1	1	3-1/4	6
EA30321	EA30321C	R.120	1/2	1/2	2	4
EA30401	EA30401C	R.120	5/8	5/8	2-1/2	5
EA30481	EA30481C	R.120	3/4	3/4	3-1/4	6
EA30641	EA30641C	R.120	1	1	3-1/4	6

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0005	0~-.0003

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

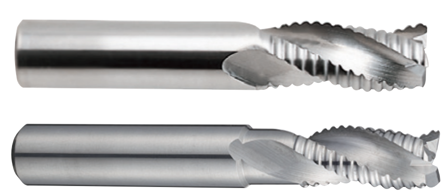
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

ALU-POWER END MILLS

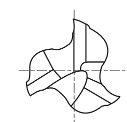
PLAIN SHANK **E5E44** SERIES
PLAIN SHANK **E5E98** SERIES

CARBIDE, 3 FLUTE ROUGHING / ROUGHING with NECK

- Excellent cutting qualities on aluminum, copper
- Increased tool life and superior chip evacuation
- Reduces chipping of corner edges



※ WITH NECK



CARBIDE | 3 | 30° | PLAIN p.C643

◆ U.S.A Stock

■ ROUGHING

Unit : Inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
44016	1/4	1/4	3/4	2-1/2
44024	3/8	3/8	7/8	2-1/2
44032	1/2	1/2	1	3
44040	5/8	5/8	1-1/4	3-1/2
44048	3/4	3/4	1-5/8	4
44064	1	1	1-3/4	4

■ ROUGHING WITH NECK

Unit : Inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
98016	1/4	1/4	3/4	1	2-1/2	.210
98024	3/8	3/8	7/8	1-1/4	3	.335
98032	1/2	1/2	1	1-3/8	3-1/4	.440
98040	5/8	5/8	1-1/4	1-3/4	3-3/4	.565
98048	3/4	3/4	1-5/8	2-1/4	4-1/2	.690
98064	1	1	1-3/4	2-1/2	5	.940

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0005	0~-.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

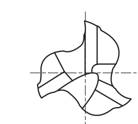
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

ALU-POWER END MILLS

PLAIN SHANK **E5E45** SERIES

CARBIDE, 3 FLUTE ROUGHING BALL NOSE

- Excellent cutting qualities on aluminum, copper
- Increased tool life and superior chip evacuation
- Reduces chipping of corner edges



CARBIDE | 3 | 30° | PLAIN p.C643

◆ U.S.A Stock

Unit : Inch

SAB CODE	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
45016	1/4	1/4	3/4	2-1/2	3
45024	3/8	3/8	7/8	2-1/2	3
45032	1/2	1/2	1	3	3
45040	5/8	5/8	1-1/4	3-1/2	3
45048	3/4	3/4	1-5/8	4	3
45064	1	1	1-3/4	4	3

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0005	0~-.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

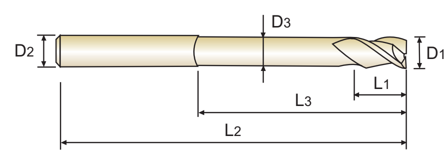
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG ALU-POWER END MILLS

PLAIN SHANK **E5977** SERIES

CARBIDE, 3 FLUTE 37° HELIX with EXTENDED NECK

- High velocity milling of aluminum & other non-ferrous materials.
- 3flute and 37° helix allow harmonic balance at high speed condition and smooth cutting.
- Improved surface roughness-cylindrical margin which is controlled tightly.
- Maximum-metal removal rate.
- Superior chip evacuation.
- Mirror face-excellent surface finish.



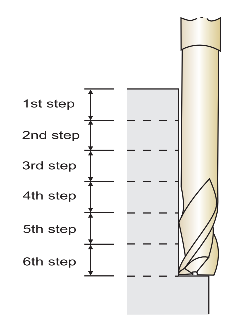
CARBIDE 3 37° PLAIN p.C638

◆ U.S.A Stock

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
UNCOATED	TiCN COATED	D1	D2	L1	L3	L2	D3
40573	40573TC	1/4	1/4	3/8	2-1/4	4	.220
40584	40584TC	3/8	3/8	1/2	2-1/4	4	.345
40593	40593TC	1/2	1/2	5/8	2-1/4	5	.470
40901	40901TC	1/2	1/2	5/8	3-1/4	6	.470
40902	40902TC	1/2	1/2	5/8	4	6	.470
40595	40595TC	5/8	5/8	3/4	2-1/4	5	.585
40903	40903TC	5/8	5/8	3/4	3-1/4	6	.585
40904	40904TC	5/8	5/8	3/4	4-1/4	7	.585
40598	40598TC	3/4	3/4	1	2-1/4	5	.710
40905	40905TC	3/4	3/4	1	3-1/4	6	.710
40906	40906TC	3/4	3/4	1	4-1/4	7	.710
40600	40600TC	1	1	1-1/8	2-1/4	5	.960
40907	40907TC	1	1	1-1/8	3-1/4	6	.960
40908	40908TC	1	1	1-1/8	4-1/4	7	.960

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0005	0~-.0003



STEP MILLING

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

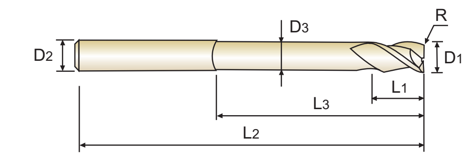
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG ALU-POWER END MILLS

PLAIN SHANK **E5985** SERIES

CARBIDE, 3 FLUTE 37° HELIX with EXTENDED NECK CORNER RADIUS

- High velocity milling of aluminum & other non-ferrous materials.
- 3flute and 37° helix allow harmonic balance at high speed condition and smooth cutting.
- Improved surface roughness-cylindrical margin which is controlled tightly.
- Maximum-metal removal rate.
- Superior chip evacuation.
- Mirror face-excellent surface finish.



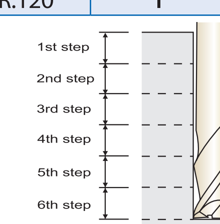
CARBIDE 3 37° PLAIN p.C638

◆ U.S.A Stock

Unit : Inch

EDP No.		Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
UNCOATED	TiCN COATED	R	D1	D2	L1	L3	L2	D3
EA40321	EA40321C	R.060	1/2	1/2	5/8	3-1/4	6	.470
EA40322	EA40322C	R.060	1/2	1/2	5/8	4	6	.470
EA40401	EA40401C	R.060	5/8	5/8	3/4	2-1/4	5	.585
EA40402	EA40402C	R.060	5/8	5/8	3/4	3-1/4	6	.585
EA40403	EA40403C	R.060	5/8	5/8	3/4	4-1/4	7	.585
EA40481	EA40481C	R.060	3/4	3/4	1	2-1/4	5	.710
EA40482	EA40482C	R.060	3/4	3/4	1	3-1/4	6	.710
EA40483	EA40483C	R.060	3/4	3/4	1	4-1/4	7	.710
EA40641	EA40641C	R.060	1	1	1-1/8	2-1/4	5	.960
EA40642	EA40642C	R.060	1	1	1-1/8	3-1/4	6	.960
EA40643	EA40643C	R.060	1	1	1-1/8	4-1/4	7	.960
EA10321	EA10321C	R.120	1/2	1/2	5/8	3-1/4	6	.470
EA10322	EA10322C	R.120	1/2	1/2	5/8	4	6	.470
EA10401	EA10401C	R.120	5/8	5/8	3/4	2-1/4	5	.585
EA10402	EA10402C	R.120	5/8	5/8	3/4	3-1/4	6	.585
EA10403	EA10403C	R.120	5/8	5/8	3/4	4-1/4	7	.585
EA10481	EA10481C	R.120	3/4	3/4	1	2-1/4	5	.710
EA10482	EA10482C	R.120	3/4	3/4	1	3-1/4	6	.710
EA10483	EA10483C	R.120	3/4	3/4	1	4-1/4	7	.710
EA10641	EA10641C	R.120	1	1	1-1/8	2-1/4	5	.960
EA10642	EA10642C	R.120	1	1	1-1/8	3-1/4	6	.960
EA10643	EA10643C	R.120	1	1	1-1/8	4-1/4	7	.960

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0005	0~-.0003



STEP MILLING

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

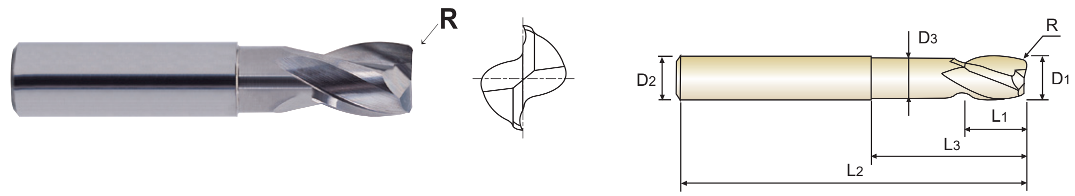
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

ALU-POWER END MILLS

PLAIN SHANK **E5973** SERIES

CARBIDE, 2 FLUTE CORNER RADIUS with NECK

- ▶Excellent cutting qualities on stainless steel, aluminum, copper.
- ▶Increased tool life and higher cutting accuracy.
- ▶Mirror face-excellent surface finish.



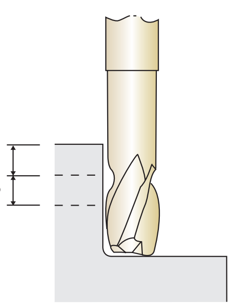
CARBIDE 2 30° R ±.001 PLAIN p.C639

◆ U.S.A Stock

Unit : Inch

EDP No.		Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
UNCOATED	TiCN COATED	R	D_1	D_2	L_1	L_3	L_2	D_3
24562	**24562TC**	R.012	**5/32**	1/4	3/16	3/8	2	.140
24573	**24573TC**	R.020	**1/4**	1/4	5/16	3/4	2-3/8	.226
24579	**24579TC**	R.024	**5/16**	5/16	3/8	1-1/8	2-3/4	.282
24584	**24584TC**	R.031	**3/8**	3/8	1/2	1-1/2	3-1/8	.336
24593	**24593TC**	R.040	**1/2**	1/2	9/16	1-1/2	3-1/2	.460
24595	**24595TC**	R.051	**5/8**	5/8	3/4	1-3/4	4	.566
24598	**24598TC**	R.063	**3/4**	3/4	1	1-3/4	4	.670

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003



STEP MILLING

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

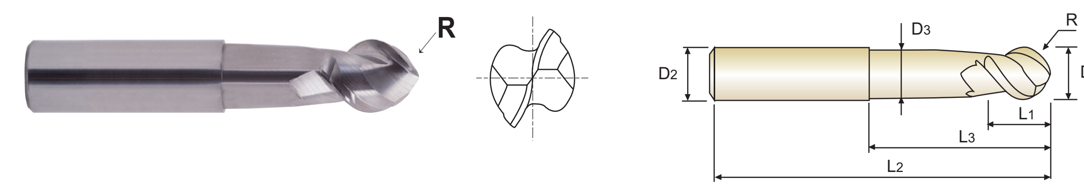
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

ALU-POWER END MILLS

PLAIN SHANK **E5974** SERIES

CARBIDE, 2 FLUTE 50° HELIX STUB CUT LENGTH BALL NOSE with NECK

- ▶Excellent cutting qualities on stainless steel, aluminum, copper.
- ▶Increased tool life and higher cutting accuracy.
- ▶Mirror face-excellent surface finish.



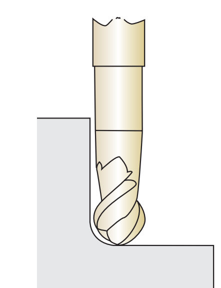
CARBIDE 2 50° R ±.0005 PLAIN p.C640

◆ U.S.A Stock

Unit : Inch

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
UNCOATED	TiCN COATED	R (±.0005)	D_1	D_2	L_1	L_3	L_2	D_3
37573	**37573TC**	R 1/8	**1/4**	1/4	7/32	1	2-1/4	.226
37579	**37579TC**	R 5/32	**5/16**	5/16	9/32	1-1/8	2-1/2	.280
37584	**37584TC**	R 3/16	**3/8**	3/8	11/32	1-3/8	3	.335
37593	37593TC	R 1/4	**1/2**	1/2	13/32	1-1/2	3	.460
37595	**37595TC**	R 5/16	**5/8**	5/8	9/16	2	3-1/2	.566
37598	**37598TC**	R 3/8	**3/4**	3/4	11/16	2	4	.671

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0010	0~-.0003



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

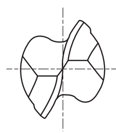
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

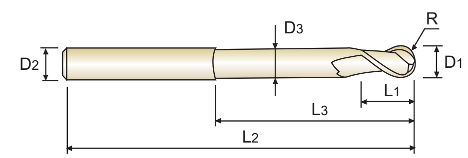
YG ALU-POWER END MILLS

PLAIN SHANK **E5978** SERIES

CARBIDE, 2 FLUTE 37° HELIX LONG REACH BALL NOSE

- High velocity milling of aluminum & other non-ferrous materials.
- Extended neck design which is suitable for step milling.
- Improved surface roughness-cylinderical margin which is controlled tightly
- Maximum-metal removal rate.
- Superior chip evacuation.
- Mirror face-excellent surface finish.





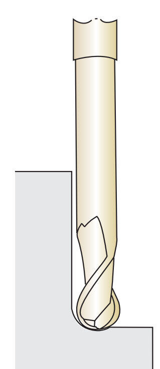
CARBIDE | 2 | 37° | R ±.001 | PLAIN p.C640

◆ U.S.A Stock

Unit : Inch

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
UNCOATED	TiCN COATED	R (±.001)	D1	D2	L1	L3	L2	D3
89573	89573TC	R 1/8	1/4	1/4	3/8	2-1/4	4	.220
89584	89584TC	R 3/16	3/8	3/8	1/2	2-1/4	4	.345
89593	89593TC	R 1/4	1/2	1/2	5/8	2-1/4	5	.470
89901	89901TC	R 1/4	1/2	1/2	5/8	3-1/4	6	.470
89902	89902TC	R 1/4	1/2	1/2	5/8	4	6	.470
89595	89595TC	R 5/16	5/8	5/8	3/4	2-1/4	5	.585
89903	89903TC	R 5/16	5/8	5/8	3/4	3-1/4	6	.585
89904	89904TC	R 5/16	5/8	5/8	3/4	4-1/4	7	.585
89598	89598TC	R 3/8	3/4	3/4	1	2-1/4	5	.710
89905	89905TC	R 3/8	3/4	3/4	1	3-1/4	6	.710
89906	89906TC	R 3/8	3/4	3/4	1	4-1/4	7	.710
89600	89600TC	R1/2	1	1	1-1/8	2-1/4	5	.960
89907	89907TC	R1/2	1	1	1-1/8	3-1/4	6	.960
89908	89908TC	R1/2	1	1	1-1/8	4-1/4	7	.960

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

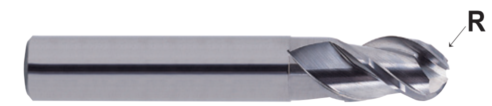
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

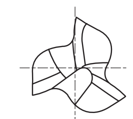
YG ALU-POWER END MILLS

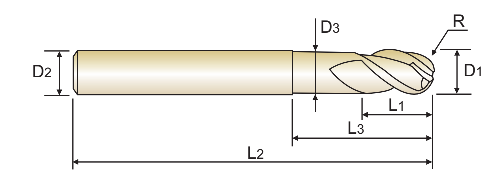
PLAIN SHANK **E5975** SERIES

CARBIDE, 3 FLUTE 40° HELIX LONG LENGTH BALL NOSE with NECK

- Excellent cutting qualities on stainless steel, aluminum, copper.
- Increased tool life and higher cutting accuracy.
- Mirror face-excellent surface finish.







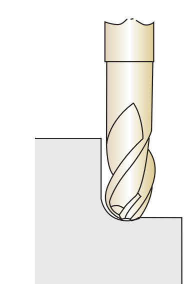
CARBIDE | 3 | 40° | R ±.0005 | PLAIN p.C640

◆ U.S.A Stock

Unit : Inch

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
UNCOATED	TiCN COATED	R (±.0005)	D1	D2	L1	L3	L2	D3
38602	38602TC	R 3/64	3/32	1/4	1/8	3/16	2-3/8	.090
38601	38601TC	R 1/16	1/8	1/4	3/16	1/4	2-3/8	.117
38566	38566TC	R 3/32	3/16	1/4	1/4	3/8	2-1/2	.172
38573	38573TC	R 1/8	1/4	1/4	3/8	1/2	3	.235
38579	38579TC	R 5/32	5/16	5/16	1/2	1	3	.289
38584	38584TC	R 3/16	3/8	3/8	5/8	1-1/4	3-1/8	.351
38593	38593TC	R 1/4	1/2	1/2	3/4	1-3/8	3-1/2	.476
38595	38595TC	R 5/16	5/8	5/8	1	1-1/2	4	.601

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

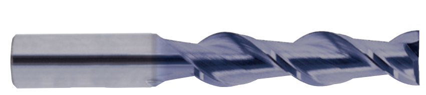
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

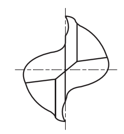
YG ALU-POWER END MILLS

PLAIN SHANK **E5522 SERIES**
PLAIN SHANK **EG522 SERIES**

CARBIDE, 2 FLUTE 45° HELIX LONG LENGTH - TiCN COATED

▶Suitable for high speed machining in aluminum and other non-ferrous materials, excellent surface finishes, superior chip removal.
▶Mirror face-excellent surface finish.





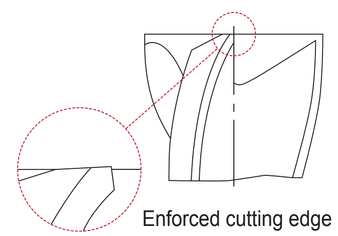
CARBIDE 2 45° PLAIN p.C641

◇ Call for Availability

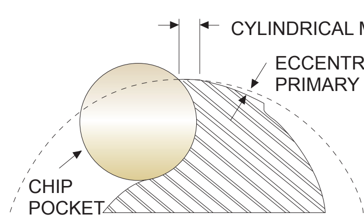
Unit : Inch

EDP No.		Mill Diameter		Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiCN COATED	Metric	Inch			
E5522030	EG522030	3.0	.1181	6	8	57
E5522040	EG522040	4.0	.1575	6	11	57
E5522050	EG522050	5.0	.1969	6	13	57
E5522060	EG522060	6.0	.2362	6	13	57
E5522080	EG522080	8.0	.3150	8	19	63
E5522100	EG522100	10.0	.3937	10	22	72
E5522120	EG522120	12.0	.4724	12	26	83
E5522140	EG522140	14.0	.5512	14	26	83
E5522160	EG522160	16.0	.6299	16	32	92
E5522180	EG522180	18.0	.7087	18	32	92
E5522200	EG522200	20.0	.7874	20	38	104

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h6



- High performance in machining aluminum and non-ferrous materials
- Special designed geometry with high rigidity cutting edge
- Improved surface roughness - cylindrical margin which is controlled tightly.
- Excellent chip removal - higher rake angle, higher helix angle(45°), bigger chip pocket.



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

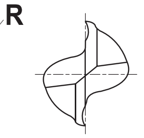
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

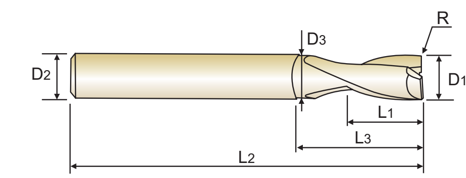
YG ALU-POWER END MILLS

PLAIN SHANK **EG930 SERIES**

CARBIDE, 2 FLUTE 25° HELIX STUB CUT LENGTH CORNER RADIUS TiCN COATED

▶Designed for the machining aluminum and its alloys, non-ferrous materials.
▶Increased tool life and higher cutting accuracy.
▶Maximum-stock removal, chip ejection, stability.
▶Corner Radius for avoiding the chipping.
▶Mirror face-excellent surface finish.





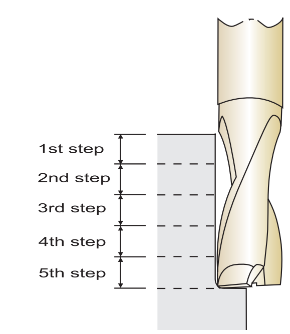
CARBIDE 2 25° R ±0.025 PLAIN p.C641

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius	Mill Diameter		Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
		Metric	Inch					
	R (±0.025)	D1		D2	L1	L3	L2	D3
EG930020	R0.2	2.0	.0787	3	3	6	40	1.9
EG930030	R0.2	3.0	.1181	3	4	8	40	2.9
EG930040	R0.2	4.0	.1575	4	5	12	50	3.8
EG930050	R0.2	5.0	.1969	5	8	14	50	4.8
EG930060	R0.2	6.0	.2362	6	8	18	65	5.7
EG930080	R0.2	8.0	.3150	8	10	22	70	7.7
EG930100	R0.2	10.0	.3937	10	14	28	80	9.7
EG930120	R0.2	12.0	.4724	12	16	35	90	11.5
EG930160	R0.2	16.0	.6299	16	20	40	90	15.5
EG930200	R0.2	20.0	.7874	20	25	50	100	19.5

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h6



STEP MILLING

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

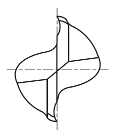
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

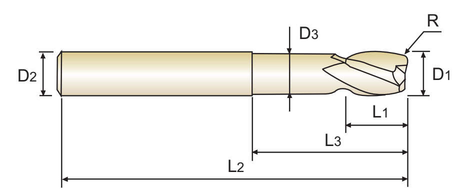
YG ALU-POWER END MILLS

PLAIN SHANK **EG909** SERIES

CARBIDE, 2 FLUTE STUB CUT LENGTH CORNER RADIUS with NECK TiCN COATED

- ▶Excellent cutting qualities on stainless steel, Aluminum, copper.
- ▶Increased tool life and higher cutting accuracy.
- ▶Mirror face-excellent surface finish.





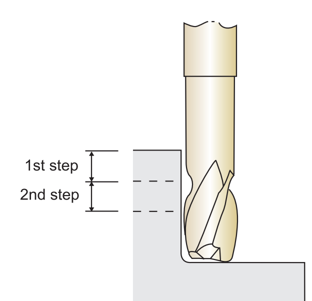
CARBIDE | 2 | 30° | R ±0.025 | PLAIN | p.C642

◇ Call for Availability

Unit : mm

EDP No.	Corner Radius	Mill Diameter		Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
		Metric	Inch					
	R (±0.025)	D1		D2	L1	L3	L2	D3
EG909040	R0.3	4.0	.1575	6	5	10	50	3.6
EG909060	R0.5	6.0	.2362	6	8	20	60	5.4
EG909080	R0.6	8.0	.3150	8	10	30	70	7.2
EG909100	R0.8	10.0	.3937	10	12	36	80	9.0
EG909120	R1.0	12.0	.4724	12	14	40	90	11.0
EG909160	R1.3	16.0	.6299	16	18	45	100	14.5
EG909200	R1.6	20.0	.7874	20	24	45	100	18.0

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h6



STEP MILLING

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

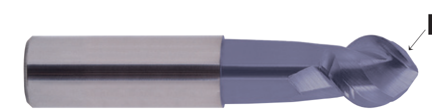
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

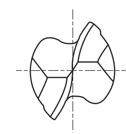
YG ALU-POWER END MILLS

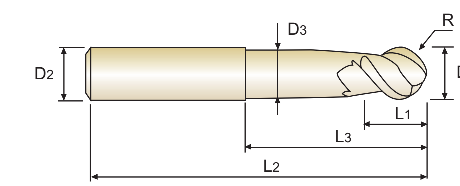
PLAIN SHANK **EG910** SERIES

CARBIDE, 2 FLUTE 50° HELIX STUB CUT LENGTH BALL NOSE with NECK TiCN COATED

- ▶Excellent cutting qualities on stainless steel, Aluminum, copper.
- ▶Increased tool life and higher cutting accuracy.
- ▶Mirror face-excellent surface finish.







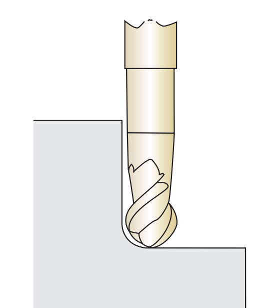
CARBIDE | 2 | 50° | R ±0.01 | PLAIN | p.C642

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter		Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
		Metric	Inch					
	R (±0.01)	D1		D2	L1	L3	L2	D3
EG910060	R 3.0	6.0	.2362	6	5.5	25	55	5.4
EG910080	R 4.0	8.0	.3150	8	7	30	65	7.2
EG910100	R 5.0	10.0	.3937	10	8.5	35	75	9.0
EG910120	R 6.0	12.0	.4724	12	10.5	40	75	11.0
EG910160	R 8.0	16.0	.6299	16	14	50	90	14.5
EG910200	R 10.0	20.0	.7874	20	17	50	100	18.0

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
± 0.02	h6



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

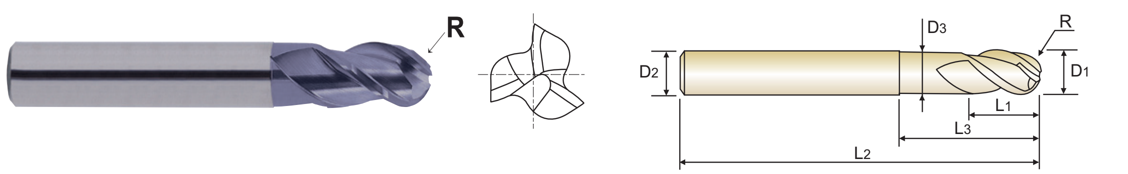
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

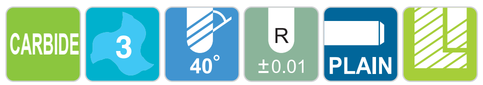
ALU-POWER END MILLS

PLAIN SHANK **EG908** SERIES

CARBIDE, 3 FLUTE 40° HELIX LONG LENGTH BALL NOSE with NECK TiCN COATED

- Excellent cutting performance on stainless steels, Aluminum & copper.
- Increased tool life and higher cutting accuracy.
- Mirror face-excellent surface finish.





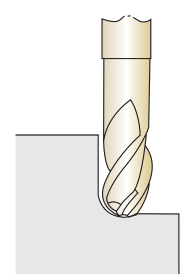
p.C642

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R (±0.01)	D1		D2	L1	L3	L2	D3
EG908020	R1.0	2.0	.0787	6	3	5	60	1.9
EG908025	R1.25	2.5	.0984	6	4	6	60	2.4
EG908030	R1.5	3.0	.1181	6	4.5	6.5	60	2.8
EG908035	R1.75	3.5	.1378	6	5	7	65	3.2
EG908040	R2.0	4.0	.1575	6	6	8	65	3.7
EG908050	R2.5	5.0	.1969	6	7.5	10	65	4.6
EG908060	R3.0	6.0	.2362	6	9	12	75	5.6
EG908080	R4.0	8.0	.3150	8	12	25	75	7.4
EG908100	R5.0	10.0	.3937	10	15	30	80	9.4
EG908120	R6.0	12.0	.4724	12	18	36	90	11.4
EG908160	R8.0	16.0	.6299	16	24	40	100	15.4

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h6



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

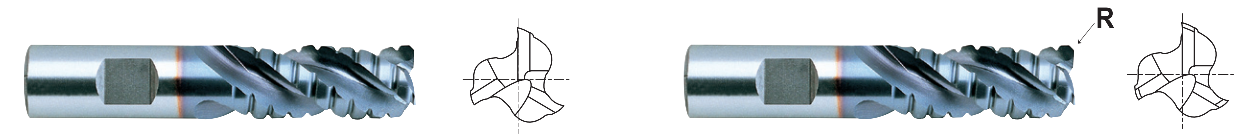
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

ALU-POWER END MILLS

FLAT SHANK **EK191** SERIES

HSS-PM, 3 FLUTE 42° HELIX REGULAR LENGTH ROUGHING for ALUMINUM

- High performance metal removal in aluminum alloys.
- Corner radius against chipping



p.C644

◆ U.S.A Stock

■ SQUARE

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
66515	66515 PC	1/2	1/2	1-1/4	3-1/4
66519	66519 PC	5/8	5/8	1-5/8	3-3/4
66524	66524 PC	3/4	3/4	1-5/8	3-7/8
66540	66540 PC	1	1	2	4-1/2
66541	66541 PC	1-1/4	1-1/4	2	4-1/2
66542	66542 PC	1-1/2	1-1/4	2	4-1/2
*66543	*66543 PC	2	2	2	5-3/4

*Combination Shank

HSS-PM ALU 3 42° R ±.001 FLAT

p.C600

◆ U.S.A Stock

■ with CORNER RADIUS

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Corner Radius R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
66903	66903 PC	R.060	3/4	3/4	1-5/8	3-7/8
66904	66904 PC	R.090	3/4	3/4	1-5/8	3-7/8
66905	66905 PC	R.120	3/4	3/4	1-5/8	3-7/8
66906	66906 PC	R.060	1	1	2	4-1/2
66907	66907 PC	R.090	1	1	2	4-1/2
66908	66908 PC	R.120	1	1	2	4-1/2
66909	66909 PC	R.060	1-1/4	1-1/4	2	4-1/2
66910	66910 PC	R.090	1-1/4	1-1/4	2	4-1/2
66911	66911 PC	R.120	1-1/4	1-1/4	2	4-1/2

■ The TiN coated, or TiAlN coated is available on your request.

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

YG ALU-POWER END MILLS

FLAT SHANK **EK226** SERIES

HSS-PM, 3 FLUTE 42° HELIX & MEDIUM LENGTH ROUGHING for ALUMINUM

- High performance metal removal in aluminum alloys.
- Corner radius against chipping

R

HSS-PM ALU 3 42° FLAT p.C644

◆ U.S.A Stock

SQUARE

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
80524	80524 PC	3/4	3/4	2-1/2	4-5/8
80540	80540 PC	1	1	3	5-1/2
80541	80541 PC	1-1/4	1-1/4	3	5-1/2
80542	80542 PC	1-1/2	1-1/4	3	5-1/2
*80543	*80543 PC	2	2	3	6-3/4

*Combination Shank

HSS-PM ALU 3 42° R ±.001 FLAT p.C644

◆ U.S.A Stock

with CORNER RADIUS

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Corner Radius R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
80901	80901 PC	R.060	3/4	3/4	2-1/4	4-5/8
80902	80902 PC	R.090	3/4	3/4	2-1/4	4-5/8
80903	80903 PC	R.120	3/4	3/4	2-1/4	4-5/8
80904	80904 PC	R.060	1	1	3	5-1/2
80905	80905 PC	R.090	1	1	3	5-1/2
80906	80906 PC	R.120	1	1	3	5-1/2
80907	80907 PC	R.060	1-1/4	1-1/4	3	5-1/2
80908	80908 PC	R.090	1-1/4	1-1/4	3	5-1/2
80909	80909 PC	R.120	1-1/4	1-1/4	3	5-1/2

■ The TiN coated, or TiAlN coated is available on your request.

Mill Dia.	Tolerance (inch)
up to 1	0~+.0030
over 1	0~+.0060

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

YG ALU-POWER END MILLS

FLAT SHANK **EK192** SERIES

HSS-PM, 3 FLUTE 42° HELIX LONG LENGTH ROUGHING for ALUMINUM

- High performance metal removal in aluminum alloys.

HSS-PM ALU 3 42° FLAT p.C644

◆ U.S.A Stock

SQUARE

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
67515	67515 PC	1/2	1/2	2	4
67519	67519 PC	5/8	5/8	2-1/2	4-5/8
67524	67524 PC	3/4	3/4	3	5-1/4
67540	67540 PC	1	1	4	6-1/2
67541	67541 PC	1-1/4	1-1/4	4	6-1/2
67542	67542 PC	1-1/2	1-1/4	4	6-1/2
*67543	*67543 PC	2	2	4	7-3/4
67544	67544 PC	1-1/4	1-1/4	6	8-1/2
67545	67545 PC	1-1/2	1-1/4	6	8-1/2
*67546	*67546 PC	2	2	6	9-3/4

*Combination Shank

with NECK

EDP No. UNCOATED	EDP No. TiCN COATED	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
EK10482	EK10482C	3/4	3/4	1-1/2	3	5-1/4	.705
EK10483	EK10483C	3/4	3/4	1-1/2	4	6-1/4	.705
EK10642	EK10642C	1	1	1-1/2	3	5-1/2	.950
EK10643	EK10643C	1	1	2	4	6-1/2	.950
EK10644	EK10644C	1	1	2	6	8-1/2	.950
EK11601	EK11601C	1-1/4	1-1/4	2	4	6-1/2	1.200
EK11602	EK11602C	1-1/4	1-1/4	2	6	8-1/2	1.200

■ The TiN coated, or TiAlN coated is available on your request.

Mill Dia.	Tolerance (inch)
up to 1	0~+.0030
over 1	0~+.0060

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

ALU-POWER END MILLS

FLAT SHANK **EK192** SERIES

HSS-PM, 3 FLUTE 42° HELIX LONG LENGTH ROUGHING with CORNER RADIUS for ALUMINUM

▶High performance metal in aluminum alloys.
▶Corner radius against chipping

HSS-PM · ALU · 3 · 42° · R ±.001 · FLAT

p.C644

◆ U.S.A Stock

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Corner Radius R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
67904	67904 PC	R.060	3/4	3/4	3	5-1/4
67905	67905 PC	R.090	3/4	3/4	3	5-1/4
67906	67906 PC	R.120	3/4	3/4	3	5-1/4
67907	67907 PC	R.060	1	1	4	6-1/2
67908	67908 PC	R.090	1	1	4	6-1/2
67909	67909 PC	R.120	1	1	4	6-1/2
67910	67910 PC	R.060	1-1/4	1-1/4	4	6-1/2
67911	67911 PC	R.090	1-1/4	1-1/4	4	6-1/2
67912	67912 PC	R.120	1-1/4	1-1/4	4	6-1/2
67913	67913 PC	R.060	1-1/4	1-1/4	6	8-1/2
67914	67914 PC	R.090	1-1/4	1-1/4	6	8-1/2
67915	67915 PC	R.120	1-1/4	1-1/4	6	8-1/2

■ The TiN coated, or TiAlN coated is available on your request.

Mill Dia.	Tolerance (inch)
up to 1	0~+.0030
over 1	0~+.0060

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

ALU-POWER END MILLS

FLAT SHANK **EK196** SERIES

HSS-PM, 3 FLUTE 42° HELIX ROUGHING BALL NOSE REGULAR LENGTH for ALUMINUM

▶High performance metal removal in aluminum alloys.

HSS-PM · ALU · 3 · 42° · R ±.001 · FLAT

p.C643

◆ U.S.A Stock

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Radius of Ball Nose R (±.001)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
EP12032	EP12032C	R1/4	1/2	1/2	1-1/4	3-1/4
EP12040	EP12040C	R5/16	5/8	5/8	1-5/8	3-3/4
EP12048	EP12048C	R3/8	3/4	3/4	1-5/8	3-7/8
EP12064	EP12064C	R1/2	1	1	2	4-1/2
EP12110	EP12110C	R5/8	1-1/4	1-1/4	2	4-1/2

■ The TiN coated, or TiAlN coated is available on your request.

Mill Dia.	Tolerance (inch)
up to 1	0~+.0030
over 1	0~+.0060

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

ALU-POWER END MILLS

FLAT SHANK **EK193** SERIES
FLAT SHANK **EK132** SERIES

HSS-PM, 3 FLUTE FINISHING REGULAR LENGTH & MEDIUM LENGTH & LONG LENGTH

▶ High performance metal removal in aluminum alloys.

HSS-PM 3 42° FLAT p.C645

◆ U.S.A Stock

■ SQUARE

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
EP10323	EP10323C	1/2	1/2	1-1/4	3-1/4
EP10324	EP10324C	1/2	1/2	2	4
EP10403	EP10403C	5/8	5/8	1-5/8	3-3/4
EP10404	EP10404C	5/8	5/8	2-1/2	4-5/8
EP10484	EP10484C	3/4	3/4	1-5/8	3-7/8
EP10485	EP10485C	3/4	3/4	2-1/4	4-5/8
EP10486	EP10486C	3/4	3/4	3	5-1/4
EP10644	EP10644C	1	1	2	4-1/2
EP10645	EP10645C	1	1	3	5-1/2
EP10646	EP10646C	1	1	4	6-1/2
EP11165	EP11165C	1-1/4	1-1/4	2	4-1/2
EP11166	EP11166C	1-1/4	1-1/4	3	5-1/2
EP11167	EP11167C	1-1/4	1-1/4	4	6-1/2
EP11324	EP11324C	1-1/2	1-1/4	2	4-1/2
EP11325	EP11325C	1-1/2	1-1/4	3	5-1/2
EP11326	EP11326C	1-1/2	1-1/4	4	6-1/2

■ SQUARE with NECK

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
EK13210	EK13210C	3/4	3/4	1-1/2	3	5-1/4	.705
EK13211	EK13211C	3/4	3/4	1-1/2	4	6-1/4	.705
EK13212	EK13212C	1	1	1-1/2	3	5-1/2	.950
EK13213	EK13213C	1	1	2	4	6-1/2	.950
EK13214	EK13214C	1	1	2	6	8-1/2	.950
EK13215	EK13215C	1-1/4	1-1/4	2	4	6-1/2	1.200
EK13216	EK13216C	1-1/4	1-1/4	2	6	8-1/2	1.200

Mill Dia. Tolerance (inch)	
0~+.0010	∗∗0~+.0015

■ The TiN coated, or TiAlN coated is available on your request.

∗∗The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

ALU-POWER END MILLS

FLAT SHANK **EK193** SERIES

HSS-PM, 3 FLUTE FINISHING CORNER RADIUS REGULAR LENGTH & MEDIUM LENGTH & LONG LENGTH

▶ High performance metal removal in aluminum alloys.
▶ Corner radius against chipping

HSS-PM 3 42° FLAT p.C645

◆ U.S.A Stock

Unit : Inch

EDP No. UNCOATED	EDP No. TiCN COATED	Corner Radius R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
EP10321	EP10321C	R.120	1/2	1/2	1-1/4	3-1/4
EP10322	EP10322C	R.120	1/2	1/2	2	4
EP10401	EP10401C	R.120	5/8	5/8	1-5/8	3-3/4
EP10402	EP10402C	R.120	5/8	5/8	2-1/2	4-5/8
EP10481	EP10481C	R.120	3/4	3/4	1-5/8	3-7/8
EP10482	EP10482C	R.120	3/4	3/4	2-1/4	4-5/8
EP10483	EP10483C	R.120	3/4	3/4	3	5-1/4
EP10641	EP10641C	R.120	1	1	2	4-1/2
EP10642	EP10642C	R.120	1	1	3	5-1/2
EP10643	EP10643C	R.120	1	1	4	6-1/2
EP11162	EP11162C	R.120	1-1/4	1-1/4	2	4-1/2
EP11163	EP11163C	R.120	1-1/4	1-1/4	3	5-1/2
EP11164	EP11164C	R.120	1-1/4	1-1/4	4	6-1/2
EP11321	EP11321C	R.120	1-1/2	1-1/4	2	4-1/2
EP11322	EP11322C	R.120	1-1/2	1-1/4	3	5-1/2
EP11323	EP11323C	R.120	1-1/2	1-1/4	4	6-1/2

■ The TiN coated, or TiAlN coated is available on your request.

Mill Dia. Tolerance (inch)	
0~+.0010	∗∗0~+.0015

∗∗The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

ALU-POWER END MILLS

PLAIN SHANK **EP922 SERIES**

HSS-PM, 3 FLUTE 42° HELIX SHORT LENGTH ROUGHING for ALUMINUM

- ▶ Maximum stock removal rates at High Speed Condition.
- ▶ Reduces vibrations and improves surface roughness.

HSS-PM ALU 3 42° PLAIN p.C645

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
	Metric	Inch			
	js12		h6		
EP922120	12.0	.4724	12	26	83
EP922140	14.0	.5512	12	26	83
EP922160	16.0	.6299	16	32	92
EP922180	18.0	.7087	16	32	92
EP922200	20.0	.7874	20	38	104
EP922220	22.0	.8661	20	38	104
EP922250	25.0	.9843	25	45	121
EP922280	28.0	1.1024	25	45	121
EP922320	32.0	1.2598	32	53	133

Tolerances according to DIN 7160 & 7161

	Tolerance range in µm					
	Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
js12	± 50	± 60	± 75	± 90	± 105	± 125
h6	0 / − 6	0 / − 8	0 / − 9	0 / − 11	0 / − 13	0 / − 16

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

ALU-POWER END MILLS

PLAIN SHANK **EP924 SERIES**

HSS-PM, 3 FLUTE 42° HELIX LONG LENGTH ROUGHING for ALUMINUM

- ▶ Maximum stock removal rates at High Speed Condition.
- ▶ Reduces vibrations and improves surface roughness.

HSS-PM ALU 3 42° PLAIN p.C645

◇ Call for Availability

Unit : mm

EDP No.	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
	Metric	Inch			
	js12		h6		
EP924120	12.0	.4724	12	53	110
EP924140	14.0	.5512	12	53	110
EP924160	16.0	.6299	16	63	123
EP924180	18.0	.7087	16	63	123
EP924200	20.0	.7874	20	75	141
EP924220	22.0	.8661	20	75	141
EP924250	25.0	.9843	25	90	166
EP924280	28.0	1.1024	25	90	166
EP924320	32.0	1.2598	32	106	186

Tolerances according to DIN 7160 & 7161

	Tolerance range in µm					
	Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
js12	± 50	± 60	± 75	± 90	± 105	± 125
h6	0 / − 6	0 / − 8	0 / − 9	0 / − 11	0 / − 13	0 / − 16

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

YG ALU-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

E5253, E5254 SERIES

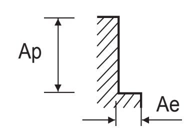
SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

2 FLUTE - SIDE CUTTING

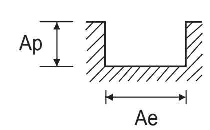
ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	11/16	13/16
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	D1/8 ~ 3/8 : 0.25D D1/2 ~ 13/16 : 0.5D	1.0D	SFM (Vc)	325	410	490	655	655	785	1045	885	980	720	850
					IPT (fz)	.0018	.0022	.0026	.0030	.0044	.0052	.0064	.0073	.0079	.0089	.0094
					RPM	10000	10000	10000	10000	8000	8000	8000	6000	6000	4000	4000
					IPM (FEED)	35	43	51	59	71	83	102	87	95	71	75

2 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	11/16	13/16
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	0.5D	SFM (Vc)	325	410	490	655	655	785	1045	885	980	720	850
					IPT (fz)	.0014	.0018	.0020	.0024	.0034	.0042	.0052	.0059	.0063	.0069	.0079
					RPM	10000	10000	10000	10000	8000	8000	8000	6000	6000	4000	4000
					IPM (FEED)	28	35	39	47	55	67	83	71	75	55	63



※ The Feed, in long & extra long types, should be reduced by around 50%.



※ The Feed, in long & extra long types, should be reduced by around 50%.

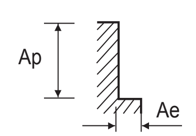
EG253, EG254 SERIES TiCN Coated

2 FLUTE - SIDE CUTTING

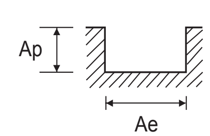
ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	11/16	13/16
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	D1/8 ~ 3/8 : 0.25D D1/2 ~ 13/16 : 0.5D	1.0D	SFM (Vc)	395	490	590	785	785	940	1255	1060	1180	865	1020
					IPT (fz)	.0024	.0028	.0033	.0040	.0057	.0067	.0084	.0092	.0102	.0114	.0123
					RPM	12000	12000	12000	12000	9600	9600	9600	7200	7200	4800	4800
					IPM (FEED)	57	66	80	95	109	128	161	132	147	109	118

2 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	11/16	13/16
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	0.5D	SFM (Vc)	510	640	765	1020	980	1180	1570	1415	1570	1080	1275
					IPT (fz)	.0014	.0018	.0020	.0023	.0035	.0043	.0053	.0057	.0061	.0071	.0079
					RPM	15600	15600	15600	15600	12000	12000	12000	9600	9600	6000	6000
					IPM (FEED)	43	57	61	71	85	104	128	109	118	85	95



※ The Feed, in long & extra long types, should be reduced by around 50%.



※ The Feed, in long & extra long types, should be reduced by around 50%.

YG ALU-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

E5980, E5981, E5982, E5983, E5984 SERIES

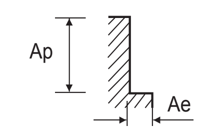
SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

3 FLUTE - SIDE CUTTING

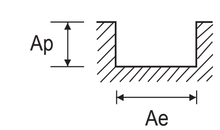
ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	11/16	13/16
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	D1/8 ~ 3/8 : 0.25D D1/2 ~ 13/16 : 0.5D	1.0D	SFM (Vc)	325	410	490	655	655	785	1045	885	980	720	850
					IPT (fz)	.0014	.0017	.0020	.0024	.0035	.0041	.0051	.0058	.0063	.0071	.0075
					RPM	10000	10000	10000	10000	8000	8000	8000	6000	6000	4000	4000
					IPM (FEED)	43	52	61	71	85	99	123	104	113	85	90

3 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	11/16	13/16
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	0.5D	SFM (Vc)	325	410	490	655	655	785	1045	885	980	720	850
					IPT (fz)	.0011	.0014	.0016	.0019	.0028	.0033	.0041	.0047	.0050	.0055	.0063
					RPM	10000	10000	10000	10000	8000	8000	8000	6000	6000	4000	4000
					IPM (FEED)	33	43	47	57	66	80	99	85	90	66	76



※ The Feed, in long & extra long types, should be reduced by around 50%.



※ The Feed, in long & extra long types, should be reduced by around 50%.

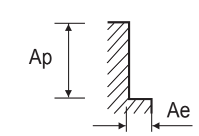
EG980, EG981, EG982, EG983, EG984 SERIES TiCN Coated

3 FLUTE - SIDE CUTTING

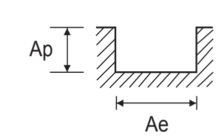
ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	11/16	13/16
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	D1/8 ~ 3/8 : 0.25D D1/2 ~ 13/16 : 0.5D	1.0D	SFM (Vc)	395	490	590	785	785	940	1255	1060	1180	865	1020
					IPT (fz)	.0015	.0019	.0022	.0026	.0039	.0045	.0056	.0063	.0068	.0077	.0081
					RPM	12000	12000	12000	12000	9600	9600	9600	7200	7200	4800	4800
					IPM (FEED)	55	68	80	92	111	129	160	135	147	111	117

3 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	11/16	13/16
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	0.5D	SFM (Vc)	510	640	765	1020	980	1180	1570	1415	1570	1080	1275
					IPT (fz)	.0009	.0012	.0013	.0016	.0024	.0029	.0036	.0039	.0041	.0048	.0054
					RPM	15600	15600	15600	15600	12000	12000	12000	9600	9600	6000	6000
					IPM (FEED)	43	55	61	74	86	104	129	111	117	86	98



※ The Feed, in long & extra long types, should be reduced by around 50%.



※ The Feed, in long & extra long types, should be reduced by around 50%.

YG ALU-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

E5977, E5985 SERIES

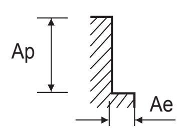
SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

3 FLUTE - SIDE CUTTING

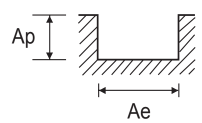
ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	3/8	1/2	5/8	3/4	1
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	D1/8 ~ 3/8 : 0.25D D1/2 ~ 13/16 : 0.5D	1.0D	SFM (Vc)	525	630	840	785	630	680
					IPT (fz)	.0024	.0041	.0051	.0063	.0091	.0101
					RPM	8000	6400	6400	4800	3200	2600
					IPM (FEED)	57	79	98	91	87	79

3 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	3/8	1/2	5/8	3/4	1
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	0.5D	SFM (Vc)	525	630	840	785	630	680
					IPT (fz)	.0019	.0033	.0041	.0050	.0074	.0082
					RPM	8000	6400	6400	4800	3200	2600
					IPM (FEED)	45	64	79	72	71	64



※ The Feed, in long & extra long types, should be reduced by around 50%.



※ The Feed, in long & extra long types, should be reduced by around 50%.

EG977, EG985 SERIES TiCN Coated

3 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	3/8	1/2	5/8	3/4	1
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	D1/8 ~ 3/8 : 0.25D D1/2 ~ 13/16 : 0.5D	1.0D	SFM (Vc)	685	815	1085	1015	825	890
					IPT (fz)	.0023	.0041	.0051	.0063	.0090	.0100
					RPM	10500	8300	8300	6200	4200	3400
					IPM (FEED)	74	103	128	118	114	102

3 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	3/8	1/2	5/8	3/4	1
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	0.5D	SFM (Vc)	685	815	1085	1015	825	890
					IPT (fz)	.0028	.0051	.0062	.0075	.0110	.0122
					RPM	10500	8300	8300	6200	4200	3400
					IPM (FEED)	59	84	103	93	92	83

YG ALU-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

E5973 SERIES

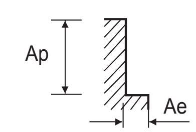
SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

2 FLUTE - SIDE CUTTING

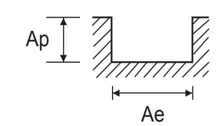
ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 5/32	1/4	5/16	3/8	1/2	5/8	3/4
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	D5/32 ~ 3/8 : 0.25D D1/2 ~ 3/4 : 0.5D	1.0D	SFM (Vc)	410	655	655	785	1045	980	785
					IPT (fz)	.0021	.0031	.0044	.0051	.0064	.0078	.0095
					RPM	10000	10000	8000	8000	8000	6000	4000
					IPM (FEED)	42	61	70	82	103	94	76
	26-28	Copper and Copper Alloys (Bronze / Brass)	D5/32 ~ 3/8 : 0.25D D1/2 ~ 3/4 : 0.5D	1.0D	SFM (Vc)	125	195	190	225	300	295	225
					IPT (fz)	.0018	.0025	.0039	.0046	.0057	.0067	.0083
					RPM	3000	3000	2300	2300	2300	1800	1150
					IPM (FEED)	11	15	18	21	26	24	19

2 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 5/32	1/4	5/16	3/8	1/2	5/8	3/4
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	0.5D	SFM (Vc)	410	655	655	785	1045	980	785
					IPT (fz)	.0018	.0023	.0034	.0042	.0051	.0063	.0076
					RPM	10000	10000	8000	8000	8000	6000	4000
					IPM (FEED)	36	45	55	67	82	76	61
	26-28	Copper and Copper Alloys (Bronze / Brass)	1.0D	0.5D	SFM (Vc)	125	195	190	225	300	295	225
					IPT (fz)	.0015	.0020	.0030	.0037	.0046	.0053	.0065
					RPM	3000	3000	2300	2300	2300	1800	1150
					IPM (FEED)	9	12	14	17	21	19	15



※ The Feed, in long & extra long types, should be reduced by around 50%.



※ The Feed, in long & extra long types, should be reduced by around 50%.

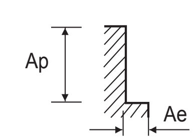
E5976 SERIES

2 FLUTE - SIDE CUTTING

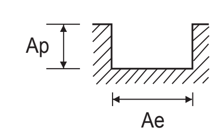
ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	3/8	1/2	5/8	3/4	1
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	D1/4 ~ 3/8 : 0.25D D1/2 ~ 1 : 0.5D	1.0D	SFM (Vc)	525	630	840	785	630	680
					IPT (fz)	.0029	.0052	.0064	.0079	.0114	.0127
					RPM	8000	6400	6400	4800	3200	2600
					IPM (FEED)	47	66	82	76	73	66

2 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	3/8	1/2	5/8	3/4	1
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.5D	1.0D	SFM (Vc)	525	630	840	785	630	680
					IPT (fz)	.0024	.0042	.0052	.0063	.0092	.0102
					RPM	8000	6400	6400	4800	3200	2600
					IPM (FEED)	38	54	66	60	59	53



※ The Feed, in long & extra long types, should be reduced by around 50%.



※ The Feed, in long & extra long types, should be reduced by around 50%.

YG ALU-POWER END MILLS

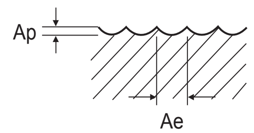
RECOMMENDED CUTTING CONDITIONS

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

E5978 SERIES — 2 FLUTE - PLANE

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/4	5/16	3/8	1/2	5/8	3/4
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.5D	0.2D	SFM (Vc)	735	705	845	1125	1115	845
					IPT (fz)	.0025	.0037	.0043	.0055	.0063	.0080
					RPM	11200	8600	8600	8600	6800	4300
					IPM (FEED)	55	63	74	95	85	69

(Diameter (Ø))

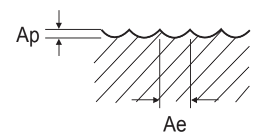


※ The Feed, in long & extra long types, should be reduced by around 50%.

E5978 SERIES TiCN Coated — 2 FLUTE - PLANE

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/4	5/16	3/8	1/2	5/8	3/4
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.5D	0.2D	SFM (Vc)	950	915	1100	1465	1440	1100
					IPT (fz)	.0025	.0037	.0043	.0055	.0063	.0093
					RPM	14500	11200	11200	11200	8800	5600
					IPM (FEED)	72	82	96	123	111	104

(Diameter (Ø))

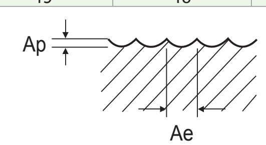


※ The Feed, in long & extra long types, should be reduced by around 50%.

E5974 SERIES — 2 FLUTE - PLANE

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/4	5/16	3/8	1/2	5/8	3/4
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.5D	0.2D	SFM (Vc)	915	885	1060	1415	1390	1060
					IPT (fz)	.0019	.0028	.0033	.0042	.0048	.0062
					RPM	14000	10800	10800	10800	8500	5400
					IPM (FEED)	53	61	71	91	82	67
	26-28	Copper and Copper Alloys (Bronze / Brass)	0.5D	0.2D	SFM (Vc)	275	260	315	420	410	315
					IPT (fz)	.0015	.0023	.0028	.0036	.0040	.0053
					RPM	4200	3200	3200	3200	2500	1600
					IPM (FEED)	13	15	18	23	20	17

(Diameter (Ø))

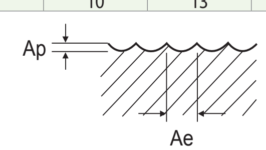


※ The Feed, in long & extra long types, should be reduced by around 50%.

E5975 SERIES — 3 FLUTE - PLANE

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/32	1/8	3/16	1/4	5/16	3/8	1/2	5/8
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.5D	0.2D	SFM (Vc)	510	450	675	905	885	1060	1415	1390
					IPT (fz)	.0005	.0007	.0010	.0013	.0019	.0022	.0028	.0032
					RPM	20700	13800	13800	13800	10800	10800	10800	8500
					IPM (FEED)	29	29	41	53	61	71	91	82
	26-28	Copper and Copper Alloys (Bronze / Brass)	0.5D	0.2D	SFM (Vc)	150	135	205	275	260	315	420	410
					IPT (fz)	.0004	.0006	.0008	.0010	.0016	.0019	.0024	.0027
					RPM	6200	4200	4200	4200	3200	3200	3200	2500
					IPM (FEED)	7	7	10	13	15	18	23	20

(Diameter (Ø))



※ The Feed, in long & extra long types, should be reduced by around 50%.

YG ALU-POWER END MILLS RECOMMENDED CUTTING CONDITIONS

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

E5522 SERIES — 2Flute / Side Cutting / METRIC

2 FLUTE - SIDE CUTTING

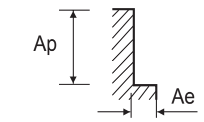
ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	D3 ~ 10 : 0.25D D12 ~ 20 : 0.5D	1.0D	SFM (Vc)	310	410	515	620	660	825	990	865	990	740	825
					IPT (fz)	.0018	.0022	.0026	.0030	.0044	.0052	.0064	.0073	.0079	.0089	.0094
					RPM	10000	10000	10000	10000	8000	8000	8000	6000	6000	4000	4000
					IPM (FEED)	35	43	51	59	71	83	102	87	95	71	75

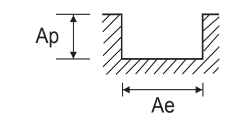
(Diameter (Ø))

2 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	0.5D	SFM (Vc)	310	410	515	620	660	825	990	865	990	740	825
					IPT (fz)	.0014	.0018	.0020	.0024	.0034	.0042	.0052	.0059	.0063	.0069	.0079
					RPM	10000	10000	10000	10000	8000	8000	8000	6000	6000	4000	4000
					IPM (FEED)	28	35	39	47	55	67	83	71	75	55	63

(Diameter (Ø))





EG522, EG930 SERIES TiCN Coated

2 FLUTE - SIDE CUTTING

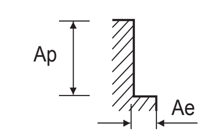
ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	D3 ~ 10 : 0.25D D12 ~ 20 : 0.5D	1.0D	SFM (Vc)	400	535	670	805	825	1030	1235	1155	1320	930	1030
					IPT (fz)	.0018	.0021	.0026	.0030	.0046	.0053	.0067	.0069	.0076	.0091	.0098
					RPM	13000	13000	13000	13000	10000	10000	10000	8000	8000	5000	5000
					IPM (FEED)	47	55	67	79	91	106	134	110	122	91	98

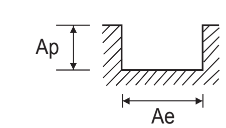
(Diameter (Ø))

2 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	0.5D	SFM (Vc)	400	535	670	805	825	1030	1235	1155	1320	930	1030
					IPT (fz)	.0013	.0018	.0020	.0023	.0036	.0044	.0053	.0057	.0061	.0071	.0079
					RPM	13000	13000	13000	13000	10000	10000	10000	8000	8000	5000	5000
					IPM (FEED)	35	47	51	59	71	87	106	91	98	71	79

(Diameter (Ø))





CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG ALU-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

EG909 SERIES TiCN Coated

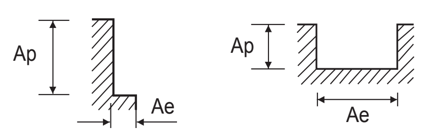
SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

2 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 4.0	6.0	8.0	10.0	12.0	16.0	20.0
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	~D10 : 0.25D D12 ~ 20 : 0.5D	1.0D	SFM(Vc)	535	805	825	1030	1235	1320	1030
					IPT(fz)	.0021	.0030	.0046	.0053	.0067	.0076	.0098
					RPM	13000	13000	10000	10000	10000	8000	5000
					IPM(FEED)	55	79	91	106	134	122	98
	26-28	Copper and Copper Alloys (Bronze / Brass)	~D10 : 0.25D D12 ~ 20 : 0.5D	1.0D	SFM(Vc)	160	240	245	310	370	395	310
					IPT(fz)	.001	.002	.003	.004	.005	.006	.008
					RPM	3900	3900	3000	3000	3000	2400	1500
					IPM(FEED)	14	20	23	27	34	31	25

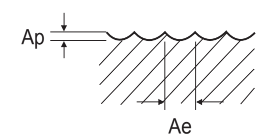
2 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 4.0	6.0	8.0	10.0	12.0	16.0	20.0
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	0.5D	SFM(Vc)	535	805	825	1030	1235	1320	1030
					IPT(fz)	.0018	.0023	.0036	.0044	.0053	.0061	.0079
					RPM	13000	13000	10000	10000	10000	8000	5000
					IPM(FEED)	47	59	71	87	106	98	79
	26-28	Copper and Copper Alloys (Bronze / Brass)	1.0D	0.5D	SFM(Vc)	160	240	245	310	370	395	310
					IPT(fz)	.001	.001	.003	.003	.004	.005	.006
					RPM	3900	3900	3000	3000	3000	2400	1500
					IPM(FEED)	12	15	18	22	27	25	20



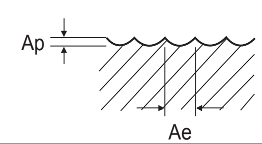
EG910 SERIES TiCN Coated 2 FLUTE - PLANE

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 6.0	8.0	10.0	12.0	16.0	20.0
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.5D	0.2D	SFM(Vc)	1115	1155	1445	1730	1815	1445
					IPT(fz)	.0019	.0028	.0033	.0042	.0048	.0062
					RPM	18000	14000	14000	14000	11000	7000
					IPM(FEED)	69	79	93	118	106	87
	26-28	Copper and Copper Alloys (Bronze / Brass)	0.5D	0.2D	SFM(Vc)	340	345	435	520	545	435
					IPT(fz)	.001	.002	.002	.003	.003	.005
					RPM	5500	4200	4200	4200	3300	2100
					IPM(FEED)	17	20	23	30	26	22



EG908 SERIES TiCN Coated 3 FLUTE - PLANE

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.5D	0.2D	SFM(Vc)	555	565	555	740	930	1115	1155	1445	1730	1815
					IPT(fz)	.0005	.0006	.0007	.0009	.0010	.0013	.0019	.0022	.0028	.0032
					RPM	27000	22000	18000	18000	18000	18000	14000	14000	14000	11000
					IPM(FEED)	37	37	37	49	53	69	79	93	118	106
	26-28	Copper and Copper Alloys (Bronze / Brass)	0.5D	0.2D	SFM(Vc)	165	165	170	225	285	340	345	435	520	545
					IPT(fz)	.0004	.0005	.0006	.0007	.0007	.001	.001	.001	.002	.002
					RPM	8000	6500	5500	5500	5500	5500	4200	4200	4200	3300
					IPM(FEED)	10	10	10	12	13	17	20	23	30	26



YG ALU-POWER END MILLS

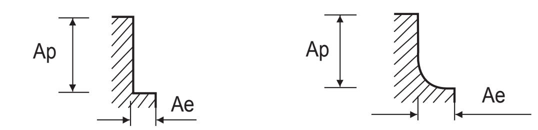
RECOMMENDED CUTTING CONDITIONS

E5E44, E5E98, E5E45 SERIES

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

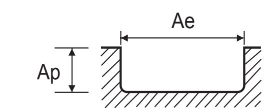
3 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	3/8	1/2	5/8	3/4	1
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.5D	1.5D	SFM(Vc)	655	660	670	655	650	655
					IPT(fz)	.0010	.0011	.0015	.0020	.0026	.0032
					RPM	10000	6700	5100	4000	3300	2500
					IPM(FEED)	30	23	23	24	26	24



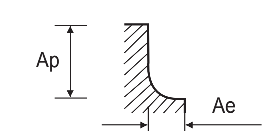
3 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	3/8	1/2	5/8	3/4	1
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	1.5D	SFM(Vc)	460	460	470	460	450	470
					IPT(fz)	.0010	.0011	.0015	.0020	.0028	.0031
					RPM	7000	4700	3600	2800	2300	1800
					IPM(FEED)	21	16	16	17	19	17



EK196 SERIES 3 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.5D	1.5D	SFM(Vc)	295	255	245	260	260
					IPT(fz)	.0006	.0010	.0019	.0027	.0038
					RPM	4500	3100	2500	2000	1600
					IPM(FEED)	8	9	14	16	18



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG ALU-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

EK191, EK226, EK192 SERIES

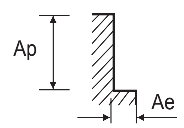
SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

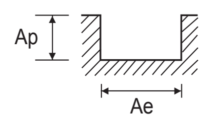
3 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/2	3/4	1	1 1/4	2
N	21-22	Aluminum-wrought alloy	0.5D	1.5D	SFM (Vc)	250~500	250~500	250~500	250~500	250~500
					IPT (fz)	.0050	.0070	.0100	.0120	.0150
					RPM	1910~3820	1270~2550	960~1910	760~1530	480~960
					IPM (FEED)	29~57	27~54	29~57	27~55	22~43
	23-22	Aluminum-cast, alloyed	0.5D	1.5D	SFM (Vc)	250~750	250~750	250~750	250~750	250~750
					IPT (fz)	.0050	.0070	.0100	.0120	.0150
					RPM	1910~5730	1270~3820	960~2870	760~2290	480~1430
					IPM (FEED)	29~86	27~80	29~86	27~82	22~64

3 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/2	3/4	1	1 1/4	2
N	21-22	Aluminum-wrought alloy	1.0D	0.5D	SFM (Vc)	250~500	250~500	250~500	250~500	250~500
					IPT (fz)	.0050	.0070	.0100	.0120	.0150
					RPM	1910~3820	1270~2550	960~1910	760~1530	480~960
					IPM (FEED)	29~57	27~54	29~57	27~55	22~43
	23-22	Aluminum-cast, alloyed	1.0D	0.5D	SFM (Vc)	250~750	250~750	250~750	250~750	250~750
					IPT (fz)	.0050	.0070	.0100	.0120	.0150
					RPM	1910~5730	1270~3820	960~2870	760~2290	480~1430
					IPM (FEED)	29~86	27~80	29~86	27~82	22~64





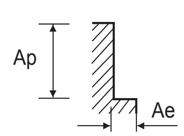
EK191, EK226, EK192 SERIES TiCN Coated

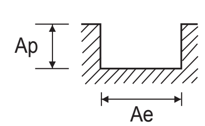
3 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/2	3/4	1	1 1/4	2
N	21-22	Aluminum-wrought alloy	0.5D	1.5D	SFM (Vc)	400~2500	400~2500	400~2500	400~2500	400~2500
					IPT (fz)	.0050	.0070	.0100	.0120	.0150
					RPM	3060~19100	2040~12730	1530~9550	1220~7640	760~4780
					IPM (FEED)	46~287	43~267	46~287	44~275	34~215
	23-22	Aluminum-cast, alloyed	0.5D	1.5D	SFM (Vc)	500~3250	500~3250	500~3250	500~3250	500~3250
					IPT (fz)	.0050	.0070	.0100	.0120	.0150
					RPM	3820~24830	2550~16550	1910~12420	1530~9930	960~6210
					IPM (FEED)	57~372	54~348	57~372	55~357	43~279

3 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/2	3/4	1	1 1/4	2
N	21-22	Aluminum-wrought alloy	1.0D	0.5D	SFM (Vc)	400~2500	400~2500	400~2500	400~2500	400~2500
					IPT (fz)	.0050	.0070	.0100	.0120	.0150
					RPM	3060~19100	2040~12730	1530~9550	1220~7640	760~4780
					IPM (FEED)	46~287	43~267	46~287	44~275	34~215
	23-22	Aluminum-cast, alloyed	1.0D	0.5D	SFM (Vc)	500~3250	500~3250	500~3250	500~3250	500~3250
					IPT (fz)	.0050	.0070	.0100	.0120	.0150
					RPM	3820~24830	2550~16550	1910~12420	1530~9930	960~6210
					IPM (FEED)	57~372	54~348	57~372	55~357	43~279





YG ALU-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

EK193, EK132 SERIES

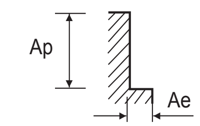
SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

3 FLUTE - SIDE CUTTING

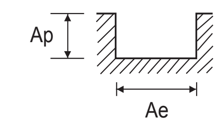
ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/2	5/8	3/4	1	1 1/4	1 1/2
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.5D	1.5D	SFM (Vc)	590	575	450	525	525	530
					IPT (fz)	.0028	.0025	.0039	.0045	.0054	.0062
					RPM	4500	3500	2300	2000	1600	1350
					IPM (FEED)	38	26	27	27	26	25

3 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/2	5/8	3/4	1	1 1/4	1 1/2
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	0.5D	SFM (Vc)	535	520	410	475	475	485
					IPT (fz)	.0031	.0041	.0065	.0073	.0087	.0103
					RPM	4095	3185	2093	1820	1456	1229
					IPM (FEED)	38	39	41	40	38	38



※ The Feed, in long & extra long types, should be reduced by around 50%.



※ The Feed, in long & extra long types, should be reduced by around 50%.

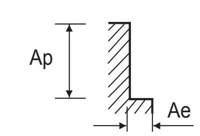
EP922, EP924 SERIES TiAlN Coated

3 FLUTE - SIDE CUTTING

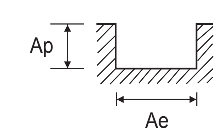
ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 12.0	16.0	20.0	25.0	32.0
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.5D	1.5D	SFM (Vc)	345	365	350	360	365
					IPT (fz)	.0019	.0027	.0041	.0043	.0064
					RPM	2800	2200	1700	1400	1100
					IPM (FEED)	16	18	21	18	21

3 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 12.0	16.0	20.0	25.0	32.0
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	0.5D	SFM (Vc)	345	365	350	360	365
					IPT (fz)	.0026	.0038	.0055	.0060	.0085
					RPM	2800	2200	1700	1400	1100
					IPM (FEED)	22	25	28	25	28

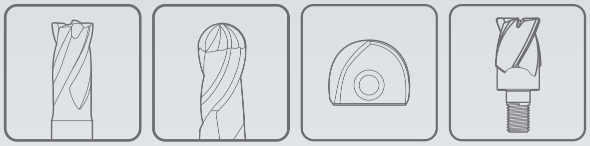


※ The Feed, in long & extra long types, should be reduced by around 50%.



※ The Feed, in long & extra long types, should be reduced by around 50%.

Global Cutting Tool Leader **YG-1**



MILLING

SOLID CARBIDE

D-POWER GRAPHITE END MILLS

- For Graphites

SELECTION GUIDE

YG MILLING TOOLS

SOLID CARBIDE

D-POWER GRAPHITE END MILLS

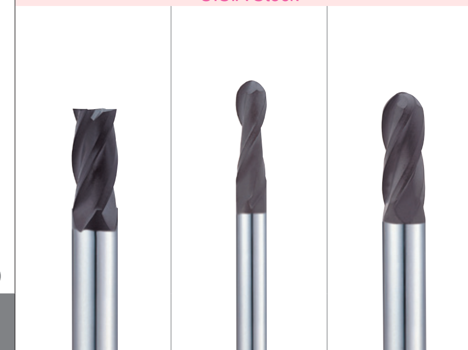
Aluminium Alloys and Silent Cutting

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p. C660

	Inch			Inch					Metric			
SERIES	EI107	EI099	EI106	EI971	EI972	EIB07	EIB05	EIB06	EI880	EI881	EI451	EI450
FLUTE	2, 4	2	4	2	2	4	4	4	2	3	2	2
HELIX ANGLE	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°
CUTTING EDGE SHAPE	SQUARE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	CORNER RADIUS	CORNER RADIUS	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE
SIZE MIN	D1/64	R.0391	R.0391	R.0391	R.0391	R.0156	D1/16	D1/32	R1.0	R1.0	R1.0	R1.0
SIZE MAX	D1/2	R1/4	R1/4	R1/4	R5/32	R.0625	D1/2	D3/8	R6.0	R6.0	R6.0	R4.0
PAGE	C650	C651		C652	C653	C654	C655	C656	C657		C658	C659
	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH	LONG LENGTH	LONG REACH	REGULAR LENGTH NECK	REGULAR LENGTH	REGULAR LENGTH NECK	SHORT LENGTH	SHORT LENGTH	LONG LENGTH	LONG REACH
	Diamond	Diamond	Diamond	Diamond	Diamond	Diamond	Diamond	Diamond	Diamond	Diamond	Diamond	Diamond
	U.S.A Stock			U.S.A Stock					Call for Availability			



ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	EI107	EI099	EI106	EI971	EI972	EIB07	EIB05	EIB06	EI880	EI881	EI451	EI450
P	1	Non-alloy steel	About 0.15% C	Annealed	125													
	2		About 0.45% C	Annealed	190	13												
	3		About 0.45% C	Quenched & Tempered	250	25												
	4		About 0.75% C	Annealed	270	28												
	5		About 0.75% C	Quenched & Tempered	300	32												
	6	Low alloy steel		Annealed	180	10												
	7			Quenched & Tempered	275	29												
	8			Quenched & Tempered	300	32												
	9			Quenched & Tempered	350	38												
	10	High alloyed steel, and tool steel		Annealed	200	15												
	11			Quenched & Tempered	325	35												
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15												
	13		Martensitic	Quenched & Tempered	240	23												
	14		Austenitic		180	10												
K	15	Grey cast iron	Pearlitic / ferritic		180	10												
	16		Pearlitic (Martensitic)		260	26												
	17	Nodular cast iron	Ferritic		160	3												
	18		Pearlitic		250	25												
	19	Malleable cast iron	Ferritic		130													
	20		Pearlitic		230	21												
N	21	Aluminum-wrought alloy	Not Curable		60		○	○	○	○	○	○	○	○	○	○	○	○
	22		Curable	Hardened	100		○	○	○	○	○	○	○	○	○	○	○	○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○	○	○	○	○	○	○	○	○	○	○	○
	24		≤ 12% Si, Curable	Hardened	90		○	○	○	○	○	○	○	○	○	○	○	○
	25		> 12% Si, Not Curable		130		○	○	○	○	○	○	○	○	○	○	○	○
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110													
	27		CuZn, CuSnZn (Brass)		90													
	28		CuSn, lead-free copper and electrolytic copper		100													
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic				◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	30		Rubber, Wood, etc.															
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15												
	32			Cured	280	30												
	33		Ni or Co Based	Annealed	250	25												
	34			Cured	350	38												
	35			Cast	320	34												
	36	Titanium Alloys	Pure Titanium		400 Rm													
	37		Alpha + Beta Alloys	Hardened	1050 Rm													
H	38	Hardened steel		Hardened	550	55												
	39			Hardened	630	60												
	40	Chilled Cast Iron		Cast	400	42												
	41	Hardened Cast Iron		Hardened	550	55												

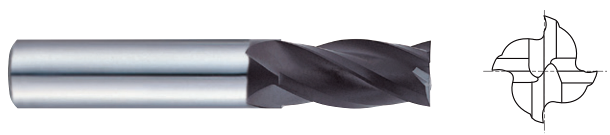
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG D-POWER GRAPHITE END MILLS

PLAIN SHANK **EI107** SERIES

CARBIDE, 4(2) FLUTE REGULAR LENGTH

- ▶ Higher hardness of film and excellent wear-resistance increase the tool life dramatically.
- ▶ Ultra fine film of YG-1's diamond coated carbide end mills ensure the smooth and excellent surface on work materials.
- ▶ High performance on graphite, wrought aluminum, bakelite, plastics, wood, brass, etc.
- ▶ YG-1's diamond coated carbide end mills may have good result for the machining of non-ferrous metals and non-metallic materials.



CARBIDE 4 30° PLAIN p.C661

for GRAPHITE
◆ U.S.A Stock

Unit : Inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
★99686	1/64	1/8	3/65	1-1/2
99629	1/8	1/8	1/2	1-1/2
99630	3/16	3/16	5/8	2
99631	1/4	1/4	3/4	2-1/2
99632	5/16	5/16	13/16	2-1/2
99633	3/8	3/8	7/8	2-1/2
99635	1/2	1/2	1	3

★ 2Flute

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
	○	○	○	○	○				◎													

YG D-POWER GRAPHITE END MILLS

PLAIN SHANK **EI099** SERIES
PLAIN SHANK **EI106** SERIES

CARBIDE, 2&4 FLUTE REGULAR LENGTH BALL NOSE

- ▶ Higher hardness of film and excellent wear-resistance increase the tool life dramatically.
- ▶ Ultra fine film of YG-1's diamond coated carbide ball end mills ensure the smooth and excellent surface on work materials.
- ▶ High performance on graphite, wrought aluminum, bakelite, plastics, wood, brass, etc.
- ▶ YG-1's diamond coated carbide ball end mills may have good result for the machining of non-ferrous metals and non-metallic materials.

CARBIDE 2 30° R ±.0008 PLAIN p.C660

for GRAPHITE
◆ U.S.A Stock

EI099(2 FLUTE), EI106(4 FLUTE) Series

Unit : Inch

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
2 FLUTE	4 FLUTE	R (±.0008)				
99572	99621	R .0391	5/64	1/8	1/4	1-1/2
99573	99622	R 3/64	3/32	1/8	3/8	1-1/2
99574	99623	R 1/16	1/8	1/8	1/2	1-1/2
99575	99624	R 3/32	3/16	3/16	5/8	2
99576	99625	R 1/8	1/4	1/4	3/4	2-1/2
99577	99626	R 5/32	5/16	5/16	13/16	2-1/2
99578	99627	R 3/16	3/8	3/8	7/8	2-1/2
99583	99628	R 1/4	1/2	1/2	1	3

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003

◎ : Excellent ○ : Good

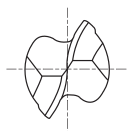
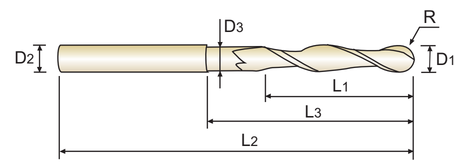
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
	○	○	○	○	○				◎													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

CARBIDE, 2 FLUTE LONG LENGTH BALL NOSE

- ▶ Higher hardness of film and excellent wear-resistance increase the tool life dramatically.
- ▶ Ultra fine film of YG-1's diamond coated carbide ball end mills ensure the smooth and excellent surface on work materials.
- ▶ High performance on graphite, wrought aluminum, bakelite, plastics, wood, brass, etc.
- ▶ YG-1's diamond coated carbide ball end mills may have good result for the machining of non-ferrous metals and non-metallic materials.

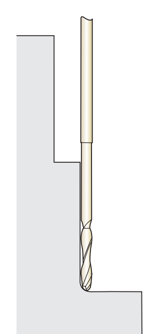
CARBIDE 2 30° R ±.0008 PLAIN p.C660

for GRAPHITE
◆ U.S.A Stock

Unit : Inch

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R (±.0008)	D1	D2	L1	L3	L2	D3
99671	R.0391	**5/64**	1/8	3/8	3/4	3-1/4	.076
99672	R 1/16	**1/8**	1/8	5/8	1	3-1/4	.120
99973	R 3/32	**3/16**	3/16	1-1/8	2	4	.182
99673	R 3/32	**3/16**	1/4	1-1/8	2	4	.185
99674	R 1/8	**1/4**	1/4	1-1/8	2	4	.230
99675	R 5/32	**5/16**	5/16	1-1/2	2-3/8	4-1/2	.293
99676	R 3/16	**3/8**	3/8	2	2-3/4	4-3/4	.355
99677	R1/4	**1/2**	1/2	2-1/8	3	5-1/8	.480

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003



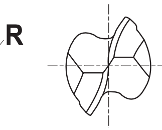
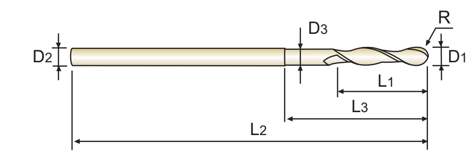
◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630		400	550
	○	○	○	○	○				◎													

CARBIDE, 2 FLUTE LONG REACH BALL NOSE

- ▶ Higher hardness of film and excellent wear-resistance increase the tool life dramatically.
- ▶ Ultra fine film of YG-1's diamond coated carbide ball end mills ensure the smooth and excellent surface on work materials.
- ▶ High performance on graphite, wrought aluminum, bakelite, plastics, wood, brass, etc.
- ▶ YG-1's diamond coated carbide ball end mills may have good result for the machining of non-ferrous metals and non-metallic materials.

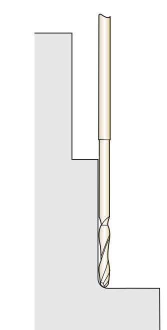
CARBIDE 2 30° R ±.0008 PLAIN p.C660

for GRAPHITE
◆ U.S.A Stock

Unit : Inch

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R (±.0008)	D1	D2	L1	L3	L2	D3
99678	R.0391	**5/64**	1/8	3/8	3/4	4	.076
99679	R1/16	**1/8**	1/8	5/8	1	4	.120
99980	R3/32	**3/16**	3/16	1-1/8	2	4-3/4	.182
99680	R3/32	**3/16**	1/4	1-1/8	2	4-3/4	.186
99681	R1/8	**1/4**	1/4	1-1/8	2	6	.230
99682	R5/32	**5/16**	5/16	1-1/2	2-3/8	6	.293

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630		400	550
	○	○	○	○	○				◎													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

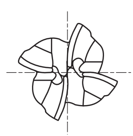
YG

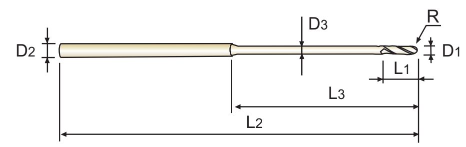
D-POWER GRAPHITE END MILLS

PLAIN SHANK **EIB07 SERIES**

CARBIDE, 4 FLUTE REGULAR LENGTH BALL NOSE with NECK

- ▶ Higher hardness of film and excellent wear-resistance increase the tool life dramatically.
- ▶ Ultra fine film of YG-1's diamond coated carbide ball end mills ensure the smooth and excellent surface on work materials.
- ▶ High performance on graphite, wrought aluminum, bakelite, plastics, wood, brass, etc.
- ▶ YG-1's diamond coated carbide ball end mills may have good result for the machining of non-ferrous metals and non-metallic materials.





CARBIDE 4 30° R ±.0008 PLAIN p.C660

for GRAPHITE

◆ U.S.A Stock

Unit : Inch

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R (±.0008)	D1	D2	L1	L3	L2	D3
EIB07002	R.0156	**1/32**	1/8	3/32	3/8	3	.028
EIB07901	R.0156	**1/32**	1/8	3/32	1/2	3	.028
EIB07003	R.0234	**3/64**	1/8	9/64	9/16	3	.043
EIB07902	R.0234	**3/64**	1/8	9/64	3/4	3	.043
EIB07004	R.0312	**1/16**	1/8	3/16	3/4	3	.057
EIB07903	R.0312	**1/16**	1/8	3/16	1	3	.057
EIB07006	R.0469	**3/32**	1/8	9/32	1	3	.086
EIB07904	R.0469	**3/32**	1/8	9/32	1-1/2	3	.086
EIB07008	R.0625	**1/8**	1/8	3/8	1-1/2	3	.115
EIB07905	R.0625	**1/8**	1/8	3/8	2	3	.115

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
	○	○	○	○	○				◎													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

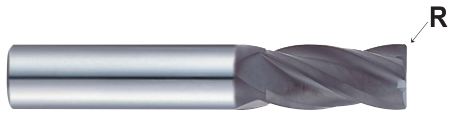
YG

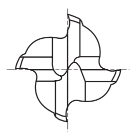
D-POWER GRAPHITE END MILLS

PLAIN SHANK **EIB05 SERIES**

CARBIDE, 4 FLUTE REGULAR LENGTH CORNER RADIUS

- ▶ Higher hardness of film and excellent wear-resistance increase the tool life dramatically.
- ▶ Ultra fine film of YG-1's diamond coated carbide ball end mills ensure the smooth and excellent surface on work materials.
- ▶ High performance on graphite, wrought aluminum, bakelite, plastics, wood, brass, etc.
- ▶ YG-1's diamond coated carbide ball end mills may have good result for the machining of non-ferrous metals and non-metallic materials.





CARBIDE 4 30° R ±.001 PLAIN p.C660

for GRAPHITE

◆ U.S.A Stock

Unit : Inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R (±.001)	D1	D2	L1	L3	L2	D3
EIB05004	R.010	**1/16**	1/8	3/16	-	1-1/2	-
EIB05901	R.015	**1/16**	1/8	3/16	-	1-1/2	-
EIB05006	R.010	**3/32**	1/8	3/8	-	1-1/2	-
EIB05008	R.015	**1/8**	1/8	1/2	-	1-1/2	-
EIB05902	R.020	**1/8**	1/8	1/2	-	1-1/2	-
EIB05012	R.020	**3/16**	3/16	5/8	-	2	-
EIB05911	R.020	**3/16**	3/16	3/16	1-1/2	4	.169
EIB05903	R.030	**3/16**	3/16	5/8	-	2	-
EIB05016	R.020	**1/4**	1/4	3/4	-	2-1/2	-
EIB05913	R.020	**1/4**	1/4	1/4	2	4	.230
EIB05912	R.020	**1/4**	1/4	1/4	2	6	.230
EIB05904	R.030	**1/4**	1/4	3/4	-	2-1/2	-
EIB05024	R.020	**3/8**	3/8	7/8	-	2-1/2	-
EIB05908	R.020	**3/8**	3/8	3/8	2	4	.355
EIB05907	R.020	**3/8**	3/8	3/8	-	4	-
EIB05905	R.030	**3/8**	3/8	7/8	-	2-1/2	-
EIB05032	R.030	**1/2**	1/2	1	-	3	-
EIB05906	R.060	**1/2**	1/2	1	-	3	-
EIB05909	R.030	**1/2**	1/2	1-1/2	-	4	-
EIB05910	R.030	**1/2**	1/2	3	-	6	-

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

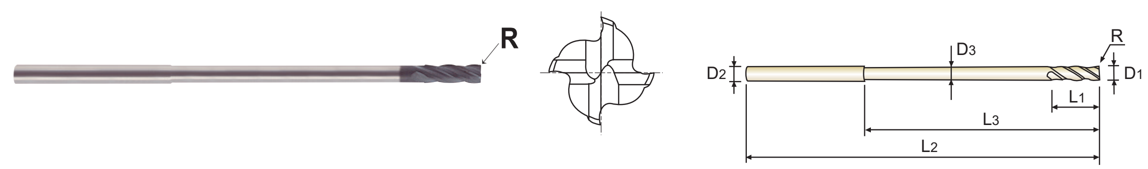
ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
	○	○	○	○	○				◎													

YG D-POWER GRAPHITE END MILLS

PLAIN SHANK **EIB06 SERIES**

CARBIDE, 4 FLUTE REGULAR LENGTH CORNER RADIUS with NECK

- ▶ Higher hardness of film and excellent wear-resistance increase the tool life dramatically.
- ▶ Ultra fine film of YG-1's diamond coated carbide ball end mills ensure the smooth and excellent surface on work materials.
- ▶ High performance on graphite, wrought aluminum, bakelite, plastics, wood, brass, etc.
- ▶ YG-1's diamond coated carbide ball end mills may have good result for the machining of non-ferrous metals and non-metallic materials.



CARBIDE 4 30° R ±.001 PLAIN p.C661

for GRAPHITE
◆ U.S.A Stock

Unit : Inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R (±.001)	D1	D2	L1	L3	L2	D3
EIB06002	R.005	1/32	1/8	3/32	3/8	3	.028
EIB06901	R.005	1/32	1/8	3/32	1/2	3	.028
EIB06003	R.010	3/64	1/8	9/64	9/16	3	.043
EIB06902	R.010	3/64	1/8	9/64	3/4	3	.043
EIB06004	R.010	1/16	1/8	3/16	3/4	3	.057
EIB06903	R.010	1/16	1/8	3/16	1	3	.057
EIB06006	R.010	3/32	1/8	9/32	1	3	.086
EIB06904	R.010	3/32	1/8	9/32	1-1/2	3	.086
EIB06008	R.010	1/8	1/8	3/8	1-1/2	3	.115
EIB06905	R.010	1/8	1/8	3/8	2	3	.115
EIB06906	R.015	1/8	1/8	3/16	.800	2-1/2	.115
EIB06907	R.020	3/8	3/8	3/8	3	6	.355

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

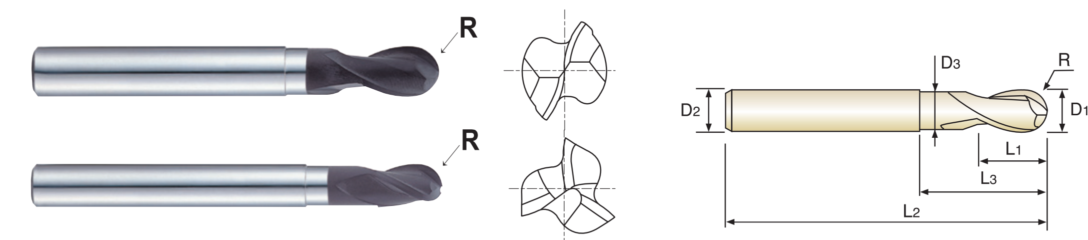
ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
	○	○	○	○	○				◎													

YG D-POWER GRAPHITE END MILLS

PLAIN SHANK **EI880 SERIES**
PLAIN SHANK **EI881 SERIES**

CARBIDE, 2&3 FLUTE SHORT LENGTH BALL NOSE

- ▶ Higher hardness of film and excellent wear-resistance increase the tool life dramatically.
- ▶ Ultra fine film of YG-1's diamond coated carbide ball end mills ensure the smooth and excellent surface on work materials.
- ▶ High performance on graphite, wrought aluminum, bakelite, plastics, wood, brass, etc.
- ▶ YG-1's diamond coated carbide ball end mills may have good result for the machining of non-ferrous metals and non-metallic materials.



CARBIDE 2&3 30° R ±0.01 PLAIN p.C661

for GRAPHITE
◇ Call for Availability

EI880(2 FLUTE), EI881(3 FLUTE) Series

Unit : mm

EDP No.		Radius of Ball Nose	Mill Diameter		Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
			Metric	Inch					
2 FLUTE	3 FLUTE	R (±0.01)	D1		D2	L1	L3	L2	D3
EI880020	EI881020	R1.0	2.0	.0787	6	3	5	60	1.9
EI880025	EI881025	R1.25	2.5	.0984	6	4	6	60	2.4
EI880030	EI881030	R1.5	3.0	.1181	6	4.5	6.5	60	2.8
EI880035	EI881035	R1.75	3.5	.1378	6	5	7	65	3.2
EI880040	EI881040	R2.0	4.0	.1575	6	6	8	65	3.7
EI880050	EI881050	R2.5	5.0	.1969	6	7.5	10	65	4.6
EI880060	EI881060	R3.0	6.0	.2362	6	9	12	75	5.6
EI880080	EI881080	R4.0	8.0	.3150	8	12	25	75	7.4
EI880100	EI881100	R5.0	10.0	.3937	10	15	30	80	9.4
EI880120	EI881120	R6.0	12.0	.4724	12	18	36	90	11.4

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h6

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
	○	○	○	○	○				◎													

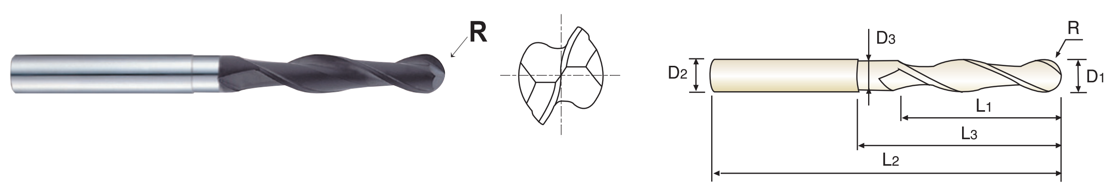
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

D-POWER GRAPHITE END MILLS

PLAIN SHANK **EI451** SERIES

CARBIDE, 2 FLUTE LONG LENGTH BALL NOSE

- ▶ Higher hardness of film and excellent wear-resistance increase the tool life dramatically.
- ▶ Ultra fine film of YG-1's diamond coated carbide ball end mills ensure the smooth and excellent surface on work materials.
- ▶ High performance on graphite, wrought aluminum, bakelite, plastics, wood, brass, etc.
- ▶ YG-1's diamond coated carbide ball end mills may have good result for the machining of non-ferrous metals and non-metallic materials.



CARBIDE 2 30° R ±0.01 PLAIN p.C661

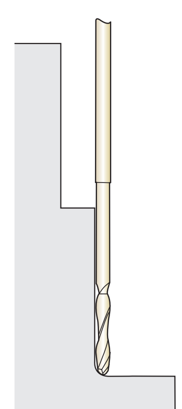
for GRAPHITE

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R (±0.01)	D1		D2	L1	L3	L2	D3
99558	R1.0	2.0	.0787	4	10	20	80	1.95
99559	R1.5	3.0	.1181	4	15	25	80	2.9
99560	R2.0	4.0	.1575	4	20	30	80	3.9
99561	R2.5	5.0	.1969	6	30	50	100	4.9
99562	R3.0	6.0	.2362	6	30	50	100	5.5
99563	R4.0	8.0	.3150	8	40	60	110	7.5
99564	R5.0	10.0	.3937	10	50	70	120	9.5
99565	R6.0	12.0	.4724	12	55	75	130	11.5

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h6



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

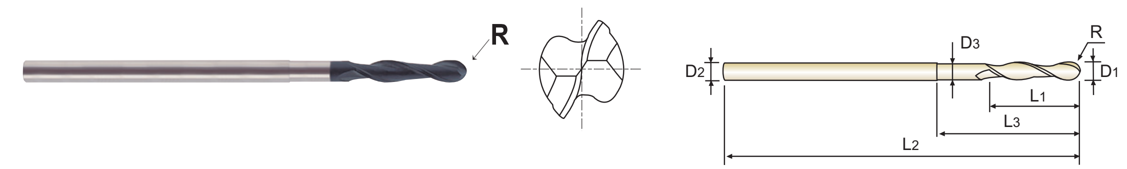
ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
	○	○	○	○	○				◎													

D-POWER GRAPHITE END MILLS

PLAIN SHANK **EI450** SERIES

CARBIDE, 2 FLUTE LONG REACH BALL NOSE

- ▶ Higher hardness of film and excellent wear-resistance increase the tool life dramatically.
- ▶ Ultra fine film of YG-1's diamond coated carbide ball end mills ensure the smooth and excellent surface on work materials.
- ▶ High performance on graphite, wrought aluminum, bakelite, plastics, wood, brass, etc.
- ▶ YG-1's diamond coated carbide ball end mills may have good result for the machining of non-ferrous metals and non-metallic materials.



CARBIDE 2 30° R ±0.01 PLAIN p.C661

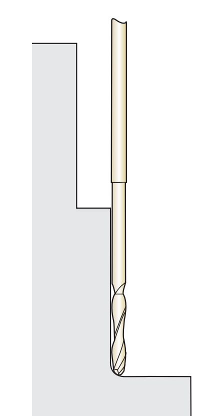
for GRAPHITE

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R (±0.01)	D1		D2	L1	L3	L2	D3
99566	R1.0	2.0	.0787	4	10	20	100	1.95
99567	R1.5	3.0	.1181	4	15	25	100	2.9
99568	R2.0	4.0	.1575	4	20	30	100	3.9
99569	R2.5	5.0	.1969	6	30	50	120	4.9
99570	R3.0	6.0	.2362	6	30	50	150	5.5
99571	R4.0	8.0	.3150	8	40	60	150	7.5

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0~-0.03	h6



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel			Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	39-1	40	41
HRc											15	30	25	38	34			55	60	50	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630		400	550
	○	○	○	○	○				◎													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

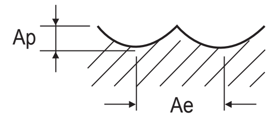
YG D-POWER GRAPHITE END MILLS

RECOMMENDED CUTTING CONDITIONS

EI106 SERIES — 4 FLUTE BALL NOSE - SURFACING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)									
						5/64	3/32	1/8	9/64	5/32	3/16	1/4	5/16	3/8	1/2
N	29.2	Non Metallic Materials	0.2D	0.2D	SFM (Vc)	325	395	525	590	655	760	980	1065	1130	1375
					IPT (fz)	.0010	.0014	.0018	.0021	.0026	.0032	.0039	.0045	.0070	.0059
					RPM	15890	16090	16040	16030	16010	15480	14970	13020	11510	10510
					IPM (FEED)	63	88	114	138	165	201	232	236	324	248

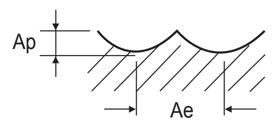
SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute



EI099, EI971, EI972 SERIES — 2 FLUTE BALL NOSE - SURFACING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)									
						5/64	3/32	1/8	9/64	5/32	3/16	1/4	5/16	3/8	1/2
N	29.2	Non Metallic Materials	0.2D	0.2D	SFM (Vc)	325	395	525	590	655	760	980	1065	1130	1375
					IPT (fz)	.0010	.0014	.0018	.0018	.0026	.0032	.0039	.0045	.0052	.0059
					RPM	15890	16090	16040	16030	16010	15480	14970	13020	11510	10510
					IPM (FEED)	32	44	57	59	83	100	116	118	120	124

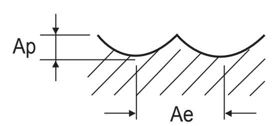
SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute



EIB07 SERIES — 4 FLUTE BALL NOSE - SURFACING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)												
						1/32	3/64	1/16	5/64	3/32	1/8	9/64	5/32	3/16	1/4	5/16	3/8	1/2
N	29.2	Non Metallic Materials	0.2D	0.2D	SFM (Vc)	165	245	325	325	395	525	590	655	760	980	1065	1130	1375
					IPT (fz)	.0005	.0005	.0007	.0009	.0012	.0016	.0019	.0023	.0029	.0035	.0041	.0047	.0053
					RPM	20170	19970	19860	15890	16090	16040	16030	16010	15480	14970	13020	11510	10510
					IPM (FEED)	38	43	52	57	79	102	125	147	182	211	212	217	225

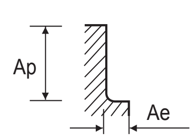
SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute



EIB05 SERIES — 4 FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)								
						1/16	5/64	1/8	5/32	3/16	1/4	5/16	3/8	1/2
N	29.2	Non Metallic Materials	0.3D	0.3D	SFM (Vc)	655	820	1310	1635	1965	2620	2620	2550	2750
					IPT (fz)	.0008	.0010	.0014	.0020	.0024	.0028	.0034	.0043	.0051
					RPM	40030	40090	40030	39970	40030	40030	32030	25980	21010
					IPM (FEED)	126	158	221	315	378	441	441	451	431

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute

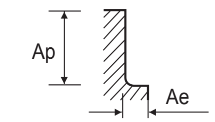


YG D-POWER GRAPHITE END MILLS
RECOMMENDED CUTTING CONDITIONS

EIB06 SERIES — 4 FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)										
						1/32	3/64	1/16	5/64	1/8	5/32	3/16	1/4	5/16	3/89	1/2
N	29.2	Non Metallic Materials	0.3D	0.3D	SFM (Vc)	325	490	655	820	1310	1635	1965	2620	2620	230	2750
					IPT (fz)	.0003	.0004	.0006	.0007	.0010	.0014	.0017	.0019	.0024	.0030	.0036
					RPM	39730	39930	40030	40090	40030	39970	40030	40030	32030	26070	21010
					IPM (FEED)	44	66	88	110	154	221	265	309	309	316	301

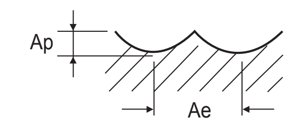
SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute



EI880, EI451, EI450 SERIES — 2 FLUTE BALL NOSE - SURFACING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)									
						2	2.5	3	3.5	4	5	6	8	10	12
N	29.2	Non Metallic Materials	0.2D	0.2D	SFM (Vc)	330	410	495	575	660	800	930	1070	1185	1300
					IPT (fz)	.0010	.0014	.0018	.0022	.0026	.0032	.0039	.0046	.0052	.0059
					RPM	16010	15910	16010	15940	16010	15520	15040	12980	11500	10510
					IPM (FEED)	32	44	57	69	83	100	116	118	120	124

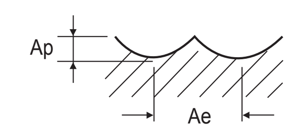
SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute



EI881 SERIES — 3 FLUTE BALL NOSE - SURFACING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)									
						2	2.5	3	3.5	4	5	6	8	10	12
N	29.2	Non Metallic Materials	0.2D	0.2D	SFM (Vc)	330	410	495	575	660	800	930	1070	1185	1300
					IPT (fz)	.0010	.0014	.0018	.0022	.0025	.0032	.0039	.0046	.0053	.0059
					RPM	16010	15910	16010	15940	16010	15520	15040	12980	11500	10510
					IPM (FEED)	47	67	85	104	122	150	175	177	181	187

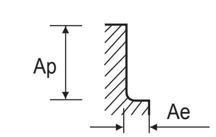
SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute



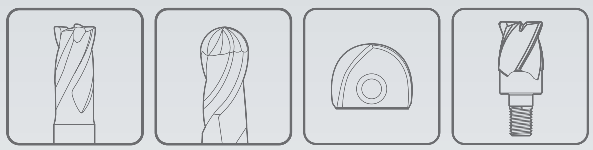
EI107 SERIES — 4 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)						
						1/64	1/8	3/16	1/4	5/16	3/8	1/2
N	29.2	Non Metallic Materials	0.3D	0.3D	SFM (Vc)	165	1310	1965	2620	2620	2550	2620
					IPT (fz)	.0002	.0004	.0008	.0012	.0015	.0020	.0024
					RPM	40340	40030	40030	40030	32030	25980	20020
					IPM (FEED)	32	63	126	189	197	205	189

SFM = Surface Feet per Minute
RPM = Revolutions Per Minute
IPT = Inches Per Tooth
IPM = Inches Per Minute



Global Cutting Tool Leader **YG-1**



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YG MILLING TOOLS

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- General Purpose

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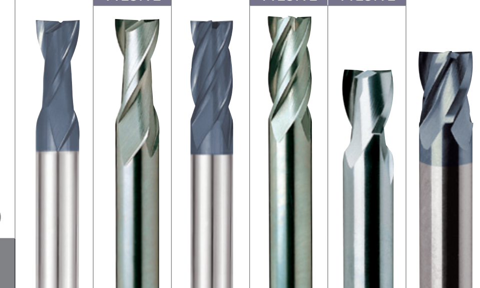
◎ : Excellent ○ : Good

Recommended cutting conditions : p. C708

Inch

SERIES	UGMF90	E5020	UGMF89	E5021	E5244	UGMGF57
FLUTE	2	2	4	4	2	4
HELIX ANGLE	30°	30°	30°	30°	30°	30°
CUTTING EDGE SHAPE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE
SIZE MIN	D1/8	D1/32	D1/16	D1/16	D1/16	D1/16
SIZE MAX	D1	D1	D1	D1	D3/4	D3/4
PAGE	C668	C669	C670	C671	C672	C673
	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH	STUB LENGTH	STUB LENGTH
	Y-Coating	Uncoated	Y-Coating	Uncoated	Uncoated	Y-Coating
		TiN		TiN	TiN	
		TiCN		TiCN	TiCN	
		TYLON F		TYLON F	TYLON F	
		TYLON E		TYLON E	TYLON E	



ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	UGMF90	E5020	UGMF89	E5021	E5244	UGMGF57
P	1	Non-alloy steel	About 0.15% C Annealed	125		◎	◎	◎	◎	◎	◎
	2		About 0.45% C Annealed	190	13	◎	◎	◎	◎	◎	◎
	3		About 0.45% C Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎
	4		About 0.75% C Annealed	270	28	◎	◎	◎	◎	◎	◎
	5		About 0.75% C Quenched & Tempered	300	32	○	◎	◎	◎	◎	◎
	6	Low alloy steel	Annealed	180	10	◎	◎	◎	◎	◎	◎
	7		Quenched & Tempered	275	29	◎	◎	◎	◎	◎	◎
	8		Quenched & Tempered	300	32	○	◎	◎	◎	◎	◎
	9		Quenched & Tempered	350	38	◎	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel	Annealed	200	15	◎	◎	◎	◎	◎	◎
	11		Quenched & Tempered	325	35	○	◎	◎	◎	◎	◎
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15	○	○	○	○	○	○
	13		Martensitic Quenched & Tempered	240	23	○	○	○	○	○	○
	14		Austenitic	180	10	○	○	○	○	○	○
K	15	Grey cast iron	Pearlitic / ferritic	180	10	○	○	○	○	○	○
	16		Pearlitic (Martensitic)	260	26	○	○	○	○	○	○
	17	Nodular cast iron	Ferritic	160	3	○	○	○	○	○	○
	18		Pearlitic	250	25	○	○	○	○	○	○
	19	Malleable cast iron	Ferritic	130		○	○	○	○	○	○
	20		Pearlitic	230	21	○	○	○	○	○	○
N	21	Aluminum-wrought alloy	Not Curable	60		○	○	○	○	○	○
	22		Curable Hardened	100		○	○	○	○	○	○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75		○	○	○	○	○	○
	24		≤ 12% Si, Curable Hardened	90		○	○	○	○	○	○
	25		> 12% Si, Not Curable	130		○	○	○	○	○	○
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110		○	○	○	○	○	○
	27		CuZn, CuSnZn (Brass)	90		○	○	○	○	○	○
	28		CuSn, lead-free copper and electrolytic copper	100		○	○	○	○	○	○
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic								
	30		Rubber, Wood, etc.								
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15						
	32		Cured	280	30						
	33		Ni or Co Based Annealed	250	25						
	34		Cured	350	38						
	35		Cast	320	34						
	36	Titanium Alloys	Pure Titanium	400 Rm							
	37		Alpha + Beta Alloys Hardened	1050 Rm							
H	38	Hardened steel	Hardened	550	55						
	39		Hardened	630	60						
	40	Chilled Cast Iron	Cast	400	42						
	41	Hardened Cast Iron	Hardened	550	55						

Inch

SERIES	E5245	E5011	E5012	UGMGF58	E5026	UGMGF59	E5065	E5022	E5023	E5025	E5024	E5249	E5250	UGMF91	E5014
FLUTE	4	2	4	4	2	4	4	2	4	2	4	2	4	4	2
HELIX ANGLE	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	45°
CUTTING EDGE SHAPE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE
SIZE MIN	D1/16	D1/8	D1/8	D1/8	D1/8	D1/8	D1/8	D1/32	D1/16	D1/8	D1/8	R1/16	R1/16	R1/16	R1/16
SIZE MAX	D3/4	D1	D1	D1	D1	D1	D1	D1/2	D1/2	D1/2	D1/2	R1/2	R1/2	R1/2	R1/2
PAGE	C674	C675	C675	C676	C677	C678	C679	C680	C681	C682	C683	C684	C685	C686	C687
	STUB LENGTH	LONG LENGTH	LONG LENGTH	LONG LENGTH	EXTRA LONG LENGTH	EXTRA LONG LENGTH	EXTRA LONG LENGTH	STUB LENGTH DOUBLE	STUB LENGTH DOUBLE	REGULAR LENGTH DOUBLE	REGULAR LENGTH DOUBLE	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH	LONG LENGTH
	Uncoated	Uncoated	Uncoated	Y-Coating	Uncoated	Y-Coating	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Y-Coating	Uncoated
	TiN	TiN	TiN		TiN		TiN	TiN	TiN	TiN	TiN	TiN	TiN		TiN
	TiCN	TiCN	TiCN		TiCN		TiCN	TiCN	TiCN	TiCN	TiCN	TiCN	TiCN		TiCN
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E5245	E5011	E5012	UGMGF58	E5026	UGMGF59	E5065	E5022	E5023	E5025	E5024	E5249	E5250	UGMF91	E5014	VDI	ISO
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CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
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SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
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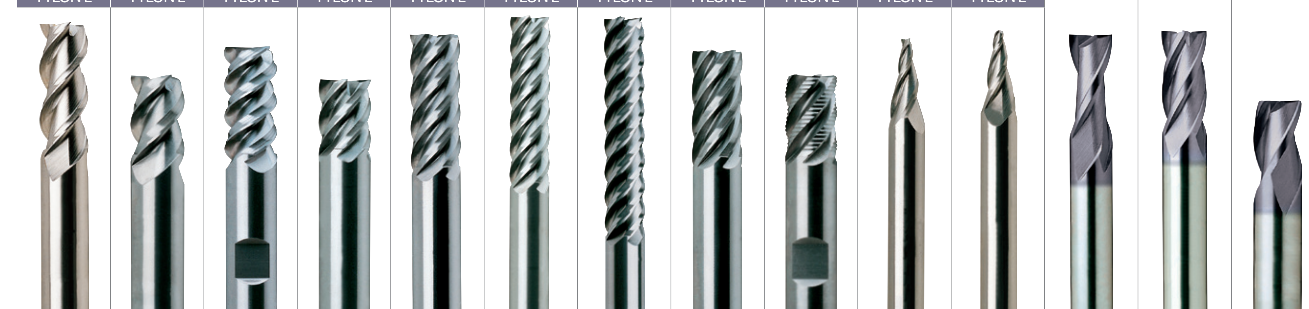
Recommended cutting conditions : p. C708

	Inch						Inch											Metric		
SERIES	E5060	E5018	E5062	E5251 E5252	E5216	E5069	E5243	E5059	E5246	E5066	E5067	E5068	E5073	E5058	E5056 E5057	E5077	E5078	EH527	EH540	EH882
FLUTE	4	2	4	2&4	4	5	3	3	3	5	5	5	5	6	5	3	3	2	4	3
HELIX ANGLE	30°	30°	30°	30°	30°	45°	45°	50°	60°	45°	45°	45°	45°	40°	45°	30°	30°	30°	30°	35°
CUTTING EDGE SHAPE	BALL NOSE	BALL NOSE	BALL NOSE	BALL NOSE	CORNER RADIUS	CORNER RADIUS	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	ROUGHING	TAPER	TAPER BALL NOSE	SQUARE	SQUARE	CORNER RADIUS
SIZE MIN	R1/16	R1/16	R1/16	R7/64	D1/8	D1/4	D1/8	D1/4	D1/8	D1/8	D1/8	D1/4	D5/16	D3/16	D3/8	D3/32	R.047	D3.5	D3.5	D3.0
SIZE MAX	R1/2	R1/2	R1/2	R1/4	D1	D1	D1	D3/4	D1	D1	D1	D1	D1	D3/4	D1	D1/4	R.125	D20.0	D20.0	D20.0
PAGE	C687	C688	C689	C690	C691	C693	C694	C695	C696	C697	C698	C699	C700	C701	C702	C703	C704	C705	C706	C707
	LONG LENGTH	EXTRA LONG LENGTH	EXTRA LONG LENGTH	STUB LENGTH DOUBLE	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH	STUB & REGULAR & LONG LENGTH	REGULAR LENGTH	STUB LENGTH	REGULAR LENGTH	MEDIUM & LONG LENGTH	EXTRA LONG LENGTH	REGULAR LENGTH	STUB & REGULAR LENGTH			LONG LENGTH	LONG LENGTH	REGULAR LENGTH
	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TYLON F	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TiN TiCN TYLON F TYLON E	Uncoated TiN TiCN TYLON F TYLON E	TiAlN	TiAlN	TiAlN



ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	E5060	E5018	E5062	E5251 E5252	E5216	E5069
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	◎	◎	◎	◎	◎
	2		About 0.45% C	Annealed	190	13	◎	◎	◎	◎	◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎
	4		About 0.75% C	Annealed	270	28	◎	◎	◎	◎	◎	◎
	5		About 0.75% C	Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎
	6	Low alloy steel		Annealed	180	10	◎	◎	◎	◎	◎	◎
	7			Quenched & Tempered	275	29	◎	◎	◎	◎	◎	◎
	8			Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎
	9			Quenched & Tempered	350	38	◎	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel		Annealed	200	15	◎	◎	◎	◎	◎	◎
	11			Quenched & Tempered	325	35	◎	◎	◎	◎	◎	◎
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15					○	◎
	13		Martensitic	Quenched & Tempered	240	23					○	◎
	14		Austenitic		180	10					○	◎
K	15	Grey cast iron	Pearlitic / ferritic		180	10	○	○	○	○	○	○
	16		Pearlitic (Martensitic)		260	26	○	○	○	○	○	○
	17	Nodular cast iron	Ferritic		160	3	○	○	○	○	○	○
	18		Pearlitic		250	25	○	○	○	○	○	○
	19	Malleable cast iron	Ferritic		130		○	○	○	○	○	○
	20		Pearlitic		230	21	○	○	○	○	○	○
N	21	Aluminum-wrought alloy	Not Curable		60		○	○	○	○	○	
	22		Curable	Hardened	100		○	○	○	○	○	
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○	○	○	○	○	
	24		≤ 12% Si, Curable	Hardened	90		○	○	○	○	○	
	25		> 12% Si, Not Curable		130		○	○	○	○	○	
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110						○	○
	27		CuZn, CuSnZn (Brass)		90						○	○
	28		CuSn, lead-free copper and electrolytic copper		100						○	○
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic									
	30		Rubber, Wood, etc.									
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15						○
	32			Cured	280	30						○
	33		Ni or Co Based	Annealed	250	25						○
	34			Cured	350	38						○
	35			Cast	320	34						○
	36	Titanium Alloys	Pure Titanium		400 Rm							○
	37		Alpha + Beta Alloys	Hardened	1050 Rm							○
H	38	Hardened steel		Hardened	550	55						
	39			Hardened	630	60						
	40	Chilled Cast Iron		Cast	400	42						○
	41	Hardened Cast Iron		Hardened	550	55						

ISO	VDI 3323	E5243	E5059	E5246	E5066	E5067	E5068	E5073	E5058	E5056 E5057	E5077	E5078	EH527	EH540	EH882
P	1	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	2	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	4	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	6	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	9	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	11	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
M	12	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	
	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	
	14	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	
K	15	○	○	○	○	○	○	○	○		○	○	○	○	○
	16	○	○	○	○	○	○	○	○		○	○	○	○	○
	17	○	○	○	○	○	○	○	○		○	○	○	○	○
	18	○	○	○	○	○	○	○	○		○	○	○	○	○
	19	○	○	○	○	○	○	○	○		○	○	○	○	○
	20	○	○	○	○	○	○	○	○		○	○	○	○	○
N	21										○	○	○	○	◎
	22										○	○	○	○	◎
	23										○	○	○	○	◎
	24										○	○	○	○	◎
	25										○	○	○	○	◎
	26	○	○	○	○	○	○	○	○		○	○	○	○	◎
	27	○	○	○	○	○	○	○	○		○	○	○	○	◎
	28	○	○	○	○	○	○	○	○		○	○	○	○	◎
	29														
	30														
S	31	○	○	○	○	○	○	○	○						
	32	○	○	○	○	○	○	○	○						
	33	○	○	○	○	○	○	○	○						
	34	○	○	○	○	○	○	○	○						
	35	○	○	○	○	○	○	○	○						
	36	○	○	○	○	○	○	○	○	○					
	37	○	○	○	○	○	○	○	○	○					
H	38														
	39														
	40	○	○	○	○	○	○	○	○	○	○	○			○
	41														

YG-1 CO., LTD. phone:+1-800-765-8665 | Technical Support : 888-868-5988, www.yg1usa.com

YG CARBIDE END MILLS

PLAIN SHANK **UGMF90** SERIES

CARBIDE, 2 FLUTE REGULAR LENGTH

- ▶ These are designed for slotting, drilling, pocketing and general operation.
- ▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

CARBIDE 2 30° PLAIN p.C710

Unit : Inch

EDP No. Y-COATED	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UGMF90008	1/8	1/8	1/2	1-1/2
UGMF90012	3/16	3/16	5/8	2
UGMF90016	1/4	1/4	3/4	2-1/2
UGMF90024	3/8	3/8	1	2-1/2
UGMF90032	1/2	1/2	1	3
UGMF90040	5/8	5/8	1-1/4	3-1/2
UGMF90048	3/4	3/4	1-1/2	4
UGMF90064	1	1	1-1/2	4

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	◎	◎	○	○	○	○	○	○	○	○	○	○

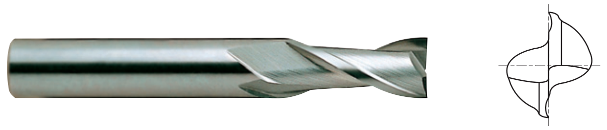
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG CARBIDE END MILLS

PLAIN SHANK **E5020** SERIES

CARBIDE, 2 FLUTE REGULAR LENGTH

- ▶ These are designed for slotting, drilling, pocketing and general operation.
- ▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.



CARBIDE 2 30° PLAIN p.C712, C713

Unit : Inch

EDP No. UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
01552	01552TN	01552TC	01552TF	01552TE	1/32	1/8	5/64	1-1/2
01553	01553TN	01553TC	01553TF	01553TE	3/64	1/8	7/64	1-1/2
01554	01554TN	01554TC	01554TF	01554TE	1/16	1/8	3/16	1-1/2
01555	01555TN	01555TC	01555TF	01555TE	5/64	1/8	3/16	1-1/2
01556	01556TN	01556TC	01556TF	01556TE	3/32	1/8	3/8	1-1/2
01557	01557TN	01557TC	01557TF	01557TE	7/64	1/8	3/8	1-1/2
01558	01558TN	01558TC	01558TF	01558TE	1/8	1/8	1/2	1-1/2
01560	01560TN	01560TC	01560TF	01560TE	9/64	3/16	1/2	2
01562	01562TN	01562TC	01562TF	01562TE	5/32	3/16	9/16	2
01564	01564TN	01564TC	01564TF	01564TE	11/64	3/16	5/8	2
01565	01565TN	01565TC	01565TF	01565TE	3/16	3/16	5/8	2
01569	01569TN	01569TC	01569TF	01569TE	13/64	1/4	5/8	2-1/2
01570	01570TN	01570TC	01570TF	01570TE	7/32	1/4	5/8	2-1/2
01572	01572TN	01572TC	01572TF	01572TE	15/64	1/4	3/4	2-1/2
01573	01573TN	01573TC	01573TF	01573TE	1/4	1/4	3/4	2-1/2
01579	01579TN	01579TC	01579TF	01579TE	5/16	5/16	13/16	2-1/2
01584	01584TN	01584TC	01584TF	01584TE	3/8	3/8	1	2-1/2
01588	01588TN	01588TC	01588TF	01588TE	7/16	7/16	1	2-3/4
01593	01593TN	01593TC	01593TF	01593TE	1/2	1/2	1	3
01595	01595TN	01595TC	01595TF	01595TE	5/8	5/8	1-1/4	3-1/2
01598	01598TN	01598TC	01598TF	01598TE	3/4	3/4	1-1/2	4
01600	01600TN	01600TC	01600TF	01600TE	1	1	1-1/2	4

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

PLAIN SHANK **UGMF89** SERIES

CARBIDE, 4 FLUTE REGULAR LENGTH

- ▶ These are designed for slotting, drilling, pocketing and general operation.
- ▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

CARBIDE 4 30° PLAIN p.C709

Unit : Inch

EDP No. Y-COATED	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UGMF89004	1/16	1/8	3/16	1-1/2
UGMF89005	5/64	1/8	3/16	1-1/2
UGMF89006	3/32	1/8	3/8	1-1/2
UGMF89007	7/64	1/8	3/8	1-1/2
UGMF89008	1/8	1/8	1/2	1-1/2
UGMF89009	9/64	3/16	1/2	2
UGMF89010	5/32	3/16	9/16	2
UGMF89011	11/64	3/16	5/8	2
UGMF89012	3/16	3/16	5/8	2
UGMF89013	13/64	1/4	5/8	2-1/2
UGMF89014	7/32	1/4	5/8	2-1/2
UGMF89015	15/64	1/4	3/4	2-1/2
UGMF89016	1/4	1/4	3/4	2-1/2
UGMF89018	9/32	5/16	3/4	2-1/2
UGMF89020	5/16	5/16	13/16	2-1/2
UGMF89024	3/8	3/8	1	2-1/2
UGMF89028	7/16	7/16	1	2-3/4
UGMF89032	1/2	1/2	1	3
UGMF89036	9/16	9/16	1-1/4	3-1/2
UGMF89040	5/8	5/8	1-1/4	3-1/2
UGMF89048	3/4	3/4	1-1/2	4
UGMF89056	7/8	7/8	1-1/2	4
UGMF89064	1	1	1-1/2	4

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG CARBIDE END MILLS

PLAIN SHANK **E5021** SERIES

CARBIDE, 4 FLUTE REGULAR LENGTH

- ▶ Possible for high-speed cutting, suitable for high efficiency maching for hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

CARBIDE 4 30° PLAIN p.C714, C715

Unit : Inch

EDP No. UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
07554	07554TN	07554TC	07554TF	07554TE	1/16	1/8	3/16	1-1/2
07555	07555TN	07555TC	07555TF	07555TE	5/64	1/8	3/16	1-1/2
07556	07556TN	07556TC	07556TF	07556TE	3/32	1/8	3/8	1-1/2
07557	07557TN	07557TC	07557TF	07557TE	7/64	1/8	3/8	1-1/2
07558	07558TN	07558TC	07558TF	07558TE	1/8	1/8	1/2	1-1/2
07560	07560TN	07560TC	07560TF	07560TE	9/64	3/16	1/2	2
07561	07561TN	07561TC	07561TF	07561TE	5/32	3/16	9/16	2
07564	07564TN	07564TC	07564TF	07564TE	11/64	3/16	5/8	2
07565	07565TN	07565TC	07565TF	07565TE	3/16	3/16	5/8	2
07569	07569TN	07569TC	07569TF	07569TE	13/64	1/4	5/8	2-1/2
07570	07570TN	07570TC	07570TF	07570TE	7/32	1/4	5/8	2-1/2
07572	07572TN	07572TC	07572TF	07572TE	15/64	1/4	3/4	2-1/2
07573	07573TN	07573TC	07573TF	07573TE	1/4	1/4	3/4	2-1/2
07576	07576TN	07576TC	07576TF	07576TE	9/32	5/16	3/4	2-1/2
07579	07579TN	07579TC	07579TF	07579TE	5/16	5/16	13/16	2-1/2
07584	07584TN	07584TC	07584TF	07584TE	3/8	3/8	1	2-1/2
07588	07588TN	07588TC	07588TF	07588TE	7/16	7/16	1	2-3/4
07593	07593TN	07593TC	07593TF	07593TE	1/2	1/2	1	3
07595	07595TN	07595TC	07595TF	07595TE	5/8	5/8	1-1/4	3-1/2
07598	07598TN	07598TC	07598TF	07598TE	3/4	3/4	1-1/2	4
07600	07600TN	07600TC	07600TF	07600TE	1	1	1-1/2	4

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

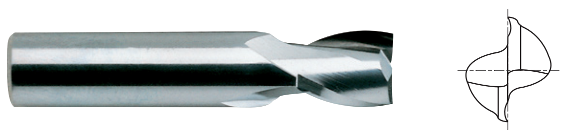
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

PLAIN SHANK **E5244** SERIES

CARBIDE, 2 FLUTE STUB LENGTH

▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.



CARBIDE 2 30° PLAIN p.C712, C713

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
30554	30554TN	30554TC	30554TF	30554TE	1/16	1/8	1/8	1-1/2
30556	30556TN	30556TC	30556TF	30556TE	3/32	1/8	3/16	1-1/2
30558	30558TN	30558TC	30558TF	30558TE	1/8	1/8	1/4	1-1/2
30561	30561TN	30561TC	30561TF	30561TE	5/32	3/16	5/16	2
30565	30565TN	30565TC	30565TF	30565TE	3/16	3/16	3/8	2
30570	30570TN	30570TC	30570TF	30570TE	7/32	1/4	7/16	2
30573	30573TN	30573TC	30573TF	30573TE	1/4	1/4	1/2	2
30579	30579TN	30579TC	30579TF	30579TE	5/16	5/16	1/2	2
30584	30584TN	30584TC	30584TF	30584TE	3/8	3/8	5/8	2
30588	30588TN	30588TC	30588TF	30588TE	7/16	7/16	5/8	2-1/2
30593	30593TN	30593TC	30593TF	30593TE	1/2	1/2	5/8	2-1/2
30595	30595TN	30595TC	30595TF	30595TE	5/8	5/8	3/4	3
30598	30598TN	30598TC	30598TF	30598TE	3/4	3/4	1	3

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG CARBIDE END MILLS

PLAIN SHANK **UGMGF57** SERIES

CARBIDE, 4 FLUTE STUB LENGTH

▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

Only available till stock runs out

CARBIDE 4 30° PLAIN p.C709

Unit : Inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
Y-COATED				
UGMGF57004	1/16	1/8	1/8	1-1/2
UGMGF57006	3/32	1/8	3/16	1-1/2
UGMGF57008	1/8	1/8	1/4	1-1/2
UGMGF57010	5/32	3/16	5/16	2
UGMGF57012	3/16	3/16	3/8	2
UGMGF57014	7/32	1/4	7/16	2
UGMGF57016	1/4	1/4	1/2	2
UGMGF57020	5/16	5/16	1/2	2
UGMGF57024	3/8	3/8	5/8	2
UGMGF57028	7/16	7/16	5/8	2-1/2
UGMGF57032	1/2	1/2	5/8	2-1/2
UGMGF57040	5/8	5/8	3/4	3
UGMGF57048	3/4	3/4	1	3

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

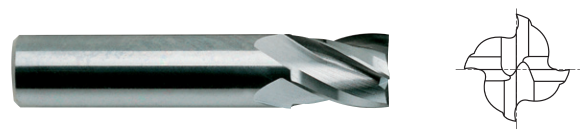
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG CARBIDE END MILLS

PLAIN SHANK **E5245** SERIES

CARBIDE, 4 FLUTE STUB LENGTH

▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.



CARBIDE | 4 | 30° | PLAIN

p.C714, C715

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
31554	31554TN	31554TC	31554TF	31554TE	1/16	1/8	1/8	1-1/2
31556	31556TN	31556TC	31556TF	31556TE	3/32	1/8	3/16	1-1/2
31558	31558TN	31558TC	31558TF	31558TE	1/8	1/8	1/4	1-1/2
31561	31561TN	31561TC	31561TF	31561TE	5/32	3/16	5/16	2
31565	31565TN	31565TC	31565TF	31565TE	3/16	3/16	3/8	2
31570	31570TN	31570TC	31570TF	31570TE	7/32	1/4	7/16	2
31573	31573TN	31573TC	31573TF	31573TE	1/4	1/4	1/2	2
31579	31579TN	31579TC	31579TF	31579TE	5/16	5/16	1/2	2
31584	31584TN	31584TC	31584TF	31584TE	3/8	3/8	5/8	2
31588	31588TN	31588TC	31588TF	31588TE	7/16	7/16	5/8	2-1/2
31593	31593TN	31593TC	31593TF	31593TE	1/2	1/2	5/8	2-1/2
31595	31595TN	31595TC	31595TF	31595TE	5/8	5/8	3/4	3
31598	31598TN	31598TC	31598TF	31598TE	3/4	3/4	1	3

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

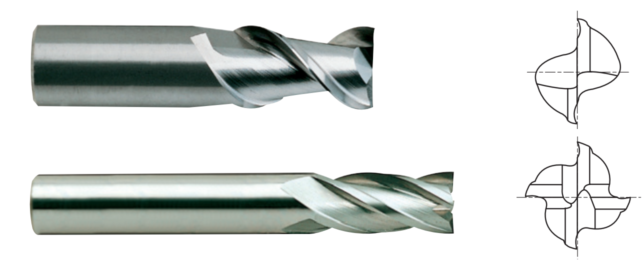
YG CARBIDE END MILLS

PLAIN SHANK **E5011** SERIES

PLAIN SHANK **E5012** SERIES

CARBIDE, 2&4 FLUTE LONG LENGTH

▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.



CARBIDE | 2&4 | 30° | PLAIN

p.C712, C713
p.C714, C715

E5011(2 FLUTE) Series

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
02558	02558TN	02558TC	02558TF	02558TE	1/8	1/8	3/4	2-1/4
02565	02565TN	02565TC	02565TF	02565TE	3/16	3/16	3/4	2-1/2
02573	02573TN	02573TC	02573TF	02573TE	1/4	1/4	1-1/8	3
02579	02579TN	02579TC	02579TF	02579TE	5/16	5/16	1-1/8	3
02584	02584TN	02584TC	02584TF	02584TE	3/8	3/8	1-1/8	3
02588	02588TN	02588TC	02588TF	02588TE	7/16	7/16	2	4
02593	02593TN	02593TC	02593TF	02593TE	1/2	1/2	2	4
02595	02595TN	02595TC	02595TF	02595TE	5/8	5/8	2-1/4	5
02598	02598TN	02598TC	02598TF	02598TE	3/4	3/4	2-1/4	5
02600	02600TN	02600TC	02600TF	02600TE	1	1	2-1/4	5

E5012(4 FLUTE) Series

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
08558	08558TN	08558TC	08558TF	08558TE	1/8	1/8	3/4	2-1/4
08565	08565TN	08565TC	08565TF	08565TE	3/16	3/16	3/4	2-1/2
08573	08573TN	08573TC	08573TF	08573TE	1/4	1/4	1-1/8	3
08579	08579TN	08579TC	08579TF	08579TE	5/16	5/16	1-1/8	3
08584	08584TN	08584TC	08584TF	08584TE	3/8	3/8	1-1/8	3
08588	08588TN	08588TC	08588TF	08588TE	7/16	7/16	2	4
08593	08593TN	08593TC	08593TF	08593TE	1/2	1/2	2	4
08595	08595TN	08595TC	08595TF	08595TE	5/8	5/8	2-1/4	5
08598	08598TN	08598TC	08598TF	08598TE	3/4	3/4	2-1/4	5
08600	08600TN	08600TC	08600TF	08600TE	1	1	2-1/4	5

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

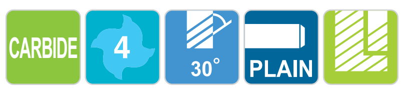
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

PLAIN SHANK **UGMGF58** SERIES

CARBIDE, 4 FLUTE LONG LENGTH

▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.



p.C709

Unit : Inch

EDP No. Y-COATED	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UGMGF58008	1/8	1/8	3/4	2-1/4
UGMGF58012	3/16	3/16	3/4	2-1/2
UGMGF58016	1/4	1/4	1-1/8	3
UGMGF58020	5/16	5/16	1-1/8	3
UGMGF58024	3/8	3/8	1-1/8	3
UGMGF58028	7/16	7/16	2	4
UGMGF58032	1/2	1/2	2	4
UGMGF58040	5/8	5/8	2-1/4	5
UGMGF58048	3/4	3/4	2-1/4	5
UGMGF58064	1	1	2-1/4	5

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

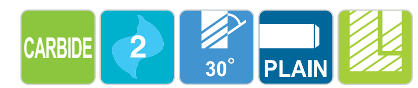
CARBIDE
HSS

YG CARBIDE END MILLS

PLAIN SHANK **E5026** SERIES

CARBIDE, 2 FLUTE EXTRA LONG LENGTH

▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.



p.C712, C713

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
54558	54558TN	54558TC	54558TF	54558TE	1/8	1/8	1	3
54565	54565TN	54565TC	54565TF	54565TE	3/16	3/16	1-1/8	3
54904	54904TN	54904TC	54904TF	54904TE	3/16	3/16	1	4
54573	54573TN	54573TC	54573TF	54573TE	1/4	1/4	1-1/2	4
54901	54901TN	54901TC	54901TF	54901TE	1/4	1/4	1-1/2	6
54579	54579TN	54579TC	54579TF	54579TE	5/16	5/16	1-5/8	4
54584	54584TN	54584TC	54584TF	54584TE	3/8	3/8	1-3/4	4
54902	54902TN	54902TC	54902TF	54902TE	3/8	3/8	1-1/2	6
54588	54588TN	54588TC	54588TF	54588TE	7/16	7/16	3	6
54903	54903TN	54903TC	54903TF	54903TE	1/2	1/2	1-1/2	6
54593	54593TN	54593TC	54593TF	54593TE	1/2	1/2	3	6
54595	54595TN	54595TC	54595TF	54595TE	5/8	5/8	3	6
54598	54598TN	54598TC	54598TF	54598TE	3/4	3/4	3	6
54600	54600TN	54600TC	54600TF	54600TE	1	1	3	6

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

PLAIN SHANK **UGMGF59** SERIES

CARBIDE, 4 FLUTE EXTRA LONG LENGTH

▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

CARBIDE | 4 | 30° | PLAIN | p.C709

Unit : Inch

EDP No. Y-COATED	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UGMGF59008	1/8	1/8	1	3
UGMGF59012	3/16	3/16	1-1/8	3
UGMGF59016	1/4	1/4	1-1/2	4
UGMGF59020	5/16	5/16	1-5/8	4
UGMGF59024	3/8	3/8	1-3/4	4
UGMGF59028	7/16	7/16	3	6
UGMGF59032	1/2	1/2	3	6
UGMGF59040	5/8	5/8	3	6
UGMGF59048	3/4	3/4	3	6
UGMGF59064	1	1	3	6
UGMGF59901	1/4	1/4	1-1/2	6
UGMGF59902	3/8	3/8	1-1/2	6
UGMGF59903	1/2	1/2	1-1/2	6
UGMGF59904	3/16	3/16	1	4

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CARBIDE
HSS

CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

PLAIN SHANK **E5065** SERIES

CARBIDE, 4 FLUTE EXTRA LONG LENGTH

▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

CARBIDE | 4 | 30° | PLAIN | p.C714, C715

Unit : Inch

EDP No. UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
55558	55558TN	55558TC	55558TF	55558TE	1/8	1/8	1	3
55565	55565TN	55565TC	55565TF	55565TE	3/16	3/16	1-1/8	3
55904	55904TN	55904TC	55904TF	55904TE	3/16	3/16	1	4
55573	55573TN	55573TC	55573TF	55573TE	1/4	1/4	1-1/2	4
55901	55901TN	55901TC	55901TF	55901TE	1/4	1/4	1-1/2	6
55579	55579TN	55579TC	55579TF	55579TE	5/16	5/16	1-5/8	4
55584	55584TN	55584TC	55584TF	55584TE	3/8	3/8	1-3/4	4
55902	55902TN	55902TC	55902TF	55902TE	3/8	3/8	1-1/2	6
55588	55588TN	55588TC	55588TF	55588TE	7/16	7/16	3	6
55903	55903TN	55903TC	55903TF	55903TE	1/2	1/2	1-1/2	6
55593	55593TN	55593TC	55593TF	55593TE	1/2	1/2	3	6
55595	55595TN	55595TC	55595TF	55595TE	5/8	5/8	3	6
55598	55598TN	55598TC	55598TF	55598TE	3/4	3/4	3	6
55600	55600TN	55600TC	55600TF	55600TE	1	1	3	6

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

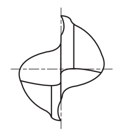
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG CARBIDE END MILLS

PLAIN SHANK **E5022** SERIES

CARBIDE, 2 FLUTE STUB LENGTH DOUBLE

- ▶ Same construction features as 2&4 flute single end mill in a more economical version.
- ▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.



CARBIDE 2 30° PLAIN p.C712, C713

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
32552	32552TN	32552TC	32552TF	32552TE	1/32	1/8	1/16	1-1/2
32553	32553TN	32553TC	32553TF	32553TE	3/64	1/8	3/32	1-1/2
32554	32554TN	32554TC	32554TF	32554TE	1/16	1/8	1/8	1-1/2
32555	32555TN	32555TC	32555TF	32555TE	5/64	1/8	1/8	1-1/2
32556	32556TN	32556TC	32556TF	32556TE	3/32	1/8	3/16	1-1/2
32557	32557TN	32557TC	32557TF	32557TE	7/64	1/8	3/16	1-1/2
32558	32558TN	32558TC	32558TF	32558TE	1/8	1/8	1/4	1-1/2
32560	32560TN	32560TC	32560TF	32560TE	9/64	3/16	5/16	2
32562	32562TN	32562TC	32562TF	32562TE	5/32	3/16	5/16	2
32564	32564TN	32564TC	32564TF	32564TE	11/64	3/16	5/16	2
32565	32565TN	32565TC	32565TF	32565TE	3/16	3/16	3/8	2
32569	32569TN	32569TC	32569TF	32569TE	13/64	1/4	1/2	2-1/2
32570	32570TN	32570TC	32570TF	32570TE	7/32	1/4	1/2	2-1/2
32572	32572TN	32572TC	32572TF	32572TE	15/64	1/4	1/2	2-1/2
32573	32573TN	32573TC	32573TF	32573TE	1/4	1/4	1/2	2-1/2
32579	32579TN	32579TC	32579TF	32579TE	5/16	5/16	1/2	2-1/2
32584	32584TN	32584TC	32584TF	32584TE	3/8	3/8	9/16	2-1/2
32588	32588TN	32588TC	32588TF	32588TE	7/16	7/16	9/16	2-3/4
32593	32593TN	32593TC	32593TF	32593TE	1/2	1/2	5/8	3

Mill Dia. Tolerance (inch)	
0~-.0012	＊＊0~-.0020

＊＊The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

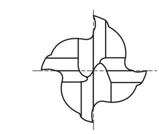
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

PLAIN SHANK **E5023** SERIES

CARBIDE, 4 FLUTE STUB LENGTH DOUBLE

- ▶ Same construction features as 2&4 flute single end mill in a more economical version.
- ▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.



CARBIDE 4 30° PLAIN p.C714, C715

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
33554	33554TN	33554TC	33554TF	33554TE	1/16	1/8	1/8	1-1/2
33555	33555TN	33555TC	33555TF	33555TE	5/64	1/8	1/8	1-1/2
33556	33556TN	33556TC	33556TF	33556TE	3/32	1/8	3/16	1-1/2
33557	33557TN	33557TC	33557TF	33557TE	7/64	1/8	3/16	1-1/2
33558	33558TN	33558TC	33558TF	33558TE	1/8	1/8	1/4	1-1/2
33560	33560TN	33560TC	33560TF	33560TE	9/64	3/16	5/16	2
33561	33561TN	33561TC	33561TF	33561TE	5/32	3/16	5/16	2
33564	33564TN	33564TC	33564TF	33564TE	11/64	3/16	5/16	2
33565	33565TN	33565TC	33565TF	33565TE	3/16	3/16	3/8	2
33569	33569TN	33569TC	33569TF	33569TE	13/64	1/4	1/2	2-1/2
33570	33570TN	33570TC	33570TF	33570TE	7/32	1/4	1/2	2-1/2
33572	33572TN	33572TC	33572TF	33572TE	15/64	1/4	1/2	2-1/2
33573	33573TN	33573TC	33573TF	33573TE	1/4	1/4	1/2	2-1/2
33579	33579TN	33579TC	33579TF	33579TE	5/16	5/16	1/2	2-1/2
33584	33584TN	33584TC	33584TF	33584TE	3/8	3/8	9/16	2-1/2
33588	33588TN	33588TC	33588TF	33588TE	7/16	7/16	9/16	2-3/4
33593	33593TN	33593TC	33593TF	33593TE	1/2	1/2	5/8	3

Mill Dia. Tolerance (inch)	
0~-.0012	＊＊0~-.0020

＊＊The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG CARBIDE END MILLS

FLAT SHANK **E5025** SERIES

CARBIDE, 2 FLUTE REGULAR LENGTH DOUBLE

- Same construction features as single end mill in a more economical version.
- Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

CARBIDE 2 30° FLAT p.C712, C713

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
11559	11559TN	11559TC	11559TF	11559TE	1/8	3/8	3/8	3-1/16
11563	11563TN	11563TC	11563TF	11563TE	5/32	3/8	7/16	3-1/8
11567	11567TN	11567TC	11567TF	11567TE	3/16	3/8	1/2	3-1/4
11571	11571TN	11571TC	11571TF	11571TE	7/32	3/8	9/16	3-3/8
11574	11574TN	11574TC	11574TF	11574TE	1/4	3/8	5/8	3-3/8
11577	11577TN	11577TC	11577TF	11577TE	9/32	3/8	11/16	3-3/8
11580	11580TN	11580TC	11580TF	11580TE	5/16	3/8	3/4	3-1/2
11582	11582TN	11582TC	11582TF	11582TE	11/32	3/8	3/4	3-1/2
11584	11584TN	11584TC	11584TF	11584TE	3/8	3/8	3/4	3-1/2
11589	11589TN	11589TC	11589TF	11589TE	7/16	1/2	7/8	4
11593	11593TN	11593TC	11593TF	11593TE	1/2	1/2	1	4

Mill Dia. Tolerance (inch)	
0~-.0012	⁎⁎0~-.0020

⁎⁎ The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG CARBIDE END MILLS

FLAT SHANK **E5024** SERIES

CARBIDE, 4 FLUTE REGULAR LENGTH DOUBLE

- Same construction features as single end mill in a more economical version.
- Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

CARBIDE 4 30° FLAT p.C714, C715

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
13559	13559TN	13559TC	13559TF	13559TE	1/8	3/8	3/8	3-1/16
13563	13563TN	13563TC	13563TF	13563TE	5/32	3/8	7/16	3-1/8
13567	13567TN	13567TC	13567TF	13567TE	3/16	3/8	1/2	3-1/4
13571	13571TN	13571TC	13571TF	13571TE	7/32	3/8	9/16	3-3/8
13574	13574TN	13574TC	13574TF	13574TE	1/4	3/8	5/8	3-3/8
13577	13577TN	13577TC	13577TF	13577TE	9/32	3/8	11/16	3-3/8
13580	13580TN	13580TC	13580TF	13580TE	5/16	3/8	3/4	3-1/2
13582	13582TN	13582TC	13582TF	13582TE	11/32	3/8	3/4	3-1/2
13584	13584TN	13584TC	13584TF	13584TE	3/8	3/8	3/4	3-1/2
13589	13589TN	13589TC	13589TF	13589TE	7/16	1/2	7/8	4
13593	13593TN	13593TC	13593TF	13593TE	1/2	1/2	1	4

Mill Dia. Tolerance (inch)	
0~-.0012	⁎⁎0~-.0020

⁎⁎ The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

PLAIN SHANK **E5249** SERIES

CARBIDE, 2 FLUTE REGULAR LENGTH BALL NOSE

▶Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

CARBIDE | 2 | 30° | R ±.0008 | PLAIN

p.C716, C717

Unit : Inch

EDP No.					Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	R (±.0008)				
41558	41558TN	41558TC	41558TF	41558TE	R1/16	1/8	1/8	1/2	1-1/2
41561	41561TN	41561TC	41561TF	41561TE	R5/64	5/32	3/16	9/16	2
41565	41565TN	41565TC	41565TF	41565TE	R3/32	3/16	3/16	5/8	2
41570	41570TN	41570TC	41570TF	41570TE	R7/64	7/32	1/4	5/8	2-1/2
41573	41573TN	41573TC	41573TF	41573TE	R1/8	1/4	1/4	3/4	2-1/2
41579	41579TN	41579TC	41579TF	41579TE	R5/32	5/16	5/16	13/16	2-1/2
41584	41584TN	41584TC	41584TF	41584TE	R3/16	3/8	3/8	1	2-1/2
41588	41588TN	41588TC	41588TF	41588TE	R7/32	7/16	7/16	1	2-3/4
41593	41593TN	41593TC	41593TF	41593TE	R1/4	1/2	1/2	1	3
41595	41595TN	41595TC	41595TF	41595TE	R5/16	5/8	5/8	1-1/4	3-1/2
41598	41598TN	41598TC	41598TF	41598TE	R3/8	3/4	3/4	1-1/2	4
41600	41600TN	41600TC	41600TF	41600TE	R1/2	1	1	1-1/2	4

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○																

CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

PLAIN SHANK **E5250** SERIES

CARBIDE, 4 FLUTE REGULAR LENGTH BALL NOSE

▶Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

CARBIDE | 4 | 30° | R ±.0008 | PLAIN

p.C718, C719

Unit : Inch

EDP No.					Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	R (±.0008)				
43558	43558TN	43558TC	43558TF	43558TE	R1/16	1/8	1/8	1/2	1-1/2
43561	43561TN	43561TC	43561TF	43561TE	R5/64	5/32	3/16	9/16	2
43565	43565TN	43565TC	43565TF	43565TE	R3/32	3/16	3/16	5/8	2
43570	43570TN	43570TC	43570TF	43570TE	R7/64	7/32	1/4	5/8	2-1/2
43573	43573TN	43573TC	43573TF	43573TE	R1/8	1/4	1/4	3/4	2-1/2
43579	43579TN	43579TC	43579TF	43579TE	R5/32	5/16	5/16	13/16	2-1/2
43584	43584TN	43584TC	43584TF	43584TE	R3/16	3/8	3/8	1	2-1/2
43588	43588TN	43588TC	43588TF	43588TE	R7/32	7/16	7/16	1	2-3/4
43593	43593TN	43593TC	43593TF	43593TE	R1/4	1/2	1/2	1	3
43595	43595TN	43595TC	43595TF	43595TE	R5/16	5/8	5/8	1-1/4	3-1/2
43598	43598TN	43598TC	43598TF	43598TE	R3/8	3/4	3/4	1-1/2	4
43600	43600TN	43600TC	43600TF	43600TE	R1/2	1	1	1-1/2	4

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○																

YG CARBIDE END MILLS

PLAIN SHANK **UGMF91** SERIES

CARBIDE, 4 FLUTE REGULAR LENGTH

- These are designed for slotting, drilling, pocketing and general operation.
- Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

CARBIDE | 4 | 30° | PLAIN | R ±.0008

p.C711

Unit : Inch

EDP No. Y-COATED	Radiusof BallNose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UGMF91008	1/16	1/8	1/8	1/2	1-1/2
UGMF91010	5/64	5/32	3/16	9/16	2
UGMF91012	3/32	3/16	3/16	5/8	2
UGMF91016	1/8	1/4	1/4	3/4	2-1/2
UGMF91020	5/32	5/16	5/16	13/16	2-1/2
UGMF91024	3/16	3/8	3/8	1	2-1/2
UGMF91028	7/32	7/16	7/16	1	2-3/4
UGMF91032	1/4	1/2	1/2	1	3
UGMF91040	5/16	5/8	5/8	1-1/4	3-1/2
UGMF91048	3/8	3/4	3/4	1-1/2	4
UGMF91064	1/2	1	1	1-1/2	4

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○																

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

PLAIN SHANK **E5014** SERIES
PLAIN SHANK **E5060** SERIES

CARBIDE, 2&4 FLUTE LONG LENGTH BALL NOSE

- Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

CARBIDE | 2&4 | 30° | R ±.0008 | PLAIN

p.C716, C717
p.C718, C719

E5014(2 FLUTE) Series

Unit : Inch

EDP No. UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	Radius of Ball Nose R (±.0008)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
50558	50558TN	50558TC	50558TF	50558TE	R1/16	1/8	1/8	3/4	2-1/4
50565	50565TN	50565TC	50565TF	50565TE	R3/32	3/16	3/16	3/4	2-1/2
50573	50573TN	50573TC	50573TF	50573TE	R1/8	1/4	1/4	1-1/8	3
50579	50579TN	50579TC	50579TF	50579TE	R5/32	5/16	5/16	1-1/8	3
50584	50584TN	50584TC	50584TF	50584TE	R3/16	3/8	3/8	1-1/8	3
50588	50588TN	50588TC	50588TF	50588TE	R7/32	7/16	7/16	2	4
50593	50593TN	50593TC	50593TF	50593TE	R1/4	1/2	1/2	2	4
50595	50595TN	50595TC	50595TF	50595TE	R5/16	5/8	5/8	2-1/4	5
50598	50598TN	50598TC	50598TF	50598TE	R3/8	3/4	3/4	2-1/4	5
50600	50600TN	50600TC	50600TF	50600TE	R1/2	1	1	2-1/4	5

E5060(4 FLUTE) Series

Unit : Inch

EDP No. UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	Radius of Ball Nose R (±.0008)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
51558	51558TN	51558TC	51558TF	51558TE	R1/16	1/8	1/8	3/4	2-1/4
51565	51565TN	51565TC	51565TF	51565TE	R3/32	3/16	3/16	3/4	2-1/2
51573	51573TN	51573TC	51573TF	51573TE	R1/8	1/4	1/4	1-1/8	3
51579	51579TN	51579TC	51579TF	51579TE	R5/32	5/16	5/16	1-1/8	3
51584	51584TN	51584TC	51584TF	51584TE	R3/16	3/8	3/8	1-1/8	3
51588	51588TN	51588TC	51588TF	51588TE	R7/32	7/16	7/16	2	4
51593	51593TN	51593TC	51593TF	51593TE	R1/4	1/2	1/2	2	4
51595	51595TN	51595TC	51595TF	51595TE	R5/16	5/8	5/8	2-1/4	5
51598	51598TN	51598TC	51598TF	51598TE	R3/8	3/4	3/4	2-1/4	5
51600	51600TN	51600TC	51600TF	51600TE	R1/2	1	1	2-1/4	5

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○																

YG CARBIDE END MILLS

PLAIN SHANK **E5018** SERIES

CARBIDE, 2 FLUTE EXTRA LONG LENGTH BALL NOSE

▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

CARBIDE | 2 | 30° | R ±.0008 | PLAIN

p.C716, C717

Unit : Inch

EDP No.					Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	R (±.0008)				
52558	52558TN	52558TC	52558TF	52558TE	R1/16	1/8	1/8	1	3
52565	52565TN	52565TC	52565TF	52565TE	R3/32	3/16	3/16	1-1/8	3
52904	52904TN	52904TC	52904TF	52904TE	R3/32	3/16	3/16	1	4
52573	52573TN	52573TC	52573TF	52573TE	R1/8	1/4	1/4	1-1/2	4
52901	52901TN	52901TC	52901TF	52901TE	R1/8	1/4	1/4	1-1/2	6
52579	52579TN	52579TC	52579TF	52579TE	R5/32	5/16	5/16	1-5/8	4
52584	52584TN	52584TC	52584TF	52584TE	R3/16	3/8	3/8	1-3/4	4
52902	52902TN	52902TC	52902TF	52902TE	R3/16	3/8	3/8	1-1/2	6
52588	52588TN	52588TC	52588TF	52588TE	R7/32	7/16	7/16	3	6
52903	52903TN	52903TC	52903TF	52903TE	R1/4	1/2	1/2	1-1/2	6
52593	52593TN	52593TC	52593TF	52593TE	R1/4	1/2	1/2	3	6
52595	52595TN	52595TC	52595TF	52595TE	R5/16	5/8	5/8	3	6
52598	52598TN	52598TC	52598TF	52598TE	R3/8	3/4	3/4	3	6
52600	52600TN	52600TC	52600TF	52600TE	R1/2	1	1	3	6

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○																

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

PLAIN SHANK **E5062** SERIES

CARBIDE, 4 FLUTE EXTRA LONG LENGTH BALL NOSE

▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

CARBIDE | 4 | 30° | R ±.0008 | PLAIN

p.C718, C719

Unit : Inch

EDP No.					Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	R (±.0008)				
53558	53558TN	53558TC	53558TF	53558TE	R1/16	1/8	1/8	1	3
53565	53565TN	53565TC	53565TF	53565TE	R3/32	3/16	3/16	1-1/8	3
53573	53573TN	53573TC	53573TF	53573TE	R1/8	1/4	1/4	1-1/2	4
53901	53901TN	53901TC	53901TF	53901TE	R1/8	1/4	1/4	1-1/2	6
53579	53579TN	53579TC	53579TF	53579TE	R5/32	5/16	5/16	1-5/8	4
53584	53584TN	53584TC	53584TF	53584TE	R3/16	3/8	3/8	1-3/4	4
53902	53902TN	53902TC	53902TF	53902TE	R3/16	3/8	3/8	1-1/2	6
53588	53588TN	53588TC	53588TF	53588TE	R7/32	7/16	7/16	3	6
53903	53903TN	53903TC	53903TF	53903TE	R1/4	1/2	1/2	1-1/2	6
53593	53593TN	53593TC	53593TF	53593TE	R1/4	1/2	1/2	3	6
53595	53595TN	53595TC	53595TF	53595TE	R5/16	5/8	5/8	3	6
53904	53904TN	53904TC	53904TF	53904TE	R5/16	5/8	5/8	1-1/2	6
53598	53598TN	53598TC	53598TF	53598TE	R3/8	3/4	3/4	3	6
53905	53905TN	53905TC	53905TF	53905TE	R3/8	3/4	3/4	1-1/2	6
53600	53600TN	53600TC	53600TF	53600TE	R1/2	1	1	3	6
53906	53906TN	53906TC	53906TF	53906TE	R1/2	1	1	1-1/2	6

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				○	○	○	○	○	○

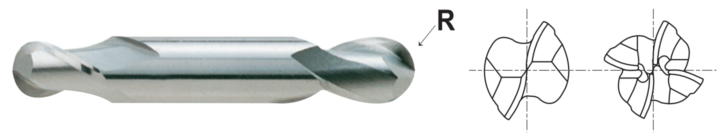
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○																

YG CARBIDE END MILLS

PLAIN SHANK **E5251** SERIES
PLAIN SHANK **E5252** SERIES

CARBIDE, 2&4 FLUTE STUB LENGTH DOUBLE BALL NOSE

- ▶ Same construction features as single end mill in a more economical version.
- ▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.



CARBIDE 2&4 30° R ±.0008 PLAIN p.C716, C717 p.C718, C719

E5251 Series ■ 2 FLUTE

Unit : Inch

EDP No.					Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	R (±.0008)				
47570	47570TN	47570TC	47570TF	47570TE	R7/64	7/32	1/4	1/2	2-1/2
47573	47573TN	47573TC	47573TF	47573TE	R1/8	1/4	1/4	1/2	2-1/2
47579	47579TN	47579TC	47579TF	47579TE	R5/32	5/16	5/16	1/2	2-1/2
47584	47584TN	47584TC	47584TF	47584TE	R3/16	3/8	3/8	9/16	2-1/2
47588	47588TN	47588TC	47588TF	47588TE	R7/32	7/16	7/16	9/16	2-3/4
47593	47593TN	47593TC	47593TF	47593TE	R1/4	1/2	1/2	5/8	3

E5252 Series ■ 4 FLUTE

Unit : Inch

EDP No.					Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	R (±.0008)				
48570	48570TN	48570TC	48570TF	48570TE	R7/64	7/32	1/4	1/2	2-1/2
48573	48573TN	48573TC	48573TF	48573TE	R1/8	1/4	1/4	1/2	2-1/2
48579	48579TN	48579TC	48579TF	48579TE	R5/32	5/16	5/16	1/2	2-1/2
48584	48584TN	48584TC	48584TF	48584TE	R3/16	3/8	3/8	9/16	2-1/2
48588	48588TN	48588TC	48588TF	48588TE	R7/32	7/16	7/16	9/16	2-3/4
48593	48593TN	48593TC	48593TF		R1/4	1/2	1/2	5/8	3

Mill Dia. Tolerance (inch)	
0~-.0012	＊＊0~-.0020

＊＊The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○																

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

PLAIN SHANK **E5216** SERIES

CARBIDE, 4 FLUTE REGULAR LENGTH CORNER RADIUS

- ▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

CARBIDE 4 30° R ±.001 PLAIN p.C714, C715

Unit : Inch

EDP No.		Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	YG:TYLON F	R				
07558-015R	07558TF-015R	R.015	1/8	1/8	1/2	1-1/2
07558-030R	07558TF-030R	R.030	1/8	1/8	1/2	1-1/2
07565-015R	07565TF-015R	R.015	3/16	3/16	5/8	2
07565-030R	07565TF-030R	R.030	3/16	3/16	5/8	2
07573-015R	07573TF-015R	R.015	1/4	1/4	3/4	2-1/2
07573-030R	07573TF-030R	R.030	1/4	1/4	3/4	2-1/2
07573-045R	07573TF-045R	R.045	1/4	1/4	3/4	2-1/2
07579-015R	07579TF-015R	R.015	5/16	5/16	13/16	2-1/2
07579-030R	07579TF-030R	R.030	5/16	5/16	13/16	2-1/2
07579-045R	07579TF-045R	R.045	5/16	5/16	13/16	2-1/2
07584-015R	07584TF-015R	R.015	3/8	3/8	1	2-1/2
07584-030R	07584TF-030R	R.030	3/8	3/8	1	2-1/2
07584-045R	07584TF-045R	R.045	3/8	3/8	1	2-1/2
07584-060R	07584TF-060R	R.060	3/8	3/8	1	2-1/2
07588-015R	07588TF-015R	R.015	7/16	7/16	1	2-3/4
07588-030R	07588TF-030R	R.030	7/16	7/16	1	2-3/4
07588-045R	07588TF-045R	R.045	7/16	7/16	1	2-3/4
07588-060R	07588TF-060R	R.060	7/16	7/16	1	2-3/4
07588-090R	07588TF-090R	R.090	7/16	7/16	1	2-3/4
07593-015R	07593TF-015R	R.015	1/2	1/2	1	3
07593-030R	07593TF-030R	R.030	1/2	1/2	1	3
07593-045R	07593TF-045R	R.045	1/2	1/2	1	3
07593-060R	07593TF-060R	R.060	1/2	1/2	1	3
07593-090R	07593TF-090R	R.090	1/2	1/2	1	3

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

PLAIN SHANK **E5216** SERIES

CARBIDE, 4 FLUTE REGULAR LENGTH CORNER RADIUS

▶ Suitable for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

CARBIDE | 4 | 30° | R ±.001 | PLAIN

p.C714, C715

Unit : Inch

EDP No.		Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	YG:TYLON F	R				
07593-125R	07593TF-125R	R.125	1/2	1/2	1	3
07595-015R	07595TF-015R	R.015	5/8	5/8	1-1/4	3-1/2
07595-030R	07595TF-030R	R.030	5/8	5/8	1-1/4	3-1/2
07595-045R	07595TF-045R	R.045	5/8	5/8	1-1/4	3-1/2
07595-060R	07595TF-060R	R.060	5/8	5/8	1-1/4	3-1/2
07595-090R	07595TF-090R	R.090	5/8	5/8	1-1/4	3-1/2
07595-125R	07595TF-125R	R.125	5/8	5/8	1-1/4	3-1/2
07598-015R	07598TF-015R	R.015	3/4	3/4	1-1/2	4
07598-030R	07598TF-030R	R.030	3/4	3/4	1-1/2	4
07598-045R	07598TF-045R	R.045	3/4	3/4	1-1/2	4
07598-060R	07598TF-060R	R.060	3/4	3/4	1-1/2	4
07598-090R	07598TF-090R	R.090	3/4	3/4	1-1/2	4
07598-125R	07598TF-125R	R.125	3/4	3/4	1-1/2	4
07600-015R	07600TF-015R	R.015	1	1	1-1/2	4
07600-030R	07600TF-030R	R.030	1	1	1-1/2	4
07600-045R	07600TF-045R	R.045	1	1	1-1/2	4
07600-060R	07600TF-060R	R.060	1	1	1-1/2	4
07600-090R	07600TF-090R	R.090	1	1	1-1/2	4
07600-125R	07600TF-125R	R.125	1	1	1-1/2	4

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CARBIDE
HSS

YG CARBIDE END MILLS

PLAIN SHANK **E5069** SERIES

CARBIDE, 5 FLUTE 45° HELIX REGULAR LENGTH CORNER RADIUS

Designed to machine stainless steels, Inconols and other alloys.
5 Flute and 45° medium helix allow harmonic balance and smooth cutting.

CARBIDE | 5 | 45° | R ±.001 | PLAIN

p.C708

Unit : Inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	R				
86573TF-030R	R.030	1/4	1/4	3/4	2-1/2
86584TF-030R	R.030	3/8	3/8	1	2-1/2
86584TF-060R	R.060	3/8	3/8	1	2-1/2
86593TF-030R	R.030	1/2	1/2	1-1/4	3
86593TF-060R	R.060	1/2	1/2	1-1/4	3
86593TF-090R	R.090	1/2	1/2	1-1/4	3
86595TF-030R	R.030	5/8	5/8	1-5/8	3-1/2
86595TF-060R	R.060	5/8	5/8	1-5/8	3-1/2
86595TF-090R	R.090	5/8	5/8	1-5/8	3-1/2
86595TF-125R	R.125	5/8	5/8	1-5/8	3-1/2
86598TF-030R	R.030	3/4	3/4	1-5/8	4
86598TF-060R	R.060	3/4	3/4	1-5/8	4
86598TF-090R	R.090	3/4	3/4	1-5/8	4
86598TF-125R	R.125	3/4	3/4	1-5/8	4
86598TF-156R	R.156	3/4	3/4	1-5/8	4
86598TF-187R	R.187	3/4	3/4	1-5/8	4
86600TF-030R	R.030	1	1	2	4
86600TF-060R	R.060	1	1	2	4
86600TF-090R	R.090	1	1	2	4
86600TF-125R	R.125	1	1	2	4
86600TF-156R	R.156	1	1	2	4
86600TF-187R	R.187	1	1	2	4

Any non stocked radius available in 1 week for uncoated tools

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○

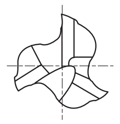
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○			○	○	○	○	○	○	○			○	

YG CARBIDE END MILLS

PLAIN SHANK
FLAT SHANK
E5243 SERIES

CARBIDE, 3 FLUTE 45° HELIX REGULAR LENGTH

- ▶Designed to machine stainless steel, inconel, titanium and other hard to machine materials.
- ▶It's 3 flute design gives high stability and allows good chip removal in plunging & slotting operations.
- ▶The normal rake angle and 45° medium helix allows an extremely wide range of application.
- ▶YG:TYLON super TiAlN coating are recommended for maximum performance.



CARBIDE 3 45° PLAIN FLAT

Ø1/8~Ø5/16 Ø3/8~Ø1

p.C708

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
34558	34558TN	34558TC	34558TF	34558TE	1/8	1/8	3/8	1-1/2
34565	34565TN	34565TC	34565TF	34565TE	3/16	3/16	9/16	2
34573	34573TN	34573TC	34573TF	34573TE	1/4	1/4	3/4	2-1/2
34579	34579TN	34579TC	34579TF	34579TE	5/16	5/16	13/16	2-1/2
34584	34584TN	34584TC	34584TF	34584TE	3/8	3/8	7/8	2-1/2
34593	34593TN	34593TC	34593TF	34593TE	1/2	1/2	1	3
34594	34594TN	34594TC	34594TF	34594TE	9/16	9/16	1-1/4	3-1/2
34595	34595TN	34595TC	34595TF	34595TE	5/8	5/8	1-1/4	3-1/2
34598	34598TN	34598TC	34598TF	34598TE	3/4	3/4	1-1/2	4
34600	34600TN	34600TC	34600TF	34600TE	1	1	1-1/2	4

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○

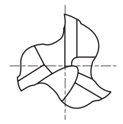
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○			○	○	○	○	○	○	○			○	

YG CARBIDE END MILLS

PLAIN SHANK
E5059 SERIES

CARBIDE, 3 FLUTE 50° HELIX STUB & REGULAR & LONG LENGTH

- ▶Designed to machine stainless steel, inconel, titanium and other hard to machine materials.
- ▶It's 3 flute design gives high stability and allows good chip removal in plunging & slotting operations.
- ▶The high rake angle and 50° helix allows an extremely wide range of application.
- ▶YG:TYLON super TiAlN coating are recommended for maximum performance.



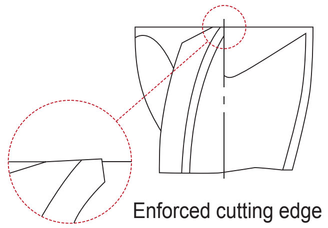
CARBIDE 3 50° PLAIN

p.C708

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
83573	83573TN	83573TC	83573TF	83573TE	1/4	1/4	1/2	2
83901	83901TN	83901TC	83901TF	83901TE	1/4	1/4	3/4	2-1/2
83902	83902TN	83902TC	83902TF	83902TE	1/4	1/4	1-1/4	3
83584	83584TN	83584TC	83584TF	83584TE	3/8	3/8	1/2	2
83903	83903TN	83903TC	83903TF	83903TE	3/8	3/8	1	2-1/2
83904	83904TN	83904TC	83904TF	83904TE	3/8	3/8	1-1/2	3-1/2
83593	83593TN	83593TC	83593TF	83593TE	1/2	1/2	5/8	2-1/2
83905	83905TN	83905TC	83905TF	83905TE	1/2	1/2	1	3
83906	83906TN	83906TC	83906TF	83906TE	1/2	1/2	2	4
83595	83595TN	83595TC	83595TF	83595TE	5/8	5/8	7/8	3
83907	83907TN	83907TC	83907TF	83907TE	5/8	5/8	2-1/2	6
83598	83598TN	83598TC	83598TF	83598TE	3/4	3/4	1	3-1/2
83908	83908TN	83908TC	83908TF	83908TE	3/4	3/4	3	6

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005



Enforced cutting edge

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○			○	○	○	○	○	○	○			○	

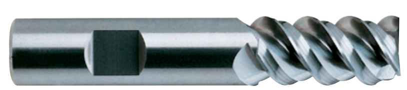
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

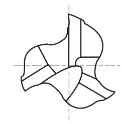
YG CARBIDE END MILLS

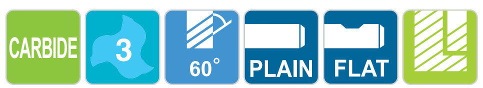
PLAIN SHANK
FLAT SHANK
E5246 SERIES

CARBIDE, 3 FLUTE 60° HELIX REGULAR LENGTH

- ▶ Excellent shearing and chip ejection due to 60° Helix.
- ▶ 20%～ 30% increase in chip load recommended over 30° helix tools.







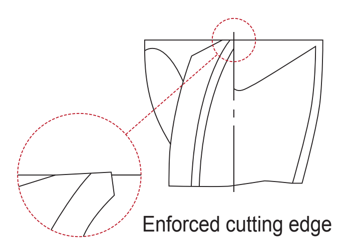
p.C708

Ø1/8~Ø5/16 Ø3/8~Ø1

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
20558	**20558TN**	**20558TC**	**20558TF**	**20558TE**	**1/8**	1/8	3/8	1-1/2
20565	**20565TN**	**20565TC**	**20565TF**	**20565TE**	**3/16**	3/16	9/16	2
20573	**20573TN**	**20573TC**	**20573TF**	**20573TE**	**1/4**	1/4	3/4	2-1/2
20579	**20579TN**	**20579TC**	**20579TF**	**20579TE**	**5/16**	5/16	13/16	2-1/2
20584	**20584TN**	**20584TC**	**20584TF**	**20584TE**	**3/8**	3/8	7/8	2-1/2
20593	**20593TN**	**20593TC**	**20593TF**	**20593TE**	**1/2**	1/2	1	3
20594	**20594TN**	**20594TC**	**20594TF**	**20594TE**	**9/16**	9/16	1-1/4	3-1/2
20595	**20595TN**	**20595TC**	**20595TF**	**20595TE**	**5/8**	5/8	1-1/4	3-1/2
20598	**20598TN**	**20598TC**	**20598TF**	**20598TE**	**3/4**	3/4	1-1/2	4
20600	**20600TN**	**20600TC**	**20600TF**	**20600TE**	**1**	1	1-1/2	4

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005



Enforced cutting edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○			○	○	○	○	○	○	○			○	

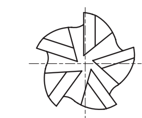
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

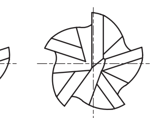
PLAIN SHANK
E5066 SERIES

CARBIDE, 5 FLUTE 45° HELIX STUB LENGTH

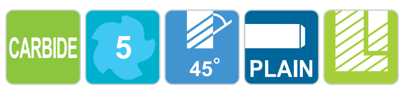
- ▶ Designed to machine stainless steels, inconels and other alloys.
- ▶ The new design of stub length allows cutting at maximum speeds and feeds with minimum deflection
- ▶ 5 Flute and 45° medium helix allow harmonic balance and smooth cutting.



up to Ø3/16



over Ø3/16



p.C708

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
85558	**85558TN**	**85558TC**	**85558TF**	**85558TE**	**1/8**	1/8	1/4	1-1/2
85561	**85561TN**	**85561TC**	**85561TF**	**85561TE**	**5/32**	3/16	5/16	2
85565	**85565TN**	**85565TC**	**85565TF**	**85565TE**	**3/16**	3/16	5/16	2
85570	**85570TN**	**85570TC**	**85570TF**	**85570TE**	**7/32**	1/4	3/8	2
85573	**85573TN**	**85573TC**	**85573TF**	**85573TE**	**1/4**	1/4	3/8	2
85579	**85579TN**	**85579TC**	**85579TF**	**85579TE**	**5/16**	5/16	7/16	2
85584	**85584TN**	**85584TC**	**85584TF**	**85584TE**	**3/8**	3/8	1/2	2
85588	**85588TN**	**85588TC**	**85588TF**	**85588TE**	**7/16**	7/16	9/16	2-1/2
85593	**85593TN**	**85593TC**	**85593TF**	**85593TE**	**1/2**	1/2	5/8	2-1/2
85595	**85595TN**	**85595TC**	**85595TF**	**85595TE**	**5/8**	5/8	3/4	3
85598	**85598TN**	**85598TC**	**85598TF**	**85598TE**	**3/4**	3/4	1	3
85600	**85600TN**	**85600TC**	**85600TF**	**85600TE**	**1**	1	1-1/4	3

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○			○	○	○	○	○	○	○			○	

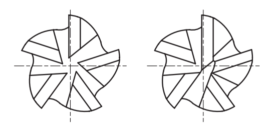
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

PLAIN SHANK **E5067** SERIES

CARBIDE, 5 FLUTE 45° HELIX REGULAR LENGTH

- ▶ Designed to machine stainless steels, inconels and other alloys.
- ▶ The new design of stub length allows cutting at maximum speeds and feeds with minimum deflection
- ▶ 5 Flute and 45° medium helix allow harmonic balance and smooth cutting.



up to Ø3/16   over Ø3/16

CARBIDE | 5 | 45° | PLAIN | p.C708

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
86558	86558TN	86558TC	86558TF	86558TE	1/8	1/8	1/2	1-1/2
86561	86561TN	86561TC	86561TF	86561TE	5/32	3/16	9/16	2
86565	86565TN	86565TC	86565TF	86565TE	3/16	3/16	9/16	2
86570	86570TN	86570TC	86570TF	86570TE	7/32	1/4	3/4	2-1/2
86573	86573TN	86573TC	86573TF	86573TE	1/4	1/4	3/4	2-1/2
86579	86579TN	86579TC	86579TF	86579TE	5/16	5/16	13/16	2-1/2
86584	86584TN	86584TC	86584TF	86584TE	3/8	3/8	1	2-1/2
86588	86588TN	86588TC	86588TF	86588TE	7/16	7/16	1	2-3/4
86593	86593TN	86593TC	86593TF	86593TE	1/2	1/2	1-1/4	3
86595	86595TN	86595TC	86595TF	86595TE	5/8	5/8	1-5/8	3-1/2
86598	86598TN	86598TC	86598TF	86598TE	3/4	3/4	1-5/8	4
86599	86599TN	86599TC	86599TF	86599TE	7/8	7/8	2	4
86600	86600TN	86600TC	86600TF	86600TE	1	1	2	4

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○			○	○	○	○	○	○	○			○	

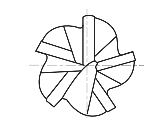
CARBIDE
HSS

YG CARBIDE END MILLS

PLAIN SHANK **E5068** SERIES

CARBIDE, 5 FLUTE 45° HELIX MEDIUM & LONG LENGTH

- ▶ Designed to machine stainless steel, inconels and other alloys.
- ▶ The new design of stub length allows cutting at maximum speeds and feeds with minimum deflection
- ▶ 5 Flute and 45° medium helix allow harmonic balance and smooth cutting.



CARBIDE | 5 | 45° | PLAIN | p.C708

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
58573	58573TN	58573TC	58573TF	58573TE	1/4	1/4	1-1/4	4
58579	58579TN	58579TC	58579TF	58579TE	5/16	5/16	1-1/4	4
58584	58584TN	58584TC	58584TF	58584TE	3/8	3/8	1-1/2	4
58588	58588TN	58588TC	58588TF	58588TE	7/16	7/16	2	4
58593	58593TN	58593TC	58593TF	58593TE	1/2	1/2	2	4
58595	58595TN	58595TC	58595TF	58595TE	5/8	5/8	2-1/2	5
58598	58598TN	58598TC	58598TF	58598TE	3/4	3/4	3-1/4	6
58901	58901TN	58901TC	58901TF	58901TE	3/4	3/4	2-1/4	5
58600	58600TN	58600TC	58600TF	58600TE	1	1	3-1/4	6
58902	58902TN	58902TC	58902TF	58902TE	1	1	2-5/8	6

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○			○	○	○	○	○	○	○			○	

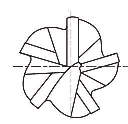
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

PLAIN SHANK **E5073** SERIES

CARBIDE, 5 FLUTE 45° HELIX EXTRA LONG LENGTH

- ▶ Designed to machine stainless steel, inconels and other alloys.
- ▶ The new design of stub length allows cutting at maximum speeds and feeds with minimum deflection
- ▶ 5 Flute and 45° medium helix allow harmonic balance and smooth cutting.



CARBIDE 5 45° PLAIN p.C708

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
59579	59579TN	59579TC	59579TF	59579TE	5/16	5/16	2-1/8	4
59584	59584TN	59584TC	59584TF	59584TE	3/8	3/8	2-1/2	6
59593	59593TN	59593TC	59593TF	59593TE	1/2	1/2	3-1/8	6
59595	59595TN	59595TC	59595TF	59595TE	5/8	5/8	4	6
59598	59598TN	59598TC	59598TF	59598TE	3/4	3/4	4	6
59600	59600TN	59600TC	59600TF	59600TE	1	1	4-1/8	7

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0003

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○

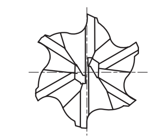
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○			○	○	○	○	○	○	○			○	

YG CARBIDE END MILLS

PLAIN SHANK **E5058** SERIES

CARBIDE, 6 FLUTE 40° HELIX REGULAR LENGTH

- ▶ For finishing in most materials.
- ▶ 20～40% increase in inches per minute over 4 flute tools.
- ▶ YG:TYLON SUPER TiAIN coating recommended for maximum performance.



CARBIDE 6 40° PLAIN p.C708

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
84565	84565TN	84565TC	84565TF	84565TE	3/16	3/16	5/8	2
84573	84573TN	84573TC	84573TF	84573TE	1/4	1/4	3/4	2-1/2
84579	84579TN	84579TC	84579TF	84579TE	5/16	5/16	7/8	2-1/2
84584	84584TN	84584TC	84584TF	84584TE	3/8	3/8	7/8	2-1/2
84588	84588TN	84588TC	84588TF	84588TE	7/16	7/16	1	2-1/2
84593	84593TN	84593TC	84593TF	84593TE	1/2	1/2	1	3
84595	84595TN	84595TC	84595TF	84595TE	5/8	5/8	1-1/4	3-1/2
84598	84598TN	84598TC	84598TF	84598TE	3/4	3/4	1-1/2	4

MATERIAL HARDNESS		
Recommended Coating	Under 45 Rc F	Over 45 Rc E

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○

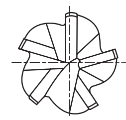
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○			○	○	○	○	○	○	○			○	

YG CARBIDE END MILLS

FLAT SHANK **E5056** SERIES
FLAT SHANK **E5057** SERIES

CARBIDE, 5 FLUTE 45° HELIX STUB & REGULAR LENGTH FINE PITCH ROUGHING CORNER RADIUS

- ▶5 flute design gives minimum harmonic vibration.
- ▶Stub tools for minimum deflection and maximum rigidity.
- ▶Ideal for profile milling.
- ▶Not recommended for slotting.



CARBIDE | FINE | 5 | 45° | FLAT

p.C708

E5056 Series ■ STUB LENGTH

Unit : Inch

EDP No.					Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	R (±.0008)				
47570	47570TN	47570TC	47570TF	81584TE	R7/64	7/32	1/4	1/2	2-1/2
47573	47573TN	47573TC	47573TF	81593TE	R1/8	1/4	1/4	1/2	2-1/2
47584	47584TN	47584TC	47584TF	81595TE	R3/16	3/8	3/8	9/16	2-1/2
47588	47588TN	47588TC	47588TF	81598TE	R7/32	7/16	7/16	9/16	2-3/4
47593	47593TN	47593TC	47593TF	81600TE	R1/4	1/2	1/2	5/8	3

E5057 Series ■ REGULAR LENGTH

Unit : Inch

EDP No.					Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	R (±.0008)				
48570	48570TN	48570TC	48570TF	82584TE	R7/64	7/32	1/4	1/2	2-1/2
48573	48573TN	48573TC	48573TF	82593TE	R1/8	1/4	1/4	1/2	2-1/2
48584	48584TN	48584TC	48584TF	82595TE	R3/16	3/8	3/8	9/16	2-1/2
48588	48588TN	48588TC	48588TF	82598TE	R7/32	7/16	7/16	9/16	2-3/4
48593	48593TN	48593TC	48593TF	82600TE	R1/4	1/2	1/2	5/8	3

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.003	0~-.0005

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎									

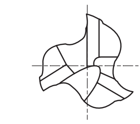
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																○	○			○	

YG CARBIDE END MILLS

PLAIN SHANK **E5077** SERIES

CARBIDE, 3 FLUTE TAPER

- ▶Designed for milling die cavity.
- ▶Many different center line angles are available on your job requirement.



CARBIDE | 3 | 30° | PLAIN

p.C708

Unit : Inch

EDP No.					Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E				
87552	87552TN	87552TC	87552TF	87552TE	1/8	1/4	1-1/2	1°
87553	87553TN	87553TC	87553TF	87553TE	1/8	1/4	1-1/2	1.5°
87554	87554TN	87554TC	87554TF	87554TE	1/8	1/4	1-1/4	2°
87556	87556TN	87556TC	87556TF	87556TE	1/8	1/4	1	3°
87560	87560TN	87560TC	87560TF	87560TE	1/8	1/4	3/4	5°
87564	87564TN	87564TC	87564TF	87564TE	1/8	1/4	1/2	7°
87570	87570TN	87570TC	87570TF	87570TE	3/32	1/4	1/2	10°
87572	87572TN	87572TC	87572TF	87572TE	3/16	3/8	1-3/4	1°
87573	87573TN	87573TC	87573TF	87573TE	3/16	3/8	1-3/4	1.5°
87574	87574TN	87574TC	87574TF	87574TE	3/16	3/8	1-3/4	2°
87576	87576TN	87576TC	87576TF	87576TE	5/32	3/8	1-3/4	3°
87580	87580TN	87580TC	87580TF	87580TE	1/8	3/8	1-1/2	5°
87584	87584TN	87584TC	87584TF	87584TE	1/8	3/8	1	7°
87590	87590TN	87590TC	87590TF	87590TE	1/8	3/8	3/4	10°
87592	87592TN	87592TC	87592TF	87592TE	1/4	1/2	2	1°
87594	87594TN	87594TC	87594TF	87594TE	1/4	1/2	2	2°
87596	87596TN	87596TC	87596TF	87596TE	1/4	1/2	2	3°
87600	87600TN	87600TC	87600TF	87600TE	1/4	1/2	1-1/4	5°
87902	87902TN	87902TC	87902TF	87902TE	3/16	1/2	1-1/4	7°
87903	87903TN	87903TC	87903TF	87903TE	1/8	1/2	1	10°

Cutting Small Dia. Tolerance (mm)		Shank Dia. Tolerance	Center Line Angle Tolerance
Ø1/16 ~ Ø1/4	0~-.0020	0~-.0005	±5′
Ø17/64 ~ Ø1	0~-.0030		

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○												○	

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

PLAIN SHANK **E5078** SERIES

CARBIDE, 3 FLUTE TAPER BALL NOSE

▶Designed for milling die cavity.
▶Many different center line angles are available on your job requirement.

CARBIDE | 3 | 30° | R ±.0008 | PLAIN p.C708

Unit : Inch

EDP No.					TIP Radius	Cutting Small Diameter	Shank Diameter	Length of Cut	Overall Length	Center Ling Angle
UNCOATED	TiN COATED	TiCN COATED	YG:TYLON F	YG:TYLON E	R (±.0008)					
88552	88552TN	88552TC	88552TF	88552TE	.062	1/8	1/4	1-1/2	3	1°
88553	88553TN	88553TC	88553TF	88553TE	.062	1/8	1/4	1-1/2	3	1.5°
88554	88554TN	88554TC	88554TF	88554TE	.062	1/8	1/4	1-1/4	3	2°
88556	88556TN	88556TC	88556TF	88556TE	.062	1/8	1/4	1	3	3°
88560	88560TN	88560TC	88560TF	88560TE	.062	1/8	1/4	3/4	3	5°
88564	88564TN	88564TC	88564TF	88564TE	.062	1/8	1/4	1/2	3	7°
88570	88570TN	88570TC	88570TF	88570TE	.047	3/32	1/4	1/2	3	10°
88572	88572TN	88572TC	88572TF	88572TE	.093	3/16	3/8	1-3/4	3-1/2	1°
88573	88573TN	88573TC	88573TF	88573TE	.093	3/16	3/8	1-3/4	3-1/2	1.5°
88574	88574TN	88574TC	88574TF	88574TE	.093	3/16	3/8	1-3/4	3-1/2	2°
88576	88576TN	88576TC	88576TF	88576TE	.078	5/32	3/8	1-3/4	3-1/2	3°
88580	88580TN	88580TC	88580TF	88580TE	.062	1/8	3/8	1-1/2	3-1/2	5°
88584	88584TN	88584TC	88584TF	88584TE	.062	1/8	3/8	1	3-1/2	7°
88590	88590TN	88590TC	88590TF	88590TE	.062	1/8	3/8	3/4	3-1/2	10°
88592	88592TN	88592TC	88592TF	88592TE	.125	1/4	1/2	2	4	1°
88594	88594TN	88594TC	88594TF	88594TE	.125	1/4	1/2	2	4	2°
88596	88596TN	88596TC	88596TF	88596TE	.125	1/4	1/2	2	4	3°
88600	88600TN	88600TC	88600TF	88600TE	.125	1/4	1/2	1-1/4	4	5°
88902	88902TN	88902TC	88902TF	88902TE	.093	3/16	1/2	1-1/4	4	7°
88903	88903TN	88903TC	88903TF	88903TE	.062	1/8	1/2	1	4	10°

Cutting Small Dia. Tolerance (mm)		Shank Dia. Tolerance	Center Line Angle Tolerance
Ø1/16 ~ Ø1/4	0~-.0020	0~-.0005	±5′
Ø17/64 ~ Ø1	0~-.0030		

◎ : Excellent ○ : Good

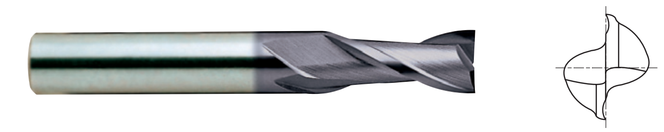
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○												○	

YG CARBIDE END MILLS

PLAIN SHANK **EH527** SERIES

CARBIDE, 2 FLUTE LONG LENGTH - TiAlN 'F' Coated



CARBIDE | DIN 6528 | N | 2 | ≈30° | DIN 6535HA p.C720

Unit : mm

EDP No.	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
	Metric	Inch			
	h10		h6		
EH527035	3.5	.1378	3.5	7	50
EH527040	4.0	.1575	4	8	50
EH527045	4.5	.1772	4.5	8	50
EH527050	5.0	.1969	5	10	50
EH527055	5.5	.2165	5.5	10	57
EH527060	6.0	.2362	6	10	57
EH527065	6.5	.2559	6.5	13	60
EH527070	7.0	.2756	7	13	60
EH527075	7.5	.2953	7.5	16	63
EH527080	8.0	.3150	8	16	63
EH527085	8.5	.3346	8.5	16	67
EH527090	9.0	.3543	9	16	67
EH527095	9.5	.3740	9.5	19	72
EH527100	10.0	.3937	10	19	72
EH527110	11.0	.4330	11	22	83
EH527120	12.0	.4724	12	22	83
EH527130	13.0	.5118	13	22	83
EH527140	14.0	.5512	14	22	83
EH527150	15.0	.5905	15	26	92
EH527160	16.0	.6299	16	26	92
EH527180	18.0	.7087	18	26	92
EH527200	20.0	.7874	20	32	104

Tolerances according to DIN 7160 & 7161

	Tolerance range in μm				
	Nominal-Diameter in mm				
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
h10	0 / −40	0 / −48	0 / −58	0 / −70	0 / −84
h6	0 / −6	0 / −8	0 / −9	0 / −11	0 / −13

◎ : Excellent ○ : Good

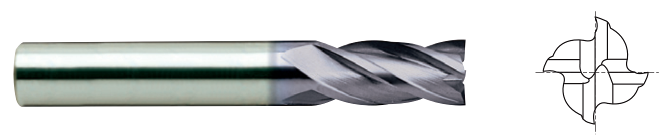
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CARBIDE END MILLS

PLAIN SHANK **EH540** SERIES

CARBIDE, 4 FLUTE LONG LENGTH - TiAlN 'F' Coated



CARBIDE | DIN 6528 | N | 4 | ≈30° | DIN 6535HA

p.C721

Unit : mm

EDP No.	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Overall Length
	h10		h6		
EH540035	3.5	.1378	3.5	10	50
EH540040	4.0	.1575	4	11	50
EH540045	4.5	.1772	4.5	11	50
EH540050	5.0	.1969	5	13	50
EH540055	5.5	.2165	5.5	13	57
EH540060	6.0	.2362	6	13	57
EH540065	6.5	.2559	6.5	16	60
EH540070	7.0	.2756	7	16	60
EH540075	7.5	.2953	7.5	19	63
EH540080	8.0	.3150	8	19	63
EH540085	8.5	.3346	8.5	19	67
EH540090	9.0	.3543	9	19	67
EH540095	9.5	.3740	9.5	22	72
EH540100	10.0	.3937	10	22	72
EH540110	11.0	.4330	11	26	83
EH540120	12.0	.4724	12	26	83
EH540130	13.0	.5118	13	26	83
EH540140	14.0	.5512	14	26	83
EH540150	15.0	.5905	15	32	92
EH540160	16.0	.6299	16	32	92
EH540180	18.0	.7087	18	32	92
EH540200	20.0	.7874	20	38	104

Tolerances according to DIN 7160 & 7161

Tolerance range in μm
Nominal-Diameter in mm

	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
h10	0 / – 40	0 / – 48	0 / – 58	0 / – 70	0 / – 84
h6	0 / – 6	0 / – 8	0 / – 9	0 / – 11	0 / – 13

◎ : Excellent ○ : Good

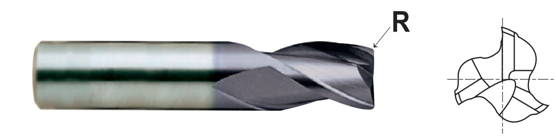
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CARBIDE END MILLS

PLAIN SHANK **EH882** SERIES

CARBIDE, 3 FLUTE 35° HELIX CORNER RADIUS - TiAlN 'F' Coated



CARBIDE | DIN 6527 | N | 3 | 35° | DIN 6535HA

p.C708

Unit : mm

EDP No.	Corner Radius	Mill Diameter Metric	Mill Diameter Inch	Shank Diameter	Length of Cut	Overall Length
	R	h10		h6		
EH882030	0.20~0.25	3.0	.1181	3	4	38
EH882040	0.20~0.25	4.0	.1575	6	5	54
EH882050	0.20~0.25	5.0	.1969	6	6	54
EH882060	0.40~0.50	6.0	.2362	6	7	54
EH882080	0.40~0.50	8.0	.3150	8	9	58
EH882100	0.40~0.50	10.0	.3937	10	11	66
EH882120	0.75~0.85	12.0	.4724	12	12	73
EH882160	0.75~0.85	16.0	.6299	16	16	82
EH882200	0.75~0.85	20.0	.7874	20	20	92

TiN & TiCN-COATING are available on your request.

Tolerances according to DIN 7160 & 7161

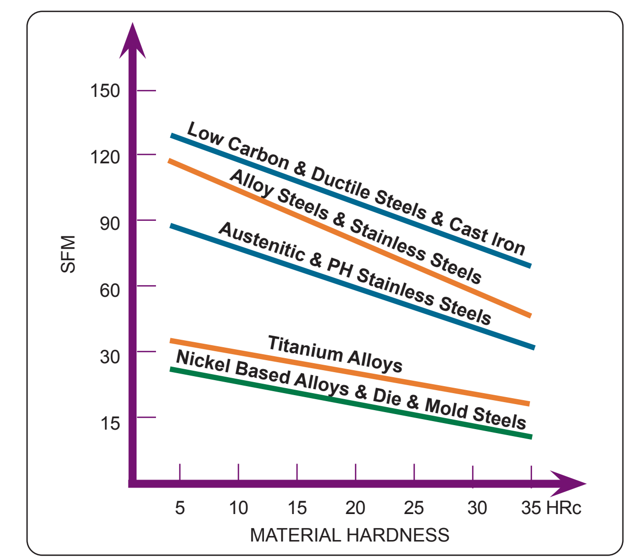
Tolerance range in μm
Nominal-Diameter in mm

	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
h10	0 / – 40	0 / – 48	0 / – 58	0 / – 70	0 / – 84
h6	0 / – 6	0 / – 8	0 / – 9	0 / – 11	0 / – 13

TiAlN FEED CHART

Unit : inch

Mill Diameter	Feed / Tooth	Mill Diameter	Feed / Tooth
3	.0035 ~ .0070	10	.0018 ~ .0040
5	.0050 ~ .0025	12	.0025 ~ .0050
6	.0012 ~ .0030	16	.0030 ~ .0060
8	.0018 ~ .0035	20	.0035 ~ .0070



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				○	○	○	○	○	○

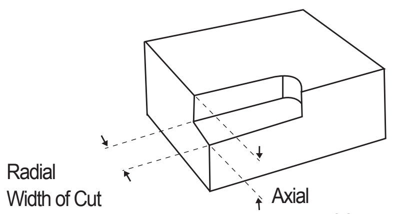
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎	◎	◎	◎												○	

YG CARBIDE END MILLS **RECOMMENDED CUTTING CONDITIONS**

SPEED & FEED RECOMMENDATIONS

Material	Speed	Chip Load per Tooth by End Mill Diameter			Recommended Coating
		Up to 1/4"	Up to 1/2"	Up to 1"	
Carbon + Alloy Steel <45Rc	100-700	.0002-.002	.001-.003	.003-.007	TF
Carbon + Alloy Steel >45Rc	50-400	.0002-.001	.0005-.0015	.001-.003	TE
Stainless Steels Non-Hardenable 200-300 Series	150-500	.0002-.001	.001-.002	.002-.006	TF
Stainless Steels Hardenable 400 Series Martensitic and PH Series	100-450	.0002-.0005	.0005-.001	.001-.005	TF
Cast+Ductile Iron	100-800	.0002-.0015	.002-.003	.003-.008	TF or TE
Nickel+Cobalt Based Alloys	20-200	.0003-.0008	.0008-.001	.001-.002	TE
Titanium	30-200	.0002-.0008	.0008-.002	.002-.004	TE
Aluminum	600-2000	.0002-.002	.002-.004	.004-.008	TiCN
Copper	300-1000	.0005-.002	.002-.003	.003-.006	CrN
Brass+ Bronze Alloys Graphite	600-1000 600-1000	.0005-.002 .0005-.005	.002-.003 .001-.008	.003-.006 .002-.010	TiCN D
Plastic	600-1200	.0006-.003	.003-.006	.006-.012	TF

TF = YG:TYLON F
TE = YG:TYLON E
D = DIAMOND
CrN = CHROME NITRIDE



SPEED & FEED DETERMINANTS

1. MATERIAL HARDNESS
2. MACHINE RIGIDITY
3. TYPE OF COATING
4. TOOL GEOMETRY
5. FINISH REQUIREMENTS
6. DEPTH & WIDTH OF CUT

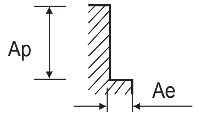
YG CARBIDE END MILLS RECOMMENDED CUTTING CONDITIONS

UGMF89, UGMGF57, UGMGF58, UGMGF59 SERIES

4 FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)											
						1/16	5/64	3/32	7/64	1/8	9/64	5/32	11/64	3/16	13/64	7/32	15/64
P	1-2	Non-alloy steel	0.1D	1.5D	SFM (Vc)	185	205	225	215	200	195	190	185	175	185	190	195
					IPT (fz)	.0003	.0004	.0004	.0005	.0007	.0008	.0009	.0010	.0012	.0012	.0013	.0013
					RPM	11200	10080	9070	7560	6050	5320	4590	4100	3600	3460	3310	3170
					IPM (FEED)	15	15	15	16	17	17	17	17	17	17	17	17
	3-4		0.1D	1.5D	SFM (Vc)	160	180	190	190	175	170	160	160	155	160	165	165
					IPT (fz)	.0003	.0004	.0004	.0005	.0007	.0008	.0010	.0011	.0012	.0013	.0013	.0014
					RPM	9640	8680	7810	6550	5290	4600	3910	3530	3150	2990	2840	2680
					IPM (FEED)	13	13	13	14	15	15	15	15	15	15	15	15
	5		0.1D	1.5D	SFM (Vc)	130	150	160	155	140	140	135	130	125	130	135	135
					IPT (fz)	.0003	.0003	.0004	.0005	.0006	.0007	.0008	.0009	.0011	.0011	.0012	.0012
					RPM	8090	7280	6550	5420	4280	3780	3280	2900	2520	2430	2330	2240
					IPM (FEED)	10	10	10	11	11	11	11	11	11	11	11	11
	6	Low alloy steel	0.1D	1.5D	SFM (Vc)	185	205	225	215	200	195	190	185	175	185	190	195
					IPT (fz)	.0003	.0004	.0004	.0005	.0007	.0008	.0009	.0010	.0012	.0012	.0013	.0013
					RPM	11200	10080	9070	7560	6050	5320	4590	4100	3600	3460	3310	3170
					IPM (FEED)	15	15	15	16	17	17	17	17	17	17	17	17
	7		0.1D	1.5D	SFM (Vc)	160	180	190	190	175	170	160	160	155	160	165	165
					IPT (fz)	.0003	.0004	.0004	.0005	.0007	.0008	.0010	.0011	.0012	.0013	.0013	.0014
					RPM	9640	8680	7810	6550	5290	4600	3910	3530	3150	2990	2840	2680
					IPM (FEED)	13	13	13	14	15	15	15	15	15	15	15	15
	8-9		0.1D	1.5D	SFM (Vc)	130	150	160	155	140	140	135	130	125	130	135	135
					IPT (fz)	.0003	.0003	.0004	.0005	.0006	.0007	.0008	.0009	.0011	.0011	.0012	.0012
					RPM	8090	7280	6550	5420	4280	3780	3280	2900	2520	2430	2330	2240
					IPM (FEED)	10	10	10	11	11	11	11	11	11	11	11	11
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM (Vc)	185	205	225	215	200	195	190	185	175	185	190	195
					IPT (fz)	.0003	.0004	.0004	.0005	.0007	.0008	.0009	.0010	.0012	.0012	.0013	.0013
					RPM	11200	10080	9070	7560	6050	5320	4590	4100	3600	3460	3310	3170
					IPM (FEED)	15	15	15	16	17	17	17	17	17	17	17	17
	11.1		0.1D	1.5D	SFM (Vc)	130	150	160	155	140	140	135	130	125	130	135	135
					IPT (fz)	.0003	.0003	.0004	.0005	.0006	.0007	.0008	.0009	.0011	.0011	.0012	.0012
					RPM	8090	7280	6550	5420	4280	3780	3280	2900	2520	2430	2330	2240
					IPM (FEED)	10	10	10	11	11	11	11	11	11	11	11	11
M	12-13	Stainless steel	0.1D	1.5D	SFM (Vc)	255	285	310	305	285	280	270	265	260	270	275	280
					IPT (fz)	.0002	.0002	.0003	.0003	.0004	.0004	.0005	.0005	.0006	.0006	.0007	.0007
					RPM	15560	14000	12600	10650	8690	7620	6550	5920	5290	5040	4790	4540
					IPM (FEED)	13	13	13	13	13	13	13	13	13	13	13	13
	14.1-14.2		0.1D	1.5D	SFM (Vc)	255	285	310	305	285	280	270	265	260	270	275	280
					IPT (fz)	.0002	.0002	.0003	.0003	.0004	.0004	.0005	.0005	.0006	.0006	.0007	.0007
					RPM	15560	14000	12600	10650	8690	7620	6550	5920	5290	5040	4790	4540
					IPM (FEED)	13	13	13	13	13	13	13	13	13	13	13	13
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.1D	1.5D	SFM (Vc)	215	245	265	255	225	225	215	215	205	210	215	220
					IPT (fz)	.0005	.0006	.0007	.0008	.0010	.0012	.0014	.0015	.0017	.0019	.0021	.0023
					RPM	13220	11900	10710	8820	6930	6110	5290	4730	4160	3970	3780	3590
					IPM (FEED)	29	29	29	29	29	29	29	29	29	30	32	33
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.1D	1.5D	SFM (Vc)	510	575	620	615	575	555	515	520	515	535	550	560
					IPT (fz)	.0005	.0005	.0006	.0007	.0009	.0010	.0012	.0013	.0014	.0015	.0016	.0017
					RPM	31110	28000	25200	21420	17640	15120	12600	11530	10460	10020	9580	9140
					IPM (FEED)	60	60	60	60	60	60	60	60	60	61	62	63
	26-28	Copper and Copper Alloys (Bronze / Brass)	0.1D	1.5D	SFM (Vc)	380	430	465	450	410	415	410	405	385	400	410	420
					IPT (fz)	.0005	.0006	.0006	.0007	.0009	.0010	.0012	.0013	.0015	.0016	.0017	.0018
					RPM	23330	21000	18900	15750	12600	11340	10080	8950	7810	7500	7180	6870
					IPM (FEED)	47	47	47	47	47	47	47	47	47	47	48	49



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

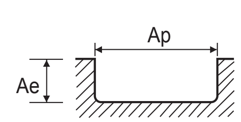
YG CARBIDE END MILLS

RECOMMENDED CUTTING CONDITIONS

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

UGMF90 SERIES 2 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/8	3/16	1/4	3/8	1/2	5/8	3/4	1
						Diameter (Ø)							
P	1-2	Non-alloy steel	1.0D	1.0D	SFM(Vc)	200	175	200	175	200	185	190	195
					IPT(fz)	.0005	.0008	.0010	.0017	.0020	.0027	.0031	.0033
					RPM	6050	3600	3020	1760	1510	1130	980	750
					IPM(FEED)	6	6	6	6	6	6	6	5
	3-4		1.0D	1.0D	SFM(Vc)	175	155	165	150	165	165	165	165
					IPT(fz)	.0005	.0008	.0010	.0017	.0020	.0025	.0030	.0032
					RPM	5290	3150	2520	1510	1260	1010	830	630
					IPM(FEED)	5	5	5	5	5	5	5	4
	5		1.0D	1.0D	SFM(Vc)	140	125	140	125	140	135	135	140
					IPT(fz)	.0005	.0008	.0009	.0016	.0019	.0030	.0036	.0038
					RPM	4280	2520	2140	1260	1080	820	690	530
					IPM(FEED)	4	4	4	4	4	5	5	4
	6	Low alloy steel	1.0D	1.0D	SFM(Vc)	200	175	200	175	200	185	190	195
					IPT(fz)	.0005	.0008	.0010	.0017	.0020	.0027	.0031	.0033
					RPM	6050	3600	3020	1760	1510	1130	980	750
					IPM(FEED)	6	6	6	6	6	6	6	5
	7		1.0D	1.0D	SFM(Vc)	175	155	165	150	165	165	165	165
					IPT(fz)	.0005	.0008	.0010	.0017	.0020	.0025	.0030	.0032
					RPM	5290	3150	2520	1510	1260	1010	830	630
					IPM(FEED)	5	5	5	5	5	5	5	4
	8-9		1.0D	1.0D	SFM(Vc)	140	125	140	125	140	135	135	140
					IPT(fz)	.0005	.0008	.0009	.0016	.0019	.0030	.0036	.0038
					RPM	4280	2520	2140	1260	1080	820	690	530
					IPM(FEED)	4	4	4	4	4	5	5	4
	10	High alloyed steel, and tool steel	1.0D	1.0D	SFM(Vc)	200	175	200	175	200	185	190	195
					IPT(fz)	.0005	.0008	.0010	.0017	.0020	.0027	.0031	.0033
					RPM	6050	3600	3020	1760	1510	1130	980	750
					IPM(FEED)	6	6	6	6	6	6	6	5
	11.1		1.0D	1.0D	SFM(Vc)	140	125	140	125	140	135	135	140
					IPT(fz)	.0005	.0008	.0009	.0016	.0019	.0030	.0036	.0038
					RPM	4280	2520	2140	1260	1080	820	690	530
					IPM(FEED)	4	4	4	4	4	5	5	4
M	12-13	Stainless steel	1.0D	1.0D	SFM(Vc)	285	260	280	245	280	270	265	265
					IPT(fz)	.0002	.0004	.0005	.0008	.0009	.0015	.0019	.0020
					RPM	8690	5290	4280	2520	2140	1640	1350	1020
					IPM(FEED)	4	4	4	4	4	5	5	4
	14.1-14.2		1.0D	1.0D	SFM(Vc)	285	260	280	245	280	270	265	265
					IPT(fz)	.0002	.0004	.0005	.0008	.0009	.0015	.0019	.0020
					RPM	8690	5290	4280	2520	2140	1640	1350	1020
					IPM(FEED)	4	4	4	4	4	5	5	4
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	1.0D	SFM(Vc)	225	205	225	210	215	205	215	225
					IPT(fz)	.0007	.0012	.0016	.0030	.0040	.0056	.0068	.0071
					RPM	6930	4160	3400	2140	1640	1260	1100	850
					IPM(FEED)	10	10	11	13	13	14	15	12
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	1.0D	SFM(Vc)	575	515	570	520	560	535	530	535
					IPT(fz)	.0006	.0010	.0013	.0021	.0026	.0034	.0041	.0044
					RPM	17640	10460	8690	5290	4280	3280	2710	2040
					IPM(FEED)	21	21	22	22	22	22	22	18
	26-28	Copper and Copper Alloys (Bronze / Brass)	1.0D	1.0D	SFM(Vc)	410	385	430	385	430	410	410	415
					IPT(fz)	.0006	.0010	.0013	.0022	.0026	.0034	.0040	.0044
					RPM	12600	7810	6550	3910	3280	2520	2100	1590
					IPM(FEED)	15	15	17	17	17	17	17	14



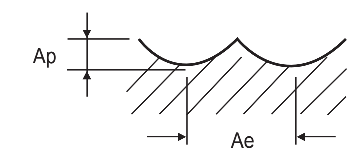
YG CARBIDE END MILLS

RECOMMENDED CUTTING CONDITIONS

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

UGMF91 SERIES 4 FLUTE BALL NOSE - PLANE

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/8	3/16	1/4	3/8	1/2	5/8	3/4	1
						Diameter (Ø)							
P	1-4	Non-alloy steel	0.7D	0.3D	SFM(Vc)	185	165	180	160	180	175	190	200
					IPT(fz)	.0004	.0007	.0009	.0014	.0014	.0019	.0020	.0023
					RPM	5670	3400	2770	1640	1390	1070	980	770
					IPM(FEED)	10	10	10	9	8	8	8	7
	5		0.7D	0.3D	SFM(Vc)	155	135	155	135	155	145	155	165
					IPT(fz)	.0002	.0004	.0004	.0007	.0008	.0011	.0013	.0016
					RPM	4790	2770	2380	1390	1200	880	800	630
					IPM(FEED)	4	4	4	4	4	4	4	4
	6-7	Low alloy steel	0.7D	0.3D	SFM(Vc)	185	165	180	160	180	175	190	200
					IPT(fz)	.0004	.0007	.0009	.0014	.0014	.0019	.0020	.0023
					RPM	5670	3400	2770	1640	1390	1070	980	770
					IPM(FEED)	10	10	10	9	8	8	8	7
	8-9		0.7D	0.3D	SFM(Vc)	155	135	155	135	155	145	155	165
					IPT(fz)	.0002	.0004	.0004	.0007	.0008	.0011	.0013	.0016
					RPM	4790	2770	2380	1390	1200	880	800	630
					IPM(FEED)	4	4	4	4	4	4	4	4
	10	High alloyed steel, and tool steel	0.7D	0.3D	SFM(Vc)	185	165	180	160	180	175	190	200
					IPT(fz)	.0004	.0007	.0009	.0014	.0014	.0019	.0020	.0023
					RPM	5670	3400	2770	1640	1390	1070	980	770
					IPM(FEED)	10	10	10	9	8	8	8	7
	11.1		0.7D	0.3D	SFM(Vc)	155	135	155	135	155	145	155	165
					IPT(fz)	.0002	.0004	.0004	.0007	.0008	.0011	.0013	.0016
					RPM	4790	2770	2380	1390	1200	880	800	630
					IPM(FEED)	4	4	4	4	4	4	4	4
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.7D	0.3D	SFM(Vc)	265	235	255	235	265	245	260	265
					IPT(fz)	.0005	.0011	.0015	.0033	.0038	.0053	.0061	.0064
					RPM	8060	4790	3910	2380	2020	1510	1320	1020
					IPM(FEED)	15	22	24	31	31	32	32	26
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.7D	0.3D	SFM(Vc)	765	680	775	695	775	720	790	825
					IPT(fz)	.0003	.0006	.0007	.0013	.0018	.0021	.0023	.0024
					RPM	23440	13860	11840	7060	5920	4410	4030	3160
					IPM(FEED)	27	32	32	37	43	37	37	30



YG CARBIDE END MILLS

RECOMMENDED CUTTING CONDITIONS

E5020, E5244, E5011 E5026, E5022, E5025 SERIES

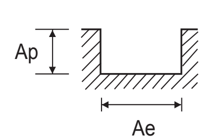
2 FLUTE - SLOTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/32	1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	13/16
P	1-2	Non-alloy steel	1.0D	1.0D	SFM (Vc)	135	120	115	110	120	115	110	120	120	115	115
					IPT (fz)	.0003	.0005	.0007	.0009	.0011	.0014	.0018	.0022	.0025	.0029	.0036
					RPM	5500	3700	2800	2200	1800	1400	1100	900	800	700	550
					IPM (FEED)	3	4	4	4	4	4	4	4	4	4	4
	3-4		1.0D	1.0D	SFM (Vc)	120	105	100	95	105	100	95	105	105	100	100
					IPT (fz)	.0003	.0005	.0006	.0008	.0009	.0013	.0016	.0019	.0021	.0025	.0031
					RPM	4800	3200	2400	1900	1600	1200	950	800	700	600	480
					IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3
	5		1.0D	1.0D	SFM (Vc)	100	85	80	80	85	80	80	85	85	80	85
					IPT (fz)	.0003	.0004	.0005	.0006	.0008	.0010	.0013	.0015	.0018	.0030	.0038
					RPM	4000	2600	2000	1600	1300	1000	800	660	570	500	400
					IPM (FEED)	2	2	2	2	2	2	2	2	2	3	3
	6	Low alloy steel	1.0D	1.0D	SFM (Vc)	135	120	115	110	120	115	110	120	120	115	115
					IPT (fz)	.0003	.0005	.0007	.0009	.0011	.0014	.0018	.0022	.0025	.0029	.0036
					RPM	5500	3700	2800	2200	1800	1400	1100	900	800	700	550
					IPM (FEED)	3	4	4	4	4	4	4	4	4	4	4
	7		1.0D	1.0D	SFM (Vc)	120	105	100	95	105	100	95	105	105	100	100
					IPT (fz)	.0003	.0005	.0006	.0008	.0009	.0013	.0016	.0019	.0021	.0025	.0031
					RPM	4800	3200	2400	1900	1600	1200	950	800	700	600	480
					IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3
	8-9		1.0D	1.0D	SFM (Vc)	100	85	80	80	85	80	80	85	85	80	85
					IPT (fz)	.0003	.0004	.0005	.0006	.0008	.0010	.0013	.0015	.0018	.0030	.0038
					RPM	4000	2600	2000	1600	1300	1000	800	660	570	500	400
					IPM (FEED)	2	2	2	2	2	2	2	2	2	3	3
	10	High alloyed steel, and tool steel	1.0D	1.0D	SFM (Vc)	135	120	115	110	120	115	110	120	120	115	115
					IPT (fz)	.0003	.0005	.0007	.0009	.0011	.0014	.0018	.0022	.0025	.0029	.0036
					RPM	5500	3700	2800	2200	1800	1400	1100	900	800	700	550
					IPM (FEED)	3	4	4	4	4	4	4	4	4	4	4
	11.1		1.0D	1.0D	SFM (Vc)	100	85	80	80	85	80	80	85	85	80	85
					IPT (fz)	.0003	.0004	.0005	.0006	.0008	.0010	.0013	.0015	.0018	.0030	.0038
					RPM	4000	2600	2000	1600	1300	1000	800	660	570	500	400
					IPM (FEED)	2	2	2	2	2	2	2	2	2	3	3
M	12-13	Stainless steel	1.0D	1.0D	SFM (Vc)	195	175	165	155	170	165	155	170	160	165	170
					IPT (fz)	.0002	.0003	.0004	.0005	.0006	.0008	.0009	.0012	.0014	.0015	.0019
					RPM	8000	5300	4000	3200	2600	2000	1600	1300	1100	1000	800
					IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3
	14.1-14.2		1.0D	1.0D	SFM (Vc)	195	175	165	155	170	165	155	170	160	165	170
					IPT (fz)	.0002	.0003	.0004	.0005	.0006	.0008	.0009	.0012	.0014	.0015	.0019
					RPM	8000	5300	4000	3200	2600	2000	1600	1300	1100	1000	800
					IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	1.0D	SFM (Vc)	160	135	130	125	135	130	130	130	135	130	135
					IPT (fz)	.0005	.0007	.0009	.0012	.0017	.0025	.0031	.0040	.0050	.0056	.0078
					RPM	6500	4200	3200	2500	2100	1600	1300	1000	900	800	640
					IPM (FEED)	6	6	6	6	7	8	8	8	9	9	10
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	1.0D	SFM (Vc)	395	360	325	315	345	325	315	340	340	325	340
					IPT (fz)	.0004	.0006	.0008	.0010	.0012	.0016	.0020	.0025	.0028	.0033	.0041
					RPM	16000	11000	8000	6400	5300	4000	3200	2600	2300	2000	1600
					IPM (FEED)	13	13	13	13	13	13	13	13	13	13	13
	26-28	Copper and Copper Alloys (Bronze / Brass)	1.0D	1.0D	SFM (Vc)	295	260	245	235	260	245	235	260	250	245	255
					IPT (fz)	.0004	.0006	.0008	.0010	.0013	.0017	.0021	.0025	.0029	.0033	.0042
					RPM	12000	8000	6000	4800	4000	3000	2400	2000	1700	1500	1200
					IPM (FEED)	10	10	10	10	10	10	10	10	10	10	10

(Diameter (Ø) spans columns 3/32 through 13/16.)

RPM = rev./min.
Feed = inch/min.
SFM = ft/min
Fz = inch/tooth



※ The Feed, in long & extra long types, should be reduced by around 50%.

YG CARBIDE END MILLS

RECOMMENDED CUTTING CONDITIONS

E5020, E5244, E5011 E5026, E5022, E5025 SERIES

TiAlN Coated

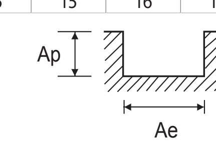
2 FLUTE - SLOTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/32	1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	13/16
P	1-2	Non-alloy steel	1.0D	1.0D	SFM (Vc)	210	190	180	170	190	175	165	190	175	175	185
					IPT (fz)	.0003	.0005	.0007	.0009	.0010	.0014	.0018	.0021	.0025	.0028	.0034
					RPM	8640	5760	4370	3430	2880	2160	1680	1440	1200	1080	880
					IPM (FEED)	5	6	6	6	6	6	6	6	6	6	6
	3-4		1.0D	1.0D	SFM (Vc)	185	165	150	145	155	145	140	155	160	155	155
					IPT (fz)	.0003	.0005	.0007	.0008	.0010	.0014	.0017	.0021	.0023	.0026	.0034
					RPM	7440	5040	3720	3000	2400	1800	1440	1200	1080	960	740
					IPM (FEED)	4	5	5	5	5	5	5	5	5	5	5
	5		1.0D	1.0D	SFM (Vc)	155	135	130	120	135	130	120	135	130	130	130
					IPT (fz)	.0002	.0005	.0006	.0008	.0010	.0013	.0017	.0019	.0022	.0032	.0040
					RPM	6240	4080	3120	2400	2040	1560	1200	1030	890	780	620
					IPM (FEED)	3	4	4	4	4	4	4	4	4	5	5
	6	Low alloy steel	1.0D	1.0D	SFM (Vc)	210	190	180	170	190	175	165	190	175	175	185
					IPT (fz)	.0003	.0005	.0007	.0009	.0010	.0014	.0018	.0021	.0025	.0028	.0034
					RPM	8640	5760	4370	3430	2880	2160	1680	1440	1200	1080	880
					IPM (FEED)	5	6	6	6	6	6	6	6	6	6	6
	7		1.0D	1.0D	SFM (Vc)	185	165	150	145	155	145	140	155	160	155	155
					IPT (fz)	.0003	.0005	.0007	.0008	.0010	.0014	.0017	.0021	.0023	.0026	.0034
					RPM	7440	5040	3720	3000	2400	1800	1440	1200	1080	960	740
					IPM (FEED)	4	5	5	5	5	5	5	5	5	5	5
	8-9		1.0D	1.0D	SFM (Vc)	155	135	130	120	135	130	120	135	130	130	130
					IPT (fz)	.0002	.0005	.0006	.0008	.0010	.0013	.0017	.0019	.0022	.0032	.0040
					RPM	6240	4080	3120	2400	2040	1560	1200	1030	890	780	620
					IPM (FEED)	3	4	4	4	4	4	4	4	4	5	5
	10	High alloyed steel, and tool steel	1.0D	1.0D	SFM (Vc)	210	190	180	170	190	175	165	190	175	175	185
					IPT (fz)	.0003	.0005	.0007	.0009	.0010	.0014	.0018	.0021	.0025	.0028	.0034
					RPM	8640	5760	4370	3430	2880	2160	1680	1440	1200	1080	880
					IPM (FEED)	5	6	6	6	6	6	6	6	6	6	6
	11.1		1.0D	1.0D	SFM (Vc)	155	135	130	120	135	130	120	135	130	130	130
					IPT (fz)	.0002	.0005	.0006	.0008	.0010	.0013	.0017	.0019	.0022	.0032	.0040
					RPM	6240	4080	3120	2400	2040	1560	1200	1030	890	780	620
					IPM (FEED)	3	4	4	4	4	4	4	4	4	5	5
M	12-13	Stainless steel	1.0D	1.0D	SFM (Vc)	295	270	255	245	265	255	235	265	245	255	255
					IPT (fz)	.0002	.0002	.0003	.0004	.0005	.0006	.0008	.0010	.0012	.0016	.0021
					RPM	12000	8280	6240	5040	4080	3120	2400	2040	1680	1560	1200
					IPM (FEED)	4	4	4	4	4	4	4	4	4	5	5
	14.1-14.2		1.0D	1.0D	SFM (Vc)	295	270	255	245	265	255	235	265	245	255	255
					IPT (fz)	.0002	.0002	.0003	.0004	.0005	.0006	.0008	.0010	.0012	.0016	.0021
					RPM	12000	8280	6240	5040	4080	3120	2400	2040	1680	1560	1200
					IPM (FEED)	4	4	4	4	4	4	4	4	4	5	5
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	1.0D	SFM (Vc)	250	215	205	195	210	195	200	205	210	195	215
					IPT (fz)	.0004	.0007	.0009	.0011	.0017	.0025	.0029	.0042	.0045	.0058	.0075
					RPM	10200	6600	5040	3960	3240	2400	2040	1560	1440	1200	1000
					IPM (FEED)	9	9	9	9	11	12	12	13	13	14	15
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	1.0D	SFM (Vc)	590	550	490	490	540	510	495	535	530	510	510
					IPT (fz)	.0004	.0006	.0008	.0010	.0013	.0017	.0021	.0026	.0029	.0034	.0044
					RPM	24000	16800	12000	9960	8280	6240	5040	4080	3600	3120	2400
					IPM (FEED)	20	20	20	20	21	21	21	21	21	21	21
	26-28	Copper and Copper Alloys (Bronze / Brass)	1.0D	1.0D	SFM (Vc)	440	395	395	365	410	395	365	410	390	395	400
					IPT (fz)	.0004	.0006	.0008	.0010	.0013	.0017	.0022	.0026	.0030	.0033	.0043
					RPM	18000	12000	9600	7440	6240	4800	3720	3120	2640	2400	1870
					IPM (FEED)	15	15	15	15	16	16	16	16	16	16	16

(Diameter (Ø) spans columns 3/32 through 13/16.)

RPM = rev./min.
Feed = inch/min.
SFM = ft/min
Fz = inch/tooth



※ The Feed, in long & extra long types, should be reduced by around 50%.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG CARBIDE END MILLS

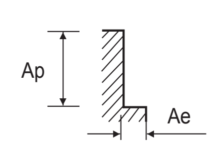
RECOMMENDED CUTTING CONDITIONS

E5021, E5245, E5012, E5065 E5023, E5024, E5216 SERIES

4 FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 3/32	1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	13/16
P	1-2	Non-alloy steel	0.1D	1.5D	SFM(Vc)	135	120	115	110	120	115	110	120	120	115	115
					IPT(fz)	.0005	.0007	.0010	.0013	.0015	.0020	.0025	.0031	.0034	.0043	.0055
					RPM	5500	3700	2800	2200	1800	1400	1100	900	800	700	550
					IPM(FEED)	10	11	11	11	11	11	11	11	11	12	12
	3-4		0.1D	1.5D	SFM(Vc)	120	105	100	95	105	100	95	105	105	100	100
					IPT(fz)	.0004	.0008	.0010	.0013	.0016	.0021	.0026	.0031	.0036	.0042	.0052
					RPM	4800	3200	2400	1900	1600	1200	950	800	700	600	480
					IPM(FEED)	8	10	10	10	10	10	10	10	10	10	10
	5		0.1D	1.5D	SFM(Vc)	100	85	80	80	85	80	80	85	85	80	85
					IPT(fz)	.0004	.0007	.0009	.0011	.0013	.0018	.0022	.0027	.0031	.0045	.0056
					RPM	4000	2600	2000	1600	1300	1000	800	660	570	500	400
					IPM(FEED)	6	7	7	7	7	7	7	7	7	9	9
	6	Low alloy steel	0.1D	1.5D	SFM(Vc)	135	120	115	110	120	115	110	120	120	115	115
					IPT(fz)	.0005	.0007	.0010	.0013	.0015	.0020	.0025	.0031	.0034	.0043	.0055
					RPM	5500	3700	2800	2200	1800	1400	1100	900	800	700	550
					IPM(FEED)	10	11	11	11	11	11	11	11	11	12	12
	7		0.1D	1.5D	SFM(Vc)	120	105	100	95	105	100	95	105	105	100	100
					IPT(fz)	.0004	.0008	.0010	.0013	.0016	.0021	.0026	.0031	.0036	.0042	.0052
					RPM	4800	3200	2400	1900	1600	1200	950	800	700	600	480
					IPM(FEED)	8	10	10	10	10	10	10	10	10	10	10
	8-9		0.1D	1.5D	SFM(Vc)	100	85	80	80	85	80	80	85	85	80	85
					IPT(fz)	.0004	.0007	.0009	.0011	.0013	.0018	.0022	.0027	.0031	.0045	.0056
					RPM	4000	2600	2000	1600	1300	1000	800	660	570	500	400
					IPM(FEED)	6	7	7	7	7	7	7	7	7	9	9
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM(Vc)	135	120	115	110	120	115	110	120	120	115	115
					IPT(fz)	.0005	.0007	.0010	.0013	.0015	.0020	.0025	.0031	.0034	.0043	.0055
					RPM	5500	3700	2800	2200	1800	1400	1100	900	800	700	550
					IPM(FEED)	10	11	11	11	11	11	11	11	11	12	12
	11.1		0.1D	1.5D	SFM(Vc)	100	85	80	80	85	80	80	85	85	80	85
					IPT(fz)	.0004	.0007	.0009	.0011	.0013	.0018	.0022	.0027	.0031	.0045	.0056
					RPM	4000	2600	2000	1600	1300	1000	800	660	570	500	400
					IPM(FEED)	6	7	7	7	7	7	7	7	7	9	9
M	12-14.2	Stainless steel	0.1D	1.5D	SFM(Vc)	195	175	165	155	170	165	155	170	160	165	170
					IPT(fz)	.0003	.0004	.0005	.0006	.0008	.0010	.0013	.0015	.0018	.0023	.0031
					RPM	8000	5300	4000	3200	2600	2000	1600	1300	1100	1000	800
					IPM(FEED)	8	8	8	8	8	8	8	8	8	9	10
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.1D	1.5D	SFM(Vc)	160	135	130	125	135	130	130	130	135	130	135
					IPT(fz)	.0007	.0011	.0014	.0018	.0025	.0034	.0046	.0063	.0072	.0084	.0109
					RPM	6500	4200	3200	2500	2100	1600	1300	1000	900	800	640
					IPM(FEED)	18	18	18	18	21	22	24	25	26	27	28
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.1D	1.5D	SFM(Vc)	395	360	325	315	345	325	315	340	340	325	340
					IPT(fz)	.0006	.0009	.0012	.0015	.0019	.0025	.0031	.0038	.0043	.0050	.0063
					RPM	16000	11000	8000	6400	5300	4000	3200	2600	2300	2000	1600
					IPM(FEED)	38	38	38	38	40	40	40	40	40	40	40
	26-28	Copper and Copper Alloys (Bronze / Brass)	0.1D	1.5D	SFM(Vc)	295	260	245	235	260	245	235	260	250	245	255
					IPT(fz)	.0005	.0008	.0010	.0013	.0019	.0026	.0032	.0039	.0046	.0052	.0065
					RPM	12000	8000	6000	4800	4000	3000	2400	2000	1700	1500	1200
					IPM(FEED)	25	25	25	25	31	31	31	31	31	31	31



YG CARBIDE END MILLS

RECOMMENDED CUTTING CONDITIONS

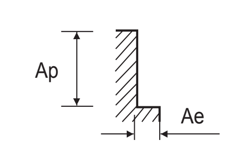
E5021, E5245, E5012, E5065 E5023, E5024, E5216 SERIES

TiAlN Coated

4 FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 3/32	1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	13/16
P	1-2	Non-alloy steel	0.1D	1.5D	SFM(Vc)	210	190	180	170	190	175	165	190	175	175	185
					IPT(fz)	.0004	.0007	.0010	.0012	.0015	.0020	.0025	.0030	.0035	.0042	.0051
					RPM	8640	5760	4370	3430	2880	2160	1680	1440	1200	1080	880
					IPM(FEED)	15	17	17	17	17	17	17	17	17	18	18
	3-4		0.1D	1.5D	SFM(Vc)	185	165	150	145	155	145	140	155	160	155	155
					IPT(fz)	.0004	.0007	.0010	.0013	.0016	.0021	.0026	.0031	.0035	.0042	.0054
					RPM	7440	5040	3720	3000	2400	1800	1440	1200	1080	960	740
					IPM(FEED)	13	15	15	15	15	15	15	15	15	16	16
	5		0.1D	1.5D	SFM(Vc)	155	135	130	120	135	130	120	135	130	130	130
					IPT(fz)	.0004	.0007	.0009	.0011	.0013	.0018	.0023	.0027	.0031	.0045	.0056
					RPM	6240	4080	3120	2400	2040	1560	1200	1030	890	780	620
					IPM(FEED)	10	11	11	11	11	11	11	11	11	14	14
	6	Low alloy steel	0.1D	1.5D	SFM(Vc)	210	190	180	170	190	175	165	190	175	175	185
					IPT(fz)	.0004	.0007	.0010	.0012	.0015	.0020	.0025	.0030	.0035	.0042	.0051
					RPM	8640	5760	4370	3430	2880	2160	1680	1440	1200	1080	880
					IPM(FEED)	15	17	17	17	17	17	17	17	17	18	18
	7		0.1D	1.5D	SFM(Vc)	185	165	150	145	155	145	140	155	160	155	155
					IPT(fz)	.0004	.0007	.0010	.0013	.0016	.0021	.0026	.0031	.0035	.0042	.0054
					RPM	7440	5040	3720	3000	2400	1800	1440	1200	1080	960	740
					IPM(FEED)	13	15	15	15	15	15	15	15	15	16	16
	8-9		0.1D	1.5D	SFM(Vc)	155	135	130	120	135	130	120	135	130	130	130
					IPT(fz)	.0004	.0007	.0009	.0011	.0013	.0018	.0023	.0027	.0031	.0045	.0056
					RPM	6240	4080	3120	2400	2040	1560	1200	1030	890	780	620
					IPM(FEED)	10	11	11	11	11	11	11	11	11	14	14
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM(Vc)	210	190	180	170	190	175	165	190	175	175	185
					IPT(fz)	.0004	.0007	.0010	.0012	.0015	.0020	.0025	.0030	.0035	.0042	.0051
					RPM	8640	5760	4370	3430	2880	2160	1680	1440	1200	1080	880
					IPM(FEED)	15	17	17	17	17	17	17	17	17	18	18
	11.1		0.1D	1.5D	SFM(Vc)	155	135	130	120	135	130	120	135	130	130	130
					IPT(fz)	.0004	.0007	.0009	.0011	.0013	.0018	.0023	.0027	.0031	.0045	.0056
					RPM	6240	4080	3120	2400	2040	1560	1200	1030	890	780	620
					IPM(FEED)	10	11	11	11	11	11	11	11	11	14	14
M	12-14.2	Stainless steel	0.1D	1.5D	SFM(Vc)	295	270	255	245	265	255	235	265	245	255	255
					IPT(fz)	.0003	.0004	.0005	.0006	.0007	.0010	.0013	.0015	.0018	.0022	.0031
					RPM	12000	8280	6240	5040	4080	3120	2400	2040	1680	1560	1200
					IPM(FEED)	12	12	12	12	12	12	12	12	12	14	15
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.1D	1.5D	SFM(Vc)	250	215	205	195	210	195	200	205	210	195	215
					IPT(fz)	.0007	.0010	.0013	.0017	.0025	.0036	.0045	.0063	.0071	.0088	.0093
					RPM	10200	6600	5040	3960	3240	2400	2040	1560	1440	1200	1000
					IPM(FEED)	27	27	27	27	33	35	37	39	41	42	37
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.1D	1.5D	SFM(Vc)	590	550	490	490	540	510	495	535	530	510	510
					IPT(fz)	.0006	.0008	.0012	.0014	.0018	.0024	.0030	.0037	.0042	.0049	.0064
					RPM	24000	16800	12000	9960	8280	6240	5040	4080	3600	3120	2400
					IPM(FEED)	57	57	57	57	61	61	61	61	61	61	61
	26-28	Copper and Copper Alloys (Bronze / Brass)	0.1D	1.5D	SFM(Vc)	440	395	395	365	410	395	365	410	390	395	400
					IPT(fz)	.0006	.0009	.0011	.0015	.0019	.0024	.0032	.0038	.0045	.0049	.0063
					RPM	18000	12000	9600	7440	6240	4800	3720	3120	2640	2400	1870
					IPM(FEED)	44	44	44	44	47	47	47	47	47	47	47



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

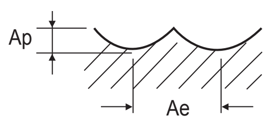
YG CARBIDE END MILLS

RECOMMENDED CUTTING CONDITIONS

E5249, E5014, E5018, E5251 SERIES 2 FLUTE BALL NOSE - PLANE

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/32	1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	11/16	13/16
						Diameter (Ø)											
P	1-4	Non-alloy steel	0.7D	0.3D	SFM (Vc)	130	115	105	105	110	105	100	115	110	105	105	105
					IPT (fz)	.0004	.0006	.0008	.0010	.0012	.0016	.0020	.0017	.0020	.0023	.0026	.0030
					RPM	5200	3500	2600	2100	1700	1270	1000	870	750	650	580	500
					IPM (FEED)	4	4	4	4	4	4	4	3	3	3	3	3
	5		0.7D	0.3D	SFM (Vc)	110	95	85	85	95	90	85	95	90	90	85	90
					IPT (fz)	.0002	.0003	.0005	.0006	.0007	.0009	.0011	.0014	.0016	.0019	.0021	.0023
					RPM	4400	2900	2100	1700	1430	1100	870	730	620	540	480	430
					IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2
	6-7	Low alloy steel	0.7D	0.3D	SFM (Vc)	130	115	105	105	110	105	100	115	110	105	105	105
					IPT (fz)	.0004	.0006	.0008	.0010	.0012	.0016	.0020	.0017	.0020	.0023	.0026	.0030
					RPM	5200	3500	2600	2100	1700	1270	1000	870	750	650	580	500
					IPM (FEED)	4	4	4	4	4	4	4	3	3	3	3	3
	8-9		0.7D	0.3D	SFM (Vc)	110	95	85	85	95	90	85	95	90	90	85	90
					IPT (fz)	.0002	.0003	.0005	.0006	.0007	.0009	.0011	.0014	.0016	.0019	.0021	.0023
					RPM	4400	2900	2100	1700	1430	1100	870	730	620	540	480	430
					IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2
	10	High alloyed steel, and tool steel	0.7D	0.3D	SFM (Vc)	130	115	105	105	110	105	100	115	110	105	105	105
					IPT (fz)	.0004	.0006	.0008	.0010	.0012	.0016	.0020	.0017	.0020	.0023	.0026	.0030
					RPM	5200	3500	2600	2100	1700	1270	1000	870	750	650	580	500
					IPM (FEED)	4	4	4	4	4	4	4	3	3	3	3	3
	11.1		0.7D	0.3D	SFM (Vc)	110	95	85	85	95	90	85	95	90	90	85	90
					IPT (fz)	.0002	.0003	.0005	.0006	.0007	.0009	.0011	.0014	.0016	.0019	.0021	.0023
					RPM	4400	2900	2100	1700	1430	1100	870	730	620	540	480	430
					IPM (FEED)	2	2	2	2	2	2	2	2	2	2	2	2
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.7D	0.3D	SFM (Vc)	180	160	145	140	155	145	140	155	145	150	145	155
					IPT (fz)	.0004	.0006	.0011	.0016	.0021	.0036	.0045	.0054	.0065	.0071	.0080	.0075
					RPM	7300	4900	3600	2900	2400	1800	1430	1200	1000	920	810	730
					IPM (FEED)	6	6	8	9	10	13	13	13	13	13	13	11
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.7D	0.3D	SFM (Vc)	530	470	445	430	475	450	420	470	440	440	430	445
					IPT (fz)	.0003	.0004	.0005	.0007	.0009	.0014	.0017	.0024	.0028	.0028	.0031	.0036
					RPM	21500	14300	10900	8800	7260	5500	4300	3600	3000	2700	2400	2100
					IPM (FEED)	11	11	11	13	13	15	15	17	17	15	15	15



YG CARBIDE END MILLS

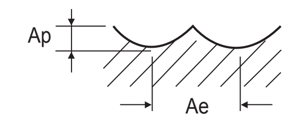
RECOMMENDED CUTTING CONDITIONS

E5249, E5014, E5018, E5251 SERIES TiAlN Coated

2 FLUTE BALL NOSE - PLANE

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/32	1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	11/16	13/16
						Diameter (Ø)											
P	1-4	Non-alloy steel	0.7D	0.3D	SFM (Vc)	200	175	165	160	175	155	155	175	175	165	160	165
					IPT (fz)	.0004	.0006	.0007	.0009	.0011	.0016	.0019	.0019	.0021	.0025	.0028	.0032
					RPM	8110	5400	4080	3240	2640	1920	1560	1320	1180	1020	900	780
					IPM (FEED)	6	6	6	6	6	6	6	5	5	5	5	5
	5		0.7D	0.3D	SFM (Vc)	170	150	135	130	150	135	130	150	140	135	135	145
					IPT (fz)	.0002	.0003	.0005	.0006	.0007	.0009	.0011	.0013	.0016	.0018	.0020	.0022
					RPM	6840	4560	3240	2640	2270	1680	1320	1140	960	840	740	670
					IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3	3
	6-7	Low alloy steel	0.7D	0.3D	SFM (Vc)	200	175	165	160	175	155	155	175	175	165	160	165
					IPT (fz)	.0004	.0006	.0007	.0009	.0011	.0016	.0019	.0019	.0021	.0025	.0028	.0032
					RPM	8110	5400	4080	3240	2640	1920	1560	1320	1180	1020	900	780
					IPM (FEED)	6	6	6	6	6	6	6	5	5	5	5	5
	8-9		0.7D	0.3D	SFM (Vc)	170	150	135	130	150	135	130	150	140	135	135	145
					IPT (fz)	.0002	.0003	.0005	.0006	.0007	.0009	.0011	.0013	.0016	.0018	.0020	.0022
					RPM	6840	4560	3240	2640	2270	1680	1320	1140	960	840	740	670
					IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3	3
	10	High alloyed steel, and tool steel	0.7D	0.3D	SFM (Vc)	200	175	165	160	175	155	155	175	175	165	160	165
					IPT (fz)	.0004	.0006	.0007	.0009	.0011	.0016	.0019	.0019	.0021	.0025	.0028	.0032
					RPM	8110	5400	4080	3240	2640	1920	1560	1320	1180	1020	900	780
					IPM (FEED)	6	6	6	6	6	6	6	5	5	5	5	5
	11.1		0.7D	0.3D	SFM (Vc)	170	150	135	130	150	135	130	150	140	135	135	145
					IPT (fz)	.0002	.0003	.0005	.0006	.0007	.0009	.0011	.0013	.0016	.0018	.0020	.0022
					RPM	6840	4560	3240	2640	2270	1680	1320	1140	960	840	740	670
					IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3	3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.7D	0.3D	SFM (Vc)	280	250	230	225	245	225	165	250	230	235	215	240
					IPT (fz)	.0004	.0007	.0011	.0015	.0022	.0036	.0060	.0052	.0064	.0069	.0083	.0079
					RPM	11400	7680	5640	4560	3720	2760	1680	1920	1560	1440	1200	1140
					IPM (FEED)	9	10	12	14	16	20	20	20	20	20	20	18
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.7D	0.3D	SFM (Vc)	825	730	685	650	740	705	660	740	690	685	670	690
					IPT (fz)	.0003	.0004	.0005	.0008	.0009	.0013	.0017	.0024	.0029	.0027	.0031	.0035
					RPM	33600	22320	16800	13200	11280	8640	6720	5640	4680	4200	3720	3240
					IPM (FEED)	17	17	17	20	20	23	23	27	27	23	23	23



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
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V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

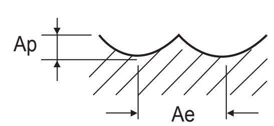
YG CARBIDE END MILLS

RECOMMENDED CUTTING CONDITIONS

E5250, E5060, E5062, E5252 SERIES 4 FLUTE BALL NOSE - PLANE

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/32	1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	11/16	13/16
						Diameter (Ø)											
P	1-4	Non-alloy steel	0.7D	0.3D	SFM (Vc)	130	115	105	105	110	105	100	115	110	105	105	105
					IPT (fz)	.0003	.0004	.0006	.0007	.0009	.0012	.0015	.0014	.0017	.0019	.0022	.0025
					RPM	5200	3500	2600	2100	1700	1270	1000	870	750	650	580	500
					IPM (FEED)	6	6	6	6	6	6	6	5	5	5	5	5
	5		0.7D	0.3D	SFM (Vc)	110	95	85	85	95	90	85	95	90	90	85	90
					IPT (fz)	.0002	.0003	.0004	.0004	.0005	.0007	.0009	.0010	.0012	.0014	.0016	.0017
					RPM	4400	2900	2100	1700	1430	1100	870	730	620	540	480	430
					IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3	3
	6-7	Low alloy steel	0.7D	0.3D	SFM (Vc)	130	115	105	105	110	105	100	115	110	105	105	105
					IPT (fz)	.0003	.0004	.0006	.0007	.0009	.0012	.0015	.0014	.0017	.0019	.0022	.0025
					RPM	5200	3500	2600	2100	1700	1270	1000	870	750	650	580	500
					IPM (FEED)	6	6	6	6	6	6	6	5	5	5	5	5
	8-9		0.7D	0.3D	SFM (Vc)	110	95	85	85	95	90	85	95	90	90	85	90
					IPT (fz)	.0002	.0003	.0004	.0004	.0005	.0007	.0009	.0010	.0012	.0014	.0016	.0017
					RPM	4400	2900	2100	1700	1430	1100	870	730	620	540	480	430
					IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3	3
	10	High alloyed steel, and tool steel	0.7D	0.3D	SFM (Vc)	130	115	105	105	110	105	100	115	110	105	105	105
					IPT (fz)	.0003	.0004	.0006	.0007	.0009	.0012	.0015	.0014	.0017	.0019	.0022	.0025
					RPM	5200	3500	2600	2100	1700	1270	1000	870	750	650	580	500
					IPM (FEED)	6	6	6	6	6	6	6	5	5	5	5	5
	11.1		0.7D	0.3D	SFM (Vc)	110	95	85	85	95	90	85	95	90	90	85	90
					IPT (fz)	.0002	.0003	.0004	.0004	.0005	.0007	.0009	.0010	.0012	.0014	.0016	.0017
					RPM	4400	2900	2100	1700	1430	1100	870	730	620	540	480	430
					IPM (FEED)	3	3	3	3	3	3	3	3	3	3	3	3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.7D	0.3D	SFM (Vc)	180	160	145	140	155	145	140	155	145	150	145	155
					IPT (fz)	.0003	.0005	.0008	.0012	.0016	.0026	.0033	.0040	.0048	.0052	.0059	.0058
					RPM	7300	4900	3600	2900	2400	1800	1430	1200	1000	920	810	730
					IPM (FEED)	9	10	12	14	15	19	19	19	19	19	19	17
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.7D	0.3D	SFM (Vc)	530	470	445	430	475	450	420	470	440	440	430	445
					IPT (fz)	.0002	.0003	.0004	.0006	.0007	.0010	.0013	.0018	.0022	.0020	.0023	.0026
					RPM	21500	14300	10900	8800	7260	5500	4300	3600	3000	2700	2400	2100
					IPM (FEED)	17	17	17	20	20	22	22	26	26	22	22	22



YG CARBIDE END MILLS

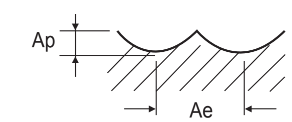
RECOMMENDED CUTTING CONDITIONS

E5250, E5060, E5062, E5252 SERIES TiAlN Coated

4 FLUTE BALL NOSE - PLANE

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/32	1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	11/16	13/16
						Diameter (Ø)											
P	1-4	Non-alloy steel	0.7D	0.3D	SFM (Vc)	200	175	165	160	175	155	155	175	175	165	160	165
					IPT (fz)	.0003	.0004	.0006	.0008	.0009	.0012	.0014	.0015	.0017	.0020	.0022	.0026
					RPM	8110	5400	4080	3240	2640	1920	1560	1320	1180	1020	900	780
					IPM (FEED)	9	9	9	10	9	9	9	8	8	8	8	8
	5		0.7D	0.3D	SFM (Vc)	170	150	135	130	150	135	130	150	140	135	135	145
					IPT (fz)	.0001	.0002	.0003	.0004	.0004	.0006	.0008	.0009	.0010	.0012	.0014	.0015
					RPM	6840	4560	3240	2640	2270	1680	1320	1140	960	840	740	670
					IPM (FEED)	4	4	4	4	4	4	4	4	4	4	4	4
	6-7	Low alloy steel	0.7D	0.3D	SFM (Vc)	200	175	165	160	175	155	155	175	175	165	160	165
					IPT (fz)	.0003	.0004	.0006	.0008	.0009	.0012	.0014	.0015	.0017	.0020	.0022	.0026
					RPM	8110	5400	4080	3240	2640	1920	1560	1320	1180	1020	900	780
					IPM (FEED)	9	9	9	10	9	9	9	8	8	8	8	8
	8-9		0.7D	0.3D	SFM (Vc)	170	150	135	130	150	135	130	150	140	135	135	145
					IPT (fz)	.0001	.0002	.0003	.0004	.0004	.0006	.0008	.0009	.0010	.0012	.0014	.0015
					RPM	6840	4560	3240	2640	2270	1680	1320	1140	960	840	740	670
					IPM (FEED)	4	4	4	4	4	4	4	4	4	4	4	4
	10	High alloyed steel, and tool steel	0.7D	0.3D	SFM (Vc)	200	175	165	160	175	155	155	175	175	165	160	165
					IPT (fz)	.0003	.0004	.0006	.0008	.0009	.0012	.0014	.0015	.0017	.0020	.0022	.0026
					RPM	8110	5400	4080	3240	2640	1920	1560	1320	1180	1020	900	780
					IPM (FEED)	9	9	9	10	9	9	9	8	8	8	8	8
	11.1		0.7D	0.3D	SFM (Vc)	170	150	135	130	150	135	130	150	140	135	135	145
					IPT (fz)	.0001	.0002	.0003	.0004	.0004	.0006	.0008	.0009	.0010	.0012	.0014	.0015
					RPM	6840	4560	3240	2640	2270	1680	1320	1140	960	840	740	670
					IPM (FEED)	4	4	4	4	4	4	4	4	4	4	4	4
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.7D	0.3D	SFM (Vc)	280	250	230	225	245	225	225	250	230	235	215	240
					IPT (fz)	.0003	.0005	.0008	.0012	.0015	.0026	.0032	.0038	.0048	.0052	.0063	.0059
					RPM	11400	7680	5640	4560	3720	2760	2270	1920	1560	1440	1200	1140
					IPM (FEED)	14	15	18	21	23	29	29	29	30	30	30	27
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.7D	0.3D	SFM (Vc)	825	730	685	650	740	705	660	740	690	685	670	690
					IPT (fz)	.0002	.0003	.0004	.0006	.0007	.0010	.0013	.0018	.0022	.0021	.0024	.0027
					RPM	33600	22320	16800	13200	11280	8640	6720	5640	4680	4200	3720	3240
					IPM (FEED)	26	26	26	31	31	35	35	41	41	35	35	35



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

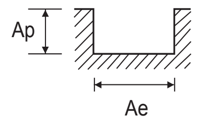
YG CARBIDE END MILLS

RECOMMENDED CUTTING CONDITIONS

EH527 SERIES TiAlN Coated 2 FLUTE - SLOTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	20.0
P	1-2	Non-alloy steel	1.0D	1.0D	SFM (Vc)	160	160	160	160	155	160	160	155	160	160	160
					IPT (fz)	.0003	.0005	.0006	.0008	.0010	.0013	.0016	.0020	.0022	.0031	.0039
					RPM	7700	5180	3920	3080	2520	1960	1540	1260	1120	980	770
					IPM (FEED)	4	5	5	5	5	5	5	5	5	6	6
	3-4		1.0D	1.0D	SFM (Vc)	140	140	140	135	140	140	135	140	140	140	140
					IPT (fz)	.0003	.0004	.0006	.0008	.0009	.0012	.0015	.0018	.0020	.0030	.0037
					RPM	6720	4480	3360	2660	2240	1680	1330	1120	980	840	672
					IPM (FEED)	4	4	4	4	4	4	4	4	4	5	5
	5		1.0D	1.0D	SFM (Vc)	115	115	115	115	115	115	115	115	115	115	115
					IPT (fz)	.0003	.0004	.0005	.0007	.0008	.0011	.0013	.0016	.0019	.0029	.0036
					RPM	5600	3640	2800	2240	1820	1400	1120	924	798	700	560
					IPM (FEED)	3	3	3	3	3	3	3	3	3	4	4
	6	Low alloy steel	1.0D	1.0D	SFM (Vc)	160	160	160	160	155	160	160	155	160	160	160
					IPT (fz)	.0003	.0005	.0006	.0008	.0010	.0013	.0016	.0020	.0022	.0031	.0039
					RPM	7700	5180	3920	3080	2520	1960	1540	1260	1120	980	770
					IPM (FEED)	4	5	5	5	5	5	5	5	5	6	6
	7		1.0D	1.0D	SFM (Vc)	140	140	140	135	140	140	135	140	140	140	140
					IPT (fz)	.0003	.0004	.0006	.0008	.0009	.0012	.0015	.0018	.0020	.0030	.0037
					RPM	6720	4480	3360	2660	2240	1680	1330	1120	980	840	672
					IPM (FEED)	4	4	4	4	4	4	4	4	4	5	5
	8-9		1.0D	1.0D	SFM (Vc)	115	115	115	115	115	115	115	115	115	115	115
					IPT (fz)	.0003	.0004	.0005	.0007	.0008	.0011	.0013	.0016	.0019	.0029	.0036
					RPM	5600	3640	2800	2240	1820	1400	1120	924	798	700	560
					IPM (FEED)	3	3	3	3	3	3	3	3	3	4	4
	10	High alloyed steel, and tool steel	1.0D	1.0D	SFM (Vc)	160	160	160	160	155	160	160	155	160	160	160
					IPT (fz)	.0003	.0005	.0006	.0008	.0010	.0013	.0016	.0020	.0022	.0031	.0039
					RPM	7700	5180	3920	3080	2520	1960	1540	1260	1120	980	770
					IPM (FEED)	4	5	5	5	5	5	5	5	5	6	6
	11.1		1.0D	1.0D	SFM (Vc)	115	115	115	115	115	115	115	115	115	115	115
					IPT (fz)	.0003	.0004	.0005	.0007	.0008	.0011	.0013	.0016	.0019	.0029	.0036
					RPM	5600	3640	2800	2240	1820	1400	1120	924	798	700	560
					IPM (FEED)	3	3	3	3	3	3	3	3	3	4	4
M	12-14.2	Stainless steel	1.0D	1.0D	SFM (Vc)	230	230	230	230	225	230	230	225	220	230	230
					IPT (fz)	.0002	.0003	.0004	.0004	.0005	.0007	.0009	.0011	.0013	.0014	.0018
					RPM	11200	7420	5600	4480	3640	2800	2240	1820	1540	1400	1120
					IPM (FEED)	4	4	4	4	4	4	4	4	4	4	4
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	1.0D	SFM (Vc)	190	180	185	180	180	185	190	175	180	185	185
					IPT (fz)	.0004	.0007	.0009	.0011	.0017	.0022	.0030	.0043	.0048	.0054	.0072
					RPM	9100	5880	4480	3500	2940	2240	1820	1400	1260	1120	900
					IPM (FEED)	8	8	8	8	10	10	11	12	12	12	13
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	1.0D	1.0D	SFM (Vc)	460	475	460	460	460	460	460	450	465	460	460
					IPT (fz)	.0004	.0006	.0008	.0010	.0013	.0017	.0021	.0026	.0030	.0034	.0042
					RPM	22400	15400	11200	8960	7420	5600	4480	3640	3220	2800	2240
					IPM (FEED)	18	18	18	18	19	19	19	19	19	19	19
	26-28	Copper and Copper Alloys (Bronze / Brass)	1.0D	1.0D	SFM (Vc)	345	345	345	345	345	345	345	345	345	345	345
					IPT (fz)	.0004	.0006	.0008	.0010	.0013	.0017	.0021	.0025	.0029	.0033	.0042
					RPM	16800	11200	8400	6720	5600	4200	3360	2800	2380	2100	1680
					IPM (FEED)	13	13	13	13	14	14	14	14	14	14	14



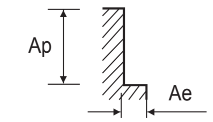
YG CARBIDE END MILLS

RECOMMENDED CUTTING CONDITIONS

EH540 SERIES TiAlN Coated 4 FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	20.0
P	1-2	Non-alloy steel	0.1D	1.5D	SFM (Vc)	160	160	160	160	155	160	160	155	160	160	160
					IPT (fz)	.0004	.0007	.0010	.0012	.0015	.0019	.0024	.0030	.0033	.0043	.0055
					RPM	7700	5180	3920	3080	2520	1960	1540	1260	1120	980	770
					IPM (FEED)	13	15	15	15	15	15	15	15	15	17	17
	3-4		0.1D	1.5D	SFM (Vc)	140	140	140	135	140	140	135	140	140	140	140
					IPT (fz)	.0004	.0007	.0010	.0012	.0015	.0019	.0024	.0029	.0033	.0042	.0052
					RPM	6720	4480	3360	2660	2240	1680	1330	1120	980	840	670
					IPM (FEED)	12	13	13	13	13	13	13	13	13	14	14
	5		0.1D	1.5D	SFM (Vc)	115	115	115	115	115	115	115	115	115	115	115
					IPT (fz)	.0004	.0007	.0009	.0011	.0014	.0018	.0022	.0027	.0031	.0043	.0054
					RPM	5600	3640	2800	2240	1820	1400	1120	920	800	700	560
					IPM (FEED)	9	10	10	10	10	10	10	10	10	12	12
	6	Low alloy steel	0.1D	1.5D	SFM (Vc)	160	160	160	160	155	160	160	155	160	160	160
					IPT (fz)	.0004	.0007	.0010	.0012	.0015	.0019	.0024	.0030	.0033	.0043	.0055
					RPM	7700	5180	3920	3080	2520	1960	1540	1260	1120	980	770
					IPM (FEED)	13	15	15	15	15	15	15	15	15	17	17
	7		0.1D	1.5D	SFM (Vc)	140	140	140	135	140	140	135	140	140	140	140
					IPT (fz)	.0004	.0007	.0010	.0012	.0015	.0019	.0024	.0029	.0033	.0042	.0052
					RPM	6720	4480	3360	2660	2240	1680	1330	1120	980	840	670
					IPM (FEED)	12	13	13	13	13	13	13	13	13	14	14
	8-9		0.1D	1.5D	SFM (Vc)	115	115	115	115	115	115	115	115	115	115	115
					IPT (fz)	.0004	.0007	.0009	.0011	.0014	.0018	.0022	.0027	.0031	.0043	.0054
					RPM	5600	3640	2800	2240	1820	1400	1120	920	800	700	560
					IPM (FEED)	9	10	10	10	10	10	10	10	10	12	12
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM (Vc)	160	160	160	160	155	160	160	155	160	160	160
					IPT (fz)	.0004	.0007	.0010	.0012	.0015	.0019	.0024	.0030	.0033	.0043	.0055
					RPM	7700	5180	3920	3080	2520	1960	1540	1260	1120	980	770
					IPM (FEED)	13	15	15	15	15	15	15	15	15	17	17
	11.1		0.1D	1.5D	SFM (Vc)	115	115	115	115	115	115	115	115	115	115	115
					IPT (fz)	.0004	.0007	.0009	.0011	.0014	.0018	.0022	.0027	.0031	.0043	.0054
					RPM	5600	3640	2800	2240	1820	1400	1120	920	800	700	560
					IPM (FEED)	9	10	10	10	10	10	10	10	10	12	12
M	12-14.2	Stainless steel	0.1D	1.5D	SFM (Vc)	230	230	230	230	225	230	230	225	220	230	230
					IPT (fz)	.0002	.0004	.0005	.0006	.0008	.0010	.0012	.0015	.0018	.0021	.0029
					RPM	11200	7420	5600	4480	3640	2800	2240	1820	1540	1400	1120
					IPM (FEED)	11	11	11	11	11	11	11	11	11	12	13
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.1D	1.5D	SFM (Vc)	190	180	185	180	180	185	190	175	180	185	185
					IPT (fz)	.0007	.0011	.0014	.0018	.0026	.0036	.0045	.0063	.0071	.0083	.0111
					RPM	9100	5880	4480	3500	2940	2240	1820	1400	1260	1120	900
					IPM (FEED)	25	25	25	25	30	32	33	35	36	37	40
N	21-25	Aluminum-wrought alloy Aluminum-cast, alloyed	0.1D	1.5D	SFM (Vc)	460	475	460	460	460	460	460	450	465	460	460
					IPT (fz)	.0006	.0009	.0012	.0015	.0019	.0025	.0031	.0038	.0043	.0050	.0063
					RPM	22400	15400	11200	8960	7420	5600	4480	3640	3220	2800	2240
					IPM (FEED)	53	53	53	53	56	56	56	56	56	56	56
	26-28	Copper and Copper Alloys (Bronze / Brass)	0.1D	1.0D	SFM (Vc)	345	345	345	345	345	345	345	345	345	345	345
					IPT (fz)	.0006	.0009	.0012	.0015	.0019	.0026	.0032	.0038	.0045	.0051	.0064
					RPM	16800	11200	8400	6720	5600	4200	3360	2800	2380	2100	1680
					IPM (FEED)	40	40	40	40	43	43	43	43	43	43	43



PROPERTIES AND APPLICATIONS OF COATINGS

	Titanium Nitride	Titanium Carbonitride	Super TiAlN "F" Coatings	Super TiAlN "E" Coatings
Hardness	82 Rc	92 Rc	92 Rc	95 Rc
Coefficient of Friction Against Dry Steel (.8)	.4	.4	.4	.4
Coating Thickness 3 Microns = .0001	1 - 4	1 - 4	1 - 5	1 - 3
Maximum Working Temperature	1100 F	750F	1470 F	1470 F
Coating Color	Gold	Blue - Gray	Violet - Gray	Violet - Gray
Key Characteristics	Good General Purpose	Good Wear Resistance Good Toughness Moderate Heat Resistance	Enhanced Toughness High Heat Resistance	High Hardness Enhanced Toughness High Heat Resistance
Primary Applications	Machining of Iron Based Materials	General Machining of Various Materials	Steel, Cast Iron, Stainless, Nickel Based Alloys, High Temp and Titanium Alloys, High Speed Machining Wet, Dry, or Semi Dry Condition	Hardened Workpieces, Steel, Cast Iron, Stainless, Nickel Based Alloys, High Temp and Titanium Alloys, Machining Wet, Dry, or Semi Dry Condition

YG:TYLON SUPER TiAlN COATED TOOLS CAN BE RUN 20% - 50% FASTER THAN TiN or TiCN ON MOST MATERIALS

ONLY ONE COATED PM60 END MILLS

- Perfect Solution of Carbide Chipping under Vibrations

SELECTION GUIDE

YG MILLING TOOLS

HSS PM60 ONLY ONE END MILLS

Perfect solution to protect Carbide chipping problems under vibrations

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.C733

SERIES	GYG64	GYG67	GYG65	GYG66	GYG69	GYG68	GYG70
FLUTE	2	4	4	4	4&5	3-6	3-6
HELIX ANGLE	30°	30°	30°	M-Helix	M-Helix	30°	30°
CUTTING EDGE SHAPE	SQUARE	BALL NOSE	SQUARE	SQUARE	CORNER RADIUS ROUGHING	ROUGHING	ROUGHING
SIZE MIN	D1/8	R1/16	D1/8	D1/8	D1/4	D1/4	D1/4
SIZE MAX	D1	R1/2	D1	D1	D1	D1-1/4	D1-1/4
PAGE	C726	C727	C728	C729	C730	C731	C732
	CENTER CUT		CENTER CUT	CENTER CUT	FINE CENTER CUT	FINE CENTER CUT	COARSE CENTER CUT
	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating





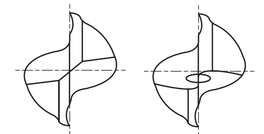


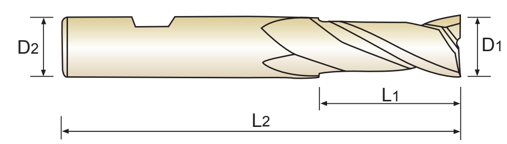
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	GYG64	GYG67	GYG65	GYG66	GYG69	GYG68	GYG70
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	◎	◎	◎	◎	◎	◎
	2		About 0.45% C	Annealed	190	13	◎	◎	◎	◎	◎	◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎	◎
	4		About 0.75% C	Annealed	270	28	◎	◎	◎	◎	◎	◎	◎
	5		About 0.75% C	Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎	◎
	6	Low alloy steel		Annealed	180	10	◎	◎	◎	◎	◎	◎	◎
	7			Quenched & Tempered	275	29	◎	◎	◎	◎	◎	◎	◎
	8			Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎	◎
	9			Quenched & Tempered	350	38	○	○	○	○	○	○	○
	10	High alloyed steel, and tool steel		Annealed	200	15	◎	◎	◎	◎	◎	◎	◎
	11			Quenched & Tempered	325	35	○	○	○	○	○	○	○
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎	◎	◎	◎	◎	◎	◎
	13		Martensitic	Quenched & Tempered	240	23	◎	◎	◎	◎	◎	◎	◎
	14		Austenitic		180	10	◎	◎	◎	◎	◎	◎	◎
K	15	Grey cast iron	Pearlitic / ferritic		180	10	◎	◎	◎	◎	◎	◎	◎
	16		Pearlitic (Martensitic)		260	26	◎	◎	◎	◎	◎	◎	◎
	17	Nodular cast iron	Ferritic		160	3	◎	◎	◎	◎	◎	◎	◎
	18		Pearlitic		250	25	◎	◎	◎	◎	◎	◎	◎
	19	Malleable cast iron	Ferritic		130		◎	◎	◎	◎	◎	◎	◎
	20		Pearlitic		230	21	◎	◎	◎	◎	◎	◎	◎
N	21	Aluminum-wrought alloy	Not Curable		60								
	22		Curable	Hardened	100								
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75								
	24		≤ 12% Si, Curable	Hardened	90								
	25		> 12% Si, Not Curable		130								
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○	○	○	○	○	○	○
	27		CuZn, CuSnZn (Brass)		90		○	○	○	○	○	○	○
	28		CuSn, lead-free copper and electrolytic copper		100		○	○	○	○	○	○	○
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic										
	30		Rubber, Wood, etc.										
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15							
	32			Cured	280	30							
	33		Ni or Co Based	Annealed	250	25							
	34			Cured	350	38							
	35			Cast	320	34							
	36	Titanium Alloys	Pure Titanium		400 Rm								
	37		Alpha + Beta Alloys	Hardened	1050 Rm								
H	38	Hardened steel		Hardened	550	55							
	39			Hardened	630	60							
	40	Chilled Cast Iron		Cast	400	42	○	○	○	○	○	○	○
	41	Hardened Cast Iron		Hardened	550	55							

ONLY ONE END MILLS

FLAT SHANK **GYG64** SERIES

PM60, 2 FLUTE (Center Cut)





PM 60 | 2 | 30° | FLAT | p.C733

Unit : Inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
Y-COATED	D1	D2	L1	L2
GYG64008	**1/8**	3/8	3/8	2-5/16
GYG64012	**3/16**	3/8	7/16	2-5/16
GYG64016	**1/4**	3/8	1/2	2-5/16
GYG64020	**5/16**	3/8	9/16	2-5/16
GYG64024	**3/8**	3/8	9/16	2-5/16
GYG64032	**1/2**	1/2	1	3
GYG64040	**5/8**	5/8	1-5/16	3-7/16
GYG64048	**3/4**	3/4	1-5/16	3-7/16
GYG64064	**1**	1	1-5/8	4-1/8

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6

◎ : Excellent ○ : Good

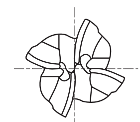
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎

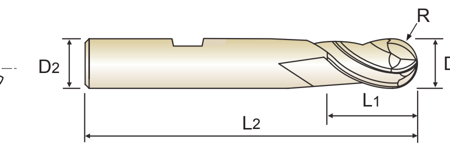
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○												○	

ONLY ONE END MILLS

FLAT SHANK **GYG67** SERIES

PM60, 4 FLUTE BALL NOSE





PM 60 | 4 | 30° | R ±.001 | FLAT | p.C734

Unit : Inch

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
Y-COATED	R	D1	D2	L1	L2
GYG67008	R1/16	**1/8**	3/8	3/8	2-5/16
GYG67012	R3/32	**3/16**	3/8	1/2	2-3/8
GYG67016	R1/8	**1/4**	3/8	5/8	2-7/16
GYG67020	R5/32	**5/16**	3/8	3/4	2-1/2
GYG67024	R3/16	**3/8**	3/8	3/4	2-1/2
GYG67032	R1/4	**1/2**	1/2	1-1/4	3-1/4
GYG67040	R5/16	**5/8**	5/8	1-5/8	3-3/4
GYG67048	R3/8	**3/4**	3/4	1-5/8	3-7/8
GYG67064	R1/2	**1**	1	2	4-1/2

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6

◎ : Excellent ○ : Good

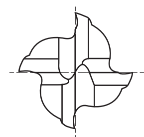
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎

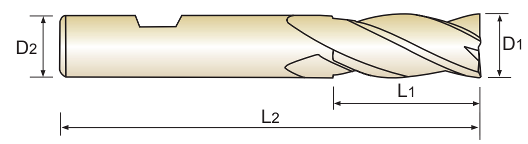
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○												○	

YG ONLY ONE END MILLS

FLAT SHANK **GYG65 SERIES**

PM60, 4 FLUTE (Center Cut)





PM 60 | 4 | 30° | FLAT

p.C735

Unit : Inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
Y-COATED	D_1	D_2	L_1	L_2
GYG65008	1/8	3/8	3/8	2-5/16
GYG65012	3/16	3/8	1/2	2-3/8
GYG65016	1/4	3/8	5/8	2-7/16
GYG65020	5/16	3/8	3/4	2-1/2
GYG65024	3/8	3/8	3/4	2-1/2
GYG65032	1/2	1/2	1-1/4	3-1/4
GYG65040	5/8	5/8	1-5/8	3-3/4
GYG65048	3/4	3/4	1-5/8	3-7/8
GYG65056	7/8	7/8	1-7/8	4-1/8
GYG65064	1	1	2	4-1/2

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎

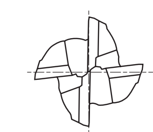
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○												○	

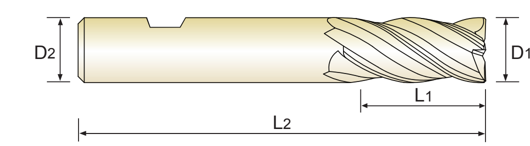
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG ONLY ONE END MILLS

FLAT SHANK **GYG66 SERIES**

PM60, 4 FLUTE MULTIPLE HELIX (Center Cut)





PM 60 | 4 | 35°/37° | FLAT

p.C736

Unit : Inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
Y-COATED	D_1	D_2	L_1	L_2
GYG66008	1/8	3/8	3/8	2-5/16
GYG66012	3/16	3/8	1/2	2-3/8
GYG66016	1/4	3/8	5/8	2-7/16
GYG66020	5/16	3/8	3/4	2-1/2
GYG66024	3/8	3/8	3/4	2-1/2
GYG66032	1/2	1/2	1-1/4	3-1/4
GYG66040	5/8	5/8	1-5/8	3-3/4
GYG66048	3/4	3/4	1-5/8	3-7/8
GYG66064	1	1	2	4-1/2

Mill Dia. Tolerance (inch)	Shank Dia. Tolerance
0~-.0012	h6

◎ : Excellent ○ : Good

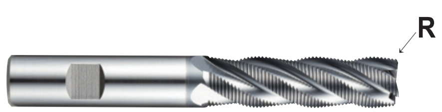
ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎

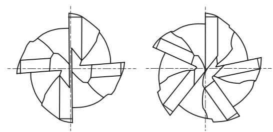
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○												○	

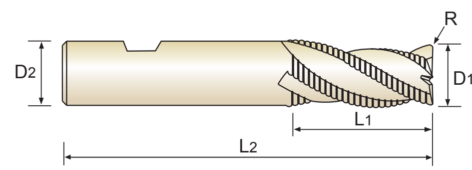
YG ONLY ONE END MILLS

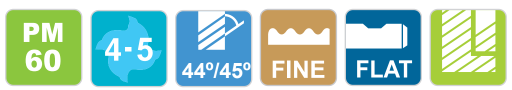
FLAT SHANK **GYG69 SERIES**

PM60, MULTI FLUTE MULTIPLE HELIX CORNER RADIUS ROUGHING - FINE (Center Cut)









p.C737

5 Flute, 44°/44.5°/45°

Unit : Inch

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
Y-COATED	R	D1	D2	L1	L2	
GYG69016	R.020	1/4	3/8	5/8	2-7/16	4
GYG69020	R.020	5/16	3/8	3/4	2-1/2	4
GYG69024	R.020	3/8	3/8	3/4	2-1/2	4
GYG69032	R.020	1/2	1/2	1-1/4	3-1/4	4
GYG69040	R.040	5/8	5/8	1-1/4	3-3/8	5
GYG69048	R.040	3/4	3/4	1-5/8	3-7/8	5
GYG69064	R.040	1	1	2	4-1/2	5

Mill Dia. Tolerance (inch)
0 ~ +.0030

◎ : Excellent ○ : Good

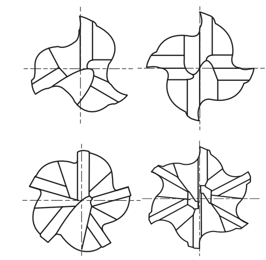
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎

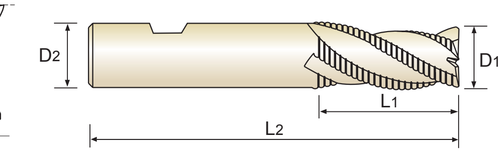
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○												○	

YG ONLY ONE END MILLS

FLAT SHANK **GYG68 SERIES**

PM60, MULTI FLUTE ROUGHING- FINE (Center Cut)





p.C738

Unit : Inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
Y-COATED	D1	D2	L1	L2	
GYG68016	1/4	3/8	5/8	2-7/16	3
GYG68020	5/16	3/8	3/4	2-1/2	3
GYG68901	5/16	3/8	1-3/8	3_3/16	3
GYG68024	3/8	3/8	3/4	2-1/2	4
GYG68902	3/8	3/8	1-1/2	3-1/4	4
GYG68032	1/2	1/2	1-1/4	3-1/4	4
GYG68903	1/2	1/2	2	4	4
GYG68040	5/8	5/8	1-5/8	3-3/4	4
GYG68904	5/8	5/8	2-1/2	4-5/8	4
GYG68048	3/4	3/4	1-5/8	3-7/8	4
GYG68905	3/4	3/4	2-1/2	4-3/4	4
GYG68906	3/4	3/4	3	5-1/4	4
GYG68064	1	1	2	4-1/2	5
GYG68907	1	1	4	6-1/2	5
GYG68116	1-1/4	1-1/4	2	4-1/2	6

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎

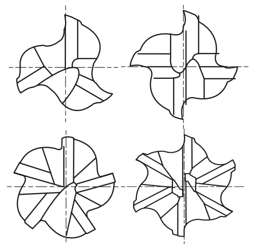
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○												○	

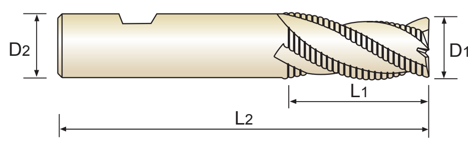
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILL
STANDARD COBALT & HSS
TECHNICAL DATA

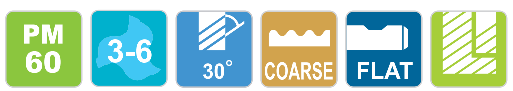
YG ONLY ONE END MILLS

FLAT SHANK **GYG70 SERIES**

PM60, MULTI FLUTE ROUGHING- COARSE (Center Cut)







p.C738

Unit : Inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
Y-COATED	D1	D2	L1	L2	
GYG70016	1/4	3/8	5/8	2-7/16	3
GYG70020	5/16	3/8	3/4	2-1/2	3
GYG70024	3/8	3/8	3/4	2-1/2	4
GYG70032	1/2	1/2	1-1/4	3-1/4	4
GYG70040	5/8	5/8	1-5/8	3-3/4	4
GYG70048	3/4	3/4	1-5/8	3-7/8	4
GYG70064	1	1	2	4-1/2	5
GYG70116	1-1/4	1-1/4	2	4-1/2	6

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○												○	

YG ONLY ONE END MILLS

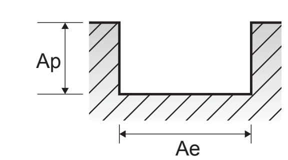
RECOMMENDED CUTTING CONDITIONS

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

GYG64 SERIES 2 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1
P	1	Non-alloy steel	1.0D	0.5D	SFM (Vc) IPT (fz) RPM IPM (FEED)	185 .0006 5710 7	245 .0013 4950 13	260 .0015 3960 12	255 .0021 3130 13	260 .0028 2640 15	265 .0030 2030 12	265 .0039 1620 13	235 .0046 1200 11	235 .0041 890 7
P	2	Non-alloy steel	1.0D	0.5D	SFM (Vc) IPT (fz) RPM IPM (FEED)	150 .0006 4610 6	200 .0012 4080 10	215 .0014 3310 9	215 .0022 2650 11	225 .0029 2270 13	215 .0033 1650 11	225 .0034 1380 9	195 .0042 990 8	195 .0044 750 7
P	3-4	Non-alloy steel	1.0D	0.5D	SFM (Vc) IPT (fz) RPM IPM (FEED)	125 .0007 3810 5	160 .0014 3280 9	170 .0017 2610 9	180 .0022 2170 10	180 .0031 1840 11	170 .0036 1300 9	175 .0039 1080 9	175 .0042 890 7	150 .0047 580 5
P	5	Non-alloy steel	1.0D	0.5D	SFM (Vc) IPT (fz) RPM IPM (FEED)	85 .0007 2610 3	105 .0011 2140 5	110 .0015 1650 5	115 .0020 1400 6	110 .0027 1140 6	110 .0031 850 5	110 .0036 680 5	110 .0041 550 5	115 .0041 430 4
P	6	Low alloy steel	1.0D	0.5D	SFM (Vc) IPT (fz) RPM IPM (FEED)	150 .0006 4610 6	200 .0012 4080 10	215 .0014 3310 9	215 .0022 2650 11	225 .0029 2270 13	215 .0033 1650 11	225 .0034 1380 9	195 .0042 990 8	195 .0044 750 7
P	7	Low alloy steel	1.0D	0.5D	SFM (Vc) IPT (fz) RPM IPM (FEED)	125 .0007 3810 5	160 .0014 3280 9	170 .0017 2610 9	180 .0022 2170 10	180 .0031 1840 11	170 .0036 1300 9	175 .0039 1080 9	175 .0042 890 7	150 .0047 580 5
P	8	Low alloy steel	1.0D	0.5D	SFM (Vc) IPT (fz) RPM IPM (FEED)	85 .0007 2610 3	105 .0011 2140 5	110 .0015 1650 5	115 .0020 1400 6	110 .0027 1140 6	110 .0031 850 5	110 .0036 680 5	110 .0041 550 5	115 .0041 430 4
P	9	Low alloy steel	1.0D	0.5D	SFM (Vc) IPT (fz) RPM IPM (FEED)	65 .0007 2010 3	80 .0011 1670 4	85 .0014 1300 4	90 .0019 1080 4	85 .0028 870 5	85 .0028 650 4	90 .0036 540 4	90 .0039 450 4	80 .0040 300 2
P	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM (Vc) IPT (fz) RPM IPM (FEED)	150 .0006 4610 6	200 .0012 4080 10	215 .0014 3310 9	215 .0022 2650 11	225 .0029 2270 13	215 .0033 1650 11	225 .0034 1380 9	195 .0042 990 8	195 .0044 750 7
P	11.1	High alloyed steel, and tool steel	1.0D	0.5D	SFM (Vc) IPT (fz) RPM IPM (FEED)	85 .0007 2610 3	105 .0011 2140 5	110 .0015 1650 5	115 .0020 1400 6	110 .0027 1140 6	110 .0031 850 5	110 .0036 680 5	110 .0041 550 5	115 .0041 430 4
P	11.2	High alloyed steel, and tool steel	1.0D	0.3D	SFM (Vc) IPT (fz) RPM IPM (FEED)	45 .0007 1400 2	60 .0011 1200 3	60 .0014 900 3	60 .0019 760 3	60 .0029 630 4	60 .0028 450 3	60 .0035 380 3	65 .0039 320 3	50 .0038 200 2
M	14.1	Stainless steel	1.0D	0.5D	SFM (Vc) IPT (fz) RPM IPM (FEED)	70 .0007 2210 3	90 .0011 1870 4	95 .0014 1450 4	100 .0019 1200 4	95 .0028 970 5	95 .0028 730 4	95 .0036 580 4	100 .0040 500 4	85 .0038 330 3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	0.5D	SFM (Vc) IPT (fz) RPM IPM (FEED)	150 .0006 4610 6	200 .0012 4080 10	215 .0014 3310 9	215 .0022 2650 11	225 .0029 2270 13	215 .0033 1650 11	225 .0034 1380 9	195 .0042 990 8	195 .0044 750 7
H	40	Hardened Cast Iron	1.0D	0.3D	SFM (Vc) IPT (fz) RPM IPM (FEED)	45 .0007 1400 2	60 .0011 1200 3	60 .0014 900 3	60 .0019 760 3	60 .0029 630 4	60 .0028 450 3	60 .0035 380 3	65 .0039 320 3	50 .0038 200 2

(Diameter (Ø) columns: 1/8 to 1)



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

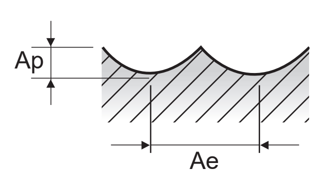
YG ONLY ONE END MILLS

RECOMMENDED CUTTING CONDITIONS

GYG67 SERIES 4 FLUTE BALL NOSE - PLANE

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1
						Diameter (Ø)								
P	1	Non-alloy steel	0.5D	0.2D	SFM (Vc)	270	310	330	330	340	340	340	335	295
					IPT (fz)	.0007	.0012	.0016	.0023	.0032	.0034	.0042	.0046	.0048
					RPM	8320	6270	5010	4050	3480	2610	2070	1700	1130
					IPM (FEED)	24	29	32	38	45	36	34	31	22
P	2	Non-alloy steel	0.5D	0.2D	SFM (Vc)	215	245	260	255	260	265	255	245	230
					IPT (fz)	.0006	.0010	.0014	.0020	.0028	.0029	.0037	.0041	.0041
					RPM	6620	4950	3960	3130	2640	2030	1560	1250	880
					IPM (FEED)	16	20	22	25	30	23	23	21	15
P	3-4	Non-alloy steel	0.5D	0.2D	SFM (Vc)	145	160	170	180	175	175	175	170	145
					IPT (fz)	.0005	.0008	.0011	.0016	.0024	.0025	.0030	.0032	.0037
					RPM	4410	3260	2610	2170	1770	1350	1080	870	550
					IPM (FEED)	8	11	12	14	17	13	13	11	8
P	5	Non-alloy steel	0.5D	0.2D	SFM (Vc)	75	85	90	90	85	85	90	90	80
					IPT (fz)	.0004	.0007	.0010	.0014	.0022	.0021	.0027	.0030	.0030
					RPM	2310	1690	1350	1080	870	650	540	450	300
					IPM (FEED)	4	5	6	6	8	6	6	5	4
P	6	Low alloy steel	0.5D	0.2D	SFM (Vc)	215	245	260	255	260	265	255	245	230
					IPT (fz)	.0006	.0010	.0014	.0020	.0028	.0029	.0037	.0041	.0041
					RPM	6620	4950	3960	3130	2640	2030	1560	1250	880
					IPM (FEED)	16	20	22	25	30	23	23	21	15
P	7	Low alloy steel	0.5D	0.2D	SFM (Vc)	145	160	170	180	175	175	175	170	145
					IPT (fz)	.0005	.0008	.0011	.0016	.0024	.0025	.0030	.0032	.0037
					RPM	4410	3260	2610	2170	1770	1350	1080	870	550
					IPM (FEED)	8	11	12	14	17	13	13	11	8
P	8	Low alloy steel	0.5D	0.2D	SFM (Vc)	75	85	90	90	85	85	90	90	80
					IPT (fz)	.0004	.0007	.0010	.0014	.0022	.0021	.0027	.0030	.0030
					RPM	2310	1690	1350	1080	870	650	540	450	300
					IPM (FEED)	4	5	6	6	8	6	6	5	4
P	9	Low alloy steel	0.5D	0.2D	SFM (Vc)	75	85	90	90	85	85	90	90	80
					IPT (fz)	.0004	.0007	.0010	.0014	.0022	.0021	.0027	.0030	.0030
					RPM	2310	1690	1350	1080	870	650	540	450	300
					IPM (FEED)	4	5	6	6	8	6	6	5	4
P	10	High alloyed steel, and tool steel	0.5D	0.2D	SFM (Vc)	215	245	260	255	260	265	255	245	230
					IPT (fz)	.0006	.0010	.0014	.0020	.0028	.0029	.0037	.0041	.0041
					RPM	6620	4950	3960	3130	2640	2030	1560	1250	880
					IPM (FEED)	16	20	22	25	30	23	23	21	15
P	11.1	High alloyed steel, and tool steel	0.5D	0.2D	SFM (Vc)	75	85	90	90	85	85	90	90	80
					IPT (fz)	.0004	.0007	.0010	.0014	.0022	.0021	.0027	.0030	.0030
					RPM	2310	1690	1350	1080	870	650	540	450	300
					IPM (FEED)	4	5	6	6	8	6	6	5	4
P	11.2	High alloyed steel, and tool steel	0.3D	0.2D	SFM (Vc)	50	60	60	60	60	60	60	65	50
					IPT (fz)	.0004	.0007	.0010	.0014	.0023	.0021	.0027	.0029	.0028
					RPM	1600	1190	950	760	600	450	380	320	200
					IPM (FEED)	3	4	4	4	5	4	4	4	2
M	14.1	Stainless steel	0.5D	0.2D	SFM (Vc)	80	90	100	100	90	95	100	100	85
					IPT (fz)	.0004	.0008	.0011	.0015	.0021	.0022	.0028	.0030	.0030
					RPM	2510	1880	1500	1200	940	730	600	500	330
					IPM (FEED)	4	6	7	7	8	7	7	6	4
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.5D	0.2D	SFM (Vc)	215	245	260	255	260	265	255	245	230
					IPT (fz)	.0006	.0010	.0014	.0020	.0028	.0029	.0037	.0041	.0041
					RPM	6620	4950	3960	3130	2640	2030	1560	1250	880
					IPM (FEED)	16	20	22	25	30	23	23	21	15
H	40	Hardened Cast Iron	0.3D	0.2D	SFM (Vc)	50	60	60	60	60	60	60	65	50
					IPT (fz)	.0004	.0007	.0010	.0014	.0023	.0021	.0027	.0029	.0028
					RPM	1600	1190	950	760	600	450	380	320	200
					IPM (FEED)	3	4	4	4	5	4	4	4	2

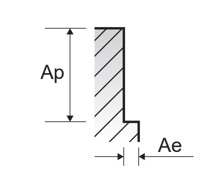


YG ONLY ONE END MILLS
RECOMMENDED CUTTING CONDITIONS

GYG65 SERIES 4 FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1
						Diameter (Ø)									
P	1	Non-alloy steel	0.1D	1.5D	SFM (Vc)	245	270	290	305	285	295	320	310	285	310
					IPT (fz)	.0006	.0011	.0014	.0018	.0027	.0028	.0031	.0035	.0038	.0037
					RPM	7520	5550	4410	3730	2910	2260	1950	1570	1250	1180
					IPM (FEED)	18	25	24	27	31	25	24	22	19	17
P	2	Non-alloy steel	0.1D	1.5D	SFM (Vc)	225	245	265	255	260	265	275	260	260	260
					IPT (fz)	.0006	.0010	.0012	.0018	.0025	.0026	.0030	.0035	.0033	.0035
					RPM	6820	5010	4060	3130	2640	2030	1680	1320	1130	990
					IPM (FEED)	16	21	20	23	26	21	20	18	15	14
P	3-4	Non-alloy steel	0.1D	1.5D	SFM (Vc)	165	180	195	195	195	205	195	195	190	195
					IPT (fz)	.0006	.0011	.0013	.0018	.0023	.0026	.0034	.0034	.0036	.0036
					RPM	5010	3680	2960	2410	2010	1580	1200	990	820	750
					IPM (FEED)	11	16	15	17	19	16	16	14	12	11
P	5	Non-alloy steel	0.1D	1.5D	SFM (Vc)	100	125	135	135	125	130	135	130	130	130
					IPT (fz)	.0007	.0011	.0013	.0017	.0026	.0027	.0032	.0032	.0033	.0035
					RPM	3110	2540	2060	1680	1270	1000	820	670	560	490
					IPM (FEED)	8	11	10	11	13	11	10	9	7	7
P	6	Low alloy steel	0.1D	1.5D	SFM (Vc)	225	245	265	255	260	265	275	260	260	260
					IPT (fz)	.0006	.0010	.0012	.0018	.0025	.0026	.0030	.0035	.0033	.0035
					RPM	6820	5010	4060	3130	2640	2030	1680	1320	1130	990
					IPM (FEED)	16	21	20	23	26	21	20	18	15	14
P	7	Low alloy steel	0.1D	1.5D	SFM (Vc)	165	180	195	195	195	205	195	195	190	195
					IPT (fz)	.0006	.0011	.0013	.0018	.0023	.0026	.0034	.0034	.0036	.0036
					RPM	5010	3680	2960	2410	2010	1580	1200	990	820	750
					IPM (FEED)	11	16	15	17	19	16	16	14	12	11
P	8	Low alloy steel	0.1D	1.5D	SFM (Vc)	100	125	135	135	125	130	135	130	130	130
					IPT (fz)	.0007	.0011	.0013	.0017	.0026	.0027	.0032	.0032	.0033	.0035
					RPM	3110	2540	2060	1680	1270	1000	820	670	560	490
					IPM (FEED)	8	11	10	11	13	11	10	9	7	7
P	9	Low alloy steel	0.1D	1.5D	SFM (Vc)	90	105	110	115	110	105	110	110	110	115
					IPT (fz)	.0005	.0009	.0012	.0016	.0022	.0025	.0030	.0032	.0032	.0034
					RPM	2710	2140	1650	1400	1140	800	660	550	470	430
					IPM (FEED)	6	8	8	9	10	8	8	7	6	6
P	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM (Vc)	225	245	265	255	260	265	275	260	260	260
					IPT (fz)	.0006	.0010	.0012	.0018	.0025	.0026	.0030	.0035	.0033	.0035
					RPM	6820	5010	4060	3130	2640	2030	1680	1320	1130	990
					IPM (FEED)	16	21	20	23	26	21	20	18	15	14
P	11.1	High alloyed steel, and tool steel	0.1D	1.5D	SFM (Vc)	100	125	135	135	125	130	135	130	130	130
					IPT (fz)	.0007	.0011	.0013	.0017	.0026	.0027	.0032	.0032	.0033	.0035
					RPM	3110	2540	2060	1680	1270	1000	820	670	560	490
					IPM (FEED)	8	11	10	11	13	11	10	9	7	7
P	11.2	High alloyed steel, and tool steel	0.05D	1.5D	SFM (Vc)	60	70	75	80	80	75	75	75	75	80
					IPT (fz)	.0005	.0009	.0012	.0016	.0023	.0025	.0030	.0032	.0032	.0035
					RPM	1900	1470	1150	960	800	580	460	380	330	300
					IPM (FEED)	4	6	6	6	7	6	6	5	4	4
M	14.1	Stainless steel	0.1D	1.5D	SFM (Vc)	100	115	120	125	120	120	120	120	120	120
					IPT (fz)	.0005	.0009	.0012	.0015	.0022	.0025	.0030	.0032	.0032	.0035
					RPM	3010	2340	1800	1520	1240	900	740	600	530	460
					IPM (FEED)	6	8	9	9	11	9	9	8	7	6
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.1D	1.5D	SFM (Vc)	225	245	265	255	260	265	275	260	260	260
					IPT (fz)	.0006	.0010	.0012	.0018	.0025	.0026	.0030	.0035	.0033	.0035
					RPM	6820	5010	4060	3130	2640	2030	1680	1320	1130	990
					IPM (FEED)	16	21	20	23	26	21	20	18	15	14
H	40	Hardened Cast Iron	0.05D	1.5D	SFM (Vc)	60	70	75	80	80	75	75	75	75	80
					IPT (fz)	.0005	.0009	.0012	.0016	.0023	.0025	.0030	.0032	.0032	.0035
					RPM	1900	1470	1150	960	800	580	460	380	330	300
					IPM (FEED)	4	6	6	6	7	6	6	5	4	4



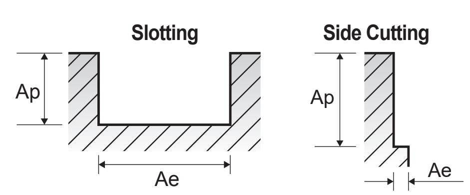
YG ONLY ONE END MILLS

RECOMMENDED CUTTING CONDITIONS

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

GYG66 SERIES 4 FLUTE - SLOTTING & SIDE CUTTING

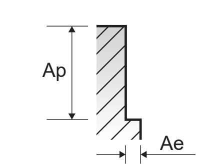
ISO	VDI 3323	Material Description	SLOTTING Ae	SLOTTING Ap	SIDE CUTTING Ae	SIDE CUTTING Ap	Parameter	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1
P	1-2	Non-alloy steel	1.0D	0.5D	0.3D	1.5D	SFM (Vc)	230	230	230	230	250	255	250	255	255
							IPT (fz)	.0002	.0005	.0006	.0011	.0015	.0019	.0021	.0026	.0025
							RPM	7020	4680	3510	2810	2570	1930	1540	1290	970
							IPM (FEED)	6	9	9	12	16	14	13	13	10
	3-4		1.0D	0.5D	0.3D	1.5D	SFM (Vc)	210	205	210	210	230	230	230	230	230
							IPT (fz)	.0002	.0004	.0006	.0011	.0015	.0019	.0021	.0026	.0025
							RPM	6420	4210	3210	2570	2340	1750	1400	1170	880
							IPM (FEED)	5	7	8	11	14	13	12	12	9
	5		1.0D	0.5D	0.3D	1.5D	SFM (Vc)	145	145	145	145	160	160	160	160	160
							IPT (fz)	.0002	.0004	.0006	.0011	.0015	.0018	.0021	.0026	.0026
							RPM	4410	2940	2210	1760	1640	1230	980	820	610
							IPM (FEED)	3	5	6	8	10	9	8	9	6
	6	Low alloy steel	1.0D	0.5D	0.3D	1.5D	SFM (Vc)	230	230	230	230	250	255	250	255	255
							IPT (fz)	.0002	.0005	.0006	.0011	.0015	.0019	.0021	.0026	.0025
							RPM	7020	4680	3510	2810	2570	1930	1540	1290	970
							IPM (FEED)	6	9	9	12	16	14	13	13	10
	7		1.0D	0.5D	0.3D	1.5D	SFM (Vc)	210	205	210	210	230	230	230	230	230
							IPT (fz)	.0002	.0004	.0006	.0011	.0015	.0019	.0021	.0026	.0025
							RPM	6420	4210	3210	2570	2340	1750	1400	1170	880
							IPM (FEED)	5	7	8	11	14	13	12	12	9
	8		1.0D	0.5D	0.3D	1.5D	SFM (Vc)	145	145	145	145	160	160	160	160	160
							IPT (fz)	.0002	.0004	.0006	.0011	.0015	.0018	.0021	.0026	.0026
							RPM	4410	2940	2210	1760	1640	1230	980	820	610
							IPM (FEED)	3	5	6	8	10	9	8	9	6
	9		1.0D	0.5D	0.15D	1.5D	SFM (Vc)	90	90	90	90	100	95	100	100	95
							IPT (fz)	.0002	.0004	.0006	.0009	.0013	.0016	.0017	.0022	.0021
							RPM	2710	1800	1350	1080	1000	730	600	500	360
							IPM (FEED)	2	3	3	4	5	5	4	4	3
	10	High alloyed steel, and tool steel	1.0D	0.5D	0.3D	1.5D	SFM (Vc)	230	230	230	230	250	255	250	255	255
							IPT (fz)	.0002	.0005	.0006	.0011	.0015	.0019	.0021	.0026	.0025
							RPM	7020	4680	3510	2810	2570	1930	1540	1290	970
							IPM (FEED)	6	9	9	12	16	14	13	13	10
	11.1		1.0D	0.5D	0.3D	1.5D	SFM (Vc)	145	145	145	145	160	160	160	160	160
							IPT (fz)	.0002	.0004	.0006	.0011	.0015	.0018	.0021	.0026	.0026
							RPM	4410	2940	2210	1760	1640	1230	980	820	610
							IPM (FEED)	3	5	6	8	10	9	8	9	6
	11.2		1.0D	0.3D	0.15D	1.5D	SFM (Vc)	90	90	90	90	100	95	100	100	95
							IPT (fz)	.0002	.0004	.0006	.0009	.0013	.0016	.0017	.0022	.0021
							RPM	2710	1800	1350	1080	1000	730	600	500	360
							IPM (FEED)	2	3	3	4	5	5	4	4	3
M	14.1	Stainless steel	1.0D	0.5D	0.3D	1.5D	SFM (Vc)	155	160	160	160	155	155	155	155	155
							IPT (fz)	.0002	.0005	.0007	.0011	.0019	.0022	.0025	.0030	.0031
							RPM	4810	3210	2410	1930	1600	1200	960	800	600
							IPM (FEED)	4	7	7	9	12	11	10	10	7
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	0.5D	0.3D	1.5D	SFM (Vc)	230	230	230	230	250	255	250	255	255
							IPT (fz)	.0002	.0005	.0006	.0011	.0015	.0019	.0021	.0026	.0025
							RPM	7020	4680	3510	2810	2570	1930	1540	1290	970
							IPM (FEED)	6	9	9	12	16	14	13	13	10
H	40	Chilled Cast Iron	1.0D	0.3D	0.15D	1.5D	SFM (Vc)	90	90	90	90	100	95	100	100	95
							IPT (fz)	.0002	.0004	.0006	.0009	.0013	.0016	.0017	.0022	.0021
							RPM	2710	1800	1350	1080	1000	730	600	500	360
							IPM (FEED)	2	3	3	4	5	5	4	4	3



YG ONLY ONE END MILLS
RECOMMENDED CUTTING CONDITIONS
SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

GYG69 SERIES MULTI FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/4	5/16	3/8	1/2	5/8	3/4	1
P	1	Non-alloy steel	0.5D	1.5D	SFM (Vc)	250	285	280	285	285	285	295
					IPT (fz)	.0008	.0012	.0022	.0026	.0027	.0035	.0041
					RPM	3810	3490	2870	2180	1740	1450	1130
					IPM (FEED)	12	16	25	22	24	25	23
	2		0.5D	1.5D	SFM (Vc)	195	225	225	215	225	225	225
					IPT (fz)	.0008	.0012	.0021	.0027	.0027	.0034	.0042
					RPM	3010	2770	2270	1630	1380	1140	850
					IPM (FEED)	10	13	19	18	19	19	18
	3-4		0.5D	1.5D	SFM (Vc)	140	170	155	160	155	155	155
					IPT (fz)	.0007	.0011	.0018	.0025	.0027	.0034	.0042
					RPM	2160	2050	1570	1230	960	800	590
					IPM (FEED)	6	9	11	12	13	14	12
	5		0.5D	1.5D	SFM (Vc)	115	125	130	130	130	130	135
					IPT (fz)	.0008	.0012	.0018	.0024	.0026	.0032	.0040
					RPM	1750	1520	1340	1000	800	670	510
					IPM (FEED)	6	7	9	10	10	11	10
	6	Low alloy steel	0.5D	1.5D	SFM (Vc)	195	225	225	215	225	225	225
					IPT (fz)	.0008	.0012	.0021	.0027	.0027	.0034	.0042
					RPM	3010	2770	2270	1630	1380	1140	850
					IPM (FEED)	10	13	19	18	19	19	18
	7		0.5D	1.5D	SFM (Vc)	140	170	155	160	155	155	155
					IPT (fz)	.0007	.0011	.0018	.0025	.0027	.0034	.0042
					RPM	2160	2050	1570	1230	960	800	590
					IPM (FEED)	6	9	11	12	13	14	12
	8-9		0.5D	1.5D	SFM (Vc)	115	125	130	130	130	130	135
					IPT (fz)	.0008	.0012	.0018	.0024	.0026	.0032	.0040
					RPM	1750	1520	1340	1000	800	670	510
					IPM (FEED)	6	7	9	10	10	11	10
	10	High alloyed steel, and tool steel	0.5D	1.5D	SFM (Vc)	195	225	225	215	225	225	225
					IPT (fz)	.0008	.0012	.0021	.0027	.0027	.0034	.0042
					RPM	3010	2770	2270	1630	1380	1140	850
					IPM (FEED)	10	13	19	18	19	19	18
	11.1		0.5D	1.5D	SFM (Vc)	115	125	130	130	130	130	135
					IPT (fz)	.0008	.0012	.0018	.0024	.0026	.0032	.0040
					RPM	1750	1520	1340	1000	800	670	510
					IPM (FEED)	6	7	9	10	10	11	10
	11.2		0.3D	1.5D	SFM (Vc)	80	90	90	90	90	90	90
					IPT (fz)	.0008	.0011	.0017	.0024	.0026	.0031	.0039
					RPM	1250	1080	940	700	560	470	350
					IPM (FEED)	4	5	6	7	7	7	7
M	14.1	Stainless steel	0.5D	1.5D	SFM (Vc)	130	140	140	140	140	145	145
					IPT (fz)	.0007	.0012	.0018	.0025	.0027	.0033	.0041
					RPM	1960	1720	1440	1080	860	740	550
					IPM (FEED)	6	8	10	11	12	12	11
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.5D	1.5D	SFM (Vc)	195	225	225	215	225	225	225
					IPT (fz)	.0008	.0012	.0021	.0027	.0027	.0034	.0042
					RPM	3010	2770	2270	1630	1380	1140	850
					IPM (FEED)	10	13	19	18	19	19	18
H	40	Hardened Cast Iron	0.3D	1.5D	SFM (Vc)	80	90	90	90	90	90	90
					IPT (fz)	.0008	.0011	.0017	.0024	.0026	.0031	.0039
					RPM	1250	1080	940	700	560	470	350
					IPM (FEED)	4	5	6	7	7	7	7



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG ONLY ONE END MILLS

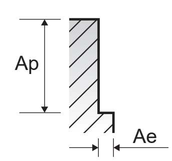
RECOMMENDED CUTTING CONDITIONS

GYG68, GYG70 SERIES

MULTI FLUTE - SIDE CUTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	3/4	1	1-1/4
P	1	Non-alloy steel	0.5D	1.5D	SFM (Vc)	205	235	235	235	235	235	245	175
					IPT (fz)	.0011	.0016	.0022	.0026	.0034	.0044	.0041	.0044
					RPM	3160	2890	2410	1800	1440	1200	940	670
					IPM (FEED)	10	14	21	18	20	21	19	18
	2		0.5D	1.5D	SFM (Vc)	165	185	185	175	185	185	185	130
					IPT (fz)	.0011	.0016	.0021	.0027	.0034	.0043	.0042	.0045
					RPM	2510	2290	1900	1350	1140	950	710	500
					IPM (FEED)	8	11	16	15	16	16	15	13
	3-4		0.5D	1.5D	SFM (Vc)	120	135	130	135	130	130	130	90
					IPT (fz)	.0009	.0015	.0018	.0025	.0034	.0042	.0042	.0045
					RPM	1800	1680	1340	1030	800	670	490	350
					IPM (FEED)	5	8	10	10	11	11	10	9
	5		0.5D	1.5D	SFM (Vc)	95	105	110	110	110	110	115	80
					IPT (fz)	.0011	.0016	.0017	.0024	.0032	.0040	.0041	.0043
					RPM	1450	1280	1140	850	660	550	430	300
					IPM (FEED)	5	6	8	8	8	9	8	8
	6	Low alloy steel	0.5D	1.5D	SFM (Vc)	165	185	185	175	185	185	185	130
					IPT (fz)	.0011	.0016	.0021	.0027	.0034	.0043	.0042	.0045
					RPM	2510	2290	1900	1350	1140	950	710	500
					IPM (FEED)	8	11	16	15	16	16	15	13
	7		0.5D	1.5D	SFM (Vc)	120	135	130	135	130	130	130	90
					IPT (fz)	.0009	.0015	.0018	.0025	.0034	.0042	.0042	.0045
					RPM	1800	1680	1340	1030	800	670	490	350
					IPM (FEED)	5	8	10	10	11	11	10	9
	8-9		0.5D	1.5D	SFM (Vc)	95	105	110	110	110	110	115	80
					IPT (fz)	.0011	.0016	.0017	.0024	.0032	.0040	.0041	.0043
					RPM	1450	1280	1140	850	660	550	430	300
					IPM (FEED)	5	6	8	8	8	9	8	8
	10	High alloyed steel, and tool steel	0.5D	1.5D	SFM (Vc)	165	185	185	175	185	185	185	130
					IPT (fz)	.0011	.0016	.0021	.0027	.0034	.0043	.0042	.0045
					RPM	2510	2290	1900	1350	1140	950	710	500
					IPM (FEED)	8	11	16	15	16	16	15	13
	11.1		0.5D	1.5D	SFM (Vc)	95	105	110	110	110	110	115	80
					IPT (fz)	.0011	.0016	.0017	.0024	.0032	.0040	.0041	.0043
					RPM	1450	1280	1140	850	660	550	430	300
					IPM (FEED)	5	6	8	8	8	9	8	8
	11.2		0.3D	1.5D	SFM (Vc)	70	70	80	75	75	75	80	55
					IPT (fz)	.0011	.0016	.0018	.0023	.0032	.0040	.0039	.0042
					RPM	1050	880	800	580	460	380	300	210
					IPM (FEED)	3	4	6	5	6	6	6	5
M	14.1	Stainless steel	0.5D	1.5D	SFM (Vc)	110	120	120	120	120	120	120	85
					IPT (fz)	.0010	.0015	.0018	.0025	.0034	.0042	.0040	.0043
					RPM	1650	1440	1200	900	720	600	460	330
					IPM (FEED)	5	7	9	9	10	10	9	9
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.5D	1.5D	SFM (Vc)	165	185	185	175	185	185	185	130
					IPT (fz)	.0011	.0016	.0021	.0027	.0034	.0043	.0042	.0045
					RPM	2510	2290	1900	1350	1140	950	710	500
					IPM (FEED)	8	11	16	15	16	16	15	13
H	40	Hardened Cast Iron	0.3D	1.5D	SFM (Vc)	70	70	80	75	75	75	80	55
					IPT (fz)	.0011	.0016	.0018	.0023	.0032	.0040	.0039	.0042
					RPM	1050	880	800	580	460	380	300	210
					IPM (FEED)	3	4	6	5	6	6	6	5



Being the best through innovation

HSS

SINE-POWER END MILLS

- High Performane HSS Rongher for Titanium and Titanium Alloys

SELECTION GUIDE

YG MILLING TOOLS

SERIES	E2F64
FLUTE	4&6
HELIX ANGLE	35°
CUTTING EDGE SHAPE	SQUARE
SIZE MIN	D3/4
SIZE MAX	D2
PAGE	C741
	Uncoated

HSSCo8

SINE-POWER END MILLS

-

Next Generation of Powdered Metal End Mills
Higher Edge Strength & Feed Rates

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

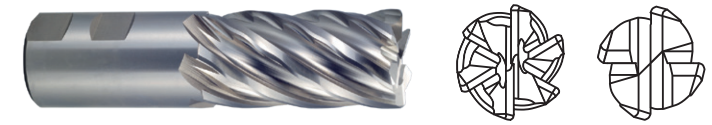
Recommended cutting conditions : p. C742

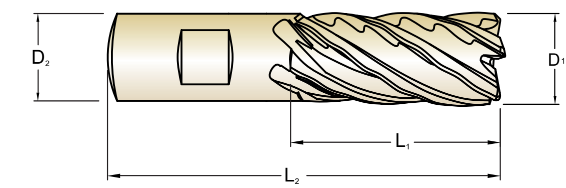
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	E2F64
P	1	Non-alloy steel	About 0.15% C Annealed	125		
	2		About 0.45% C Annealed	190	13	
	3		About 0.45% C Quenched & Tempered	250	25	
	4		About 0.75% C Annealed	270	28	
	5		About 0.75% C Quenched & Tempered	300	32	
	6	Low alloy steel	Annealed	180	10	
	7		Quenched & Tempered	275	29	
	8		Quenched & Tempered	300	32	
	9		Quenched & Tempered	350	38	
	10	High alloyed steel, and tool steel	Annealed	200	15	
	11		Quenched & Tempered	325	35	
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15	
	13		Martensitic Quenched & Tempered	240	23	
	14		Austenitic	180	10	
K	15	Grey cast iron	Pearlitic / ferritic	180	10	
	16		Pearlitic (Martensitic)	260	26	
	17	Nodular cast iron	Ferritic	160	3	
	18		Pearlitic	250	25	
	19	Malleable cast iron	Ferritic	130		
	20		Pearlitic	230	21	
N	21	Aluminum-wrought alloy	Not Curable	60		
	22		Curable Hardened	100		
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75		
	24		≤ 12% Si, Curable Hardened	90		
	25		> 12% Si, Not Curable	130		
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110		
	27		CuZn, CuSnZn (Brass)	90		
	28		CuSn, lead-free copper and electrolytic copper	100		
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic			
	30		Rubber, Wood, etc.			
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15	
	32		Fe Based Cured	280	30	
	33		Ni or Co Based Annealed	250	25	
	34		Ni or Co Based Cured	350	38	
	35		Ni or Co Based Cast	320	34	
	36	Titanium Alloys	Pure Titanium	400 Rm		◎
	37		Alpha + Beta Alloys Hardened	1050 Rm		◎
H	38	Hardened steel	Hardened	550	55	
	39		Hardened	630	60	
	40	Chilled Cast Iron	Cast	400	42	
	41	Hardened Cast Iron	Hardened	550	55	

SINE-POWER END MILLS

FLAT SHANK **E2F64 SERIES**

HSSCo8, 4&6 FLUTE





HSS Co8 | 4&6 | 35° | C x 45° | FLAT

p.C742

Unit : Inch

EDP No.	Mill Diameter D1	Shank Diameter D2	Length of Cut L1	Overall Length L2	Chamfer	No. of Flute
E2F64048	3/4	3/4	1 5/8	3 7/8	.030	4
E2F64901	3/4	3/4	2 1/4	4 1/2	.030	4
E2F64902	3/4	3/4	3	5 1/4	.030	4
E2F64064	1	1	2	4 1/2	.030	4
E2F64903	1	1	2	4 1/2	.030	6
E2F64904	1	1	3	5 1/2	.030	4
E2F64905	1	1	3	5 1/2	.030	6
E2F64906	1	1	4	6 1/2	.030	4
E2F64907	1	1	4	6 1/2	.030	6
E2F64116	1 1/4	1 1/4	2	4 1/2	.040	4
E2F64908	1 1/4	1 1/4	2	4 1/2	.040	6
E2F64909	1 1/4	1 1/4	3	5 1/2	.040	4
E2F64910	1 1/4	1 1/4	3	5 1/2	.040	6
E2F64911	1 1/4	1 1/4	4	6 1/2	.040	4
E2F64912	1 1/4	1 1/4	4	6 1/2	.040	6
E2F64132	1 1/2	1 1/4	2	4 1/2	.040	6
E2F64913	1 1/2	1 1/4	3	5 1/2	.040	6
E2F64914	1 1/2	1 1/4	4	6 1/2	.040	6
E2F64915	1 1/2	1 1/4	6	8 1/2	.040	6
E2F64200	2	2	2	5 3/4	.040	6
E2F64916	2	2	3	6 3/4	.040	6
E2F64917	2	2	4	7 3/4	.040	6
E2F64918	2	2	6	9 3/4	.040	6
E2F64919	2	2	8	11 3/4	.040	6

Cutting Dia. Tolerance(inch)	Shank Dia. Tolerance(inch)
0~ + .0030	- .0001~ - .0005

※ Radius, coatings and HSS-PM available on request

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended																				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																◎	◎				

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SINE-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

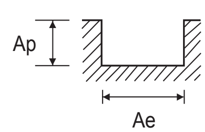
E2F64 SERIES

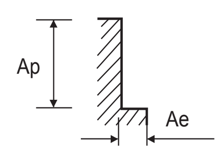
4&6 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 4FL 3/4	4FL 1	4FL 1 1/4	6FL 1	6FL 1 1/4	6FL 1 1/2	6FL 2
S	1-2	Titanium Alloys	1D	1D	SFM (Vc)	40	40	40	40	40	40	40
					IPT (fz)	.0025	.0033	.0041	.0022	.0027	.0033	.0066
					RPM	200	150	120	150	120	100	80
					IPM (FEED)	2	2	2	2	2	2	3
	3-4		1D	1D	SFM (Vc)	65	65	65	65	65	65	65
					IPT (fz)	.0023	.0040	.0050	.0027	.0034	.0040	.0054
					RPM	330	250	200	250	200	170	120
					IPM (FEED)	3	4	4	4	4	4	4

4&6 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 4FL 3/4	4FL 1	4FL 1 1/4	6FL 1	6FL 1 1/4	6FL 1 1/2	6FL 2
S	1-2	Titanium Alloys	0.5D	1.5D	SFM (Vc)	60	60	60	60	60	60	60
					IPT (fz)	.0025	.0033	.0041	.0022	.0027	.0033	.0043
					RPM	310	230	180	230	180	150	120
					IPM (FEED)	3	3	3	3	3	3	3
	3-4		0.5D	1.5D	SFM (Vc)	75	75	75	75	75	75	75
					IPT (fz)	.0026	.0035	.0044	.0023	.0029	.0035	.0047
					RPM	380	290	230	290	230	190	140
					IPM (FEED)	4	4	4	4	4	4	4





Being the best through innovation

HSS-PM

TANK-POWER END MILLS

- High Toughness for Stainless Steels, Carbon steels and Alloy Steels

SELECTION GUIDE

MILLING TOOLS

HSS-PM
TANK-POWER END MILLS

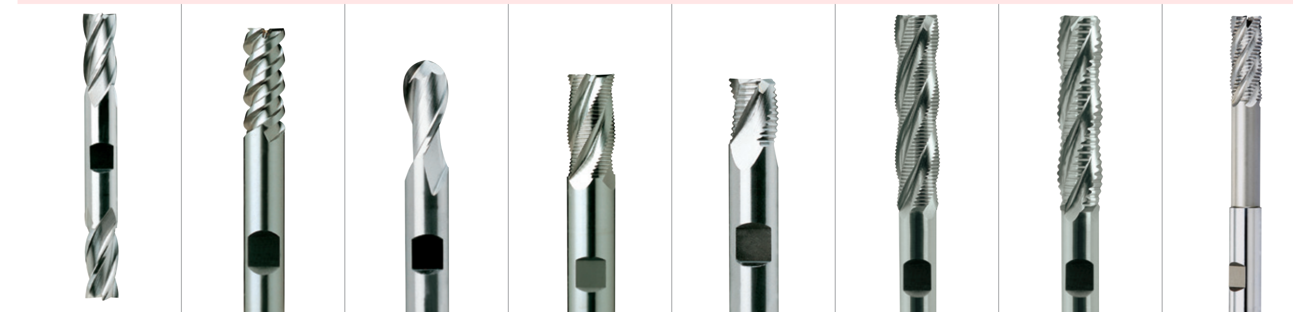
- Next Generation of Powdered Metal End Mills
Higher Edge Strength & Feed Rates

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p. C757

SERIES	E9983	E9984	E9985	E9986	E9988	E9992	E9990	E9991	E9A86	E9A87	E9921
FLUTE	2	2	4	4	3&4	2	3~6	3~6	3~6	3~6	5~6
HELIX ANGLE	30°	30°	30°	30°	60°	30°	30°	30°	30°	30°	35°
CUTTING EDGE SHAPE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	BALL NOSE	ROUGHING	ROUGHING	ROUGHING	ROUGHING	ROUGHING
SIZE MIN	D1/8	D1/8	D1/8	D1/8	D1/4	R1/16	D1/4	D1/4	D5/16	D5/16	D1/2
SIZE MAX	D1	D1	D1	D1	D1	R1/2	D1-1/4	D1-1/4	D1-1/4	D1-1/4	D1-1/4
PAGE	C746	C747	C748	C749	C750	C751	C752	C753	C754	C755	C756
	REGULAR LENGTH	REGULAR LENGTH DOUBLE	REGULAR LENGTH	REGULAR LENGTH DOUBLE	REGULAR LENGTH	REGULAR LENGTH	REGULAR LENGTH FINE PITCH	REGULAR LENGTH COARSE PITCH	LONG LENGTH FINE PITCH	LONG LENGTH COARSE PITCH	EXTENDED NECK FINE PITCH CENTER CUTTING
	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN
		U.S.A Stock					U.S.A Stock				



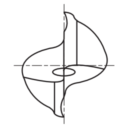
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	E9983	E9984	E9985	E9986	E9988	E9992	E9990	E9991	E9A86	E9A87	E9921
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	2		About 0.45% C	Annealed	190	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	4		About 0.75% C	Annealed	270	28	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5		About 0.75% C	Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	6	Low alloy steel		Annealed	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7			Quenched & Tempered	275	29	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8			Quenched & Tempered	300	32	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	9			Quenched & Tempered	350	38	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	10	High alloyed steel, and tool steel		Annealed	200	15	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	11			Quenched & Tempered	325	35	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15											
	13		Martensitic	Quenched & Tempered	240	23											
	14		Austenitic		180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	15	Grey cast iron	Pearlitic / ferritic		180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	16		Pearlitic (Martensitic)		260	26	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	17	Nodular cast iron	Ferritic		160	3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	18		Pearlitic		250	25	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	19	Malleable cast iron	Ferritic		130		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	20		Pearlitic		230	21	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
N	21	Aluminum-wrought alloy	Not Curable		60												
	22		Curable	Hardened	100												
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75												
	24		≤ 12% Si, Curable	Hardened	90												
	25		> 12% Si, Not Curable		130												
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○	○	○	○	○	○	○	○	○	○	○
	27		CuZn, CuSnZn (Brass)		90		○	○	○	○	○	○	○	○	○	○	○
	28		CuSn, lead-free copper and electrolytic copper		100		○	○	○	○	○	○	○	○	○	○	○
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic														
	30		Rubber, Wood, etc.														
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15											
	32			Cured	280	30											
	33		Ni or Co Based	Annealed	250	25											
	34			Cured	350	38											
	35			Cast	320	34											
	36	Titanium Alloys	Pure Titanium		400 Rm												
	37		Alpha + Beta Alloys	Hardened	1050 Rm												
H	38	Hardened steel		Hardened	550	55											
	39			Hardened	630	60											
	40	Chilled Cast Iron		Cast	400	42											
	41	Hardened Cast Iron		Hardened	550	55											

YG TANK-POWER END MILLS

FLAT SHANK **E9983** SERIES

PREMIUM HSS-PM, 2 FLUTE REGULAR LENGTH

▶ Faster feed & speed than normal HSS can be applied to hardened steels up to Rc 45. Accordingly, HSS-PM made by powder metallurgy makes much higher productivity possible.



HSS-PM 2 30° FLAT p.C757

◆ U.S.A Stock

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAIN COATED				
E9983008	E9983008TF	1/8	3/8	3/8	2-5/16
E9983012	E9983012TF	3/16	3/8	7/16	2-5/16
E9983016	E9983016TF	1/4	3/8	1/2	2-5/16
E9983020	E9983020TF	5/16	3/8	9/16	2-5/16
E9983024	E9983024TF	3/8	3/8	9/16	2-5/16
E9983032	E9983032TF	1/2	1/2	1	3
E9983040	E9983040TF	5/8	5/8	1-5/16	3-7/16
E9983048	E9983048TF	3/4	3/4	1-5/16	3-7/16
E9983056	E9983056TF	7/8	7/8	1-1/2	3-3/4
E9983064	E9983064TF	1	1	1-5/8	4-1/8

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○													

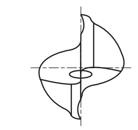
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG TANK-POWER END MILLS

FLAT SHANK **E9984** SERIES

PREMIUM HSS-PM, 2 FLUTE REGULAR LENGTH DOUBLE

▶ Series E9984, E9984 two flute, end mills are the double end version of E9983, E9983 single-end tools.
Faster feed & speed than normal HSS can be applied to hardened steels up to Rc 45. Accordingly, HSS-PM made by powder metallurgy makes much higher productivity possible.



HSS-PM 2 30° FLAT p.C757

◆ U.S.A Stock

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAIN COATED				
E9984008	E9984008TF	1/8	3/8	3/8	3-1/16
E9984012	E9984012TF	3/16	3/8	7/16	3-1/8
E9984016	E9984016TF	1/4	3/8	1/2	3-1/8
E9984020	E9984020TF	5/16	3/8	9/16	3-1/8
E9984024	E9984024TF	3/8	3/8	9/16	3-1/8
E9984032	E9984032TF	1/2	1/2	13/16	3-3/4
E9984040	E9984040TF	5/8	5/8	1-1/8	4-1/2
E9984048	E9984048TF	3/4	3/4	1-5/16	5
E9984056	E9984056TF	7/8	7/8	1-9/16	5-1/2
E9984064	E9984064TF	1	1	1-5/8	5-7/8

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~-.0020

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎	◎	◎	◎	◎

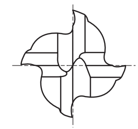
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○													

YG TANK-POWER END MILLS

FLAT SHANK **E9985** SERIES

PREMIUM HSS-PM, 4 FLUTE REGULAR LENGTH

▶ Faster feed & speed than normal HSS can be applied to hardened steels up to Rc 45. Accordingly, HSS-PM made by powder metallurgy makes much higher productivity possible.



HSS-PM 4 30° FLAT p.C758

◆ U.S.A Stock

Unit : Inch

EDP No. UNCOATED	EDP No. TiAlN COATED	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
E9985008	E9985008TF	1/8	3/8	3/8	2-5/16
E9985012	E9985012TF	3/16	3/8	1/2	2-3/8
E9985016	E9985016TF	1/4	3/8	5/8	2-7/16
E9985020	E9985020TF	5/16	3/8	3/4	2-1/2
E9985024	E9985024TF	3/8	3/8	3/4	2-1/2
E9985032	E9985032TF	1/2	1/2	1-1/4	3-1/4
E9985040	E9985040TF	5/8	5/8	1-5/8	3-3/4
E9985048	E9985048TF	3/4	3/4	1-5/8	3-7/8
E9985056	E9985056TF	7/8	7/8	1-7/8	4-1/8
E9985064	E9985064TF	1	1	2	4-1/2

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○													

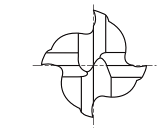
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG TANK-POWER END MILLS

FLAT SHANK **E9986** SERIES

PREMIUM HSS-PM, 4 FLUTE REGULAR LENGTH DOUBLE

▶ Series E9986,EP986 four flute end mills are the double end version of E9985,EP985 single-end tools.
Faster feed & speed than normal HSS can be applied to hardened steels up to Rc 45. Accordingly, HSS-PM made by powder metallurgy makes much higher productivity possible.



HSS-PM 4 30° FLAT p.C758

◆ U.S.A Stock

Unit : Inch

EDP No. UNCOATED	EDP No. TiAlN COATED	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
E9986008	E9986008TF	1/8	3/8	3/8	3-1/16
E9986012	E9986012TF	3/16	3/8	1/2	3-1/4
E9986016	E9986016TF	1/4	3/8	5/8	3-3/8
E9986020	E9986020TF	5/16	3/8	3/4	3-1/2
E9986024	E9986024TF	3/8	3/8	3/4	3-1/2
E9986032	E9986032TF	1/2	1/2	1	4-1/8
E9986040	E9986040TF	5/8	5/8	1-3/8	5
E9986048	E9986048TF	3/4	3/4	1-5/8	5-5/8
E9986056	E9986056TF	7/8	7/8	1-7/8	6-1/8
E9986064	E9986064TF	1	1	1-7/8	6-3/8

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~-.0015

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○													

CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

TANK-POWER END MILLS

FLAT SHANK **E9988** SERIES

PREMIUM HSS-PM, 3&4 FLUTE 60° HELIX REGULAR LENGTH

▶ Faster feed & speed than normal HSS can be applied to hardened steels up to Rc 45. Accordingly, HSS-PM made by powder metallurgy makes much higher productivity possible.

HSS-PM | 3&4 | 60° | FLAT | p.C759

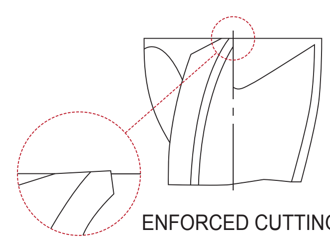
◆ U.S.A Stock

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	Overall Length
UNCOATED	TiAIN COATED					
E9988016	E9988016TF	1/4	3/8	5/8	2-7/16	3
E9988020	E9988020TF	5/16	3/8	3/4	2-1/2	3
E9988024	E9988024TF	3/8	3/8	3/4	2-1/2	3
E9988028	E9988028TF	7/16	3/8	1	2-11/16	3
E9988032	E9988032TF	1/2	1/2	1-1/4	3-1/4	3
E9988040	E9988040TF	5/8	5/8	1-5/8	3-3/4	3
E9988048	E9988048TF	3/4	3/4	1-5/8	3-7/8	3
E9988901	E9988901TF	7/8	3/4	1-7/8	4-1/8	4
E9988056	E9988056TF	7/8	7/8	1-7/8	4-1/8	4
E9988064	E9988064TF	1	1	2	4-1/2	4

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.



ENFORCED CUTTING EDGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○													

CARBIDE
HSS

TANK-POWER END MILLS

FLAT SHANK **E9992** SERIES

PREMIUM HSS-PM, 2 FLUTE REGULAR LENGTH BALL NOSE

▶ The two flute ball end mills are designed for milling of radius bottom slots, fillets and special contours. The end teeth are cut to center allowing these end mills to drill into material at the beginning of a slotting cut. The two flute design provides good chip removal ability in slotting.

HSS-PM | 2 | 30° | R ±.001 | FLAT | p.C761

◆ U.S.A Stock

Unit : Inch

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAIN COATED	R (±.001)				
E9992008	E9992008TF	R1/16	1/8	3/8	3/8	2-5/16
E9992012	E9992012TF	R3/32	3/16	3/8	1/2	2-3/8
E9992016	E9992016TF	R1/8	1/4	3/8	5/8	2-7/16
E9992020	E9992020TF	R5/32	5/16	3/8	3/4	2-1/2
E9992024	E9992024TF	R3/16	3/8	3/8	3/4	2-1/2
E9992032	E9992032TF	R1/4	1/2	1/2	1	3
E9992040	E9992040TF	R5/16	5/8	5/8	1-3/8	3-1/2
E9992048	E9992048TF	R3/8	3/4	3/4	1-5/8	3-7/8
E9992056	E9992056TF	R7/16	7/8	7/8	2	4-1/4
E9992064	E9992064TF	R1/2	1	1	2-1/4	4-3/4

Mill Dia. Tolerance (inch)
0~-.0015

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○													

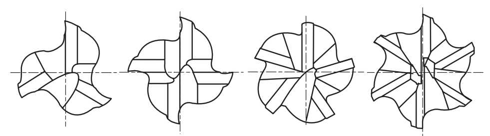
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

TANK-POWER END MILLS

FLAT SHANK **E9990** SERIES

PREMIUM HSS-PM, MULTI FLUTE REGULAR LENGTH FINE PITCH ROUGHING

▶ This TANK-POWER rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths. In many cases, the milled surfaces are of acceptable quality.



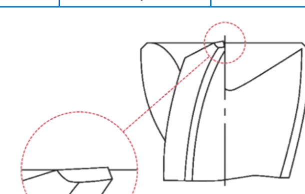
HSS-PM FINE 3-6 30° FLAT p.C760

◆ U.S.A Stock

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
UNCOATED	TiAlN COATED					
E9990016	E9990016TF	1/4	3/8	5/8	2-7/16	3
E9990907	E9990907TF	1/4	3/8	1-1/8	2-15/16	3
E9990020	E9990020TF	5/16	3/8	3/4	2-1/2	3
E9990024	E9990024TF	3/8	3/8	3/4	2-1/2	4
E9990028	E9990028TF	7/16	3/8	1	2-11/16	4
E9990032	E9990032TF	1/2	1/2	1-1/4	3-1/4	4
E9990908	E9990908TF	1/2	1/2	1-5/8	3-5/8	4
E9990036	E9990036TF	9/16	1/2	1-3/8	3-3/8	4
E9990040	E9990040TF	5/8	5/8	1-5/8	3-3/4	4
E9990048	E9990048TF	3/4	3/4	1-5/8	3-7/8	4
E9990948	E9990948TF	3/4	5/8	1-5/8	3-7/8	4
E9990909	E9990909TF	3/4	3/4	2-1/2	4-3/4	4
E9990056	E9990056TF	7/8	7/8	1-7/8	4-1/8	5
E9990901	E9990901TF	7/8	3/4	1-7/8	4-1/8	5
E9990064	E9990064TF	1	1	2	4-1/2	5
E9990905	E9990905TF	1	1	3	5-1/2	5
E9990108	E9990108TF	1-1/8	1	2	4-1/2	6
E9990116	E9990116TF	1-1/4	1-1/4	2	4-1/2	6
E9990906	E9990906TF	1-1/4	1-1/4	3	5-1/2	6

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎	◎	◎	◎	◎

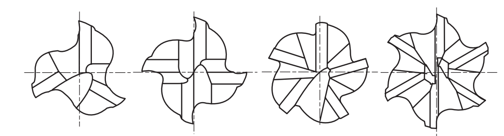
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○													

TANK-POWER END MILLS

FLAT SHANK **E9991** SERIES

PREMIUM HSS-PM, MULTI FLUTE REGULAR LENGTH COARSE PITCH ROUGHING

▶ This TANK-POWER rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths.



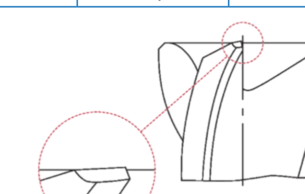
HSS-PM COARSE 3-6 30° FLAT p.C760

◆ U.S.A Stock

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
UNCOATED	TiAlN COATED					
E9991016	E9991016TF	1/4	3/8	5/8	2-7/16	3
E9991902	E9991902TF	1/4	3/8	1-1/8	2-15/16	3
E9991020	E9991020TF	5/16	3/8	3/4	2-1/2	3
E9991024	E9991024TF	3/8	3/8	3/4	2-1/2	4
E9991028	E9991028TF	7/16	3/8	1	2-11/16	4
E9991032	E9991032TF	1/2	1/2	1-1/4	3-1/4	4
E9991903	E9991903TF	1/2	1/2	1-5/8	3-5/8	4
E9991036	E9991036TF	9/16	1/2	1-3/8	3-3/8	4
E9991040	E9991040TF	5/8	5/8	1-5/8	3-3/4	4
E9991048	E9991048TF	3/4	3/4	1-5/8	3-7/8	4
E9991948	E9991948TF	3/4	5/8	1-5/8	3-7/8	4
E9991904	E9991904TF	3/4	3/4	2-1/2	4-3/4	4
E9991056	E9991056TF	7/8	7/8	1-7/8	4-1/8	5
E9991901	E9991901TF	7/8	3/4	1-7/8	4-1/8	5
E9991064	E9991064TF	1	1	2	4-1/2	5
E9991905	E9991905TF	1	1	3	5-1/2	5
E9991108	E9991108TF	1-1/8	1	2	4-1/2	6
E9991116	E9991116TF	1-1/4	1-1/4	2	4-1/2	6
E9991906	E9991906TF	1-1/4	1-1/4	3	5-1/2	6

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎	◎	◎	◎	◎

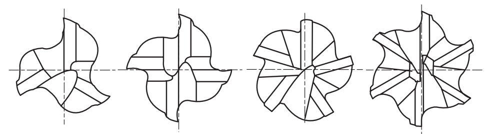
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○													

TANK-POWER END MILLS

FLAT SHANK **E9A86** SERIES

PREMIUM HSS-PM, MULTI FLUTE LONG LENGTH FINE PITCH ROUGHING

▶ This TANK-POWER rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths.



HSS-PM | FINE | 3-6 | 30° | FLAT

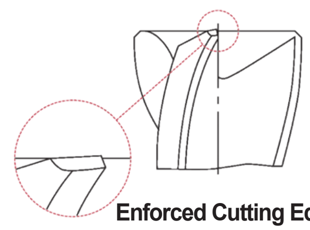
p.C760

◆ U.S.A Stock

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
UNCOATED	TiAIN COATED					
E9A86020	E9A86020TF	5/16	3/8	1-3/8	3-3/16	3
E9A86024	E9A86024TF	3/8	3/8	1-1/2	3-1/4	4
E9A86924	E9A86924TF	3/8	3/8	1-1/2	4	4
E9A86032	E9A86032TF	1/2	1/2	2	4	4
E9A86040	E9A86040TF	5/8	5/8	2-1/2	4-5/8	4
E9A86048	E9A86048TF	3/4	5/8	3	5-1/8	4
E9990902	E9990902TF	3/4	3/4	3	5-1/4	4
E9A86056	E9A86056TF	7/8	3/4	3-1/2	5-3/4	5
E9A86956	E9A86956TF	7/8	7/8	3-1/2	5-3/4	5
E9990903	E9990903TF	1	1	4	6-1/2	5
E9A86116	E9A86116TF	1-1/4	3/4	4	6-1/4	6
E9990904	E9990904TF	1-1/4	1-1/4	4	6-1/2	6

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○													

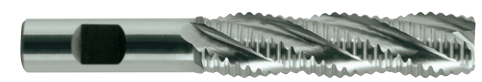
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

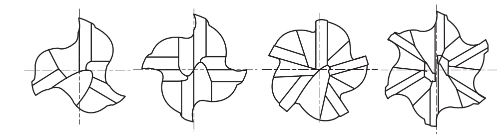
TANK-POWER END MILLS

FLAT SHANK **E9A87** SERIES

PREMIUM HSS-PM, MULTI FLUTE LONG LENGTH COARSE PITCH ROUGHING

▶ This TANK-POWER rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths.





HSS-PM | COARSE | 3-6 | 30° | FLAT

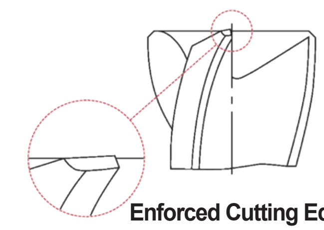
p.C760

◆ U.S.A Stock

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
UNCOATED	TiAIN COATED					
E9A87020	E9A87020TF	5/16	3/8	1-3/8	3-3/16	3
E9A87024	E9A87024TF	3/8	3/8	1-1/2	3-1/4	4
E9A87924	E9A87924TF	3/8	3/8	1-1/2	4	4
E9A87032	E9A87032TF	1/2	1/2	2	4	4
E9A87040	E9A87040TF	5/8	5/8	2-1/2	4-5/8	4
E9A87048	E9A87048TF	3/4	5/8	3	5-1/8	4
E9A87948	E9A87948TF	3/4	3/4	3	5-1/4	4
E9A87056	E9A87056TF	7/8	3/4	3-1/2	5-3/4	5
E9A87956	E9A87956TF	7/8	7/8	3-1/2	5-3/4	5
E9A87064	E9A87064TF	1	1	4	6-1/2	5
E9A87116	E9A87116TF	1-1/4	3/4	4	6-1/4	6
E9A87917	E9A87917TF	1-1/4	1-1/4	4	6-1/2	6

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎	◎	◎	◎	◎

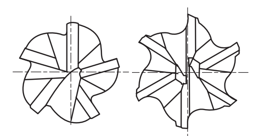
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○													

TANK-POWER END MILLS

FLAT SHANK **E9921** SERIES

PREMIUM HSS-PM, MULTI FLUTE FINE PITCH ROUGHING EXTENDED NECK CENTER CUTTING

▶ This TANK-POWER rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths.



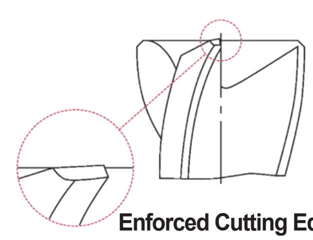
p.C760

◆ U.S.A Stock

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Reach Extended Neck	Overall Length	No. of Flute
UNCOATED	TiAIN COATED						
EP20322	EP20322F	1/2	1/2	1-1/4	3	5	5
EP20402	EP20402F	5/8	5/8	1-5/8	4	6-1/8	5
EP20482	EP20482F	3/4	3/4	1-5/8	4	6-1/4	5
EP20484	EP20484F	3/4	3/4	1-5/8	6	8-1/4	5
EP20642	EP20642F	1	1	2	4	6-1/2	6
EP20643	EP20643F	1	1	2	6	8-1/2	6
EP21161	EP21161F	1-1/4	1 1/4	2	4	6-1/2	6
EP21162	EP21162F	1-1/4	1 1/4	2	6	8-1/2	6

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎	◎	◎	◎	◎

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend						○	○	○													

TANK-POWER END MILLS

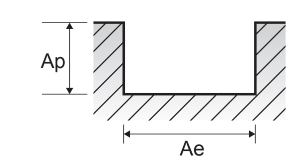
RECOMMENDED CUTTING CONDITIONS

E9983, E9984 SERIES 2 FLUTE - SLOTTING

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1
P	1	Non-alloy steel	1.0D	0.5D	SFM(Vc)	150	185	205	205	205	215	215	195	180	185
					IPT(fz)	.0006	.0011	.0014	.0019	.0024	.0028	.0035	.0040	.0039	.0037
					RPM	4600	3800	3150	2500	2100	1650	1300	1000	800	710
					IPM(FEED)	6	9	9	9	10	9	9	8	6	5
	2		1.0D	0.5D	SFM(Vc)	125	155	175	170	175	175	180	160	155	155
					IPT(fz)	.0007	.0011	.0014	.0020	.0025	.0030	.0033	.0038	.0038	.0040
					RPM	3800	3150	2650	2100	1800	1350	1100	820	680	590
					IPM(FEED)	5	7	8	8	9	8	7	6	5	5
	3-4		1.0D	0.5D	SFM(Vc)	105	130	135	140	140	135	140	140	130	120
					IPT(fz)	.0007	.0012	.0016	.0020	.0026	.0033	.0036	.0037	.0038	.0042
					RPM	3150	2600	2100	1700	1450	1050	860	710	560	470
					IPM(FEED)	4	6	7	7	8	7	6	5	4	4
	5		1.0D	0.5D	SFM(Vc)	70	80	90	90	90	85	90	90	85	90
					IPT(fz)	.0007	.0011	.0014	.0018	.0023	.0029	.0034	.0036	.0036	.0037
					RPM	2150	1650	1350	1100	910	670	540	450	380	340
					IPM(FEED)	3	4	4	4	4	4	4	3	3	3
	6	Low alloy steel	1.0D	0.5D	SFM(Vc)	125	155	175	170	175	175	180	160	155	155
					IPT(fz)	.0007	.0011	.0014	.0020	.0025	.0030	.0033	.0038	.0038	.0040
					RPM	3800	3150	2650	2100	1800	1350	1100	820	680	590
					IPM(FEED)	5	7	8	8	9	8	7	6	5	5
	7		1.0D	0.5D	SFM(Vc)	105	130	135	140	140	135	140	140	130	120
					IPT(fz)	.0007	.0012	.0016	.0020	.0026	.0033	.0036	.0037	.0038	.0042
					RPM	3150	2600	2100	1700	1450	1050	860	710	560	470
					IPM(FEED)	4	6	7	7	8	7	6	5	4	4
	8		1.0D	0.5D	SFM(Vc)	70	80	90	90	90	85	90	90	85	90
					IPT(fz)	.0007	.0011	.0014	.0018	.0023	.0029	.0034	.0036	.0036	.0037
					RPM	2150	1650	1350	1100	910	670	540	450	380	340
					IPM(FEED)	3	4	4	4	4	4	4	3	3	3
	9		1.0D	0.5D	SFM(Vc)	55	65	70	70	70	70	70	70	70	60
					IPT(fz)	.0007	.0010	.0014	.0018	.0024	.0028	.0033	.0035	.0033	.0036
					RPM	1650	1350	1050	860	720	530	430	360	300	240
					IPM(FEED)	2	3	3	3	3	3	3	3	2	2
	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM(Vc)	125	155	175	170	175	175	180	160	155	155
					IPT(fz)	.0007	.0011	.0014	.0020	.0025	.0030	.0033	.0038	.0038	.0040
					RPM	3800	3150	2650	2100	1800	1350	1100	820	680	590
					IPM(FEED)	5	7	8	8	9	8	7	6	5	5
	11.1		1.0D	0.5D	SFM(Vc)	70	80	90	90	90	85	90	90	85	90
					IPT(fz)	.0007	.0011	.0014	.0018	.0023	.0029	.0034	.0036	.0036	.0037
					RPM	2150	1650	1350	1100	910	670	540	450	380	340
					IPM(FEED)	3	4	4	4	4	4	4	3	3	3
M	14.1	Stainless steel	1.0D	0.5D	SFM(Vc)	55	65	70	70	70	70	70	70	70	60
					IPT(fz)	.0007	.0010	.0014	.0018	.0024	.0028	.0033	.0035	.0033	.0036
					RPM	1650	1350	1050	860	720	530	430	360	300	240
					IPM(FEED)	2	3	3	3	3	3	3	3	2	2
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	1.0D	0.5D	SFM(Vc)	125	155	175	170	175	175	180	160	155	155
					IPT(fz)	.0007	.0011	.0014	.0020	.0025	.0030	.0033	.0038	.0038	.0040
					RPM	3800	3150	2650	2100	1800	1350	1100	820	680	590
					IPM(FEED)	5	7	8	8	9	8	7	6	5	5

Diameter (Ø) applies to columns 1/8 through 1.



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG TANK-POWER END MILLS

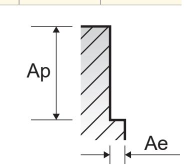
RECOMMENDED CUTTING CONDITIONS

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

E9985, E9986 SERIES — 4 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1
P	1	Non-alloy steel	0.1D	1.5D	SFM (Vc)	205	225	250	255	245	250	260	275	235	260
					IPT (fz)	.0007	.0011	.0015	.0018	.0025	.0029	.0031	.0032	.0038	.0037
					RPM	6300	4600	3800	3100	2500	1900	1600	1400	1030	1000
					IPM (FEED)	18	20	22	22	25	22	20	18	16	15
	2		0.1D	1.5D	SFM (Vc)	195	200	215	215	215	225	230	225	215	215
					IPT (fz)	.0006	.0010	.0014	.0018	.0023	.0027	.0030	.0033	.0033	.0036
					RPM	6000	4100	3300	2600	2200	1720	1410	1150	930	830
					IPM (FEED)	14	16	18	19	21	19	17	15	12	12
	3-4		0.1D	1.5D	SFM (Vc)	140	150	165	165	165	165	165	165	155	160
					IPT (fz)	.0006	.0010	.0013	.0018	.0022	.0028	.0033	.0035	.0036	.0035
					RPM	4250	3040	2500	2000	1680	1270	1000	830	680	620
					IPM (FEED)	10	13	13	14	15	14	13	12	10	9
	5		0.1D	1.5D	SFM (Vc)	90	100	110	115	115	115	115	115	110	110
					IPT (fz)	.0007	.0010	.0014	.0017	.0022	.0027	.0032	.0031	.0034	.0033
					RPM	2700	2070	1700	1400	1180	860	690	580	470	420
					IPM (FEED)	7	9	10	9	10	9	9	7	6	6
	6	Low alloy steel	0.1D	1.5D	SFM (Vc)	195	200	215	215	215	225	230	225	215	215
					IPT (fz)	.0006	.0010	.0014	.0018	.0023	.0027	.0030	.0033	.0033	.0036
					RPM	6000	4100	3300	2600	2200	1720	1410	1150	930	830
					IPM (FEED)	14	16	18	19	21	19	17	15	12	12
	7		0.1D	1.5D	SFM (Vc)	140	150	165	165	165	165	165	165	155	160
					IPT (fz)	.0006	.0010	.0013	.0018	.0022	.0028	.0033	.0035	.0036	.0035
					RPM	4250	3040	2500	2000	1680	1270	1000	830	680	620
					IPM (FEED)	10	13	13	14	15	14	13	12	10	9
	8		0.1D	1.5D	SFM (Vc)	90	100	110	115	115	115	115	115	110	110
					IPT (fz)	.0007	.0010	.0014	.0017	.0022	.0027	.0032	.0031	.0034	.0033
					RPM	2700	2070	1700	1400	1180	860	690	580	470	420
					IPM (FEED)	7	9	10	9	10	9	9	7	6	6
	9		0.1D	1.5D	SFM (Vc)	75	85	90	95	95	90	100	90	90	95
					IPT (fz)	.0005	.0009	.0013	.0016	.0020	.0010	.0027	.0030	.0033	.0034
					RPM	2320	1780	1400	1150	960	690	620	470	390	360
					IPM (FEED)	5	6	7	7	8	3	7	6	5	5
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM (Vc)	195	200	215	215	215	225	230	225	215	215
					IPT (fz)	.0006	.0010	.0014	.0018	.0023	.0027	.0030	.0033	.0033	.0036
					RPM	6000	4100	3300	2600	2200	1720	1410	1150	930	830
					IPM (FEED)	14	16	18	19	21	19	17	15	12	12
	11.1		0.1D	1.5D	SFM (Vc)	90	100	110	115	115	115	115	115	110	110
					IPT (fz)	.0007	.0010	.0014	.0017	.0022	.0027	.0032	.0031	.0034	.0033
					RPM	2700	2070	1700	1400	1180	860	690	580	470	420
					IPM (FEED)	7	9	10	9	10	9	9	7	6	6
M	14.1	Stainless steel	0.1D	0.5D	SFM (Vc)	75	85	90	95	95	90	100	90	90	95
					IPT (fz)	.0005	.0009	.0013	.0016	.0020	.0010	.0027	.0030	.0033	.0034
					RPM	2320	1780	1400	1150	960	690	620	470	390	360
					IPM (FEED)	5	6	7	7	8	3	7	6	5	5
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.1D	1.5D	SFM (Vc)	195	200	215	215	215	225	230	225	215	215
					IPT (fz)	.0006	.0010	.0014	.0018	.0023	.0027	.0030	.0033	.0033	.0036
					RPM	6000	4100	3300	2600	2200	1720	1410	1150	930	830
					IPM (FEED)	14	16	18	19	21	19	17	15	12	12

Diameter (Ø) applies to columns 1/8 through 1.



YG TANK-POWER END MILLS

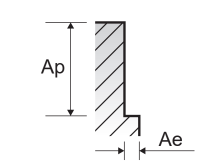
RECOMMENDED CUTTING CONDITIONS

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

E9988 SERIES — 3&4 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1
P	1-2	Non-alloy steel	0.3D	1.5D	SFM (Vc)	250	250	265	240	215	175	165	165
					IPT (fz)	.0007	.0009	.0010	.0017	.0028	.0054	.0058	.0075
					RPM	3850	3050	2700	1850	1300	900	720	630
					IPM (FEED)	8	8	9	10	11	15	17	19
	3-4		0.3D	1.5D	SFM (Vc)	165	170	165	155	140	115	110	110
					IPT (fz)	.0007	.0010	.0012	.0018	.0034	.0068	.0074	.0096
					RPM	2500	2100	1700	1200	850	580	480	420
					IPM (FEED)	5	6	6	6	9	12	14	16
	5		0.3D	1.5D	SFM (Vc)	125	140	140	125	115	95	85	90
					IPT (fz)	.0006	.0007	.0009	.0014	.0026	.0055	.0058	.0075
					RPM	1900	1700	1450	960	690	480	380	340
					IPM (FEED)	4	4	4	4	5	8	9	10
	6	Low alloy steel	0.3D	1.5D	SFM (Vc)	250	250	265	240	215	175	165	165
					IPT (fz)	.0007	.0009	.0010	.0017	.0028	.0054	.0058	.0075
					RPM	3850	3050	2700	1850	1300	900	720	630
					IPM (FEED)	8	8	9	10	11	15	17	19
	7		0.3D	1.5D	SFM (Vc)	165	170	165	155	140	115	110	110
					IPT (fz)	.0007	.0010	.0012	.0018	.0034	.0068	.0074	.0096
					RPM	2500	2100	1700	1200	850	580	480	420
					IPM (FEED)	5	6	6	6	9	12	14	16
	8-9		0.3D	1.5D	SFM (Vc)	125	140	140	125	115	95	85	90
					IPT (fz)	.0006	.0007	.0009	.0014	.0026	.0055	.0058	.0075
					RPM	1900	1700	1450	960	690	480	380	340
					IPM (FEED)	4	4	4	4	5	8	9	10
	10	High alloyed steel, and tool steel	0.3D	1.5D	SFM (Vc)	250	250	265	240	215	175	165	165
					IPT (fz)	.0007	.0009	.0010	.0017	.0028	.0054	.0058	.0075
					RPM	3850	3050	2700	1850	1300	900	720	630
					IPM (FEED)	8	8	9	10	11	15	17	19
	11.1		0.3D	1.5D	SFM (Vc)	125	140	140	125	115	95	85	90
					IPT (fz)	.0006	.0007	.0009	.0014	.0026	.0055	.0058	.0075
					RPM	1900	1700	1450	960	690	480	380	340
					IPM (FEED)	4	4	4	4	5	8	9	10
M	14.1	Stainless steel	0.3D	1.5D	SFM (Vc)	125	140	140	125	115	95	85	90
					IPT (fz)	.0006	.0007	.0009	.0014	.0026	.0055	.0058	.0075
					RPM	1900	1700	1450	960	690	480	380	340
					IPM (FEED)	4	4	4	4	5	8	9	10
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.3D	1.5D	SFM (Vc)	250	250	265	240	215	175	165	165
					IPT (fz)	.0007	.0009	.0010	.0017	.0028	.0054	.0058	.0075
					RPM	3850	3050	2700	1850	1300	900	720	630
					IPM (FEED)	8	8	9	10	11	15	17	19

Diameter (Ø) applies to columns 1/4 through 1.



CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

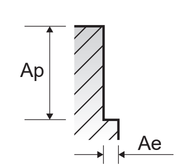
TANK-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

E9990, E9991, E9A86, E9A87, E9921 SERIES — MULTI FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	3/8	1/2	5/8	3/4	7/8	1
P	1-2	Non-alloy steel	0.5D	1.5D	SFM (Vc)	175	185	190	190	190	195	195
					IPT (fz)	.0010	.0017	.0024	.0031	.0038	.0034	.0038
					RPM	2650	1900	1450	1150	960	850	740
					IPM (FEED)	8	13	14	14	14	15	14
	3-4		0.5D	1.5D	SFM (Vc)	135	145	145	150	155	140	145
					IPT (fz)	.0010	.0017	.0026	.0031	.0037	.0037	.0038
					RPM	2050	1500	1100	910	780	620	560
					IPM (FEED)	6	10	11	11	11	11	11
	5		0.5D	1.5D	SFM (Vc)	95	105	105	105	105	100	105
					IPT (fz)	.0010	.0015	.0025	.0031	.0037	.0035	.0037
					RPM	1450	1050	810	630	540	450	400
					IPM (FEED)	4	6	8	8	8	8	7
	6	Low alloy steel	0.5D	1.5D	SFM (Vc)	175	185	190	190	190	195	195
					IPT (fz)	.0010	.0017	.0024	.0031	.0038	.0034	.0038
					RPM	2650	1900	1450	1150	960	850	740
					IPM (FEED)	8	13	14	14	14	15	14
	7		0.5D	1.5D	SFM (Vc)	135	145	145	150	155	140	145
					IPT (fz)	.0010	.0017	.0026	.0031	.0037	.0037	.0038
					RPM	2050	1500	1100	910	780	620	560
					IPM (FEED)	6	10	11	11	11	11	11
	8		0.5D	1.5D	SFM (Vc)	95	105	105	105	105	100	105
					IPT (fz)	.0010	.0015	.0025	.0031	.0037	.0035	.0037
					RPM	1450	1050	810	630	540	450	400
					IPM (FEED)	4	6	8	8	8	8	7
	9		0.5D	1.5D	SFM (Vc)	80	85	85	85	85	85	80
					IPT (fz)	.0009	.0015	.0023	.0029	.0034	.0033	.0038
					RPM	1200	890	670	530	450	380	320
					IPM (FEED)	3	5	6	6	6	6	6
	10	High alloyed steel, and tool steel	0.5D	1.5D	SFM (Vc)	175	185	190	190	190	195	195
					IPT (fz)	.0010	.0017	.0024	.0031	.0038	.0034	.0038
					RPM	2650	1900	1450	1150	960	850	740
					IPM (FEED)	8	13	14	14	14	15	14
	11.1		0.5D	1.5D	SFM (Vc)	95	105	105	105	105	100	105
					IPT (fz)	.0010	.0015	.0025	.0031	.0037	.0035	.0037
					RPM	1450	1050	810	630	540	450	400
					IPM (FEED)	4	6	8	8	8	8	7
M	14.1	Stainless steel	0.5D	1.5D	SFM (Vc)	125	125	125	125	125	125	125
					IPT (fz)	.0010	.0017	.0024	.0032	.0038	.0034	.0038
					RPM	1900	1270	950	760	630	540	470
					IPM (FEED)	6	9	9	10	10	9	9
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.1D	1.5D	SFM (Vc)	175	185	190	190	190	195	195
					IPT (fz)	.0010	.0017	.0024	.0031	.0038	.0034	.0038
					RPM	2650	1900	1450	1150	960	850	740
					IPM (FEED)	8	13	14	14	14	15	14

SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.



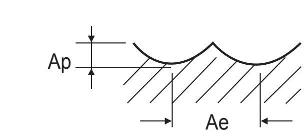
TANK-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS

E9992 SERIES — 2 FLUTE BALL NOSE - PROFILING

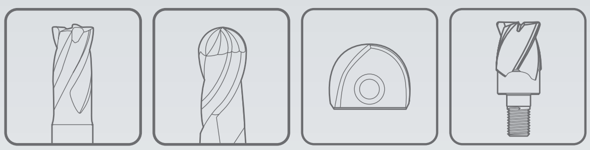
SFM(Vc) = ft./min.
IPT(fz) = in./tooth
RPM = rev./min.
IPM(Feed) = in./min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1
P	1	Non-alloy steel	0.5D	0.2D	SFM (Vc)	225	250	265	265	270	275	260	265	250	235
					IPT (fz)	.0009	.0015	.0021	.0028	.0036	.0042	.0052	.0054	.0057	.0059
					RPM	6800	5100	4050	3250	2750	2100	1600	1350	1100	890
					IPM (FEED)	12	15	17	18	20	18	17	15	13	11
	2		0.5D	0.2D	SFM (Vc)	175	195	205	210	205	210	205	205	200	180
					IPT (fz)	.0008	.0013	.0018	.0024	.0032	.0038	.0044	.0047	.0049	.0051
					RPM	5300	4000	3150	2550	2100	1600	1250	1050	870	690
					IPM (FEED)	8	10	11	12	13	12	11	10	8	7
	3-4		0.5D	0.2D	SFM (Vc)	115	130	135	140	140	145	140	135	130	115
					IPT (fz)	.0006	.0011	.0015	.0020	.0026	.0031	.0035	.0039	.0041	.0044
					RPM	3550	2650	2100	1700	1450	1100	860	700	560	450
					IPM (FEED)	5	6	6	7	8	7	6	5	5	4
	5		0.5D	0.2D	SFM (Vc)	60	65	70	70	70	70	70	70	70	60
					IPT (fz)	.0006	.0010	.0014	.0017	.0024	.0027	.0033	.0035	.0035	.0036
					RPM	1850	1350	1100	860	700	530	430	360	300	240
					IPM (FEED)	2	3	3	3	3	3	3	3	2	2
	6	Low alloy steel	0.5D	0.2D	SFM (Vc)	175	195	205	210	205	210	205	205	200	180
					IPT (fz)	.0008	.0013	.0018	.0024	.0032	.0038	.0044	.0047	.0049	.0051
					RPM	5300	4000	3150	2550	2100	1600	1250	1050	870	690
					IPM (FEED)	8	10	11	12	13	12	11	10	8	7
	7		0.5D	0.2D	SFM (Vc)	115	130	135	140	140	145	140	135	130	115
					IPT (fz)	.0006	.0011	.0015	.0020	.0026	.0031	.0035	.0039	.0041	.0044
					RPM	3550	2650	2100	1700	1450	1100	860	700	560	450
					IPM (FEED)	5	6	6	7	8	7	6	5	5	4
	8-9		0.5D	0.2D	SFM (Vc)	60	65	70	70	70	70	70	70	70	60
					IPT (fz)	.0006	.0010	.0014	.0017	.0024	.0027	.0033	.0035	.0035	.0036
					RPM	1850	1350	1100	860	700	530	430	360	300	240
					IPM (FEED)	2	3	3	3	3	3	3	3	2	2
	10	High alloyed steel, and tool steel	0.5D	0.2D	SFM (Vc)	175	195	205	210	205	210	205	205	200	180
					IPT (fz)	.0008	.0013	.0018	.0024	.0032	.0038	.0044	.0047	.0049	.0051
					RPM	5300	4000	3150	2550	2100	1600	1250	1050	870	690
					IPM (FEED)	8	10	11	12	13	12	11	10	8	7
	11.1		0.5D	0.2D	SFM (Vc)	60	65	70	70	70	70	70	70	70	60
					IPT (fz)	.0006	.0010	.0014	.0017	.0024	.0027	.0033	.0035	.0035	.0036
					RPM	1850	1350	1100	860	700	530	430	360	300	240
					IPM (FEED)	2	3	3	3	3	3	3	3	2	2
M	14.1	Stainless steel	0.5D	0.2D	SFM (Vc)	60	65	70	70	70	70	70	70	70	60
					IPT (fz)	.0006	.0010	.0014	.0017	.0024	.0027	.0033	.0035	.0035	.0036
					RPM	1850	1350	1100	860	700	530	430	360	300	240
					IPM (FEED)	2	3	3	3	3	3	3	3	2	2
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.5D	0.2D	SFM (Vc)	175	195	205	210	205	210	205	205	200	180
					IPT (fz)	.0008	.0013	.0018	.0024	.0032	.0038	.0044	.0047	.0049	.0051
					RPM	5300	4000	3150	2550	2100	1600	1250	1050	870	690
					IPM (FEED)	8	10	11	12	13	12	11	10	8	7



※ The Feed, in long & extra long types, should be reduced by around 50%.

Global Cutting Tool Leader **YG-1**



MILLING

Being the best through innovation

HSSCo8 & HSS

COBALT & HSS END MILLS

- General Purpose / Coating Available

SELECTION GUIDE

YG MILLING TOOLS

HSSCo8 & HSS

COBALT & HSS END MILLS

General Purpose, Non-coated, Any Coating Available

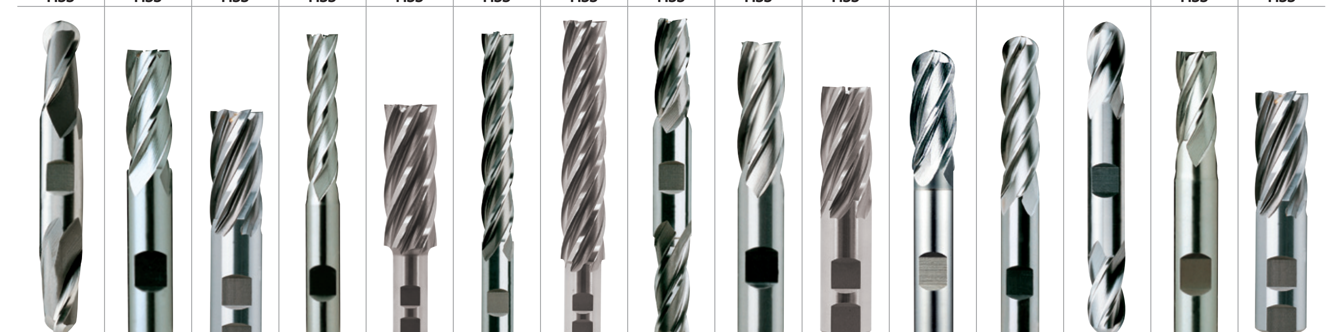
Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p. C833

Inch	E2030 E1030	E2080 E1080	E2033 E1033	E2050 E1050	E2110 E1110	E2111 E1111
FLUTE	2	2	2	2	2	2
HELIX ANGLE	30°	30°	30°	30°	30°	30°
CUTTING EDGE SHAPE	SQUARE	SQUARE	SQUARE	SQUARE	BALL NOSE	BALL NOSE
SIZE MIN	D1/8	D1/4	D1/8	D1/8	R1/16	R1/16
SIZE MAX	D2	D2	D1-1/4	D1	R1	R1/2
PAGE	C771	C773	C774	C775	C777	C778
	REGULAR LENGTH	LONG LENGTH	EXTENDED LENGTH	REGULAR LENGTH DOUBLE	REGULAR LENGTH	EXTENDED LENGTH
	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	E2030 E1030	E2080 E1080	E2033 E1033	E2050 E1050	E2110 E1110	E2111 E1111
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	◎	◎	◎	◎	◎
	2		About 0.45% C	Annealed	190	13	◎	◎	◎	◎	◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎
	4		About 0.75% C	Annealed	270	28	◎	◎	◎	◎	◎	◎
	5		About 0.75% C	Quenched & Tempered	300	32	○	○	○	○	○	○
	6	Low alloy steel		Annealed	180	10	◎	◎	◎	◎	◎	◎
	7			Quenched & Tempered	275	29	◎	◎	◎	◎	◎	◎
	8			Quenched & Tempered	300	32	○	○	○	○	○	○
	9			Quenched & Tempered	350	38	○	○	○	○	○	○
	10	High alloyed steel, and tool steel		Annealed	200	15	◎	◎	◎	◎	◎	◎
	11			Quenched & Tempered	325	35	○	○	○	○	○	○
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15						
	13		Martensitic	Quenched & Tempered	240	23						
	14		Austenitic		180	10						
K	15	Grey cast iron	Pearlitic / ferritic		180	10						
	16		Pearlitic (Martensitic)		260	26						
	17	Nodular cast iron	Ferritic		160	3						
	18		Pearlitic		250	25						
	19	Malleable cast iron	Ferritic		130							
	20		Pearlitic		230	21						
N	21	Aluminum-wrought alloy	Not Curable		60		○	○	○	○	○	○
	22		Curable	Hardened	100		○	○	○	○	○	○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○	○	○	○	○	○
	24		≤ 12% Si, Curable	Hardened	90		○	○	○	○	○	○
	25		> 12% Si, Not Curable		130		○	○	○	○	○	○
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○	○	○	○	○	○
	27		CuZn, CuSnZn (Brass)		90		○	○	○	○	○	○
	28		CuSn, lead-free copper and electrolytic copper		100		○	○	○	○	○	○
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic									
	30		Rubber, Wood, etc.									
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15						
	32			Cured	280	30						
	33		Ni or Co Based	Annealed	250	25						
	34			Cured	350	38						
	35			Cast	320	34						
	36	Titanium Alloys	Pure Titanium		400 Rm							
	37		Alpha + Beta Alloys	Hardened	1050 Rm							
H	38	Hardened steel		Hardened	550	55						
	39			Hardened	630	60						
	40	Chilled Cast Iron		Cast	400	42						
	41	Hardened Cast Iron		Hardened	550	55						



Inch	E2112 E1112	E2031 E1031	E2032 E1032	E2034 E1034	E2035 E1035	E2036 E1036	E2037 E1037	E2051 E1051	E2031 E1031	E2032 E1032	E2020	E2021	E2069	E2039 E1039	E2042 E1042
FLUTE	2	4	6	4	6	4	6	4	4	6&8	4	4	4	4	6
HELIX ANGLE	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°
CUTTING EDGE SHAPE	BALL NOSE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	BALL NOSE	BALL NOSE	BALL NOSE	SQUARE	SQUARE
SIZE MIN	R1/16	D1/8	D5/8	D1/4	D1-1/8	D1/4	D1-1/4	D1/8	D3/4	D1-1/8	R1/16	R1/8	R1/16	D1/8	D1/2
SIZE MAX	R1/2	D1	D2	D1	D2	D1	D2	D1	D1	D2	R1	R1/2	R1/2	D1-1/2	D2
PAGE	C779	C780	C782	C783		C784		C785	C787		C788	C789	C790	C791	C793
	REGULAR LENGTH DOUBLE	REGULAR LENGTH	REGULAR LENGTH	LONG LENGTH	LONG LENGTH	EXTRA LONG LENGTH	EXTRA LONG LENGTH	REGULAR LENGTH DOUBLE	REGULAR LENGTH 3/4 SHANK	REGULAR LENGTH 3/4 SHANK	REGULAR LENGTH	LONG LENGTH	REGULAR LENGTH DOUBLE	REGULAR LENGTH CENTER CUTTING	REGULAR LENGTH CENTER CUTTING
	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8	HSSCo8	HSSCo8	HSSCo8 & HSS	HSSCo8 & HSS

ISO	VDI 3323	E2112 E1112	E2031 E1031	E2032 E1032	E2034 E1034	E2035 E1035	E2036 E1036	E2037 E1037	E2051 E1051	E2031 E1031	E2032 E1032	E2020	E2021	E2069	E2039 E1039	E2042 E1042
P	1	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	2	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	4	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	6	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	9	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	11	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
M	12															
	13															
	14															
K	15															
	16															
	17															
	18															
	19															
	20															
N	21	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	22	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	23	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	24	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	25	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	26	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	27	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	28	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	29															
	30															
S	31															
	32															
	33															
	34															
	35															
	36															
	37															
H	38															
	39															
	40															
	41															

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SELECTION GUIDE

YG MILLING TOOLS

HSS

COBALT & HSS END MILLS

General Purpose, Non-coated, Any Coating Available

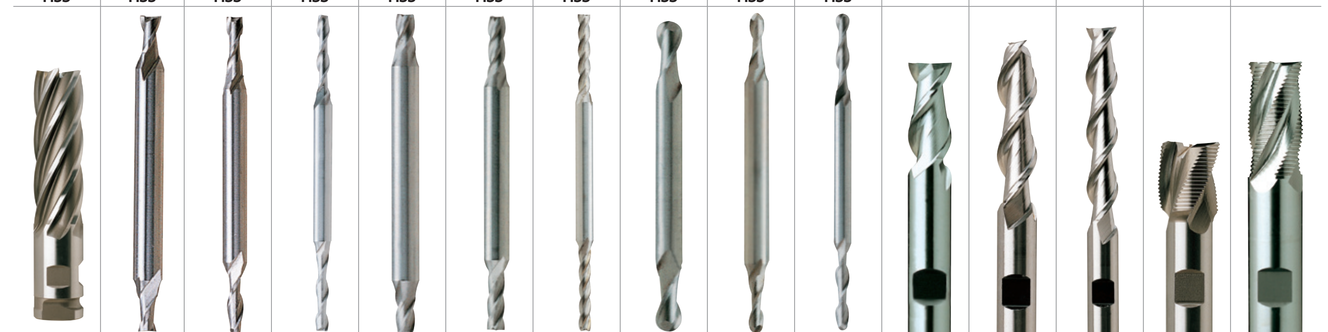
Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p. C833

Inch						
SERIES	E2039 E2042	E2040 E1040	E2162 E1162	E2041 E1041	E2175 E1175	E2053 E1053
FLUTE	4~8	4	6	4	6	4
HELIX ANGLE	30°	30°	30°	30°	30°	30°
CUTTING EDGE SHAPE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE
SIZE MIN	D1	D1/4	D1/2	D1/4	D1/2	D1/8
SIZE MAX	D2	D1-1/2	D2	D1-1/4	D2	D1
PAGE	C794	C795		C796		C797
	MEDIUM LENGTH CENTER CUTTING	LONG LENGTH CENTER CUTTING	LONG LENGTH CENTER CUTTING	EXTRA LONG LENGTH CENTER CUTTING	EXTRA LONG LENGTH CENTER CUTTING	REGULAR LENGTH DOUBLE CENTER CUTTING
	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	HSSCo8	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS

Inch															
SERIES	E2100 E1100	E2001 E1001	E2003 E1003	E2005 E1005	E2002 E1002	E2004 E1004	E2006 E1006	E2008 E1008	E2013 E1013	E2015 E1015	E1070	E1071	E1072	E2086	E2085
FLUTE	6	2	2	2	4	4	4	2	2	2	2	2	2	4~5	3~5
HELIX ANGLE	30°	30°&39°	30°&39°	30°&39°	30°&39°	30°&39°	30°&39°	30°&39°	30°&39°	30°&39°	42°	42°	42°	30°	30°
CUTTING EDGE SHAPE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	BALL NOSE	BALL NOSE	BALL NOSE	SQUARE	SQUARE	SQUARE	ROUGHING	ROUGHING
SIZE MIN	D2	D1/32	D1/32	D1/16	D1/16	D1/16	D1/16	R1/32	R1/64	R1/32	D1/4	D1/4	D1/4	D1/4	D1/4
SIZE MAX	D2	D3/16	D3/16	D3/16	D3/16	D3/16	D3/16	R3/32	R3/32	R3/32	D2	D2	D1-1/2	D1	D1
PAGE	C799	C800	C801	C802	C803	C804	C805	C806	C807	C808	C809	C810		C811	C812
	REGULAR COMBINATION 2" SHANK CENTER CUTTING	STUB LENGTH MINIATURE DOUBLE	REGULAR LENGTH MINIATURE DOUBLE	LONG LENGTH MINIATURE DOUBLE	LONG LENGTH MINIATURE DOUBLE	REGULAR LENGTH MINIATURE DOUBLE	LONG LENGTH MINIATURE DOUBLE	STUB LENGTH MINIATURE DOUBLE	REGULAR LENGTH MINIATURE DOUBLE	LONG LENGTH MINIATURE DOUBLE	REGULAR & MEDIUM LENGTH ALUMINUM	LONG LENGTH ALUMINUM	EXTRA LONG LENGTH ALUMINUM	STUB LENGTH FINE PITCH CENTER CUTTING	REGULAR LENGTH FINE PITCH CENTER CUTTING
	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSS	HSS	HSS	HSSCo8	HSSCo8



ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	E2039 E2042	E2040 E1040	E2162 E1162	E2041 E1041	E2175 E1175	E2053 E1053
P	1	Non-alloy steel	About 0.15% C Annealed	125		◎	◎	◎	◎	◎	◎
P	2	Non-alloy steel	About 0.45% C Annealed	190	13	◎	◎	◎	◎	◎	◎
P	3	Non-alloy steel	About 0.45% C Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎
P	4	Non-alloy steel	About 0.75% C Annealed	270	28	◎	◎	◎	◎	◎	◎
P	5	Non-alloy steel	About 0.75% C Quenched & Tempered	300	32	○	○	○	○	○	○
P	6	Low alloy steel	Annealed	180	10	◎	◎	◎	◎	◎	◎
P	7	Low alloy steel	Quenched & Tempered	275	29	◎	◎	◎	◎	◎	◎
P	8	Low alloy steel	Quenched & Tempered	300	32	○	○	○	○	○	○
P	9	Low alloy steel	Quenched & Tempered	350	38	○	○	○	○	○	○
P	10	High alloyed steel, and tool steel	Annealed	200	15	◎	◎	◎	◎	◎	◎
P	11	High alloyed steel, and tool steel	Quenched & Tempered	325	35	○	○	○	○	○	○
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15						
M	13	Stainless steel	Martensitic Quenched & Tempered	240	23						
M	14	Stainless steel	Austenitic	180	10						
K	15	Grey cast iron	Pearlitic / ferritic	180	10						
K	16	Grey cast iron	Pearlitic (Martensitic)	260	26						
K	17	Nodular cast iron	Ferritic	160	3						
K	18	Nodular cast iron	Pearlitic	250	25						
K	19	Malleable cast iron	Ferritic	130							
K	20	Malleable cast iron	Pearlitic	230	21						
N	21	Aluminum-wrought alloy	Not Curable	60		○	○	○	○	○	○
N	22	Aluminum-wrought alloy	Curable Hardened	100		○	○	○	○	○	○
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75		○	○	○	○	○	○
N	24	Aluminum-cast, alloyed	≤ 12% Si, Curable Hardened	90		○	○	○	○	○	○
N	25	Aluminum-cast, alloyed	> 12% Si, Not Curable	130		○	○	○	○	○	○
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110		○	○	○	○	○	○
N	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)	90		○	○	○	○	○	○
N	28	Copper and Copper Alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper	100		○	○	○	○	○	○
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic								
N	30	Non Metallic Materials	Rubber, Wood, etc.								
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15						
S	32	Heat Resistant Super Alloys	Fe Based Cured	280	30						
S	33	Heat Resistant Super Alloys	Ni or Co Based Annealed	250	25						
S	34	Heat Resistant Super Alloys	Ni or Co Based Cured	350	38						
S	35	Heat Resistant Super Alloys	Ni or Co Based Cast	320	34						
S	36	Titanium Alloys	Pure Titanium	400 Rm							
S	37	Titanium Alloys	Alpha + Beta Alloys Hardened	1050 Rm							
H	38	Hardened steel	Hardened	550	55						
H	39	Hardened steel	Hardened	630	60						
H	40	Chilled Cast Iron	Cast	400	42						
H	41	Hardened Cast Iron	Hardened	550	55						

ISO	VDI 3323	E2100 E1100	E2001 E1001	E2003 E1003	E2005 E1005	E2002 E1002	E2004 E1004	E2006 E1006	E2008 E1008	E2013 E1013	E2015 E1015	E1070	E1071	E1072	E2086	E2085
P	1	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎
P	2	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎
P	3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎
P	4	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎
P	5	○	○	○	○	○	○	○	○	○	○				○	○
P	6	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎
P	7	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎				◎	◎
P	8	○	○	○	○	○	○	○	○	○	○				○	○
P	9	○	○	○	○	○	○	○	○	○	○				○	○
P	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎
P	11	○	○	○	○	○	○	○	○	○	○				○	○
M	12															
M	13															
M	14															
K	15															
K	16															
K	17															
K	18															
K	19															
K	20															
N	21	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○
N	22	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○
N	23	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○
N	24	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○
N	25	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○
N	26	○	○	○	○	○	○	○	○	○	○				○	○
N	27	○	○	○	○	○	○	○	○	○	○				○	○
N	28	○	○	○	○	○	○	○	○	○	○				○	○
N	29															
N	30															
S	31															
S	32															
S	33															
S	34															
S	35															
S	36															
S	37															
H	38															
H	39															
H	40															
H	41															

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SELECTION GUIDE

YG MILLING TOOLS

HSS
COBALT & HSS
END MILLS

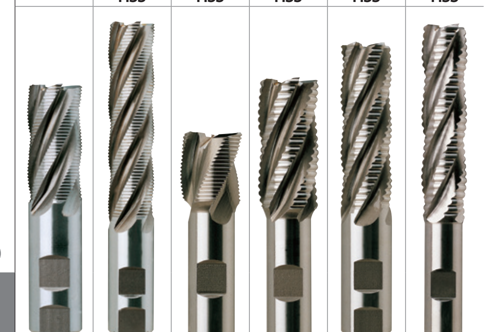
General Purpose, Non-coated, Any Coating Available

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p. C833

SERIES (Inch)	E2079	E2077	E2086	E2170	E2171	E2172
FLUTE	3~6	4~6	3	3~8	5~8	4~8
HELIX ANGLE	30°	30°	30°	30°	30°	30°
CUTTING EDGE SHAPE	ROUGHING	ROUGHING	ROUGHING	ROUGHING	ROUGHING	ROUGHING
SIZE MIN	D1/4	D1/2	D1/4	D1/4	D1	D1/2
SIZE MAX	D2	D2	D1	D2	D2	D2
PAGE	C813	C814	C815	C816	C817	C818
	REGULAR LENGTH FINE PITCH	LONG LENGTH FINE PITCH	STUB LENGTH FINE PITCH CENTER CUTTING	REGULAR LENGTH COARSE PITCH ROUGHING	MEDIUM LENGTH COARSE PITCH	LONG LENGTH COARSE PITCH
	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	HSSCo8	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS



SERIES (Inch)	E2241	E2195	E2197	E2193 E2125	E2248	E2191	E2226 E2192	E2163 E1163	E2120 E2121	E2160	E2161	E2237 E1237	E2482 E1482	E2483 E1483
FLUTE	3	4~6	4~6	3~6	4~8	3	3	2	3&4	3	3	4	2	4
HELIX ANGLE	30°	30°	30°	30°	30°	37°	37°	15°	60°	30°	30°	0°	30°	30°
CUTTING EDGE SHAPE	ROUGHING	ROUGHING	ROUGHING	BALL NOSE ROUGHING	ROUGHING & FINISHING	ROUGHING	ROUGHING	SQUARE	SQUARE	SQUARE	SQUARE	CORNER ROUNDING	SQUARE	SQUARE
SIZE MIN	D1/4	D1/2	D1/2	R1/8	D1/4	D1/4	D1/2	D1/8	D1/4 D7/8	D1/16	D1/16	D1/4	D2.0(.0787)	D2.0(.0787)
SIZE MAX	D1	D1-1/2	D1-1/2	R3/4	D2	D1-1/2	D1-1/2	D1	D3/4 D2	D1/4	D1/4	D5/8	D45.0(1.772)	D45.0(1.772)
PAGE	C819	C820		C821	C822	C823	C824	C825	C826	C827		C828	C829	C830
	STUB LENGTH COARSE PITCH CENTER CUTTING	REGULAR LENGTH COARSE PITCH CENTER CUTTING	LONG LENGTH COARSE PITCH CENTER CUTTING	REGULAR & LONG LENGTH COARSE PITCH	ROUGHING & FINISHING CENTER CUTTING	REGULAR LENGTH ALUMINUM CENTER CUTTING	MEDIUM & LONG LENGTH ALUMINUM CENTER CUTTING	KEYWAY CUTTING	REGULAR LENGTH	SHORT LENGTH THROW AWAY	LONG LENGTH THROW AWAY		REGULAR LENGTH	REGULAR LENGTH
	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated	Uncoated
	HSSCo8	HSSCo8	HSSCo8	HSSCo8	HSSCo8	HSSCo8	HSSCo8	HSSCo8	HSSCo8	HSSCo8	HSSCo8	HSSCo8 & HSS	HSSCo8 & HSS	HSSCo8 & HSS

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	E2079	E2077	E2086	E2170	E2171	E2172	E2241	E2195	E2197	E2193 E2125	E2248	E2191	E2226 E2192	E2163 E1163	E2120 E2121	E2160	E2161	E2237 E1237	E2482 E1482	E2483 E1483
P	1	Non-alloy steel	About 0.15% C Annealed	125		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	2		About 0.45% C Annealed	190	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	3		About 0.45% C Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	4		About 0.75% C Annealed	270	28	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	5		About 0.75% C Quenched & Tempered	300	32	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	6	Low alloy steel	Annealed	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	7		Quenched & Tempered	275	29	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	8		Quenched & Tempered	300	32	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	9		Quenched & Tempered	350	38	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	10	High alloyed steel, and tool steel	Annealed	200	15	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
	11		Quenched & Tempered	325	35	○	○	○	○	○	○	○	○	○	○	○	○	○	○		○	○	○	○	○
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15															○					
	13		Martensitic Quenched & Tempered	240	23															○					
	14		Austenitic	180	10															○					
K	15	Grey cast iron	Pearlitic / ferritic	180	10															○					
	16		Pearlitic (Martensitic)	260	26															○					
	17	Nodular cast iron	Ferritic	160	3															○					
	18		Pearlitic	250	25															○					
	19	Malleable cast iron	Ferritic	130																○					
	20		Pearlitic	230	21															○					
N	21	Aluminum-wrought alloy	Not Curable	60		○	○	○	○	○	○	○	○	○	○	○	◎	◎	○		○	○	○	○	○
	22		Curable Hardened	100		○	○	○	○	○	○	○	○	○	○	○	◎	◎	○		○	○	○	○	○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75		○	○	○	○	○	○	○	○	○	○	○	◎	◎	○		○	○	○	○	○
	24		≤ 12% Si, Curable Hardened	90		○	○	○	○	○	○	○	○	○	○	○	◎	◎	○		○	○	○	○	○
	25		> 12% Si, Not Curable	130		○	○	○	○	○	○	○	○	○	○	○	◎	◎	○		○	○	○	○	○
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110		○	○	○	○	○	○	○	○	○	○	○	○	○	○		○	○	○	○	○
	27		CuZn, CuSnZn (Brass)	90		○	○	○	○	○	○	○	○	○	○	○	○	○	○		○	○	○	○	○
	28		CuSn, lead-free copper and electrolytic copper	100		○	○	○	○	○	○	○	○	○	○	○	○	○	○		○	○	○	○	○
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic																						
	30		Rubber, Wood, etc.																						
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15																				
	32		Cured	280	30																				
	33		Ni or Co Based Annealed	250	25																				
	34		Cured	350	38																				
	35		Cast	320	34																				
	36	Titanium Alloys	Pure Titanium	400 Rm																					
	37		Alpha + Beta Alloys Hardened	1050 Rm																					
H	38	Hardened steel	Hardened	550	55																				
	39		Hardened	630	60																				
	40	Chilled Cast Iron	Cast	400	42																				
	41	Hardened Cast Iron	Hardened	550	55																				

CARBIDE
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STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

SUPER CUTTING END MILLS

DESCRIPTION				YG-1	**ANSI	REMARK
TYPE	NO. OF FLUTE	LENGTH OF CUT	TYPE OF END			
SINGLE END	2	REGULAR LONG EX. LONG	ALL	+ .0010 .0000 *(+ .0015 .0000)	+ .0030 .0000	
	MULTIPLE	ALL	ALL	+ .0010 .0000 *(+ .0015 .0000)	+ .0030 .0000	
KEY WAY	2	ALL	CENTER CUTTING	+ .0000 - .0015	+ .0000 - .0015	
DOUBLE END	2	REGULAR	ALL	.0000 - .0010 *(.0000 - .0020)	.0000 - .0015	
	4	ALL	CENTER CUTTING	.0000 - .0010 *(.0000 - .0020)	.0000 - .0015	
	4	ALL	NON CENTER CUTTING	+ .0010 .0000 *(.0000 - .0020)	+ .0030 .0000 *(.0000 - .0025)	
3/16 SHANK DOUBLE END	2	STUB REGULAR	ALL	.0000 - .0010 *(.0000 - .0020)	.0000 - .0015	
		LONG	ALL	+ .0010 .0000 *(.0000 - .0020)	+ .0030 .0000 *(.0000 - .0025)	
	4	ALL	ALL	+ .0010 .0000 *(.0000 - .0020)	+ .0030 .0000 *(.0000 - .0025)	
ROUGHING	MULTIPLE	ALL	ALL	+ .0060 .0000	+ .025 - .005	
ROUGHING & FINISHING	MULTIPLE	REGULAR	ALL	+ .0025 + .0005		
HELICAL 60°	3.4	REGULAR	CENTER CUTTING	+ .0010 .0000 *(+ .0015 .0000)		
THROW AWAY 1/4 SHANK	3	ALL	CENTER CUTTING	- .0005 - .0013		

* The shank of End Mills is the same diameter as the cutting portion.
** ANSI B94-19-1977 published by the American Society of Mechanical Engineers.

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2030 SERIES**
HSS (M2) FLAT SHANK **E1030 SERIES**

HSSCo8 & HSS, 2 FLUTE REGULAR LENGTH

▶ These end mills are furnished as regular with right-hand cutting and right-hand helical flutes. All shanks are flatted for holder set screw. These are designed for slotting, drilling, pocketing and general-purpose operation.

HSS Co8 | HSS | 2 | 30° | FLAT

p.C833, C834, C835

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
01289	01039	1/8	3/8	3/8	2-5/16
01291	01041	5/32	3/8	7/16	2-5/16
01293	01043	3/16	3/8	7/16	2-5/16
01295	01045	7/32	3/8	1/2	2-5/16
01297	01047	1/4	3/8	1/2	2-5/16
01299	01049	9/32	3/8	9/16	2-5/16
01301	01051	5/16	3/8	9/16	2-5/16
01303	01053	11/32	3/8	9/16	2-5/16
01305	01055	3/8	3/8	9/16	2-5/16
01308	01058	13/32	3/8	13/16	2-1/2
01312	01062	7/16	3/8	13/16	2-1/2
01316	01066	15/32	3/8	13/16	2-1/2
01320	01070	1/2	3/8	13/16	2-1/2
01321	01071	1/2	1/2	1	3
01328	01078	9/16	1/2	1-1/8	3-1/8
01336	01086	5/8	1/2	1-1/8	3-1/8
01337	01087	5/8	5/8	1-5/16	3-7/16
01348	01098	11/16	5/8	1-5/16	3-7/16
01357	01107	3/4	1/2	1-5/16	3-5/16
01358	01108	3/4	5/8	1-5/16	3-7/16
01359	01109	3/4	3/4	1-5/16	3-7/16
01373	01123	13/16	5/8	1-1/2	3-5/8
01391	01141	7/8	3/4	1-1/2	3-3/4
01394	01144	7/8	7/8	1-1/2	3-3/4
01409	01159	15/16	7/8	1-1/2	3-3/4
01420	01170	1	5/8	1-1/2	3-5/8

■ The TiN coated, TiCN coated or TiAlN coated is available on your request.
▶ NEXT PAGE
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAlN F), CE(TiAlN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAlN F), HE(TiAlN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

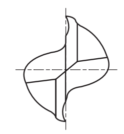
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2030 SERIES**
HSS (M2) FLAT SHANK **E1030 SERIES**

HSSCo8 & HSS, 2 FLUTE REGULAR LENGTH

▶ These end mills are furnished as regular with right-hand cutting and right-hand helical flutes. All shanks are flatted for holder set screw. These are designed for slotting, drilling, pocketing and general-purpose operation.



HSS Co8 | HSS | 2 | 30° | FLAT | p.C833, C834, C835

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
01422	01172	1	3/4	1-1/2	3-3/4
01426	01176	1	1	1-5/8	4-1/8
01435	01185	1-1/8	1	1-5/8	4-1/8
01445	01195	1-1/4	1-1/4	1-5/8	4-1/8
01451	01201	1-3/8	1	1-5/8	4-1/8
01453	01203	1-3/8	1-1/4	1-5/8	4-1/8
01459	01209	1-1/2	1	1-5/8	4-1/8
01461	01211	1-1/2	1-1/4	1-5/8	4-1/8
01469	01219	1-3/4	1-1/4	1-5/8	4-1/8
01477	01227	2	1-1/4	1-5/8	4-1/8
* 01480	* 01230	2	2	2	5-3/4

* Combination Shank

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

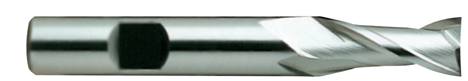
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

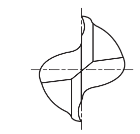
YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2080 SERIES**
HSS (M2) FLAT SHANK **E1080 SERIES**

HSSCo8 & HSS, 2 FLUTE LONG LENGTH

▶ Longer flute length than E2030 type and allows deeper cutting.





HSS Co8 | HSS | 2 | 30° | FLAT | p.C833, C834, C835

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
02297	02047	1/4	3/8	1-1/4	3-1/8
02301	02051	5/16	3/8	1-3/8	3-1/8
02305	02055	3/8	3/8	1-1/2	3-1/4
02321	02071	1/2	1/2	2	4
02337	02087	5/8	5/8	2	4-1/8
02359	02109	3/4	3/4	2-1/4	4-1/2
02394	02144	7/8	7/8	2-1/2	4-3/4
02426	02176	1	1	3	5-1/2
02435	02185	1-1/8	1	3	5-1/2
02443	02193	1-1/4	1	3	5-1/2
02445	02195	1-1/4	1-1/4	3	5-1/2
02461	02211	1-1/2	1-1/4	3	5-1/2
02469	02219	1-3/4	1-1/4	3	5-1/2
02477	02227	2	1-1/4	3	5-1/2
* 02482	* 02232	2	2	3	6-3/4

* Combination Shank

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

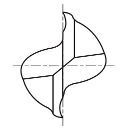
COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2033** SERIES

HSS (M2) FLAT SHANK **E1033** SERIES

HSSCo8 & HSS, 2 FLUTE EXTENDED LENGTH

▶ Provided with the longest flute length and suitable for high accuracy machining of deep step.



HSS Co8 | HSS | 2 | 30° | FLAT

p.C833, C834, C835

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length
03289	03039	1/8	3/8	3/8	13/16	2-3/8
03293	03043	3/16	3/8	1/2	1-1/8	2-11/16
03297	03047	1/4	3/8	5/8	1-1/2	3-1/16
03301	03051	5/16	3/8	3/4	1-3/4	3-5/16
03305	03055	3/8	3/8	3/4	1-3/4	3-5/16
03321	03071	1/2	1/2	1	2-7/32	4
03337	03087	5/8	5/8	1-3/8	2-23/32	4-5/8
03359	03109	3/4	3/4	1-5/8	3-11/32	5-3/8
03394	03144	7/8	7/8	2	4	6
03426	03176	1	1	2-1/2	4-31/32	7-1/4
03445	03195	1-1/4	1-1/4	3	4-31/32	7-1/4

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

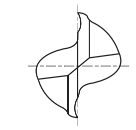
COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2050** SERIES

HSS (M2) FLAT SHANK **E1050** SERIES

HSSCo8 & HSS, 2 FLUTE REGULAR LENGTH DOUBLE

▶ Series E2050 two flute end mills are the double-end version of E2030 single-end tools. Same excellent tool geometry for slotting, keying and general purpose milling, plus the added economy offered by the double-end design.



HSS Co8 | HSS | 2 | 30° | FLAT

p.C833, C834, C835

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
11289	11039	1/8	3/8	3/8	3-1/16
11290	11040	9/64	3/8	7/16	3-1/8
11291	11041	5/32	3/8	7/16	3-1/8
11292	11042	11/64	3/8	7/16	3-1/8
11293	11043	3/16	3/8	7/16	3-1/8
11294	11044	13/64	3/8	1/2	3-1/8
11295	11045	7/32	3/8	1/2	3-1/8
11296	11046	15/64	3/8	1/2	3-1/8
11297	11047	1/4	3/8	1/2	3-1/8
11298	11048	17/64	3/8	9/16	3-1/8
11299	11049	9/32	3/8	9/16	3-1/8
11300	11050	19/64	3/8	9/16	3-1/8
11301	11051	5/16	3/8	9/16	3-1/8
11302	11052	21/64	3/8	9/16	3-1/8
11303	11053	11/32	3/8	9/16	3-1/8
11304	11054	23/64	3/8	9/16	3-1/8
11305	11055	3/8	3/8	9/16	3-1/8
11307	11057	25/64	1/2	13/16	3-3/4
11309	11059	13/32	1/2	13/16	3-3/4
11311	11061	27/64	1/2	13/16	3-3/4
11313	11063	7/16	1/2	13/16	3-3/4
11315	11065	29/64	1/2	13/16	3-3/4
11317	11067	15/32	1/2	13/16	3-3/4
11319	11069	31/64	1/2	13/16	3-3/4
11321	11071	1/2	1/2	13/16	3-3/4
11326	11076	17/32	5/8	1-1/8	4-1/2

▶ NEXT PAGE

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

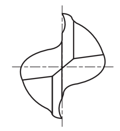
CARBIDE
HSS

COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2050** SERIES
HSS (M2) FLAT SHANK **E1050** SERIES

HSSCo8 & HSS, 2 FLUTE REGULAR LENGTH DOUBLE

▶ Series E2050 two flute end mills are the double-end version of E2030 single-end tools. Same excellent tool geometry for slotting, keying and general purpose milling, plus the added economy offered by the double-end design.

HSS Co8 | HSS | 2 | 30° | FLAT

p.C833, C834, C835

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
11330	11080	9/16	5/8	1-1/8	4-1/2
11334	11084	19/32	5/8	1-1/8	4-1/2
11337	11087	5/8	5/8	1-1/8	4-1/2
11344	11094	21/32	3/4	1-5/16	5
11350	11100	11/16	3/4	1-5/16	5
11354	11104	23/32	3/4	1-5/16	5
11359	11109	3/4	3/4	1-5/16	5
11368	11118	25/32	7/8	1-9/16	5-1/2
11377	11127	13/16	7/8	1-9/16	5-1/2
11384	11134	27/32	7/8	1-9/16	5-1/2
11394	11144	7/8	7/8	1-9/16	5-1/2
11402	11152	29/32	1	1-5/8	5-7/8
11410	11160	15/16	1	1-5/8	5-7/8
11417	11167	31/32	1	1-5/8	5-7/8
11426	11176	1	1	1-5/8	5-7/8

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~-.0020

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

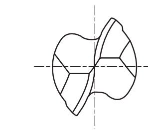
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2110** SERIES
HSS (M2) FLAT SHANK **E1110** SERIES

HSSCo8 & HSS, 2 FLUTE REGULAR LENGTH BALL NOSE

▶ The two flute ball end mills are designed for milling of radius bottom slots, fillets and special contours. The end teeth are cut to center allowing these end mills to drill into material at the beginning of a slotting cut. The two flute design provides good chip removal ability in slotting.



HSS Co8 | HSS | 2 | 30° | FLAT

p.C844, C845, C846

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Radius of Ball Nose R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
41289	41039	R1/16	1/8	3/8	3/8	2-5/16
41293	41043	R3/32	3/16	3/8	1/2	2-3/8
41297	41047	R1/8	1/4	3/8	5/8	2-7/16
41301	41051	R5/32	5/16	3/8	3/4	2-1/2
41305	41055	R3/16	3/8	3/8	3/4	2-1/2
41313	41063	R7/32	7/16	1/2	1	3
41321	41071	R1/4	1/2	1/2	1	3
41328	41078	R9/32	9/16	1/2	1-1/8	3-1/8
41336	41086	R5/16	5/8	1/2	1-1/8	3-1/8
41337	41087	R5/16	5/8	5/8	1-3/8	3-1/2
41357	41107	R3/8	3/4	1/2	1-5/16	3-5/16
41359	41109	R3/8	3/4	3/4	1-5/8	3-7/8
41391	41141	R7/16	7/8	3/4	2	4-1/4
41394	41144	R7/16	7/8	7/8	2	4-1/4
41422	41172	R1/2	1	3/4	2-1/4	4-1/2
41426	41176	R1/2	1	1	2-1/4	4-3/4
41431	41181	R9/16	1-1/8	3/4	1-5/8	3-7/8
41435	41185	R9/16	1-1/8	1	2-1/4	4-3/4
41439	41189	R5/8	1-1/4	3/4	1-5/8	3-7/8
41445	41195	R5/8	1-1/4	1-1/4	2-1/2	5
41449	41199	R11/16	1-3/8	3/4	1-5/8	4-1/8
41453	41203	R11/16	1-3/8	1-1/4	2-1/2	5
41457	41207	R3/4	1-1/2	3/4	1-5/8	4-1/8
41461	41211	R3/4	1-1/2	1-1/4	2-1/2	5
41478	41227	R1	2	1-1/4	2-1/2	5

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2111** SERIES
HSS (M2) FLAT SHANK **E1111** SERIES

HSSCo8 & HSS, 2 FLUTE EXTENDED LENGTH BALL NOSE

▶Longer flute length than E2110 type and suitable for high efficient copying process and deep cutting of die mold corner radius.

HSS Co8 | HSS | 2 | 30° | FLAT

p.C844, C845, C846

Unit : Inch

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length
8% COBALT (M42)	HSS (M2)	R					
42289	42039	R1/16	1/8	3/8	3/8	-	2-3/8
42293	42043	R3/32	3/16	3/8	1/2	1-1/8	2-11/16
42297	42047	R1/8	1/4	3/8	5/8	1-1/2	3-1/16
42301	42051	R5/32	5/16	3/8	3/4	1-3/4	3-5/16
42305	42055	R3/16	3/8	3/8	3/4	1-3/4	3-5/16
42313	42063	R7/32	7/16	1/2	1	1-7/8	3-11/16
42321	42071	R1/4	1/2	1/2	1	2-1/4	4
42337	42087	R5/16	5/8	5/8	1-3/8	2-3/4	4-5/8
42359	42109	R3/8	3/4	3/4	1-5/8	3-3/8	5-3/8
42426	42176	R1/2	1	1	2-1/2	5	7-1/4

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	※ 0~+.0015

※ The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2112** SERIES
HSS (M2) FLAT SHANK **E1112** SERIES

HSSCo8 & HSS, 2 FLUTE REGULAR LENGTH BALL NOSE DOUBLE

▶ Same construction features as E2110 end mill in a more economical version. Removes more material per grind. Machine ground notch assures positive anchorage in tool holder.

HSS Co8 | HSS | 2 | 30° | FLAT

p.C844, C845, C846

Unit : Inch

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)	R				
45289	45039	R1/16	1/8	3/8	3/8	3-1/16
45293	45043	R3/32	3/16	3/8	7/16	3-1/8
45297	45047	R1/8	1/4	3/8	1/2	3-1/8
45301	45051	R5/32	5/16	3/8	9/16	3-1/8
45305	45055	R3/16	3/8	3/8	9/16	3-1/8
45313	45063	R7/32	7/16	1/2	13/16	3-3/4
45321	45071	R1/4	1/2	1/2	13/16	3-3/4
45337	45087	R5/16	5/8	5/8	1-1/8	4-1/2
45359	45109	R3/8	3/4	3/4	1-5/16	5
45426	45176	R1/2	1	1	1-5/8	5-7/8

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	※ 0~ -.0020

※ The shank of end mills is the same diameter as the cutting portion.

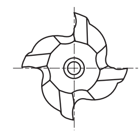
◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

HSSCo8 & HSS, 4 FLUTE REGULAR LENGTH

▶ Possible for high-speed cutting, suitable for high efficiency machining. Easy to regrind.

HSS Co8 | HSS | 4 | 30° | FLAT

p.C847, C848, C849

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
04289	04039	1/8	3/8	3/8	2-5/16
04290	04040	9/64	3/8	7/16	2-3/8
04291	04041	5/32	3/8	7/16	2-3/8
04292	04042	11/64	3/8	1/2	2-3/8
04293	04043	3/16	3/8	1/2	2-3/8
04294	04044	13/64	3/8	9/16	2-7/16
04295	04045	7/32	3/8	9/16	2-7/16
04296	04046	15/64	3/8	5/8	2-7/16
04297	04047	1/4	3/8	5/8	2-7/16
04298	04048	17/64	3/8	11/16	2-1/2
04299	04049	9/32	3/8	11/16	2-1/2
04300	04050	19/64	3/8	3/4	2-1/2
04301	04051	5/16	3/8	3/4	2-1/2
04302	04052	21/64	3/8	3/4	2-1/2
04303	04053	11/32	3/8	3/4	2-1/2
04304	04054	23/64	3/8	3/4	2-1/2
04305	04055	3/8	3/8	3/4	2-1/2
04306	04056	25/64	3/8	1	2-11/16
04308	04058	13/32	3/8	1	2-11/16
04310	04060	27/64	3/8	1	2-11/16
04312	04062	7/16	3/8	1	2-11/16
04315	04065	29/64	1/2	1-1/4	3-1/4
04317	04067	15/32	1/2	1-1/4	3-1/4
04319	04069	31/64	1/2	1-1/4	3-1/4

▶ NEXT PAGE

- ■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
- ■ Coating Codes for Cobalt
  Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
- ■ Coating Codes for HSS
  Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
- ▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

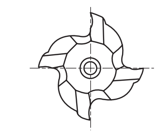
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2031** SERIES
HSS (M2) FLAT SHANK **E1031** SERIES

HSSCo8 & HSS, 4 FLUTE REGULAR LENGTH

▶ Possible for high-speed cutting, suitable for high efficiency machining. Easy to regrind.

HSS Co8 | HSS | 4 | 30° | FLAT

p.C847, C848, C849

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
04320	04070	1/2	3/8	1	2-11/16
04321	04071	1/2	1/2	1-1/4	3-1/4
04324	04074	17/32	1/2	1-3/8	3-3/8
04328	04078	9/16	1/2	1-3/8	3-3/8
04332	04082	19/32	1/2	1-3/8	3-3/8
04336	04086	5/8	1/2	1-3/8	3-3/8
04337	04087	5/8	5/8	1-5/8	3-3/4
04340	04090	21/32	1/2	1-5/8	3-5/8
04348	04098	11/16	5/8	1-5/8	3-3/4
04352	04102	23/32	1/2	1-5/8	3-5/8
04357	04107	3/4	1/2	1-5/8	3-5/8
04358	04108	3/4	5/8	1-5/8	3-3/4
04359	04109	3/4	3/4	1-5/8	3-7/8
04364	04114	25/32	5/8	1-7/8	4
04375	04125	13/16	3/4	1-7/8	4-1/8
04380	04130	27/32	5/8	1-7/8	4
04391	04141	7/8	3/4	1-7/8	4-1/8
04394	04144	7/8	7/8	1-7/8	4-1/8
04399	04149	29/32	3/4	1-7/8	4-1/8
04407	04157	15/16	3/4	1-7/8	4-1/8
04414	04164	31/32	3/4	1-7/8	4-1/8
04420	04170	1	5/8	1-7/8	4
04422	04172	1	3/4	1-7/8	4-1/8
04426	04176	1	1	2	4-1/2

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

- ■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
- ■ Coating Codes for Cobalt
  Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
- ■ Coating Codes for HSS
  Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
- ▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2032** SERIES
HSS (M2) FLAT SHANK **E1032** SERIES

HSSCo8 & HSS, 6 FLUTE REGULAR LENGTH

▶ Possible for high-speed cutting, suitable for high efficiency machining. Easy to regrind.

HSS Co8 | HSS | 6 | 30° | FLAT p.C850, C851, C852

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
04338	04088	5/8	5/8	1-5/8	3-3/4
04360	04110	3/4	3/4	1-5/8	3-7/8
04376	04126	13/16	3/4	1-7/8	4-1/8
04390	04140	7/8	5/8	1-7/8	4
04395	04145	7/8	7/8	1-7/8	4-1/8
04405	04155	15/16	5/8	1-7/8	4
04421	04171	1	5/8	1-7/8	4
04427	04177	1	1	2	4-1/2
04432	04182	1-1/8	3/4	2	4-1/4
04436	04186	1-1/8	1	2	4-1/2
04440	04190	1-1/4	3/4	2	4-1/4
04444	04194	1-1/4	1	2	4-1/2
04446	04196	1-1/4	1-1/4	2	4-1/2
04452	04202	1-3/8	1	2	4-1/2
04460	04210	1-1/2	1	2	4-1/2
04462	04212	1-1/2	1-1/4	2	4-1/2
04470	04220	1-3/4	1-1/4	2	4-1/2
04478	04228	2	1-1/4	2	4-1/2
* 04481	* 04231	2	2	2	5-3/4

* Combination Shank

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

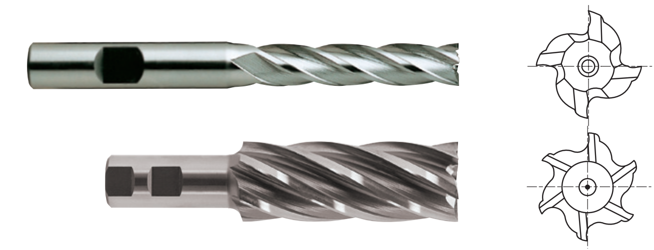
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2034 / E2035** SERIES
HSS (M2) FLAT SHANK **E1034 / E1035** SERIES

HSSCo8 & HSS, 4&6 FLUTE LONG LENGTH

▶ Longer flute length than E2031 type and allows deeper cutting. Easy to regrind.



HSS Co8 | HSS | 4&6 | 30° | FLAT p.C847, C848, C849 / p.C850, C851, C852

E2034(8% COBALT) , E1034(HSS) Series ■ 4 FLUTE

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
05297	05047	1/4	3/8	1-1/4	3-1/16
05301	05051	5/16	3/8	1-3/8	3-1/8
05305	05055	3/8	3/8	1-1/2	3-1/4
05313	05063	7/16	1/2	1-3/4	3-3/4
05321	05071	1/2	1/2	2	4
05337	05087	5/8	5/8	2-1/2	4-5/8
05359	05109	3/4	3/4	3	5-1/4
05394	05144	7/8	7/8	3-1/2	5-3/4
05426	05176	1	1	4	6-1/2

E2035(8% COBALT) , E1035(HSS) Series ■ 6 FLUTE

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
05436	05186	1-1/8	1	4	6-1/2
05444	05194	1-1/4	1	4	6-1/2
05446	05196	1-1/4	1-1/4	4	6-1/2
05460	05210	1-1/2	1	4	6-1/2
05462	05212	1-1/2	1-1/4	4	6-1/2
05470	05220	1-3/4	1-1/4	4	6-1/2
05478	05228	2	1-1/4	4	6-1/2
* 05485	* 05235	2	2	4	7-3/4

* Combination Shank

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

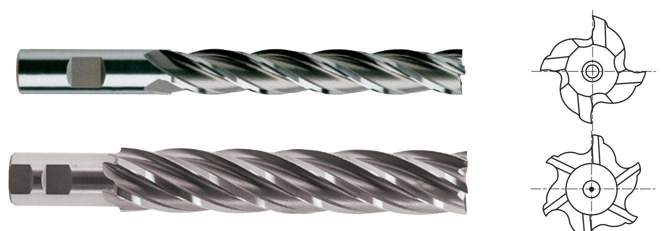
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2036 / E2037 SERIES**
HSS (M2) FLAT SHANK **E1036 / E1037 SERIES**

HSSCo8 & HSS, 4&6 FLUTE EXTRA LONG LENGTH

▶ Provided with the longest flute length and suitable for high accuracy machining of deep step. Easy to regrind.



HSS Co8 | HSS | 4&6 | 30° | FLAT

p.C847, C848, C849 / p.C850, C851, C852

E2036(8% COBALT) , E1036(HSS) Series ■ 4 FLUTE

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
06297	06047	1/4	3/8	1-3/4	3-9/16
06301	06051	5/16	3/8	2	3-3/4
06305	06055	3/8	3/8	2-1/2	4-1/4
06321	06071	1/2	1/2	3	5
06337	06087	5/8	5/8	4	6-1/8
06359	06109	3/4	3/4	4	6-1/4
06394	06144	7/8	7/8	5	7-1/4
06426	06176	1	1	6	8-1/2

E2037(8% COBALT) , E1037(HSS) Series ■ 6 FLUTE

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
06446	06196	1-1/4	1-1/4	6	8-1/2
06462	06212	1-1/2	1-1/4	8	10-1/2
* 06491	* 06241	2	2	8	11-3/4

* Combination Shank

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2051 SERIES**
HSS (M2) FLAT SHANK **E1051 SERIES**

HSSCo8 & HSS, 4 FLUTE REGULAR LENGTH DOUBLE

▶ Series E2051 four flute end mills are the double-end version of E2031 four flute tools and are used for the same type of finishing operation. Two tools on one shank saves on sharpening set-up as well as on initial tool costs. Easy to regrind.

HSS Co8 | HSS | 4 | 30° | FLAT

p.C847, C848, C849

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
12289	12039	1/8	3/8	3/8	3-1/16
12290	12040	9/64	3/8	7/16	3-1/8
12291	12041	5/32	3/8	7/16	3-1/8
12292	12042	11/64	3/8	1/2	3-1/4
12293	12043	3/16	3/8	1/2	3-1/4
12294	12044	13/64	3/8	9/16	3-1/4
12295	12045	7/32	3/8	9/16	3-1/4
12296	12046	15/64	3/8	5/8	3-3/8
12297	12047	1/4	3/8	5/8	3-3/8
12298	12048	17/64	3/8	11/16	3-3/8
12299	12049	9/32	3/8	11/16	3-3/8
12300	12050	19/64	3/8	3/4	3-1/2
12301	12051	5/16	3/8	3/4	3-1/2
12302	12052	21/64	3/8	3/4	3-1/2
12303	12053	11/32	3/8	3/4	3-1/2
12304	12054	23/64	3/8	3/4	3-1/2
12305	12055	3/8	3/8	3/4	3-1/2
12307	12057	25/64	1/2	1	4-1/8
12309	12059	13/32	1/2	1	4-1/8
12311	12061	27/64	1/2	1	4-1/8
12313	12063	7/16	1/2	1	4-1/8
12315	12065	29/64	1/2	1	4-1/8
12317	12067	15/32	1/2	1	4-1/8
12319	12069	31/64	1/2	1	4-1/8

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

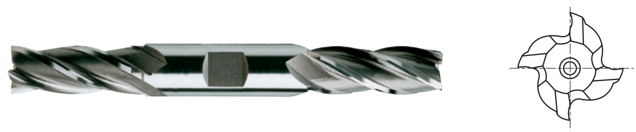
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2051** SERIES
HSS (M2) FLAT SHANK **E1051** SERIES

HSSCo8 & HSS, 4 FLUTE REGULAR LENGTH DOUBLE

▶ Series E2051 four flute end mills are the double-end version of E2031 four flute tools and are used for the same type of finishing operation. Two tools on one shank saves on sharpening set-up as well as on initial tool costs. Easy to regrind.



HSS Co8 | HSS | 4 | 30° | FLAT

p.C847, C848, C849

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
12321	12071	1/2	1/2	1	4-1/8
12330	12080	9/16	5/8	1-3/8	5
12337	12087	5/8	5/8	1-3/8	5
12350	12100	11/16	3/4	1-5/8	5-5/8
12359	12109	3/4	3/4	1-5/8	5-5/8
12377	12127	13/16	7/8	1-7/8	6-1/8
12394	12144	7/8	7/8	1-7/8	6-1/8
12410	12160	15/16	1	1-7/8	6-3/8
12426	12176	1	1	1-7/8	6-3/8

■ The TiN coated, TiCN coated or TiAlN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAlN F), CE(TiAlN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAlN F), HE(TiAlN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~ -.0020

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2031 / E2032** SERIES
HSS (M2) FLAT SHANK **E1031 / E1032** SERIES

HSSCo8 & HSS, 4, 6&8 FLUTE REGULAR LENGTH 3/4˝ SHANK

▶ E2031(3/4″ shank, multi flute, general purpose end mills) are recommended for finishing operations for Bridgeport machines and other similar operations. Easy to regrind.

HSS Co8 | HSS | 4·8 | 30° | FLAT

p.C847, C848, C849 / p.C850, C851, C852

E2031(8% COBALT) , E1031(HSS) Series ■ 4 FLUTE

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
04359	04109	3/4	3/4	1-5/8	3-7/8
04375	04125	13/16	3/4	1-7/8	4-1/8
04391	04141	7/8	3/4	1-7/8	4-1/8
04407	04157	15/16	3/4	1-7/8	4-1/8
04422	04172	1	3/4	1-7/8	4-1/8

E2032(8% COBALT) , E1032(HSS) Series ■ 6&8 FLUTE

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
8% COBALT (M42)	HSS (M2)					
04432	04182	1-1/8	3/4	2	4-1/4	6
04440	04190	1-1/4	3/4	2	4-1/4	6
04458	04208	1-1/2	3/4	2	4-1/4	6
04468	04218	1-3/4	3/4	2	4-1/2	6
04476	04226	2	3/4	2	4-1/2	8

■ The TiN coated, TiCN coated or TiAlN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAlN F), CE(TiAlN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAlN F), HE(TiAlN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2020** SERIES

HSSCo8, 4 FLUTE REGULAR LENGTH BALL NOSE

▶ The four flute ball end mills are designed for milling of radius bottom slots fillets and special contours.
The end teeth are cut to center allowing these end mills to drill into material at the beginning of a slotting cut.

HSS Co8 | 4 | 30° | FLAT

p.C853, C854, C855

Unit : Inch

EDP No. 8% COBALT (M42)	Radius of Ball Nose R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
43289	R1/16	**1/8**	3/8	3/8	2-5/16
43293	R3/32	**3/16**	3/8	1/2	2-3/8
43297	R1/8	**1/4**	3/8	5/8	2-7/16
43301	R5/32	**5/16**	3/8	3/4	2-1/2
43305	R3/16	**3/8**	3/8	3/4	2-1/2
43312	R7/32	**7/16**	3/8	1	2-11/16
43321	R1/4	**1/2**	1/2	1-1/4	3-1/4
43337	R5/16	**5/8**	5/8	1-5/8	3-3/4
43350	R11/32	**11/16**	5/8	1-5/8	3-3/4
43359	R3/8	**3/4**	3/4	1-5/8	3-7/8
43394	R7/16	**7/8**	7/8	1-7/8	4-1/8
43426	R1/2	**1**	1	2	4-1/2
43435	R9/16	**1-1/8**	1	2	4-1/2
43445	R5/8	**1-1/4**	1-1/4	2	4-1/2
43461	R3/4	**1-1/2**	1-1/4	2	4-1/2
43477	R1	**2**	1-1/4	2	4-1/2

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2021** SERIES

HSSCo8, 4 FLUTE LONG LENGTH BALL NOSE

▶ Longer flute length than E2020 type and suitable for high efficient copying process and deep cutting of die mold corner radius.

HSS Co8 | 4 | 30° | FLAT

p.C853, C854, C855

Unit : Inch

EDP No. 8% COBALT (M42)	Radius of Ball Nose R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
44297	R1/8	**1/4**	3/8	1-1/4	3-1/16
44301	R5/32	**5/16**	3/8	1-3/8	3-1/8
44305	R3/16	**3/8**	3/8	1-1/2	3-1/4
44321	R1/4	**1/2**	1/2	2	4
44337	R5/16	**5/8**	5/8	2-1/2	4-5/8
44359	R3/8	**3/4**	3/4	3	5-1/4
44394	R7/16	**7/8**	7/8	3-1/2	5-3/4
44426	R1/2	**1**	1	4	6-1/2

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

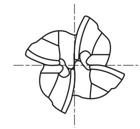
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2069 SERIES**

HSSCo8, 4 FLUTE REGULAR LENGTH BALL NOSE DOUBLE

▶ Same construction features as E2020 end mill in a more economical version.
Removes more material per grind. Machine ground notch assures positive anchorage in tool holder.



HSS Co8 | 4 | 30° | FLAT

p.C853, C854, C855

Unit : Inch

EDP No. 8% COBALT (M42)	Radius of Ball Nose R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
46289	R1/16	1/8	3/8	3/8	3-1/16
46293	R3/32	3/16	3/8	1/2	3-1/4
46297	R1/8	1/4	3/8	5/8	3-3/8
46301	R5/32	5/16	3/8	3/4	3-1/2
46305	R3/16	3/8	3/8	3/4	3-1/2
46313	R7/32	7/16	1/2	1	4-1/8
46321	R1/4	1/2	1/2	1	4-1/8
46337	R5/16	5/8	5/8	1-3/8	5
46359	R3/8	3/4	3/4	1-5/8	5-5/8
46426	R1/2	1	1	1-7/8	6-3/8

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~ -.0020

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

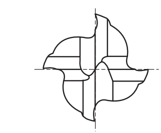
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2039 SERIES**
HSS (M2) FLAT SHANK **E1039 SERIES**

HSSCo8 & HSS, 4 FLUTE REGULAR LENGTH CENTER CUTTING

▶ Center cutting allows these end mills to drill into the part for the beginning of a slot.
These center cutting end mills are recommended for pocketing, tracer milling, cam milling, die sinking and slotting.



HSS Co8 | HSS | 4 | 30° | FLAT

p.C847, C848, C849

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
07289	07039	1/8	3/8	3/8	2-5/16
07291	07041	5/32	3/8	7/16	2-3/8
07293	07043	3/16	3/8	1/2	2-3/8
07295	07045	7/32	3/8	9/16	2-7/16
07297	07047	1/4	3/8	5/8	2-7/16
07299	07049	9/32	3/8	11/16	2-1/2
07301	07051	5/16	3/8	3/4	2-1/2
07303	07053	11/32	3/8	3/4	2-1/2
07305	07055	3/8	3/8	3/4	2-1/2
07308	07058	13/32	3/8	1	2-11/16
07312	07062	7/16	3/8	1	2-11/16
07316	07066	15/32	3/8	1	2-11/16
07320	07070	1/2	3/8	1	2-11/16
07321	07071	1/2	1/2	1-1/4	3-1/4

■ The TiN coated, TiCN coated or TiAIN coated is available on your request. ▶ NEXT PAGE
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

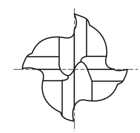
COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2039** SERIES

HSS (M2) FLAT SHANK **E1039** SERIES

HSSCo8 & HSS, 4 FLUTE REGULAR LENGTH CENTER CUTTING

▶ Center cutting allows these end mills to drill into the part for the beginning of a slot.
These center cutting end mills are recommended for pocketing, tracer milling, cam milling, die sinking and slotting.

HSS Co8 | HSS | 4 | 30° | FLAT

p.C847, C848, C849

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
07336	07086	5/8	1/2	1-3/8	3-3/8
07337	07087	5/8	5/8	1-5/8	3-3/4
07348	07098	11/16	5/8	1-5/8	3-3/4
07357	07107	3/4	1/2	1-5/8	3-5/8
07358	07108	3/4	5/8	1-5/8	3-3/4
07359	07109	3/4	3/4	1-5/8	3-7/8
07391	07141	7/8	3/4	1-7/8	4-1/8
07394	07144	7/8	7/8	1-7/8	4-1/8
07420	07170	1	5/8	1-7/8	4
07422	07172	1	3/4	1-7/8	4-1/8
07426	07176	1	1	2	4-1/2
07435	07185	1-1/8	1	2	4-1/2
07445	07195	1-1/4	1-1/4	2	4-1/2
07461	07211	1-1/2	1-1/4	2	4-1/2

■ The TiN coated, TiCN coated or TiAlN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAlN F), CE(TiAlN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAlN F), HE(TiAlN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

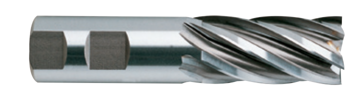
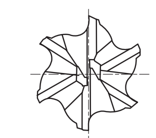
COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2042** SERIES

HSS (M2) FLAT SHANK **E1042** SERIES

HSSCo8 & HSS, 6 FLUTE REGULAR LENGTH CENTER CUTTING

▶ Center cutting allows these end mills to drill into the part for the beginning of a slot.
These center cutting end mills are recommended for pocketing, tracer milling, cam milling, die sinking and slotting.

HSS Co8 | HSS | 6 | 30° | FLAT

p.C850, C851, C852

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
07322	07072	1/2	1/2	1-1/4	3-1/4
07338	07088	5/8	5/8	1-5/8	3-3/4
07349	07099	11/16	5/8	1-5/8	3-3/4
07360	07110	3/4	3/4	1-5/8	3-7/8
07395	07145	7/8	7/8	1-7/8	4-1/8
07427	07177	1	1	2	4-1/2
07436	07186	1-1/8	1	2	4-1/2
07446	07196	1-1/4	1-1/4	2	4-1/2
07448		1-5/16	3/4	2	4-1/4
07462	07212	1-1/2	1-1/4	2	4-1/2
07478	07228	2	1-1/4	2	4-1/2
* 07481	* 07231	2	2	2	5-3/4

* Combination Shank

■ The TiN coated, TiCN coated or TiAlN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAlN F), CE(TiAlN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAlN F), HE(TiAlN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

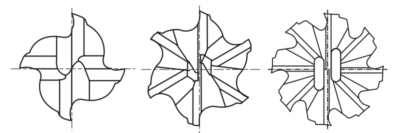
YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2039** SERIES

8% COBALT (M42) FLAT SHANK **E2042** SERIES

HSSCo8, MULTI FLUTE MEDIUM LENGTH CENTER CUTTING

▶ Center cutting allows these end mills to drill into the part for the beginning of a slot.
These center cutting end mills are recommended for pocketing, tracer milling, cam milling, die sinking and slotting.



HSS Co8 | 4·8 | 30° | FLAT

p.C847, C848, C849 / p.C850, C851, C852

E2039(4 FLUTE), E2042(6&8 FLUTE) Series

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
07901	1	1	3	5-1/2	4
07902	1-1/4	1-1/4	3	5-1/2	4
07903	1-1/2	1-1/4	3	5-1/2	4
07094	1	1	3	5-1/2	6
07095	1-1/4	1-1/4	3	5-1/2	6
07096	1-1/2	1-1/4	3	5-1/2	6
07097	1-3/4	1-1/4	3	5-1/2	6
99098	2	1-1/4	3	5-1/2	8

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

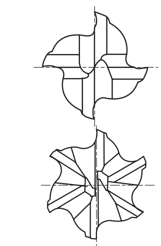
YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2040 / E2162** SERIES

HSS (M2) FLAT SHANK **E1040 / E1162** SERIES

HSSCo8 & HSS, 4&6 FLUTE LONG LENGTH CENTER CUTTING

▶ Longer flute length than E2039 type, E2042 and allows deeper cutting.



HSS Co8 | HSS | 4&6 | 30° | FLAT

p.C847, C848, C849 / p.C850, C851, C852

E2040(8% COBALT) , E1040(HSS) Series ■ 4 FLUTE

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
08297	08047	1/4	3/8	1-1/4	3-1/16
08301	08051	5/16	3/8	1-3/8	3-1/8
08305	08055	3/8	3/8	1-1/2	3-1/4
08321	08071	1/2	1/2	2	4
08337	08087	5/8	5/8	2-1/2	4-5/8
08359	08109	3/4	3/4	3	5-1/4
08394	08144	7/8	7/8	3-1/2	5-3/4
08426	08176	1	1	4	6-1/2
08445	08195	1-1/4	1-1/4	4	6-1/2
08461	08211	1-1/2	1-1/4	4	6-1/2

E2162(8% COBALT) , E1162(HSS) Series ■ 6 FLUTE

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Lengthe
08322	08072	1/2	1/2	2	4
08338	08088	5/8	5/8	2-1/2	4-5/8
08360	08110	3/4	3/4	3	5-1/4
08395	08145	7/8	7/8	3-1/2	5-3/4
08427	08177	1	1	4	6-1/2
08446	08196	1-1/4	1-1/4	4	6-1/2
08462	08212	1-1/2	1-1/4	4	6-1/2
08478	08228	2	1-1/4	4	6-1/2
* 08485	* 08235	2	2	4	7-3/4
* 08489	* 08239	2	2	6	9-3/4

* Combination Shank

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2041 / E2175 SERIES**
HSS (M2) FLAT SHANK **E1041 / E1175 SERIES**

HSSCo8 & HSS, 4&6 FLUTE EXTRA LONG LENGTH CENTER CUTTING

▶ Provided with longest flute length and suitable for high accuracy machining of deep step.

HSS Co8 | HSS | 4&6 | 30° | FLAT

p.C847, C848, C849 / p.C850, C851, C852

E2041(8% COBALT) , E1041(HSS) Series ■ 4 FLUTE

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
09297	09047	1/4	3/8	1-3/4	3-9/16
09301	09051	5/16	3/8	2	3-3/4
09305	09055	3/8	3/8	2-1/2	4-1/4
09321	09071	1/2	1/2	3	5
09337	09087	5/8	5/8	4	6-1/8
09359	09109	3/4	3/4	4	6-1/4
09394	09144	7/8	7/8	5	7-1/4
09426	09176	1	1	6	8-1/2
09445	09195	1-1/4	1-1/4	6	8-1/2

E2175(8% COBALT) , E1175(HSS) Series ■ 6 FLUTE

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Lengthe
09322	09072	1/2	1/2	3	5
09338	09088	5/8	5/8	4	6-1/8
09360	09110	3/4	3/4	4	6-1/4
09395	09145	7/8	7/8	5	7-1/4
09427	09177	1	1	6	8-1/2
09446	09196	1-1/4	1-1/4	6	8-1/2
09462	09212	1-1/2	1-1/4	8	10-1/2
* 09491	* 09241	2	2	8	11-3/4

* Combination Shank

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2053 SERIES**
HSS (M2) FLAT SHANK **E1053 SERIES**

HSSCo8 & HSS, 4 FLUTE REGULAR LENGTH DOUBLE CENTER CUTTING

▶ Series E2053 end mills are the double-end version of E2039 center cutting single-end tools.
They are used for slotting, shallow pocketing, tracer milling or die sinking and similar operation.

HSS Co8 | HSS | 4 | 30° | FLAT

p.C847, C848, C849

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
13289	13039	1/8	3/8	3/8	3-1/16
13290	13040	9/64	3/8	7/16	3-1/8
13291	13041	5/32	3/8	7/16	3-1/8
13292	13042	11/64	3/8	1/2	3-1/4
13293	13043	3/16	3/8	1/2	3-1/4
13294	13044	13/64	3/8	9/16	3-1/4
13295	13045	7/32	3/8	9/16	3-1/4
13296	13046	15/64	3/8	5/8	3-3/8
13297	13047	1/4	3/8	5/8	3-3/8
13298	13048	17/64	3/8	11/16	3-3/8
13299	13049	9/32	3/8	11/16	3-3/8
13300	13050	19/64	3/8	3/4	3-1/2
13301	13051	5/16	3/8	3/4	3-1/2
13302	13052	21/64	3/8	3/4	3-1/2
13303	13053	11/32	3/8	3/4	3-1/2
13304	13054	23/64	3/8	3/4	3-1/2
13305	13055	3/8	3/8	3/4	3-1/2
13307	13057	25/64	1/2	1	4-1/8
13309	13059	13/32	1/2	1	4-1/8
13311	13061	27/64	1/2	1	4-1/8
13313	13063	7/16	1/2	1	4-1/8
13315	13065	29/64	1/2	1	4-1/8
13317	13067	15/32	1/2	1	4-1/8

▶ NEXT PAGE

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

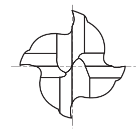
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2053** SERIES
HSS (M2) FLAT SHANK **E1053** SERIES

HSSCo8 & HSS, 4 FLUTE REGULAR LENGTH DOUBLE CENTER CUTTING

▶ Series E2053 end mills are the double-end version of E2039 center cutting single-end tools. They are used for slotting, shallow pocketing, tracer milling or die sinking and similar operation.

HSS Co8 | HSS | 4 | 30° | FLAT p.C847, C848, C849

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
13319	13069	31/64	1/2	1	4-1/8
13321	13071	1/2	1/2	1	4-1/8
13330	13080	9/16	5/8	1-3/8	5
13337	13087	5/8	5/8	1-3/8	5
13350	13100	11/16	3/4	1-5/8	5-5/8
13359	13109	3/4	3/4	1-5/8	5-5/8
13377	13127	13/16	7/8	1-7/8	6-1/8
13394	13144	7/8	7/8	1-7/8	6-1/8
13426	13176	1	1	1-7/8	6-3/8

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~ -.0020

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

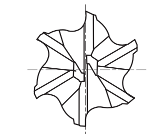
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2100** SERIES
HSS (M2) FLAT SHANK **E1100** SERIES

HSSCo8 & HSS, 6 FLUTE REGULAR with COMBINATION 2″ SHANK CENTER CUTTING

▶ These are to be used for heavy hogging cuts in die-sinking, tape & tracer controlled milling and similar work.
The Heavy-Duty end mills are made with toughened Combination shank, heavy web construction, accurate machine-ground end-teeth notching and a special surface treatment to reduce cutting-edge wear.

HSS Co8 | HSS | 6 | 30° | FLAT p.C850, C851, C852

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
10481	10231	2	2	2	5-3/4
10485	10235	2	2	4	7-3/4
10487	10237	2	2	5	8-3/4
10489	10239	2	2	6	9-3/4
10491	10241	2	2	8	11-3/4

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)
0~+.0030

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

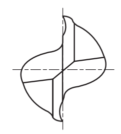
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

COBALT & HSS END MILLS

8% COBALT (M42) PLAIN SHANK **E2001** SERIES
HSS (M2) PLAIN SHANK **E1001** SERIES

HSSCo8 & HSS, 2 FLUTE MINIATURE STUB LENGTH DOUBLE

▶ Tools under Miniature end mills have 3/16″ shank diameter without flats. They are designed with positive rake angle geometry and a high helix angle to insure free cutting action. The flute design provides good strength behind the cutting edge. Suitable for finishing of precision components such as watch, camera, electronic apparatus molds, etc.

HSS Co8 | HSS | 2 | 39° ~Ø3/32 | 30° Ø7/64~ | PLAIN | p.C856

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
49252	49002	1/32	3/16	3/64	2
49254	49004	3/64	3/16	1/16	2
49256	49006	1/16	3/16	3/32	2
49258	49008	5/64	3/16	1/8	2
49260	49010	3/32	3/16	9/64	2
49262	49012	7/64	3/16	5/32	2
49264	49014	1/8	3/16	3/16	2
49266	49016	9/64	3/16	7/32	2
49268	49018	5/32	3/16	15/64	2
49270	49020	11/64	3/16	1/4	2
49272	49022	3/16	3/16	9/32	2

- ■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
- ■ Coating Codes for Cobalt
  Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
- ■ Coating Codes for HSS
  Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
- ▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~ -.0020

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

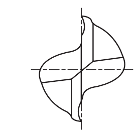
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

COBALT & HSS END MILLS

8% COBALT (M42) PLAIN SHANK **E2003** SERIES
HSS (M2) PLAIN SHANK **E1003** SERIES

HSSCo8 & HSS, 2 FLUTE MINIATURE REGULAR LENGTH DOUBLE

▶ Suitable for finishing of precision components such as watch, camera electronic apparatus molds, etc.

HSS Co8 | HSS | 2 | 39° ~Ø3/32 | 30° Ø7/64~ | PLAIN | p.C856

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
50252	50002	1/32	3/16	3/32	2-1/4
50254	50004	3/64	3/16	9/64	2-1/4
50256	50006	1/16	3/16	3/16	2-1/4
50258	50008	5/64	3/16	15/64	2-1/4
50260	50010	3/32	3/16	9/32	2-1/4
50262	50012	7/64	3/16	21/64	2-1/4
50264	50014	1/8	3/16	3/8	2-1/4
50266	50016	9/64	3/16	13/32	2-1/4
50268	50018	5/32	3/16	7/16	2-1/4
50270	50020	11/64	3/16	1/2	2-1/4
50272	50022	3/16	3/16	1/2	2-1/4

- ■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
- ■ Coating Codes for Cobalt
  Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
- ■ Coating Codes for HSS
  Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
- ▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~ -.0020

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

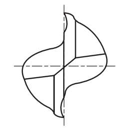
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

8% COBALT (M42) PLAIN SHANK **E2005** SERIES
HSS (M2) PLAIN SHANK **E1005** SERIES

HSSCo8 & HSS, 2 FLUTE MINIATURE LONG LENGTH DOUBLE

▶ Suitable for finishing of precision components such as watch, camera electronic apparatus molds, etc.

HSS Co8 | HSS | 2 | 39° ~Ø3/32 | 30° Ø7/64~ | PLAIN

p.C856

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
51256	51006	1/16	3/16	7/32	2-1/2
51258	51008	5/64	3/16	1/4	2-1/2
51260	51010	3/32	3/16	9/32	2-5/8
51262	51012	7/64	3/16	9/32	2-5/8
51264	51014	1/8	3/16	3/4	3-1/8
51266	51016	9/64	3/16	3/4	3-1/8
51268	51018	5/32	3/16	7/8	3-1/4
51270	51020	11/64	3/16	7/8	3-1/4
51272	51022	3/16	3/16	1	3-3/8

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~ -.0020

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

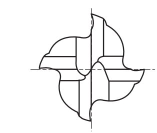
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG COBALT & HSS END MILLS

8% COBALT (M42) PLAIN SHANK **E2002** SERIES
HSS (M2) PLAIN SHANK **E1002** SERIES

HSSCo8 & HSS, 4FLUTE MINIATURE STUB LENGTH DOUBLE

▶ Suitable for finishing of precision components such as watch, camera electronic apparatus molds, etc.

HSS Co8 | HSS | 4 | 39° ~Ø3/32 | 30° Ø7/64~ | PLAIN

p.C856

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
52256	52006	1/16	3/16	3/32	2
52258	52008	5/64	3/16	1/8	2
52260	52010	3/32	3/16	9/64	2
52262	52012	7/64	3/16	5/32	2
52264	52014	1/8	3/16	3/16	2
52266	52016	9/64	3/16	7/32	2
52268	52018	5/32	3/16	15/64	2
52270	52020	11/64	3/16	1/4	2
52272	52022	3/16	3/16	9/32	2

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~ -.0020

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

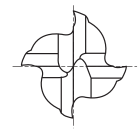
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

COBALT & HSS END MILLS

8% COBALT (M42) PLAIN SHANK **E2004** SERIES
HSS (M2) PLAIN SHANK **E1004** SERIES

HSSCo8 & HSS, 4FLUTE MINIATURE REGULAR LENGTH DOUBLE

▶ Suitable for finishing of precision components such as watch, camera electronic apparatus molds, etc.



HSS Co8 | HSS | 4 | 39° ~Ø3/32 | 30° Ø7/64~ | PLAIN | p.C856

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
53256	53006	1/16	3/16	3/16	2-1/4
53258	53008	5/64	3/16	15/64	2-1/4
53260	53010	3/32	3/16	9/32	2-1/4
53262	53012	7/64	3/16	21/64	2-1/4
53264	53014	1/8	3/16	3/8	2-1/4
53266	53016	9/64	3/16	13/32	2-1/4
53268	53018	5/32	3/16	7/16	2-1/4
53270	53020	11/64	3/16	1/2	2-1/4
53272	53022	3/16	3/16	1/2	2-1/4

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~ -.0020

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

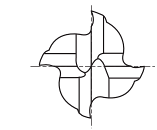
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

COBALT & HSS END MILLS

8% COBALT (M42) PLAIN SHANK **E2006** SERIES
HSS (M2) PLAIN SHANK **E1006** SERIES

HSSCo8 & HSS, 4FLUTE MINIATURE LONG LENGTH DOUBLE

▶ Suitable for finishing of precision components such as watch, camera electronic apparatus molds, etc.



HSS Co8 | HSS | 4 | 39° ~Ø3/32 | 30° Ø7/64~ | PLAIN | p.C856

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
54256	54006	1/16	3/16	7/32	2-1/2
54258	54008	5/64	3/16	1/4	2-1/2
54260	54010	3/32	3/16	9/32	2-5/8
54262	54012	7/64	3/16	9/32	2-5/8
54264	54014	1/8	3/16	3/4	3-1/8
54266	54016	9/64	3/16	3/4	3-1/8
54268	54018	5/32	3/16	7/8	3-1/4
54270	54020	11/64	3/16	7/8	3-1/4
54272	54022	3/16	3/16	1	3-3/8

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~ -.0020

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

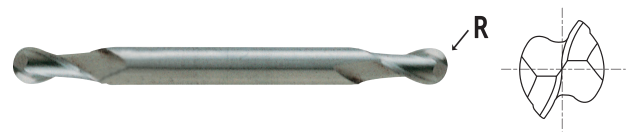
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

8% COBALT (M42) PLAIN SHANK **E2008** SERIES
HSS (M2) PLAIN SHANK **E1008** SERIES

HSSCo8 & HSS, 2 FLUTE MINIATURE STUB LENGTH BALL NOSE DOUBLE

▶ Helical flute in the nose radius.
Suitable for high efficient copying process and cutting of die mold corner radius.



HSS Co8 | HSS | 2 | 39° ~Ø3/32 | 30° Ø7/64~ | PLAIN | p.C856

Unit : Inch

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)	R				
55256	55006	R1/32	1/16	3/16	3/32	2
55260	55010	R3/64	3/32	3/16	9/64	2
55264	55014	R1/16	1/8	3/16	3/16	2
55268	55018	R5/64	5/32	3/16	15/64	2
55272	55022	R3/32	3/16	3/16	9/32	2

■ The TiN coated, TiCN coated or TiAlN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAlN F), CE(TiAlN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAlN F), HE(TiAlN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~ -.0020

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CARBIDE
HSS

YG COBALT & HSS END MILLS

8% COBALT (M42) PLAIN SHANK **E2013** SERIES
HSS (M2) PLAIN SHANK **E1013** SERIES

HSSCo8 & HSS, 2 FLUTE MINIATURE REGULAR LENGTH BALL NOSE DOUBLE

▶ Helical flute in the nose radius.
Suitable for high efficient copying process and cutting of die mold corner radius.

HSS Co8 | HSS | 2 | 39° ~Ø3/32 | 30° Ø7/64~ | PLAIN | p.C856

Unit : Inch

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)	R				
56252	56002	R1/64	1/32	3/16	3/32	2-1/4
56254	56004	R3/128	3/64	3/16	9/64	2-1/4
56256	56006	R1/32	1/16	3/16	3/16	2-1/4
56258	56008	R5/128	5/64	3/16	15/64	2-1/4
56260	56010	R3/64	3/32	3/16	9/32	2-1/4
56262	56012	R7/128	7/64	3/16	21/64	2-1/4
56264	56014	R1/16	1/8	3/16	3/8	2-1/4
56266	56016	R9/128	9/64	3/16	13/32	2-1/4
56268	56018	R5/64	5/32	3/16	7/16	2-1/4
56270	56020	R11/128	11/64	3/16	1/2	2-1/4
56272	56022	R3/32	3/16	3/16	1/2	2-1/4

■ The TiN coated, TiCN coated or TiAlN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAlN F), CE(TiAlN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAlN F), HE(TiAlN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~ -.0020

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

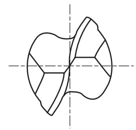
YG COBALT & HSS END MILLS

8% COBALT (M42) PLAIN SHANK **E2015** SERIES

HSS (M2) PLAIN SHANK **E1015** SERIES

HSSCo8 & HSS, 2 FLUTE MINIATURE LONG LENGTH BALL NOSE DOUBLE

▶ Helical flute in the nose radius.
Suitable for high efficient copying process and cutting of die mold corner radius.



HSS Co8 | HSS | 2 | 39° | 30° | PLAIN

~Ø3/32 Ø7/64~

p.C856

Unit : Inch

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)	R				
57256	57006	R1/32	1/16	3/16	7/32	2-1/2
57260	57010	R3/64	3/32	3/16	9/32	2-5/8
57264	57014	R1/16	1/8	3/16	3/4	3-1/8
57268	57018	R5/64	5/32	3/16	7/8	3-1/4
57272	57022	R3/32	3/16	3/16	1	3-3/8

■ The TiN coated, TiCN coated or TiAlN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAlN F), CE(TiAlN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAlN F), HE(TiAlN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~-.0020

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

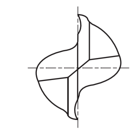
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG COBALT & HSS END MILLS

HSS (M2) FLAT SHANK **E1070** SERIES

HSS, 2 FLUTE 42° HELIX REGULAR & MEDIUM LENGTH for ALUMINUM

▶ The two flute end mills for aluminum have High Helix flute design making them well suited for milling aluminum and other non-ferrous materials. Special rake angles and low micro inch finishes on the primary clearance angles and flute faces insure free cutting action, fine finishes and longer tool life for both non-ferrous materials as well as harder alloys. These tools are made from regular HSS(M2), which is good for aluminum cutting.



HSS | 2 | 42° | FLAT

p.C836

■ REGULAR LENGTH

Unit : Inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
HSS (M2)				
17047	1/4	3/8	5/8	2-7/16
17051	5/16	3/8	3/4	2-1/2
17055	3/8	3/8	3/4	2-1/2
17062	7/16	3/8	1	2-11/16
17071	1/2	1/2	1-1/4	3-1/4
17087	5/8	5/8	1-5/8	3-3/4
17109	3/4	3/4	1-5/8	3-7/8
17141	7/8	3/4	1-7/8	4-1/8
17144	7/8	7/8	1-7/8	4-1/8
17172	1	3/4	1-7/8	4-1/8
17176	1	1	2	4-1/2
17195	1-1/4	1-1/4	2	4-1/2
17211	1-1/2	1-1/4	2	4-1/2
17219	1-3/4	1-1/4	2	4-1/2
17227	2	1-1/4	2	4-1/2

■ MEDIUM LENGTH

Unit : Inch

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
HSS (M2)				
99089	1	1	3	5-1/2
99090	1-1/4	1-1/4	3	5-1/2
99091	1-1/2	1-1/4	3	5-1/2
99092	1-3/4	1-1/4	3	5-1/2
99093	2	1-1/4	3	5-1/2

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

■ The TiN coated, TiCN coated or TiAlN coated is available on your request.
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAlN F), HE(TiAlN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P										M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○				○				○										

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

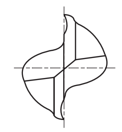
YG COBALT & HSS END MILLS

HSS (M2) FLAT SHANK **E1071** SERIES

HSS (M2) FLAT SHANK **E1072** SERIES

HSS, 2 FLUTE 42° HELIX LONG & EXTRA LONG LENGTH for ALUMINUM

▶ Sharp cutting most suitable flute shape for cutting aluminum alloy, etc.
These tools are made from regular HSS(M2), which is good for aluminum cutting.



HSS | 2 | 42° | FLAT | p.C836

LONG LENGTH

Unit : Inch

EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
18047	**1/4**	3/8	1-1/4	3-1/16
18051	**5/16**	3/8	1-3/8	3-1/8
18055	**3/8**	3/8	1-1/2	3-1/4
18063	**7/16**	1/2	1-3/4	3-3/4
18071	**1/2**	1/2	2	4
18087	**5/8**	5/8	2-1/2	4-5/8
18109	**3/4**	3/4	3	5-1/4
18176	**1**	1	4	6-1/2
18195	**1-1/4**	1-1/4	4	6-1/2
18211	**1-1/2**	1-1/4	4	6-1/2
18227	**2**	1-1/4	4	6-1/2

EXTRA LONG LENGTH

Unit : Inch

EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
19047	**1/4**	3/8	1-3/4	3-9/16
19051	**5/16**	3/8	2	3-3/4
19055	**3/8**	3/8	2-1/2	4-1/4
19071	**1/2**	1/2	3	5
19087	**5/8**	5/8	4	6-1/8
19109	**3/4**	3/4	4	6-1/4
19176	**1**	1	6	8-1/2
19195	**1-1/4**	1-1/4	6	8-1/2
19211	**1-1/2**	1-1/4	8	10-1/2

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○				○				○										

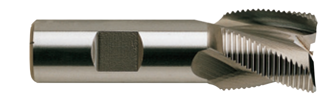
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

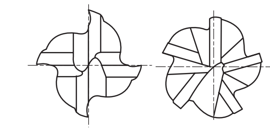
YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2086** SERIES

HSSCo8, MULTI FLUTE STUB LENGTH FINE PITCH ROUGHING CENTER CUTTING

▶ This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths. In many cases, the milled surfaces are of acceptable quality.





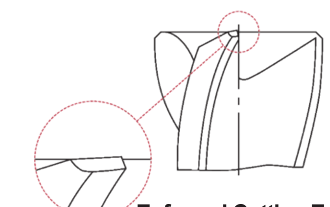
HSS Co8 | FINE | 4&5 | 30° | FLAT | p.C857, C858, C859

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
75297	**1/4**	3/8	1/4	2-1/16	4
75305	**3/8**	3/8	3/8	2-5/32	4
75313	**7/16**	1/2	1/2	2-1/2	4
75321	**1/2**	1/2	1/2	2-1/2	4
75337	**5/8**	5/8	5/8	2-3/4	4
75359	**3/4**	3/4	3/4	2-7/8	4
75391	**7/8**	3/4	7/8	3-1/8	5
75426	**1**	1	1	3-1/2	5

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	○	○				○				○										

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎																

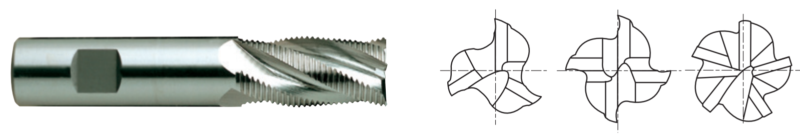
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2085** SERIES

HSSCo8, MULTI FLUTE REGULAR LENGTH FINE PITCH ROUGHING CENTER CUTTING

▶ This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths. In many cases, the milled surfaces are of acceptable quality.



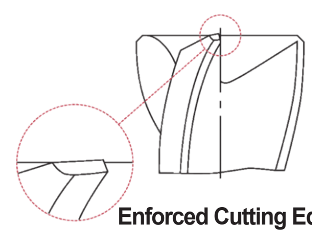
HSS Co8 | FINE | 3-5 | 30° | FLAT p.C857, C858, C859

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
76297	1/4	3/8	5/8	2-7/16	3
76301	5/16	3/8	3/4	2-1/2	3
76305	3/8	3/8	3/4	2-1/2	4
76312	7/16	3/8	1	2-11/16	4
76321	1/2	1/2	1-1/4	3-1/4	4
76328	9/16	1/2	1-3/8	3-3/8	4
76337	5/8	5/8	1-5/8	3-3/4	4
76359	3/4	3/4	1-5/8	3-7/8	4
76391	7/8	3/4	1-7/8	4-1/8	5
76394	7/8	7/8	1-7/8	4-1/8	5
76422	1	3/4	2	4-1/4	5
76426	1	1	2	4-1/2	5

■ The TiN coated, TiCN coated or TiAlN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAlN F), CE(TiAlN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

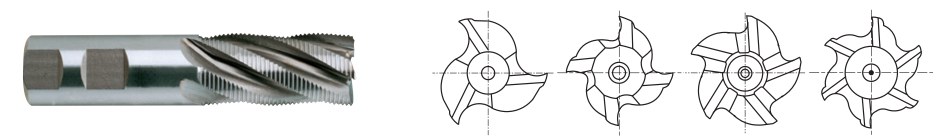
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2079** SERIES

HSSCo8, MULTI FLUTE REGULAR LENGTH FINE PITCH ROUGHING

▶ This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths. In many cases, the milled surfaces are of acceptable quality.

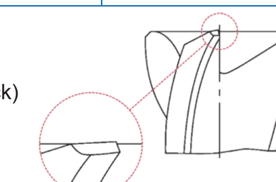


HSS Co8 | FINE | 3-6 | 30° | FLAT p.C857, C858, C859

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
70297	1/4	3/8	5/8	2-7/16	3
70301	5/16	3/8	3/4	2-1/2	3
70305	3/8	3/8	3/4	2-1/2	4
70312	7/16	3/8	1	2-11/16	4
70321	1/2	1/2	1-1/4	3-1/4	4
70328	9/16	1/2	1-3/8	3-3/8	4
70337	5/8	5/8	1-5/8	3-3/4	4
70358	3/4	5/8	1-5/8	3-3/4	4
70359	3/4	3/4	1-5/8	3-7/8	4
70391	7/8	3/4	1-7/8	4-1/8	5
70394	7/8	7/8	1-7/8	4-1/8	5
70422	1	3/4	2	4-1/4	5
70426	1	1	2	4-1/2	5
70431	1-1/8	3/4	2	4-1/4	6
70435	1-1/8	1	2	4-1/2	6
70439	1-1/4	3/4	2	4-1/4	6
70445	1-1/4	1-1/4	2	4-1/2	6
70449	1-3/8	3/4	2	4-1/4	6
70457	1-1/2	3/4	2	4-1/4	6
70461	1-1/2	1-1/4	2	4-1/2	6
70469	1-3/4	1-1/4	2	4-1/2	6
70475	2	3/4	2	4-1/4	6
70477	2	1-1/4	2	4-1/2	6

■ The TiN coated, TiCN coated or TiAlN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAlN F), CE(TiAlN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

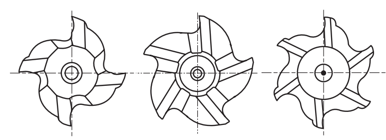
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2077** SERIES

HSSCo8, MULTI FLUTE LONG LENGTH FINE PITCH ROUGHING

▶ This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths. In many cases, the milled surfaces are of acceptable quality.



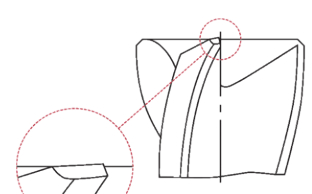
HSS Co8 | FINE | 4·6 | 30° | FLAT | p.C857, C858, C859

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
71321	1/2	1/2	2	4	4
71337	5/8	5/8	2-1/2	4-5/8	4
71358	3/4	5/8	3	5-1/4	4
71359	3/4	3/4	3	5-1/4	4
71394	7/8	7/8	3-1/2	5-3/4	5
71426	1	1	4	6-1/2	5
71445	1-1/4	1-1/4	4	6-1/2	6
71457	1-1/2	3/4	4	6-1/4	6
71461	1-1/2	1-1/4	4	6-1/2	6
71469	1-3/4	1-1/4	4	6-1/2	6
71477	2	1-1/4	4	6-1/2	6

■ The TiN coated, TiCN coated or TiAlN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAlN F), CE(TiAlN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

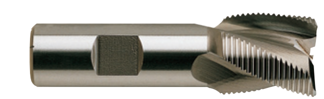
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

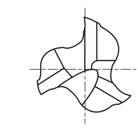
COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2086** SERIES

HSSCo8, 3 FLUTE STUB LENGTH FINE PITCH ROUGHING CENTER CUTTING

▶ This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths. In many cases, the milled surfaces are of acceptable quality.





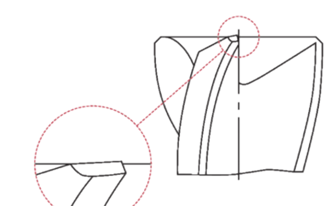
HSS Co8 | FINE | 3 | 30° | FLAT | p.C857, C858, C859

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
72297	1/4	3/8	1/4	2-1/16
72305	3/8	3/8	3/8	2-5/32
72321	1/2	1/2	1/2	2-1/2
72337	5/8	5/8	5/8	2-3/4
72359	3/4	3/4	3/4	2-7/8
72391	7/8	3/4	7/8	3-1/8
72422	1	3/4	1	3-1/4
72426	1	1	1	3-1/2

■ The TiN coated, TiCN coated or TiAlN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAlN F), CE(TiAlN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

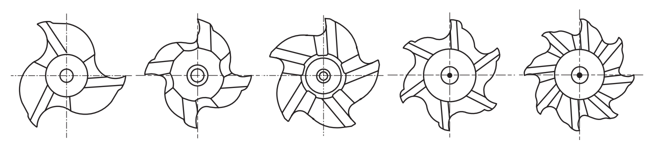
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

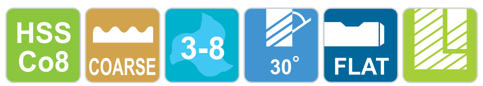
COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2170 SERIES**

HSSCo8, MULTI FLUTE REGULAR LENGTH COARSE PITCH ROUGHING

▶ This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is recommended for cutting steel grades and many non-ferrous materials.
The end tooth of this tool has a center hole design for many accurate resharpenings between centers.





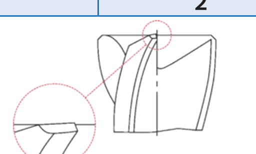
p.C857, C858, C859

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
60297	1/4	3/8	5/8	2-7/16	3
60301	5/16	3/8	3/4	2-1/2	3
60305	3/8	3/8	3/4	2-1/2	4
60312	7/16	3/8	1	2-11/16	4
60321	1/2	1/2	1-1/4	3-1/4	4
60328	9/16	1/2	1-3/8	3-3/8	4
60337	5/8	5/8	1-5/8	3-3/4	4
60348	11/16	5/8	1-5/8	3-3/4	4
60358	3/4	5/8	1-5/8	3-3/4	4
60359	3/4	3/4	1-5/8	3-3/4	4
60375	13/16	3/4	1-7/8	4-1/8	4
60391	7/8	3/4	1-7/8	4-1/8	5
60394	7/8	7/8	1-7/8	4-1/8	5
60409	15/16	7/8	1-7/8	4-1/8	5
60422	1	3/4	2	4-1/4	5
60426	1	1	2	4-1/2	5
60431	1-1/8	3/4	2	4-1/4	6
60435	1-1/8	1	2	4-1/2	6
60439	1-1/4	3/4	2	4-1/4	6
60445	1-1/4	1-1/4	2	4-1/2	6
60449	1-3/8	3/4	2	4-1/4	6
60457	1-1/2	3/4	2	4-1/4	6
60461	1-1/2	1-1/4	2	4-1/2	6
60467	1-3/4	3/4	2	4-1/4	6
60469	1-3/4	1-1/4	2	4-1/2	6
60475	2	3/4	2	4-1/4	6
60477	2	1-1/4	2	4-1/2	6
* 60480	2	2	2	5-3/4	8
* 60482	2	2	3	6-3/4	8
* 60484	2	2	4	7-3/4	8

* Combination Shank

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060



Enforced Cutting Edge

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

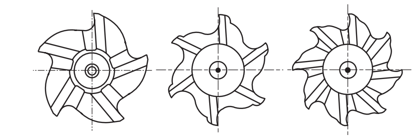
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

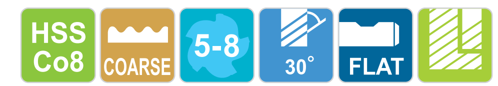
COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2171 SERIES**

HSSCo8, MULTI FLUTE MEDIUM LENGTH COARSE PITCH ROUGHING

▶ This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is recommended for cutting steel grades and many non-ferrous materials. The end tooth of this tool has a center hole design for many accurate resharpenings between centers.





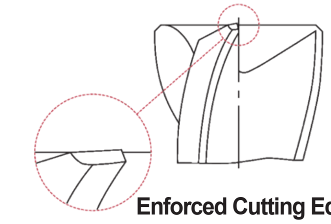
p.C857, C858, C859

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
61426	1	1	3	5-1/2	5
61445	1-1/4	1-1/4	3	5-1/2	6
61461	1-1/2	1-1/4	3	5-1/2	6
* 61488	2	2	6	9-3/4	8

* Combination Shank

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.



Enforced Cutting Edge

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

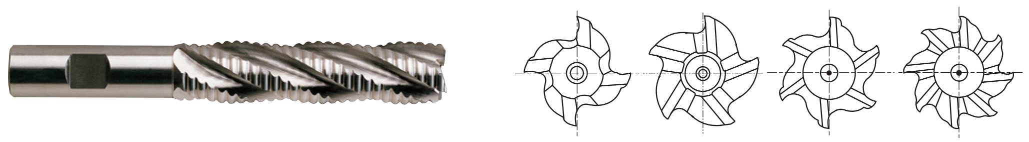
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2172 SERIES**

HSSCo8, MULTI FLUTE LONG LENGTH COARSE PITCH ROUGHING

▶ This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is recommended for cutting steel grades and many non-ferrous materials. The end tooth of this tool has a center hole design for many accurate resharpenings between centers.



HSS Co8 | COARSE | 4·8 | 30° | FLAT

p.C857, C858, C859

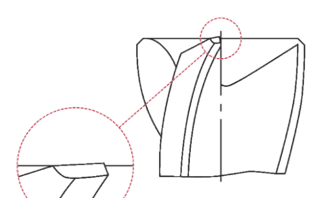
Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
62321	1/2	1/2	2	4	4
62337	5/8	5/8	2-1/2	4-5/8	4
62358	3/4	5/8	3	5-1/8	4
62359	3/4	3/4	3	5-1/4	4
62391	7/8	3/4	3-1/2	5-3/4	5
62422	1	3/4	4	6-1/4	5
62426	1	1	4	6-1/2	5
62439	1-1/4	3/4	4	6-1/4	6
62445	1-1/4	1-1/4	4	6-1/2	6
62457	1-1/2	3/4	4	6-1/4	6
62461	1-1/2	1-1/4	4	6-1/2	6
62469	1-3/4	1-1/4	4	6-1/2	6
62477	2	1-1/4	4	6-1/2	6
* 62490	2	2	8	11-3/4	8

* Combination Shank

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2241 SERIES**

HSSCo8, 3FLUTE STUB LENGTH COARSE PITCH ROUGHING CENTER CUTTING

▶ This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is recommended for cutting steel grades and many non-ferrous materials. The end tooth of this tool has a center hole design for many accurate resharpenings between centers.

HSS Co8 | COARSE | 3 | 30° | FLAT

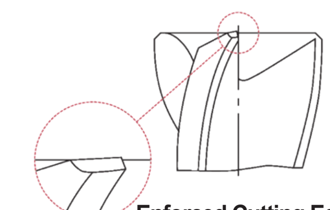
p.C857, C858, C859

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
63297	1/4	3/8	1/4	2-1/16
63305	3/8	3/8	3/8	2-5/32
63321	1/2	1/2	1/2	2-1/2
63337	5/8	5/8	5/8	2-3/4
63359	3/4	3/4	3/4	2-7/8
63426	1	1	1	3-1/2

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

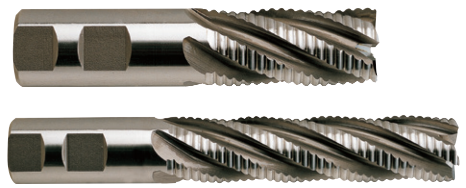
YG COBALT & HSS END MILLS

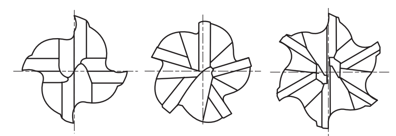
8% COBALT (M42) FLAT SHANK **E2195** SERIES

8% COBALT (M42) FLAT SHANK **E2197** SERIES

HSSCo8, MULTI FLUTE REGULAR & LONG LENGTH COARSE PITCH ROUGHING CENTER CUTTING

▶ This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is recommended for cutting steel grades and many non-ferrous materials.





HSS Co8 | COARSE | 4-6 | 30° | FLAT

p.C857, C858, C859

E2195 Series ■ REGULAR LENGTH

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
64321	1/2	1/2	1-1/4	3-1/4	4
64337	5/8	5/8	1-5/8	3-3/4	4
64359	3/4	3/4	1-5/8	3-7/8	4
64426	1	1	2	4-1/2	5
64445	1-1/4	1-1/4	2	4-1/2	6
64461	1-1/2	1-1/4	2	4-1/2	6

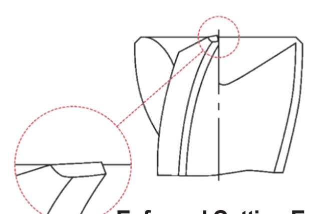
E2197 Series ■ LONG LENGTH

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
65321	1/2	1/2	2	4	4
65337	5/8	5/8	2-1/2	4-5/8	4
65359	3/4	3/4	3	5-1/4	4
65426	1	1	4	6-1/2	5
65445	1-1/4	1-1/4	4	6-1/2	6
65461	1-1/2	1-1/4	4	6-1/2	6

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

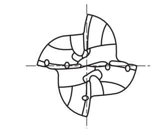
YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2193** SERIES

8% COBALT (M42) FLAT SHANK **E2125** SERIES

HSSCo8, MULTI FLUTE REGULAR & LONG LENGTH COARSE PITCH ROUGHING BALL NOSE

▶ This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is recommended for cutting steel grades and many non-ferrous materials.



HSS Co8 | COARSE | 3-6 | 30° | FLAT

p.C860

E2193 Series ■ REGULAR LENGTH

Unit : Inch

EDP No. 8% COBALT (M42)	Radius of Ball Nose R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
68297	R1/8	1/4	3/8	5/8	2-7/16	3
68301	R5/32	5/16	3/8	3/4	2-1/2	3
68305	R3/16	3/8	3/8	3/4	2-1/2	4
68321	R1/4	1/2	1/2	1-1/4	3-1/4	4
68337	R5/16	5/8	5/8	1-5/8	3-3/4	4
68359	R3/8	3/4	3/4	1-3/4	4	4
68422	R1/2	1	3/4	2	4-1/2	5
68426	R1/2	1	1	2	4-1/2	5
68439	R5/8	1-1/4	3/4	2	4-1/2	6
68445	R5/8	1-1/4	1-1/4	2	4-1/2	6
68457	R3/4	1-1/2	3/4	2	4-1/2	6
68461	R3/4	1-1/2	1-1/4	2	4-1/2	6

E2125 Series ■ LONG LENGTH

Unit : Inch

EDP No. 8% COBALT (M42)	Radius of Ball Nose R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
69321	R1/4	1/2	1/2	2-1/2	4-1/2	4
69337	R5/16	5/8	5/8	2-1/2	4-5/8	4
69359	R3/8	3/4	3/4	3	5-1/4	4
69426	R1/2	1	1	4	6-1/2	5
69445	R5/8	1-1/4	1-1/4	4	6-1/2	6
69461	R3/4	1-1/2	1-1/4	4	6-1/2	6

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

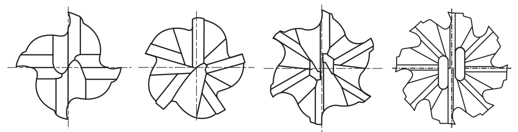
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

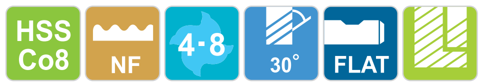
COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2248** SERIES

HSSCo8, MULTI FLUTE REGULAR LENGTH ROUGHING & FINISHING

▶ This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths. In many cases, the milled surfaces are of acceptable quality.





p.C861

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
73297	1/4	3/8	5/8	2-7/16	4
73301	5/16	3/8	3/4	2-1/2	4
73305	3/8	3/8	3/4	2-1/2	4
73312	7/16	3/8	1	2-11/16	4
73321	1/2	1/2	1-1/4	3-1/4	4
73328	9/16	1/2	1-3/8	3-3/8	4
73337	5/8	5/8	1-5/8	3-3/4	4
73348	11/16	5/8	1-5/8	3-3/4	4
73358	3/4	5/8	1-5/8	3-3/4	4
73359	3/4	3/4	1-5/8	3-3/4	4
73391	7/8	3/4	1-7/8	4-1/8	5
73394	7/8	7/8	1-7/8	4-1/8	5
73422	1	3/4	2	4-1/4	5
73426	1	1	2	4-1/2	5
73431	1-1/8	3/4	2	4-1/4	6
73435	1-1/8	1	2	4-1/2	6
73439	1-1/4	3/4	2	4-1/4	6
73445	1-1/4	1-1/4	2	4-1/2	6
73457	1-1/2	3/4	2	4-1/4	6
73461	1-1/2	1-1/4	2	4-1/2	6
73467	1-3/4	3/4	2	4-1/4	6
73469	1-3/4	1-1/4	2	4-1/2	6
73475	2	3/4	2	4-1/4	6
73477	2	1-1/4	2	4-1/2	6
* 73480	2	2	2	5-3/4	8
* 73482	2	2	3	6-3/4	8
* 73484	2	2	4	7-3/4	8

* Combination Shank

Mill Dia. Tolerance (inch)
+ .0025 + .0005

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

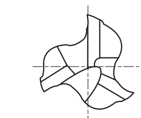
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2191** SERIES

HSSCo8, 3 FLUTE 37° HELIX REGULAR LENGTH ROUGHING for ALUMINUM

▶ This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths. In many cases, the milled surfaces are of acceptable quality.



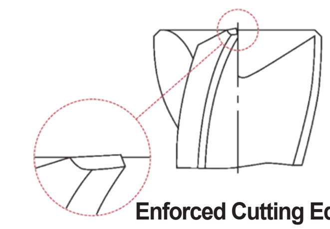
p.C862

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
66297	1/4	3/8	5/8	2-7/16
66301	5/16	3/8	3/4	2-1/2
66305	3/8	3/8	3/4	2-1/2
66321	1/2	1/2	1-1/4	3-1/4
66337	5/8	5/8	1-5/8	3-3/4
66359	3/4	3/4	1-5/8	3-7/8
66391	7/8	3/4	1-7/8	4-1/8
66426	1	1	2	4-1/2
66445	1-1/4	1-1/4	2	4-1/2
66461	1-1/2	1-1/4	2	4-1/2

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
up to 1	0~+.0030
over 1	0~+.0060



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎	○	○	○													

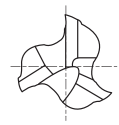
YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2226 SERIES**

8% COBALT (M42) FLAT SHANK **E2192 SERIES**

HSSCo8, 3 FLUTE 37° HELIX MEDIUM & LONG LENGTH ROUGHING for ALUMINUM

▶ This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is recommended for cutting aluminum, aluminum alloy and many non-ferrous materials.



HSS Co8 | ALU | 3 | 37° | FLAT

p.C862

E2226 Series ■ MEDIUM LENGTH

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
66901	1	1	3	5-1/2
66902	1-1/4	1-1/4	3	5-1/2

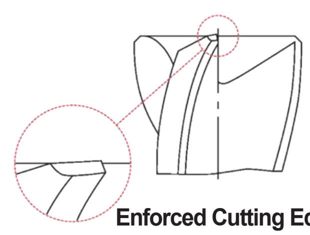
E2192 Series ■ LONG LENGTH

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
67321	1/2	1/2	2	4
67337	5/8	5/8	2-1/2	4-5/8
67359	3/4	3/4	3	5-1/4
67426	1	1	4	6-1/2
67445	1-1/4	1-1/4	4	6-1/2
67461	1-1/2	1-1/4	4	6-1/2

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia.	Tolerance (inch)
up to 1	0~+.0030
over 1	0~+.0060



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	◎	◎	◎	◎	◎	○	○	○													

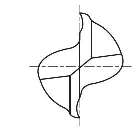
YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2163 SERIES**

HSS (M2) FLAT SHANK **E1163 SERIES**

HSSCo8 & HSS, 2 FLUTE 15° HELIX for KEYWAY CUTTING

▶ E2163(E1163) are keyway cutting end mills that have the same design as the general purpose of two flute single end mill, but are held to a mill diameter tolerance of +.0000 -.0015. These close tolerance end mills are recommended for cutting keyway which must be held close to nominal size.



HSS Co8 | HSS | 2 | 15° | FLAT

p.C833, C834, C835

Unit : Inch

EDP No. 8% COBALT (M42)	EDP No. HSS (M2)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
14289	14039	1/8	3/8	3/8	2-5/16
14293	14043	3/16	3/8	7/16	2-5/16
14297	14047	1/4	3/8	1/2	2-5/16
14301	14051	5/16	3/8	9/16	2-5/16
14305	14055	3/8	3/8	9/16	2-5/16
14312	14062	7/16	3/8	13/16	2-1/2
14321	14071	1/2	1/2	1	3
14337	14087	5/8	5/8	1-5/16	3-7/16
14359	14109	3/4	3/4	1-5/16	3-9/16
14394	14144	7/8	7/8	1-1/2	3-3/4
14426	14176	1	1	1-5/8	4-1/8

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)
0~-.0015

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

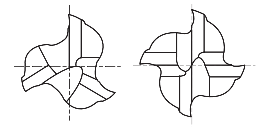
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2120 SERIES**
HSS (M2) FLAT SHANK **E2121 SERIES**

HSSCo8, 3&4 FLUTE 60° HELIX REGULAR LENGTH

▶ Provided with high helix angle(60°).
Smooth cutting and small cutting resistance.
Suitable for machining of difficult-to-cut materials.



HSS Co8 | 3&4 | 60° | FLAT

p.C843

E2120 Series ■ 3 FLUTE

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
20297	1/4	3/8	5/8	2-7/16
20301	5/16	3/8	3/4	2-1/2
20305	3/8	3/8	3/4	2-1/2
20312	7/16	3/8	1	2-11/16
20321	1/2	1/2	1-1/4	3-1/4
20337	5/8	5/8	1-5/8	3-3/4
20359	3/4	3/4	1-5/8	3-7/8

E2121 Series ■ 4 FLUTE

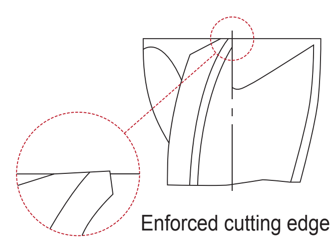
Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
20394	7/8	7/8	1-7/8	4-1/8
20426	1	1	2	4-1/2
20445	1-1/4	1-1/4	2	4-1/2
20461	1-1/2	1-1/4	2	4-1/2
20477	2	1-1/4	2	4-1/2

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.



Enforced cutting edge

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎		○	○	○	○	○	○	○	○	○

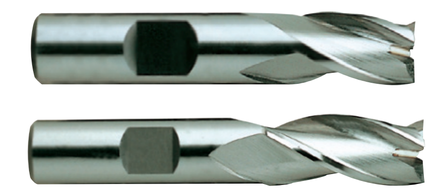
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																					

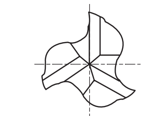
COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2160 SERIES**
HSS (M2) FLAT SHANK **E2161 SERIES**

HSSCo8, 3 FLUTE SHORT & LONG LENGTH THROW AWAY

▶ Well balanced web design to minimize deflection & chattering. High accuracy for O.D. is guaranteed under the strict tolerance control. Much higher(50%) table speed than 2 Flute is allowed.





HSS Co8 | 3 | 30° | FLAT

p.C837, C838, C839, C840, C841, C842, C843

E2160 Series ■ SHORT LENGTH

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
22257	1/16	1/4	3/32	31/32
22261	3/32	1/4	5/32	1-1/64
22265	1/8	1/4	3/16	1-3/32
22269	5/32	1/4	1/4	1-9/32
22273	3/16	1/4	9/32	1-11/32
22277	7/32	1/4	5/16	1-13/32
22281	1/4	1/4	3/8	1-13/32

E2161 Series ■ LONG LENGTH

Unit : Inch

EDP No. 8% COBALT (M42)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
23257	1/16	1/4	5/32	1-3/32
23261	3/32	1/4	1/4	1-1/4
23265	1/8	1/4	5/16	1-11/32
23269	5/32	1/4	3/8	1-17/32
23273	3/16	1/4	7/16	1-21/32
23277	7/32	1/4	1/2	1-3/4
23281	1/4	1/4	5/8	1-3/4

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)
- .0005 - .0013

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2237** SERIES
HSS (M2) FLAT SHANK **E1237** SERIES

HSSCo8 & HSS, 4 FLUTE CORNER ROUNDING

▶This general corner rounding end mills are designed for machining fillets on work piece.

HSS Co8 | HSS | 4 | FLAT | p.C863

Unit : Inch

EDP No.		Radius	Pilot Diameter	Outside Diameter	Shank Diameter	Overall Length
8% COBALT (M42)	HSS (M2)					
29251	29001	1/16	1/4	7/16	3/8	2-1/2
29252	29002	3/32	1/4	1/2	3/8	2-1/2
29253	29003	1/8	1/4	5/8	1/2	3
29254	29004	5/32	5/16	3/4	1/2	3
29255	29005	3/16	3/8	7/8	1/2	3
29256	29006	3/16	3/8	7/8	3/4	3-1/8
29257	29007	7/32	5/16	7/8	1/2	3-1/4
29258	29008	1/4	3/8	1	1/2	3
29259	29009	9/32	3/8	1	5/8	3
29260	29010	1/4	3/8	1	3/4	3-1/4
29261	29011	5/16	3/8	1-1/8	1/2	3-1/4
29262	29012	5/16	3/8	1-1/8	5/8	3-1/2
29263	29013	5/16	3/8	1-1/8	3/4	3-1/2
29264	29014	5/16	3/8	1-1/8	7/8	3-1/2
29265	29015	3/8	3/8	1-1/4	1/2	3-1/2
29266	29016	3/8	3/8	1-1/4	3/4	3-3/4
29267	29017	3/8	3/8	1-1/4	7/8	3-3/4
29268	29018	7/16	3/8	1-3/8	3/4	3-3/4
29269	29019	7/16	3/8	1-3/8	1	4
29270	29020	1/2	3/8	1-1/2	3/4	3-7/8
29271	29021	1/2	3/8	1-1/2	1	4-1/8
29272	29022	5/8	5/16	1-5/8	3/4	4
29273	29023	5/8	5/16	1-5/8	1	4
29274	29024	5/8	9/16	1-15/16	3/4	4
29275	29025	5/8	9/16	1-15/16	1	4-1/4
29276	29026	3/4	5/16	1-7/8	3/4	4
29277	29027	3/4	5/16	1-7/8	1	4
29278	29028	3/4	5/8	2-1/4	3/4	4-1/8
29279	29029	3/4	5/8	2-1/4	1	4-5/16
29280	29030	7/8	5/8	2-1/2	3/4	4-1/2
29281	29031	1	5/8	2-5/8	3/4	4-1/2
29282	29032	1	5/8	2-3/4	1	4-3/4

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

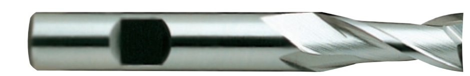
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

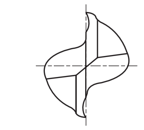
YG COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2482** SERIES
HSS (M2) FLAT SHANK **E1482** SERIES

HSSCo8 & HSS, 2 FLUTE REGULAR LENGTH

▶Two flute end mills with metric cutting diameter are especially recommended for slotting operation, pocketing keyway cutting and other general purpose work including plunge cutting.





HSS Co8 | HSS | 2 | 30° | FLAT | p.C864

Unit : Inch

EDP No.		Mill Diameter		Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)	Metric	Inch			
15252	15002	2.0	.0787	3/8	5/16	2-5/16
15253	15003	2.5	.0984	3/8	5/16	2-5/16
15254	15004	3.0	.1181	3/8	5/16	2-5/16
15255	15005	3.5	.1378	3/8	7/16	2-5/16
15256	15006	4.0	.1575	3/8	7/16	2-5/16
15257	15007	4.5	.1772	3/8	1/2	2-5/16
15258	15008	5.0	.1969	3/8	1/2	2-5/16
15259	15009	5.5	.2165	3/8	1/2	2-5/16
15260	15010	6.0	.2362	3/8	1/2	2-5/16
15261	15011	7.0	.2756	3/8	9/16	2-5/16
15262	15012	8.0	.3150	3/8	9/16	2-5/16
15263	15013	9.0	.3543	3/8	9/16	2-5/16
15264	15014	10.0	.3937	3/8	13/16	2-1/2
15265	15015	11.0	.4330	3/8	13/16	2-1/2
15266	15016	12.0	.4724	3/8	13/16	2-1/2
15267	15017	12.5	.4921	1/2	1-1/8	3-1/8
15268	15018	13.0	.5118	1/2	1-1/8	3-1/8
15270	15020	14.0	.5512	1/2	1-1/8	3-1/8
15276	15026	16.0	.6299	5/8	1-5/16	3-7/16
15280	15030	18.0	.7087	5/8	1-5/16	3-7/16
15282	15032	20.0	.7874	5/8	1-1/2	3-3/4
15284	15034	22.0	.8661	3/4	1-1/2	3-3/4
15288	15038	24.0	.9449	3/4	2	4-1/2
15290	15040	25.0	.9843	1	2	4-1/2
15296	15046	32.0	1.2598	1	2	4-1/2
15298	15048	36.0	1.4173	1	2	4-1/2
15300	15050	40.0	1.5748	1-1/4	2	4-1/2
15302	15052	45.0	1.7717	1-1/4	2	4-1/2

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

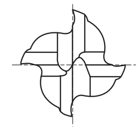
COBALT & HSS END MILLS

8% COBALT (M42) FLAT SHANK **E2483** SERIES

HSS (M2) FLAT SHANK **E1483** SERIES

HSSCo8 & HSS, 4 FLUTE REGULAR LENGTH

▶ E2483 have an extensive range of standard regular length in metric diameter.
End mills with center cutting are recommended for a wide range of cutting jobs, including slotting, shallow pocketing and tracer milling.



HSS Co8 | HSS | 4 | 30° | FLAT

p.C865

Unit : Inch

EDP No.		Mill Diameter		Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)	Metric	Inch			
16252	16002	2.0	.0787	3/8	3/8	2-5/16
16253	16003	2.5	.0984	3/8	3/8	2-5/16
16254	16004	3.0	.1181	3/8	3/8	2-5/16
16255	16005	3.5	.1378	3/8	1/2	2-3/8
16256	16006	4.0	.1575	3/8	1/2	2-3/8
16257	16007	4.5	.1772	3/8	9/16	2-1/2
16258	16008	5.0	.1969	3/8	9/16	2-1/2
16259	16009	5.5	.2165	3/8	5/8	2-1/2
16260	16010	6.0	.2362	3/8	5/8	2-1/2
16261	16011	7.0	.2756	3/8	11/16	2-1/2
16262	16012	8.0	.3150	3/8	3/4	2-1/2
16263	16013	9.0	.3543	3/8	3/4	2-1/2
16264	16014	10.0	.3937	3/8	1	2-11/16
16265	16015	11.0	.4330	3/8	1	2-11/16
16266	16016	12.0	.4724	3/8	1	2-11/16
16267	16017	12.5	.4921	1/2	1-1/4	3-1/4
16268	16018	13.0	.5118	1/2	1-1/4	3-1/4
16270	16020	14.0	.5512	1/2	1-3/8	3-3/8
16276	16026	16.0	.6299	5/8	1-5/8	3-3/4
16280	16030	18.0	.7087	5/8	1-5/8	3-3/4
16282	16032	20.0	.7874	5/8	1-7/8	4-1/8
16284	16034	22.0	.8661	3/4	1-7/8	4-1/8
16288	16038	24.0	.9449	3/4	2	4-1/2
16290	16040	25.0	.9843	1	2	4-1/2
16296	16046	32.0	1.2598	1	2	4-1/2
16298	16048	36.0	1.4173	1	2	4-1/2
16300	16050	40.0	1.5748	1-1/4	2	4-1/2
16302	16052	45.0	1.7717	1-1/4	2	4-1/2

Mill Dia. Tolerance (inch)	
0~+.0010	** 0~+.0015

** The shank of end mills is the same diameter as the cutting portion.

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	○	◎	◎	○	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○													

COBALT & HSS END MILLS

END MILL SET SERIES

▶ Various range of sizes in these end mill sets gives you plenty of opportunities to reduce manufacturing costs and improve productivity.

■ SET OF MINIATURE, (3/16″ SHANK) DOUBLE

EDP No.	ITEM No.	EDP No.	ITEM No.	Type	Length	Mill Diameter	No.of Flute
8% COBALT (M42)		HSS (M2)					
96002	CMR211	96001	MR211	Sq. END (11PCS.)	REGULAR	1/32, 3/64, 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 11/64, 3/16	2
96004	CMR409	96003	MR409	Sq. END (9PCS.)	REGULAR	1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 11/64, 3/16	4
96006	CMS211	96005	MS211	Sq. END (11PCS.)	STUB	1/32, 3/64, 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 11/64, 3/16	2
96008	CMS409	96007	MS409	Sq. END (9PCS.)	STUB	1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 11/64, 3/16	4

※ WITH TRANSPARENT PLASTIC CASE

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

■ SET OF 3/8″ SHANK, (WELDON) SINGLE

EDP No.	ITEM No.	EDP No.	ITEM No.	Type	Length	Mill Diameter	No.of Flute
8% COBALT (M42)		HSS (M2)					
96010	CWR205	96009	WR205	Sq. END (5PCS.)	REGULAR	1/8, 3/16, 1/4, 5/16, 3/8	2
96012	CWR405	96011	WR405	Sq. END (5PCS.)	REGULAR	1/8, 3/16, 1/4, 5/16, 3/8	4
96014	CWRC05	96013	WRC05	CENTER CUT (5PCS.)	REGULAR	1/8, 3/16, 1/4, 5/16, 3/8	04

※ WITH TRANSPARENT PLASTIC CASE

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
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STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

END MILL SET SERIES

▶ Various range of sizes in these end mill sets gives you a plenty of opportunities to reduce manufacturing costs and improve productivity.

■ SET OF 3/8″SHANK, (WELDON) DOUBLE

EDP No.	ITEM No.	EDP No.	ITEM No.	Type	Length	Mill Diameter	No.of Flute
8% COBALT (M42)		HSS (M2)					
96016	CDR209	96015	DR209	Sq. END (9PCS.)	REGULAR	1/8, 5/32, 3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8	2
96018	CDR409	96017	DR409	Sq. END (9PCS.)	REGULAR	1/8, 5/32, 3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8	4
96020	CDRC09	96019	DRC09	CENTER CUT (9PCS.)	REGULAR	1/8, 5/32, 3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8	4

※ WITH TRANSPARENT PLASTIC CASE

■ The TiN coated, TiCN coated or TiAIN coated is available on your request.
■ Coating Codes for Cobalt
Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAIN F), CE(TiAIN E), CH(Hardslick)
■ Coating Codes for HSS
Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAIN F), HE(TiAIN E), HH(Hardslick)
▶ Coated Price Shown in Price List. Call for Availability.

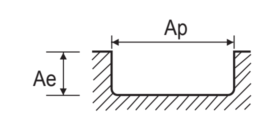
YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2030, E1030, E2080, E1080, E2033, E1033, E2050, E1050, E2163, E1163 SERIES

2FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	1/4	3/8	1/2	5/8	3/4	7/8	1	1-1/8	1-3/8	1-1/2	1-3/4	2
P	1	Non-alloy steel	1.0D	0.5D	SFM	115	120	110	120	115	125	115	120	120	110	120	130	130
					IPT	.0003	.0010	.0018	.0024	.0031	.0032	.0040	.0039	.0039	.0039	.0039	.0043	.0040
					RPM	3500	1800	1100	900	700	630	500	450	400	310	310	280	250
					IPM	2	4	4	4	4	4	4	4	3	2	2	2	2
	2		1.0D	0.5D	SFM	105	105	90	105	90	100	105	105	105	90	100	100	100
					IPT	.0003	.0010	.0019	.0025	.0031	.0035	.0039	.0039	.0040	.0040	.0040	.0045	.0047
					RPM	3200	1600	900	800	560	500	450	400	350	250	250	220	190
					IPM	2	3	4	4	4	4	4	3	3	2	2	2	2
	3-4		1.0D	0.5D	SFM	80	80	80	80	75	80	80	80	80	70	80	80	60
					IPT	.0003	.0010	.0019	.0025	.0031	.0035	.0040	.0039	.0039	.0040	.0040	.0044	.0045
					RPM	2500	1200	800	630	450	400	350	310	280	200	200	180	110
					IPM	2	2	3	3	3	3	3	2	2	2	2	2	1
	5		1.0D	0.5D	SFM	50	50	45	50	45	50	50	45	45	45	45	50	40
					IPT	.0003	.0010	.0020	.0025	.0032	.0036	.0041	.0039	.0038	.0042	.0042	.0045	.0050
					RPM	1600	800	450	400	280	250	220	180	160	120	120	110	80
					IPM	1	2	2	2	2	2	2	1	1	1	1	1	1
	6	Low alloy steel	1.0D	0.5D	SFM	105	105	90	105	90	100	105	105	105	90	100	100	100
					IPT	.0003	.0010	.0019	.0025	.0031	.0035	.0039	.0039	.0040	.0040	.0040	.0045	.0047
					RPM	3200	1600	900	800	560	500	450	400	350	250	250	220	190
					IPM	2	3	4	4	4	4	4	3	3	2	2	2	2
	7		1.0D	0.5D	SFM	80	80	80	80	75	80	80	80	80	70	80	80	60
					IPT	.0003	.0010	.0019	.0025	.0031	.0035	.0040	.0039	.0039	.0040	.0040	.0044	.0045
					RPM	2500	1200	800	630	450	400	350	310	280	200	200	180	110
					IPM	2	2	3	3	3	3	3	2	2	2	2	2	1
	8-9		1.0D	0.5D	SFM	50	50	45	50	45	50	50	45	45	45	45	50	40
					IPT	.0003	.0010	.0020	.0025	.0032	.0036	.0041	.0039	.0038	.0042	.0042	.0045	.0050
					RPM	1600	800	450	400	280	250	220	180	160	120	120	110	80
					IPM	1	2	2	2	2	2	2	1	1	1	1	1	1
	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM	105	105	90	105	90	100	105	105	105	90	100	100	100
					IPT	.0003	.0010	.0019	.0025	.0031	.0035	.0039	.0039	.0040	.0040	.0040	.0045	.0047
					RPM	3200	1600	900	800	560	500	450	400	350	250	250	220	190
					IPM	2	3	4	4	4	4	4	3	3	2	2	2	2
	11.1		1.0D	0.5D	SFM	50	50	45	50	45	50	50	45	45	45	45	50	40
					IPT	.0003	.0010	.0020	.0025	.0032	.0036	.0041	.0039	.0038	.0042	.0042	.0045	.0050
					RPM	1600	800	450	400	280	250	220	180	160	120	120	110	80
					IPM	1	2	2	2	2	2	2	1	1	1	1	1	1
N	21-22	Aluminum-wrought alloy	1.0D	0.5D	SFM	360	365	305	325	325	355	320	315	325	325	355	365	330
					IPT	.0004	.0011	.0025	.0030	.0035	.0038	.0042	.0046	.0048	.0048	.0048	.0049	.0050
					RPM	11000	5600	3100	2500	2000	1800	1400	1200	1100	900	900	800	630
					IPM	10	12	16	15	14	14	12	11	11	9	9	8	6
	23-25	Aluminum-cast, alloyed	1.0D	0.5D	SFM	360	365	305	325	325	355	320	315	325	325	355	365	330
					IPT	.0004	.0011	.0025	.0030	.0035	.0038	.0042	.0046	.0048	.0048	.0048	.0049	.0050
					RPM	11000	5600	3100	2500	2000	1800	1400	1200	1100	900	900	800	630
					IPM	10	12	16	15	14	14	12	11	11	9	9	8	6



※ The Feed, in long & extra long types, should be reduced by around 50%.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
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STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

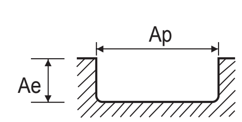
RECOMMENDED CUTTING CONDITIONS

E2030, E1030, E2080, E1080, E2033, E1033, E2050, E1050, E2163, E1163 SERIES

TiN Coated

2FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	1/4	3/8	1/2	5/8	3/4	7/8	1	1-1/8	1-3/8	1-1/2	1-3/4	2
P	1	Non-alloy steel	1.0D	0.5D	SFM	135	140	130	145	135	150	135	140	140	135	145	155	155
					IPT	.0003	.0010	.0018	.0024	.0031	.0032	.0040	.0039	.0039	.0039	.0039	.0043	.0040
					RPM	4200	2160	1320	1090	840	760	600	540	480	370	370	340	300
					IPM	3	4	5	5	5	5	5	4	4	3	3	3	2
	2		1.0D	0.5D	SFM	125	125	105	125	110	120	125	125	125	110	120	120	120
					IPT	.0003	.0010	.0019	.0025	.0031	.0035	.0039	.0039	.0040	.0040	.0040	.0045	.0048
					RPM	3840	1920	1080	960	670	600	540	480	420	300	300	260	230
					IPM	2	4	4	5	4	4	4	4	3	2	2	2	2
	3-4		1.0D	0.5D	SFM	100	95	95	100	90	95	95	95	100	85	95	100	70
					IPT	.0003	.0010	.0019	.0024	.0034	.0035	.0040	.0039	.0039	.0040	.0040	.0044	.0045
					RPM	3000	1440	960	760	540	480	420	370	340	240	240	220	130
					IPM	2	3	4	4	4	3	3	3	3	2	2	2	1
	5		1.0D	0.5D	SFM	65	65	55	65	55	60	60	70	125	50	55	60	50
					IPT	.0003	.0010	.0020	.0025	.0033	.0037	.0042	.0042	.0020	.0042	.0042	.0045	.0052
					RPM	1920	960	540	480	340	300	260	260	430	140	140	130	100
					IPM	1	2	2	2	2	2	2	2	2	1	1	1	1
	6	Low alloy steel	1.0D	0.5D	SFM	125	125	105	125	110	120	125	125	125	110	120	120	120
					IPT	.0003	.0010	.0019	.0025	.0031	.0035	.0039	.0039	.0040	.0040	.0040	.0045	.0048
					RPM	3840	1920	1080	960	670	600	540	480	420	300	300	260	230
					IPM	2	4	4	5	4	4	4	4	3	2	2	2	2
	7		1.0D	0.5D	SFM	100	95	95	100	90	95	95	95	100	85	95	100	70
					IPT	.0003	.0010	.0019	.0024	.0034	.0035	.0040	.0039	.0039	.0040	.0040	.0044	.0045
					RPM	3000	1440	960	760	540	480	420	370	340	240	240	220	130
					IPM	2	3	4	4	4	3	3	3	3	2	2	2	1
	8-9		1.0D	0.5D	SFM	65	65	55	65	55	60	60	70	125	50	55	60	50
					IPT	.0003	.0010	.0020	.0025	.0033	.0037	.0042	.0042	.0020	.0042	.0042	.0045	.0052
					RPM	1920	960	540	480	340	300	260	260	430	140	140	130	100
					IPM	1	2	2	2	2	2	2	2	2	1	1	1	1
	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM	125	125	105	125	110	120	125	125	125	110	120	120	120
					IPT	.0003	.0010	.0019	.0025	.0031	.0035	.0039	.0039	.0040	.0040	.0040	.0045	.0048
					RPM	3840	1920	1080	960	670	600	540	480	420	300	300	260	230
					IPM	2	4	4	5	4	4	4	4	3	2	2	2	2
	11.1		1.0D	0.5D	SFM	65	65	55	65	55	60	60	70	125	50	55	60	50
					IPT	.0003	.0010	.0020	.0025	.0033	.0037	.0042	.0042	.0020	.0042	.0042	.0045	.0052
					RPM	1920	960	540	480	340	300	260	260	430	140	140	130	100
					IPM	1	2	2	2	2	2	2	2	2	1	1	1	1
N	21-22	Aluminum-wrought alloy	1.0D	0.5D	SFM	430	440	365	395	395	425	385	375	390	390	425	440	395
					IPT	.0004	.0011	.0026	.0030	.0035	.0038	.0042	.0046	.0048	.0048	.0048	.0049	.0050
					RPM	13200	6720	3720	3000	2400	2160	1680	1440	1320	1080	1080	960	760
					IPM	12	15	19	18	17	17	14	13	13	10	10	10	8
	23-25	Aluminum-cast, alloyed	1.0D	0.5D	SFM	430	440	365	395	395	425	385	375	390	390	425	440	395
					IPT	.0004	.0011	.0026	.0030	.0035	.0038	.0042	.0046	.0048	.0048	.0048	.0049	.0050
					RPM	13200	6720	3720	3000	2400	2160	1680	1440	1320	1080	1080	960	760
					IPM	12	15	19	18	17	17	14	13	13	10	10	10	8



※ The Feed, in long & extra long types, should be reduced by around 50%.

YG COBALT & HSS END MILLS

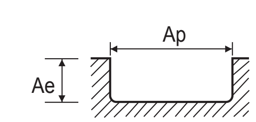
RECOMMENDED CUTTING CONDITIONS

E2030, E1030, E2080, E1080, E2033, E1033, E2050, E1050, E2163, E1163 SERIES

TiCN Coated

2FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	1/4	3/8	1/2	5/8	3/4	7/8	1	1-1/8	1-3/8	1-1/2	1-3/4	2
P	1	Non-alloy steel	1.0D	0.5D	SFM	150	155	140	155	150	160	150	155	155	145	160	165	170
					IPT	.0003	.0010	.0018	.0024	.0031	.0032	.0040	.0039	.0038	.0038	.0038	.0043	.0040
					RPM	4550	2340	1430	1170	910	820	650	590	520	400	400	360	330
					IPM	3	5	5	6	6	5	5	5	4	3	3	3	3
	2		1.0D	0.5D	SFM	125	135	115	135	120	130	135	135	135	115	130	130	120
					IPT	.0003	.0010	.0020	.0025	.0032	.0035	.0039	.0038	.0040	.0040	.0040	.0045	.0050
					RPM	3840	2080	1170	1040	730	650	590	520	460	330	330	290	230
					IPM	2	4	5	5	5	5	5	4	4	3	3	3	2
	3-4		1.0D	0.5D	SFM	105	100	100	105	95	100	105	105	105	95	100	105	75
					IPT	.0003	.0010	.0019	.0024	.0031	.0035	.0040	.0038	.0040	.0040	.0040	.0045	.0045
					RPM	3250	1560	1040	820	590	520	460	400	360	260	260	230	140
					IPM	2	3	4	4	4	4	4	3	3	2	2	2	1
	5		1.0D	0.5D	SFM	65	70	55	70	60	65	65	60	60	55	60	65	55
					IPT	.0002	.0015	.0027	.0027	.0032	.0035	.0040	.0038	.0038	.0042	.0042	.0045	.0048
					RPM	2050	1040	590	520	360	330	290	230	210	160	160	140	100
					IPM	1	3	3	3	2	2	2	2	2	1	1	1	1
	6	Low alloy steel	1.0D	0.5D	SFM	125	135	115	135	120	130	135	135	135	115	130	130	120
					IPT	.0003	.0010	.0020	.0025	.0032	.0035	.0039	.0038	.0040	.0040	.0040	.0045	.0050
					RPM	3840	2080	1170	1040	730	650	590	520	460	330	330	290	230
					IPM	2	4	5	5	5	5	5	4	4	3	3	3	2
	7		1.0D	0.5D	SFM	105	100	100	105	95	100	105	105	105	95	100	105	75
					IPT	.0003	.0010	.0019	.0024	.0031	.0035	.0040	.0038	.0040	.0040	.0040	.0045	.0045
					RPM	3250	1560	1040	820	590	520	460	400	360	260	260	230	140
					IPM	2	3	4	4	4	4	4	3	3	2	2	2	1
	8-9		1.0D	0.5D	SFM	65	70	55	70	60	65	65	60	60	55	60	65	55
					IPT	.0002	.0015	.0027	.0027	.0032	.0035	.0040	.0038	.0038	.0042	.0042	.0045	.0048
					RPM	2050	1040	590	520	360	330	290	230	210	160	160	140	100
					IPM	1	3	3	3	2	2	2	2	2	1	1	1	1
	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM	125	135	115	135	120	130	135	135	135	115	130	130	120
					IPT	.0003	.0010	.0020	.0025	.0032	.0035	.0039	.0038	.0040	.0040	.0040	.0045	.0050
					RPM	3840	2080	1170	1040	730	650	590	520	460	330	330	290	230
					IPM	2	4	5	5	5	5	5	4	4	3	3	3	2
	11.1		1.0D	0.5D	SFM	65	70	55	70	60	65	65	60	60	55	60	65	55
					IPT	.0002	.0015	.0027	.0027	.0032	.0035	.0040	.0038	.0038	.0042	.0042	.0045	.0048
					RPM	2050	1040	590	520	360	330	290	230	210	160	160	140	100
					IPM	1	3	3	3	2	2	2	2	2	1	1	1	1
N	21-22	Aluminum-wrought alloy	1.0D	0.5D	SFM	470	475	395	425	425	460	415	410	420	420	460	475	430
					IPT	.0004	.0011	.0025	.0030	.0034	.0038	.0042	.0046	.0048	.0048	.0048	.0050	.0050
					RPM	14300	7280	4030	3250	2600	2340	1820	1560	1430	1170	1170	1040	820
					IPM	13	16	21	20	18	18	15	14	14	11	11	10	8
	23-25	Aluminum-cast, alloyed	1.0D	0.5D	SFM	470	475	395	425	425	460	415	410	420	420	460	475	430
					IPT	.0004	.0011	.0025	.0030	.0034	.0038	.0042	.0046	.0048	.0048	.0048	.0050	.0050
					RPM	14300	7280	4030	3250	2600	2340	1820	1560	1430	1170	1170	1040	820
					IPM	13	16	21	20	18	18	15	14	14	11	11	10	8



※ The Feed, in long & extra long types, should be reduced by around 50%.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
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V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
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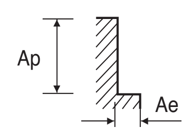
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

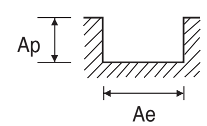
YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E1070, E1071, E1072 SERIES — 2FLUTE for ALUMINIUM - SIDE CUTTING & SLOTTING

ISO	VDI 3323	Material Description	SIDE CUTTING Ae	SIDE CUTTING Ap	SLOTTING Ae	SLOTTING Ap	Parameter	1/8	3/16	1/4	5/16	7/16	1/2	9/16	5/8	3/4	13/16
K	15-16	Grey cast iron	ø1/8~ø5/16 = 0.25D ø7/16~ø13/16 = 0.5D	1.0D	1.0D	0.5D	SFM	260	365	445	425	575	590	515	575	450	425
							IPT	.0018	.0022	.0027	.0053	.0047	.0068	.0090	.0090	.0146	.0168
							RPM	8000	7400	6800	5200	5000	4500	3500	3500	2300	2000
							IPM	29	33	37	55	47	61	63	63	67	67
	17-18	Nodular cast iron	ø1/8~ø5/16 = 0.25D ø7/16~ø13/16 = 0.5D	1.0D	1.0D	0.5D	SFM	260	365	445	425	575	590	515	575	450	425
							IPT	.0018	.0022	.0027	.0053	.0047	.0068	.0090	.0090	.0146	.0168
							RPM	8000	7400	6800	5200	5000	4500	3500	3500	2300	2000
							IPM	29	33	37	55	47	61	63	63	67	67
	19-20	Low alloy steel	ø1/8~ø5/16 = 0.25D ø7/16~ø13/16 = 0.5D	1.0D	1.0D	0.5D	SFM	260	365	445	425	575	590	515	575	450	425
							IPT	.0018	.0022	.0027	.0053	.0047	.0068	.0090	.0090	.0146	.0168
							RPM	8000	7400	6800	5200	5000	4500	3500	3500	2300	2000
							IPM	29	33	37	55	47	61	63	63	67	67
N	21-22	Aluminum-wrought alloy			1.0D	0.5D	SFM	260	365	445	425	575	590	515	575	450	425
							IPT	.0014	.0017	.0021	.0042	.0047	.0052	.0070	.0070	.0111	.0128
							RPM	8000	7400	6800	5200	5000	4500	3500	3500	2300	2000
							IPM	23	25	29	44	47	47	49	49	51	51
	23-25	Aluminum-cast, alloyed			1.0D	0.5D	SFM	170	235	290	275	370	385	335	370	295	275
							IPT	.0014	.0017	.0021	.0042	.0047	.0052	.0070	.0070	.0111	.0128
							RPM	5200	4810	4420	3380	3250	2930	2280	2280	1500	1300
							IPM	15	16	19	28	31	31	32	32	33	33



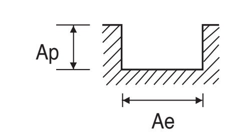


※ The Feed, in long & extra long types, should be reduced by around 50%.

YG COBALT & HSS END MILLS
RECOMMENDED CUTTING CONDITIONS

E2160, E2161 SERIES — 3 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/32	1/8	1/4	3/8	1/2	9/16	5/8	7/8	1	1-1/8
P	1	Non-alloy steel	1.0D	0.5D	SFM	135	115	120	110	120	120	115	115	120	120
					IPT	.0001	.0003	.0010	.0018	.0024	.0027	.0031	.0040	.0039	.0039
					RPM	5600	3500	1800	1100	900	800	700	500	450	400
					IPM	2	3	5	6	7	7	7	6	5	5
	2		1.0D	0.5D	SFM	110	105	105	90	105	105	90	105	105	105
					IPT	.0001	.0003	.0010	.0020	.0025	.0025	.0032	.0039	.0039	.0039
					RPM	4500	3200	1600	900	800	700	560	450	400	350
					IPM	2	3	5	5	6	5	5	5	5	4
	3-4		1.0D	0.5D	SFM	100	80	80	80	80	80	75	80	80	80
					IPT	.0002	.0003	.0010	.0020	.0025	.0028	.0030	.0039	.0038	.0037
					RPM	4000	2500	1200	800	630	560	450	350	310	280
					IPM	2	2	4	5	5	5	4	4	4	3
	5		1.0D	0.5D	SFM	55	50	50	45	50	50	45	50	45	45
					IPT	.0001	.0003	.0010	.0019	.0025	.0029	.0031	.0039	.0037	.0038
					RPM	2200	1600	800	450	400	350	280	220	180	160
					IPM	1	1	2	3	3	3	3	3	2	2
	6	Low alloy steel	1.0D	0.5D	SFM	110	105	105	90	105	105	90	105	105	105
					IPT	.0001	.0003	.0010	.0020	.0025	.0025	.0032	.0039	.0039	.0039
					RPM	4500	3200	1600	900	800	700	560	450	400	350
					IPM	2	3	5	5	6	5	5	5	5	4
	7		1.0D	0.5D	SFM	100	80	80	80	80	80	75	80	80	80
					IPT	.0002	.0003	.0010	.0020	.0025	.0028	.0030	.0039	.0038	.0037
					RPM	4000	2500	1200	800	630	560	450	350	310	280
					IPM	2	2	4	5	5	5	4	4	4	3
	8-9		1.0D	0.5D	SFM	55	50	50	45	50	50	45	50	45	45
					IPT	.0001	.0003	.0010	.0019	.0025	.0029	.0031	.0039	.0037	.0038
					RPM	2200	1600	800	450	400	350	280	220	180	160
					IPM	1	1	2	3	3	3	3	3	2	2
	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM	110	105	105	90	105	105	90	105	105	105
					IPT	.0001	.0003	.0010	.0020	.0025	.0025	.0032	.0039	.0039	.0039
					RPM	4500	3200	1600	900	800	700	560	450	400	350
					IPM	2	3	5	5	6	5	5	5	5	4
	11.1		1.0D	0.5D	SFM	55	50	50	45	50	50	45	50	45	45
					IPT	.0001	.0003	.0010	.0019	.0025	.0029	.0031	.0039	.0037	.0038
					RPM	2200	1600	800	450	400	350	280	220	180	160
					IPM	1	1	2	3	3	3	3	3	2	2
N	21-22	Aluminum-wrought alloy	1.0D	0.5D	SFM	295	360	365	305	325	325	325	320	315	325
					IPT	.0003	.0005	.0011	.0025	.0030	.0032	.0035	.0042	.0046	.0048
					RPM	12000	11000	5600	3100	2500	2200	2000	1400	1200	1100
					IPM	9	15	19	24	22	21	21	18	17	16
	23-25	Aluminum-cast, alloyed	1.0D	0.5D	SFM	295	360	365	305	325	325	325	320	315	325
					IPT	.0003	.0005	.0011	.0025	.0030	.0032	.0035	.0042	.0046	.0048
					RPM	12000	11000	5600	3100	2500	2200	2000	1400	1200	1100
					IPM	9	15	19	24	22	21	21	18	17	16



※ The Feed, in long & extra long types, should be reduced by around 50%.

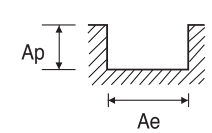
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2160, E2161 SERIES TiN Coated 3 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/32	1/8	1/4	3/8	1/2	9/16	5/8	7/8	1	1-1/8	1-3/16
						Diameter (Ø)										
P	1	Non-alloy steel	1.0D	0.5D	SFM	165	135	140	130	140	125	125	135	140	125	130
					IPT	.0001	.0003	.0010	.0018	.0024	.0031	.0032	.0040	.0040	.0043	.0039
					RPM	6720	4200	2160	1320	1080	840	760	600	540	430	420
					IPM	3	4	6	7	8	8	7	7	6	6	5
	2		1.0D	0.5D	SFM	135	125	125	105	125	100	100	125	125	125	110
					IPT	.0001	.0003	.0010	.0020	.0025	.0032	.0036	.0040	.0039	.0039	.0038
					RPM	5400	3840	1920	1080	960	670	600	540	480	420	370
					IPM	2	3	6	6	7	6	6	6	6	5	4
	3-4		1.0D	0.5D	SFM	120	100	95	95	100	80	80	95	95	100	90
					IPT	.0002	.0003	.0010	.0019	.0025	.0030	.0034	.0039	.0038	.0037	.0040
					RPM	4800	3000	1440	960	760	540	480	420	370	340	300
					IPM	2	3	4	6	6	5	5	5	4	4	4
	5		1.0D	0.5D	SFM	65	65	65	55	65	50	50	60	55	55	55
					IPT	.0001	.0002	.0010	.0019	.0025	.0031	.0034	.0039	.0037	.0038	.0038
					RPM	2640	1920	960	540	480	340	300	260	220	190	190
					IPM	1	1	3	3	4	3	3	3	2	2	2
	6	Low alloy steel	1.0D	0.5D	SFM	135	125	125	105	125	100	100	125	125	125	110
					IPT	.0001	.0003	.0010	.0020	.0025	.0032	.0036	.0040	.0039	.0039	.0038
					RPM	5400	3840	1920	1080	960	670	600	540	480	420	370
					IPM	2	3	6	6	7	6	6	6	6	5	4
	7		1.0D	0.5D	SFM	120	100	95	95	100	80	80	95	95	100	90
					IPT	.0002	.0003	.0010	.0019	.0025	.0030	.0034	.0039	.0038	.0037	.0040
					RPM	4800	3000	1440	960	760	540	480	420	370	340	300
					IPM	2	3	4	6	6	5	5	5	4	4	4
	8-9		1.0D	0.5D	SFM	65	65	65	55	65	50	50	60	55	55	55
					IPT	.0001	.0002	.0010	.0019	.0025	.0031	.0034	.0039	.0037	.0038	.0038
					RPM	2640	1920	960	540	480	340	300	260	220	190	190
					IPM	1	1	3	3	4	3	3	3	2	2	2
	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM	135	125	125	105	125	100	100	125	125	125	110
					IPT	.0001	.0003	.0010	.0020	.0025	.0032	.0036	.0040	.0039	.0039	.0038
					RPM	5400	3840	1920	1080	960	670	600	540	480	420	370
					IPM	2	3	6	6	7	6	6	6	6	5	4
	11.1		1.0D	0.5D	SFM	65	65	65	55	65	50	50	60	55	55	55
					IPT	.0001	.0002	.0010	.0019	.0025	.0031	.0034	.0039	.0037	.0038	.0038
					RPM	2640	1920	960	540	480	340	300	260	220	190	190
					IPM	1	1	3	3	4	3	3	3	2	2	2
N	21-22	Aluminum-wrought alloy	1.0D	0.5D	SFM	355	430	440	365	395	355	355	385	375	390	390
					IPT	.0003	.0005	.0011	.0025	.0030	.0035	.0039	.0042	.0046	.0048	.0048
					RPM	14400	13200	6720	3720	3000	2400	2160	1680	1440	1320	1320
					IPM	11	18	22	28	27	25	25	21	20	19	19
	23-25	Aluminum-cast, alloyed	1.0D	0.5D	SFM	355	430	440	365	395	355	355	385	375	390	390
					IPT	.0003	.0005	.0011	.0025	.0030	.0035	.0039	.0042	.0046	.0048	.0048
					RPM	14400	13200	6720	3720	3000	2400	2160	1680	1440	1320	1320
					IPM	11	18	22	28	27	25	25	21	20	19	19



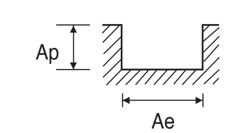
※ The Feed, in long & extra long types, should be reduced by around 50%.

COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2160, E2161 SERIES TiCN Coated 3 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/32	1/8	1/4	3/8	1/2	9/16	5/8	7/8	1	1-1/8
						Diameter (Ø)									
P	1	Non-alloy steel	1.0D	0.5D	SFM	180	150	155	140	155	155	150	150	155	155
					IPT	.0001	.0003	.0010	.0018	.0024	.0027	.0031	.0040	.0039	.0044
					RPM	7280	4550	2340	1430	1170	1040	910	650	590	520
					IPM	3	4	7	8	9	9	9	8	7	7
	2		1.0D	0.5D	SFM	145	75	135	115	135	135	120	135	135	135
					IPT	.0001	.0005	.0010	.0020	.0025	.0025	.0032	.0039	.0039	.0039
					RPM	5850	2340	2080	1170	1040	910	730	590	520	460
					IPM	2	3	6	7	8	7	7	7	6	5
	3-4		1.0D	0.5D	SFM	130	105	100	100	105	105	95	105	105	105
					IPT	.0001	.0003	.0010	.0020	.0025	.0028	.0030	.0039	.0038	.0039
					RPM	5200	3250	1560	1040	820	730	590	460	400	360
					IPM	2	3	5	6	6	6	5	5	5	4
	5		1.0D	0.5D	SFM	70	70	70	55	70	65	60	65	60	60
					IPT	.0001	.0003	.0010	.0019	.0024	.0028	.0031	.0040	.0037	.0037
					RPM	2860	2080	1040	590	520	460	360	290	230	210
					IPM	1	2	3	3	4	4	3	3	3	2
	6	Low alloy steel	1.0D	0.5D	SFM	145	75	135	115	135	135	120	135	135	135
					IPT	.0001	.0005	.0010	.0020	.0025	.0025	.0032	.0039	.0039	.0039
					RPM	5850	2340	2080	1170	1040	910	730	590	520	460
					IPM	2	3	6	7	8	7	7	7	6	5
	7		1.0D	0.5D	SFM	130	105	100	100	105	105	95	105	105	105
					IPT	.0001	.0003	.0010	.0020	.0025	.0028	.0030	.0039	.0038	.0039
					RPM	5200	3250	1560	1040	820	730	590	460	400	360
					IPM	2	3	5	6	6	6	5	5	5	4
	8-9		1.0D	0.5D	SFM	70	70	70	55	70	65	60	65	60	60
					IPT	.0001	.0003	.0010	.0019	.0024	.0028	.0031	.0040	.0037	.0037
					RPM	2860	2080	1040	590	520	460	360	290	230	210
					IPM	1	2	3	3	4	4	3	3	3	2
	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM	145	75	135	115	135	135	120	135	135	135
					IPT	.0001	.0005	.0010	.0020	.0025	.0025	.0032	.0039	.0039	.0039
					RPM	5850	2340	2080	1170	1040	910	730	590	520	460
					IPM	2	3	6	7	8	7	7	7	6	5
	11.1		1.0D	0.5D	SFM	70	70	70	55	70	65	60	65	60	60
					IPT	.0001	.0003	.0010	.0019	.0024	.0028	.0031	.0040	.0037	.0037
					RPM	2860	2080	1040	590	520	460	360	290	230	210
					IPM	1	2	3	3	4	4	3	3	3	2
N	21-22	Aluminum-wrought alloy	1.0D	0.5D	SFM	385	470	475	395	425	420	425	415	410	420
					IPT	.0003	.0005	.0011	.0025	.0030	.0032	.0035	.0042	.0046	.0048
					RPM	15600	14300	7280	4030	3250	2860	2600	1820	1560	1430
					IPM	12	20	24	31	29	27	27	23	22	21
	23-25	Aluminum-cast, alloyed	1.0D	0.5D	SFM	385	470	475	395	425	420	425	415	410	420
					IPT	.0003	.0005	.0011	.0025	.0030	.0032	.0035	.0042	.0046	.0048
					RPM	15600	14300	7280	4030	3250	2860	2600	1820	1560	1430
					IPM	12	20	24	31	29	27	27	23	22	21



※ The Feed, in long & extra long types, should be reduced by around 50%.

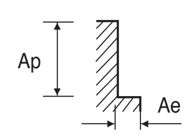
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2160, E2161 SERIES 3 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)															
						3/32	1/8	5/32	3/16	1/4	5/16	3/8	1/2	9/16	5/8	11/16	13/16	7/8	1	1-1/8	1-3/16
P	1	Non-alloy steel	0.1D	1.5D	SFM	135	115	115	110	120	115	110	120	120	115	115	120	115	120	120	110
					IPT	.0001	.0003	.0005	.0008	.0010	.0014	.0018	.0024	.0027	.0031	.0032	.0036	.0040	.0039	.0039	.0039
					RPM	5600	3500	2800	2200	1800	1400	1100	900	800	700	630	560	500	450	400	350
					IPM	2	3	4	5	5	6	6	7	7	7	6	6	6	5	5	4
	2		0.1D	1.5D	SFM	110	105	90	90	105	90	90	105	105	90	90	95	105	105	105	95
					IPT	.0001	.0003	.0005	.0007	.0009	.0014	.0017	.0022	.0022	.0028	.0031	.0035	.0035	.0036	.0035	.0033
					RPM	4500	3200	2200	1800	1600	1100	900	800	700	560	500	450	450	400	350	310
					IPM	2	2	3	4	4	5	5	5	5	5	5	5	5	4	4	3
	3-4		0.1D	1.5D	SFM	100	80	75	80	80	75	80	80	80	75	70	85	80	80	80	80
					IPT	.0001	.0002	.0004	.0005	.0007	.0011	.0016	.0020	.0023	.0023	.0026	.0026	.0030	.0028	.0029	.0029
					RPM	4000	2500	1800	1600	1200	900	800	630	560	450	400	400	350	310	280	250
					IPM	1	2	2	3	3	3	4	4	4	3	3	3	3	3	2	2
	5		0.1D	1.5D	SFM	55	50	45	45	50	45	45	50	50	45	45	45	50	45	45	50
					IPT	.0001	.0002	.0004	.0005	.0008	.0012	.0015	.0018	.0021	.0024	.0027	.0030	.0030	.0026	.0025	.0025
					RPM	2200	1600	1100	900	800	560	450	400	350	280	250	220	220	180	160	160
					IPM	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1
	6	Low alloy steel	0.1D	1.5D	SFM	110	105	90	90	105	90	90	105	105	90	90	95	105	105	105	95
					IPT	.0001	.0003	.0005	.0007	.0009	.0014	.0017	.0022	.0022	.0028	.0031	.0035	.0035	.0036	.0035	.0033
					RPM	4500	3200	2200	1800	1600	1100	900	800	700	560	500	450	450	400	350	310
					IPM	2	2	3	4	4	5	5	5	5	5	5	5	5	4	4	3
	7		0.1D	1.5D	SFM	100	80	75	80	80	75	80	80	80	75	70	85	80	80	80	80
					IPT	.0001	.0002	.0004	.0005	.0007	.0011	.0016	.0020	.0023	.0023	.0026	.0026	.0030	.0028	.0029	.0029
					RPM	4000	2500	1800	1600	1200	900	800	630	560	450	400	400	350	310	280	250
					IPM	1	2	2	3	3	3	4	4	4	3	3	3	3	3	2	2
	8-9		0.1D	1.5D	SFM	55	50	45	45	50	45	45	50	50	45	45	45	50	45	45	50
					IPT	.0001	.0002	.0004	.0005	.0008	.0012	.0015	.0018	.0021	.0024	.0027	.0030	.0030	.0026	.0025	.0025
					RPM	2200	1600	1100	900	800	560	450	400	350	280	250	220	220	180	160	160
					IPM	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM	110	105	90	90	105	90	90	105	105	90	90	95	105	105	105	95
					IPT	.0001	.0003	.0005	.0007	.0009	.0014	.0017	.0022	.0022	.0028	.0031	.0035	.0035	.0036	.0035	.0033
					RPM	4500	3200	2200	1800	1600	1100	900	800	700	560	500	450	450	400	350	310
					IPM	2	2	3	4	4	5	5	5	5	5	5	5	5	4	4	3
	11.1		0.1D	1.5D	SFM	55	50	45	45	50	45	45	50	50	45	45	45	50	45	45	50
					IPT	.0001	.0002	.0004	.0005	.0008	.0012	.0015	.0018	.0021	.0024	.0027	.0030	.0030	.0026	.0025	.0025
					RPM	2200	1600	1100	900	800	560	450	400	350	280	250	220	220	180	160	160
					IPM	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1
N	21-22	Aluminum-wrought alloy	0.1D	1.5D	SFM	295	360	325	310	365	325	305	325	325	325	325	340	320	315	325	340
					IPT	.0002	.0003	.0005	.0007	.0008	.0014	.0019	.0023	.0024	.0026	.0029	.0030	.0032	.0035	.0036	.0036
					RPM	12000	11000	8000	6300	5600	4000	3100	2500	2200	2000	1800	1600	1400	1200	1100	1100
					IPM	7	11	13	14	14	17	18	17	16	16	16	14	13	13	12	12
	23-25	Aluminum-cast, alloyed	0.1D	1.5D	SFM	295	360	325	310	365	325	305	325	325	325	325	340	320	315	325	340
					IPT	.0002	.0003	.0005	.0007	.0008	.0014	.0019	.0023	.0024	.0026	.0029	.0030	.0032	.0035	.0036	.0036
					RPM	12000	11000	8000	6300	5600	4000	3100	2500	2200	2000	1800	1600	1400	1200	1100	1100
					IPM	7	11	13	14	14	17	18	17	16	16	16	14	13	13	12	12



※ The Feed, in long & extra long types, should be reduced by around 50%.

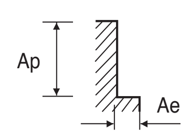
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2160, E2161 SERIES TiN Coated 3 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)										
						3/32	1/8	1/4	3/8	1/2	9/16	5/8	11/16	7/8	1	1-1/8
P	1	Non-alloy steel	0.1D	1.5D	SFM	165	135	140	130	140	140	135	135	135	140	125
					IPT	.0001	.0003	.0010	.0018	.0024	.0027	.0031	.0032	.0040	.0040	.0043
					RPM	6720	4200	2160	1320	1080	960	840	760	600	540	430
					IPM	3	4	6	7	8	8	8	7	7	6	6
	2		0.1D	1.5D	SFM	135	125	125	105	125	125	110	110	125	125	125
					IPT	.0001	.0003	.0009	.0017	.0022	.0022	.0028	.0031	.0035	.0036	.0035
					RPM	5400	3840	1920	1080	960	840	670	600	540	480	420
					IPM	2	3	5	6	6	6	6	6	6	5	4
	3-4		0.1D	1.5D	SFM	120	100	95	95	100	100	90	85	95	95	100
					IPT	.0001	.0002	.0007	.0015	.0019	.0021	.0023	.0026	.0029	.0028	.0029
					RPM	4800	3000	1440	960	760	670	540	480	420	370	340
					IPM	2	2	3	4	4	4	4	4	4	3	3
	5		0.1D	1.5D	SFM	65	65	65	55	65	60	55	55	60	55	55
					IPT	.0001	.0002	.0008	.0015	.0018	.0021	.0024	.0027	.0030	.0026	.0024
					RPM	2640	1920	960	540	480	420	340	300	260	220	190
					IPM	1	1	2	2	3	3	2	2	2	2	1
	6	Low alloy steel	0.1D	1.5D	SFM	135	125	125	105	125	125	110	110	125	125	125
					IPT	.0001	.0003	.0009	.0017	.0022	.0022	.0028	.0031	.0035	.0036	.0035
					RPM	5400	3840	1920	1080	960	840	670	600	540	480	420
					IPM	2	3	5	6	6	6	6	6	6	5	4
	7		0.1D	1.5D	SFM	120	100	95	95	100	100	90	85	95	95	100
					IPT	.0001	.0002	.0007	.0015	.0019	.0021	.0023	.0026	.0029	.0028	.0029
					RPM	4800	3000	1440	960	760	670	540	480	420	370	340
					IPM	2	2	3	4	4	4	4	4	4	3	3
	8-9		0.1D	1.5D	SFM	65	65	65	55	65	60	55	55	60	55	55
					IPT	.0001	.0002	.0008	.0015	.0018	.0021	.0024	.0027	.0030	.0026	.0024
					RPM	2640	1920	960	540	480	420	340	300	260	220	190
					IPM	1	1	2	2	3	3	2	2	2	2	1
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM	135	125	125	105	125	125	110	110	125	125	125
					IPT	.0001	.0003	.0009	.0017	.0022	.0022	.0028	.0031	.0035	.0036	.0035
					RPM	5400	3840	1920	1080	960	840	670	600	540	480	420
					IPM	2	3	5	6	6	6	6	6	6	5	4
	11.1		0.1D	1.5D	SFM	65	65	65	55	65	60	55	55	60	55	55
					IPT	.0001	.0002	.0008	.0015	.0018	.0021	.0024	.0027	.0030	.0026	.0024
					RPM	2640	1920	960	540	480	420	340	300	260	220	190
					IPM	1	1	2	2	3	3	2	2	2	2	1
N	21-22	Aluminum-wrought alloy	0.1D	1.5D	SFM	355	430	440	365	395	390	395	390	385	375	390
					IPT	.0002	.0003	.0008	.0019	.0023	.0024	.0026	.0029	.0032	.0035	.0036
					RPM	14400	13200	6720	3720	3000	2640	2400	2160	1680	1440	1320
					IPM	9	13	17	21	20	19	19	19	16	15	14
	23-25	Aluminum-cast, alloyed	0.1D	1.5D	SFM	355	430	440	365	395	390	395	390	385	375	390
					IPT	.0002	.0003	.0008	.0019	.0023	.0024	.0026	.0029	.0032	.0035	.0036
					RPM	14400	13200	6720	3720	3000	2640	2400	2160	1680	1440	1320
					IPM	9	13	17	21	20	19	19	19	16	15	14



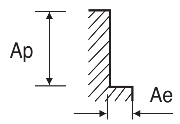
※ The Feed, in long & extra long types, should be reduced by around 50%.

COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2160, E2161 SERIES TiCN Coated 3 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	3/32	1/8	1/4	5/16	1/2	9/16	5/8	11/16	7/8	1	1-1/8
						Diameter (Ø)										
P	1	Non-alloy steel	0.1D	1.5D	SFM	180	150	145	150	155	155	150	145	150	155	155
					IPT	.0001	.0003	.0010	.0014	.0024	.0027	.0031	.0032	.0040	.0039	.0039
					RPM	7280	4550	2240	1820	1170	1040	910	820	650	590	520
					IPM	3	4	7	8	9	9	9	8	8	7	6
	2		0.1D	1.5D	SFM	145	135	135	115	135	135	120	115	135	135	135
					IPT	.0001	.0002	.0009	.0012	.0022	.0022	.0028	.0031	.0035	.0036	.0035
					RPM	5850	4160	2080	1430	1040	910	730	650	590	520	460
					IPM	2	3	6	5	7	6	6	6	6	6	5
	3-4		0.1D	1.5D	SFM	130	105	100	95	105	105	95	95	105	105	105
					IPT	.0001	.0002	.0007	.0011	.0019	.0021	.0026	.0026	.0029	.0028	.0029
					RPM	5200	3250	1560	1170	820	730	590	520	460	400	360
					IPM	2	2	3	4	5	5	5	4	4	3	3
	5		0.1D	1.5D	SFM	70	70	70	60	70	65	60	60	65	60	60
					IPT	.0001	.0002	.0007	.0012	.0019	.0021	.0024	.0027	.0030	.0026	.0026
					RPM	2860	2080	1040	730	520	460	360	330	290	230	210
					IPM	1	1	2	3	3	3	3	3	3	2	2
	6	Low alloy steel	0.1D	1.5D	SFM	145	135	135	115	135	135	120	115	135	135	135
					IPT	.0001	.0002	.0009	.0012	.0022	.0022	.0028	.0031	.0035	.0036	.0035
					RPM	5850	4160	2080	1430	1040	910	730	650	590	520	460
					IPM	2	3	6	5	7	6	6	6	6	6	5
	7		0.1D	1.5D	SFM	130	105	100	95	105	105	95	95	105	105	105
					IPT	.0001	.0002	.0007	.0011	.0019	.0021	.0026	.0026	.0029	.0028	.0029
					RPM	5200	3250	1560	1170	820	730	590	520	460	400	360
					IPM	2	2	3	4	5	5	5	4	4	3	3
	8-9		0.1D	1.5D	SFM	70	70	70	60	70	65	60	60	65	60	60
					IPT	.0001	.0002	.0007	.0012	.0019	.0021	.0024	.0027	.0030	.0026	.0026
					RPM	2860	2080	1040	730	520	460	360	330	290	230	210
					IPM	1	1	2	3	3	3	3	3	3	2	2
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM	145	135	135	115	135	135	120	115	135	135	135
					IPT	.0001	.0002	.0009	.0012	.0022	.0022	.0028	.0031	.0035	.0036	.0035
					RPM	5850	4160	2080	1430	1040	910	730	650	590	520	460
					IPM	2	3	6	5	7	6	6	6	6	6	5
	11.1		0.1D	1.5D	SFM	70	70	70	60	70	65	60	60	65	60	60
					IPT	.0001	.0002	.0007	.0012	.0019	.0021	.0024	.0027	.0030	.0026	.0026
					RPM	2860	2080	1040	730	520	460	360	330	290	230	210
					IPM	1	1	2	3	3	3	3	3	3	2	2
N	21-22	Aluminum-wrought alloy	0.1D	1.5D	SFM	385	470	475	425	425	420	425	420	415	410	420
					IPT	.0002	.0003	.0008	.0014	.0023	.0024	.0026	.0029	.0032	.0035	.0036
					RPM	15600	14300	7280	5200	3250	2860	2600	2340	1820	1560	1430
					IPM	9	14	18	23	22	21	21	21	17	16	15
	23-25	Aluminum-cast, alloyed	0.1D	1.5D	SFM	385	470	475	425	425	420	425	420	415	410	420
					IPT	.0002	.0003	.0008	.0014	.0023	.0024	.0026	.0029	.0032	.0035	.0036
					RPM	15600	14300	7280	5200	3250	2860	2600	2340	1820	1560	1430
					IPM	9	14	18	23	22	21	21	21	17	16	15

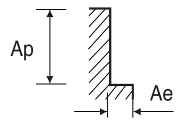


※ The Feed, in long & extra long types, should be reduced by around 50%.

COBALT & HSS END MILLS
RECOMMENDED CUTTING CONDITIONS

E2120, E2121 SERIES MULTI FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Parameter	1/4	1/4	5/8	5/8	3/4	3/4	1	1	1-1/2	1-1/2	2	2
				Diameter (Ø)											
			Ae	0.08D	0.32D	0.03D	0.3D	0.03D	0.35D	0.02D	0.3D	0.13D	0.05D	0.01D	0.8D
			Ap	1.4D	1.4D	1.6D	1.6D	1.6D	1.6D	1.6D	1.6D	1.05D	1.05D	1.0D	1.0D
P	1-5	Non-alloy steel	SFM	120	105	125	105	100	90	120	105	110	95	115	100
			IPT	.0007	.0008	.0013	.0015	.0016	.0019	.0016	.0018	.0022	.0026	.0025	.0029
			RPM	1840	1600	750	650	520	450	460	400	280	240	220	190
			IPM	4	4	3	3	3	3	3	3	3	3	2	2
	6-9	Low alloy steel	SFM	120	105	125	105	100	90	120	105	110	95	115	100
			IPT	.0007	.0008	.0013	.0015	.0016	.0019	.0016	.0018	.0022	.0026	.0025	.0029
			RPM	1840	1600	750	650	520	450	460	400	280	240	220	190
			IPM	4	4	3	3	3	3	3	3	3	3	2	2
	10-11	High alloyed steel, and tool steel	SFM	80	45	75	65	75	65	75	65	65	60	75	65
			IPT	.0006	.0011	.0014	.0017	.0016	.0019	.0016	.0018	.0021	.0023	.0023	.0027
			RPM	1250	650	460	400	370	320	290	250	170	150	140	120
			IPM	2	2	2	2	2	2	2	2	1	1	1	1
M	12-14	Stainless steel	SFM	65	35	65	55	60	50	65	55	60	50	60	50
			IPT	.0006	.0010	.0012	.0014	.0016	.0018	.0015	.0017	.0022	.0025	.0024	.0028
			RPM	980	510	390	340	300	260	240	210	150	130	120	100
			IPM	2	2	1	1	1	1	1	1	1	1	1	1
K	15-16	Grey cast iron	SFM	135	70	135	120	125	110	135	115	125	110	135	120
			IPT	.0008	.0014	.0016	.0019	.0022	.0025	.0021	.0024	.0028	.0032	.0028	.0032
			RPM	2050	1100	840	730	630	550	510	440	320	280	260	230
			IPM	5	5	4	4	4	4	4	4	4	4	3	3
	17-18	Nodular cast iron	SFM	135	70	135	120	125	110	135	115	125	110	135	120
			IPT	.0008	.0014	.0016	.0019	.0022	.0025	.0021	.0024	.0028	.0032	.0028	.0032
			RPM	2050	1100	840	730	630	550	510	440	320	280	260	230
			IPM	5	5	4	4	4	4	4	4	4	4	3	3
	19-20	Low alloy steel	SFM	135	70	135	120	125	110	135	115	125	110	135	120
			IPT	.0008	.0014	.0016	.0019	.0022	.0025	.0021	.0024	.0028	.0032	.0028	.0032
			RPM	2050	1100	840	730	630	550	510	440	320	280	260	230
			IPM	5	5	4	4	4	4	4	4	4	4	3	3



※ The Feed, in long & extra long types, should be reduced by around 50%.

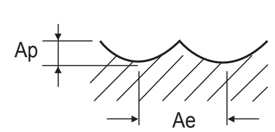
YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2110, E1110, E2111, E1111, E2112, E1112 SERIES

2 FLUTE BALL NOSE- PROFILE MILLING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	5/32	1/4	5/16	3/8	1/2	5/8	3/4	1
P	1	Non-alloy steel	0.7D	0.3D	SFM	145	130	145	350	130	130	130	120	130
					IPT	.0004	.0007	.0012	.0020	.0027	.0034	.0038	.0046	.0051
					RPM	4500	3200	2200	1600	1300	1000	800	600	500
					IPM	4	5	5	6	7	7	6	6	5
	2		0.7D	0.3D	SFM	110	100	110	260	100	105	100	100	105
					IPT	.0004	.0006	.0010	.0017	.0024	.0026	.0033	.0034	.0035
					RPM	3400	2400	1700	1200	1000	800	600	500	400
					IPM	3	3	4	4	5	4	4	3	3
	3-4		0.7D	0.3D	SFM	65	55	65	155	55	60	55	60	60
					IPT	.0003	.0005	.0009	.0014	.0021	.0024	.0031	.0033	.0036
					RPM	2000	1400	1000	700	560	450	350	300	220
					IPM	1	1	2	2	2	2	2	2	2
	5		0.7D	0.3D	SFM	45	40	45	110	40	40	40	40	40
					IPT	.0003	.0005	.0007	.0012	.0018	.0022	.0028	.0035	.0038
					RPM	1400	1000	700	500	400	320	250	200	160
					IPM	1	1	1	1	1	1	1	1	1
	6	Low alloy steel	0.7D	0.3D	SFM	110	100	110	260	100	105	100	100	105
					IPT	.0004	.0006	.0010	.0017	.0024	.0026	.0033	.0034	.0035
					RPM	3400	2400	1700	1200	1000	800	600	500	400
					IPM	3	3	4	4	5	4	4	3	3
	7		0.7D	0.3D	SFM	65	55	65	155	55	60	55	60	60
					IPT	.0003	.0005	.0009	.0014	.0021	.0024	.0031	.0033	.0036
					RPM	2000	1400	1000	700	560	450	350	300	220
					IPM	1	1	2	2	2	2	2	2	2
	8-9		0.7D	0.3D	SFM	45	40	45	110	40	40	40	40	40
					IPT	.0003	.0005	.0007	.0012	.0018	.0022	.0028	.0035	.0038
					RPM	1400	1000	700	500	400	320	250	200	160
					IPM	1	1	1	1	1	1	1	1	1
	10	High alloyed steel, and tool steel	0.7D	0.3D	SFM	110	100	110	260	100	105	100	100	105
					IPT	.0004	.0006	.0010	.0017	.0024	.0026	.0033	.0034	.0035
					RPM	3400	2400	1700	1200	1000	800	600	500	400
					IPM	3	3	4	4	5	4	4	3	3
	11.1		0.7D	0.3D	SFM	45	40	45	110	40	40	40	40	40
					IPT	.0003	.0005	.0007	.0012	.0018	.0022	.0028	.0035	.0038
					RPM	1400	1000	700	500	400	320	250	200	160
					IPM	1	1	1	1	1	1	1	1	1
N	21-22	Aluminum-wrought alloy	0.7D	0.3D	SFM	360	325	365	875	315	325	325	315	340
					IPT	.0004	.0006	.0010	.0017	.0022	.0027	.0030	.0034	.0038
					RPM	11000	8000	5600	4000	3200	2500	2000	1600	1300
					IPM	9	10	11	14	14	13	12	11	10
	23-25	Aluminum-cast, alloyed	0.7D	0.3D	SFM	360	325	365	875	315	325	325	315	340
					IPT	.0004	.0006	.0010	.0017	.0022	.0027	.0030	.0034	.0038
					RPM	11000	8000	5600	4000	3200	2500	2000	1600	1300
					IPM	9	10	11	14	14	13	12	11	10



※ The Feed, in long & extra long types, should be reduced by around 50%.

YG COBALT & HSS END MILLS

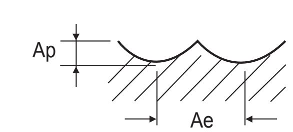
RECOMMENDED CUTTING CONDITIONS

E2110, E1110, E2111, E1111, E2112, E1112 SERIES

TiN Coated

2 FLUTE BALL NOSE- PROFILE MILLING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	5/32	1/4	5/16	3/8	1/2	5/8	3/4	1
P	1	Non-alloy steel	0.7D	0.3D	SFM	175	155	175	420	155	155	190	165	155
					IPT	.0004	.0007	.0012	.0020	.0027	.0034	.0038	.0046	.0051
					RPM	5400	3840	2640	1920	1560	1200	960	720	600
					IPM	4	5	6	8	9	8	7	7	6
	2		0.7D	0.3D	SFM	135	120	135	315	120	125	140	135	125
					IPT	.0004	.0006	.0010	.0017	.0023	.0026	.0033	.0034	.0035
					RPM	4080	2880	2040	1440	1200	960	720	600	480
					IPM	3	4	4	5	6	5	5	4	3
	3-4		0.7D	0.3D	SFM	80	70	80	185	65	70	80	80	70
					IPT	.0003	.0005	.0009	.0014	.0022	.0024	.0031	.0033	.0036
					RPM	2400	1680	1200	840	672	540	420	360	264
					IPM	1	2	2	2	3	3	3	2	2
	5		0.7D	0.3D	SFM	55	50	55	130	45	50	60	55	50
					IPT	.0003	.0005	.0007	.0012	.0018	.0022	.0028	.0035	.0036
					RPM	1680	1200	840	600	480	384	300	240	192
					IPM	1	1	1	1	2	2	2	2	1
	6	Low alloy steel	0.7D	0.3D	SFM	135	120	135	315	120	125	140	135	125
					IPT	.0004	.0006	.0010	.0017	.0023	.0026	.0033	.0034	.0035
					RPM	4080	2880	2040	1440	1200	960	720	600	480
					IPM	3	4	4	5	6	5	5	4	3
	7		0.7D	0.3D	SFM	80	70	80	185	65	70	80	80	70
					IPT	.0003	.0005	.0009	.0014	.0022	.0024	.0031	.0033	.0036
					RPM	2400	1680	1200	840	672	540	420	360	264
					IPM	1	2	2	2	3	3	3	2	2
	8-9		0.7D	0.3D	SFM	55	50	55	130	45	50	60	55	50
					IPT	.0003	.0005	.0007	.0012	.0018	.0022	.0028	.0035	.0036
					RPM	1680	1200	840	600	480	384	300	240	192
					IPM	1	1	1	1	2	2	2	2	1
	10	High alloyed steel, and tool steel	0.7D	0.3D	SFM	135	120	135	315	120	125	140	135	125
					IPT	.0004	.0006	.0010	.0017	.0023	.0026	.0033	.0034	.0035
					RPM	4080	2880	2040	1440	1200	960	720	600	480
					IPM	3	4	4	5	6	5	5	4	3
	11.1		0.7D	0.3D	SFM	55	50	55	130	45	50	60	55	50
					IPT	.0003	.0005	.0007	.0012	.0018	.0022	.0028	.0035	.0036
					RPM	1680	1200	840	600	480	384	300	240	192
					IPM	1	1	1	1	2	2	2	2	1
N	21-22	Aluminum-wrought alloy	0.7D	0.3D	SFM	430	395	440	1045	375	395	470	440	410
					IPT	.0004	9600	6720	4800	3840	3000	2400	1920	1560
					RPM	13200	9600	6720	4800	3840	3000	2400	1920	1560
					IPM	11	12	13	17	17	16	14	13	12
	23-25	Aluminum-cast, alloyed	0.7D	0.3D	SFM	430	395	440	1045	375	395	470	440	410
					IPT	.0004	9600	6720	4800	3840	3000	2400	1920	1560
					RPM	13200	9600	6720	4800	3840	3000	2400	1920	1560
					IPM	11	12	13	17	17	16	14	13	12



※ The Feed, in long & extra long types, should be reduced by around 50%.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

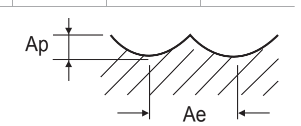
RECOMMENDED CUTTING CONDITIONS

E2110, E1110, E2111, E1111, E2112, E1112 SERIES

TiCN Coated

2 FLUTE BALL NOSE - PROFILE MILLING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/8	5/32	1/4	5/6	3/8	1/2	5/8	3/4	1
						Diameter (Ø)								
P	1	Non-alloy steel	0.7D	0.3D	SFM	190	170	185	455	165	170	170	155	170
					IPT	.0004	.0007	.0012	.0020	.0027	.0034	.0038	.0046	.0051
					RPM	5850	4160	2860	2080	1690	1300	1040	780	650
					IPM	5	6	7	8	9	9	8	7	7
	2		0.7D	0.3D	SFM	145	130	145	340	130	135	130	130	135
					IPT	.0004	.0006	.0010	.0017	.0023	.0025	.0033	.0034	.0035
					RPM	4420	3120	2210	1560	1300	1040	780	650	520
					IPM	4	4	5	5	6	5	5	4	4
	3-4		0.7D	0.3D	SFM	85	75	85	200	70	75	75	75	75
					IPT	.0003	.0005	.0009	.0014	.0021	.0025	.0032	.0033	.0037
					RPM	2600	1820	1300	910	730	590	460	390	290
					IPM	2	2	2	3	3	3	3	3	2
	5		0.7D	0.3D	SFM	60	55	60	140	50	55	55	50	55
					IPT	.0003	.0005	.0007	.0012	.0017	.0022	.0028	.0034	.0038
					RPM	1820	1300	910	650	520	420	330	260	210
					IPM	1	1	1	2	2	2	2	2	2
	6	Low alloy steel	0.7D	0.3D	SFM	145	130	145	340	130	135	130	130	135
					IPT	.0004	.0006	.0010	.0017	.0023	.0025	.0033	.0034	.0035
					RPM	4420	3120	2210	1560	1300	1040	780	650	520
					IPM	4	4	5	5	6	5	5	4	4
	7		0.7D	0.3D	SFM	85	75	85	200	70	75	75	75	75
					IPT	.0003	.0005	.0009	.0014	.0021	.0025	.0032	.0033	.0037
					RPM	2600	1820	1300	910	730	590	460	390	290
					IPM	2	2	2	3	3	3	3	3	2
	8-9		0.7D	0.3D	SFM	60	55	60	140	50	55	55	50	55
					IPT	.0003	.0005	.0007	.0012	.0017	.0022	.0028	.0034	.0038
					RPM	1820	1300	910	650	520	420	330	260	210
					IPM	1	1	1	2	2	2	2	2	2
	10	High alloyed steel, and tool steel	0.7D	0.3D	SFM	145	130	145	340	130	135	130	130	135
					IPT	.0004	.0006	.0010	.0017	.0023	.0025	.0033	.0034	.0035
					RPM	4420	3120	2210	1560	1300	1040	780	650	520
					IPM	4	4	5	5	6	5	5	4	4
	11.1		0.7D	0.3D	SFM	60	55	60	140	50	55	55	50	55
					IPT	.0003	.0005	.0007	.0012	.0017	.0022	.0028	.0034	.0038
					RPM	1820	1300	910	650	520	420	330	260	210
					IPM	1	1	1	2	2	2	2	2	2
N	21-22	Aluminum-wrought alloy	0.7D	0.3D	SFM	470	425	475	1135	410	425	425	410	440
					IPT	.0004	.0006	.0008	.0017	.0022	.0027	.0029	.0036	.0038
					RPM	14300	10400	7280	5200	4160	3250	2600	2080	1690
					IPM	12	13	12	18	19	17	15	15	13
	23-25	Aluminum-cast, alloyed	0.7D	0.3D	SFM	470	425	475	1135	410	425	425	410	440
					IPT	.0004	.0006	.0008	.0017	.0022	.0027	.0029	.0036	.0038
					RPM	14300	10400	7280	5200	4160	3250	2600	2080	1690
					IPM	12	13	12	18	19	17	15	15	13



※ The Feed, in long & extra long types, should be reduced by around 50%.

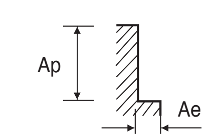
YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2031, E1031, E2034, E1034, E2036, E1036, E2051, E1051, E2039, E1039, E2040, E1040, E2041, E1041, E2053, E1053 SERIES

4 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	1/8	1/4	3/8	1/2	5/8	3/4	13/16	15/16	1	1 1/2	1 3/4	2
						Diameter (Ø)											
P	1	Non-alloy steel	0.1D	1.5D	SFM	115	120	110	120	115	125	105	125	120	120	130	145
					IPT	.0003	.0010	.0018	.0025	.0032	.0032	.0040	.0040	.0039	.0040	.0045	.0045
					RPM	3500	1800	1100	900	700	630	500	500	450	310	280	280
					IPM	4	7	8	9	9	8	8	8	7	5	5	5
	2		0.1D	1.5D	SFM	105	105	90	105	90	100	95	110	105	100	100	100
					IPT	.0002	.0009	.0017	.0022	.0027	.0030	.0033	.0033	.0038	.0040	.0045	.0053
					RPM	3200	1600	900	800	560	500	450	450	400	250	220	190
					IPM	3	6	6	7	6	6	6	6	6	4	4	4
	3-4		0.1D	1.5D	SFM	80	80	80	80	75	80	75	85	80	80	70	60
					IPT	.0002	.0008	.0016	.0020	.0022	.0025	.0029	.0029	.0032	.0025	.0033	.0045
					RPM	2500	1200	800	630	450	400	350	350	310	200	150	110
					IPM	2	4	5	5	4	4	4	4	4	2	2	2
	5		0.1D	1.5D	SFM	50	50	45	50	45	50	45	55	45	45	50	40
					IPT	.0002	.0006	.0017	.0019	.0027	.0030	.0034	.0034	.0028	.0021	.0023	.0031
					RPM	1600	800	450	400	280	250	220	220	180	120	110	80
					IPM	1	2	3	3	3	3	3	3	2	1	1	1
	6	Low alloy steel	0.1D	1.5D	SFM	105	105	90	105	90	100	95	110	105	100	100	100
					IPT	.0002	.0009	.0017	.0022	.0027	.0030	.0033	.0033	.0038	.0040	.0045	.0053
					RPM	3200	1600	900	800	560	500	450	450	400	250	220	190
					IPM	3	6	6	7	6	6	6	6	6	4	4	4
	7		0.1D	1.5D	SFM	80	80	80	80	75	80	75	85	80	80	70	60
					IPT	.0002	.0008	.0016	.0020	.0022	.0025	.0029	.0029	.0032	.0025	.0033	.0045
					RPM	2500	1200	800	630	450	400	350	350	310	200	150	110
					IPM	2	4	5	5	4	4	4	4	4	2	2	2
	8-9		0.1D	1.5D	SFM	50	50	45	50	45	50	45	55	45	45	50	40
					IPT	.0002	.0006	.0017	.0019	.0027	.0030	.0034	.0034	.0028	.0021	.0023	.0031
					RPM	1600	800	450	400	280	250	220	220	180	120	110	80
					IPM	1	2	3	3	3	3	3	3	2	1	1	1
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM	105	105	90	105	90	100	95	110	105	100	100	100
					IPT	.0002	.0009	.0017	.0022	.0027	.0030	.0033	.0033	.0038	.0040	.0045	.0053
					RPM	3200	1600	900	800	560	500	450	450	400	250	220	190
					IPM	3	6	6	7	6	6	6	6	6	4	4	4
	11.1		0.1D	1.5D	SFM	50	50	45	50	45	50	45	55	45	45	50	40
					IPT	.0002	.0006	.0017	.0019	.0027	.0030	.0034	.0034	.0028	.0021	.0023	.0031
					RPM	1600	800	450	400	280	250	220	220	180	120	110	80
					IPM	1	2	3	3	3	3	3	3	2	1	1	1
N	21-22	Aluminum-wrought alloy	0.1D	1.5D	SFM	360	365	305	325	325	355	300	345	315	355	365	330
					IPT	.0003	.0008	.0019	.0022	.0026	.0029	.0032	.0032	.0035	.0036	.0038	.0048
					RPM	11000	5600	3100	2500	2000	1800	1400	1400	1200	900	800	630
					IPM	15	19	24	22	21	21	18	18	17	13	12	12
	23-25	Aluminum-cast, alloyed	0.1D	1.5D	SFM	360	365	305	325	325	355	300	345	315	355	365	330
					IPT	.0003	.0008	.0019	.0022	.0026	.0029	.0032	.0032	.0035	.0036	.0038	.0048
					RPM	11000	5600	3100	2500	2000	1800	1400	1400	1200	900	800	630
					IPM	15	19	24	22	21	21	18	18	17	13	12	12



※ The Feed, in long & extra long types, should be reduced by around 50%.

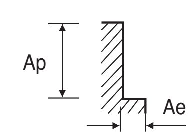
COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2031, E1031, E2034, E1034, E2036, E1036, E2051, E1051, E2039, E1039, E2040, E1040, E2041, E1041, E2053, E1053 SERIES

TiN Coated 4 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	1/4	3/8	1/2	5/8	3/4	13/16	15/16	1	1 1/2	1 3/4	2
P	1	Non-alloy steel	0.1D	1.5D	SFM	135	140	130	140	135	150	130	145	140	145	155	175
					IPT	.0003	.0010	.0019	.0023	.0030	.0033	.0042	.0042	.0042	.0041	.0044	.0044
					RPM	4200	2160	1320	1080	840	760	600	600	540	370	340	340
					IPM	5	9	10	10	10	10	10	10	9	6	6	6
	2		0.1D	1.5D	SFM	125	125	105	125	110	120	115	135	125	120	120	120
					IPT	.0003	.0009	.0019	.0023	.0030	.0033	.0037	.0037	.0036	.0033	.0038	.0043
					RPM	3840	1920	1080	960	670	600	540	540	480	300	260	230
					IPM	4	7	8	9	8	8	8	8	7	4	4	4
	3-4		0.1D	1.5D	SFM	100	95	95	100	90	95	90	105	95	95	80	70
					IPT	.0003	.0007	.0016	.0020	.0023	.0026	.0030	.0030	.0027	.0031	.0042	.0038
					RPM	3000	1440	960	760	540	480	420	420	370	240	180	130
					IPM	3	4	6	6	5	5	5	5	4	3	3	2
	5		0.1D	1.5D	SFM	65	65	55	65	55	60	55	65	55	55	60	50
					IPT	.0001	.0008	.0014	.0021	.0022	.0025	.0029	.0029	.0023	.0036	.0038	.0025
					RPM	1920	960	540	480	340	300	260	260	220	140	130	100
					IPM	1	3	3	4	3	3	3	3	2	2	2	1
	6	Low alloy steel	0.1D	1.5D	SFM	125	125	105	125	110	120	115	135	125	120	120	120
					IPT	.0003	.0009	.0019	.0023	.0030	.0033	.0037	.0037	.0036	.0033	.0038	.0043
					RPM	3840	1920	1080	960	670	600	540	540	480	300	260	230
					IPM	4	7	8	9	8	8	8	8	7	4	4	4
	7		0.1D	1.5D	SFM	100	95	95	100	90	95	90	105	95	95	80	70
					IPT	.0003	.0007	.0016	.0020	.0023	.0026	.0030	.0030	.0027	.0031	.0042	.0038
					RPM	3000	1440	960	760	540	480	420	420	370	240	180	130
					IPM	3	4	6	6	5	5	5	5	4	3	3	2
	8-9		0.1D	1.5D	SFM	65	65	55	65	55	60	55	65	55	55	60	50
					IPT	.0001	.0008	.0014	.0021	.0022	.0025	.0029	.0029	.0023	.0036	.0038	.0025
					RPM	1920	960	540	480	340	300	260	260	220	140	130	100
					IPM	1	3	3	4	3	3	3	3	2	2	2	1
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM	125	125	105	125	110	120	115	135	125	120	120	120
					IPT	.0003	.0009	.0019	.0023	.0030	.0033	.0037	.0037	.0036	.0033	.0038	.0043
					RPM	3840	1920	1080	960	670	600	540	540	480	300	260	230
					IPM	4	7	8	9	8	8	8	8	7	4	4	4
	11.1		0.1D	1.5D	SFM	65	65	55	65	55	60	55	65	55	55	60	50
					IPT	.0001	.0008	.0014	.0021	.0022	.0025	.0029	.0029	.0023	.0036	.0038	.0025
					RPM	1920	960	540	480	340	300	260	260	220	140	130	100
					IPM	1	3	3	4	3	3	3	3	2	2	2	1
N	21-22	Aluminum-wrought alloy	0.1D	1.5D	SFM	430	440	365	395	395	425	355	410	375	425	440	395
					IPT	.0003	.0008	.0019	.0023	.0026	.0029	.0031	.0031	.0035	.0037	.0036	.0046
					RPM	13200	6720	3720	3000	2400	2160	1680	1680	1440	1080	960	760
					IPM	18	22	28	27	25	25	21	21	20	16	14	14
	23-25	Aluminum-cast, alloyed	0.1D	1.5D	SFM	430	440	365	395	395	425	355	410	375	425	440	395
					IPT	.0003	.0008	.0019	.0023	.0026	.0029	.0031	.0031	.0035	.0037	.0036	.0046
					RPM	13200	6720	3720	3000	2400	2160	1680	1680	1440	1080	960	760
					IPM	18	22	28	27	25	25	21	21	20	16	14	14



※ The Feed, in long & extra long types, should be reduced by around 50%.

CARBIDE
HSS

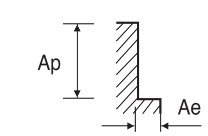
COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2031, E1031, E2034, E1034, E2036, E1036, E2051, E1051, E2039, E1039, E2040, E1040, E2041, E1041, E2053, E1053 SERIES

TiCN Coated 4 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	1/4	3/8	1/2	5/8	3/4	13/16	15/16	1	1 1/2	1 3/4	2
P	1	Non-alloy steel	0.1D	1.5D	SFM	150	155	140	155	150	160	140	160	155	160	165	190
					IPT	.0003	.0010	.0017	.0024	.0030	.0030	.0038	.0038	.0038	.0038	.0042	.0042
					RPM	4550	2340	1430	1170	910	820	650	650	590	400	360	360
					IPM	6	9	10	11	11	10	10	10	9	6	6	6
	2		0.1D	1.5D	SFM	135	135	115	135	120	130	125	145	135	130	130	130
					IPT	.0002	.0008	.0017	.0022	.0027	.0031	.0034	.0034	.0034	.0038	.0043	.0050
					RPM	4160	2090	1170	1040	730	650	590	590	520	330	290	250
					IPM	4	7	8	9	8	8	8	8	7	5	5	5
	3-4		0.1D	1.5D	SFM	105	100	100	105	95	100	95	110	105	100	105	75
					IPT	.0002	.0008	.0014	.0018	.0021	.0024	.0027	.0027	.0031	.0029	.0033	.0036
					RPM	3250	1560	1040	820	590	520	460	460	400	260	230	140
					IPM	3	5	6	6	5	5	5	5	5	3	3	2
	5		0.1D	1.5D	SFM	70	70	55	70	60	65	60	70	60	60	65	55
					IPT	.0002	.0007	.0013	.0019	.0021	.0023	.0026	.0026	.0033	.0031	.0036	.0025
					RPM	2080	1040	590	520	360	330	290	290	230	160	140	100
					IPM	2	3	3	4	3	3	3	3	3	2	2	1
	6	Low alloy steel	0.1D	1.5D	SFM	135	135	115	135	120	130	125	145	135	130	130	130
					IPT	.0002	.0008	.0017	.0022	.0027	.0031	.0034	.0034	.0034	.0038	.0043	.0050
					RPM	4160	2090	1170	1040	730	650	590	590	520	330	290	250
					IPM	4	7	8	9	8	8	8	8	7	5	5	5
	7		0.1D	1.5D	SFM	105	100	100	105	95	100	95	110	105	100	105	75
					IPT	.0002	.0008	.0014	.0018	.0021	.0024	.0027	.0027	.0031	.0029	.0033	.0036
					RPM	3250	1560	1040	820	590	520	460	460	400	260	230	140
					IPM	3	5	6	6	5	5	5	5	5	3	3	2
	8-9		0.1D	1.5D	SFM	70	70	55	70	60	65	60	70	60	60	65	55
					IPT	.0002	.0007	.0013	.0019	.0021	.0023	.0026	.0026	.0033	.0031	.0036	.0025
					RPM	2080	1040	590	520	360	330	290	290	230	160	140	100
					IPM	2	3	3	4	3	3	3	3	3	2	2	1
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM	135	135	115	135	120	130	125	145	135	130	130	130
					IPT	.0002	.0008	.0017	.0022	.0027	.0031	.0034	.0034	.0034	.0038	.0043	.0050
					RPM	4160	2090	1170	1040	730	650	590	590	520	330	290	250
					IPM	4	7	8	9	8	8	8	8	7	5	5	5
	11.1		0.1D	1.5D	SFM	70	70	55	70	60	65	60	70	60	60	65	55
					IPT	.0002	.0007	.0013	.0019	.0021	.0023	.0026	.0026	.0033	.0031	.0036	.0025
					RPM	2080	1040	590	520	360	330	290	290	230	160	140	100
					IPM	2	3	3	4	3	3	3	3	3	2	2	1
N	21-22	Aluminum-wrought alloy	0.1D	1.5D	SFM	470	475	395	425	425	460	385	445	410	460	475	545
					IPT	.0003	.0008	.0019	.0022	.0026	.0029	.0032	.0032	.0035	.0036	.0036	.0036
					RPM	14300	7280	4030	3250	2600	2340	1820	1820	1560	1170	1040	1040
					IPM	20	24	31	29	27	27	23	23	22	17	15	15
	23-25	Aluminum-cast, alloyed	0.1D	1.5D	SFM	470	475	395	425	425	460	385	445	410	460	475	545
					IPT	.0003	.0008	.0019	.0022	.0026	.0029	.0032	.0032	.0035	.0036	.0036	.0036
					RPM	14300	7280	4030	3250	2600	2340	1820	1820	1560	1170	1040	1040
					IPM	20	24	31	29	27	27	23	23	22	17	15	15



※ The Feed, in long & extra long types, should be reduced by around 50%.

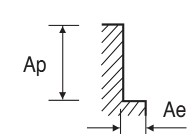
YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2032, E1032, E2035, E1035, E2037, E1037, E2042, E1042, E2162, E1162, E2175, E1175, E2100, E1100 SERIES

6 & 8 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)											
						1/8	1/4	3/8	1/2	5/8	3/4	13/16	15/16	1	1 1/2	1 3/4	2 (6 & 8 FL)
P	1	Non-alloy steel	0.1D	1.5D	SFM	115	120	110	120	115	125	105	125	120	120	130	145
					IPT	.0002	.0006	.0012	.0017	.0021	.0021	.0027	.0027	.0026	.0027	.0030	.0030 / .0022
					RPM	3500	1800	1100	900	700	630	500	500	450	310	280	280
					IPM	4	7	8	9	9	8	8	8	7	5	5	5
	2		0.1D	1.5D	SFM	105	105	90	105	90	100	95	110	105	100	100	100
					IPT	.0002	.0006	.0011	.0015	.0018	.0020	.0022	.0022	.0025	.0027	.0030	.0035 / .0026
					RPM	3200	1600	900	800	560	500	450	450	400	250	220	190
					IPM	3	6	6	7	6	6	6	6	6	4	4	4
	3-4		0.1D	1.5D	SFM	80	80	80	80	75	80	75	85	80	80	70	60
					IPT	.0001	.0006	.0010	.0013	.0015	.0017	.0019	.0019	.0022	.0017	.0022	.0030 / .0023
					RPM	2500	1200	800	630	450	400	350	350	310	200	150	110
					IPM	2	4	5	5	4	4	4	4	4	2	2	2
	5		0.1D	1.5D	SFM	50	50	45	50	45	50	45	55	45	45	50	40
					IPT	.0001	.0004	.0011	.0013	.0018	.0020	.0023	.0023	.0019	.0014	.0015	.0021 / .0016
					RPM	1600	800	450	400	280	250	220	220	180	120	110	80
					IPM	1	2	3	3	3	3	3	3	2	1	1	1
	6	Low alloy steel	0.1D	1.5D	SFM	105	105	90	105	90	100	95	110	105	100	100	100
					IPT	.0002	.0006	.0011	.0015	.0018	.0020	.0022	.0022	.0025	.0027	.0030	.0035 / .0026
					RPM	3200	1600	900	800	560	500	450	450	400	250	220	190
					IPM	3	6	6	7	6	6	6	6	6	4	4	4
	7		0.1D	1.5D	SFM	80	80	80	80	75	80	75	85	80	80	70	60
					IPT	.0001	.0006	.0010	.0013	.0015	.0017	.0019	.0019	.0022	.0017	.0022	.0030 / .0023
					RPM	2500	1200	800	630	450	400	350	350	310	200	150	110
					IPM	2	4	5	5	4	4	4	4	4	2	2	2
	8-9		0.1D	1.5D	SFM	50	50	45	50	45	50	45	55	45	45	50	40
					IPT	.0001	.0004	.0011	.0013	.0018	.0020	.0023	.0023	.0019	.0014	.0015	.0021 / .0016
					RPM	1600	800	450	400	280	250	220	220	180	120	110	80
					IPM	1	2	3	3	3	3	3	3	2	1	1	1
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM	105	105	90	105	90	100	95	110	105	100	100	100
					IPT	.0002	.0006	.0011	.0015	.0018	.0020	.0022	.0022	.0025	.0027	.0030	.0035 / .0026
					RPM	3200	1600	900	800	560	500	450	450	400	250	220	190
					IPM	3	6	6	7	6	6	6	6	6	4	4	4
	11.1		0.1D	1.5D	SFM	50	50	45	50	45	50	45	55	45	45	50	40
					IPT	.0001	.0004	.0011	.0013	.0018	.0020	.0023	.0023	.0019	.0014	.0015	.0021 / .0016
					RPM	1600	800	450	400	280	250	220	220	180	120	110	80
					IPM	1	2	3	3	3	3	3	3	2	1	1	1
N	21-22	Aluminum-wrought alloy	0.1D	1.5D	SFM	360	365	305	325	325	355	300	345	315	355	365	330
					IPT	.0002	.0006	.0013	.0015	.0018	.0019	.0021	.0021	.0024	.0024	.0025	.0032 / .0024
					RPM	11000	5600	3100	2500	2000	1800	1400	1400	1200	900	800	630
					IPM	15	19	24	22	21	21	18	18	17	13	12	12
	23-25	Aluminum-cast, alloyed	0.1D	1.5D	SFM	360	365	305	325	325	355	300	345	315	355	365	330
					IPT	.0002	.0006	.0013	.0015	.0018	.0019	.0021	.0021	.0024	.0024	.0025	.0032 / .0024
					RPM	11000	5600	3100	2500	2000	1800	1400	1400	1200	900	800	630
					IPM	15	19	24	22	21	21	18	18	17	13	12	12



※ The Feed, in long & extra long types, should be reduced by around 50%.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

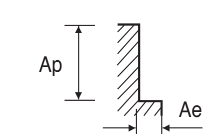
YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2032, E1032, E2035, E1035, E2037, E1037, E2042, E1042, E2162, E1162, E2175, E1175, E2100, E1100 SERIES

TiN Coated 6 & 8 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)											
						1/8	1/4	3/8	1/2	5/8	3/4	13/16	15/16	1	1 1/2	1 3/4	2 (6 & 8 FL)
P	1	Non-alloy steel	0.1D	1.5D	SFM	135	140	130	140	135	150	130	145	140	145	155	175
					IPT	.0002	.0007	.0013	.0015	.0020	.0022	.0028	.0028	.0028	.0027	.0029	.0029 / .0022
					RPM	4200	2160	1320	1080	840	760	600	600	540	370	340	340
					IPM	5	9	10	10	10	10	10	10	9	6	6	6
	2		0.1D	1.5D	SFM	125	125	105	125	110	120	115	135	125	120	120	120
					IPT	.0002	.0006	.0012	.0016	.0020	.0022	.0025	.0025	.0024	.0022	.0026	.0029 / .0022
					RPM	3840	1920	1080	960	670	600	540	540	480	300	260	230
					IPM	4	7	8	9	8	8	8	8	7	4	4	4
	3-4		0.1D	1.5D	SFM	100	95	95	100	90	95	90	105	95	95	80	70
					IPT	.0002	.0005	.0010	.0013	.0015	.0017	.0020	.0020	.0018	.0021	.0028	.0026 / .0019
					RPM	3000	1440	960	760	540	480	420	420	370	240	180	130
					IPM	3	4	6	6	5	5	5	5	4	3	3	2
	5		0.1D	1.5D	SFM	65	65	55	65	55	60	55	65	55	55	60	50
					IPT	.0001	.0005	.0009	.0014	.0015	.0017	.0019	.0019	.0015	.0024	.0026	.0017 / .0013
					RPM	1920	960	540	480	340	300	260	260	220	140	130	100
					IPM	1	3	3	4	3	3	3	3	2	2	2	1
	6	Low alloy steel	0.1D	1.5D	SFM	125	125	105	125	110	120	115	135	125	120	120	120
					IPT	.0002	.0006	.0012	.0016	.0020	.0022	.0025	.0025	.0024	.0022	.0026	.0029 / .0022
					RPM	3840	1920	1080	960	670	600	540	540	480	300	260	230
					IPM	4	7	8	9	8	8	8	8	7	4	4	4
	7		0.1D	1.5D	SFM	100	95	95	100	90	95	90	105	95	95	80	70
					IPT	.0002	.0005	.0010	.0013	.0015	.0017	.0020	.0020	.0018	.0021	.0028	.0026 / .0019
					RPM	3000	1440	960	760	540	480	420	420	370	240	180	130
					IPM	3	4	6	6	5	5	5	5	4	3	3	2
	8-9		0.1D	1.5D	SFM	65	65	55	65	55	60	55	65	55	55	60	50
					IPT	.0001	.0005	.0009	.0014	.0015	.0017	.0019	.0019	.0015	.0024	.0026	.0017 / .0013
					RPM	1920	960	540	480	340	300	260	260	220	140	130	100
					IPM	1	3	3	4	3	3	3	3	2	2	2	1
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM	125	125	105	125	110	120	115	135	125	120	120	120
					IPT	.0002	.0006	.0012	.0016	.0020	.0022	.0025	.0025	.0024	.0022	.0026	.0029 / .0022
					RPM	3840	1920	1080	960	670	600	540	540	480	300	260	230
					IPM	4	7	8	9	8	8	8	8	7	4	4	4
	11.1		0.1D	1.5D	SFM	65	65	55	65	55	60	55	65	55	55	60	50
					IPT	.0001	.0005	.0009	.0014	.0015	.0017	.0019	.0019	.0015	.0024	.0026	.0017 / .0013
					RPM	1920	960	540	480	340	300	260	260	220	140	130	100
					IPM	1	3	3	4	3	3	3	3	2	2	2	1
N	21-22	Aluminum-wrought alloy	0.1D	1.5D	SFM	430	440	365	395	395	425	355	410	375	425	440	395
					IPT	.0002	.0005	.0013	.0015	.0017	.0019	.0021	.0021	.0023	.0025	.0024	.0031 / .0023
					RPM	13200	6720	3720	3000	2400	2160	1680	1680	1440	1080	960	760
					IPM	18	22	28	27	25	25	21	21	20	16	14	14
	23-25	Aluminum-cast, alloyed	0.1D	1.5D	SFM	430	440	365	395	395	425	355	410	375	425	440	395
					IPT	.0002	.0005	.0013	.0015	.0017	.0019	.0021	.0021	.0023	.0025	.0024	.0031 / .0023
					RPM	13200	6720	3720	3000	2400	2160	1680	1680	1440	1080	960	760
					IPM	18	22	28	27	25	25	21	21	20	16	14	14



※ The Feed, in long & extra long types, should be reduced by around 50%.

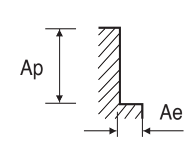
YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2032, E1032, E2035, E1035, E2037, E1037, E2042, E1042, E2162, E1162, E2175, E1175, E2100, E1100 SERIES

TiCN Coated 6 & 8 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/8	1/4	3/8	1/2	5/8	3/4	13/16	15/16	1	1 1/2	1 3/4	2 (6 & 8 FL)
P	1	Non-alloy steel	0.1D	1.5D	SFM	150	155	140	155	150	160	140	160	155	160	165	190
					IPT	.0002	.0006	.0012	.0016	.0020	.0020	.0026	.0026	.0025	.0025	.0028	.0028 / .0021
					RPM	4550	2340	1430	1170	910	820	650	650	590	400	360	360
					IPM	6	9	10	11	11	10	10	10	9	6	6	6
	2		0.1D	1.5D	SFM	135	135	115	135	120	130	125	145	135	130	130	130
					IPT	.0002	.0006	.0011	.0014	.0018	.0021	.0023	.0023	.0022	.0025	.0029	.0033 / .0025
					RPM	4160	2090	1170	1040	730	650	590	590	520	330	290	250
					IPM	4	7	8	9	8	8	8	8	7	5	5	5
	3-4		0.1D	1.5D	SFM	105	100	100	105	95	100	95	110	105	100	105	75
					IPT	.0002	.0005	.0010	.0012	.0014	.0016	.0018	.0018	.0021	.0019	.0022	.0024 / .0018
					RPM	3250	1560	1040	820	590	520	460	460	400	260	230	140
					IPM	3	5	6	6	5	5	5	5	5	3	3	2
	5		0.1D	1.5D	SFM	70	70	55	70	60	65	60	70	60	60	65	55
					IPT	.0002	.0005	.0008	.0013	.0014	.0015	.0017	.0017	.0022	.0021	.0024	.0017 / .0013
					RPM	2080	1040	590	520	360	330	290	290	230	160	140	100
					IPM	2	3	3	4	3	3	3	3	3	2	2	1
	6	Low alloy steel	0.1D	1.5D	SFM	135	135	115	135	120	130	125	145	135	130	130	130
					IPT	.0002	.0006	.0011	.0014	.0018	.0021	.0023	.0023	.0022	.0025	.0029	.0033 / .0025
					RPM	4160	2090	1170	1040	730	650	590	590	520	330	290	250
					IPM	4	7	8	9	8	8	8	8	7	5	5	5
	7		0.1D	1.5D	SFM	105	100	100	105	95	100	95	110	105	100	105	75
					IPT	.0002	.0005	.0010	.0012	.0014	.0016	.0018	.0018	.0021	.0019	.0022	.0024 / .0018
					RPM	3250	1560	1040	820	590	520	460	460	400	260	230	140
					IPM	3	5	6	6	5	5	5	5	5	3	3	2
	8-9		0.1D	1.5D	SFM	70	70	55	70	60	65	60	70	60	60	65	55
					IPT	.0002	.0005	.0008	.0013	.0014	.0015	.0017	.0017	.0022	.0021	.0024	.0017 / .0013
					RPM	2080	1040	590	520	360	330	290	290	230	160	140	100
					IPM	2	3	3	4	3	3	3	3	3	2	2	1
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM	135	135	115	135	120	130	125	145	135	130	130	130
					IPT	.0002	.0006	.0011	.0014	.0018	.0021	.0023	.0023	.0022	.0025	.0029	.0033 / .0025
					RPM	4160	2090	1170	1040	730	650	590	590	520	330	290	250
					IPM	4	7	8	9	8	8	8	8	7	5	5	5
	11.1		0.1D	1.5D	SFM	70	70	55	70	60	65	60	70	60	60	65	55
					IPT	.0002	.0005	.0008	.0013	.0014	.0015	.0017	.0017	.0022	.0021	.0024	.0017 / .0013
					RPM	2080	1040	590	520	360	330	290	290	230	160	140	100
					IPM	2	3	3	4	3	3	3	3	3	2	2	1
N	21-22	Aluminum-wrought alloy	0.1D	1.5D	SFM	470	475	395	425	425	460	385	445	410	460	475	545
					IPT	.0002	.0005	.0013	.0015	.0017	.0019	.0021	.0021	.0024	.0024	.0024	.0024 / .0018
					RPM	14300	7280	4030	3250	2600	2340	1820	1820	1560	1170	1040	1040
					IPM	20	24	31	29	27	27	23	23	22	17	15	15
	23-25	Aluminum-cast, alloyed	0.1D	1.5D	SFM	470	475	395	425	425	460	385	445	410	460	475	545
					IPT	.0002	.0005	.0013	.0015	.0017	.0019	.0021	.0021	.0024	.0024	.0024	.0024 / .0018
					RPM	14300	7280	4030	3250	2600	2340	1820	1820	1560	1170	1040	1040
					IPM	20	24	31	29	27	27	23	23	22	17	15	15



※ The Feed, in long & extra long types, should be reduced by around 50%.

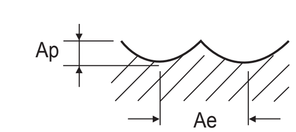
YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2020, E2021, E2069 SERIES

4 FLUTE BALL NOSE- PROFILE MILLING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	3/4	1
P	1	Non-alloy steel	0.7D	0.3D	SFM	145	130	130	130	130	120	130
					IPT	.0009	.0014	.0021	.0025	.0028	.0033	.0040
					RPM	2200	1600	1300	1000	800	600	500
					IPM	8	9	11	10	9	8	8
	2		0.7D	0.3D	SFM	110	100	100	105	100	100	105
					IPT	.0007	.0013	.0018	.0019	.0025	.0025	.0025
					RPM	1700	1200	1000	800	600	500	400
					IPM	5	6	7	6	6	5	4
	3-4		0.7D	0.3D	SFM	65	55	55	60	55	60	60
					IPT	.0008	.0011	.0018	.0017	.0021	.0025	.0023
					RPM	1000	700	560	450	350	300	220
					IPM	3	3	4	3	3	3	2
	5		0.7D	0.3D	SFM	45	40	40	40	40	40	40
					IPT	.0007	.0010	.0013	.0016	.0020	.0025	.0031
					RPM	700	500	400	320	250	200	160
					IPM	2	2	2	2	2	2	2
	6	Low alloy steel	0.7D	0.3D	SFM	110	100	100	105	100	100	105
					IPT	.0007	.0013	.0018	.0019	.0025	.0025	.0025
					RPM	1700	1200	1000	800	600	500	400
					IPM	5	6	7	6	6	5	4
	7		0.7D	0.3D	SFM	65	55	55	60	55	60	60
					IPT	.0008	.0011	.0018	.0017	.0021	.0025	.0023
					RPM	1000	700	560	450	350	300	220
					IPM	3	3	4	3	3	3	2
	8-9		0.7D	0.3D	SFM	45	40	40	40	40	40	40
					IPT	.0007	.0010	.0013	.0016	.0020	.0025	.0031
					RPM	700	500	400	320	250	200	160
					IPM	2	2	2	2	2	2	2
	10	High alloyed steel, and tool steel	0.7D	0.3D	SFM	110	100	100	105	100	100	105
					IPT	.0007	.0013	.0018	.0019	.0025	.0025	.0025
					RPM	1700	1200	1000	800	600	500	400
					IPM	5	6	7	6	6	5	4
	11.1		0.7D	0.3D	SFM	45	40	40	40	40	40	40
					IPT	.0007	.0010	.0013	.0016	.0020	.0025	.0031
					RPM	700	500	400	320	250	200	160
					IPM	2	2	2	2	2	2	2
N	21-22	Aluminum-wrought alloy	0.7D	0.3D	SFM	365	325	315	325	325	315	340
					IPT	.0008	.0013	.0016	.0020	.0023	.0027	.0029
					RPM	5600	4000	3200	2500	2000	1600	1300
					IPM	17	21	21	20	18	17	15
	23-25	Aluminum-cast, alloyed	0.7D	0.3D	SFM	365	325	315	325	325	315	340
					IPT	.0008	.0013	.0016	.0020	.0023	.0027	.0029
					RPM	5600	4000	3200	2500	2000	1600	1300
					IPM	17	21	21	20	18	17	15



※ The Feed, in long & extra long types, should be reduced by around 50%.

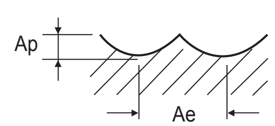
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2020, E2021, E2069 SERIES TiN Coated 4 FLUTE BALL NOSE- PROFILE MILLING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	3/4	1
P	1	Non-alloy steel	0.7D	0.3D	SFM	175	155	155	155	155	140	155
					IPT	.0009	.0014	.0021	.0025	.0029	.0035	.0042
					RPM	2640	1920	1560	1200	960	720	600
					IPM	10	11	13	12	11	10	10
	2		0.7D	0.3D	SFM	135	120	120	125	120	120	125
					IPT	.0007	.0014	.0019	.0021	.0024	.0025	.0026
					RPM	2040	1440	1200	960	720	600	480
					IPM	6	8	9	8	7	6	5
	3-4		0.7D	0.3D	SFM	80	70	65	70	70	70	70
					IPT	.0006	.0012	.0015	.0019	.0024	.0028	.0029
					RPM	1200	840	670	540	420	360	260
					IPM	3	4	4	4	4	4	3
	5		0.7D	0.3D	SFM	55	50	45	50	50	45	50
					IPT	.0006	.0008	.0010	.0013	.0017	.0021	.0026
					RPM	840	600	480	380	300	240	190
					IPM	2	2	2	2	2	2	2
	6	Low alloy steel	0.7D	0.3D	SFM	135	120	120	125	120	120	125
					IPT	.0007	.0014	.0019	.0021	.0024	.0025	.0026
					RPM	2040	1440	1200	960	720	600	480
					IPM	6	8	9	8	7	6	5
	7		0.7D	0.3D	SFM	80	70	65	70	70	70	70
					IPT	.0006	.0012	.0015	.0019	.0024	.0028	.0029
					RPM	1200	840	670	540	420	360	260
					IPM	3	4	4	4	4	4	3
	8-9		0.7D	0.3D	SFM	55	50	45	50	50	45	50
					IPT	.0006	.0008	.0010	.0013	.0017	.0021	.0026
					RPM	840	600	480	380	300	240	190
					IPM	2	2	2	2	2	2	2
	10	High alloyed steel, and tool steel	0.7D	0.3D	SFM	135	120	120	125	120	120	125
					IPT	.0007	.0014	.0019	.0021	.0024	.0025	.0026
					RPM	2040	1440	1200	960	720	600	480
					IPM	6	8	9	8	7	6	5
	11.1		0.7D	0.3D	SFM	55	50	45	50	50	45	50
					IPT	.0006	.0008	.0010	.0013	.0017	.0021	.0026
					RPM	840	600	480	380	300	240	190
					IPM	2	2	2	2	2	2	2
N	21-22	Aluminum-wrought alloy	0.7D	0.3D	SFM	440	395	375	395	395	375	410
					IPT	.0007	.0013	.0017	.0020	.0022	.0026	.0029
					RPM	6720	4800	3840	3000	2400	1920	1560
					IPM	20	25	26	24	21	20	18
	23-25	Aluminum-cast, alloyed	0.7D	0.3D	SFM	440	395	375	395	395	375	410
					IPT	.0007	.0013	.0017	.0020	.0022	.0026	.0029
					RPM	6720	4800	3840	3000	2400	1920	1560
					IPM	20	25	26	24	21	20	18

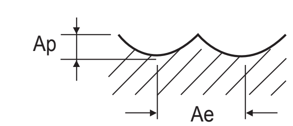


※ The Feed, in long & extra long types, should be reduced by around 50%.

YG COBALT & HSS END MILLS
RECOMMENDED CUTTING CONDITIONS

E2020, E2021, E2069 SERIES TiCN Coated 4 FLUTE BALL NOSE- PROFILE MILLING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	3/4	1
P	1	Non-alloy steel	0.7D	0.3D	SFM	185	170	165	170	170	155	170
					IPT	.0009	.0014	.0021	.0025	.0029	.0035	.0038
					RPM	2860	2080	1690	1300	1040	780	650
					IPM	10	12	14	13	12	11	10
	2		0.7D	0.3D	SFM	145	130	130	135	130	130	135
					IPT	.0008	.0013	.0017	.0019	.0026	.0027	.0024
					RPM	2210	1560	1300	1040	780	650	520
					IPM	7	8	9	8	8	7	5
	3-4		0.7D	0.3D	SFM	85	75	70	75	75	75	75
					IPT	.0008	.0011	.0017	.0017	.0022	.0026	.0026
					RPM	1300	910	730	590	460	390	290
					IPM	4	4	5	4	4	4	3
	5		0.7D	0.3D	SFM	60	55	50	55	55	50	55
					IPT	.0005	.0008	.0014	.0018	.0023	.0029	.0024
					RPM	910	650	520	420	330	260	210
					IPM	2	2	3	3	3	3	2
	6	Low alloy steel	0.7D	0.3D	SFM	145	130	130	135	130	130	135
					IPT	.0008	.0013	.0017	.0019	.0026	.0027	.0024
					RPM	2210	1560	1300	1040	780	650	520
					IPM	7	8	9	8	8	7	5
	7		0.7D	0.3D	SFM	85	75	70	75	75	75	75
					IPT	.0008	.0011	.0017	.0017	.0022	.0026	.0026
					RPM	1300	910	730	590	460	390	290
					IPM	4	4	5	4	4	4	3
	8-9		0.7D	0.3D	SFM	60	55	50	55	55	50	55
					IPT	.0005	.0008	.0014	.0018	.0023	.0029	.0024
					RPM	910	650	520	420	330	260	210
					IPM	2	2	3	3	3	3	2
	10	High alloyed steel, and tool steel	0.7D	0.3D	SFM	145	130	130	135	130	130	135
					IPT	.0008	.0013	.0017	.0019	.0026	.0027	.0024
					RPM	2210	1560	1300	1040	780	650	520
					IPM	7	8	9	8	8	7	5
	11.1		0.7D	0.3D	SFM	60	55	50	55	55	50	55
					IPT	.0005	.0008	.0014	.0018	.0023	.0029	.0024
					RPM	910	650	520	420	330	260	210
					IPM	2	2	3	3	3	3	2
N	21-22	Aluminum-wrought alloy	0.7D	0.3D	SFM	475	425	410	425	425	410	440
					IPT	.0008	.0013	.0017	.0020	.0022	.0026	.0030
					RPM	7280	5200	4160	3250	2600	2080	1690
					IPM	22	27	28	26	23	22	20
	23-25	Aluminum-cast, alloyed	0.7D	0.3D	SFM	475	425	410	425	425	410	440
					IPT	.0008	.0013	.0017	.0020	.0022	.0026	.0030
					RPM	7280	5200	4160	3250	2600	2080	1690
					IPM	22	27	28	26	23	22	20



※ The Feed, in long & extra long types, should be reduced by around 50%.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
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STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2001, E1001, E2003, E1003, E2005, E1005, E2002, E1002, E2004, E1004, E2006, E1006, E2008, E1008, E2013, E1013, E2015, E1015 SERIES

MINIATURE

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 1/64	1/32	3/64	1/16	5/64	3/32	7/64	1/8	9/64	5/32	11/64	3/16
P	1-5	Non-alloy steel Low alloy steel	SFM	45	45~55	45~55	45~55	45~55	45~55	45~55	45~55	45~55	45~55	45~55	45~55
			RPM	11000 up	5500~5600	3670~4400	2750~3300	2200~2640	1840~2200	1570~1890	1380~1650	1220~1470	1100~1320	1000~1200	920~1100
			IPM	0.5	0.6	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.2	1.4
	6-9	Low alloy steel	SFM	45	45~55	45~55	45~55	45~55	45~55	45~55	45~55	45~55	45~55	45~55	45~55
			RPM	11000 up	5500~5600	3670~4400	2750~3300	2200~2640	1840~2200	1570~1890	1380~1650	1220~1470	1100~1320	1000~1200	920~1100
			IPM	0.5	0.6	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.2	1.4
	10-11	High alloyed steel, and tool steel	SFM	25~35	25~35	25~35	25~35	25~35	25~30	25~35	25~35	25~35	25~35	25~35	25~35
			RPM	6600~8800	3300~4400	2200~2940	1650~2260	1320~1760	1100~1290	850~1260	830~1100	740~980	560~880	600~800	550~740
			IPM	0.3	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.8	0.9	1.0
M	12-14	Stainless steel	SFM	25~35	25~35	25~35	25~35	25~35	25~30	25~35	25~35	25~35	25~35	25~35	25~35
			RPM	6600~8800	3300~4400	2200~2940	1650~2260	1320~1760	1100~1290	850~1260	830~1100	740~980	560~880	600~800	550~740
			IPM	0.3	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.8	0.9	1.0
N	21-22	Aluminum-wrought alloy	SFM	45	90	135	180	175	180	160	180	180~360	180~360	180~360	180~360
			RPM	11000 up	11000 up	11000 up	11000 up	8500 up	7330 up	5625 up	5500 up	4890~9780	4400~8800	3000~8000	3690~7340
			IPM	1.5	2.5	2.6	4.2	4.2	4.2	4.3	4.5	4.5	4.5	4.6	4.7
	23-25	Aluminum-cast, alloyed	SFM	45	90	135	180	175	180	160	180	180~360	180~360	180~360	180~360
			RPM	11000 up	11000 up	11000 up	11000 up	8500 up	7330 up	5625 up	5500 up	4890~9780	4400~8800	3000~8000	3690~7340
			IPM	1.5	2.5	2.6	4.2	4.2	4.2	4.3	4.5	4.5	4.5	4.6	4.7
	26-28	Copper and Copper Alloys (Bronze / Brass)	SFM	45	65~80	65~80	55~80	80	65~80	65~80	65~80	65~80	65~80	65~80	65~80
			RPM	11000 up	7700~9900	5140~6600	3350~4950	3850~3960	2570~3300	2200~2830	1930~2480	1710~2200	1540~1980	1400~1800	1290~1650
			IPM	0.8	1.6	2.5	3.3	3.3	3.3	3.3	3.3	3.4	3.6	3.7	3.3
	30	Non Metallic Materials	SFM	45	90	90~110	90~110	90~120	90~110	90~110	90~110	90~140	90~110	90~110	75~110
			RPM	11000 up	11000 up	7335~8800	5500~6600	4400~5820	3665~4400	3140~3770	2750~3300	2445~3770	2205~2640	2000~2400	1535~2200
			IPM	1.2	1.6	2.0	2.6	2.6	2.6	2.6	2.8	2.8	2.9	3.0	3.3
S	36	Titanium Alloys	SFM	45	45~55	45~55	45~55	45~55	45~55	45~55	45~55	45~55	45~55	45~55	45~55
			RPM	11000 up	5500~5600	3670~4400	2750~3300	2200~2640	1840~2200	1570~1890	1380~1650	1220~1470	1100~1320	1000~1200	920~1100
			IPM	0.5	0.6	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.2	1.4
	37		SFM	25~35	25~35	25~35	25~35	25~35	25~30	25~35	25~35	25~35	25~35	25~35	25~35
			RPM	6600~8800	3300~4400	2200~2940	1650~2260	1320~1760	1100~1290	850~1260	830~1100	740~980	560~880	600~800	550~740
			IPM	0.3	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.8	0.9	1.0

※ The Feed, in long & extra long types, should be reduced by around 50%.

NOTES :

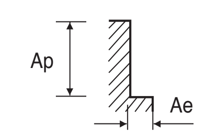
(1) The cutting conditions in this table are given for reference, which should be varied depending on the machine, tooling, depth of cut. cutting fluid and other conditons.
(2) Use a holder of strong gripping force and machine of high stiffness

YG COBALT & HSS END MILLS RECOMMENDED CUTTING CONDITIONS

E2086, E2085, E2079, E2077, E2170, E2171, E2172, E2241, E2195, E2197 SERIES

MULTI FLUTE ROUGHING - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	11/16	7/8	1	1 1/8	1 1/4	1 3/8	1 3/4	2
P	1	Non-alloy steel	0.5D	1.5D	SFM	120	115	110	120	115	115	115	120	120	115	110	130	115
					RPM	1800	1400	1100	900	700	630	500	450	400	350	310	280	220
					IPM	3	4	6	7	7	7	9	9	8	8	8	8	8
	2		0.5D	1.5D	SFM	105	90	90	105	90	90	105	105	105	90	90	100	95
					RPM	1600	1100	900	800	560	500	450	400	350	280	250	220	180
					IPM	2	3	5	6	6	6	7	7	6	6	6	6	7
	3-4		0.5D	1.5D	SFM	80	75	80	80	75	70	80	80	80	70	70	80	85
					RPM	1200	900	800	630	450	400	350	310	280	220	200	180	160
					IPM	2	3	4	4	4	4	6	6	5	5	5	5	6
	5		0.5D	1.5D	SFM	50	45	45	50	45	45	50	45	45	45	45	50	45
					RPM	800	560	450	400	280	250	220	180	160	140	120	110	90
					IPM	1	1	2	3	3	3	3	3	3	3	3	3	3
	6	Low alloy steel	0.5D	1.5D	SFM	105	90	90	105	90	90	105	105	105	90	90	100	95
					RPM	1600	1100	900	800	560	500	450	400	350	280	250	220	180
					IPM	2	3	5	6	6	6	7	7	6	6	6	6	7
	7		0.5D	1.5D	SFM	80	75	80	80	75	70	80	80	80	70	70	80	85
					RPM	1200	900	800	630	450	400	350	310	280	220	200	180	160
					IPM	2	3	4	4	4	4	6	6	5	5	5	5	6
	8-9		0.5D	1.5D	SFM	50	45	45	50	45	45	50	45	45	45	45	50	45
					RPM	800	560	450	400	280	250	220	180	160	140	120	110	90
					IPM	1	1	2	3	3	3	3	3	3	3	3	3	3
	10	High alloyed steel, and tool steel	0.5D	1.5D	SFM	105	90	90	105	90	90	105	105	105	90	90	100	95
					RPM	1600	1100	900	800	560	500	450	400	350	280	250	220	180
					IPM	2	3	5	6	6	6	7	7	6	6	6	6	7
	11.1		0.5D	1.5D	SFM	50	45	45	50	45	45	50	45	45	45	45	50	45
					RPM	800	560	450	400	280	250	220	180	160	140	120	110	90
					IPM	1	1	2	3	3	3	3	3	3	3	3	3	3
N	21-22	Aluminum-wrought alloy	0.5D	1.5D	SFM	295	255	245	260	260	250	250	260	265	260	250	290	260
					RPM	4500	3100	2500	2000	1600	1400	1100	1000	900	800	700	630	500
					IPM	8	9	14	16	18	19	19	18	20	20	19	18	15
	23-25	Aluminum-cast, alloyed	0.5D	1.5D	SFM	295	255	245	260	260	250	250	260	265	260	250	290	260
					RPM	4500	3100	2500	2000	1600	1400	1100	1000	900	800	700	630	500
					IPM	8	9	14	16	18	19	19	18	20	20	19	18	15



※ The Feed, in long & extra long types, should be reduced by around 50%.

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HSS
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D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

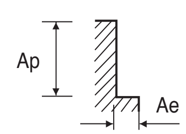
COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2086, E2085, E2079, E2077, E2170, E2171, E2172, E2241, E2195, E2197 SERIES

TiN Coated
MULTI FLUTE ROUGHING
- SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	11/16	7/8	1	1 1/8	1 1/4	1 3/8	1 3/4	2
P	1	Non-alloy steel	0.5D	1.5D	SFM	140	135	130	140	135	135	135	140	140	135	135	155	140
					RPM	2160	1680	1320	1080	840	760	600	540	480	420	370	340	260
					IPM	4	5	7	9	9	9	10	10	10	10	10	10	10
	2		0.5D	1.5D	SFM	125	110	105	125	110	110	125	125	125	110	110	120	115
					RPM	1920	1320	1080	960	670	600	540	480	420	340	300	260	220
					IPM	3	4	6	7	7	7	8	8	8	8	8	7	8
	3-4		0.5D	1.5D	SFM	95	90	95	100	90	85	95	95	100	85	85	100	100
					RPM	1440	1080	960	760	540	480	420	370	340	260	240	220	190
					IPM	3	3	5	5	5	5	7	7	6	6	6	6	7
	5		0.5D	1.5D	SFM	65	55	55	65	55	55	60	55	55	55	50	60	55
					RPM	960	670	540	480	340	300	260	220	190	170	140	130	110
					IPM	1	2	3	3	3	3	4	4	4	4	4	4	4
	6	Low alloy steel	0.5D	1.5D	SFM	125	110	105	125	110	110	125	125	125	110	110	120	115
					RPM	1920	1320	1080	960	670	600	540	480	420	340	300	260	220
					IPM	3	4	6	7	7	7	8	8	8	8	8	7	8
	7		0.5D	1.5D	SFM	95	90	95	100	90	85	95	95	100	85	85	100	100
					RPM	1440	1080	960	760	540	480	420	370	340	260	240	220	190
					IPM	3	3	5	5	5	5	7	7	6	6	6	6	7
	8-9		0.5D	1.5D	SFM	65	55	55	65	55	55	60	55	55	55	50	60	55
					RPM	960	670	540	480	340	300	260	220	190	170	140	130	110
					IPM	1	2	3	3	3	3	4	4	4	4	4	4	4
	10	High alloyed steel, and tool steel	0.5D	1.5D	SFM	125	110	105	125	110	110	125	125	125	110	110	120	115
					RPM	1920	1320	1080	960	670	600	540	480	420	340	300	260	220
					IPM	3	4	6	7	7	7	8	8	8	8	8	7	8
	11.1		0.5D	1.5D	SFM	65	55	55	65	55	55	60	55	55	55	50	60	55
					RPM	960	670	540	480	340	300	260	220	190	170	140	130	110
					IPM	1	2	3	3	3	3	4	4	4	4	4	4	4
N	21-22	Aluminum-wrought alloy	0.5D	1.5D	SFM	355	305	295	315	315	300	300	315	320	315	300	345	315
					RPM	5400	3720	3000	2400	1920	1680	1320	1200	1080	960	840	760	600
					IPM	10	11	17	19	21	22	22	21	24	24	22	21	18
	23-25	Aluminum-cast, alloyed	0.5D	1.5D	SFM	355	305	295	315	315	300	300	315	320	315	300	345	315
					RPM	5400	3720	3000	2400	1920	1680	1320	1200	1080	960	840	760	600
					IPM	10	11	17	19	21	22	22	21	24	24	22	21	18



※ The Feed, in long & extra long types, should be reduced by around 50%.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

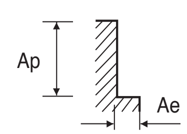
COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2086, E2085, E2079, E2077, E2170, E2171, E2172, E2241, E2195, E2197 SERIES

TiCN Coated
MULTI FLUTE ROUGHING
- SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	11/16	7/8	1	1 1/8	1 1/4	1 3/8	1 3/4	2
P	1	Non-alloy steel	0.5D	1.5D	SFM	155	150	140	155	150	145	150	155	155	150	145	165	150
					RPM	2340	1820	1430	1170	910	820	650	590	520	460	400	360	290
					IPM	4	5	8	9	9	9	11	11	11	11	11	10	10
	2		0.5D	1.5D	SFM	135	115	115	135	120	115	135	135	135	120	115	130	125
					RPM	2080	1430	1170	1040	730	650	590	520	460	360	330	290	230
					IPM	3	4	6	7	7	7	9	9	8	8	8	8	9
	3-4		0.5D	1.5D	SFM	100	95	100	105	95	95	105	105	105	95	95	105	110
					RPM	1560	1170	1040	820	590	520	460	400	360	290	260	230	210
					IPM	3	3	6	6	6	6	7	7	7	7	7	6	7
	5		0.5D	1.5D	SFM	70	60	55	70	60	60	65	60	60	60	55	65	60
					RPM	1040	730	590	520	360	330	290	230	210	180	160	140	120
					IPM	2	2	3	4	4	4	4	4	4	4	4	4	4
	6	Low alloy steel	0.5D	1.5D	SFM	135	115	115	135	120	115	135	135	135	120	115	130	125
					RPM	2080	1430	1170	1040	730	650	590	520	460	360	330	290	230
					IPM	3	4	6	7	7	7	9	9	8	8	8	8	9
	7		0.5D	1.5D	SFM	100	95	100	105	95	95	105	105	105	95	95	105	110
					RPM	1560	1170	1040	820	590	520	460	400	360	290	260	230	210
					IPM	3	3	6	6	6	6	7	7	7	7	7	6	7
	8-9		0.5D	1.5D	SFM	70	60	55	70	60	60	65	60	60	60	55	65	60
					RPM	1040	730	590	520	360	330	290	230	210	180	160	140	120
					IPM	2	2	3	4	4	4	4	4	4	4	4	4	4
	10	High alloyed steel, and tool steel	0.5D	1.5D	SFM	135	115	115	135	120	115	135	135	135	120	115	130	125
					RPM	2080	1430	1170	1040	730	650	590	520	460	360	330	290	230
					IPM	3	4	6	7	7	7	9	9	8	8	8	8	9
	11.1		0.5D	1.5D	SFM	70	60	55	70	60	60	65	60	60	60	55	65	60
					RPM	1040	730	590	520	360	330	290	230	210	180	160	140	120
					IPM	2	2	3	4	4	4	4	4	4	4	4	4	4
N	21-22	Aluminum-wrought alloy	0.5D	1.5D	SFM	385	330	320	340	340	330	330	340	345	340	330	375	340
					RPM	5850	4030	3250	2600	2080	1820	1430	1300	1170	1040	910	820	650
					IPM	10	12	18	21	23	24	24	23	26	26	24	23	19
	23-25	Aluminum-cast, alloyed	0.5D	1.5D	SFM	385	330	320	340	340	330	330	340	345	340	330	375	340
					RPM	5850	4030	3250	2600	2080	1820	1430	1300	1170	1040	910	820	650
					IPM	10	12	18	21	23	24	24	23	26	26	24	23	19



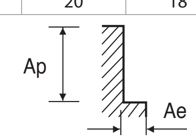
※ The Feed, in long & extra long types, should be reduced by around 50%.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS — RECOMMENDED CUTTING CONDITIONS

E2193, E2125 SERIES — MULTI FLUTE BALL ROUGHING - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 5/16	3/8	1/2	5/8	3/4	1	1 1/4	1 3/4
P	1	Non-alloy steel	0.5D	1.5D	SFM	115	110	120	115	110	120	115	130
					IPT	.0010	.0014	.0019	.0025	.0031	.0040	.0038	.0048
					RPM	1400	1100	900	700	560	450	350	280
					IPM	4	6	7	7	7	9	8	8
	2		0.5D	1.5D	SFM	90	90	105	90	90	105	90	100
					IPT	.0009	.0014	.0019	.0027	.0033	.0035	.0036	.0045
					RPM	1100	900	800	560	450	400	280	220
					IPM	3	5	6	6	6	7	6	6
	3-4		0.5D	1.5D	SFM	75	80	80	75	80	80	70	80
					IPT	.0011	.0013	.0016	.0022	.0025	.0039	.0038	.0046
					RPM	900	800	630	450	400	310	220	180
					IPM	3	4	4	4	4	6	5	5
	5		0.5D	1.5D	SFM	45	45	50	45	45	45	45	50
					IPT	.0006	.0011	.0019	.0027	.0034	.0033	.0036	.0045
					RPM	560	450	400	280	220	180	140	110
					IPM	1	2	3	3	3	3	3	3
	6	Low alloy steel	0.5D	1.5D	SFM	90	90	105	90	90	105	90	100
					IPT	.0009	.0014	.0019	.0027	.0033	.0035	.0036	.0045
					RPM	1100	900	800	560	450	400	280	220
					IPM	3	5	6	6	6	7	6	6
	7		0.5D	1.5D	SFM	75	80	80	75	80	80	70	80
					IPT	.0011	.0013	.0016	.0022	.0025	.0039	.0038	.0046
					RPM	900	800	630	450	400	310	220	180
					IPM	3	4	4	4	4	6	5	5
	8-9		0.5D	1.5D	SFM	45	45	50	45	45	45	45	50
					IPT	.0006	.0011	.0019	.0027	.0034	.0033	.0036	.0045
					RPM	560	450	400	280	220	180	140	110
					IPM	1	2	3	3	3	3	3	3
	10	High alloyed steel, and tool steel	0.5D	1.5D	SFM	90	90	105	90	90	105	90	100
					IPT	.0009	.0014	.0019	.0027	.0033	.0035	.0036	.0045
					RPM	1100	900	800	560	450	400	280	220
					IPM	3	5	6	6	6	7	6	6
	11.1		0.5D	1.5D	SFM	45	45	50	45	45	45	45	50
					IPT	.0006	.0011	.0019	.0027	.0034	.0033	.0036	.0045
					RPM	560	450	400	280	220	180	140	110
					IPM	1	2	3	3	3	3	3	3
N	21-22	Aluminum-wrought alloy	0.5D	1.5D	SFM	255	245	260	260	235	260	260	290
					IPT	.0010	.0010	.0020	.0028	.0042	.0036	.0042	.0048
					RPM	3100	2500	2000	1600	1200	1000	800	630
					IPM	9	10	16	18	20	18	20	18
	23-25	Aluminum-cast, alloyed	0.5D	1.5D	SFM	255	245	260	260	235	260	260	290
					IPT	.0010	.0010	.0020	.0028	.0042	.0036	.0042	.0048
					RPM	3100	2500	2000	1600	1200	1000	800	630
					IPM	9	10	16	18	20	18	20	18

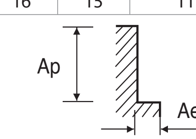


※ The Feed, in long & extra long types, should be reduced by around 50%.

YG COBALT & HSS END MILLS — RECOMMENDED CUTTING CONDITIONS

E2248 SERIES — MULTI FLUTE ROUGHING & FINISHING - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	11/16	7/8	1	1 1/4	1 3/8	2 (6 & 8 FL)
P	1	Non-alloy steel	0.5D	1.5D	SFM	120	115	110	120	115	115	115	120	115	110	125
					IPT	.0004	.0005	.0011	.0017	.0021	.0024	.0028	.0031	.0033	.0038	.0035/ .0026
					RPM	1800	1400	1100	900	700	630	500	450	350	310	240
					IPM	3	3	5	6	6	6	7	7	7	7	5
	2		0.5D	1.5D	SFM	85	90	90	105	90	90	105	105	90	90	100
					IPT	.0004	.0005	.0011	.0013	.0018	.0020	.0022	.0025	.0030	.0033	.0035 / .0026
					RPM	1300	1100	900	800	560	500	450	400	280	250	190
					IPM	2	2	4	4	4	4	5	5	5	5	4
	3-4		0.5D	1.5D	SFM	80	75	80	80	75	70	80	80	70	70	80
					IPT	.0004	.0006	.0013	.0016	.0022	.0025	.0023	.0026	.0030	.0033	.0033 / .0025
					RPM	1200	900	800	630	450	400	350	310	220	200	150
					IPM	2	2	4	4	4	4	4	4	4	4	3
	5		0.5D	1.5D	SFM	50	45	45	50	45	45	50	45	45	45	60
					IPT	.0003	.0004	.0011	.0013	.0018	.0020	.0027	.0033	.0036	.0042	.0045 / .0034
					RPM	800	560	450	400	280	250	220	180	140	120	110
					IPM	1	1	2	2	2	2	3	3	3	3	3
	6	Low alloy steel	0.5D	1.5D	SFM	85	90	90	105	90	90	105	105	90	90	100
					IPT	.0004	.0005	.0011	.0013	.0018	.0020	.0022	.0025	.0030	.0033	.0035 / .0026
					RPM	1300	1100	900	800	560	500	450	400	280	250	190
					IPM	2	2	4	4	4	4	5	5	5	5	4
	7		0.5D	1.5D	SFM	80	75	80	80	75	70	80	80	70	70	80
					IPT	.0004	.0006	.0013	.0016	.0022	.0025	.0023	.0026	.0030	.0033	.0033 / .0025
					RPM	1200	900	800	630	450	400	350	310	220	200	150
					IPM	2	2	4	4	4	4	4	4	4	4	3
	8-9		0.5D	1.5D	SFM	50	45	45	50	45	45	50	45	45	45	60
					IPT	.0003	.0004	.0011	.0013	.0018	.0020	.0027	.0033	.0036	.0042	.0045 / .0034
					RPM	800	560	450	400	280	250	220	180	140	120	110
					IPM	1	1	2	2	2	2	3	3	3	3	3
	10	High alloyed steel, and tool steel	0.5D	1.5D	SFM	85	90	90	105	90	90	105	105	90	90	100
					IPT	.0004	.0005	.0011	.0013	.0018	.0020	.0022	.0025	.0030	.0033	.0035 / .0026
					RPM	1300	1100	900	800	560	500	450	400	280	250	190
					IPM	2	2	4	4	4	4	5	5	5	5	4
	11.1		0.5D	1.5D	SFM	50	45	45	50	45	45	50	45	45	45	60
					IPT	.0003	.0004	.0011	.0013	.0018	.0020	.0027	.0033	.0036	.0042	.0045 / .0034
					RPM	800	560	450	400	280	250	220	180	140	120	110
					IPM	1	1	2	2	2	2	3	3	3	3	3
N	21-22	Aluminum-wrought alloy	0.5D	1.5D	SFM	295	255	245	260	260	250	250	260	260	250	260
					IPT	.0003	.0006	.0011	.0016	.0022	.0027	.0027	.0028	.0033	.0036	.0037 / .0028
					RPM	4500	3100	2500	2000	1600	1400	1100	1000	800	700	500
					IPM	6	7	11	13	14	15	15	14	16	15	11
	23-25	Aluminum-cast, alloyed	0.5D	1.5D	SFM	295	255	245	260	260	250	250	260	260	250	260
					IPT	.0003	.0006	.0011	.0016	.0022	.0027	.0027	.0028	.0033	.0036	.0037 / .0028
					RPM	4500	3100	2500	2000	1600	1400	1100	1000	800	700	500
					IPM	6	7	11	13	14	15	15	14	16	15	11



※ The Feed, in long & extra long types, should be reduced by around 50%.

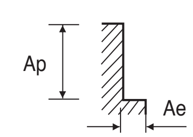
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2191, E2226, E2192 SERIES — 3 FLUTE ROUGHING FOR ALUMINIUM - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø) 1/4	5/16	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2
P	1	Non-alloy steel	0.5D	1.5D	SFM	120	115	110	120	115	115	115	120	115	110
					IPT	.0006	.0010	.0018	.0026	.0033	.0037	.0060	.0067	.0076	.0086
					RPM	1800	1400	1100	900	700	630	500	450	350	310
					IPM	3	4	6	7	7	7	9	9	8	8
	2		0.5D	1.5D	SFM	105	90	90	105	90	90	105	105	90	90
					IPT	.0004	.0009	.0019	.0025	.0036	.0040	.0052	.0058	.0071	.0080
					RPM	1600	1100	900	800	560	500	450	400	280	250
					IPM	2	3	5	6	6	6	7	7	6	6
	3-4		0.5D	1.5D	SFM	80	75	80	80	75	70	80	80	70	70
					IPT	.0006	.0011	.0017	.0021	.0030	.0033	.0057	.0065	.0076	.0083
					RPM	1200	900	800	630	450	400	350	310	220	200
					IPM	2	3	4	4	4	4	6	6	5	5
	5		0.5D	1.5D	SFM	50	45	45	50	45	45	50	45	45	45
					IPT	.0004	.0006	.0015	.0017	.0024	.0027	.0045	.0056	.0071	.0083
					RPM	800	560	450	400	280	250	220	180	140	120
					IPM	1	1	2	2	2	2	3	3	3	3
	6	Low alloy steel	0.5D	1.5D	SFM	105	90	90	105	90	90	105	105	90	90
					IPT	.0004	.0009	.0019	.0025	.0036	.0040	.0052	.0058	.0071	.0080
					RPM	1600	1100	900	800	560	500	450	400	280	250
					IPM	2	3	5	6	6	6	7	7	6	6
	7		0.5D	1.5D	SFM	80	75	80	80	75	70	80	80	70	70
					IPT	.0006	.0011	.0017	.0021	.0030	.0033	.0057	.0065	.0076	.0083
					RPM	1200	900	800	630	450	400	350	310	220	200
					IPM	2	3	4	4	4	4	6	6	5	5
	8-9		0.5D	1.5D	SFM	50	45	45	50	45	45	50	45	45	45
					IPT	.0004	.0006	.0015	.0017	.0024	.0027	.0045	.0056	.0071	.0083
					RPM	800	560	450	400	280	250	220	180	140	120
					IPM	1	1	2	2	2	2	3	3	3	3
	10	High alloyed steel, and tool steel	0.5D	1.5D	SFM	105	90	90	105	90	90	105	105	90	90
					IPT	.0004	.0009	.0019	.0025	.0036	.0040	.0052	.0058	.0071	.0080
					RPM	1600	1100	900	800	560	500	450	400	280	250
					IPM	2	3	5	6	6	6	7	7	6	6
	11.1		0.5D	1.5D	SFM	50	45	45	50	45	45	50	45	45	45
					IPT	.0004	.0006	.0015	.0017	.0024	.0027	.0045	.0056	.0071	.0083
					RPM	800	560	450	400	280	250	220	180	140	120
					IPM	1	1	2	2	2	2	3	3	3	3
N	21-22	Aluminum-wrought alloy	0.5D	1.5D	SFM	295	255	245	260	260	250	250	260	260	250
					IPT	.0004	.0008	.0015	.0022	.0029	.0036	.0045	.0047	.0067	.0071
					RPM	4500	3100	2500	2000	1600	1400	1100	1000	800	700
					IPM	6	7	11	13	14	15	15	14	16	15
	23-25	Aluminum-cast, alloyed	0.5D	1.5D	SFM	295	255	245	260	260	250	250	260	260	250
					IPT	.0004	.0008	.0015	.0022	.0029	.0036	.0045	.0047	.0067	.0071
					RPM	4500	3100	2500	2000	1600	1400	1100	1000	800	700
					IPM	6	7	11	13	14	15	15	14	16	15



※ The Feed, in long & extra long types, should be reduced by around 50%.

YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2237, E1237 SERIES — 4 FLUTE CORNER ROUNDING

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø) 7/16	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 15/16	1 7/8
P	1	Non-alloy steel	SFM	65	65	65	65	65	65	65	65	65	65	65	65	65
			IPT	.0008	.0008	.0011	.0012	.0014	.0016	.0017	.0019	.0019	.0021	.0022	.0023	.0023
			RPM	580	500	400	340	290	250	220	200	180	170	160	130	130
			IPM	1.8	1.6	1.8	1.6	1.6	1.6	1.5	1.5	1.4	1.4	1.4	1.2	1.2
	2		SFM	50	50	50	50	50	50	50	50	50	50	50	50	50
			IPT	.0008	.0008	.0011	.0012	.0014	.0016	.0016	.0018	.0018	.0021	.0021	.0023	.0023
			RPM	430	370	300	250	210	190	170	150	140	120	120	100	100
			IPM	1.4	1.2	1.3	1.2	1.2	1.2	1.1	1.1	1	1	1	0.9	0.9
	3-4		SFM	35	35	35	35	35	35	35	35	35	35	35	35	35
			IPT	.0009	.0010	.0013	.0015	.0018	.0019	.0023	.0025	.0028	.0031	.0000	.0000	.0036
			RPM	290	250	200	170	140	130	110	100	90	80	80	70	70
			IPM	1	1	1	1	1	1	1	1	1	1	0	0	1
	5		SFM	50	45	45	50	45	45	50	45	45	45	45	45	45
			IPT	.0004	.0006	.0015	.0017	.0024	.0027	.0045	.0056	.0071	.0083	.0083	.0083	.0083
			RPM	800	560	450	400	280	250	220	180	140	120	120	120	120
			IPM	1	1	2	2	2	2	3	3	3	3	3	3	3
	6	Low alloy steel	SFM	50	50	50	50	50	50	50	50	50	50	50	50	50
			IPT	.0008	.0008	.0011	.0012	.0014	.0016	.0016	.0018	.0018	.0021	.0021	.0023	.0023
			RPM	430	370	300	250	210	190	170	150	140	120	120	100	100
			IPM	1.4	1.2	1.3	1.2	1.2	1.2	1.1	1.1	1	1	1	0.9	0.9
	7		SFM	35	35	35	35	35	35	35	35	35	35	35	35	35
			IPT	.0009	.0010	.0013	.0015	.0018	.0019	.0023	.0025	.0028	.0031	.0000	.0000	.0036
			RPM	290	250	200	170	140	130	110	100	90	80	80	70	70
			IPM	1	1	1	1	1	1	1	1	1	1	0	0	1
	8-9		SFM	50	45	45	50	45	45	50	45	45	45	45	45	45
			IPT	.0004	.0006	.0015	.0017	.0024	.0027	.0045	.0056	.0071	.0083	.0083	.0083	.0083
			RPM	800	560	450	400	280	250	220	180	140	120	120	120	120
			IPM	1	1	2	2	2	2	3	3	3	3	3	3	3
	10	High alloyed steel, and tool steel	SFM	50	50	50	50	50	50	50	50	50	50	50	50	50
			IPT	.0008	.0008	.0011	.0012	.0014	.0016	.0016	.0018	.0018	.0021	.0021	.0023	.0023
			RPM	430	370	300	250	210	190	170	150	140	120	120	100	100
			IPM	1.4	1.2	1.3	1.2	1.2	1.2	1.1	1.1	1	1	1	0.9	0.9
	11.1		SFM	50	45	45	50	45	45	50	45	45	45	45	45	45
			IPT	.0004	.0006	.0015	.0017	.0024	.0027	.0045	.0056	.0071	.0083	.0083	.0083	.0083
			RPM	800	560	450	400	280	250	220	180	140	120	120	120	120
			IPM	1	1	2	2	2	2	3	3	3	3	3	3	3
N	21-22	Aluminum-wrought alloy	SFM	295	295	295	295	295	295	295	295	295	295	295	295	295
			IPT	.0009	.0009	.0013	.0013	.0016	.0015	.0018	.0019	.0021	.0023	.0022	.0022	.0025
			RPM	2580	2250	1800	1500	1290	1130	1000	900	820	750	690	580	600
			IPM	9	8	9	8	8	7	7	7	7	7	6	5	6
	23-25	Aluminum-cast, alloyed	SFM	295	295	295	295	295	295	295	295	295	295	295	295	295
			IPT	.0009	.0009	.0013	.0013	.0016	.0015	.0018	.0019	.0021	.0023	.0022	.0022	.0025
			RPM	2580	2250	1800	1500	1290	1130	1000	900	820	750	690	580	600
			IPM	9	8	9	8	8	7	7	7	7	7	6	5	6

※ The Feed, in long & extra long types, should be reduced by around 50%.

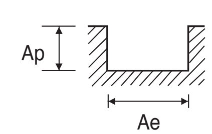
CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

E2482, E1482 SERIES — 2FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	2	3	4	5	6	8	10	12	14	16	18	20	22	25	28	30	32	36	40
						Diameter (Ø)																		
P	1	Non-alloy steel	1.0D	0.5D	SFM	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115
					IPT	.0002	.0003	.0005	.0009	.0011	.0014	.0018	.0022	.0025	.0029	.0032	.0036	.0039	.0044	.0038	.0041	.0043	.0032	.0036
					RPM	5570	3710	2790	2230	1860	1390	1110	930	800	700	620	560	510	450	400	370	350	310	280
					IPM	2	2	3	4	4	4	4	4	4	4	4	4	4	4	3	3	3	2	2
	2		1.0D	0.5D	SFM	100	100	100	100	100	100	100	100	100	100	100	100	95	100	100	100	100	100	100
					IPT	.0001	.0003	.0004	.0008	.0009	.0017	.0021	.0025	.0022	.0033	.0038	.0042	.0035	.0039	.0044	.0031	.0033	.0037	.0042
					RPM	4780	3180	2390	1910	1590	1190	960	800	680	600	530	480	430	380	340	320	300	270	240
					IPM	1	2	2	3	3	4	4	4	3	4	4	4	3	3	3	2	2	2	2
	3-4		1.0D	0.5D	SFM	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	85	65	80	80
					IPT	.0001	.0004	.0005	.0006	.0011	.0015	.0019	.0023	.0026	.0030	.0034	.0038	.0042	.0031	.0036	.0037	.0050	.0045	.0050
					RPM	3980	2650	1990	1590	1330	1000	800	660	570	500	440	400	360	320	280	270	200	220	200
					IPM	1	2	2	2	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2
	5		1.0D	0.5D	SFM	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
					IPT	.0002	.0003	.0004	.0005	.0013	.0017	.0021	.0025	.0029	.0033	.0037	.0042	.0045	.0026	.0029	.0031	.0033	.0038	.0042
					RPM	2390	1590	1190	960	800	600	480	400	340	300	270	240	220	190	170	160	150	130	120
					IPM	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1
	6	Low alloy steel	1.0D	0.5D	SFM	100	100	100	100	100	100	100	100	100	100	100	100	95	100	100	100	100	100	100
					IPT	.0001	.0003	.0004	.0008	.0009	.0017	.0021	.0025	.0022	.0033	.0038	.0042	.0035	.0039	.0044	.0031	.0033	.0037	.0042
					RPM	4780	3180	2390	1910	1590	1190	960	800	680	600	530	480	430	380	340	320	300	270	240
					IPM	1	2	2	3	3	4	4	4	3	4	4	4	3	3	3	2	2	2	2
	7		1.0D	0.5D	SFM	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	85	65	80	80
					IPT	.0001	.0004	.0005	.0006	.0011	.0015	.0019	.0023	.0026	.0030	.0034	.0038	.0042	.0031	.0036	.0037	.0050	.0045	.0050
					RPM	3980	2650	1990	1590	1330	1000	800	660	570	500	440	400	360	320	280	270	200	220	200
					IPM	1	2	2	2	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2
	8-9		1.0D	0.5D	SFM	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
					IPT	.0002	.0003	.0004	.0005	.0013	.0017	.0021	.0025	.0029	.0033	.0037	.0042	.0045	.0026	.0029	.0031	.0033	.0038	.0042
					RPM	2390	1590	1190	960	800	600	480	400	340	300	270	240	220	190	170	160	150	130	120
					IPM	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1
	10	High alloyed steel, and tool steel	1.0D	0.5D	SFM	100	100	100	100	100	100	100	100	100	100	100	100	95	100	100	100	100	100	100
					IPT	.0001	.0003	.0004	.0008	.0009	.0017	.0021	.0025	.0022	.0033	.0038	.0042	.0035	.0039	.0044	.0031	.0033	.0037	.0042
					RPM	4780	3180	2390	1910	1590	1190	960	800	680	600	530	480	430	380	340	320	300	270	240
					IPM	1	2	2	3	3	4	4	4	3	4	4	4	3	3	3	2	2	2	2
	11.1		1.0D	0.5D	SFM	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
					IPT	.0002	.0003	.0004	.0005	.0013	.0017	.0021	.0025	.0029	.0033	.0037	.0042	.0045	.0026	.0029	.0031	.0033	.0038	.0042
					RPM	2390	1590	1190	960	800	600	480	400	340	300	270	240	220	190	170	160	150	130	120
					IPM	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1
N	21-22	Aluminum-wrought alloy	1.0D	0.5D	SFM	245	345	330	330	345	330	310	310	310	330	330	330	315	310	310	345	330	325	330
					IPT	.0003	.0004	.0007	.0010	.0011	.0019	.0025	.0030	.0032	.0035	.0040	.0041	.0043	.0045	.0046	.0050	.0045	.0051	.0050
					RPM	11940	11140	7960	6370	5570	3980	3020	2520	2160	1990	1770	1590	1380	1210	1080	1110	1000	880	800
					IPM	7	10	11	13	12	15	15	15	14	14	14	13	12	11	10	11	9	9	8
	23-25	Aluminum-cast, alloyed	1.0D	0.5D	SFM	160	225	215	215	225	215	205	205	205	215	215	215	205	205	205	225	215	215	215
					IPT	.0003	.0004	.0007	.0010	.0011	.0019	.0025	.0030	.0032	.0035	.0039	.0038	.0044	.0044	.0049	.0049	.0046	.0052	.0048
					RPM	7800	7220	5170	4140	3610	2590	1970	1650	1410	1290	1150	1040	900	790	710	720	650	580	520
					IPM	4	6	7	8	8	10	10	10	9	9	9	8	8	7	7	7	6	6	5



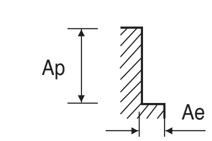
※ The Feed, in long & extra long types, should be reduced by around 50%.

YG COBALT & HSS END MILLS

RECOMMENDED CUTTING CONDITIONS

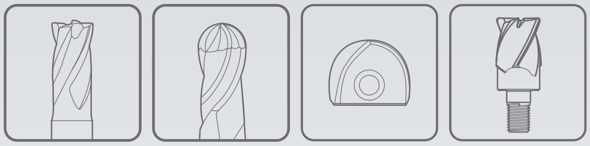
E2483, E1483 SERIES — 4 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	2	3	4	5	6	8	10	12	14	16	18	20	22	25	28	30	32	36	40
						Diameter (Ø)																		
P	1	Non-alloy steel	0.1D	1.5D	SFM	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115
					IPT	.0002	.0003	.0005	.0008	.0009	.0014	.0018	.0024	.0028	.0032	.0032	.0036	.0039	.0039	.0038	.0041	.0043	.0040	.0045
					RPM	5570	3710	2790	2230	1860	1390	1110	930	800	700	620	560	510	450	400	370	350	310	280
					IPM	4	5	6	7	7	8	8	9	9	9	8	8	8	7	6	6	6	5	5
	2		0.1D	1.5D	SFM	100	100	100	100	100	100	100	100	100	100	100	100	95	100	100	100	100	100	100
					IPT	.0001	.0002	.0004	.0007	.0009	.0015	.0018	.0022	.0066	.0029	.0033	.0036	.0035	.0033	.0037	.0031	.0033	.0037	.0042
					RPM	4780	3180	2390	1910	1590	1190	960	800	680	600	530	480	430	380	340	320	300	270	240
					IPM	2	3	4	5	6	7	7	7	18	7	7	7	6	5	5	4	4	4	4
	3-4		0.1D	1.5D	SFM	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	85	65	80	80
					IPT	.0001	.0003	.0004	.0006	.0008	.0013	.0016	.0019	.0022	.0025	.0028	.0025	.0028	.0031	.0027	.0028	.0025	.0034	.0038
					RPM	3980	2650	1990	1590	1330	1000	800	660	570	500	440	400	360	320	280	270	200	220	200
					IPM	2	3	3	4	4	5	5	5	5	5	5	4	4	4	3	3	2	3	3
	5		0.1D	1.5D	SFM	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
					IPT	.0001	.0002	.0004	.0005	.0006	.0013	.0016	.0019	.0022	.0025	.0028	.0031	.0034	.0026	.0029	.0031	.0033	.0038	.0021
					RPM	2390	1590	1190	960	800	600	480	400	340	300	270	240	220	190	170	160	150	130	120
					IPM	1	1	2	2	2	3	3	3	3	3	3	3	3	2	2	2	2	2	1
	6	Low alloy steel	0.1D	1.5D	SFM	100	100	100	100	100	100	100	100	100	100	100	100	95	100	100	100	100	100	100
					IPT	.0001	.0002	.0004	.0007	.0009	.0015	.0018	.0022	.0066	.0029	.0033	.0036	.0035	.0033	.0037	.0031	.0033	.0037	.0042
					RPM	4780	3180	2390	1910	1590	1190	960	800	680	600	530	480	430	380	340	320	300	270	240
					IPM	2	3	4	5	6	7	7	7	18	7	7	7	6	5	5	4	4	4	4
	7		0.1D	1.5D	SFM	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	85	65	80	80
					IPT	.0001	.0003	.0004	.0006	.0008	.0013	.0016	.0019	.0022	.0025	.0028	.0025	.0028	.0031	.0027	.0028	.0025	.0034	.0038
					RPM	3980	2650	1990	1590	1330	1000	800	660	570	500	440	400	360	320	280	270	200	220	200
					IPM	2	3	3	4	4	5	5	5	5	5	5	4	4	4	3	3	2	3	3
	8-9		0.1D	1.5D	SFM	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
					IPT	.0001	.0002	.0004	.0005	.0006	.0013	.0016	.0019	.0022	.0025	.0028	.0031	.0034	.0026	.0029	.0031	.0033	.0038	.0021
					RPM	2390	1590	1190	960	800	600	480	400	340	300	270	240	220	190	170	160	150	130	120
					IPM	1	1	2	2	2	3	3	3	3	3	3	3	3	2	2	2	2	2	1
	10	High alloyed steel, and tool steel	0.1D	1.5D	SFM	100	100	100	100	100	100	100	100	100	100	100	100	95	100	100	100	100	100	100
					IPT	.0001	.0002	.0004	.0007	.0009	.0015	.0018	.0022	.0066	.0029	.0033	.0036	.0035	.0033	.0037	.0031	.0033	.0037	.0042
					RPM	4780	3180	2390	1910	1590	1190	960	800	680	600	530	480	430	380	340	320	300	270	240
					IPM	2	3	4	5	6	7	7	7	18	7	7	7	6	5	5	4	4	4	4
	11.1		0.1D	1.5D	SFM	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
					IPT	.0001	.0002	.0004	.0005	.0006	.0013	.0016	.0019	.0022	.0025	.0028	.0031	.0034	.0026	.0029	.0031	.0033	.0038	.0021
					RPM	2390	1590	1190	960	800	600	480	400	340	300	270	240	220	190	170	160	150	130	120
					IPM	1	1	2	2	2	3	3	3	3	3	3	3	3	2	2	2	2	2	1
N	21-22	Aluminum-wrought alloy	0.1D	1.5D	SFM	245	345	330	330	345	330	310	310	310	330	330	330	315	310	310	345	330	325	330
					IPT	.0002	.0004	.0006	.0007	.0008	.0014	.0019	.0023	.0023	.0026	.0030	.0030	.0031	.0035	.0037	.0036	.0035	.0037	.0034
					RPM	11940	11140	7960	6370	5570	3980	3020	2520	2160	1990	1770	1590	1380	1210	1080	1110	1000	880	800
					IPM	9	16	18	19	18	23	23	23	20	21	21	19	17	17	16	16	14	13	11
	23-25	Aluminum-cast, alloyed	0.1D	1.5D	SFM	160	225	215	215	225	215	205	205	205	215	215	215	205	205	205	225	215	215	215
					IPT	.0002	.0003	.0005	.0007	.0008	.0014	.0019	.0023	.0023	.0025	.0028	.0029	.0031	.0035	.0035	.0035	.0035	.0034	.0034
					RPM	7800	7220	5170	4140	3610	2590	1970	1650	1410	1290	1150	1040	900	790	710	720	650	580	520
					IPM	6	10	11	12	12	15	15	15	13	13	13	12	11	11	10	10	9	8	7



※ The Feed, in long & extra long types, should be reduced by around 50%.

Global Cutting Tool Leader **YG-1**



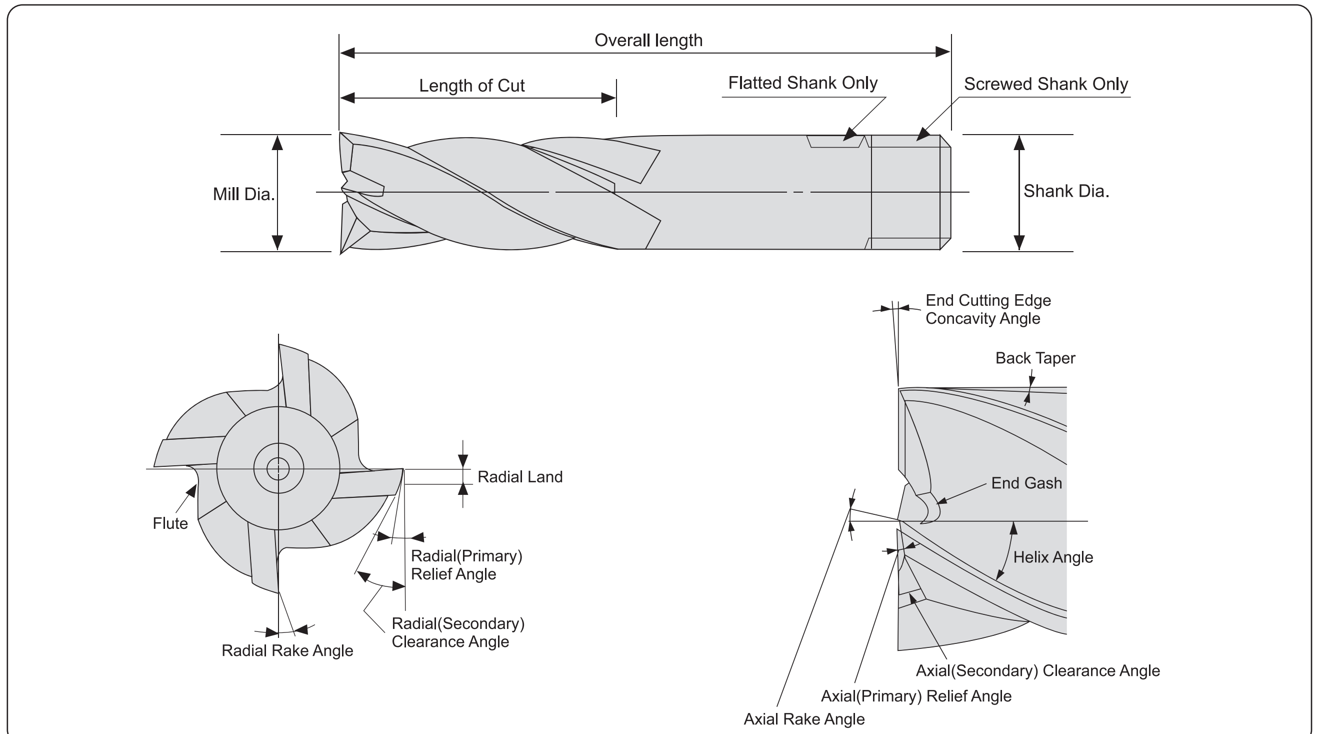
MILLING

Being the best through innovation

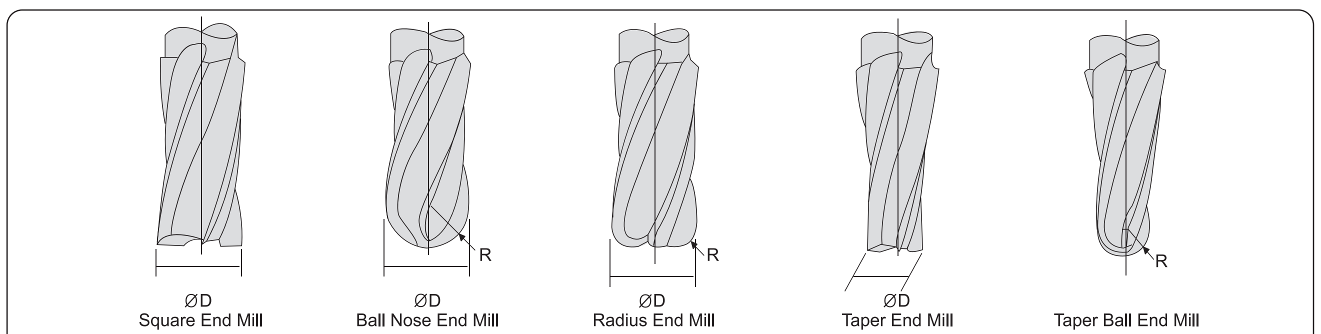
END MILLS

TECHNICAL DATA

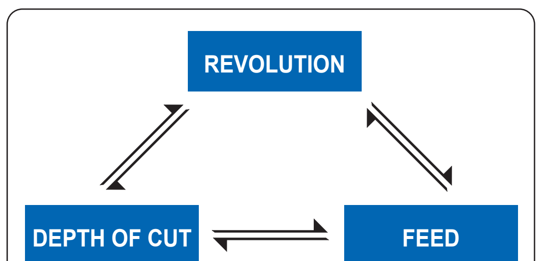
1 Names of End Mill Parts



2 Type of End Mill



Speed, feed and depth of cut are the most important factors to consider for best results in milling. Improper feeds and speeds often cause low production, poor work quality and unnecessary damage to the cutter.
This section covers the basic principles of speed and feed selection for milling cutters and end mills. It will serve as a guide in setting-up new milling jobs.



INTERRELATIONSHIP OF THREE FACTORS

YG TECHNICAL DATA
SUPER CUTTING END MILLS

3 Speeds

In milling, Speed is measured in peripheral feet per minute.(revolution per minute × cutter circumference in feet) This is frequently referred to as “peripheral speed” “cutting speed” or “surface speed”.

Revolutions per Minute $N = \dfrac{1000V}{\pi \times D}$

V : Cutting Speed(m/min)
D : Diameter of Tool(mm)
N : Revolution per minute(rev/min)
π : 3.1416

They will have to be tempered to suit the conditons ON THE JOB. For example:

Use Lower Speed Ranges for	Use Higher Speed Ranges for
Hard materials Tough materials Abrasive materials Heavy cuts Minimum tool wear Maximum cutter life	Softer materials Better finishes Smaller diameter cutters Light cuts Frail work pieces or set-ups Hand feed operations Maximum production rates Non-metallics

4 Feeds

Feed is usually measured in millimeters per minute. It is the product of feed per tooth times revolution per minute times the number of teeth in the cutter. Due to variations in cutter sizes, numbers of teeth and revolutions per minute, all feed rates should be calculated from feed per tooth. Feed per tooth is the basis of all feed rates per minute, whether the cutters are large or small, fine or coarse tooth, and are run at high or low peripheral speed. Because feed per tooth affects chip thickness. It is a very important factor in cutter life.
Highest possible feed per tooth will usually give longer cutter life between grinds and greater production per grind. Excessive feeds may over load the cutter teeth and cause breakage or chipping of the cutting edges. The following factors should be kept in mind when using the recommended starting feed per tooth.

Feed in milimeters per Minute
F.M = F.R.×R.P.M

F.R. : Feed per Revolutions in milimeters
R.P.M .: Revolutions per Minutes

The following factors should be kept in mind when using the recommended stating feed per tooth.

Use Higher Feeds For	Use Lower Feeds For
Heavy, roughing cuts Rigid set-ups Easy-to-machine work materials Rugged cutters Slab milling cuts Low tensile strength materials Coarse tooth cutters Abrasive materials	Light, and finishing cuts Frail set-ups Hard to machine work materials Frail and small cutters Deep slots High tensile strength materials Fine tooth cutters

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

SPEED AND FEED CALCULATIONS FOR MILLING CUTTERS AND OTHER ROTATING TOOLS

TO FIND	HAVING		FORMULA
Surface(or Periphery) Speed in meter Per Minute=S.P.M.	Diameter of Tool in milimeters Revolutions per Minute	=D =R.P.M.	$V=\frac{D\times3.1416\times R.P.M.}{1000}$
Revolutions Per Minute=R.P.M.	Surface Speed in meter per Minute Diameter of Tool in milimeters	=S.P.M =D	$R.P.M.=\frac{V\times1000}{D\times3.1416}$
Feed per Revolution in milimeters-F.R.	Feed in milimeters per Minute Revolution per Minute	=F.M. =R.P.M.	$F.R.=\frac{F.M.}{R.P.M.}$
Feed in milimeters Per Minute-F.M.	Feed per Revolution in milimeters Revolution per Minute	=F.R. =R.P.M.	F.M.= F.R.×R.P.M.
Number of Cutting Teeth per Minute=T.M.	Number of Teeth in Tool Revolution per Minute	=T =R.P.M.	T.M=T×R.P.M.
Feed per tooth=F.T.	Number of Teeth in Tool Feed per Revolution in milimeters	=T =R.P.M.	$F.T.=\frac{F.R.}{T}$
Feed per Tooth=F.T.	Number of Teeth in Tool Feed in milimeters per Minute Speed in Revolution per Minute	=T =F.M. =R.P.M.	$F.T.=\frac{F.M.}{T\times R.P.M.}$

5 Case of Resharpening

When the product finish become worse, the cutting edge must get dulled, chips become smaller and the cutting sound gets louder. In such cases, an end mill must be resharpened. The following are the damages of end mills when the resharpening is required.

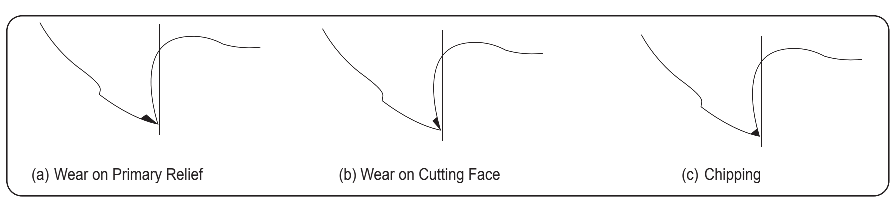


Fig. 1. Damages of Cutting Edge

6 Sharpen at Predetermined Wear Land

Cutters should be sharpened as soon as the wear land(Fig. 2.) reaches a predetermined width. This width should permit sharpening without excessive loss of tool life. It may vary from a few hundreths to some tenth of a millimeter, depending on the type of cutter and the finish required on the product. This method is used on production runs where uneven amounts of stock is removed or where the material varies in machinability. It is also used on small quantity product lots.

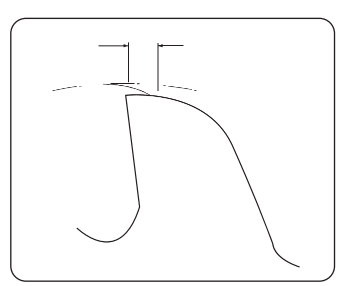


Fig. 2. Wear Land

YG TECHNICAL DATA SUPER CUTTING END MILLS

7 Resharpening Peripheral Cutting Edge

1 RESHARPENING PERIPHERAL CUTTING EDGE

The geometry of relief angle in an end mill consists of three methods as shown in Fig.3 concave, flat, and eccentric. Recently, most end mills have the eccentric relief(eccentric sharpening). In this method, since the relief is formed an eccentric are surface in cylindrical grinding method, the roughness of the finished surface of the relief improves and the strength of cutting edge increase at the same time.(Fig.4) As a result, the tool life is improved.

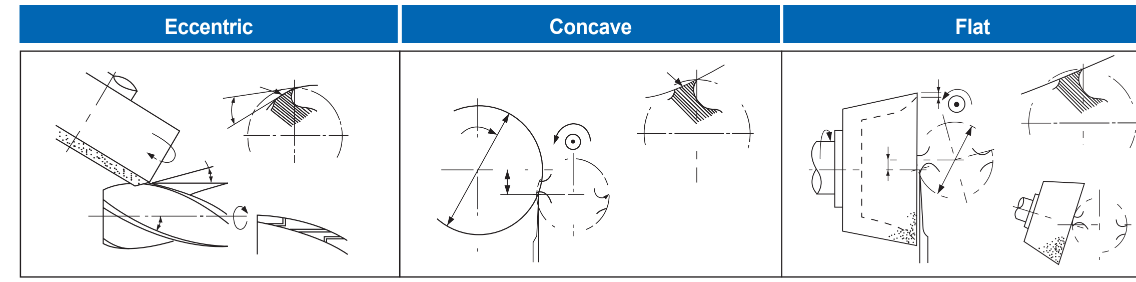


Fig. 3. Three Types of Primary Relief

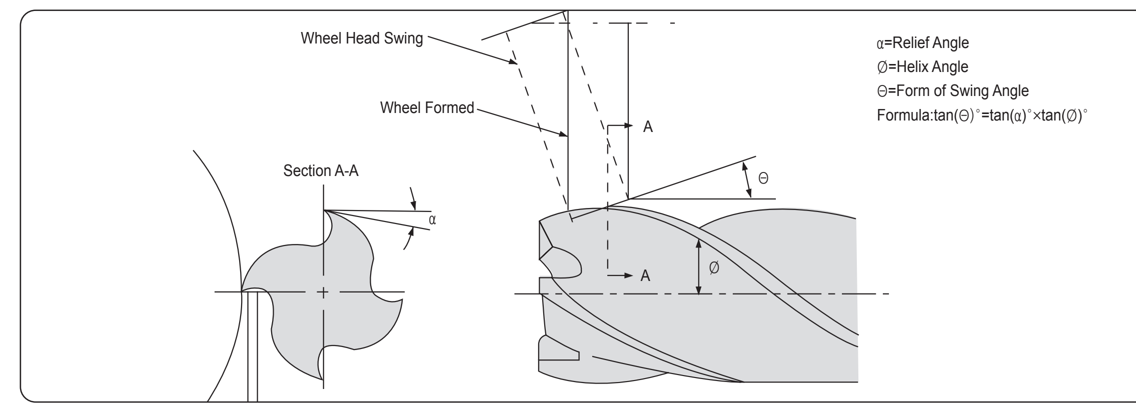


Fig. 4. Toothing of Eccentric Relief Angle

2 ANGLE OF WHEEL INCLINATION

Eccentric relief is produced with a plain wheel positioned with its axis parallel or at a slight angle with the cutter axis. The degree of relief is varied by changing the angle of wheel inclination.

Table 1. RECOMMENDED RELIEF ON END MILLS

Mill Diameter (inches)	Eccentric relief indicator drop for relief Angles shown		Checking Distance	Wheel Angles(Deg.)⊖			Radial Relief Angles(α1)	Clearance Angles(α2)
				15° Helix	30° Helix	60° Helix		
-	Min	Max.	-	*Angle	*Angle	*Angle	*Angle	*Angle
1/8	.0040	.0052	.015	4°42′	10°02′	27°58′	17°03′	25°
1/4	.0035	.0050	.020	3°15′	6°59′	20°12′	12°00′	25°
1/2	.0040	.0053	.025	2°51′	6°07′	17°51′	10°32′	25°
1	.0038	.0055	1/32	2°16′	4°54′	14°27′	8°27′	25°
1-1/2	.0033	.0050	1/32	2°02′	4°22′	12°57′	7°33′	25°
2	.0033	.0050	1/32	2°02′	4°22′	12°57′	7°33′	25°

The actual at the radial relief angle is normally kept within the range shown but may be varied to suit the cutter material, the work material and the operating conditions.
* Angle is calculated from the basic mean at the radical angle.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

8 Resharpening End Teeth

The three necessary operations and one option feature, along with setup suggestions are shown in Fig.5 A to D in each drawing, the shaded area indicates the surface being ground.

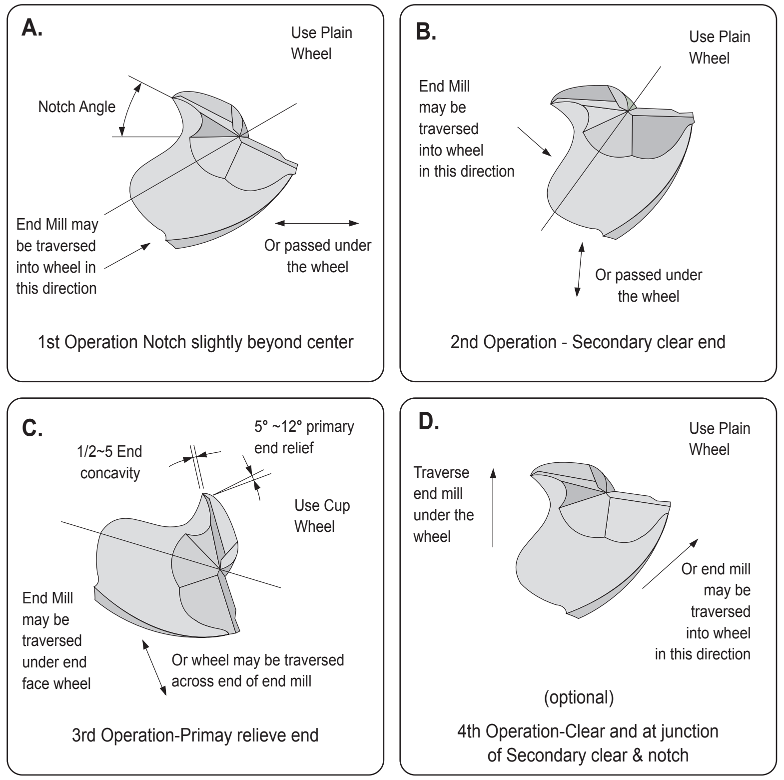


Fig 5. PROCEDURE FOR SHARPENING END OF 2 FLUTE SQUARE END MILLS

9 Inspection

The inspection is calculated by using the formula shown in Table1.
Procedure To Check
Radial Relief Angles
With Indicators.

1. Mount the cutter to rotate freely with no end movement.
2. Adjust the sharp pointed indicator to bear at the very tip of the cutting edge, pointing in a radial line, shown in Figure6
3. Roll the cutter the tabuleted amount gives under “checking distance” using the second indicator as control.
4. Consult chart for amount of drop for the particular diameter and relief angle.

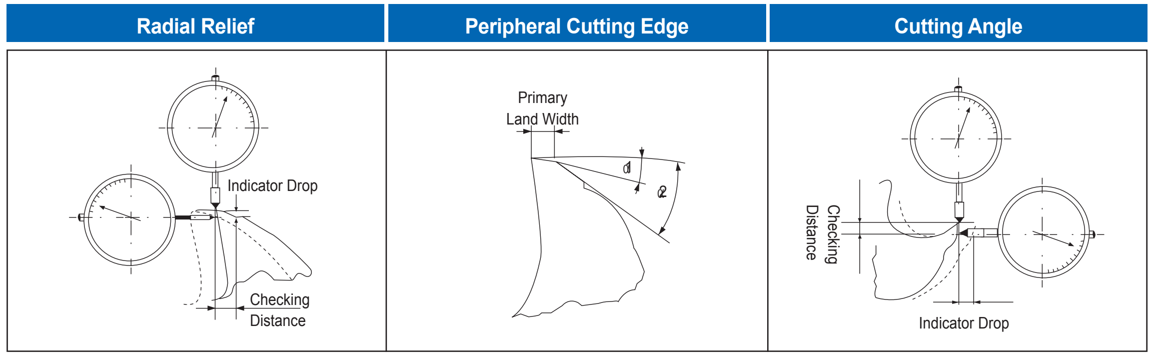
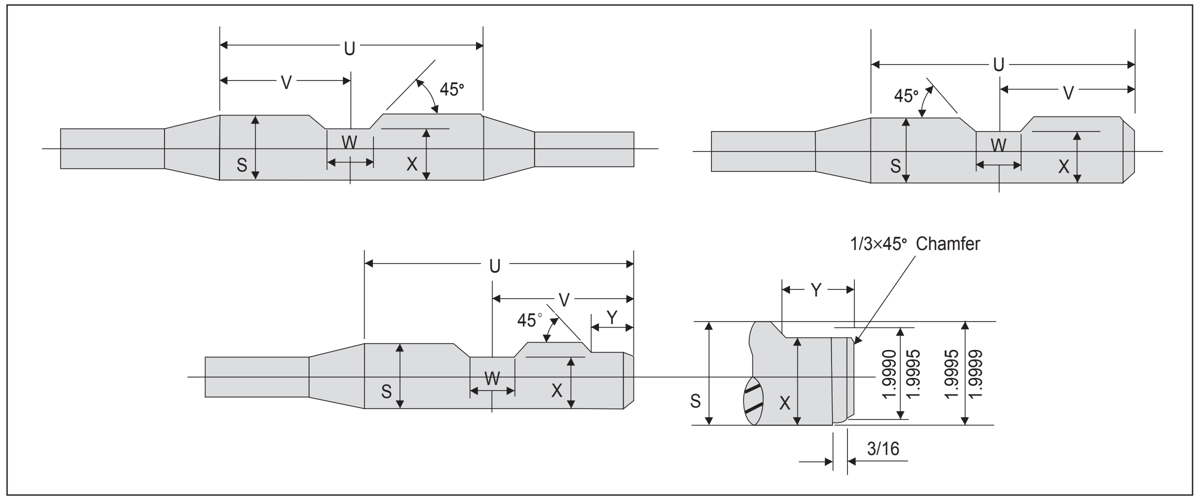


Fig. 6. Indicator Set-Up for Checking

10 Standard Weldon Shanks



11 Dimensions

All dimensions are given in inches.

Diameter of Shank S	Length of Shank U	V	W		X	Y
			Min.	Max.		
3/8	1-9/16	25/32	0.280	0.282	0.325	-
1/2	1-25/32	57/64	0.330	0.332	0.440	-
5/8	1-29/32	61/64	0.400	0.402	0.560	-
3/4	2-1/32	1-1/64	0.455	0.457	0.675	-
7/8	2-1/32	1-1/64	0.455	0.457	0.810	1/2
1	2-9/32	1-9/64	0.515	0.517	0.925	1/2
1-1/4	2-9/32	1-9/64	0.515	0.517	1.156	1/2
1-1/2	2-11/16	1-3/16	0.515	0.517	1.406	9/16
2	3-1/4	1-27/32	0.700	0.702	1.900	27/32
2-1/2	3-1/2	1-15/16	0.700	0.702	2.400	27/32

12 Tolerances

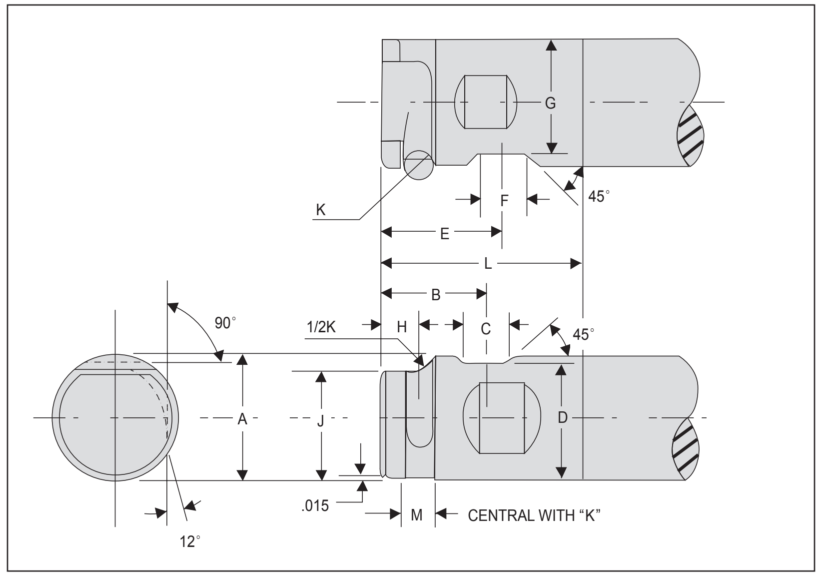
Element	Range	Direction	Tolerance
Diameter of Shank, S	All Sizes	minus	.0001 to .0005
Length of Shank, U	All Sizes	plus or minus	1/32
Dimension, V	All Sizes	plus or minus	1/64
Dimension, X	All Sizes	minus	1/64
Dimension, Y	7/8 to 2-1/2 inc.	plus or minus	1/32

Extracted from Milling Cutters and End Mills. MCTI 1989.

CARBIDE
HSS
CBN END MILLS
i-Xmill END MILLS
i-SMART MODULAR END MILLS
X5070 END MILLS
4G MILL END MILLS
X-POWER PRO END MILLS
TitaNox-POWER END MILLS
JET-POWER END MILLS
V7 PLUS A END MILLS
V7 MILL INOX
ALU-POWER HPC END MILLS
ALU-POWER END MILLS
D-POWER GRAPHITE END MILLS
STANDARD CARBIDE
ONLY ONE COATED PM60 END MILLS
SINE-POWER
TANK-POWER END MILLS
STANDARD COBALT & HSS
TECHNICAL DATA

13 Combination Shanks for End Mills

Right hand End Mill shank shown. For left hand End Mills flat “F” and pin groove “K” should be located 180° from that shown, maintaining 12° relationship of flat “F” and groove “K”



14 Dimensions

All dimensions are given in inches.

Diameter of Shank A	Length of Shank L	B	C	D	E	F	G	H	J	K	M
1-1/2	2-11/16	1-3/16	0.515	1.406	1-1/2	0.515	1.371	9/16	1.302	0.377	7/16
2	3-1/4	1-23/32	0.700	1.900	1-3/4	0.700	1.809	5/8	1.772	0.440	1/2
2-1/2	3-1/2	1-15/16	0.700	2.400	2	0.700	2.312	3/4	2.245	0.503	9/16

15 Tolerances

Element	Direction	Tolerance
Diameter of Shank, A	minus	.0001 to .0005
Length of Shank, L	plus or minus	1/32
Dimension, B	plus or minus	1/64
Dimension, C	plus	.002
Dimension, D	minus	1/64
Dimension, E	plus or minus	1/64
Dimension, F	plus or minus	.005
Dimension, G	minus	1/64
Dimension, H	plus	1/64
Dimension, J	plus or minus	.002
Dimension, K	plus	.003

Extracted from Milling Cutters and End Mills. MCTI 1989.

TECHNICAL DATA
SUPER CUTTING END MILLS

16 Troubleshooting in Endmilling

Trouble	Occurrences of trouble	Countermeasures
Breaking of tool	• At time of engaging with work material • When ending cut	1. Decrease feed rate. 2. Decrease projection amount 3. Shorten cutting edge length to required minimum limit
	• During normal cutting	1. Decrease feed rate 2. Control wear → replace tool early 3. Replace chuck or collet 4. Decrease projection amount 5. Carry out honing 6. If 4 flute, reduce to 2 flute(clogging of chipping) 7. If dry cutting change to wet cutting utilize cutting fluid. In case of wet cutting flow oil supplied from the front, change to from rear angle of side top. Use ample with rate.
	• When changing direction of feed	1. Utilize circular interpolation(in case of NC machine) or temporarily stop feed(Dowelling) 2. Reduce feed rate before and after change of directions 3. Replace chuck or collect
Fracture of cutting edge	• Fracture of corners	1. Carry out chamfering or nose with hand lapper. 2. Down cut → Up cut
	• Fracture at boundary of depth of cut	1. Down cut → Up cut 2. Reduce cutting speed
	• Chipping at center part or overall	1. Carry out honing. Or enlarge. 2. Change number of rotation(in case machine vibrates) 3. Increase cutting speed 4. In ease of squeaking noise during cutting, increase feed. 5. It dry cutting use cutting fluid or blow air. 6. Replace chuck or collet 7. Reduce cutting speed
	• Large fracturing of cutting edge	1. Decrease feed rate 2. If 4 flute reduce to 2 flute 3. Carry out honing. Or enlarge 4. Replace chuck or collet 5. Reduce cutting speed 6. If dry cutting, change to wet cutting. In case oil supply in wet cutting is from the front, change to rear at an angle or from side top. Use ample supply.
Rapid tool wear		1. Reduce cutting speed 2. Up cut → Down cut 3. Increase feed 4. Utilize wet cutting or air 5. If reground tool, improve surface roughness of flank.

SUPER CUTTING END MILLS

Trouble	Occurrences of trouble	Countermeasures
Inferior finished surface	• Surface is good but rough	1. Decrease feed 2. In case using 2 flute, increase to 4 flute
	• Small chip welding	1. Increase cutting speed 2. Utilize wet cutting air blow(ample supply) 3. Carry out fine honing 4. Up cut → Down cut 5. Increase feed or enlarge finish allowance
	• With transverse streaks	1. Carry out fine honing 2. Use water insoluble cutting fluid 3. Down cut → Up cut
	• Signs of excessive cutting	1. Reduce finishing depth of cut 2. Increase cutting speed 3. Reduce feed
Poor machining accuracy	• Finish dimensions are on minus side	1. Up cut → Down cut 2. Reduce finishing depth of cut 3. Replace chuck or collet 4. Reduce projection amount 5. Increase cutting speed
	• Poor perpendicularity	1. Reduce finishing depth of cut 2. Replace chuck or collet 3. Reduce projection amount 4. Increase cutting speed 5. 2Flute → 4 Flute 6. Reduce feed 7. Check wear rate → Replace tool
Chattering		1. Increase feed rate(in case over 0.05 mm/Zahn, try reducing) 2. Change cutting speed 3. Replace chuck or collet 4. Reduce projection amount 5. Use 2 flute cutter for rough cutting and 4 flute for finishing 6. Down cut → Up cut

ROTARY TOOL HOLDERS

HYDRAULIC CHUCK
STANDARD, POWER E-HYDRO, SHORT & RIGID
RADIAL TOOL LENGTH PRE-SETTING, MOULD

SHRINK FIT HOLDER
STANDARD, COOLANT CHANNEL TYPE,
INTERMEDIATE, REINFORCED, EXTENSION

END MILL HOLDER & SIDE LOCK ARBOR
STUB, STANDARD, EXTENDED, COOLANT CHANNEL TYPE
SIDE LOCK ARBOR

ER COLLET CHUCK
STUB, STANDARD, SHORT, EXTENDED, EXTRA EXTENDED,
TENSION (For TAPPING), NC (For CNC Lathe)
ER COLLET

SK SLIM CHUCK
STANDARD, STRAIGHT, SK COLLET

TG COLLET CHUCK
STANDARD

POWER MILLING CHUCK
STANDARD, HIGH SPEED MILLING CHUCK
MILLING CHUCK COLLET

MORSE TAPER ADAPTOR

TAPPING CHUCK
QUICK CHANGE TYPE, SYNCHRO TAPPING CHUCK-ER TYPE
QUICK CHANGE TAP ADAPTER

ONE STEP TAPPING CHUCK
TAP ADAPTER

SHELL MILL ARBOR
STANDARD, COOLANT CHANNEL TYPE,
FLANGE MOUNTING TYPE

NC DRILL CHUCK
KEYLESS TYPE, HEX KEY TYPE

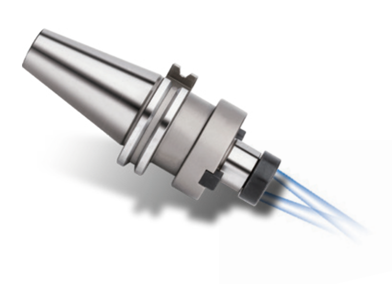
JACOBS TAPER ARBOR

STUB ARBOR

SLITTING SAW ARBOR

PULL STUD & TOOL CLAMP
PULL STUD
TOOL CLAMP
COOLANT TUBE

PRODUCTS	DESCRIPTION	PAGE
	**HYDRAULIC CHUCK**	**D5**
	CAT40, CAT50	D6
	CCT40, CCT50	D13
	BT30, BT40, BT50	D16
	CBT30, CBT40	D22
	HSK63A, HSK100A	D25
	TEST PIECE	D30
	HYDRAULIC CHUCK COLLET (REDUCTION SLEEVE)	D31
	**SHRINK FIT HOLDER**	**D39**
	CAT40, CAT50	D40
	CCT40, CCT50	D50
	BT30, BT40, BT50	D58
	CBT30, CBT40, CBT50	D70
	HSK63A, HSK100A	D82
	EXTENSION (STRAIGHT)	D92
	**END MILL HOLDER & SIDE LOCK ARBOR**	**D95**
	CAT40, CAT50	D96
	CCT40, CCT50 SIDE LOCK ARBOR	D105
	BT40, BT50	D106
	CBT30, CBT40 SIDE LOCK ARBOR	D114
	HSK63A, HSK100A	D115
	SIDE LOCK BOLT	D118
	**ER COLLET CHUCK**	**D119**
	CAT40, CAT50	D114
	BT40, BT50	D122
	HSK63A, HSK100A	D125
	SHORT, STRAIGHT-K	D126
	NC-ER	D127
	ER COLLET	D128
	NUT, WRENCH, STOP SCREW	D137
	**SK SLIM CHUCK**	**D139**
	CAT40, CAT50	D140
	CCT40, CCT50	D141
	CBT30, CBT40	D142
	HSK63A, HSK100A	D143
	STRAIGHT-K	D144
	SK COLLET	D145
	NUT, WRENCH	D146

PRODUCTS	DESCRIPTION		PAGE
	**TG COLLET CHUCK**		**D149**
	CAT40, CAT50		D150
	BT40, BT50		D151
	NUT, WRENCH, STOP SCREW		D152
	**POWER MILLING CHUCK**		**D153**
	CAT40, CAT50		D154
	CCT40, CCT50 HIGH SPEED		D155
	BT40, BT50		D156
	CBT40 HIGH SPEED		D157
	HSK63A, HSK100A HIGH SPEED		D157
	POWER MILLING CHUCK COLLET		D158
	**MORSE TAPER ADAPTER**		**D159**
	CAT40, CAT50		D160
	BT40, BT50		D160
	**TAPPING CHUCK**		**D161**
	QUICK CHANG TYPE	CAT40, CAT50	D162
		BT40, BT50	D163
	SYNCHRO TAPPING ER CHUCK	CAT40, CAT50	D164
		BT40, BT50	D165
		HSK63A	D166
		STRAIGHT-KW	D167
		TAP ADAPTER	D168
	**ONE STEP TAPPING CHUCK**		**D169**
	CAT40, CAT50		D170
	BT40, BT50		D170
	HSK63A, HSK100A		D171
	STRAIGHT-KW		D171
	TAP ADAPTER		D172
	**SHELL MILL ARBOR**		**D175**
	CAT40, CAT50		D176
	CCT40, CCT50		D179
	BT40, BT50		D181
	CBT30, CBT40		D183
	HSK63A, HSK100A		D185
	FLANGE MOUNTING TYPE	CAT50, BT50, HSK100A	D187
	COLLAR BOLT, DRIVE KEY, KEY BOLT		D188

SELECTION GUIDE

YG-1 ROTARY TOOLING

HYDRAULIC CHUCK

STANDARD, POWER E-HYDRO, SHORT & RIGID, RADIAL TOOL LENGTH PRE-SETTING, MOULD, ULTRA SHORT

HYDRAULIC CHUCK

CAT : ASME B5.50-2009

CCT : CAT DUAL CONTACT

BT : JIS B6339/MAS 403-BT/ISO7388-2

CBT : BT DUAL CONTACT

HSK : DIN69893/ISO12164-1

TEST PIECE

REDUCTION SLEEVE : OPEN TYPE/CLOSED TYPE

YG HYDRAULIC CHUCK

CAT

HYDRAULIC CHUCK

FIG.1

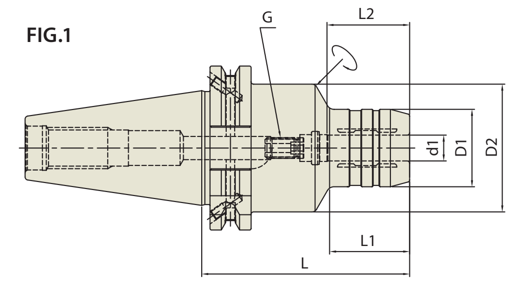
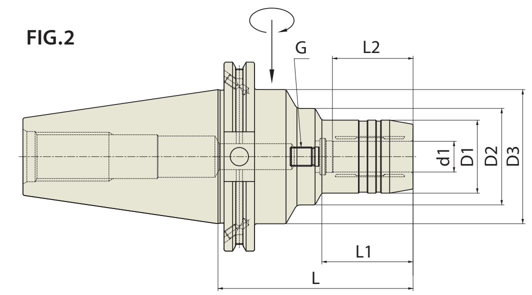


FIG.2



ASME B5.50-2009-CAT (Inch)

Collet(reduction sleeves)
Refer to page D31-D38

ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B

Unit : inch

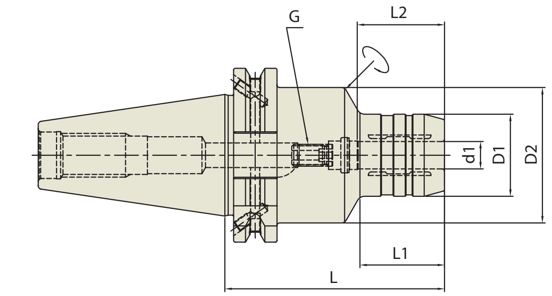
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L1	L2	G	FIG
WK020	40	CAT40 AD/B - HC 1/4 - 4.00	.250	1.024	1.750	-	4.000	1.280	1.063	M5x0.8mm	1
WK022		CAT40 AD/B - HC 3/8 - 4.00	.375	1.181	1.750	-	4.000	1.634	1.260	M6x1.0mm	1
WK024		CAT40 AD/B - HC 1/2 - 4.00	.500	1.260	1.750	-	4.000	1.634	1.457	M10x1.0mm	1
WK026		CAT40 AD/B - HC 5/8 - 4.00	.625	1.496	1.750	-	4.000	1.949	1.654	M10x1.0mm	1
WK028		CAT40 AD/B - HC 3/4 - 4.00	.750	1.654	1.750	-	4.000	1.949	1.654	M10x1.0mm	1
WK030		CAT40 AD/B - HC 1 - 4.00	1.000	2.165	2.480	-	4.000	2.618	1.890	M16x1.0mm	1
WK032		CAT40 AD/B - HC 1 1/4 - 4.00	1.250	2.480	3.150	-	4.000	1.378	2.165	M16x1.0mm	1
WL020	50	CAT50 AD/B - HC 1/4 - 4.00	.250	1.024	1.978	2.752	4.000	1.280	1.063	M5x0.8mm	2
WL022		CAT50 AD/B - HC 3/8 - 4.00	.375	1.181	1.978	2.752	4.000	1.417	1.260	M6x1.0mm	2
WL024		CAT50 AD/B - HC 1/2 - 4.00	.500	1.260	1.978	2.752	4.000	1.634	1.457	M10x1.0mm	2
WL026		CAT50 AD/B - HC 5/8 - 4.00	.625	1.496	1.978	2.752	4.000	1.870	1.654	M10x1.0mm	2
WL028		CAT50 AD/B - HC 3/4 - 4.00	.750	1.654	1.978	2.752	4.000	1.949	1.654	M10x1.0mm	2
WL030		CAT50 AD/B - HC 1 - 4.00	1.000	2.244	2.480	2.752	4.000	1.949	1.890	M16x1.0mm	2
WL032		CAT50 AD/B - HC 1 1/4 - 4.00	1.250	2.520	-	2.752	4.000	2.559	2.165	M16x1.0mm	2

ROTARY TOOL HOLDERS

YG HYDRAULIC CHUCK

CAT

HYDRAULIC CHUCK



ASME B5.50-2009-CAT (Inch)

Collet(reduction sleeves)
Refer to page D31-D38

ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B

Unit : mm

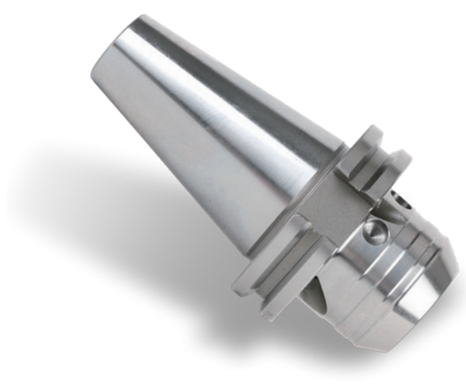
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WK060	40	CAT40 AD/B - HC 6 - 80.5	6	26	49.5	80.5	29.5	27	M5x0.8
WK062		CAT40 AD/B - HC 6 - 110	6	26	49.5	110	29.5	27	M5x0.8
WK064		CAT40 AD/B - HC 8 - 80.5	8	28	49.5	80.5	30	27	M6x1.0
WK066		CAT40 AD/B - HC 8 - 110	8	28	49.5	110	30	27	M6x1.0
WK068		CAT40 AD/B - HC 10 - 80.5	10	30	49.5	80.5	31	32	M8x1.0
WK070		CAT40 AD/B - HC 10 - 110	10	30	49.5	110	31	32	M8x1.0
WK072		CAT40 AD/B - HC 12 - 80.5	12	32	49.5	80.5	31.5	37	M10x1.0
WK074		CAT40 AD/B - HC 12 - 110	12	32	49.5	110	31.5	37	M10x1.0
WK076		CAT40 AD/B - HC 16 - 80.5	16	38	49.5	80.5	33	42	M12x1.0
WK078		CAT40 AD/B - HC 16 - 110	16	38	49.5	110	33	42	M12x1.0
WK080		CAT40 AD/B - HC 20 - 80.5	20	42	49.5	80.5	34	42	M16x1.0
WK082		CAT40 AD/B - HC 20 - 110	20	42	49.5	110	34	42	M16x1.0
WK084		CAT40 AD/B - HC 25 - 80.5	25	55	66	80.5	22	48	M16x1.0
WK086		CAT40 AD/B - HC 32 - 80.5	32	63	80	80.5	25.5	55	M16x1.0
WL060	50	CAT50 AD/B - HC 6 - 80.5	6	26	49.5	80.5	30	27	M5x0.8
WL062		CAT50 AD/B - HC 8 - 80.5	8	28	49.5	80.5	30	27	M6x1.0
WL064		CAT50 AD/B - HC 10 - 80.5	10	30	49.5	80.5	32	32	M8x1.0
WL066		CAT50 AD/B - HC 12 - 80.5	12	32	49.5	80.5	35	37	M10x1.0
WL068		CAT50 AD/B - HC 16 - 80.5	16	38	49.5	80.5	40	42	M12x1.0
WL070		CAT50 AD/B - HC 20 - 80.5	20	42	49.5	80.5	40	42	M16x1.0

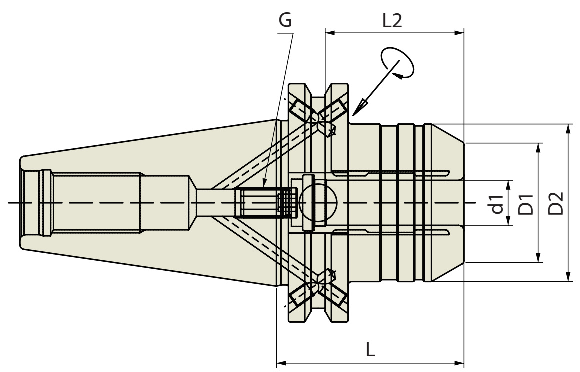
Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

HYDRAULIC CHUCK

CAT

HYDRAULIC CHUCK (Power E Hydro)





ASME B5.50-2009-CAT (Inch)

Collet(reduction sleeves)
Refer to page D31-D38

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
WK022PE	40	CAT40 AD/B - HC 3/4P - 2.539	.750	1.545	1.938	2.539	1.889	M8x1.0mm
WK023PE		CAT40 AD/B - HC 3/4P - 4.000	.750	1.545	1.938	4.000	1.889	M8x1.0mm
WK024PE		CAT40AD/B-HC1.0P-3.543	1.00	1.889	2.067	3.543	2.244	M8x1.0mm
WL028PE	50	CAT50 AD/B - HC 1 1/4P - 3.188	1.25	2.303	2.834	3.188	2.244	M8x1.0mm
WL030PE		CAT50 AD/B - HC 1 1/4P - 6.000	1.25	2.303	2.834	6.000	2.244	M8x1.0mm

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
WK102PE	40	CAT40 AD/B - HC 20P - 64.5	20	39.25	49.25	64.5	48	M8x1.0
WK103PE		CAT40 AD/B - HC 20P - 101.6	20	39.25	49.25	101.6	48	M8x1.0
WL104PE	50	CAT50 AD/B - HC 32P - 81	32	58.5	72	81	57	M8x1.0
WL106PE		CAT50 AD/B - HC 32P - 152.4	32	58.5	72	152.4	57	M8x1.0

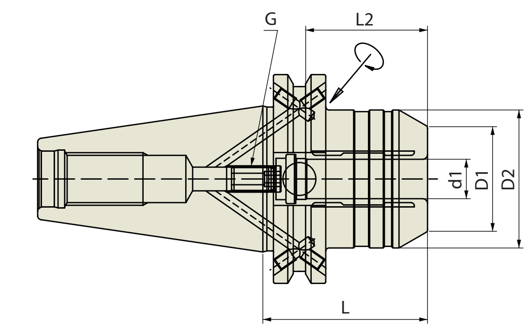
* High Clamping Torque Power version
(Please refer to page 1420, Technical Information)
* Applicable for milling(roughing and finishing)

ROTARY TOOL HOLDERS

HYDRAULIC CHUCK

CAT

HYDRAULIC CHUCK (Short & Rigid)



ASME B5.50-2009-CAT (Inch/Metric)

Collet(reduction sleeves)
Refer to page D31-D38

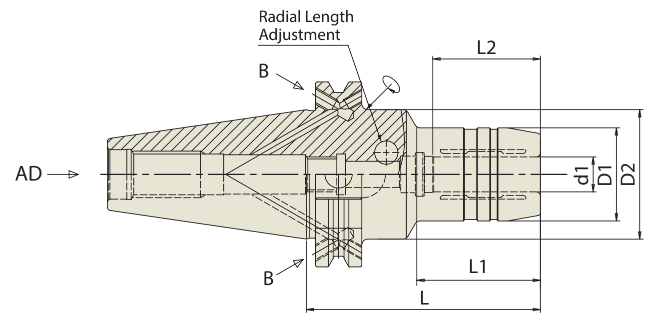
Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
WK020SNR	40	CAT40 AD/B - HC 1/2S - 2.52	.500	1.260	1.654	2.520	1.457	M8x1.0mm
WK021SNR		CAT40 AD/B - HC 5/8S - 2.52	.625	1.362	1.752	2.520	1.654	M10x1.0mm
WK022SNR		CAT40 AD/B - HC 3/4S - 2.52	.750	1.469	1.949	2.520	1.654	M10x1.0mm
WK024SNR		CAT40 AD/B - HC 1S - 3.50	1.000	2.244	2.598	3.500	1.890	M16x1.0mm
WL020SNR	50	CAT50 AD/B - HC 1/2S - 3.19	.500	1.819	2.752	3.189	1.457	M8x1.0mm
WL022SNR		CAT50 AD/B - HC 5/8S - 3.19	.625	1.819	2.752	3.189	1.654	M8x1.0mm
WL024SNR		CAT50 AD/B - HC 3/4S - 3.19	.750	2.185	2.752	3.189	1.654	M10x1.0mm
WL026SNR		CAT50 AD/B - HC 1.00S - 3.19	1.000	2.185	2.752	3.189	1.890	M16x1.0mm
WL028SNR		CAT50 AD/B - HC 1.25S - 3.19	1.250	2.185	2.752	3.189	2.165	M16x1.0mm

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
WK100SNR	40	CAT40 AD/B - HC 12S - 50	12	32	42	50	37	M8x1.0
WK102SNR		CAT40 AD/B - HC 20S - 64.5	20	37	49.5	64.5	42	M16x1.0
WL100SNR	50	CAT50 AD/B - HC 12S - 50	12	32	42	50	37	M8x1.0
WL102SNR		CAT50 AD/B - HC 20S - 64.5	20	37	49.5	64.5	42	M16x1.0
WL104SNR		CAT50 AD/B - HC 32S - 81	32	55	72	81	55	M16x1.0

HYDRAULIC CHUCK (RADIAL TOOL LENGTH PRE-SETTING TYPE)



ASME B5.50-2009-CAT (Metric)

Collet(reduction sleeves)
Refer to page D31-D38

ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B

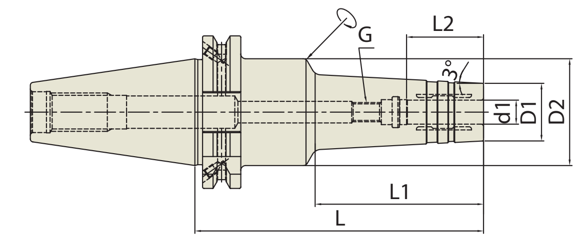
Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2
WK100HCR	40	CAT40 AD/B - HCR 12 - 80.5	12	32	49.5	80.5	31.5	37
WK102HCR		CAT40 AD/B - HCR 20 - 80.5	20	42	49.5	80.5	34	42
WK104HCR		CAT40 AD/B - HCR 32 - 110	32	64	80	110	50	55
WL100HCR	50	CAT50 AD/B - HCR 12 - 80.5	12	32	49.5	80.5	31.5	37
WL102HCR		CAT50 AD/B - HCR 20 - 80.5	20	42	49.5	80.5	34	42
WL104HCR		CAT50 AD/B - HCR 32 - 100	32	60	60	100	-	55

YG HYDRAULIC CHUCK

CAT

HYDRAULIC CHUCK (For MOULD)



ASME B5.50-2009-CAT(Inch)

Collet(reduction sleeves)
Refer to page D31-D38

ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WK020HMC	40	CAT40 AD/B - HMC 1/4 - 4.72	.250	.787	1.949	4.724	2.756	1.063	M5x0.8mm
WK022HMC		CAT40 AD/B - HMC 1/4 - 5.91	.250	.787	1.949	5.906	3.937	1.063	M5x0.8mm
WK024HMC		CAT40 AD/B - HMC 5/16 - 4.72	.313	.866	1.949	4.724	2.756	1.063	M6x1.0mm
WK026HMC		CAT40 AD/B - HMC 5/16 - 5.91	.313	.866	1.949	5.906	3.937	1.063	M6x1.0mm
WK028HMC		CAT40 AD/B - HMC 3/8 - 4.72	.375	.945	1.949	4.724	2.756	1.260	M8x1.0mm
WK030HMC		CAT40 AD/B - HMC 3/8 - 5.91	.375	.945	1.949	5.906	3.937	1.260	M8x1.0mm
WK032HMC		CAT40 AD/B - HMC 1/2 - 4.72	.500	1.024	1.949	4.724	2.756	1.457	M10x1.0mm
WK034HMC		CAT40 AD/B - HMC 1/2 - 5.91	.500	1.024	1.949	5.906	3.937	1.457	M10x1.0mm
WK036HMC		CAT40 AD/B - HMC 5/8 - 4.72	.625	1.260	1.949	4.724	2.756	1.654	M12x1.0mm
WK038HMC		CAT40 AD/B - HMC 5/8 - 5.91	.625	1.260	1.949	5.906	3.937	1.654	M12x1.0mm
WK040HMC		CAT40 AD/B - HMC 3/4 - 4.72	.750	1.339	1.949	4.724	2.756	1.654	M16x1.0mm
WK042HMC		CAT40 AD/B - HMC 3/4 - 5.91	.750	1.339	1.949	5.906	3.937	1.654	M16x1.0mm
WL020HMC	50	CAT50 AD/B - HMC 1/4 - 5.91	.250	.787	1.752	5.906	3.937	1.063	M5x0.8mm
WL022HMC		CAT50 AD/B - HMC 5/16 - 5.91	.313	.866	1.752	5.906	3.937	1.063	M6x1.0mm
WL024HMC		CAT50 AD/B - HMC 3/8 - 5.91	.375	.945	1.752	5.906	3.937	1.260	M8x1.0mm
WL026HMC		CAT50 AD/B - HMC 1/2 - 5.91	.500	1.024	1.752	5.906	3.937	1.457	M10x1.0mm
WL028HMC		CAT50 AD/B - HMC 5/8 - 5.91	.625	1.260	1.752	5.906	3.937	1.654	M12x1.0mm
WL030HMC		CAT50 AD/B - HMC 3/4 - 5.91	.750	1.339	1.752	5.906	3.937	1.654	M16x1.0mm

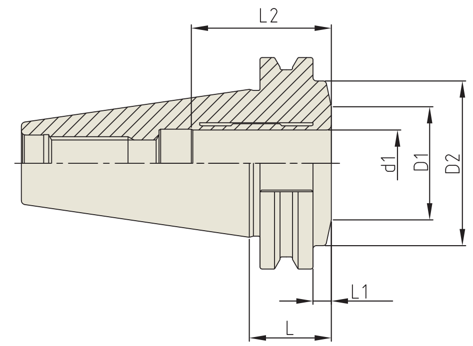
Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WK100HMC	40	CAT40 AD/B - HMC 6 - 120	6	20	49.5	120	70	27	M5X0.8
WK102HMC		CAT40 AD/B - HMC 6 - 150	6	20	49.5	150	100	27	M5X0.8
WK104HMC		CAT40 AD/B - HMC 8 - 120	8	22	49.5	120	70	27	M6X1.0
WK106HMC		CAT40 AD/B - HMC 8 - 150	8	22	49.5	150	100	27	M6X1.0
WK108HMC		CAT40 AD/B - HMC 10 - 120	10	24	49.5	120	70	32	M8X1.0
WK110HMC		CAT40 AD/B - HMC 10 - 150	10	24	49.5	150	100	32	M8X1.0
WK112HMC		CAT40 AD/B - HMC 12 - 120	12	25	49.5	120	70	37	M10X1.0
WK114HMC		CAT40 AD/B - HMC 12 - 150	12	25	49.5	150	100	37	M10X1.0
WK116HMC		CAT40 AD/B - HMC 16 - 120	16	32	49.5	120	70	42	M12X1.0
WK118HMC		CAT40 AD/B - HMC 16 - 150	16	32	49.5	150	100	42	M12X1.0
WK120HMC		CAT40 AD/B - HMC 20 - 120	20	34	49.5	120	70	42	M16X1.0
WK122HMC		CAT40 AD/B - HMC 20 - 150	20	34	49.5	150	100	42	M16X1.0
WL100HMC	50	CAT50 AD/B - HMC 6 - 150	6	20	44.5	150	100	27	M5X0.8
WL102HMC		CAT50 AD/B - HMC 8 - 150	8	22	44.5	150	100	27	M6X1.0
WL104HMC		CAT50 AD/B - HMC 10 - 150	10	24	44.5	150	100	32	M8X1.0
WL106HMC		CAT50 AD/B - HMC 12 - 150	12	25	44.5	150	100	37	M10X1.0
WL108HMC		CAT50 AD/B - HMC 16 - 150	16	32	44.5	150	100	42	M12X1.0
WL110HMC		CAT50 AD/B - HMC 20 - 150	20	34	44.5	150	100	42	M16X1.0

YG HYDRAULIC CHUCK

CAT

HYDRAULIC CHUCK (ULTRA SHORT)



JIS B6339/MAS 403-BT (Inch/Metric)

Collet(reduction sleeves)
Refer to page D31-D38

ASME B5.50 - CAT | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WK101US	40	CAT40 - HC 0.75 - 0.969	0.750	1.339	1.949	0.969	0.219	1.654	0.81
WL101US	50	CAT50 - HC 1.25 - 1.217	1.250	1.929	2.776	1.217	0.467	2.165	2.63

Unit : mm

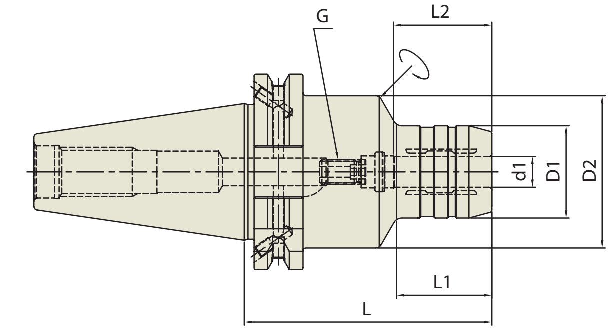
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WK102US	40	CAT40 - HC 20 - 24.6	20	34	49.5	24.6	5.5	42	0.81
WL102US	50	CAT50 - HC 32 - 30.9	32	49	70.5	30.9	11.85	55	2.63

ROTARY TOOL HOLDERS

YG HYDRAULIC CHUCK

CCT

DUAL CONTACT HYDRAULIC CHUCK



CCT (CAT DUAL CONTACT) (Inch)

Collet(reduction sleeves)
Refer to page D31-D38

CCT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WB020	40	CCT40 AD/B - HC 1/4 - 3.54	.250	1.024	1.752	3.543	1.280	1.063	M5x0.8mm
WB022		CCT40 AD/B - HC 5/16 - 3.54	.313	1.102	1.752	3.543	1.280	1.063	M6x1.0mm
WB024		CCT40 AD/B - HC 3/8 - 3.54	.375	1.181	1.752	3.543	1.634	1.260	M8x1.0mm
WB026		CCT40 AD/B - HC 1/2 - 3.54	.500	1.260	1.752	3.543	1.634	1.457	M10x1.0mm
WB028		CCT40 AD/B - HC 5/8 - 3.54	.625	1.496	1.752	3.543	1.949	1.654	M10x1.0mm
WB030		CCT40 AD/B - HC 3/4 - 3.54	.750	1.654	1.752	3.543	1.949	1.654	M10x1.0mm
WB032		CCT40AD/B-HC1"-3.94	1.000	2.165	2.480	3.937	2.559	1.890	M16x1.0mm
WB034		CCT40 AD/B - HC 1 1/4 - 4.13	1.250	2.480	3.150	4.134	1.378	2.165	M16x1.0mm
WC020	50	CCT50 AD/B - HC 1/4 - 3.54	.250	1.024	1.969	3.543	1.181	1.063	M5x0.8mm
WC022		CCT50 AD/B - HC 5/16 - 3.54	.313	1.102	1.969	3.543	1.181	1.063	M6x1.0mm
WC024		CCT50 AD/B - HC 3/8 - 3.54	.375	1.181	1.969	3.543	1.260	1.260	M8x1.0mm
WC026		CCT50 AD/B - HC 1/2 - 3.54	.500	1.260	1.969	3.543	1.378	1.457	M10x1.0mm
WC028		CCT50 AD/B - HC 5/8 - 3.54	.625	1.496	1.969	3.543	1.575	1.654	M10x1.0mm
WC030		CCT50 AD/B - HC3/4 - 3.54	.750	1.654	1.969	3.543	1.575	1.654	M10x1.0mm
WC032		CCT50 AD/B - HC1" - 4.13	1.000	2.244	2.480	4.134	2.047	1.890	M16x1.0mm
WC034		CCT50 AD/B - HC1 1/4-4.53	1.250	2.480	2.953	4.528	2.441	2.165	M16x1.0mm

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

Hydraulic Chuck
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TG Collet Chuck
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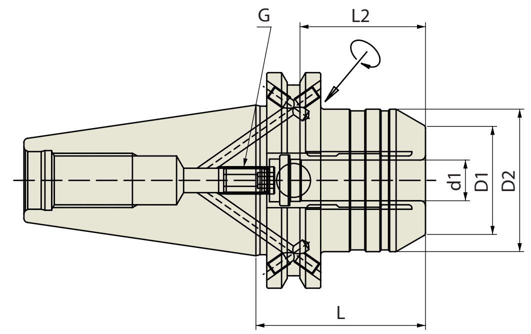
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG HYDRAULIC CHUCK

CCT

DUAL CONTACT HYDRAULIC CHUCK (Power E Hydro)



CCT (CAT DUAL CONTACT) (Inch/Metric)

Collet(reduction sleeves)
Refer to page D31-D38

CCT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
WB030PE	40	CCT40 AD/B - HC 3/4P - 2.539	0.75	1.545	1.939	2.539	1.889	M8x1.0mm
WB031PE		CCT40 AD/B - HC 3/4P - 4.000	0.75	1.545	1.939	4.000	1.889	M8x1.0mm
WB032PE		CCT40 AD/B - HC 1.0P - 4.000	1.00	1.889	2.067	3.543	2.244	M8x1.0mm

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
WB130PE	40	CCT40 AD/B - HC 20P - 64.5	20	39.25	49.25	64.5	48	M8x1.0
WB131PE		CCT40 AD/B - HC 20P - 101.6	20	39.25	49.25	101.6	48	M8x1.0

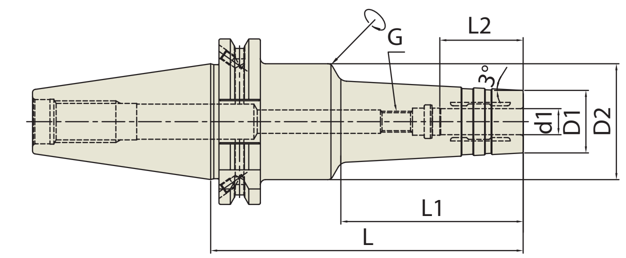
* High Clamping Torque Power version
  (Please refer to page D172, Technical Information)
* Applicable for milling(roughing and finishing)

ROTARY TOOL HOLDERS

YG HYDRAULIC CHUCK

CCT

DUAL CONTACT HYDRAULIC CHUCK (For MOULD)



CCT (CAT DUAL CONTACT) (Inch/Metric)

Collet(reduction sleeves)
Refer to page D31-D38

CCT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WB020HMC	40	CCT40 AD/B - HMC 1/4 - 4.72	.250	.787	1.949	4.724	2.756	1.063	M5X0.8mm
WB022HMC		CCT40 AD/B - HMC 1/4 - 5.91	.250	.787	1.949	5.906	3.937	1.063	M5X0.8mm
WB024HMC		CCT40 AD/B - HMC 5/16 - 4.72	.313	.866	1.949	4.724	2.756	1.063	M6X1.0mm
WB026HMC		CCT40 AD/B - HMC 5/16 - 5.91	.313	.866	1.949	5.906	3.937	1.063	M6X1.0mm
WB028HMC		CCT40 AD/B - HMC 3/8 - 4.72	.375	.945	1.949	4.724	2.756	1.260	M8X1.0mm
WB030HMC		CCT40 AD/B - HMC 3/8 - 5.91	.375	.945	1.949	5.906	3.937	1.260	M8X1.0mm
WB032HMC		CCT40 AD/B - HMC 1/2 - 4.72	.500	1.024	1.949	4.724	2.756	1.457	M10X1.0mm
WB034HMC		CCT40 AD/B - HMC 1/2 - 5.91	.500	1.024	1.949	5.906	3.937	1.457	M10X1.0mm
WB036HMC		CCT40 AD/B - HMC 5/8 - 4.72	.625	1.260	1.949	4.724	2.756	1.654	M12X1.0mm
WB038HMC		CCT40 AD/B - HMC 5/8 - 5.91	.625	1.260	1.949	5.906	3.937	1.654	M12X1.0mm
WB040HMC		CCT40 AD/B - HMC 3/4 - 4.72	.750	1.339	1.949	4.724	2.756	1.654	M16X1.0mm
WB042HMC		CCT40 AD/B - HMC 3/4 - 5.91	.750	1.339	1.949	5.906	3.937	1.654	M16X1.0mm
WC020HMC	50	CCT50 AD/B - HMC 1/4 - 5.91	.250	.787	1.752	5.906	3.937	1.063	M5X0.8mm
WC022HMC		CCT50 AD/B - HMC 5/16 - 5.91	.313	.866	1.752	5.906	3.937	1.063	M6X1.0mm
WC024HMC		CCT50 AD/B - HMC 3/8 - 5.91	.375	.945	1.752	5.906	3.937	1.260	M8X1.0mm
WC026HMC		CCT50 AD/B - HMC 1/2 - 5.91	.500	1.024	1.752	5.906	3.937	1.457	M10X1.0mm
WC028HMC		CCT50 AD/B - HMC 5/8 - 5.91	.625	1.260	1.752	5.906	3.937	1.654	M12X1.0mm
WC030HMC		CCT50 AD/B - HMC 3/4 - 5.91	.750	1.339	1.752	5.906	3.937	1.654	M16X1.0mm

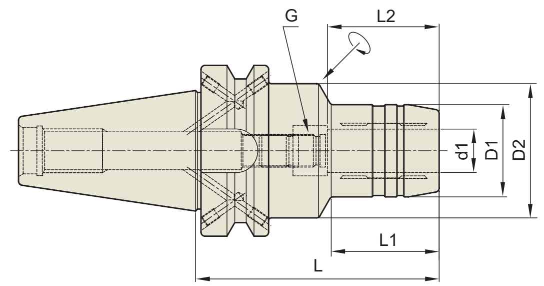
Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WB100HMC	40	CCT40 AD/B - HMC 6 - 120	6	20	49.5	120	70	27	M5X0.8
WB102HMC		CCT40 AD/B - HMC 6 - 150	6	20	49.5	150	100	27	M5X0.8
WB104HMC		CCT40 AD/B - HMC 8 - 120	8	22	49.5	120	70	27	M6X1.0
WB106HMC		CCT40 AD/B - HMC 8 - 150	8	22	49.5	150	100	27	M6X1.0
WB108HMC		CCT40 AD/B - HMC 10 - 120	10	24	49.5	120	70	32	M8X1.0
WB110HMC		CCT40 AD/B - HMC 10 - 150	10	24	49.5	150	100	32	M8X1.0
WB112HMC		CCT40 AD/B - HMC 12 - 120	12	25	49.5	120	70	37	M10X1.0
WB114HMC		CCT40 AD/B - HMC 12 - 150	12	25	49.5	150	100	37	M10X1.0
WB116HMC		CCT40 AD/B - HMC 16 - 120	16	32	49.5	120	70	42	M12X1.0
WB118HMC		CCT40 AD/B - HMC 16 - 150	16	32	49.5	150	100	42	M12X1.0
WB120HMC		CCT40 AD/B - HMC 20 - 120	20	34	49.5	120	70	42	M16X1.0
WB122HMC		CCT40 AD/B - HMC 20 - 150	20	34	49.5	150	100	42	M16X1.0
WC100HMC	50	CCT50 AD/B - HMC 6 - 150	6	20	44.5	150	100	27	M5X0.8
WC102HMC		CCT50 AD/B - HMC 8 - 150	8	22	44.5	150	100	27	M6X1.0
WC104HMC		CCT50 AD/B - HMC 10 - 150	10	24	44.5	150	100	32	M8X1.0
WC106HMC		CCT50 AD/B - HMC 12 - 150	12	25	44.5	150	100	37	M10X1.0
WC108HMC		CCT50 AD/B - HMC 16 - 150	16	32	44.5	150	100	42	M12X1.0
WC110HMC		CCT50 AD/B - HMC 20 - 150	20	34	44.5	150	100	42	M16X1.0

HYDRAULIC CHUCK

BT

HYDRAULIC CHUCK



JIS B6339/MAS 403-BT (Inch)

Collet(reduction sleeves)
Refer to page D31-D38

JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B

Unit : inch

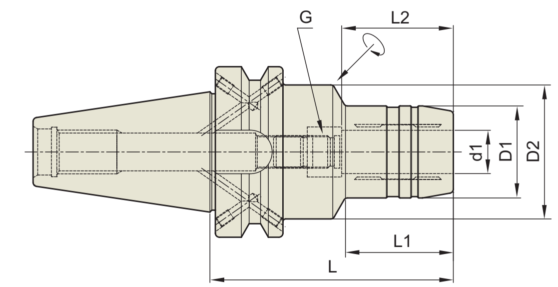
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WG020	30	BT30 - HC 1/4 - 2.75	.250	1.024	1.752	2.750	1.161	1.063	M5x0.8mm
WG022		BT30 - HC 5/16 - 2.75	.313	1.102	1.752	2.750	1.181	1.063	M6x1.0mm
WG024		BT30 - HC 3/8 - 2.95	.375	1.181	1.752	2.953	1.220	1.260	M8x1.0mm
WG026		BT30 - HC 1/2 - 3.35	.500	1.260	1.772	3.346	1.575	1.457	M10x1.0mm
WG028		BT30 - HC 5/8 - 3.54	.625	1.496	1.772	3.543	1.811	1.654	M10x1.0mm
WG030		BT30 - HC 3/4 - 3.54	.750	1.654	1.772	3.543	1.890	1.654	M6x1.0mm
WH020	40	BT40 AD/B - HC 1/4 - 3.54	.250	1.024	1.752	3.543	1.181	1.063	M5x0.8mm
WH022		BT40 AD/B - HC 5/16 - 3.54	.313	1.102	1.752	3.543	1.280	1.063	M6x1.0mm
WH024		BT40 AD/B - HC 3/8 - 3.54	.375	1.181	1.752	3.543	1.260	1.260	M8x1.0mm
WH026		BT40 AD/B - HC 1/2 - 3.54	.500	1.260	1.752	3.543	1.378	1.457	M10x1.0mm
WH028		BT40 AD/B - HC 5/8 - 3.54	.625	1.496	1.870	3.543	1.575	1.654	M12x1.0mm
WH030		BT40 AD/B - HC 3/4 - 3.54	.750	1.654	1.870	3.543	1.575	1.654	M16x1.0mm
WH032		BT40 AD/B - HC 1" - 3.94	1.000	1.969	2.362	3.937	1.772	1.890	M16x1.0mm
WH034		BT40 AD/B - HC 1 1/4 - 4.13	1.250	2.362	-	4.134	-	2.165	M16x1.0mm

ROTARY TOOL HOLDERS

HYDRAULIC CHUCK

BT

HYDRAULIC CHUCK



JIS B6339/MAS 403-BT (Metric)

Collet(reduction sleeves)
Refer to page D31-D38

JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD or AD/B

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WG100	30	BT30 - HC 6 - 70	6	26	44.5	70	29.5	27	M5x0.8
WG102		BT30 - HC 8 - 70	8	28	44.5	70	30	27	M6x1.0
WG104		BT30 - HC 10 - 75	10	30	44.5	75	31	32	M8x1.0
WG106		BT30 - HC 12 - 85	12	32	45	85	45	37	M10x1.0
WG108		BT30 - HC 14 - 85	14	34	45	85	45	37	M10x1.0
WG110		BT30 - HC 16 - 90	16	38	45	90	50	42	M10x1.0
WG112		BT30 - HC 18 - 90	18	40	45	90	50	42	M10x1.0
WG114		BT30 - HC 20 - 90	20	42	45	90	50	42	M6x1.0
WH100	40	BT40 AD/B - HC 6 - 90	6	26	44.5	90	43	27	M5x0.8
WH102		BT40 AD/B - HC 8 - 90	8	28	44.5	90	44.5	27	M6x1.0
WH104		BT40 AD/B - HC 10 - 90	10	30	44.5	90	44.5	32	M8x1.0
WH106		BT40 AD/B - HC 12 - 90	12	32	44.5	90	44.5	37	M10x1.0
WH108		BT40 AD/B - HC 14 - 90	14	34	44.5	90	44.5	37	M10x1.0
WH110		BT40 AD/B - HC 16 - 90	16	38	44.5	90	47.5	42	M12x1.0
WH112		BT40 AD/B - HC 18 - 90	18	40	44.5	90	47.5	42	M12x1.0
WH114		BT40 AD/B - HC 20 - 90	20	42	44.5	90	47.5	42	M16x1.0
WH116		BT40 AD/B - HC 25 - 100	25	50	60	100	47.5	48	M16x1.0
WH118		BT40 AD/B - HC 32 - 105	32	60	-	105	-	55	M16x1.0

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG HYDRAULIC CHUCK

BT

HYDRAULIC CHUCK (Power E Hydro)

FIG.1

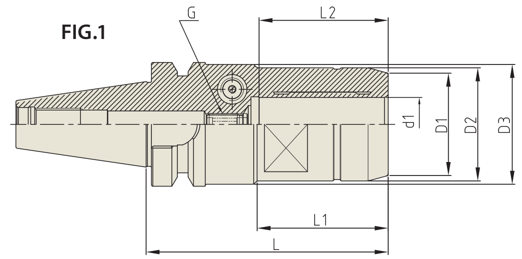
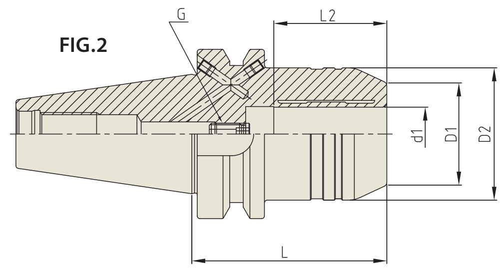


FIG.2



JIS B6339/MAS 403-BT (Inch/Metric)

Collet(reduction sleeves)
Refer to page D31-D38

JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD or AD/B

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	FIG.
WG002PE	30	BT30 - HC 3/4P - 3.543	.750	1.496	1.653	1.751	3.543	1.889	M8x1.0mm	1
WH002PE	40	BT40 AD/B - HC3/4P - 2.854	.750	1.545	1.938	-	2.854	1.889	M8x1.0mm	2
WF003PE		BT40 AD/B - HC1.0P - 3.937	1	1.889	2.067	-	3.937	2.244	M8x1.0mm	2
WI003PE	50	BT50 AD/B - HC 1 1/4P - 3.543	1.25	2.303	2.834	-	3.543	2.244	M8x1.0mm	2

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	FIG.
WG100PE	30	BT30 - HC 12P - 69	12	32	42	44.5	69	41	M8x1.0	1
WG102PE		BT30 - HC 20P - 90	20	38	42	44.5	90	48	M8x1.0	1
WH100PE	40	BT40 AD/B - HC 12P - 58	12	32	42	-	58	41	M8x1.0	2
WH102PE		BT40 AD/B - HC 20P - 72.5	20	39.25	49.25	-	72.5	48	M8x1.0	2
WI100PE	50	BT50 AD/B - HC 20P - 83.5	20	39.25	49.25	-	83.5	48	M8x1.0	2
WI102PE		BT50 AD/B - HC 32P - 90	32	58.5	72	-	90	57	M8x1.0	2

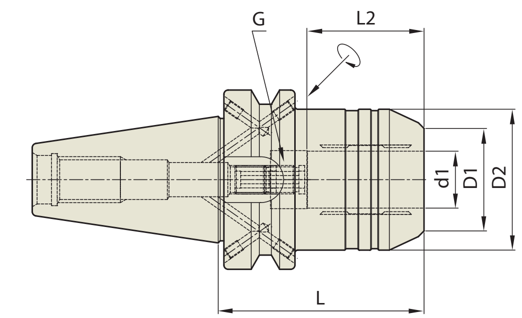
* High Clamping Torque Power version
(Please refer to page D172, Technical Information)
* Applicable for milling(roughing and finishing)

ROTARY TOOL HOLDERS

YG HYDRAULIC CHUCK

BT

HYDRAULIC CHUCK (Short & Rigid)



JIS B6339/MAS 403-BT (Metric)

Collet(reduction sleeves)
Refer to page D31-D38

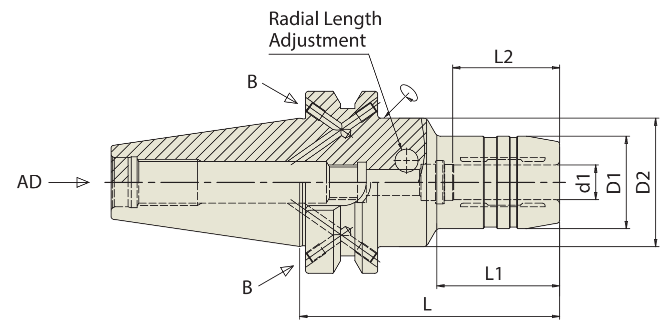
JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD or AD/B

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
WG100SNR	30	BT30 - HC 20S - 85	20	41	44	85	42	M6x1.0
WH100SNR	40	BT40 AD/B - HC 12S - 58	12	32	42	58	37	M8x1.0
WH102SNR		BT40 AD/B - HC 20S - 72.5	20	38	49.25	72.5	42	M8x1.0

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

HYDRAULIC CHUCK (RADIAL TOOL LENGTH PRE-SETTING TYPE)



JIS B6339/MAS 403-BT (Metric)

Collet(reduction sleeves)
Refer to page D31-D38

JIS B6339-BT · AT3 · 2.5G · 25,000 RPM · (at 3D) ≤0.00012" · AD or AD/B

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2
WG100HCR	30	BT30 - HCR 12 - 85	12	32	44.5	85	40	37
WG102HCR		BT30 - HCR 20 - 85	20	44	-	85	-	42
WH100HCR	40	BT40 AD/B - HCR 12 - 90	12	32	44.5	90	42.5	37
WH102HCR		BT40 AD/B - HCR 20 - 90	20	42	44.5	90	47.5	42
WH104HCR		BT40 AD/B - HCR 32 - 105	32	60	-	105	-	55

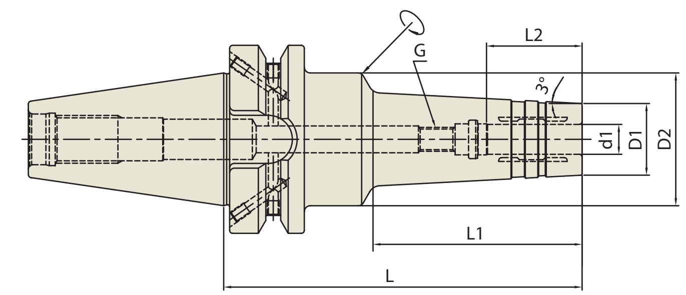
ROTARY TOOL HOLDERS

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG HYDRAULIC CHUCK

BT

HYDRAULIC CHUCK (For MOULD)



JIS B6339/MAS 403-BT (Metric)

Collet(reduction sleeves)
Refer to page D31-D38

JIS B6339-BT · AT3 · 2.5G · 25,000 RPM · (at 3D) ≤0.00012" · AD/B

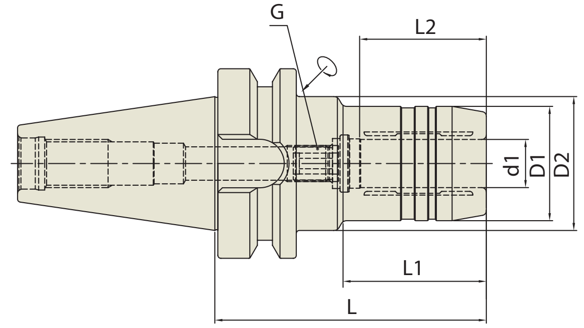
Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WH100HMC	40	BT40 AD/B - HMC 6 - 120	6	20	44.5	120	70	27	M5×0.8
WH102HMC		BT40 AD/B - HMC 6 - 150	6	20	44.5	150	100	27	M5×0.8
WH104HMC		BT40 AD/B - HMC 8 - 120	8	22	44.5	120	70	27	M6×1.0
WH106HMC		BT40 AD/B - HMC 8 - 150	8	22	44.5	150	100	27	M6×1.0
WH108HMC		BT40 AD/B - HMC 10 - 120	10	24	44.5	120	70	32	M8×1.0
WH110HMC		BT40 AD/B - HMC 10 - 150	10	24	44.5	150	100	32	M8×1.0
WH112HMC		BT40 AD/B - HMC 12 - 120	12	25	44.5	120	70	37	M10×1.0
WH114HMC		BT40 AD/B - HMC 12 - 150	12	25	44.5	150	100	37	M10×1.0
WH116HMC		BT40 AD/B - HMC 16 - 120	16	32	44.5	120	70	42	M12×1.0
WH118HMC		BT40 AD/B - HMC 16 - 150	16	32	44.5	150	100	42	M12×1.0
WH120HMC		BT40 AD/B - HMC 20 - 120	20	36	43.75	120	-	42	M16×1.0
WH122HMC		BT40 AD/B - HMC 20 - 150	20	36	46.9	150	-	42	M16×1.0

YG HYDRAULIC CHUCK

CBT

DUAL CONTACT HYDRAULIC CHUCK



CBT (BT DUAL CONTACT) (Inch/Metric)

Collet(reduction sleeves) Refer to page D31-D38

CBT AT3 2.5G 25,000 RPM (at 3D) ≤0.00012" AD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WD020	30	CBT 30 - HC 1/4 - 2.76	.250	1.024	1.752	2.756	1.161	1.063	M5x0.8mm
WD022		CBT 30 - HC 5/16 - 2.76	.313	1.102	1.752	2.756	1.181	1.063	M6x1.0mm
WD024		CBT 30 - HC 3/8 - 2.95	.375	1.181	1.752	2.953	1.220	1.260	M8x1.0mm
WD026		CBT 30 - HC 1/2 - 3.35	.500	1.260	1.772	3.346	1.575	1.457	M10x1.0mm
WD028		CBT 30 - HC 5/8 - 3.54	.625	1.496	1.772	3.543	1.811	1.654	M10x1.0mm
WD030		CBT 30 - HC 3/4 - 3.54	.750	1.654	1.772	3.543	1.890	1.654	M16x1.0mm
WE020	40	CBT 40 - HC 1/4 - 3.54	.250	1.024	1.752	3.543	1.181	1.063	M5x0.8mm
WE022		CBT 40 - HC 5/16 - 3.54	.313	1.102	1.752	3.543	1.280	1.063	M6x1.0mm
WE024		CBT 40 - HC 3/8 - 3.54	.375	1.181	1.752	3.543	1.260	1.260	M8x1.0mm
WE026		CBT 40 - HC 1/2 - 3.54	.500	1.260	1.752	3.543	1.378	1.457	M10x1.0mm
WE028		CBT 40 - HC 5/8 - 3.54	.625	1.496	1.870	3.543	1.575	1.654	M12x1.0mm
WE030		CBT 40 - HC 3/4 - 3.54	.750	1.654	1.870	3.543	1.575	1.654	M16x1.0mm
WE032		CBT 40 - HC 1 - 3.94	1.000	1.969	2.362	3.937	1.772	1.890	M16x1.0mm
WE034		CBT 40 - HC 1 1/4 - 4.13	1.250	2.362	-	4.134	-	2.165	M16x1.0mm

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WD100	30	CBT 30 - HC 6 - 70	6	26	44.5	70	29.5	27	M5x0.8
WD102		CBT 30 - HC 8 - 70	8	28	44.5	70	30	27	M6x1.0
WD104		CBT 30 - HC 10 - 75	10	30	44.5	75	31	32	M8x1.0
WD106		CBT 30 - HC 12 - 85	12	32	45	85	45	37	M10x1.0
WD108		CBT 30 - HC 14 - 85	14	34	45	85	45	37	M10x1.0
WD110		CBT 30 - HC 16 - 90	16	38	45	90	50	42	M10x1.0
WD112		CBT 30 - HC 18 - 90	18	40	45	90	50	42	M10x1.0
WD114		CBT 30 - HC 20 - 90	20	42	45	90	50	42	M6x1.0
WE100	40	CBT 40 - HC 6 - 90	6	26	44.5	90	43	27	M5x0.8
WE102		CBT 40 - HC 8 - 90	8	28	44.5	90	44.5	27	M6x1.0
WE104		CBT 40 - HC 10 - 90	10	30	44.5	90	44.5	32	M8x1.0
WE106		CBT 40 - HC 12 - 90	12	32	44.5	90	44.5	37	M10x1.0
WE108		CBT 40 - HC 14 - 90	14	34	44.5	90	44.5	37	M10x1.0
WE110		CBT 40 - HC 16 - 90	16	38	44.5	90	47.5	42	M12x1.0
WE112		CBT 40 - HC 18 - 90	18	40	44.5	90	47.5	42	M12x1.0
WE114		CBT 40 - HC 20 - 90	20	42	44.5	90	47.5	42	M16x1.0
WE116		CBT 40 - HC 25 - 100	25	50	60	100	47.5	48	M16x1.0
WE118		CBT 40 - HC 32 - 105	32	60	-	105	-	55	M16x1.0

ROTARY TOOL HOLDERS

YG HYDRAULIC CHUCK

CBT

DUAL CONTACT HYDRAULIC CHUCK (Power E Hydro)

FIG.1

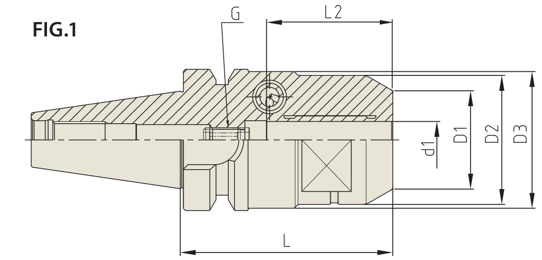
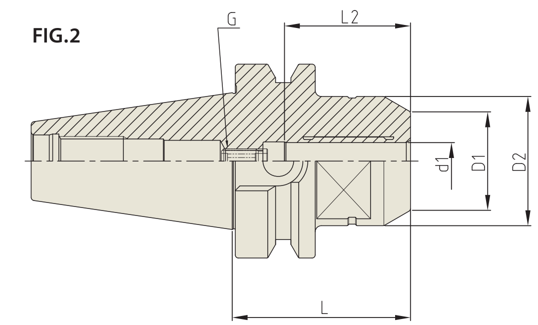


FIG.2



CBT (BT DUAL CONTACT) (Inch/Metric)

Collet(reduction sleeves) Refer to page D31-D38

CBT AT3 2.5G 25,000 RPM (at 3D) ≤0.00012" AD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	FIG.
WD030PE	30	CBT 30 - HC 3/4P - 3.543	.75	1.496	1.653	1.751	3.543	1.889	M8x1.0mm	1
WE030PE	40	CBT 40 - HC 3/4P - 2.854	.75	1.545	1.938	-	2.854	1.889	M8x1.0mm	2
WE031PE		CBT 40 - HC 1.0P - 3.937	1	1.889	2.067	-	3.937	2.244	M8x1.0mm	2

Unit : mm

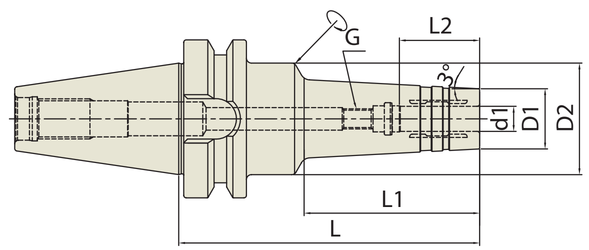
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	FIG.
WD112PE	30	CBT 30 - HC 12P - 69	12	32	42	44.5	69	41	M8x1.0	1
WD120PE		CBT 30 - HC 20P - 90	20	38	42	44.5	90	48	M8x1.0	1
WE112PE	40	CBT 40 - HC 12P - 58	12	32	42	-	58	41	M8x1.0	2
WE120PE		CBT 40 - HC 20P - 72.5	20	39.25	49.25	-	72.5	48	M8x1.0	2

* High Clamping Torque Power version
  (Please refer to page D172, Technical Information)
* Applicable for milling(roughing and finishing)

YG HYDRAULIC CHUCK

CBT

DUAL CONTACT HYDRAULIC CHUCK (For MOULD)



CBT (BT DUAL CONTACT) (Inch/Metric)

Collet(reduction sleeves) Refer to page D31-D38

CBT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WE020HMC	40	CBT 40 - HMC 1/4 - 4.72	.250	.787	1.752	4.724	2.756	1.063	M5x0.8mm
WE022HMC		CBT 40 - HMC 1/4 - 5.91	.250	.787	1.752	5.906	3.937	1.063	M5x0.8mm
WE024HMC		CBT 40 - HMC 5/16 - 4.72	.313	.866	1.752	4.724	2.756	1.063	M6x1.0mm
WE026HMC		CBT 40 - HMC 5/16 - 5.91	.313	.866	1.752	5.906	3.937	1.063	M6x1.0mm
WE028HMC		CBT 40 - HMC 3/8 - 4.72	.375	.945	1.752	4.724	2.756	1.260	M8x1.0mm
WE030HMC		CBT 40 - HMC 3/8 - 5.91	.375	.945	1.752	5.906	3.937	1.260	M8x1.0mm
WE032HMC		CBT 40 - HMC 1/2 - 4.72	.500	1.024	1.752	4.724	2.756	1.457	M10x1.0mm
WE034HMC		CBT 40 - HMC 1/2 - 5.91	.500	1.024	1.752	5.906	3.937	1.457	M10x1.0mm
WE036HMC		CBT 40 - HMC 5/8 - 4.72	.625	1.260	1.752	4.724	2.756	1.654	M12x1.0mm
WE038HMC		CBT 40 - HMC 5/8 - 5.91	.625	1.260	1.752	5.906	3.937	1.654	M12x1.0mm
WE040HMC		CBT 40 - HMC 3/4 - 4.72	.750	1.339	1.722	4.724	-	1.654	M16x1.0mm
WE042HMC		CBT 40 - HMC 3/4 - 5.91	.750	1.339	1.846	5.906	-	1.654	M16x1.0mm

Unit : mm

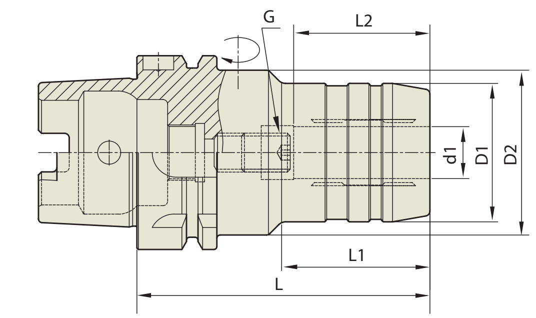
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WE100HMC	40	CBT 40 - HMC 6 - 120	6	20	44.5	120	70	27	M5x0.8
WE102HMC		CBT 40 - HMC 6 - 150	6	20	44.5	150	100	27	M5x0.8
WE104HMC		CBT 40 - HMC 8 - 120	8	22	44.5	120	70	27	M6x1.0
WE106HMC		CBT 40 - HMC 8 - 150	8	22	44.5	150	100	27	M6x1.0
WE108HMC		CBT 40 - HMC 10 - 120	10	24	44.5	120	70	32	M8x1.0
WE110HMC		CBT 40 - HMC 10 - 150	10	24	44.5	150	100	32	M8x1.0
WE112HMC		CBT 40 - HMC 12 - 120	12	25	44.5	120	70	37	M10x1.0
WE114HMC		CBT 40 - HMC 12 - 150	12	25	44.5	150	100	37	M10x1.0
WE116HMC		CBT 40 - HMC 16 - 120	16	32	44.5	120	70	42	M12x1.0
WE118HMC		CBT 40 - HMC 16 - 150	16	32	44.5	150	100	42	M12x1.0
WE120HMC		CBT 40 - HMC 20 - 120	20	34	43.8	120	-	42	M16x1.0
WE122HMC		CBT 40 - HMC 20 - 150	20	34	46.9	150	-	42	M16x1.0

ROTARY TOOL HOLDERS

YG HYDRAULIC CHUCK

HSK

DUAL CONTACT HYDRAULIC CHUCK



DIN 69893/ISO 12164-1 HSK FORM A (Inch)

Collet(reduction sleeves) Refer to page D31-D38

DIN 69893-HSK | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WQ020	63A	HSK 63A - HC 1/4 - 2.76	.250	1.024	1.969	2.756	.945	1.063	M5x0.8mm
WQ022		HSK 63A - HC 3/8 - 3.15	.375	1.181	1.969	3.150	1.378	1.260	M8x1.0mm
WQ024		HSK 63A - HC 1/2 - 3.35	.500	1.260	1.969	3.346	1.575	1.457	M10x1.0mm
WQ026		HSK 63A - HC 3/4 - 3.54	.750	1.654	1.969	3.543	1.890	1.654	M16x1.0mm
WQ028		HSK 63A - HC 1" - 4.72	1.000	2.244	2.480	4.724	2.323	1.890	M16x1.0mm
WQ030		HSK 63A - HC 1 1/4 - 4.92	1.250	2.520	2.953	4.921	2.480	2.165	M16x1.0mm
WR020	100A	HSK 100A - HC 1/4 - 2.95	.250	1.024	1.969	2.953	1.024	1.063	M5x0.8mm
WR022		HSK 100A - HC 3/8 - 2.95	.375	1.181	1.969	3.543	1.654	1.260	M8x1.0mm
WR024		HSK 100A - HC 1/2 - 3.74	.500	1.260	1.969	3.740	1.850	1.457	M10x1.0mm
WR026		HSK 100A - HC 3/4 - 4.13	.750	1.654	1.969	4.134	2.323	1.654	M16x1.0mm
WR028		HSK 100A - HC 1" - 4.33	1.000	2.244	2.480	4.331	2.441	1.890	M16x1.0mm
WR032		HSK 100A - HC 1 1/4 - 4.33	1.250	2.520	2.953	4.331	2.441	2.165	M16x1.0mm

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

HYDRAULIC CHUCK

HSK

HYDRAULIC CHUCK (Power E Hydro)

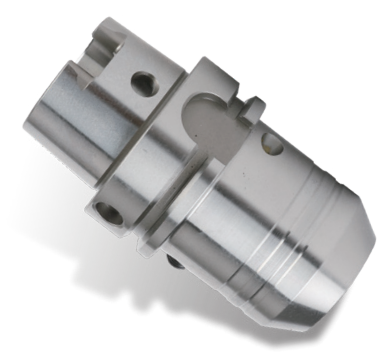


FIG.1

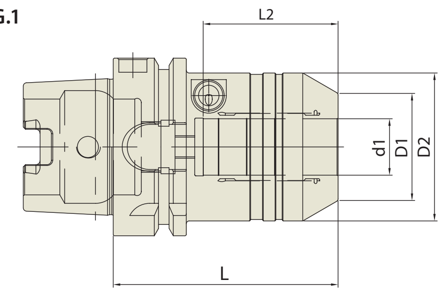
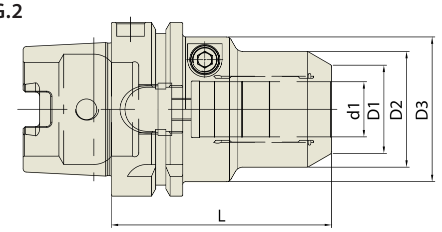


FIG.2



DIN 69893/ISO 12164-1
HSK FORM A (Inch/Metric)

Collet(reduction sleeves)
Refer to page D31-D38

DIN 69893-HSK | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	FIG.
WQ002PE	63A	HSK 63A - HC 3/4P - 3.149	.75	1.496	2.066	-	3.149	1.889	M8x1.0mm	1
WQ003PE		HSK 63A - HC 3/4P - 5.118	.75	1.496	2.066	-	5.118	1.889	M8x1.0mm	1
WQ005PE		HSK 63A - HC 1.00P - 3.74	1.00	1.89	2.067		3.740	2.244	M8x1.0mm	1
WR002PE	100A	HSK 100A - HC1 1/4P - 3.937	1.25	2.303	2.834	-	3.937	2.244	M8x1.0mm	1

Unit : mm

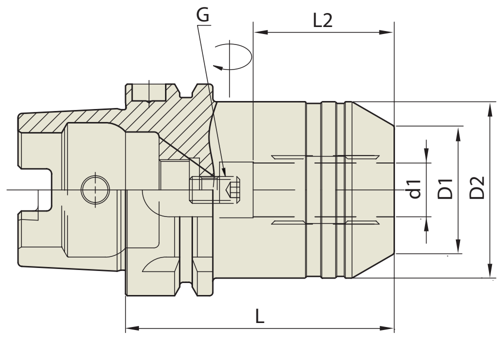
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	FIG.
WQ100PE	63A	HSK 63A - HC 12P - 80	12	32	42	52.5	80	41	M8x1.0	2
WQ102PE		HSK 63A - HC 20P - 80	20	38	52.5	-	80	48	M8x1.0	1
WR100PE	100A	HSK 100A - HC 20P - 90	20	38	52.5	-	90	48	M8x1.0	1
WR102PE		HSK 100A - HC 32P - 100	32	58.5	72	-	100	57	M8x1.0	1

* High Clamping Torque Power version
  (Please refer to page D172, Technical Information)
* Applicable for milling(roughing and finishing)

HYDRAULIC CHUCK

HSK

DUAL CONTACT HYDRAULIC CHUCK (SHORT & RIGID)



DIN 69893/ISO 12164-1
HSK FORM A (Metric)

Collet(reduction sleeves)
Refer to page D31-D38

DIN 69893-HSK | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD

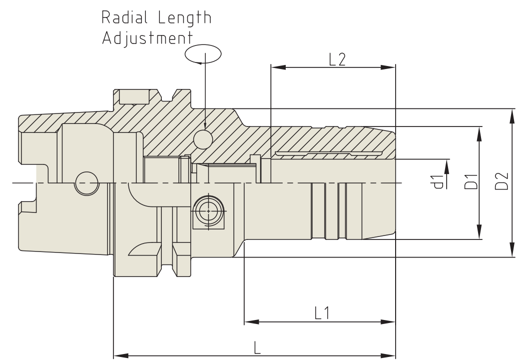
Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
WQ100SNR	63A	HSK 63A - HC 12S - 80	12	32	42	80	37	M8x1.0
WQ102SNR		HSK 63A - HC 20S - 80	20	38	52.5	80	42	M8x1.0
WR100SNR	100A	HSK 100A - HC 12S - 85	12	32	42	85	35	M8x1.0
WR102SNR		HSK 100A - HC 20S - 90	20	38	52.5	90	42	M8x1.0

HYDRAULIC CHUCK

HSK

DUAL CONTACT HYDRAULIC CHUCK (RADIAL TOOL LENGTH PRE-SETTING TYPE)



DIN 69893/ISO 12164-1
HSK FORM A (Metric)

Collet(reduction sleeves)
Refer to page D31-D38

DIN 69893-HSK | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD

Unit : mm

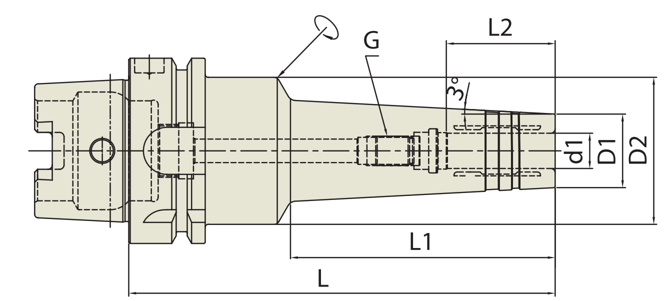
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2
WQ100HCR	63A	HSK 63A - HCR6 - 80	6	26	50	80	33	27
WQ102HCR		HSK 63A - HCR8 - 80	8	28	50	80	33	27
WQ104HCR		HSK 63A - HCR10 - 85	10	30	50	85	38	32
WQ106HCR		HSK 63A - HCR12 - 90	12	32	50	90	40	37
WQ108HCR		HSK 63A - HCR14 - 90	14	34	50	90	46	37
WQ110HCR		HSK 63A - HCR 16 - 95	16	38	50	95	51	42
WQ112HCR		HSK 63A - HCR 18 - 95	18	40	50	95	52	42
WQ114HCR		HSK 63A - HCR 20 - 100	20	42	50	100	51	42
WQ116HCR		HSK 63A - HCR 25 - 120	25	57	63	120	54.5	48
WQ118HCR		HSK 63A - HCR 32 - 125	32	64	75	125	57.5	55
WR100HCR	100A	HSK 100A - HCR6 - 85	6	26	63	85	33	27
WR102HCR		HSK 100A - HCR8 - 85	8	28	63	85	33	27
WR104HCR		HSK 100A - HCR10 - 90	10	30	63	90	36	32
WR106HCR		HSK 100A - HCR12 - 95	12	32	63	95	40	37
WR108HCR		HSK 100A - HCR14 - 95	14	34	63	95	41	37
WR110HCR		HSK 100A - HCR16 - 100	16	38	63	100	46	42
WR112HCR		HSK 100A - HCR18 - 100	18	40	63	100	46	42
WR114HCR		HSK 100A - HCR 20 - 105	20	42	75	105	51	42
WR116HCR		HSK 100A - HCR 25 - 115	25	57	75	115	55.5	48
WR118HCR		HSK 100A - HCR 32 - 120	32	64	75	120	63.5	55

ROTARY TOOL HOLDERS

HYDRAULIC CHUCK

HSK

DUAL CONTACT HYDRAULIC CHUCK (For MOULD)



DIN 69893/ISO 12164-1
HSK FORM A (Inch/Metric)

Collet(reduction sleeves)
Refer to page D31-D38

DIN 69893-HSK | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WQ020HMC	63A	HSK 63A - HMC 1/4 - 5.71	.250	.787	1.969	5.709	3.543	1.063	M5x0.8mm
WQ022HMC		HSK 63A - HMC 5/16 - 5.71	.313	.866	1.969	5.709	3.543	1.063	M6x1.0mm
WQ024HMC		HSK 63A - HMC 3/8 - 5.71	.375	.945	1.969	5.709	3.543	1.260	M8x1.0mm
WQ026HMC		HSK 63A - HMC 1/2 - 5.71	.500	1.024	1.969	5.709	3.543	1.457	M10x1.0mm
WQ028HMC		HSK 63A - HMC 5/8 - 5.71	.625	1.260	1.969	5.709	3.543	1.654	M12x1.0mm
WQ030HMC		HSK 63A - HMC 3/4 - 5.71	.750	1.339	1.969	5.709	3.543	1.654	M16x1.0mm
WR100HMC	100A	HSK 100A - HMC 1/4 - 5.71	.250	.787	1.969	5.709	3.543	1.063	M5x0.8mm
WR102HMC		HSK 100A - HMC 5/16 - 5.71	.313	.866	1.969	5.709	3.543	1.063	M6x1.0mm
WR104HMC		HSK 100A - HMC 3/8 - 5.71	.375	.945	1.969	5.709	3.543	1.260	M8x1.0mm
WR106HMC		HSK 100A - HMC 1/2 - 5.71	.500	1.024	1.969	5.709	3.543	1.457	M10x1.0mm
WR108HMC		HSK 100A - HMC 5/8 - 5.71	.625	1.260	1.969	5.709	3.543	1.654	M12x1.0mm
WR110HMC		HSK 100A - HMC 3/4 - 5.71	.750	1.339	1.969	5.709	3.543	1.654	M16x1.0mm

Unit : mm

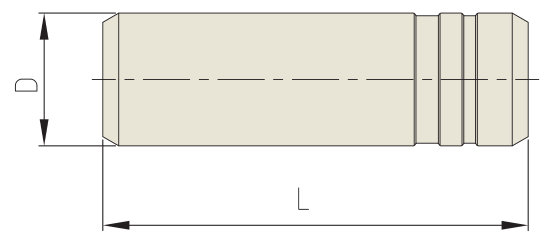
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	L2	G
WQ100HMC	63A	HSK 63A - HMC 6 - 145	6	20	50	145	90	27	M5x0.8
WQ102HMC		HSK 63A - HMC 8 - 145	8	22	50	145	90	27	M6x1.0
WQ104HMC		HSK 63A - HMC 10 - 145	10	24	50	145	90	32	M8x1.0
WQ106HMC		HSK 63A - HMC 12 - 145	12	25	50	145	90	37	M10x1.0
WQ108HMC		HSK 63A - HMC 16 - 145	16	32	50	145	90	42	M12x1.0
WQ110HMC		HSK 63A - HMC 20 - 145	20	34	50	145	90	42	M16x1.0
WR200HMC	100A	HSK 100A - HMC 6 - 150	6	20	50	150	90	27	M5x0.8
WR202HMC		HSK 100A - HMC 8 - 150	8	22	50	150	90	27	M6x1.0
WR204HMC		HSK 100A - HMC10 - 150	10	24	50	150	90	32	M8x1.0
WR206HMC		HSK 100A - HMC12 - 150	12	25	50	150	90	37	M10x1.0
WR208HMC		HSK 100A - HMC16 - 150	16	32	50	150	90	42	M12x1.0
WR210HMC		HSK 100A - HMC20 - 150	20	34	50	150	90	42	M16x1.0

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

HYDRAULIC CHUCK

TP

TEST PIECE



HYDRAULIC CHUCK TEST PIECE (SLIM)

Unit : inch

DESCRIPTIONS	EDP No.	D	L
TP 1/4	ZZ151	1/4	2.756
TP 5/16	ZZ152	5/16	2.756
TP 3/8	ZZ153	3/8	3.149
TP 1/2	ZZ154	1/2	3.149
TP 5/8	ZZ155	5/8	3.543
TP 3/4	ZZ156	3/4	3.937
TP 1	ZZ157	1	3.937
TP 1 1/4	ZZ158	1 1/4	3.937

HYDRAULIC CHUCK TEST PIECE (SLIM)

Unit : mm

DESCRIPTIONS	EDP No.	D	L
TP 6	ZZ159	6	70
TP 8	ZZ160	8	70
TP 10	ZZ161	10	80
TP 12	ZZ162	12	80
TP 14	ZZ163	14	80
TP 16	ZZ164	16	90
TP 18	ZZ165	18	90
TP 20	ZZ166	20	100
TP 25	ZZ167	25	100
TP 32	ZZ168	32	100

HYDRAULIC CHUCK TEST PIECE (POWER E-HYDRO)

Unit : inch

DESCRIPTIONS	EDP No.	D	L
TP 1/2P	ZZ175	1/2	3.149
TP 3/4P	ZZ172	3/4	3.937
TP 1"P	ZZ173	1"	3.937
TP 1 1/4P	ZZ174	1 1/4	3.937

HYDRAULIC CHUCK TEST PIECE (POWER E-HYDRO)

Unit : mm

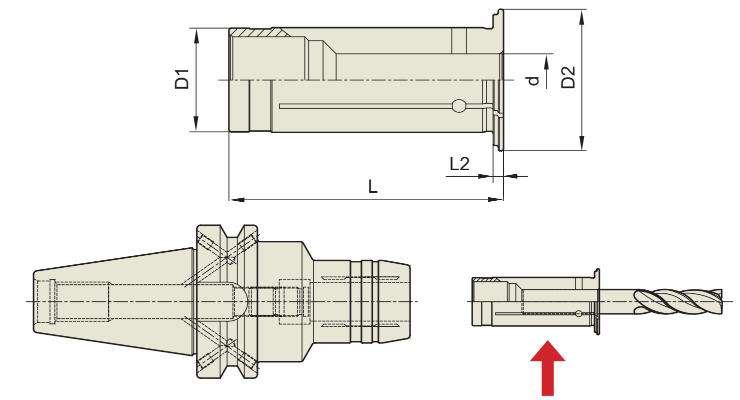
DESCRIPTIONS	EDP No.	D	L
TP 12P	ZZ169	12	80
TP 20P	ZZ170	20	100
TP 32P	ZZ171	32	100

ROTARY TOOL HOLDERS

HYDRAULIC CHUCK

HK

HYDRAULIC CHUCK COLLET (REDUCTION SLEEVE : OPEN TYPE)



Hydraulic Chuck collet

METRIC / INCH

Unit : inch

EDP No.	TYPE		d	D1	D2	L	L2
412108	HK12	1/8"	.125	.472	.748	1.850	.079
412316		3/16"	.188	.472	.748	1.850	.079
412104		1/4"	.250	.472	.748	1.850	.079
412516		5/16"	.313	.472	.748	1.850	.079
420108	HK20	1/8"	.125	.787	1.063	2.067	.079
420316		3/16"	.188	.787	1.063	2.067	.079
420104		1/4"	.250	.787	1.063	2.067	.079
420516		5/16"	.313	.787	1.063	2.067	.079
420308		3/8"	.375	.787	1.063	2.067	.079
420102		1/2"	.500	.787	1.063	2.067	.079
420508		5/8"	.625	.787	1.063	2.067	.079
432108	HK32	1/8"	.125	1.260	1.535	2.500	.118
432316		3/16"	.188	1.260	1.535	2.500	.118
432104		1/4"	.250	1.260	1.535	2.500	.118
432516		5/16"	.313	1.260	1.535	2.500	.118
432308		3/8"	.375	1.260	1.535	2.500	.118
432102		1/2"	.500	1.260	1.535	2.500	.118
432508		5/8"	.625	1.260	1.535	2.500	.118
432304		3/4"	.750	1.260	1.535	2.500	.118
432100		1	1.000	1.260	1.535	2.500	.118

* Other special sizes of Hydraulic Chuck collets can be supplied on request.

Feature Hydraulic Chuck collet(reduction sleeve) is cut into trisection by high precision cutting to guarantee precise I.D and strong clamping power.(The most economical Solution)

Chucking Method Please assemble cutting tool with collet first, and then insert collet into Hydraulic Chuck.

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
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TG Collet Chuck
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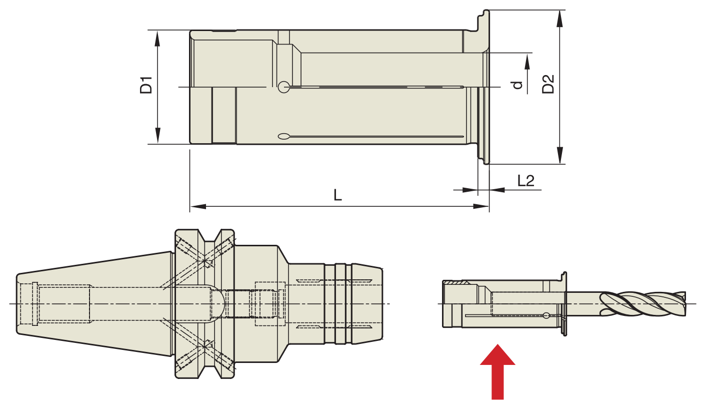
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

HYDRAULIC CHUCK

HS

HYDRAULIC CHUCK COLLET (REDUCTION SLEEVE : CLOSED TYPE)



Hydraulic Chuck collet

METRIC / INCH

Unit : inch

EDP No.	TYPE		d	D1	D2	L	L2
512108	HS12	1/8"	.125	.472	.748	1.850	.079
512316		3/16"	.188	.472	.748	1.850	.079
512104		1/4"	.250	.472	.748	1.850	.079
512516		5/16"	.313	.472	.748	1.850	.079
520108	HS20	1/8"	.125	.787	1.063	2.067	.079
520316		3/16"	.188	.787	1.063	2.067	.079
520104		1/4"	.250	.787	1.063	2.067	.079
520516		5/16"	.313	.787	1.063	2.067	.079
520308		3/8"	.375	.787	1.063	2.067	.079
520102		1/2"	.500	.787	1.063	2.067	.079
520508		5/8"	.625	.787	1.063	2.067	.079
532108	HS32	1/8"	.125	1.260	1.535	2.500	.118
532316		3/16"	.188	1.260	1.535	2.500	.118
532104		1/4"	.250	1.260	1.535	2.500	.118
532516		5/16"	.313	1.260	1.535	2.500	.118
532308		3/8"	.375	1.260	1.535	2.500	.118
532102		1/2"	.500	1.260	1.535	2.500	.118
532508		5/8"	.625	1.260	1.535	2.500	.118
532304		3/4"	.750	1.260	1.535	2.500	.118
532100		1	1.000	1.260	1.535	2.500	.118

* Other special sizes of Hydraulic Chuck collets can be supplied on request.

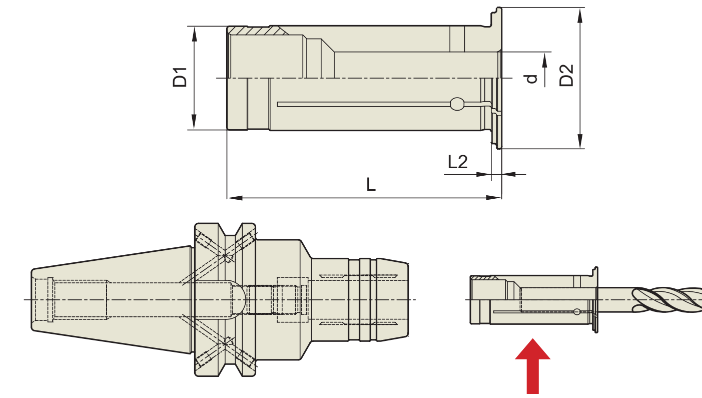
Feature The wall of Hydraulic Chuck collet(reduction sleeve) is cut by high precision wire-cutting to guarantee precise I.D and strong clamping power.

Chucking Method Please assemble cutting tool with collet first, and then insert collet into Hydraulic Chuck.

HYDRAULIC CHUCK

HK

HYDRAULIC CHUCK COLLET (REDUCTION SLEEVE : CLOSED TYPE)



Hydraulic Chuck collet

INCH / INCH

Unit : inch

EDP No.	TYPE		d	D1	D2	L	L2
612108	HK1/2"	1/8"	.125	.500	.748	1.850	.079
612316		3/16"	.188	.500	.748	1.850	.079
612104		1/4"	.250	.500	.748	1.850	.079
612516		5/16"	.313	.500	.748	1.850	.079
625108	HK3/4"	1/8"	.125	.750	1.063	2.067	.079
625316		3/16"	.188	.750	1.063	2.067	.079
625104		1/4"	.250	.750	1.063	2.067	.079
625516		5/16"	.313	.750	1.063	2.067	.079
625308		3/8"	.375	.750	1.063	2.067	.079
625102		1/2"	.500	.750	1.063	2.067	.079
625508		5/8"	.625	.750	1.063	2.067	.079
626316	HK1"	3/16	.188	1.000	1.142	2.224	.079
626104		1/4	.250	1.000	1.142	2.224	.079
626516		5/16	.313	1.000	1.142	2.224	.079
626308		3/8	.375	1.000	1.142	2.224	.079
626716		7/16	.438	1.000	1.142	2.224	.079
626102		1/2	.500	1.000	1.142	2.224	.079
626508		5/8	.625	1.000	1.142	2.224	.079
626304		3/4	.750	1.000	1.142	2.224	.079
632108	HK11/4"	1/8"	.125	1.250	1.535	2.500	.118
632316		3/16"	.188	1.250	1.535	2.500	.118
632104		1/4"	.250	1.250	1.535	2.500	.118
632516		5/16"	.313	1.250	1.535	2.500	.118
632308		3/8"	.375	1.250	1.535	2.500	.118
632102		1/2"	.500	1.250	1.535	2.500	.118
632508		5/8"	.625	1.250	1.535	2.500	.118
632304		3/4"	.750	1.250	1.535	2.500	.118
632100		1	1.000	1.250	1.535	2.500	.118

* Other special sizes of Hydraulic Chuck collets can be supplied on request.

Feature Hydraulic Chuck collet(reduction sleeve) is cut into trisection by high precision cutting to guarantee precise I.D and strong clamping power.

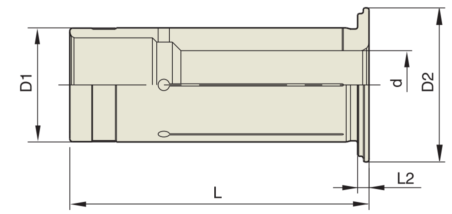
Chucking Method Please assemble cutting tool with collet first, and then insert collet into Hydraulic Chuck.

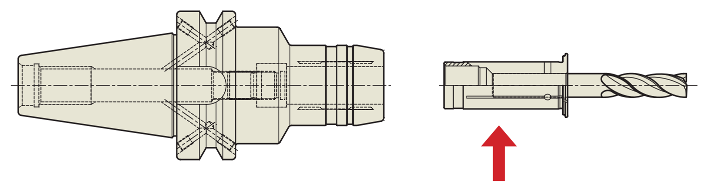
Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG HYDRAULIC CHUCK

HS

HYDRAULIC CHUCK COLLET (REDUCTION SLEEVE : CLOSED TYPE)





INCH / INCH

Unit : inch

EDP No.	TYPE		d	D1	D2	L	L2
712108	HS1/2"	1/8"	.125	.500	.748	1.850	.079
712316		3/16"	.188	.500	.748	1.850	.079
712104		1/4"	.250	.500	.748	1.850	.079
712516		5/16"	.313	.500	.748	1.850	.079
725108	HS3/4"	1/8"	.125	.750	1.063	2.067	.079
725316		3/16"	.188	.750	1.063	2.067	.079
725104		1/4"	.250	.750	1.063	2.067	.079
725516		5/16"	.313	.750	1.063	2.067	.079
725308		3/8"	.375	.750	1.063	2.067	.079
725102		1/2"	.500	.750	1.063	2.067	.079
725508		5/8"	.625	.750	1.063	2.067	.079
726316	HS1"	3/16	.188	1.000	1.142	2.224	.079
726104		1/4	.250	1.000	1.142	2.224	.079
726516		5/16	.313	1.000	1.142	2.224	.079
726308		3/8	.375	1.000	1.142	2.224	.079
726716		7/16	.438	1.000	1.142	2.224	.079
726102		1/2	.500	1.000	1.142	2.224	.079
726508		5/8	.625	1.000	1.142	2.224	.079
726304		3/4	.750	1.000	1.142	2.224	.079
732108	HS11/4"	1/8"	.125	1.250	1.535	2.500	.118
732316		3/16"	.188	1.250	1.535	2.500	.118
732104		1/4"	.250	1.250	1.535	2.500	.118
732516		5/16"	.313	1.250	1.535	2.500	.118
732308		3/8"	.375	1.250	1.535	2.500	.118
732102		1/2"	.500	1.250	1.535	2.500	.118
732508		5/8"	.625	1.250	1.535	2.500	.118
732304		3/4"	.750	1.250	1.535	2.500	.118
732100		1	1.000	1.250	1.535	2.500	.118

* Other special sizes of Hydraulic Chuck collets can be supplied on request.

Feature The wall of Hydraulic Chuck collet(reduction sleeve) is cut by high precision wire-cutting to guarantee precise I.D and strong clamping power.

Chucking Method Please assemble cutting tool with collet first, and then insert collet into Hydraulic Chuck.

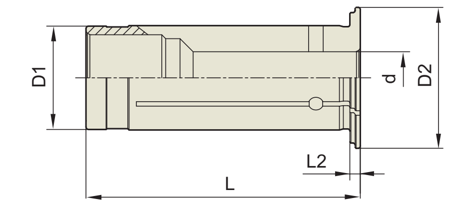
ROTARY TOOL HOLDERS

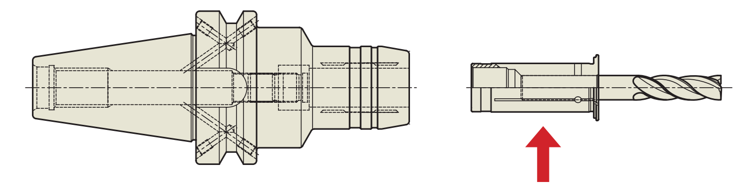
YG HYDRAULIC CHUCK

HK

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

HYDRAULIC CHUCK COLLET (REDUCTION SLEEVE : CLOSED TYPE)





METRIC / METRIC

Unit : mm

EDP No.	TYPE		d	D1	D2	L	L2
812030	HK12	3	3	12	19	47	2
812040		4	4	12	19	47	2
812050		5	5	12	19	47	2
812060		6	6	12	19	47	2
812070		7	7	12	19	47	2
812008		8	8	12	19	47	2
820030	HK20	3	3	20	27	52.5	2
820040		4	4	20	27	52.5	2
820050		5	5	20	27	52.5	2
820060		6	6	20	27	52.5	2
820070		7	7	20	27	52.5	2
820080		8	8	20	27	52.5	2
820090		9	9	20	27	52.5	2
820100		10	10	20	27	52.5	2
820110		11	11	20	27	52.5	2
820120		12	12	20	27	52.5	2
820130		13	13	20	27	52.5	2
820140		14	14	20	27	52.5	2
820150		15	15	20	27	52.5	2
820160		16	16	20	27	52.5	2
832060	HK32	6	6	32	39	63.5	3
832080		8	8	32	39	63.5	3
832100		10	10	32	39	63.5	3
832120		12	12	32	39	63.5	3
832140		14	14	32	39	63.5	3
832160		16	16	32	39	63.5	3
832180		18	18	32	39	63.5	3
832200		20	20	32	39	63.5	3
832250		25	25	32	39	63.5	3

* Other special sizes of Hydraulic Chuck collets can be supplied on request.

Feature Hydraulic Chuck collet(reduction sleeve) is cut into trisection by high precision cutting to guarantee precise I.D and strong clamping power.

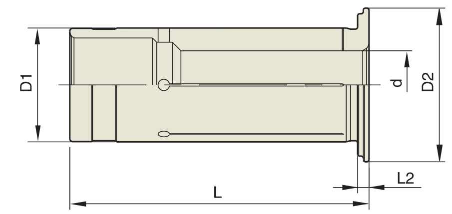
Chucking Method Please assemble cutting tool with collet first, and then insert collet into Hydraulic Chuck.

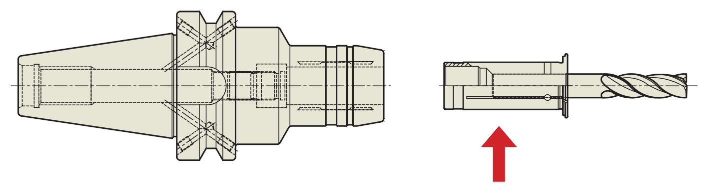
Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG HYDRAULIC CHUCK

HS

HYDRAULIC CHUCK COLLET (REDUCTION SLEEVE : CLOSED TYPE)





METRIC / METRIC

Unit : mm

EDP No.	TYPE		d	D1	D2	L	L2
912030	HS12	3	3	12	19	47	2
912040	HS12	4	4	12	19	47	2
912050	HS12	5	5	12	19	47	2
912060	HS12	6	6	12	19	47	2
912070	HS12	7	7	12	19	47	2
912080	HS12	8	8	12	19	47	2
920030	HS20	3	3	20	27	52.5	2
920040	HS20	4	4	20	27	52.5	2
920050	HS20	5	5	20	27	52.5	2
920060	HS20	6	6	20	27	52.5	2
920070	HS20	7	7	20	27	52.5	2
920080	HS20	8	8	20	27	52.5	2
920090	HS20	9	9	20	27	52.5	2
920100	HS20	10	10	20	27	52.5	2
920110	HS20	11	11	20	27	52.5	2
920120	HS20	12	12	20	27	52.5	2
920130	HS20	13	13	20	27	52.5	2
920140	HS20	14	14	20	27	52.5	2
920150	HS20	15	15	20	27	52.5	2
920160	HS20	16	16	20	27	52.5	2
932060	HS32	6	6	32	39	63.5	3
932080	HS32	8	8	32	39	63.5	3
932100	HS32	10	10	32	39	63.5	3
932120	HS32	12	12	32	39	63.5	3
932140	HS32	14	14	32	39	63.5	3
932160	HS32	16	16	32	39	63.5	3
932180	HS32	18	18	32	39	63.5	3
932200	HS32	20	20	32	39	63.5	3
932250	HS32	25	25	32	39	63.5	3

* Other special sizes of Hydraulic Chuck collets can be supplied on request.

Feature The wall of Hydraulic Chuck collet(reduction sleeve) is cut by high precision wire-cutting to guarantee precise I.D and strong clamping power.

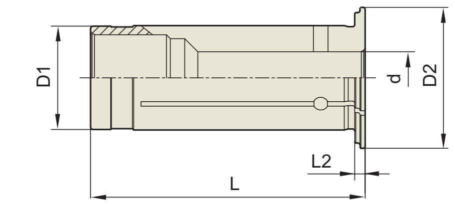
Chucking Method Please assemble cutting tool with collet first, and then insert collet into Hydraulic Chuck.

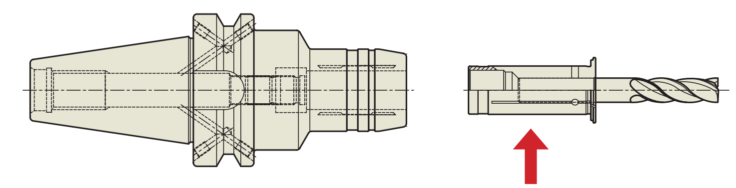
ROTARY TOOL HOLDERS

YG HYDRAULIC CHUCK

HK

HYDRAULIC CHUCK COLLET (REDUCTION SLEEVE : OPEN TYPE)





INCH / METRIC

Unit : inch

EDP No.	TYPE		d	D1	D2	L	L2
101203	HK1/2"	3	3mm	.500	.748	1.850	.079
101204	HK1/2"	4	4mm	.500	.748	1.850	.079
101205	HK1/2"	5	5mm	.500	.748	1.850	.079
101206	HK1/2"	6	6mm	.500	.748	1.850	.079
101208	HK1/2"	8	8mm	.500	.748	1.850	.079
102503	HK3/4"	3	3mm	.750	1.063	2.067	.079
102504	HK3/4"	4	4mm	.750	1.063	2.067	.079
102505	HK3/4"	5	5mm	.750	1.063	2.067	.079
102506	HK3/4"	6	6mm	.750	1.063	2.067	.079
102508	HK3/4"	8	8mm	.750	1.063	2.067	.079
102510	HK3/4"	10	10mm	.750	1.063	2.067	.079
102512	HK3/4"	12	12mm	.750	1.063	2.067	.079
102514	HK3/4"	14	14mm	.750	1.063	2.067	.079
102606	HK1"	6	6mm	1.000	1.142	2.224	.079
102608	HK1"	8	8mm	1.000	1.142	2.224	.079
102610	HK1"	10	10mm	1.000	1.142	2.224	.079
102612	HK1"	12	12mm	1.000	1.142	2.224	.079
102614	HK1"	14	14mm	1.000	1.142	2.224	.079
102616	HK1"	16	16mm	1.000	1.142	2.224	.079
102618	HK1"	18	18mm	1.000	1.142	2.224	.079
102620	HK1"	20	20mm	1.000	1.142	2.224	.079
103208	HK11/4"	8	8mm	1.250	1.535	2.500	.118
103210	HK11/4"	10	10mm	1.250	1.535	2.500	.118
103212	HK11/4"	12	12mm	1.250	1.535	2.500	.118
103214	HK11/4"	14	14mm	1.250	1.535	2.500	.118
103216	HK11/4"	16	16mm	1.250	1.535	2.500	.118
103218	HK11/4"	18	18mm	1.250	1.535	2.500	.118
103220	HK11/4"	20	20mm	1.250	1.535	2.500	.118
103225	HK11/4"	25	25mm	1.250	1.535	2.500	.118

* Other special sizes of Hydraulic Chuck collets can be supplied on request.

Feature Hydraulic Chuck collet(reduction sleeve) is cut into trisection by high precision cutting to guarantee precise I.D and strong clamping power. (The most economical Solution)

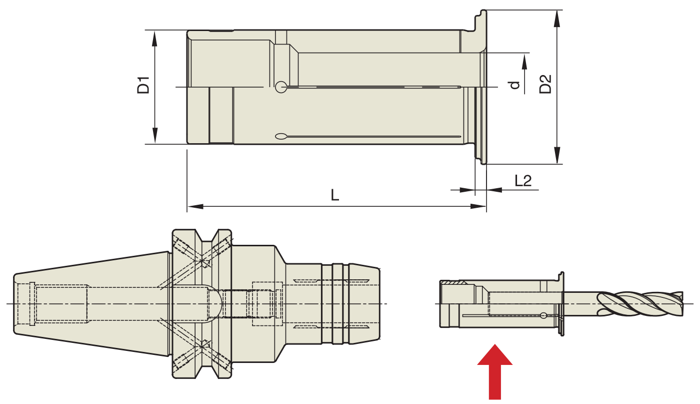
Chucking Method Please assemble cutting tool with collet first, and then insert collet into Hydraulic Chuck.

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

HYDRAULIC CHUCK

HS

HYDRAULIC CHUCK COLLET (REDUCTION SLEEVE : CLOSED TYPE)



INCH / METRIC

Unit : inch

EDP No.	TYPE		d	D1	D2	L	L2
111203	HS1/2"	3	3mm	.500	.748	1.850	.079
111204		4	4mm	.500	.748	1.850	.079
111205		5	5mm	.500	.748	1.850	.079
111206		6	6mm	.500	.748	1.850	.079
111208		8	8mm	.500	.748	1.850	.079
112503	HS3/4"	3	3mm	.750	1.063	2.067	.079
112504		4	4mm	.750	1.063	2.067	.079
112505		5	5mm	.750	1.063	2.067	.079
112506		6	6mm	.750	1.063	2.067	.079
112508		8	8mm	.750	1.063	2.067	.079
112510		10	10mm	.750	1.063	2.067	.079
112512		12	12mm	.750	1.063	2.067	.079
112514		14	14mm	.750	1.063	2.067	.079
112606	HS1"	6	6mm	1.000	1.142	2.224	.079
112608		8	8mm	1.000	1.142	2.224	.079
112610		10	10mm	1.000	1.142	2.224	.079
112612		12	12mm	1.000	1.142	2.224	.079
112614		14	14mm	1.000	1.142	2.224	.079
112616		16	16mm	1.000	1.142	2.224	.079
112618		18	18mm	1.000	1.142	2.224	.079
112620		20	20mm	1.000	1.142	2.224	.079
113208	HS11/4"	8	8mm	1.250	1.535	2.500	.118
113210		10	10mm	1.250	1.535	2.500	.118
113212		12	12mm	1.250	1.535	2.500	.118
113214		14	14mm	1.250	1.535	2.500	.118
113216		16	16mm	1.250	1.535	2.500	.118
113218		18	18mm	1.250	1.535	2.500	.118
113220		20	20mm	1.250	1.535	2.500	.118
113225		25	25mm	1.250	1.535	2.500	.118

* Other special sizes of Hydraulic Chuck collets can be supplied on request.

Feature The wall of Hydraulic Chuck collet(reduction sleeve) is cut by high precision wire-cutting to guarantee precise I.D and strong clamping power.

Chucking Method Please assemble cutting tool with collet first, and then insert collet into Hydraulic Chuck.

YG-1 ROTARY TOOLING

SHRINK FIT HOLDER

STANDARD, COOLANT CHANNEL (RESEALABLE), INTERMEDIATE, REINFORCED, EXTENSION

SHRINK FIT HOLDER

CAT : ASME B5.50-2009

CCT : CAT DUAL CONTACT

BT : JIS B6339/MAS 403-BT/ISO7388-2

CBT : BT DUAL CONTACT

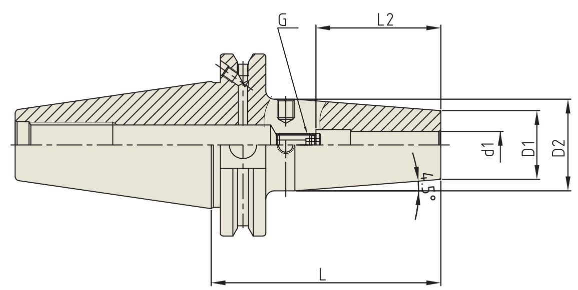
HSK : DIN69893/ISO12164-1

STRAIGHT

SHRINK FIT HOLDER

CAT

SHRINK FIT HOLDER



ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B

ASME B5.50-2009-CAT (Inch)

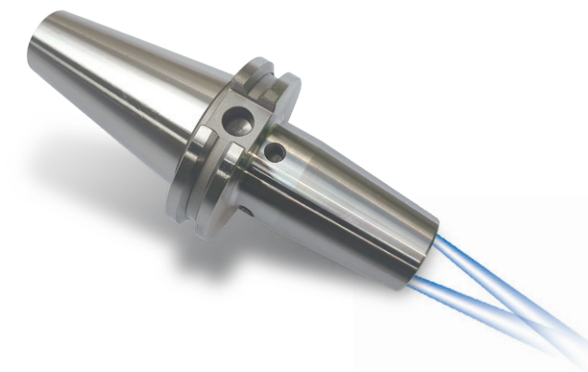
Unit : inch

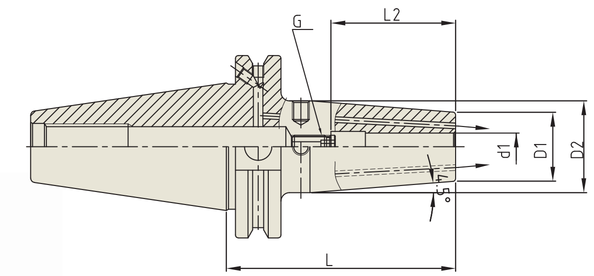
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VK020	40	CAT40 AD/B - SFH 1/8 - 3.15	.125	.394	.748	3.150	.354	-
VK028		CAT40 AD/B - SFH 1/8 - 5.12	.125	.394	.748	5.120	.354	-
VK022		CAT40 AD/B - SFH 3/16 - 3.15	.188	.394	.748	3.150	.472	-
VK029		CAT40 AD/B - SFH 3/16 - 5.12	.188	.394	.748	5.120	.472	-
VK024		CAT40 AD/B - SFH 1/4 - 3.15	.250	.827	1.063	3.150	1.417	M5x.8mm
VK026		CAT40 AD/B - SFH 1/4 - 6.30	.250	.827	1.063	6.300	1.417	M5x.8mm
VK028		CAT40 AD/B - SFH 3/8 - 3.15	.375	.945	1.260	3.150	1.713	M8x1.0mm
VK030		CAT40 AD/B - SFH 3/8 - 6.30	.375	.945	1.260	6.300	1.713	M8x1.0mm
VK032		CAT40 AD/B - SFH 1/2 - 3.15	.500	.945	1.260	3.150	1.890	M10x1.0mm
VK034		CAT40 AD/B - SFH 1/2 - 6.30	.500	.945	1.260	6.300	1.929	M10x1.0mm
VK036		CAT40 AD/B - SFH 5/8 - 3.15	.625	1.063	1.339	3.150	2.047	M12x1.0mm
VK038		CAT40 AD/B - SFH 5/8 - 6.30	.625	1.063	1.339	6.300	2.047	M12x1.0mm
VK040		CAT40 AD/B - SFH 3/4 - 3.15	.750	1.299	1.654	3.150	2.126	M16x1.0mm
VK042		CAT40 AD/B - SFH 3/4 - 6.30	.750	1.299	1.654	6.300	2.126	M16x1.0mm
VK044		CAT40 AD/B - SFH 1.0 - 3.94	1.000	1.732	2.087	3.937	2.362	M16x1.0mm
VK046		CAT40 AD/B - SFH 1.0 - 6.30	1.000	1.732	2.087	6.300	2.362	M16x1.0mm
VK048		CAT40 AD/B - SFH 1 1/4 - 3.94	1.250	1.732	2.087	3.937	2.362	M16x1.0mm
VK050		CAT40 AD/B - SFH 1 1/4 - 6.30	1.250	1.732	2.087	6.300	2.362	M16x1.0mm

SHRINK FIT HOLDER

CAT

SHRINK FIT HOLDER (Coolant Channel Type)





ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B+C

ASME B5.50-2009-CAT (Inch)

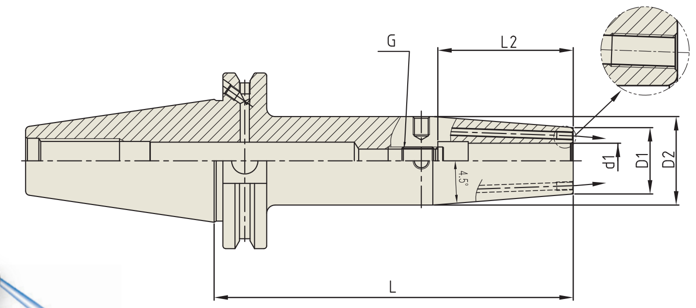
Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VK020J	40	CAT40 AD/B - SFH 1/8C -3.15	.125	.472	.827	3.150	.394	-
VK022J		CAT40 AD/B - SFH 3/16C - 3.15	.188	.472	.827	3.150	.472	-
VK024J		CAT40 AD/B - SFH 1/4C - 3.15	.250	.472	.827	3.150	.591	M5x0.8mm
VK028J		CAT40 AD/B - SFH 3/8C - 3.15	.375	.945	1.260	3.150	1.713	M8x1.0mm
VK030J		CAT40 AD/B - SFH 3/8C - 6.30	.375	.945	1.260	6.300	1.673	M8x1.0mm
VK032J		CAT40 AD/B - SFH 1/2C - 3.15	.500	.945	1.260	3.150	1.929	M10x1.0mm
VK034J		CAT40 AD/B - SFH 1/2C - 6.30	.500	.945	1.260	6.300	1.929	M10x1.0mm
VK036J		CAT40 AD/B - SFH 5/8C - 3.15	.625	1.063	1.339	3.150	2.047	M12x1.0mm
VK038J		CAT40 AD/B - SFH 5/8C - 6.30	.625	1.063	1.339	6.300	2.047	M12x1.0mm
VK040J		CAT40 AD/B - SFH 3/4C - 3.15	.750	1.299	1.654	3.150	2.126	M16x1.0mm
VK042J		CAT40 AD/B - SFH 3/4C - 6.30	.750	1.299	1.654	6.300	2.126	M16x1.0mm
VK044J		CAT40 AD/B - SFH 1.0C - 3.94	1.000	1.732	2.087	3.940	2.362	M16x1.0mm
VK046J		CAT40 AD/B - SFH 1.0C - 6.30	1.000	1.732	2.087	6.300	2.362	M16x1.0mm
VK048J		CAT40 AD/B - SFH 1 1/4C - 3.94	1.250	1.732	2.087	3.940	2.362	M16x1.0mm
VK050J		CAT40 AD/B - SFH 1 1/4C - 6.30	1.250	1.732	2.087	6.300	2.362	M16x1.0mm

SHRINK FIT HOLDER

CAT

SHRINK FIT HOLDER (Coolant Channel Resealable)



ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B+CR

ASME B5.50-2009-CAT (Inch)

Unit : inch

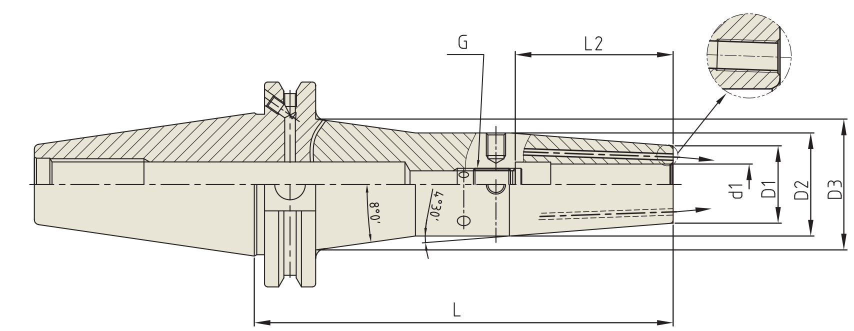
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VK221JR	40	CAT40 AD/B - SFH 1/4CR - 5.12	.250	.827	1.063	5.120	1.417	M5x.8mm
VK222JR		CAT40 AD/B - SFH 5/16CR - 5.12	.313	.827	1.063	5.120	1.417	M6x1.0mm
VK219JR		CAT40 AD/B - SFH 3/8CR - 5.12	.375	.945	1.260	5.120	1.713	M8x1.0mm
VK223JR		CAT40 AD/B - SFH 7/16CR - 5.12	.438	.945	1.260	5.120	1.929	M10x1.0mm
VK220JR		CAT40 AD/B - SFH 1/2CR - 5.12	.500	.945	1.260	5.120	1.929	M10x1.0mm
VK224JR		CAT40 AD/B - SFH 5/8CR - 5.12	.625	1.063	1.339	5.120	2.047	M12x1.0mm
VK225JR		CAT40 AD/B - SFH 3/4CR - 5.12	.750	1.299	1.654	5.120	2.126	M16x1.0mm
VK226JR		CAT40 AD/B - SFH 1.0CR - 5.12	1.000	1.732	2.087	5.120	2.362	M16x1.0mm

* Resealable type (Thread for plugging screw & screws)

SHRINK FIT HOLDER

CAT

SHRINK FIT HOLDER (Coolant Channel & Thick Wall)



ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B+C

ASME B5.50-2009-CAT (Inch)

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G
VK221JTW	40	CAT40 AD/B - SFH 1/4C TW - 5.12	.250	.827	1.063	1.406	5.120	1.417	M5x0.8mm
VK026JTW		CAT40 AD/B - SFH 1/4C TW - 6.30	.250	.827	1.063	1.661	6.300	1.417	M5x0.8mm
VK222JTW		CAT40 AD/B - SFH 5/16C TW - 5.12	.313	.827	1.063	1.406	5.120	1.417	M6x1.0mm
VK060JTW		CAT40 AD/B - SFH 5/16C TW - 6.30	.313	.827	1.063	1.661	6.300	1.417	M6x1.0mm
VK219JTW		CAT40 AD/B - SFH 3/8C TW - 5.12	.375	.945	1.260	1.602	5.120	1.673	M8x1.0mm
VK030JTW		CAT40 AD/B - SFH 3/8C TW - 6.30	.375	.945	1.260	1.750	6.300	1.673	M8x1.0mm
VK223JTW		CAT40 AD/B - SFH 7/16C TW - 5.12	.375	.945	1.260	1.602	5.120	1.929	M10x1.0mm
VK062JTW		CAT40 AD/B - SFH 7/16C TW - 6.30	.438	.945	1.260	1.732	6.300	1.929	M10x1.0mm
VK220JTW		CAT40 AD/B - SFH 1/2C TW - 5.12	.500	.945	1.260	1.602	5.120	1.929	M10x1.0mm
VK034JTW		CAT40 AD/B - SFH 1/2C TW - 6.30	.500	.945	1.260	1.732	6.300	1.929	M10x1.0mm
VK224JTW		CAT40 AD/B - SFH 5/8C TW - 5.12	.625	1.063	1.339	1.681	6.300	2.047	M12x1.0mm
VK038JTW		CAT40 AD/B - SFH 5/8C TW - 6.30	.625	1.063	1.339	1.732	6.300	2.047	M12x1.0mm

* Resealable type (Thread for plugging screw & screws)

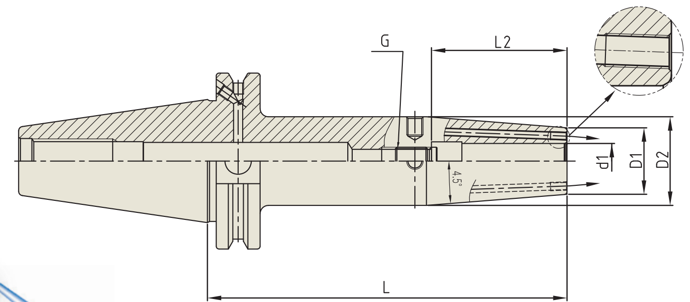
ROTARY TOOL HOLDERS

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG SHRINK FIT HOLDER

CAT

SHRINK FIT HOLDER (Coolant Channel Resealable)



ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B+CR

ASME B5.50-2009-CAT (Metric)

Unit : mm

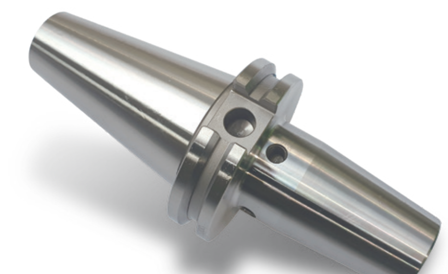
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VK123J	40	CAT40 AD/B - SFH 3C - 80 *1	3	12	17	80	10	-
VK124J		CAT40 AD/B - SFH 4C - 80 *1	4	12	17	80	12	-
VK125J		CAT40 AD/B - SFH 5C - 80 *1	5	12	17	80	15	-
VK110JR		CAT40 AD/B - SFH 6CR - 80	6	21	27	80	36	M5x0.8
VK101JR		CAT40 AD/B - SFH 6CR - 130	6	21	27	130	36	M5x0.8
VK111JR		CAT40 AD/B - SFH 6CR - 160	6	21	27	160	36	M5x0.8
VK112JR		CAT40 AD/B - SFH 8CR - 80	8	21	27	80	36	M6x1.0
VK102JR		CAT40 AD/B - SFH 8CR - 130	8	21	27	130	36	M6x1.0
VK113JR		CAT40 AD/B - SFH 8CR - 160	8	21	27	160	36	M6x1.0
VK114JR		CAT40 AD/B - SFH 10CR - 80	10	24	32	80	42.5	M8x1.0
VK103JR		CAT40 AD/B - SFH 10CR - 130	10	24	32	130	42.5	M8x1.0
VK115JR		CAT40 AD/B - SFH 10CR - 160	10	24	32	160	42.5	M8x1.0
VK116JR		CAT40 AD/B - SFH 12CR - 80	12	24	32	80	48	M10x1.0
VK104JR		CAT40 AD/B - SFH 12CR - 130	12	24	32	130	48	M10x1.0
VK117JR		CAT40 AD/B - SFH 12CR - 160	12	24	32	160	48	M10x1.0
VK118JR		CAT40 AD/B - SFH 14CR - 80	14	24	32	80	48	M10x1.0
VK105JR		CAT40 AD/B - SFH 14CR - 130	14	24	32	130	48	M10x1.0
VK119JR		CAT40 AD/B - SFH 14CR - 160	14	24	32	160	48	M10x1.0
VK120JR		CAT40 AD/B - SFH 16CR - 80	16	27	34	80	51	M12x1.0
VK106JR		CAT40 AD/B - SFH 16CR - 130	16	27	34	130	51	M12x1.0
VK121JR		CAT40 AD/B - SFH 16CR - 160	16	27	34	160	51	M12x1.0
VK122JR		CAT40 AD/B - SFH 18CR - 80	18	33	42	80	51	M12x1.0
VK107JR		CAT40 AD/B - SFH 18CR - 130	18	33	42	130	51	M12x1.0
VK123JR		CAT40 AD/B - SFH 18CR - 160	18	33	42	160	51	M12x1.0
VK124JR		CAT40 AD/B - SFH 20CR - 80	20	33	42	80	53	M16x1.0
VK108JR		CAT40 AD/B - SFH 20CR - 130	20	33	42	130	53	M16x1.0
VK125JR		CAT40 AD/B - SFH 20CR - 160	20	33	42	160	53	M16x1.0
VK126JR		CAT40 AD/B - SFH 25CR - 100	25	44	53	100	59	M16x1.0
VK109JR		CAT40 AD/B - SFH 25CR - 130	25	44	53	130	59	M16x1.0
VK127JR		CAT40 AD/B - SFH 25CR - 160	25	44	53	160	59	M16x1.0

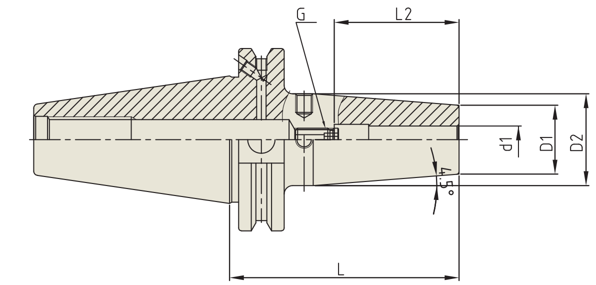
* Resealable type (Thread for plugging screw & screws)
*1 Resealable type is not available.

YG SHRINK FIT HOLDER

CAT

SHRINK FIT HOLDER





JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B

ASME B5.50-2009-CAT (Inch)

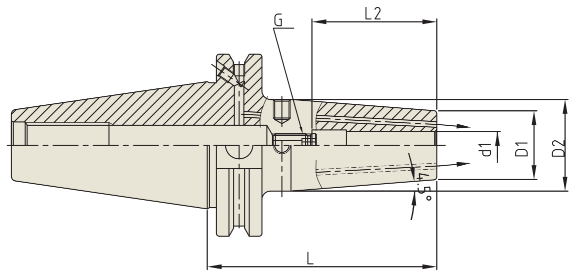
Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VL020	50	CAT50 AD/B - SFH 1/8 - 3.15	.125	.394	.748	3.150	.354	-
VL225		CAT50 AD/B - SFH 1/8 - 5.12	.125	.394	.748	5.120	.354	-
VL022		CAT50 AD/B - SFH 3/16 - 3.15	.188	.394	.748	3.150	.472	-
VL226		CAT50 AD/B - SFH 3/16 - 5.12	.188	.394	.748	5.120	.472	-
VL024		CAT50 AD/B - SFH 1/4 - 3.15	.250	.827	1.063	3.150	1.417	M5x.8mm
VL026		CAT50 AD/B - SFH 1/4 - 6.30	.250	.827	1.063	6.300	1.417	M5x.8mm
VL028		CAT50 AD/B - SFH 3/8 - 3.15	.375	.945	1.260	3.150	1.634	M8x1.0mm
VL030		CAT50 AD/B - SFH 3/8 - 6.30	.375	.945	1.260	6.300	1.634	M8x1.0mm
VL032		CAT50 AD/B - SFH 1/2 - 3.15	.500	.945	1.260	3.150	1.929	M10x1.0mm
VL034		CAT50 AD/B - SFH 1/2 - 6.30	.500	.945	1.260	6.300	1.929	M10x1.0mm
VL036		CAT50 AD/B - SFH 5/8 - 3.15	.625	1.063	1.339	3.150	2.047	M12x1.0mm
VL038		CAT50 AD/B - SFH 5/8 - 6.30	.625	1.063	1.339	6.300	2.047	M12x1.0mm
VL040		CAT50 AD/B - SFH 3/4 - 3.15	.750	1.299	1.654	3.150	2.126	M16x1.0mm
VL042		CAT50 AD/B - SFH 3/4 - 6.30	.750	1.299	1.654	6.300	2.126	M16x1.0mm
VL044		CAT50 AD/B - SFH 1.0 - 3.94	1.000	1.732	2.087	3.937	2.323	M16x1.0mm
VL046		CAT50 AD/B - SFH 1.0 - 6.30	1.000	1.732	2.087	6.300	2.362	M16x1.0mm
VL048		CAT50 AD/B - SFH 1 1/4 - 3.94	1.250	1.732	2.087	3.937	2.362	M16x1.0mm
VL050		CAT50 AD/B- SFH 1 1/4 - 6.30	1.250	1.732	2.087	6.300	2.362	M16x1.0mm

SHRINK FIT HOLDER

CAT

SHRINK FIT HOLDER (Coolant Channel)



ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B+C

ASME B5.50-2009-CAT (Inch)

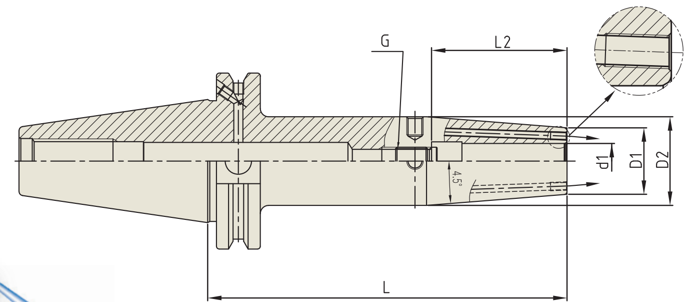
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VL024J		CAT50 AD/B - SFH 1/4C - 3.15	.250	.472	.827	3.150	.591	M5x0.8mm
VL025J		CAT50 AD/B - SFH 1/4C - 5.12	.250	.472	.827	5.120	.591	M5x0.8mm
VL064J		CAT50 AD/B - SFH 1/4C - 6.30	.250	.472	.827	6.300	.591	M5x0.8mm
VL028J		CAT50 AD/B - SFH 3/8C - 3.15	.375	.945	1.260	3.150	1.634	M8x1.0mm
VL030J		CAT50 AD/B - SFH 3/8C - 6.30	.375	.945	1.260	6.300	1.673	M8x1.0mm
VL032J		CAT50 AD/B - SFH 1/2C - 3.15	.500	.945	1.260	3.150	1.929	M10x1.0mm
VL201J		CAT50 AD/B - SFH 1/2C - 5.12	.500	.945	1.260	5.120	1.929	M10x1.0mm
VL034J		CAT50 AD/B - SFH 1/2C - 6.30	.500	.945	1.260	6.300	1.929	M10x1.0mm
VL036J	50	CAT50 AD/B - SFH 5/8C - 3.15	.625	1.063	1.339	3.150	2.047	M12x1.0mm
VL038J		CAT50 AD/B - SFH 5/8C - 6.3	.625	1.063	1.339	6.300	2.047	M12x1.0mm
VL040J		CAT50 AD/B - SFH 3/4C - 3.15	.750	1.299	1.654	3.150	2.126	M16x1.0mm
VL202J		CAT50 AD/B - SFH 3/4C - 5.12	.750	1.299	1.654	5.120	2.126	M16x1.0mm
VL042J		CAT50 AD/B - SFH 3/4C -6.3	.750	1.299	1.654	6.300	2.126	M16x1.0mm
VL044J		CAT50 AD/B - SFH 1.0C - 3.94	1.000	1.732	2.087	3.940	2.362	M16x1.0mm
VL046J		CAT50 AD/B - SFH 1.0C - 6.30	1.000	1.732	2.087	6.300	2.362	M16x1.0mm
VL048J		CAT50 AD/B - SFH 1 1/4C - 3.94	1.250	1.732	2.087	3.940	2.362	M16x1.0mm
VL050J		CAT50 AD/B - SFH 1 1/4C - 6.30	1.250	1.732	2.087	6.300	2.362	M16x1.0mm

ROTARY TOOL HOLDERS

SHRINK FIT HOLDER

CAT

SHRINK FIT HOLDER (Coolant Channel Resealable)



ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B+CR

ASME B5.50-2009-CAT (Inch)

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VL025JR		CAT50 AD/B - SFH 1/4CR - 5.12	0.250	0.827	1.063	5.120	1.417	M5x0.8mm
VL203JR		CAT50 AD/B - SFH 5/16CR - 5.12	0.313	0.827	1.063	5.120	1.417	M6x1.0mm
VL026JR		CAT50 AD/B - SFH 3/8CR - 5.12	0.375	0.945	1.260	5.120	1.713	M8x1.0mm
VL204JR		CAT50 AD/B - SFH 7/16CR - 5.12	0.438	0.945	1.260	5.120	1.929	M10x1.0mm
VL201JR	50	CAT50 AD/B - SFH 1/2CR - 5.12	0.500	0.945	1.260	5.120	1.929	M10x1.0mm
VL205JR		CAT50 AD/B - SFH 5/8CR - 5.12	0.625	1.063	1.339	5.120	2.047	M12x1.0mm
VL202JR		CAT50 AD/B - SFH 3/4CR - 5.12	0.750	1.299	1.654	5.120	2.126	M16x1.0mm
VL206JR		CAT50 AD/B - SFH 1.0CR - 5.12	1.000	1.732	2.087	5.120	2.362	M16x1.0mm
VL207JR		CAT50 AD/B - SFH 1 1/4CR - 5.12	1.250	1.732	2.087	5.120	2.362	M16x1.0mm

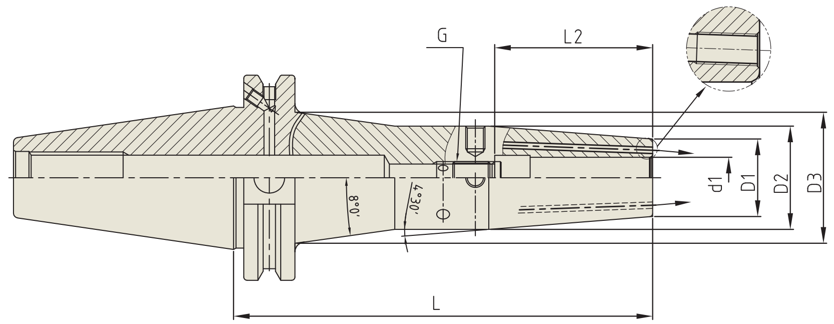
* Resealable type (Thread for plugging screw & screws)

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG SHRINK FIT HOLDER

CAT

SHRINK FIT HOLDER (Coolant Channel & Thick Wall)



ASME B5.50-2009-CAT (Inch)

ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B+C

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G
VL025JTW	50	CAT50 AD/B - SFH 1/4C TW - 5.12	.250	.827	1.063	1.406	5.120	1.417	M5x.8mm
VL026JTW		CAT50 AD/B - SFH 1/4C TW - 6.30	.250	.827	1.063	1.732	6.300	1.417	M5x.8mm
VL203JTW		CAT50 AD/B - SFH 5/16C TW - 5.12	.313	.827	1.063	1.406	5.120	1.417	M6x1.0mm
VL060JTW		CAT50 AD/B - SFH 5/16C TW - 6.30	.313	.827	1.063	1.732	6.300	1.417	M6x1.0mm
VL227JTW		CAT50 AD/B - SFH 3/8C TW - 5.12	.375	.945	1.260	1.602	5.120	1.673	M8x1.0mm
VL030JTW		CAT50 AD/B - SFH 3/8C TW - 6.30	.375	.945	1.260	1.933	6.300	1.673	M8x1.0mm
VL204JTW		CAT50 AD/B - SFH 7/16C TW - 5.12	.438	.945	1.260	1.602	5.120	1.929	M10x1.0mm
VL062JTW		CAT50 AD/B - SFH 7/16C TW - 6.30	.438	.945	1.260	1.933	6.300	1.929	M10x1.0mm
VL201JTW		CAT50 AD/B - SFH 1/2C TW - 5.12	.500	.945	1.260	1.602	5.120	1.929	M10x1.0mm
VL034JTW		CAT50 AD/B - SFH 1/2C TW - 6.30	.500	.945	1.260	1.933	6.300	1.929	M10x1.0mm
VL205JTW		CAT50 AD/B - SFH 5/8C TW - 5.12	.625	1.063	1.339	1.681	5.120	2.047	M12x1.0mm
VL038JTW		CAT50 AD/B - SFH 5/8C TW - 6.30	.625	1.063	1.339	2.013	6.300	2.047	M12x1.0mm
VL202JTW		CAT50 AD/B - SFH 3/4C TW - 5.12	.750	1.299	1.654	1.996	5.120	2.126	M16x1.0mm
VL042JTW		CAT50 AD/B - SFH 3/4C TW - 6.30	.750	1.299	1.654	2.328	6.300	2.126	M16x1.0mm

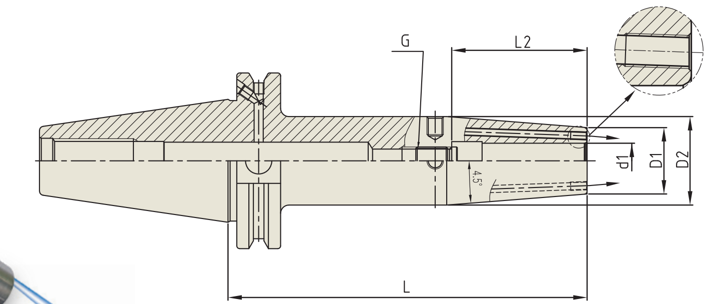
* Resealable type (Thread for plugging screw & screws)

ROTARY TOOL HOLDERS

YG SHRINK FIT HOLDER

CAT

SHRINK FIT HOLDER (Coolant Channel Resealable)



ASME B5.50-2009-CAT (Metric)

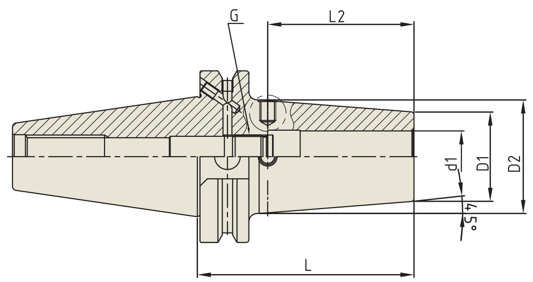
ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B+CR

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VL128J	50	CAT50 AD/B - SFH 3C - 80 *1	3	12	17	80	10	-
VL129J		CAT50 AD/B - SFH 4C - 80 *1	4	12	17	80	12	-
VL130J		CAT50 AD/B - SFH 5C - 80 *1	5	12	17	80	15	-
VL111JR		CAT50 AD/B - SFH 6CR - 80	6	21	27	80	36	M5x0.8
VL101JR		CAT50 AD/B - SFH 6CR - 130	6	21	27	130	36	M5x0.8
VL112JR		CAT50 AD/B - SFH 6CR - 160	6	21	27	160	36	M5x0.8
VL113JR		CAT50 AD/B - SFH 8CR - 80	8	21	27	80	36	M6x1.0
VL102JR		CAT50 AD/B - SFH 8CR - 130	8	21	27	130	36	M6x1.0
VL114JR		CAT50 AD/B - SFH 8CR - 160	8	21	27	160	36	M6x1.0
VL115JR		CAT50 AD/B - SFH 10CR - 80	10	24	32	80	42.5	M8x1.0
VL103JR		CAT50 AD/B - SFH 10CR - 130	10	24	32	130	42.5	M8x1.0
VL116JR		CAT50 AD/B - SFH 10CR - 160	10	24	32	160	42.5	M8x1.0
VL117JR		CAT50 AD/B - SFH 12CR - 80	12	24	32	80	48	M10x1.0
VL104JR		CAT50 AD/B - SFH 12CR - 130	12	24	32	130	48	M10x1.0
VL118JR		CAT50 AD/B - SFH 12CR - 160	12	24	32	160	48	M10x1.0
VL119JR		CAT50 AD/B - SFH 14CR - 80	14	24	32	80	48	M10x1.0
VL105JR		CAT50 AD/B - SFH 14CR - 130	14	24	32	130	48	M10x1.0
VL120JR		CAT50 AD/B - SFH 14CR - 160	14	24	32	160	48	M10x1.0
VL121JR		CAT50 AD/B - SFH 16CR - 80	16	27	34	80	51	M12x1.0
VL106JR		CAT50 AD/B - SFH 16CR - 130	16	27	34	130	51	M12x1.0
VL122JR		CAT50 AD/B - SFH 16CR - 160	16	27	34	160	51	M12x1.0
VL123JR		CAT50 AD/B - SFH 18CR - 80	18	33	42	80	51	M12x1.0
VL107JR		CAT50 AD/B - SFH 18CR - 130	18	33	42	130	51	M12x1.0
VL124JR		CAT50 AD/B - SFH 18CR - 160	18	33	42	160	51	M12x1.0
VL125JR		CAT50 AD/B - SFH 20CR - 80	20	33	42	80	53	M16x1.0
VL108JR		CAT50 AD/B - SFH 20CR - 130	20	33	42	130	53	M16x1.0
VL126JR		CAT50 AD/B - SFH 20CR - 160	20	33	42	160	53	M16x1.0
VL127JR		CAT50 AD/B - SFH 25CR - 100	25	44	53	100	59	M16x1.0
VL109JR		CAT50 AD/B - SFH 25CR - 130	25	44	53	130	59	M16x1.0
VL128JR		CAT50 AD/B - SFH 25CR - 160	25	44	53	160	59	M16x1.0
VL129JR		CAT50 AD/B - SFH 32CR - 100	32	44	53	100	63	M16x1.0
VL110JR		CAT50 AD/B - SFH 32CR - 130	32	44	53	130	63	M16x1.0
VL130JR		CAT50 AD/B - SFH 32CR - 160	32	44	53	160	63	M16x1.0

* Resealable type (Thread for plugging screw & screws)
*1 Resealable type is not available.

DUAL CONTACT SHRINK FIT HOLDER



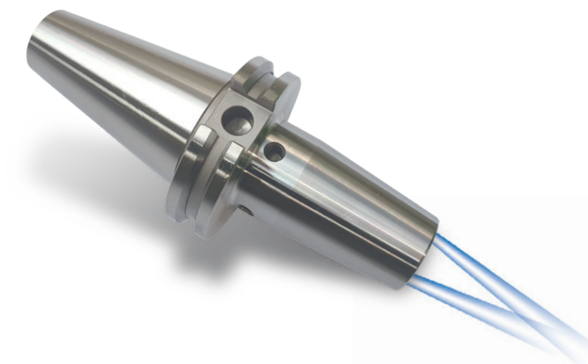
CCT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B

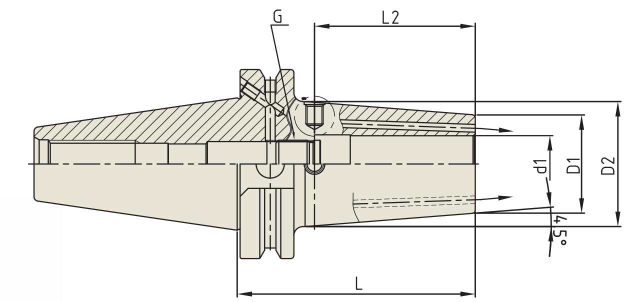
CCT (CAT DUAL CONTACT)

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VB020	40	CCT40 AD/B - SFH 1/8 - 3.15	.125	.394	.748	3.150	0.354	-
VB201		CCT40 AD/B - SFH 1/8 - 5.12	.125	.394	.748	5.120	0.354	
VB022		CCT40 AD/B - SFH 3/16 - 3.15	.188	.394	.748	3.150	0.472	-
VB202		CCT40 AD/B - SFH 3/16 - 5.12	.188	.394	.748	5.120	0.472	-
VB024		CCT40 AD/B - SFH 1/4 - 3.15	.250	.827	1.063	3.150	1.417	M5x0.8mm
VB026		CCT40 AD/B - SFH 1/4 - 6.30	.250	.827	1.063	6.300	1.417	M5x0.8mm
VB028		CCT40 AD/B - SFH 3/8 - 3.15	.375	.945	1.260	3.150	1.713	M8x1.0mm
VB030		CCT40 AD/B - SFH 3/8 - 6.30	.375	.945	1.260	6.300	1.713	M8x1.0mm
VB032		CCT40 AD/B - SFH 1/2 - 3.15	.500	.945	1.260	3.150	1.929	M10x1.0mm
VB034		CCT40 AD/B - SFH 1/2 - 6.30	.500	.945	1.260	6.300	1.929	M10x1.0mm
VB036		CCT40 AD/B - SFH 5/8 - 3.15	.625	1.063	1.339	3.150	2.047	M12x1.0mm
VB038		CCT40 AD/B - SFH 5/8 - 6.30	.625	1.063	1.339	6.300	2.047	M12x1.0mm
VB040		CCT40 AD/B - SFH 3/4 - 3.15	.750	1.299	1.654	3.150	2.126	M16x1.0mm
VB042		CCT40 AD/B - SFH 3/4 - 6.30	.750	1.299	1.654	6.300	2.126	M16x1.0mm
VB044		CCT40 AD/B - SFH 1.0 - 3.94	1.000	1.732	2.087	3.937	2.362	M16x1.0mm
VB046		CCT40 AD/B - SFH 1.0 - 6.30	1.000	1.732	2.087	6.300	2.362	M16x1.0mm
VB048		CCT40 AD/B - SFH 1 1/4 - 3.94	1.250	1.732	2.087	3.937	2.362	M16x1.0mm
VB050		CCT40 AD/B - SFH 1 1/4 - 6.30	1.250	1.732	2.087	6.300	2.362	M16x1.0mm

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Type)





CCT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B+C

CCT (CAT DUAL CONTACT) (Inch)

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VB020J	40	CCT40 AD/B - SFH 1/8C - 3.15	.125	.472	.827	3.150	0.394	-
VB022J		CCT40 AD/B - SFH 3/16C - 3.15	.188	.472	.827	3.150	0.472	-
VB024J		CCT40 AD/B - SFH 1/4C - 3.15	.250	.827	1.063	3.150	1.417	M5x0.8mm
VB026J		CCT40 AD/B - SFH 1/4C - 6.30	.250	.827	1.063	6.300	1.417	M5x0.8mm
VB028J		CCT40 AD/B - SFH 3/8C - 3.15	.375	.945	1.260	3.150	1.713	M8x1.0mm
VB030J		CCT40 AD/B - SFH 3/8C - 6.30	.375	.945	1.260	6.300	1.713	M8x1.0mm
VB032J		CCT40 AD/B - SFH 1/2C - 3.15	.500	.945	1.260	3.150	1.929	M10x1.0mm
VB034J		CCT40 AD/B - SFH 1/2C - 6.30	.500	.945	1.260	6.300	1.929	M10x1.0mm
VB036J		CCT40 AD/B - SFH 5/8C - 3.15	.625	1.063	1.339	3.150	2.047	M12x1.0mm
VB038J		CCT40 AD/B - SFH 5/8C - 6.30	.625	1.063	1.339	6.300	2.047	M12x1.0mm
VB040J		CCT40 AD/B - SFH 3/4C - 3.15	.750	1.299	1.654	3.150	2.126	M16x1.0mm
VB042J		CCT40 AD/B - SFH 3/4C - 6.30	.750	1.299	1.654	6.300	2.126	M16x1.0mm
VB044J		CCT40 AD/B - SFH 1.0C - 3.94	1.000	1.732	2.087	3.940	2.362	M16x1.0mm
VB046J		CCT40 AD/B - SFH 1.0C - 6.30	1.000	1.732	2.087	6.300	2.362	M16x1.0mm
VB048J		CCT40 AD/B - SFH 1 1/4C - 3.94	1.250	1.732	2.087	3.940	2.362	M16x1.0mm
VB050J		CCT40 AD/B - SFH 1 1/4C - 6.30	1.250	1.732	2.087	6.300	2.362	M16x1.0mm

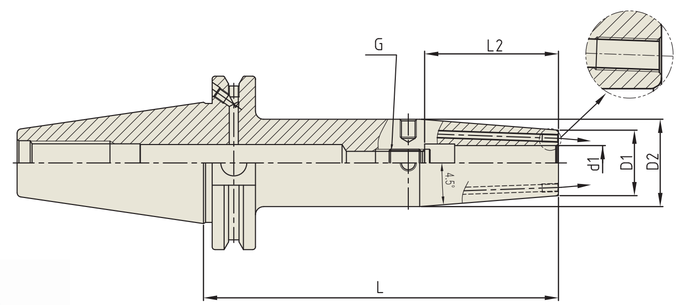
ROTARY TOOL HOLDERS
Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG SHRINK FIT HOLDER

CCT

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Resealable)



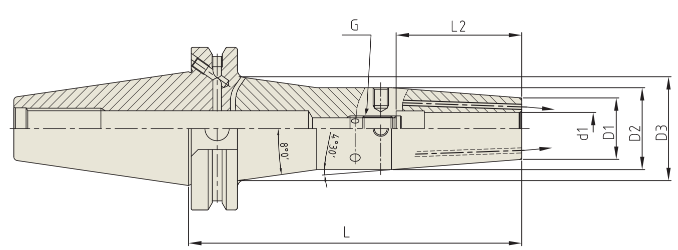
CCT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B+CR

CCT (CAT DUAL CONTACT) - (Inch)

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VB203JR	40	CCT40 AD/B - SFH 1/4CR - 5.12	.250	.827	1.063	5.120	1.417	M5x0.8mm
VB204JR		CCT40 AD/B - SFH 5/16CR - 5.12	.313	.827	1.063	5.120	1.417	M6x1.0mm
VB205JR		CCT40 AD/B - SFH 3/8CR - 5.12	.375	.945	1.260	5.120	1.713	M8x1.0mm
VB206JR		CCT40 AD/B - SFH 7/16CR - 5.12	.438	.945	1.260	5.120	1.929	M10x1.0mm
VB207JR		CCT40 AD/B - SFH 1/2CR - 5.12	.500	.945	1.260	5.120	1.929	M10x1.0mm
VB208JR		CCT40 AD/B - SFH 5/8CR - 5.12	.625	1.063	1.339	5.120	2.047	M12x1.0mm
VB209JR		CCT40 AD/B - SFH 3/4CR - 5.12	.750	1.299	1.654	5.120	2.126	M16x1.0mm
VB210JR		CCT40 AD/B - SFH 1CR - 5.12	1.000	1.732	2.087	5.120	2.362	M16x1.0mm

* Resealable type (Thread for plugging screw & screws)



CCT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B+C

CCT (CAT DUAL CONTACT) Coolant Channel & Thick Wall (Inch)

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G
VB101JR	40	CCT40 AD/B - SFH 1/4C TW - 6.30	.250	.827	1.063	1.661	6.300	1.417	M5x0.8mm
VB102JR		CCT40 AD/B - SFH 5/16C TW - 6.30	.313	.827	1.063	1.661	6.300	1.417	M6x1.0mm
VB103JR		CCT40 AD/B - SFH 3/8C TW - 6.30	.375	.945	1.260	1.750	6.300	1.673	M8x1.0mm
VB104JR		CCT40 AD/B - SFH 7/16C TW - 6.30	.438	.945	1.260	1.732	6.300	1.929	M10x1.0mm
VB105JR		CCT40 AD/B - SFH 1/2C TW - 6.30	.500	.945	1.260	1.732	6.300	1.929	M10x1.0mm
VB106JR		CCT40 AD/B - SFH 5/8C TW - 6.30	.625	1.063	1.339	1.732	6.300	2.047	M12x1.0mm

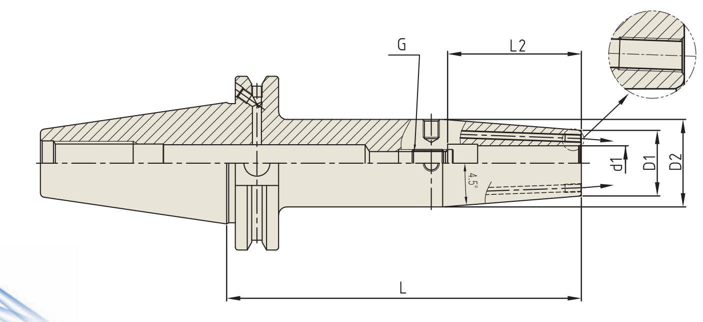
* Resealable type available. (Thread for plugging screw & screws)

ROTARY TOOL HOLDERS

YG SHRINK FIT HOLDER

CCT

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Resealable)



CCT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B+CR

CCT (CAT DUAL CONTACT) - (Metric)

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VB101J	40	CCT40 AD/B - SFH 3C - 80 *1	3	12	17	80	10	-
VB102J		CCT40 AD/B - SFH 4C - 80 *1	4	12	17	80	12	-
VB103J		CCT40 AD/B - SFH 5C - 80 *1	5	12	17	80	15	-
VB110JR		CCT40 AD/B - SFH 6CR - 80	6	21	27	80	36	M5x0.8
VB101JR		CCT40 AD/B - SFH 6CR - 130	6	21	27	130	36	M5x0.8
VB111JR		CCT40 AD/B - SFH 6CR - 160	6	21	27	160	36	M5x0.8
VB112JR		CCT40 AD/B - SFH 8CR - 80	8	21	27	80	36	M6x1.0
VB102JR		CCT40 AD/B - SFH 8CR - 130	8	21	27	130	36	M6x1.0
VB113JR		CCT40 AD/B - SFH 8CR - 160	8	21	27	160	36	M6x1.0
VB114JR		CCT40 AD/B - SFH 10CR - 80	10	24	32	80	42.5	M8x1.0
VB103JR		CCT40 AD/B - SFH 10CR - 130	10	24	32	130	42.5	M8x1.0
VB115JR		CCT40 AD/B - SFH 10CR - 160	10	24	32	160	42.5	M8x1.0
VB116JR		CCT40 AD/B - SFH 12CR - 80	12	24	32	80	48	M10x1.0
VB104JR		CCT40 AD/B - SFH 12CR - 130	12	24	32	130	48	M10x1.0
VB117JR		CCT40 AD/B - SFH 12CR - 160	12	24	32	160	48	M10x1.0
VB118JR		CCT40 AD/B - SFH 14CR - 80	14	24	32	80	48	M10x1.0
VB105JR		CCT40 AD/B - SFH 14CR - 130	14	24	32	130	48	M10x1.0
VB119JR		CCT40 AD/B - SFH 14CR - 160	14	24	32	160	48	M10x1.0
VB120JR		CCT40 AD/B - SFH 16CR - 80	16	27	34	80	51	M12x1.0
VB106JR		CCT40 AD/B - SFH 16CR - 130	16	27	34	130	51	M12x1.0
VB121JR		CCT40 AD/B - SFH 16CR - 160	16	27	34	160	51	M12x1.0
VB122JR		CCT40 AD/B - SFH 18CR- 80	18	33	42	80	51	M12x1.0
VB107JR		CCT40 AD/B - SFH 18CR - 130	18	33	42	130	51	M12x1.0
VB123JR		CCT40 AD/B - SFH 18CR - 160	18	33	42	160	51	M12x1.0
VB124JR		CCT40 AD/B - SFH 20CR - 80	20	33	42	80	53	M16x1.0
VB108JR		CCT40 AD/B - SFH 20CR - 130	20	33	42	130	53	M16x1.0
VB125JR		CCT40 AD/B - SFH 20CR - 160	20	33	42	160	53	M16x1.0
VB126JR		CCT40 AD/B - SFH 25CR - 100	25	44	53	100	59	M16x1.0
VB109JR		CCT40 AD/B - SFH 25CR - 130	25	44	53	130	59	M16x1.0
VB127JR		CCT40 AD/B - SFH 25CR - 160	25	44	53	160	59	M16x1.0

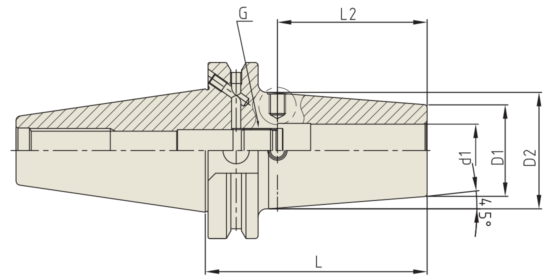
* Resealable type (Thread for plugging screw & screws)
*1 Resealable type is not available.

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

SHRINK FIT HOLDER

CCT

DUAL CONTACT SHRINK FIT HOLDER



CCT AT3 2.5G 25,000 RPM (at 3D) ≤0.00012" AD/B

CCT (CAT DUAL CONTACT)

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VC020	50	CCT50 AD/B - SFH 1/8 - 3.15	.125	.394	.748	3.150	0.354	-
VC022		CCT50 AD/B - SFH 3/16 - 3.15	.188	.394	.748	3.150	0.472	-
VC024		CCT50 AD/B - SFH 1/4 - 3.15	.250	.827	1.063	3.150	1.417	M5x0.8mm
VC026		CCT50 AD/B - SFH 1/4 - 6.30	.250	.827	1.063	6.300	1.417	M5x0.8mm
VC028		CCT50 AD/B - SFH 3/8 - 3.15	.375	.945	1.260	3.150	1.634	M8x1.0mm
VC030		CCT50 AD/B - SFH 3/8 - 6.30	.375	.945	1.260	6.300	1.634	M8x1.0mm
VC032		CCT50 AD/B - SFH 1/2 - 3.15	.500	.945	1.260	3.150	1.929	M10x1.0mm
VC034		CCT50 AD/B - SFH 1/2 - 6.30	.500	.945	1.260	6.300	1.929	M10x1.0mm
VC036		CCT50 AD/B - SFH 5/8 - 3.15	.625	1.063	1.339	3.150	2.047	M12x1.0mm
VC040		CCT50 AD/B - SFH 5/8 - 6.30	.625	1.063	1.339	6.300	2.047	M12x1.0mm
VC042		CCT50 AD/B - SFH 3/4 - 3.15	.750	1.299	1.654	3.150	2.126	M16x1.0mm
VC044		CCT50 AD/B - SFH 3/4 - 6.30	.750	1.299	1.654	6.300	2.126	M16x1.0mm
VC046		CCT50 AD/B - SFH 1.0 - 3.94	1.000	1.732	2.087	3.937	2.362	M16x1.0mm
VC048		CCT50 AD/B - SFH 1.0 - 6.30	1.000	1.732	2.087	6.300	2.362	M16x1.0mm
VC050		CCT50 AD/B - SFH 1 1/4 - 3.94	1.250	1.732	2.087	3.937	2.362	M16x1.0mm
VC052		CCT50 AD/B - SFH 1 1/4 - 6.30	1.250	1.732	2.087	6.300	2.362	M16x1.0mm

CCT (CAT DUAL CONTACT) (Metric)

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VB105	40	CCT40 AD/B - SFH 3 - 130	3	10	15	130	9	-
VB106		CCT40 AD/B - SFH 4 - 130	4	11	15	130	12	-

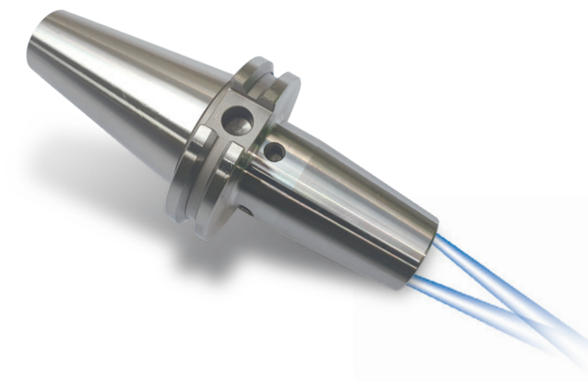
ROTARY TOOL HOLDERS

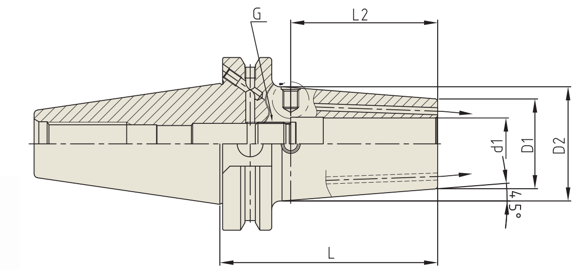
Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

SHRINK FIT HOLDER

CCT

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Type)





CCT AT3 2.5G 25,000 RPM (at 3D) ≤0.00012" AD/B+C

CCT (CAT DUAL CONTACT) (Inch)

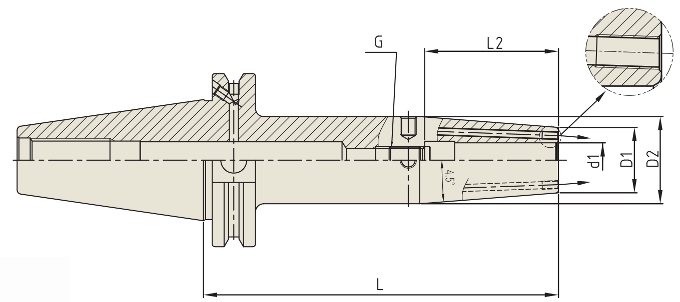
Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VC024J	40	CCT50 AD/B - SFH 1/4C - 3.15	.250	.827	1.063	3.150	1.417	M5x0.8mm
VC026J		CCT50 AD/B - SFH 1/4C - 6.30	.250	.827	1.063	6.300	1.417	M5x0.8mm
VC028J		CCT50 AD/B - SFH 3/8C - 3.15	.375	.945	1.260	3.150	1.634	M8x1.0mm
VC030J		CCT50 AD/B - SFH 3/8C - 6.30	.375	.945	1.260	6.300	1.634	M8x1.0mm
VC032J		CCT50 AD/B - SFH 1/2C - 3.15	.500	.945	1.260	3.150	1.929	M10x1.0mm
VC034J		CCT50 AD/B - SFH 1/2C - 6.30	.500	.945	1.260	6.300	1.929	M10x1.0mm
VC036J		CCT50 AD/B - SFH 5/8C - 3.15	.625	1.063	1.339	3.150	2.047	M12x1.0mm
VC040J		CCT50 AD/B - SFH 5/8C - 6.30	.625	1.063	1.339	6.300	2.047	M12x1.0mm
VC042J		CCT50 AD/B - SFH 3/4C - 3.15	.750	1.299	1.654	3.150	2.126	M16x1.0mm
VC044J		CCT50 AD/B - SFH 3/4C - 6.30	.750	1.299	1.654	6.300	2.126	M16x1.0mm
VC046J		CCT50 AD/B - SFH 1.0C - 3.94	1.000	1.732	2.087	3.940	2.362	M16x1.0mm
VC048J		CCT50 AD/B - SFH 1.0C - 6.30	1.000	1.732	2.087	6.300	2.362	M16x1.0mm
VC050J		CCT50 AD/B - SFH 1 1/4C - 3.94	1.250	1.732	2.087	3.940	2.362	M16x1.0mm
VC052J		CCT50 AD/B - SFH 1 1/4C - 6.30	1.250	1.732	2.087	6.300	2.362	M16x1.0mm

SHRINK FIT HOLDER

CCT

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Resealable)

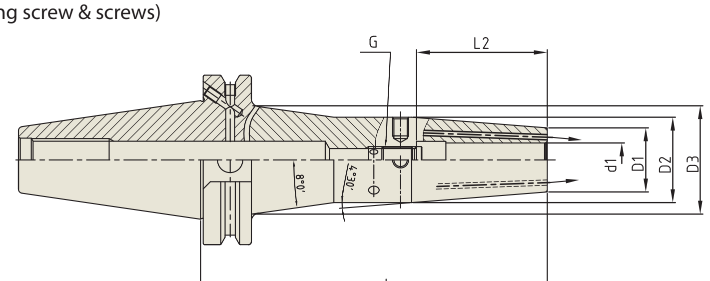
CCT (CAT DUAL CONTACT) - (Inch)

CCT AT3 2.5G 25,000 RPM (at 3D) ≤0.00012" AD/B+CR

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VC102JR	50	CCT50 AD/B - SFH 1/4CR - 5.12	.250	.827	1.063	5.120	1.417	M5x0.8mm
VC108JR		CCT50 AD/B - SFH 5/16CR - 5.12	.313	.827	1.063	5.120	1.417	M6x1.0mm
VC103JR		CCT50 AD/B - SFH 3/8CR - 5.12	.375	.945	1.260	5.120	1.713	M8x1.0mm
VC109JR		CCT50 AD/B - SFH 7/16CR - 5.12	.438	.945	1.260	5.120	1.929	M10x1.0mm
VC104JR		CCT50 AD/B - SFH 1/2CR - 5.12	.500	.945	1.260	5.120	1.929	M10x1.0mm
VC105JR		CCT50 AD/B - SFH 5/8CR - 5.12	.625	1.063	1.339	5.120	2.047	M12x1.0mm
VC106JR		CCT50 AD/B - SFH 3/4CR - 5.12	.750	1.299	1.654	5.120	2.126	M16x1.0mm
VC107JR		CCT50 AD/B - SFH 1CR - 5.12	1.000	1.732	2.087	5.120	2.362	M16x1.0mm

* Resealable type (Thread for plugging screw & screws)



CCT (CAT DUAL CONTACT) Coolant Channel & Thick Wall (Inch)

CCT AT3 2.5G 25,000 RPM (at 3D) ≤0.00012" AD/B+C

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G
VC026JTW	40	CCT50 AD/B - SFH 1/4C TW - 6.30	.250	.827	1.063	1.732	6.300	1.417	M5x0.8mm
VC120JTW		CCT50 AD/B - SFH 5/16C TW - 6.30	.313	.827	1.063	1.732	6.300	1.417	M6x1.0mm
VC030JTW		CCT50 AD/B - SFH 3/8C TW - 6.30	.375	.945	1.260	1.933	6.300	1.673	M8x1.0mm
VC121JTW		CCT50 AD/B - SFH 7/16C TW - 6.30	.438	.945	1.260	1.933	6.300	1.929	M10x1.0mm
VC034JTW		CCT50 AD/B - SFH 1/2C TW - 6.30	.500	.945	1.260	1.933	6.300	1.929	M10x1.0mm
VC040JTW		CCT50 AD/B - SFH 5/8C TW - 6.30	.625	1.063	1.339	2.000	6.300	2.047	M12x1.0mm
VC044JTW		CCT50 AD/B - SFH 3/4C TW - 6.30	.750	1.299	1.654	2.000	6.300	2.126	M16x1.0mm

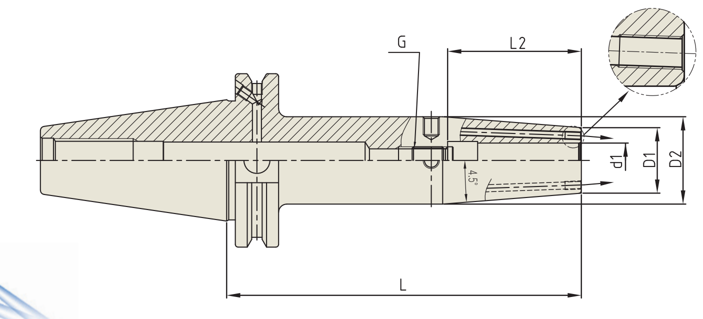
* Resealable type available. (Thread for plugging screw & screws)

ROTARY TOOL HOLDERS

SHRINK FIT HOLDER

CCT

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Resealable)

CCT (CAT DUAL CONTACT) - (Metric)

CCT AT3 2.5G 25,000 RPM (at 3D) ≤0.00012" AD/B+CR

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VC200J	40	CCT50 AD/B - SFH 3C - 80 *1	3	12	17	80	10	-
VC201J		CCT50 AD/B - SFH 4C - 80 *1	4	12	17	80	12	-
VC202J		CCT50 AD/B - SFH 5C - 80 *1	5	12	17	80	15	-
VC209JR		CCT50 AD/B - SFH 6CR - 80	6	21	27	80	36	M5x0.8
VC200JR		CCT50 AD/B - SFH 6CR - 130	6	21	27	130	36	M5x0.8
VC210JR		CCT50 AD/B - SFH 6CR - 160	6	21	27	160	36	M5x0.8
VC211JR		CCT50 AD/B - SFH 8CR - 80	8	21	27	80	36	M6x1.0
VC201JR		CCT50 AD/B - SFH 8CR - 130	8	21	27	130	36	M6x1.0
VC212JR		CCT50 AD/B - SFH 8CR - 160	8	21	27	160	36	M6x1.0
VC213JR		CCT50 AD/B - SFH 10CR - 80	10	24	32	80	42.5	M8x1.0
VC202JR		CCT50 AD/B - SFH 10CR - 130	10	24	32	130	42.5	M8x1.0
VC214JR		CCT50 AD/B - SFH 10CR - 160	10	24	32	160	42.5	M8x1.0
VC215JR		CCT50 AD/B - SFH 12CR - 80	12	24	32	80	48	M10x1.0
VC203JR		CCT50 AD/B - SFH 12CR - 130	12	24	32	130	48	M10x1.0
VC216JR		CCT50 AD/B - SFH 12CR - 160	12	24	32	160	48	M10x1.0
VC217JR		CCT50 AD/B - SFH 14CR - 80	14	27	34	80	48	M10x1.0
VC204JR		CCT50 AD/B - SFH 14CR - 130	14	27	34	130	48	M10x1.0
VC218JR		CCT50 AD/B - SFH 14CR - 160	14	27	34	160	48	M10x1.0
VC219JR		CCT50 AD/B - SFH 16CR - 80	16	27	34	80	51	M12x1.0
VC205JR		CCT50 AD/B - SFH 16CR - 130	16	27	34	130	51	M12x1.0
VC220JR		CCT50 AD/B - SFH 16CR - 160	16	27	34	160	51	M12x1.0
VC221JR		CCT50 AD/B - SFH 18CR - 80	18	33	42	80	51	M12x1.0
VC206JR		CCT50 AD/B - SFH 18CR - 130	18	33	42	130	51	M12x1.0
VC222JR		CCT50 AD/B - SFH 18CR - 160	18	33	42	160	51	M12x1.0
VC223JR		CCT50 AD/B - SFH 20CR - 80	20	33	42	80	53	M16x1.0
VC207JR		CCT50 AD/B - SFH 20CR - 130	20	33	42	130	53	M16x1.0
VC224JR		CCT50 AD/B - SFH 20CR - 160	20	33	42	160	53	M16x1.0
VC225JR		CCT50 AD/B - SFH 25CR - 100	25	44	53	100	59	M16x1.0
VC208JR		CCT50 AD/B - SFH 25CR - 130	25	44	53	130	59	M16x1.0
VC226JR		CCT50 AD/B - SFH 25CR - 160	25	44	53	160	59	M16x1.0
VC227JR		CCT50 AD/B - SFH 32CR - 100	32	44	53	100	59	M16x1.0
VC228JR		CCT50 AD/B - SFH 32CR - 130	32	44	53	130	59	M16x1.0
VC229JR		CCT50 AD/B - SFH 32CR - 160	32	44	53	160	59	M16x1.0

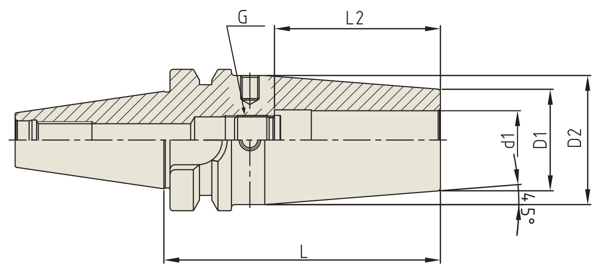
* Resealable type (Thread for plugging screw & screws)
*1 Resealable type is not available.

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

SHRINK FIT HOLDER

BT

SHRINK FIT HOLDER

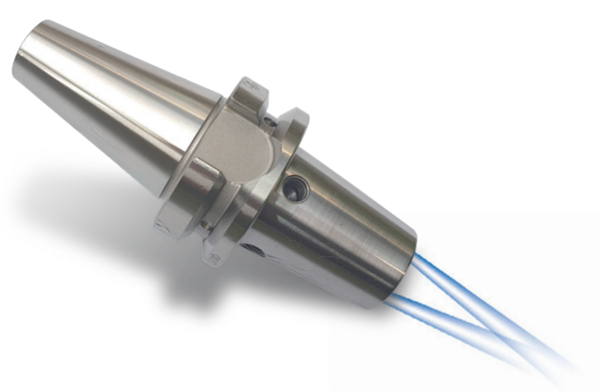


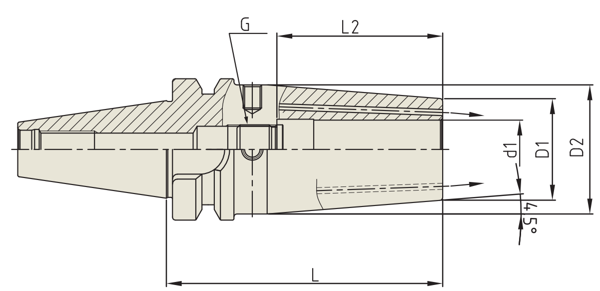
JIS B6339/MAS 403-BT (Inch)

JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	WEIGHT (Kg)
VG020	30	BT30 - SFH 1/8 - 2.36	.125	.394	.629	2.362	0.354	-	-
VG022		BT30 - SFH 3/16 - 2.36	.188	.394	.629	2.362	0.472	-	-
VG024		BT30 - SFH 1/4 - 2.36	.250	.827	1.062	2.362	1.417	M5x0.8mm	-
VG026		BT30 - SFH 3/8 - 2.36	.375	.945	1.180	2.362	1.713	M8x1.0mm	-
VG028		BT30 - SFH 1/2 - 3.15	.500	.945	1.260	3.150	1.929	M10x1.0mm	-
VG030		BT30 - SFH 5/8 - 3.15	.625	1.063	1.339	3.150	2.047	M12x1.0mm	-
VG032		BT30 - SFH 3/4 - 3.54	.750	1.299	1.654	3.543	2.087	M16x1.0mm	-





JIS B6339/MAS 403-BT (Inch)

JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD+C

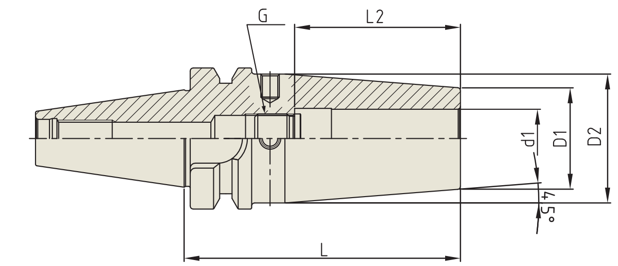
Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	WEIGHT (Kg)
VG024J	30	BT30 - SFH 1/4C - 2.36	.250	.827	1.063	2.360	1.417	M5x0.8mm	-
VG026J		BT30 - SFH 3/8C - 2.36	.375	.945	1.180	2.360	1.713	M8x1.0mm	-
VG028J		BT30 - SFH 1/2C - 3.15	.500	.945	1.260	3.150	1.929	M10x1.0mm	-
VG030J		BT30 - SFH 5/8C - 3.15	.625	1.063	1.339	3.150	2.047	M12x1.0mm	-
VG032J		BT30 - SFH 3/4C - 3.54	.750	1.299	1.654	3.540	2.126	M16x1.0mm	-

SHRINK FIT HOLDER

BT

SHRINK FIT HOLDER



JIS B6339/MAS 403-BT (Inch)

JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD

Unit : mm

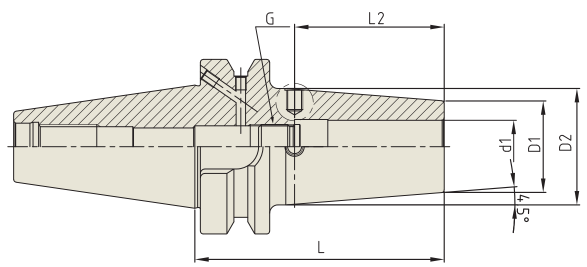
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	WEIGHT (Kg)
P2776703A	30	BT30 - SFH 3 - 60	3	11	15	60	10	-	0.40
P2776702A		BT30 - SFH 4 - 60	4	11	15	60	12	-	0.40
P2776704A		BT30 - SFH 5 - 60	5	11	15	60	15	M5x0.8	0.40
P2776701A		BT30 - SFH 6 - 60	6	21	27	60	36	M5x0.8	0.40
P2776705A		BT30 - SFH 8 - 60	8	21	27	60	36	M6x1.0	0.40
P2776706A		BT30 - SFH 10 - 80	10	24	32	80	42	M8x1.0	0.40
P2776707A		BT30 - SFH 12 - 80	12	24	32	80	47	M10x1.0	0.42
P2776708A		BT30 - SFH 14 - 80	14	27	34	80	47	M10x1.0	0.42
P2776709A		BT30 - SFH 16 - 80	16	27	34	80	50	M12x1.0	0.42
P2776710A		BT30 - SFH 18 - 80	18	33	42	80	50	M12x1.0	0.42
P2776711A		BT30 - SFH 20 - 90	20	33	42	90	52	M16x1.0	0.44

* Coolant channel is available as option.

YG SHRINK FIT HOLDER

BT

SHRINK FIT HOLDER



JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B

JIS B6339/MAS 403-BT (Inch)

Unit : inch

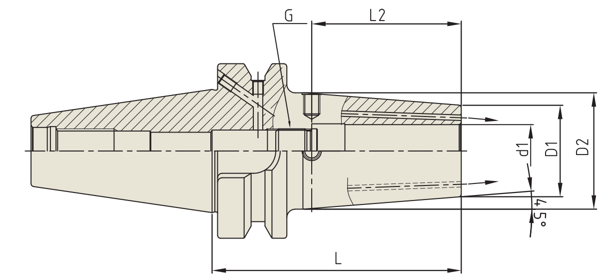
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	WEIGHT (Kg)
VH020	40	BT40 AD/B - SFH 1/8 - 3.54	.125	.394	.748	3.543	0.354	-	-
VH022		BT40 AD/B - SFH 3/16 - 3.54	.188	.394	.748	3.543	0.472	-	-
VH024		BT40 AD/B - SFH 1/4 - 3.54	.250	.827	1.063	3.543	1.417	M5x0.8mm	-
VH026		BT40 AD/B - SFH I/4 - 6.30	.250	.827	1.063	6.300	1.417	M5x0.8mm	-
VH028		BT40 AD/B - SFH 3/8 - 3.54	.375	.945	1.260	3.543	1.713	M8x1.0mm	-
VH030		BT40 AD/B - SFH 3/8 - 6.30	.375	.945	1.260	6.300	1.713	M8x1.0mm	-
VH032		BT40 AD/B - SFH 1/2 - 3.54	.500	.945	1.260	3.543	1.929	M10x1.0mm	-
VH034		BT40 AD/B - SFH 1/2 - 6.30	.500	.945	1.260	6.300	1.929	M10x1.0mm	-
VH036		BT40 AD/B - SFH 5/8 - 3.54	.625	1.063	1.339	3.543	2.047	M12x1.0mm	-
VH038		BT40 AD/B - SFH 5/8 - 6.30	.625	1.063	1.339	6.300	2.047	M12x1.0mm	-
VH040		BT40 AD/B - SFH 3/4 - 3.54	.750	1.299	1.654	3.543	2.126	M16x1.0mm	-
VH042		BT40 AD/B - SFH 3/4 - 6.30	.750	1.299	1.654	6.300	2.126	M16x1.0mm	-
VH044		BT40 AD/B - SFH 1.0 - 3.94	1.000	1.732	2.087	3.937	2.362	M16x1.0mm	-
VH046		BT40 AD/B - SFH 1.0 - 6.30	1.000	1.732	2.087	6.300	2.362	M16x1.0mm	-

ROTARY TOOL HOLDERS

YG SHRINK FIT HOLDER

BT

SHRINK FIT HOLDER (Coolant Channel Type)



JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD/B+C

JIS B6339/MAS 403-BT (Inch)

Unit : inch

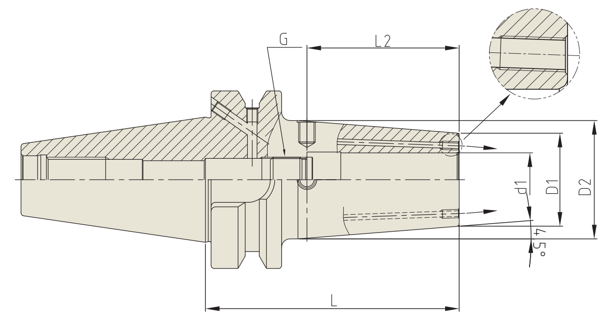
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	WEIGHT (Kg)
VH020J	40	BT40 AD/B - SFH 1/8C - 3.54	.125	.472	.827	3.540	0.394	-	-
VH022J		BT40 AD/B - SFH 3/16C - 3.54	.188	.472	.827	3.540	0.472	-	-
VH024J		BT40 AD/B - SFH 1/4C - 3.54	.250	.827	1.063	3.540	1.417	M5x0.8mm	-
VH026J		BT40 AD/B - SFH 1/4C - 6.30	.250	.827	1.063	6.300	1.417	M5x0.8mm	-
VH028J		BT40 AD/B - SFH 3/8C - 3.54	.375	.945	1.260	3.540	1.713	M8x1.0mm	-
VH030J		BT40 AD/B - SFH 3/8C - 6.30	.375	.945	1.260	6.300	1.713	M8x1.0mm	-
VH032J		BT40 AD/B - SFH 1/2C - 3.54	.500	.945	1.260	3.540	1.929	M10x1.0mm	-
VH034J		BT40 AD/B - SFH 1/2C - 6.30	.500	.945	1.260	6.300	1.929	M10x1.0mm	-
VH036J		BT40 AD/B - SFH 5/8C - 3.54	.625	1.063	1.339	3.540	2.047	M12x1.0mm	-
VH038J		BT40 AD/B - SFH 5/8C - 6.30	.625	1.063	1.339	6.300	2.047	M12x1.0mm	-
VH040J		BT40 AD/B - SFH 3/4C - 3.54	.750	1.299	1.654	3.540	2.126	M16x1.0mm	-
VH042J		BT40 AD/B - SFH 3/4C - 6.30	.750	1.299	1.654	6.300	2.126	M16x1.0mm	-
VH044J		BT40 AD/B - SFH 1.0C - 3.94	1.000	1.732	2.087	3.940	2.362	M16x1.0mm	-
VH046J		BT40 AD/B - SFH 1.0C - 6.30	1.000	1.732	2.087	6.300	2.362	M16x1.0mm	-

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

SHRINK FIT HOLDER

BT

SHRINK FIT HOLDER (Coolant Channel Resealable)



JIS B6339/MAS 403-BT (Inch)

Unit : inch

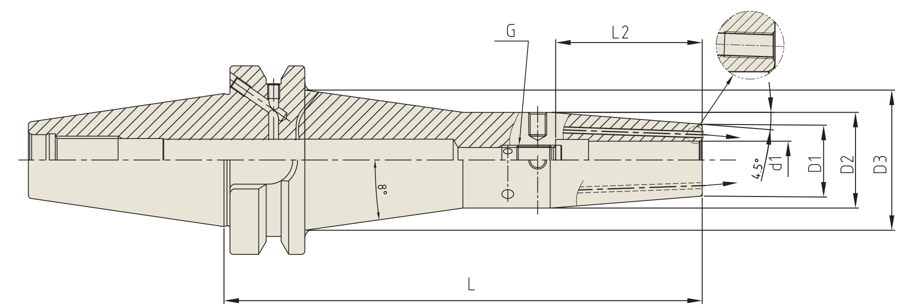
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	WEIGHT (Kg)
VH051JR	40	BT40 AD/B - SFH 1/4CR - 5.12	.250	.827	1.063	5.120	1.417	M5x0.8mm	-
VH057JR		BT40 AD/B - SFH 5/16CR - 5.12	.313	.827	1.063	5.120	1.417	M6x1.0mm	-
VH052JR		BT40 AD/B - SFH 3/8CR - 5.12	.375	.945	1.260	5.120	1.713	M8x1.0mm	-
VH058JR		BT40 AD/B - SFH 7/16CR - 5.12	.438	.945	1.260	5.120	1.929	M10x1.0mm	-
VH053JR		BT40 AD/B - SFH 1/2CR - 5.12	.500	.945	1.260	5.120	1.929	M10x1.0mm	-
VH054JR		BT40 AD/B - SFH 5/8CR - 5.12	.625	1.063	1.339	5.120	2.047	M12x1.0mm	-
VH055JR		BT40 AD/B - SFH 3/4CR - 5.12	.750	1.299	1.654	5.120	2.126	M12x1.0mm	-
VH056JR		BT40 AD/B - SFH 1.0CR - 5.12	1.000	1.732	2.087	5.120	2.362	M16x1.0mm	-

* Resealable type (Thread for plugging screw & screws)

SHRINK FIT HOLDER

BT

SHRINK FIT HOLDER (Coolant Channel & Thick Wall)



JIS B6339/MAS 403-BT (Inch)

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	WEIGHT (Kg)
VH026JTW	40	BT40 AD/B - SFH 1/4C TW - 6.30	.250	.827	1.063	1.654	6.300	1.417	M5x0.8mm	-
VH060JTW		BT40 AD/B - SFH 5/16C TW - 6.30	.313	.827	1.063	1.654	6.300	1.417	M6x1.0mm	-
VH030JTW		BT4 0AD/B - SFH 3/8C TW - 6.30	.375	.945	1.260	1.850	6.300	1.713	M8x1.0mm	-
VH061JTW		BT40 AD/B - SFH 7/16C TW - 6.30	.438	.945	1.260	1.850	6.300	1.929	M10x1.0mm	-
VH034JTW		BT40 AD/B - SFH 1/2C TW - 6.30	.500	.945	1.260	1.850	6.300	1.929	M10x1.0mm	-
VH038JTW		BT40 AD/B - SFH 5/8C TW - 6.30	.625	1.063	1.339	1.929	6.300	2.047	M12x1.0mm	-
VH042JTW		BT40 AD/B - SFH 3/4C TW - 6.30	.750	1.299	1.654	2.244	6.300	2.126	M16x1.0mm	-

* Resealable type available.

ROTARY TOOL HOLDERS

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG SHRINK FIT HOLDER

BT

SHRINK FIT HOLDER (Coolant Channel Resealable)

FIG.1

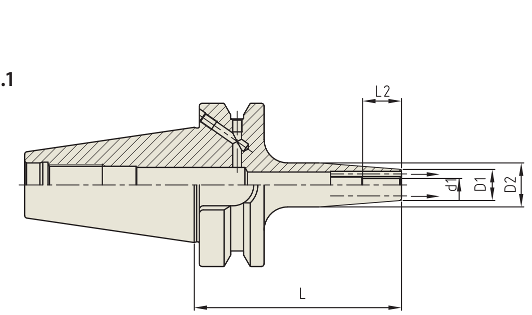
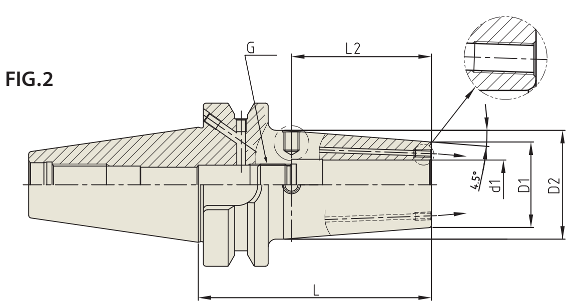


FIG.2



JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤3μm | AD/B+CR

JIS B6339/MAS 403-BT (Metric)

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	FIG.	WEIGHT (Kg)
P2863000C	40	BT40 AD/B - SFH 3C - 90 [*1]	3	12	17	90	10	-	1	-
P2863001C		BT40 AD/B - SFH 4C - 90 [*1]	4	12	17	90	12	-	1	-
P2863002C		BT40 AD/B - SFH 5C - 90 [*1]	5	12	17	90	15	-	1	-
P2863024CR		BT40 AD/B - SFH 6CR - 90	6	21	27	90	36	M5x0.8	2	1.10
P2863003CR		BT40 AD/B - SFH 6CR - 130	6	21	27	130	36	M5x0.8	2	-
P2863025CR		BT40 AD/B - SFH 6CR - 160	6	21	27	160	36	M5x0.8	2	1.15
P2863026CR		BT40 AD/B - SFH 8CR - 90	8	21	27	90	36	M6x1.0	2	1.11
P2863004CR		BT40 AD/B - SFH 8CR - 130	8	21	27	130	36	M6x1.0	2	-
P2863027CR		BT40 AD/B - SFH 8CR - 160	8	21	27	160	36	M6x1.0	2	1.15
P2863028CR		BT40 AD/B - SFH 10CR - 90	10	24	32	90	41	M8x1.0	2	1.10
P2863005CR		BT40 AD/B - SFH 10CR - 130	10	24	32	130	41	M8x1.0	2	-
P2863029CR		BT40 AD/B - SFH 10CR - 160	10	24	32	160	41	M8x1.0	2	1.15
P2863030CR		BT40 AD/B - SFH 12CR - 90	12	24	32	90	47	M10x1.0	2	1.10
P2863006CR		BT40 AD/B - SFH 12CR - 130	12	24	32	130	47	M10x1.0	2	-
P2863031CR		BT40 AD/B - SFH 12CR - 160	12	24	32	160	47	M10x1.0	2	1.15
P2863032CR		BT40 AD/B - SFH 14CR - 90	14	27	34	90	47	M10x1.0	2	1.20
P2863007CR		BT40 AD/B - SFH 14CR - 130	14	27	34	130	47	M10x1.0	2	-
P2863033CR		BT40 AD/B - SFH 14CR - 160	14	27	34	160	47	M10x1.0	2	1.50
P2863034CR		BT40 AD/B - SFH 16CR - 90	16	27	34	90	50	M12x1.0	2	1.20
P2863008CR		BT40 AD/B - SFH 16CR - 130	16	27	34	130	50	M12x1.0	2	-
P2863035CR		BT40 AD/B - SFH 16CR - 160	16	27	34	160	50	M12x1.0	2	1.50
P2863036CR		BT40 AD/B - SFH 18CR - 90	18	33	42	90	50	M12x1.0	2	1.30
P2863009CR		BT40 AD/B - SFH 18CR - 130	18	33	42	130	50	M12x1.0	2	-
P2863037CR		BT40 AD/B - SFH 18CR - 160	18	33	42	160	50	M12x1.0	2	1.60
P2863038CR		BT40 AD/B - SFH 20CR - 90	20	33	42	90	52	M16x1.0	2	1.40
P2863010CR		BT40 AD/B - SFH 20CR - 130	20	33	42	130	52	M16x1.0	2	-
P2863039CR		BT40 AD/B - SFH 20CR - 160	20	33	42	160	52	M16x1.0	2	1.70
P2863040CR		BT40 AD/B - SFH 25CR - 100	25	44	53	100	58	M16x1.0	2	1.70
P2863011CR		BT40 AD/B - SFH 25CR - 130	25	44	53	130	58	M16x1.0	2	-
P2863041CR		BT40 AD/B - SFH 25CR - 160	25	44	53	160	58	M16x1.0	2	2.00

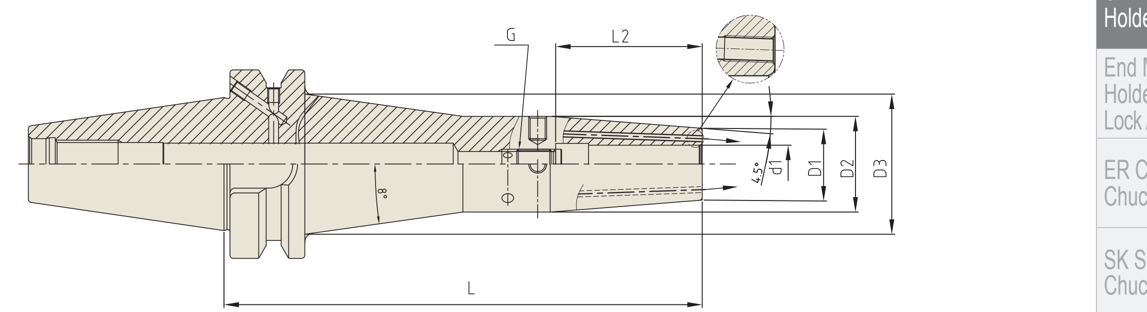
* Resealable type (Thread for plugging screw & screws)
[*1] Resealable type is not available.

ROTARY TOOL HOLDERS

YG SHRINK FIT HOLDER

BT

SHRINK FIT HOLDER (Coolant Channel & Thick Wall)



JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤3μm | AD/B+C

JIS B6339/MAS 403-BT (Metric)

Unit : mm

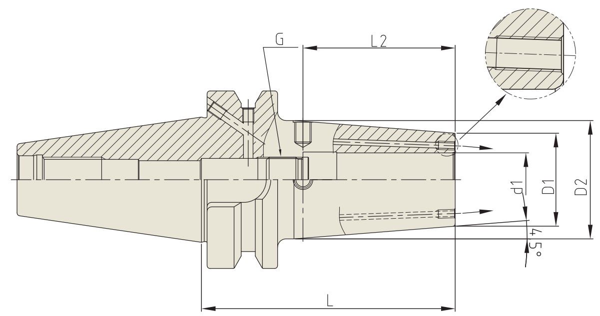
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	WEIGHT (Kg)
P2801601TW	40	BT40 AD/B - SFH 6C TW - 160	6	21	27	41.9	160	36	M5x0.8	1.64
P2801602TW		BT40 AD/B - SFH 8C TW - 160	8	21	27	41.9	160	36	M6x1.0	1.63
P2801603TW		BT40 AD/B - SFH 10C TW - 160	10	24	32	46.9	160	42	M8x1.0	1.84
P2801604TW		BT40 AD/B - SFH 12C TW - 160	12	24	32	46.9	160	47	M10x1.0	1.83
P2801605TW		BT40 AD/B - SFH 14C TW - 160	14	27	34	48.9	160	47	M10x1.0	1.80
P2801606TW		BT40 AD/B - SFH 16C TW - 160	16	27	34	48.9	160	50	M12x1.0	1.92

* Resealable type available.

YG SHRINK FIT HOLDER

BT

SHRINK FIT HOLDER (Coolant Channel Resealable)



JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤3μm | AD/B+CR

JIS B6339/MAS 403-BT (Inch)

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	WEIGHT (Kg)
VI201JR	50	BT50 AD/B - SFH 1/4CR - 5.12	.250	.827	1.063	5.120	1.417	M5x0.8mm	-
VI202JR		BT50 AD/B - SFH 5/16CR - 5.12	.313	.827	1.063	5.120	1.417	M6x1.0mm	-
VI203JR		BT50 AD/B - SFH 3/8CR - 5.12	.375	.945	1.260	5.120	1.713	M8x1.0mm	-
VI204JR		BT50 AD/B - SFH 7/16CR - 5.12	.438	.945	1.260	5.120	1.929	M10x1.0mm	-
VI205JR		BT50 AD/B - SFH 1/2CR - 5.12	.500	.945	1.260	5.120	1.929	M10x1.0mm	-
VI206JR		BT50 AD/B - SFH 5/8CR - 5.12	.625	1.063	1.339	5.120	2.047	M12x1.0mm	-
VI207JR		BT50 AD/B - SFH 3/4CR - 5.12	.750	1.299	1.654	5.120	2.126	M12x1.0mm	-
VI208JR		BT50 AD/B - SFH 1.0CR - 5.12	1.000	1.732	2.087	5.120	2.362	M16x1.0mm	-

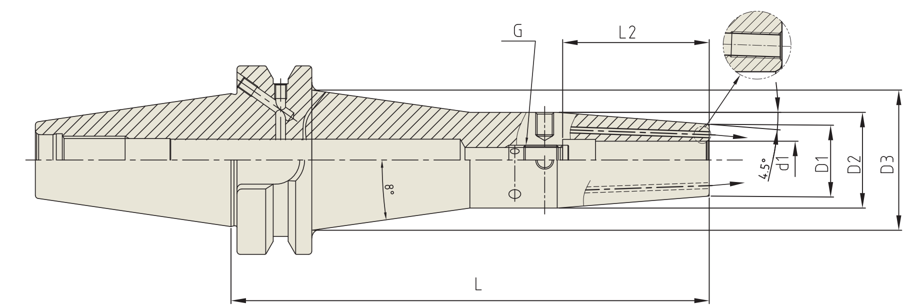
* Resealable type (Thread for plugging screw & screws)

ROTARY TOOL HOLDERS

YG SHRINK FIT HOLDER

BT

SHRINK FIT HOLDER (Coolant Channel & Thick Wall)



JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤3μm | AD/B+C

JIS B6339/MAS 403-BT (Inch)

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	WEIGHT (Kg)
VI300JTW	50	BT50 AD/B - SFH 1/4C TW - 6.30	.250	.827	1.063	1.531	6.300	1.417	M5x0.8mm	-
VI301JTW		BT50 AD/B - SFH 5/16C TW - 6.30	.313	.827	1.063	1.531	6.300	1.417	M6x1.0mm	-
VI302JTW		BT50 AD/B - SFH 3/8C TW - 6.30	.375	.945	1.260	1.728	6.300	1.713	M8x1.0mm	-
VI303JTW		BT50 AD/B - SFH 7/16C TW - 6.30	.438	.945	1.260	1.728	6.300	1.929	M10x1.0mm	-
VI304JTW		BT50 AD/B - SFH 1/2C TW - 6.30	.500	.945	1.260	1.728	6.300	1.929	M10x1.0mm	-
VI305JTW		BT50 AD/B - SFH 5/8C TW - 6.30	.625	1.063	1.339	1.807	6.300	2.047	M12x1.0mm	-
VI306JTW		BT50 AD/B - SFH 3/4C TW - 6.30	.750	1.299	1.654	2.122	6.300	2.126	M16x1.0mm	-
VI307JTW		BT50 AD/B - SFH 1.0C TW - 6.30	1.000	1.732	2.087	2.557	6.300	2.126	M16x1.0mm	-
VI308JTW		BT50 AD/B - SFH1 1/4C TW - 6.30	1.250	1.732	2.087	2.557	6.300	2.126	M16x1.0mm	-

* Resealable type available.

YG SHRINK FIT HOLDER

BT

SHRINK FIT HOLDER (Coolant Channel Resealable)

FIG.1

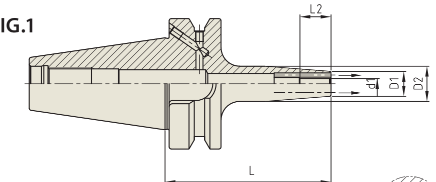
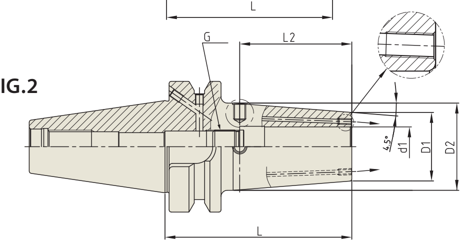


FIG.2



JIS B6339-BT · AT3 · 2.5G · 25,000 RPM · (at 3D) ≤3μm · AD/B+CR

JIS B6339/MAS 403-BT (Metric)

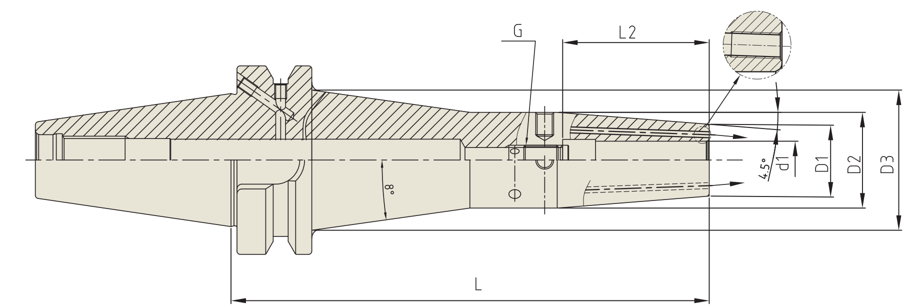
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	FIG.	WEIGHT (Kg)
P2863012C	50	BT50 AD/B - SFH 3C - 100 *1	3	12	17	100	10	-	1	-
P2863013C		BT50 AD/B - SFH 4C - 100 *1	4	12	17	100	12	-	1	-
P2863014C		BT50 AD/B - SFH 5C - 100 *1	5	12	17	100	15	-	1	-
P2863042CR		BT50 AD/B - SFH 6CR - 100	6	21	27	100	36	M5x0.8	2	1.50
P2863015CR		BT50 AD/B - SFH 6CR - 130	6	21	27	130	36	M5x0.8	2	-
P2863043CR		BT50 AD/B - SFH 6CR - 160	6	21	27	160	36	M5x0.8	2	2.00
P2863044CR		BT50 AD/B - SFH 8CR - 100	8	21	27	100	36	M6x1.0	2	1.50
P2863016CR		BT50 AD/B - SFH 8CR - 130	8	21	27	130	36	M6x1.0	2	-
P2863045CR		BT50 AD/B - SFH 8CR - 160	8	21	27	160	36	M6x1.0	2	2.00
P2863046CR		BT50 AD/B - SFH 10CR - 100	10	24	32	100	42	M8x1.0	2	1.10
P2863017CR		BT50 AD/B - SFH 10CR - 130	10	24	32	130	42	M8x1.0	2	-
P2863047CR		BT50 AD/B - SFH 10CR - 160	10	24	32	160	42	M8x1.0	2	1.15
P2863048CR		BT50 AD/B - SFH 12CR - 100	12	24	32	100	47	M10x1.0	2	1.60
P2863018CR		BT50 AD/B - SFH 12CR - 130	12	24	32	130	47	M10x1.0	2	-
P2863049CR		BT50 AD/B - SFH 12CR - 160	12	24	32	160	47	M10x1.0	2	2.10
P2863050CR		BT50 AD/B - SFH 14CR - 100	14	27	34	100	47	M10x1.0	2	1.60
P2863019CR		BT50 AD/B - SFH 14CR - 130	14	27	34	130	47	M10x1.0	2	-
P2863051CR		BT50 AD/B - SFH 14CR - 160	14	27	34	160	47	M10x1.0	2	2.10
P2863052CR		BT50 AD/B - SFH 16CR - 100	16	27	34	100	50	M12x1.0	2	1.60
P2863020CR		BT50 AD/B - SFH 16CR - 130	16	27	34	130	50	M12x1.0	2	-
P2863053CR		BT50 AD/B - SFH 16CR - 160	16	27	34	160	50	M12x1.0	2	2.10
P2863054CR		BT50 AD/B - SFH 18CR - 100	18	33	42	100	50	M12x1.0	2	1.60
P2863021CR		BT50 AD/B - SFH 18CR - 130	18	33	42	130	50	M12x1.0	2	-
P2863055CR		BT50 AD/B - SFH 18CR - 160	18	33	42	160	50	M12x1.0	2	2.00
P2863056CR		BT50 AD/B - SFH 20CR - 100	20	33	42	100	52	M16x1.0	2	1.80
P2863022CR		BT50 AD/B - SFH 20CR - 130	20	33	42	130	52	M16x1.0	2	-
P2863057CR		BT50 AD/B - SFH 20CR - 160	20	33	42	160	52	M16x1.0	2	2.20
P2863058CR		BT50 AD/B - SFH 25CR - 100	25	44	53	100	58	M16x1.0	2	2.00
P2863023CR		BT50 AD/B - SFH 25CR - 130	25	44	53	130	58	M16x1.0	2	-
P2863059CR		BT50 AD/B - SFH 25CR - 160	25	44	53	160	58	M16x1.0	2	2.40

* Resealable type (Thread for plugging screw & screws)
*1 Resealable type is not available.

YG SHRINK FIT HOLDER

BT

SHRINK FIT HOLDER (Coolant Channel & Thick Wall)



JIS B6339-BT · AT3 · 2.5G · 25,000 RPM · (at 3D) ≤3μm · AD/B+C

JIS B6339/MAS 403-BT (Metric)

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	WEIGHT (Kg)
P2801607TW	50	BT50 AD/B - SFH 6C TW - 160	6	21	27	38.8	160	36	M5x0.8	4.12
P2801608TW		BT50 AD/B - SFH 8C TW - 160	8	21	27	38.8	160	36	M6x1.0	4.57
P2801609TW		BT50 AD/B - SFH 10C TW - 160	10	24	32	43.8	160	42	M8x1.0	4.76
P2801610TW		BT50 AD/B - SFH 12C TW - 160	12	24	32	43.8	160	47	M10x1.0	4.74
P2801611TW		BT50 AD/B - SFH 14C TW - 160	14	27	34	45.8	160	47	M10x1.0	4.70
P2801612TW		BT50 AD/B - SFH 16C TW - 160	16	27	34	45.8	160	50	M12x1.0	4.69
P2801613TW		BT50 AD/B - SFH 20C TW - 160	20	33	42	53.8	160	52	M16x1.0	5.17

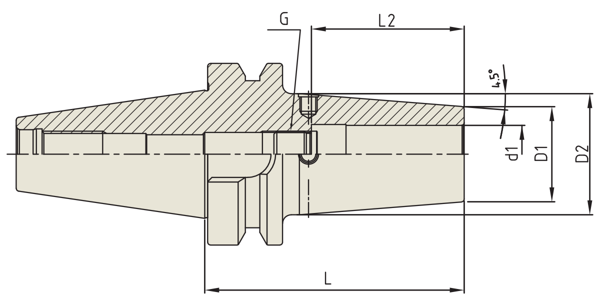
* Resealable type available.

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

SHRINK FIT HOLDER

CBT

DUAL CONTACT SHRINK FIT HOLDER

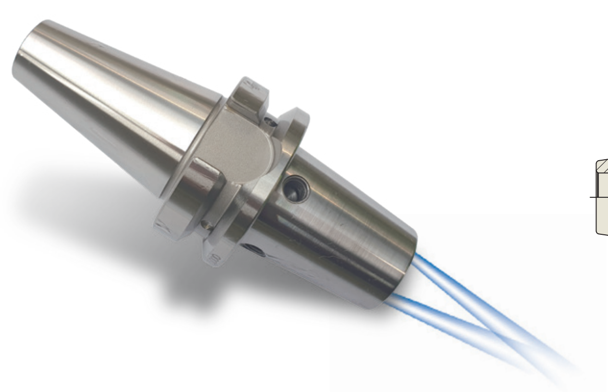


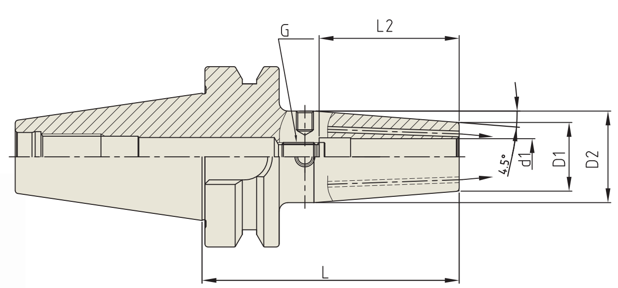
CBT (BT DUAL CONTACT) (Inch)

CBT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	WEIGHT (Kg)
VD020	30	CBT30 - SFH 1/8 - 2.36	.125	.394	.629	2.362	.354	-	-
VD022		CBT30 - SFH 3/16 - 2.36	.188	.394	.629	2.362	.472	-	-
VD024		CBT30 - SFH 1/4 - 2.36	.250	.827	1.062	2.362	1.417	M5x0.8mm	-
VD026		CBT30 - SFH 3/8 - 2.36	.375	.945	1.180	2.362	1.673	M8x1.0mm	-
VD028		CBT30 - SFH 1/2 - 3.15	.500	.945	1.260	3.150	1.929	M10x1.0mm	-
VD030		CBT30 - SFH 5/8 - 3.15	.625	1.063	1.339	3.150	2.047	M12x1.0mm	-
VD032		CBT30 - SFH 3/4 - 3.54	.750	1.299	1.654	3.543	2.126	M16x1.0mm	-





CBT (BT DUAL CONTACT) Coolant Channel Type(Inch)

CBT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD+C

Unit : inch

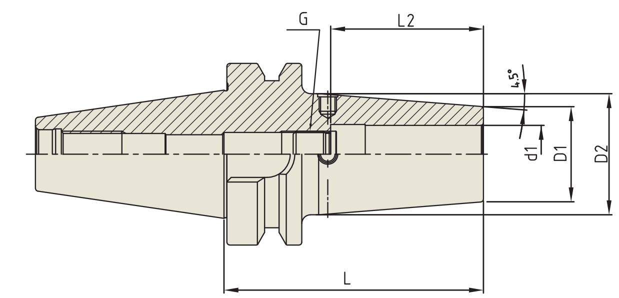
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	WEIGHT (Kg)
VD024J	30	CBT30 - SFH 1/4C - 2.36	.250	.827	1.062	2.360	1.417	M5x0.8mm	-
VD026J		CBT30 - SFH 3/8C - 2.36	.375	.945	1.180	2.360	1.713	M8x1.0mm	-
VD028J		CBT30 - SFH 1/2C - 3.15	.500	.945	1.260	3.150	1.929	M10x1.0mm	-
VD030J		CBT30 - SFH 5/8C - 3.15	.625	1.063	1.339	3.150	2.047	M12x1.0mm	-
VD032J		CBT30 - SFH 3/4C - 3.54	.750	1.299	1.654	3.540	2.126	M16x1.0mm	-

ROTARY TOOL HOLDERS
Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

SHRINK FIT HOLDER

CBT

DUAL CONTACT SHRINK FIT HOLDER



CBT (BT DUAL CONTACT) (Metric)

CBT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤3μm | AD

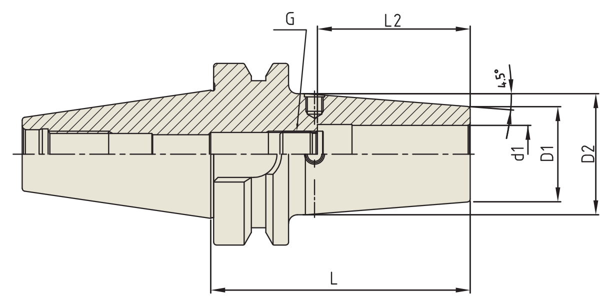
Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	WEIGHT (Kg)
P2771505	30	CBT30 - SFH 3 - 60	3	11	15	60	10	-	0.40
P2771506		CBT30 - SFH 4 - 60	4	11	15	60	12	-	0.40
P2771507		CBT30 - SFH 5 - 60	5	11	15	60	15	M5x0.8	0.40
P2771508		CBT30 - SFH 6 - 60	6	21	27	60	36	M5x0.8	0.40
P2771509		CBT30 - SFH 8 - 60	8	21	27	60	36	M6x1.0	0.40
P2771510		CBT30 - SFH 10 - 80	10	24	32	80	42	M8x1.0	0.40
P2771511		CBT30 - SFH 12 - 80	12	24	32	80	47	M10x1.0	0.42
P2771512		CBT30 - SFH 14 - 80	14	27	34	80	47	M10x1.0	0.42
P2771513		CBT30 - SFH 16 - 80	16	27	34	80	50	M12x1.0	0.42
P2771514		CBT30 - SFH 18 - 80	18	33	42	80	50	M12x1.0	0.42
P2771515		CBT30 - SFH 20 - 90	20	33	42	90	52	M16x1.0	0.44

SHRINK FIT HOLDER

CBT

DUAL CONTACT SHRINK FIT HOLDER



CBT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD

CBT (BT DUAL CONTACT) (Inch)

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	WEIGHT (Kg)
VE020	40	CBT40 - SFH 1/8 - 3.54	.125	.394	.748	3.543	.354	-	-
VE022		CBT40 - SFH 3/16 -3.54	.188	.394	.748	3.543	.472	-	-
VE024		CBT40 - SFH 1/4 - 3.54	.250	.827	1.063	3.543	1.417	M5x0.8mm	-
VE026		CBT40 - SFH 1/4 - 6.30	.250	.827	1.063	6.300	1.417	M5x0.8mm	-
VE028		CBT40 - SFH 3/8 - 3.54	.375	.945	1.260	3.543	1.713	M8x1.0mm	-
VE030		CBT40 - SFH 3/8 - 6.30	.375	.945	1.260	6.300	1.713	M8x1.0mm	-
VE032		CBT40 - SFH 1/2 - 3.54	.500	.945	1.260	3.543	1.929	M10x1.0mm	-
VE034		CBT40 - SFH 1/2 - 6.30	.500	.945	1.260	6.300	1.929	M10x1.0mm	-
VE036		CBT40 - SFH 5/8 - 3.54	.625	1.063	1.339	3.543	2.047	M12x1.0mm	-
VE038		CBT40 - SFH 5/8 - 6.30	.625	1.063	1.339	6.300	2.047	M12x1.0mm	-
VE040		CBT40 - SFH 3/4 - 3.54	.750	1.299	1.654	3.543	2.126	M16x1.0mm	-
VE042		CBT40 - SFH 3/4 - 6.30	.750	1.299	1.654	6.300	2.126	M16x1.0mm	-
VE044		CBT40 - SFH 1.0 - 3.94	1.000	1.732	2.087	3.937	2.362	M16x1.0mm	
VE046		CBT40 - SFH 1.0 - 6.30	1.000	1.732	2.087	6.300	2.362	M16x1.0mm	

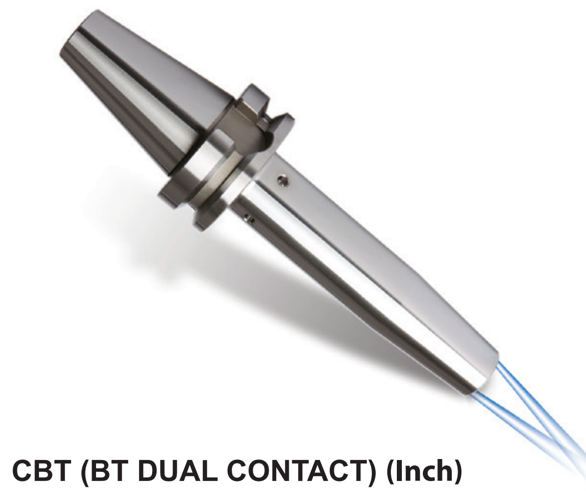
ROTARY TOOL HOLDERS

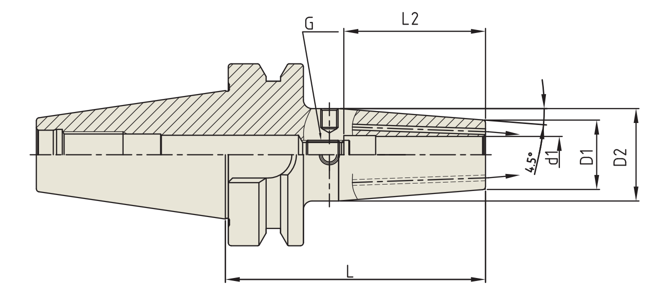
Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

SHRINK FIT HOLDER

CBT

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Type)





CBT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD+C

CBT (BT DUAL CONTACT) (Inch)

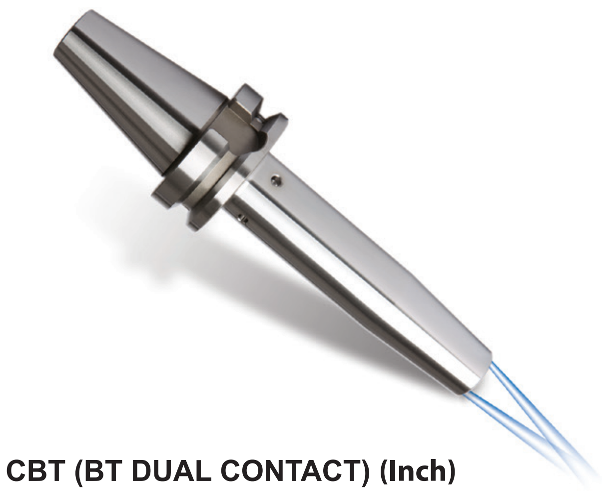
Unit : inch

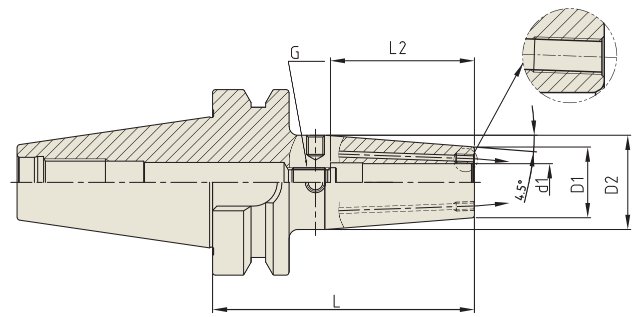
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	WEIGHT (Kg)
VE020J	40	CBT40 - SFH 1/8C - 3.54	.125	.472	.827	3.540	.394	-	-
VE022J		CBT40 - SFH 3/16C - 3.54	.188	.472	.827	3.540	.472	-	-
VE024J		CBT40 - SFH 1/4C - 3.54	.250	.827	1.063	3.540	1.417	M5x0.8mm	-
VE026J		CBT40 - SFH 1/4C - 6.30	.250	.827	1.063	6.300	1.417	M5x0.8mm	-
VE028J		CBT40 - SFH 3/8C - 3.54	.375	.945	1.260	3.540	1.713	M8x1.0mm	-
VE030J		CBT40 - SFH 3/8C - 6.30	.375	.945	1.260	6.300	1.713	M8x1.0mm	-
VE032J		CBT40 - SFH 1/2C - 3.54	.500	.945	1.260	3.540	1.929	M10x1.0mm	-
VE034J		CBT40 - SFH 1/2C - 6.30	.500	.945	1.260	6.300	1.929	M10x1.0mm	-
VE036J		CBT40 - SFH 5/8C - 3.54	.625	1.063	1.339	3.540	2.047	M12x1.0mm	-
VE038J		CBT40 - SFH 5/8C - 6.30	.625	1.063	1.339	6.300	2.047	M12x1.0mm	-
VE040J		CBT40 - SFH 3/4C - 3.54	.750	1.299	1.654	3.540	2.126	M16x1.0mm	-
VE042J		CBT40 - SFH 3/4C - 6.30	.750	1.299	1.654	6.300	2.126	M16x1.0mm	-
VE044J		CBT40 - SFH 1.0C - 3.94	1.000	1.732	2.087	3.940	2.362	M16x1.0mm	-
VE046J		CBT40 - SFH 1.0C - 6.30	1.000	1.732	2.087	6.300	2.362	M16x1.0mm	-

SHRINK FIT HOLDER

CBT

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Resealable)





CBT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤3μm | AD+CR

CBT (BT DUAL CONTACT) (Inch)

Unit : inch

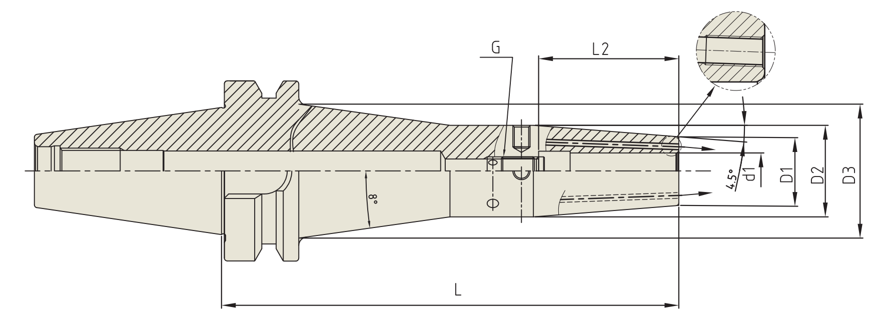
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	WEIGHT (Kg)
VE122JR	40	CBT40 - SFH 1/4CR - 5.12	.250	.827	1.063	5.120	1.417	M5x0.8mm	-
VE129JR		CBT40 - SFH 5/16CR - 5.12	.313	.827	1.063	5.120	1.417	M6x1.0mm	-
VE123JR		CBT40 - SFH 3/8CR - 5.12	.375	.945	1.260	5.120	1.713	M8x1.0mm	-
VE130JR		CBT40 - SFH 7/16CR - 5.12	.438	.945	1.260	5.120	1.929	M10x1.0mm	-
VE124JR		CBT40 - SFH 1/2CR - 5.12	.500	.945	1.260	5.120	1.929	M10x1.0mm	-
VE125JR		CBT40 - SFH 5/8CR - 5.12	.625	1.063	1.339	5.120	2.047	M12x1.0mm	-
VE127JR		CBT40 - SFH 3/4CR - 5.12	.750	1.299	1.654	5.120	2.126	M12x1.0mm	-
VE128JR		CBT40 - SFH 1.0CR - 5.12	1.000	1.732	2.087	5.120	2.362	M16x1.0mm	-

ROTARY TOOL HOLDERS
Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

SHRINK FIT HOLDER

CBT

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel & Thick Wall)



CBT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD+C

CBT (BT DUAL CONTACT) (Inch)

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	WEIGHT (Kg)
VE100JTW	50	CBT40 - SFH 1/4C TW - 6.30	.250	.827	1.063	1.654	6.300	1.417	M5x0.8mm	-
VE101JTW		CBT40 - SFH 5/16C TW - 6.30	.313	.827	1.063	1.654	6.300	1.417	M6x1.0mm	-
VE102JTW		CBT40 - SFH 3/8C TW - 6.30	.375	.945	1.260	1.850	6.300	1.713	M8x1.0mm	-
VE103JTW		CBT40 - SFH 7/16C TW - 6.30	.438	.945	1.260	1.850	6.300	1.929	M10x1.0mm	-
VE104JTW		CBT40 - SFH 1/2C TW - 6.30	.500	.945	1.260	1.850	6.300	1.929	M10x1.0mm	-
VE105JTW		CBT40 - SFH 5/8C TW - 6.30	.625	1.063	1.339	1.929	6.300	2.047	M12x1.0mm	-
VE106JTW		CBT40 - SFH 3/4C TW - 6.30	.750	1.299	1.654	2.244	6.300	2.126	M16x1.0mm	-

* Resealable type available.

YG SHRINK FIT HOLDER

CBT

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Resealable)

FIG.1

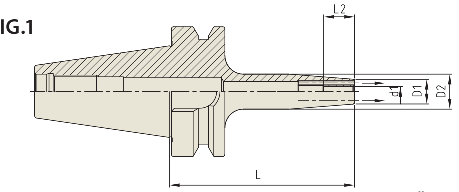
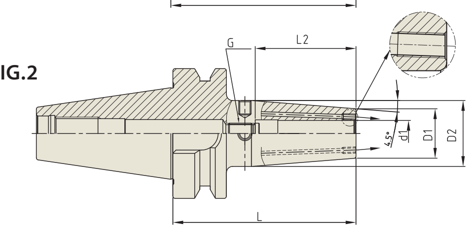


FIG.2



CBT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤3μm | AD+CR

CBT (BT DUAL CONTACT) (METRIC)

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	FIG.	WEIGHT (Kg)
P2862160C	40	CBT40 - SFH 3C - 90 *1	3	12	17	90	10	-	1	-
P2862161C		CBT40 - SFH 4C - 90 *1	4	12	17	90	12	-	1	-
P2862162C		CBT40 - SFH 5C - 90 *1	5	12	17	90	15	-	1	-
P2862184CR		CBT40 - SFH 6CR - 90	6	21	27	90	36	M5x0.8	2	1.10
P2862163CR		CBT40 - SFH 6CR - 130	6	21	27	130	36	M5x0.8	2	-
P2862185CR		CBT40 - SFH 6CR - 160	6	21	27	160	36	M5x0.8	2	1.15
P2862186CR		CBT40 - SFH 8CR - 90	8	21	27	90	36	M6x1.0	2	1.11
P2862164CR		CBT40 - SFH 8CR - 130	8	21	27	130	36	M6x1.0	2	-
P2862187CR		CBT40 - SFH 8CR - 160	8	21	27	160	36	M6x1.0	2	1.15
P2862188CR		CBT40 - SFH 10CR - 90	10	24	32	90	41	M8x1.0	2	1.10
P2862165CR		CBT40 - SFH 10CR - 130	10	24	32	130	41	M8x1.0	2	-
P2862189CR		CBT40 - SFH 10CR - 160	10	24	32	160	41	M8x1.0	2	1.15
P2862190CR		CBT40 - SFH 12CR - 90	12	24	32	90	47	M10x1.0	2	1.10
P2862166CR		CBT40 - SFH 12CR - 130	12	24	32	130	47	M10x1.0	2	-
P2862191CR		CBT40 - SFH 12CR - 160	12	24	32	160	47	M10x1.0	2	1.15
P2862192CR		CBT40 - SFH 14CR - 90	14	27	34	90	47	M10x1.0	2	1.20
P2862167CR		CBT40 - SFH 14CR - 130	14	27	34	130	47	M10x1.0	2	-
P2862193CR		CBT40 - SFH 14CR - 160	14	27	34	160	47	M10x1.0	2	1.50
P2862194CR		CBT40 - SFH 16CR - 90	16	27	34	90	50	M12x1.0	2	1.20
P2862168CR		CBT40 - SFH 16CR - 130	16	27	34	130	50	M12x1.0	2	-
P2862195CR		CBT40 - SFH 16CR - 160	16	27	34	160	50	M12x1.0	2	1.50
P2862196CR		CBT40 - SFH 18CR - 90	18	33	42	90	50	M12x1.0	2	1.30
P2862169CR		CBT40 - SFH 18CR - 130	18	33	42	130	50	M12x1.0	2	-
P2862197CR		CBT40 - SFH 18CR - 160	18	33	42	160	50	M12x1.0	2	1.60
P2862198CR		CBT40 - SFH 20CR - 90	20	33	42	90	52	M16x1.0	2	1.40
P2862170CR		CBT40 - SFH 20CR - 130	20	33	42	130	52	M16x1.0	2	-
P2862199CR		CBT40 - SFH 20CR - 160	20	33	42	160	52	M16x1.0	2	1.70
P2862200CR		CBT40 - SFH 25CR - 100	25	44	53	100	58	M16x1.0	2	1.70
P2862171CR		CBT40 - SFH 25CR - 130	25	44	53	130	58	M16x1.0	2	-
P2862201CR		CBT40 - SFH 25CR - 160	25	44	53	160	58	M16x1.0	2	2.00

* Resealable type (Thread for plugging screw & screws)

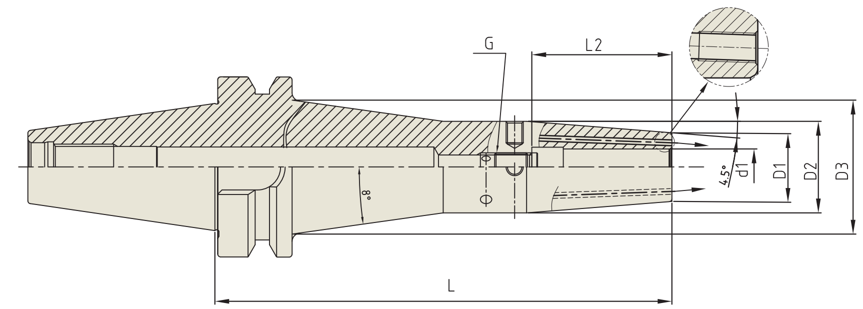
*1 Resealable type is not available.

ROTARY TOOL HOLDERS

YG SHRINK FIT HOLDER

CBT

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel & Thick Wall)



CBT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤3μm | AD+C

CBT (BT DUAL CONTACT) (METRIC)

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	WEIGHT (Kg)
P2863200TW	40	CBT40 - SFH 6C TW - 160	6	21	27	41.9	160	36	M5x0.8	1.64
P2863201TW		CBT40 - SFH 8C TW - 160	8	21	27	41.9	160	36	M6x1.0	1.63
P2863202TW		CBT40 - SFH 10C TW - 160	10	24	32	46.9	160	42	M8x1.0	1.84
P2863203TW		CBT40 - SFH 12C TW - 160	12	24	32	46.9	160	47	M10x1.0	1.83
P2863204TW		CBT40 - SFH 14C TW - 160	14	27	34	48.9	160	47	M10x1.0	1.80
P2863205TW		CBT40 - SFH 16C TW - 160	16	27	34	48.9	160	50	M12x1.0	1.92

* Resealable type available.

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
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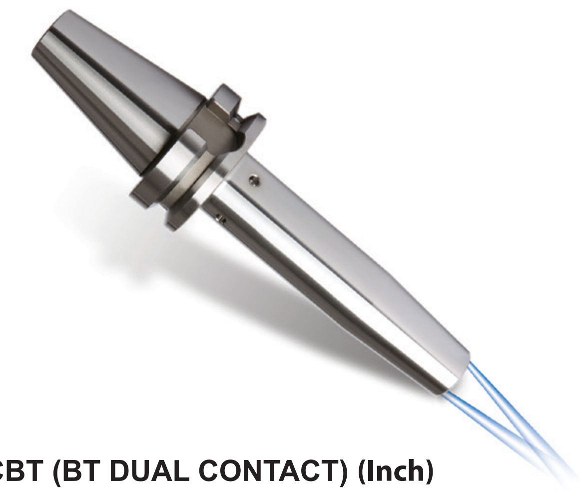
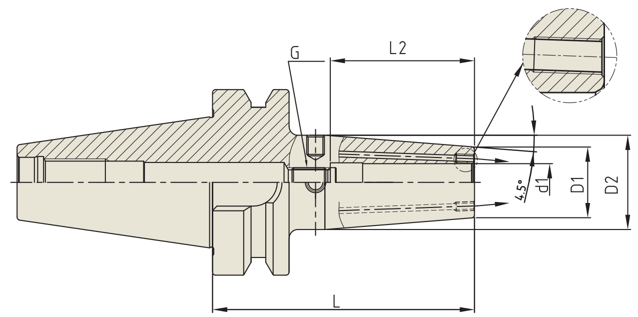
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

SHRINK FIT HOLDER

CBT

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Resealable)





CBT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD+CR

CBT (BT DUAL CONTACT) (Inch)

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	WEIGHT (Kg)
VF100JR	50	CBT50 - SFH 1/4CR - 5.12	.250	.827	1.063	5.120	1.417	M5x0.8mm	-
VF101JR		CBT50 - SFH 5/16CR - 5.12	.313	.827	1.063	5.120	1.417	M6x1.0mm	-
VF102JR		CBT50 - SFH 3/8CR - 5.12	.375	.945	1.260	5.120	1.713	M8x1.0mm	-
VF103JR		CBT50 - SFH 7/16CR - 5.12	.438	.945	1.260	5.120	1.929	M10x1.0mm	-
VF104JR		CBT50 - SFH 1/2CR - 5.12	.500	.945	1.260	5.120	1.929	M10x1.0mm	-
VF105JR		CBT50 - SFH 5/8CR - 5.12	.625	1.063	1.339	5.120	2.047	M12x1.0mm	-
VF106JR		CBT50 - SFH 3/4CR - 5.12	.750	1.299	1.654	5.120	2.126	M12x1.0mm	-
VF107JR		CBT50 - SFH 1.0CR - 5.12	1.000	1.732	2.087	5.120	2.362	M16x1.0mm	-

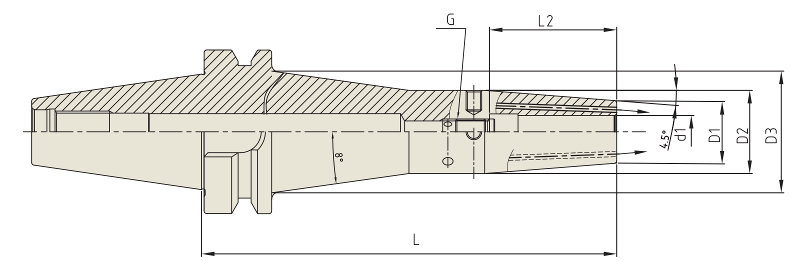
* Resealable type (Thread for plugging screw & screws)

ROTARY TOOL HOLDERS

SHRINK FIT HOLDER

CBT

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel & Thick Wall)



CBT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD+CR

CBT (BT DUAL CONTACT) (Inch)

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	WEIGHT (Kg)
VF100JTW	50	CBT50 - SFH 1/4C TW - 6.30	.250	.827	1.063	1.531	6.300	1.417	M5x0.8mm	-
VF101JTW		CBT50 - SFH 5/16C TW - 6.30	.313	.827	1.063	1.531	6.300	1.417	M6x1.0mm	-
VF102JTW		CBT50 - SFH 3/8C TW - 6.30	.375	.945	1.260	1.728	6.300	1.713	M8x1.0mm	-
VF103JTW		CBT50 - SFH 7/16C TW - 6.30	.438	.945	1.260	1.728	6.300	1.929	M10x1.0mm	-
VF104JTW		CBT50 - SFH 1/2C TW - 6.30	.500	.945	1.260	1.728	6.300	1.929	M10x1.0mm	-
VF105JTW		CBT50 - SFH 5/8C TW - 6.30	.625	1.063	1.339	1.807	6.300	2.047	M12x1.0mm	-
VF106JTW		CBT50 - SFH 3/4C TW - 6.30	.750	1.299	1.654	2.122	6.300	2.126	M16x1.0mm	-
VF107JTW		CBT50 - SFH 1.0C TW - 6.30	1.000	1.732	2.087	2.557	6.300	2.126	M16x1.0mm	-
VF108JTW		CBT50 - SFH1 1/4C TW - 6.30	1.250	1.732	2.087	2.557	6.300	2.126	M16x1.0mm	-

* Resealable type available.

SHRINK FIT HOLDER

CBT

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Resealable)

FIG.1

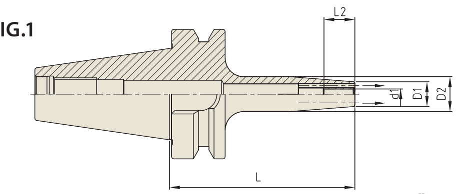
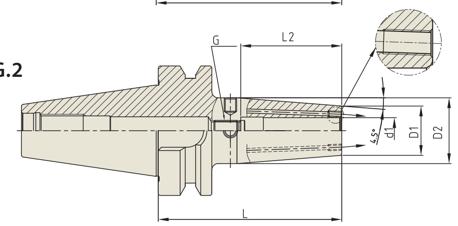


FIG.2



CBT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤3μm | AD+CR

CBT (BT DUAL CONTACT) (METRIC)

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	FIG.	WEIGHT (Kg)
P2862172C	50	CBT50 - SFH 3C - 100 *1	3	12	17	100	10	-	1	-
P2862173C		CBT50 - SFH 4C - 100 *1	4	12	17	100	12	-	1	-
P2862174C		CBT50 - SFH 5C - 100 *1	5	12	17	100	15	-	1	-
P2862202CR		CBT50 - SFH 6CR - 100	6	21	27	100	36	M5x0.8	2	1.50
P2862175CR		CBT50 - SFH 6CR - 130	6	21	27	130	36	M5x0.8	2	-
P2862203CR		CBT50 - SFH 6CR - 160	6	21	27	160	36	M5x0.8	2	2.00
P2862204CR		CBT50 - SFH 8CR - 100	8	21	27	100	36	M6x1.0	2	1.50
P2862176CR		CBT50 - SFH 8CR - 130	8	21	27	130	36	M6x1.0	2	-
P2862205CR		CBT50 - SFH 8CR - 160	8	21	27	160	36	M6x1.0	2	2.00
P2862206CR		CBT50 - SFH 10CR - 100	10	24	32	100	42	M8x1.0	2	1.10
P2862177CR		CBT50 - SFH 10CR - 130	10	24	32	130	42	M8x1.0	2	-
P2862207CR		CBT50 - SFH 10CR - 160	10	24	32	160	42	M8x1.0	2	1.15
P2862208CR		CBT50 - SFH 12CR - 100	12	24	32	100	47	M10x1.0	2	1.60
P2862178CR		CBT50 - SFH 12CR - 130	12	24	32	130	47	M10x1.0	2	-
P2862209CR		CBT50 - SFH 12CR - 160	12	24	32	160	47	M10x1.0	2	2.10
P2862210CR		CBT50 - SFH 14CR - 100	14	27	34	100	47	M10x1.0	2	1.60
P2862179CR		CBT50 - SFH 14CR - 130	14	27	34	130	47	M10x1.0	2	-
P2862211CR		CBT50 - SFH 14CR - 160	14	27	34	160	47	M10x1.0	2	2.10
P2862212CR		CBT50 - SFH 16CR - 100	16	27	34	100	50	M12x1.0	2	1.60
P2862180CR		CBT50 - SFH 16CR - 130	16	27	34	130	50	M12x1.0	2	-
P2862213CR		CBT50 - SFH 16CR - 160	16	27	34	160	50	M12x1.0	2	2.10
P2862214CR		CBT50 - SFH 18CR - 100	18	33	42	100	50	M12x1.0	2	1.60
P2862181CR		CBT50 - SFH 18CR - 130	18	33	42	130	50	M12x1.0	2	-
P2862215CR		CBT50 - SFH 18CR - 160	18	33	42	160	50	M12x1.0	2	2.00
P2862216CR		CBT50 - SFH 20CR - 100	20	33	42	100	52	M16x1.0	2	1.80
P2862182CR		CBT50 - SFH 20CR - 130	20	33	42	130	52	M16x1.0	2	-
P2862217CR		CBT50 - SFH 20CR - 160	20	33	42	160	52	M16x1.0	2	2.20
P2862218CR		CBT50 - SFH 25CR - 100	25	44	53	100	58	M16x1.0	2	2.00
P2862183CR		CBT50 - SFH 25CR - 130	25	44	53	130	58	M16x1.0	2	-
P2862219CR		CBT50 - SFH 25CR - 160	25	44	53	160	58	M16x1.0	2	2.40

* Resealable type (Thread for plugging screw & screws)

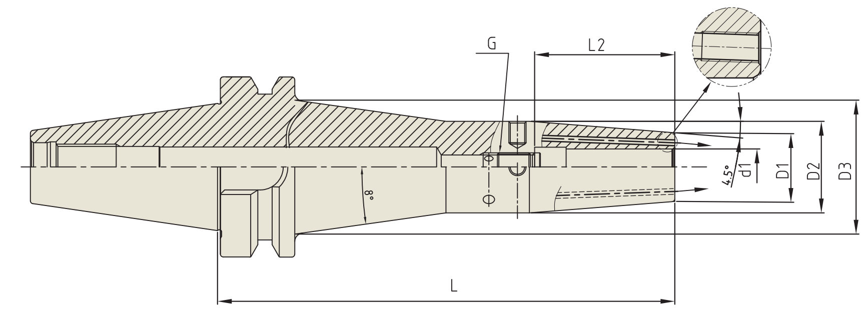
*1 Resealable type is not available.

ROTARY TOOL HOLDERS

SHRINK FIT HOLDER

CBT

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel & Thick Wall)



CBT | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤3μm | AD+CR

CBT (BT DUAL CONTACT) (METRIC)

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	WEIGHT (Kg)
P2863206TW	50	CBT50 - SFH 6C TW - 160	6	21	27	38.8	160	36	M5x0.8	4.12
P2863207TW		CBT50 - SFH 8C TW - 160	8	21	27	38.8	160	36	M6x1.0	4.57
P2863208TW		CBT50 - SFH 10C TW - 160	10	24	32	43.8	160	42	M8x1.0	4.76
P2863209TW		CBT50 - SFH 12C TW - 160	12	24	32	43.8	160	47	M10x1.0	4.74
P2863210TW		CBT50 - SFH 14C TW - 160	14	27	34	45.8	160	47	M10x1.0	4.70
P2863211TW		CBT50 - SFH 16C TW - 160	16	27	34	45.8	160	50	M12x1.0	4.69
P2863212TW		CBT50 - SFH 20C TW - 160	20	33	42	53.8	160	52	M16x1.0	5.17

* Resealable type available.

SHRINK FIT HOLDER

HSK

DUAL CONTACT SHRINK FIT HOLDER

FIG.1

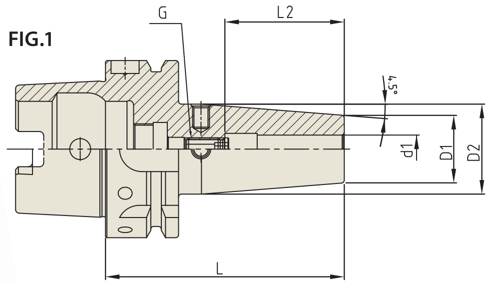
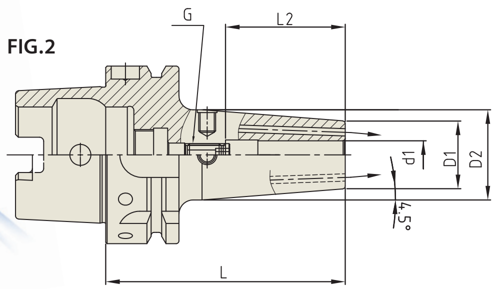


FIG.2



DIN 69893/ISO 12164-1-HSK FORM A (Inch)

Unit : inch

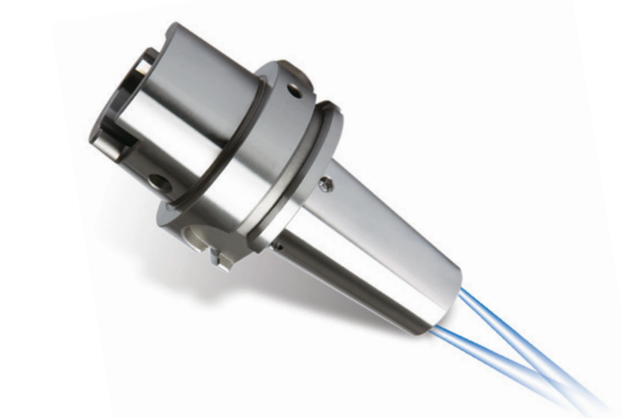
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	FIG.
VQ020	63A	HSK63A - SFH 1/8 - 3.15	.125	.394	.728	3.150	.354	-	1
VQ022		HSK63A - SFH 3/16 - 3.15	.188	.394	.728	3.150	.472	-	1
VQ024		HSK63A - SFH 1/4 - 3.15	.250	.827	1.063	3.150	1.417	M5x.8mm	1
VQ026		HSK63A - SFH 1/4 - 6.30	.250	.827	1.063	6.300	1.417	M5x.8mm	1
VQ028		HSK63A - SFH 3/8 - 3.35	.375	.945	1.260	3.346	1.713	M8x1.0mm	1
VQ030		HSK63A - SFH 3/8 - 6.30	.375	.945	1.260	6.300	1.713	M8x1.0mm	1
VQ032		HSK63A - SFH 1/2 - 3.54	.500	.945	1.260	3.543	1.929	M10x1.0mm	1
VQ034		HSK63A - SFH 1/2 - 6.30	.500	.945	1.260	6.300	1.929	M10x1.0mm	1
VQ036		HSK63A - SFH 5/8 - 3.74	.625	1.063	1.339	3.740	2.047	M12x1.0mm	1
VQ038		HSK63A - SFH 5/8 - 6.30	.625	1.063	1.339	6.300	2.047	M12x1.0mm	1
VQ040		HSK63A - SFH 3/4 - 3.94	.750	1.299	1.654	3.937	2.126	M16x1.0mm	1
VQ042		HSK63A - SFH 3/4 - 6.30	.750	1.299	1.654	6.300	2.126	M16x1.0mm	1
VQ046		HSK63A - SFH 1.0 - 4.53	1.000	1.732	2.087	4.528	2.362	M16x1.0mm	1
VQ048		HSK63A - SFH 1.0 - 6.30	1.000	1.732	2.087	6.300	2.362	M16x1.0mm	1
VQ020J		HSK63A - SFH 1/8C - 3.15	.125	.472	.827	3.150	.354	-	2
VQ022J		HSK63A - SFH 3/16C - 3.15	.188	.472	.827	3.150	.472	-	2
VQ024J		HSK63A - SFH 1/4C - 3.15	.250	.827	1.063	3.150	1.417	M5x.8mm	2
VQ026J		HSK63A - SFH 1/4C - 6.30	.250	.827	1.063	6.300	1.417	M5x.8mm	2
VQ028J		HSK63A - SFH 3/8C - 3.35	.375	.945	1.260	3.350	1.713	M8x1.0mm	2
VQ030J		HSK63A - SFH 3/8C - 6.30	.375	.945	1.260	6.300	1.713	M8x1.0mm	2
VQ032J		HSK63A - SFH 1/2C - 3.54	.500	.945	1.260	3.540	1.929	M10x1.0mm	2
VQ034J		HSK63A - SFH 1/2C - 6.30	.500	.945	1.260	6.300	1.929	M10x1.0mm	2
VQ036J		HSK63A - SFH 5/8C - 3.74	.625	1.063	1.339	3.740	2.047	M12x1.0mm	2
VQ038J		HSK63A - SFH 5/8C - 6.30	.625	1.063	1.339	6.300	2.047	M12x1.0mm	2
VQ040J		HSK63A - SFH 3/4C - 3.94	.750	1.299	1.654	3.940	2.126	M16x1.0mm	2
VQ042J		HSK63A - SFH 3/4C - 6.30	.750	1.299	1.654	6.300	2.126	M16x1.0mm	2
VQ046J		HSK63A - SFH 1.0C - 4.53	1.000	1.732	2.087	4.530	2.362	M16x1.0mm	2
VQ048J		HSK63A - SFH 1.0C - 6.30	1.000	1.732	2.087	6.300	2.362	M16x1.0mm	2

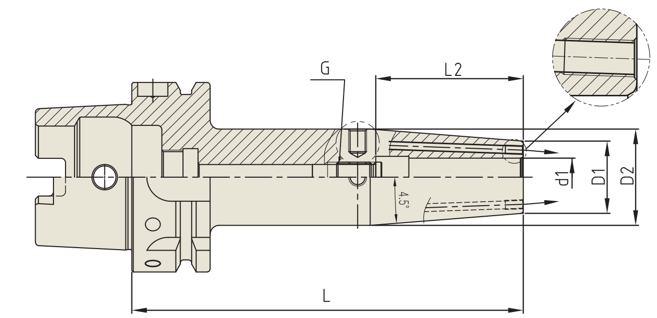
ROTARY TOOL HOLDERS

SHRINK FIT HOLDER

HSK

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Resealable)





DIN 69893/ISO 12164-1-HSK FORM A (Inch)

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G
VQ301JR	63A	HSK63A - SFH 1/4CR - 5.12	.250	.827	1.063	5.120	1.417	M5x0.8mm
VQ302JR		HSK63A - SFH 5/16CR - 5.12	.313	.827	1.063	5.120	1.417	M6x1.0mm
VQ303JR		HSK63A - SFH 3/8CR - 5.12	.375	.945	1.260	5.120	1.713	M8x1.0mm
VQ304JR		HSK63A - SFH 7/16CR - 5.12	.438	.945	1.260	5.120	1.929	M10x1.0mm
VQ305JR		HSK63A - SFH 1/2CR - 5.12	.500	.945	1.260	5.120	1.929	M10x1.0mm
VQ306JR		HSK63A - SFH 5/8CR - 5.12	.625	1.063	1.339	5.120	2.047	M12x1.0mm
VQ307JR		HSK63A - SFH 3/4CR - 5.12	.750	1.299	1.654	5.120	2.126	M16x1.0mm
VQ308JR		HSK63A - SFH 1.0CR - 5.12	1.000	1.732	2.087	5.120	2.362	M16x1.0mm

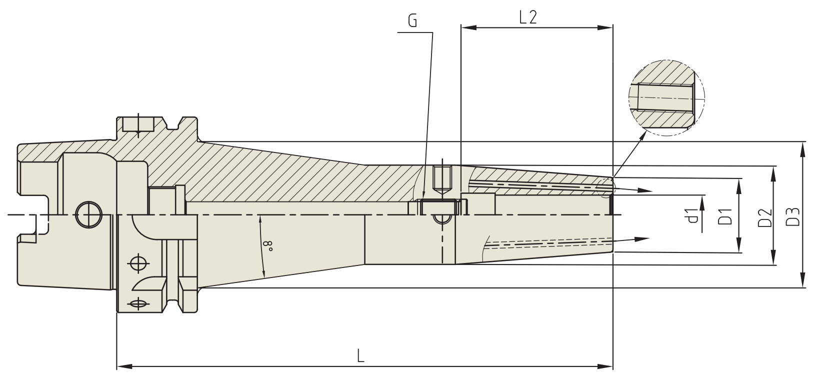
* Resealable type (Thread for plugging screw & screws)

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

SHRINK FIT HOLDER

HSK

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel & Thick Wall)



DIN69893/ISO12164-1 HSK FORM A (Inch)

DIN 69893-HSK | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD+C

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G
VQ026JTW	63A	HSK63A - SFH 1/4C TW - 6.30	.250	.827	1.063	1.661	6.300	1.417	M5x0.8mm
VQ060JTW		HSK63A - SFH 5/16C TW - 6.30	.313	.827	1.063	1.661	6.300	1.417	M6x1.0mm
VQ030JTW		HSK63A - SFH 3/8C TW - 6.30	.375	.945	1.260	1.858	6.300	1.713	M8x1.0mm
VQ062JTW		HSK63A - SFH 7/16C TW - 6.30	.438	.945	1.260	1.858	6.300	1.929	M10x1.0mm
VQ034JTW		HSK63A - SFH 1/2C TW - 6.30	.500	.945	1.260	1.858	6.300	1.929	M10x1.0mm
VQ038JTW		HSK63A - SFH 5/8C TW - 6.30	.625	1.063	1.339	1.937	6.300	2.047	M12x1.0mm

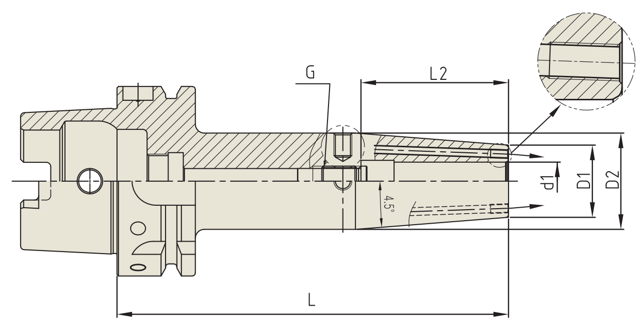
* Resealable type available. (Thread for plugging screw & screws)

ROTARY TOOL HOLDERS

SHRINK FIT HOLDER

HSK

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Resealable)



DIN 69893/ISO 12164-1-HSK FORM A (Metric)

DIN 69893-HSK | 2.5G | 25,000 RPM | (at 3D) ≤3μm | AD+CR

Unit : mm

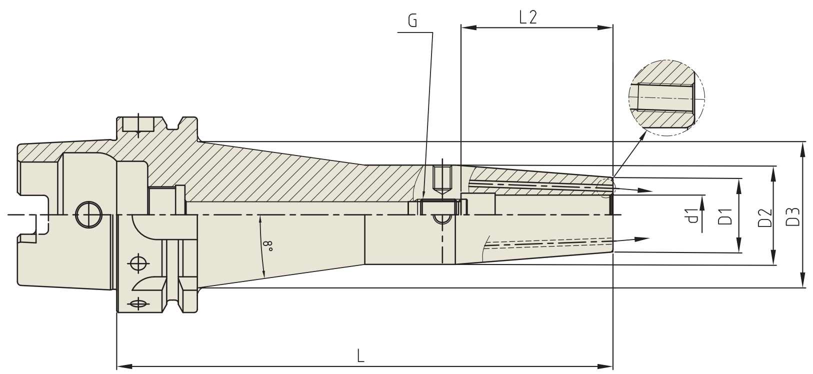
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L2	G	WEIGHT (Kg)
VQ124	63A	HSK63A - SFH 3 - 130 *1	3	10	15	130	10	-	-
VQ125		HSK63A - SFH 4 - 130 *1	4	11	15	130	12	-	-
P2862131C		HSK63A - SFH 3C - 80 *2	3	12	17	80	10	-	-
P2862132C		HSK63A - SFH 4C - 80 *2	4	12	17	80	12	-	-
P2862133C		HSK63A - SFH 5C - 80 *2	5	12	17	80	15	-	-
VQ110JR		HSK63A - SFH 6CR - 80	6	21	27	80	36	M5x0.8	0.83
VQ101JR		HSK63A - SFH 6CR - 130	6	21	27	130	36	M5x0.8	-
VQ111JR		HSK63A - SFH 6CR - 160	6	21	27	160	36	M5x0.8	1.00
VQ112JR		HSK63A - SFH 8CR - 80	8	21	27	80	36	M6x1.0	0.83
VQ102JR		HSK63A - SFH 8CR - 130	8	21	27	130	36	M6x1.0	-
VQ113JR		HSK63A - SFH 8CR - 160	8	21	27	160	36	M6x1.0	1.00
VQ114JR		HSK63A - SFH 10CR - 85	10	24	32	85	42	M8x1.0	0.83
VQ103JR		HSK63A - SFH 10CR - 130	10	24	32	130	42	M8x1.0	-
VQ115JR		HSK63A - SFH 10CR - 160	10	24	32	160	42	M8x1.0	1.00
VQ116JR		HSK63A - SFH 12CR - 90	12	24	32	90	47	M10x1.0	0.83
VQ104JR		HSK63A - SFH 12CR - 130	12	24	32	130	47	M10x1.0	-
VQ117JR		HSK63A - SFH 12CR - 160	12	24	32	160	47	M10x1.0	1.00
VQ118JR		HSK63A - SFH 14CR - 90	14	27	34	90	47	M10x1.0	0.91
VQ105JR		HSK63A - SFH 14CR - 130	14	27	34	130	47	M10x1.0	-
VQ119JR		HSK63A - SFH 14CR - 160	14	27	34	160	47	M10x1.0	1.30
VQ120JR		HSK63A - SFH 16CR - 95	16	27	34	95	50	M12x1.0	0.98
VQ106JR		HSK63A - SFH 16CR - 130	16	27	34	130	50	M12x1.0	-
VQ121JR		HSK63A - SFH 16CR - 160	16	27	34	160	50	M12x1.0	1.40
VQ122JR		HSK63A - SFH 18CR - 95	18	33	42	95	50	M12x1.0	0.98
VQ107JR		HSK63A - SFH 18CR - 130	18	33	42	130	50	M12x1.0	-
VQ123JR		HSK63A - SFH 18CR - 160	18	33	42	160	50	M12x1.0	1.40
VQ124JR		HSK63A - SFH 20CR - 100	20	33	42	100	52	M16x1.0	1.00
VQ108JR		HSK63A - SFH 20CR - 130	20	33	42	130	52	M16x1.0	-
VQ125JR		HSK63A - SFH 20CR - 160	20	33	42	160	52	M16x1.0	1.40
VQ126JR		HSK63A - SFH 25CR - 115	25	44	53	115	58	M16x1.0	1.40
VQ109JR		HSK63A - SFH 25CR - 130	25	44	53	130	58	M16x1.0	-
VQ127JR		HSK63A - SFH 25CR - 160	25	44	53	160	58	M16x1.0	1.80

* Resealable type (Thread for plugging screw & screws)
*1 Coolant Through type, without back-up screw & balancing tap
*2 Resealable type is not available, without back-up screw, balancing tap

YG SHRINK FIT HOLDER

HSK

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel & Thick Wall)



DIN69893/ISO12164-1 HSK FORM A (Metric)

DIN 69893-HSK | 2.5G | 25,000 RPM | (at 3D) ≤3μm | AD+C

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	WEIGHT (Kg)
P2801501TW	63A	HSK63A - SFH 6C TW - 160	6	21	27	42.2	160	36	M5x0.8	1.36
P2801502TW		HSK63A - SFH 8C TW - 160	8	21	27	42.2	160	36	M6x1.0	1.35
P2801503TW		HSK63A - SFH 10C TW - 160	10	24	32	47.2	160	42	M8x1.0	1.56
P2801504TW		HSK63A - SFH 12C TW - 160	12	24	32	47.2	160	47	M10x1.0	1.55
P2801505TW		HSK63A - SFH 14C TW - 160	14	27	34	49.2	160	47	M10x1.0	1.52
P2801506TW		HSK63A - SFH 16C TW - 160	16	27	34	49.2	160	50	M12x1.0	1.64

* Resealable type available.

YG SHRINK FIT HOLDER

HSK

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Resealable)

FIG.1

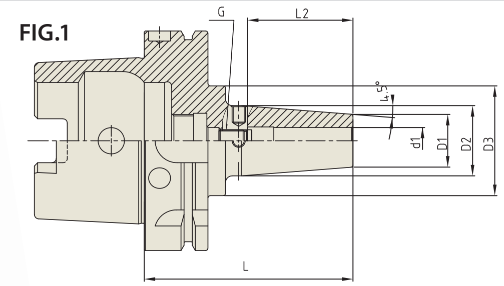
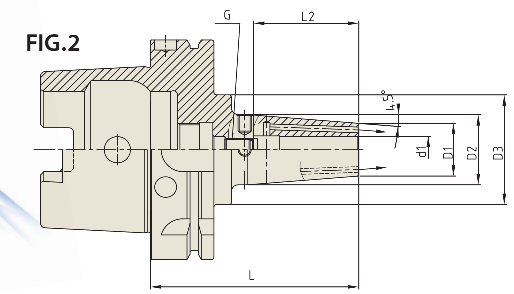


FIG.2



DIN 69893/ISO 12164-1-HSK FORM A (Inch)

DIN 69893-HSK | AT3 | 2.5G | 25,000 RPM | (at 3D) ≤0.00012" | AD or AD+C

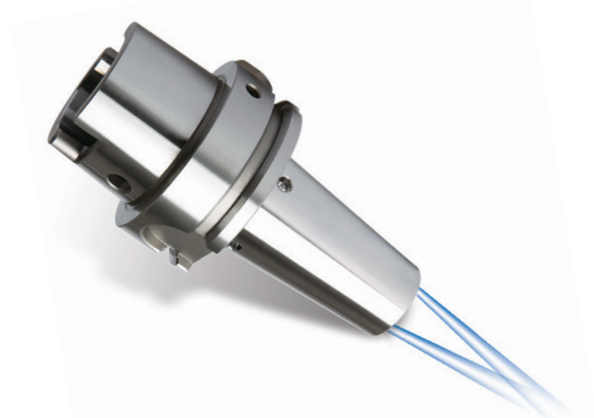
Unit : inch

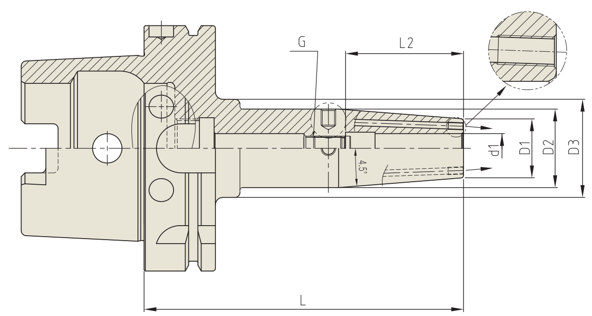
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	FIG.
VR020	100A	HSK100A - SFH 1/8 - 3.15	.125	.394	.648	1.575	3.150	.354	-	1
VR310		HSK100A - SFH 1/8 - 5.12	.125	.394	.748	1.575	3.150	.354	-	1
VR022		HSK100A - SFH 3/16 - 3.15	.188	.394	.648	1.575	3.150	.472	-	1
VR311		HSK100A - SFH 3/16 - 5.12	.188	.394	.748	1.575	3.150	.472	-	1
VR023		HSK100A - SFH 1/4 - 3.54	0,250	.827	1.063	1.575	3.543	1.417	M5x0.8mm	1
VR024		HSK100A - SFH 3/8 - 3.54	.375	.945	1.260	1.575	3.543	1.713	M8x1.0mm	1
VR026		HSK100A - SFH 3/8 - 6.30	.375	.945	1.260	1.575	6.300	1.713	M8x1.0mm	1
VR028		HSK100A - SFH 1/2 - 3.74	.500	.945	1.260	1.575	3.740	1.929	M10x1.0mm	1
VR030		HSK100A - SFH 1/2 - 6.30	.500	.945	1.260	1.575	6.300	1.929	M10x1.0mm	1
VR032		HSK100A - SFH 5/8 - 3.94	.625	1.063	1.339	1.575	3.937	2.047	M12x1.0mm	1
VR034		HSK100A - SFH 5/8 - 6.30	.625	1.063	1.339	1.575	6.300	2.047	M12x1.0mm	1
VR036		HSK100A - SFH 3/4 - 4.13	.750	1.299	1.654	-	4.134	2.126	M16x1.0mm	1
VR038		HSK100A - SFH 3/4 - 6.30	.750	1.299	1.654	-	6.300	2.126	M16x1.0mm	1
VR040		HSK100A - SFH 1.0 - 4.53	1.000	1.732	2.087	-	4.528	2.362	M16x1.0mm	1
VR042		HSK100A - SFH 1.0 - 6.30	1.000	1.732	2.087	-	6.300	2.362	M16x1.0mm	1
VR044		HSK100A - SFH 1 1/4 - 4.72	1.250	1.732	2.087	-	4.724	2.362	M16x1.0mm	1
VR046		HSK100A - SFH 1 1/4 - 6.30	1.250	1.732	2.087	-	6.300	2.362	M16x1.0mm	1
VR023J		HSK100A - SFH 1/4C - 3.54	.250	.827	1.063	1.575	3.540	1.417	M5x0.8mm	2
VR024J		HSK100A - SFH 3/8C - 3.54	.375	.945	1.260	1.575	3.540	1.713	M8x1.0mm	2
VR026J		HSK100A - SFH 3/8C - 6.30	.375	.945	1.260	1.575	6.300	1.713	M8x1.0mm	2
VR028J		HSK100A - SFH 1/2C - 3.74	.500	.945	1.260	1.575	3.740	1.929	M10x1.0mm	2
VR030J		HSK100A - SFH 1/2C - 6.30	.500	.945	1.260	1.575	6.300	1.929	M10x1.0mm	2
VR032J		HSK100A - SFH 5/8C - 3.94	.625	1.063	1.339	1.575	3.940	2.047	M12x1.0mm	2
VR034J		HSK100A - SFH 5/8C - 6.30	.625	1.063	1.339	1.575	6.300	2.047	M12x1.0mm	2
VR036J		HSK100A - SFH 3/4C - 4.13	.750	1.299	1.654	-	4.130	2.126	M16x1.0mm	2
VR038J		HSK100A - SFH 3/4C - 6.30	.750	1.299	1.654	-	6.300	2.126	M16x1.0mm	2
VR040J		HSK100A - SFH 1.0C - 4.53	1.000	1.732	2.087	-	4.530	2.362	M16x1.0mm	2
VR042J		HSK100A - SFH 1.0C - 6.30	1.000	1.732	2.087	-	6.300	2.362	M16x1.0mm	2
VR044J		HSK100A - SFH 1 1/4C - 4.72	1.250	1.732	2.087	-	4.720	2.362	M16x1.0mm	2
VR046J		HSK100A - SFH 1 1/4C - 6.30	1.250	1.732	2.087	-	6.300	2.362	M16x1.0mm	2

SHRINK FIT HOLDER

HSK

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Resealable)





DIN 69893-HSK 2.5G 25,000 RPM (at 3D) ≤0.00012" AD+CR

DIN 69893/ISO 12164-1-HSK FORM A (Inch)

Unit : inch

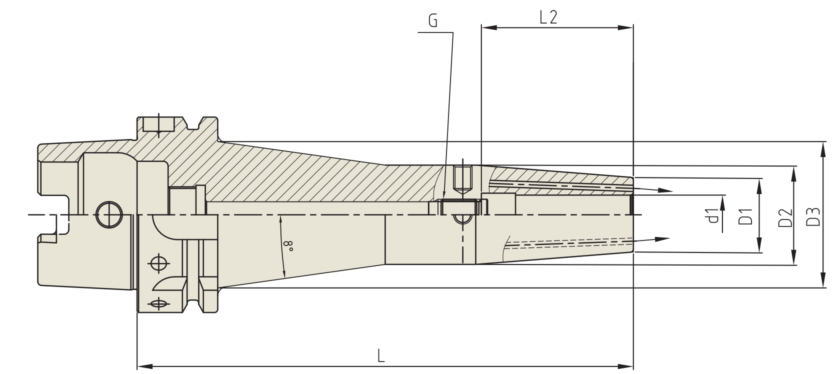
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	WEIGHT (Kg)
VR301JR	100A	HSK100A - SFH 1/4CR - 5.12	.250	.827	1.063	1.575	5.120	1.417	M5x0.8mm	-
VR302JR		HSK100A - SFH 5/16CR - 5.12	.313	.827	1.063	1.575	5.120	1.417	M6x1.0mm	-
VR303JR		HSK100A - SFH 3/8CR - 5.12	.375	.945	1.260	1.575	5.120	1.713	M8x1.0mm	-
VR304JR		HSK100A - SFH 7/16CR - 5.12	.438	.945	1.260	1.575	5.120	1.929	M10x1.0mm	-
VR305JR		HSK100A - SFH 1/2CR - 5.12	.500	.945	1.260	1.575	5.120	1.929	M10x1.0mm	-
VR306JR		HSK100A - SFH 5/8CR - 5.12	.625	1.063	1.339	1.575	5.120	2.047	M12x1.0mm	-
VR307JR		HSK100A - SFH 3/4CR - 5.12	.750	1.299	1.654	-	5.120	2.126	M16x1.0mm	-
VR308JR		HSK100A - SFH 1.0CR - 5.12	1.000	1.732	2.087	-	5.120	2.362	M16x1.0mm	-
VR309JR		HSK100A - SFH 1 1/4CR - 5.12	1.250	1.732	2.087	-	5.120	2.362	M16x1.0mm	-

* Resealable type (Thread for plugging screw & screws)

SHRINK FIT HOLDER

HSK

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel & Thick Wall)



DIN 69893-HSK 2.5G 25,000 RPM (at 3D) ≤0.00012" AD+C

DIN 69893/ISO 12164-1-HSK FORM A (Inch)

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	WEIGHT (Kg)
VR060JTW	100A	HSK100A - SFH 1/4C TW - 6.30	.250	.827	1.063	1.626	6.300	1.417	M5x0.8mm	-
VR062JTW		HSK100A - SFH 5/16C TW - 6.30	.313	.827	1.063	1.626	6.300	1.417	M6x1.0mm	-
VR026JTW		HSK100A - SFH 3/8C TW - 6.30	.375	.945	1.260	1.823	6.300	1.713	M8x1.0mm	-
VR064JTW		HSK100A - SFH 7/16C TW - 6.30	.438	.945	1.260	1.823	6.300	1.929	M10x1.0mm	-
VR030JTW		HSK100A - SFH 1/2C TW - 6.30	.500	.945	1.260	1.823	6.300	1.929	M10x1.0mm	-
VR034JTW		HSK100A - SFH 5/8C TW - 6.30	.625	1.063	1.339	1.902	6.300	2.047	M12x1.0mm	-
VR038JTW		HSK100A - SFH 3/4C TW - 6.30	.750	1.299	1.654	2.217	6.300	2.126	M16x1.0mm	-
VR042JTW		HSK100A - SFH 1.0C TW - 6.30	1.000	1.732	2.087	2.638	6.300	2.362	M16x1.0mm	-
VR046JTW		HSK100A - SFH 1 1/4C TW - 6.30	1.250	1.732	2.087	2.638	6.300	2.362	M16x1.0mm	-

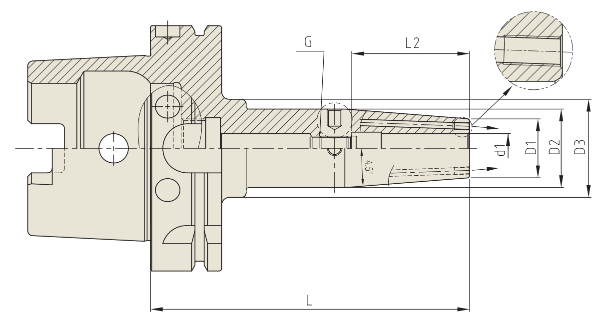
* Resealable type available.

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

SHRINK FIT HOLDER

HSK

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel Resealable)



DIN 69893/ISO 12164-1-HSK FORM A (Inch)

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	WEIGHT (Kg)
VR107	100A	HSK100A - SFH 3 - 130 *1	3	10	15	40	130	10	-	-
VR108		HSK100A - SFH 4 - 130 *1	4	11	15	40	130	12	-	-
P2862143C		HSK100A - SFH 3C -85 *2	3	12	17	40	85	10	-	-
P2862144C		HSK100A - SFH 4C - 85 *2	4	12	17	40	85	12	-	-
P2862145C		HSK100A - SFH 5C - 85 *2	5	12	17	40	85	15	-	-
VR111JR		HSK100A - SFH 6CR - 85	6	21	27	40	85	36	M5x0.8	1.30
VR101JR		HSK100A - SFH 6CR - 130	6	21	27	40	130	36	M5x0.8	-
VR112JR		HSK100A - SFH 6CR - 160	6	21	27	40	160	36	M5x0.8	1.80
VR113JR		HSK100A - SFH 8CR - 85	8	21	27	40	85	36	M6x1.0	1.30
VR102JR		HSK100A - SFH 8CR - 130	8	21	27	40	130	36	M6x1.0	-
VR114JR		HSK100A - SFH 8CR - 160	8	21	27	40	160	36	M6x1.0	1.80
VR115JR		HSK100A - SFH 10CR - 90	10	24	32	40	90	42	M8x1.0	1.30
VR103JR		HSK100A - SFH 10CR - 130	10	24	32	40	130	42	M8x1.0	-
VR116JR		HSK100A - SFH 10CR - 160	10	24	32	40	160	42	M8x1.0	1.80
VR117JR		HSK100A - SFH 12CR - 95	12	24	32	40	95	47	M10x1.0	1.30
VR104JR		HSK100A - SFH 12CR - 130	12	24	32	40	130	47	M10x1.0	-
VR118JR		HSK100A - SFH 12CR - 160	12	24	32	40	160	47	M10x1.0	1.80
VR119JR		HSK100A - SFH 14CR - 95	14	27	34	40	95	47	M10x1.0	1.40
VR105JR		HSK100A - SFH 14CR - 130	14	27	34	40	130	47	M10x1.0	-
VR120JR		HSK100A - SFH 14CR - 160	14	27	34	40	160	47	M10x1.0	1.90
VR121JR		HSK100A - SFH 16CR - 100	16	27	34	40	100	50	M12x1.0	1.40
VR106JR		HSK100A - SFH 16CR - 130	16	27	34	40	130	50	M12x1.0	-
VR122JR		HSK100A - SFH 16CR - 160	16	27	34	40	160	50	M12x1.0	1.90
VR123JR		HSK100A - SFH 18CR - 100	18	33	42	-	100	50	M12x1.0	1.50
VR107JR		HSK100A - SFH 18CR - 130	18	33	42	-	130	50	M12x1.0	-
VR124JR		HSK100A - SFH 18CR - 160	18	33	42	-	160	50	M12x1.0	2.00
VR125JR		HSK100A - SFH 20CR - 100	20	33	42	-	100	52	M16x1.0	1.50
VR108JR		HSK100A - SFH 20CR - 130	20	33	42	-	130	52	M16x1.0	-
VR126JR		HSK100A - SFH 20CR - 160	20	33	42	-	160	52	M16x1.0	2.00
VR127JR		HSK100A - SFH 25CR - 115	25	44	53	-	115	58	M16x1.0	1.80
VR109JR		HSK100A - SFH 25CR - 130	25	44	53	-	130	58	M16x1.0	-
VR128JR		HSK100A - SFH 25CR - 160	25	44	53	-	160	58	M16x1.0	2.30

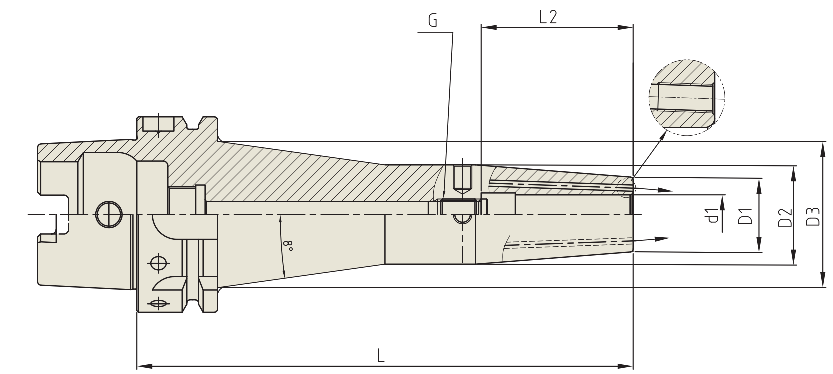
* Resealable type (Thread for plugging screw & screws)
*1 Coolant Through type, without back-up screw & balancing tap
*2 Resealable type is not available, without back-up screw, balancing tap

ROTARY TOOL HOLDERS

SHRINK FIT HOLDER

HSK

DUAL CONTACT SHRINK FIT HOLDER (Coolant Channel & Thick Wall)



DIN 69893/ISO 12164-1-HSK FORM A (Inch)

Unit : mm

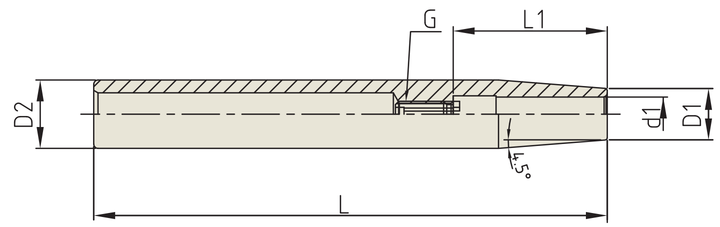
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	D3	L	L2	G	WEIGHT (Kg)
P2801507TW	100A	HSK100A - SFH 6C TW - 160	6	21	27	41.3	160	36	M5x0.8	2.73
P2801508TW		HSK100A - SFH 8C TW - 160	8	21	27	41.3	160	36	M6x1.0	2.72
P2801509TW		HSK100A - SFH 10C TW - 160	10	24	32	46.3	160	42	M8x1.0	2.92
P2801510TW		HSK100A - SFH 12C TW - 160	12	24	32	46.3	160	47	M10x1.0	2.9
P2801511TW		HSK100A - SFH 14C TW - 160	14	27	34	48.3	160	47	M10x1.0	3.05
P2801512TW		HSK100A - SFH 16C TW - 160	16	27	34	48.3	160	50	M12x1.0	3.03
P2801513TW		HSK100A - SFH 18C TW - 160	18	33	42	56.3	160	50	M12x1.0	3.39
P2801514TW		HSK100A - SFH 20C TW - 160	20	33	42	56.3	160	52	M16x1.0	3.36

* Resealable type available.

YG SHRINK FIT HOLDER

ST

SHRINK FIT EXTENSION



INCH

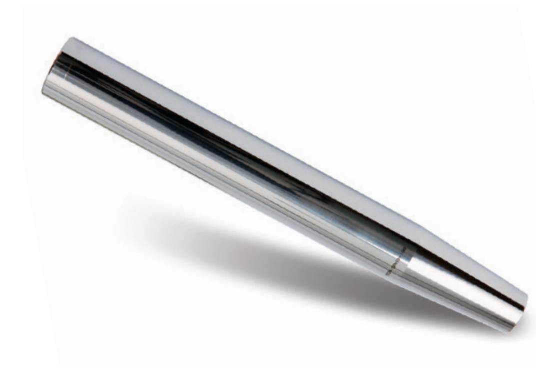
Unit : inch

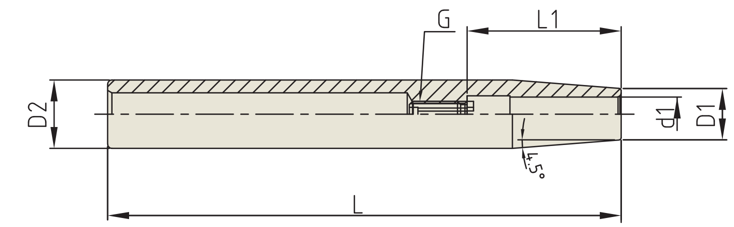
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	G
VS010		ST 1/2 - SFH 1/8 - 6.30	.125	.394	.500	6.300	.354	-
VS011	ST1/2	ST 1/2 - SFH 3/16 - 6.30	.188	.394	.500	6.300	.472	-
VS012		ST 1/2 - SFH 1/4 - 6.30	.250	.394	.500	6.300	1.417	M5x0.8mm
VS020		ST 5/8 - SFH 1/8 - 6.30	.125	.394	.625	6.300	.354	-
VS021	ST5/8	ST 5/8 - SFH 3/16 - 6.30	.188	.394	.625	6.300	.472	-
VS022		ST 5/8 - SFH 1/4 - 6.30	.250	.394	.625	6.300	1.417	M5x0.8mm
VS023		ST 5/8 - SFH 5/16 - 6.30	.313	.472	.625	6.300	1.417	M6x1.0mm
VS030		ST 3/4 - SFH 1/8 - 6.30	.125	.394	.750	6.300	.354	-
VS031		ST 3/4 - SFH 3/16 - 6.30	.188	.394	.750	6.300	.472	-
VS032	ST3/4	ST 3/4 - SFH 1/4 - 6.30	.250	.551	.750	6.300	1.417	M5x0.8mm
VS033		ST 3/4 - SFH 5/16 - 6.30	.313	.551	.750	6.300	1.417	M6x1.0mm
VS034		ST 3/4 - SFH 3/8 - 6.30	.375	.551	.750	6.300	1.713	M8x1.0mm
VS035		ST 3/4 - SFH 1/2 - 6.30	.500	.630	.750	6.300	1.929	M10x1.0mm
VS040		ST 1 - SFH 1/8 - 6.30	.125	.394	1.000	6.300	.354	-
VS041		ST 1 - SFH 3/16 - 6.30	.188	.394	1.000	6.300	.472	-
VS042		ST 1 - SFH 1/4 - 6.30	.250	.551	1.000	6.300	1.417	M5x0.8mm
VS043	ST1	ST 1 - SFH 5/16 - 6.30	.313	.551	1.000	6.300	1.417	M6x1.0mm
VS044		ST 1 - SFH 3/8 - 6.30	.375	.787	1.000	6.300	1.713	M8x1.0mm
VS045		ST 1 - SFH 1/2 - 6.30	.500	.787	1.000	6.300	1.929	M10x1.0mm
VS046		ST 1 - SFH 5/8 - 6.30	.625	.866	1.000	6.300	2.008	M12x1.0mm
VS050		ST 1 - 1/4 - SFH 1/8 - 6.30	.125	.394	1.250	6.300	.354	-
VS051		ST 1 - 1/4 - SFH 3/16 - 6.30	.188	.394	1.250	6.300	.472	-
VS052		ST 1 - 1/4 - SFH 1/4 - 6.30	.250	.551	1.250	6.300	1.417	M5x0.8mm
VS053	ST1-1/4	ST 1 - 1/4 - SFH 5/16 - 6.30	.313	.551	1.250	6.300	1.417	M6x1.0mm
VS054		ST 1 - 1/4 - SFH 3/8 - 6.30	.375	.945	1.250	6.300	1.713	M8x1.0mm
VS055		ST 1 - 1/4 - SFH 1/2 - 6.30	.500	.945	1.250	6.300	1.929	M10x1.0mm
VS056		ST 1 - 1/4 - SFH 5/8 - 6.30	.625	1.063	1.250	6.300	2.008	M12x1.0mm
VS057		ST 1 - 1/4 - SFH 3/4 - 6.30	.750	1.063	1.250	6.300	2.087	M16x1.0mm

YG SHRINK FIT HOLDER

ST

SHRINK FIT EXTENSION





METRIC (STANDARD)

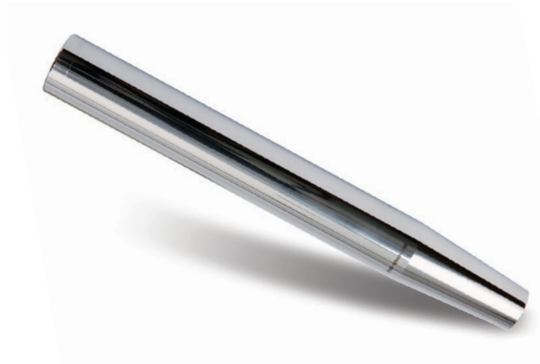
Unit : mm

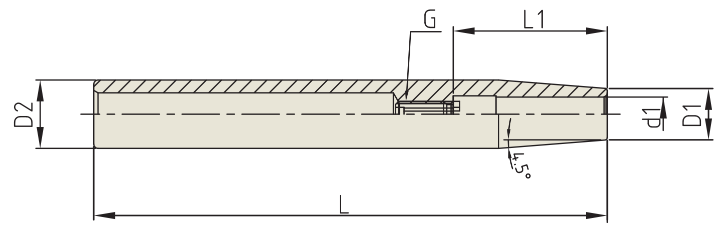
EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	G
VS010M		ST12 - SFH3 - 120	3	8	12	120	10	-
VS011M	12	ST12 - SFH4 - 120	4	8	12	120	12	-
VS012M		ST12 - SFH5 - 120	5	10	12	120	15	-
VS013M		ST12 - SFH6 - 120	6	10	12	120	36	M5×0.8
VS020M		ST16 - SFH3 - 120	3	10	16	120	10	-
VS021M		ST16 - SFH4 - 120	4	10	16	120	12	-
VS022M	16	ST16 - SFH5 - 120	5	10	16	120	15	-
VS023M		ST16 - SFH6 - 120	6	10	16	120	36	M5×0.8
VS024M		ST16 - SFH8 - 120	8	12	16	120	36	M6×1.0
VS030M		ST20 - SFH3 - 120	3	10	20	120	10	-
VS031M		ST20 - SFH4 - 120	4	10	20	120	12	-
VS032M		ST20 - SFH5 - 120	5	10	20	120	15	-
VS033M	20	ST20 - SFH6 - 120	6	10	20	120	36	M5×0.8
VS034M		ST20 - SFH8 - 120	8	12	20	120	36	M6×1.0
VS035M		ST20 - SFH10 - 120	10	14	20	120	43	M8×1.0
VS036M		ST20 - SFH12 - 120	12	16	20	120	48	M10×1.0

SHRINK FIT HOLDER

ST

SHRINK FIT EXTENSION





METRIC (EXTENDED)

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D1	D2	L	L1	G
VS110M	12	ST12 - SFH 3 - 160	3	8	12	160	10	-
VS111M		ST12 - SFH 4 - 160	4	8	12	160	12	-
VS112M		ST12 - SFH 5 - 160	5	10	12	160	15	-
VS113M		ST12 - SFH 6 - 160	6	10	12	160	36	M5×0.8
VS210M	16	ST16 - SFH 3 - 160	3	10	16	160	10	-
VS211M		ST16 - SFH 4 - 160	4	10	16	160	12	-
VS212M		ST16 - SFH 5 - 160	5	10	16	160	15	-
VS213M		ST16 - SFH 6 - 160	6	10	16	160	36	M5×0.8
VS214M		ST16 - SFH 8 - 160	8	12	16	160	36	M6×1.0
VS310M	20	ST20 - SFH 3 - 160	3	10	20	160	10	-
VS311M		ST20 - SFH 4 - 160	4	10	20	160	12	-
VS312M		ST20 - SFH 5 - 160	5	10	20	160	15	-
VS313M		ST20 - SFH 6 - 160	6	10	20	160	36	M5×0.8
VS314M		ST20 - SFH 8 - 160	8	12	20	160	36	M6×1.0
VS315M		ST20 - SFH 10 - 160	10	14	20	160	43	M8×1.0
VS316M		ST20 - SFH 12 - 160	12	16	20	160	48	M10×1.0
VS410M	25	ST25 - SFH 3 - 160	3	10	25	160	10	-
VS411M		ST25 - SFH 4 - 160	4	10	25	160	12	-
VS412M		ST25 - SFH 5 - 160	5	15	25	160	15	-
VS413M		ST25 - SFH 6 - 160	6	20	25	160	36	M5×0.8
VS414M		ST25 - SFH 8 - 160	8	20	25	160	36	M6×1.0
VS415M		ST25 - SFH 10 - 160	10	20	25	160	43	M8×1.0
VS416M		ST25 - SFH 12 - 160	12	20	25	160	48	M10×1.0
VS417M		ST25 - SFH 14 - 160	14	20	25	160	`48	M10×1.0
VS418M		ST25 - SFH 16 - 160	16	22	25	160	51	M12×1.0
VS510M	32	ST32 - SFH 6 - 160	6	20	32	160	36	M5×0.8
VS511M		ST32 - SFH 8 - 160	8	20	32	160	36	M6×1.0
VS512M		ST32 - SFH 10 - 160	10	24	32	160	43	M8×1.0
VS513M		ST32 - SFH 12 - 160	12	24	32	160	48	M10×1.0
VS514M		ST32 - SFH 14 - 160	14	27	32	160	48	M10×1.0
VS515M		ST32 - SFH 16 - 160	16	27	32	160	51	M12×1.0
VS516M		ST32 - SFH 18 - 160	18	27	32	160	51	M12×1.0
VS517M		ST32 - SFH 20 - 160	20	27	32	160	53	M16×1.0

YG-1 TOOLING SYSTEM

END MILL HOLDER & SIDE LOCK ARBOR

STUB, STANDARD, EXTENDED, COOLANT CHANNEL, SIDE LOCK ARBOR

END MILL HOLDER

CAT : ASME B5.50-2009

CCT : CAT DUAL CONTACT

BT : JIS B6339/MAS 403-BT/ISO7388-2

CBT : BT DUAL CONTACT

HSK : DIN69893/ISO12164-1

ACCESSORY & PART

SIDE LOCK BOLT

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

END MILL HOLDER & SIDE LOCK ARBOR

CAT

END MILL HOLDER

FIG.1

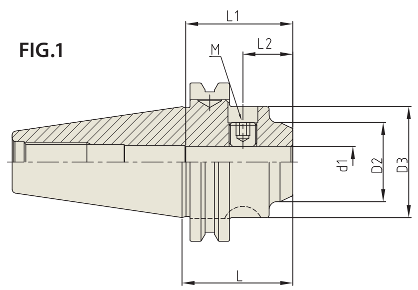
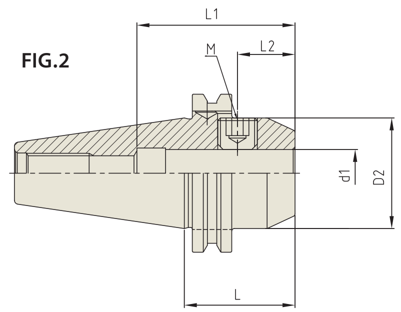


FIG.2



ASME B5.50-2009-CAT (Inch)

Set screws for End Mill Holders
Refer to page D118

ASME B5.50 - CAT | AT3 | 6.3G | 15,000 RPM | AD

■ STUB

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	FIG.
AK206	40	CAT40 - EMH 1/2 - 1.75	.500	1.250	1.750	1.750	1.690	.790	-	UNF 7/16-20 3/8L	1
AK208		CAT40 - EMH 5/8 - 1.75	.630	1.500	1.750	1.750	1.930	.880	-	UNF 1/2-20 1/2L	1
AK210		CAT40 - EMH 3/4 - 1.75	.750	1.750	-	1.750	2.050	.910	-	UNF 5/8-18 1/2L	2
AK214		CAT40 - EMH 1.0 - 1.75	1.00	1.750	-	1.750	2.170	.830	-	UNF 3/4-16 3/8L	2
AK217		CAT40 - EMH 1 1/4 - 2.00	1.25	2.250	-	2.000	2.220	.830	-	UNF 3/4-16 1/2L	2

* High balanced End Mill Holders on page 1356~1357.

END MILL HOLDER & SIDE LOCK ARBOR

CAT

END MILL HOLDER

FIG.1

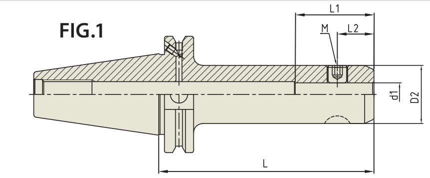
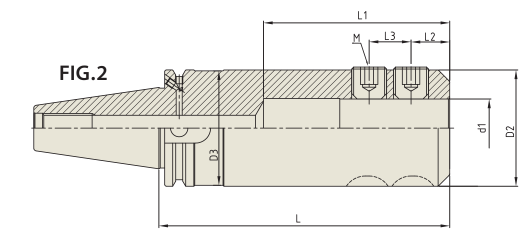


FIG.2



ASME B5.50-2009-CAT (Inch)

Set screws for End Mill Holders
Refer to page D118

ASME B5.50 - CAT | AT3 | 6.3G | 15,000 RPM | AD/B

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	FIG.
AK000B	40	CAT40 AD/B - EMH 1/8 - 2.50	.130	.690	-	2.500	.591	.295	-	UNC#8-32 1/4L	1
AK001B		CAT40 AD/B - EMH 3/16 - 2.50	.190	.690	-	2.500	.787	.441	-	UNC#10-32 1/4L	1
AK002B		CAT40 AD/B - EMH 1/4 - 2.50	.250	.780	-	2.500	1.299	.598	-	UNF1/4-28 1/4L	1
AK003B		CAT40 AD/B - EMH 5/16 - 2.50	.310	.880	-	2.500	1.358	.630	-	UNF5/16-24 1/4L	1
AK004B		CAT40 AD/B - EMH 3/8 - 2.50	.380	1.000	-	2.500	1.417	.630	-	UNF3/8-24 5/16L	1
AK005B		CAT40 AD/B - EMH 7/16 - 2.50	.440	1.130	-	2.500	1.417	.630	-	UNF3/8-24 25/64L	1
AK006B		CAT40 AD/B - EMH 1/2 - 2.63	.500	1.250	-	2.500	1.693	.787	-	UNF7/16-20 3/8L	1
AK008B		CAT40 AD/B - EMH 5/8 - 3.75	.630	1.500	-	2.500	3.600	.881	-	UNF1/2-20 1/2L	1
AK010B		CAT40 AD/B - EMH 3/4 - 3.75	.750	1.750	-	2.500	3.900	.909	-	UNF5/8-18 1/2L	1
AK012B		CAT40 AD/B - EMH 7/8 - 4.00	.880	1.880	-	3.500	4.200	.650	.811	UNF5/8-18 1/2L	2
AK014B		CAT40 AD/B - EMH 1.0 - 4.00	1.000	2.000	-	3.750	4.400	.831	.902	UNF3/4-16 1/2L	2
AK017B		CAT40 AD/B - EMH 1 1/4 - 4.25	1.250	2.500	2.461	3.750	4.000	.831	.902	UNF3/4-16 11/16L	2
AK021B		CAT40 AD/B - EMH 1 1/2 - 4.63	1.500	2.500	2.461	4.250	3.978	.881	1.063	UNF3/4-16 1/2L	2
AL002B	50	CAT50 AD/B - EMH 1/4 - 2.50	.250	.780	-	2.500	1.299	.598	-	UNF1/4-28 1/4L	1
AL003B		CA50 AD/B - EMH 5/16 - 2.50	.310	.880	-	2.500	1.358	.630	-	UNF5/16-24 1/4L	1
AL004B.		CAT50 AD/B - EMH 3/8 - 2.50	.380	1.000	-	2.500	1.417	.630	-	UNF3/8-24 5/16L	1
AL005B		CAT50 AD/B - EMH 7/16 - 2.63	.440	1.130	-	2.630	1.417	.630	-	UNF3/8-24 25/64L	1
AL006B		CAT50 AD/B - EMH 1/2 - 2.63	.500	1.250	-	2.630	1.693	.787	-	UNF7/16-20 3/8L	1
AL008B.		CAT50 AD/B - EMH 5/8 - 3.75	.630	1.500	-	3.750	1.929	.881	-	UNF1/2-20 1/2L	1
AL010B		CAT50 AD/B - EMH 3/4 - 3.75	.750	1.750	-	3.750	2.047	.909	-	UNF5/8-18 1/2L	1
AL012B		CAT50 AD/B - EMH 7/8 - 3.75	.880	1.880	-	3.750	4.200	.650	.811	UNF5/8-18 1/2L	2
AL014B		CAT50 AD/B - EMH 1.0 - 4.00	1.000	2.000	-	4.000	4.400	.831	.902	UNF3/4-16 1/2L	2
AL017B		CAT50 AD/B - EMH 1 1/4 - 4.00	1.250	2.500	-	4.000	4.000	.831	.902	UNF3/4-16 11/16L	2
AL021B		CAT50 AD/B - EMH 1 1/2 - 4.00	1.500	2.500	-	4.000	3.978	.881	1.063	UNF3/4-16 1/2L	2
AL029B		CAT50 AD/B - EMH 2.0 - 5.63	2.000	3.750	-	5.630	5.000	1.299	1.358	UNS1-14 7/8L	2

* High balanced End Mill Holders are available on request.

ROTARY TOOL HOLDERS

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

END MILL HOLDER & SIDE LOCK ARBOR

CAT

END MILL HOLDER

FIG.1

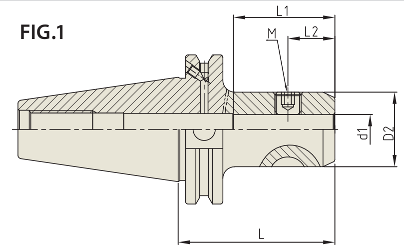
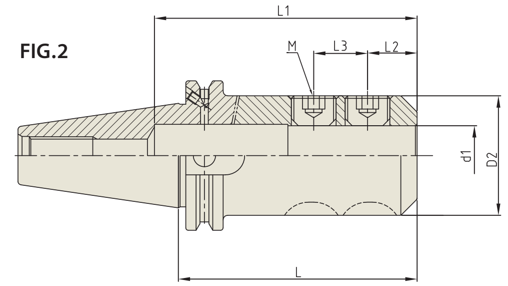


FIG.2



ASME B5.50-2009-CAT (Inch)

Set screws for End Mill Holders
Refer to page D118

ASME B5.50 - CAT | AT3 | 6.3G | 15,000 RPM | AD/B

■ EXTENDED

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	FIG.
AK104B	40	CAT40 AD/B - EMH 3/8 - 4.50	.375	1.000	-	4.500	1.417	.630	-	UNF3/8-24 5/16L	1
AK106B		CAT40 AD/B - EMH 1/2 - 4.63	.500	1.250	-	4.630	1.693	.787	-	UNF7/16-20 3/8L	1
AK108B		CAT40 AD/B - EMH 5/8 - 5.75	.625	1.500	-	5.750	3.600	.881	-	UNF1/2-20 1/2L	1
AK110B		CAT40 AD/B - EMH 3/4 - 5.75	.750	1.750	-	5.750	3.900	.909	-	UNF5/8-18 1/2L	1
AK112B		CAT40 AD/B - EMH 7/8 - 6.00	.875	1.880	-	6.000	4.200	.650	.811	UNF5/8-18 1/2L	2
AK114B		CAT40 AD/B - EMH 1.0 - 6.00	1.000	2.000	-	6.000	4.400	.831	.902	UNF3/4-16 1/2L	2
AK117B		CAT40 AD/B - EMH 1 1/4 - 6.25	1.250	2.500	2.461	6.250	4.000	.831	.902	UNF3/4-16 11/16L	2
AK121B		CAT40 AD/B - EMH 1 1/2 - 6.63	1.500	2.500	2.461	6.630	3.978	.881	1.063	UNF3/4-16 1/2L	2
AL104B	50	CAT50 AD/B - EMH 3/8 - 4.50	.375	1.000	-	4.500	1.417	.630	-	UNF3/8-24 5/16L	1
AL106B		CAT50 AD/B - EMH 1/2 - 4.63	.500	1.250	-	4.630	1.693	.787	-	UNF7/16-20 3/8L	1
AL108B		CAT50 AD/B - EMH 5/8 - 5.75	.625	1.500	-	5.750	3.449	.881	-	UNF1/2-20 1/2L	1
AL110B		CAT50 AD/B - EMH 3/4 - 5.75	.750	1.750	-	5.750	3.203	.909	-	UNF5/8-18 1/2L	1
AL112B		CAT50 AD/B - EMH 7/8 - 5.75	.875	1.880	-	5.750	4.200	.650	.811	UNF5/8-18 1/2L	2
AL114B		CAT50 AD/B - EMH 1.0 - 6.00	1.000	2.000	-	6.000	4.400	.831	.902	UNF3/4-16 1/2L	2
AL117B		CAT50 AD/B - EMH 1 1/4 - 6.00	1.250	2.500	-	6.000	4.000	.831	.902	UNF3/4-16 11/16L	2
AL121B		CAT50 AD/B - EMH 1 1/2 - 6.00	1.500	2.500	-	6.000	3.978	.881	1.063	UNF3/4-16 1/2L	2
AL129B		CAT50 AD/B - EMH 2.0 - 7.63	2.000	3.750	-	7.630	5.000	1.299	1.358	UNS1-14 7/8L	2

* High balanced End Mill Holders are available on request.

ROTARY TOOL HOLDERS

END MILL HOLDER & SIDE LOCK ARBOR

CAT

END MILL HOLDER (Coolant Channel Type)

FIG.1

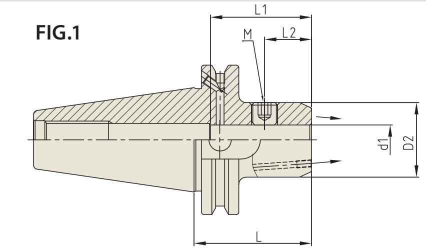
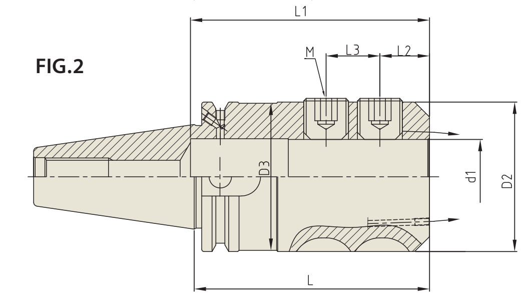


FIG.2



ASME B5.50-2009-CAT (Inch)

Set screws for End Mill Holders
Refer to page D118

ASME B5.50 - CAT | AT3 | 6.3G | 15,000 RPM | AD/B+C

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	FIG.
AK002C	40	CAT40 AD/B - EMH 1/4C - 1.97	.250	.780	-	1.969	1.299	.598	-	UNF1/4-28 1/4L	1
AK003C		CAT40 AD/B - EMH 5/16C - 1.97	.313	.880	-	1.969	1.359	.630	-	UNF5/16-24 1/4L	1
AK004C		CAT40 AD/B - EMH 3/8C - 1.97	.375	1.000	-	1.969	1.417	.630	-	UNF3/8-24 5/16L	1
AK005C		CAT40 AD/B - EMH 1/2C - 1.97	.500	1.250	-	1.969	1.693	.787	-	UNF7/16-20 3/8L	1
AK008C		CAT40 AD/B - EMH 5/8C - 2.48	.625	1.500	-	2.480	3.600	.882	-	UNF1/2-20 1/2L	1
AK010C		CAT40 AD/B - EMH 3/4C - 2.48	.750	1.750	-	2.480	3.900	.909	-	UNF5/8-18 1/2L	1
AK012C		CAT40 AD/B - EMH 1.0C - 3.94	1.000	2.000	-	3.937	4.400	.831	.902	UNF3/4-16 1/2L	2
AK017C		CAT40 AD/B - EMH 1 1/4C - 3.94	1.250	2.500	2.461	3.937	4.000	.831	.902	UNF3/4-16 11/16L	2
AL002C	50	CAT50 AD/B - EMH 1/4C - 2.48	.250	.780	-	2.480	1.299	.591	-	UNF1/4-28 1/4L	1
AL003C		CAT50 AD/B - EMH 5/16C - 2.48	.313	.880	-	2.480	1.358	.630	-	UNF5/16-24 1/4L	1
AL004C		CAT50 AD/B - EMH 3/8C - 2.48	.375	1.000	-	2.480	1.417	.630	-	UNF3/8-24 5/16L	1
AL005C		CAT50 AD/B - EMH 1/2C - 2.48	.500	1.250	-	2.480	1.693	.787	-	UNF3/8-24 25/64L	1
AL008C		CAT50 AD/B - EMH 5/8C - 2.48	.625	1.500	-	2.480	1.890	.882	-	UNF1/2-20 1/2L	1
AL010C		CAT50 AD/B - EMH 3/4C - 2.48	.750	1.750	-	2.480	1.925	.909	-	UNF5/8-18 1/2L	1
AL012C		CAT50 AD/B - EMH 1.0C - 3.15	1.000	2.000	-	3.150	4.400	.831	.902	UNF3/4-16 1/2L	2
AL017C		CAT50 AD/B - EMH 1 1/4C - 3.94	1.250	2.500	-	3.937	4.000	.831	.902	UNF3/4-16 11/16L	2

* High balanced End Mill Holders are available on request.

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

END MILL HOLDER & SIDE LOCK ARBOR

CAT

HIGH BALANCED END MILL HOLDER

FIG.1

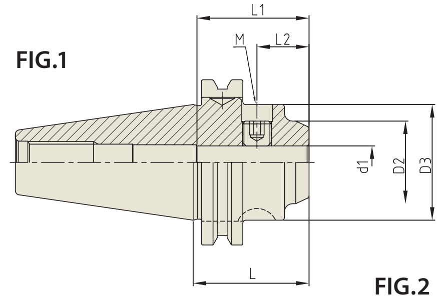
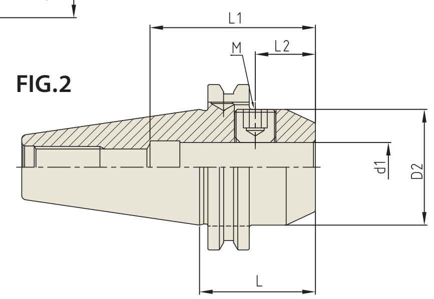


FIG.2



ASME B5.50-2009-CAT (Inch)

Set screws for End Mill Holders
Refer to page D118

ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | AD

■ STUB

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	M	FIG.
AK206B25	40	CAT40 - EMH 1/2 - 1.75	.500	1.250	1.750	1.750	1.693	.787	UNF7/16-20 3/8L	1
AK208B25		CAT40 - EMH 5/8 - 1.75	.625	1.500	1.750	1.750	1.929	.882	UNF1/2-20 1/2L	1
AK210B25		CAT40 - EMH 3/4 - 1.75	.750	1.750	-	1.750	2.047	.909	UNF5/8-18 1/2L	2
AK214B25		CAT40 - EMH 1.0 - 1.75	1.000	1.750	-	1.750	2.165	.831	UNF3/4-16 3/8L	2
AK217B25		CAT40 - EMH 1 1/4 - 2.00	1.250	2.250	-	2.000	2.221	.831	UNF3/4-16 1/2L	2

END MILL HOLDER & SIDE LOCK ARBOR

CAT

HIGH BALANCED END MILL HOLDER

FIG.1

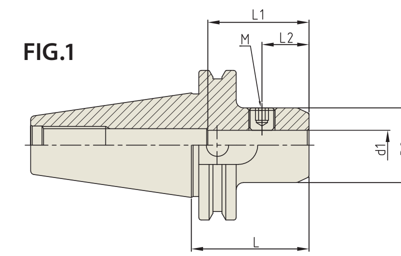
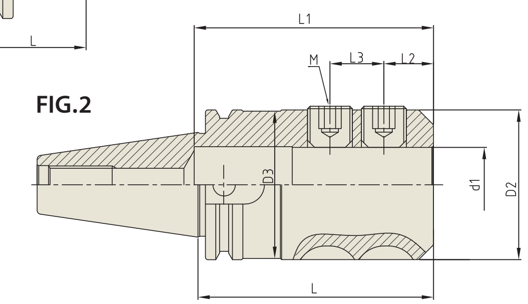


FIG.2



ASME B5.50-2009-CAT (Inch)

Set screws for End Mill Holders
Refer to page D118

ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | AD

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	FIG.
AK000B25	40	CAT40 - EMH 1/8 - 2.50	.125	.690	-	2.500	.591	.295	-	UNC#8-32 1/4L	1
AK001B25		CAT40 - EMH 3/16 - 2.50	.187	.690	-	2.500	.787	.441	-	UNC#10-32 1/4L	1
AK002B25		CAT40 - EMH 1/4 - 2.50	.250	.780	-	2.500	1.299	.598	-	UNF1/4-28 1/4L	1
AK003B25		CAT40 - EMH 5/16 - 2.50	.312	.880	-	2.500	1.358	.630	-	UNF5/16-24 1/4L	1
AK004B25		CAT40 - EMH 3/8 - 2.50	.375	1.000	-	2.500	1.417	.630	-	UNF3/8-24 5/16L	1
AK005B25		CAT40 - EMH 7/16 - 2.50	.437	1.130	-	2.500	1.417	.630	-	UNF3/8-24 25/64L	1
AK006B25		CAT40 - EMH 1/2 - 2.63	.500	1.250	-	2.500	1.693	.787	-	UNF7/16-20 3/8L	1
AK008B25		CAT40 - EMH 5/8 - 3.75	.625	1.500	-	2.500	3.600	.881	-	UNF1/2-20 1/2L	1
AK010B25		CAT40 - EMH 3/4 - 3.75	.750	1.750	-	2.500	3.900	.909	-	UNF5/8-18 1/2L	1
AK012B25		CAT40 - EMH 7/8 - 4.00	.875	1.880	-	3.500	4.200	.650	.811	UNF5/8-18 1/2L	2
AK014B25		CAT40 - EMH 1.0 - 4.00	1.000	2.000	-	3.750	4.400	.831	.902	UNF3/4-16 1/2L	2
AK017B25		CAT40 - EMH 1 1/4 - 4.25	1.250	2.500	2.461	3.750	4.000	.831	.902	UNF3/4-16 11/16L	2
AK021B25		CAT40 - EMH 1 1/2 - 4.63	1.500	2.500	2.461	4.250	3.978	.881	1.063	UNF3/4-16 1/2L	2
AL002B25	50	CAT50 - EMH 1/4 - 2.50	.250	.780	-	2.500	1.299	.598	-	UNF1/4-28 1/4L	1
AL003B25		CAT50 - EMH 5/16 - 2.50	.312	.880	-	2.500	1.358	.630	-	UNF5/16-24 1/4L	1
AL004B25		CAT50 - EMH 3/8 - 2.50	.375	1.000	-	2.500	1.417	.630	-	UNF3/8-24 5/16L	1
AL005B25		CAT50 - EMH 7/16 - 2.63	.437	1.130	-	2.630	1.417	.630	-	UNF3/8-24 25/64L	1
AL006B25		CAT50 - EMH 1/2 - 2.63	.500	1.250	-	2.630	1.693	.787	-	UNF7/16-20 3/8L	1
AL008B25		CAT50 - EMH 5/8 - 3.75	.625	1.500	-	3.750	3.449	.881	-	UNF1/2-20 1/2L	1
AL010B25		CAT50 - EMH 3/4 - 3.75	.750	1.750	-	3.750	3.203	.909	-	UNF5/8-18 1/2L	1
AL012B25		CAT50 - EMH 7/8 - 3.75	.875	1.880	-	3.750	4.200	.650	.811	UNF5/8-18 1/2L	2
AL014B25		CAT50 - EMH 1.0 - 4.00	1.000	2.000	-	4.000	4.400	.831	.902	UNF3/4-16 1/2L	2
AL017B25		CAT50 - EMH 1 1/4 - 4.00	1.250	2.500	-	4.000	4.000	.831	.902	UNF3/4-16 11/16L	2
AL021B25		CAT50 - EMH 1 1/2 - 4.00	1.500	2.500	-	4.000	3.978	.881	1.063	UNF3/4-16 1/2L	2
AL029B25		CAT50 - EMH 2.0 - 5.63	2.000	3.750	-	5.630	5.000	1.299	1.358	UNS1-14 7/8L	2

END MILL HOLDER & SIDE LOCK ARBOR

CAT

HIGH BALANCED END MILL HOLDER

FIG.1

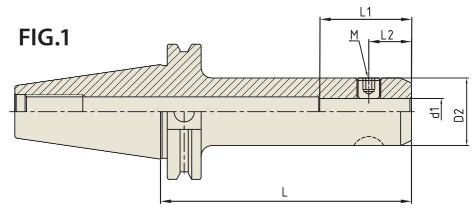
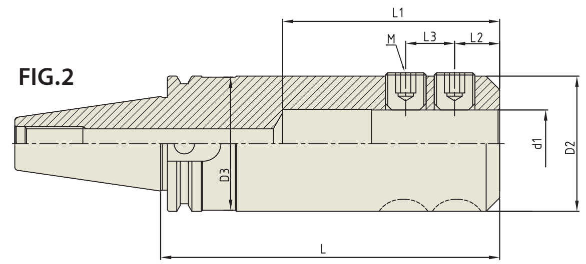


FIG.2



ASME B5.50-2009-CAT (Inch)

Set screws for End Mill Holders
Refer to page D118

ASME B5.50 - CAT, AT3, 2.5G, 25,000 RPM, AD

■ EXTENDED

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	FIG.
AK104B25	40	CAT40 - EMH 3/8 - 4.50	.375	1.000	-	4.500	1.417	.630	-	UNF3/8-24 5/16L	1
AK106B25		CAT40 - EMH 1/2 - 4.63	.500	1.250	-	4.630	1.693	.787	-	UNF7/16-20 3/8L	1
AK108B25		CAT40 - EMH 5/8 - 5.75	.625	1.500	-	5.750	3.600	.882	-	UNF1/2-20 1/2L	1
AK110B25		CAT40 - EMH 3/4 - 5.75	.750	1.750	-	5.750	3.900	.909	-	UNF5/8-18 1/2L	1
AK112B25		CAT40 - EMH 7/8 - 6.00	.875	1.880	-	6.000	4.200	.650	.811	UNF5/8-18 1/2L	2
AK114B25		CAT40 - EMH 1.0 - 6.00	1.000	2.000	-	6.000	4.636	.831	.902	UNF3/4-16 1/2L	2
AK117B25		CAT40 - EMH 1 1/4 - 6.25	1.250	2.500	2.461	6.250	4.000	.831	.902	UNF3/4-16 11/16L	2
AK121B25		CAT40 - EMH 1 1/2 - 6.63	1.500	2.500	2.461	6.630	3.976	.882	1.063	UNF3/4-16 1/2L	2
AL104B25	50	CAT50 - EMH 3/8 - 4.50	.375	1.000	-	4.500	1.417	.630	-	UNF3/8-24 5/16L	1
AL106B25		CAT50 - EMH 1/2 - 4.63	.500	1.250	-	4.630	1.693	.787	-	UNF7/16-20 3/8L	1
AL108B25		CAT50 - EMH 5/8 - 5.75	.625	1.500	-	5.750	3.449	.881	-	UNF1/2-20 1/2L	1
AL110B25		CAT50 - EMH 3/4 - 5.75	.750	1.750	-	5.750	3.203	.909	-	UNF5/8-18 1/2L	1
AL112B25		CAT50 - EMH 7/8 - 5.75	.875	1.880	-	5.750	4.200	.650	.811	UNF5/8-18 1/2L	2
AL114B25		CAT50 - EMH 1.0 - 6.00	1.000	2.000	-	6.000	4.400	.831	.902	UNF3/4-16 1/2L	2
AL117B25		CAT50 - EMH 1 1/4 - 6.00	1.250	2.500	-	6.000	4.000	.831	.902	UNF3/4-16 11/16L	2
AL121B25		CAT50 - EMH 1 1/2 - 6.00	1.500	2.500	-	6.000	3.978	.881	1.063	UNF3/4-16 1/2L	2
AL129B25		CAT50 - EMH 2.0 - 7.63	2.000	3.750	-	7.630	5.000	1.299	1.358	UNS1-14 7/8L	2

ROTARY TOOL HOLDERS

END MILL HOLDER & SIDE LOCK ARBOR

CAT

END MILL HOLDER (COOLANT CHANNEL TYPE)

FIG.1

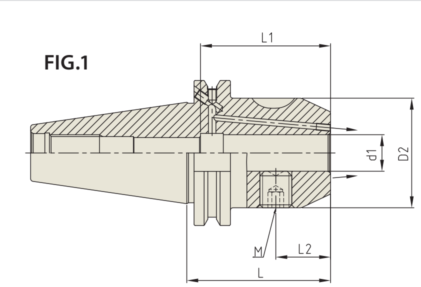
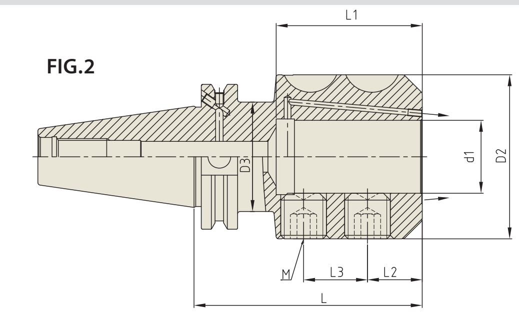


FIG.2



ASME B5.50-2009-CAT (Metric)

Set screws for End Mill Holders
Refer to page D118

ASME B5.50 - CAT, AT3, 6.3G, 15,000 RPM, AD/B+C

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D2	L	L1	L2	L3	M	FIG.	WEIGHT(Kg)
AK311B15C	40	CAT40 AD/B - EMH 6C - 50	6	25	50	35	18	-	M6	1	0.86
AK312B15C		CAT40 AD/B - EMH 8C - 50	8	28	50	35	18	-	M8	1	0.89
AK313B15C		CAT40 AD/B - EMH 10C - 50	10	35	50	39	20	-	M10	1	0.95
AK314B15C		CAT40 AD/B - EMH 12C - 50	12	42	50	36	22.5	-	M12	1	1.03
AK315B15C		CAT40 AD/B - EMH 14C - 50	14	44	50	48	22.5	-	M12	1	1.26
AK316B15C		CAT40 AD/B - EMH 16C - 63	16	48	63	54	24	-	M14	1	1.28
AK317B15C		CAT40 AD/B - EMH 18C - 63	18	50	63	54	24	-	M14	1	1.35
AK318B15C		CAT40 AD/B - EMH 20C - 63	20	52	63	55	25	-	M16	1	1.28
AK319B15C		CAT40 AD/B - EMH 25C - 100	25	65	100	69	24	25	M18	2	2.28
AK320B15C		CAT40 AD/B - EMH 32C - 100	32	72	100	64	24	28	M20	2	2.50
AL311B15C	50	CAT50 AD/B - EMH 6C - 63	6	25	63	35	18	-	M6	1	2.70
AL312B15C		CAT50 AD/B - EMH 8C - 63	8	28	63	35	18	-	M8	1	2.70
AL313B15C		CAT50 AD/B - EMH 10C - 63	10	35	63	39	20	-	M10	1	2.90
AL314B15C		CAT50 AD/B - EMH 12C - 63	12	42	63	46	22.5	-	M12	1	2.90
AL315B15C		CAT50 AD/B - EMH 14C - 63	14	44	63	46	22.5	-	M12	1	2.90
AL316B15C		CAT50 AD/B - EMH 16C - 63	16	48	63	46	24	-	M14	1	3.00
AL317B15C		CAT50 AD/B - EMH 18C - 63	18	50	63	46	24	-	M14	1	3.00
AL318B15C		CAT50 AD/B - EMH 20C - 63	20	52	63	56	25	-	M16	1	3.05
AL319B15C		CAT50 AD/B - EMH 25C - 80	25	65	80	60	24	25	M18	2	3.73
AL320B15C		CAT50 AD/B - EMH 32C - 100	32	72	100	64	24	28	M20	2	4.53
AL321B15C		CAT50 AD/B - EMH 40C - 120	40	80	120	74	30	32	M20	2	4.77
AL322B15C		CAT50 AD/B - EMH 50C - 125	50	100	125	84	35	35	M24	2	7.03

END MILL HOLDER & SIDE LOCK ARBOR

CAT

HIGH BALANCED END MILL HOLDER (COOLANT CHANNEL TYPE)

FIG.1

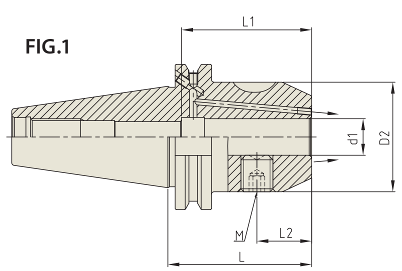
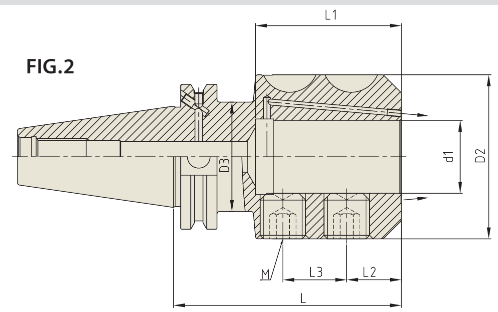


FIG.2



ASME B5.50-2009-CAT (Metric)

Set screws for End Mill Holders
Refer to page D118

ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | AD/B+C

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D2	L	L1	L2	L3	M	FIG.	WEIGHT(Kg)
AK311B25C	40	CAT40 AD/B - EMH 6C - 50	6	25	50	35	18	-	M6	1	0.86
AK312B25C		CAT40 AD/B - EMH 8C - 50	8	28	50	35	18	-	M8	1	0.89
AK313B25C		CAT40 AD/B - EMH 10C - 50	10	35	50	39	20	-	M10	1	0.95
AK314B25C		CAT40 AD/B - EMH 12C - 50	12	42	50	46	22.5	-	M12	1	1.03
AK315B25C		CAT40 AD/B - EMH 14C - 50	14	44	50	48	22.5	-	M12	1	1.26
AK316B25C		CAT40 AD/B - EMH 16C - 63	16	48	63	54	24	-	M14	1	1.28
AK317B25C		CAT40 AD/B - EMH 18C - 63	18	50	63	54	24	-	M14	1	1.35
AK318B25C		CAT40 AD/B - EMH 20C - 63	20	52	63	55	25	-	M16	1	1.28
AK319B25C		CAT40 AD/B - EMH 25C - 100	25	65	100	59	24	25	M18	2	2.28
AK320B25C		CAT40 AD/B - EMH 32C - 100	32	72	100	64	24	28	M20	2	2.50
AL311B25C	50	CAT50 AD/B - EMH 6C - 63	6	25	63	35	18	-	M6	1	2.70
AL312B25C		CAT50 AD/B - EMH 8C - 63	8	28	63	35	18	-	M8	1	2.70
AL313B25C		CAT50 AD/B - EMH 10C - 63	10	35	63	39	20	-	M10	1	2.90
AL314B25C		CAT50 AD/B - EMH 12C - 63	12	42	63	46	22.5	-	M12	1	2.90
AL315B25C		CAT50 AD/B - EMH 14C - 63	14	44	63	46	22.5	-	M12	1	2.90
AL316B25C		CAT50 AD/B - EMH 16C - 63	16	48	63	46	24	-	M14	1	3.00
AL317B25C		CAT50 AD/B - EMH 18C - 63	18	50	63	46	24	-	M14	1	3.00
AL318B25C		CAT50 AD/B - EMH 20C - 63	20	52	63	56	25	-	M16	1	3.05
AL319B25C		CAT50 AD/B - EMH 25C - 80	25	65	80	60	24	25	M18	2	3.73
AL320B25C		CAT50 AD/B - EMH 32C - 100	32	72	100	64	24	28	M20	2	4.53
AL321B25C		CAT50 AD/B - EMH 40C - 120	40	80	120	74	30	32	M20	2	4.77
AL322B25C		CAT50 AD/B - EMH 50C - 125	50	100	125	84	35	35	M24	2	7.03

END MILL HOLDER & SIDE LOCK ARBOR

CCT

DUAL CONTACT SIDE LOCK ARBOR

FIG.1

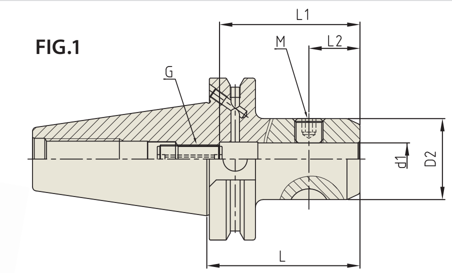
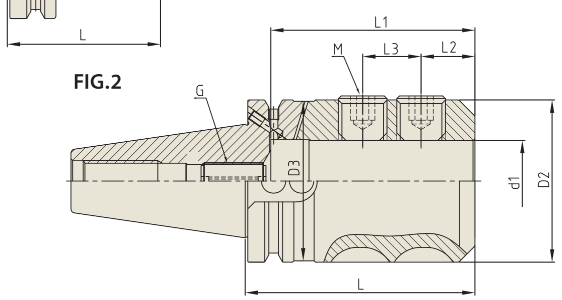


FIG.2



CCT (CAT DUAL CONTACT) (Inch)

Set screws for End Mill Holders
Refer to page D118

CCT | AT3 | 2.5G | 25,000 RPM | AD/B

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	G	FIG.
AB020	40	CCT40 AD/B - SLA 1/4 - 2.36	.250	.780	-	2.362	1.378	.598	-	UNF1/4-28 1/4L	UNF#10-32 3/4L	1
AB022		CCT40 AD/B - SLA 5/16 - 2.36	.313	.880	-	2.362	1.378	.630	-	UNF5/16-24 1/4L	UNF1/4-28 3/4L	1
AB024		CCT40 AD/B - SLA 3/8 - 2.36	.375	1.000	-	2.362	1.969	.630	-	UNF3/8-24 5/16L	UNF5/16-24 3/4L	1
AB026		CCT40 AD/B - SLA 1/2 - 2.36	.500	1.250	-	2.362	2.165	.787	-	UNF7/16-20 3/8L	UNF7/16-16 1.0L	1
AB028		CCT40 AD/B - SLA 5/8 - 3.54	.625	1.500	-	3.543	2.756	.882	-	UNF1/2-20 1/2L	UN9/16-16 1.0L	1
AB030		CCT40 AD/B - SLA 3/4 - 3.54	.750	1.750	-	3.543	2.756	.909	-	UNF5/8-18 1/2L	UN9/16-16 1.0L	1
AB032		CCT40 AD/B - SLA 1.0 - 3.54	1.000	2.000	-	3.543	2.756	.831	.902	UNF3/4-16 1/2L	UN9/16-16 1.0L	2
AB034		CCT40 AD/B - SLA 1 1/4 - 3.54	1.250	2.500	2.461	3.543	3.150	.831	.902	UNF3/4-16 1/2L	UN9/16-16 1.0L	2
AC020	50	CCT50 AD/B - SLA 1/4 - 3.54	.250	.780	-	3.543	1.378	.598	-	UNF1/4-28 1/4L	UNF#10-32 3/4L	1
AC022		CCT50 AD/B - SLA 5/16 - 3.54	.313	.880	-	3.543	1.378	.630	-	UNF5/16-24 1/4L	UNF1/4-28 3/4L	1
AC024		CCT50 AD/B - SLA 3/8 - 3.54	.375	1.000	-	3.543	1.969	.630	-	UNF3/8-24 5/16L	UNF5/16-24 3/4L	1
AC026		CCT50 AD/B - SLA 1/2 - 3.54	.500	1.250	-	3.543	2.165	.787	-	UNF7/16-20 3/8L	UNF7/16-16 1.0L	1
AC028		CCT50 AD/B - SLA 5/8 - 4.13	.625	1.500	-	4.134	2.756	.882	-	UNF1/2-20 1/2L	UN9/16-16 1.0L	1
AC030		CCT50 AD/B - SLA 3/4 - 4.13	.750	1.750	-	4.134	2.756	.909	-	UNF5/8-18 1/2L	UN9/16-16 1.0L	1
AC032		CCT50 AD/B - SLA 1.0 - 4.13	1.000	2.000	-	4.134	2.756	.831	.902	UNF3/4-16 1/2L	UN9/16-16 1.0L	2
AC034		CCT50 AD/B - SLA 1 1/4 - 4.13	1.250	2.500	-	4.134	3.150	.831	.902	UNF3/4-16 1/2L	UN9/16-16 1.0L	2

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

END MILL HOLDER & SIDE LOCK ARBOR

BT

END MILL HOLDER

FIG.1

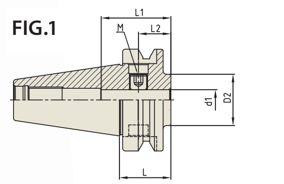


FIG.3

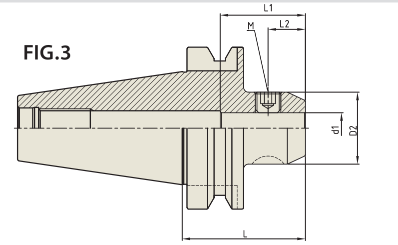


FIG.2

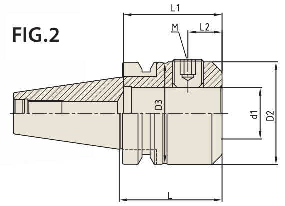
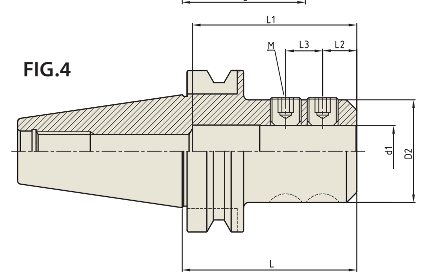


FIG.4



JIS B6339/MAS 403-BT (Inch)

Set screws for End Mill Holders
Refer to page D118

JIS B6339-BT | AT3 | 6.3G | 15,000 RPM | AD

■ STUB

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	FIG.
AH206	40	BT40 - EMH 1/2 - 1.25	.500	1.250	-	1.250	1.693	.787	-	UNF7/16-20 3/8L	1
AH208		BT40 - EMH 5/8 - 1.38	.625	1.500	-	1.380	2.400	.866	-	UNF1/2-20 1/2L	1
AH210		BT40 - EMH 3/4 - 1.44	.750	1.750	-	1.440	2.500	.909	-	UNF5/8-18 1/2L	1
AH214		BT40 - EMH 1.0 - 2.50	1.000	2.000	-	2.500	2.500	.831	-	UNF3/4-16 1/2L	1
AH217		BT40 - EMH 1 1/4 - 2.50	1.250	2.500	2.441	2.500	2.500	.831	-	UNF3/4-16 11/16L	2

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	FIG.
AI002	50	BT50 - EMH 1/4 - 3.00	.250	.780	-	3.000	1.299	.598	-	UNF1/4-28 1/4L	3
AI004		BT50 - EMH 3/8 - 3.00	.375	1.000	-	3.000	1.417	.630	-	UNF3/8-24 5/16L	3
AI006		BT50 - EMH 1/2 - 3.00	.500	1.250	-	3.000	1.693	.787	-	UNF7/16-20 3/8L	3
AI008		BT50 - EMH 5/8 - 3.00	.625	1.500	-	3.000	1.929	.882	-	UNF1/2-20 1/2L	3
AI010		BT50 - EMH 3/4 - 3.00	.750	1.750	-	3.000	2.047	.909	-	UNF5/8-18 1/2L	3
AI012		BT50 - EMH 7/8 - 4.00	.875	1.880	-	4.000	4.200	.650	-	UNF5/8-18 1/2L	4
AI014		BT50 - EMH 1.0 - 4.25	1.000	2.000	-	4.250	4.636	.831	.902	UNF3/4-16 1/2L	4
AI017		BT50 - EMH 1 1/4 - 4.25	1.250	2.500	-	4.250	4.000	.831	.902	UNF3/4-16 11/16L	4
AI021		BT50 - EMH 1 1/2 - 4.25	1.500	2.500	-	4.250	3.976	.882	1.063	UNF3/4-16 1/2L	4
AI029		BT50 - EMH 2.0 - 5.00	2.000	3.750	-	5.000	5.000	1.299	1.358	UNS1-14 7/8L	4

■ EXTENDED

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	FIG.
AI104	50	BT50 - EMH 3/8 - 6.00	.375	1.000	-	6.000	1.417	.630	-	UNF3/8-24 5/16L	3
AI106		BT50 - EMH 1/2 - 6.00	.500	1.250	-	6.000	1.693	.787	-	UNF7/16-20 3/8L	3
AI108		BT50 - EMH 5/8 - 6.00	.625	1.500	-	6.000	1.929	.882	-	UNF1/2-20 1/2L	3
AI110		BT50 - EMH 3/4 - 6.00	.750	1.750	-	6.000	2.047	.909	-	UNF5/8-18 1/2L	3
AI112		BT50 - EMH 7/8 - 6.00	.875	1.880	-	6.000	4.200	.650	-	UNF5/8-18 1/2L	4
AI114		BT50 - EMH 1.0 - 6.00	1.000	2.000	-	6.000	4.636	.831	.902	UNF3/4-16 1/2L	4
AI117		BT50 - EMH 1 1/4 - 6.00	1.250	2.500	-	6.000	4.000	.831	.902	UNF3/4-16 11/16L	4
AI121		BT50 - EMH 1 1/2 - 6.00	1.500	2.500	-	6.000	3.976	.882	1.063	UNF3/4-16 1/2L	4
AI129		BT50 - EMH 2.0 - 6.00	2.000	3.750	-	6.000	5.000	1.299	1.358	UNS1-14 7/8L	4

* High balanced End Mill Holders on page 1356~1357.

ROTARY TOOL HOLDERS

END MILL HOLDER & SIDE LOCK ARBOR

BT

END MILL HOLDER

FIG.1

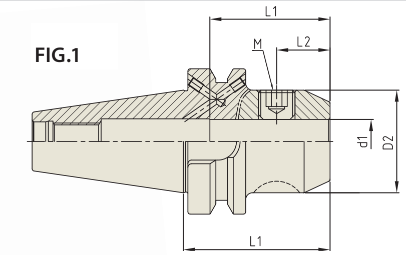
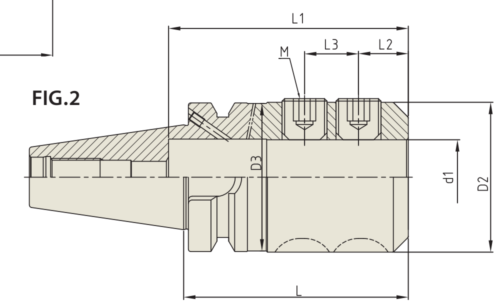


FIG.2



JIS B6339/MAS 403-BT (Inch)

Set screws for End Mill Holders
Refer to page D118

JIS B6339-BT | AT3 | 6.3G | 15,000 RPM | AD/B

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	FIG.
AH000B	40	BT40 AD/B - EMH 1/8 - 2.50	.125	.690	-	2.500	.591	.295	-	UNC#8-32 1/4L	1
AH001B		BT40 AD/B - EMH 3/16 - 2.50	.187	.690	-	2.500	.787	.441	-	UNC#10-32 1/4L	1
AH002B		BT40 AD/B - EMH 1/4 - 2.50	.250	.780	-	2.500	1.299	.598	-	UNF1/4-28 1/4L	1
AH003B		BT40 AD/B - EMH 5/16 - 2.50	.312	.880	-	2.500	1.358	.630	-	UNF5/16-24 1/4L	1
AH004B		BT40 AD/B - EMH 3/8 - 2.50	.375	1.000	-	2.500	1.417	.630	-	UNF3/8-24 5/16L	1
AH005B		BT40 AD/B - EMH 7/16 - 2.50	.437	1.130	-	2.500	1.417	.630	-	UNF3/8-24 25/64L	1
AH006B		BT40 AD/B - EMH 1/2 - 2.50	.500	1.250	-	2.500	1.693	.787	-	UNF7/16-20 3/8L	1
AH008B		BT40 AD/B - EMH 5/8 - 2.50	.625	1.500	-	2.500	3.600	.881	-	UNF1/2-20 1/2L	1
AH010B		BT40 AD/B - EMH 3/4 - 2.50	.750	1.750	-	2.500	3.900	.909	-	UNF5/8-18 1/2L	1
AH012B		BT40 AD/B - EMH 7/8 - 3.50	.875	1.880	-	3.500	4.200	.650	.811	UNF5/8-18 1/2L	2
AH014B		BT40 AD/B - EMH 1.0 - 3.75	1.000	2.000	-	3.750	4.400	.831	.902	UNF3/4-16 1/2L	2
AH017B		BT40 AD/B - EMH 1 1/4 - 3.75	1.250	2.500	2.461	3.750	4.000	.831	.902	UNF3/4-16 11/16L	2
AH021B		BT40 AD/B - EMH 1 1/2 - 4.25	1.500	2.500	2.461	4.250	3.978	.881	1.063	UNF3/4-16 1/2L	2

■ EXTENDED

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	FIG.
AH104B	40	BT40 AD/B - EMH 3/8 - 4.00	.375	1.000	-	4.000	1.417	.630	-	UNF3/8-24 5/16L	1
AH106B		BT40 AD/B - EMH 1/2 - 4.00	.500	1.250	-	4.000	1.693	.787	-	UNF7/16-20 3/8L	1
AH108B		BT40 AD/B - EMH 5/8 - 4.00	.625	1.500	-	4.000	3.600	.881	-	UNF1/2-20 1/2L	1
AH110B		BT40 AD/B - EMH 3/4 - 4.00	.750	1.750	-	4.000	2.047	.909	-	UNF5/8-18 1/2L	1
AH114B		BT40 AD/B - EMH 1.0 - 5.00	1.000	2.000	-	5.000	4.400	.831	.902	UNF3/4-16 1/2L	2
AH117B		BT40 AD/B - EMH 1 1/4 - 5.00	1.250	2.500	2.461	5.000	4.000	.831	.902	UNF3/4-16 11/16L	2
AH121B		BT40 AD/B - EMH 1 1/2 - 6.00	1.500	2.500	2.461	6.000	3.978	.881	1.063	UNF3/4-16 1/2L	2

* High balanced End Mill Holders are available on request.

END MILL HOLDER & SIDE LOCK ARBOR

BT

END MILL HOLDER (COOLANT CHANNEL TYPE)

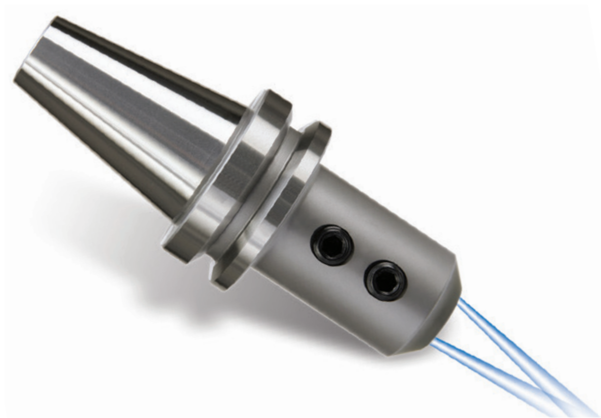


FIG.1

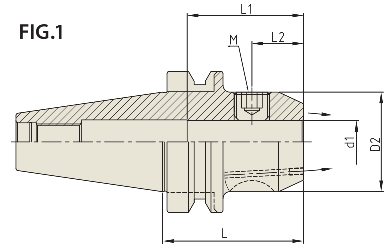
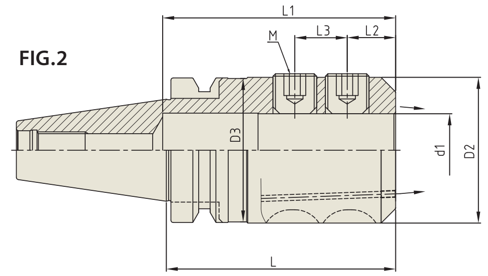


FIG.2



JIS B6339/MAS 403-BT (Inch)

Set screws for End Mill Holders
Refer to page D118

JIS B6339-BT AT3 6.3G 15,000 RPM AD/B+C

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	FIG.
AH002C	40	BT40 AD/B - EMH 1/4C - 1.97	.250	.780	-	1.969	1.299	.598	-	UNF1/4-28 1/4L	1
AH003C		BT40 AD/B - EMH 5/16C - 1.97	.313	.880	-	1.969	1.358	.630	-	UNF5/16-24 1/4L	1
AH004C		BT40 AD/B - EMH 3/8C - 2.48	.375	1.000	-	2.480	1.417	.630	-	UNF3/8-24 5/16L	1
AH006C		BT40 AD/B - EMH 1/2C - 2.48	.500	1.250	-	2.480	1.693	.787	-	UNF7/16-20 3/8L	1
AH008C		BT40 AD/B - EMH 5/8C - 2.48	.625	1.500	-	2.480	3.600	.882	-	UNF1/2-20 1/2L	1
AH010C		BT40 AD/B - EMH 3/4C - 2.48	.750	1.750	-	2.480	3.900	.909	-	UNF5/8-18 1/2L	1
AH012C		BT40 AD/B - EMH 1C - 3.54	1.000	2.000	-	3.543	4.400	.831	.902	UNF3/4-16 1/2L	2
AH014C		BT40 AD/B - EMH 1 1/4C - 3.94	1.250	2.500	2.461	3.937	4.000	.831	.902	UNF3/4-16 11/16L	2

* High balanced End Mill Holders are available on request.

ROTARY TOOL HOLDERS

END MILL HOLDER & SIDE LOCK ARBOR

BT

HIGH BALANCED END MILL HOLDER

FIG.1

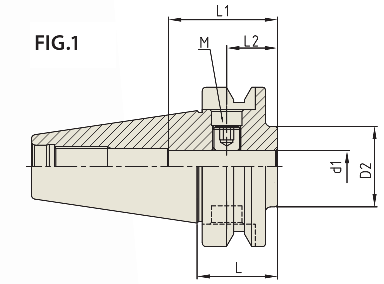
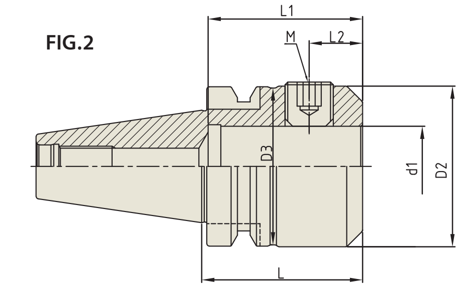


FIG.2



JIS B6339/MAS 403-BT (Inch)

Set screws for End Mill Holders
Refer to page D118

JIS B6339-BT AT3 2.5G 25,000 RPM AD

■ STUB

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	M	FIG.
AH206B25	40	BT40 - EMH 1/2 - 1.25	.500	1.250	-	1.250	1.693	.787	UNF7/16-20 3/8L	1
AH208B25		BT40 - EMH 5/8 - 1.38	.625	1.500	-	1.380	2.400	.866	UNF1/2-20 1/2L	1
AH210B25		BT40 - EMH 3/4 - 1.44	.750	1.750	-	1.440	2.500	.909	UNF5/8-18 1/2L	1
AH214B25		BT40 - EMH 1.0 - 2.50	1.000	2.000	-	2.500	2.500	.831	UNF3/4-16 1/2L	2
AH217B25		BT40 - EMH 1 1/4 - 2.50	1.250	2.500	2.441	2.500	2.500	.831	UNF3/4-16 11/16L	2

END MILL HOLDER & SIDE LOCK ARBOR

BT

HIGH BALANCED END MILL HOLDER

FIG.1

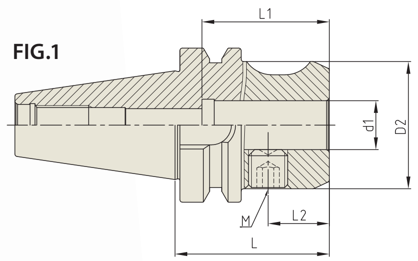
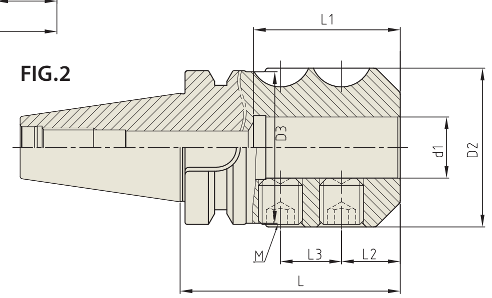


FIG.2



JIS B6339/MAS 403-BT (Inch)

Set screws for End Mill Holders
Refer to page D118

JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | AD

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	FIG.
AH000B25		BT40 - EMH 1/8 - 2.50	.125	.690	-	2.500	.591	.295	-	UNC#8-32 1/4L	1
AH001B25		BT40 - EMH 3/16 - 2.50	.187	.690	-	2.500	.787	.441	-	UNC#10-32 1/4L	1
AH002B25		BT40 - EMH 1/4 - 2.50	.250	.780	-	2.500	1.299	.598	-	UNF1/4-28 1/4L	1
AH003B25		BT40 - EMH 5/16 - 2.50	.312	.880	-	2.500	1.358	.630	-	UNF5/16-24 1/4L	1
AH004B25		BT40 - EMH 3/8 - 2.50	.375	1.000	-	2.500	1.417	.630	-	UNF3/8-24 5/16L	1
AH005B25		BT40 - EMH 7/16 - 2.50	.437	1.130	-	2.500	1.417	.630	-	UNF3/8-24 25/64L	1
AH006B25	40	BT40 - EMH 1/2 - 2.50	.500	1.250	-	2.500	1.693	.787	-	UNF7/16-20 3/8L	1
AH008B25		BT40 - EMH 5/8 - 2.50	.625	1.500	-	2.500	3.600	.881	-	UNF1/2-20 1/2L	1
AH010B25		BT40 - EMH 3/4 - 2.50	.750	1.750	-	2.500	3.900	.909	-	UNF5/8-18 1/2L	1
AH012B25		BT40 - EMH 7/8 - 3.50	.875	1.880	-	3.500	4.200	.650	.811	UNF5/8-18 1/2L	2
AH014B25		BT40 - EMH 1.0 - 3.75	1.000	2.000	-	3.750	4.400	.831	.902	UNF3/4-16 1/2L	2
AH017B25		BT40 - EMH 1 1/4 - 3.75	1.250	2.500	2.461	3.750	4.000	.831	.902	UNF3/4-16 11/16L	2
AH021B25		BT40 - EMH 1 1/2 - 4.25	1.500	2.500	2.461	4.250	3.978	.881	1.063	UNF3/4-16 1/2L	2
AI002B25		BT50 - EMH 1/4 - 3,00	.250	.780	-	3.000	1.299	.598	-	UNF1/4-28 1/4L	1
AI004B25		BT50 - EMH 3/8 - 3.00	.375	1.000	-	3.000	1.417	.630	-	UNF3/8-24 5/16L	1
AI006B25		BT50 - EMH 1/2 - 3.00	.500	1.250	-	3.000	1.693	.787	-	UNF7/16-20 3/8L	1
AI008B25		BT50 - EMH 5/8 - 3.00	.625	1.500	-	3.000	1.929	.882	-	UNF1/2-20 1/2L	1
AI010B25		BT50 - EMH 3/4 - 3.00	.750	1.750	-	3.000	2.047	.909	-	UNF5/8-18 1/2L	1
AI012B25	50	BT50 - EMH 7/8 - 4.00	.875	1.880	-	4.000	4.200	.650	-	UNF5/8-18 1/2L	1
AI014B25		BT50 - EMH 1.0 - 4.25	1.000	2.000	-	4.250	4.636	.831	.902	UNF3/4-16 1/2L	2
AI017B25		BT50 - EMH 1 1/4 - 4.25	1.250	2.500	-	4.250	4.000	.831	.902	UNF3/4-16 11/16L	2
AI021B25		BT50 - EMH 1 1/2 - 4.25	1.500	2.500	-	4.250	3.976	.882	1.063	UNF3/4-16 1/2L	2
AI029B25		BT50 - EMH 2.0 - 5.00	2.000	3.750	-	5.000	5.000	1.299	1.538	UNS1-14 7/8L	2

ROTARY TOOL HOLDERS

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

END MILL HOLDER & SIDE LOCK ARBOR

BT

HIGH BALANCED END MILL HOLDER

FIG.1

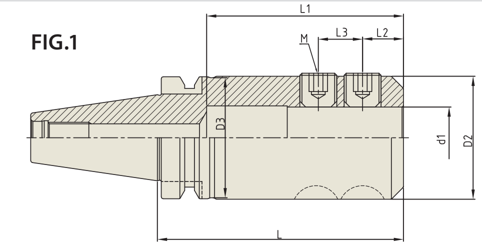
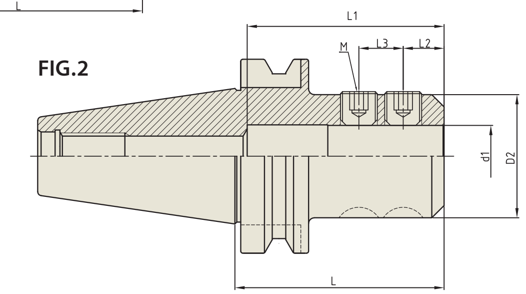


FIG.2



JIS B6339/MAS 403 - BT (Inch)

Set screws for End Mill Holders
Refer to page D118

JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | AD

■ EXTENDED

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	FIG.
AH104B25		BT40 - EMH 3/8 - 4.00	.375	1.000	-	4.000	1.417	.630	-	UNF3/8-24 5/16L	1
AH106B25		BT40 - EMH 1/2 - 4.00	.500	1.250	-	4.000	1.693	.787	-	UNF7/16-20 3/8L	1
AH108B25		BT40 - EMH 5/8 - 4.00	.625	1.500	-	4.000	3.600	.881	-	UNF1/2-20 1/2L	1
AH110B25	40	BT40 - EMH 3/4 - 4.00	.750	1.750	-	4.000	3.900	.909	-	UNF5/8-18 1/2L	1
AH114B25		BT40 - EMH 1.0 - 5.00	1.000	2.000	-	5.000	4.400	.831	.902	UNF3/4-16 1/2L	2
AH117B25		BT40 - EMH 1 1/4 - 5.00	1.250	2.500	2.461	5.000	4.000	.831	.902	UNF3/4-16 11/16L	2
AH121B25		BT40 - EMH 1 1/2 - 6.00	1.500	2.500	2.461	6.000	3.978	.881	1.063	UNF3/4-16 1/2L	2
AI104B25		BT50 - EMH 3/8 - 6.00	.375	1.000	-	6.000	1.417	.630	-	UNF3/8-24 5/16L	1
AI106B25		BT50 - EMH 1/2 - 6.00	.500	1.250	-	6.000	1.693	.787	-	UNF7/16-20 3/8L	1
AI108B25		BT50 - EMH 5/8 - 6.00	.625	1.500	-	6.000	1.929	.882	-	UNF1/2-20 1/2L	1
AI110B25		BT50 - EMH 3/4 - 6.00	.750	1.750	-	6.000	2.047	.909	-	UNF5/8-18 1/2L	1
AI112B25	50	BT50 - EMH 7/8 - 6.00	.875	1.880	-	6.000	4.200	.650	-	UNF5/8-18 1/2L	1
AI114B25		BT50 - EMH 1.0 - 6.00	1.000	2.000	-	6.000	4.636	.831	.902	UNF3/4-16 1/2L	2
AI117B25		BT50 - EMH 1 1/4 - 6.00	1.250	2.500	-	6.000	4.000	.831	.902	UNF3/4-16 11/16L	2
AI121B25		BT50 - EMH 1 1/2 - 6.00	1.500	2.500	-	6.000	3.976	.882	1.063	UNF3/4-16 1/2L	2
AI129B25		BT50 - EMH 2.0 - 6.00	2.000	3.750	-	6.000	5.000	1.299	1.358	UNS1-14 7/8L	2

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG END MILL HOLDER & SIDE LOCK ARBOR

BT

END MILL HOLDER (COOLANT CHANNEL TYPE)

FIG.1

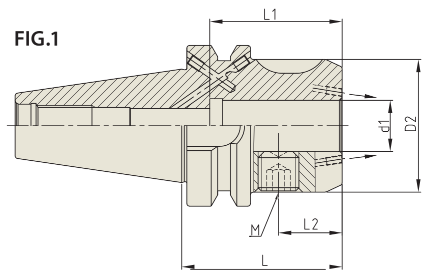
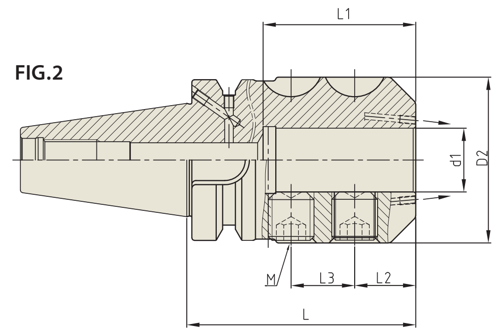


FIG.2



JIS B6339/MAS 403 - BT (Metric)

Set screws for End Mill Holders
Refer to page D118

JIS B6339-BT | AT3 | 6.3G | 15,000 RPM | AD/B+C

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D2	L	L1	L2	L3	M	FIG.	WEIGHT(Kg)
AH311B15C	40	BT40 AD/B - EMH 6C - 50	6	25	50	35	18	-	M6	1	1.00
AH312B15C		BT40 AD/B - EMH 8C - 50	8	28	50	35	18	-	M8	1	1.00
AH313B15C		BT40 AD/B - EMH 10C - 63	10	35	63	39	20	-	M10	1	1.10
AH314B15C		BT40 AD/B - EMH 12C - 63	12	42	63	44	22.5	-	M12	1	1.30
AH315B15C		BT40 AD/B - EMH 14C - 63	14	44	63	49	22.5	-	M12	1	1.40
AH316B15C		BT40 AD/B - EMH 16C - 63	16	48	63	52	24	-	M14	1	1.70
AH317B15C		BT40 AD/B - EMH 18C - 63	18	50	63	50	24	-	M14	1	1.70
AH318B15C		BT40 AD/B - EMH 20C - 63	20	52	63	52	25	-	M16	1	1.80
AH319B15C		BT40 AD/B - EMH 25C - 90	25	65	90	60	24	25	M18	2	1.80
AH320B15C		BT40 AD/B - EMH 32C - 100	32	72	100	64	24	28	M20	2	2.00
AI311B15C	50	BT50 AD/B - EMH 6C - 63	6	25	63	35	18	-	M6	1	3.30
AI312B15C		BT50 AD/B - EMH 8C - 63	8	28	63	35	18	-	M8	1	3.60
AI313B15C		BT50 AD/B - EMH 10C - 65	10	35	65	39	20	-	M10	1	3.80
AI314B15C		BT50 AD/B - EMH 12C - 80	12	42	80	46	22.5	-	M12	1	3.80
AI315B15C		BT40 AD/B - EMH 14C - 80	14	44	80	46	22.5	-	M12	1	4.00
AI316B15C		BT50 AD/B - EMH 16C - 80	16	48	80	49	24	-	M14	1	4.00
AI317B15C		BT50 AD/B - EMH 18C - 80	18	50	80	49	24	-	M14	1	4.20
AI318B15C		BT50 AD/B - EMH 20C - 80	20	52	80	52	25	-	M16	1	4.20
AI319B15C		BT50 AD/B - EMH 25C - 100	25	65	100	60	24	25	M18	2	4.60
AI320B15C		BT50 AD/B - EMH 32C - 105	32	72	105	64	24	28	M20	2	4.70
AI321B15C		BT50 AD/B - EMH 40C - 120	40	80	120	74	30	32	M20	2	4.90

ROTARY TOOL HOLDERS

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG END MILL HOLDER & SIDE LOCK ARBOR

BT

HIGH BALANCED END MILL HOLDER (COOLANT CHANNEL TYPE)

FIG.1

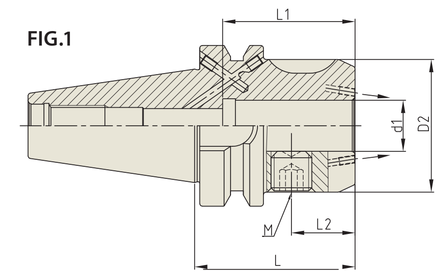
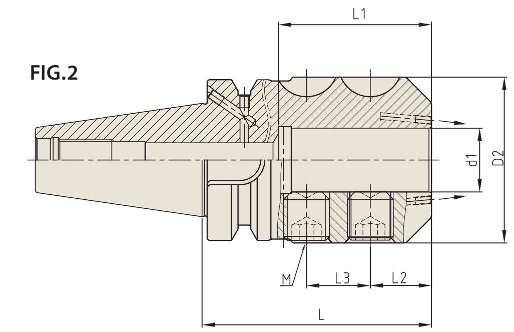


FIG.2



JIS B6339/MAS 403 - BT (Metric)

Set screws for End Mill Holders
Refer to page D118

JIS B6339-BT | AT3 | 2.5G | 25,000 RPM | AD/B+C

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D2	L	L1	L2	L3	M	FIG.	WEIGHT(Kg)
AH311B25C	40	BT40 AD/B - EMH 6C - 50	6	25	50	35	18	-	M6	1	1.00
AH312B25C		BT40 AD/B - EMH 8C - 50	8	28	50	35	18	-	M8	1	1.00
AH313B25C		BT40 AD/B - EMH 10C - 63	10	35	63	39	20	-	M10	1	1.10
AH314B25C		BT40 AD/B - EMH 12C - 63	12	42	63	44	22.5	-	M12	1	1.30
AH315B25C		BT40 AD/B - EMH 14C - 63	14	44	63	49	22.5	-	M12	1	1.40
AH316B25C		BT40 AD/B - EMH 16C - 63	16	48	63	52	24	-	M14	1	1.70
AH317B25C		BT40 AD/B - EMH 18C - 63	18	50	63	50	24	-	M14	1	1.70
AH318B25C		BT40 AD/B - EMH 20C - 63	20	52	63	52	25	-	M16	1	1.80
AH319B25C		BT40 AD/B - EMH 25C - 90	25	65	90	60	24	25	M18	2	1.80
AH320B25C		BT40 AD/B - EMH 32C - 100	32	72	100	64	24	28	M20	2	2.00
AI311B25C	50	BT50 AD/B - EMH 6C - 63	6	25	63	35	18	-	M6	1	3.30
AI312B25C		BT50 AD/B - EMH 8C - 63	8	28	63	35	18	-	M8	1	3.60
AI313B25C		BT50 AD/B - EMH 10C - 65	10	35	65	39	20	-	M10	1	3.80
AI314B25C		BT50 AD/B - EMH 12C - 80	12	42	80	46	22.5	-	M12	1	3.80
AI315B25C		BT40 AD/B - EMH 14C - 80	14	44	80	46	22.5	-	M12	1	4.00
AI316B25C		BT50 AD/B - EMH 16C - 80	16	48	80	49	24	-	M14	1	4.00
AI317B25C		BT50 AD/B - EMH 18C - 80	18	50	80	49	24	-	M14	1	4.20
AI318B25C		BT50 AD/B - EMH 20C - 80	20	52	80	52	25	-	M16	1	4.20
AI319B25C		BT50 AD/B - EMH 25C - 100	25	65	100	60	24	25	M18	2	4.60
AI320B25C		BT50 AD/B - EMH 32C - 105	32	72	105	64	24	28	M20	2	4.70
AI321B25C		BT50 AD/B - EMH 40C - 120	40	80	120	74	30	32	M20	2	4.90

END MILL HOLDER & SIDE LOCK ARBOR

CBT

DUAL CONTACT SIDE LOCK ARBOR

FIG.1

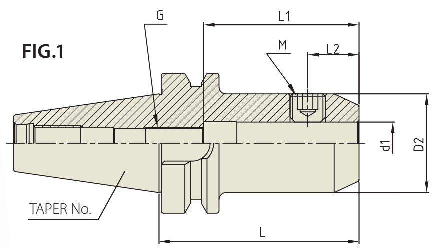
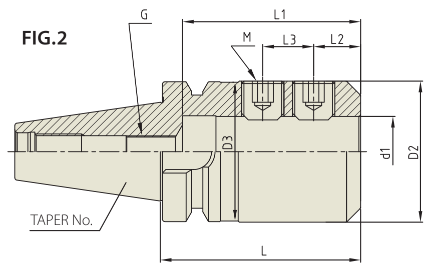


FIG.2



CBT (BT DUAL CONTACT) (Inch)

Set screws for End Mill Holders
Refer to page D118

CBT AT3 2.5G 25,000 RPM AD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	G	FIG.
AD020	30	CBT30 - SLA 1/4 - 2.36	.250	.780	-	2.362	1.378	.598	-	UNF1/4-28 1/4L	UNF#10-32 3/4L	1
AD022		CBT30 - SLA 5/16 - 2.36	.313	.880	-	2.362	1.378	.630	-	UNF5/16-24 1/4L	UNF1/4-28 3/4L	1
AD024		CBT30 - SLA 3/8 - 2.36	.375	1.000	-	2.362	1.969	.630	-	UNF3/8-24 5/16L	UNF5/16-24 3/4L	1
AD026		CBT30 - SLA 1/2 - 2.36	.500	1.250	-	2.362	2.165	.787	-	UNF7/16-20 3/8L	UNF7/16-16 1.0L	1
AD028		CBT30 - SLA 5/8 - 2.95	.625	1.500	-	2.953	2.756	.882	-	UNF1/2-20 1/2L	UN9/16-16 1.0L	1
AD030		CBT30 - SLA 3/4 - 2.95	.750	1.750	-	2.953	2.756	.909	-	UNF5/8-18 1/2L	UN9/16-16 1.0L	1
AD032		CBT30 - SLA 1.0 - 2.95	1.000	2.000	1.772	2.953	2.756	.831	.902	UNF3/4-16 1/2L	UN9/16-16 1.0L	2
AE020	40	CBT40 - SLA 1/4 - 2.36	.250	.780	-	2.362	1.378	.598	-	UNF1/4-28 1/4L	UNF#10-32 3/4L	1
AE022		CBT40 - SLA 5/16 - 2.36	.313	.880	-	2.362	1.378	.630	-	UNF5/16-24 1/4L	UNF1/4-28 3/4L	1
AE024		CBT40 - SLA 3/8 - 2.36	.375	1.000	-	2.362	1.969	.630	-	UNF3/8-24 5/16L	UNF5/16-24 3/4L	1
AE026		CBT40 - SLA 1/2 - 2.36	.500	1.250	-	2.362	2.165	.787	-	UNF7/16-20 3/8L	UNF7/16-16 1.0L	1
AE028		CBT40 - SLA 5/8 - 3.54	.625	1.500	-	3.543	2.756	.882	-	UNF1/2-20 1/2L	UN9/16-16 1.0L	1
AE030		CBT40 - SLA 3/4 - 3.54	.750	1.750	-	3.543	2.756	.909	-	UNF5/8-18 1/2L	UN9/16-16 1.0L	1
AE032		CBT40 - SLA 1.0 - 3.54	1.000	2.000	-	3.543	2.756	.831	.902	UNF3/4-16 1/2L	UN9/16-16 1.0L	2
AE034		CBT40 - SLA 1 1/4 - 3.54	1.250	2.500	-	3.543	3.150	.831	.902	UNF3/4-16 1/2L	UN9/16-16 1.0L	2

ROTARY TOOL HOLDERS

END MILL HOLDER & SIDE LOCK ARBOR

HSK

DUAL CONTACT END MILL HOLDER (COOLANT CHANNEL TYPE)

FIG.1

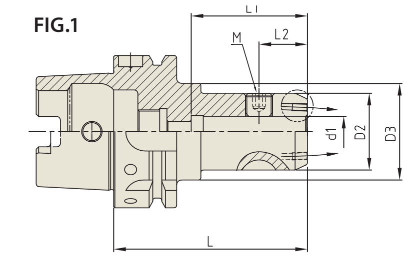
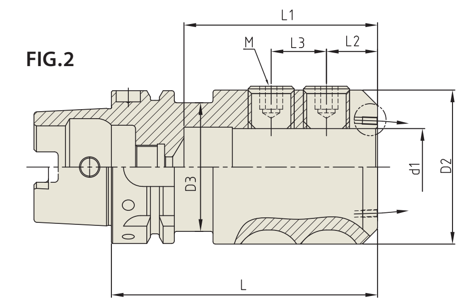


FIG.2



DIN 69893/ ISO 12164-1-HSK FORM A (Inch)

Set screws for End Mill Holders
Refer to page D118

DIN 69893-HSK 2.5G 25,000 RPM AD+C

Unit : inch

EDP No.	TAPER No.	MODEL No.	d1	D2	D3	L	L1	L2	L3	M	FIG.
AQ020C	63A	HSK63A - EMH 1/4C - 2.56	.250	.780	1.181	2.559	1.299	.598	-	UNF1/4-28 1/4L	1
AQ022C		HSK63A - EMH 5/16C - 2.56	.313	.880	1.181	2.559	1.358	.630	-	UNF5/16-24 1/4L	1
AQ024C		HSK63A - EMH 3/8C - 2.56	.375	1.000	1.181	2.559	1.535	.630	-	UNF3/8-24 5/16L	1
AQ026C		HSK63A - EMH 1/2C - 3.15	.500	1.250	1.181	3.150	1.889	.787	-	UNF7/16-20 3/8L	1
AQ028C		HSK63A - EMH 5/8C - 3.15	.625	1.500	1.811	3.150	2.126	.882	-	UNF1/2-20 1/2L	1
AQ030C		HSK63A - EMH 3/4C - 3.15	.750	1.750	-	3.150	2.165	.909	-	UNF5/8-18 1/2L	1
AQ032C		HSK63A - EMH 1.0C - 4.33	1.000	2.000	-	4.331	3.150	.837	.902	UNF3/4-16 1/2L	2
AQ034C		HSK63A - EMH 1 1/4C - 4.33	1.250	2.500	2.087	4.331	3.150	.837	.902	UNF3/4-16 11/16L	2
AR020C	100A	HSK100A - EMH 1/4C - 3.15	.250	.780	1.575	3.150	1.299	.598	-	UNF1/4-28 1/4L	1
AR022C		HSK100A - EMH 5/16C - 3.15	.313	.880	1.575	3.150	1.358	.630	-	UNF5/16-24 1/4L	1
AR024C		HSK100A - EMH 3/8C - 3.15	.375	1.000	1.575	3.150	1.417	.630	-	UNF3/8-24 5/16L	1
AR026C		HSK100A - EMH 1/2C - 3.15	.500	1.250	1.575	3.150	1.890	.787	-	UNF7/16-20 3/8L	1
AR028C		HSK100A - EMH 5/8C - 3.94	.625	1.500	1.811	3.937	2.520	.882	-	UNF1/2-20 1/2L	1
AR030C		HSK100A - EMH 3/4C - 3.94	.750	1.750	-	3.937	2.559	.909	-	UNF5/8-18 1/2L	1
AR032C		HSK100A - EMH 1.0C - 3.94	1.000	2.000	-	3.937	2.677	.837	.902	UNF3/4-16 1/2L	2
AR034C		HSK100A - EMH 1 1/4C - 3.94	1.250	2.500	-	3.937	2.677	.837	.902	UNF3/4-16 11/16L	2

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

END MILL HOLDER & SIDE LOCK ARBOR

HSK

END MILL HOLDER (COOLANT CHANNEL TYPE)

FIG.1

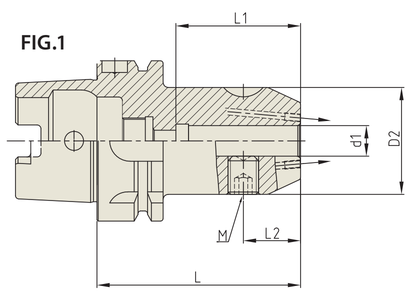
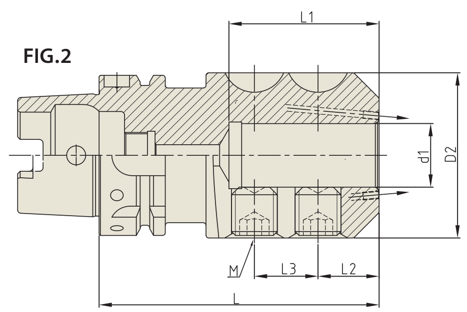


FIG.2



DIN69893/ ISO12164-1 HSK FORM A (Metric)

Set screws for End Mill Holders
Refer to page D118

DIN 69893-HSK | AT3 | 6.3G | 15,000 RPM | AD+C

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D2	L	L1	L2	L3	M	FIG.	WEIGHT(Kg)
AP001B15C	40A	HSK40A - EMH 6C - 60	6	25	60	38	18	-	M6	1	0.30
AP002B15C		HSK40A - EMH 8C - 60	8	28	60	38	18	-	M8	1	0.30
AP003B15C		HSK40A - EMH 10C - 60	10	35	60	42	20	-	M10	1	0.30
AP004B15C		HSK40A - EMH 12C - 70	12	42	70	47	22.5	-	M12	1	0.40
AP005B15C		HSK40A - EMH 14C - 70	14	44	70	47	22.5	-	M12	1	0.40
AP006B15C		HSK40A - EMH 16C - 80	16	48	80	50	24	-	M14	1	0.60
AP007B15C	50A	HSK50A - EMH 6C - 65	6	25	65	38	18	-	M6	1	0.70
AP008B15C		HSK50A - EMH 8C - 65	8	28	65	38	18	-	M8	1	0.80
AP009B15C		HSK50A - EMH 10C - 65	10	35	65	42	20	-	M10	1	0.80
AP010B15C		HSK50A - EMH 12C - 80	12	42	80	47	22.5	-	M12	1	1.20
AP011B15C		HSK50A - EMH 14C - 80	14	44	80	47	22.5	-	M12	1	1.30
AP012B15C		HSK50A - EMH 16C - 80	16	48	80	50	24	-	M14	1	1.30
AP013B15C		HSK50A - EMH 18C - 80	18	50	80	50	24	-	M14	1	1.40
AP014B15C		HSK50A - EMH 20C - 80	20	52	80	52	25	-	M16	1	1.50
AQ101B15C	63A	HSK63A - EMH 6C - 65	6	25	65	35	18	-	M6	1	0.80
AQ102B15C		HSK63A - EMH 8C - 65	8	28	65	40	18	-	M8	1	0.80
AQ103B15C		HSK63A - EMH 10C - 65	10	35	65	40.5	20	-	M10	1	0.90
AQ104B15C		HSK63A - EMH 12C - 80	12	42	80	49	22.5	-	M12	1	1.10
AQ105B15C		HSK63A - EMH 14C - 80	14	44	80	49	22.5	-	M12	1	1.20
AQ106B15C		HSK63A - EMH 16C - 80	16	48	80	52	24	-	M14	1	1.30
AQ107B15C		HSK63A - EMH 18C - 80	18	50	80	52	24	-	M14	1	1.40
AQ108B15C		HSK63A - EMH 20C - 80	20	52	80	53	25	-	M16	1	1.50
AQ109B15C		HSK63A - EMH 25C - 110	25	65	110	59	24	25	M18	2	2.30
AQ110B15C		HSK63A - EMH 32C - 110	32	72	110	63	24	28	M20	2	2.60
AR101B15C	100A	HSK100A - EMH 6C - 80	6	25	80	35	18	-	M6	1	0.80
AR102B15C		HSK100A - EMH 8C - 80	8	28	80	35	18	-	M8	1	0.80
AR103B15C		HSK100A - EMH 10C - 80	10	35	80	35.5	20	-	M10	1	0.90
AR104B15C		HSK100A - EMH 12C - 80	12	42	80	49	22.5	-	M12	1	1.10
AR105B15C		HSK100A - EMH 14C - 80	14	44	80	49	22.5	-	M12	1	1.20
AR106B15C		HSK100A - EMH 16C - 100	16	48	100	52	24	-	M14	1	1.30
AR107B15C		HSK100A - EMH 18C - 100	18	50	100	52	24	-	M14	1	1.40
AR108B15C		HSK100A - EMH 20C - 100	20	52	100	53	25	-	M16	1	1.50
AR109B15C		HSK100A - EMH 25C - 100	25	65	100	59	24	25	M18	2	2.30
AR110B15C		HSK100A - EMH 32C - 100	32	72	100	63	24	28	M20	2	2.60
AR111B15C		HSK100A - EMH 40C - 120	40	80	120	73	30	32	M20	2	2.60

ROTARY TOOL HOLDERS

END MILL HOLDER & SIDE LOCK ARBOR

HSK

HIGH BALANCED END MILL HOLDER (COOLANT CHANNEL TYPE)

FIG.1

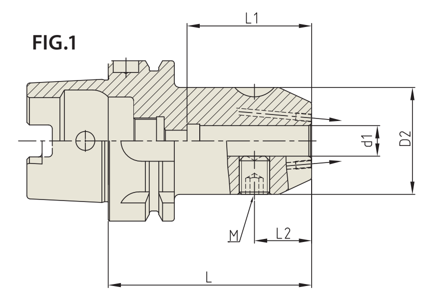
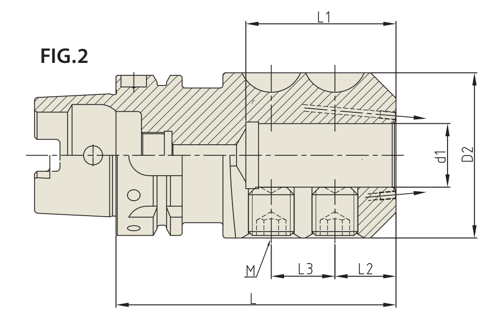


FIG.2



DIN69893/ ISO12164-1 HSK FORM A (Metric)

Set screws for End Mill Holders
Refer to page D118

DIN 69893-HSK | AT3 | 2.5G | 25,000 RPM | AD+C

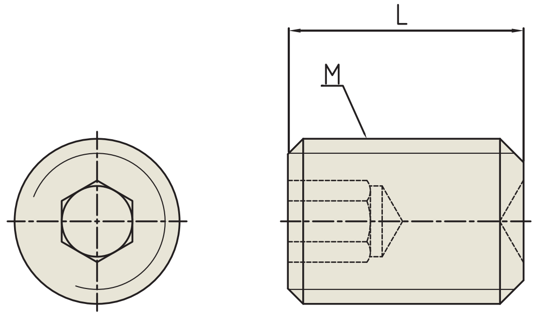
Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D2	L	L1	L2	L3	M	FIG.	WEIGHT(Kg)
AP001B25C	40A	HSK40A - EMH 6C - 60	6	25	60	38	18	-	M6	1	0.30
AP002B25C		HSK40A - EMH 8C - 60	8	28	60	38	18	-	M8	1	0.30
AP003B25C		HSK40A - EMH 10C - 60	10	35	60	42	20	-	M10	1	0.30
AP004B25C		HSK40A - EMH 12C - 70	12	42	70	47	22.5	-	M12	1	0.40
AP005B25C		HSK40A - EMH 14C - 70	14	44	70	47	22.5	-	M12	1	0.40
AP006B25C		HSK40A - EMH 16C - 80	16	48	80	50	24	-	M14	1	0.60
AP007B25C	50A	HSK50A - EMH 6C - 65	6	25	65	38	18	-	M6	1	0.70
AP008B25C		HSK50A - EMH 8C - 65	8	28	65	38	18	-	M8	1	0.80
AP009B25C		HSK50A - EMH 10C - 65	10	35	65	42	20	-	M10	1	0.80
AP010B25C		HSK50A - EMH 12C - 80	12	42	80	47	22.5	-	M12	1	1.20
AP011B25C		HSK50A - EMH 14C - 80	14	44	80	47	22.5	-	M12	1	1.30
AP012B25C		HSK50A - EMH 16C - 80	16	48	80	50	24	-	M14	1	1.30
AP013B25C		HSK50A - EMH 18C - 80	18	50	80	50	24	-	M14	1	1.40
AP014B25C		HSK50A - EMH 20C - 80	20	52	80	52	25	-	M16	1	1.50
AQ101B25C	63A	HSK63A - EMH 6C - 65	6	25	65	35	18	-	M6	1	0.80
AQ102B25C		HSK63A - EMH 8C - 65	8	28	65	38	18	-	M8	1	0.80
AQ103B25C		HSK63A - EMH 10C - 65	10	35	65	42	20	-	M10	1	0.90
AQ104B25C		HSK63A - EMH 12C - 80	12	42	80	47	22.5	-	M12	1	1.10
AQ105B25C		HSK63A - EMH 14C - 80	14	44	80	47	22.5	-	M12	1	1.20
AQ106B25C		HSK63A - EMH 16C - 80	16	48	80	50	24	-	M14	1	1.30
AQ107B25C		HSK63A - EMH 18C - 80	18	50	80	50	24	-	M14	1	1.40
AQ108B25C		HSK63A - EMH 20C - 80	20	52	80	52	25	-	M16	1	1.50
AQ109B25C		HSK63A - EMH 25C - 110	25	65	110	60	24	25	M18	2	2.30
AQ110B25C		HSK63A - EMH 32C - 110	32	72	110	64	24	28	M20	2	2.60
AR101B25C	100A	HSK100A - EMH 6C - 80	6	25	80	35	18	-	M6	1	0.80
AR102B25C		HSK100A - EMH 8C - 80	8	28	80	35	18	-	M8	1	0.80
AR103B25C		HSK100A - EMH 10C - 80	10	35	80	35.5	20	-	M10	1	0.90
AR104B25C		HSK100A - EMH 12C - 80	12	42	80	49	22.5	-	M12	1	1.10
AR105B25C		HSK100A - EMH 14C - 80	14	44	80	49	22.5	-	M12	1	1.20
AR106B25C		HSK100A - EMH 16C - 100	16	48	100	52	24	-	M14	1	1.30
AR107B25C		HSK100A - EMH 18C - 100	18	50	100	52	24	-	M14	1	1.40
AR108B25C		HSK100A - EMH 20C - 100	20	52	100	53	25	-	M16	1	1.50
AR109B25C		HSK100A - EMH 25C - 100	25	65	100	59	24	25	M18	2	2.30
AR110B25C		HSK100A - EMH 32C - 100	32	72	100	63	24	28	M20	2	2.60
AR111B25C		HSK100A - EMH 40C - 120	40	80	120	73	30	32	M20	2	2.60

YG END MILL HOLDER & SIDE LOCK ARBOR

PART

SIDE LOCK BOLT (For End mill holder & Side lock arbor)



Unit : inch

EMH & SLA ID	EMH			SLA		
	M	L	EDP No.	M	L	EDP No.
1/8	UNC#8-32	1/4 (0.25)	ZZ000	-	-	
3/16	UNC#10-32	1/4 (0.25)	ZZ001	-	-	
1/4	UNF1/4-28	1/4 (0.25)	ZZ002	UNF1/4-28	1/4 (0.25)	ZZ002
5/16	UNF5/16-24	1/4 (0.25)	ZZ003	UNF5/16-24	1/4 (0.25)	ZZ003
3/8	UNF3/8-24	5/16 (0.3125)	ZZ004	UNF3/8-24	5/16 (0.3125)	ZZ004
7/16	UNF3/8-24	25/64 (0.391)	ZZ005	-	-	
1/2	UNF7/16-20	3/8 (0.375)	ZZ006	UNF7/16-20	3/8 (0.375)	ZZ006
5/8	UNF1/2-20	1/2 (0.5)	ZZ007	UNF1/2-20	1/2 (0.5)	ZZ007
3/4	UNF5/8-18	1/2 (0.5)	ZZ008	-	-	
7/8	UNF5/8-18	1/2 (0.5)	ZZ009	UNF5/8-18	1/2 (0.5)	ZZ009
1	UNF3/4-16	1/2 (0.5)	ZZ010	UNF3/4-16	1/2 (0.5)	ZZ010
1 1/4	UNF3/4-16	11/16 (0.6875)	ZZ011	UNF3/4-16	11/16 (0.6875)	ZZ011
1 1/2	UNF3/4-16	1/2 (0.5)	ZZ012	-	-	
2	UNS1-14- 7/8L	7/8 (0.875)	ZZ013	-	-	

Unit : mm

EMH & SLA ID	EMH			SLA		
	M	L	EDP No.	M	L	EDP No.
6	M6 x 1.0	10.5	P2778088	M5 x 0.8	8	P2778079
8	M8 x 1.25	10.5	P2778089	M6 x 1.0	10	P2778080
10	M10 x 1.5	12.5	P2778090	M8 x 1.25	12	P2778081
12	M12 x 1.75	16.5	P2778091	M10 x 1.5	14	P2778082
14	M12 x 1.75	15.0	P2778092	M10 x 1.5	14	P2778082
16	M14 x 2.0	16.5	P2778093	M12 x 1.75	12	P2778083
18	M14 x 2.0	16.5	P2778093	-	-	-
20	M16 x2.0	16.5	P2778094	M12 x 1.75	16	P2778084
25	M18 x 2.0	20.5	P2778095	M14 x 2.0	14	P2778085
32	M20 x 2.0	20.5	P2778096	M16 x2.0	16	P2778086
40	M20 x 2.0	20.5	P2778096	M16 x2.0	16	P2778086
42	-	-	-	M16 x2.0	16	P2778086
50	M24 x 2.0	25.5	P2778098	-	-	-
50.8	-			M20 x 2.5	25	P2778087

YG-1 ROTARY TOOLING

ER COLLET CHUCK

ER COLLET CHUCK

CAT : ASME B5.50-2009

BT : JIS B6339/MAS 403-BT/ISO7388-2

HSK : DIN69893/ISO12164-1

SHORT, STRAIGHT-K

NC-ER

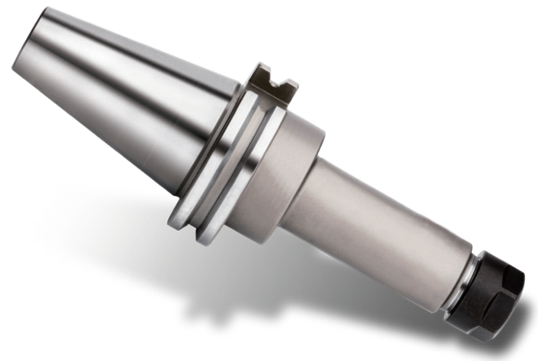
ACCESSORY & PART

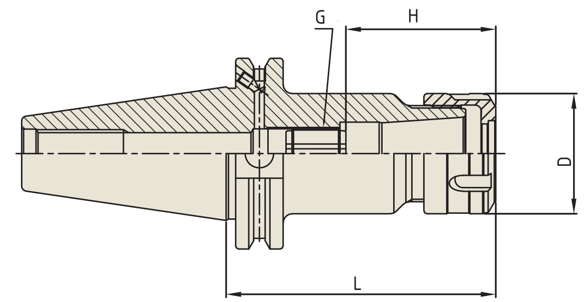
ER COLLET, ER NUT, WRENCH, STOP SCREW

YG ER COLLET CHUCK

CAT

ER COLLET CHUCK





ASME B5.50-2009-CAT (Inch)

ER Collet Refer to page D128-D136

ER nut, Sealing disk and Spanner Refer to page D137

ASME B5.50 - CAT · AT3 · 6.3G · 15,000 RPM · AD/B

■ STUB Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BH232B	40	CAT40 AD/B - ER 20 - 2.55	.039 - .511	1.339	2.55	1.220	2.315	UN9/16-16 1/2L	ER20
BH233B		CAT40 AD/B - ER 25 - 2.50	.039 - .629	1.654	2.50	1.339	2.335	UN11/16-16 1/2L	ER25
BH234B		CAT40 AD/B - ER 32 - 2.70	.078 - .787	1.969	2.70	1.575	3.555	UN7/8-16 1/2L	ER32

■ STANDARD Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BK030B	40	CAT40 AD/B - ER 11 - 3.00	.019 - .275	.748	3.00	.654	1.177	UN5/16-18 1/2L	ER11
BK031B		CAT40 AD/B - ER 16 - 3.00	.019 - .393	1.102	3.00	1.008	2.240	UN7/16-18 1/2L	ER16
BK032B		CAT40 AD/B - ER 20 - 4.00	.039 - .511	1.339	4.00	1.220	2.315	UN9/16-16 1/2L	ER20
BK133B		CAT40 AD/B - ER 25 - 4.00	.039 - .629	1.654	4.00	1.339	2.335	UN11/16-16 1/2L	ER25
BK134B		CAT40 AD/B - ER 32 - 4.00	.078 - .787	1.969	4.00	1.575	3.555	UN7/8-16 1/2L	ER32
BK136B		CAT40 AD/B - ER 40 - 4.00	.118 - 1.024	2.480	4.00	2.283	3.634	UN1 1/8-16 1/2L	ER40
BL031B	50	CAT50 AD/B - ER 16 - 4.00	.019 - .393	1.100	4.00	1.008	1.839	UN7/16-18 1/2L	ER16
BL032B		CAT50 AD/B - ER 20 - 4.00	.039 - .511	1.339	4.00	1.220	2.315	UN9/16-16 1/2L	ER20
BL033B		CAT50 AD/B - ER 25 - 4.00	.039 - .629	1.654	4.00	1.339	2.335	UN11/16-16 1/2L	ER25
BL034B		CAT50 AD/B - ER 32 - 4.00	.078 - .787	1.969	4.00	1.575	3.555	UN7/8-16 1/2L	ER32
BL036B		CAT50 AD/B - ER 40 - 4.00	.118 - 1.024	2.480	4.00	2.283	3.634	UN1 1/8-16 1/2L	ER40

■ EXTENDED Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BK331B	40	CAT40 AD/B - ER 16 - 6.00	.019 - .393	1.102	6.00	1.008	2.240	UN7/16-18 1/2L	ER16
BK332B		CAT40 AD/B - ER 20 - 6.00	.039 - .511	1.339	6.00	1.220	2.315	UN9/16-16 1/2L	ER20
BK333B		CAT40 AD/B - ER 25 - 6.00	.039 - .629	1.654	6.00	1.339	2.335	UN11/16-16 1/2L	ER25
BK334B		CAT40 AD/B - ER 32 - 6.00	.078 - .787	1.969	6.00	1.575	3.555	UN7/8-16 1/2L	ER32
BL331B	50	CAT50 AD/B - ER 16 - 6.00	.019 - .393	1.100	6.00	1.008	1.839	UN7/16-18 1/2L	ER16
BL332B		CAT50 AD/B - ER 20 - 6.00	.039 - .511	1.330	6.00	1.220	2.315	UN9/16-16 1/2L	ER20
BL333B		CAT50 AD/B - ER 25 - 6.00	.039 - .629	1.650	6.00	1.339	2.335	UN11/16-16 1/2L	ER25
BL334B		CAT50 AD/B - ER 32 - 6.00	.078 - .787	1.960	6.00	1.575	3.555	UN7/8-16 1/2L	ER32

■ EXTRA EXTENDED Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BK434B	40	CAT40 AD/B - ER 16 - 8.00	.019 - .393	1.102	8.00	1.008	2.240	UN7/16-18 1/2L	ER16
BK432B		CAT40 AD/B - ER 20 - 8.00	.039 - .511	1.339	8.00	2.283	3.634	UN9/16-16 1/2	ER20
BK435B		CAT40 AD/B - ER 25 - 8.00	.039 - .629	1.654	8.00	1.339	2.335	UN11/16-16 1/2L	ER25
BK433B		CAT40 AD/B - ER 32 - 8.00	.078 - .787	1.969	8.00	1.575	3.555	UN7/8-16 1/2L	ER32

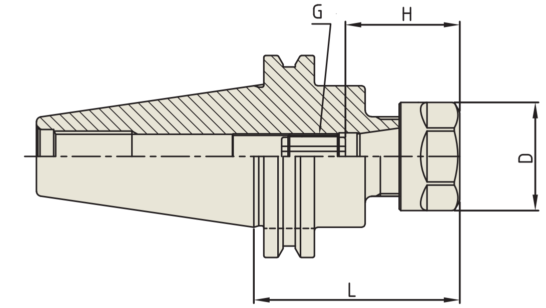
ROTARY TOOL HOLDERS

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG ER COLLET CHUCK

CAT

HIGH BALANCED ER COLLET CHUCK



ASME B5.50-2009-CAT (Inch)

ER Collet Refer to page D128-D136

ER nut, Sealing disk and Spanner Refer to page D137

ASME B5.50 - CAT · AT3 · 2.5G · 25,000 RPM · AD

■ STUB Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BK232B25	40	CAT40 - ER 20 - 2.55	.039 - .511	1.339	2.55	2.315	1.272	UN9/16-16 1/2L	ER20
BK233B25		CAT40 - ER 25 - 2.50	.039 - .629	1.654	2.5	2.335	1.339	UN11/16-16 1/2L	ER25
BK233B25		CAT40 - ER 32 - 2.70	.078 - .787	1.969	2.70	3.555	1.575	UN7/8-16 1/2L	ER32

■ STANDARD Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BK030B25	40	CAT40 - ER 11 - 3.00	.019 - .275	.748	3.00	.654	1.177	UN5/16-18 1/2L	ER11
BK031B25		CAT40 - ER 16 - 2.88	.019 - .393	1.102	2.88	1.008	2.240	UN7/16-18 1/2L	ER16
BK032B25		CAT40 - ER 20 - 4.00	.039 - .511	1.339	4.00	1.220	2.315	UN9/16-16 1/2L	ER20
BK133B25		CAT40 - ER 25 - 4.00	.039 - .629	1.654	4.00	1.339	2.335	UN11/16-16 1/2L	ER25
BK134B25		CAT40 - ER 32 - 4.00	.078 - .787	1.969	4.00	1.575	3.555	UN7/8-16 1/2L	ER32
BL031B25	50	CAT50 - ER 16 - 4.88	.019 - .393	1.102	4.88	1.008	1.839	UN7/16-18 1/2L	ER16
BL032B25		CAT50 - ER 20 - 4.00	.039 - .511	1.339	4.00	1.220	2.315	UN9/16-16 1/2L	ER20
BL033B25		CAT50 - ER 25 - 4.00	.039 - .629	1.654	4.00	1.339	2.335	UN11/16-16 1/2L	ER25
BL034B25		CAT50 - ER 32 - 4.00	.078 - .787	1.969	4.00	1.575	3.555	UN7/8-16 1/2L	ER32

■ EXTENDED Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BK331B25	40	CAT40 - ER 16 - 4.88	.019 - .393	1.100	4.88	1.008	2.240	UN7/16-18 1/2L	ER16
BK332B25		CAT40 - ER 20 - 6.00	.039 - .511	1.330	6.00	1.220	2.315	UN9/16-16 1/2L	ER20
BK333B25		CAT40 - ER 25 - 6.00	.039 - .629	1.650	6.00	1.339	2.335	UN11/16-16 1/2L	ER25
BK334B25		CAT40 - ER 32 - 6.00	.078 - .787	1.960	6.00	1.575	3.555	UN7/8-16 1/2L	ER32
BL331B25	50	CAT50 - ER 16 - 6.88	.019 - .393	1.100	6.88	1.008	1.839	UN7/16-18 1/2L	ER16
BL332B25		CAT50 - ER 20 - 6.00	.039 - .511	1.330	6.00	1.220	2.315	UN9/16-16 1/2L	ER20
BL333B25		CAT50 - ER 25 - 6.00	.039 - .629	1.650	6.00	1.339	2.335	UN11/16-16 1/2L	ER25
BL334B25		CAT50 - ER 32 - 6.00	.078 - .787	1.960	6.00	1.575	3.555	UN7/8-16 1/2L	ER32

■ EXTRA EXTENDED Unit : inch

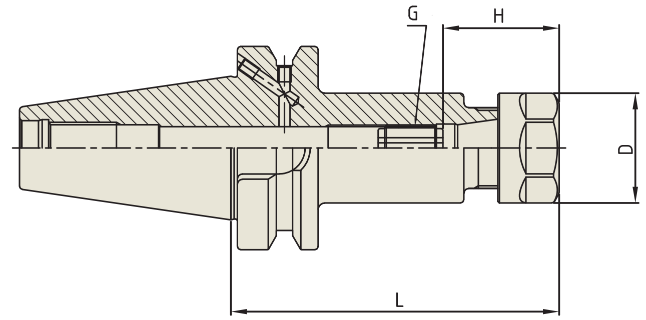
EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BK434B25	40	CAT40 - ER 16 - 8.00	.019 - .393	1.102	8.000	1.008	2.240	UN7/16-18 1/2L	ER16
BK432B25		CAT40 - ER 20 - 8.00	.039 - .511	1.339	8.000	2.283	3.634	UN9/16-16 1/2	ER20
BK435B25		CAT40 - ER 25 - 8.00	.039 - .629	1.654	8.000	1.339	2.335	UN11/16-16 1/2L	ER25
BK433B25		CAT40 - ER 32 - 8.00	.078 - .787	1.969	8.000	1.575	3.555	UN7/8-16 1/2L	ER32

* Supplied without wrench.

ER COLLET CHUCK

BT

ER COLLET CHUCK



JIS B6339/MAS 403-BT (Inch)

ER Collet Refer to page D128-D136 · ER nut, Sealing disk and Spanner Refer to page D137 · JIS B6339-BT · AT3 · 6.3G · 15,000 RPM · AD/B

■ STUB

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BH232B	40	BT40 AD/B - ER20 - 2.20	.039 - .511	1.339	2.200	1.220	2.315	UN9/16-16 1/2L	ER20
BH233B		BT40 AD/B - ER25 - 2.50	.039 - .629	1.654	2.500	1.339	2.335	UN11/16-16 1/2L	ER25
BH234B		BT40 AD/B - ER32 - 2.40	.078 - .787	1.969	2.400	1.575	3.161	UN7/8-16 1/2L	ER32

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BH030B	40	BT40 AD/B - ER11 - 3.00	.019 - .275	.748	3.000	.654	1.453	UN5/16-18 1/2L	ER11
BH031B		BT40 AD/B - ER16 - 3.00	.019 - .393	1.102	3.000	1.008	1.886	UN7/16-18 1/2L	ER16
BH032B		BT40 AD/B - ER20 - 4.00	.039 - .511	1.339	4.000	1.220	2.315	UN9/16-16 1/2L	ER20
BH133B		BT40 AD/B - ER25 - 4.00	.039 - .629	1.654	4.000	1.339	2.335	UN11/16-16 1/2L	ER25
BH134B		BT40 AD/B - ER32 - 4.00	.078 - .787	1.969	4.000	1.575	3.555	UN7/8-16 1/2L	ER32
BH136B		BT40 AD/B - ER40 - 4.00	.118 - 1.024	2.480	4.000	2.283	3.437	UN1 1/8-16 1/2L	ER40

■ EXTENDED

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BH331B	40	BT40 AD/B - ER16 - 6.00	.019 - .393	1.102	6.000	1.008	1.886	UN7/16-18 1/2L	ER16
BH332B		BT40 AD/B - ER20 - 6.00	.039 - .511	1.339	6.000	1.220	2.315	UN9/16-16 1/2L	ER20
BH333B		BT40 AD/B - ER25 - 6.00	.039 - .629	1.654	6.000	1.339	2.335	UN11/16-16 1/2L	ER25
BH334B		BT40 AD/B - ER32 - 6.00	.078 - .787	1.969	6.000	1.575	3.555	UN7/8-16 1/2L	ER32

■ EXTRA EXTENDED

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BH434B	40	BT40 AD/B - ER 16 - 8.00	.019 - .393	1.102	8.000	1.008	1.886	UN7/16-18 1/2L	ER16
BH432B		BT40 AD/B - ER 20 - 8.00	.039 - .511	1.339	8.000	1.220	2.315	UN9/16-16 1/2L	ER20
BH435B		BT40 AD/B - ER 25 - 8.00	.039 - .629	1.654	8.000	1.339	2.335	UN11/16-16 1/2L	ER25
BH433B		BT40 AD/B - ER 32 - 8.00	.078 - .787	1.969	8.000	1.575	3.555	UN7/8-16 1/2L	ER32

* High balanced ER Collet Chucks are available on request.
* Supplied without wrench.

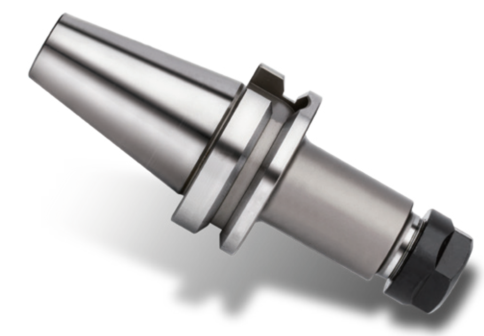
ROTARY TOOL HOLDERS

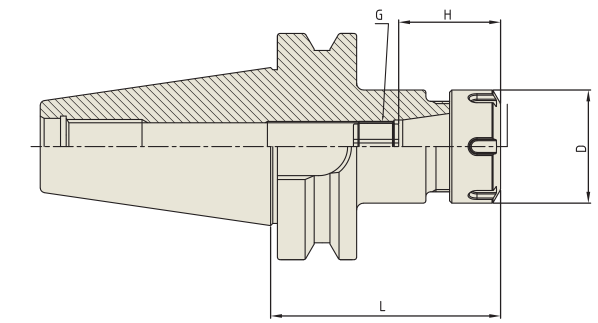
Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

ER COLLET CHUCK

BT

ER COLLET CHUCK





JIS B6339/MAS 403-BT (Inch)

ER Collet Refer to page D128-D136 · ER nut, Sealing disk and Spanner Refer to page D137 · JIS B6339-BT · AT3 · 6.3G · 15,000 RPM · AD

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BI031	50	BT50 - ER16 - 4.88	.019 - .393	1.102	4.880	1.008	1.886	UN7/16-18 1/2L	ER16
BI032		BT50 - ER20 - 2.63	.039 - .511	1.339	2.630	1.220	3.102	UN9/16-16 1/2L	ER20
BI033		BT50 - ER25 - 2.63	.039 - .629	1.654	2.630	1.339	2.335	UN11/16-16 1/2L	ER25
BI034		BT50 - ER32 - 4.00	.078 - .787	1.969	4.000	1.575	3.555	UN7/8-16 1/2L	ER32

■ EXTENDED

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BI331	50	BT50 - ER16 - 6.00	.019 - .393	1.102	6.000	1.008	1.886	UN7/16-18 1/2L	ER16
BI332		BT50 - ER20 - 6.00	.039 - .511	1.339	6.000	1.220	3.102	UN9/16-16 1/2L	ER20
BI333		BT50 - ER25 - 6.00	.039 - .629	1.654	6.000	1.339	2.335	UN11/16-16 1/2L	ER25
BI334		BT50 - ER32 - 6.00	.078 - .787	1.969	6.000	1.575	3.555	UN7/8-16 1/2L	ER32

■ EXTRA EXTENDED

Unit : inch

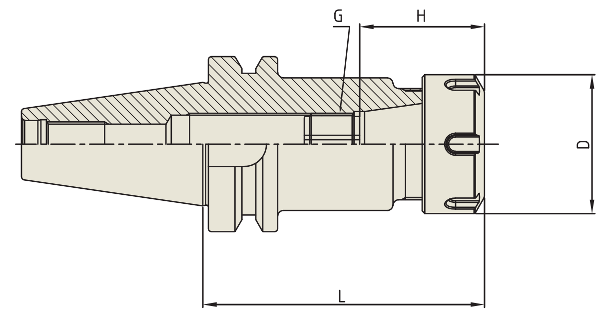
EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BI335	50	BT50 - ER 16 - 8.00	0.019 - 0.393	1.102	8.000	1.008	1.886	UN7/16-18 1/2L	ER16
BI336		BT50 - ER 20 - 8.00	0.039 - 0.511	1.339	8.000	1.220	3.102	UN9/16-16 1/2L	ER20
BI337		BT50 - ER 25 - 8.00	0.039 - 0.629	1.654	8.000	1.339	2.335	UN11/16-16 1/2L	ER25
BI338		BT50 - ER 32 - 8.00	0.078 - 0.787	1.969	8.000	1.575	3.555	UN7/8-16 1/2L	ER32

* High balanced ER Collet Chucks are on page 72.
* Supplied without wrench.

YG ER COLLET CHUCK

BT

HIGH BALANCED ER COLLET CHUCK



JIS B6339/MAS 403-BT

ER Collet Refer to page D128-D136

ER nut, Sealing disk and Spanner Refer to page D137

JIS B6339-BT · AT3 · 2.5G · 25,000 RPM · AD

■ STUB

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BH232B25	40	BT40 - ER 20 - 2.20	.039-.511	1.339	2.200	1.220	2.315	UN9/16-16 1/2L	ER20
BH233B25		BT40 - ER 25 - 2.50	.039-.629	1.654	2.500	1.339	2.335	UN11/16-16 1/2L	ER25
BH234B25		BT40 - ER 32 - 2.40	.078-.787	1.969	2.400	1.575	3.161	UN7/8-16 1/2L	ER32

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BH030B25	40	BT40 - ER 11 - 3.00	.019-.275	.748	3.000	.654	1.453	UN5/16-18 1/2L	ER11
BH031B25		BT40 - ER 16 - 2.88	.019-.393	1.102	2.880	1.008	1.886	UN7/16-18 1/2L	ER16
BH032B25		BT40 - ER 20 - 4.00	.039-.511	1.339	4.000	1.220	2.315	UN9/16-16 1/2L	ER20
BH133B25		BT40 - ER 25 - 4.00	.039-.629	1.654	4.000	1.339	2.335	UN11/16-16 1/2L	ER25
BH134B25		BT40 - ER 32 - 4.00	.078-.787	1.969	4.000	1.575	3.555	UN7/8-16 1/2L	ER32
BI031B25	50	BT50 - ER 16 - 4.88	.019-.393	1.102	4.880	1.008	1.886	UN7/16-18 1/2L	ER16
BI032B25		BT50 - ER 20 - 2.63	.039-.511	1.339	2.630	1.22	3.102	UN9/16-16 1/2L	ER20
BI033B25		BT50 - ER 25 - 2.63	.039-.629	1.654	2.630	1.339	2.335	UN11/16-16 1/2L	ER25
BI034B25		BT50 - ER 32 - 4.00	.078-.787	1.969	4.000	1.575	3.555	UN7/8-16 1/2L	ER32

■ EXTENDED

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BH331B25	40	BT40 - ER 16 - 4.88	.019 - .393	1.102	4.880	1.008	1.886	UN7/16-18 1/2L	ER16
BH434B25		BT40 AD/B - ER 16 - 8.00	.019 - .393	1.102	8.000	1.008	1.886	UN7/16-18 1/2L	ER16
BH332B25		BT40 - ER 20 - 6.00	.039 - .511	1.339	6.000	1.220	2.315	UN9/16-16 1/2L	ER20
BH432B25		BT40 AD/B - ER 20 - 8.00	.039 - .511	1.339	8.000	1.220	2.315	UN9/16-16 1/2L	ER20
BH333B25		BT40 - ER 25 - 6.00	.039 - .629	1.654	6.000	1.339	2.335	UN11/16-16 1/2L	ER25
BH435B25		BT40 AD/B - ER 25 - 8.00	.039 - .629	1.654	8.000	1.339	2.335	UN11/16-16 1/2L	ER25
BH334B25		BT40 - ER 32 - 6.00	.078 - .787	1.969	6.000	1.575	3.555	UN7/8-16 1/2L	ER32
BH433B25		BT40 AD/B - ER 32 - 8.00	.078 - .787	1.969	8.000	1.575	3.555	UN7/8-16 1/2L	ER32
BI331B25	50	BT50 - ER 16 - 6.00	.019 - .393	1.102	6.000	1.008	1.886	UN7/16-18 1/2L	ER16
BI335B25		BT50 - ER 16 - 8.00	.019 - .393	1.102	8.000	1.008	1.886	UN7/16-18 1/2L	ER16
BI332B25		BT50 - ER 20 - 6.00	.039 - .511	1.339	6.000	1.220	3.102	UN9/16-16 1/2L	ER20
BI336B25		BT50 - ER 20 - 8.00	.039 - .511	1.339	8.000	1.220	3.102	UN9/16-16 1/2L	ER20
BI333B25		BT50 - ER 25 - 6.00	.039 - .629	1.654	6.000	1.339	2.335	UN11/16-16 1/2L	ER25
BI337B25		BT50 - ER 25 - 8.00	.039 - .629	1.654	8.000	1.339	2.335	UN11/16-16 1/2L	ER25
BI334B25		BT50 - ER 32 - 6.00	.078 - .787	1.969	6.000	1.575	3.555	UN7/8-16 1/2L	ER32
BI338B25		BT50 - ER 32 - 8.00	.078 - .787	1.969	8.000	1.575	3.555	UN7/8-16 1/2L	ER32

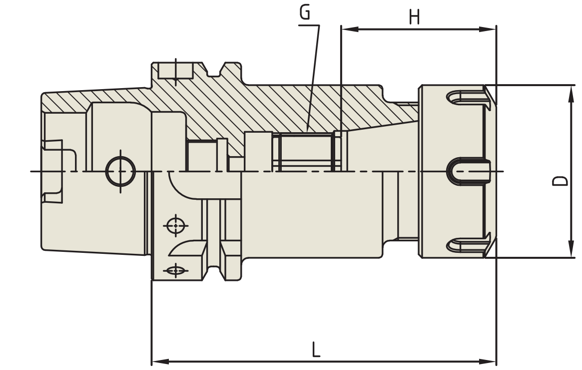
* Supplied without wrench.

ROTARY TOOL HOLDERS

YG ER COLLET CHUCK

HSK

DUAL CONTACT ER COLLET CHUCK



DIN 69893/ ISO 12164-1-HSK FORM A

ER Collet Refer to page D128-D136

ER nut, Sealing disk and Spanner Refer to page D137

DIN 69893-HSK · 2.5G · 25,000 RPM · AD

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H Min.	H Max.	G	COLLET SERIES
BQ010	63	HSK63A - ER 16 - 3.94	.019-.393	1.102	3.940	1.008	1.886	UN7/16-18 1/2L	ER16
BQ023		HSK63A - ER 16 - 6.00	.019-.393	1.102	6.000	1.008	1.886	UN7/16-18 1/2L	ER16
BQ012		HSK63A - ER 20 - 3.94	.039-.511	1.339	3.940	1.220	2.315	UN9/16-16 1/2L	ER20
BQ026		HSK63A - ER 20 - 6.00	.039-.511	1.339	6.000	1.220	2.315	UN9/16-16 1/2L	ER20
BQ014		HSK63A - ER 25 - 3.94	.039-.629	1.654	3.940	1.339	2.020	UN11/16-16 1/2L	ER25
BQ016		HSK63A - ER 32 - 3.94	.078-.787	1.969	3.940	1.575	2.295	UN7/8-16 1/2L	ER32
BQ018		HSK63A - ER 40 - 4.72	.118-1.180	2.480	4.720	2.283	2.846	UN1 1/8-16 1/2L	ER40
BR010	100	HSK100A - ER 16 - 3.94	.019-.393	1.102	3.940	1.008	1.886	UN7/16-18 1/2L	ER16
BR012		HSK100A - ER 20 - 3.94	.039-.511	1.339	3.940	1.220	2.000	UN9/16-16 1/2L	ER20
BR014		HSK100A - ER 25 - 3.94	.039-.629	1.654	3.940	1.339	1.882	UN11/16-16 1/2L	ER25
BR016		HSK100A - ER 32 - 3.94	.078-.787	1.969	3.940	1.575	1.882	UN7/8-16 1/2L	ER32
BR018		HSK100A - ER 40 - 4.72	.118-1.180	2.480	4.720	2.283	2.590	UN1 1/8-16 1/2L	ER40

* Supplied without wrench.

ER COLLET CHUCK

CAT/BT

ER COLLET CHUCK (SHORT)

FIG.1

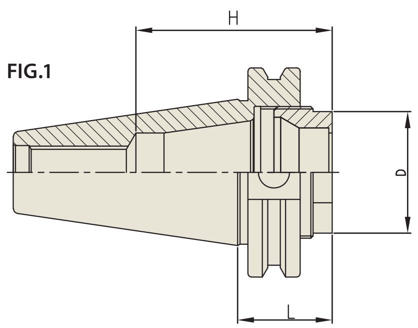
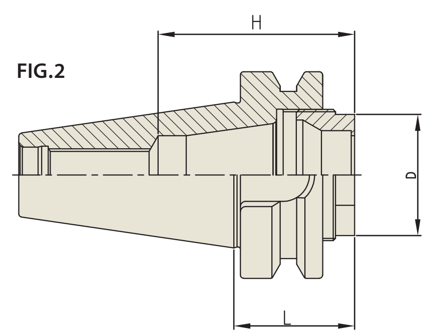


FIG.2



ASME B5.50-2009-CAT

ER Collet Refer to page D128-D136
ER nut, Sealing disk and Spanner Refer to page D137

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H	G	COLLET SERIES
BK020SHT	40	CAT40 - ER 32 - SHORT	.078-.787	1.455	1.134	2.350	ER32(For Hex. Nut)	1
BK020SHT	50	CAT50 - ER 32 - SHORT	.078-.787	1.455	1.134	2.350	ER32(For Hex. Nut)	1

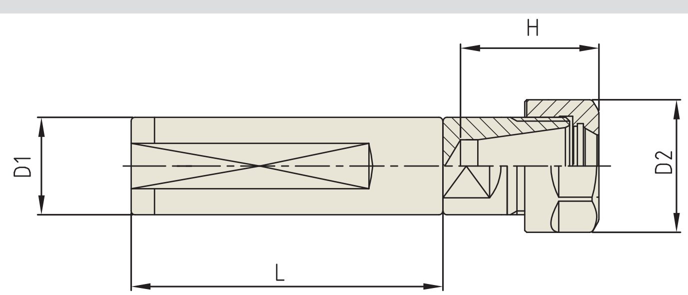
JIS B6339/MAS 403-BT

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	H	G	COLLET SERIES
BH020SHT	40	BT40 - ER 32 - SHORT	0.078-0.787	1.455	1.446	2.350	ER32(For Hex. Nut)	2

K

TENSION ER COLLET CHUCK (For TAPPING)



STRAIGHT-K

ER Collet Refer to page D128-D136
ER nut, Sealing disk and Spanner Refer to page D137

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D1	D2	L	H	COLLET SERIES
BS110	1	K1 - ERT 16 - 2.76	.019-.393	1.00	1.102	2.756	1.248	ER16
BS111		K1 - ERT 20 - 3.15	.039-.511	1.00	1.339	3.150	1.398	ER20
BS112	1 1/4	K1 1/4 - ERT 16 - 2.76	.019-.393	1.25	1.102	2.756	1.248	ER16
BS113		K1 1/4 - ERT 20 - 3.15	.039-.511	1.25	1.339	3.150	1.398	ER20
BS114		K1 1/4 - ERT 25 - 3.15	.039-.629	1.25	1.654	3.150	1.654	ER25
BS115		K1 1/4 - ERT 32 - 3.15	.078-.787	1.25	1.969	3.150	1.890	ER32

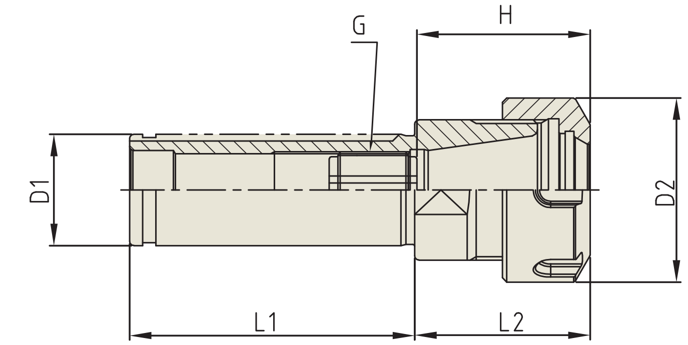
* Supplied without wrench.

ROTARY TOOL HOLDERS

ER COLLET CHUCK

NC

NC ER COLLET CHUCK (For CNC LATHE)



NC

ER Collet Refer to page D128-D136
ER nut, Sealing disk and Spanner Refer to page D137

Unit : inch

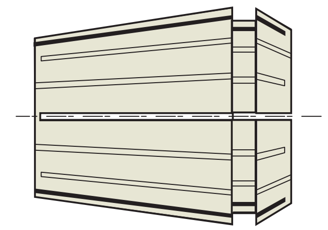
EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D1	D2	L1	L2	H Min.	H Max.	G	COLLET SERIES
BN110	1	NC1 - ER 11	.019-.275	1.00	.748	2.559	1.260	.654	1.35	UN5/16-18 1/2L	ER11
BN111		NC1 - ER 16	.019-.393	1.00	1.102	2.559	1.417	1.008	1.886	UN7/16-18 1/2L	ER16
BN112		NC1 - ER 20	.039-.511	1.00	1.339	2.559	1.575	1.220	2.315	UN9/16-16 1/2L	ER20
BN113		NC1 - ER 25	.039-.629	1.00	1.654	2.559	1.575	1.339	2.315	UN11/16-16 1/2L	ER25
BN114	1 1/4	NC1 1/4 - ER 20	.039-.511	1.25	1.339	2.756	1.161	1.220	2.315	UN9/16-16 1/2L	ER20
BN115		NC1 1/4 - ER 25	.039-.629	1.25	1.654	2.756	1.575	1.339	2.335	UN11/16-16 1/2L	ER25
BN116		NC1 1/4 - ER 32	.078-.787	1.25	1.969	2.756	1.772	1.575	2.453	UN7/8-16 1/2L	ER32
BN117		NC1 1/4 - ER 40	.118-1.180	1.25	2.48	2.756	3.150	2.441	3.555	UN1 1/8-16 1/2L	ER42
BN118	1 1/2	NC1 1/2 - ER 25	.039-.629	1.50	1.654	2.953	1.575	1.339	2.335	UN11/16-16 1/2L	ER25
BN119		NC1 1/2 - ER 32	.078-.787	1.50	1.969	2.953	1.772	1.575	2.335	UN7/8-16 1/2L	ER32
BN120		NC1 1/2 - ER 40	.118-1.180	1.50	2.480	2.953	3.150	2.559	3.427	UN1 1/8-16 1/2L	ER42

* Supplied without wrench.

YG ER COLLET CHUCK

ER

ER COLLET (INCH TYPE)



Unit : inch

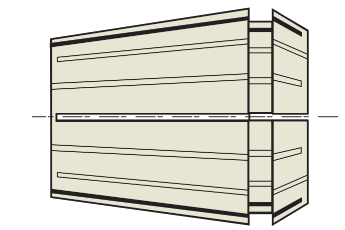
ER 11		ER 16		ER 20		ER 25		ER 32		ER 40	
EDP No.	CLAMPING CAPACITY	EDP No.	CLAMPING RANGE	EDP No.	CLAMPING RANGE	EDP No.	CLAMPING RANGE	EDP No.	CLAMPING RANGE	EDP No.	CLAMPING RANGE
110116	1/16	160116	1/16	200116	1/16	250116	1/16	320332	3/32	400108	1/8
110332	3/32	160332	3/32	200332	3/32	250332	3/32	320108	1/8	400532	5/32
110108	1/8	160108	1/8	200108	1/8	250108	1/8	320532	5/32	400316	3/16
110532	5/32	160532	5/32	200532	5/32	250532	5/32	320316	3/16	400732	7/32
110316	3/16	160316	3/16	200316	3/16	250316	3/16	320732	7/32	400104	1/4
110732	7/32	160732	7/32	200732	7/32	250732	7/32	320104	1/4	400932	9/32
110104	1/4	160104	1/4	200104	1/4	250104	1/4	320932	9/32	400516	5/16
		160932	9/32	200932	9/32	250932	9/32	320516	5/16	401132	11/32
		160516	5/16	200516	5/16	250516	5/16	321132	11/32	400308	3/8
		161132	11/32	201132	11/32	251132	11/32	320308	3/8	401332	13/32
		160308	3/8	200308	3/8	250308	3/8	321332	13/32	400716	7/16
		161332	13/32	201332	13/32	251332	13/32	320716	7/16	401532	15/32
				200716	7/16	250716	7/16	321532	15/32	400102	1/2
				201532	15/32	251532	15/32	320102	1/2	401732	17/32
				200102	1/2	250102	1/2	321732	17/32	400916	9/16
						251732	17/32	320916	9/16	401932	19/32
						250916	9/16	321932	19/32	400508	5/8
						251932	19/32	320508	5/8	402132	21/32
						250508	5/8	322132	21/32	401116	11/16
								321116	11/16	402332	23/32
								322332	23/32	400304	3/4
								320304	3/4	402532	25/32
										401316	13/16
										402732	27/32
										400708	7/8
										402932	29/32
										401516	15/16
										403132	31/32
										401000	1
ER11S07	STANDARD SET	ER16S12	STANDARD SET	ER20S15	STANDARD SET	ER25S19	STANDARD SET	ER32S22	STANDARD SET	ER40S29	STANDARD SET
Ø1/16″ to 1/4″		Ø1/16″ to 13/32″		Ø1/16″ to 1/2″		Ø1/16″ to 5/8″		Ø3/32″ to 3/4″		Ø1/8″ to 1″	
7pcs		12pcs		15pcs		19pcs		22pcs		29pcs	

ROTARY TOOL HOLDERS

YG ER COLLET CHUCK

ER

ER COLLET (Metric Type)



Unit : mm

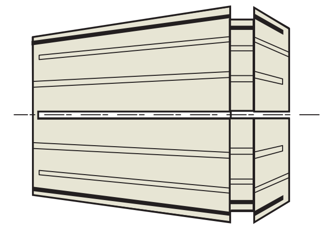
ER 8		ER 11		ER 16		ER 20	
EDP No.	CLAMPING RANGE	EDP No.	CLAMPING RANGE	EDP No.	CLAMPING RANGE	EDP No.	CLAMPING RANGE
208010	1.0 - 0.5	211010	1.0 - 0.5	216010	1.0 - 0.5	220010	1.0 - 0.5
208015	1.5 - 1.0	211015	1.5 - 1.0	216015	1.5 - 1.0	220015	1.5 - 1.0
208020	2.0 - 1.5	211020	2.0 - 1.5	216020	2.0 - 1.0	220020	2.0 - 1.0
208025	2.5 - 2.0	211025	2.5 - 2.0	216025	2.5 - 2.0	220025	2.5 - 2.0
208030	3.0 - 2.5	211030	3.0 - 2.5	216030	3.0 - 2.0	220030	3.0 - 2.0
208035	3.5 - 3.0	211035	3.5 - 3.0	216040	4.0 - 3.0	220040	4.0 - 3.0
208040	4.0 - 3.5	211040	4.0 - 3.5	216050	5.0 - 4.0	220050	5.0 - 4.0
208045	4.5 - 4.0	211045	4.5 - 4.0	216060	6.0 - 5.0	220060	6.0 - 5.0
208050	5.0 - 4.5	211050	5.0 - 4.5	216070	7.0 - 6.0	220070	7.0 - 6.0
		211055	5.5 - 5.0	216080	8.0 - 7.0	220080	8.0 - 7.0
		211060	6.0 - 5.5	216090	9.0 - 8.0	220090	9.0 - 8.0
		211065	6.5 - 6.0	216100	10.0 - 9.0	220100	10.0 - 9.0
		211070	7.0 - 6.5			220110	11.0 - 10.0
						220120	12.0 - 11.0
						220130	13.0 - 12.0
208000	STANDARD SET	211000	STANDARD SET	216000	STANDARD SET	220000	STANDARD SET
Ø1.0 - 5.0mm		Ø1.0 - 7.0mm		Ø1.0 - 10.0mm		Ø2.0 - 13.0mm	
9pcs		13pcs		10pcs		12pcs	
108110	WOODEN TRAY ZWT 8	011110	WOODEN TRAY ZWT 11	016110	WOODEN TRAY ZWT 16	020110	WOODEN TRAY ZWT 20

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG ER COLLET CHUCK

ER

ER COLLET (Metric Type)



Unit : mm

ER 25		ER 32		ER 40		ER 50	
EDP No.	CLAMPING RANGE	EDP No.	CLAMPING RANGE	EDP No.	CLAMPING RANGE	EDP No.	CLAMPING RANGE
225010	1.0 - 1.5	232020	2.0 - 1.0	240030	3.0 - 2.0	250060	6.0 - 4.0
225015	1.5 - 1.0	232025	2.5 - 2.0	240040	4.0 - 3.0	250080	8.0 - 6.0
225020	2.0 - 1.0	232030	3.0 - 2.0	240050	5.0 - 4.0	250100	10.0 - 8.0
225025	2.5 - 2.0	232040	4.0 - 3.0	240060	6.0 - 5.0	250120	12.0 - 10.0
225030	3.0 - 2.0	232050	5.0 - 4.0	240070	7.0 - 6.0	250140	14.0 - 12.0
225040	4.0 - 3.0	232060	6.0 - 5.0	240080	8.0 - 7.0	250160	16.0 - 14.0
225050	5.0 - 4.0	232070	7.0 - 6.0	240090	9.0 - 8.0	250180	18.0 - 16.0
225060	6.0 - 5.0	232080	8.0 - 7.0	240100	10.0 - 9.0	250200	20.0 - 18.0
225070	7.0 - 6.0	232090	9.0 - 8.0	240110	11.0 - 10.0	250220	22.0 - 20.0
225080	8.0 - 7.0	232100	10.0 - 9.0	240120	12.0 - 11.0	250240	24.0 - 22.0
225090	9.0 - 8.0	232110	11.0 - 10.0	240130	13.0 - 12.0	250250	25.0 - 23.0
225100	10.0 - 9.0	232120	12.0 - 11.0	240140	14.0 - 13.0	250260	26.0 - 24.0
225110	11.0 - 10.0	232130	13.0 - 12.0	240150	15.0 - 14.0	250280	28.0 - 26.0
225120	12.0 - 11.0	232140	14.0 - 13.0	240160	16.0 - 15.0	250300	30.0 - 28.0
225130	13.0 - 12.0	232150	15.0 - 14.0	240170	17.0 - 16.0	250320	32.0 - 30.0
225140	14.0 - 13.0	232160	16.0 - 15.0	240180	18.0 - 17.0	250340	34.0 - 32.0
225150	15.0 - 14.0	232170	17.0 - 16.0	240190	19.0 - 18.0		
225160	16.0 - 15.0	232180	18.0 - 17.0	240200	20.0 - 19.0		
		232190	19.0 - 18.0	240210	21.0 - 20.0		
		232200	20.0 - 19.0	240220	22.0 - 21.0		
				240230	23.0 - 22.0		
				240240	24.0 - 23.0		
				240250	25.0 - 24.0		
				240260	26.0 - 25.0		
				240270	27.0 - 26.0		
				240280	28.0 - 27.0		
				240290	29.0 - 28.0		
				240300	30.0 - 29.0		
225000	STANDARD SET	232000	STANDARD SET	240000	STANDARD SET	250000	STANDARD SET
Ø2.0 - 16.0mm		Ø3.0 - 20.0mm		Ø4.0 - 26.0mm		Ø12.0 - 34.0mm	
15pcs		18pcs		23pcs		12pcs	
025110	WOODEN TRAY ZWT 25	032110	WOODEN TRAY ZWT 32	040110	WOODEN TRAY ZWT 40	050110	WOODEN TRAY ZWT 50

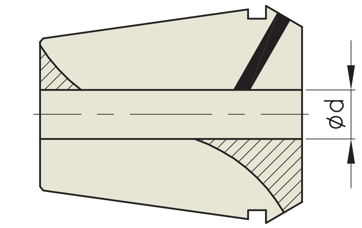
ROTARY TOOL HOLDERS

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG ER COLLET CHUCK

ER

SEALED ER COLLET (Inch Type)



Unit : inch

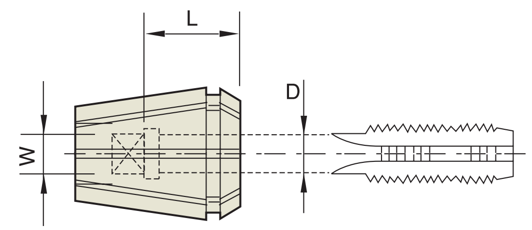
ER 11S		ER 16S		ER 20S		ER 25S		ER 32S		ER 40S	
EDP No.	CLAMPING CAPACITY	EDP No.	CLAMPING CAPACITY	EDP No.	CLAMPING CAPACITY	EDP No.	CLAMPING CAPACITY	EDP No.	CLAMPING CAPACITY	EDP No.	CLAMPING CAPACITY
110108S	1/8	160108S	1/8	200108S	1/8	250108S	1/8	320108S	1/8	400108S	1/8
110532S	5/32	160532S	5/32	200532S	5/32	250532S	5/32	320532S	5/32	400532S	5/32
110316S	3/16	160316S	3/16	200316S	3/16	250316S	3/16	320316S	3/16	400316S	3/16
110732S	7/32	160732S	7/32	200732S	7/32	250732S	7/32	320732S	7/32	400732S	7/32
110104S	1/4	160104S	1/4	200104S	1/4	250104S	1/4	320104S	1/4	400104S	1/4
		160932S	9/32	200932S	9/32	250932S	9/32	320932S	9/32	400932S	9/32
		160516S	5/16	200516S	5/16	250516S	5/16	320516S	5/16	400516S	5/16
		161132S	11/32	201132S	11/32	251132S	11/32	321132S	11/32	401132S	11/32
		160308S	3/8	200308S	3/8	250308S	3/8	320308S	3/8	400308S	3/8
		161332S	13/32	201332S	13/32	251332S	13/32	321332S	13/32	401332S	13/32
				200716S	7/16	250716S	7/16	320716S	7/16	400716S	7/16
				201532S	15/32	251532S	15/32	321532S	15/32	401532S	15/32
				200102S	1/2	250102S	1/2	320102S	1/2	400102S	1/2
						251732S	17/32	321732S	17/32	401732S	17/32
						250916S	9/16	320916S	9/16	400916S	9/16
						251932S	19/32	321932S	19/32	401932S	19/32
						250508S	5/8	320508S	5/8	400508S	5/8
								322132S	21/32	402132S	21/32
								321116S	11/16	401116S	11/16
								322332S	23/32	402332S	23/32
								320304S	3/4	400304S	3/4
										402532S	25/32
										401316S	13/16
										402732S	27/32
										400708S	7/8
										402932S	29/32
										401516S	15/16
										403132S	31/32
										401000S	1
ER11S05S	STANDARD SET	ER16S10S	STANDARD SET	ER20S13S	STANDARD SET	ER25S17S	STANDARD SET	ER32S21S	STANDARD SET	ER40S29S	STANDARD SET
Ø1/8" to 1/4"		Ø1/8" to 13/32"		Ø1/8" to 1/2"		Ø1/8" to 5/8"		Ø1/8" to 3/4"		Ø1/8" to 1"	
5pcs		10pcs		13pcs		17pcs		21pcs		29pcs	

* Metric sealed ER collets are available on request.

ER COLLET CHUCK

RD

TAP ER COLLET (Inch Type : ANSI)



Below standard Tap ER Collet conforms to ANSI (For STANDARD TAPS)

Unit : inch

RD 11TC

EDP No.	TAP Inch	TAP Metric	D(Ø)	W(□)	L
11TC1411	#6	M3	.141	.110	.472
11TC1613	#8	M4	.168	.131	.472
11TC1915	#10	M4.5+M5	.194	.152	.472
11TC2216	#12	-	.220	.165	.551
11TC2519	1/4	M6	.255	.191	.551

RD 16TC

EDP No.	TAP Inch	TAP Metric	D(Ø)	W(□)	L
16TC1411	#6	M3	.141	.110	.709
16TC1613	#8	M4	.168	.131	.709
16TC1915	#10	M4.5+M5	.194	.152	.709
16TC2216	#12	-	.220	.165	.709
16TC2519	1/4	M6	.255	.191	.709
16TC3123	5/16	M7+M8	.318	.238	.709
16TC3224	7/16	-	.323	.242	.709

RD 20TC

EDP No.	TAP Inch	TAP Metric	D(Ø)	W(□)	L
20TC1411	#6	M3	0.141	0.110	0.709
20TC1613	#8	M4	0.168	0.131	0.709
20TC1915	#10	M4.5+M5	0.194	0.152	0.709
20TC2216	#12	-	0.220	0.165	0.709
20TC2519	1/4	M6	0.255	0.191	0.709
20TC3123	5/16	M7+M8	0.318	0.238	0.866
20TC3828	3/8	M10	0.381	0.286	0.866
20TC3224	7/16	-	0.323	0.242	0.866
20TC3622	1/2	M12	0.367	0.275	0.866

RD 25TC

EDP No.	TAP Inch	TAP Metric	D(Ø)	W(□)	L
25TC1411	#6	M3	0.141	0.110	0.709
25TC1613	#8	M4	0.168	0.131	0.709
25TC1915	#10	M4.5+M5	0.194	0.152	0.709
25TC2216	#12	-	0.220	0.165	0.709
25TC2519	1/4	M6	0.255	0.191	0.709
25TC3123	5/16	M7+M8	0.318	0.238	0.866
25TC3828	3/8	M10	0.381	0.286	0.866
25TC3224	7/16	-	0.323	0.242	0.866
25TC3622	1/2	M12	0.367	0.275	0.866
25TC4232	9/16	M14	0.429	0.322	0.984
25TC4836	5/8	M16	0.480	0.360	0.984
25TC5440	11/16	M18	0.542	0.406	0.984
25TC5944	3/4	-	0.590	0.442	0.984

RD 32TC

EDP No.	TAP Inch	TAP Metric	D(Ø)	W(□)	L
32TC1411	#6	M3	0.141	0.110	0.709
32TC1613	#8	M4	0.168	0.131	0.709
32TC1915	#10	M4.5+M5	0.194	0.152	0.709
32TC2216	#12	-	0.220	0.165	0.709
32TC2519	1/4	M6	0.255	0.191	0.709
32TC3123	5/16	M7+M8	0.318	0.238	0.866
32TC3828	3/8	M10	0.381	0.286	0.866
32TC3224	7/16	-	0.323	0.242	0.866
32TC3627	1/2	M12	0.367	0.275	0.866
32TC4232	9/16	M14	0.429	0.322	0.984
32TC4836	5/8	M16	0.480	0.360	0.984
32TC5440	11/16	M18	0.542	0.406	0.984
32TC5944	3/4	-	0.590	0.442	0.984
32TC6548	13/16	M20	0.652	0.489	0.984

RD 40TC

EDP No.	TAP Inch	TAP Metric	D(Ø)	W(□)	L
40TC1411	#6	M3	0.141	0.110	0.709
40TC1613	#8	M4	0.168	0.131	0.709
40TC1915	#10	M4.5+M5	0.194	0.152	0.709
40TC2216	#12	-	0.220	0.165	0.709
40TC2519	1/4	M6	0.255	0.191	0.709
40TC3123	5/16	M7+M8	0.318	0.238	0.866
40TC3828	3/8	M10	0.381	0.286	0.866
40TC3224	7/16	-	0.323	0.242	0.866
40TC3627	1/2	M12	0.367	0.275	0.866
40TC4232	9/16	M14	0.429	0.322	0.984
40TC4836	5/8	M16	0.480	0.360	0.984
40TC5440	11/16	M18	0.542	0.406	0.984
40TC5944	3/4	-	0.590	0.442	0.984
40TC6548	13/16	M20	0.652	0.489	0.984
40TC6952	7/8	M22	0.697	0.523	0.984
40TC7657	15/16	M24	0.760	0.570	0.984
40TC8060	1	M25	0.800	0.600	1.102

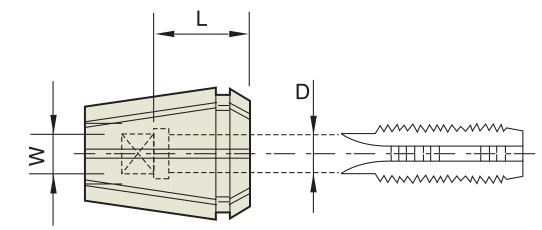
ROTARY TOOL HOLDERS

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

ER COLLET CHUCK

RD

TAP ER COLLET (Inch Type : ANSI)



Below standard Tap ER Collet conforms to ANSI (For PIPE TAPS)

Unit : inch

RD 16TCP

EDP No.	TAP Inch	D(Ø)	W(□)	L
16TP3123	1/8(SS)	.312	.234	.709
16TP4332	1/8(LS)	.437	.328	.709

RD 20TCP

EDP No.	TAP Inch	D(Ø)	W(□)	L
20TP3123	1/8(SS)	.312	.234	.787
20TP4332	1/8(LS)	.437	.328	.787

RD 25TCP

EDP No.	TAP Inch	D(Ø)	W(□)	L
25TP3123	1/8(SS)	.312	.234	.787
25TP4332	1/8(LS)	.437	.328	.787
25TP5642	1/4	.562	.420	.787

RD 32TCP

EDP No.	TAP Inch	D(Ø)	W(□)	L
32TP3123	1/8(SS)	.312	.234	.787
32TP4332	1/8(LS)	.437	.328	.787
32TP5642	1/4	.562	.420	.787

RD 40TCP

EDP No.	TAP Inch	D(Ø)	W(□)	L
40TP3123	1/8(SS)	.312	.234	.787
40TP4332	1/8(LS)	.437	.328	.787
40TP5642	1/4	.562	.420	.787
40TP7053	3/8	.700	.530	.866
40TP6851	1/2	.687	.515	.866
40TP9067	3/4	.906	.679	.945

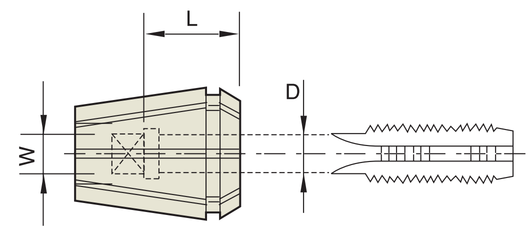
* SS : Short Series / LS : Long Series

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG ER COLLET CHUCK

RDT

TAP ER COLLET (Metric Type : JIS)



Below standard Tap ER Collet conforms to JIS

Unit : mm

RDT 16				
EDP No.	TAP	D(Ø)	W(□)	L
16T30025	M2	3.0	2.5	15
16T40032	M3	4.0	3.2	15
16T50040	M4	5.0	4.0	15
16T55045	M5	5.5	4.5	15
16T60045	M6	6.0	4.5	15
16T62050	M8	6.2	5.0	15

RDT 20				
EDP No.	TAP	D(Ø)	W(□)	L
20T40032	M3	4.0	3.2	15
20T50040	M4	5.0	4.0	15
20T55045	M5	5.5	4.5	15
20T60045	M6	6.0	4.5	15
20T62050	M8	6.2	5.0	20
20T70055	M10	7.0	5.5	20

RDT 25				
EDP No.	TAP	D(Ø)	W(□)	L
25T40032	M3	4.0	3.2	15
25T50032	M4	5.0	4.0	15
25T55045	M5	5.5	4.5	15
25T60045	M6	6.0	4.5	15
25T62050	M8	6.2	5.0	20
25T70055	M10	7.0	5.5	20
25T85065	M12	8.5	6.5	20
25T10580	M14	10.5	8.0	20

RDT 32				
EDP No.	TAP	D(Ø)	W(□)	L
32T50040	M4	5.0	4.0	15
32T55045	M5	5.5	4.5	15
32T60045	M6	6.0	4.5	15
32T62050	M8	6.2	5.0	20
32T70055	M10	7.0	5.5	20
32T85065	M12	8.5	6.5	20
32T10560	M14	10.5	8.0	20
32T12510	M16	12.5	10.0	20
32T14011	M18	14.0	11.0	20

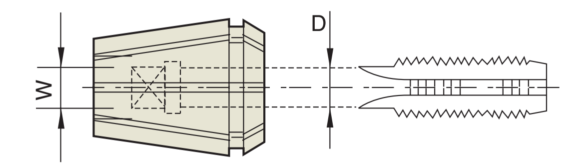
RDT 40				
EDP No.	TAP	D(Ø)	W(□)	L
40T62050	M8	6.2	5.0	20
40T70055	M10	7.0	5.5	20
40T85065	M12	8.5	6.5	25
40T10580	M14	10.5	8.0	25
40T12510	M16	12.5	10.0	25
40T14011	M18	14.0	11.0	25
40T15012	M20	15.0	12.0	28
40T17013	M22	17.0	13.0	28
40T19015	M24	19.0	15.0	28

ROTARY TOOL HOLDERS

YG ER COLLET CHUCK

RD

TAP ER COLLET (Metric Type : DIN)



Below standard Tap ER Collet conforms to DIN

Unit : mm

DIN STANDARD		
DIN 374/376	DIN 352/2181	DIN 371
M5	M3	M3
M5.5	M3.5	M3.5
M6	M4	M4
M5	-	-
M7	-	-
M8	M4.5-M8	M4.5-M8
M9+M10	M9+M10	M7
M11	M11	M8
M12	M12	M9
-	-	M10
M13+M14	M13+M14	-
M15-M17	M15-M17	-
M18+M19	M18+M19	-
M20+M21	M20+M21	-
M22-M26	M22-M26	-
M27+M28	M27+M28	-
M29-M32	M29-M32	-
M33	M33	-
M34-M38	M34-M38	-
M39-M42	M39-M42	-

RD 11TCD		
EDP No.	D(Ø)	W(□)
11TD3527	3.5	2.7
11TD4030	4.0	3.0
11TD4534	4.5	3.4
11TD5040	5.0	4.0
11TD5543	5.5	4.3
11TD6049	6.0	4.9

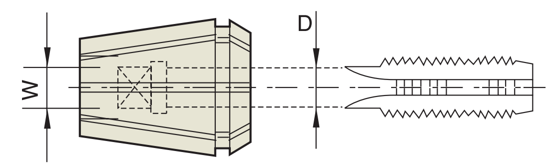
RD 16TCD		
EDP No.	D(Ø)	W(□)
16TD3527	3.5	2.7
16TD4030	4.0	3.0
16TD4534	4.5	3.4
16TD5040	5.0	4.0
16TD5543	5.5	4.3
16TD6049	6.0	4.9
16TD7055	7.0	5.5

RD 20TCD		
EDP No.	D(Ø)	W(□)
20TD3527	3.5	2.7
20TD4030	4.0	3.0
20TD4534	4.5	3.4
20TD5040	5.0	4.0
20TD5543	5.5	4.3
20TD6049	6.0	4.9
20TD7055	7.0	5.5
20TD8062	8.0	6.2
20TD9070	9.0	7.0
20TD10080	10.0	8.0

YG ER COLLET CHUCK

RD

TAP ER COLLET (Metric Type : DIN)



Below standard Tap ER Collet conforms to DIN

Unit : mm

RD 25TCD			RD 32TCD			RD 40TCD			RD 50TCD		
EDP No.	D(Ø)	W(□)	EDP No.	D(Ø)	W(□)	EDP No.	D(Ø)	W(□)	EDP No.	D(Ø)	W(□)
25TD3527	3.5	2.7	32TD3527	3.5	2.7	40TD3527	3.5	2.7			
25TD4030	4.0	3.0	32TD4030	4.0	3.0	40TD4030	4.0	3.0			
25TD4534	4.5	3.4	32TD4534	4.5	3.4	40TD4534	4.5	3.4			
25TD5040	5.0	4.0	32TD5040	5.0	4.0	40TD5040	5.0	4.0			
25TD5543	5.5	4.3	32TD5543	5.5	4.3	40TD5543	5.5	4.3			
25TD6049	6.0	4.9	32TD6049	6.0	4.9	40TD6049	6.0	4.9			
25TD7055	7.0	5.5	32TD7055	7.0	5.5	40TD7055	7.0	5.5			
25TD8062	8.0	6.2	32TD8062	8.0	6.2	40TD8062	8.0	6.2	50TD8062	8.0	6.2
25TD9080	9.0	7.0	32TD9070	9.0	7.0	40TD9070	9.0	7.0	50TD9070	9.0	7.0
25TD10090	10.0	8.0	32TD10080	10.0	8.0	40TD10080	10.0	8.0	50TD10080	10.0	8.0
25TD11090	11.0	9.0	32TD11090	11.0	9.0	40TD11090	11.0	9.0	50TD11090	11.0	9.0
25TD12090	12.0	9.0	32TD12090	12.0	9.0	40TD12090	12.0	9.0	50TD12090	12.0	9.0
25TD140110	14.0	11.0	32TD140110	14.0	11.0	40TD140110	14.0	11.0	50TD140110	14.0	11.0
25TD160120	16.0	12.0	32TD160120	16.0	12.0	40TD160120	16.0	12.0	50TD160120	16.0	12.0
						40TD180145	18.0	14.5	50TD180145	18.0	14.5
						40TD200160	20.0	16.0	50TD200160	20.0	16.0
						40TD220180	22.0	18.0	50TD220180	22.0	18.0
									50TD250200	25.0	20.0
									50TD280220	28.0	22.0
									50TD320240	32.0	24.0

ROTARY TOOL HOLDERS

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG ER COLLET CHUCK

PART

ER NUT

FIG.1

EDP No.	SERIES	TYPE
ZZ061	ER11 - NUT	FIG.1
ZZ063	ER16 - NUT	FIG.1
ZZ066	ER20 - NUT	FIG.1

FIG.2

EDP No.	SERIES	TYPE
ZZ069	ER25 - NUT	FIG.2
ZZ072	ER32 - NUT	FIG.2
ZZ077	ER40 - NUT	FIG.2

FIG.1

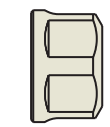
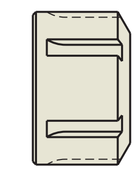


FIG.2



ER WRENCH

FIG.1

EDP No.	SERIES	TYPE
ZZ062	ER11	FIG.1
ZZ064	ER16	FIG.1
ZZ067	ER20	FIG.1

EDP No.	SERIES	TYPE
ZZ070	ER25	FIG.2
ZZ073	ER32	FIG.2
ZZ076	ER40	FIG.2

* Design and shape could be changed without prior notice.

FIG.1

FIG.2

ER STOP SCREW

FIG.1

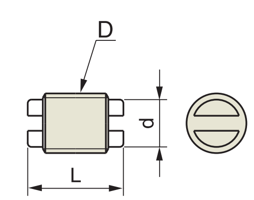


FIG.2

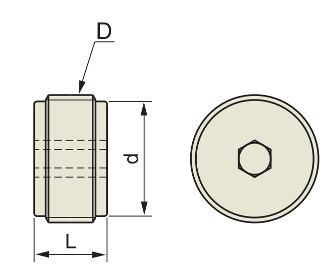


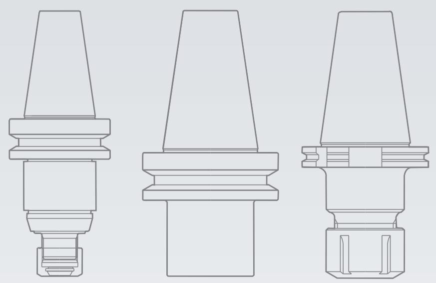
FIG.1

EDP No.	SERIES	L	d	D	TYPE
ZZ060	ER11	0.50	0.25	UN 5/16 - 18	FIG.1

FIG.2

EDP No.	SERIES	L	d	D	TYPE
ZZ065	ER16	0.50	0.35	UN 7/16 - 16	FIG.2
ZZ068	ER20	0.50	0.48	UN 9/16 - 16	FIG.2
ZZ071	ER25	0.50	0.60	UN 11/16 - 16	FIG.2
ZZ074	ER32	0.50	0.79	UN 7/8 - 16	FIG.2

Global Cutting Tool Leader **YG-1**



ROTARY TOOLING

YG-1 ROTARY TOOLING

SK SLIM CHUCK

DUAL CONTACT SK SLIM CHUCK

CAT : ASME B5.50-2009

CCT : CAT DUAL CONTACT

CBT : BT DUAL CONTACT

HSK : DIN69893/ISO12164-1

STRAIGHT-K

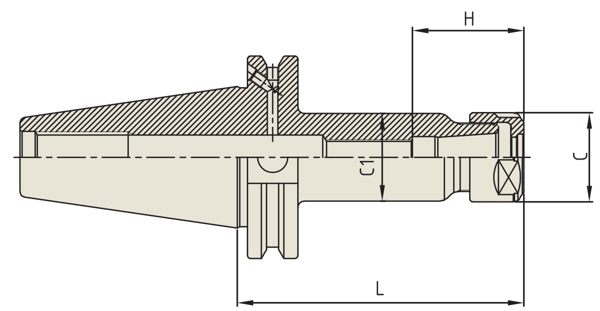
ACCESSORY & PART

SK COLLET, SK NUT, WRENCH

YG SK SLIM CHUCK

CAT

SK SLIM CHUCK



ASME B5.50-2009- CAT

Collet, Nut and spanner
Refer to page D145-D148

ASME B5.50 - CAT | AT3 | 2.5G | 25,000 RPM | AD/B

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	L	C	C1	H Min.	H Max.	COLLET
TK020	40	CAT40 AD/B - SKA 6 - 3.54	.036 - .236	3.540	.787	.768	.827	1.378	SKC6
TK021		CAT40 AD/B - SKA 6 - 4.72	.036 - .236	4.720	.787	.768	.827	1.378	SKC6
TK022		CAT40 AD/B - SKA 6 - 5.90	.036 - .236	5.900	.787	.768	.827	1.378	SKC6
TK023		CAT40 AD/B - SKA 10 - 3.54	.068 - .394	3.540	1.102	1.083	1.181	1.969	SKC10
TK024		CAT40 AD/B - SKA 10 - 4.72	.068 - .394	4.720	1.102	1.083	1.181	1.969	SKC10
TK025		CAT40 AD/B - SKA 10 - 5.90	.068 - .394	5.900	1.102	1.083	1.181	1.969	SKC10
TK026		CAT40 AD/B - SKA 13 - 3.54	.108 - .512	3.540	1.299	1.299	1.220	2.559	SKC13
TK027		CAT40 AD/B - SKA 13 - 4.72	.108 - .512	4.720	1.299	1.299	1.220	2.559	SKC13
TK028		CAT40 AD/B - SKA 13 - 5.90	.108 - .512	5.900	1.299	1.299	1.220	2.559	SKC13
TK029		CAT40 AD/B - SKA 16 - 3.54	.108 - .630	3.540	1.575	1.575	1.772	2.756	SKC16
TK030		CAT40 AD/B - SKA 16 - 4.72	.108 - .630	4.720	1.575	1.575	1.772	2.756	SKC16
TK031		CAT40 AD/B - SKA 16 - 5.90	.108 - .630	5.900	1.575	1.575	1.772	2.756	SKC16
TK032		CAT40 AD/B - SKA 20 - 3.54	.138 - .787	3.540	1.909	1.909	1.850	3.150	SKC20
TK033		CAT40 AD/B - SKA 20 - 4.72	.138 - .787	4.720	1.909	1.909	1.850	3.150	SKC20
TK034		CAT40 AD/B - SKA 20 - 5.90	.138 - .787	5.900	1.909	1.909	1.850	3.150	SKC20
TK035		CAT40 AD/B - SKA 25 - 3.54	.630 - 1.000	3.540	2.165	2.165	2.165	3.346	SKC25
TK036		CAT40 AD/B - SKA 25 - 4.72	.630 - 1.000	4.720	2.165	2.165	2.165	3.346	SKC25
TK037		CAT40 AD/B - SKA 25 - 5.90	.630 - 1.000	5.900	2.165	2.165	2.165	3.346	SKC25
TL020	50	CAT50 AD/B - SKA 6 - 4.13	.036 - .236	4.130	.787	.768	.827	1.378	SKC6
TL021		CAT50 AD/B - SKA 6 - 5.31	.036 - .236	5.310	.787	.768	.827	1.378	SKC6
TL022		CAT50 AD/B - SKA 6 - 6.50	.036 - .236	6.500	.787	.768	.827	1.378	SKC6
TL023		CAT50 AD/B - SKA 6 - 7.68	.036 - .236	7.680	.787	.768	.827	1.378	SKC6
TL024		CAT50 AD/B - SKA 10 - 4.13	.068 - .394	4.130	1.102	1.083	1.181	1.969	SKC10
TL025		CAT50 AD/B - SKA 10 - 5.31	.068 - .394	5.310	1.102	1.083	1.181	1.969	SKC10
TL026		CAT50 AD/B - SKA 10 - 6.50	.068 - .394	6.500	1.102	1.083	1.181	1.969	SKC10
TL027		CAT50 AD/B - SKA 10 - 7.68	.068 - .394	7.680	1.102	1.083	1.181	1.969	SKC10
TL028		CAT50 AD/B - SKA 13 - 4.13	.108 - .512	4.130	1.299	1.299	1.220	2.559	SKC13
TL029		CAT50 AD/B - SKA 13 - 5.31	.108 - .512	5.310	1.299	1.299	1.220	2.559	SKC13
TL030		CAT50 AD/B - SKA 13 - 6.50	.108 - .512	6.500	1.299	1.299	1.220	2.559	SKC13
TL031		CAT50 AD/B - SKA 13 - 7.68	.108 - .512	7.680	1.299	1.299	1.220	2.559	SKC13
TL032		CAT50 AD/B - SKA 16 - 4.13	.108 - .630	4.130	1.575	1.575	1.772	2.362	SKC16
TL033		CAT50 AD/B - SKA 16 - 5.31	.108 - .630	5.310	1.575	1.575	1.772	2.756	SKC16
TL034		CAT50 AD/B - SKA 16 - 6.50	.108 - .630	6.500	1.575	1.575	1.772	2.756	SKC16
TL035		CAT50 AD/B - SKA 16 - 7.68	.108 - .630	7.680	1.575	1.575	1.772	2.756	SKC16
TL036		CAT50 AD/B - SKA 20 - 4.13	.138 - .787	4.130	1.909	1.909	1.850	3.150	SKC20
TL037		CAT50 AD/B - SKA 20 - 5.31	.138 - .787	5.310	1.909	1.909	1.850	3.150	SKC20
TL038		CAT50 AD/B - SKA 20 - 6.50	.138 - .787	6.500	1.909	1.909	1.850	3.150	SKC20
TL039		CAT50 AD/B - SKA 20 - 7.68	.138 - .787	7.680	1.909	1.909	1.850	3.150	SKC20
TL040		CAT50 AD/B - SKA 25 - 4.13	.630 - 1.000	4.130	2.165	2.165	2.165	3.346	SKC25
TL041		CAT50 AD/B - SKA 25 - 5.31	.630 - 1.000	5.310	2.165	2.165	2.165	3.346	SKC25
TL042		CAT50 AD/B - SKA 25 - 6.50	.630 - 1.000	6.500	2.165	2.165	2.165	3.346	SKC25
TL043		CAT50 AD/B - SKA 25 - 7.68	.630 - 1.000	7.680	2.165	2.165	2.165	3.346	SKC25

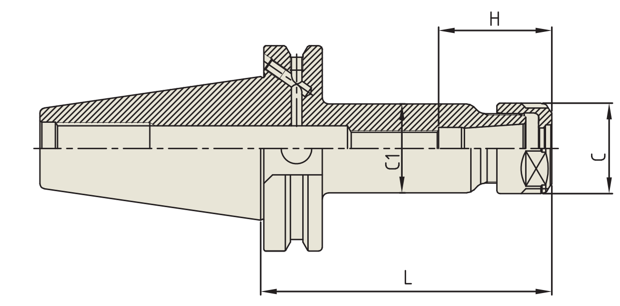
ROTARY TOOL HOLDERS

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG SK SLIM CHUCK

CCT

DUAL CONTACT SK SLIM CHUCK



CCT (CAT DUAL CONTACT)

Collet, Nut and spanner
Refer to page D145-D148

CCT | AT3 | 2.5G | 25,000 RPM | AD/B

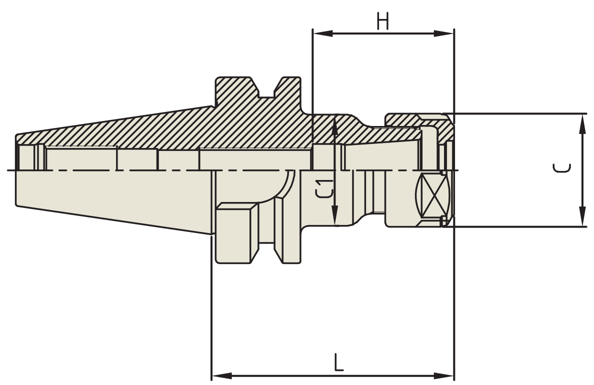
Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	L	C	C1	H Min.	H Max.	COLLET
TB020	40	CCT40 AD/B - SKA 6 - 3.54	.036 - .236	3.540	.787	.768	.827	1.378	SKC6
TB021		CCT40 AD/B - SKA 6 - 4.72	.036 - .236	4.720	.787	.768	.827	1.378	SKC6
TB022		CCT40 AD/B - SKA 6 - 5.90	.036 - .236	5.900	.787	.768	.827	1.378	SKC6
TB023		CCT40 AD/B - SKA 10 - 3.54	.068 - .394	3.540	1.102	1.083	1.181	1.969	SKC10
TB024		CCT40 AD/B - SKA 10 - 4.72	.068 - .394	4.720	1.102	1.083	1.181	1.969	SKC10
TB025		CCT40 AD/B - SKA 10 - 5.90	.068 - .394	5.900	1.102	1.083	1.181	1.969	SKC10
TB026		CCT40 AD/B - SKA 13 - 3.54	.108 - .512	3.540	1.299	1.299	1.220	2.559	SKC13
TB027		CCT40 AD/B - SKA 13 - 4.72	.108 - .512	4.720	1.299	1.299	1.220	2.559	SKC13
TB028		CCT40 AD/B - SKA 13 - 5.90	.108 - .512	5.900	1.299	1.299	1.220	2.559	SKC13
TB029		CCT40 AD/B - SKA 16 - 3.54	.108 - .630	3.540	1.575	1.575	1.772	2.756	SKC16
TB030		CCT40 AD/B - SKA 16 - 4.72	.108 - .630	4.720	1.575	1.575	1.772	2.756	SKC16
TB031		CCT40 AD/B - SKA 16 - 5.90	.108 - .630	5.900	1.575	1.575	1.772	2.756	SKC16
TB032		CCT40 AD/B - SKA 20 - 3.54	.138 - .787	3.540	1.909	1.909	1.850	3.150	SKC20
TB033		CCT40 AD/B - SKA 20 - 4.72	.138 - .787	4.720	1.909	1.909	1.850	3.150	SKC20
TB034		CCT40 AD/B - SKA 20 - 5.90	.138 - .787	5.900	1.909	1.909	1.850	3.150	SKC20
TB035		CCT40 AD/B - SKA 25 - 3.54	.630 - 1.000	3.540	2.165	2.165	2.165	3.346	SKC25
TB036		CCT40 AD/B - SKA 25 - 4.72	.630 - 1.000	4.720	2.165	2.165	2.165	3.346	SKC25
TB037		CCT40 AD/B - SKA 25 - 5.90	.630 - 1.000	5.900	2.165	2.165	2.165	3.346	SKC25
TC020	50	CCT50 AD/B - SKA 6 - 4.13	.036 - .236	4.130	.787	.768	.827	1.378	SKC6
TC021		CCT50 AD/B - SKA 6 - 5.31	.036 - .236	5.310	.787	.768	.827	1.378	SKC6
TC022		CCT50 AD/B - SKA 6 - 6.50	.036 - .236	6.500	.787	.768	.827	1.378	SKC6
TC023		CCT50 AD/B - SKA 6 - 7.68	.036 - .236	7.680	.787	.768	.827	1.378	SKC6
TC024		CCT50 AD/B - SKA 10 - 4.13	.068 - .394	4.130	1.102	1.083	1.181	1.969	SKC10
TC025		CCT50 AD/B - SKA 10 - 5.31	.068 - .394	5.310	1.102	1.083	1.181	1.969	SKC10
TC026		CCT50 AD/B - SKA 10 - 6.50	.068 - .394	6.500	1.102	1.083	1.181	1.969	SKC10
TC027		CCT50 AD/B - SKA 10 - 7.68	.068 - .394	7.680	1.102	1.083	1.181	1.969	SKC10
TC028		CCT50 AD/B - SKA 13 - 4.13	.108 - .512	4.130	1.299	1.299	1.220	2.559	SKC13
TC029		CCT50 AD/B - SKA 13 - 5.31	.108 - .512	5.310	1.299	1.299	1.220	2.559	SKC13
TC030		CCT50 AD/B - SKA 13 - 6.50	.108 - .512	6.500	1.299	1.299	1.220	2.559	SKC13
TC031		CCT50 AD/B - SKA 13 - 7.68	.108 - .512	7.680	1.299	1.299	1.220	2.559	SKC13
TC032		CCT50 AD/B - SKA 16 - 4.13	.108 - .630	4.130	1.575	1.575	1.772	2.362	SKC16
TC033		CCT50 AD/B - SKA 16 - 5.31	.108 - .630	5.310	1.575	1.575	1.772	2.756	SKC16
TC034		CCT50 AD/B - SKA 16 - 6.50	.108 - .630	6.500	1.575	1.575	1.772	2.756	SKC16
TC035		CCT50 AD/B - SKA 16 - 7.68	.108 - .630	7.680	1.575	1.575	1.772	2.756	SKC16
TC036		CCT50 AD/B - SKA 20 - 4.13	.138 - .787	4.130	1.909	1.909	1.850	3.150	SKC20
TC037		CCT50 AD/B - SKA 20 - 5.31	.138 - .787	5.310	1.909	1.909	1.850	3.150	SKC20
TC038		CCT50 AD/B - SKA 20 - 6.50	.138 - .787	6.500	1.909	1.909	1.850	3.150	SKC20
TC039		CCT50 AD/B - SKA 20 - 7.68	.138 - .787	7.680	1.909	1.909	1.850	3.150	SKC20
TC040		CCT50 AD/B - SKA 25 - 4.13	.630 - 1.000	4.130	2.165	2.165	2.165	3.346	SKC25
TC041		CCT50 AD/B - SKA 25 - 5.31	.630 - 1.000	5.310	2.165	2.165	2.165	3.346	SKC25
TC042		CCT50 AD/B - SKA 25 - 6.50	.630 - 1.000	6.500	2.165	2.165	2.165	3.346	SKC25
TC043		CCT50 AD/B - SKA 25 - 7.68	.630 - 1.000	7.680	2.165	2.165	2.165	3.346	SKC25

YG SK SLIM CHUCK

CBT

DUAL CONTACT SK SLIM CHUCK



CBT (BT DUAL CONTACT)

Collet, Nut and spanner Refer to page D111-D114

CBT AT3 2.5G 25,000 RPM AD

Unit : mm

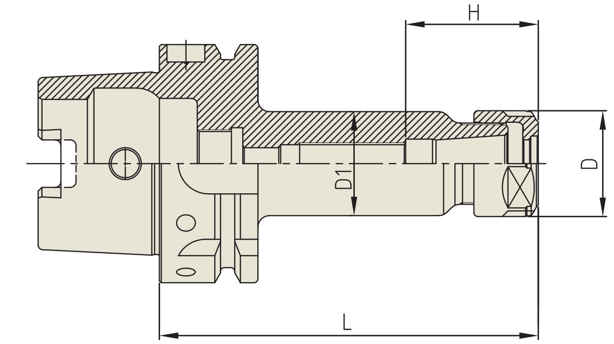
EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	L	C	C1	H		COLLET
							Min.	Max.	
TD100	30	CBT30 - SKA 06 - 60	0.9 - 6.00	60	20.0	19.5	21	35	SKC6
TD102		CBT30 - SKA 06 - 90	0.9 - 6.00	90	20.0	19.5	21	35	SKC6
TD104		CBT30 - SKA 10 - 60	1.75 - 10.0	60	28.0	27.5	30	50	SKC10
TD106		CBT30 - SKA 10 - 90	1.75 - 10.0	90	28.0	27.5	30	50	SKC10
TD108		CBT30 - SKA 13 - 60	2.75 - 13.0	60	33.0	33.0	31	65	SKC13
TD110		CBT30 - SKA 13 - 90	2.75 - 13.0	90	33.0	33.0	31	65	SKC13
TD112		CBT30 - SKA 16 - 60	2.75 - 16.0	60	40.0	40.0	45	60	SKC16
TD114		CBT30 - SKA 16 - 90	2.75 - 16.0	90	40.0	40.0	45	60	SKC16
TD116		CBT30 - SKA 20 - 60	4.0 - 20.0	60	48.5	48.5	65	75	SKC20
TD118		CBT30 - SKA 20 - 90	4.0 - 20.0	90	48.5	48.5	65	75	SKC20
TD120		CBT30 - SKA 25 - 90	16.0 - 25.4	90	55.0	55.0	55	75	SKC25
TE100	40	CBT40 - SKA 06 - 90	0.9 - 6.00	90	20.0	19.5	21	35	SKC6
TE102		CBT40 - SKA 06 - 120	0.9 - 6.00	120	20.0	19.5	21	35	SKC6
TE104		CBT40 - SKA 06 - 150	0.9 - 6.00	150	20.0	19.5	21	35	SKC6
TE106		CBT40 - SKA 10 - 90	1.75 - 10.0	90	28.0	27.5	30	50	SKC10
TE108		CBT40 - SKA 10 - 120	1.75 - 10.0	120	28.0	27.5	30	50	SKC10
TE110		CBT40 - SKA 10 - 150	1.75 - 10.0	150	28.0	27.5	30	50	SKC10
TE112		CBT40 - SKA 13 - 90	2.75 - 13.0	90	33.0	33.0	31	65	SKC13
TE114		CBT40 - SKA 13 - 120	2.75 - 13.0	120	33.0	33.0	31	65	SKC13
TE116		CBT40 - SKA 13 - 150	2.75 - 13.0	150	33.0	40.0	31	65	SKC13
TE118		CBT40 - SKA 16 - 90	2.75 - 16.0	90	40.0	40.0	45	70	SKC16
TE121		CBT40 - SKA 16 - 120	2.75 - 16.0	120	40.0	40.0	45	70	SKC16
TE122		CBT40 - SKA 16 - 150	2.75 - 16.0	150	40.0	40.0	45	70	SKC16
TE124		CBT40 - SKA 20 - 90	4.0 - 20.0	90	48.5	48.5	47	80	SKC20
TE126		CBT40 - SKA 20 - 120	4.0 - 20.0	120	48.5	48.5	47	80	SKC20
TE128		CBT40 - SKA 20 - 150	4.0 - 20.0	150	48.5	48.5	47	80	SKC20
TE130		CBT40 - SKA 25 - 90	16.0 - 25.4	90	55.0	55.0	55	85	SKC25
TE132		CBT40 - SKA 25 - 120	16.0 - 25.4	120	55.0	55.0	55	85	SKC25
TE134		CBT40 - SKA 25 - 150	16.0 - 25.4	150	55.0	55.0	55	85	SKC25

ROTARY TOOL HOLDERS

YG SK SLIM CHUCK

HSK

DUAL CONTACT SK SLIM CHUCK



DIN 69893/
ISO 12164-1-HSK FORM A

Collet, Nut and spanner Refer to page D111-D114

DIN 69893-HSK 2.5G 25,000 RPM AD

Unit : mm

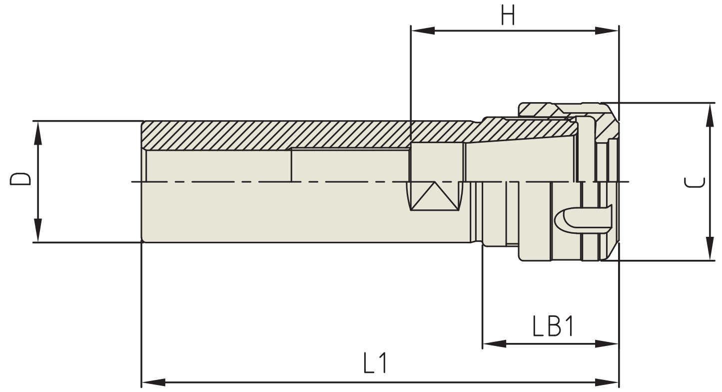
EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	D1	L	H		COLLET
							Min.	Max.	
TQ100	63A	HSK63A - SKA 06 - 100	0.9 - 6.0	20.0	19.5	100	21	35	SKC6
TQ102		HSK63A - SKA 10 - 100	1.75 - 10.0	28.0	27.5	100	30	50	SKC10
TQ104		HSK63A - SKA 13 - 100	2.75 - 13.0	33.0	33.0	100	31	65	SKC13
TQ106		HSK63A - SKA 16 - 120	2.75 - 16.0	40.0	40.0	120	45	70	SKC16
TQ108		HSK63A - SKA 20 - 120	4.0 - 20.0	48.5	48.5	120	65	75	SKC20
TQ110		HSK63A - SKA 25 - 150	16.0 - 25.4	55.0	55.0	150	55	85	SKC25
TR100	100A	HSK100A - SKA 06 - 120	0.9 - 6.0	20.0	19.5	120	21	35	SKC6
TR102		HSK100A - SKA 10 - 150	1.75 - 10.0	28.0	27.5	150	30	50	SKC10
TR104		HSK100A - SKA 13 - 150	2.75 - 13.0	33.0	40.0	150	31	65	SKC13
TR106		HSK100A - SKA 16 - 150	2.75 - 16.0	40.0	40.0	150	45	70	SKC16
TR108		HSK100A - SKA 20 - 150	4.0 - 20.0	48.5	48.5	150	65	75	SKC20
TR110		HSK100A - SKA 25 - 160	16.0 - 25.4	55.0	55.0	160	55	85	SKC25

SK SLIM CHUCK

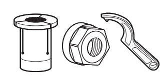
K

Hydraulic Chuck | Shrink Fit Holder | End Mill Holder & Side Lock Arbor | ER Collet Chuck | SK Slim Chuck | TG Collet Chuck | Power Milling Chuck | Morse Taper Adapter | Tapping Chuck | One Step Tapping Chuck | Shell Mill Arbor | NC Drill Chuck | Jacobs Taper Arbor | Stub Arbor | Slitting Saw Arbor | Pull Stud &Tool Clamp | TECHNICAL INFORMATION

STRAIGHT SK SLIM CHUCK



STRAIGHT-K



Collet, Nut and spanner
Refer to page D99~D114

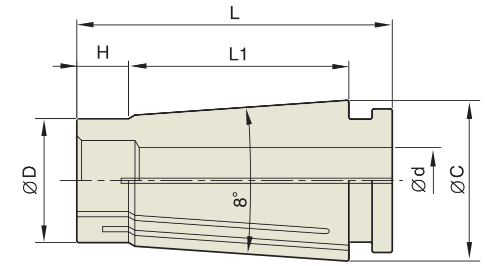
Unit : inch

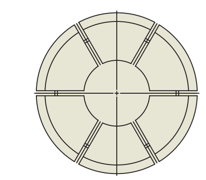
EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	C	L1	H Min.	H Max.	COLLET
TS020	K3/4	K3/4-SKA6-100	.035 ~ .236	.750	.787	3.937	.827	1.378	SKC6
TS021		K3/4-SKA6-140	.035 ~ .236	.750	.787	5.512	.827	1.378	SKC6
TS022		K3/4-SKA10-100	.069 ~ .394	.750	1.102	3.937	1.181	1.969	SKC10
TS023		K3/4-SKA10-140	.069 ~ .394	.750	1.102	5.512	1.181	1.969	SKC10
TS030	K1	K1-SKA6-100	.035 ~ .236	.787	3.937	.827	.827	1.378	SKC6
TS031		K1-SKA6-140	.035 ~ .236	.787	5.512	.827	.827	1.378	SKC6
TS032		K1-SKA10-100	.069 ~ .394	1.102	3.937	1.181	1.181	1.969	SKC10
TS033		K1-SKA10-150	.069 ~ .394	1.102	5.906	1.181	1.181	1.969	SKC10
TS034		K1-SKA13-100	.108 ~ .512	1.299	3.937	1.22	1.220	2.559	SKC13
TS035		K1-SKA13-150	.108 ~ .512	1.299	5.906	1.22	1.220	2.559	SKC13
TS040	K1-1/4	K1 1/4-SKA10-100	.069 ~ .394	1.250	1.102	3.937	1.181	1.969	SKC10
TS041		K1 1/4-SKA10-150	.069 ~ .394	1.250	1.102	5.906	1.181	1.969	SKC10
TS042		K1 1/4-SKA13-100	.108 ~ .512	1.250	1.299	3.937	1.220	2.559	SKC13
TS043		K1 1/4-SKA13-150	.108 ~ .512	1.250	1.299	5.906	1.220	2.559	SKC13
TS044		K1 1/4-SKA16-100	.108 ~ .630	1.250	1.575	3.937	1.575	2.756	SKC16
TS045		K1 1/4-SKA16-150	.108 ~ .630	1.250	1.575	5.906	1.575	2.756	SKC16
TS046		K1 1/4-SKA20-100	.138 ~ .787	1.250	1.909	3.937	1.850	3.150	SKC20
TS047		K1 1/4-SKA20-150	.138 ~ .787	1.250	1.909	5.906	1.850	3.150	SKC20

SK SLIM CHUCK

SKC

SK COLLET (Metric Type)





◇ T.I.R of standard collet is 5Um at 3D.

Unit : mm

EDP No.	TYPE	MODEL No.	CLAMPING RANGE (d)
306010	SKC6	SKC6 - 1	0.9 - 1.0
306015		SKC6 - 1.5	1.3 - 1.5
306020		SKC6 - 2	1.8 - 2.0
306025		SKC6 - 2.5	2.3 - 2.5
306030		SKC6 - 3	2.8 - 3.0
306035		SKC6 - 3.5	3.0 - 3.5
306040		SKC6 - 4	3.5 - 4.0
306045		SKC6 - 4.5	4.0 - 4.5
306050		SKC6 - 5	4.5 - 5.0
306055		SKC6 - 5.5	5.0 - 5.5
306060		SKC6 - 6	5.5 - 6.0

EDP No.	TYPE	MODEL No.	CLAMPING RANGE (d)
310020	SKC10	SKC10 - 2	1.75 - 2.0
310025		SKC10 - 2.5	2.25 - 2.5
310030		SKC10 - 3	2.75 - 3.0
310035		SKC10 - 3.5	3.0 - 3.5
310040		SKC10 - 4	3.5 - 4.0
310045		SKC10 - 4.5	4.0 - 4.5
310050		SKC10 - 5	4.5 - 5.0
310055		SKC10 - 5.5	5.0 - 5.5
310060		SKC10 - 6	5.5 - 6.0
310065		SKC10 - 6.5	6.0 - 6.5
310070		SKC10 - 7	6.5 - 7.0
310075		SKC10 - 7.5	7.0 - 7.5
310080		SKC10 - 8	7.5 - 8.0
310085		SKC10 - 8.5	8.0 - 8.5
310090		SKC10 - 9	8.5 - 9.0
310095		SKC10 - 9.5	9.0 - 9.5
310100		SKC10 - 10	9.5 - 10.0

EDP No.	TYPE	MODEL No.	CLAMPING RANGE (d)
313030	SKC13	SKC13 - 3	2.75 - 3.0
313035		SKC13 - 3.5	3.0 - 3.5
313040		SKC13 - 4	3.5 - 4.0
313045		SKC13 - 4.5	4.0 - 4.5
313050		SKC13 - 5	4.5 - 5.0
313055		SKC13 - 5.5	5.0 - 5.5
313060		SKC13 - 6	5.5 - 6.0
313065		SKC13 - 6.5	6.0 - 6.5
313070		SKC13 - 7	6.5 - 7.0
313075		SKC13 - 7.5	7.0 - 7.5
313080		SKC13 - 8	7.5 - 8.0
313085		SKC13 - 8.5	8.0 - 8.5
313090		SKC13 - 9	8.5 - 9.0
313095		SKC13 - 9.5	9.0 - 9.5
313100		SKC13 - 10	9.5 - 10.0
313105		SKC13 - 10.5	10.0 - 10.5
313110		SKC13 - 11	10.5 - 11.0
313115		SKC13 - 11.5	11.0 - 11.5
313120		SKC13 - 12	11.5 - 12.0
313125		SKC13 - 12.5	12.0 - 12.5
313130		SKC13 - 13	12.5 - 13.0

SKC COLLET Dimension

Unit : mm

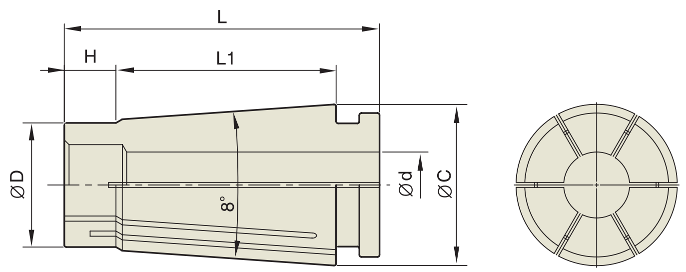
TYPE	D	L	L1	H	C
SKC6	7.5	25.7	17.6	3.8	10
SKC10	12	32	21.3	5	15
SKC13	15.4	39	28.3	5.5	20
SKC16	18.8	46	32	8	24
SKC20	22.5	54.2	41	8	29
SKC25	28.9	58.2	43	8.5	35

Hydraulic Chuck | Shrink Fit Holder | End Mill Holder & Side Lock Arbor | ER Collet Chuck | SK Slim Chuck | TG Collet Chuck | Power Milling Chuck | Morse Taper Adapter | Tapping Chuck | One Step Tapping Chuck | Shell Mill Arbor | NC Drill Chuck | Jacobs Taper Arbor | Stub Arbor | Slitting Saw Arbor | Pull Stud &Tool Clamp | TECHNICAL INFORMATION

SK SLIM CHUCK

SKC

SK COLLET (Metric Type)



◇ T.I.R of standard collet is 5Um at 3D.

Unit : mm

EDP No.	TYPE	MODEL No.	CLAMPING RANGE (d)
316030		SKC16-3	2.75 - 3.0
316035		SKC16-3.5	3.0 - 3.5
316040		SKC16-4	3.5 - 4.0
316045		SKC16-4.5	4.0 - 4.5
316050		SKC16-5	4.5 - 5.0
316055		SKC16-5.5	5.0 - 5.5
316060		SKC16-6	5.5 - 6.0
316605		SKC16-6.5	6.0 - 6.5
316070		SKC16-7	6.5 - 7.0
316075		SKC16-7.5	7.0 - 7.5
316080		SKC16-8	7.5 - 8.0
316085		SKC16-8.5	8.0 - 8.5
316090		SKC16-9	8.5 - 9.0
316095	SKC16	SKC16-9.5	9.0 - 9.5
316100		SKC16-10	9.5 - 10.0
316105		SKC16-10.5	10.0 - 10.5
316110		SKC16-11	10.5 - 11.0
316115		SKC16-11.5	10.0 - 11.5
316120		SKC16-12	11.5 - 12.0
316125		SKC16-12.5	12.0 - 12.5
316130		SKC16-13	12.5 - 13.0
316135		SKC16-13.5	13.0 - 13.5
316140		SKC16-14	13.5 - 14.0
316145		SKC16-14.5	14.0 - 14.5
316150		SKC16-15	14.5 - 15.0
316155		SKC16-15.5	15.0 - 15.5
316160		SKC16-16	15.5 - 16.0

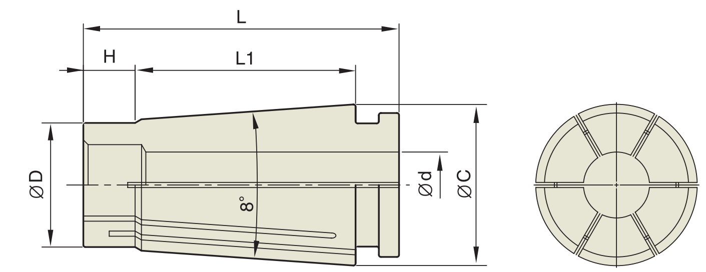
EDP No.	TYPE	MODEL No.	CLAMPING RANGE (d)
323040		SKC20-4	3.5 - 4.0
323045		SKC20-4.5	4.0 - 4.5
323050		SKC20-5	4.5 - 5.0
323055		SKC20-5.5	5.0 - 5.5
323060		SKC20-6	5.5 - 6.0
323065		SKC20-6.5	6.0 - 6.5
323070		SKC20-7	6.5 - 7.0
323075		SKC20-7.5	7.0 - 7.5
323080		SKC20-8	7.5 - 8.0
323085		SKC20-8.5	8.0 - 8.5
323090		SKC20-9	8.5 - 9.0
323095		SKC20-9.5	9.0 - 9.5
323100		SKC20-10	9.5 - 10.0
323105		SKC20-10.5	10.0 - 10.5
323110		SKC20-11	10.5 - 11.0
323115		SKC20-11.5	11.0 - 11.5
323120	SKC20	SKC20-12	11.5 - 12.0
323125		SKC20-12.5	12.0 - 12.5
323130		SKC20-13	12.5 - 13.0
323135		SKC20-13.5	13.0 - 13.5
323140		SKC20-14	13.5 - 14.0
323145		SKC20-14.5	14.0 - 14.5
323150		SKC20-15	14.5 - 15.0
323155		SKC20-15.5	15.0 - 15.5
323160		SKC20-16	15.5 - 16.0
323165		SKC20-16.5	16.0 - 16.5
323170		SKC20-17	16.5 - 17.0
323175		SKC20-17.5	17.0 - 17.5
323180		SKC20-18	17.5 - 18.0
323185		SKC20-18.5	18.0 - 18.5
323190		SKC20-19	18.5 - 19.0
323195		SKC20-19.5	19.0 - 19.5
323200		SKC20-20.0	19.5 - 20.0

EDP No.	TYPE	MODEL No.	CLAMPING RANGE (d)
325165		SKC25-16.5	16.0 - 16.5
325170		SKC25-17	16.5 - 17.0
325175		SKC25-17.5	17.0 - 17.5
325180		SKC25-18	17.5 - 18.0
325185		SKC25-18.5	18.0 - 18.5
325190		SKC25-19	18.5 - 19.0
325195		SKC25-19.5	19.0 - 19.5
325200		SKC25-20	19.5 - 20.0
325205		SKC25-20.5	20.0 - 20.5
325210	SKC25	SKC25-21	20.5 - 21.0
325215		SKC25-21.5	21.0 - 21.5
325220		SKC25-22	21.5 - 22.0
325225		SKC25-22.5	22.0 - 22.5
325230		SKC25-23	22.5 - 23.0
325235		SKC25-23.5	23.0 - 23.5
325240		SKC25-24	23.5 - 24.0
325245		SKC25-24.5	24.0 - 24.5
325250		SKC25-25	24.5 - 25.0
325254		SKC25-25.4	25.0 - 25.4

SK SLIM CHUCK

SKC

SK COLLET (Inch Type)



◇ T.I.R of standard collet is 5Um at 3D.

Unit : inch

EDP No.	TYPE	MODEL No.	CLAMPING RANGE (d1)
3060108A	SKC6	SKC6 - 1/8A	.125
3060316A		SKC6 - 3/16A	.187

EDP No.	TYPE	MODEL No.	CLAMPING RANGE (d1)
3100108A		SKC10 - 1/8A	.125
3100316A		SKC10 - 3/16A	.187
3100104A	SKC10	SKC10 - 1/4A	.250
3100516A		SKC10 - 5/16A	.312
3100308A		SKC10 - 3/8A	.375

EDP No.	TYPE	MODEL No.	CLAMPING RANGE (d1)
3160108A		SKC16 - 1/8A	.125
3160316A		SKC16 - 3/16A	.187
3160104A		SKC16 - 1/4A	.250
3160516A		SKC16 - 5/16A	.312
3160308A	SKC16	SKC16 - 3/8A	.375
3160716A		SKC16 - 7/16A	.437
3160102A		SKC16 - 1/2A	.500
3160916A		SKC16 - 9/16A	.562
3160508A		SKC16 - 5/8A	.625

EDP No.	TYPE	MODEL No.	CLAMPING RANGE (d1)
3250316A		SKC25 - 3/16A	.187
3250104A		SKC25 - 1/4A	.250
3250516A		SKC25 - 5/16A	.312
3250308A		SKC25 - 3/8A	.375
3250716A	SKC25	SKC25 - 7/16A	.437
3250102A		SKC25 - 1/2A	.500
3250508A		SKC25 - 5/8A	.625
3250304A		SKC25 - 3/4A	.750

YG SK SLIM CHUCK

PART

SK NUT

FIG.1

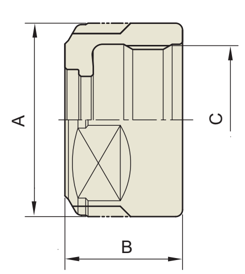
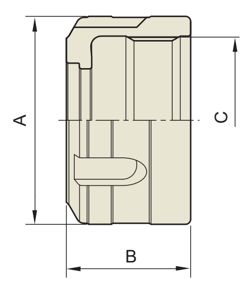


FIG.2



Unit : mm

EDP No.	TYPE	A	B	C	FIG.
ZS106	SKN06	20	15	M15.5 × 1.0	1
ZS110	SKN10	28	17	M21.5 × 1.0	1
ZS113	SKN13	33	21	M27 × 1.0	2
ZS116	SKN16	40	24	M32 × 1.5	2
ZS120	SKN20	48.5	24	M40 × 1.0	2
ZS125	SKN25	55	30	M42 × 1.5	2

SK WRENCH

EDP No.	TYPE	FIG.
ZS206	SK06	1
ZS210	SK10	1
ZS213	SK13	1
ZS216	SK16	2
ZS220	SK20	2
ZS225	SK25	2

FIG. 1

FIG. 2

YG-1 ROTARY TOOLING

TG COLLET CHUCK

TG COLLET CHUCK

CAT : ASME B5.50-2009

BT : JIS B6339/MAS 403-BT/ISO7388-2

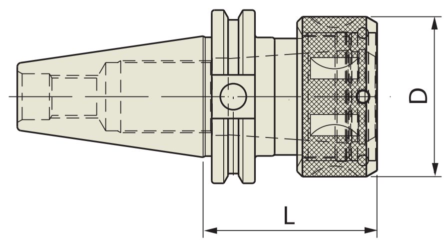
ACCESSORY & PART

TG NUT, WRENCH, STOP SCREW

TG COLLET CHUCK

CAT

TG COLLET CHUCK



ASME B5.50-2009-CAT

Wrenches
Refer to page D152

ASME B5.50 - CAT AT3 AD

TG75

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	L	D	COLLET SERIES
VK012	40	CAT40 - TG75 - 2.50	.047 - .750	2.50	1.81	75TG

■ EXTENDED

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	L	D	COLLET SERIES
VK312	40	CAT40 - TG75 - 3.00	.047 - .750	3.00	1.81	75TG

TG100

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	L	D	COLLET SERIES
OK014	40	CAT40 - TG100 - 3.25	.063 - 1.000	3.25	2.36	100TG
OL014	50	CAT50 - TG100 - 3.25	.063 - 1.000	3.25	2.36	100TG

■ EXTENDED

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	L	D	COLLET SERIES
OK314	40	CAT40 - TG100 - 4.50	.063 - 1.000	4.50	2.36	100TG
OL314	50	CAT50 - TG100 - 5.50	.063 - 1.000	5.50	2.36	100TG

TG150

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	L	D	COLLET SERIES
UL052	50	CAT50 - TG150 - 3.50	.500 - 1.500	3.50	3.43	150TG

■ EXTENDED

Unit : inch

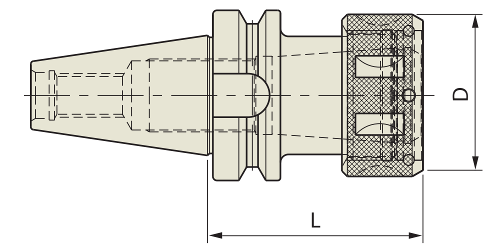
EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	L	D	COLLET SERIES
UL352	50	CAT50 - TG150 - 6.00	.500 - 1.500	6.00	3.43	150TG

* TG Nut : Swiss made precision TG Nut

TG COLLET CHUCK

BT

TG COLLET CHUCK



JIS B6339/MAS 403-BT

Wrenches
Refer to page D152

JIS B6339-BT AT3 AD

TG75

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	L	D	COLLET SERIES
VH012	40	BT40 - TG75 - 3.00	.047 - .750	3.00	1.81	75TG

TG100

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	L	D	COLLET SERIES
OH014	40	BT40 - TG100 - 3.50	.063 - 1.000	3.50	2.36	100TG
OI014	50	BT50 - TG100 - 3.50	.063 - 1.000	3.50	2.36	100TG

■ EXTENDED

Unit : mm

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	L	D	COLLET SERIES
OH314	40	BT40 - TG100 - 5.50	.063 - 1.000	5.50	2.36	100TG
OI314	50	BT50 - TG100 - 6.00	.063 - 1.000	6.00	2.36	100TG

TG150

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	L	D	COLLET SERIES
UI052	50	BT50 - TG150 - 4.00	.500 - 1.500	4.00	3.43	150TG

■ EXTENDED

Unit : inch

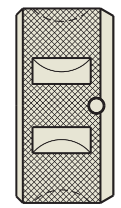
EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	L	D	COLLET SERIES
UI352	50	BT50 - TG150 - 6.00	.500 - 1.500	6.00	3.43	150TG

* TG Nut : Swiss made precision TG Nut

TG NUT

TG NUT

EDP No.	SERIES
ZZ084	TG75-NUT
ZZ081	TG100-NUT
ZZ087	TG150-NUT



TG WRENCH

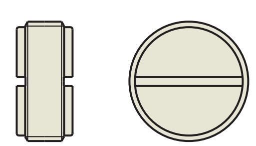
TG WRENCH

EDP No.	SERIES
ZZ085	TG75
ZZ082	TG100
ZZ088	TG150

TG STOP SCREW

TG STOP SCREW

EDP No.	SERIES
ZZ086	TG75
ZZ083	TG100
ZZ089	TG150



YG-1 ROTARY TOOLING

POWER MILLING CHUCK

STANDARD, HIGH SPEED MILLING CHUCK

MILLING CHUCK COLLET & WRENCH

POWER MILLING CHUCK

CAT : ASME B5.50-2009

CCT : CAT DUAL CONTACT

BT : JIS B6339/MAS 403-BT/ISO7388-2

CBT : BT DUAL CONTACT

HSK : DIN69893/ISO12164-1

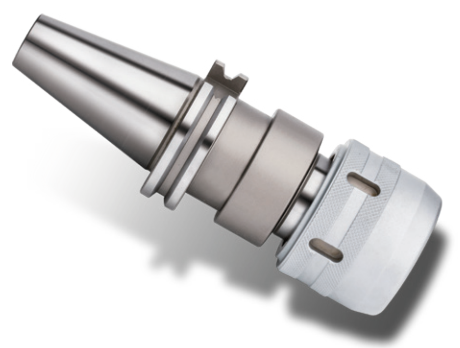
ACCESSORY

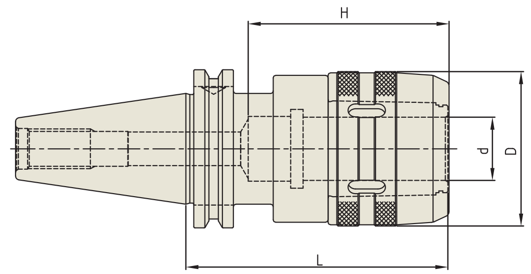
POWER MILLING CHUCK COLLET, WRENCH

POWER MILLING CHUCK

CAT

POWER MILLING CHUCK





ASME B5.50-2009-CAT

Collet, spanner
Refer to page D158

ASME B5.50 - CAT AT3 AD

■ STANDARD

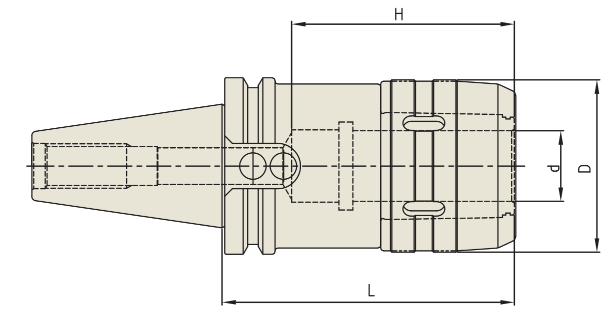
Unit : inch

EDP No.	TAPER No.	MODEL No.	d	D	L	H
LK010	40	CAT40 - C3/4 - 4.13	.750	2.126	4.134	2.756
LK014		CAT40 - C1 - 4.13	1.000	2.461	4.134	3.150
LK017		CAT40 - C1 1/4 - 4.13	1.250	2.835	4.134	3.937
LL010	50	CAT50 - C3/4 - 4.13	.750	2.126	4.134	2.756
LL014		CAT50 - C1 - 4.13	1.000	2.461	4.134	3.150
LL017		CAT50 - C1 1/4 - 4.13	1.250	2.835	4.134	3.937

POWER MILLING CHUCK

CCT

DUAL CONTACT HIGH SPEED POWER MILLING CHUCK



CCT (CAT DUAL CONTACT)

Collet, spanner
Refer to page D158

CCT AT3 6.3G 20,000 RPM AD

Unit : inch

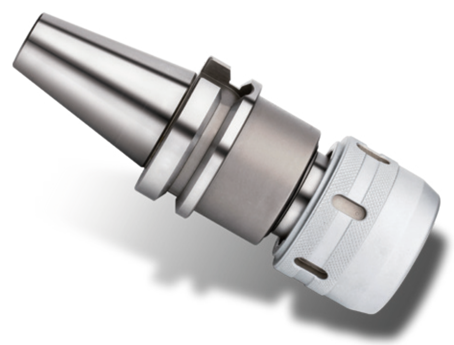
EDP No.	TAPER No.	MODEL No.	d	D	L	H
LB020	40	CCT40 - C 3/4 - 4.13HS	.750	2.126	4.134	2.756
LB022		CCT40 - C 1.0 - 4.13HS	1.000	2.461	4.134	3.150
LB024		CCT40 - C 1 1/4 - 4.13HS	1.250	2.835	4.134	3.937
LB026		CCT40 - C 1 1/4 - 5.31HS	1.250	2.835	5.310	3.937
LC020	50	CCT50 - C 3/4 - 4.13HS	.750	2.126	4.134	2.756
LC022		CCT50 - C 1.0 - 4.13HS	1.000	2.461	4.134	3.150
LC024		CCT50 - C 1 1/4 - 4.13HS	1.250	2.835	4.134	3.937
LC026		CCT50 - C 1 1/4 - 5.31HS	1.250	2.835	5.311	3.937
LC028		CCT50 - C 1 1/4 - 6.50HS	1.250	2.835	6.500	3.937

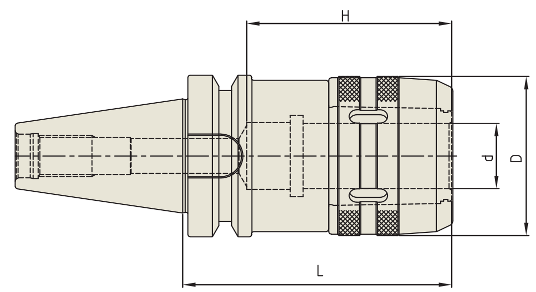
Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

POWER MILLING CHUCK

BT

POWER MILLING CHUCK





JIS B6339/MAS 403-BT

Collet, spanner
Refer to page D158

JIS B6339-BT AT3 AD

■ **STANDARD**

Unit : inch

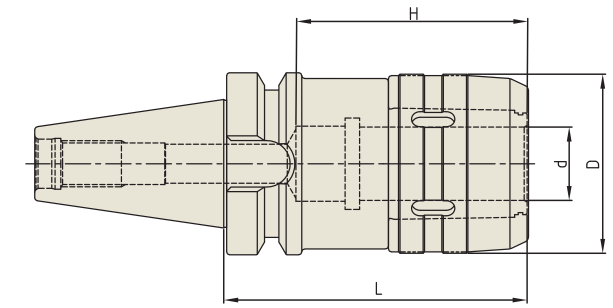
EDP No.	TAPER No.	MODEL No.	d	D	L	H
LH010	40	BT40 - C 3/4 - 3.56	.750	2.126	3.560	2.756
LH014		BT40 - C 1.0 - 4.13	1.000	2.461	4.134	3.150
LH017		BT40 - C 1 1/4 - 4.13	1.250	2.835	4.134	3.937
LI010	50	BT50 - C 3/4 - 4.13	.750	2.126	4.134	2.756
LI014		BT50 - C 1.0 - 4.13	1.000	2.461	4.134	3.150
LI017		BT50 - C 1 1/4 - 4.13	1.250	2.835	4.134	3.937

ROTARY TOOL HOLDERS

POWER MILLING CHUCK

CBT

DUAL CONTACT HIGH SPEED POWER MILLING CHUCK



CBT (BT DUAL CONTACT)

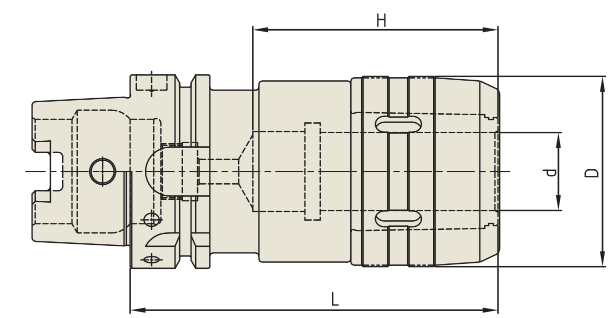
Collet, spanner
Refer to page D158

CBT AT3 6.3G 20,000 RPM AD

EDP No.	TAPER No.	MODEL No.	d	D	L	H
LE020	40	CBT40 - C 3/4 - 3.15HS	.750	2.126	3.150	2.756
LE022		CBT40 - C 3/4 - 4.13HS	.750	2.126	4.134	2.756
LE024		CBT40 - C 1.0 - 4.13HS	1.000	2.461	4.134	3.150
LE026		CBT40 - C1 1/4 - 3.54HS	1.000	2.835	3.543	3.937
LE028		CBT40 - C1 1/4 - 4.13HS	1.250	2.835	4.134	3.937
LE030		CBT40 - C1 1/4 - 5.31HS	1.250	2.835	5.310	3.937

HSK

DUAL CONTACT HIGH SPEED POWER MILLING CHUCK



DIN 69893/ISO 12164-1-HSK FORM A

Collet, spanner
Refer to page D158

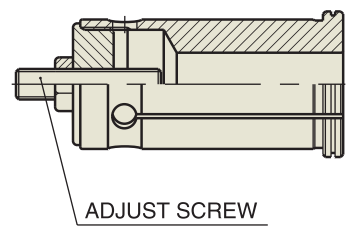
DIN 69893-HSK 6.3G 20,000 RPM AD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d	D	L	H
LQ020	63A	HSK63A - C 3/4 - 4.13HS	.750	2.126	4.130	2.756
LQ022		HSK63A - C 1.0 - 4.72HS	1.000	2.461	4.720	3.150
LQ024		HSK63A - C 1 1/4 - 5.31HS	1.250	2.835	5.310	3.937
LR020	100A	HSK100A - C 3/4 - 4.33HS	.750	2.126	4.330	2.756
LR022		HSK100A - C 1.0 - 5.12HS	1.000	2.461	5.118	3.150
LR024		HSK100A - C1 1/4 - 5.31HS	1.250	2.835	5.315	3.937

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

POWER MILLING CHUCK COLLET



Unit : inch

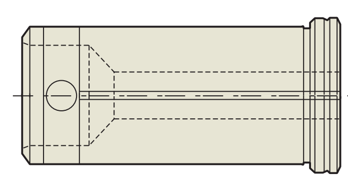
EDP No.	TYPE	D
MZ002	C3/4	1/4
MZ003	C3/4	5/16
MZ004	C3/4	3/8
MZ006	C3/4	1/2
MZ008	C3/4	5/8

Unit : inch

EDP No.	TYPE	D
MZ102	C1	1/4
MZ103	C1	5/16
MZ104	C1	3/8
MZ106	C1	1/2
MZ108	C1	5/8
MZ110	C1	3/4

Unit : inch

EDP No.	TYPE	D
MZ302	C1 1/4	1/4
MZ303	C1 1/4	5/16
MZ304	C1 1/4	3/8
MZ306	C1 1/4	1/2
MZ308	C1 1/4	5/8
MZ310	C1 1/4	3/4
MZ312	C1 1/4	7/8
MZ314	C1 1/4	1"



Unit : inch

EDP No.	TYPE	D
MY002	C3/4	1/4
MY003	C3/4	5/16
MY004	C3/4	3/8
MY006	C3/4	1/2
MY008	C3/4	5/8

Unit : inch

EDP No.	TYPE	D
MY102	C1	1/4
MY103	C1	5/16
MY104	C1	3/8
MY106	C1	1/2
MY108	C1	5/8
MY110	C1	3/4

Unit : inch

EDP No.	TYPE	D
MY302	C1 1/4	1/4
MY303	C1 1/4	5/16
MY304	C1 1/4	3/8
MY306	C1 1/4	1/2
MY308	C1 1/4	5/8
MY310	C1 1/4	3/4
MY312	C1 1/4	7/8
MY314	C1 1/4	1"

WRENCH

Unit : inch

EDP No.	SERIES
ZZ056	C3/4
ZZ057	C1
ZZ058	C1 1/4

YG-1 ROTARY TOOLING

MORSE TAPER ARBOR

MORSE TAPER ADAPTER

CAT : ASME B5.50-2009

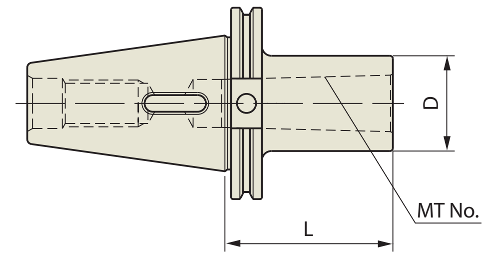
BT : JIS B6339/MAS 403-BT/ISO7388-2

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

MORSE TAPER ARBOR

CAT

MORSE TAPER ADAPTER



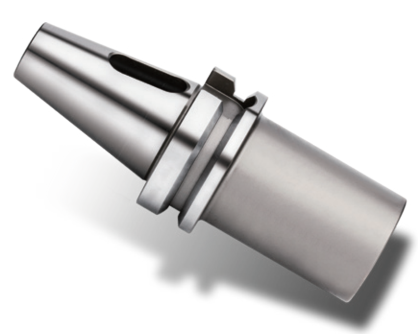
ASME B5.50-2009-CAT

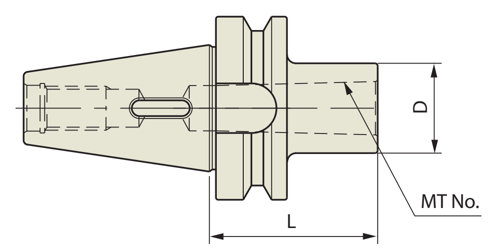
Unit : inch

EDP No.	TAPER No.	MODEL No.	MT No.	D	L
CK037	40	CAT40 - MTA 1 - 1.75	#1	1.00	1.75
CK038		CAT40 - MTA 2 - 2.00	#2	1.26	2.00
CK039		CAT40 - MTA 3 - 2.75	#3	1.75	2.75
CK040		CAT40 - MTA 4 - 3.63	#4	1.75	3.63
CL038	50	CAT50 - MTA 2 - 1.38	#2	2.75	1.38
CL039		CAT50 - MTA 3 - 1.88	#3	1.57	1.88
CL040		CAT50 - MTA 4 - 2.75	#4	1.97	2.75
CL041		CAT50 - MTA 5 - 4.06	#5	2.48	4.06

BT

MORSE TAPER ADAPTER





JIS B6339/MAS 403-BT

Unit : inch

EDP No.	TAPER No.	MODEL No.	MT No.	D	L
CH037	40	BT40 - MTA 1 - 1.75	#1	1.00	1.75
CH038		BT40 - MTA 2 - 2.36	#2	1.26	2.36
CH039		BT40 - MTA 3 - 2.95	#3	1.57	2.95
CH040		BT40 - MTA 4 - 3.74	#4	1.97	3.74
CI038	50	BT50 - MTA 2 - 2.36	#2	1.26	2.36
CI039		BT50 - MTA 3 - 2.95	#3	1.58	2.95
CI040		BT50 - MTA 4 - 3.74	#4	1.97	3.74
CI041		BT50 - MTA 5 - 4.13	#5	2.55	4.13

YG-1 ROTARY TOOLING

TAPPING CHUCK

QUICK CHANGE TYPE, SYNCHRO TAPPING CHUCK-ER TYPE

TAP ADAPTOR

TAPPING CHUCK

CAT : ASME B5.50-2009

BT : JIS B6339/MAS 403-BT/ISO7388-2

HSK : DIN69893/ISO12164-1

STRAIGHT-KW

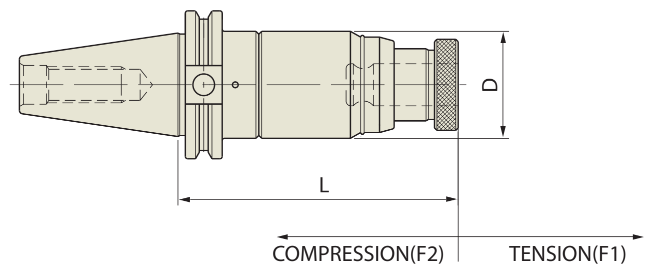
ACCESSORY & PART

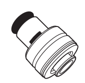
QUICK CHANGE ADAPTER

TAPPING CHUCK

CAT

TAPPING CHUCK





Tap Adapter
Refer to page D168

ASME B5.50 - CAT

AT3

ASME B5.50-2009-CAT (Inch)

■ TO USE TAP ADAPTER QCT12

Unit : inch

EDP No.	TAPER No.	MODEL No.	D	L	F1	F2
JK048	40	CAT40 - TC#1 - 4.56	1.77	4.56	.591	.197
JL048	50	CAT50 - TC#1 - 4.56	1.77	4.56	.591	.197

■ TO USE TAP ADAPTER QCT24

Unit : inch

EDP No.	TAPER No.	MODEL No.	D	L	F1	F2
JK049	40	CAT40 - TC#2 - 6.47	2.48	6.47	.787	.197
JL049	50	CAT50 - TC#2 - 5.82	2.48	5.82	.787	.197

■ TO USE TAP ADAPTER QCT32

Unit : inch

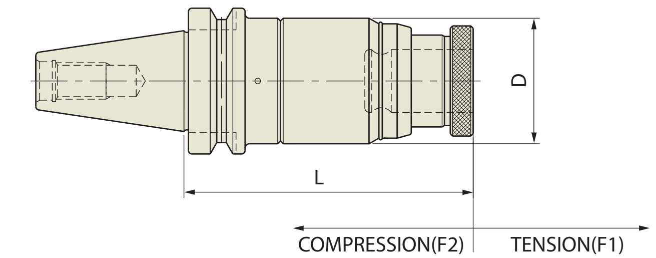
EDP No.	TAPER No.	MODEL No.	D	L	F1	F2
JL050	50	CAT50 - TC#3 - 7.75	3.86	7.75	.984	.394

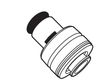
ROTARY TOOL HOLDERS

TAPPING CHUCK

BT

TAPPING CHUCK





Tap Adapter
Refer to page D168

JIS B6339- BT

AT3

JIS B6339/MAS 403-BT (Inch)

■ TO USE TAP ADAPTER QCT12

Unit : inch

EDP No.	TAPER No.	MODEL No.	D	L	F1	F2
JH048	40	BT40 - TC#1 - 4.53	1.77	4.53	.591	.197
JI048	50	BT50 - TC#1 - 4.64	1.77	4.64	.591	.197

■ TO USE TAP ADAPTER QCT24

Unit : inch

EDP No.	TAPER No.	MODEL No.	D	L	F1	F2
JH049	40	BT40 - TC#2 - 6.72	2.48	6.72	.787	.197
JI049	50	BT50 - TC#2 - 6.72	2.48	6.72	.787	.197

■ TO USE TAP ADAPTER QCT32

Unit : inch

EDP No.	TAPER No.	MODEL No.	D	L	F1	F2
JI050	50	BT50 - TC#3 - 8.33	3.86	8.33	.984	.394

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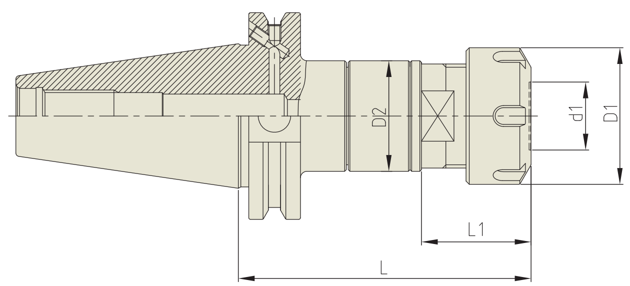
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

TAPPING CHUCK

CAT

SYNCHRO TAPPING ER CHUCK



ASME B5.50-2009-CAT (Metric)

ER Collet
Refer to page D132-D136

ER nut, Sealing disk and Spanner
Refer to page D137

ASME B5.50 - CAT | AT3 | AD/B

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1 (TAP SIZE)	NUT	D1	D2	L	L1	WEIGHT (kg)
JK060SYT	40	CAT40 AD/B - SYTER 12 - 79	M3 - M12	ER16	28	34	79	26	1.00
JK062SYT		CAT40 AD/B - SYTER 16 - 85	M3 - M16	ER20	34	34	85	27	1.08
JK064SYT		CAT40 AD/B - SYTER 20 - 90	M3 - M20	ER25	42	34	90	34	1.08
JK066SYT		CAT40 AD/B - SYTER 27 - 100	M4 - M27	ER32	50	45	100	31	1.37
JK068SYT		CAT40 AD/B - SYTER 33 - 120	M4 - M33	ER40	63	62	120	35	2.16
JL060SYT	50	CAT50 AD/B - SYTER 12 - 79	M3 - M12	ER16	28	34	79	24	2.83
JL062SYT		CAT50 AD/B - SYTER 16 - 85	M3 - M16	ER20	34	34	85	27	2.86
JL064SYT		CAT50 AD/B - SYTER 20 - 90	M3 - M20	ER25	42	34	90	34	2.87
JL066SYT		CAT50 AD/B - SYTER 27 - 100	M4 - M27	ER32	50	45	100	31	3.04
JL068SYT		CAT50 AD/B - SYTER 33 - 120	M4 - M33	ER40	63	62	105	35	3.93

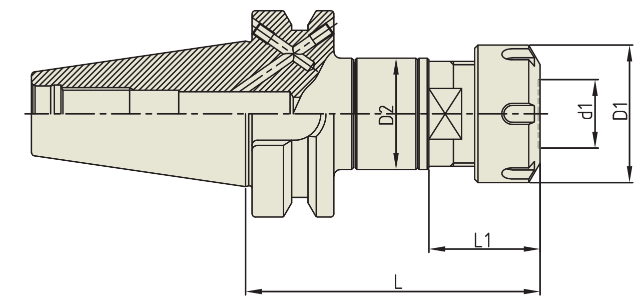
* BT(JIS B6339/MAS-403), HSK(DIN 69893/ISO 12164-1) and STRAIGHT-K Taper products are available.
For details, please discuss separately.

Feature
- To compensate for synchronization errors to extend tap life and to improve thread quality
- To compensate for pitch tolerances of taps
- For machine with synchronized spindle

TAPPING CHUCK

BT

SYNCHRO TAPPING ER CHUCK



JIS B6339/MAS 403-BT (Metric)

ER Collet
Refer to page D132-D136

ER nut, Sealing disk and Spanner
Refer to page D137

ASME B5.50 - CAT | AT3 | AD/B

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1 (TAP SIZE)	NUT	D1	D2	L	L1	WEIGHT (kg)
P2776301	40	BT40 AD/B - SYTER 12 - 79	M2 - M8	ER16	28	34	79	26	1.14
P2776302		BT40 AD/B - SYTER 16 - 85	M3 - M10	ER20	34	34	85	27	1.17
P2776303		BT4 0AD/B - SYTER 20 - 90	M3 - M14	ER25	42	34	90	34	1.17
P2776304		BT40 AD/B - SYTER 27 - 100	M4 - M18	ER32	50	45	100	31	1.45
P2776305		BT40 AD/B - SYTER 33 - 125	M8 - M24	ER40	63	62	125	35	2.40
P2776306	50	BT50 AD/B - SYTER 12 - 100	M2 - M8	ER16	28	34	100	26	3.79
P2776307		BT50 AD/B - SYTER 16 - 100	M3 - M10	ER20	34	34	100	27	3.79
P2776308		BT50 AD/B - SYTER 20 - 100	M3 - M14	ER25	42	34	100	34	3.75
P2776309		BT50 AD/B - SYTER 27 - 110	M4 - M18	ER32	50	45	110	31	3.99
P2776310		BT50 AD/B - SYTER 33 - 125	M8 - M24	ER40	63	62	125	35	4.75

Hydraulic Chuck
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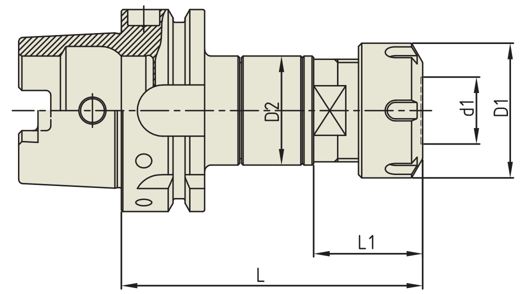
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG TAPPING CHUCK

HSK

SYNCHRO TAPPING ER CHUCK



DIN69893/ISO12164-1 HSK FORM A (Metric)

ER Collet
Refer to page D132-D136

ER nut, Sealing disk and Spanner
Refer to page D137

DIN 69893-HSK

AD

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1 (TAP SIZE)	NUT	D1	D2	L	L1	WEIGHT (kg)
P2773801	63A	HSK63A - SYTER 16 - 90	M3 - M16	ER20	34	34	90	27	0.95
P2773802		HSK63A - SYTER 20 - 94	M3 - M20	ER25	42	34	94	34	0.95
P2773803		HSK63A - SYTER 27 - 105	M4 - M27	ER32	50	45	105	31	1.34

ROTARY TOOL HOLDERS

Hydraulic Chuck
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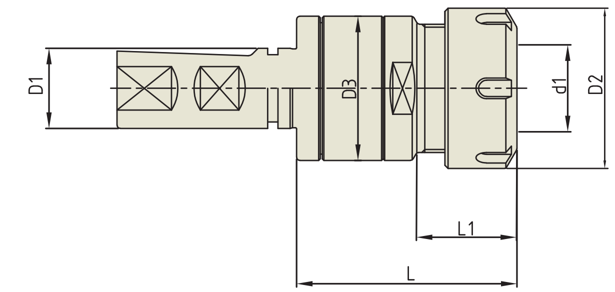
TECHNICAL INFORMATION

YG TAPPING CHUCK

KW

SYNCHRO TAPPING ER CHUCK



STRAIGHT-KW (Inch)

ER Collet
Refer to page D132-D136

ER nut, Sealing disk and Spanner
Refer to page D137

Unit : inch

EDP No.	MODEL No.	d1 (TAP SIZE)	NUT	D1	D2	D3	L	L1	WEIGHT (kg)
JS101SYT	KW3/4 - SYTER 16	M3 - M16	ER20	0.750	1.339	1.339	2.283	1.024	0.33
JS102SYT	KW1.0 - SYTER 16	M3 - M16	ER20	1.000	1.339	1.339	2.402	1.063	0.44
JS103SYT	KW1.0 - SYTER 27	M4 - M27	ER32	1.000	1.969	1.772	2.717	1.220	0.60

STRAIGHT-KW (Metric)

ER Collet
Refer to page D132-D136

ER nut, Sealing disk and Spanner
Refer to page D137

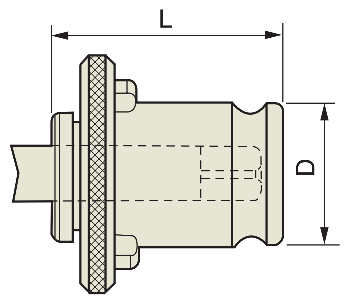
Unit : mm

EDP No.	MODEL No.	d1 (TAP SIZE)	NUT	D1	D2	D3	L	L1	WEIGHT (kg)
P2773901	KW20 - SYTER 16	M3 - M16	ER20	20	34	34	58	26	0.33
P2773902	KW25 - SYTER 16	M3 - M16	ER20	25	34	34	61	27	0.44
P2773903	KW25 - SYTER 27	M4 - M27	ER32	25	50	45	69	31	0.60

YG TAPPING CHUCK

QCT

QUICK CHANGE TAP ADAPTER



POSITIVE DRIVE-SOLID TYPE

Unit : inch

EDP No.	ADAPTER SIZE	TAP SIZE RANGE	TAP SIZE	TAP Dia.	TAP SQUARE
QCT12001			# 0 - 6	.141	.110
QCT12002			# 8	.168	.131
QCT12003			# 10	.194	.152
QCT12004			# 12	.220	.165
QCT12005	QCT 12		1/4	.255	.191
QCT12006		0 - 9/16"	5/16	.318	.238
QCT12007	D = 19mm/0.748"		3/8	.381	.286
QCT12008	L = 28.5mm/1.122"		7/16	.323	.242
QCT12009			1/2	.367	.275
QCT12010			9/16	.429	.322
QCT12011		1/8"	1/8pss	.3125	.234
QCT12012		PIPE	1/8pls	.4370	.328
QCT24001			5/16	.318	.238
QCT24002			3/8	.381	.286
QCT24003			7/16	.323	.242
QCT24004			1/2	.367	.275
QCT24005	QCT 24	5/16 - 7/8"	9/16	.429	.322
QCT24006			5/8	.480	.360
QCT24007	D = 31mm/1.220"		11/16	.542	.406
QCT24008	L = 46mm/1.811"		3/4	.590	.421
QCT24009			13/16	.652	.489
QCT24010			7/8	.697	.523
QCT24011		1/4" - 3/8"	1/4p	.5620	.42
QCT24012		1/2" PIPE	3/8p	.7000	.531
QCT24013			1/2p	.6875	.515
QCT32001			13/16	.652	.489
QCT32002			7/8	.697	.523
QCT32003			15/16	.760	.570
QCT32004	QCT 32	13/16 - 1 - 3/8"	1	.800	.600
QCT32005			1 - 1/8	.896	.672
QCT32006	D = 48mm/1.890"		1 - 1/4	1.021	.766
QCT32007	L = 69.5mm/2.736"		1 - 3/8	1.108	.831
QCT32008		1/2/3/4 & 1"	1/2p	.6875	.515
QCT32009		PIPE	3/4p	.9060	.679
QCT32010			1p	1.1250	.843

YG-1 ROTARY TOOLING

ONE STEP TAPPING CHUCK

ONE STEP TAPPING CHUCK, TAP ADAPTOR

ONE STEP TAPPING CHUCK

CAT : ASME B5.50-2009

BT : JIS B6339/MAS 403-BT/ISO7388-2

HSK : DIN69893/ISO12164-1

STRAIGHT-KW

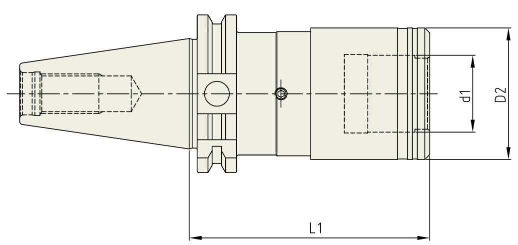
ACCESSORY & PART

TAP ADAPTER

YG ONE STEP TAPPING CHUCK

CAT

ONE STEP TAPPING CHUCK



Tap Adapter
Refer to page D172-D173

ASME B5.50-2009-CAT

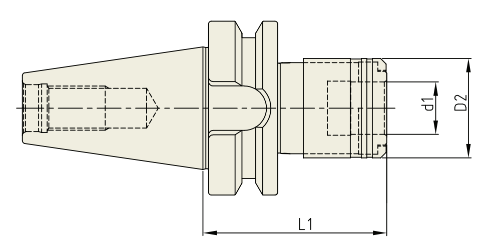
ASME B5.50-CAT AT3

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D2	L1	WEIGHT(Kg)
JK101OTC	40	CAT40 - OTC - M3 - M12 - 59	19	36	59	1.10
JK102OTC		CAT40 - OTC - M8 - M20 - 97	31	53	97	1.50
JK103OTC		CAT40 - OTC - M14 - M36 - 149	48	78	149	3.30
JL101OTC	50	CAT50 - OTC - M3 - M12 - 59	19	36	59	3.00
JL102OTC		CAT50 - OTC - M8 - M20 - 83	31	53	83	3.30
JL103OTC		CAT50 - OTC - M14 - M36 - 138	48	78	138	5.20

BT

ONE STEP TAPPING CHUCK



Tap Adapter
Refer to page D172-D173

JIS B6339/MAS 403-BT

JIS B6339-BT AT3

Unit : mm

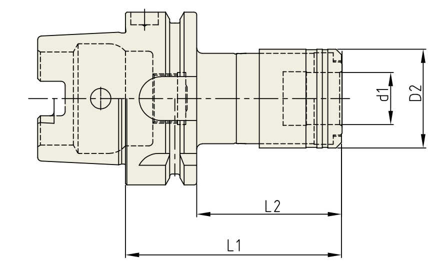
EDP No.	TAPER No.	MODEL No.	d1	D2	L1	WEIGHT(Kg)
JH101OTC	40	BT40 - OTC - M3 - M12 - 66.5	19	36	66.5	1.10
JH102OTC		BT40 - OTC - M8 - M20 - 93.5	31	53	93.5	1.50
JH103OTC		BT40 - OTC - M14 - M36 - 162.5	48	78	162.5	3.30
JI101OTC	50	BT50 - OTC - M3 - M12 - 85	19	36	85	3.00
JI102OTC		BT50 - OTC - M8 - M20 - 101.5	31	53	101.5	3.30
JI103OTC		BT50 - OTC - M14 - M36 - 141	48	78	141	5.20

ROTARY TOOL HOLDERS

YG ONE STEP TAPPING CHUCK

HSK

ONE STEP TAPPING CHUCK



Tap Adapter
Refer to page D172-D173

DIN 69893/ISO12164-1

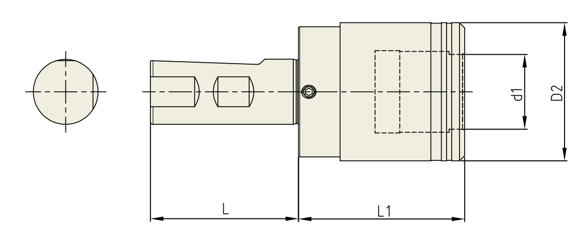
DIN 69893-HSK

Unit : mm

EDP No.	TAPER No.	MODEL No.	d1	D2	D1	L1	L2	WEIGHT(Kg)
JQ101OTC	63A	HSK63A - OTC - M3 - M12 - 77	19	36	19	79	53	
JQ102OTC		HSK63A - OTC - M8 - M20 - 110	31	53	31	110	84	
JQ103OTC		HSK63A - OTC - M14 - M36 - 155	48	78	48	121	95	
JR101OTC	100A	HSK100A - OTC - M3 - M12 - 85.5	19	36	19	85.5	56.5	
JR102OTC		HSK100A - OTC - M8 - M20 - 119.5	31	53	31	119.5	90.5	
JR103OTC		HSK100A - OTC - M14 - M36 - 161	48	78	48	127	98	

KW

ONE STEP TAPPING CHUCK



Tap Adapter
Refer to page D172-D173

STRAIGHT - KW

STRAIGHT

Unit : mm

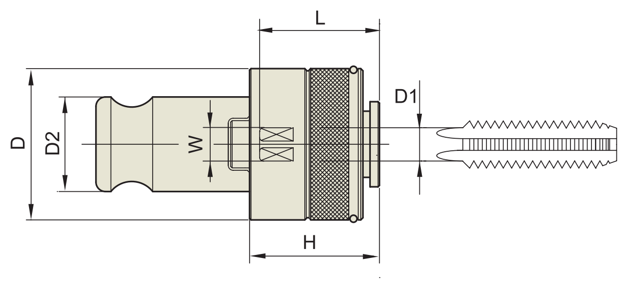
EDP No.	TAPER No.	MODEL No.	d1	D2	L	L1	WEIGHT(Kg)
JS101OTC	20	KW20 - OTC - M3 - M12 - 40	19	36	51	40	
JS102OTC	25	KW25 - OTC - M3 - M12 - 40	19	36	57	40	
JS103OTC		KW25 - OTC - M8 - M20 - 64	31	53	57	64	
JS104OTC	32	KW32 - OTC - M3 - M12 - 39	19	36	60	39	
JS105OTC		KW32 - OTC - M8 - M20 - 63	31	53	60.5	63	
JS106OTC		KW32 - OTC - M14 - M36 - 124	48	78	61	124	

YG ONE STEP TAPPING CHUCK

TC

TAP ADAPTER (JIS)

Below standard
Tap Adapter conforms to **JIS**



Unit : mm

EDP No.	TAPER No.	MODEL No.	D	D1 (Ø)	D2	H	W (□)	L	WEIGHT (kg)
P2774651	TCS12	TCS12 - M3	32	4	19	25	3.2	24	0.18
P2774652		TCS12 - M4	32	5	19	25	4.	24	0.18
P2774653		TCS12 - M5	32	5.5	19	25	4.5	24	0.18
P2774654		TCS12 - M6, U1/4	32	6	19	25	4.5	24	0.18
P2774655		TCS12 - M8	32	6.2	19	25	5	25	0.18
P2774656		TCS12 - M10, U3/8	32	7	19	25	5.5	25	0.18
P2774657		TCS12 - M12	32	8.5	19	25	6.5	26	0.18
P2774658	TCS24	TCS24 - M6	52	6	31	33	4.5	38	0.60
P2774659		TCS24 - M8	52	6.2	31	33	5	38	0.60
P2774660		TCS24 - M10	52	7	31	33	5.5	38	0.60
P2774661		TCS24 - M12	52	8.5	31	33	6.5	39	0.60
P2774662		TCS24 - M14, U3/4	52	10.5	31	33	8	41	0.60
P2774663		TCS24 - M16	52	12.5	31	33	10	43	0.60
P2774664		TCS24 - M18, P3/8	52	14	31	33	11	43	0.60
P2774665		TCS24 - M20	52	15	31	33	12	43.5	0.60
P2774666		TCS24 - M22, U7/8	52	17	31	33	13	46	0.60
P2774667		TCS24 - M24, PF5/8	52	19	31	33	15	46	0.60
P2774668	TCS38	TCS38 - M18	72	14	48	45	11	43	1.80
P2774669		TCS38 - M20	72	15	48	45	12	43.5	1.80
P2774670		TCS38 - M22	72	17	48	45	13	45	1.80
P2774671		TCS38 - M24	72	19	48	45	15	45	1.80
P2774672		TCS38 - M27, U1	72	20	48	45	15	62	1.80
P2774673		TCS38 - M30, PT3/4	72	23	48	45	17	64	1.80
P2774674		TCS38 - M33	72	25	48	45	19	66	1.80
P2774675		TCS38 - M36	72	28	48	45	21	68	1.80
P2774676		TCS38 - M38	72	28	48	45	21	68	1.80

▶ Feature : Quick Change Type with Built-in Torque Safety Device
▶ For Pipe Type Tap, please discuss separately.

ROTARY TOOL HOLDERS

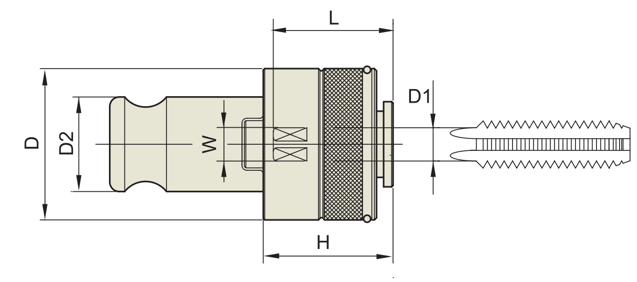
Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG ONE STEP TAPPING CHUCK

TC

TAP ADAPTER (DIN)

Below standard
Tap Adapter conforms to **JIS**

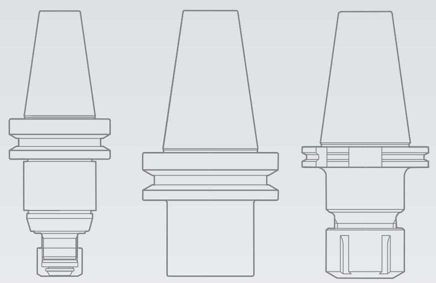


Unit : mm

EDP No.	TAPER No.	MODEL No.	D	D1 (Ø)	D2	H	W (□)	L	DIN No.	WEIGHT (kg)
P2774601	TSC12D	TCS12D - 2821	32	2.8	19	25	2.1	24	371	0.20
P2774602		TCS12D - 3527	32	3.5	19	25	2.7	24	371	0.20
P2774603		TCS12D - 4534	32	4.5	19	25	3.4	24	371	0.20
P2774604		TCS12D - 43	32	4	19	25	3	24	371	0.20
P2774605		TCS12D - 5543	32	5.5	19	25	4.3	25	376	0.20
P2774606		TCS12D - 649	32	6	19	25	4.9	25	371	0.20
P2774607		TCS12D - 755	32	7	19	25	5.5	25	376	0.20
P2774608		TCS12D - 862	32	8	19	25	6.2	25	371	0.20
P2774609		TCS12D - 97	32	9	19	25	7	26	376	0.20
P2774610		TCS12D - 108	32	10	19	25	8	26	371	0.20
P2774611		TCS12D - 119	32	11	19	25	9	26	376	0.20
P2774612	TCS24D	TCS24D - 649	52	6	31	33	4.9	38	371	0.60
P2774613		TCS24D - 755	52	7	31	33	5.5	38	376	0.60
P2774614		TCS24D - 862	52	8	31	33	6.2	38	371	0.60
P2774615		TCS24D - 97	52	9	31	33	7	38	376	0.60
P2774616		TCS24D - 108	52	10	31	33	8	39	371	0.60
P2774617		TCS24D - 119	52	11	31	33	9	41	376	0.60
P2774618		TCS24D - 129	52	12	31	33	9	43	376	0.60
P2774619		TCS24D - 1411	52	14	31	33	11	43	376	0.60
P2774620		TCS24D - 1612	52	16	31	33	12	46	376	0.60
P2774621		TCS24D - 18145	52	18	31	33	14.5	46	376	0.60
P2774622	TCS38D	TCS38D - 119	72	11	48	45	9	43	376	1.80
P2774623		TCS38D - 129	72	12	48	45	9	43	376	1.80
P2774624		TCS38D - 1411	72	14	48	45	11	45	376	1.80
P2774625		TCS38D - 1612	72	16	48	45	12	45	376	1.80
P2774626		TCS38D - 18145	72	18	48	45	14.5	62	376	1.80
P2774627		TCS38D - 2016	72	20	48	45	16	64	376	1.80
P2774628		TCS38D - 2218	72	22	48	45	18	66	376	1.80
P2774629		TCS38D - 2520	72	25	48	45	20	68	376	1.80
P2774630		TCS38D - 2822	72	28	48	45	22	68	376	1.80

▶ Feature : Quick Change Type with Built-in Torque Safety Device
▶ For Pipe Type Tap, please discuss separately.

Global Cutting Tool Leader **YG-1**



ROTARY TOOLING

YG-1 ROTARY TOOLING

SHELL MILL ARBOR

STANDARD, COOLANT CHANNEL TYPE, FLANGE MOUNTING TYPE
COLLAR BOLT & DRIVE KEY

SHELL MILL ARBOR

CAT : ASME B5.50-2009

CCT : CAT DUAL CONTACT

BT : JIS B6339/MAS 403-BT/ISO7388-2

CBT : BT DUAL CONTACT

HSK : DIN69893/ISO12164-1

ACCESSORY

COLLAR BOLT, DRIVE KEY, KEY BOLT

SHELL MILL ARBOR

CAT

SHELL MILL ARBOR

FIG.1

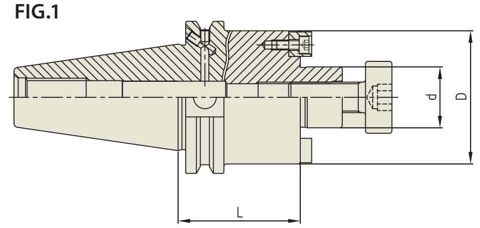
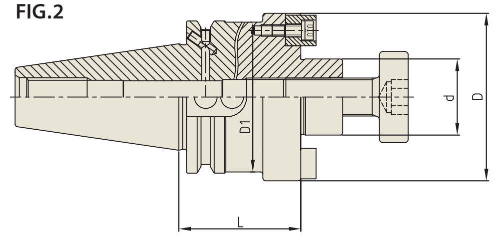


FIG.2



ASME B5.50-2009-CAT

Parts
Refer to page D188-D189

ASME B5.50 - CAT | AT3 | 6.3G | 15,000 RPM | AD/B

■ **STANDARD**

Unit : inch

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
EK006B	40	CAT40 AD/B - SMA 1/2 - 1.50	.500	1.50	1.44	-	UNF1/4-28x16L	1
EK010B		CAT40 AD/B - SMA 3/4 - 1.50	.750	1.50	1.69	-	UNF3/8-24x24L	1
EK014B		CAT40 AD/B - SMA 1.0 - 2.00	1.000	2.00	2.19	-	UNF1/2-20x32L	1
EK017B		CAT40 AD/B - SMA 1 1/4 - 2.00	1.250	2.00	2.75	2.46	UNF5/8-18x40L	2
EK0218		CAT40 AD/B - SMA 1 1/2 - 3.00	1.500	3.00	3.81	2.46	UNF3/4-16x47L	2
EL010B	50	CAT50 AD/B - SMA 3/4 - 1.50	.750	1.50	1.69	-	UNF3/8-24x24L	1
EL014B		CAT50 AD/B - SMA 1.0 - 2.00	1.000	2.00	2.19	-	UNF1/2-20x32L	1
EL017B		CAT50 AD/B - SMA 1 1/4 - 2.00	1.250	2.00	2.75	-	UNF5/8-18x40L	1
EL021B		CAT50 AD/B - SMA 1 1/2 - 2.50	1.500	2.50	3.81	-	UNF3/4-16x47L	1
EL029B		CAT50 AD/B - SMA 2.00 - 3.00	2.000	3.00	4.88	3.84	UN1-14x48L	2

■ **EXTENDED**

Unit : inch

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
EK306B	40	CAT40 AD/B - SMA 1/2 - 3.50	.500	3.50	1.44	-	UNF1/4-28x16L	1
EK310B		CAT40 AD/B - SMA 3/4 - 3.50	.750	3.50	1.69	-	UNF3/8-24x24L	1
EK314B		CAT40 AD/B - SMA 1.0 - 4.00	1.000	4.00	2.19	-	UNF1/2-20x32L	1
EK317B		CAT40 AD/B - SMA 1 1/4 - 4.00	1.250	4.00	2.75	2.46	UNF5/8-18x40L	2
EK321B		CAT40 AD/B - SMA 1 1/2 - 4.00	1.500	4.00	3.81	2.46	UNF3/4-16x47L	2
EL310B	50	CAT50 AD/B - SMA 3/4 - 3.50	.750	3.50	1.69	-	UNF3/8-24x24L	1
EL314B		CAT50 AD/B - SMA 1.0 - 4.00	1.000	4.00	2.19	-	UNF1/2-20x32L	1
EL317B		CAT50 AD/B - SMA 1 1/4 - 4.00	1.250	4.00	2.75	-	UNF5/8-18x40L	1
EL321B		CAT50 AD/B - SMA 1 1/2 - 4.00	1.500	4.00	3.81	-	UNF3/4-16x47L	1
EL329B		CAT50 AD/B - SMA 2.0 - 4.00	2.000	4.00	4.88	3.84	UN1-14x48L	2

* High balanced Shell Mill Arbors are available on request.

ROTARY TOOL HOLDERS

SHELL MILL ARBOR

CAT

SHELL MILL ARBOR (Coolant Channel Type)

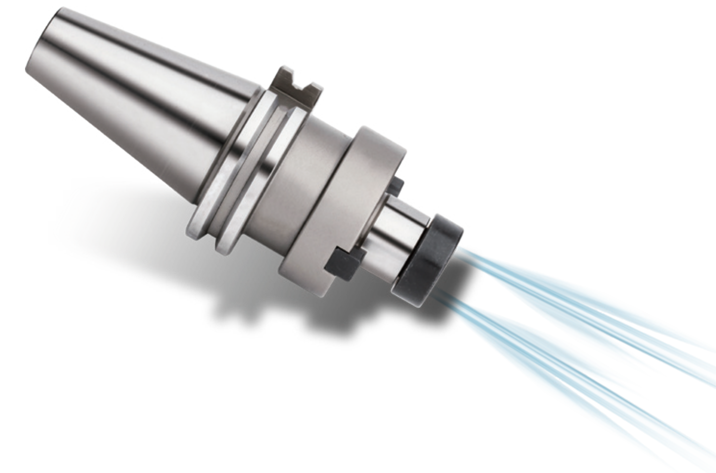


FIG.1

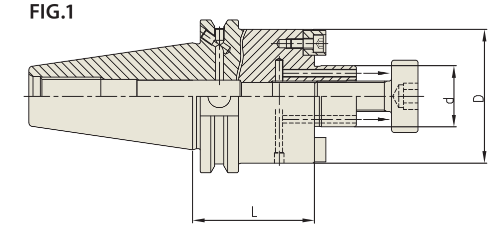
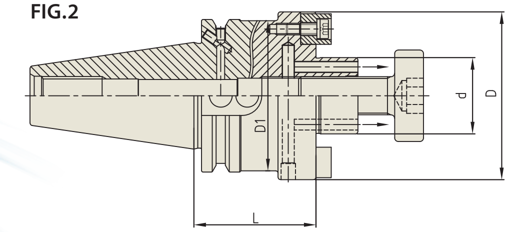


FIG.2



ASME B5.50-2009-CAT

Parts
Refer to page D188-D189

ASME B5.50 - CAT | AT3 | 6.3G | 15,000 RPM | AD/B+C

■ **STANDARD**

Unit : inch

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
EK006BC	40	CAT40 AD/B - SMA 1/2C - 1.50	.500	1.50	1.44	-	UNF1/4-28x16L	1
EK010BC		CAT40 AD/B - SMA 3/4C - 1.50	.750	1.50	1.69	-	UNF3/8-24x24L	1
EK014BC		CAT40 AD/B - SMA 1.0C- 2.00	1.000	2.00	2.19	-	UNF1/2-20x32L	1
EK017BC		CAT40 AD/B - SMA 1 1/4C - 2.00	1.250	2.00	2.75	2.46	UNF5/8-18x40L	2
EK021BC		CAT40 AD/B - SMA 1 1/2C - 3.00	1.500	3.00	3.81	2.46	UNF3/4-16x47L	2
EL010BC	50	CAT50 AD/B - SMA 3/4C - 1.50	.750	1.50	1.69	-	UNF3/8-24x24L	1
EL014BC		CAT50 AD/B - SMA 1.0C - 2.00	1.000	2.00	2.19	-	UNF1/2-20x32L	1
EL017BC		CAT50 AD/B - SMA 1 1/4C - 2.00	1.250	2.00	2.75	-	UNF5/8-18x40L	1
EL031BC		CAT50 AD/B - SMA 1 1/2C - 2.50	1.500	2.50	3.81	-	UNF3/4-16x47L	1
EL029BC		CAT50 AD/B - SMA 2.0C - 3.00	2.000	3.00	4.88	3.84	UN1-14x48L	2
EL029BC		CAT50AD/B-SMA2"C-3.00	2.000	3.00	4.88	3.84	UN1-14x48L	2

■ **EXTENDED**

Unit : inch

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
EK306BC	40	CAT40 AD/B - SMA 1/2C - 3.50	.500	3.50	1.44	-	UNF1/4-28x16L	1
EK310BC		CAT40 AD/B - SMA 3/4C - 3.50	.750	3.50	1.69	-	UNF3/8-24x24L	1
EK314BC		CAT40 AD/B - SMA 1.0C - 4.00	1.000	4.00	2.19	-	UNF1/2-20x32L	1
EK317BC		CAT40 AD/B - SMA 1 1/4C - 4.00	1.250	4.00	2.75	2.46	UNF5/8-18x40L	2
EK321BC		CAT40 AD/B - SMA 1 1/2C - 4.00	1.500	4.00	3.81	2.46	UNF3/4-16x47L	2
EL310BC	50	CAT50 AD/B - SMA 3/4C - 3.50	.750	3.50	1.69	-	UNF3/8-24x24L	1
EL314BC		CAT50 AD/B - SMA 1.0C - 4.00	1.000	4.00	2.19	-	UNF1/2-20x32L	1
EL317BC		CAT50 AD/B - SMA 1 1/4C - 4.00	1.250	4.00	2.75	-	UNF5/8-18x40L	1
EL331BC		CAT50 AD/B - SMA 1 1/2C - 4.00	1.500	4.00	3.81	-	UNF3/4-16x47L	1
EL329BC		CAT50 AD/B - SMA 2.0C- 4.00	2.000	4.00	4.88	3.84	UN1-14x48L	2
EL329BC		CAT50AD/B-SMA2"C-4.00	2.000	4.00	4.88	3.84	UN1-14x48L	2

* High balanced Shell Mill Arbors are available on request.

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

SHELL MILL ARBOR

CAT

SHELL MILL ARBOR (Coolant Channel Type)

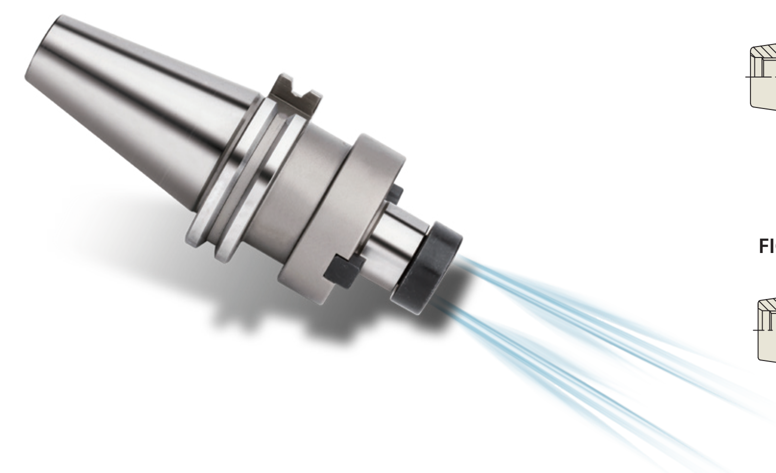


FIG.1

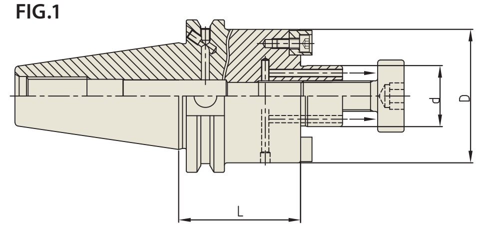
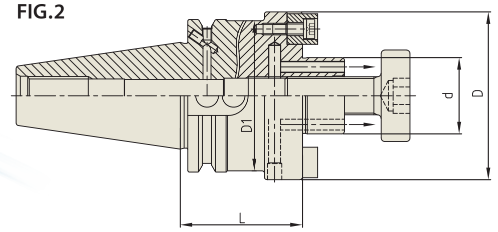


FIG.2



ASME B5.50-2009-CAT

Parts
Refer to page D188-D189

ASME B5.50 - CAT · AT3 · 6.3G · 15,000 RPM · AD/B+C

■ STANDARD

Unit : mm

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
EK401BC	40	CAT40 AD/B - SMA 16C - 44	Ø16	44	Ø38	-	M8x1.25-16L	1
EK402BC		CAT40 AD/B - SMA 22C - 44	Ø22	44	Ø48	-	M10x1.5-18L	1
EK403BC		CAT40 AD/B - SMA 27C - 44	Ø27	44	Ø60	-	M12x1.75-22L	1
EK404BC		CAT40 AD/B - SMA 32C - 60	Ø32	60	Ø78	-	M16x2.0-26L	1
EK405BC		CAT40 AD/B - SMA 40C - 60	Ø40	60	Ø89	50	M20x2.5-30L	2
EL401BC	50	CAT50 AD/B - SMA 16C - 35	Ø16	35	Ø38	-	M8x1.25-16L	1
EL402BC		CAT50 AD/B - SMA 22C - 35	Ø22	35	Ø48	-	M10x1.5-18L	1
EL403BC		CAT50 AD/B - SMA 27C - 40	Ø27	40	Ø60	-	M12x1.75-22L	1
EL404BC		CAT50 AD/B - SMA 32C - 50	Ø32	50	Ø78	-	M16x2.0-26L	1
EL405BC		CAT50 AD/B - SMA 40C - 50	Ø40	50	Ø89	80	M20x2.5-30L	2

■ EXTENDED

Unit : mm

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
EK406BC	40	CAT40 AD/B - SMA 16C - 100	Ø16	100	Ø38	-	M8x1.25-16L	1
EK407BC		CAT40 AD/B - SMA 22C - 100	Ø22	100	Ø48	-	M10x1.5-18L	1
EK408BC		CAT40 AD/B - SMA 27C - 100	Ø27	100	Ø60	-	M12x1.75-22L	1
EK409BC		CAT40 AD/B - SMA 32C - 100	Ø32	100	Ø78	-	M16x2.0-26L	1
EK410BC		CAT40 AD/B - SMA 40C - 100	Ø40	100	Ø89	50	M20x2.5-30L	2
EL406BC	50	CAT50 AD/B - SMA 16C - 100	Ø16	100	Ø38	-	M8x1.25-16L	1
EL407BC		CAT50 AD/B - SMA 22C - 100	Ø22	100	Ø48	-	M10x1.5-18L	1
EL408BC		CAT50 AD/B - SMA 22C - 160	Ø22	160	Ø48	-	M10x1.5-18L	1
EL409BC		CAT50 AD/B - SMA 27C - 100	Ø27	100	Ø60	-	M12x1.75-22L	1
EL410BC		CAT50 AD/B - SMA 27C - 160	Ø27	160	Ø60	-	M12x1.75-22L	1
EL411BC		CAT50 AD/B - SMA 32C - 100	Ø32	100	Ø78	-	M16x2.0-26L	1
EL412BC		CAT50 AD/B - SMA 32C - 160	Ø32	160	Ø78	-	M16x2.0-26L	1
EL413BC		CAT50 AD/B - SMA 40C - 100	Ø40	100	Ø89	80	M20x2.5-30L	2
EL414BC		CAT50 AD/B - SMA 40C - 160	Ø40	160	Ø89	80	M20x2.5-30L	2

* High balanced Shell Mill Arbors are available on request.

SHELL MILL ARBOR

CCT

DUAL CONTACT SHELL MILL ARBOR

FIG.1

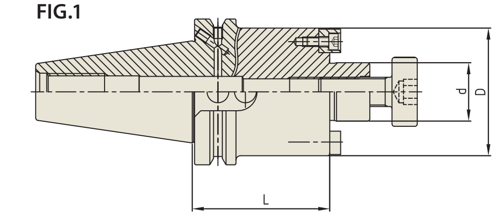
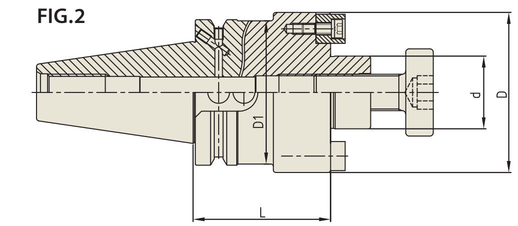


FIG.2



CCT (CAT DUAL CONTACT)

Parts
Refer to page D188-D189

CCT · AT3 · 2.5G · 25,000 RPM · AD/B

Unit : inch

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
EB020	40	CCT40 AD/B - SMA 1/2 - 2.36	.500	1.438	2.360	-	UNF1/4-28x16L	1
EB022		CCT40 AD/B - SMA 1/2 - 4.72	.500	1.438	4.720	-	UNF1/4-28x16L	1
EB024		CCT40 AD/B - SMA 3/4 - 2.36	.750	1.688	2.360	-	UNF3/8-24x24L	1
EB026		CCT40 AD/B - SMA 3/4 - 4.72	.750	1.688	4.720	-	UNF3/8-24x24L	1
EB028		CCT40 AD/B - SMA 1.0 - 2.36	1.000	2.188	2.360	-	UNF1/2-20x32L	1
EB030		CCT40 AD/B - SMA 1.0 - 4.72	1.000	2.188	4.720	-	UNF1/2-20x32L	1
EB032		CCT40 AD/B - SMA 1 1/4 - 2.36	1.250	2.750	2.360	2.461	UNF5/8-18x40L	2
EB034		CCT40 AD/B - SMA 1 1/4 - 4.72	1.250	2.750	4.720	2.461	UNF5/8-18x40L	2
EB051		CCT40 AD/B - SMA 1 1/2 - 4.00	1.500	3.813	4.000	2.461	UNF3/4-16x47L	2
EC020	50	CCT50 AD/B - SMA 1/2 - 2.95	.500	1.438	2.950	-	UNF1/4-28x16L	1
EC022		CCT50 AD/B - SMA 1/2 - 4.72	.500	1.438	4.720	-	UNF1/4-28x16L	1
EC024		CCT50 AD/B - SMA 3/4 - 2.95	.750	1.688	2.950	-	UNF3/8-24x24L	1
EC026		CCT50 AD/B - SMA 3/4 - 4.72	.750	1.688	4.720	-	UNF3/8-24x24L	1
EC028		CCT50 AD/B - SMA 1.0 - 2.95	1.000	2.188	2.950	-	UNF1/2-20x32L	1
EC030		CCT50 AD/B - SMA 1.0 - 4.72	1.000	2.188	4.720	-	UNF1/2-20x32L	1
EC032		CCT50 AD/B - SMA 1 1/4 - 2.95	1.250	2.750	2.950	-	UNF5/8-18x40L	1
EC034		CCT50 AD/B - SMA 1 1/4 - 4.72	1.250	2.750	4.720	-	UNF5/8-18x40L	1
EC036		CCT50 AD/B - SMA 1 1/2 - 2.95	1.500	3.813	2.950	-	UNF3/4-16x47L	1
EC038		CCT50 AD/B - SMA 1 1/2 - 4.72	1.500	3.813	4.720	-	UNF3/4-16x47L	1
EC051		CCT50 AD/B - SMA 2.0 - 4.72	2.000	4.880	4.000	3.836	UN1-14x48L	2

YG SHELL MILL ARBOR

CCT

DUAL CONTACT SHELL MILL ARBOR (Coolant Channel Type)

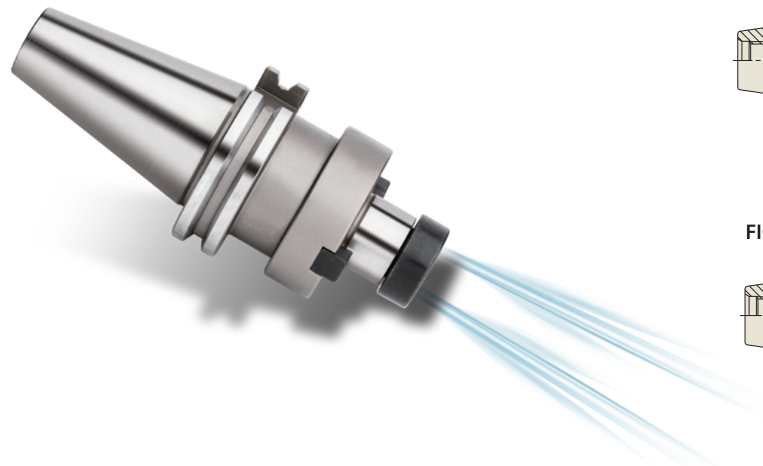


FIG.1

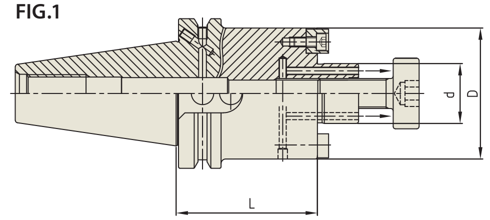
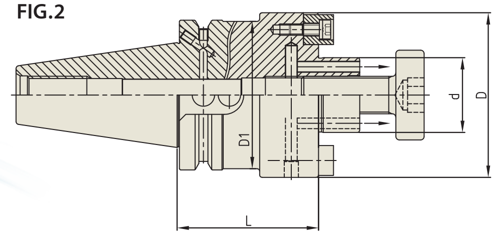


FIG.2



CCT (CAT DUAL CONTACT)

Parts
Refer to page D188-D189

CCT | AT3 | 2.5G | 25,000 RPM | AD/B+C

Unit : inch

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
EB044C	40	CCT40 AD/B - SMA 1/2C - 1.50	.500	1.500	1.438	-	UNF1/4-28x16L	1
EB024C		CCT40 AD/B - SMA 3/4C - 2.36	.750	1.688	2.360	-	UNF3/8-24x24L	1
EB040C		CCT40 AD/B - SMA 3/4C - 3.50	.750	1.688	3.500	-	UNF3/8-24x24L	1
EB028C		CCT40 AD/B - SMA 1.0C - 2.36	1.000	2.188	2.360	-	UNF1/2-20x32L	1
EB041C		CCT40 AD/B - SMA 1.0C - 4.00	1.000	2.188	4.000	-	UNF1/2-20x32L	1
EB032C		CCT40 AD/B - SMA 1 1/4C - 2.36	1.250	2.750	2.360	2.461	UNF5/8-18x40L	2
EB042C		CCT40 AD/B - SMA 1 1/4C - 4.00	1.250	2.750	4.000	2.461	UNF5/8-18x40L	2
EB043C		CCT40 AD/B - SMA 1 1/2C - 4.00	1.500	3.813	4.000	2.461	UNF3/4-16x47L	2
EC024C	50	CCT50 AD/B - SMA3/4C - 2.95	.750	1.688	2.950	-	UNF3/8-24x24L	1
EC040C		CCT50 AD/B - SMA3/4C - 3.5	.750	1.688	3.500	-	UNF3/8-24x24L	1
EC028C		CCT50 AD/B - SMA1C - 2.95	1.000	2.188	2.950	-	UNF1/2-20x32L	1
EC041C		CCT50 AD/B - SMA1C - 4.0	1.000	2.188	4.000	-	UNF1/2-20x32L	1
EC032C		CCT50 AD/B - SMA1 1/4C - 2.95	1.250	2.750	2.950	-	UNF5/8-18x40L	1
EC042C		CCT50 AD/B - SMA1 1/4C - 4.0	1.250	2.750	4.000	-	UNF5/8-18x40L	1
EC036C		CCT50 AD/B - SMA1 1/2C - 2.95	1.500	3.813	2.950	-	UNF3/4-16x47L	1
EC043C		CCT50 AD/B - SMA1 1/2C - 4.0	1.500	3.813	4.000	-	UNF3/4-16x47L	1
EC044C		CCT50 AD/B - SMA2C - 4.0	1.500	4.880	4.000	-	UN1-14x48L	1

ROTARY TOOL HOLDERS

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG SHELL MILL ARBOR

BT

SHELL MILL ARBOR

FIG.1

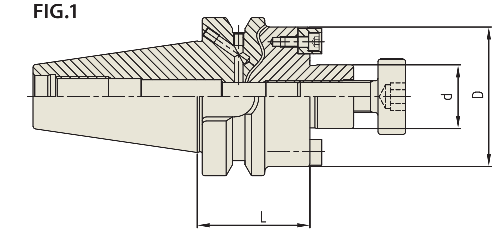
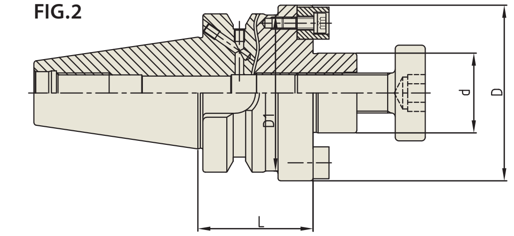


FIG.2



JIS B6339/MAS 403-BT

Parts
Refer to page D188-D189

JIS B6339-BT | AT3 | 6.3G | 15,000 RPM | AD/B

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
EH006B	40	BT40 AD/B - SMA 1/2 - 1.75	.500	1.75	1.44	-	UNF1/4-28x16L	1
EH010B		BT40 AD/B - SMA 3/4 - 1.77	.750	1.77	1.69	-	UNF3/8-24x24L	1
EH014B		BT40 AD/B - SMA 1.0 - 1.77	1.000	1.77	2.19	-	UNF1/2-20x32L	1
EH017B		BT40 AD/B - SMA 1 1/4 - 1.81	1.250	1.81	2.75	2.44	UNF5/8-18x40L	2
EH021B		BT40 AD/B - SMA 1 1/2 - 2.36	1.500	2.36	3.81	2.44	UNF3/4-16x47L	2
EI010	50	BT50 - SMA 3/4 - 1.75	.750	1.75	1.69	-	UNF3/8-24x24L	1
EI014		BT50 - SMA 1.0 - 1.75	1.000	1.75	2.19	-	UNF1/2-20x32L	1
EI017		BT50 - SMA 1 1/4 - 1.75	1.250	1.75	2.75	-	UNF5/8-18x40L	1
EI021		BT50 - SMA 1 1/2 - 1.75	1.500	1.75	3.81	-	UNF3/4-16x47L	1
EI029		BT50 - SMA 2.0 - 3.00	2.000	3.00	4.88	3.86	UN1-14x48L	2

■ EXTENDED

Unit : inch

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
EH306B	40	BT40 AD/B - SMA 1/2 - 3.50	.500	3.50	1.44	-	UNF1/4-28x16L	1
EH310B		BT40 AD/B - SMA 3/4 - 4.13	.750	4.13	1.69	-	UNF3/8-24x24L	1
EH3148		BT40 AD/B - SMA 1.0 - 4.13	1.000	4.13	2.19	-	UNF1/2-20x32L	1
EH317B		BT40 AD/B - SMA 1 1/4 - 4.13	1.250	4.13	2.75	2.44	UNF5/8-18x40L	2
EH321B		BT40 AD/B - SMA 1 1/2 - 4.72	1.500	4.72	3.81	2.44	UNF3/4-16x47L	2
EI310	50	BT50 - SMA 3/4 - 3.50	.750	3.50	1.69	-	UNF3/8-24x24L	1
EI314		BT50 - SMA 1.0 - 4.00	1.000	4.00	2.19	-	UNF1/2-20x32L	1
EI317		BT50 - SMA 1 1/4 - 4.00	1.250	4.00	2.75	-	UNF5/8-18x40L	1
EI321		BT50 - SMA 1 1/2 - 4.00	1.500	4.00	3.81	-	UNF3/4-16x47L	1
EI329		BT50 - SMA 2.0 - 4.00	2.000	4.00	4.88	3.86	UN1-14x48L	2

* High balanced Shell Mill Arbors are available on request.

YG SHELL MILL ARBOR

BT

SHELL MILL ARBOR (Coolant Channel Type)

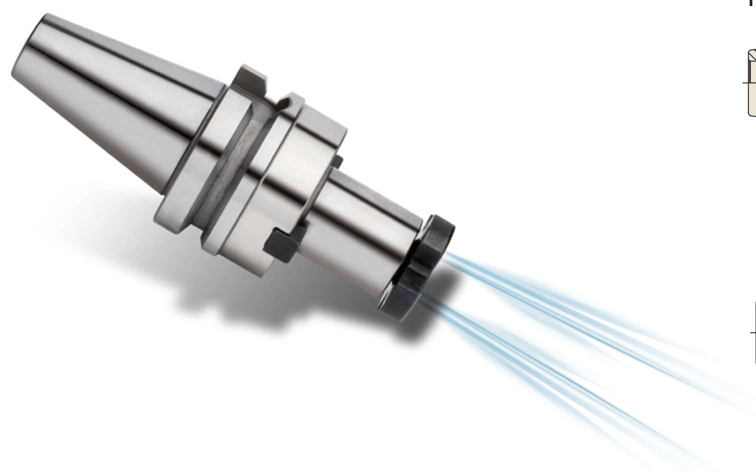


FIG.1

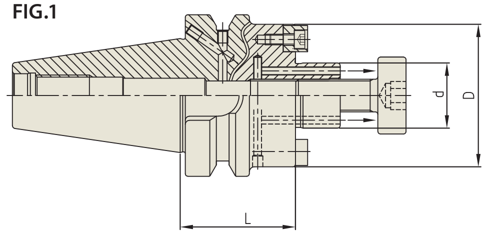
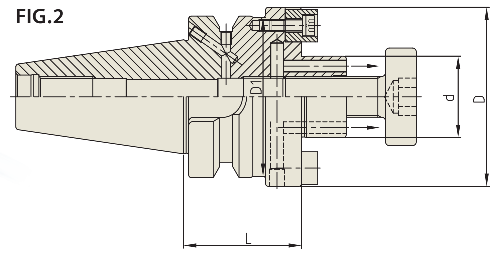


FIG.2



JIS B6339/MAS 403-BT

Parts
Refer to page D188-D189

JIS B6339-BT | AT3 | 6.3G | 15,000 RPM | AD+C | AD/B+C

■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
EH006BC	40	BT40 AD/B - SMA 1/2C - 1.75	.500	1.75	1.44	-	UNF1/4-28x16L	1
EH010BC		BT40 AD/B - SMA 3/4C - 1.77	.750	1.77	1.69	-	UNF3/8-24x24L	1
EH014BC		BT40 AD/B - SMA 1.0C - 1.77	1.000	1.77	2.19	-	UNF1/2-20x32L	1
EH017BC		BT40 AD/B - SMA 1 1/4C - 1.81	1.250	1.81	2.75	2.44	UNF5/8-18x40L	2
EH021BC		BT40 AD/B - SMA 1 1/2C - 2.36	1.500	2.36	3.81	2.44	UNF3/4-16x47L	2
EI101C	50	BT50 - SMA3/4C - 2.25	.750	2.25	1.69	-	UNF3/8-24x24L	1
EI102C		BT50 - SMA1.0C - 2.25	1.000	2.25	2.19	-	UNF1/2-20x32L	1
EI103C		BT50 - SMA1 1/4C - 2.25	1.250	2.25	2.75	-	UNF5/8-18x40L	1
EI104C		BT50 - SMA1 1/2C - 2.25	1.500	2.25	3.81	-	UNF3/4-16x47L	1
EI029C		BT50 - SMA2C - 3.00	2.000	3.00	4.88	3.86	UN1-14x48L	2

■ EXTENDED

Unit : inch

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
EH306BC	40	BT40 AD/B - SMA 1/2C - 3.50	.500	3.50	1.44	-	UNF1/4-28x16L	1
EH351BC		BT40 AD/B - SMA 3/4C - 4.13	.750	4.13	1.69	-	UNF3/8-24x24L	1
EH314BC		BT40 AD/B - SMA 1.0C - 4.13	1.000	4.13	2.19	-	UNF1/2-20x32L	1
EH317BC		BT40 AD/B - SMA 1 1/4C - 4.1.3	1.250	4.13	2.75	2.44	UNF5/8-18x40L	2
EH321BC		BT40 AD/B - SMA 1 1/2C - 4.72	1.500	4.72	3.81	2.44	UNF3/4-16x47L	2
EI351C	50	BT50 - SMA3/4C - 3.50	.750	3.50	1.69	-	UNF3/8-24x24L	1
EI314C		BT50 - SMA1C - 4.00	1.000	4.00	2.19	-	UNF1/2-20x32L	1
EI317C		BT50 - SMA1 1/4C - 4.00	1.250	4.00	2.75	-	UNF5/8-18x40L	1
EI321C		BT50 - SMA1 1/2C - 4.00	1.500	4.00	3.81	-	UNF3/4-16x47L	1
EI329C		BT50 - SMA2C - 4.00	2.000	4.00	4.88	3.86	UN1-14x48L	2

* High balanced Shell Mill Arbors are available on request.

YG SHELL MILL ARBOR

CBT

DUAL CONTACT SHELL MILL ARBOR

FIG.1

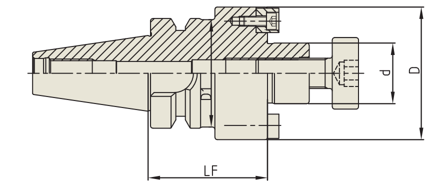
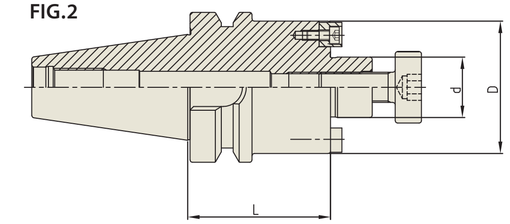


FIG.2



CBT (BT DUAL CONTACT)

Parts
Refer to page D188-D189

CBT | AT3 | 2.5G | 25,000 RPM | AD+C

Unit : inch

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
ED100	30	CBT30 - SMA 1/2 - 1.97	.500	1.438	1.970	-	UNF1/4-28x16L	2
ED102		CBT30 - SMA 3/4 - 1.97	.750	1.688	1.970	-	UNF3/8-24x24L	2
ED104		CBT30 - SMA 1.0 - 1.97	1.000	2.188	1.970	1.772	UNF1/2-20x32L	1
ED106		CBT30 - SMA 1 1/4 - 1.97	1.250	2.750	1.970	1.772	UNF5/8-18x40L	1
EE100	40	CBT40 - SMA 1/2 - 2.36	.500	1.438	2.360	-	UNF1/4-28x16L	2
EE102		CBT40 - SMA 3/4 - 2.36	.750	1.688	2.360	-	UNF3/8-24x24L	2
EE104		CBT40 - SMA 1.0 - 2.36	1.000	2.188	2.360	-	UNF1/2-20x32L	2
EE106		CBT40 - SMA 1 1/4 - 2.36	1.250	2.750	2.360	2.441	UNF5/8-18x40L	1

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG SHELL MILL ARBOR

CBT

DUAL CONTACT SHELL MILL ARBOR (Coolant Channel Type)

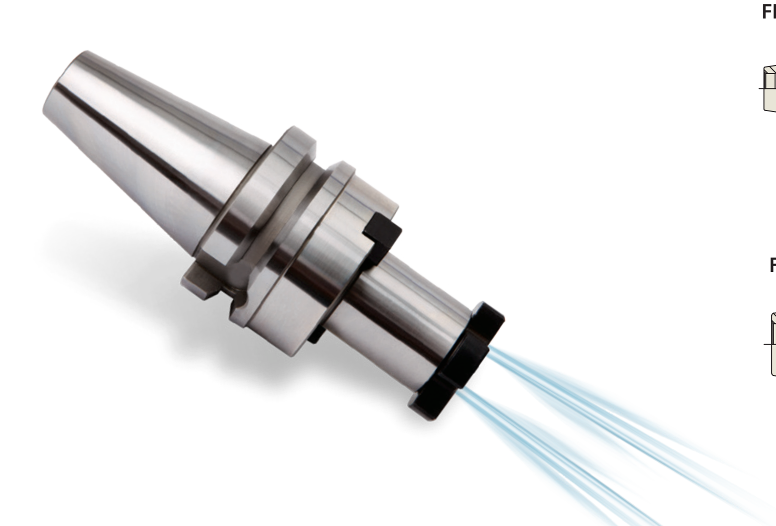


FIG.1

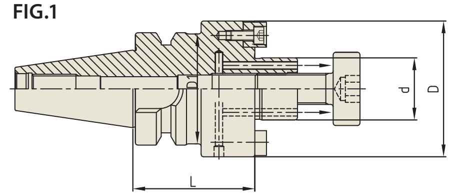
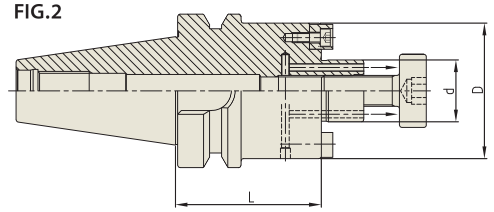


FIG.2



CBT (BT DUAL CONTACT)

Parts
Refer to page D188-D189

CBT | AT3 | 2.5G | 25,000 RPM | AD+C

Unit : inch

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
ED100C	30	CBT30 - SMA 1/2C - 1.97	.500	1.438	1.970	-	UNF1/4-28x16L	2
ED102C		CBT30 - SMA 3/4C - 1.97	.750	1.688	1.970	-	UNF3/8-24x24L	2
ED104C		CBT30 - SMA 1.0C - 1.97	1.000	2.188	1.970	1.771	UNF1/2-20x32L	1
ED106C		CBT30 - SMA 1 1/4C - 1.97	1.250	2.750	1.970	1.771	UNF5/8-18x40L	1
EE100C	40	CBT40 - SMA 1/2C - 2.36	.500	1.438	2.360	-	UNF1/4-28x16L	2
EE102C		CBT40 - SMA 3/4C - 2.36	.750	1.688	2.360	-	UNF3/8-24x24L	2
EE104C		CBT40 - SMA 1.0C - 2.36	1.000	2.188	2.360	-	UNF1/2-20x32L	2
EE106C		CBT40 - SMA 1 1/4C - 2.36	1.250	2.750	2.360	2.441	UNF5/8-18x40L	1

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG SHELL MILL ARBOR

HSK

DUAL CONTACT SHELL MILL ARBOR (Coolant Channel Type)

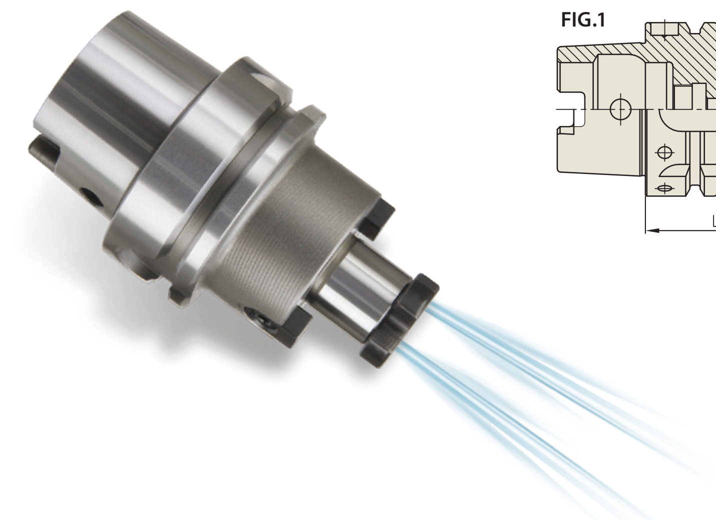


FIG.1

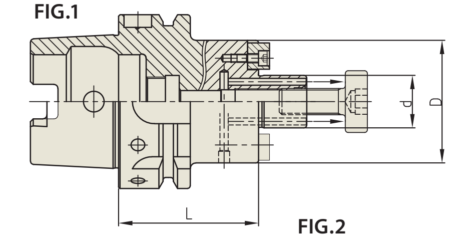
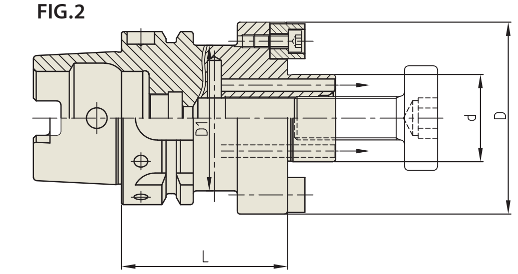


FIG.2



DIN69893/ ISO12164-1 HSK FORM A

Parts
Refer to page D188-D189

DIN 69893-HSK | AT3 | 6.3G | 15,000 RPM | AD+C

Unit : inch

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
EQ201C	63A	HSK63A - SMA 1/2C - 2.00	.500	2.000	1.438	-	UNF1/4-28x16L	1
EQ101C		HSK63A - SMA 3/4C - 2.00	.750	2.000	1.750	-	UNF3/8-24x24L	1
EQ102C		HSK63A - SMA 3/4C - 3.00	.750	3.000	1.750	-	UNF3/8-24x24L	1
EQ103C		HSK63A - SMA 1.0C - 2.37	1.000	2.370	2.250	2.087	UNF1/2-20x32L	2
EQ104C		HSK63A - SMA 1 1/4C - 2.37	1.250	2.370	2.750	2.087	UNF5/8-18x40L	2
EQ105C		HSK63A - SMA 1 1/2C - 2.37	1.500	2.370	3.500	2.087	UNF3/4-16x47L	2
ER101C	100A	HSK100A - SMA3/4C - 4.00	.750	4.000	1.750	-	UNF3/8-24x24L	1
ER102C		HSK100A - SMA1C - 2.00	1.000	2.000	2.250	-	UNF1/2-20x32L	1
ER103C		HSK100A - SMA1C - 4.00	1.000	4.000	2.250	-	UNF1/2-20x32L	1
ER104C		HSK100A - SMA1 1/4C - 4.00	1.250	4.000	2.750	-	UNF5/8-18x40L	1
ER105C		HSK100A - SMA1 1/2C - 2.25	1.500	2.250	3.500	3.465	UNF3/4-16x47L	2
ER106C		HSK100A - SMA2.00C - 4.00	2.000	4.000	4.870	3.465	UN1-14x48L	2

YG SHELL MILL ARBOR

HSK

DUAL CONTACT SHELL MILL ARBOR (Coolant Channel Type)

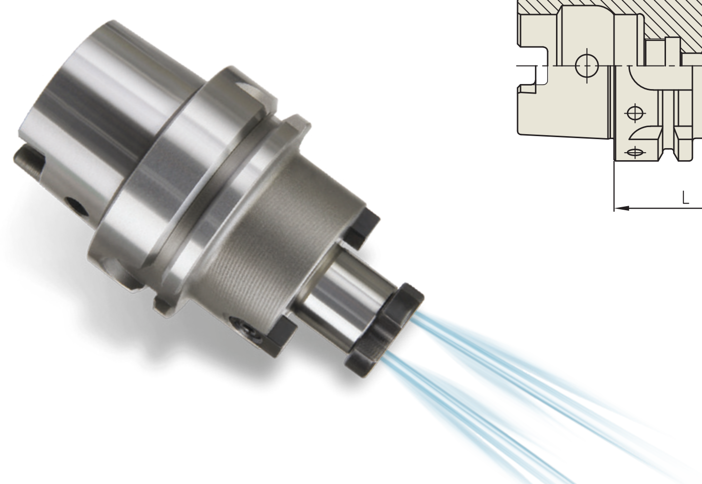


FIG.1

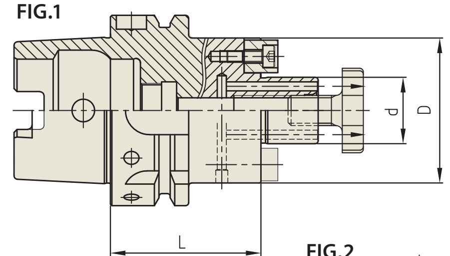
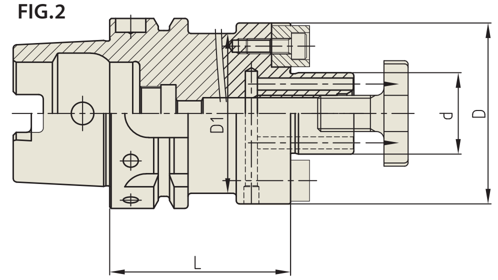


FIG.2



DIN69893/
ISO12164-1 HSK FORM A

Parts
Refer to page D188-D189

DIN 69893-HSK | AT3 | 6.3G | 15,000 RPM | AD+C

■ STANDARD

Unit : mm

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
EQ001C	63A	HSK63A - SMA 16C - 50	16	50	38	-	M8x1.25-16L	1
EQ002C		HSK63A - SMA 22C - 50	22	50	48	-	M10x1.5-18L	1
EQ003C		HSK63A - SMA 27C - 60	27	60	60	53	M12x1.75-22L	2
EQ004C		HSK63A - SMA 32C - 60	32	60	78	53	M16x2.0-26L	2
EQ005C		HSK63A - SMA 40C - 60	40	60	89	53	M20x2.5-30L	2
ER001C	100A	HSK100A - SMA 16C - 50	16	50	38	-	M8x1.25-16L	1
ER002C		HSK100A - SMA 22C - 50	22	50	48	-	M10x1.5-18L	1
ER003C		HSK100A - SMA 27C - 50	27	50	60	-	M12x1.75-22L	1
ER004C		HSK100A - SMA 32C - 60	32	60	78	-	M16x2.0-26L	1
ER005C		HSK100A - SMA 40C - 60	40	60	89	-	M20x2.5-30L	1

■ EXTENDED

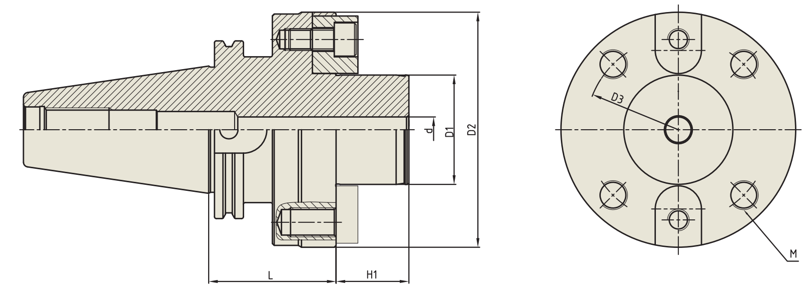
Unit : mm

EDP No.	TAPER No.	MODEL No.	d	L	D	D1	COLLAR BOLT	FIG.
EQ006C	63A	HSK63A - SMA 16C - 100	16	100	38	-	M8x1.25-16L	1
EQ007C		HSK63A - SMA 16C - 145	16	145	38	-	M8x1.25-16L	1
EQ008C		HSK63A - SMA 22C - 100	22	100	48	-	M10x1.5-18L	1
EQ009C		HSK63A - SMA 22C - 160	22	160	48	-	M10x1.5-18L	1
EQ010C		HSK63A - SMA 27C - 100	27	100	60	53	M12x1.75-22L	2
EQ011C		HSK63A - SMA 27C - 160	27	160	60	53	M12x1.75-22L	2
EQ012C		HSK63A - SMA 32C - 100	32	100	78	53	M16x2.0-26L	2
EQ013C		HSK63A - SMA 40C - 160	40	160	89	53	M20x2.5-30L	2
ER006C	100	HSK100A - SMA 16C - 100	16	100	38	-	M8x1.25-16L	1
ER007C		HSK100A - SMA 22C - 100	22	100	48	-	M10x1.5-18L	1
ER008C		HSK100A - SMA 22C - 160	22	160	48	-	M10x1.5-18L	1
ER009C		HSK100A - SMA 27C - 100	27	100	60	-	M12x1.75-22L	1
ER010C		HSK100A - SMA 27C - 160	27	160	60	-	M12x1.75-22L	1
ER011C		HSK100A - SMA 32C - 100	32	100	78	-	M16x2.0-26L	1
ER012C		HSK100A - SMA 32C - 160	32	160	78	-	M16x2.0-26L	1
ER013C		HSK100A - SMA 40C - 100	40	100	89	-	M20x2.5-30L	1
ER014C		HSK100A - SMA 40C - 160	40	160	89	-	M20x2.5-30L	1

YG SHELL MILL ARBOR

CAT/BT/HSK

SHELL MILL ARBOR (Flange Mounting type)

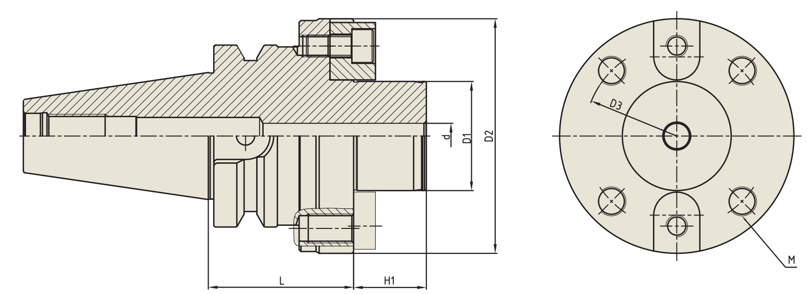


ASME B5.50 - CAT | AT3 | 6.3G | 15,000 RPM | AD

ASME B5.50-2009-CAT

Unit : mm

EDP No.	TAPER No.	MODEL No.	d	D1	D2	D3	L	H1	M (TAP)	DRIVE KEY (BOLT)	WEIGHT (kg)
EL451	CAT50	CAT50 - SMF 40 - 70	14	40	89	66.7	70	30	4-M12	15.9x16x21.5 (M6-15L)	
EL452		CAT50 - SMF 60 - 70	14	60	129	101.6	70	40	4-M16	25.4x25.4x31.5 (M12-25L)	

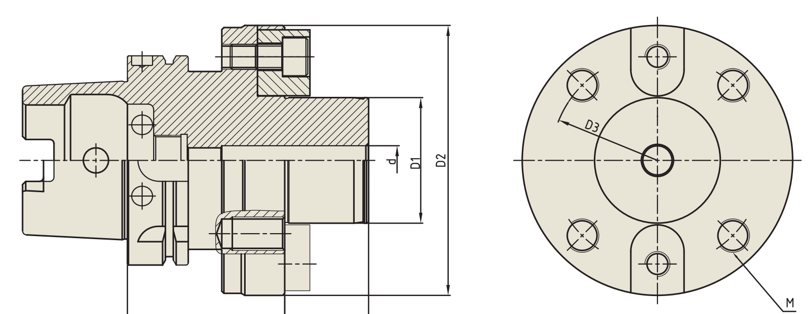


DIN 69893-HSK | AT3 | 6.3G | 15,000 RPM | AD

JIS B6339/MAS 403-BT

Unit : mm

EDP No.	TAPER No.	MODEL No.	d	D1	D2	D3	L	H1	M (TAP)	DRIVE KEY (BOLT)	WEIGHT (kg)
EI201	BT50	BT50 - SMF 40 - 70	14	40	89	66.7	70	30	4-M12	15.9x16x21.5 (M6-15L)	
EI202		BT50 - SMF 60 - 80	14	60	129	101.6	80	40	4-M16	25.4x25.4x31.5 (M12-25L)	
EI331		BT50 - SMF 63.5(2.5") - 76.2(3.0")	14	63.5	123.8	101.6	76.2	29	4-UNC5/8-11	25.4x25x28 (M12-25L)	



JIS B6339-BT | AT3 | 6.3G | 15,000 RPM | AD

DIN69893/ISO12164-1 HSK FORM A

Unit : mm

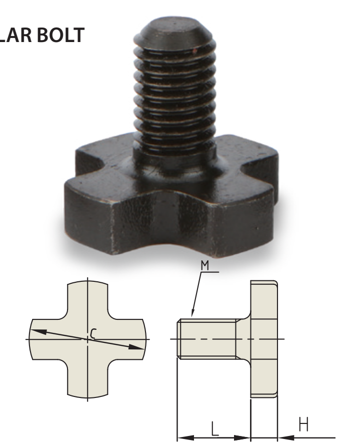
EDP No.	TAPER No.	MODEL No.	d	D1	D2	D3	L	H1	M (TAP)	DRIVE KEY (BOLT)	WEIGHT (kg)
ER021	HSK100A	HSK100A - SMF 60 - 75	14	60	129	101.6	75	40	4-M16	25.4x25.4x31.5 (M12-25L)	

SHELL MILL ARBOR

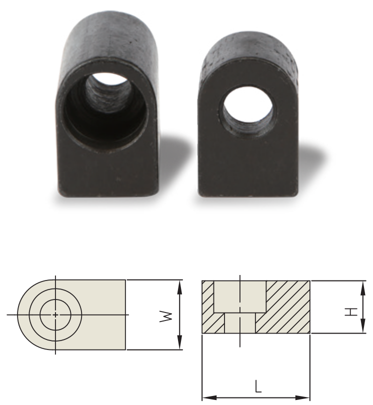
SMA

COLLAR BOLT & DRIVE KEY (For SHELL MILL ARBOR)

COLLAR BOLT



DRIVE KEY



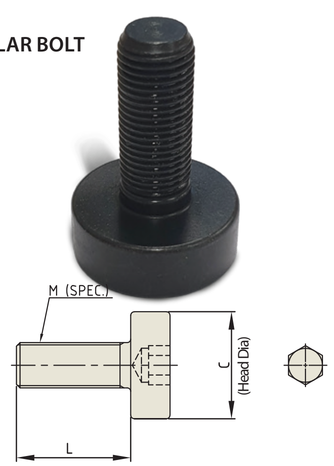
KEY BOLT

Accessories (Standard SMA)

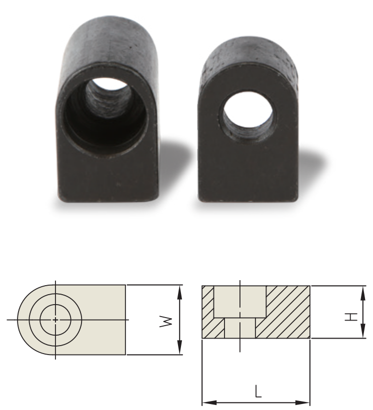
Unit : mm

SPIGOT Dia.	COLLAR BOLT			DRIVE KEY		KEY BOLT	
	SPEC.	Head Dia. (mm)	EDP No.	SPEC. (WxHxL) (mm)	EDP No.	SPEC.	EDP No.
16	M8 x 1.25 x 16L	20	P2514051	8 x 7 x 12.8	P2778857	M3×0.5×10L	P2778863
22	M10 x 1.5 x 18L	28	P2514052	10 x 7.8 x 15.5	P2778858	M4×0.7×10L	P2778864
27	M12 x 1.75 x 22L	35	P2514053	12 x 9 x 18.5	P2778859	M5×0.8×12L	P2778865
32	M16 x 2.0 x 26L	42	P2514054	14 x 11.5 x 20.5	P2778860	M6×1.0×15L	P2778866
40	M20 x 2.5 x 30L	52	P2514055	16 x 13.5 x 23.5	P2778861	M6×1.0×15L	P2778866
50	M24 x 3.0 x 36L	63	P2514056	18 x 18 x 28.5	P2778862	M6×1.0×20L	P2778868

COLLAR BOLT



DRIVE KEY



KEY BOLT

Accessories (inch)

Unit : inch

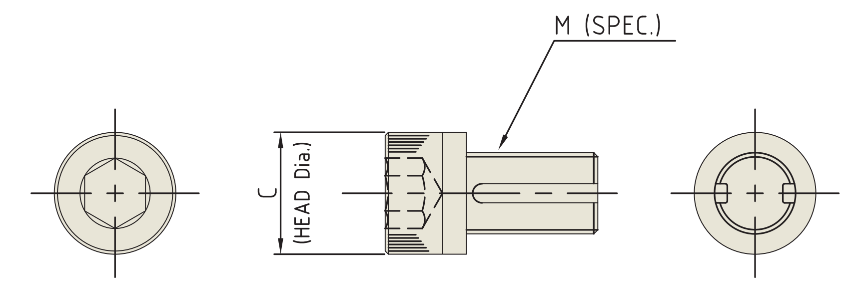
SPIGOT Dia.	COLLAR BOLT			DRIVE KEY		KEY BOLT	
	SPEC.	Head Dia. (mm)	EDP No.	SPEC. (WxHxL) (mm)	EDP No.	SPEC.	EDP No.
1/2	UNF1/4-28 x 16L	15.7	ZZ031	6.35x6.35x8	ZZ021	UNC#3-48 x 1/4L	ZZ181
3/4	UNF3/8-24 x 24L	22.4	ZZ032	7.93x7.93x9.5	ZZ022	UNC#5-40 x 5/16L	ZZ182
1	UNF1/2-20 x 32L	30.0	ZZ033	9.52x9.52x10.2	ZZ023	UNC#8-32 x 3/8L	ZZ183
1 1/4	UNF5/8-18 x 40L	38.1	ZZ034	12.7x12.7x12.7	ZZ024	UNC#10-24 x 1/2L	ZZ184
1 1/2	UNF3/4-16 x 47L	47.7	ZZ035	15.87x11.8x18.5	ZZ025	UNC1/4-20 x 5/8L	ZZ185
2	UN1-14 x 48L	50.8	ZZ036	19.05x18x22	ZZ026	UNC5/16-18 x 3/4L	ZZ186

ROTARY TOOL HOLDERS

SHELL MILL ARBOR

SMA

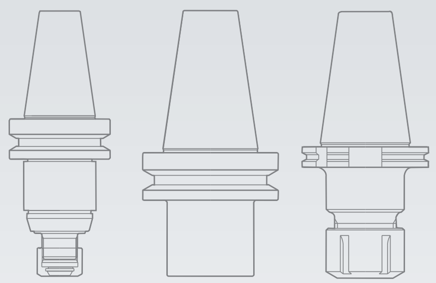
COLLAR BOLT (Coolant groove)



Accessories (inch)- Coolant Groove

SPIGOT Dia.	COLLAR BOLT		
	SPEC.	Head Dia. (mm)	EDP No.
1/2	UNF1/4-28 x 25.4L	3/8 (9.52)	ZZ251
3/4	UNF3/8-24 x 25.4L	9/16 (14.27)	ZZ252
3/4	UNF3/8-24 x 38.1L	9/16 (14.27)	ZZ254
1	UNF1/2-20 x 31.75L	3/4 (19.05)	ZZ253
1	UNF1/2-20 x 50.8L	3/4 (19.05)	ZZ255
1 1/4	UNF5/8-18 x 38.1L	15/16 (23.81)	ZZ256
1 1/2	UNF3/4-16 x 44.45L	1 1/8 (28.575)	ZZ257
2	UN1-14 x 50.8L	1 1/2 (38.1)	ZZ258

Global Cutting Tool Leader **YG-1**



ROTARY TOOLING

YG-1 ROTARY TOOLING

NC DRILL CHUCK

KEYLESS TYPE, HEX KEY TYPE

NC DRILL CHUCK

CAT : ASME B5.50-2009

BT : JIS B6339/MAS 403-BT/ISO7388-2

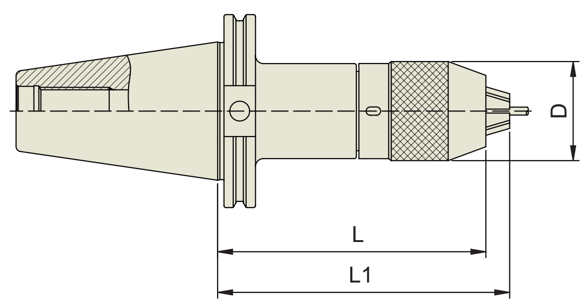
HSK : DIN69893/ISO12164-1

STRAIGHT-K

NC DRILL CHUCK

CAT

NC DRILL CHUCK (KEYLESS TYPE)



ASME B5.50-CAT
AT3

ASME B5.50-2009-CAT

Unit : inch

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L	L1
RK020	40	CAT 40 - NPU8 - 2.95	.012 - .315	1.437	2.950	3.174
RK022		CAT 40 - NPU8 - 4.33	.012 - .315	1.437	4.331	4.555
RK024		CAT 40 - NPU8 - 5.91	.012 - .315	1.437	5.906	6.130
RK026		CAT 40 - NPU13 - 3.54	.039 - .512	1.984	3.543	3.937
RK028		CAT 40 - NPU13 - 5.12	.039 - .512	1.984	5.118	5.512
RK030		CAT 40 - NPU13 - 5.91	.039 - .512	1.984	5.906	6.299
RL020	50	CAT 50 - NPU8 - 3.54	.012 - .315	1.437	3.543	3.768
RL022		CAT 50 - NPU8 - 4.33	.012 - .315	1.437	4.331	4.555
RL024		CAT 50 - NPU8 - 6.69	.012 - .315	1.437	6.693	6.917
RL026		CAT 50 - NPU13 - 3.94	.039 - .512	1.984	3.937	4.331
RL028		CAT 50 - NPU13 - 5.12	.039 - .512	1.984	5.118	5.512
RL030		CAT 50 - NPU13 - 5.91	.039 - .512	1.984	5.906	6.299
RL032		CAT 50 - NPU13 - 6.69	.039 - .512	1.984	6.693	7.087

* Hook Wrench Size
  - NPU8 : 8S
  - NPU13 : 13S

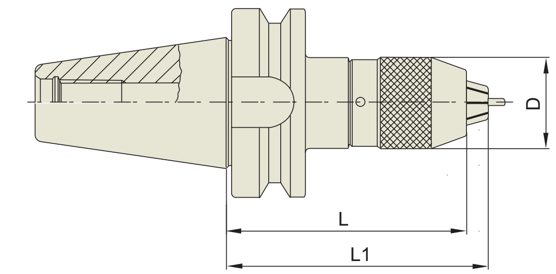
ROTARY TOOL HOLDERS

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

NC DRILL CHUCK

BT

NC DRILL CHUCK (KEYLESS TYPE)



JIS B6339-BT
AT3

JIS B6339/MAS 403-BT

Unit : mm

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L(Min.)	L1(Max.)
RG100	30	BT30 - NPU8 - 75	0.3 - 8	36.5	75	80.7
RG102		BT30 - NPU13 - 105	1 - 13	50.4	105	115
RH100	40	BT40 - NPU8 - 80	0.3 - 8	36.5	80	85.7
RH102		BT40 - NPU8 - 110	0.3 - 8	36.5	110	115.7
RH104		BT40 - NPU8 - 150	0.3 - 8	36.5	150	155.7
RH106		BT40 - NPU13 - 95	1 - 13	50.4	95	100.7
RH108		BT40 - NPU13 - 130	1 - 13	50.4	130	140
RH110		BT40 - NPU13 - 150	1 - 13	50.4	150	160

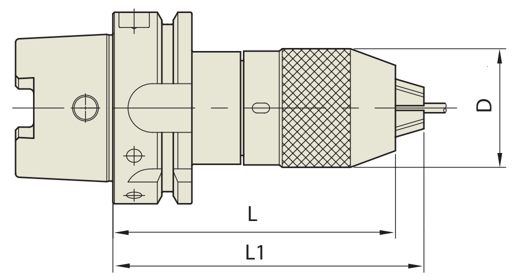
* Chucking Length
  - NPU8 : 20mm
  - NPU13 : 28mm

* Hook Wrench Size
  - NPU8 : 8S
  - NPU13 : 13S

NC DRILL CHUCK

HSK

DUAL CONTACT NC DRILL CHUCK (KEYLESS TYPE)



DIN 69893/ISO 12164-1-HSK FORM A

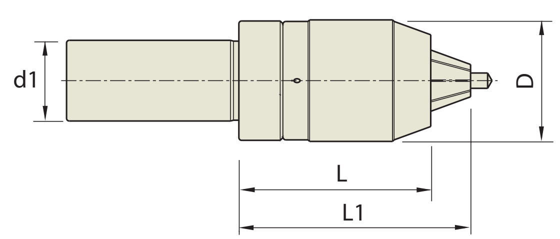
DIN 69893-HSK

Unit : mm

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L(Min.)	L1(Max.)
RQ100	63A	HSK63A - NPU8 - 125	0.3 - 8	36.5	125	130.7
RQ102		HSK63A - NPU13 - 150	1 - 13	50.4	150	160
RR100	100A	HSK100A - NPU8 - 130	0.3 - 8	36.5	130	135.7
RR102		HSK100A - NPU13 - 1510	1 - 13	50.4	150	160

K

STRAIGHT NC DRILL CHUCK (KEYLESS TYPE)



STRAIGHT-K

Unit : mm

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	D	L(Min.)	L1(Max.)	d1
RS100	32	K32 - NPU8 - 75	0.3 - 8	36.5	75	80.7	32.0
RS102		K32 - NPU13 - 100	1 - 13	50.4	100	110	32.0
RS104	42	K42 - NPU8 - 70	0.3 - 8	36.5	70	75.7	42.0
RS106		K42 - NPU13 - 100	1 - 13	50.4	100	110	42.0

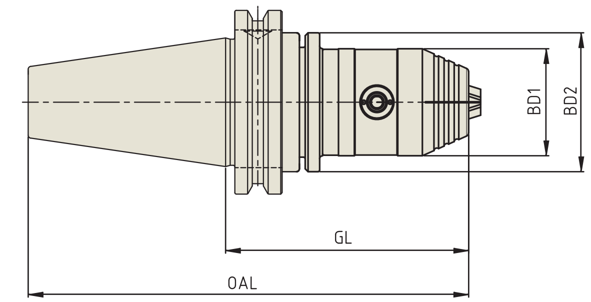
* Hook Wrench Size
- NPU8 : 8S
- NPU13 : 13S

ROTARY TOOL HOLDERS

NC DRILL CHUCK

CAT

NC DRILL CHUCK (HEX KEY TYPE)



ASME B5.50-2009-CAT

ASME B5.50 - CAT AT3 AD or AD/B

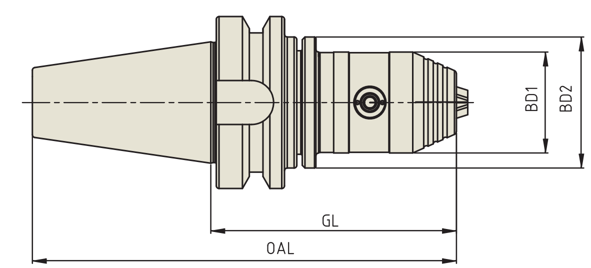
Unit : mm

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	OAL	GL	BD1	BD2	LB	WEIGHT(Kg)
RK200	40	CAT40 - HKD 8 - 90	0.3 - 8.0	158.4	90	37	48	-	
RK201		CAT40 - HKD 13 - 100	0.3 - 13.0	168.4	100	50.1	50.1	-	
RK202		CAT40 AD/B - HKD 8 - 110	0.3 - 8.0	178.4	110	37	48	-	
RK203		CAT40 AD/B - HKD 13 - 130	0.3 - 13.0	198.4	130	50.1	50.1	-	

* Hex Wrench Size
HKD8 : 4mm , HKD13 : 6mm

BT

NC DRILL CHUCK (HEX KEY TYPE)



JIS B6339/MAS 403-BT

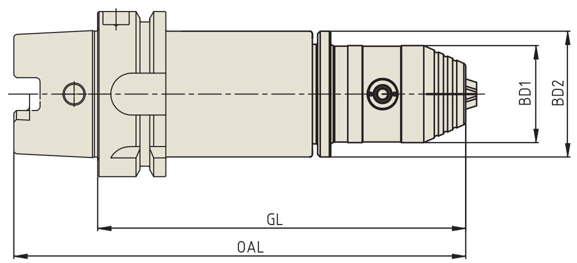
JIS B6339-BT AT3 AD or AD/B

Unit : mm

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	OAL	GL	BD1	BD2	WEIGHT(Kg)
RH200	40	BT40 - HKD 8 - 90	0.3 - 8.0	155.4	90	37	48	-
RH201		BT40 - HKD 13 - 110	0.3 - 13.0	175.4	110	50.1	50.1	-
RH202		BT40 AD/B - HKD 8 - 120	0.3 - 8.0	185.4	120	37	48	-
RH203		BT40 AD/B - HKD 13 - 140	0.3 - 13.0	205.4	140	50.1	50.1	-

* Hex Wrench Size
HKD8 : 4mm , HKD13 : 6mm

NC DRILL CHUCK (HEX KEY TYPE)



DIN 69893/ISO 12164-1-HSK FORM A

DIN 69893-HSK AT3 AD

Unit : mm

EDP No.	TAPER No.	MODEL No.	CLAMPING RANGE	OAL	GL	BD1	BD2	WEIGHT(Kg)
RQ200	63A	HSK63A - HKD 8 - 155	0.3 - 8.0	177	145	37	48	-
RQ201		HSK63A - HKD 13 - 175	0.3 - 13.0	197	165	50.1	50.1	-

* Hex Wrench Size
HKD8 : 4mm , HKD13 : 6mm

YG-1 ROTARY TOOLING

JACOBS TAPER ARBOR

JACOBS TAPER ARBOR

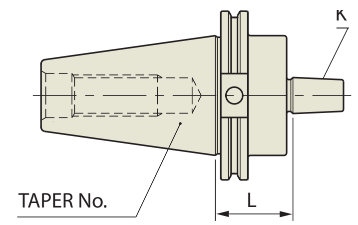
CAT : ASME B5.50-200

BT : JIS B6339/MAS 403

JACOBS TAPER ARBOR

CAT

JACOBS TAPER ARBOR



ASME B5.50-2009-CAT

ASME B5.50 - CAT

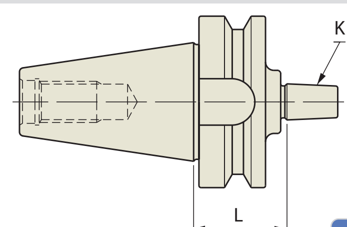
AT3

Unit : inch

EDP No.	TAPER No.	MODEL No.	K	L
GK042	40	CAT40 - JTA 1 - 1.50	#1	1.50
GK043		CAT40 - JTA 2 - 1.50	#2	1.50
GK044		CAT40 - JTA 3 - 1.50	#3	1.50
GK045		CAT40 - JTA 4 - 1.50	#4	1.50
GK046		CAT40 - JTA 6 - 1.50	#6	1.50
GK047		CAT40 - JTA 33 - 1.50	#33	1.50
GL042	50	CAT50 - JTA 1 - 1.50	#1	1.50
GL043		CAT50 - JTA 2 - 1.50	#2	1.50
GL044		CAT50 - JTA 3 - 1.50	#3	1.50
GL045		CAT50 - JTA 4 - 1.50	#4	1.50
GL046		CAT50 - JTA 6 - 1.50	#6	1.50
GL047		CAT50 - JTA 33 - 1.50	#33	1.50

BT

JACOBS TAPER ARBOR



JIS B6339/MAS 403-BT

JIS B6339-BT

AT3

Unit : inch

EDP No.	TAPER No.	MODEL No.	K	L
GH042	40	BT40 - JTA 1 - 1.34	#1	1.34
GH043		BT40 - JTA 2 - 1.77	#2	1.77
GH044		BT40 - JTA 3 - 1.77	#3	1.77
GH045		BT40 - JTA 4 - 1.77	#4	1.77
GH046		BT40 - JTA 6 - 1.77	#6	1.77
GH047		BT40 - JTA 33 - 1.77	#33	1.77
GI042	50	BT50 - JTA 1 - 1.80	#1	1.80
GI043		BT50 - JTA 2 - 1.77	#2	1.77
GI044		BT50 - JTA 3 - 1.77	#3	1.77
GI045		BT50 - JTA 4 - 1.77	#4	1.77
GI046		BT50 - JTA 6 - 1.77	#6	1.77
GI047		BT50 - JTA 33 - 1.77	#33	1.77

YG-1 ROTARY TOOLING

STUB ARBOR

STUB ARBOR

CAT : ASME B5.50-2009

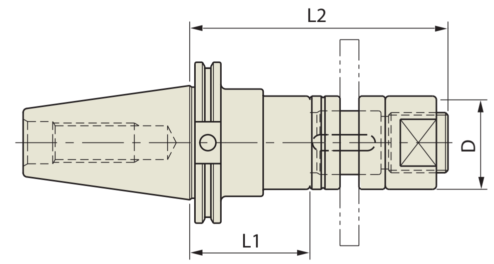
BT : JIS B6339/MAS 403-BT/ISO7388-2

ACCESSORY (NUT, KEY, SPACER)

YG STUB ARBOR

CAT

STUB ARBOR



ASME B5.50-2009-CAT

ASME B5.50 - CAT | AT3

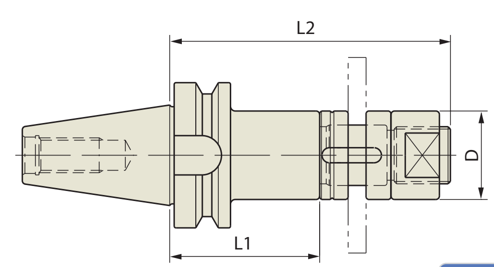
■ **STANDARD**

Unit : inch

EDP No.	TAPER No.	MODEL No.	CUTTER SIZE I.D	L1	D	L2
PK014		CAT40 - STUB 1" - 4.00	1.000	4.00	1.56	6.25
PK017	40	CAT40 - STUB 1 1/4 - 4.00	1.250	4.00	1.87	6.50
PK021		CAT40 - STUB 1 1/2 - 4.00	1.500	4.00	2.12	6.75
PL014		CAT50 - STUB 1" - 4.00	1.000	4.00	1.56	6.25
PL017	50	CAT50 - STUB 1 1/4 - 4.00	1.250	4.00	1.87	6.50
PL021		CAT50 - STUB 1 1/2 - 4.00	1.500	4.00	2.12	6.75

BT

STUB ARBOR



JIS B6339/MAS 403-BT

JIS B6339-BT | AT3

■ **STANDARD**

Unit : inch

EDP No.	TAPER No.	MODEL No.	CUTTER SIZE I.D	L1	D	L2
PH014		BT40 - STUB 1" - 3.00	1.000	3.00	1.56	5.25
PH017	40	BT40 - STUB 1 1/4 - 3.00	1.250	3.00	1.87	5.50
PH021		BT40 - STUB 1 1/2 - 3.00	1.500	3.00	2.12	5.75
PI014		BT50 - STUB 1" - 4.00	1.000	4.00	1.56	6.25
PI017	50	BT50 - STUB 1 1/4 - 4.00	1.250	4.00	1.87	6.50
PI021		BT50 - STUB 1 1/2 - 4.00	1.500	4.00	2.12	6.75

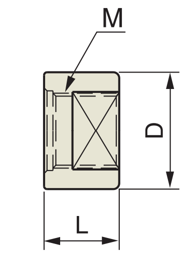
* Nuts / Key / Spacer for Stub Arbors on page 1416.

ROTARY TOOL HOLDERS

YG STUB ARBOR

PART

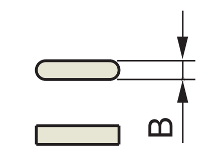
NUT



Unit : inch

EDP No.	TYPE (M)	L	D	SERIES
ZZ041	UNF 1 - 12	1.00	1.56	STUB 1"
ZZ046	UNF 11/4 - 12	1.25	1.87	STUB 1 1/4
ZZ052	UNF 11/2 - 12	1.50	2.12	STUB 1 1/2

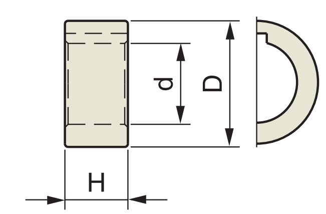
KEY



Unit : inch

EDP No.	SERIES	B
ZZ042	STUB 1"	0.25
ZZ047	STUB 1 1/4	0.312
ZZ054	STUB 1 1/2	0.375

SPACER



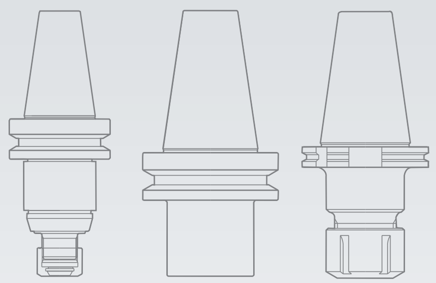
Unit : inch

EDP No.	TYPE	H	D	d	SERIES
ZZ043	1/4 - SPACER	0.25	1.56	1.00	STUB 1"
ZZ044	3/8 - SPACER	0.375	1.56	1.00	STUB 1"
ZZ045	3/4 - SPACER	0.75	1.56	1.00	STUB 1"

EDP No.	TYPE	H	D	d	SERIES
ZZ048	1/4 - SPACER	0.25	1.87	1.25	STUB 1 1/4
ZZ049	3/8 - SPACER	0.375	1.87	1.25	STUB 1 1/4
ZZ050	3/4 - SPACER	0.75	1.87	1.25	STUB 1 1/4

EDP No.	TYPE	H	D	d	SERIES
ZZ037	1/4 - SPACER	0.25	2.12	1.50	STUB 1 1/2
ZZ038	3/8 - SPACER	0.375	2.12	1.50	STUB 1 1/2
ZZ039	3/4 - SPACER	0.75	2.12	1.50	STUB 1 1/2

Global Cutting Tool Leader **YG-1**



ROTARY TOOLING

YG-1 ROTARY TOOLING

SLITTING SAW ARBOR

SLITTING SAW ARBOR

CAT : ASME B5.50-2009

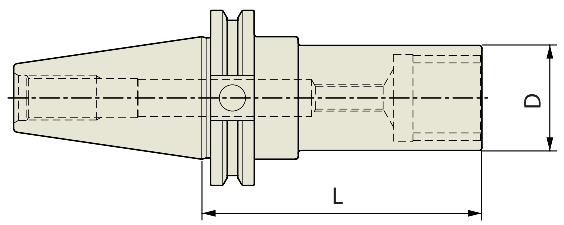
BT : JIS B6339/MAS 403-BT/ISO7388-2

ACCESSORY (CAP)

SLITTING SAW ARBOR

CAT

SLITTING SAW ARBOR



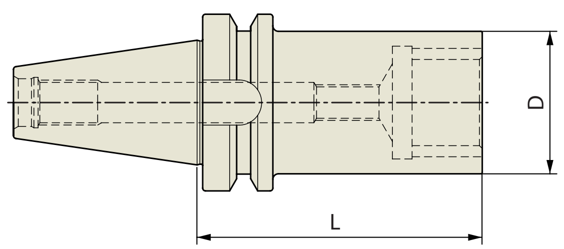
■ STANDARD

Unit : inch

EDP No.	TAPER No.	MODEL No.	COLLET SERIES	L	D
QK014	40	CAT40 - SSA 1.0 - 4.00	1.000	4.00	1.50
QK017		CAT40 - SSA 1 1/4 - 4.00	1.250	4.00	2.00
QL014	50	CAT50 - SSA 1.0 - 4.00	1.000	4.00	1.50
QL017		CAT50 - SSA 1 1/4 - 4.00	1.250	4.00	2.00

BT

SLITTING SAW ARBOR



■ STANDARD

Unit : inch

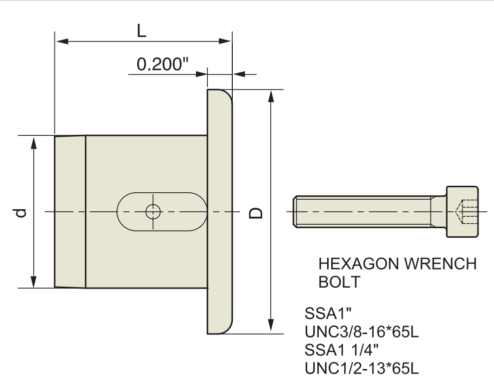
EDP No.	TAPER No.	MODEL No.	COLLET SERIES	L	D
QH014	40	BT40 - SSA 1.0 - 4.00	1.000	4.00	1.50
QH017		BT40 - SSA 1 1/4 - 4.00	1.250	4.00	2.00

SSA

CAP

Unit : inch

EDP No.	TYPE	L	D	d
ZZ051	SSA 1.0	1.02	1.50	1.00
ZZ053	SSA 1 1/4	1.30	2.00	1.25



YG-1 ROTARY TOOLING

PULL STUD & TOOL CLAMP

PULL STUD

TOOL CLAMP

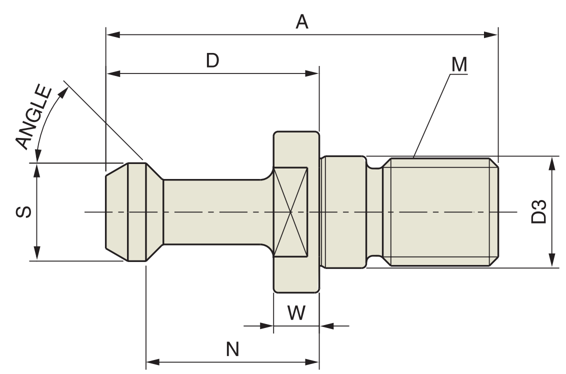
COOLANT TUBE

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG PULL STUD & TOOL CLAMP

CAT

PULL STUD



Unit : inch

EDP NO.	MODEL No.	ANGLE	S	P	D3	A	N	D	W	M
SK661	CAT - 40ANSI C	45°	.740	.490	.490	1.500	.440	.640	.120	5/8 - 11
SL661	CAT - 50ANSI C	45°	1.140	.820	.820	2.300	.700	1.000	.200	1 - 8
SK561	CAT - 40ANSI	45°	.740	.490	.490	1.500	.440	.640	.120	5/8 - 11
SL561	CAT - 50ANSI	45°	1.140	.820	.820	2.300	.700	1.000	.200	1 - 8
SK761	CAT - 40TYPE I	45°	.590	.394	.512	2.250	.990	1.266	.120	5/8 - 11
SK762	CAT - 40TYPE II	60°	.590	.394	.512	2.250	.990	1.266	.120	5/8 - 11
SK763	CAT - 40TYPE III	90°	.590	.394	.512	2.250	.990	1.266	.120	5/8 - 11
SK861	CAT - 40TYPE I C	45°	.590	.394	.512	2.250	.990	1.266	.120	5/8 - 11
SK862	CAT - 40TYPE II C	60°	.590	.394	.512	2.250	.990	1.266	.120	5/8 - 11
SK863	CAT - 40TYPE III C	90°	.590	.394	.512	2.250	.990	1.266	.120	5/8 - 11
SL761	CAT - 50TYPE I	45°	.906	.669	.827	3.346	1.377	1.772	.390	1 - 8
SL762	CAT - 50TYPE II	60°	.906	.669	.827	3.346	1.377	1.772	.390	1 - 8
SL763	CAT - 50TYPE III	90°	.906	.669	.827	3.346	1.377	1.772	.390	1 - 8
SL861	CAT - 50TYPE I C	45°	.906	.669	.827	3.346	1.377	1.772	.390	1 - 8
SL862	CAT - 50TYPE II C	60°	.906	.669	.827	3.346	1.377	1.772	.390	1 - 8
SL863	CAT - 50TYPE III C	90°	.906	.669	.827	3.346	1.377	1.772	.390	1 - 8
SH061	BT - 40PS 1	45°	.590	.394	.669	2.360	1.102	1.378	.230	M16
SI061	BT - 50PS 5	45°	.905	.669	.984	3.346	1.377	1.772	.390	M24
SH062	BT - 40PS 2	60°	.590	.394	.669	2.360	1.102	1.378	.230	M16
SI062	BT - 50PS 6	60°	.905	.669	.984	3.346	1.377	1.772	.390	M24
SH063	BT - 40PS 8	90°	.590	.394	.669	2.360	1.102	1.378	.230	M16
SI063	BT - 50PS 0	90°	.905	.669	.984	3.346	1.377	1.772	.390	M24
SK161	CAT - 40TYPE I	45°	.590	.394	.512	2.250	.990	1.266	.236	5/8 - 11
SK162	CAT - 40TYPE II	60°	.590	.394	.512	2.250	.990	1.266	.236	5/8 - 11
SK163	CAT - 40TYPE III	90°	.590	.394	.512	2.250	.990	1.266	.236	5/8 - 11
SK261	CAT - 40TYPE I C	45°	.590	.394	.512	2.250	.990	1.266	.236	5/8 - 11
SK262	CAT - 40TYPE II C	60°	.590	.394	.512	2.250	.990	1.266	.236	5/8 - 11
SK263	CAT - 40TYPE III C	90°	.590	.394	.512	2.250	.990	1.266	.236	5/8 - 11

* Suffix "C" in MODEL No. is through coolant type.
* Improper selection of pull studs can cause serious damage and possible injury.
  Please make sure the machine accepts the pull stud you select.

ROTARY TOOL HOLDERS

YG PULL STUD & TOOL CLAMP

TCT

TOOL CLAMP

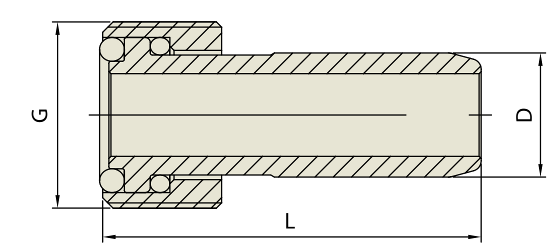
EDP No.	MODEL No.	SHANK FLANGE TYPE
RK099	TCT - 40	CAT - 40
RH099	TBT - 40	BT - 40
RL099	TCT - 50	CAT - 50
RM099	TBT - 50	BT - 50

* Available in all tapers.

Feature
- Access both ends of your tool holders simultaneously
- Minimizes tool holders handling
- Speeds up your operations
- Convenient

CT

COOLANT TUBE



Unit : mm

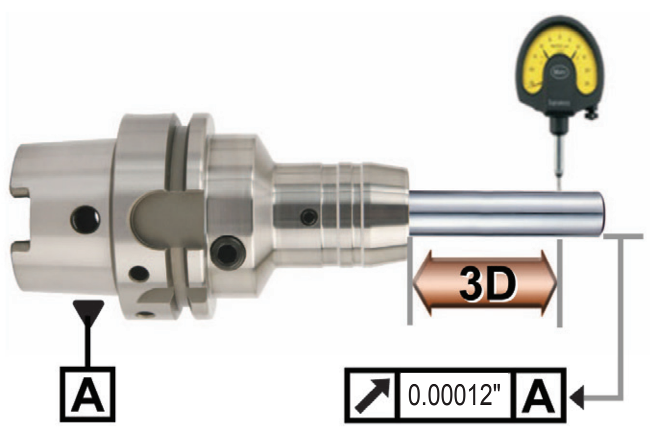
EDP Code	TAPER No.	G	L	D
CT320	32A	M10x1.0	26.0	6
CT400	40A	M12x1.0	29.1	8
CT500	50A	M16x1.0	32.9	10
CT630	63A	M18x1.0	36.6	12
CT100	100A	M24x1.5	43.9	16

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG TECHNICAL INFORMATION

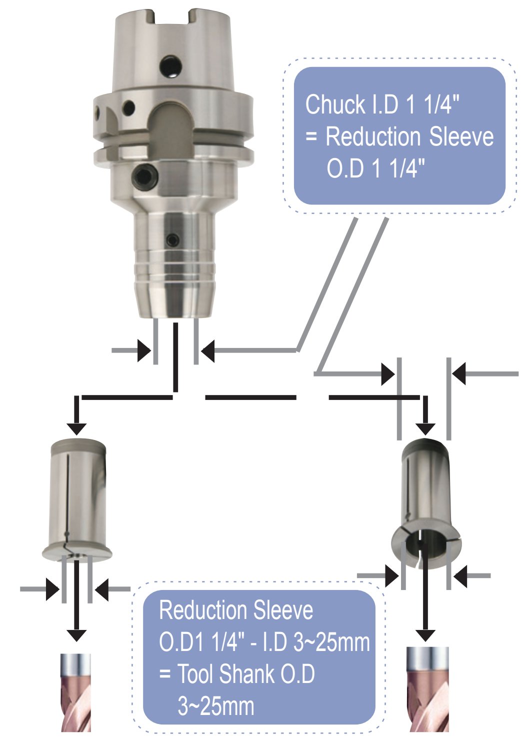
TECHNICAL INFORMATION (HYDRAULIC CHUCK)

High precision T.I.R : ≤ 0.00012" (Without Reduction Sleeve)

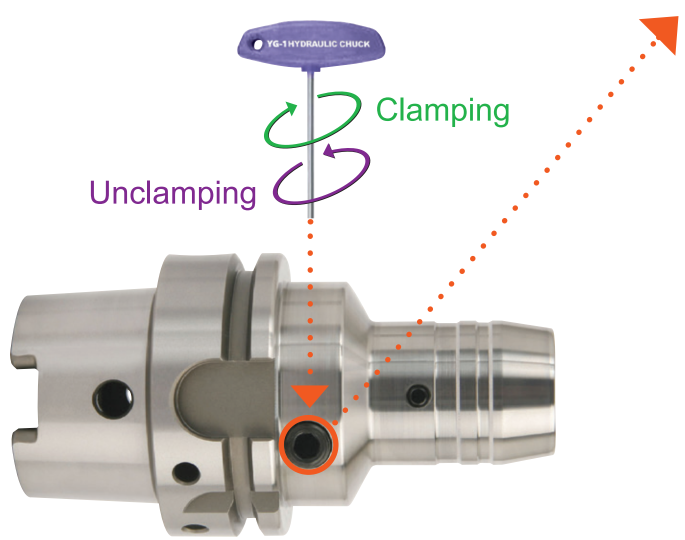


• Less than 0.00012" T.I.R
⇒ Suitable for high-speed precision machining

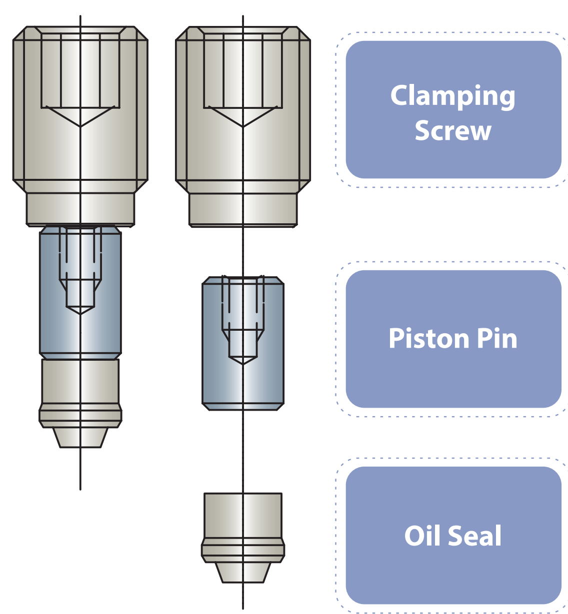
Flexible use of cutting tools by using reduction sleeves



Easy Tool Change



CLAMPING SCREW



• Easy clamping and unclamping by use of T wrench
⇒ Reducing tool change time

ROTARY TOOL HOLDERS

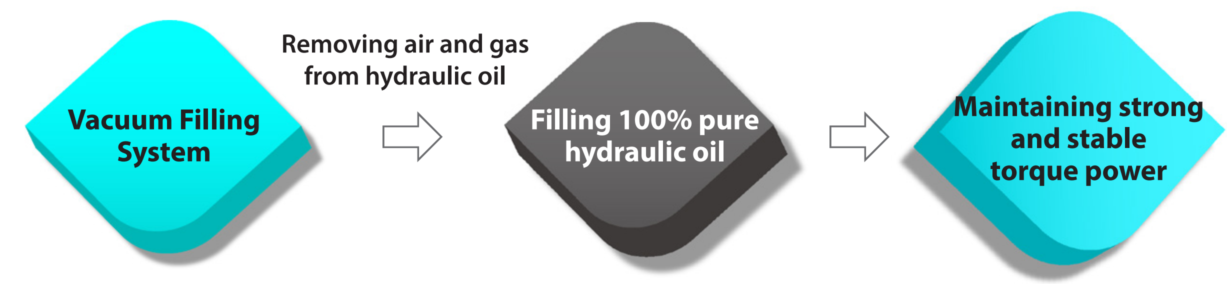
YG TECHNICAL INFORMATION

TECHNICAL INFORMATION (HYDRAULIC CHUCK)

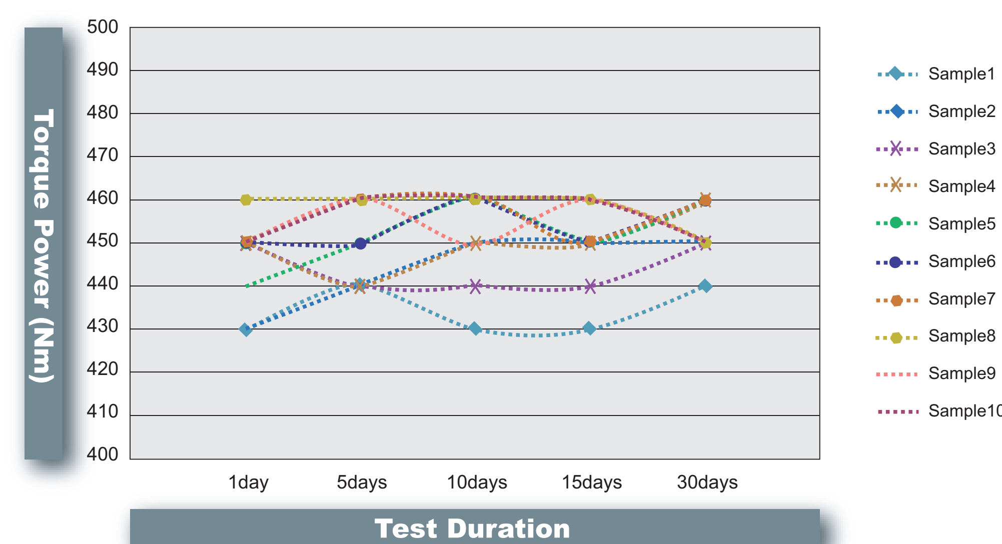
Strong Torque Power

Hydraulic Chuck I.D(mm)	Tool Shank O.D(mm)	Applicable RPM	Minimum Clamping Depth (mm)		Min. Torque Power (Nm)	
			Slim	Power E Hydro	Slim	Power E Hydro
6	6	40,000	27		16	
8	8	40,000	27		23	
10	10	40,000	32		45	
12	12	40,000	37	41	90	110
14	14	40,000	37		110	
16	16	40,000	42		185	
18	18	40,000	42		240	
20	20	40,000	42	48	330	520
25	25	25,000	48		400	
32	32	25,000	55	57	650	900

• Tool Holder I.D Tolerance : H6
• Operating Temperature : 20~25℃
• Maximum pressure of coolant oil : 80bar



Test of Torque Power and Hydraulic Oil Leakage



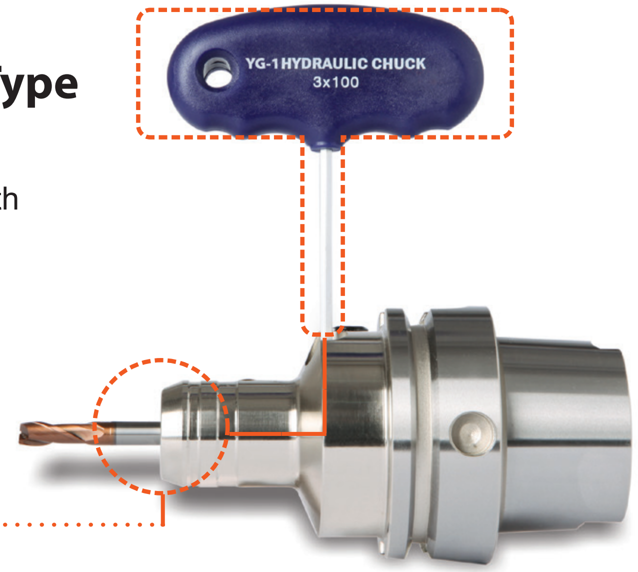
• Test Model : BT40AD/B-HC20-90
• No oil leakage for long period ⇒ Maintaining stable torque power

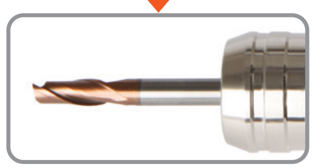
YG TECHNICAL INFORMATION

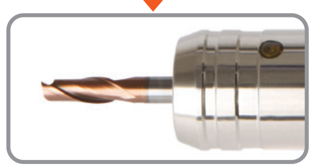
TECHNICAL INFORMATION (HYDRAULIC CHUCK)

Radial Tool Length Pre-setting Type

- Easy to adjust pre-setting length of cutting tool (Saving time to pre-set cutting tool to one fifth compared with conventional Hydraulic Chuck)
- Precise adjustment of cutting tool length
- Designed to separate tool length adjustment screw from clamping screw



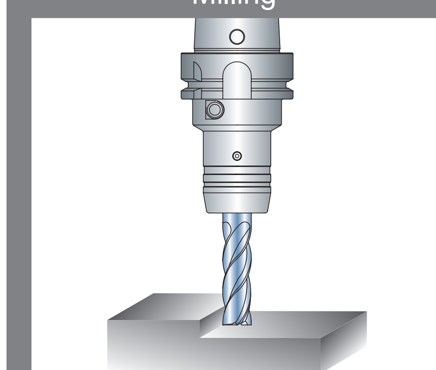




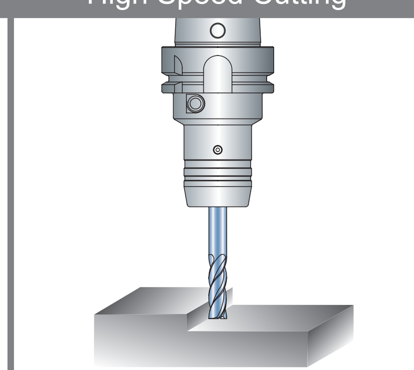
Adjustable range of cutting tool length : 0~0.394"

APPLICATION

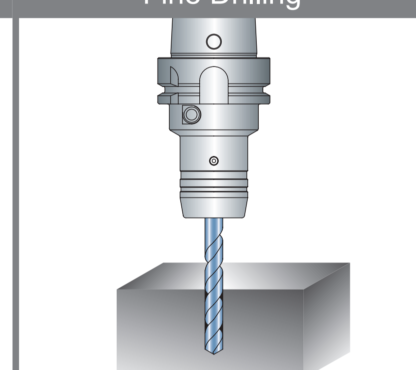
Milling



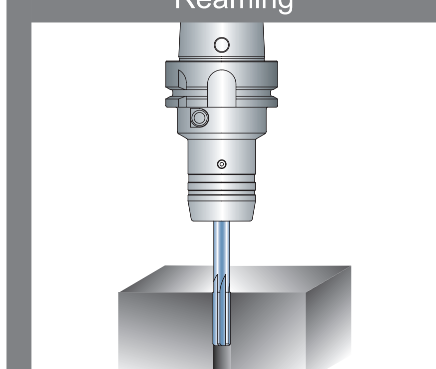
High Speed Cutting



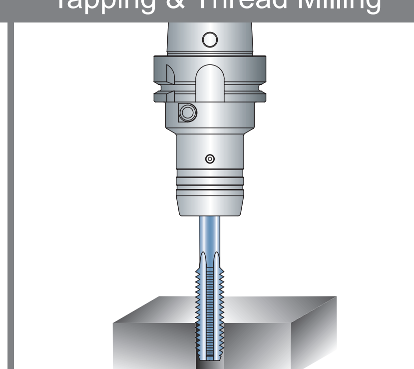
Fine Drilling



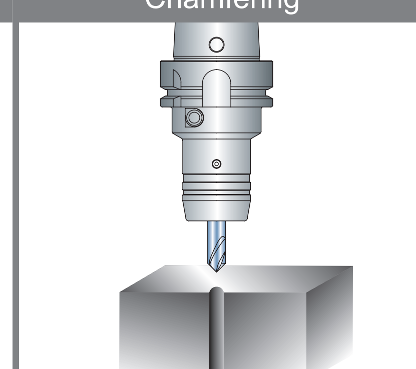
Reaming



Tapping & Thread Milling



Chamfering



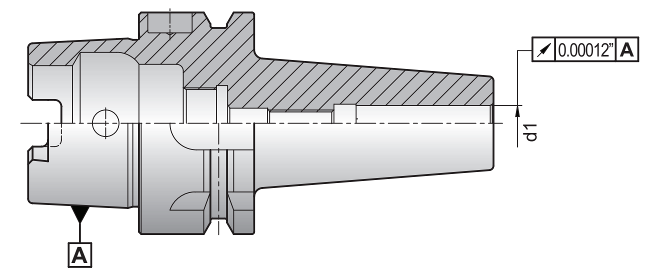
ROTARY TOOL HOLDERS

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

YG TECHNICAL INFORMATION

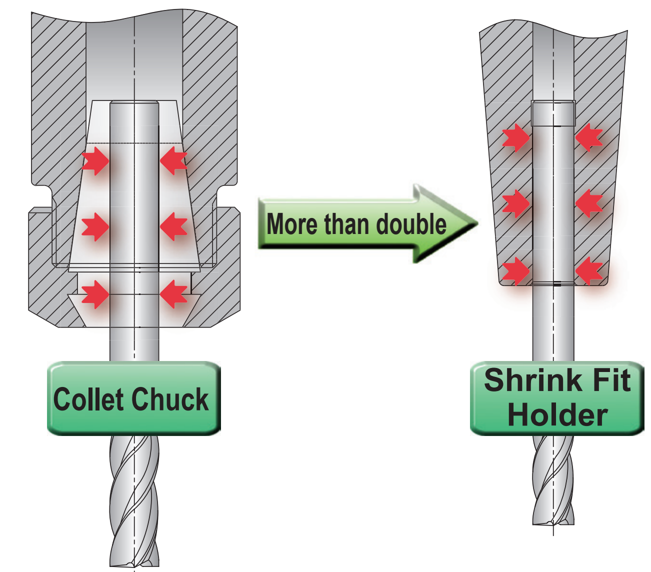
TECHNICAL INFORMATION (SHRINK FIT HOLDER)

High Precision I.D
Run-out : ≤ 0.00012"



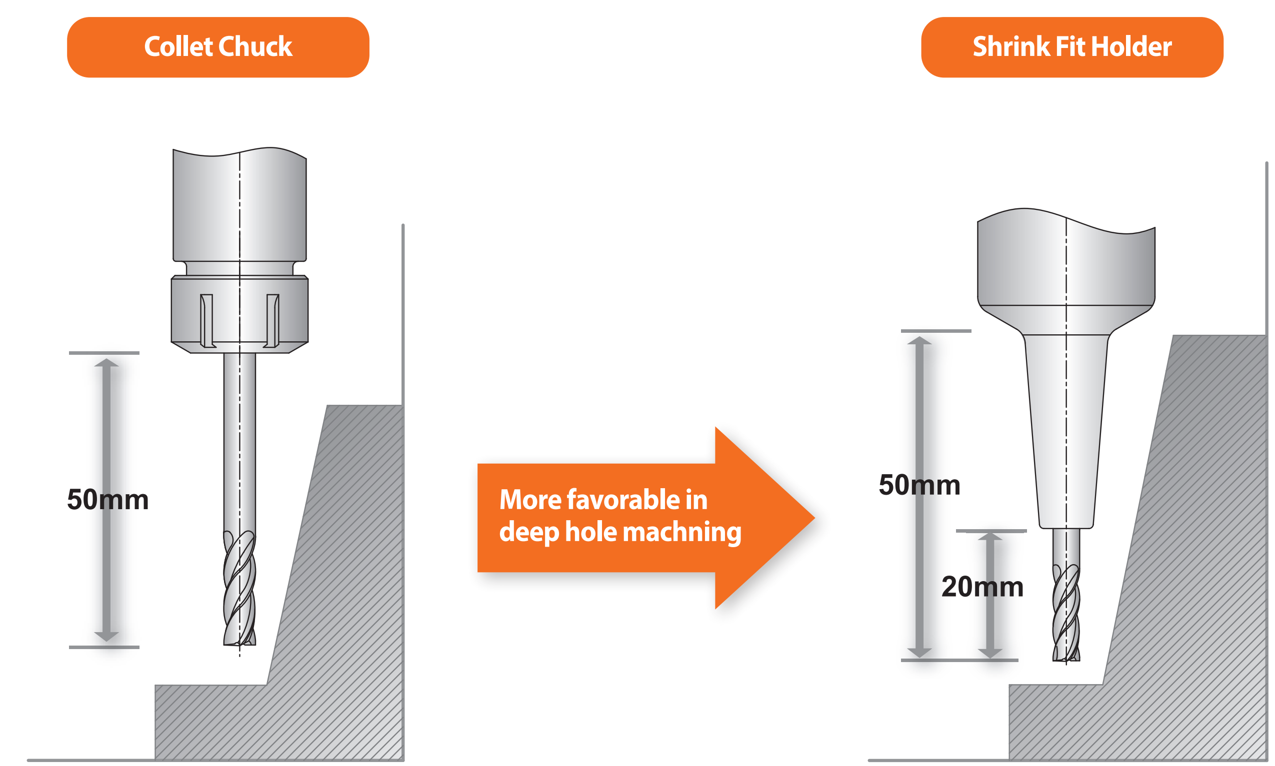
- Less than 0.00012" of Tool Holder accuracy at I.D

Strong and Consistent Torque Power



- Achieving strong torque power by integration of chuck and tool

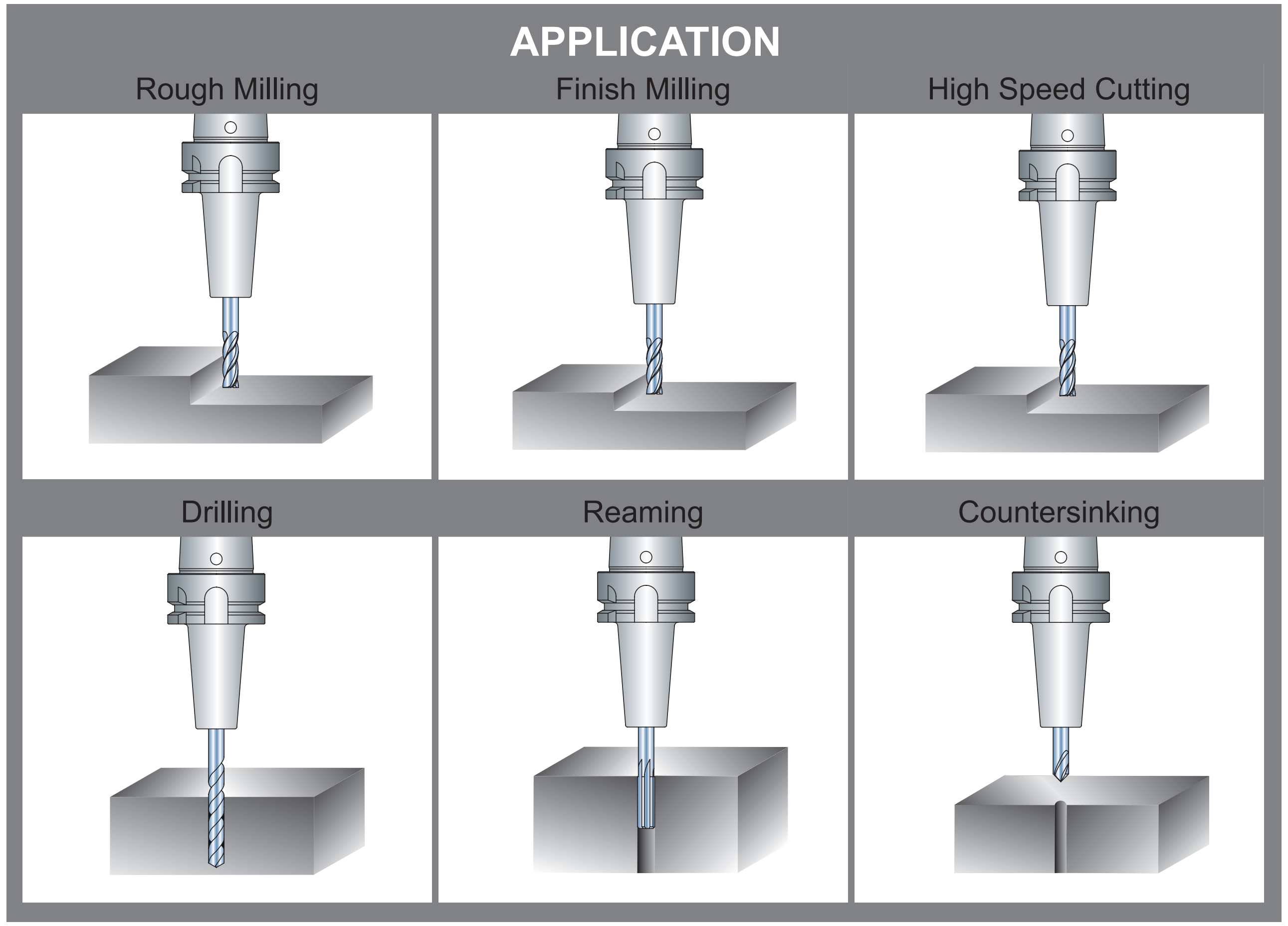
Deep hole Machining



- Suitable for High-Speed precision deep hole machining

YG TECHNICAL INFORMATION

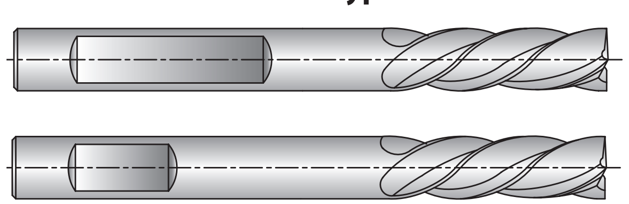
TECHNICAL INFORMATION (SHRINK FIT HOLDER)



Shank Type of Cutting Tool

Straight shank

One weldon flat shaft type



• One Weldon flat shaft type tool is usable, but there is a possibility that the I.D of shrink fit holder may be deformed.

Material of Cutting Tool

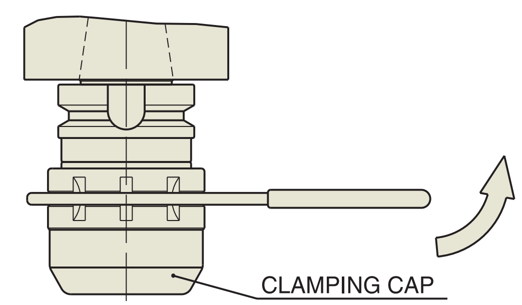
CARBIDE TOOL	HSS TOOL
OK	NO

ROTARY TOOL HOLDERS

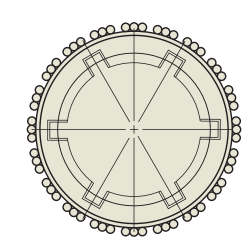
YG TECHNICAL INFORMATION

TECHNICAL INFORMATION (POWER MILLING CHUCK)

CLAMPING



STRUCTURE



SPECIAL FEATURES

TOOL CLAMPING

For complete tool clamping, clamping cap should be fully turned up to the point where the bottom of clamping cap touches the flange of tool holder.

HOLDING POWER

Thicker body structure od clamping cap assures strong holding power maximum durability and smooth movement of needle bearings 300 kgf holding force.

ACCURACY

Slots on the inside of bore help prevent excessive oil and grime from building up between shank of end mill and inside of bore which increases accuracy and holding power.

DURABILITY

Special engineered steels and alloys are used in the bearing and stop seal to increase life and reduce maintenance.

Hydraulic Chuck
Shrink Fit Holder
End Mill Holder & Side Lock Arbor
ER Collet Chuck
SK Slim Chuck
TG Collet Chuck
Power Milling Chuck
Morse Taper Adapter
Tapping Chuck
One Step Tapping Chuck
Shell Mill Arbor
NC Drill Chuck
Jacobs Taper Arbor
Stub Arbor
Slitting Saw Arbor
Pull Stud &Tool Clamp
TECHNICAL INFORMATION

TECHNICAL INFORMATION

TECHNICAL INFORMATION (T.I.R and TOLEARANCE)

T.I.R (Total Indicated Run-out)

HYDRAULIC CHUCK
Concentric to 0.00012” T.I.R (at 3D)

SHRINK FIT HOLDER
Concentric to 0.00012” T.I.R (at I.D)

ER COLLET CHUCK
Concentric to 0.0002” T.I.R (at I.D)

END MILL HOLDER
Concentric to 0.0002” T.I.R (at I.D)

SLITTING SAW ARBOR
Face perpendicular to taper within 0.0002” T.I.R (at I.D)

STUB ARBOR
Face perpendicular to taper within 0.0002” T.I.R (at I.D)

SHELL MILL ARBOR
Face perpendicular to taper within 0.0001” T.I.R
Out diameter to taper within 0.0002” T.I.R

MORSE & JACOBS TAPER ARBOR
Concentric to 0.0003” T.I.R

* To put tool precisely on spindle center line for getting correct T.I.R.

AT3 or better accuracy on all shank tapers

TAPER	AT3
#30	0.000078”
#40	0.00012”
#50	0.00016”

Accurate and rigid tool holder mounting to spindle

The bore diameter of all tool holders is controlled by H5 grade tolerance limit.

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