CATALOG & TECHNICAL GUIDE 2020.2

HOLEMAKING

AHB TOOLING & MACHINERY

COMPLETE METALWORKING SOLUTIONS

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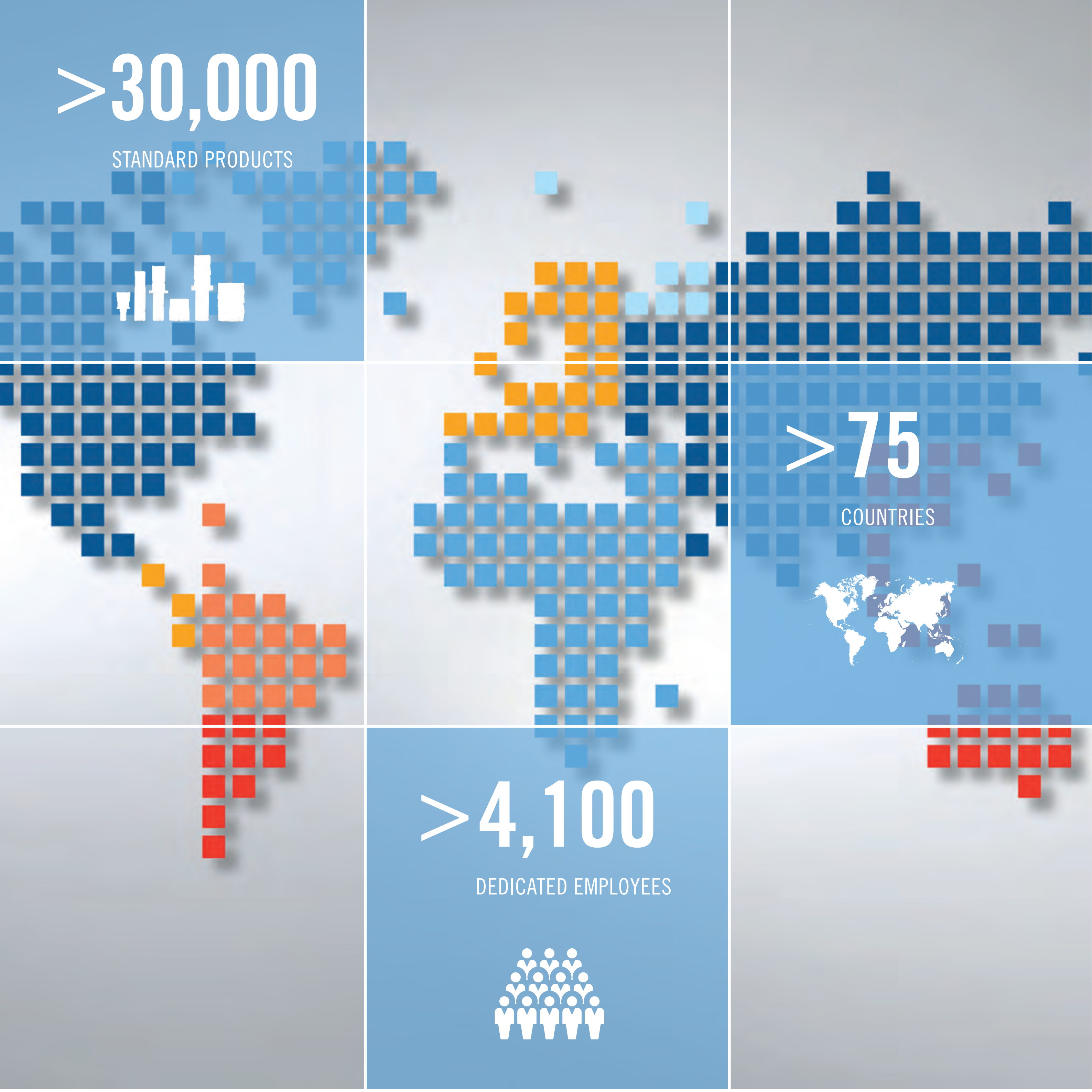
SECO



Headquartered in Fagersta, Sweden and present in more than 75 countries, Seco Tools is a leading global provider of metal cutting solutions for milling, stationary tools, holemaking and tooling systems.

For more than 80 years, the company has provided the technologies, processes and support that manufacturers depend on for maximum productivity and profitability. For more information on how Seco's innovative products and expert services bring success to manufacturers across all industry segments, please visit www.secotools.com.

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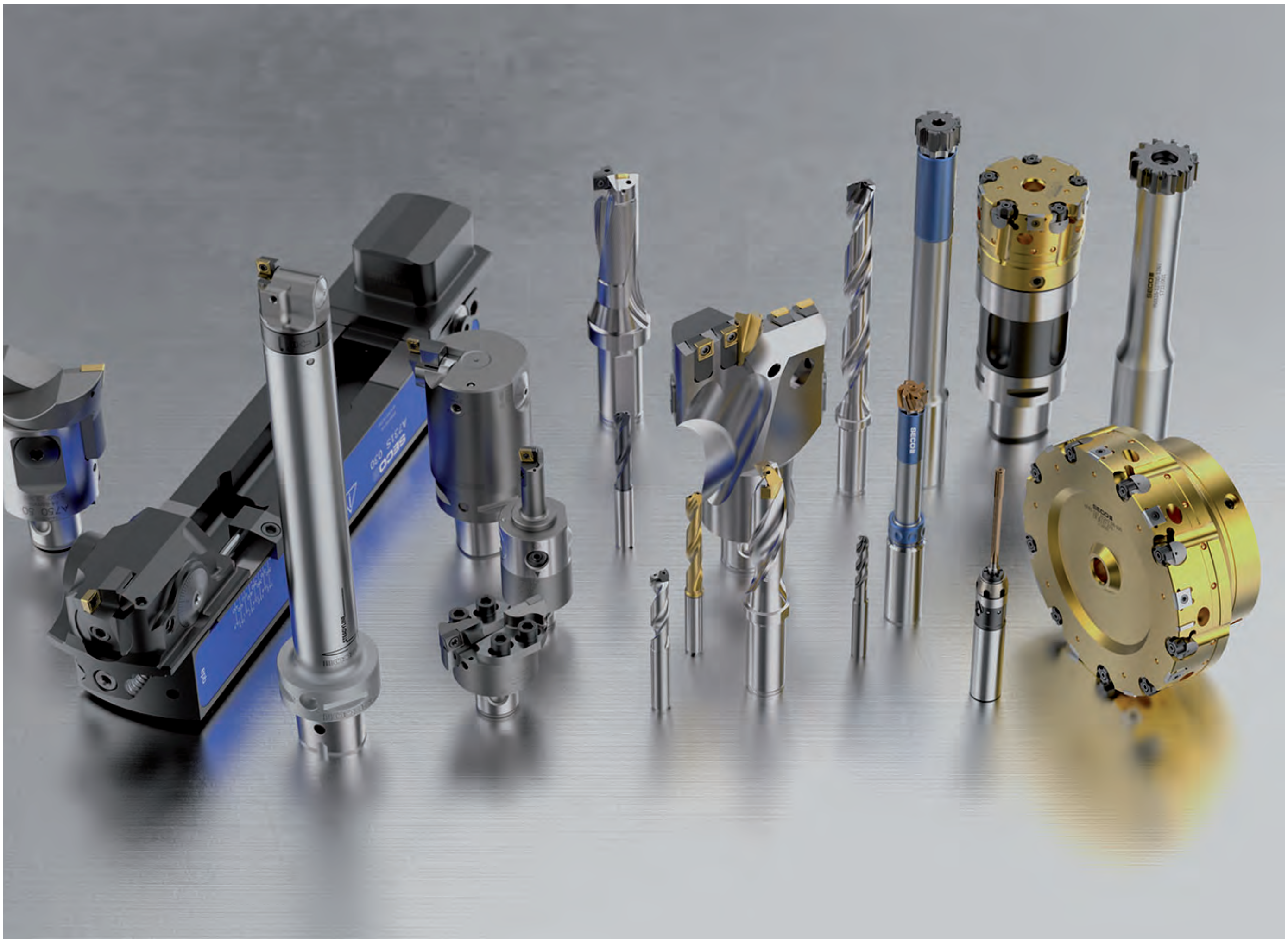
Overcome any holemaking challenge

Holemaking can mean the difference between profit or scrapped parts and success requires the highest quality tooling for the greatest level of productivity enhancements and cost-reduction opportunities. To achieve that level of success, manufacturers need a partner who can help prove out processes and test new solutions. A partner with the ability to meet all your unique challenges with a truly comprehensive range of drilling, reaming, boring and threading tools.

Seco Tools is your single-source provider for comprehensive hole-making solutions. With years of experience developing holemaking solutions for customers' challenging applications, we have the R&D and metal cutting expertise to help manufacturers achieve fully optimal processes.

We are committed to our customers' holemaking productivity. That means you can purchase tools, receive technical support, consult with experts and develop solutions with just one provider and with access to the industry's most comprehensive range of indexable and solid drills, reamers, threaders and boring heads.



What are you looking for in making a hole?

	Drilling			Threading				Boring		Reaming		
	Feedmax™ Universal	Crownloc® Crownloc® Plus	Perfomax®	Threadmaster™	Threadmaster™ Taps		Thread milling 396.18/396.19	Rough boring	Fine boring	Precimaster™ Plus/ Nanofix™	Bifix®	Xfix™
Page(s)	12-175	176-227	228-319	See MN Threading catalogue				476-501	502-546	322-388	389-412	413-451
										 		
IT	7-9	9-10	12					9-10	5-6	6-8	6-7	6-7
⊕	0,02 mm *0.0008"*	0,05 mm *0.002"*	-		Follow the pre-bore	Follow the pre-bore		0,005 mm *0.0002"*	0,005 mm *0.0002"*	Follow the pre-bore	Follow the pre-bore	Follow the pre-bore
	0,02 mm *0.0008"*	0,05 mm *0.002"*	-					0,02 mm *0.0008"*	0,01 mm *0.0004"*	0,007 mm *0.0003"*	0,005 mm *0.0002"*	0,005 mm *0.0002"*
√Ra	1,0 mm *0.039"*	1,6 mm *0.063"*	2,0 mm *0.079"*					1,0 mm *0.039"*	0,6 mm *0.024"*	0,6 mm *0.024"*	0,25 mm *0.010"*	0,8 mm *0.031"*
TCTR	-	-	-		6H 6HX 6G 2B Normal	5HX 2BX Normal-X 6HX 6GX		-	-	-	-	-
Thread form	-	-	-	M MF UNC UNF NPT NPTF BSP	M MF UNC UNF G NPT NPTF	M MF UNC UNF G	ISO UN W NPT NPTF BSPT	-	-	-	-	-

⊕ Positioning accuracy
Seco Feedmax, A750 rough boring heads and the whole range of fine boring heads are the holemaking tools that offer the best positioning accuracy.

Hole geometry
For excellent hole geometry, such as as roundness and straightness, all of Seco's drilling, boring and reaming tools offer the same high and consistent quality. Seco's boring heads will always guarantee the best results on straightness.

√Ra Surface finish
For a really smooth hole surface Bifix/is your first choice, and Seco's fine boring heads offer a full range of machining capabilities.

TCTR Thread Tolerance Class

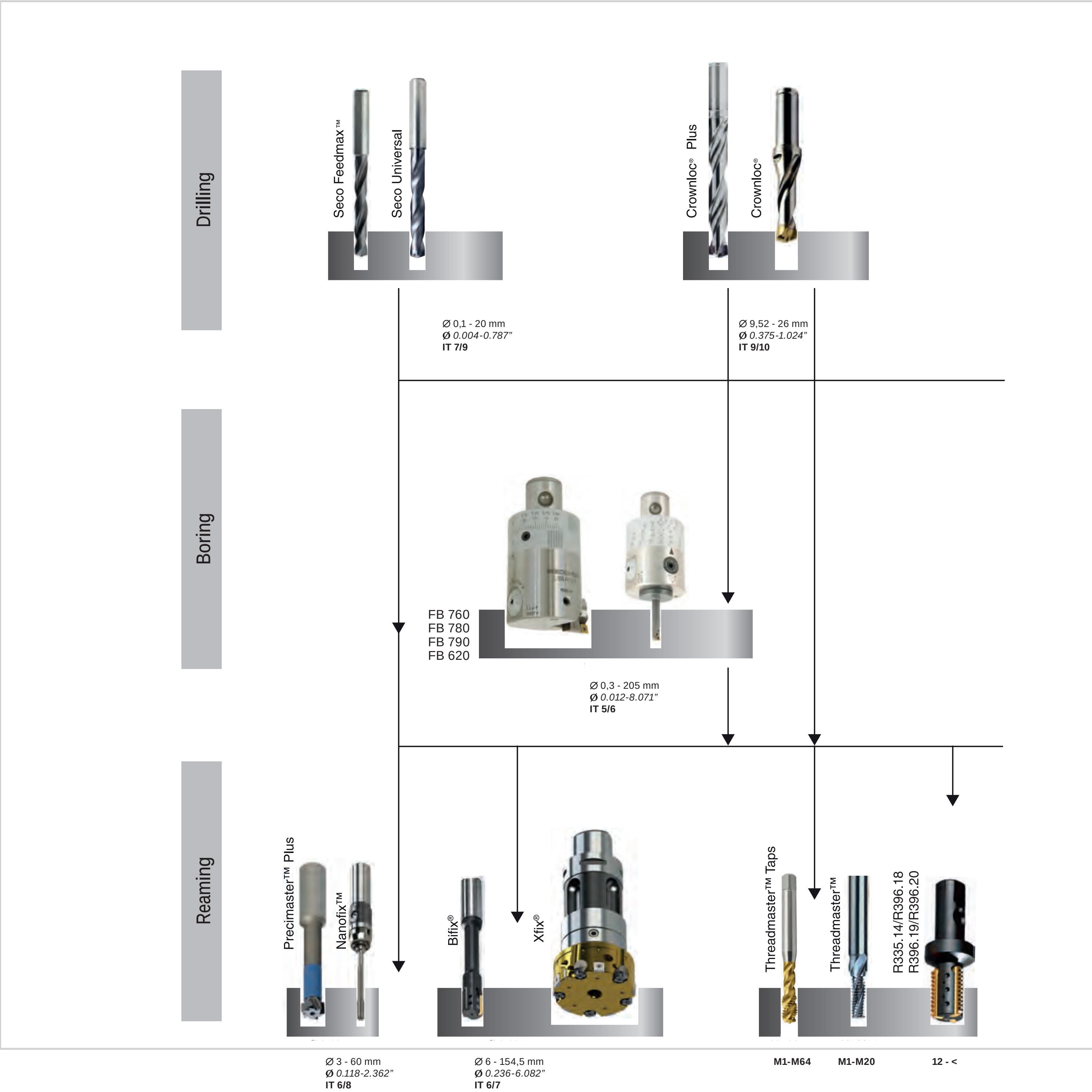
IT Hole tolerance

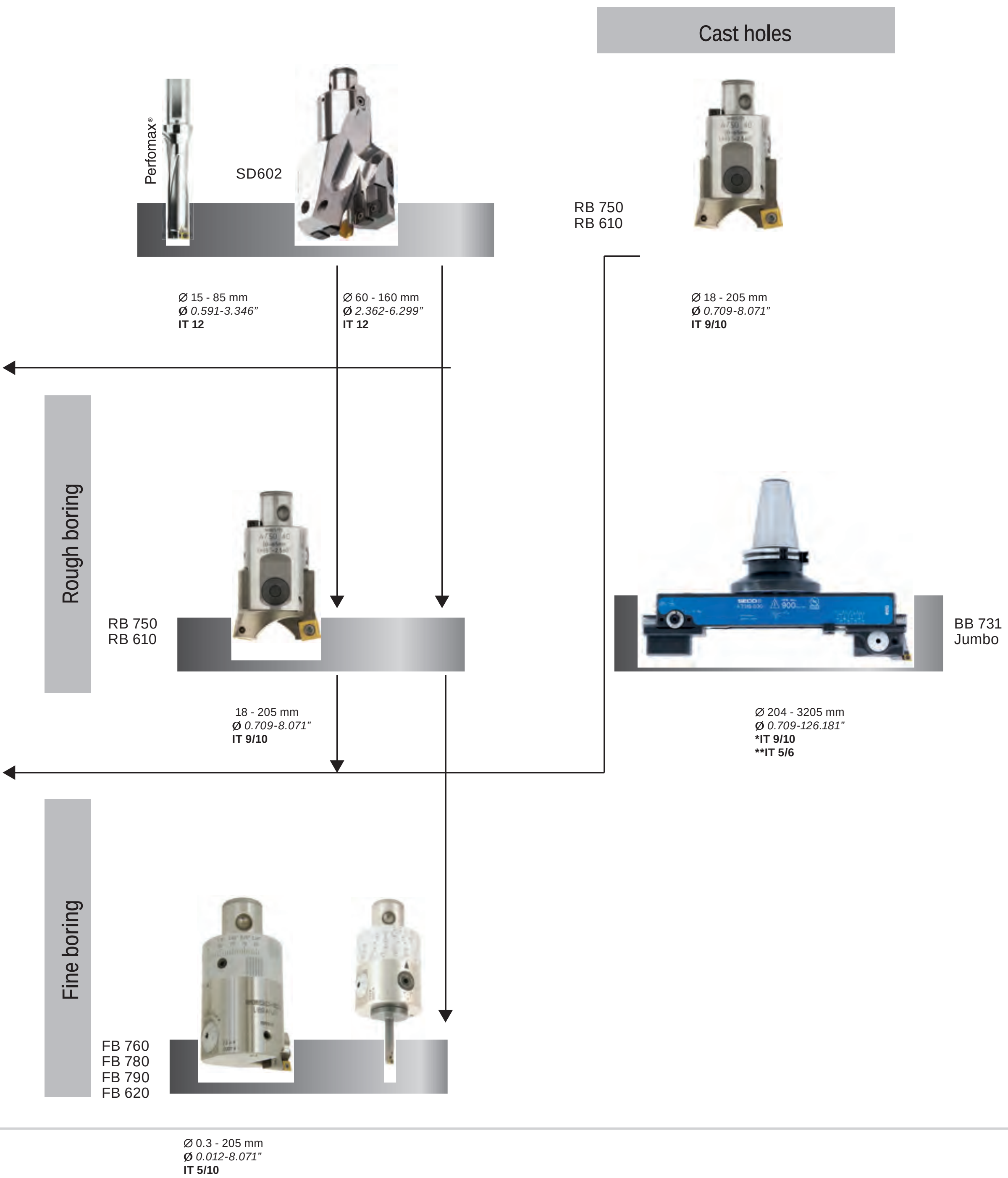
Tool guide

Feedmax, Crownloc and Perfomax
are used to drill holes 0.1-160 mm *(0.004-6.299")* in diameter, with tolerances from IT7 to IT12.
For already cast holes, rough boring or semi-finishing is often used, with Bridge Bars and Jumbo Bridge Bars used for the large diameters.
Finally, high quality holes are made with reaming and fine boring heads, reaching tolerances of IT5 or IT6.
* Rough IT9/10, ** Fine IT 5/6

Threadmaster DTM, TM, TM2, 396.18 and 396.19;
The same cutter could be used for machining right and left hand threads. Metric and UN versions are only for internal threading. It's also possible to make all types of tolerances with the same cutter.

Threadmaster Tap:
Available in the most popular threads and tolerances in both cutting and forming taps.




Cast holes
Perfomax®
SD602
RB 750
RB 610
Ø 15 - 85 mm
Ø 0.591-3.346"
IT 12
Ø 60 - 160 mm
Ø 2.362-6.299"
IT 12
Ø 18 - 205 mm
Ø 0.709-8.071"
IT 9/10
Rough boring
RB 750
RB 610
18 - 205 mm
Ø 0.709-8.071"
IT 9/10
BB 731
Jumbo
Ø 204 - 3205 mm
Ø 0.709-126.181"
*IT 9/10
**IT 5/6
Fine boring
FB 760
FB 780
FB 790
FB 620
Ø 0.3 - 205 mm
Ø 0.012-8.071"
IT 5/10

PERFOMAX®

DRILL WITH STRENGTH, STABILITY AND PRECISION

Perfomax® indexable drills are the natural choice for large-diameter holes. These drills can run at high cutting speeds and feed rates because they combine a strong, rigid design with a wide array of available inserts.

EXPANDED RANGE

- 2xD, 3xD, 4xD and 5xD
- Available in most common shank types
- Diameter range 15-160 mm (.590-6.299 inch)

SECO

DRILLING

OPTIMIZED GRADES AND GEOMETRIES FOR DIFFERENT WORKPIECE MATERIALS SECURE LONG, PREDICTABLE TOOL LIFE

- Square inserts with four edges
- Strong design
- Handles high feed rates

DRILL BODY EXCELLENCE

- New flute design
- Wave pattern in the flute
- Polished drill body
- Laser hardened

Drilling range - Choice of drill

Feedmax™ solid carbide drills

Productivity
- Low cost/hole through high productivity
- Increased capacity through higher output
- Long and predictable tool life
- Excellent hole quality due to material/ application optimized products

Crownloc® & Crownloc® Plus Exchangeeble crown drills

Flexibility
- High quality holes at lower cost
- Easy to use
- Consistent performance and repeatability – new crown with every change
- Reduced inventory cost

Perfomax® Indexable insert drills

Cost effectiveness
- Excellent productivity through drill body strength in combination with strong square inserts
- Versaltile drilling solution, wide application area
- Safe and secure drilling process
- Lowest cost/cutting edge (tool cost)

SMG - Introduction

The foundation for SMG is a classification of workpiece materials based on their type rather than their relative machinability and consequently it contains workpiece materials like composites. It is comprehensive enough, but still easy to identify to which SMG a particular material belongs.
Each SMG has a specific material standard in a specific condition assigned as reference to allow easy adjustment of cutting data for any actual material compared to any Seco reference material see pages 580-591.

As example the reference materials EN C45E for SMG P4 and EN 42 CrMo 4 for both SMG P5 and SMG H5 see further details in the following tables.
In SMG classification of workpiece materials involves a specific material standard in a specific condition assigned as reference for easy and unambigious adjustment of cutting data for any actual material compared to any Seco reference material. As examples the reference materials EN C45E for SMG P4 and EN 42 CrMo 4 for both SMG P5 and SMG H5 shown below in table 1 where the reference level material property is indicated.

SMG	Description	Properties	Reference
P4	Low-alloy general structural steels, 0.25% < C < 0.67%wt Low-alloy Quench & Temper steels	520 < R_m < 1200	C 45E R_m = 660 N/mm²
P5	Structural steels, 0.25% < C < 0.67%wt Quench & Temper steels	550 < R_m < 1200	42 CrMo 4 R_m = 700 N/mm²

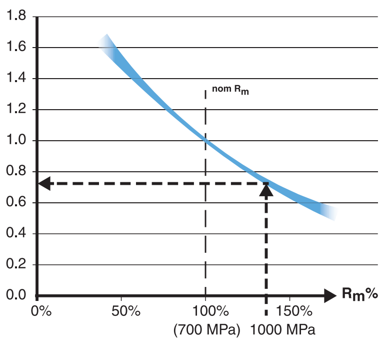
SMG	Description	Properties	Reference
H5	Quenched & Tempered steels	38 < HRC < 56	42 CrMo 4 50 HRC

Focusing specifically on EN 42 CrMo 4 in annealed condition, the ultimate tensile strength R_m may typically vary between R_m = 630 N/mm² and R_m = 780 N/mm², which provide a reference level for SMG P5.

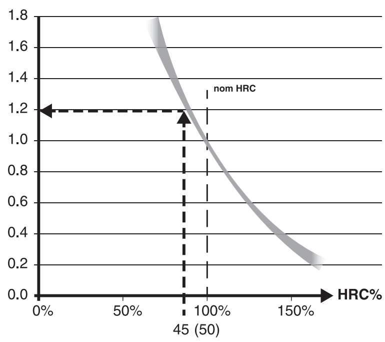
In Quenched & Tempered condition, the ultimate tensile strength R_m may typically be between R_m = 900 N/mm² and R_m = 1100 N/mm² thus still belongs to SMG P5. However, if hardened above R_m = 1200 N/mm² it now belongs to SMG H5.

SMG	EN	W.-Nr	AFNOR	BS	UNI	JIS	AISI / ASTM	GOST	Condition	Rm_nom	HRCnom
P5	42 CrMo 4	1.1201	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	4142, 4140	38HM	Annealed	700	
P5	42 CrMo 4	1.1201	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	4142, 4140	38HM	Quenched & Tempered	1000	
H5	42 CrMo 4	1.1201	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	4142, 4140	38HM	Quenched & Tempered		45
H5	42 CrMo 4	1.1201	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	4142, 4140	38HM	Quenched & Tempered		50

The EN 42CrMo4 quench & tempered steel could be used to illustrate the machinability dependence of materials' condition.



The graphs below indicate how speed recommendations for a nominal material conditions may be adjusted for relative R_m (left diagram valid for ISO-P) and for relative HRC (valid for ISO-H).



To further illustrate how the SMG P5 nominal v_c can be adjusted to a more accurate recommended v_c we need ultimate tensile strength R_m data and in this case we use the EN 42 CrMo 4 quenched & tempered to R_m = 1000 N/mm² according to above table (bold blue arrows).
Assume that we find that the SMG P5 nominal v_c = 280 m/min for a certain product and machining.
Then, actual recommended v_c = 280 m/min x 0,75 = 210 m/min.
Consequently in the SMG H5 the nominal v_c can be adjusted using the hardened EN 42 CrMo 4 at HRC 45 (smaller grey arrows).

Assume that the SMG H5 nominal v_c = 50 m/min for a certain product and machining using a coated cemented carbide tool then, actual recommended v_c = 50 m/min x 1,2 = 60 m/min.
For further workpiece material details please see page(s) 580-591 and suggested cutting data at applicable pages.
For more convenient cutting data handling we recommend applicable tools in My Pages – Suggest on www.secotools.com

ISO attribute	Explanation
ADJLN	Minimum adjustment limit
ADJLX	Maximum adjustment limit
ADJRG	Adjustment range
AN	Clearance angle major
APMX	Depth of cut maximum
AZ	Maximum plunge depth
B	Shank width
BD	Body diameter
BDX	Body diameter maximum
BLQ	Balance quality code
BN	Face land width
CBDP	Connection bore depth
CDX	Cutting depth maximum
CEDC	Cutting edge count
CHA	Cross hole angle
CHW	Corner chamfer width
CNT	Coolant entry thread size
CW	Cutting width
CZC	Connection size code
D1	Fixing hole diameter
DC	Cutting diameter
DCB	Connection bore diameter
DCBN	Connection bore diameter minimum
DCBX	Connection bore diameter maximum
DCB1	Connection bore diameter 1
DCC	Design configuration style code
DCINN	Minimum cutting diameter internal
DCINX	Maximum cutting diameter internal
DCN	Minimum cutting diameter
DCON	Connection diameter
DCX	Maximum cutting diameter
DF	Flange diameter
DMM	Shank diameter
FLGW	Flange width
GAN	Insert rake angle
GB	Face land angle
HTB	Body height
IC	Inscribed circle diameter
INSD	Insert diameter
INSL	Insert length
KRINS	Major cutting edge angle
L	Cutting edge length
LB	Body length
LCF	Chip flute length
LE	Cutting edge effective length
LF	Functional length
LFS	Secondary functional length
LH	Head length
LPR	Protruding length
LS	Shank length
LSC	Clamping length
LU	Usable length
LUX	Maximum usable length
M	M-dimension
OAL	Overall length
RE	Corner radius
S	Insert thickness
TDZ	Thread diameter size
WB	Body width
WF	Functional width

High performance and Universal solutions

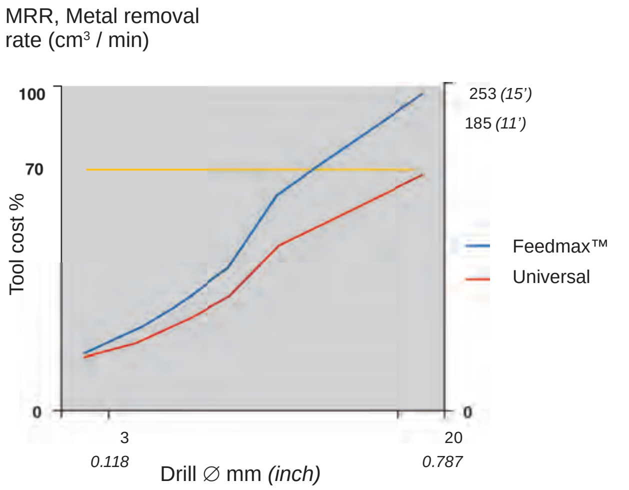
What are you looking for in your solid drill application?

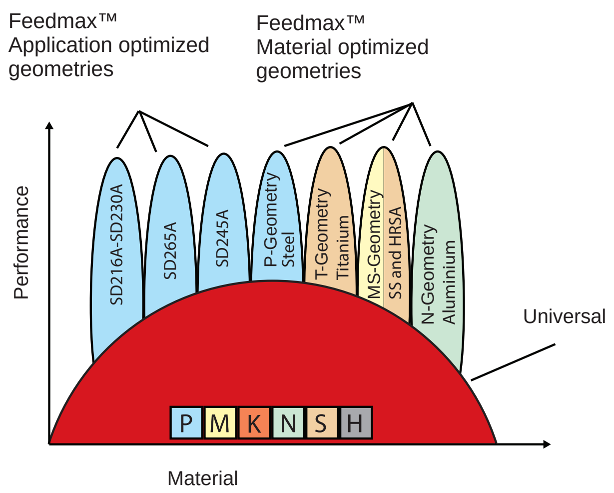
Universal – Versatile general performance solid carbide drill

Universal is a multi purpose general performance solid carbide drill, that can be used in a wide range of materials and applications in all industry segments. Thanks to the design with a strong self centering 140 degree drill point, polished chip flutes and the excellent quality of the drill - high capacity utilization, application security and versatility is provided at a very low cost.
With Universal stock holding cost can be reduced and greater machining flexibility is offered, leading to reduced set-up time.
Universal is an alternative to Feedmax™ in operations when versatility, flexibility and reduced stock holding cost are the main targets.

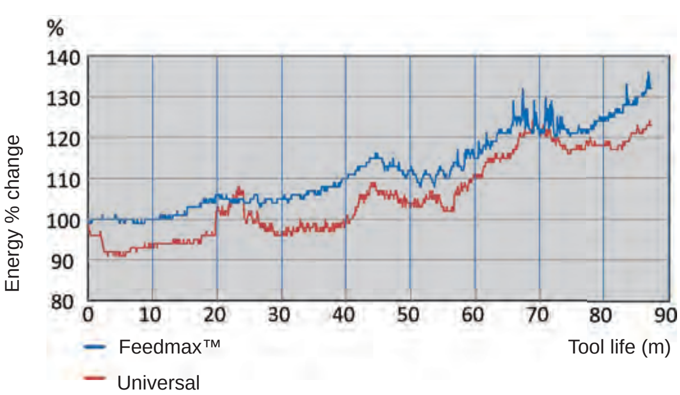
Feedmax™ – Productive high performance solid carbide drill

Feedmax™ offers a unique combination of state-of-the-art carbide, coating- and geometry technology.
Feedmax™ is designed for high productivity and low cost per hole with high feeds up to 0,70 mm/rev *(0.028 in/rev)* and high cutting speeds up to 220 m/min *(720 sf/min)*. With excellent centering capabilities - high hole quality is achieved with no need for center drilling operations.
Thanks to the modern coating with high hot hardness, the strong cutting edges with protective corner chamfers, high strength carbide rod, excellent chip evacuation capabilities and a superb cutting edge quality - a long and predictable tool life is achieved.
Feedmax™ has a wide range of optimized geometries for different materials and applications, to obtain a good quality hole at the lowest cost.

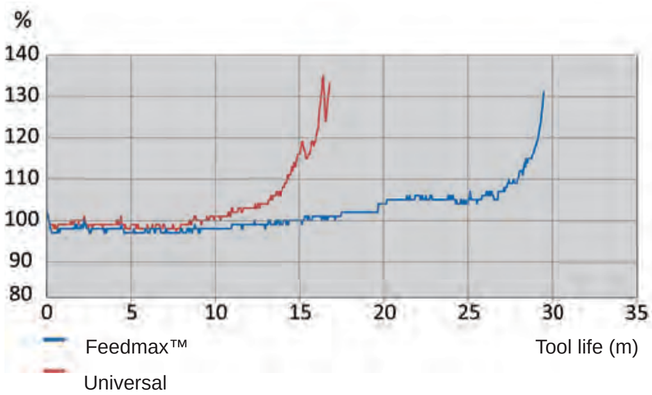




Tool life, lower cutting data



Tool life, high cutting data



First hole is set as reference, 100% based on the spindle power
Cutting data
V_c = 90 m/min
f = 0,15 mm/rev

V_c= 295 sf/min
f = 0.006 in/rev
Material = SMG P5-P6, SS2244, DIN41CrMo4, AISI 4140

First hole is set as reference, 100% based on the spindle power
Cutting data
V_c = 160 m/min
f = 0,24 mm/rev

V_c = 525 sf/min
f = 0.009 in/rev
Material =SMG P5-P6, SS2244, DIN41CrMo4, AISI 4140

Product overview

Universal	∅ Range	Drill depth	Drill ∅ tolerance	Hole tolerance (1)	Surface finish (2)
SD1103  Page(s) 29-34	3-20 mm *(0.118-0.787")*	~ 3 x D	m7	**IT 8-9**	R_a 1-2 µm *R_a 39-79 µin*
SD1103A  Page(s) 35-40	3-20 mm *(0.118-0.787")*	~ 3 x D	m7	**IT 8-9**	R_a 1-2 µm *R_a 39-79 µin*
SD1105A  Page(s) 41-48	3-20 mm *(0.118-0.787")*	~ 5 x D	m7	**IT 8-9**	R_a 1-3 µm *R_a 39-118 µin*
SD1108A  Page(s) 45-53	3-20 mm *(0.118-0.787")*	~ 8 x D	m7	**IT 9**	R_a 1-3 µm *R_a 39-118 µin*
SD1112A  Page(s) 54-57	3-20 mm *(0.118-0.787")*	~ 12 x D	m7	**IT 9**	R_a 1-3 µm *R_a 39-118 µin*

1) Variations can occur depending on the material and the cutting data used.
2) Drill depth, cutting data, coolant pressure and material can cause deterioration of the surface finish.

Product overview

Feedmax™	∅ Range	Drill depth	Drill ∅ tolerance	Hole tolerance (1)	Surface finish (2)
SD203A-P  Page(s) 59-64	2-20 mm *(0.078-0.787")*	~ 3 x D	m7	**IT 8-9**	R_a 1-2 µm *R_a 39-79 µin*
SD205A-P  Page(s) 65-72	2-20 mm *(0.078-0.787")*	~ 5 x D	m7	**IT 8-9**	R_a 1-2 µm *R_a 39-79 µin*
SD206, SD206A  Page(s) 73-74	0,7-2,0 mm *(0.027-0.078")*	~ 6 x D	h6	**IT 9**	R_a 1-2 µm *R_a 39-79 µin*
SD207A-P  Page(s) 75-77	3-20 mm *(0.118-0.787")*	~ 7 x D	m7	**IT 9**	R_a 1-3 µm *R_a 39-118 µin*
SD216A  Page(s) 78	3-12 mm *(0.118-0.472)*	~ 16 x D	m7	**IT 9**	R_a 1-3 µm *R_a 39-118 µin*
SD230A  Page(s) 79	4-10 mm *(0.157-0.393")*	~ 30 x D	m7	**IT 9**	R_a 1-3 µm *R_a 39-118 µin*

1) Variations can occur depending on the material and the cutting data used.
2) Drill depth, cutting data, coolant pressure and material can cause deterioration of the surface finish.

Product overview

Feedmax™	∅ Range	Drill depth	Drill ∅ tolerance	Hole tolerance (1)	Surface finish (2)
SD245A  Page(s) 81-82	5-14 mm *(0.196-0.551")*	~ 5 x D	m7	**IT 8**	R_a 1-2 µm *R_a 39-79 µin*
SD265A  Page(s) 84	6-16 mm *(0.236-0.630")*	~ 5 x D	js6	**IT 7**	R_a 1-2 µm *R_a 39-79 µin*
SD203A-MS  Page(s) 91-95	2-20 mm *(0.079-0.551")*	~ 3 x D	m7	**IT 8-9**	R_a 1-2 µm *R_a 39-79 µin*
SD205A-MS  Page(s) 96-99	2-20 mm *(0.079-0.551")*	~ 5 x D	m7	**IT 8-9**	R_a 1-2 µm *R_a 39-79 µin*
SD203A-M Superalloys  Page(s) 100-102	3-20 mm *(0.098-0.551")*	~ 3 x D	m7	**IT 8-9**	R_a 1-2 µm *R_a 39-79 µin*
SD205A-M Superalloys  Page(s) 103-105	3-20 mm *(0.098-0.551")*	~ 5 x D	m7	**IT 8-9**	R_a 1-2 µm *R_a 39-79 µin*

1) Variations can occur depending on the material and the cutting data used.
2) Drill depth, cutting data, coolant pressure and material can cause deterioration of the surface finish.

Product overview

Feedmax™	∅ Range	Drill depth	Drill ∅ tolerance	Hole tolerance (1)	Surface finish (2)
SD203A-T, SD205A-T **Titanium alloys**  Page(s) 106-108	3-20 mm *(0.118-0.787")*	~ 3 x D, ~ 5 x D	m7	**IT 8-9**	R_a 1-2 µm R_a *39-79 µin*
SD203A-N **Aluminium**  Page(s) 109-110	3-20 mm *(0.098-0.551")*	~ 3 x D	m7	**IT 8-9**	R_a 1-2 µm R_a *39-79 µin*
SD205A-C1, -C2 **Diamond coated drills for composites**  Page(s) 111-115	3.2-12.7 mm *(0.125-0.500")*	~ 5 x D	m7	**IT 9**	–
SD205-CX1, -CX2, -CX31 **PCD drills for composites**  Page(s) 116-118	3.26-9.53mm *(0.128-0.375")*	~ 5 x D	m7	**IT9**	–
SD22  Page(s) 120-126	0.1-2.0 mm *(0.004-0.079")*	~ 2 x D	0,005/0 *(+0.0002"/0)*	**–**	–
SD26  Page(s) 127-133	0.1-2.0 mm *(0.004-0.079")*	~ 6 x D	0-0,04 mm *(0/-0.0016")*	–	–

1) Variations can occur depending on the material and the cutting data used.
2) Drill depth, cutting data, coolant pressure and material can cause deterioration of the surface finish.

SECO

Code keys

Universal

Type of drill
Solid carbide drill:
SD1103: ~3 x D
SD1105: ~5 x D
SD1108: ~8 x D
SD1112: ~12 x D

Drill diameter

Shank diameter

Right hand rotation

SD1105 A - 0850 - 049 - 10 R 1

Internal through coolant

Drilling depth

Type of shank
1. Cylindrical

Feedmax™

Type of drill
Solid carbide drill:
SD203: ~3 x D
SD205: ~5 x D
SD207: ~7 x D

Drill diameter

Shank diameter

Right hand rotation

P - Geometry for steel
MS - Geometry for super-alloys and SS

SD205 A - 0950 - 049 - 10 R 1 - P

Internal through coolant

Drilling depth

Type of shank
1. Cylindrical

Feedmax™

Type of drill
Solid carbide drill:
SD206: ~6 x D
SD216: ~16 x D
SD230: ~30 x D
SD245: ~5 x D
SD265: ~5 x D
SD22: ~2 x D
SD26: ~6 x D

Drill diameter

Shank diameter

Right hand rotation

M - Geometry for superalloys
T- Geometry for titanium alloys
N- Geometry for aluminium
C1 - Geometry for CFRP and exiting in CFRP
C2 - Geometry for CFRP and exiting in i.e. Ti or Al
CX1/CX2/CX3 - PCD drills for CFRP and GFRP

SD205 A - 9.5 - 45 - 10 R 1 - M

Internal through coolant

Drilling depth

Type of shank
1. Cylindrical
5. Whistle Notch

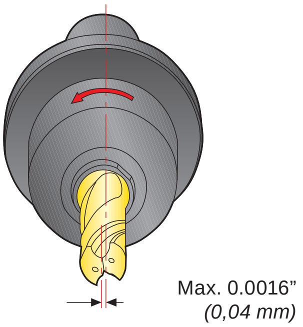
Set up

Holding/run-Out
Drills with cylindrical shanks can be used with Shrinkfitholder, hydraulic chucks or collet chucks. Keep the total indicated run-out of the drill within 0,04 mm *(0.0016")* measured in the spindle. For best result keep run-out 0,02 mm *(0.0008")*.

Stability
The stability of the application is important to obtain the best tool life and hole accuracy. Check the condition of the machine spindle, fixture and fixturing of the component to secure maximum stability and rigidity. Unstable conditions can cause tool breakages.

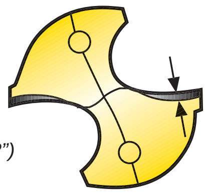
Tool Life
Drills should not be used with flank wear exceeding 0,1-0,3 mm *(0.004-0.012")* measured at the largest point.

Recommended Tool Holders



For best result use holders:
Type 5603 - Shrinkfit holders, DIN type
Type 5834 - Hydraulic chucks
Type 5672 - High precision collet chucks
For more information see Tooling Systems catalogue

0,1-0,3 mm *(0.004-0.012")*



Shrinkfit holder
(For cylindrical, R1 shanks only)

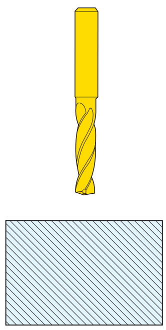
Hydraulic chuck
(For cylindrical, -R1 shanks only)

High precision collet chucks
(For cylindrical, R1 shanks only)

Machining methods

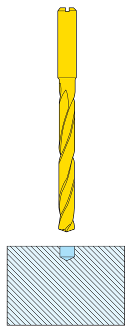
Recommended Tool Holders

3-15 x D



No pre-drilling or entrance feed needed.

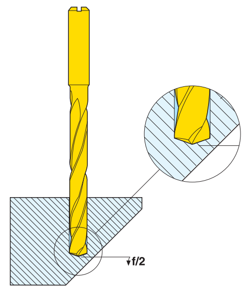
> 16 x D



When using a longer drill it´s recommended to drill a pilot hole.

Angled Hole Exits

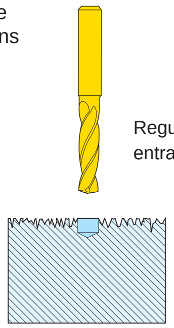
Before hole exit reduce the feed/rev by 50%.



Or use SD245A drills.

Irregular/angled Hole entrance

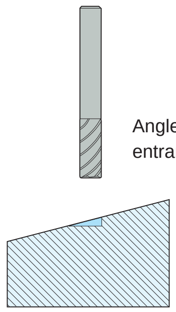
If irregular or angle entrance use pre operations accordingly



Regular hole entrance

Pre drill with a short standard Feedmax.

Pre-machining alternatives

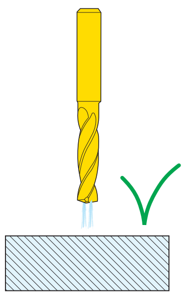


Angled hole entrance

Machine a flat using an end mill from the Seco range.

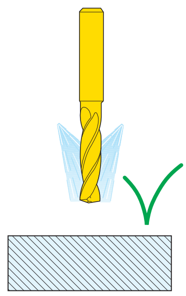
Coolant Recommendations

1.



First choice

2.



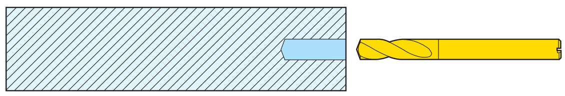
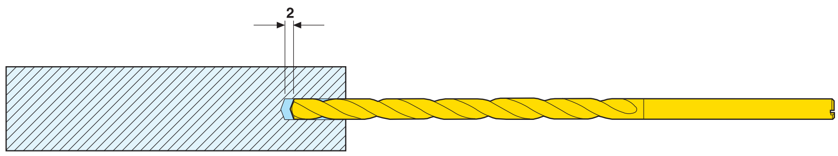
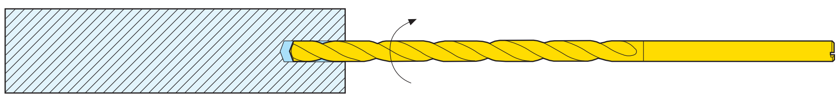
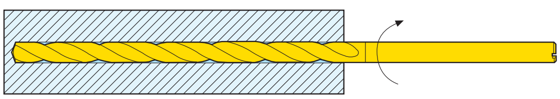
≤ 5 x D

1. Coolant pressure*
Minimum recommended coolant pressure 10 bar with ≤ 5 x D
Minimum recommended coolant pressure 30 bar with > 5 x D
Minimum recommended coolant pressure 40 bar with > 16 x D

2. Coolant mix
Recommended emulsion mix 6-8%.
When drilling in stainless steels, superalloys and high strength steels a mix of 10% is recommended.

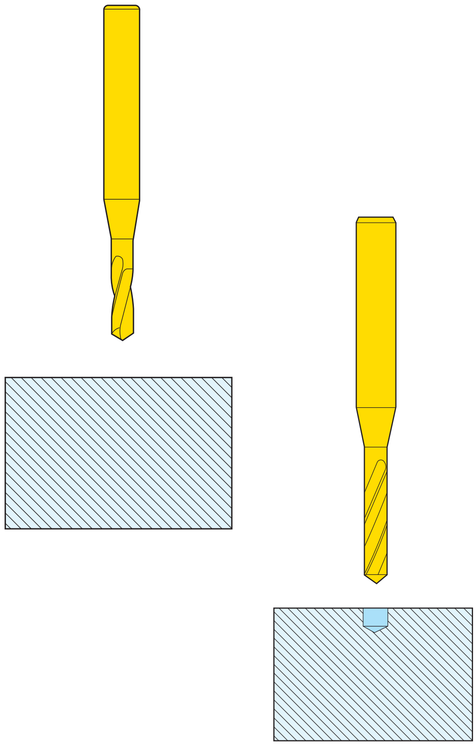
*If lower coolant pressure is used adjust by reducing cutting data accordingly.

Machining methods

SD216A (16 x D) up to SD230A (30 x D) - STEP BY STEP	
1. 	1. Drill a pilot hole 2-3 x D. Use a standard drill with the same diameter i.e. SD203A or SD1103 (with 140° point angle).
2. 	2. Enter the hole with the machine spindle stopped or use a low rpm (500). Stop 2 mm *(0.080”)* above the pilot hole depth.
3. 	3. Start the machine spindle and the coolant, drill with the recommended cutting data. (No peck drilling).
4. 	4. When reaching full depth, reduce the rpm to 500 and then retract the drill with 4 times the work feed to avoid retraction marks.

Machining methods - Micro drills

Pilot Hole



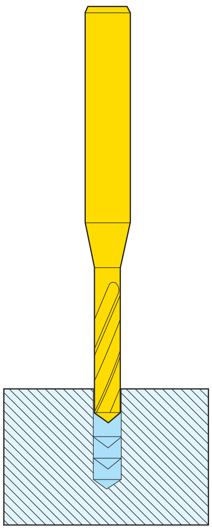
SD22

For optimal hole tolerance and positioning accuracy use an SD22 pilot drill of the same diameter.

SD26

Below 1 mm *(0.039)* inch diameter drill we highly recommend to use a pilot drill.

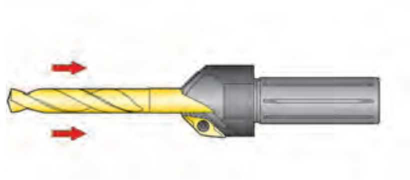
Pecking



For long chipping materials a pecking cycle should be used. Generally peck every 1 x D drilling depth.

Chamfer module mounting instructions

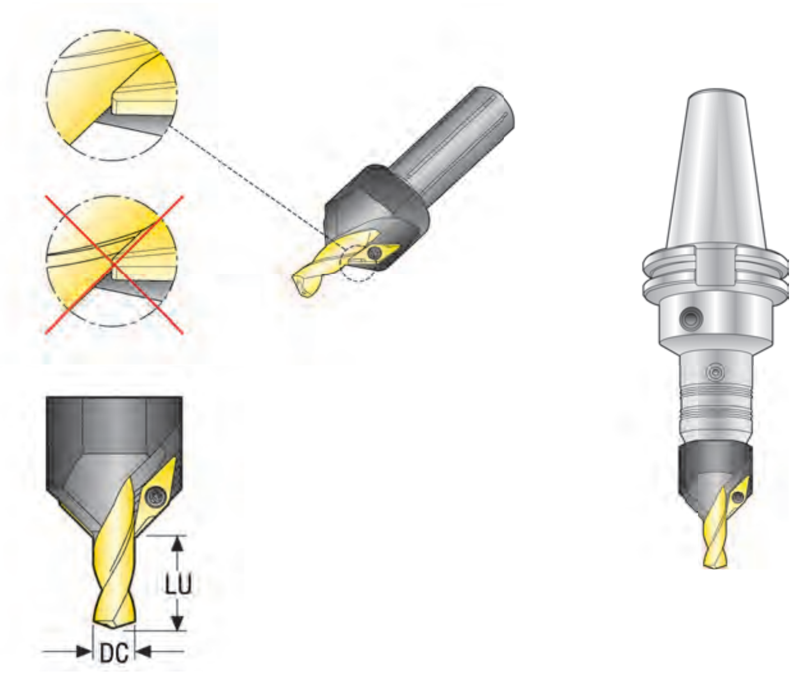
1.



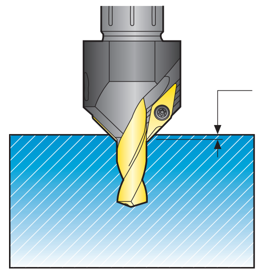
2.

3.

4.



Maximum chamfer depth



LU drilling depth (min-max) **Drill diameter D_c**		**SD1103 / SD203A**		**SD1105 / SD205A**		**SD207A**	
mm	*(inch)*	*mm*	*(inch)*	*mm*	*(inch)*	*mm*	(inch)
4.00-4.75	*0.157-0.187*	4-17	*0.157-0.669*	10-27	*0.394-1.063*	30-45	*1.181-1.772*
4.76-6.00	*0.187-0.236*	6-20	*0.236-0.787*	18-32	*0.709-1.260*	30-45	*1.181-1.772*
6.01-8.00	*0.237-0.315*	15-27	*0.591-1.063*	28-42	*1.102-1.654*	42-57	*1.654-2.244*
8.01-10.00	*0.315-0.394*	17-31	*0.669-1.220*	34-48	*1.339-1.890*	47-62	*1.850-2.441*
10.01-12.00	*0.394-0.472*	21-36	*0.827-1.417*	40-56	*1.575-2.205*	57-72	*2.244-2.835*
12.01-14.00	*0.473-0.551*	22-37	*0.866-1.457*	43-59	*1.693-2.323*	68-83	*2.677-3.268*
14.01-16.00	*0.552-0.630*	23-39	*0.906-1.535*	44-60	*1.732-2.362*	76-92	*2.992-3.622*

To be used with cylindrical shank only (R1).

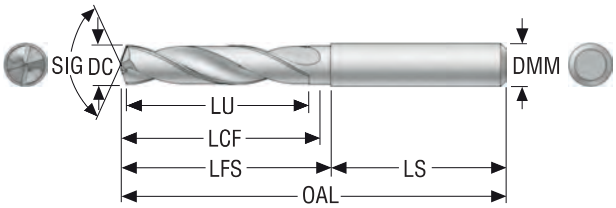
Seco Universal – Single diameter drills

Seco Universal solid carbide drills are a cost effective and versatile solution with a perfect fit for small and medium batch production. The Seco Universal drills are suitable for most applications across all industry segments.

- Multi-purpose, 4-facett point geometry that provides excellent centering capability
- Highly wear resistant TiAlN coating secures for long tool life
- Can be used in conjunction with Threadmaster™ Tap and in pre-bore operations with Precimaster™ Plus

SD1103

Drilling depth ~ 3 x D



- Cylindrical shank DIN 6537A
- DC tolerance m7
- External coolant
- Point angle: 140°
- Coating: TiAlN
- Hole tolerance: IT8-9
- For cutting data see page(s) 144
- For intermediate diameters see Custom Design software.

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1103-0300-014-06R1 *SD_DRILL_3.0MM_3XD*	02898974	3,0 *0.118*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103-0310-014-06R1 *SD_DRILL_3.1MM_3XD*	02898975	3,1 *0.122*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103-0318-014-06R1 *SD_DRILL_1/8_3XD*	02898976	3,175 *0.125*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103-0320-014-06R1 *SD_DRILL_3.2MM_3XD*	02898977	3,2 *0.126*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103-0325-014-06R1 *SD_DRILL_3.25MM_3XD*	02898978	3,25 *0.128*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103-0330-014-06R1 *SD_DRILL_3.3MM_3XD*	02898979	3,3 *0.130*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103-0340-014-06R1 *SD_DRILL_3.4MM_3XD*	02898980	3,4 *0.134*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103-0350-014-06R1 *SD_DRILL_3.5MM_3XD*	02898981	3,5 *0.138*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103-0357-014-06R1 *SD_DRILL_9/64_3XD*	02898982	3,572 *0.141*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103-0360-014-06R1 *SD_DRILL_3.6MM_3XD*	02898983	3,6 *0.142*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103-0365-014-06R1 *SD_DRILL_3.65MM_3XD*	02898984	3,65 *0.144*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103-0370-014-06R1 *SD_DRILL_3.7MM_3XD*	02898985	3,7 *0.146*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103-0380-017-06R1 *SD_DRILL_3.8MM_3XD*	02898986	3,8 *0.150*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103-0390-017-06R1 *SD_DRILL_3.9MM_3XD*	02898987	3,9 *0.154*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103-0397-017-06R1 *SD_DRILL_5/32_3XD*	02898988	3,969 *0.156*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103-0400-017-06R1 *SD_DRILL_4.0MM_3XD*	02898989	4,0 *0.157*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103-0410-017-06R1 *SD_DRILL_4.1MM_3XD*	02898990	4,1 *0.161*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103-0420-017-06R1 *SD_DRILL_4.2MM_3XD*	02898991	4,2 *0.165*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103-0430-017-06R1 *SD_DRILL_4.3MM_3XD*	02898992	4,3 *0.169*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103-0437-017-06R1 *SD_DRILL_11/64_3XD*	02898993	4,366 *0.172*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103-0440-017-06R1 *SD_DRILL_4.4MM_3XD*	02898994	4,4 *0.173*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*

Designation / *Designation Ansi*	Item number	DC mm / *Inch*	LU mm / *Inch*	OAL mm / *Inch*	LFS mm / *Inch*	LS mm / *Inch*	LCF mm / *Inch*	DMM mm / *Inch*
SD1103-0450-017-06R1 *SD_DRILL_4.5MM_3XD*	02898995	4,5 *0.177*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103-0460-017-06R1 *SD_DRILL_4.6MM_3XD*	02898996	4,6 *0.181*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103-0465-017-06R1 *SD_DRILL_4.65MM_3XD*	02898997	4,65 *0.183*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103-0470-017-06R1 *SD_DRILL_4.7MM_3XD*	02898998	4,7 *0.185*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103-0476-020-06R1 *SD_DRILL_3/16_3XD*	02898999	4,763 *0.188*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0480-020-06R1 *SD_DRILL_4.8MM_3XD*	02899000	4,8 *0.189*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0490-020-06R1 *SD_DRILL_4.9MM_3XD*	02899001	4,9 *0.193*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0500-020-06R1 *SD_DRILL_5.0MM_3XD*	02899002	5,0 *0.197*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0510-020-06R1 *SD_DRILL_5.1MM_3XD*	02899003	5,1 *0.201*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0516-020-06R1 *SD_DRILL_13/64_3XD*	02899004	5,159 *0.203*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0520-020-06R1 *SD_DRILL_5.2MM_3XD*	02899005	5,2 *0.205*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0530-020-06R1 *SD_DRILL_5.3MM_3XD*	02899006	5,3 *0.209*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0540-020-06R1 *SD_DRILL_5.4MM_3XD*	02899007	5,4 *0.213*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0550-020-06R1 *SD_DRILL_5.5MM_3XD*	02899008	5,5 *0.217*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0555-020-06R1 *SD_DRILL_5.55MM_3XD*	02899009	5,55 *0.219*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0556-020-06R1 *SD_DRILL_7/32_3XD*	02899010	5,556 *0.219*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0560-020-06R1 *SD_DRILL_5.6MM_3XD*	02899011	5,6 *0.220*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0570-020-06R1 *SD_DRILL_5.7MM_3XD*	02899012	5,7 *0.224*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0580-020-06R1 *SD_DRILL_5.8MM_3XD*	02899013	5,8 *0.228*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0590-020-06R1 *SD_DRILL_5.9MM_3XD*	02899014	5,9 *0.232*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0595-020-06R1 *SD_DRILL_15/64_3XD*	02899015	5,953 *0.234*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0600-020-06R1 *SD_DRILL_6.0MM_3XD*	02899016	6,0 *0.236*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103-0610-024-08R1 *SD_DRILL_6.1MM_3XD*	02899017	6,1 *0.240*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103-0620-024-08R1 *SD_DRILL_6.2MM_3XD*	02899018	6,2 *0.244*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103-0630-024-08R1 *SD_DRILL_6.3MM_3XD*	02899019	6,3 *0.248*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103-0635-024-08R1 *SD_DRILL_1/4_3XD*	02899020	6,35 *0.250*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103-0640-024-08R1 *SD_DRILL_6.4MM_3XD*	02899021	6,4 *0.252*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103-0650-024-08R1 *SD_DRILL_6.5MM_3XD*	02899022	6,5 *0.256*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103-0660-024-08R1 *SD_DRILL_6.6MM_3XD*	02899024	6,6 *0.260*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103-0675-024-08R1 *SD_DRILL_17/64_3XD*	02899025	6,747 *0.266*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103-0680-024-08R1 *SD_DRILL_6.8MM_3XD*	02899026	6,8 *0.268*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1103-0690-024-08R1 *SD_DRILL_6.9MM_3XD*	02899027	6,9 *0.272*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103-0700-024-08R1 *SD_DRILL_7.0MM_3XD*	02899028	7,0 *0.276*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103-0710-029-08R1 *SD_DRILL_7.1MM_3XD*	02899029	7,1 *0.280*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103-0714-029-08R1 *SD_DRILL_9/32_3XD*	02899030	7,144 *0.281*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103-0720-029-08R1 *SD_DRILL_7.2MM_3XD*	02899031	7,2 *0.283*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103-0730-029-08R1 *SD_DRILL_7.3MM_3XD*	02899032	7,3 *0.287*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103-0740-029-08R1 *SD_DRILL_7.4MM_3XD*	02899033	7,4 *0.291*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103-0750-029-08R1 *SD_DRILL_7.5MM_3XD*	02899034	7,5 *0.295*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103-0754-029-08R1 *SD_DRILL_19/64_3XD*	02899035	7,541 *0.297*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103-0755-029-08R1 *SD_DRILL_7.55MM_3XD*	02899036	7,55 *0.297*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103-0760-029-08R1 *SD_DRILL_7.6MM_3XD*	02899037	7,6 *0.299*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103-0770-029-08R1 *SD_DRILL_7.7MM_3XD*	02899038	7,7 *0.303*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103-0780-029-08R1 *SD_DRILL_7.8MM_3XD*	02899040	7,8 *0.307*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103-0790-029-08R1 *SD_DRILL_7.9MM_3XD*	02899041	7,9 *0.311*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103-0794-029-08R1 *SD_DRILL_5/16_3XD*	02899042	7,938 *0.313*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103-0800-029-08R1 *SD_DRILL_8.0MM_3XD*	02899043	8,0 *0.315*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103-0810-035-10R1 *SD_DRILL_8.1MM_3XD*	02899044	8,1 *0.319*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0820-035-10R1 *SD_DRILL_8.2MM_3XD*	02899045	8,2 *0.323*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0830-035-10R1 *SD_DRILL_8.3MM_3XD*	02899046	8,3 *0.327*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0833-035-10R1 *SD_DRILL_21/64_3XD*	02899047	8,334 *0.328*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0840-035-10R1 *SD_DRILL_8.4MM_3XD*	02899048	8,4 *0.331*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0850-035-10R1 *SD_DRILL_8.5MM_3XD*	02899049	8,5 *0.335*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0860-035-10R1 *SD_DRILL_8.6MM_3XD*	02899050	8,6 *0.339*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0870-035-10R1 *SD_DRILL_8.7MM_3XD*	02899051	8,7 *0.343*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0873-035-10R1 *SD_DRILL_11/32_3XD*	02899052	8,731 *0.344*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0880-035-10R1 *SD_DRILL_8.8MM_3XD*	02899053	8,8 *0.346*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0890-035-10R1 *SD_DRILL_8.9MM_3XD*	02899054	8,9 *0.350*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0900-035-10R1 *SD_DRILL_9.0MM_3XD*	02899055	9,0 *0.354*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0910-035-10R1 *SD_DRILL_9.1MM_3XD*	02899056	9,1 *0.358*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0913-035-10R1 *SD_DRILL_23/64_3XD*	02899058	9,128 *0.359*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0920-035-10R1 *SD_DRILL_9.2MM_3XD*	02899059	9,2 *0.362*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*

Introduction
Drilling
Reaming
Boring
Annex

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1103-0930-035-10R1 *SD_DRILL_9.3MM_3XD*	02899060	9,3 *0.366*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0940-035-10R1 *SD_DRILL_9.4MM_3XD*	02899061	9,4 *0.370*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0950-035-10R1 *SD_DRILL_9.5MM_3XD*	02899062	9,5 *0.374*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0953-035-10R1 *SD_DRILL_3/8_3XD*	02899063	9,525 *0.375*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0955-035-10R1 *SD_DRILL_9.55MM_3XD*	02899064	9,55 *0.376*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0960-035-10R1 *SD_DRILL_9.6MM_3XD*	02899065	9,6 *0.378*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0970-035-10R1 *SD_DRILL_9.7MM_3XD*	02899066	9,7 *0.382*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0980-035-10R1 *SD_DRILL_9.8MM_3XD*	02899067	9,8 *0.386*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0990-035-10R1 *SD_DRILL_9.9MM_3XD*	02899068	9,9 *0.390*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-0992-035-10R1 *SD_DRILL_25/64_3XD*	02899069	9,922 *0.391*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-1000-035-10R1 *SD_DRILL_10.0MM_3XD*	02899070	10,0 *0.394*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103-1020-040-12R1 *SD_DRILL_10.2MM_3XD*	02899071	10,2 *0.402*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1032-040-12R1 *SD_DRILL_13/32_3XD*	02899072	10,319 *0.406*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1040-040-12R1 *SD_DRILL_10.4MM_3XD*	02899073	10,4 *0.409*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1050-040-12R1 *SD_DRILL_10.5MM_3XD*	02899074	10,5 *0.413*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1060-040-12R1 *SD_DRILL_10.6MM_3XD*	02899075	10,6 *0.417*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1072-040-12R1 *SD_DRILL_27/64_3XD*	02899076	10,716 *0.422*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1080-040-12R1 *SD_DRILL_10.8MM_3XD*	02899077	10,8 *0.425*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1090-040-12R1 *SD_DRILL_10.9MM_3XD*	02899078	10,9 *0.429*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1100-040-12R1 *SD_DRILL_11.0MM_3XD*	02899079	11,0 *0.433*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1110-040-12R1 *SD_DRILL_11.1MM_3XD*	02899080	11,1 *0.437*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1111-040-12R1 *SD_DRILL_7/16_3XD*	02899081	11,113 *0.438*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1120-040-12R1 *SD_DRILL_11.2MM_3XD*	02899082	11,2 *0.441*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1130-040-12R1 *SD_DRILL_11.3MM_3XD*	02899083	11,3 *0.445*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1140-040-12R1 *SD_DRILL_11.4MM_3XD*	02899084	11,4 *0.449*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1150-040-12R1 *SD_DRILL_11.5MM_3XD*	02899085	11,5 *0.453*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1151-040-12R1 *SD_DRILL_29/64_3XD*	02899086	11,509 *0.453*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1155-040-12R1 *SD_DRILL_11.55MM_3XD*	02899087	11,55 *0.455*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1160-040-12R1 *SD_DRILL_11.6MM_3XD*	02899088	11,6 *0.457*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1170-040-12R1 *SD_DRILL_11.7MM_3XD*	02899089	11,7 *0.461*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1180-040-12R1 *SD_DRILL_11.8MM_3XD*	02899090	11,8 *0.465*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1103-1190-040-12R1 *SD_DRILL_11.9MM_3XD*	02899091	11,9 *0.469*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1191-040-12R1 *SD_DRILL_15/32_3XD*	02899092	11,906 *0.469*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1200-040-12R1 *SD_DRILL_12.0MM_3XD*	02899093	12,0 *0.472*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103-1210-043-14R1 *SD_DRILL_12.1MM_3XD*	02899094	12,1 *0.476*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1220-043-14R1 *SD_DRILL_12.2MM_3XD*	02899095	12,2 *0.480*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1230-043-14R1 *SD_DRILL_31/64_3XD*	02899096	12,303 *0.484*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1240-043-14R1 *SD_DRILL_12.4MM_3XD*	02899097	12,4 *0.488*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1250-043-14R1 *SD_DRILL_12.5MM_3XD*	02899098	12,5 *0.492*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1260-043-14R1 *SD_DRILL_12.6MM_3XD*	02899099	12,6 *0.496*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1270-043-14R1 *SD_DRILL_1/2_3XD*	02899100	12,7 *0.500*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1275-043-14R1 *SD_DRILL_12.75MM_3XD*	02899101	12,75 *0.502*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1280-043-14R1 *SD_DRILL_12.8MM_3XD*	02899102	12,8 *0.504*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1290-043-14R1 *SD_DRILL_12.9MM_3XD*	02899103	12,9 *0.508*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1300-043-14R1 *SD_DRILL_13.0MM_3XD*	02899104	13,0 *0.512*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1310-043-14R1 *SD_DRILL_33/64_3XD*	02899105	13,1 *0.516*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1320-043-14R1 *SD_DRILL_13.2MM_3XD*	02899106	13,2 *0.520*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1330-043-14R1 *SD_DRILL_13.3MM_3XD*	02899107	13,3 *0.524*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1340-043-14R1 *SD_DRILL_13.4MM_3XD*	02899108	13,4 *0.528*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1349-043-14R1 *SD_DRILL_17/32_3XD*	02899109	13,494 *0.531*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1350-043-14R1 *SD_DRILL_13.5MM_3XD*	02899110	13,5 *0.531*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1360-043-14R1 *SD_DRILL_13.6MM_3XD*	02899111	13,6 *0.535*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1370-043-14R1 *SD_DRILL_13.7MM_3XD*	02899112	13,7 *0.539*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1380-043-14R1 *SD_DRILL_13.8MM_3XD*	02899113	13,8 *0.543*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1390-043-14R1 *SD_DRILL_35/64_3XD*	02899114	13,9 *0.547*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1400-043-14R1 *SD_DRILL_14.0MM_3XD*	02899115	14,0 *0.551*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103-1420-045-16R1 *SD_DRILL_14.2MM_3XD*	02899116	14,2 *0.559*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103-1429-045-16R1 *SD_DRILL_9/16_3XD*	02899117	14,288 *0.563*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103-1450-045-16R1 *SD_DRILL_14.5MM_3XD*	02899119	14,5 *0.571*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103-1470-045-16R1 *SD_DRILL_14.7MM_3XD*	02899120	14,7 *0.579*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103-1475-045-16R1 *SD_DRILL_14.75MM_3XD*	02899121	14,75 *0.581*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103-1480-045-16R1 *SD_DRILL_14.8MM_3XD*	02899122	14,8 *0.583*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*

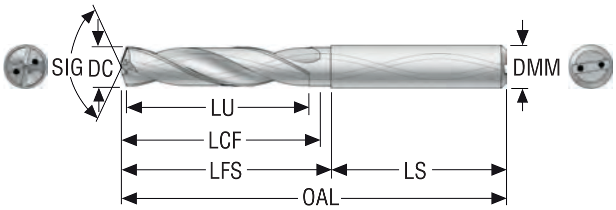
SECO

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1103-1500-045-16R1 *SD_DRILL_15.0MM_3XD*	02899123	15,0 *0.591*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103-1510-045-16R1 *SD_DRILL_15.1MM_3XD*	02899124	15,1 *0.594*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103-1530-045-16R1 *SD_DRILL_15.3MM_3XD*	02899125	15,3 *0.602*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103-1550-045-16R1 *SD_DRILL_15.5MM_3XD*	02899126	15,5 *0.610*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103-1570-045-16R1 *SD_DRILL_15.7MM_3XD*	02899127	15,7 *0.618*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103-1580-045-16R1 *SD_DRILL_15.8MM_3XD*	02899128	15,8 *0.622*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103-1588-045-16R1 *SD_DRILL_5/8_3XD*	02899129	15,875 *0.625*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103-1600-045-16R1 *SD_DRILL_16.0MM_3XD*	02899130	16,0 *0.630*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103-1650-051-18R1 *SD_DRILL_16.5MM_3XD*	02899131	16,5 *0.650*	51,0 *2.008*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD1103-1700-051-18R1 *SD_DRILL_17.0MM_3XD*	02899132	17,0 *0.669*	51,0 *2.008*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD1103-1750-051-18R1 *SD_DRILL_17.5MM_3XD*	02899133	17,5 *0.689*	51,0 *2.008*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD1103-1800-051-18R1 *SD_DRILL_18.0MM_3XD*	02899134	18,0 *0.709*	51,0 *2.008*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD1103-1850-055-20R1 *SD_DRILL_18.5MM_3XD*	02899135	18,5 *0.728*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD1103-1900-055-20R1 *SD_DRILL_19.0MM_3XD*	02899136	19,0 *0.748*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD1103-1905-055-20R1 *SD_DRILL_3/4_3XD*	02899137	19,05 *0.750*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD1103-1950-055-20R1 *SD_DRILL_19.5MM_3XD*	02899138	19,5 *0.768*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD1103-2000-055-20R1 *SD_DRILL_20.0MM_3XD*	02899139	20,0 *0.787*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*

Introduction
Drilling
Reaming
Boring
Annex

SD1103A

Drilling depth ~ 3 x D



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- Point angle: 140°
- Coating: TiAlN
- Hole tolerance: IT8-9
- For cutting data see page(s) 145
- For intermediate diameters see Custom Design software.

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1103A-0300-014-06R1 *SD_DRILL_3.0MM_3XD_A*	02898244	3,0 *0.118*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103A-0310-014-06R1 *SD_DRILL_3.1MM_3XD_A*	02898245	3,1 *0.122*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103A-0318-014-06R1 *SD_DRILL_1/8_3XD_A*	02898246	3,175 *0.125*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103A-0320-014-06R1 *SD_DRILL_3.2MM_3XD_A*	02898247	3,2 *0.126*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103A-0325-014-06R1 *SD_DRILL_3.25MM_3XD_A*	02898248	3,25 *0.128*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103A-0330-014-06R1 *SD_DRILL_3.3MM_3XD_A*	02898249	3,3 *0.130*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103A-0340-014-06R1 *SD_DRILL_3.4MM_3XD_A*	02898250	3,4 *0.134*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103A-0350-014-06R1 *SD_DRILL_3.5MM_3XD_A*	02898251	3,5 *0.138*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103A-0357-014-06R1 *SD_DRILL_9/64_3XD_A*	02898252	3,572 *0.141*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103A-0360-014-06R1 *SD_DRILL_3.6MM_3XD_A*	02898253	3,6 *0.142*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103A-0365-014-06R1 *SD_DRILL_3.65MM_3XD_A*	02898254	3,65 *0.144*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103A-0370-014-06R1 *SD_DRILL_3.7MM_3XD_A*	02898255	3,7 *0.146*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD1103A-0380-017-06R1 *SD_DRILL_3.8MM_3XD_A*	02898256	3,8 *0.150*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103A-0390-017-06R1 *SD_DRILL_3.9MM_3XD_A*	02898257	3,9 *0.154*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103A-0397-017-06R1 *SD_DRILL_5/32_3XD_A*	02898258	3,969 *0.156*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103A-0400-017-06R1 *SD_DRILL_4.0MM_3XD_A*	02898259	4,0 *0.157*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103A-0410-017-06R1 *SD_DRILL_4.1MM_3XD_A*	02898260	4,1 *0.161*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103A-0420-017-06R1 *SD_DRILL_4.2MM_3XD_A*	02898261	4,2 *0.165*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103A-0430-017-06R1 *SD_DRILL_4.3MM_3XD_A*	02898262	4,3 *0.169*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103A-0437-017-06R1 *SD_DRILL_11/64_3XD_A*	02898263	4,366 *0.172*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103A-0450-017-06R1 *SD_DRILL_4.5MM_3XD_A*	02898264	4,5 *0.177*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*

Designation Designation Ansi	Item number	DC mm Inch	LU mm Inch	OAL mm Inch	LFS mm Inch	LS mm Inch	LCF mm Inch	DMM mm Inch
SD1103A-0460-017-06R1 *SD_DRILL_4.6MM_3XD_A*	02898265	4,6 *0.181*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103A-0465-017-06R1 *SD_DRILL_4.65MM_3XD_A*	02898266	4,65 *0.183*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103A-0470-017-06R1 *SD_DRILL_4.7MM_3XD_A*	02898267	4,7 *0.185*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD1103A-0476-020-06R1 *SD_DRILL_3/16_3XD_A*	02898268	4,763 *0.188*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0480-020-06R1 *SD_DRILL_4.8MM_3XD_A*	02898269	4,8 *0.189*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0490-020-06R1 *SD_DRILL_4.9MM_3XD_A*	02898270	4,9 *0.193*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0500-020-06R1 *SD_DRILL_5.0MM_3XD_A*	02898271	5,0 *0.197*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0510-020-06R1 *SD_DRILL_5.1MM_3XD_A*	02898272	5,1 *0.201*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0516-020-06R1 *SD_DRILL_13/64_3XD_A*	02898273	5,159 *0.203*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0520-020-06R1 *SD_DRILL_5.2MM_3XD_A*	02898275	5,2 *0.205*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0530-020-06R1 *SD_DRILL_5.3MM_3XD_A*	02898276	5,3 *0.209*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0540-020-06R1 *SD_DRILL_5.4MM_3XD_A*	02898277	5,4 *0.213*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0550-020-06R1 *SD_DRILL_5.5MM_3XD_A*	02898278	5,5 *0.217*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0555-020-06R1 *SD_DRILL_5.55MM_3XD_A*	02898279	5,55 *0.219*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0556-020-06R1 *SD_DRILL_7/32_3XD_A*	02898280	5,556 *0.219*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0560-020-06R1 *SD_DRILL_5.6MM_3XD_A*	02898281	5,6 *0.220*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0570-020-06R1 *SD_DRILL_5.7MM_3XD_A*	02898282	5,7 *0.224*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0580-020-06R1 *SD_DRILL_5.8MM_3XD_A*	02898283	5,8 *0.228*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0590-020-06R1 *SD_DRILL_5.9MM_3XD_A*	02898284	5,9 *0.232*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0595-020-06R1 *SD_DRILL_15/64_3XD_A*	02898285	5,953 *0.234*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0600-020-06R1 *SD_DRILL_6.0MM_3XD_A*	02898286	6,0 *0.236*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1103A-0610-024-08R1 *SD_DRILL_6.1MM_3XD_A*	02898287	6,1 *0.240*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103A-0620-024-08R1 *SD_DRILL_6.2MM_3XD_A*	02898288	6,2 *0.244*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103A-0630-024-08R1 *SD_DRILL_6.3MM_3XD_A*	02898289	6,3 *0.248*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103A-0635-024-08R1 *SD_DRILL_1/4_3XD_A*	02898290	6,35 *0.250*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103A-0640-024-08R1 *SD_DRILL_6.4MM_3XD_A*	02898291	6,4 *0.252*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103A-0650-024-08R1 *SD_DRILL_6.5MM_3XD_A*	02898292	6,5 *0.256*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103A-0660-024-08R1 *SD_DRILL_6.6MM_3XD_A*	02898293	6,6 *0.260*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103A-0670-024-08R1 *SD_DRILL_6.7MM_3XD_A*	02898294	6,7 *0.264*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103A-0675-024-08R1 *SD_DRILL_17/64_3XD_A*	02898295	6,747 *0.266*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103A-0680-024-08R1 *SD_DRILL_6.8MM_3XD_A*	02898296	6,8 *0.268*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1103A-0690-024-08R1 *SD_DRILL_6.9MM_3XD_A*	02898297	6,9 *0.272*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103A-0700-024-08R1 *SD_DRILL_7.0MM_3XD_A*	02898298	7,0 *0.276*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD1103A-0710-029-08R1 *SD_DRILL_7.1MM_3XD_A*	02898299	7,1 *0.280*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103A-0714-029-08R1 *SD_DRILL_9/32_3XD_A*	02898300	7,144 *0.281*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103A-0720-029-08R1 *SD_DRILL_7.2MM_3XD_A*	02898301	7,2 *0.283*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103A-0730-029-08R1 *SD_DRILL_7.3MM_3XD_A*	02898302	7,3 *0.287*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103A-0740-029-08R1 *SD_DRILL_7.4MM_3XD_A*	02898303	7,4 *0.291*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103A-0750-029-08R1 *SD_DRILL_7.5MM_3XD_A*	02898304	7,5 *0.295*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103A-0754-029-08R1 *SD_DRILL_19/64_3XD_A*	02898305	7,541 *0.297*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103A-0755-029-08R1 *SD_DRILL_7.55MM_3XD_A*	02898306	7,55 *0.297*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103A-0760-029-08R1 *SD_DRILL_7.6MM_3XD_A*	02898307	7,6 *0.299*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103A-0770-029-08R1 *SD_DRILL_7.7MM_3XD_A*	02898308	7,7 *0.303*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103A-0780-029-08R1 *SD_DRILL_7.8MM_3XD_A*	02898309	7,8 *0.307*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103A-0790-029-08R1 *SD_DRILL_7.9MM_3XD_A*	02898310	7,9 *0.311*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103A-0794-029-08R1 *SD_DRILL_5/16_3XD_A*	02898311	7,938 *0.313*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103A-0800-029-08R1 *SD_DRILL_8.0MM_3XD_A*	02898312	8,0 *0.315*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD1103A-0810-035-10R1 *SD_DRILL_8.1MM_3XD_A*	02898313	8,1 *0.319*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0820-035-10R1 *SD_DRILL_8.2MM_3XD_A*	02898314	8,2 *0.323*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0830-035-10R1 *SD_DRILL_8.3MM_3XD_A*	02898315	8,3 *0.327*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0833-035-10R1 *SD_DRILL_21/64_3XD_A*	02898316	8,334 *0.328*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0840-035-10R1 *SD_DRILL_8.4MM_3XD_A*	02898317	8,4 *0.331*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0850-035-10R1 *SD_DRILL_8.5MM_3XD_A*	02898318	8,5 *0.335*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0860-035-10R1 *SD_DRILL_8.6MM_3XD_A*	02898319	8,6 *0.339*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0870-035-10R1 *SD_DRILL_8.7MM_3XD_A*	02898320	8,7 *0.343*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0873-035-10R1 *SD_DRILL_11/32_3XD_A*	02898321	8,731 *0.344*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0880-035-10R1 *SD_DRILL_8.8MM_3XD_A*	02898322	8,8 *0.346*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0890-035-10R1 *SD_DRILL_8.9MM_3XD_A*	02898323	8,9 *0.350*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0900-035-10R1 *SD_DRILL_9.0MM_3XD_A*	02898324	9,0 *0.354*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0910-035-10R1 *SD_DRILL_9.1MM_3XD_A*	02898325	9,1 *0.358*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0913-035-10R1 *SD_DRILL_23/64_3XD_A*	02898326	9,128 *0.359*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0920-035-10R1 *SD_DRILL_9.2MM_3XD_A*	02898327	9,2 *0.362*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*

Introduction
Drilling
Reaming
Boring
Annex

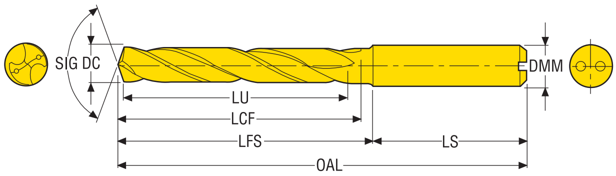
Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1103A-0930-035-10R1 *SD_DRILL_9.3MM_3XD_A*	02898328	9,3 *0.366*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0940-035-10R1 *SD_DRILL_9.4MM_3XD_A*	02898329	9,4 *0.370*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0950-035-10R1 *SD_DRILL_9.5MM_3XD_A*	02898330	9,5 *0.374*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0953-035-10R1 *SD_DRILL_3/8_3XD_A*	02898331	9,525 *0.375*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0955-035-10R1 *SD_DRILL_9.55MM_3XD_A*	02898332	9,55 *0.376*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0960-035-10R1 *SD_DRILL_9.6MM_3XD_A*	02898333	9,6 *0.378*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0970-035-10R1 *SD_DRILL_9.7MM_3XD_A*	02898334	9,7 *0.382*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0980-035-10R1 *SD_DRILL_9.8MM_3XD_A*	02898335	9,8 *0.386*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0990-035-10R1 *SD_DRILL_9.9MM_3XD_A*	02898336	9,9 *0.390*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-0992-035-10R1 *SD_DRILL_25/64_3XD_A*	02898337	9,922 *0.391*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-1000-035-10R1 *SD_DRILL_10.0MM_3XD_A*	02898338	10,0 *0.394*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD1103A-1020-040-12R1 *SD_DRILL_10.2MM_3XD_A*	02898339	10,2 *0.402*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1032-040-12R1 *SD_DRILL_13/32_3XD_A*	02898340	10,319 *0.406*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1040-040-12R1 *SD_DRILL_10.4MM_3XD_A*	02898341	10,4 *0.409*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1050-040-12R1 *SD_DRILL_10.5MM_3XD_A*	02898342	10,5 *0.413*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1060-040-12R1 *SD_DRILL_10.6MM_3XD_A*	02898343	10,6 *0.417*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1072-040-12R1 *SD_DRILL_27/64_3XD_A*	02898344	10,716 *0.422*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1080-040-12R1 *SD_DRILL_10.8MM_3XD_A*	02898345	10,8 *0.425*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1090-040-12R1 *SD_DRILL_10.9MM_3XD_A*	02898346	10,9 *0.429*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1100-040-12R1 *SD_DRILL_11.0MM_3XD_A*	02898347	11,0 *0.433*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1110-040-12R1 *SD_DRILL_11.1MM_3XD_A*	02898348	11,1 *0.437*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1111-040-12R1 *SD_DRILL_7/16_3XD_A*	02898349	11,113 *0.438*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1120-040-12R1 *SD_DRILL_11.2MM_3XD_A*	02898350	11,2 *0.441*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1130-040-12R1 *SD_DRILL_11.3MM_3XD_A*	02898351	11,3 *0.445*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1140-040-12R1 *SD_DRILL_11.4MM_3XD_A*	02898352	11,4 *0.449*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1150-040-12R1 *SD_DRILL_11.5MM_3XD_A*	02898353	11,5 *0.453*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1151-040-12R1 *SD_DRILL_29/64_3XD_A*	02898354	11,509 *0.453*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1155-040-12R1 *SD_DRILL_11.55MM_3XD_A*	02898355	11,55 *0.455*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1160-040-12R1 *SD_DRILL_11.6MM_3XD_A*	02898356	11,6 *0.457*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1170-040-12R1 *SD_DRILL_11.7MM_3XD_A*	02898357	11,7 *0.461*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1180-040-12R1 *SD_DRILL_11.8MM_3XD_A*	02898358	11,8 *0.465*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1103A-1190-040-12R1 *SD_DRILL_11.9MM_3XD_A*	02898359	11,9 *0.469*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1191-040-12R1 *SD_DRILL_15/32_3XD_A*	02898360	11,906 *0.469*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1200-040-12R1 *SD_DRILL_12.0MM_3XD_A*	02898361	12,0 *0.472*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD1103A-1210-043-14R1 *SD_DRILL_12.1MM_3XD_A*	02898362	12,1 *0.476*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1220-043-14R1 *SD_DRILL_12.2MM_3XD_A*	02898363	12,2 *0.480*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1230-043-14R1 *SD_DRILL_31/64_3XD_A*	02898364	12,303 *0.484*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1240-043-14R1 *SD_DRILL_12.4MM_3XD_A*	02898365	12,4 *0.488*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1250-043-14R1 *SD_DRILL_12.5MM_3XD_A*	02898366	12,5 *0.492*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1260-043-14R1 *SD_DRILL_12.6MM_3XD_A*	02898367	12,6 *0.496*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1270-043-14R1 *SD_DRILL_1/2_3XD_A*	02898368	12,7 *0.500*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1275-043-14R1 *SD_DRILL_12.75MM_3XD_A*	02898369	12,75 *0.502*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1280-043-14R1 *SD_DRILL_12.8MM_3XD_A*	02898370	12,8 *0.504*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1290-043-14R1 *SD_DRILL_12.9MM_3XD_A*	02898371	12,9 *0.508*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1300-043-14R1 *SD_DRILL_13.0MM_3XD_A*	02898372	13,0 *0.512*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1310-043-14R1 *SD_DRILL_33/64_3XD_A*	02898373	13,1 *0.516*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1320-043-14R1 *SD_DRILL_13.2MM_3XD_A*	02898374	13,2 *0.520*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1330-043-14R1 *SD_DRILL_13.3MM_3XD_A*	02898375	13,3 *0.524*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1340-043-14R1 *SD_DRILL_13.4MM_3XD_A*	02898376	13,4 *0.528*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1349-043-14R1 *SD_DRILL_17/32_3XD_A*	02898377	13,494 *0.531*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1350-043-14R1 *SD_DRILL_13.5MM_3XD_A*	02898378	13,5 *0.531*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1360-043-14R1 *SD_DRILL_13.6MM_3XD_A*	02898379	13,6 *0.535*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1370-043-14R1 *SD_DRILL_13.7MM_3XD_A*	02898380	13,7 *0.539*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1380-043-14R1 *SD_DRILL_13.8MM_3XD_A*	02898381	13,8 *0.543*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1390-043-14R1 *SD_DRILL_13.9MM_3XD_A*	02898382	13,9 *0.547*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1400-043-14R1 *SD_DRILL_14.0MM_3XD_A*	02898383	14,0 *0.551*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD1103A-1420-045-16R1 *SD_DRILL_14.2MM_3XD_A*	02898384	14,2 *0.559*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103A-1429-045-16R1 *SD_DRILL_9/16_3XD_A*	02898385	14,288 *0.563*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103A-1450-045-16R1 *SD_DRILL_14.5MM_3XD_A*	02898386	14,5 *0.571*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103A-1470-045-16R1 *SD_DRILL_14.7MM_3XD_A*	02898387	14,7 *0.579*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103A-1475-045-16R1 *SD_DRILL_14.75MM_3XD_A*	02898388	14,75 *0.581*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103A-1480-045-16R1 *SD_DRILL_14.8MM_3XD_A*	02898389	14,8 *0.583*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1103A-1500-045-16R1 *SD_DRILL_15.0MM_3XD_A*	02898390	15,0 *0.591*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103A-1510-045-16R1 *SD_DRILL_15.1MM_3XD_A*	02898391	15,1 *0.594*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103A-1530-045-16R1 *SD_DRILL_15.3MM_3XD_A*	02898392	15,3 *0.602*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103A-1550-045-16R1 *SD_DRILL_15.5MM_3XD_A*	02898393	15,5 *0.610*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103A-1570-045-16R1 *SD_DRILL_15.7MM_3XD_A*	02898394	15,7 *0.618*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103A-1580-045-16R1 *SD_DRILL_15.8MM_3XD_A*	02898395	15,8 *0.622*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103A-1588-045-16R1 *SD_DRILL_5/8_3XD_A*	02898396	15,875 *0.625*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103A-1600-045-16R1 *SD_DRILL_16.0MM_3XD_A*	02898397	16,0 *0.630*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD1103A-1650-051-18R1 *SD_DRILL_16.5MM_3XD_A*	02898398	16,5 *0.650*	51,0 *2.008*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD1103A-1700-051-18R1 *SD_DRILL_17.0MM_3XD_A*	02898399	17,0 *0.669*	51,0 *2.008*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD1103A-1750-051-18R1 *SD_DRILL_17.5MM_3XD_A*	02898400	17,5 *0.689*	51,0 *2.008*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD1103A-1800-051-18R1 *SD_DRILL_18.0MM_3XD_A*	02898401	18,0 *0.709*	51,0 *2.008*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD1103A-1850-055-20R1 *SD_DRILL_18.5MM_3XD_A*	02898402	18,5 *0.728*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD1103A-1900-055-20R1 *SD_DRILL_19.0MM_3XD_A*	02898403	19,0 *0.748*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD1103A-1905-055-20R1 *SD_DRILL_3/4_3XD_A*	02898404	19,05 *0.750*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD1103A-1950-055-20R1 *SD_DRILL_19.5MM_3XD_A*	02898405	19,5 *0.768*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD1103A-2000-055-20R1 *SD_DRILL_20.0MM_3XD_A*	02898406	20,0 *0.787*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*

SD1105A

Drilling depth ~ 5 x D



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- Point angle: 140°
- Coating: TiAlN
- Hole tolerance: IT8-9
- For cutting data see page(s) 146
- For intermediate diameters see Custom Design software.

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1105A-0300-023-06R1 *SD_DRILL_3.0MM_5XD_A*	02897845	3,0 *0.118*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1105A-0310-023-06R1 *SD_DRILL_3.1MM_5XD_A*	02897846	3,1 *0.122*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1105A-0318-023-06R1 *SD_DRILL_1/8_5XD_A*	02897847	3,175 *0.125*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1105A-0320-023-06R1 *SD_DRILL_3.2MM_5XD_A*	02897848	3,2 *0.126*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1105A-0325-023-06R1 *SD_DRILL_3.25MM_5XD_A*	02897849	3,25 *0.128*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1105A-0330-023-06R1 *SD_DRILL_3.3MM_5XD_A*	02897850	3,3 *0.130*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1105A-0340-023-06R1 *SD_DRILL_3.4MM_5XD_A*	02897851	3,4 *0.134*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1105A-0350-023-06R1 *SD_DRILL_3.5MM_5XD_A*	02897852	3,5 *0.138*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1105A-0357-023-06R1 *SD_DRILL_9/64_5XD_A*	02897853	3,572 *0.141*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1105A-0360-023-06R1 *SD_DRILL_3.6MM_5XD_A*	02897854	3,6 *0.142*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1105A-0365-023-06R1 *SD_DRILL_3.65MM_5XD_A*	02897855	3,65 *0.144*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1105A-0370-023-06R1 *SD_DRILL_3.7MM_5XD_A*	02897856	3,7 *0.146*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD1105A-0380-029-06R1 *SD_DRILL_3.8MM_5XD_A*	02897857	3,8 *0.150*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*
SD1105A-0390-029-06R1 *SD_DRILL_3.9MM_5XD_A*	02897858	3,9 *0.154*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*
SD1105A-0397-029-06R1 *SD_DRILL_5/32_5XD_A*	02897859	3,969 *0.156*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*
SD1105A-0400-029-06R1 *SD_DRILL_4.0MM_5XD_A*	02897860	4,0 *0.157*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*
SD1105A-0410-029-06R1 *SD_DRILL_4.1MM_5XD_A*	02897861	4,1 *0.161*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*
SD1105A-0420-029-06R1 *SD_DRILL_4.2MM_5XD_A*	02897862	4,2 *0.165*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*
SD1105A-0430-029-06R1 *SD_DRILL_4.3MM_5XD_A*	02897863	4,3 *0.169*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*
SD1105A-0437-029-06R1 *SD_DRILL_11/64_5XD_A*	02897864	4,366 *0.172*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*
SD1105A-0440-029-06R1 *SD_DRILL_4.4MM_5XD_A*	02897865	4,4 *0.173*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1105A-0450-029-06R1 *SD_DRILL_4.5MM_5XD_A*	02897866	4,5 *0.177*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*
SD1105A-0460-029-06R1 *SD_DRILL_4.6MM_5XD_A*	02897867	4,6 *0.181*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*
SD1105A-0465-029-06R1 *SD_DRILL_4.65MM_5XD_A*	02897868	4,65 *0.183*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*
SD1105A-0470-029-06R1 *SD_DRILL_4.7MM_5XD_A*	02897869	4,7 *0.185*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*
SD1105A-0476-035-06R1 *SD_DRILL_3/16_5XD_A*	02897870	4,763 *0.188*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0480-035-06R1 *SD_DRILL_4.8MM_5XD_A*	02897871	4,8 *0.189*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0490-035-06R1 *SD_DRILL_4.9MM_5XD_A*	02897872	4,9 *0.193*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0500-035-06R1 *SD_DRILL_5.0MM_5XD_A*	02897873	5,0 *0.197*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0510-035-06R1 *SD_DRILL_5.1MM_5XD_A*	02897874	5,1 *0.201*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0516-035-06R1 *SD_DRILL_13/64_5XD_A*	02897875	5,159 *0.203*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0520-035-06R1 *SD_DRILL_5.2MM_5XD_A*	02897876	5,2 *0.205*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0530-035-06R1 *SD_DRILL_5.3MM_5XD_A*	02897877	5,3 *0.209*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0540-035-06R1 *SD_DRILL_5.4MM_5XD_A*	02897878	5,4 *0.213*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0550-035-06R1 *SD_DRILL_5.5MM_5XD_A*	02897879	5,5 *0.217*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0555-035-06R1 *SD_DRILL_5.55MM_5XD_A*	02897880	5,55 *0.219*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0556-035-06R1 *SD_DRILL_7/32_5XD_A*	02897881	5,556 *0.219*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0560-035-06R1 *SD_DRILL_5.6MM_5XD_A*	02897882	5,6 *0.220*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0570-035-06R1 *SD_DRILL_5.7MM_5XD_A*	02897883	5,7 *0.224*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0580-035-06R1 *SD_DRILL_5.8MM_5XD_A*	02897884	5,8 *0.228*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0590-035-06R1 *SD_DRILL_5.9MM_5XD_A*	02897885	5,9 *0.232*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0595-035-06R1 *SD_DRILL_15/64_5XD_A*	02897886	5,953 *0.234*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0600-035-06R1 *SD_DRILL_6.0MM_5XD_A*	02897887	6,0 *0.236*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD1105A-0610-043-08R1 *SD_DRILL_6.1MM_5XD_A*	02897888	6,1 *0.240*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0620-043-08R1 *SD_DRILL_6.2MM_5XD_A*	02897889	6,2 *0.244*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0630-043-08R1 *SD_DRILL_6.3MM_5XD_A*	02897890	6,3 *0.248*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0635-043-08R1 *SD_DRILL_1/4_5XD_A*	02897891	6,35 *0.250*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0640-043-08R1 *SD_DRILL_6.4MM_5XD_A*	02897892	6,4 *0.252*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0650-043-08R1 *SD_DRILL_6.5MM_5XD_A*	02897893	6,5 *0.256*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0660-043-08R1 *SD_DRILL_6.6MM_5XD_A*	02897894	6,6 *0.260*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0670-043-08R1 *SD_DRILL_6.7MM_5XD_A*	02897895	6,7 *0.264*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0675-043-08R1 *SD_DRILL_17/64_5XD_A*	02897896	6,747 *0.266*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1105A-0680-043-08R1 *SD_DRILL_6.8MM_5XD_A*	02897897	6,8 *0.268*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0690-043-08R1 *SD_DRILL_6.9MM_5XD_A*	02897898	6,9 *0.272*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0700-043-08R1 *SD_DRILL_7.0MM_5XD_A*	02897899	7,0 *0.276*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0710-043-08R1 *SD_DRILL_7.1MM_5XD_A*	02897900	7,1 *0.280*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0714-043-08R1 *SD_DRILL_9/32_5XD_A*	02897901	7,144 *0.281*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0720-043-08R1 *SD_DRILL_7.2MM_5XD_A*	02897902	7,2 *0.283*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0730-043-08R1 *SD_DRILL_7.3MM_5XD_A*	02897903	7,3 *0.287*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0740-043-08R1 *SD_DRILL_7.4MM_5XD_A*	02897904	7,4 *0.291*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0750-043-08R1 *SD_DRILL_7.5MM_5XD_A*	02897905	7,5 *0.295*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0754-043-08R1 *SD_DRILL_19/64_5XD_A*	02897906	7,541 *0.297*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0755-043-08R1 *SD_DRILL_7.55MM_5XD_A*	02897907	7,55 *0.297*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0760-043-08R1 *SD_DRILL_7.6MM_5XD_A*	02897908	7,6 *0.299*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0770-043-08R1 *SD_DRILL_7.7MM_5XD_A*	02897909	7,7 *0.303*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0780-043-08R1 *SD_DRILL_7.8MM_5XD_A*	02897910	7,8 *0.307*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0790-043-08R1 *SD_DRILL_7.9MM_5XD_A*	02897911	7,9 *0.311*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0794-043-08R1 *SD_DRILL_5/16_5XD_A*	02897912	7,938 *0.313*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0800-043-08R1 *SD_DRILL_8.0MM_5XD_A*	02897913	8,0 *0.315*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD1105A-0810-049-10R1 *SD_DRILL_8.1MM_5XD_A*	02897914	8,1 *0.319*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD1105A-0820-049-10R1 *SD_DRILL_8.2MM_5XD_A*	02897915	8,2 *0.323*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD1105A-0830-049-10R1 *SD_DRILL_8.3MM_5XD_A*	02897916	8,3 *0.327*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD1105A-0833-049-10R1 *SD_DRILL_21/64_5XD_A*	02897917	8,334 *0.328*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD1105A-0840-049-10R1 *SD_DRILL_8.4MM_5XD_A*	02897918	8,4 *0.331*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD1105A-0850-049-10R1 *SD_DRILL_8.5MM_5XD_A*	02897919	8,5 *0.335*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD1105A-0860-049-10R1 *SD_DRILL_8.6MM_5XD_A*	02897920	8,6 *0.339*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD1105A-0870-049-10R1 *SD_DRILL_8.7MM_5XD_A*	02897921	8,7 *0.343*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD1105A-0873-049-10R1 *SD_DRILL_11/32_5XD_A*	02897922	8,731 *0.344*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD1105A-0880-049-10R1 *SD_DRILL_8.8MM_5XD_A*	02897923	8,8 *0.346*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD1105A-0890-049-10R1 *SD_DRILL_8.9MM_5XD_A*	02897924	8,9 *0.350*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD1105A-0900-049-10R1 *SD_DRILL_9.0MM_5XD_A*	02897925	9,0 *0.354*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD1105A-0910-049-10R1 *SD_DRILL_9.1MM_5XD_A*	02897926	9,1 *0.358*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD1105A-0913-049-10R1 *SD_DRILL_23/64_5XD_A*	02897927	9,128 *0.359*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*

Designation / Designation Ansi	Item number	DC mm / Inch	LU mm / Inch	OAL mm / Inch	LFS mm / Inch	LS mm / Inch	LCF mm / Inch	DMM mm / Inch
SD1105A-0920-049-10R1 SD_DRILL_9.2MM_5XD_A	02897928	9,2 0.362	49,0 1.929	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394
SD1105A-0930-049-10R1 SD_DRILL_9.3MM_5XD_A	02897929	9,3 0.366	49,0 1.929	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394
SD1105A-0940-049-10R1 SD_DRILL_9.4MM_5XD_A	02897930	9,4 0.370	49,0 1.929	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394
SD1105A-0950-049-10R1 SD_DRILL_9.5MM_5XD_A	02897931	9,5 0.374	49,0 1.929	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394
SD1105A-0953-049-10R1 SD_DRILL_3/8_5XD_A	02897932	9,525 0.375	49,0 1.929	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394
SD1105A-0955-049-10R1 SD_DRILL_9.55MM_5XD_A	02897933	9,55 0.376	49,0 1.929	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394
SD1105A-0960-049-10R1 SD_DRILL_9.6MM_5XD_A	02897934	9,6 0.378	49,0 1.929	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394
SD1105A-0970-049-10R1 SD_DRILL_9.7MM_5XD_A	02897935	9,7 0.382	49,0 1.929	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394
SD1105A-0980-049-10R1 SD_DRILL_9.8MM_5XD_A	02897936	9,8 0.386	49,0 1.929	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394
SD1105A-0990-049-10R1 SD_DRILL_9.9MM_5XD_A	02897937	9,9 0.390	49,0 1.929	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394
SD1105A-0992-049-10R1 SD_DRILL_25/64_5XD_A	02897938	9,922 0.391	49,0 1.929	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394
SD1105A-1000-049-10R1 SD_DRILL_10.0MM_5XD_A	02897939	10,0 0.394	49,0 1.929	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394
SD1105A-1010-056-12R1 SD_DRILL_10.1MM_5XD_A	02897940	10,1 0.398	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1020-056-12R1 SD_DRILL_10.2MM_5XD_A	02897941	10,2 0.402	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1030-056-12R1 SD_DRILL_10.3MM_5XD_A	02897942	10,3 0.406	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1032-056-12R1 SD_DRILL_13/32_5XD_A	02897943	10,319 0.406	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1040-056-12R1 SD_DRILL_10.4MM_5XD_A	02897944	10,4 0.409	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1050-056-12R1 SD_DRILL_10.5MM_5XD_A	02897945	10,5 0.413	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1060-056-12R1 SD_DRILL_10.6MM_5XD_A	02897946	10,6 0.417	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1070-056-12R1 SD_DRILL_10.7MM_5XD_A	02897947	10,7 0.421	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1072-056-12R1 SD_DRILL_27/64_5XD_A	02897948	10,716 0.422	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1080-056-12R1 SD_DRILL_10.8MM_5XD_A	02897949	10,8 0.425	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1090-056-12R1 SD_DRILL_10.9MM_5XD_A	02897951	10,9 0.429	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1100-056-12R1 SD_DRILL_11.0MM_5XD_A	02897952	11,0 0.433	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1110-056-12R1 SD_DRILL_11.1MM_5XD_A	02897953	11,1 0.437	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1111-056-12R1 SD_DRILL_7/16_5XD_A	02897954	11,113 0.438	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1120-056-12R1 SD_DRILL_11.2MM_5XD_A	02897955	11,2 0.441	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1130-056-12R1 SD_DRILL_11.3MM_5XD_A	02897956	11,3 0.445	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1140-056-12R1 SD_DRILL_11.4MM_5XD_A	02897957	11,4 0.449	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1150-056-12R1 SD_DRILL_11.5MM_5XD_A	02897958	11,5 0.453	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472
SD1105A-1151-056-12R1 SD_DRILL_29/64_5XD_A	02897959	11,509 0.453	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1105A-1155-056-12R1 *SD_DRILL_11.55MM_5XD_A*	02897960	11,55 *0.455*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD1105A-1160-056-12R1 *SD_DRILL_11.6MM_5XD_A*	02897961	11,6 *0.457*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD1105A-1170-056-12R1 *SD_DRILL_11.7MM_5XD_A*	02897962	11,7 *0.461*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD1105A-1180-056-12R1 *SD_DRILL_11.8MM_5XD_A*	02897963	11,8 *0.465*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD1105A-1190-056-12R1 *SD_DRILL_11.9MM_5XD_A*	02897964	11,9 *0.469*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD1105A-1191-056-12R1 *SD_DRILL_15/32_5XD_A*	02897965	11,906 *0.469*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD1105A-1200-056-12R1 *SD_DRILL_12.0MM_5XD_A*	02897966	12,0 *0.472*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD1105A-1210-060-14R1 *SD_DRILL_12.1MM_5XD_A*	02897967	12,1 *0.476*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1220-060-14R1 *SD_DRILL_12.2MM_5XD_A*	02897968	12,2 *0.480*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1225-060-14R1 *SD_DRILL_12.25MM_5XD_A*	02897969	12,25 *0.482*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1230-060-14R1 *SD_DRILL_31/64_5XD_A*	02897970	12,303 *0.484*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1240-060-14R1 *SD_DRILL_12.4MM_5XD_A*	02897972	12,4 *0.488*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1250-060-14R1 *SD_DRILL_12.5MM_5XD_A*	02897973	12,5 *0.492*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1260-060-14R1 *SD_DRILL_12.6MM_5XD_A*	02897974	12,6 *0.496*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1270-060-14R1 *SD_DRILL_1/2_5XD_A*	02897950	12,7 *0.500*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1275-060-14R1 *SD_DRILL_12.75MM_5XD_A*	02897976	12,75 *0.502*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1280-060-14R1 *SD_DRILL_12.8MM_5XD_A*	02897977	12,8 *0.504*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1290-060-14R1 *SD_DRILL_12.9MM_5XD_A*	02897978	12,9 *0.508*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1300-060-14R1 *SD_DRILL_13.0MM_5XD_A*	02897979	13,0 *0.512*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1310-060-14R1 *SD_DRILL_33/64_5XD_A*	02897980	13,1 *0.516*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1320-060-14R1 *SD_DRILL_13.2MM_5XD_A*	02897981	13,2 *0.520*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1330-060-14R1 *SD_DRILL_13.3MM_5XD_A*	02897982	13,3 *0.524*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1340-060-14R1 *SD_DRILL_13.4MM_5XD_A*	02897983	13,4 *0.528*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1349-060-14R1 *SD_DRILL_17/32_5XD_A*	02897984	13,494 *0.531*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1350-060-14R1 *SD_DRILL_13.5MM_5XD_A*	02897985	13,5 *0.531*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1360-060-14R1 *SD_DRILL_13.6MM_5XD_A*	02897986	13,6 *0.535*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1370-060-14R1 *SD_DRILL_13.7MM_5XD_A*	02897987	13,7 *0.539*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1380-060-14R1 *SD_DRILL_13.8MM_5XD_A*	02897988	13,8 *0.543*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1390-060-14R1 *SD_DRILL_35/64_5XD_A*	02897989	13,9 *0.547*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1400-060-14R1 *SD_DRILL_14.0MM_5XD_A*	02897990	14,0 *0.551*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD1105A-1410-063-16R1 *SD_DRILL_14.1MM_5XD_A*	02897991	14,1 *0.555*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*

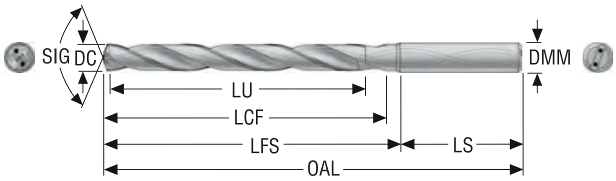
Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1105A-1420-063-16R1 *SD_DRILL_14.2MM_5XD_A*	02897992	14,2 *0.559*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1429-063-16R1 *SD_DRILL_9/16_5XD_A*	02897993	14,288 *0.563*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1430-063-16R1 *SD_DRILL_14.3MM_5XD_A*	02897994	14,3 *0.563*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1440-063-16R1 *SD_DRILL_14.4MM_5XD_A*	02897995	14,4 *0.567*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1450-063-16R1 *SD_DRILL_14.5MM_5XD_A*	02897996	14,5 *0.571*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1460-063-16R1 *SD_DRILL_14.6MM_5XD_A*	02897997	14,6 *0.575*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1470-063-16R1 *SD_DRILL_14.7MM_5XD_A*	02897998	14,7 *0.579*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1475-063-16R1 *SD_DRILL_14.75MM_5XD_A*	02897999	14,75 *0.581*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1480-063-16R1 *SD_DRILL_14.8MM_5XD_A*	02898000	14,8 *0.583*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1490-063-16R1 *SD_DRILL_14.9MM_5XD_A*	02898001	14,9 *0.587*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1500-063-16R1 *SD_DRILL_15.0MM_5XD_A*	02898002	15,0 *0.591*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1510-063-16R1 *SD_DRILL_15.1MM_5XD_A*	02898003	15,1 *0.594*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1520-063-16R1 *SD_DRILL_15.2MM_5XD_A*	02898004	15,2 *0.598*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1530-063-16R1 *SD_DRILL_15.3MM_5XD_A*	02898005	15,3 *0.602*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1540-063-16R1 *SD_DRILL_15.4MM_5XD_A*	02898006	15,4 *0.606*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1550-063-16R1 *SD_DRILL_15.5MM_5XD_A*	02898007	15,5 *0.610*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1560-063-16R1 *SD_DRILL_15.6MM_5XD_A*	02898008	15,6 *0.614*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1570-063-16R1 *SD_DRILL_15.7MM_5XD_A*	02898009	15,7 *0.618*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1580-063-16R1 *SD_DRILL_15.8MM_5XD_A*	02898010	15,8 *0.622*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1588-063-16R1 *SD_DRILL_5/8_5XD_A*	02898011	15,875 *0.625*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1590-063-16R1 *SD_DRILL_15.9MM_5XD_A*	02898012	15,9 *0.626*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1600-063-16R1 *SD_DRILL_16.0MM_5XD_A*	02898013	16,0 *0.630*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD1105A-1610-071-18R1 *SD_DRILL_16.1MM_5XD_A*	02898014	16,1 *0.634*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1620-071-18R1 *SD_DRILL_16.2MM_5XD_A*	02898015	16,2 *0.638*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1630-071-18R1 *SD_DRILL_16.3MM_5XD_A*	02898016	16,3 *0.642*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1640-071-18R1 *SD_DRILL_16.4MM_5XD_A*	02898017	16,4 *0.646*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1650-071-18R1 *SD_DRILL_16.5MM_5XD_A*	02898018	16,5 *0.650*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1660-071-18R1 *SD_DRILL_16.6MM_5XD_A*	02898019	16,6 *0.654*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1670-071-18R1 *SD_DRILL_16.7MM_5XD_A*	02898020	16,7 *0.657*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1675-071-18R1 *SD_DRILL_16.75MM_5XD_A*	02898021	16,75 *0.659*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1680-071-18R1 *SD_DRILL_16.8MM_5XD_A*	02898022	16,8 *0.661*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1105A-1690-071-18R1 *SD_DRILL_16.9MM_5XD_A*	02898023	16,9 *0.665*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1700-071-18R1 *SD_DRILL_17.0MM_5XD_A*	02898024	17,0 *0.669*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1710-071-18R1 *SD_DRILL_17.1MM_5XD_A*	02898025	17,1 *0.673*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1720-071-18R1 *SD_DRILL_17.2MM_5XD_A*	02898026	17,2 *0.677*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1730-071-18R1 *SD_DRILL_17.3MM_5XD_A*	02898027	17,3 *0.681*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1740-071-18R1 *SD_DRILL_17.4MM_5XD_A*	02898028	17,4 *0.685*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1750-071-18R1 *SD_DRILL_17.5MM_5XD_A*	02898029	17,5 *0.689*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1760-071-18R1 *SD_DRILL_17.6MM_5XD_A*	02898030	17,6 *0.693*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1770-071-18R1 *SD_DRILL_17.7MM_5XD_A*	02898031	17,7 *0.697*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1780-071-18R1 *SD_DRILL_17.8MM_5XD_A*	02898032	17,8 *0.701*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1790-071-18R1 *SD_DRILL_17.9MM_5XD_A*	02898033	17,9 *0.705*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1800-071-18R1 *SD_DRILL_18.0MM_5XD_A*	02898034	18,0 *0.709*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD1105A-1810-077-20R1 *SD_DRILL_18.1MM_5XD_A*	02898035	18,1 *0.713*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1820-077-20R1 *SD_DRILL_18.2MM_5XD_A*	02898036	18,2 *0.717*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1830-077-20R1 *SD_DRILL_18.3MM_5XD_A*	02898037	18,3 *0.720*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1840-077-20R1 *SD_DRILL_18.4MM_5XD_A*	02898038	18,4 *0.724*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1850-077-20R1 *SD_DRILL_18.5MM_5XD_A*	02898039	18,5 *0.728*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1860-077-20R1 *SD_DRILL_18.6MM_5XD_A*	02898040	18,6 *0.732*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1870-077-20R1 *SD_DRILL_18.7MM_5XD_A*	02898041	18,7 *0.736*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1880-077-20R1 *SD_DRILL_18.8MM_5XD_A*	02898042	18,8 *0.740*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1890-077-20R1 *SD_DRILL_18.9MM_5XD_A*	02898043	18,9 *0.744*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1900-077-20R1 *SD_DRILL_19.0MM_5XD_A*	02898044	19,0 *0.748*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1905-077-20R1 *SD_DRILL_3/4_5XD_A*	02898045	19,05 *0.750*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1910-077-20R1 *SD_DRILL_19.1MM_5XD_A*	02898046	19,1 *0.752*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1920-077-20R1 *SD_DRILL_19.2MM_5XD_A*	02898047	19,2 *0.756*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1930-077-20R1 *SD_DRILL_19.3MM_5XD_A*	02898048	19,3 *0.760*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1940-077-20R1 *SD_DRILL_19.4MM_5XD_A*	02898049	19,4 *0.764*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1950-077-20R1 *SD_DRILL_19.5MM_5XD_A*	02898050	19,5 *0.768*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1960-077-20R1 *SD_DRILL_19.6MM_5XD_A*	02898051	19,6 *0.772*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1970-077-20R1 *SD_DRILL_19.7MM_5XD_A*	02898052	19,7 *0.776*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-1980-077-20R1 *SD_DRILL_19.8MM_5XD_A*	02898053	19,8 *0.780*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1105A-1990-077-20R1 *SD_DRILL_19.9MM_5XD_A*	02898054	19,9 *0.783*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD1105A-2000-077-20R1 *SD_DRILL_20.0MM_5XD_A*	02898055	20,0 *0.787*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*

SD1108A

Drilling depth ~ 8 x D



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- Point angle: 140°
- Coating: TiAlN
- Hole tolerance: IT9
- For cutting data see page(s) 147
- For intermediate diameters see Custom Design software.

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1108A-0300-028-06R1 *SD_DRILL_3.0MM_8XD_A*	03295178	3,0 *0.118*	28,0 *1.102*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD1108A-0310-028-06R1 *SD_DRILL_3.1MM_8XD_A*	03295179	3,1 *0.122*	28,0 *1.102*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD1108A-0318-028-06R1 *SD_DRILL_1/8_8XD_A*	03323680	3,175 *0.125*	28,0 *1.102*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD1108A-0320-028-06R1 *SD_DRILL_3.2MM_8XD_A*	03295180	3,2 *0.126*	28,0 *1.102*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD1108A-0330-028-06R1 *SD_DRILL_3.3MM_8XD_A*	03295181	3,3 *0.130*	28,0 *1.102*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD1108A-0340-028-06R1 *SD_DRILL_3.4MM_8XD_A*	03295182	3,4 *0.134*	28,0 *1.102*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD1108A-0350-028-06R1 *SD_DRILL_3.5MM_8XD_A*	03295183	3,5 *0.138*	28,0 *1.102*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD1108A-0357-028-06R1 *SD_DRILL_9/64_8XD_A*	03323681	3,572 *0.141*	28,0 *1.102*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD1108A-0360-028-06R1 *SD_DRILL_3.6MM_8XD_A*	03295184	3,6 *0.142*	28,0 *1.102*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD1108A-0370-028-06R1 *SD_DRILL_3.7MM_8XD_A*	03295185	3,7 *0.146*	28,0 *1.102*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD1108A-0380-037-06R1 *SD_DRILL_3.8MM_8XD_A*	03295186	3,8 *0.150*	37,0 *1.457*	85,0 *3.346*	49,0 *1.929*	36,0 *1.417*	45,0 *1.772*	6,0 *0.236*
SD1108A-0390-037-06R1 *SD_DRILL_3.9MM_8XD_A*	03295187	3,9 *0.154*	37,0 *1.457*	85,0 *3.346*	49,0 *1.929*	36,0 *1.417*	45,0 *1.772*	6,0 *0.236*
SD1108A-0397-037-06R1 *SD_DRILL_5/32_8XD_A*	03323682	3,969 *0.156*	37,0 *1.457*	85,0 *3.346*	49,0 *1.929*	36,0 *1.417*	45,0 *1.772*	6,0 *0.236*
SD1108A-0400-037-06R1 *SD_DRILL_4.0MM_8XD_A*	03295188	4,0 *0.157*	37,0 *1.457*	85,0 *3.346*	49,0 *1.929*	36,0 *1.417*	45,0 *1.772*	6,0 *0.236*
SD1108A-0410-037-06R1 *SD_DRILL_4.1MM_8XD_A*	03295189	4,1 *0.161*	37,0 *1.457*	85,0 *3.346*	49,0 *1.929*	36,0 *1.417*	45,0 *1.772*	6,0 *0.236*
SD1108A-0420-037-06R1 *SD_DRILL_4.2MM_8XD_A*	03295190	4,2 *0.165*	37,0 *1.457*	85,0 *3.346*	49,0 *1.929*	36,0 *1.417*	45,0 *1.772*	6,0 *0.236*
SD1108A-0430-037-06R1 *SD_DRILL_4.3MM_8XD_A*	03295191	4,3 *0.169*	37,0 *1.457*	85,0 *3.346*	49,0 *1.929*	36,0 *1.417*	45,0 *1.772*	6,0 *0.236*
SD1108A-0437-037-06R1 *SD_DRILL_11/64_8XD_A*	03323683	4,366 *0.172*	37,0 *1.457*	85,0 *3.346*	49,0 *1.929*	36,0 *1.417*	45,0 *1.772*	6,0 *0.236*
SD1108A-0440-037-06R1 *SD_DRILL_4.4MM_8XD_A*	03295192	4,4 *0.173*	37,0 *1.457*	85,0 *3.346*	49,0 *1.929*	36,0 *1.417*	45,0 *1.772*	6,0 *0.236*
SD1108A-0450-037-06R1 *SD_DRILL_4.5MM_8XD_A*	03295193	4,5 *0.177*	37,0 *1.457*	85,0 *3.346*	49,0 *1.929*	36,0 *1.417*	45,0 *1.772*	6,0 *0.236*
SD1108A-0460-037-06R1 *SD_DRILL_4.6MM_8XD_A*	03295194	4,6 *0.181*	37,0 *1.457*	85,0 *3.346*	49,0 *1.929*	36,0 *1.417*	45,0 *1.772*	6,0 *0.236*

Designation / Designation Ansi	Item number	DC mm / Inch	LU mm / Inch	OAL mm / Inch	LFS mm / Inch	LS mm / Inch	LCF mm / Inch	DMM mm / Inch
SD1108A-0470-037-06R1 *SD_DRILL_4.7MM_8XD_A*	03295195	4,7 *0.185*	37,0 *1.457*	85,0 *3.346*	49,0 *1.929*	36,0 *1.417*	45,0 *1.772*	6,0 *0.236*
SD1108A-0476-048-06R1 *SD_DRILL_3/16_8XD_A*	03323684	4,763 *0.188*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0480-048-06R1 *SD_DRILL_4.8MM_8XD_A*	03295197	4,8 *0.189*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0490-048-06R1 *SD_DRILL_4.9MM_8XD_A*	03295198	4,9 *0.193*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0500-048-06R1 *SD_DRILL_5.0MM_8XD_A*	03295199	5,0 *0.197*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0510-048-06R1 *SD_DRILL_5.1MM_8XD_A*	03295200	5,1 *0.201*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0516-048-06R1 *SD_DRILL_13/64_8XD_A*	03323685	5,159 *0.203*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0520-048-06R1 *SD_DRILL_5.2MM_8XD_A*	03295201	5,2 *0.205*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0530-048-06R1 *SD_DRILL_5.3MM_8XD_A*	03295202	5,3 *0.209*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0540-048-06R1 *SD_DRILL_5.4MM_8XD_A*	03295203	5,4 *0.213*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0550-048-06R1 *SD_DRILL_5.5MM_8XD_A*	03295204	5,5 *0.217*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0556-048-06R1 *SD_DRILL_7/32_8XD_A*	03295206	5,556 *0.219*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0560-048-06R1 *SD_DRILL_5.6MM_8XD_A*	03295207	5,6 *0.220*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0570-048-06R1 *SD_DRILL_5.7MM_8XD_A*	03295208	5,7 *0.224*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0580-048-06R1 *SD_DRILL_5.8MM_8XD_A*	03295012	5,8 *0.228*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0590-048-06R1 *SD_DRILL_5.9MM_8XD_A*	03295013	5,9 *0.232*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0595-048-06R1 *SD_DRILL_15/64_8XD_A*	03323686	5,953 *0.234*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0600-048-06R1 *SD_DRILL_6.0MM_8XD_A*	03295014	6,0 *0.236*	48,0 *1.890*	97,0 *3.819*	61,0 *2.402*	36,0 *1.417*	57,0 *2.244*	6,0 *0.236*
SD1108A-0610-055-08R1 *SD_DRILL_6.1MM_8XD_A*	03295015	6,1 *0.240*	55,0 *2.165*	106,0 *4.173*	70,0 *2.756*	36,0 *1.417*	66,0 *2.598*	8,0 *0.315*
SD1108A-0620-055-08R1 *SD_DRILL_6.2MM_8XD_A*	03295016	6,2 *0.244*	55,0 *2.165*	106,0 *4.173*	70,0 *2.756*	36,0 *1.417*	66,0 *2.598*	8,0 *0.315*
SD1108A-0630-055-08R1 *SD_DRILL_6.3MM_8XD_A*	03295017	6,3 *0.248*	55,0 *2.165*	106,0 *4.173*	70,0 *2.756*	36,0 *1.417*	66,0 *2.598*	8,0 *0.315*
SD1108A-0635-055-08R1 *SD_DRILL_1/4_8XD_A*	03295018	6,35 *0.250*	55,0 *2.165*	106,0 *4.173*	70,0 *2.756*	36,0 *1.417*	66,0 *2.598*	8,0 *0.315*
SD1108A-0640-055-08R1 *SD_DRILL_6.4MM_8XD_A*	03295019	6,4 *0.252*	55,0 *2.165*	106,0 *4.173*	70,0 *2.756*	36,0 *1.417*	66,0 *2.598*	8,0 *0.315*
SD1108A-0650-055-08R1 *SD_DRILL_6.5MM_8XD_A*	03295020	6,5 *0.256*	55,0 *2.165*	106,0 *4.173*	70,0 *2.756*	36,0 *1.417*	66,0 *2.598*	8,0 *0.315*
SD1108A-0660-055-08R1 *SD_DRILL_6.6MM_8XD_A*	03295021	6,6 *0.260*	55,0 *2.165*	106,0 *4.173*	70,0 *2.756*	36,0 *1.417*	66,0 *2.598*	8,0 *0.315*
SD1108A-0670-055-08R1 *SD_DRILL_6.7MM_8XD_A*	03295022	6,7 *0.264*	55,0 *2.165*	106,0 *4.173*	70,0 *2.756*	36,0 *1.417*	66,0 *2.598*	8,0 *0.315*
SD1108A-0675-055-08R1 *SD_DRILL_17/64_8XD_A*	03323687	6,747 *0.266*	55,0 *2.165*	106,0 *4.173*	70,0 *2.756*	36,0 *1.417*	66,0 *2.598*	8,0 *0.315*
SD1108A-0680-055-08R1 *SD_DRILL_6.8MM_8XD_A*	03295023	6,8 *0.268*	55,0 *2.165*	106,0 *4.173*	70,0 *2.756*	36,0 *1.417*	66,0 *2.598*	8,0 *0.315*
SD1108A-0690-055-08R1 *SD_DRILL_6.9MM_8XD_A*	03295024	6,9 *0.272*	55,0 *2.165*	106,0 *4.173*	70,0 *2.756*	36,0 *1.417*	66,0 *2.598*	8,0 *0.315*
SD1108A-0700-055-08R1 *SD_DRILL_7.0MM_8XD_A*	03295025	7,0 *0.276*	55,0 *2.165*	106,0 *4.173*	70,0 *2.756*	36,0 *1.417*	66,0 *2.598*	8,0 *0.315*
SD1108A-0710-064-08R1 *SD_DRILL_7.1MM_8XD_A*	03295026	7,1 *0.280*	64,0 *2.520*	116,0 *4.567*	80,0 *3.150*	36,0 *1.417*	76,0 *2.992*	8,0 *0.315*

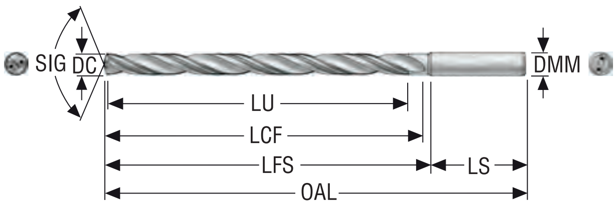
Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1108A-0714-064-08R1 *SD_DRILL_9/32_8XD_A*	03323688	7,144 *0.281*	64,0 *2.520*	116,0 *4.567*	80,0 *3.150*	36,0 *1.417*	76,0 *2.992*	8,0 *0.315*
SD1108A-0730-064-08R1 *SD_DRILL_7.3MM_8XD_A*	03323689	7,3 *0.287*	64,0 *2.520*	116,0 *4.567*	80,0 *3.150*	36,0 *1.417*	76,0 *2.992*	8,0 *0.315*
SD1108A-0740-064-08R1 *SD_DRILL_7.4MM_8XD_A*	03295027	7,4 *0.291*	64,0 *2.520*	116,0 *4.567*	80,0 *3.150*	36,0 *1.417*	76,0 *2.992*	8,0 *0.315*
SD1108A-0750-064-08R1 *SD_DRILL_7.5MM_8XD_A*	03295028	7,5 *0.295*	64,0 *2.520*	116,0 *4.567*	80,0 *3.150*	36,0 *1.417*	76,0 *2.992*	8,0 *0.315*
SD1108A-0754-064-08R1 *SD_DRILL_19/64_8XD_A*	03323690	7,541 *0.297*	64,0 *2.520*	116,0 *4.567*	80,0 *3.150*	36,0 *1.417*	76,0 *2.992*	8,0 *0.315*
SD1108A-0760-064-08R1 *SD_DRILL_7.6MM_8XD_A*	03323691	7,6 *0.299*	64,0 *2.520*	116,0 *4.567*	80,0 *3.150*	36,0 *1.417*	76,0 *2.992*	8,0 *0.315*
SD1108A-0770-064-08R1 *SD_DRILL_7.7MM_8XD_A*	03295029	7,7 *0.303*	64,0 *2.520*	116,0 *4.567*	80,0 *3.150*	36,0 *1.417*	76,0 *2.992*	8,0 *0.315*
SD1108A-0780-064-08R1 *SD_DRILL_7.8MM_8XD_A*	03295030	7,8 *0.307*	64,0 *2.520*	116,0 *4.567*	80,0 *3.150*	36,0 *1.417*	76,0 *2.992*	8,0 *0.315*
SD1108A-0790-064-08R1 *SD_DRILL_7.9MM_8XD_A*	03295031	7,9 *0.311*	64,0 *2.520*	116,0 *4.567*	80,0 *3.150*	36,0 *1.417*	76,0 *2.992*	8,0 *0.315*
SD1108A-0794-064-08R1 *SD_DRILL_5/16_8XD_A*	03323692	7,938 *0.313*	64,0 *2.520*	116,0 *4.567*	80,0 *3.150*	36,0 *1.417*	76,0 *2.992*	8,0 *0.315*
SD1108A-0800-064-08R1 *SD_DRILL_8.0MM_8XD_A*	03295032	8,0 *0.315*	64,0 *2.520*	116,0 *4.567*	80,0 *3.150*	36,0 *1.417*	76,0 *2.992*	8,0 *0.315*
SD1108A-0810-080-10R1 *SD_DRILL_8.1MM_8XD_A*	03295033	8,1 *0.319*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0820-080-10R1 *SD_DRILL_8.2MM_8XD_A*	03295034	8,2 *0.323*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0830-080-10R1 *SD_DRILL_8.3MM_8XD_A*	03295035	8,3 *0.327*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0833-080-10R1 *SD_DRILL_21/64_8XD_A*	03323693	8,334 *0.328*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0840-080-10R1 *SD_DRILL_8.4MM_8XD_A*	03295036	8,4 *0.331*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0850-080-10R1 *SD_DRILL_8.5MM_8XD_A*	03295037	8,5 *0.335*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0860-080-10R1 *SD_DRILL_8.6MM_8XD_A*	03295038	8,6 *0.339*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0870-080-10R1 *SD_DRILL_8.7MM_8XD_A*	03295039	8,7 *0.343*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0873-080-10R1 *SD_DRILL_11/32_8XD_A*	03323694	8,731 *0.344*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0880-080-10R1 *SD_DRILL_8.8MM_8XD_A*	03295040	8,8 *0.346*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0900-080-10R1 *SD_DRILL_9.0MM_8XD_A*	03295041	9,0 *0.354*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0910-080-10R1 *SD_DRILL_9.1MM_8XD_A*	03295042	9,1 *0.358*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0913-080-10R1 *SD_DRILL_23/64_8XD_A*	03323695	9,128 *0.359*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0930-080-10R1 *SD_DRILL_9.3MM_8XD_A*	03295043	9,3 *0.366*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0940-080-10R1 *SD_DRILL_9.4MM_8XD_A*	03295044	9,4 *0.370*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0950-080-10R1 *SD_DRILL_9.5MM_8XD_A*	03295045	9,5 *0.374*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0953-080-10R1 *SD_DRILL_3/8_8XD_A*	03323696	9,525 *0.375*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0970-080-10R1 *SD_DRILL_9.7MM_8XD_A*	03295046	9,7 *0.382*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0980-080-10R1 *SD_DRILL_9.8MM_8XD_A*	03295047	9,8 *0.386*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-0990-080-10R1 *SD_DRILL_9.9MM_8XD_A*	03295048	9,9 *0.390*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1108A-0992-080-10R1 *SD_DRILL_25/64_8XD_A*	03323697	9,922 *0.391*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-1000-080-10R1 *SD_DRILL_10.0MM_8XD_A*	03295049	10,0 *0.394*	80,0 *3.150*	139,0 *5.472*	99,0 *3.898*	40,0 *1.575*	95,0 *3.740*	10,0 *0.394*
SD1108A-1020-096-12R1 *SD_DRILL_10.2MM_8XD_A*	03295050	10,2 *0.402*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1030-096-12R1 *SD_DRILL_10.3MM_8XD_A*	03295051	10,3 *0.406*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1032-096-12R1 *SD_DRILL_13/32_8XD_A*	03323698	10,319 *0.406*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1040-096-12R1 *SD_DRILL_10.4MM_8XD_A*	03295053	10,4 *0.409*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1050-096-12R1 *SD_DRILL_10.5MM_8XD_A*	03295054	10,5 *0.413*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1070-096-12R1 *SD_DRILL_10.7MM_8XD_A*	03295055	10,7 *0.421*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1072-096-12R1 *SD_DRILL_27/64_8XD_A*	03323699	10,716 *0.422*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1080-096-12R1 *SD_DRILL_10.8MM_8XD_A*	03295056	10,8 *0.425*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1100-096-12R1 *SD_DRILL_11.0MM_8XD_A*	03295057	11,0 *0.433*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1111-096-12R1 *SD_DRILL_7/16_8XD_A*	03323700	11,113 *0.438*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1120-096-12R1 *SD_DRILL_11.2MM_8XD_A*	03295058	11,2 *0.441*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1130-096-12R1 *SD_DRILL_11.3MM_8XD_A*	03295059	11,3 *0.445*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1150-096-12R1 *SD_DRILL_11.5MM_8XD_A*	03295060	11,5 *0.453*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1170-096-12R1 *SD_DRILL_11.7MM_8XD_A*	03295061	11,7 *0.461*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1180-096-12R1 *SD_DRILL_11.8MM_8XD_A*	03295062	11,8 *0.465*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1190-096-12R1 *SD_DRILL_11.9MM_8XD_A*	03295063	11,9 *0.469*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1191-096-12R1 *SD_DRILL_15/32_8XD_A*	03323701	11,906 *0.469*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1200-096-12R1 *SD_DRILL_12.0MM_8XD_A*	03295064	12,0 *0.472*	96,0 *3.780*	163,0 *6.417*	118,0 *4.646*	45,0 *1.772*	114,0 *4.488*	12,0 *0.472*
SD1108A-1230-119-14R1 *SD_DRILL_31/64_8XD_A*	03295065	12,3 *0.484*	119,0 *4.685*	182,0 *7.165*	137,0 *5.394*	45,0 *1.772*	133,0 *5.236*	14,0 *0.551*
SD1108A-1250-119-14R1 *SD_DRILL_12.5MM_8XD_A*	03295066	12,5 *0.492*	119,0 *4.685*	182,0 *7.165*	137,0 *5.394*	45,0 *1.772*	133,0 *5.236*	14,0 *0.551*
SD1108A-1270-119-14R1 *SD_DRILL_1/2_8XD_A*	03295067	12,7 *0.500*	119,0 *4.685*	182,0 *7.165*	137,0 *5.394*	45,0 *1.772*	133,0 *5.236*	14,0 *0.551*
SD1108A-1300-119-14R1 *SD_DRILL_13.0MM_8XD_A*	03295068	13,0 *0.512*	119,0 *4.685*	182,0 *7.165*	137,0 *5.394*	45,0 *1.772*	133,0 *5.236*	14,0 *0.551*
SD1108A-1349-119-14R1 *SD_DRILL_17/32_8XD_A*	03323702	13,494 *0.531*	119,0 *4.685*	182,0 *7.165*	137,0 *5.394*	45,0 *1.772*	133,0 *5.236*	14,0 *0.551*
SD1108A-1350-119-14R1 *SD_DRILL_13.5MM_8XD_A*	03295069	13,5 *0.531*	119,0 *4.685*	182,0 *7.165*	137,0 *5.394*	45,0 *1.772*	133,0 *5.236*	14,0 *0.551*
SD1108A-1400-119-14R1 *SD_DRILL_14.0MM_8XD_A*	03295070	14,0 *0.551*	119,0 *4.685*	182,0 *7.165*	137,0 *5.394*	45,0 *1.772*	133,0 *5.236*	14,0 *0.551*
SD1108A-1429-136-16R1 *SD_DRILL_9/16_8XD_A*	03295071	14,288 *0.563*	136,0 *5.354*	204,0 *8.031*	156,0 *6.142*	48,0 *1.890*	152,0 *5.984*	16,0 *0.630*
SD1108A-1450-136-16R1 *SD_DRILL_14.5MM_8XD_A*	03295072	14,5 *0.571*	136,0 *5.354*	204,0 *8.031*	156,0 *6.142*	48,0 *1.890*	152,0 *5.984*	16,0 *0.630*
SD1108A-1500-136-16R1 *SD_DRILL_15.0MM_8XD_A*	03295073	15,0 *0.591*	136,0 *5.354*	204,0 *8.031*	156,0 *6.142*	48,0 *1.890*	152,0 *5.984*	16,0 *0.630*
SD1108A-1550-136-16R1 *SD_DRILL_15.5MM_8XD_A*	03295074	15,5 *0.610*	136,0 *5.354*	204,0 *8.031*	156,0 *6.142*	48,0 *1.890*	152,0 *5.984*	16,0 *0.630*

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1108A-1588-136-16R1 *SD_DRILL_5/8_8XD_A*	03295075	15,875 *0.625*	136,0 *5.354*	204,0 *8.031*	156,0 *6.142*	48,0 *1.890*	152,0 *5.984*	16,0 *0.630*
SD1108A-1600-136-16R1 *SD_DRILL_16.0MM_8XD_A*	03295076	16,0 *0.630*	136,0 *5.354*	204,0 *8.031*	156,0 *6.142*	48,0 *1.890*	152,0 *5.984*	16,0 *0.630*
SD1108A-1650-153-18R1 *SD_DRILL_16.5MM_8XD_A*	03295077	16,5 *0.650*	153,0 *6.024*	223,0 *8.780*	175,0 *6.890*	48,0 *1.890*	171,0 *6.732*	18,0 *0.709*
SD1108A-1700-153-18R1 *SD_DRILL_17.0MM_8XD_A*	03295078	17,0 *0.669*	153,0 *6.024*	223,0 *8.780*	175,0 *6.890*	48,0 *1.890*	171,0 *6.732*	18,0 *0.709*
SD1108A-1750-153-18R1 *SD_DRILL_17.5MM_8XD_A*	03295079	17,5 *0.689*	153,0 *6.024*	223,0 *8.780*	175,0 *6.890*	48,0 *1.890*	171,0 *6.732*	18,0 *0.709*
SD1108A-1800-153-18R1 *SD_DRILL_18.0MM_8XD_A*	03295080	18,0 *0.709*	153,0 *6.024*	223,0 *8.780*	175,0 *6.890*	48,0 *1.890*	171,0 *6.732*	18,0 *0.709*
SD1108A-1850-170-20R1 *SD_DRILL_18.5MM_8XD_A*	03295081	18,5 *0.728*	170,0 *6.693*	244,0 *9.606*	194,0 *7.638*	50,0 *1.969*	190,0 *7.480*	20,0 *0.787*
SD1108A-1900-170-20R1 *SD_DRILL_19.0MM_8XD_A*	03295082	19,0 *0.748*	170,0 *6.693*	244,0 *9.606*	194,0 *7.638*	50,0 *1.969*	190,0 *7.480*	20,0 *0.787*
SD1108A-1905-170-20R1 *SD_DRILL_3/4_8XD_A*	03323703	19,05 *0.750*	170,0 *6.693*	244,0 *9.606*	194,0 *7.638*	50,0 *1.969*	190,0 *7.480*	20,0 *0.787*
SD1108A-1950-170-20R1 *SD_DRILL_19.5MM_8XD_A*	03295083	19,5 *0.768*	170,0 *6.693*	244,0 *9.606*	194,0 *7.638*	50,0 *1.969*	190,0 *7.480*	20,0 *0.787*
SD1108A-2000-170-20R1 *SD_DRILL_20.0MM_8XD_A*	03295084	20,0 *0.787*	170,0 *6.693*	244,0 *9.606*	194,0 *7.638*	50,0 *1.969*	190,0 *7.480*	20,0 *0.787*

SD1112A

Drilling depth ~ 12 x D



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- Point angle: 140°
- Coating: TiAlN
- Hole tolerance: IT9
- For cutting data see page(s) 148
- For intermediate diameters see Custom Design software.

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1112A-0300-048-06R1 *SD_DRILL_3.0MM_12XD_A*	03295085	3,0 *0.118*	48,0 *1.890*	92,0 *3.622*	56,0 *2.205*	36,0 *1.417*	54,0 *2.126*	6,0 *0.236*
SD1112A-0310-048-06R1 *SD_DRILL_3.1MM_12XD_A*	03295086	3,1 *0.122*	48,0 *1.890*	92,0 *3.622*	56,0 *2.205*	36,0 *1.417*	54,0 *2.126*	6,0 *0.236*
SD1112A-0318-048-06R1 *SD_DRILL_1/8_12XD_A*	03323704	3,175 *0.125*	48,0 *1.890*	92,0 *3.622*	56,0 *2.205*	36,0 *1.417*	54,0 *2.126*	6,0 *0.236*
SD1112A-0320-048-06R1 *SD_DRILL_3.2MM_12XD_A*	03295087	3,2 *0.126*	48,0 *1.890*	92,0 *3.622*	56,0 *2.205*	36,0 *1.417*	54,0 *2.126*	6,0 *0.236*
SD1112A-0330-048-06R1 *SD_DRILL_3.3MM_12XD_A*	03295088	3,3 *0.130*	48,0 *1.890*	92,0 *3.622*	56,0 *2.205*	36,0 *1.417*	54,0 *2.126*	6,0 *0.236*
SD1112A-0340-048-06R1 *SD_DRILL_3.4MM_12XD_A*	03295089	3,4 *0.134*	48,0 *1.890*	92,0 *3.622*	56,0 *2.205*	36,0 *1.417*	54,0 *2.126*	6,0 *0.236*
SD1112A-0350-048-06R1 *SD_DRILL_3.5MM_12XD_A*	03295090	3,5 *0.138*	48,0 *1.890*	92,0 *3.622*	56,0 *2.205*	36,0 *1.417*	54,0 *2.126*	6,0 *0.236*
SD1112A-0357-048-06R1 *SD_DRILL_9/64_12XD_A*	03323705	3,572 *0.141*	48,0 *1.890*	92,0 *3.622*	56,0 *2.205*	36,0 *1.417*	54,0 *2.126*	6,0 *0.236*
SD1112A-0360-048-06R1 *SD_DRILL_3.6MM_12XD_A*	03295091	3,6 *0.142*	48,0 *1.890*	92,0 *3.622*	56,0 *2.205*	36,0 *1.417*	54,0 *2.126*	6,0 *0.236*
SD1112A-0370-048-06R1 *SD_DRILL_3.7MM_12XD_A*	03295092	3,7 *0.146*	48,0 *1.890*	92,0 *3.622*	56,0 *2.205*	36,0 *1.417*	54,0 *2.126*	6,0 *0.236*
SD1112A-0380-056-06R1 *SD_DRILL_3.8MM_12XD_A*	03295093	3,8 *0.150*	56,0 *2.205*	102,0 *4.016*	66,0 *2.598*	36,0 *1.417*	64,0 *2.520*	6,0 *0.236*
SD1112A-0390-056-06R1 *SD_DRILL_3.9MM_12XD_A*	03295094	3,9 *0.154*	56,0 *2.205*	102,0 *4.016*	66,0 *2.598*	36,0 *1.417*	64,0 *2.520*	6,0 *0.236*
SD1112A-0397-056-06R1 *SD_DRILL_5/32_12XD_A*	03323706	3,969 *0.156*	56,0 *2.205*	102,0 *4.016*	66,0 *2.598*	36,0 *1.417*	64,0 *2.520*	6,0 *0.236*
SD1112A-0400-056-06R1 *SD_DRILL_4.0MM_12XD_A*	03295095	4,0 *0.157*	56,0 *2.205*	102,0 *4.016*	66,0 *2.598*	36,0 *1.417*	64,0 *2.520*	6,0 *0.236*
SD1112A-0410-056-06R1 *SD_DRILL_4.1MM_12XD_A*	03295096	4,1 *0.161*	56,0 *2.205*	102,0 *4.016*	66,0 *2.598*	36,0 *1.417*	64,0 *2.520*	6,0 *0.236*
SD1112A-0420-056-06R1 *SD_DRILL_4.2MM_12XD_A*	03295097	4,2 *0.165*	56,0 *2.205*	102,0 *4.016*	66,0 *2.598*	36,0 *1.417*	64,0 *2.520*	6,0 *0.236*
SD1112A-0430-056-06R1 *SD_DRILL_4.3MM_12XD_A*	03295098	4,3 *0.169*	56,0 *2.205*	102,0 *4.016*	66,0 *2.598*	36,0 *1.417*	64,0 *2.520*	6,0 *0.236*
SD1112A-0437-056-06R1 *SD_DRILL_11/64_12XD_A*	03323707	4,366 *0.172*	56,0 *2.205*	102,0 *4.016*	66,0 *2.598*	36,0 *1.417*	64,0 *2.520*	6,0 *0.236*
SD1112A-0440-056-06R1 *SD_DRILL_4.4MM_12XD_A*	03295099	4,4 *0.173*	56,0 *2.205*	102,0 *4.016*	66,0 *2.598*	36,0 *1.417*	64,0 *2.520*	6,0 *0.236*
SD1112A-0450-056-06R1 *SD_DRILL_4.5MM_12XD_A*	03295100	4,5 *0.177*	56,0 *2.205*	102,0 *4.016*	66,0 *2.598*	36,0 *1.417*	64,0 *2.520*	6,0 *0.236*
SD1112A-0460-056-06R1 *SD_DRILL_4.6MM_12XD_A*	03295101	4,6 *0.181*	56,0 *2.205*	102,0 *4.016*	66,0 *2.598*	36,0 *1.417*	64,0 *2.520*	6,0 *0.236*

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1112A-0470-056-06R1 *SD_DRILL_4.7MM_12XD_A*	03295102	4,7 *0.185*	56,0 *2.205*	102,0 *4.016*	66,0 *2.598*	36,0 *1.417*	64,0 *2.520*	6,0 *0.236*
SD1112A-0476-074-06R1 *SD_DRILL_3/16_12XD_A*	03323708	4,763 *0.188*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0480-074-06R1 *SD_DRILL_4.8MM_12XD_A*	03295103	4,8 *0.189*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0490-074-06R1 *SD_DRILL_4.9MM_12XD_A*	03295104	4,9 *0.193*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0500-074-06R1 *SD_DRILL_5.0MM_12XD_A*	03295105	5,0 *0.197*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0510-074-06R1 *SD_DRILL_5.1MM_12XD_A*	03295106	5,1 *0.201*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0516-074-06R1 *SD_DRILL_13/64_12XD_A*	03323709	5,159 *0.203*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0520-074-06R1 *SD_DRILL_5.2MM_12XD_A*	03295107	5,2 *0.205*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0530-074-06R1 *SD_DRILL_5.3MM_12XD_A*	03295108	5,3 *0.209*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0540-074-06R1 *SD_DRILL_5.4MM_12XD_A*	03295109	5,4 *0.213*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0550-074-06R1 *SD_DRILL_5.5MM_12XD_A*	03295110	5,5 *0.217*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0556-074-06R1 *SD_DRILL_7/32_12XD_A*	03295111	5,556 *0.219*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0560-074-06R1 *SD_DRILL_5.6MM_12XD_A*	03295112	5,6 *0.220*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0570-074-06R1 *SD_DRILL_5.7MM_12XD_A*	03295113	5,7 *0.224*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0580-074-06R1 *SD_DRILL_5.8MM_12XD_A*	03295114	5,8 *0.228*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0590-074-06R1 *SD_DRILL_5.9MM_12XD_A*	03295115	5,9 *0.232*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0600-074-06R1 *SD_DRILL_6.0MM_12XD_A*	03295116	6,0 *0.236*	74,0 *2.913*	121,0 *4.764*	85,0 *3.346*	36,0 *1.417*	83,0 *3.268*	6,0 *0.236*
SD1112A-0610-098-08R1 *SD_DRILL_6.1MM_12XD_A*	03295117	6,1 *0.240*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0620-098-08R1 *SD_DRILL_6.2MM_12XD_A*	03295118	6,2 *0.244*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0630-098-08R1 *SD_DRILL_6.3MM_12XD_A*	03295119	6,3 *0.248*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0635-098-08R1 *SD_DRILL_1/4_12XD_A*	03295120	6,35 *0.250*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0640-098-08R1 *SD_DRILL_6.4MM_12XD_A*	03295121	6,4 *0.252*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0650-098-08R1 *SD_DRILL_6.5MM_12XD_A*	03295122	6,5 *0.256*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0660-098-08R1 *SD_DRILL_6.6MM_12XD_A*	03295123	6,6 *0.260*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0670-098-08R1 *SD_DRILL_6.7MM_12XD_A*	03295124	6,7 *0.264*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0675-098-08R1 *SD_DRILL_17/64_12XD_A*	03323710	6,747 *0.266*	98,0 *3.858*	148,0 *5.827*	128,0 *5.039*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0680-098-08R1 *SD_DRILL_6.8MM_12XD_A*	03295125	6,8 *0.268*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0690-098-08R1 *SD_DRILL_6.9MM_12XD_A*	03295126	6,9 *0.272*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0700-098-08R1 *SD_DRILL_7.0MM_12XD_A*	03295127	7,0 *0.276*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0710-098-08R1 *SD_DRILL_7.1MM_12XD_A*	03295128	7,1 *0.280*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0714-098-08R1 *SD_DRILL_9/32_12XD_A*	03323711	7,144 *0.281*	98,0 *3.858*	148,0 *5.827*	128,0 *5.039*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*

Introduction
Drilling
Reaming
Boring
Annex

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1112A-0730-098-08R1 *SD_DRILL_7.3MM_12XD_A*	03323712	7,3 *0.287*	98,0 *3.858*	148,0 *5.827*	128,0 *5.039*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0740-098-08R1 *SD_DRILL_7.4MM_12XD_A*	03295129	7,4 *0.291*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0750-098-08R1 *SD_DRILL_7.5MM_12XD_A*	03295130	7,5 *0.295*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0754-098-08R1 *SD_DRILL_19/64_12XD_A*	03323713	7,541 *0.297*	98,0 *3.858*	148,0 *5.827*	128,0 *5.039*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0780-098-08R1 *SD_DRILL_7.8MM_12XD_A*	03295131	7,8 *0.307*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0790-098-08R1 *SD_DRILL_7.9MM_12XD_A*	03295132	7,9 *0.311*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0794-098-08R1 *SD_DRILL_5/16_12XD_A*	03323714	7,938 *0.313*	98,0 *3.858*	148,0 *5.827*	128,0 *5.039*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0800-098-08R1 *SD_DRILL_8.0MM_12XD_A*	03295133	8,0 *0.315*	98,0 *3.858*	148,0 *5.827*	112,0 *4.409*	36,0 *1.417*	110,0 *4.331*	8,0 *0.315*
SD1112A-0810-123-10R1 *SD_DRILL_8.1MM_12XD_A*	03295135	8,1 *0.319*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0820-123-10R1 *SD_DRILL_8.2MM_12XD_A*	03295136	8,2 *0.323*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0830-123-10R1 *SD_DRILL_8.3MM_12XD_A*	03295137	8,3 *0.327*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0840-123-10R1 *SD_DRILL_8.4MM_12XD_A*	03295138	8,4 *0.331*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0850-123-10R1 *SD_DRILL_8.5MM_12XD_A*	03295139	8,5 *0.335*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0860-123-10R1 *SD_DRILL_8.6MM_12XD_A*	03295140	8,6 *0.339*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0870-123-10R1 *SD_DRILL_8.7MM_12XD_A*	03295141	8,7 *0.343*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0873-123-10R1 *SD_DRILL_11/32_12XD_A*	03323715	8,731 *0.344*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0880-123-10R1 *SD_DRILL_8.8MM_12XD_A*	03295142	8,8 *0.346*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0900-123-10R1 *SD_DRILL_9.0MM_12XD_A*	03295143	9,0 *0.354*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0913-123-10R1 *SD_DRILL_23/64_12XD_A*	03323716	9,128 *0.359*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0930-123-10R1 *SD_DRILL_9.3MM_12XD_A*	03295144	9,3 *0.366*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0950-123-10R1 *SD_DRILL_9.5MM_12XD_A*	03295145	9,5 *0.374*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0953-123-10R1 *SD_DRILL_3/8_12XD_A*	03323717	9,525 *0.375*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0970-123-10R1 *SD_DRILL_9.7MM_12XD_A*	03295146	9,7 *0.382*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0980-123-10R1 *SD_DRILL_9.8MM_12XD_A*	03295147	9,8 *0.386*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-0992-123-10R1 *SD_DRILL_25/64_12XD_A*	03323718	9,922 *0.391*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-1000-123-10R1 *SD_DRILL_10.0MM_12XD_A*	03295148	10,0 *0.394*	123,0 *4.843*	180,0 *7.087*	140,0 *5.512*	40,0 *1.575*	138,0 *5.433*	10,0 *0.394*
SD1112A-1020-140-12R1 *SD_DRILL_10.2MM_12XD_A*	03295149	10,2 *0.402*	140,0 *5.512*	206,0 *8.110*	161,0 *6.339*	45,0 *1.772*	158,0 *6.220*	12,0 *0.472*
SD1112A-1030-140-12R1 *SD_DRILL_10.3MM_12XD_A*	03295150	10,3 *0.406*	140,0 *5.512*	206,0 *8.110*	161,0 *6.339*	45,0 *1.772*	158,0 *6.220*	12,0 *0.472*
SD1112A-1032-140-12R1 *SD_DRILL_13/32_12XD_A*	03323719	10,319 *0.406*	140,0 *5.512*	206,0 *8.110*	161,0 *6.339*	45,0 *1.772*	158,0 *6.220*	12,0 *0.472*
SD1112A-1050-140-12R1 *SD_DRILL_10.5MM_12XD_A*	03295151	10,5 *0.413*	140,0 *5.512*	206,0 *8.110*	161,0 *6.339*	45,0 *1.772*	158,0 *6.220*	12,0 *0.472*
SD1112A-1072-140-12R1 *SD_DRILL_27/64_12XD_A*	03323720	10,716 *0.422*	140,0 *5.512*	206,0 *8.110*	161,0 *6.339*	45,0 *1.772*	158,0 *6.220*	12,0 *0.472*

Designation *Designation Ansi*	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LFS mm *Inch*	LS mm *Inch*	LCF mm *Inch*	DMM mm *Inch*
SD1112A-1080-140-12R1 *SD_DRILL_10.8MM_12XD_A*	03295152	10,8 *0.425*	140,0 *5.512*	206,0 *8.110*	161,0 *6.339*	45,0 *1.772*	158,0 *6.220*	12,0 *0.472*
SD1112A-1100-140-12R1 *SD_DRILL_11.0MM_12XD_A*	03295153	11,0 *0.433*	140,0 *5.512*	206,0 *8.110*	161,0 *6.339*	45,0 *1.772*	158,0 *6.220*	12,0 *0.472*
SD1112A-1111-140-12R1 *SD_DRILL_7/16_12XD_A*	03323722	11,113 *0.438*	140,0 *5.512*	206,0 *8.110*	161,0 *6.339*	45,0 *1.772*	158,0 *6.220*	12,0 *0.472*
SD1112A-1120-140-12R1 *SD_DRILL_11.2MM_12XD_A*	03295154	11,2 *0.441*	140,0 *5.512*	206,0 *8.110*	161,0 *6.339*	45,0 *1.772*	158,0 *6.220*	12,0 *0.472*
SD1112A-1150-140-12R1 *SD_DRILL_11.5MM_12XD_A*	03295155	11,5 *0.453*	140,0 *5.512*	206,0 *8.110*	161,0 *6.339*	45,0 *1.772*	158,0 *6.220*	12,0 *0.472*
SD1112A-1170-140-12R1 *SD_DRILL_11.7MM_12XD_A*	03295156	11,7 *0.461*	140,0 *5.512*	206,0 *8.110*	161,0 *6.339*	45,0 *1.772*	158,0 *6.220*	12,0 *0.472*
SD1112A-1180-140-12R1 *SD_DRILL_11.8MM_12XD_A*	03295157	11,8 *0.465*	140,0 *5.512*	206,0 *8.110*	161,0 *6.339*	45,0 *1.772*	158,0 *6.220*	12,0 *0.472*
SD1112A-1191-140-12R1 *SD_DRILL_15/32_12XD_A*	03323723	11,906 *0.469*	140,0 *5.512*	206,0 *8.110*	161,0 *6.339*	45,0 *1.772*	158,0 *6.220*	12,0 *0.472*
SD1112A-1200-140-12R1 *SD_DRILL_12.0MM_12XD_A*	03295158	12,0 *0.472*	140,0 *5.512*	206,0 *8.110*	161,0 *6.339*	45,0 *1.772*	158,0 *6.220*	12,0 *0.472*
SD1112A-1220-168-14R1 *SD_DRILL_12.2MM_12XD_A*	03295159	12,2 *0.480*	168,0 *6.614*	230,0 *9.055*	185,0 *7.283*	45,0 *1.772*	182,0 *7.165*	14,0 *0.551*
SD1112A-1230-168-14R1 *SD_DRILL_31/64_12XD_A*	03295160	12,3 *0.484*	168,0 *6.614*	230,0 *9.055*	185,0 *7.283*	45,0 *1.772*	182,0 *7.165*	14,0 *0.551*
SD1112A-1250-168-14R1 *SD_DRILL_12.5MM_12XD_A*	03295161	12,5 *0.492*	168,0 *6.614*	230,0 *9.055*	185,0 *7.283*	45,0 *1.772*	182,0 *7.165*	14,0 *0.551*
SD1112A-1270-168-14R1 *SD_DRILL_1/2_12XD_A*	03295162	12,7 *0.500*	168,0 *6.614*	230,0 *9.055*	185,0 *7.283*	45,0 *1.772*	182,0 *7.165*	14,0 *0.551*
SD1112A-1300-168-14R1 *SD_DRILL_13.0MM_12XD_A*	03295163	13,0 *0.512*	168,0 *6.614*	230,0 *9.055*	185,0 *7.283*	45,0 *1.772*	182,0 *7.165*	14,0 *0.551*
SD1112A-1349-168-14R1 *SD_DRILL_17/32_12XD_A*	03323724	13,494 *0.531*	168,0 *6.614*	230,0 *9.055*	185,0 *7.283*	45,0 *1.772*	182,0 *7.165*	14,0 *0.551*
SD1112A-1350-168-14R1 *SD_DRILL_13.5MM_12XD_A*	03295164	13,5 *0.531*	168,0 *6.614*	230,0 *9.055*	185,0 *7.283*	45,0 *1.772*	182,0 *7.165*	14,0 *0.551*
SD1112A-1400-168-14R1 *SD_DRILL_14.0MM_12XD_A*	03295165	14,0 *0.551*	168,0 *6.614*	230,0 *9.055*	185,0 *7.283*	45,0 *1.772*	182,0 *7.165*	14,0 *0.551*
SD1112A-1429-192-16R1 *SD_DRILL_9/16_12XD_A*	03295166	14,288 *0.563*	192,0 *7.559*	260,0 *10.236*	212,0 *8.346*	48,0 *1.890*	208,0 *8.189*	16,0 *0.630*
SD1112A-1450-192-16R1 *SD_DRILL_14.5MM_12XD_A*	03295167	14,5 *0.571*	192,0 *7.559*	260,0 *10.236*	212,0 *8.346*	48,0 *1.890*	208,0 *8.189*	16,0 *0.630*
SD1112A-1500-192-16R1 *SD_DRILL_15.0MM_12XD_A*	03295168	15,0 *0.591*	192,0 *7.559*	260,0 *10.236*	212,0 *8.346*	48,0 *1.890*	208,0 *8.189*	16,0 *0.630*
SD1112A-1550-192-16R1 *SD_DRILL_15.5MM_12XD_A*	03295169	15,5 *0.610*	192,0 *7.559*	260,0 *10.236*	212,0 *8.346*	48,0 *1.890*	208,0 *8.189*	16,0 *0.630*
SD1112A-1588-192-16R1 *SD_DRILL_5/8_12XD_A*	03295170	15,875 *0.625*	192,0 *7.559*	260,0 *10.236*	212,0 *8.346*	48,0 *1.890*	208,0 *8.189*	16,0 *0.630*
SD1112A-1600-192-16R1 *SD_DRILL_16.0MM_12XD_A*	03295171	16,0 *0.630*	192,0 *7.559*	260,0 *10.236*	212,0 *8.346*	48,0 *1.890*	208,0 *8.189*	16,0 *0.630*
SD1112A-1650-216-18R1 *SD_DRILL_16.5MM_12XD_A*	03295172	16,5 *0.650*	216,0 *8.504*	285,0 *11.220*	237,0 *9.331*	48,0 *1.890*	234,0 *9.213*	18,0 *0.709*
SD1112A-1700-216-18R1 *SD_DRILL_17.0MM_12XD_A*	03295173	17,0 *0.669*	216,0 *8.504*	285,0 *11.220*	237,0 *9.331*	48,0 *1.890*	234,0 *9.213*	18,0 *0.709*
SD1112A-1750-216-18R1 *SD_DRILL_17.5MM_12XD_A*	03295174	17,5 *0.689*	216,0 *8.504*	285,0 *11.220*	237,0 *9.331*	48,0 *1.890*	234,0 *9.213*	18,0 *0.709*
SD1112A-1800-216-18R1 *SD_DRILL_18.0MM_12XD_A*	03295175	18,0 *0.709*	216,0 *8.504*	285,0 *11.220*	237,0 *9.331*	48,0 *1.890*	234,0 *9.213*	18,0 *0.709*
SD1112A-1900-238-20R1 *SD_DRILL_19.0MM_12XD_A*	03295176	19,0 *0.748*	238,0 *9.370*	310,0 *12.205*	260,0 *10.236*	50,0 *1.969*	258,0 *10.157*	20,0 *0.787*
SD1112A-2000-238-20R1 *SD_DRILL_20.0MM_12XD_A*	03295177	20,0 *0.787*	238,0 *9.370*	310,0 *12.205*	260,0 *10.236*	50,0 *1.969*	258,0 *10.157*	20,0 *0.787*

Introduction
Drilling
Reaming
Boring
Annex

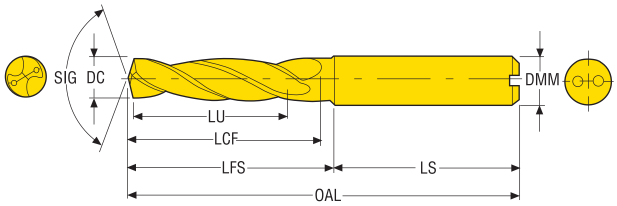
Feedmax -P – single diameter drills

Designed for high productivity and low cost per hole offering a unique combination of state-of-the-art carbide, coating and geometry technology.

- Self-centering geometry for high quality holes with no need for center-drilling operation.
- A special TiAIN coating gives Seco Feedmax drills high hot hardness that in combination with a strong cutting edge, ensures for long and predictable tool life

SD203A-P

Drilling depth ~ 3 x D



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- Point angle: 140°
- Coating: TiAlN
- Hole tolerance: IT8-9
- For cutting data see page(s) 149-152
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-0200-007-04R1-P	03045918	2,0 *0.079*	7,0 *0.276*	41,0 *1.614*	14,0 *0.551*	27,0 *1.063*	11,0 *0.433*	4,0 *0.157*
SD203A-0210-007-04R1-P	03045919	2,1 *0.083*	7,0 *0.276*	41,0 *1.614*	14,0 *0.551*	27,0 *1.063*	11,0 *0.433*	4,0 *0.157*
SD203A-0220-007-04R1-P	03045920	2,2 *0.087*	7,0 *0.276*	41,0 *1.614*	14,0 *0.551*	27,0 *1.063*	11,0 *0.433*	4,0 *0.157*
SD203A-0230-008-04R1-P	03045921	2,3 *0.091*	8,0 *0.315*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	12,5 *0.492*	4,0 *0.157*
SD203A-0235-008-04R1-P	03138154	2,35 *0.093*	8,0 *0.315*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	12,5 *0.492*	4,0 *0.157*
SD203A-0238-008-04R1-P	03120476	2,381 *0.094*	8,0 *0.315*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	12,5 *0.492*	4,0 *0.157*
SD203A-0240-008-04R1-P	03045922	2,4 *0.094*	8,0 *0.315*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	12,5 *0.492*	4,0 *0.157*
SD203A-0250-008-04R1-P	03045923	2,5 *0.098*	8,0 *0.315*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	12,5 *0.492*	4,0 *0.157*
SD203A-0260-008-04R1-P	03045924	2,6 *0.102*	8,0 *0.315*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	12,5 *0.492*	4,0 *0.157*
SD203A-0270-009-04R1-P	03045925	2,7 *0.106*	9,0 *0.354*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	14,5 *0.571*	4,0 *0.157*
SD203A-0278-009-04R1-P	03120495	2,778 *0.109*	9,0 *0.354*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	14,5 *0.571*	4,0 *0.157*
SD203A-0280-009-04R1-P	03045926	2,8 *0.110*	9,0 *0.354*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	14,5 *0.571*	4,0 *0.157*
SD203A-0290-009-04R1-P	03045927	2,9 *0.114*	9,0 *0.354*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	14,5 *0.571*	4,0 *0.157*
SD203A-0300-014-06R1-P	03045928	3,0 *0.118*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0310-014-06R1-P	03045929	3,1 *0.122*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0318-014-06R1-P	03046061	3,175 *0.125*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0320-014-06R1-P	03045930	3,2 *0.126*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0325-014-06R1-P	03045931	3,25 *0.128*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0330-014-06R1-P	03045932	3,3 *0.130*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0340-014-06R1-P	03045933	3,4 *0.134*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0350-014-06R1-P	03045934	3,5 *0.138*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0357-014-06R1-P	03046062	3,572 *0.141*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-0360-014-06R1-P	03045935	3,6 *0.142*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0365-014-06R1-P	03045936	3,65 *0.144*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0370-014-06R1-P	03045937	3,7 *0.146*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0380-017-06R1-P	03045938	3,8 *0.150*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0390-017-06R1-P	03045939	3,9 *0.154*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0397-017-06R1-P	03046063	3,97 *0.156*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0400-017-06R1-P	03045940	4,0 *0.157*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0410-017-06R1-P	03045941	4,1 *0.161*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0420-017-06R1-P	03045942	4,2 *0.165*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0430-017-06R1-P	03045943	4,3 *0.169*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0437-017-06R1-P	03046064	4,366 *0.172*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0450-017-06R1-P	03045944	4,5 *0.177*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0460-017-06R1-P	03045945	4,6 *0.181*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0465-017-06R1-P	03045946	4,65 *0.183*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0470-017-06R1-P	03045947	4,7 *0.185*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0476-020-06R1-P	03046065	4,763 *0.188*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0480-020-06R1-P	03045948	4,8 *0.189*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0490-020-06R1-P	03045949	4,9 *0.193*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0500-020-06R1-P	03045950	5,0 *0.197*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0510-020-06R1-P	03045951	5,1 *0.201*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0516-020-06R1-P	03046066	5,159 *0.203*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0520-020-06R1-P	03045952	5,2 *0.205*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0530-020-06R1-P	03045953	5,3 *0.209*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0540-020-06R1-P	03045954	5,4 *0.213*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0550-020-06R1-P	03045955	5,5 *0.217*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0555-020-06R1-P	03045956	5,55 *0.219*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0556-020-06R1-P	03046067	5,556 *0.219*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0560-020-06R1-P	03045957	5,6 *0.220*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0570-020-06R1-P	03045958	5,7 *0.224*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0580-020-06R1-P	03045959	5,8 *0.228*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0590-020-06R1-P	03045960	5,9 *0.232*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-0595-020-06R1-P	03046068	5,953 *0.234*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0600-020-06R1-P	03045961	6,0 *0.236*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0610-024-08R1-P	03045962	6,1 *0.240*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0620-024-08R1-P	03045963	6,2 *0.244*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0630-024-08R1-P	03045964	6,3 *0.248*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0635-024-08R1-P	03046069	6,35 *0.250*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0640-024-08R1-P	03045965	6,4 *0.252*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0650-024-08R1-P	03045966	6,5 *0.256*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0660-024-08R1-P	03045967	6,6 *0.260*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0670-024-08R1-P	03045968	6,7 *0.264*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0675-024-08R1-P	03046070	6,747 *0.266*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0680-024-08R1-P	03045969	6,8 *0.268*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0690-024-08R1-P	03045970	6,9 *0.272*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0700-024-08R1-P	03045971	7,0 *0.276*	24,0 *0.945*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0710-029-08R1-P	03045972	7,1 *0.280*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-0714-029-08R1-P	03046071	7,144 *0.281*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-0720-029-08R1-P	03045973	7,2 *0.283*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-0730-029-08R1-P	03045974	7,3 *0.287*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-0740-029-08R1-P	03045975	7,4 *0.291*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-0750-029-08R1-P	03045976	7,5 *0.295*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-0754-029-08R1-P	03046072	7,541 *0.297*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-0755-029-08R1-P	03045977	7,55 *0.297*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-0760-029-08R1-P	03045978	7,6 *0.299*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-0770-029-08R1-P	03045979	7,7 *0.303*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-0780-029-08R1-P	03045980	7,8 *0.307*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-0790-029-08R1-P	03045981	7,9 *0.311*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-0794-029-08R1-P	03046073	7,938 *0.313*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-0800-029-08R1-P	03045982	8,0 *0.315*	29,0 *1.142*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-0810-035-10R1-P	03045983	8,1 *0.319*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0820-035-10R1-P	03045984	8,2 *0.323*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0830-035-10R1-P	03045985	8,3 *0.327*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*

Introduction
Drilling
Reaming
Boring
Annex

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-0833-035-10R1-P	03046074	8,334 *0.328*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0840-035-10R1-P	03045986	8,4 *0.331*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0850-035-10R1-P	03045987	8,5 *0.335*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0860-035-10R1-P	03045988	8,6 *0.339*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0870-035-10R1-P	03045989	8,7 *0.343*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0873-035-10R1-P	03046075	8,731 *0.344*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0880-035-10R1-P	03045990	8,8 *0.346*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0890-035-10R1-P	03045991	8,9 *0.350*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0900-035-10R1-P	03045992	9,0 *0.354*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0910-035-10R1-P	03045993	9,1 *0.358*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0913-035-10R1-P	03046076	9,128 *0.359*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0920-035-10R1-P	03045994	9,2 *0.362*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0930-035-10R1-P	03045995	9,3 *0.366*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0940-035-10R1-P	03045996	9,4 *0.370*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0950-035-10R1-P	03045997	9,5 *0.374*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0953-035-10R1-P	03046077	9,525 *0.375*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0955-035-10R1-P	03045998	9,55 *0.376*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0960-035-10R1-P	03045999	9,6 *0.378*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0970-035-10R1-P	03046000	9,7 *0.382*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0980-035-10R1-P	03046001	9,8 *0.386*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0990-035-10R1-P	03046002	9,9 *0.390*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-0992-035-10R1-P	03046078	9,922 *0.391*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-1000-035-10R1-P	03046003	10,0 *0.394*	35,0 *1.378*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-1020-040-12R1-P	03046004	10,2 *0.402*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1032-040-12R1-P	03046079	10,319 *0.406*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1040-040-12R1-P	03046005	10,4 *0.409*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1050-040-12R1-P	03046006	10,5 *0.413*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1060-040-12R1-P	03046007	10,6 *0.417*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1072-040-12R1-P	03046080	10,716 *0.422*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1080-040-12R1-P	03046008	10,8 *0.425*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1090-040-12R1-P	03046009	10,9 *0.429*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*

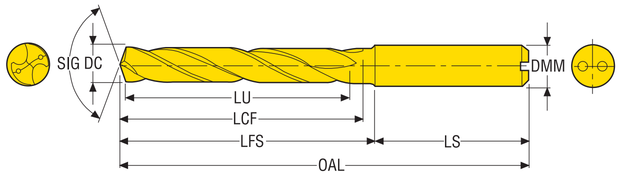
Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-1100-040-12R1-P	03046010	11,0 *0.433*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1110-040-12R1-P	03046011	11,1 *0.437*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1111-040-12R1-P	03046081	11,113 *0.438*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1120-040-12R1-P	03046012	11,2 *0.441*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1130-040-12R1-P	03046013	11,3 *0.445*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1140-040-12R1-P	03046014	11,4 *0.449*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1150-040-12R1-P	03046015	11,5 *0.453*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1151-040-12R1-P	03046082	11,509 *0.453*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1155-040-12R1-P	03046016	11,55 *0.455*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1160-040-12R1-P	03046017	11,6 *0.457*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1170-040-12R1-P	03046018	11,7 *0.461*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1180-040-12R1-P	03046019	11,8 *0.465*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1190-040-12R1-P	03046020	11,9 *0.469*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1191-040-12R1-P	03046083	11,906 *0.469*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1200-040-12R1-P	03046021	12,0 *0.472*	40,0 *1.575*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-1210-043-14R1-P	03046022	12,1 *0.476*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1220-043-14R1-P	03046023	12,2 *0.480*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1230-043-14R1-P	03046084	12,303 *0.484*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1240-043-14R1-P	03046024	12,4 *0.488*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1250-043-14R1-P	03046025	12,5 *0.492*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1260-043-14R1-P	03046026	12,6 *0.496*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1270-043-14R1-P	03046085	12,7 *0.500*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1275-043-14R1-P	03046027	12,75 *0.502*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1280-043-14R1-P	03046028	12,8 *0.504*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1290-043-14R1-P	03046029	12,9 *0.508*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1300-043-14R1-P	03046030	13,0 *0.512*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1310-043-14R1-P	03046031	13,1 *0.516*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1320-043-14R1-P	03046032	13,2 *0.520*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1330-043-14R1-P	03046033	13,3 *0.524*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1340-043-14R1-P	03046034	13,4 *0.528*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1349-043-14R1-P	03046086	13,494 *0.531*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*

Introduction
Drilling
Reaming
Boring
Annex

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-1350-043-14R1-P	03046035	13,5 *0.531*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1360-043-14R1-P	03046036	13,6 *0.535*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1370-043-14R1-P	03046037	13,7 *0.539*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1380-043-14R1-P	03046038	13,8 *0.543*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1390-043-14R1-P	03046039	13,9 *0.547*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1400-043-14R1-P	03046040	14,0 *0.551*	43,0 *1.693*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-1420-045-16R1-P	03046041	14,2 *0.559*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1425-045-16R1-P	03138155	14,25 *0.561*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1429-045-16R1-P	03046087	14,288 *0.563*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1450-045-16R1-P	03046042	14,5 *0.571*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1470-045-16R1-P	03046043	14,7 *0.579*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1475-045-16R1-P	03046044	14,75 *0.581*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1480-045-16R1-P	03046045	14,8 *0.583*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1500-045-16R1-P	03046046	15,0 *0.591*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1510-045-16R1-P	03046047	15,1 *0.594*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1530-045-16R1-P	03046048	15,3 *0.602*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1550-045-16R1-P	03046049	15,5 *0.610*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1570-045-16R1-P	03046050	15,7 *0.618*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1580-045-16R1-P	03046051	15,8 *0.622*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1588-045-16R1-P	03046088	15,875 *0.625*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1600-045-16R1-P	03046052	16,0 *0.630*	45,0 *1.772*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1650-051-18R1-P	03046053	16,5 *0.650*	51,0 *2.008*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD203A-1700-051-18R1-P	03046054	17,0 *0.669*	51,0 *2.008*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD203A-1750-051-18R1-P	03046055	17,5 *0.689*	51,0 *2.008*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD203A-1800-051-18R1-P	03046056	18,0 *0.709*	51,0 *2.008*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD203A-1850-055-20R1-P	03046057	18,5 *0.728*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD203A-1900-055-20R1-P	03046058	19,0 *0.748*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD203A-1905-055-20R1-P	03046089	19,05 *0.750*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD203A-1950-055-20R1-P	03046059	19,5 *0.768*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD203A-1980-055-20R1-P	03138156	19,8 *0.780*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD203A-2000-055-20R1-P	03046060	20,0 *0.787*	55,0 *2.165*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*

SD205A-P

Drilling depth ~ 5 x D



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- Point angle: 140°
- Coating: TiAlN
- Hole tolerance: IT8-9
- For cutting data see page(s) 153-156
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-0200-012-04R1-P	03046131	2,0 *0.079*	12,0 *0.472*	46,0 *1.811*	19,0 *0.748*	27,0 *1.063*	15,0 *0.591*	4,0 *0.157*
SD205A-0210-012-04R1-P	03046132	2,1 *0.083*	12,0 *0.472*	46,0 *1.811*	19,0 *0.748*	27,0 *1.063*	15,0 *0.591*	4,0 *0.157*
SD205A-0220-012-04R1-P	03046133	2,2 *0.087*	12,0 *0.472*	46,0 *1.811*	19,0 *0.748*	27,0 *1.063*	15,0 *0.591*	4,0 *0.157*
SD205A-0230-012-04R1-P	03046134	2,3 *0.091*	12,0 *0.472*	46,0 *1.811*	19,0 *0.748*	27,0 *1.063*	15,0 *0.591*	4,0 *0.157*
SD205A-0238-013-04R1-P	03120477	2,381 *0.094*	13,0 *0.512*	50,0 *1.969*	23,0 *0.906*	27,0 *1.063*	17,5 *0.689*	4,0 *0.157*
SD205A-0240-013-04R1-P	03046135	2,4 *0.094*	13,0 *0.512*	50,0 *1.969*	23,0 *0.906*	27,0 *1.063*	17,5 *0.689*	4,0 *0.157*
SD205A-0250-013-04R1-P	03046136	2,5 *0.098*	13,0 *0.512*	50,0 *1.969*	23,0 *0.906*	27,0 *1.063*	17,5 *0.689*	4,0 *0.157*
SD205A-0260-013-04R1-P	03046137	2,6 *0.102*	13,0 *0.512*	50,0 *1.969*	23,0 *0.906*	27,0 *1.063*	17,5 *0.689*	4,0 *0.157*
SD205A-0270-015-04R1-P	03046138	2,7 *0.106*	15,0 *0.591*	50,0 *1.969*	23,0 *0.906*	27,0 *1.063*	20,5 *0.807*	4,0 *0.157*
SD205A-0278-015-04R1-P	03120496	2,778 *0.109*	15,0 *0.591*	50,0 *1.969*	23,0 *0.906*	27,0 *1.063*	20,5 *0.807*	4,0 *0.157*
SD205A-0280-015-04R1-P	03046139	2,8 *0.110*	15,0 *0.591*	50,0 *1.969*	23,0 *0.906*	27,0 *1.063*	20,5 *0.807*	4,0 *0.157*
SD205A-0290-015-04R1-P	03046141	2,9 *0.114*	15,0 *0.591*	50,0 *1.969*	23,0 *0.906*	27,0 *1.063*	20,5 *0.807*	4,0 *0.157*
SD205A-0300-023-06R1-P	03046142	3,0 *0.118*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-0310-023-06R1-P	03046143	3,1 *0.122*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-0318-023-06R1-P	03046327	3,175 *0.125*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-0320-023-06R1-P	03046144	3,2 *0.126*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-0325-023-06R1-P	03046145	3,25 *0.128*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-0330-023-06R1-P	03046146	3,3 *0.130*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-0340-023-06R1-P	03046147	3,4 *0.134*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-0350-023-06R1-P	03046148	3,5 *0.138*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-0357-023-06R1-P	03046328	3,572 *0.141*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-0360-023-06R1-P	03046149	3,6 *0.142*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-0365-023-06R1-P	03046150	3,65 *0.144*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-0370-023-06R1-P	03046151	3,7 *0.146*	23,0 *0.906*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-0380-029-06R1-P	03046152	3,8 *0.150*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-0390-029-06R1-P	03046153	3,9 *0.154*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-0397-029-06R1-P	03046329	3,97 *0.156*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-0400-029-06R1-P	03046154	4,0 *0.157*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-0410-029-06R1-P	03046155	4,1 *0.161*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-0420-029-06R1-P	03046157	4,2 *0.165*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-0430-029-06R1-P	03046158	4,3 *0.169*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-0437-029-06R1-P	03046330	4,366 *0.172*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-0440-029-06R1-P	03046159	4,4 *0.173*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-0450-029-06R1-P	03046160	4,5 *0.177*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-0460-029-06R1-P	03046161	4,6 *0.181*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-0465-029-06R1-P	03046162	4,65 *0.183*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-0470-029-06R1-P	03046163	4,7 *0.185*	29,0 *1.142*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-0476-035-06R1-P	03046331	4,763 *0.188*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0480-035-06R1-P	03046164	4,8 *0.189*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0490-035-06R1-P	03046165	4,9 *0.193*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0500-035-06R1-P	03046166	5,0 *0.197*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0510-035-06R1-P	03046167	5,1 *0.201*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0516-035-06R1-P	03046332	5,159 *0.203*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0520-035-06R1-P	03046168	5,2 *0.205*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0530-035-06R1-P	03046169	5,3 *0.209*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0540-035-06R1-P	03046170	5,4 *0.213*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0550-035-06R1-P	03046171	5,5 *0.217*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0555-035-06R1-P	03046172	5,55 *0.219*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0556-035-06R1-P	03046333	5,556 *0.219*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0560-035-06R1-P	03046173	5,6 *0.220*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0570-035-06R1-P	03046174	5,7 *0.224*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-0580-035-06R1-P	03046175	5,8 *0.228*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0590-035-06R1-P	03046176	5,9 *0.232*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0595-035-06R1-P	03046334	5,953 *0.234*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0600-035-06R1-P	03046177	6,0 *0.236*	35,0 *1.378*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-0610-043-08R1-P	03046179	6,1 *0.240*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0620-043-08R1-P	03046180	6,2 *0.244*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0630-043-08R1-P	03046181	6,3 *0.248*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0635-043-08R1-P	03046335	6,35 *0.250*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0640-043-08R1-P	03046182	6,4 *0.252*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0650-043-08R1-P	03046183	6,5 *0.256*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0660-043-08R1-P	03046184	6,6 *0.260*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0670-043-08R1-P	03046185	6,7 *0.264*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0675-043-08R1-P	03046336	6,747 *0.266*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0680-043-08R1-P	03046186	6,8 *0.268*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0690-043-08R1-P	03046187	6,9 *0.272*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0700-043-08R1-P	03046188	7,0 *0.276*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0710-043-08R1-P	03046190	7,1 *0.280*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0714-043-08R1-P	03046337	7,144 *0.281*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0720-043-08R1-P	03046191	7,2 *0.283*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0730-043-08R1-P	03046192	7,3 *0.287*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0740-043-08R1-P	03046193	7,4 *0.291*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0750-043-08R1-P	03046194	7,5 *0.295*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0754-043-08R1-P	03046338	7,541 *0.297*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0755-043-08R1-P	03046195	7,55 *0.297*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0760-043-08R1-P	03046196	7,6 *0.299*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0770-043-08R1-P	03046197	7,7 *0.303*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0780-043-08R1-P	03046198	7,8 *0.307*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0790-043-08R1-P	03046199	7,9 *0.311*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0794-043-08R1-P	03046339	7,938 *0.313*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0800-043-08R1-P	03046200	8,0 *0.315*	43,0 *1.693*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0810-049-10R1-P	03046201	8,1 *0.319*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-0820-049-10R1-P	03046202	8,2 *0.323*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0830-049-10R1-P	03046203	8,3 *0.327*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0833-049-10R1-P	03046340	8,334 *0.328*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0840-049-10R1-P	03046204	8,4 *0.331*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0850-049-10R1-P	03046205	8,5 *0.335*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0860-049-10R1-P	03046206	8,6 *0.339*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0870-049-10R1-P	03046207	8,7 *0.343*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0873-049-10R1-P	03046341	8,731 *0.344*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0880-049-10R1-P	03046208	8,8 *0.346*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0890-049-10R1-P	03046209	8,9 *0.350*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0900-049-10R1-P	03046210	9,0 *0.354*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0910-049-10R1-P	03046211	9,1 *0.358*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0913-049-10R1-P	03046342	9,128 *0.359*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0920-049-10R1-P	03046212	9,2 *0.362*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0930-049-10R1-P	03046213	9,3 *0.366*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0940-049-10R1-P	03046214	9,4 *0.370*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0950-049-10R1-P	03046215	9,5 *0.374*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0953-049-10R1-P	03046343	9,525 *0.375*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0955-049-10R1-P	03046216	9,55 *0.376*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0960-049-10R1-P	03046217	9,6 *0.378*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0970-049-10R1-P	03046218	9,7 *0.382*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0980-049-10R1-P	03046219	9,8 *0.386*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0990-049-10R1-P	03046220	9,9 *0.390*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0992-049-10R1-P	03046344	9,922 *0.391*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-1000-049-10R1-P	03046221	10,0 *0.394*	49,0 *1.929*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-1010-056-12R1-P	03046222	10,1 *0.398*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1020-056-12R1-P	03046223	10,2 *0.402*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1030-056-12R1-P	03046224	10,3 *0.406*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1032-056-12R1-P	03046345	10,319 *0.406*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1040-056-12R1-P	03046225	10,4 *0.409*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1050-056-12R1-P	03046226	10,5 *0.413*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-1060-056-12R1-P	03046227	10,6 *0.417*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1070-056-12R1-P	03046228	10,7 *0.421*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1072-056-12R1-P	03046346	10,716 *0.422*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1080-056-12R1-P	03046229	10,8 *0.425*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1090-056-12R1-P	03046230	10,9 *0.429*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1100-056-12R1-P	03046231	11,0 *0.433*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1110-056-12R1-P	03046232	11,1 *0.437*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1111-056-12R1-P	03046347	11,113 *0.438*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1120-056-12R1-P	03046233	11,2 *0.441*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1130-056-12R1-P	03046234	11,3 *0.445*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1140-056-12R1-P	03046235	11,4 *0.449*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1150-056-12R1-P	03046236	11,5 *0.453*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1151-056-12R1-P	03046348	11,509 *0.453*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1155-056-12R1-P	03046237	11,55 *0.455*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1160-056-12R1-P	03046238	11,6 *0.457*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1170-056-12R1-P	03046239	11,7 *0.461*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1180-056-12R1-P	03046240	11,8 *0.465*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1190-056-12R1-P	03046241	11,9 *0.469*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1191-056-12R1-P	03046349	11,906 *0.469*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1200-056-12R1-P	03046242	12,0 *0.472*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1210-060-14R1-P	03046243	12,1 *0.476*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1220-060-14R1-P	03046244	12,2 *0.480*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1225-060-14R1-P	03046245	12,25 *0.482*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1230-060-14R1-P	03138157	12,3 *0.484*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1240-060-14R1-P	03046246	12,4 *0.488*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1250-060-14R1-P	03046247	12,5 *0.492*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1260-060-14R1-P	03046248	12,6 *0.496*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1270-060-14R1-P	03120497	12,7 *0.500*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1275-060-14R1-P	03046249	12,75 *0.502*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1280-060-14R1-P	03046250	12,8 *0.504*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1290-060-14R1-P	03046251	12,9 *0.508*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*

Introduction
Drilling
Reaming
Boring
Annex

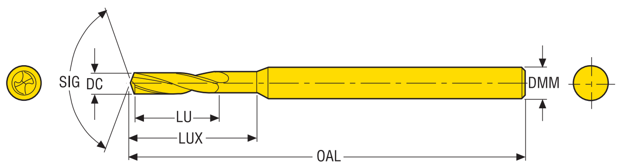
Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-1300-060-14R1-P	03046252	13,0 *0.512*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1310-060-14R1-P	03046253	13,1 *0.516*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1320-060-14R1-P	03046254	13,2 *0.520*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1330-060-14R1-P	03046255	13,3 *0.524*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1340-060-14R1-P	03046256	13,4 *0.528*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1349-060-14R1-P	03046350	13,494 *0.531*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1350-060-14R1-P	03046257	13,5 *0.531*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1355-060-14R1-P	03138158	13,55 *0.533*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1360-060-14R1-P	03046258	13,6 *0.535*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1370-060-14R1-P	03046259	13,7 *0.539*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1380-060-14R1-P	03046260	13,8 *0.543*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1389-060-14R1-P	03120498	13,891 *0.547*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1390-060-14R1-P	03046261	13,9 *0.547*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1400-060-14R1-P	03046262	14,0 *0.551*	60,0 *2.362*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1410-063-16R1-P	03046263	14,1 *0.555*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1420-063-16R1-P	03046264	14,2 *0.559*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1425-063-16R1-P	03138159	14,25 *0.561*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1429-063-16R1-P	03046351	14,288 *0.563*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1430-063-16R1-P	03046265	14,3 *0.563*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1440-063-16R1-P	03046266	14,4 *0.567*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1450-063-16R1-P	03046267	14,5 *0.571*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1460-063-16R1-P	03046268	14,6 *0.575*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1470-063-16R1-P	03046269	14,7 *0.579*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1475-063-16R1-P	03046270	14,75 *0.581*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1480-063-16R1-P	03046271	14,8 *0.583*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1490-063-16R1-P	03046272	14,9 *0.587*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1500-063-16R1-P	03046273	15,0 *0.591*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1510-063-16R1-P	03046274	15,1 *0.594*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1520-063-16R1-P	03046275	15,2 *0.598*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1525-063-16R1-P	03138160	15,25 *0.600*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1530-063-16R1-P	03046276	15,3 *0.602*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-1540-063-16R1-P	03046277	15,4 *0.606*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1550-063-16R1-P	03046278	15,5 *0.610*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1560-063-16R1-P	03046280	15,6 *0.614*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1570-063-16R1-P	03046281	15,7 *0.618*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1580-063-16R1-P	03046282	15,8 *0.622*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1588-063-16R1-P	03046352	15,875 *0.625*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1590-063-16R1-P	03046283	15,9 *0.626*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1600-063-16R1-P	03046284	16,0 *0.630*	63,0 *2.480*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1610-071-18R1-P	03046285	16,1 *0.634*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1620-071-18R1-P	03046286	16,2 *0.638*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1625-071-18R1-P	03138161	16,25 *0.640*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1630-071-18R1-P	03046287	16,3 *0.642*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1640-071-18R1-P	03046288	16,4 *0.646*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1650-071-18R1-P	03046289	16,5 *0.650*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1660-071-18R1-P	03046290	16,6 *0.654*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1667-071-18R1-P	03120499	16,669 *0.656*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1670-071-18R1-P	03046291	16,7 *0.657*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1675-071-18R1-P	03046292	16,75 *0.659*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1680-071-18R1-P	03046293	16,8 *0.661*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1690-071-18R1-P	03046294	16,9 *0.665*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1700-071-18R1-P	03046296	17,0 *0.669*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1710-071-18R1-P	03046297	17,1 *0.673*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1720-071-18R1-P	03046298	17,2 *0.677*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1730-071-18R1-P	03046299	17,3 *0.681*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1740-071-18R1-P	03046300	17,4 *0.685*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1746-071-18R1-P	03120500	17,463 *0.688*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1750-071-18R1-P	03046301	17,5 *0.689*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1760-071-18R1-P	03046302	17,6 *0.693*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1770-071-18R1-P	03046303	17,7 *0.697*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1780-071-18R1-P	03046304	17,8 *0.701*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1790-071-18R1-P	03046305	17,9 *0.705*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-1800-071-18R1-P	03046306	18,0 *0.709*	71,0 *2.795*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1810-077-20R1-P	03046307	18,1 *0.713*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1820-077-20R1-P	03046308	18,2 *0.717*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1830-077-20R1-P	03046309	18,3 *0.720*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1840-077-20R1-P	03046310	18,4 *0.724*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1850-077-20R1-P	03046311	18,5 *0.728*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1860-077-20R1-P	03046312	18,6 *0.732*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1870-077-20R1-P	03046313	18,7 *0.736*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1880-077-20R1-P	03046314	18,8 *0.740*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1890-077-20R1-P	03046315	18,9 *0.744*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1900-077-20R1-P	03046316	19,0 *0.748*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1905-077-20R1-P	03046353	19,05 *0.750*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1910-077-20R1-P	03046317	19,1 *0.752*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1920-077-20R1-P	03046318	19,2 *0.756*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1930-077-20R1-P	03046319	19,3 *0.760*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1940-077-20R1-P	03046320	19,4 *0.764*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1950-077-20R1-P	03046321	19,5 *0.768*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1960-077-20R1-P	03046322	19,6 *0.772*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1970-077-20R1-P	03046323	19,7 *0.776*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1980-077-20R1-P	03046324	19,8 *0.780*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1990-077-20R1-P	03046325	19,9 *0.783*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-2000-077-20R1-P	03046326	20,0 *0.787*	77,0 *3.031*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*

SD206

Drilling depth ~ 6 x D

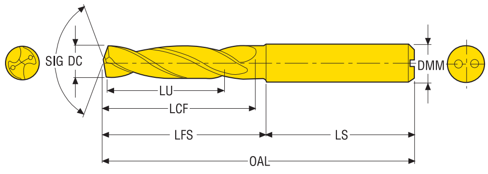


- Cylindrical shank
- External coolant
- Point angle: 140°
- Coating: TiAlN
- Hole tolerance: IT9
- For cutting data see page(s) 157

Designation	Item number	DC	LU	OAL	LUX	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD206-0.70-4.2-3R1	02731644	0,7 *0.028*	4,2 *0.165*	38,0 *1.496*	6,0 *0.236*	3,0 *0.118*
SD206-0.80-4.8-3R1	02731645	0,8 *0.031*	4,8 *0.189*	38,0 *1.496*	6,7 *0.264*	3,0 *0.118*
SD206-0.90-5.4-3R1	02731646	0,9 *0.035*	5,4 *0.213*	38,0 *1.496*	7,8 *0.307*	3,0 *0.118*
SD206-1.00-6.0-3R1	02731647	1,0 *0.039*	6,0 *0.236*	38,0 *1.496*	8,0 *0.315*	3,0 *0.118*
SD206-1.10-6.6-3R1	02731648	1,1 *0.043*	6,6 *0.260*	38,0 *1.496*	8,6 *0.339*	3,0 *0.118*
SD206-1.20-7.2-3R1	02731649	1,2 *0.047*	7,2 *0.283*	38,0 *1.496*	9,2 *0.362*	3,0 *0.118*
SD206-1.30-7.8-3R1	02731650	1,3 *0.051*	7,8 *0.307*	38,0 *1.496*	9,8 *0.386*	3,0 *0.118*
SD206-1.40-8.4-3R1	02731651	1,4 *0.055*	8,4 *0.331*	38,0 *1.496*	10,4 *0.409*	3,0 *0.118*
SD206-1.50-9.0-3R1	02731652	1,5 *0.059*	9,0 *0.354*	38,0 *1.496*	11,0 *0.433*	3,0 *0.118*
SD206-1.60-9.6-3R1	02731653	1,6 *0.063*	9,6 *0.378*	38,0 *1.496*	11,6 *0.457*	3,0 *0.118*
SD206-1.70-10.2-3R1	02731654	1,7 *0.067*	10,2 *0.402*	38,0 *1.496*	12,2 *0.480*	3,0 *0.118*
SD206-1.80-10.8-3R1	02731655	1,8 *0.071*	10,8 *0.425*	38,0 *1.496*	12,8 *0.504*	3,0 *0.118*
SD206-1.90-11.4-3R1	02731656	1,9 *0.075*	11,4 *0.449*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD206-2.00-12.0-3R1	02731657	2,0 *0.079*	12,0 *0.472*	50,0 *1.969*	14,0 *0.551*	3,0 *0.118*

SD206A

Drilling depth ~ 6 x D

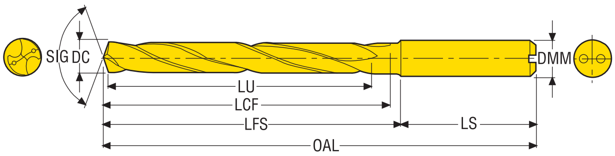


- Cylindrical shank
- Internal coolant
- Point angle: 140°
- Coating: TiAlN
- Hole tolerance: IT9
- For cutting data see page(s) 158

Designation	Item number	DC	LU	OAL	LUX	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD206A-1.00-6.0-3R1	02731658	1,0 *0.039*	6,0 *0.236*	38,0 *1.496*	8,0 *0.315*	3,0 *0.118*
SD206A-1.10-6.6-3R1	02731659	1,1 *0.043*	6,6 *0.260*	38,0 *1.496*	8,6 *0.339*	3,0 *0.118*
SD206A-1.20-7.2-3R1	02731660	1,2 *0.047*	7,2 *0.283*	38,0 *1.496*	9,2 *0.362*	3,0 *0.118*
SD206A-1.30-7.8-3R1	02731661	1,3 *0.051*	7,8 *0.307*	38,0 *1.496*	9,8 *0.386*	3,0 *0.118*
SD206A-1.40-8.4-3R1	02731662	1,4 *0.055*	8,4 *0.331*	38,0 *1.496*	10,4 *0.409*	3,0 *0.118*
SD206A-1.50-9.0-3R1	02731663	1,5 *0.059*	9,0 *0.354*	38,0 *1.496*	11,0 *0.433*	3,0 *0.118*
SD206A-1.60-9.6-3R1	02731664	1,6 *0.063*	9,6 *0.378*	38,0 *1.496*	11,6 *0.457*	3,0 *0.118*
SD206A-1.70-10.2-3R1	02731665	1,7 *0.067*	10,2 *0.402*	38,0 *1.496*	12,2 *0.480*	3,0 *0.118*
SD206A-1.80-10.8-3R1	02731666	1,8 *0.071*	10,8 *0.425*	38,0 *1.496*	12,8 *0.504*	3,0 *0.118*
SD206A-1.90-11.4-3R1	02731667	1,9 *0.075*	11,4 *0.449*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD206A-2.00-12.0-3R1	02731668	2,0 *0.079*	12,0 *0.472*	50,0 *1.969*	14,0 *0.551*	3,0 *0.118*

SD207A-P

Drilling depth ~ 7 x D



- Cylindrical shank DIN 6537A
- Internal coolant
- Point angle: 140°
- Coating: TiAlN
- Hole tolerance: IT9
- For cutting data see page(s) 159
- For intermediate diameters see MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD207A-0300-030-06R1-P	03046358	3,0 *0.118*	30,0 *1.181*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*
SD207A-0330-030-06R1-P	03046359	3,3 *0.130*	30,0 *1.181*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*
SD207A-0350-030-06R1-P	03046360	3,5 *0.138*	30,0 *1.181*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	36,0 *1.417*	6,0 *0.236*
SD207A-0400-037-06R1-P	03046361	4,0 *0.157*	37,0 *1.457*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	43,0 *1.693*	6,0 *0.236*
SD207A-0450-037-06R1-P	03046412	4,5 *0.177*	37,0 *1.457*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	43,0 *1.693*	6,0 *0.236*
SD207A-0480-045-06R1-P	03046413	4,8 *0.189*	45,0 *1.772*	94,0 *3.701*	58,0 *2.283*	36,0 *1.417*	56,0 *2.205*	6,0 *0.236*
SD207A-0500-045-06R1-P	03046414	5,0 *0.197*	45,0 *1.772*	94,0 *3.701*	58,0 *2.283*	36,0 *1.417*	56,0 *2.205*	6,0 *0.236*
SD207A-0520-045-06R1-P	03046362	5,2 *0.205*	45,0 *1.772*	94,0 *3.701*	58,0 *2.283*	36,0 *1.417*	56,0 *2.205*	6,0 *0.236*
SD207A-0550-045-06R1-P	03046363	5,5 *0.217*	45,0 *1.772*	94,0 *3.701*	58,0 *2.283*	36,0 *1.417*	56,0 *2.205*	6,0 *0.236*
SD207A-0580-045-06R1-P	03046407	5,8 *0.228*	45,0 *1.772*	94,0 *3.701*	58,0 *2.283*	36,0 *1.417*	56,0 *2.205*	6,0 *0.236*
SD207A-0600-045-06R1-P	03046364	6,0 *0.236*	45,0 *1.772*	94,0 *3.701*	58,0 *2.283*	36,0 *1.417*	56,0 *2.205*	6,0 *0.236*
SD207A-0635-057-08R1-P	03046365	6,35 *0.250*	57,0 *2.244*	110,0 *4.331*	74,0 *2.913*	36,0 *1.417*	67,0 *2.638*	8,0 *0.315*
SD207A-0650-057-08R1-P	03046366	6,5 *0.256*	57,0 *2.244*	110,0 *4.331*	74,0 *2.913*	36,0 *1.417*	67,0 *2.638*	8,0 *0.315*
SD207A-0680-057-08R1-P	03046367	6,8 *0.268*	57,0 *2.244*	110,0 *4.331*	74,0 *2.913*	36,0 *1.417*	67,0 *2.638*	8,0 *0.315*
SD207A-0690-057-08R1-P	03046368	6,9 *0.272*	57,0 *2.244*	110,0 *4.331*	74,0 *2.913*	36,0 *1.417*	67,0 *2.638*	8,0 *0.315*
SD207A-0700-057-08R1-P	03046369	7,0 *0.276*	57,0 *2.244*	110,0 *4.331*	74,0 *2.913*	36,0 *1.417*	67,0 *2.638*	8,0 *0.315*
SD207A-0750-057-08R1-P	03046370	7,5 *0.295*	57,0 *2.244*	110,0 *4.331*	74,0 *2.913*	36,0 *1.417*	72,0 *2.835*	8,0 *0.315*
SD207A-0780-057-08R1-P	03046371	7,8 *0.307*	57,0 *2.244*	110,0 *4.331*	74,0 *2.913*	36,0 *1.417*	72,0 *2.835*	8,0 *0.315*
SD207A-0800-057-08R1-P	03046372	8,0 *0.315*	57,0 *2.244*	110,0 *4.331*	74,0 *2.913*	36,0 *1.417*	72,0 *2.835*	8,0 *0.315*
SD207A-0850-062-10R1-P	03046373	8,5 *0.335*	62,0 *2.441*	122,0 *4.803*	82,0 *3.228*	40,0 *1.575*	80,0 *3.150*	10,0 *0.394*
SD207A-0860-062-10R1-P	03046374	8,6 *0.339*	62,0 *2.441*	122,0 *4.803*	82,0 *3.228*	40,0 *1.575*	80,0 *3.150*	10,0 *0.394*

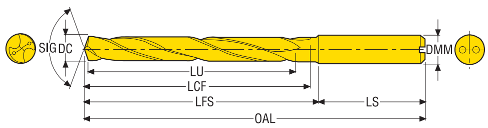
Introduction
Drilling
Reaming
Boring
Annex

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD207A-0870-062-10R1-P	03046411	8,7 *0.343*	62,0 *2.441*	122,0 *4.803*	82,0 *3.228*	40,0 *1.575*	80,0 *3.150*	10,0 *0.394*
SD207A-0880-062-10R1-P	03046408	8,8 *0.346*	62,0 *2.441*	122,0 *4.803*	82,0 *3.228*	40,0 *1.575*	80,0 *3.150*	10,0 *0.394*
SD207A-0900-062-10R1-P	03046375	9,0 *0.354*	62,0 *2.441*	122,0 *4.803*	82,0 *3.228*	40,0 *1.575*	80,0 *3.150*	10,0 *0.394*
SD207A-0950-062-10R1-P	03046376	9,5 *0.374*	62,0 *2.441*	122,0 *4.803*	82,0 *3.228*	40,0 *1.575*	80,0 *3.150*	10,0 *0.394*
SD207A-0953-062-10R1-P	03046377	9,525 *0.375*	62,0 *2.441*	122,0 *4.803*	82,0 *3.228*	40,0 *1.575*	80,0 *3.150*	10,0 *0.394*
SD207A-0975-062-10R1-P	03046402	9,75 *0.384*	62,0 *2.441*	122,0 *4.803*	82,0 *3.228*	40,0 *1.575*	80,0 *3.150*	10,0 *0.394*
SD207A-0980-062-10R1-P	03046403	9,8 *0.386*	62,0 *2.441*	122,0 *4.803*	82,0 *3.228*	40,0 *1.575*	80,0 *3.150*	10,0 *0.394*
SD207A-1000-062-10R1-P	03046378	10,0 *0.394*	62,0 *2.441*	122,0 *4.803*	82,0 *3.228*	40,0 *1.575*	80,0 *3.150*	10,0 *0.394*
SD207A-1020-072-12R1-P	03046379	10,2 *0.402*	72,0 *2.835*	141,0 *5.551*	96,0 *3.780*	45,0 *1.772*	94,0 *3.701*	12,0 *0.472*
SD207A-1040-072-12R1-P	03046401	10,4 *0.409*	72,0 *2.835*	141,0 *5.551*	96,0 *3.780*	45,0 *1.772*	94,0 *3.701*	12,0 *0.472*
SD207A-1050-072-12R1-P	03046380	10,5 *0.413*	72,0 *2.835*	141,0 *5.551*	96,0 *3.780*	45,0 *1.772*	94,0 *3.701*	12,0 *0.472*
SD207A-1080-072-12R1-P	03046404	10,8 *0.425*	72,0 *2.835*	141,0 *5.551*	96,0 *3.780*	45,0 *1.772*	94,0 *3.701*	12,0 *0.472*
SD207A-1100-072-12R1-P	03046381	11,0 *0.433*	72,0 *2.835*	141,0 *5.551*	96,0 *3.780*	45,0 *1.772*	94,0 *3.701*	12,0 *0.472*
SD207A-1150-072-12R1-P	03046382	11,5 *0.453*	72,0 *2.835*	141,0 *5.551*	96,0 *3.780*	45,0 *1.772*	94,0 *3.701*	12,0 *0.472*
SD207A-1180-072-12R1-P	03046405	11,8 *0.465*	72,0 *2.835*	141,0 *5.551*	96,0 *3.780*	45,0 *1.772*	94,0 *3.701*	12,0 *0.472*
SD207A-1200-072-12R1-P	03046383	12,0 *0.472*	72,0 *2.835*	141,0 *5.551*	96,0 *3.780*	45,0 *1.772*	94,0 *3.701*	12,0 *0.472*
SD207A-1225-083-14R1-P	03046415	12,25 *0.482*	83,0 *3.268*	155,0 *6.102*	110,0 *4.331*	45,0 *1.772*	108,0 *4.252*	14,0 *0.551*
SD207A-1250-083-14R1-P	03046384	12,5 *0.492*	83,0 *3.268*	155,0 *6.102*	110,0 *4.331*	45,0 *1.772*	108,0 *4.252*	14,0 *0.551*
SD207A-1270-083-14R1-P	03046385	12,7 *0.500*	83,0 *3.268*	155,0 *6.102*	110,0 *4.331*	45,0 *1.772*	108,0 *4.252*	14,0 *0.551*
SD207A-1280-083-14R1-P	03046416	12,8 *0.504*	83,0 *3.268*	155,0 *6.102*	110,0 *4.331*	45,0 *1.772*	108,0 *4.252*	14,0 *0.551*
SD207A-1300-083-14R1-P	03046386	13,0 *0.512*	83,0 *3.268*	155,0 *6.102*	110,0 *4.331*	45,0 *1.772*	108,0 *4.252*	14,0 *0.551*
SD207A-1350-083-14R1-P	03046387	13,5 *0.531*	83,0 *3.268*	155,0 *6.102*	110,0 *4.331*	45,0 *1.772*	108,0 *4.252*	14,0 *0.551*
SD207A-1380-083-14R1-P	03046409	13,8 *0.543*	83,0 *3.268*	155,0 *6.102*	110,0 *4.331*	45,0 *1.772*	108,0 *4.252*	14,0 *0.551*
SD207A-1400-083-14R1-P	03046388	14,0 *0.551*	83,0 *3.268*	155,0 *6.102*	110,0 *4.331*	45,0 *1.772*	108,0 *4.252*	14,0 *0.551*
SD207A-1425-092-16R1-P	03046417	14,25 *0.561*	92,0 *3.622*	171,0 *6.732*	123,0 *4.843*	48,0 *1.890*	121,0 *4.764*	16,0 *0.630*
SD207A-1450-092-16R1-P	03046389	14,5 *0.571*	92,0 *3.622*	171,0 *6.732*	123,0 *4.843*	48,0 *1.890*	121,0 *4.764*	16,0 *0.630*
SD207A-1480-092-16R1-P	03046418	14,8 *0.583*	92,0 *3.622*	171,0 *6.732*	123,0 *4.843*	48,0 *1.890*	121,0 *4.764*	16,0 *0.630*
SD207A-1500-092-16R1-P	03046390	15,0 *0.591*	92,0 *3.622*	171,0 *6.732*	123,0 *4.843*	48,0 *1.890*	121,0 *4.764*	16,0 *0.630*
SD207A-1550-092-16R1-P	03046391	15,5 *0.610*	92,0 *3.622*	171,0 *6.732*	123,0 *4.843*	48,0 *1.890*	121,0 *4.764*	16,0 *0.630*
SD207A-1580-092-16R1-P	03046410	15,8 *0.622*	92,0 *3.622*	171,0 *6.732*	123,0 *4.843*	48,0 *1.890*	121,0 *4.764*	16,0 *0.630*
SD207A-1600-092-16R1-P	03046392	16,0 *0.630*	92,0 *3.622*	171,0 *6.732*	123,0 *4.843*	48,0 *1.890*	121,0 *4.764*	16,0 *0.630*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD207A-1650-103-18R1-P	03046393	16,5 *0.650*	103,0 *4.055*	185,0 *7.283*	137,0 *5.394*	48,0 *1.890*	135,0 *5.315*	18,0 *0.709*
SD207A-1680-103-18R1-P	03046419	16,8 *0.661*	103,0 *4.055*	185,0 *7.283*	137,0 *5.394*	48,0 *1.890*	135,0 *5.315*	18,0 *0.709*
SD207A-1700-103-18R1-P	03046394	17,0 *0.669*	103,0 *4.055*	185,0 *7.283*	137,0 *5.394*	48,0 *1.890*	135,0 *5.315*	18,0 *0.709*
SD207A-1750-103-18R1-P	03046395	17,5 *0.689*	103,0 *4.055*	185,0 *7.283*	137,0 *5.394*	48,0 *1.890*	135,0 *5.315*	18,0 *0.709*
SD207A-1780-103-18R1-P	03046420	17,8 *0.701*	103,0 *4.055*	185,0 *7.283*	137,0 *5.394*	48,0 *1.890*	135,0 *5.315*	18,0 *0.709*
SD207A-1800-103-18R1-P	03046396	18,0 *0.709*	103,0 *4.055*	185,0 *7.283*	137,0 *5.394*	48,0 *1.890*	135,0 *5.315*	18,0 *0.709*
SD207A-1850-112-20R1-P	03046397	18,5 *0.728*	112,0 *4.409*	200,0 *7.874*	150,0 *5.906*	50,0 *1.969*	148,0 *5.827*	20,0 *0.787*
SD207A-1880-112-20R1-P	03046421	18,8 *0.740*	112,0 *4.409*	200,0 *7.874*	150,0 *5.906*	50,0 *1.969*	148,0 *5.827*	20,0 *0.787*
SD207A-1900-112-20R1-P	03046398	19,0 *0.748*	112,0 *4.409*	200,0 *7.874*	150,0 *5.906*	50,0 *1.969*	148,0 *5.827*	20,0 *0.787*
SD207A-1905-112-20R1-P	03046399	19,05 *0.750*	112,0 *4.409*	200,0 *7.874*	150,0 *5.906*	50,0 *1.969*	148,0 *5.827*	20,0 *0.787*
SD207A-1980-112-20R1-P	03046406	19,8 *0.780*	112,0 *4.409*	200,0 *7.874*	150,0 *5.906*	50,0 *1.969*	148,0 *5.827*	20,0 *0.787*
SD207A-2000-112-20R1-P	03046400	20,0 *0.787*	112,0 *4.409*	200,0 *7.874*	150,0 *5.906*	50,0 *1.969*	148,0 *5.827*	20,0 *0.787*

SD216A

Drilling depth ~ 16 x D

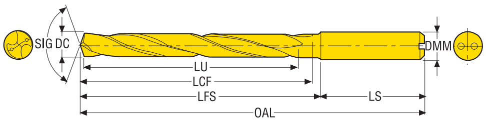


- Cylindrical shank DIN 6537A
- Internal coolant
- Point angle: 136°
- Coating: TiAlN + TiN
- Hole tolerance: IT9
- For cutting data see page(s) 160
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD216A-3.0-50-4R1	02712383	3,0 *0.118*	50,0 *1.969*	88,0 *3.465*	61,0 *2.402*	27,0 *1.063*	56,0 *2.205*	4,0 *0.157*
SD216A-3.5-60-4R1	02712384	3,5 *0.138*	60,0 *2.362*	99,0 *3.898*	72,0 *2.835*	27,0 *1.063*	67,0 *2.638*	4,0 *0.157*
SD216A-4.0-60-4R1	02712385	4,0 *0.157*	60,0 *2.362*	99,0 *3.898*	72,0 *2.835*	27,0 *1.063*	67,0 *2.638*	4,0 *0.157*
SD216A-4.5-70-6R1	02712386	4,5 *0.177*	70,0 *2.756*	117,0 *4.606*	81,0 *3.189*	36,0 *1.417*	79,0 *3.110*	6,0 *0.236*
SD216A-5.0-90-6R1	02637529	5,0 *0.197*	90,0 *3.543*	142,0 *5.591*	106,0 *4.173*	36,0 *1.417*	103,0 *4.055*	6,0 *0.236*
SD216A-5.5-90-6R1	02637530	5,5 *0.217*	90,0 *3.543*	142,0 *5.591*	106,0 *4.173*	36,0 *1.417*	103,0 *4.055*	6,0 *0.236*
SD216A-6.0-90-6R1	02637531	6,0 *0.236*	90,0 *3.543*	142,0 *5.591*	106,0 *4.173*	36,0 *1.417*	103,0 *4.055*	6,0 *0.236*
SD216A-6.35-120-8R1	02656536	6,35 *0.250*	120,0 *4.724*	177,0 *6.969*	141,0 *5.551*	36,0 *1.417*	137,0 *5.394*	8,0 *0.315*
SD216A-6.5-120-8R1	02637532	6,5 *0.256*	120,0 *4.724*	177,0 *6.969*	141,0 *5.551*	36,0 *1.417*	137,0 *5.394*	8,0 *0.315*
SD216A-7.0-120-8R1	02637533	7,0 *0.276*	120,0 *4.724*	177,0 *6.969*	141,0 *5.551*	36,0 *1.417*	137,0 *5.394*	8,0 *0.315*
SD216A-7.5-120-8R1	02637534	7,5 *0.295*	120,0 *4.724*	177,0 *6.969*	141,0 *5.551*	36,0 *1.417*	137,0 *5.394*	8,0 *0.315*
SD216A-8.0-120-8R1	02637536	8,0 *0.315*	120,0 *4.724*	177,0 *6.969*	141,0 *5.551*	36,0 *1.417*	137,0 *5.394*	8,0 *0.315*
SD216A-8.5-150-10R1	02637539	8,5 *0.335*	150,0 *5.906*	216,0 *8.504*	176,0 *6.929*	40,0 *1.575*	172,0 *6.772*	10,0 *0.394*
SD216A-9.0-150-10R1	02637540	9,0 *0.354*	150,0 *5.906*	216,0 *8.504*	176,0 *6.929*	40,0 *1.575*	172,0 *6.772*	10,0 *0.394*
SD216A-9.5-150-10R1	02637541	9,5 *0.374*	150,0 *5.906*	216,0 *8.504*	176,0 *6.929*	40,0 *1.575*	172,0 *6.772*	10,0 *0.394*
SD216A-9.52-150-10R1	02656537	9,52 *0.375*	150,0 *5.906*	216,0 *8.504*	176,0 *6.929*	40,0 *1.575*	172,0 *6.772*	10,0 *0.394*
SD216A-10.0-150-10R1	02637542	10,0 *0.394*	150,0 *5.906*	216,0 *8.504*	176,0 *6.929*	40,0 *1.575*	172,0 *6.772*	10,0 *0.394*
SD216A-10.5-180-12R1	02637543	10,5 *0.413*	180,0 *7.087*	256,0 *10.079*	211,0 *8.307*	45,0 *1.772*	207,0 *8.150*	12,0 *0.472*
SD216A-11.0-180-12R1	02637544	11,0 *0.433*	180,0 *7.087*	256,0 *10.079*	211,0 *8.307*	45,0 *1.772*	207,0 *8.150*	12,0 *0.472*
SD216A-11.5-180-12R1	02637545	11,5 *0.453*	180,0 *7.087*	256,0 *10.079*	211,0 *8.307*	45,0 *1.772*	207,0 *8.150*	12,0 *0.472*
SD216A-12.0-180-12R1	02637546	12,0 *0.472*	180,0 *7.087*	256,0 *10.079*	211,0 *8.307*	45,0 *1.772*	207,0 *8.150*	12,0 *0.472*

SD230A

Drilling depth ~ 30 x D



- Cylindrical shank DIN 6537A
- Internal coolant
- Point angle: 136°
- Coating: TiAlN + TiN
- Hole tolerance: IT9
- For cutting data see page(s) 161
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD230A-4.0-112-4R1	02712361	4,0 *0.157*	112,0 *4.409*	151,0 *5.945*	124,0 *4.882*	27,0 *1.063*	119,0 *4.685*	4,0 *0.157*
SD230A-4.5-135-6R1	02712362	4,5 *0.177*	135,0 *5.315*	185,0 *7.283*	149,0 *5.866*	36,0 *1.417*	145,0 *5.709*	6,0 *0.236*
SD230A-5.0-170-6R1	02712363	5,0 *0.197*	170,0 *6.693*	220,0 *8.661*	184,0 *7.244*	36,0 *1.417*	180,0 *7.087*	6,0 *0.236*
SD230A-5.5-170-6R1	02712364	5,5 *0.217*	170,0 *6.693*	220,0 *8.661*	184,0 *7.244*	36,0 *1.417*	180,0 *7.087*	6,0 *0.236*
SD230A-6.0-170-6R1	02712365	6,0 *0.236*	170,0 *6.693*	220,0 *8.661*	184,0 *7.244*	36,0 *1.417*	180,0 *7.087*	6,0 *0.236*
SD230A-02500-886-0315R1	02712366	6,35 *0.250*	225,0 *8.858*	279,0 *10.984*	243,0 *9.567*	36,0 *1.417*	239,0 *9.409*	8,0 *0.315*
SD230A-6.5-225-8R1	02712367	6,5 *0.256*	225,0 *8.858*	279,0 *10.984*	243,0 *9.567*	36,0 *1.417*	239,0 *9.409*	8,0 *0.315*
SD230A-7.0-225-8R1	02712370	7,0 *0.276*	225,0 *8.858*	279,0 *10.984*	243,0 *9.567*	36,0 *1.417*	239,0 *9.409*	8,0 *0.315*
SD230A-7.5-225-8R1	02712371	7,5 *0.295*	225,0 *8.858*	279,0 *10.984*	243,0 *9.567*	36,0 *1.417*	239,0 *9.409*	8,0 *0.315*
SD230A-03125-886-0315R1	02712374	7,938 *0.313*	225,0 *8.858*	279,0 *10.984*	243,0 *9.567*	36,0 *1.417*	239,0 *9.409*	8,0 *0.315*
SD230A-8.0-225-8R1	02712376	8,0 *0.315*	225,0 *8.858*	279,0 *10.984*	243,0 *9.567*	36,0 *1.417*	239,0 *9.409*	8,0 *0.315*
SD230A-8.5-285-10R1	02712378	8,5 *0.335*	285,0 *11.220*	346,0 *13.622*	306,0 *12.047*	40,0 *1.575*	302,0 *11.890*	10,0 *0.394*
SD230A-9.0-285-10R1	02712379	9,0 *0.354*	285,0 *11.220*	346,0 *13.622*	306,0 *12.047*	40,0 *1.575*	302,0 *11.890*	10,0 *0.394*
SD230A-9.5-285-10R1	02712380	9,5 *0.374*	285,0 *11.220*	346,0 *13.622*	306,0 *12.047*	40,0 *1.575*	302,0 *11.890*	10,0 *0.394*
SD230A-03750-1122-0394R1	02712381	9,525 *0.375*	285,0 *11.220*	346,0 *13.622*	306,0 *12.047*	40,0 *1.575*	302,0 *11.890*	10,0 *0.394*
SD230A-10.0-285-10R1	02712382	10,0 *0.394*	285,0 *11.220*	346,0 *13.622*	306,0 *12.047*	40,0 *1.575*	302,0 *11.890*	10,0 *0.394*

Introduction
Drilling
Reaming
Boring
Annex

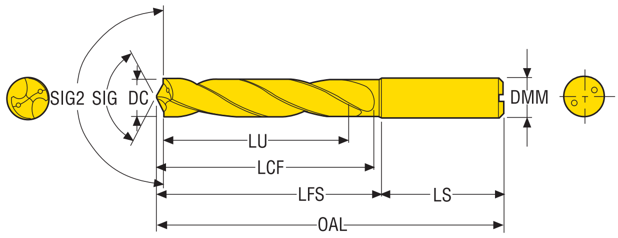
Feedmax™ SD245A

Seco Feedmax SD245A solid carbide drills bring high levels of stability and overall improved machining performance to holemaking applications with irregular exits and cross-hole interruptions. The following features enable the user to achieve good hole geometry:

- Four land margins
- An optimized self-centering point
- Highly wear-resistant TiAIN+TiN coating
- Enhanced edge preparation

SD245A

Drilling depth ~ 5 x D



- Cylindrical shank DIN 6537A
- Internal coolant
- Point angle: 140°/180°
- Coating: TiAlN + TiN
- Hole tolerance: IT8
- For cutting data see page(s) 162
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD245A-5.0-32-6R1	02691683	5,0 *0.197*	32,0 *1.260*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD245A-6.0-32-6R1	02691684	6,0 *0.236*	32,0 *1.260*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD245A-02500-138-0315R1	02691686	6,35 *0.2500*	35,0 *1.378*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD245A-6.5-35-8R1	02691687	6,5 *0.256*	35,0 *1.378*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD245A-02656-157-0315R1	02691688	6,747 *0.2656*	40,0 *1.575*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD245A-6.8-40-8R1	02691689	6,8 *0.268*	40,0 *1.575*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD245A-7.0-40-8R1	02691690	7,0 *0.276*	40,0 *1.575*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD245A-02813-157-0315R1	02691691	7,144 *0.2813*	40,0 *1.575*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD245A-7.5-40-8R1	02691692	7,5 *0.295*	40,0 *1.575*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD245A-03125-165-0315R1	02691693	7,938 *0.3125*	42,0 *1.654*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD245A-8.0-42-8R1	02691694	8,0 *0.315*	42,0 *1.654*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD245A-8.5-42-10R1	02691695	8,5 *0.335*	42,0 *1.654*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD245A-9.0-45-10R1	02546059	9,0 *0.354*	45,0 *1.772*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD245A-9.5-45-10R1	02691696	9,5 *0.374*	45,0 *1.772*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD245A-03750-189-0394R1	02691697	9,525 *0.3750*	48,0 *1.890*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD245A-10.0-48-10R1	02536888	10,0 *0.394*	48,0 *1.890*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD245A-10.2-48-12R1	02691699	10,2 *0.402*	48,0 *1.890*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD245A-04063-189-0472R1	02691700	10,319 *0.4063*	48,0 *1.890*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD245A-10.5-48-12R1	02691701	10,5 *0.413*	48,0 *1.890*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD245A-11.0-56-12R1	02561860	11,0 *0.433*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD245A-04375-221-0472R1	02691702	11,113 *0.4375*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD245A-11.5-56-12R1	02691704	11,5 *0.453*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD245A-12.0-56-12R1	02691705	12,0 *0.472*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD245A-12.5-56-14R1	02691706	12,5 *0.492*	56,0 *2.205*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD245A-0500-221-0551R1	02691707	12,7 *0.500*	56,0 *2.205*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD245A-13.0-56-14R1	02691708	13,0 *0.512*	56,0 *2.205*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD245A-05312-232-0551R1	02691709	13,494 *0.5312*	59,0 *2.323*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD245A-13.5-59-14R1	02691710	13,5 *0.531*	59,0 *2.323*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD245A-14.0-59-14R1	02691711	14,0 *0.551*	59,0 *2.323*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*

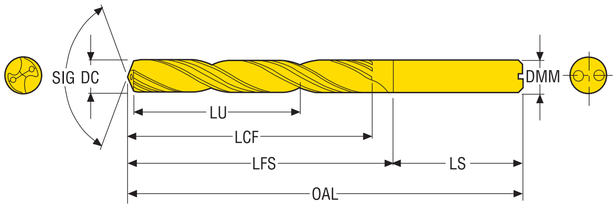
Feedmax™ SD265A

Seco Feedmax SD265A IT 7 high precision drills offer impeccable accuracy. Additionally, one SD265A drill can take the place of multiple tools and simplify complex drilling tasks. The following features enable the user to drill holes in a single pass:

- Optimized drill geometry and self-centering point
- Total of 6 land margins
- Tight manufacturing tolerances (±3µ)
- TiAlN coating for low friction and great wear resistance

SD265A

Drilling depth ~ 5 x D



- Cylindrical shank DIN 6537A
- Internal coolant
- Point angle: 140°
- Coating: TiAlN + TiN
- Hole tolerance: IT7
- For cutting data see page(s) 163
- For intermediate diameters see the MyDesign software.
- Dowel pin standard ANSI / ASME B18.8.2-1995.

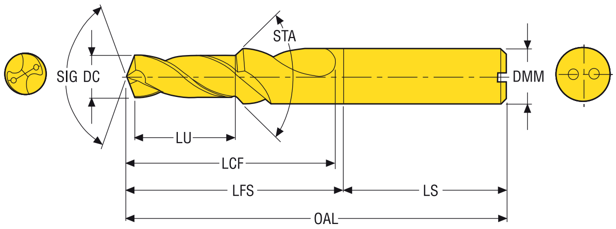
Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD265A-6.006-32-6R1	02691714	6,006 *0.236*	32,0 *1.260*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD265A-02497-138-0315R1	02722876	6,35 *0.250*	35,0 *1.378*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD265A-03122-165-0315R1	02722877	7,938 *0.313*	42,0 *1.654*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD265A-8.008-42-8R1	02691715	8,008 *0.315*	42,0 *1.654*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD265A-03747-189-0394R1	02722878	9,525 *0.375*	48,0 *1.890*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD265A-10.008-48-10R1	02691716	10,008 *0.394*	48,0 *1.890*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD265A-12.009-56-12R1	02691717	12,009 *0.473*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD265A-04997-221-0551R1	02722879	12,7 *0.500*	56,0 *2.205*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD265A-14.009-59-14R1	02691718	14,009 *0.552*	59,0 *2.323*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD265A-16.009-62-16R1	02691719	16,009 *0.630*	62,0 *2.441*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*

Feedmax™ – Chamfer drills

Seco Feedmax™ chamfer drills combine drilling and chamfering into a single process to maximize efficiency. The standard stocked range covers pre-drilling applications for common standard metric threads from M4 to M16.

- Special design minimizes cost per hole and increases productivity
- Special low friction coating provides high hot hardness and excellent chip evacuation
- The self-centering geometry provides high hole quality using a 45-degree (90-degree included angle) chamfer angle

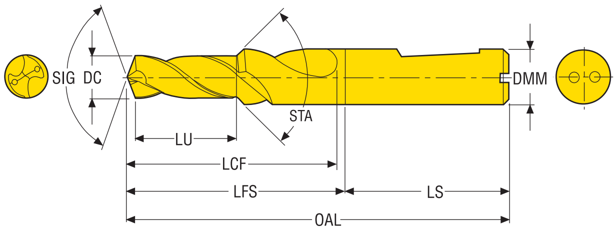
Chamfer drills – M4 - M16 Thread



- Cylindrical shank DIN 6537A
- Internal coolant
- Coating: TiAlN + TiN
- Hole tolerance: IT8-9
- Included chamfer angle = 90°
- For cutting data see page(s) 150-151
- For customized configurations, see MyDesign software

Designation	Item number	Tap thread type	Tap thread size	DC	LU	OAL	LFS	LS	LCF	DMM
				mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-C45-3.3-11.4-6R1	02500320	Normal pitch Metric thread	M4	3,3 *0.130*	11,4 *0.449*	66,0 *2.598*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-C45-3.4-11.4-6R1	02500323	Normal pitch Metric thread	M4	3,4 *0.134*	11,4 *0.449*	66,0 *2.598*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-C45-4.2-13.6-6R1	02500324	Normal pitch Metric thread	M5	4,2 *0.165*	13,6 *0.535*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-C45-4.3-13.6-6R1	02500325	Normal pitch Metric thread	M5	4,3 *0.169*	13,6 *0.535*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-C45-5.0-16.5-8R1	02500326	Normal pitch Metric thread	M6	5,0 *0.197*	16,5 *0.650*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	28,0 *1.102*	8,0 *0.315*
SD203A-C45-5.1-16.5-8R1	02500327	Normal pitch Metric thread	M6	5,1 *0.201*	16,5 *0.650*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	28,0 *1.102*	8,0 *0.315*
SD203A-C45-6.8-21-10R1	02500328	Normal pitch Metric thread	M8	6,8 *0.268*	21,0 *0.827*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	34,0 *1.339*	10,0 *0.394*
SD203A-C45-6.9-21-10R1	02500330	Normal pitch Metric thread	M8	6,9 *0.272*	21,0 *0.827*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	34,0 *1.339*	10,0 *0.394*
SD203A-C45-7.0-21-10R1	02500331	Fine pitch Metric thread	M8x1.0	7,0 *0.276*	21,0 *0.827*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	34,0 *1.339*	10,0 *0.394*
SD203A-C45-8.5-25.5-12R1	02500333	Normal pitch Metric thread	M10	8,5 *0.335*	25,5 *1.004*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	47,0 *1.850*	12,0 *0.472*
SD203A-C45-8.7-25.5-12R1	02500334	Normal pitch Metric thread	M10	8,7 *0.343*	25,5 *1.004*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	47,0 *1.850*	12,0 *0.472*
SD203A-C45-9.0-25.5-12R1	02500340	Fine pitch Metric thread	M10x1.0	9,0 *0.354*	25,5 *1.004*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	47,0 *1.850*	12,0 *0.472*
SD203A-C45-10.2-30.0-14R1	02500342	Normal pitch Metric thread	M12	10,2 *0.402*	30,0 *1.181*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	55,0 *2.165*	14,0 *0.551*
SD203A-C45-10.4-30.0-14R1	02500343	Normal pitch Metric thread	M12	10,4 *0.409*	30,0 *1.181*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	55,0 *2.165*	14,0 *0.551*
SD203A-C45-10.5-30.0-14R1	02500344	Fine pitch Metric thread	M12x1.5	10,5 *0.413*	34,5 *1.358*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	55,0 *2.165*	14,0 *0.551*
SD203A-C45-12.0-34.5-16R1	02500346	Normal pitch Metric thread	M14	12,0 *0.472*	34,5 *1.358*	115,0 *4.528*	70,0 *2.756*	45,0 *1.772*	60,0 *2.362*	16,0 *0.630*
SD203A-C45-12.25-34.5-16R1	02500348	Normal pitch Metric thread	M14	12,25 *0.482*	34,5 *1.358*	115,0 *4.528*	70,0 *2.756*	45,0 *1.772*	60,0 *2.362*	16,0 *0.630*
SD203A-C45-12.5-34.5-16R1	02500349	Fine pitch Metric thread	M14x1.5	12,5 *0.492*	34,5 *1.358*	115,0 *4.528*	70,0 *2.756*	45,0 *1.772*	60,0 *2.362*	16,0 *0.630*
SD203A-C45-14.0-38.5-18R1	02500350	Normal pitch Metric thread	M16	14,0 *0.551*	38,5 *1.516*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	65,0 *2.559*	18,0 *0.709*
SD203A-C45-14.25-38.5-18R1	02500354	Normal pitch Metric thread	M16	14,25 *0.561*	38,5 *1.516*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	65,0 *2.559*	18,0 *0.709*
SD203A-C45-14.5-38.5-18R1	02500356	Fine pitch Metric thread	M16x1.5	14,5 *0.571*	38,5 *1.516*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	65,0 *2.559*	18,0 *0.709*

Chamfer drills – M4 - M16 Thread

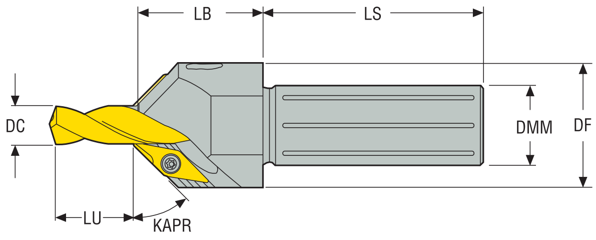


- Whistle Notch shank DIN6537B
- Internal coolant
- Coating: TiAlN + TiN
- Hole tolerance: IT8-9
- Included chamfer angle = 90°
- For cutting data see page(s) 150-151
- For customized configurations, see MyDesign software

Designation	Item number	Tap thread type	Tap thread size	DC	LU	OAL	LFS	LS	LCF	DMM
				mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-C45-3.3-11.4-6R5	02500382	Normal pitch Metric thread	M4	3,3 *0.130*	11,4 *0.449*	66,0 *2.598*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-C45-3.4-11.4-6R5	02500383	Normal pitch Metric thread	M4	3,4 *0.134*	11,4 *0.449*	66,0 *2.598*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-C45-4.2-13.6-6R5	02500391	Normal pitch Metric thread	M5	4,2 *0.165*	13,6 *0.535*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-C45-4.3-13.6-6R5	02500392	Normal pitch Metric thread	M5	4,3 *0.169*	13,6 *0.535*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-C45-5.0-16.5-8R5	02500393	Normal pitch Metric thread	M6	5,0 *0.197*	16,5 *0.650*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	28,0 *1.102*	8,0 *0.315*
SD203A-C45-5.1-16.5-8R5	02500394	Normal pitch Metric thread	M6	5,1 *0.201*	16,5 *0.650*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	28,0 *1.102*	8,0 *0.315*
SD203A-C45-6.8-21.0-10R5	02500395	Normal pitch Metric thread	M8	6,8 *0.268*	21,0 *0.827*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	34,0 *1.339*	10,0 *0.394*
SD203A-C45-6.9-21.0-10R5	02500396	Normal pitch Metric thread	M8	6,9 *0.272*	21,0 *0.827*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	34,0 *1.339*	10,0 *0.394*
SD203A-C45-7.0-21.0-10R5	02500398	Fine pitch Metric thread	M8x1.0	7,0 *0.276*	21,0 *0.827*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	34,0 *1.339*	10,0 *0.394*
SD203A-C45-8.5-25.5-12R5	02500401	Normal pitch Metric thread	M10	8,5 *0.335*	25,5 *1.004*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	47,0 *1.850*	12,0 *0.472*
SD203A-C45-8.7-25.5-12R5	02500403	Normal pitch Metric thread	M10	8,7 *0.343*	25,5 *1.004*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	47,0 *1.850*	12,0 *0.472*
SD203A-C45-9.0-25.5-12R5	02500410	Fine pitch Metric thread	M10x1.0	9,0 *0.354*	25,5 *1.004*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	47,0 *1.850*	12,0 *0.472*
SD203A-C45-10.2-30.0-14R5	02500412	Normal pitch Metric thread	M12	10,2 *0.402*	30,0 *1.181*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	55,0 *2.165*	14,0 *0.551*
SD203A-C45-10.4-30.0-14R5	02500414	Normal pitch Metric thread	M12	10,4 *0.409*	30,0 *1.181*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	55,0 *2.165*	14,0 *0.551*
SD203A-C45-10.5-30.0-14R5	02500416	Fine pitch Metric thread	M12x1.5	10,5 *0.413*	34,5 *1.358*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	55,0 *2.165*	14,0 *0.551*
SD203A-C45-12.0-34.5-16R5	02500417	Normal pitch Metric thread	M14	12,0 *0.472*	34,5 *1.358*	115,0 *4.528*	70,0 *2.756*	45,0 *1.772*	60,0 *2.362*	16,0 *0.630*
SD203A-C45-12.25-34.5-16R5	02500418	Normal pitch Metric thread	M14	12,25 *0.482*	34,5 *1.358*	115,0 *4.528*	70,0 *2.756*	45,0 *1.772*	60,0 *2.362*	16,0 *0.630*
SD203A-C45-12.5-34.5-16R5	02500420	Fine pitch Metric thread	M14x1.5	12,5 *0.492*	34,5 *1.358*	115,0 *4.528*	70,0 *2.756*	45,0 *1.772*	60,0 *2.362*	16,0 *0.630*
SD203A-C45-14.0-38.5-18R5	02500423	Normal pitch Metric thread	M16	14,0 *0.551*	38,5 *1.516*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	65,0 *2.559*	18,0 *0.709*
SD203A-C45-14.25-38.5-18R5	02500424	Normal pitch Metric thread	M16	14,25 *0.561*	38,5 *1.516*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	65,0 *2.559*	18,0 *0.709*
SD203A-C45-14.5-38.5-18R5	02500425	Fine pitch Metric thread	M16x1.5	14,5 *0.571*	38,5 *1.516*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	65,0 *2.559*	18,0 *0.709*

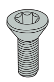
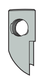
Chamfer module for Universal and Feedmax drills

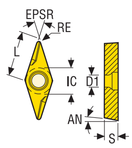
Metric



Designation	Item number	DC	Drill depth LU 3 x D LU (min-max)	Drill depth LU 5 x D LU (min-max)	Drill depth LU 7 x D LU (min-max)	Max chamfer depth	LB	DF	LS	DMM	KAPR°
		mm	mm	mm	mm	mm	mm	mm	mm	mm	
SD200-C45-6R1	02510275	4,01-6,1	4,0-17,0	10,0-27,0	30,0-45,0	2,8	25,0	21,0	41,0	12,0	45,0
SD200-C45-8R1	02510278	6,01-8,0	15,0-27,0	24,0-35,0	42,0-57,0	2,8	25,0	25,0	44,5	16,0	45,0
SD200-C45-10R1	02510280	8,01-10,0	17,0-31,0	34,0-48,0	47,0-62,0	2,8	25,0	25,0	44,5	16,0	45,0
SD200-C45-12R1	02510281	10,01-12,0	21,0-36,0	40,0-56,0	57,0-72,0	2,8	25,0	28,0	46,5	20,0	45,0
SD200-C45-14R1	02510283	12,01-14,0	22,0-37,0	43,0-59,0	68,0-83,0	2,8	25,0	30,0	46,5	20,0	45,0
SD200-C45-16R1	02510285	14,01-16,0	23,0-39,0	44,0-60,0	76,0-92,0	2,8	34,0	32,0	53,0	25,0	45,0

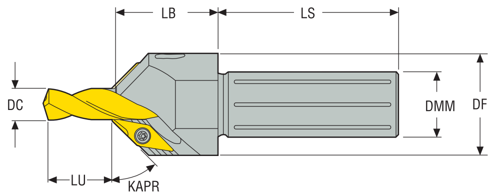
Spare parts

For drill dia. (mm)	Insert key	Insert screw	Locking key	Locking screw	Cassette
					
	Insert	Insert	Module	Module	Module
4,00 - 16,00	T07P-2	C02205-T07P	H1.5-2D	SH3040	SD200-3x7.3

	Tolerances: mm	Size	IC mm	L mm	S mm	D1 mm	RE mm
	IC = ±0,025 S = ±0,07 RE = ±0,10	C45	5,556	9,000	2,500	2,900	0,200
		Grade: T400D					
		Designation: SD200-C45					
		Item number: 02510325					

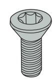
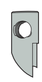
Chamfer module for Universal and Feedmax drills

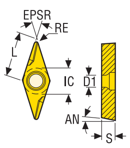
Inch



Designation	Item number	DC	Drill depth LU 3 x D LU (min-max)	5 x D LU (min-max)	7 x D LU (min-max)	Max chamfer depth	DF	LB	LS	DMM	KAPR°
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	
SD200-C45-6-500R1	02510287	0.158-0.240	0.157-0.669	0.394-1.063	1.181-1.772	0.110	0.827	0.984	1.614	0.500	45
SD200-C45-8-625R1	02510289	0.237-0.315	0.591-1.063	0.945-1.378	1.654-2.244	0.110	0.984	0.984	1.752	0.625	45
SD200-C45-10-625R1	02510291	0.315-0.394	0.669-1.220	1.339-1.890	1.850-2.441	0.110	0.984	0.984	1.752	0.625	45
SD200-C45-12-750R1	02510292	0.394-0.472	0.827-1.417	1.575-2.205	2.244-2.835	0.110	1.102	0.984	1.831	0.750	45
SD200-C45-14-750R1	02510293	0.473-0.551	0.866-1.457	1.693-2.323	2.677-3.268	0.110	1.181	0.984	1.831	0.750	45
SD200-C45-16-1000R1	02510295	0.552-0.630	0.906-1.535	1.732-2.362	2.992-3.622	0.110	1.260	1.339	2.087	1.000	45

Spare parts

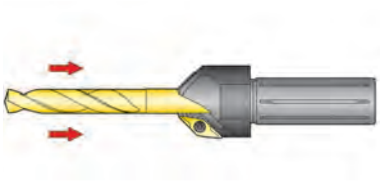
For drill dia. (inch)	Insert key	Insert screw	Locking key	Cassette
				
	Insert	Insert	Module	Module
0.1574 - 0.6299	T07P-2	C02205-T07P	H1.5-2D	SD200-3x7.3



	Tolerances: *Inch*	Size	IC *Inch*	L *Inch*	S *Inch*	D1 *Inch*	RE *Inch*
	IC = ±0.001 S = ±0.0027 RE = ±0.004	C45	0.2187	0.3543	0.0984	0.1141	0.0078
		Grade: T400D					
		Designation: SD200-C45					
		Item number: 02510325					

Chamfer module mounting instructions

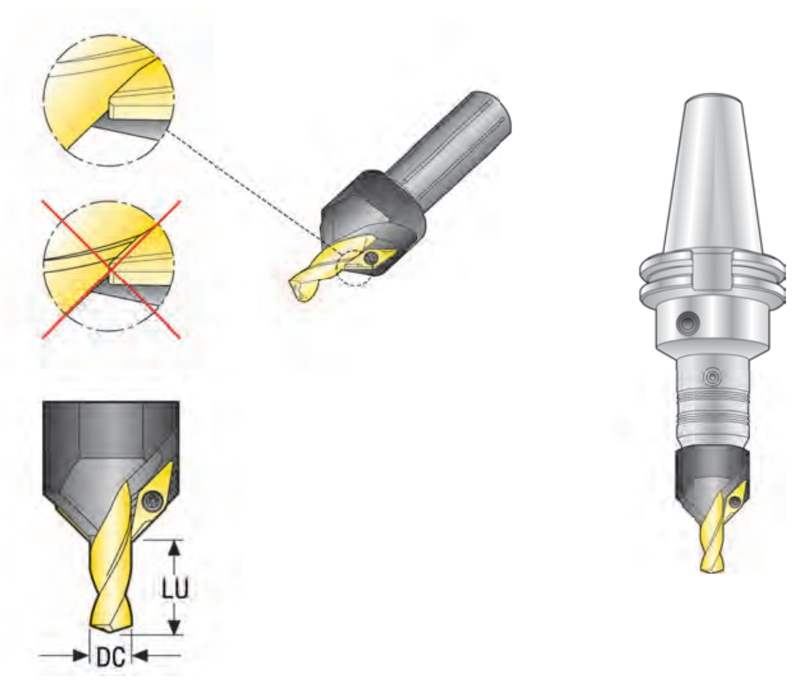
1.



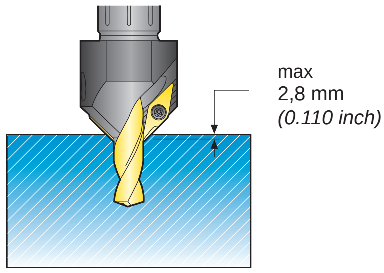
2.

3.

4.



Maximum chamfer depth

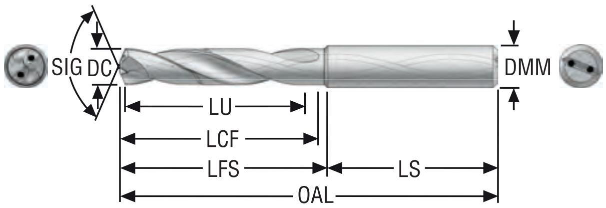


DC		LU drilling depth (min-max) SD203 / SD203A		SD205A		SD207A	
mm	*(inch)*	*mm*	*(inch)*	*mm*	*(inch)*	*mm*	(inch)
4.00-4.75	*0.157-0.187*	4-17	*0.157-0.669*	10-27	*0.394-1.063*	30-45	*1.181-1.772*
4.76-6.00	*0.187-0.236*	6-20	*0.236-0.787*	18-32	*0.709-1.260*	30-45	*1.181-1.772*
6.01-8.00	*0.237-0.315*	15-27	*0.591-1.063*	28-42	*1.102-1.654*	42-57	*1.654-2.244*
8.01-10.00	*0.315-0.394*	17-31	*0.669-1.220*	34-48	*1.339-1.890*	47-62	*1.850-2.441*
10.01-12.00	*0.394-0.472*	21-36	*0.827-1.417*	40-56	*1.575-2.205*	57-72	*2.244-2.835*
12.01-14.00	*0.473-0.551*	22-37	*0.866-1.457*	43-59	*1.693-2.323*	68-83	*2.677-3.268*
14.01-16.00	*0.552-0.630*	23-39	*0.906-1.535*	44-60	*1.732-2.362*	76-92	*2.992-3.622*

To be used with cylindrical shank only (R1).

SD203A, -MS

Drilling depth ~ 3 x D



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- Point angle: 140°
- Coating: TiAlN +NbN
- Hole tolerance: IT8-9
- For cutting data see page(s) 164-165
- For intermediate diameters see MyDesign software

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-0200-007-04R1-MS	10004064	2,0 *0.079*	7,0 *0.276*	41,0 *1.614*	14,0 *0.551*	27,0 *1.063*	11,0 *0.433*	4,0 *0.157*
SD203A-0210-007-04R1-MS	10004065	2,1 *0.083*	7,0 *0.276*	41,0 *1.614*	14,0 *0.551*	27,0 *1.063*	11,0 *0.433*	4,0 *0.157*
SD203A-0220-007-04R1-MS	10004066	2,2 *0.087*	7,0 *0.276*	41,0 *1.614*	14,0 *0.551*	27,0 *1.063*	11,0 *0.433*	4,0 *0.157*
SD203A-0230-008-04R1-MS	10004067	2,3 *0.091*	8,0 *0.315*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	12,5 *0.492*	4,0 *0.157*
SD203A-0240-008-04R1-MS	10004068	2,4 *0.094*	8,0 *0.315*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	12,5 *0.492*	4,0 *0.157*
SD203A-0250-008-04R1-MS	10004072	2,5 *0.098*	8,0 *0.315*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	12,5 *0.492*	4,0 *0.157*
SD203A-0260-008-04R1-MS	10004073	2,6 *0.102*	8,0 *0.315*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	12,5 *0.492*	4,0 *0.157*
SD203A-0270-009-04R1-MS	10004074	2,7 *0.106*	9,0 *0.354*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	14,5 *0.571*	4,0 *0.157*
SD203A-0278-009-04R1-MS	10004075	2,78 *0.109*	9,0 *0.354*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	14,5 *0.571*	4,0 *0.157*
SD203A-0290-009-04R1-MS	10004076	2,9 *0.114*	9,0 *0.354*	44,0 *1.732*	17,0 *0.669*	27,0 *1.063*	14,5 *0.571*	4,0 *0.157*
SD203A-0300-014-06R1-MS	10004077	3,0 *0.118*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0310-014-06R1-MS	10004078	3,1 *0.122*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0320-014-06R1-MS	10004079	3,2 *0.126*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0330-014-06R1-MS	10004080	3,3 *0.130*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0340-014-06R1-MS	10004081	3,4 *0.134*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0350-015-06R1-MS	10004083	3,5 *0.138*	15,0 *0.591*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0357-015-06R1-MS	10004084	3,57 *0.141*	15,0 *0.591*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0370-015-06R1-MS	10004085	3,7 *0.146*	15,0 *0.591*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-0380-017-06R1-MS	10004086	3,8 *0.150*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0390-017-06R1-MS	10004087	3,9 *0.154*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0397-017-06R1-MS	10004088	3,97 *0.156*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-0400-017-06R1-MS	10004089	4,0 *0.157*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0410-017-06R1-MS	10004090	4,1 *0.161*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0420-017-06R1-MS	10004091	4,2 *0.165*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0430-018-06R1-MS	10004092	4,3 *0.169*	18,0 *0.709*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0450-018-06R1-MS	10004093	4,5 *0.177*	18,0 *0.709*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-0460-018-06R1-MS	10004094	4,6 *0.181*	18,0 *0.709*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD203A-0465-018-06R1-MS	10004095	4,65 *0.183*	18,0 *0.709*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD203A-0470-018-06R1-MS	10004096	4,7 *0.185*	18,0 *0.709*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD203A-0476-020-06R1-MS	10004097	4,76 *0.187*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0480-020-06R1-MS	10004098	4,8 *0.189*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0490-020-06R1-MS	10004099	4,9 *0.193*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0500-020-06R1-MS	10004101	5,0 *0.197*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0510-020-06R1-MS	10004102	5,1 *0.201*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0516-020-06R1-MS	10004103	5,16 *0.203*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0520-020-06R1-MS	10004104	5,2 *0.205*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0530-020-06R1-MS	10004105	5,3 *0.209*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0540-020-06R1-MS	10004106	5,4 *0.213*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0550-020-06R1-MS	10004107	5,5 *0.217*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0556-020-06R1-MS	10004108	5,56 *0.219*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0560-021-06R1-MS	10004109	5,6 *0.220*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0570-021-06R1-MS	10004110	5,7 *0.224*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0580-021-06R1-MS	10004111	5,8 *0.228*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0590-021-06R1-MS	10004112	5,9 *0.232*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0595-021-06R1-MS	10004113	5,95 *0.234*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0600-021-06R1-MS	10004114	6,0 *0.236*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-0610-021-08R1-MS	10004115	6,1 *0.240*	21,0 *0.827*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0620-021-08R1-MS	10004116	6,2 *0.244*	21,0 *0.827*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0630-021-08R1-MS	10004117	6,3 *0.248*	21,0 *0.827*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0635-023-08R1-MS	10004121	6,35 *0.250*	23,0 *0.906*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0650-023-08R1-MS	10004122	6,5 *0.256*	23,0 *0.906*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-0660-023-08R1-MS	10004123	6,6 *0.260*	23,0 *0.906*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*

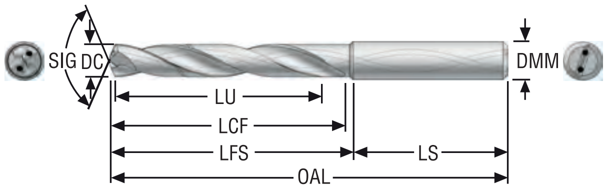
Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch
SD203A-0675-025-08R1-MS	10004124	6,75 0.266	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315
SD203A-0680-025-08R1-MS	10004125	6,8 0.268	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315
SD203A-0690-025-08R1-MS	10004127	6,9 0.272	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315
SD203A-0700-025-08R1-MS	10004128	7,0 0.276	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315
SD203A-0710-025-08R1-MS	10004129	7,1 0.280	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-0714-025-08R1-MS	10004130	7,14 0.281	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-0720-025-08R1-MS	10004132	7,2 0.283	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-0730-025-08R1-MS	10004133	7,3 0.287	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-0740-025-08R1-MS	10004134	7,4 0.291	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-0750-025-08R1-MS	10004135	7,5 0.295	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-0760-027-08R1-MS	10004136	7,6 0.299	27,0 1.063	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-0780-027-08R1-MS	10004137	7,8 0.307	27,0 1.063	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-0794-027-08R1-MS	10004138	7,94 0.313	27,0 1.063	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-0800-027-08R1-MS	10004139	8,0 0.315	27,0 1.063	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-0810-027-10R1-MS	10004140	8,1 0.319	27,0 1.063	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0820-027-10R1-MS	10004141	8,2 0.323	27,0 1.063	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0830-027-10R1-MS	10004143	8,3 0.327	27,0 1.063	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0840-027-10R1-MS	10004144	8,4 0.331	27,0 1.063	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0850-027-10R1-MS	10004146	8,5 0.335	27,0 1.063	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0860-029-10R1-MS	10004147	8,6 0.339	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0870-029-10R1-MS	10004148	8,7 0.343	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0873-029-10R1-MS	10004149	8,73 0.344	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0880-029-10R1-MS	10004150	8,8 0.346	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0900-029-10R1-MS	10004151	9,0 0.354	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0910-029-10R1-MS	10004153	9,1 0.358	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0913-029-10R1-MS	10004154	9,13 0.359	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0920-029-10R1-MS	10004156	9,2 0.362	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0930-029-10R1-MS	10004157	9,3 0.366	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0950-029-10R1-MS	10004158	9,5 0.374	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0953-031-10R1-MS	10004160	9,53 0.375	31,0 1.220	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0970-031-10R1-MS	10004161	9,7 0.382	31,0 1.220	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch
SD203A-0980-031-10R1-MS	10004162	9,8 0.386	31,0 1.220	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0990-031-10R1-MS	10004163	9,9 0.390	31,0 1.220	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-0992-031-10R1-MS	10004164	9,92 0.391	31,0 1.220	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-1000-031-10R1-MS	10004165	10,0 0.394	31,0 1.220	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-1010-031-12R1-MS	10004166	10,1 0.398	31,0 1.220	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-1020-031-12R1-MS	10004167	10,2 0.402	31,0 1.220	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-1032-031-12R1-MS	10004168	10,32 0.406	31,0 1.220	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-1040-031-12R1-MS	10004169	10,4 0.409	31,0 1.220	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-1050-031-12R1-MS	10004170	10,5 0.413	31,0 1.220	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-1072-033-12R1-MS	10004171	10,72 0.422	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-1080-033-12R1-MS	10004172	10,8 0.425	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-1100-033-12R1-MS	10004173	11,0 0.433	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-1111-033-12R1-MS	10004174	11,11 0.437	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-1120-033-12R1-MS	10004175	11,2 0.441	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-1150-033-12R1-MS	10004176	11,5 0.453	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-1180-033-12R1-MS	10004177	11,8 0.465	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-1191-036-12R1-MS	10004309	11,91 0.469	36,0 1.417	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-1200-036-12R1-MS	10004314	12,0 0.472	36,0 1.417	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-1210-036-14R1-MS	10004315	12,1 0.476	36,0 1.417	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551
SD203A-1250-036-14R1-MS	10004316	12,5 0.492	36,0 1.417	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551
SD203A-1270-036-14R1-MS	10004317	12,7 0.500	36,0 1.417	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551
SD203A-1300-036-14R1-MS	10004319	13,0 0.512	36,0 1.417	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551
SD203A-1310-036-14R1-MS	10004320	13,1 0.516	36,0 1.417	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551
SD203A-1350-037-14R1-MS	10004321	13,5 0.531	37,0 1.457	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551
SD203A-1400-037-14R1-MS	10004325	14,0 0.551	37,0 1.457	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551
SD203A-1420-037-16R1-MS	10004332	14,2 0.559	37,0 1.457	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630
SD203A-1425-038-16R1-MS	10004333	14,25 0.561	38,0 1.496	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630
SD203A-1470-038-16R1-MS	10004334	14,7 0.579	38,0 1.496	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630
SD203A-1500-040-16R1-MS	10004335	15,0 0.591	40,0 1.575	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630
SD203A-1525-040-16R1-MS	10004336	15,25 0.600	40,0 1.575	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630
SD203A-1550-040-16R1-MS	10004338	15,5 0.610	40,0 1.575	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-1588-040-16R1-MS	10004339	15,88 *0.625*	40,0 *1.575*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1600-040-16R1-MS	10004340	16,0 *0.630*	40,0 *1.575*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*
SD203A-1650-045-18R1-MS	10004341	16,5 *0.650*	45,0 *1.772*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD203A-1700-045-18R1-MS	10004342	17,0 *0.669*	45,0 *1.772*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD203A-1750-045-18R1-MS	10004343	17,5 *0.689*	45,0 *1.772*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD203A-1800-045-18R1-MS	10004344	18,0 *0.709*	45,0 *1.772*	123,0 *4.843*	75,0 *2.953*	48,0 *1.890*	73,0 *2.874*	18,0 *0.709*
SD203A-1850-050-20R1-MS	10004345	18,5 *0.728*	50,0 *1.969*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD203A-1900-050-20R1-MS	10004346	19,0 *0.748*	50,0 *1.969*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD203A-1905-050-20R1-MS	10004347	19,05 *0.750*	50,0 *1.969*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD203A-1950-050-20R1-MS	10004348	19,5 *0.768*	50,0 *1.969*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*
SD203A-2000-050-20R1-MS	10004349	20,0 *0.787*	50,0 *1.969*	131,0 *5.157*	81,0 *3.189*	50,0 *1.969*	79,0 *3.110*	20,0 *0.787*

SD205A, -MS

Drilling depth ~ 5 x D



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- Point angle: 140°
- Coating: TiAlN +NbN
- Hole tolerance: IT8-9
- For cutting data see page(s) 166-167
- For intermediate diameters see MyDesign software

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch
SD205A-0200-012-04R1-MS	10004179	2,0 0.079	12,0 0.472	46,0 1.811	19,0 0.748	27,0 1.063	15,0 0.591	4,0 0.157
SD205A-0210-012-04R1-MS	10004180	2,1 0.083	12,0 0.472	46,0 1.811	19,0 0.748	27,0 1.063	15,0 0.591	4,0 0.157
SD205A-0220-012-04R1-MS	10004181	2,2 0.087	12,0 0.472	46,0 1.811	19,0 0.748	27,0 1.063	15,0 0.591	4,0 0.157
SD205A-0230-012-04R1-MS	10004182	2,3 0.091	12,0 0.472	46,0 1.811	19,0 0.748	27,0 1.063	15,0 0.591	4,0 0.157
SD205A-0240-013-04R1-MS	10004183	2,4 0.094	13,0 0.512	50,0 1.969	23,0 0.906	27,0 1.063	17,5 0.689	4,0 0.157
SD205A-0250-013-04R1-MS	10004184	2,5 0.098	13,0 0.512	50,0 1.969	23,0 0.906	27,0 1.063	17,5 0.689	4,0 0.157
SD205A-0260-013-04R1-MS	10004185	2,6 0.102	13,0 0.512	50,0 1.969	23,0 0.906	27,0 1.063	17,5 0.689	4,0 0.157
SD205A-0270-013-04R1-MS	10004186	2,7 0.106	15,0 0.591	50,0 1.969	23,0 0.906	27,0 1.063	20,5 0.807	4,0 0.157
SD205A-0280-013-04R1-MS	10004187	2,8 0.110	15,0 0.591	50,0 1.969	23,0 0.906	27,0 1.063	20,5 0.807	4,0 0.157
SD205A-0300-021-06R1-MS	10004188	3,0 0.118	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236
SD205A-0310-021-06R1-MS	10004189	3,1 0.122	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236
SD205A-0318-021-06R1-MS	10004191	3,18 0.125	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236
SD205A-0330-021-06R1-MS	10004192	3,3 0.130	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236
SD205A-0340-021-06R1-MS	10004193	3,4 0.134	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236
SD205A-0350-021-06R1-MS	10004194	3,5 0.138	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236
SD205A-0360-027-06R1-MS	10004195	3,6 0.142	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236
SD205A-0380-027-06R1-MS	10004196	3,8 0.150	27,0 1.063	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236
SD205A-0390-027-06R1-MS	10004197	3,9 0.154	27,0 1.063	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236
SD205A-0400-027-06R1-MS	10004198	4,0 0.157	27,0 1.063	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236
SD205A-0410-027-06R1-MS	10004199	4,1 0.161	27,0 1.063	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236
SD205A-0420-027-06R1-MS	10004200	4,2 0.165	27,0 1.063	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236

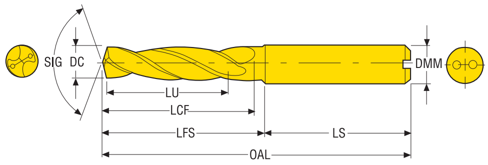
Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch
SD205A-0430-027-06R1-MS	10004201	4,3 0.169	27,0 1.063	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236
SD205A-0450-027-06R1-MS	10004202	4,5 0.177	27,0 1.063	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236
SD205A-0460-027-06R1-MS	10004203	4,6 0.181	27,0 1.063	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236
SD205A-0465-027-06R1-MS	10004205	4,65 0.183	27,0 1.063	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236
SD205A-0470-027-06R1-MS	10004206	4,7 0.185	27,0 1.063	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236
SD205A-0476-027-06R1-MS	10004208	4,76 0.187	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236
SD205A-0490-032-06R1-MS	10004209	4,9 0.193	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236
SD205A-0500-032-06R1-MS	10004211	5,0 0.197	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236
SD205A-0510-032-06R1-MS	10004212	5,1 0.201	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236
SD205A-0516-032-06R1-MS	10004213	5,16 0.203	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236
SD205A-0520-032-06R1-MS	10004214	5,2 0.205	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236
SD205A-0550-032-06R1-MS	10004215	5,5 0.217	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236
SD205A-0556-032-06R1-MS	10004216	5,56 0.219	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236
SD205A-0560-032-06R1-MS	10004218	5,6 0.220	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236
SD205A-0580-032-06R1-MS	10004219	5,8 0.228	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236
SD205A-0590-032-06R1-MS	10004220	5,9 0.232	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236
SD205A-0595-032-06R1-MS	10004221	5,95 0.234	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236
SD205A-0600-032-06R1-MS	10004222	6,0 0.236	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236
SD205A-0620-035-08R1-MS	10004224	6,2 0.244	35,0 1.378	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315
SD205A-0630-035-08R1-MS	10004225	6,3 0.248	35,0 1.378	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315
SD205A-0635-035-08R1-MS	10004226	6,35 0.250	35,0 1.378	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315
SD205A-0640-035-08R1-MS	10004227	6,4 0.252	35,0 1.378	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315
SD205A-0650-035-08R1-MS	10004228	6,5 0.256	35,0 1.378	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315
SD205A-0660-035-08R1-MS	10004229	6,6 0.260	35,0 1.378	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315
SD205A-0670-035-08R1-MS	10004231	6,7 0.264	35,0 1.378	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315
SD205A-0680-040-08R1-MS	10004234	6,8 0.268	40,0 1.575	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315
SD205A-0690-040-08R1-MS	10004235	6,9 0.272	40,0 1.575	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315
SD205A-0700-040-08R1-MS	10004236	7,0 0.276	40,0 1.575	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315
SD205A-0710-040-08R1-MS	10004237	7,1 0.280	40,0 1.575	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315
SD205A-0714-040-08R1-MS	10004238	7,14 0.281	40,0 1.575	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315
SD205A-0720-040-08R1-MS	10004239	7,2 0.283	40,0 1.575	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-0750-040-08R1-MS	10004240	7,5 *0.295*	40,0 *1.575*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0780-042-08R1-MS	10004241	7,8 *0.307*	42,0 *1.654*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0794-042-08R1-MS	10004243	7,94 *0.313*	42,0 *1.654*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0800-042-08R1-MS	10004245	8,0 *0.315*	42,0 *1.654*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-0810-042-10R1-MS	10004246	8,1 *0.319*	42,0 *1.654*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0820-042-10R1-MS	10004247	8,2 *0.323*	42,0 *1.654*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0840-042-10R1-MS	10004250	8,4 *0.331*	42,0 *1.654*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0850-042-10R1-MS	10004251	8,5 *0.335*	42,0 *1.654*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0870-045-10R1-MS	10004252	8,7 *0.343*	45,0 *1.772*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0880-045-10R1-MS	10004255	8,8 *0.346*	45,0 *1.772*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0900-045-10R1-MS	10004256	9,0 *0.354*	45,0 *1.772*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0910-045-10R1-MS	10004257	9,1 *0.358*	45,0 *1.772*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0950-045-10R1-MS	10004258	9,5 *0.374*	45,0 *1.772*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0953-048-10R1-MS	10004259	9,53 *0.375*	48,0 *1.890*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0980-048-10R1-MS	10004266	9,8 *0.386*	48,0 *1.890*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-0992-048-10R1-MS	10004269	9,92 *0.391*	48,0 *1.890*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-1000-048-10R1-MS	10004270	10,0 *0.394*	48,0 *1.890*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-1020-048-12R1-MS	10004272	10,2 *0.402*	48,0 *1.890*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1030-048-12R1-MS	10004273	10,3 *0.406*	48,0 *1.890*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1050-048-12R1-MS	10004274	10,5 *0.413*	48,0 *1.890*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1070-056-12R1-MS	10004275	10,7 *0.421*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1080-056-12R1-MS	10004276	10,8 *0.425*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1100-056-12R1-MS	10004277	11,0 *0.433*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1111-056-12R1-MS	10004278	11,11 *0.437*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1130-056-12R1-MS	10004279	11,3 *0.445*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1150-056-12R1-MS	10004280	11,5 *0.453*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1180-056-12R1-MS	10004281	11,8 *0.465*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1200-056-12R1-MS	10004282	12,0 *0.472*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-1220-056-14R1-MS	10004283	12,2 *0.480*	56,0 *2.205*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1250-056-14R1-MS	10004284	12,5 *0.492*	56,0 *2.205*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1270-056-14R1-MS	10004285	12,7 *0.500*	56,0 *2.205*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-1300-056-14R1-MS	10004286	13,0 *0.512*	56,0 *2.205*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1310-056-14R1-MS	10004287	13,1 *0.516*	59,0 *2.323*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1350-059-14R1-MS	10004288	13,5 *0.531*	59,0 *2.323*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1400-059-14R1-MS	10004290	14,0 *0.551*	59,0 *2.323*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-1420-060-16R1-MS	10004291	14,2 *0.559*	60,0 *2.362*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1425-060-16R1-MS	10004292	14,25 *0.561*	60,0 *2.362*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1450-060-16R1-MS	10004293	14,5 *0.571*	60,0 *2.362*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1500-060-16R1-MS	10004295	15,0 *0.591*	60,0 *2.362*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1550-062-16R1-MS	10004296	15,5 *0.610*	62,0 *2.441*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1580-062-16R1-MS	10004297	15,8 *0.622*	62,0 *2.441*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1600-062-16R1-MS	10004298	16,0 *0.630*	62,0 *2.441*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-1650-071-18R1-MS	10004299	16,5 *0.650*	64,0 *2.520*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1700-071-18R1-MS	10004300	17,0 *0.669*	64,0 *2.520*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1750-071-18R1-MS	10004301	17,5 *0.689*	66,0 *2.598*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1800-071-18R1-MS	10004302	18,0 *0.709*	66,0 *2.598*	143,0 *5.630*	95,0 *3.740*	48,0 *1.890*	93,0 *3.661*	18,0 *0.709*
SD205A-1850-077-20R1-MS	10004303	18,5 *0.728*	71,0 *2.795*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1900-077-20R1-MS	10004304	19,0 *0.748*	71,0 *2.795*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1930-077-20R1-MS	10004305	19,3 *0.760*	71,0 *2.795*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-1950-077-20R1-MS	10004306	19,5 *0.768*	71,0 *2.795*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*
SD205A-2000-077-20R1-MS	10004307	20,0 *0.787*	71,0 *2.795*	153,0 *6.024*	103,0 *4.055*	50,0 *1.969*	101,0 *3.976*	20,0 *0.787*

SD203A, -M

Drilling depth ~ 3 x D



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- Point angle: 140°
- Coating: TiAlN + TiN
- Hole tolerance: IT8-9
- For cutting data see page(s) 149-152
- For intermediate diameters see the MyDesign software.

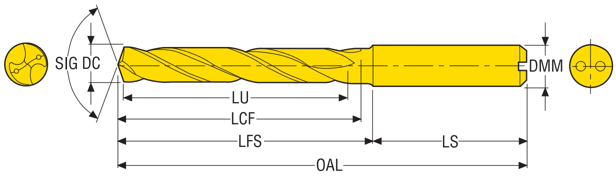
Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-3.0-14-6R1-M	02569995	3,0 *0.118*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-3.1-14-6R1-M	02570998	3,1 *0.122*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-3.3-14-6R1-M	02555958	3,3 *0.130*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-3.4-14-6R1-M	02570984	3,4 *0.134*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-3.5-15-6R1-M	02533784	3,5 *0.138*	15,0 *0.591*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-3.9-17-6R1-M	02570988	3,9 *0.154*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-4.0-17-6R1-M	02539902	4,0 *0.157*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-4.2-17-6R1-M	02555959	4,2 *0.165*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-4.3-18-6R1-M	02533700	4,3 *0.169*	18,0 *0.709*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-4.5-18-6R1-M	02570993	4,5 *0.177*	18,0 *0.709*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-01875-079-0236R1-M	02450103	4,763 *0.188*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-4.8-20-6R1-M	02570982	4,8 *0.189*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-4.9-20-6R1-M	02592709	4,9 *0.193*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-5.0-20-6R1-M	02450075	5,0 *0.197*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-5.5-21-6R1-M	02544249	5,5 *0.217*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-02188-083-0236R1-M	02450104	5,558 *0.219*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-5.6-21-6R1-M	02544028	5,6 *0.220*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-5.9-21-6R1-M	02515290	5,9 *0.232*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-6.0-21-6R1-M	02450076	6,0 *0.236*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-02500-091-0315R1-M	02450105	6,35 *0.250*	23,0 *0.906*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*

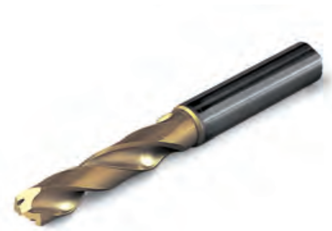
Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch
SD203A-6.5-23-8R1-M	02450077	6,5 0.256	23,0 0.906	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315
SD203A-6.6-23-8R1-M	02450078	6,6 0.260	23,0 0.906	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315
SD203A-02656-098-0315R1-M	02450106	6,746 0.266	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315
SD203A-6.8-25-8R1-M	02450079	6,8 0.268	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315
SD203A-6.9-25-8R1-M	02450080	6,9 0.272	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315
SD203A-7.0-25-8R1-M	02450081	7,0 0.276	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315
SD203A-02813-098-0315R1-M	02450107	7,145 0.281	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-7.2-25-8R1-M	02537185	7,2 0.283	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-7.3-25-8R1-M	02530109	7,3 0.287	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-7.5-25-8R1-M	02450082	7,5 0.295	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-7.6-27-8R1-M	02545197	7,6 0.299	27,0 1.063	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-7.8-27-8R1-M	02450083	7,8 0.307	27,0 1.063	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-03125-106-0315R1-M	02450108	7,938 0.313	27,0 1.063	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-8.0-27-8R1-M	02450084	8,0 0.315	27,0 1.063	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315
SD203A-8.5-27-10R1-M	02450085	8,5 0.335	27,0 1.063	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-03438-114-0394R1-M	02450109	8,733 0.344	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-8.8-29-10R1-M	02450086	8,8 0.346	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-9.0-29-10R1-M	02450087	9,0 0.354	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-03594-114-0394R1-M	02450110	9,129 0.359	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-9.2-29-10R1-M	02546516	9,2 0.362	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-9.3-29-10R1-M	02582375	9,3 0.366	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-9.5-29-10R1-M	02450088	9,5 0.374	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-03750-122-0394R1-M	02450111	9,525 0.375	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-9.8-31-10R1-M	02450089	9,8 0.386	31,0 1.220	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-9.9-31-10R1-M	02515293	9,9 0.390	31,0 1.220	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-10.0-31-10R1-M	02450090	10,0 0.394	31,0 1.220	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394
SD203A-10.2-31-12R1-M	02450091	10,2 0.402	31,0 1.220	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-04063-122-0472R1-M	02450112	10,32 0.406	31,0 1.220	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-10.4-31-12R1-M	02535267	10,4 0.409	31,0 1.220	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-10.5-31-12R1-M	02450092	10,5 0.413	31,0 1.220	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472
SD203A-04219-130-0472R1-M	02450113	10,716 0.422	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-10.8-33-12R1-M	02450093	10,8 *0.425*	33,0 *1.299*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-11.0-33-12R1-M	02450094	11,0 *0.433*	33,0 *1.299*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-04375-130-0472R1-M	02450114	11,113 *0.438*	33,0 *1.299*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-11.5-33-12R1-M	02450095	11,5 *0.453*	33,0 *1.299*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-11.8-33-12R1-M	02450096	11,8 *0.465*	33,0 *1.299*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-04688-142-0472R1-M	02592711	11,908 *0.469*	36,0 *1.417*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-12.0-36-12R1-M	02450097	12,0 *0.472*	36,0 *1.417*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-12.25-36-14R1-M	02592712	12,25 *0.482*	36,0 *1.417*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-12.3-36-14R1-M	02450098	12,3 *0.484*	36,0 *1.417*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-12.5-36-14R1-M	02450099	12,5 *0.492*	36,0 *1.417*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-05000-142-0551R1-M	02450115	12,7 *0.500*	36,0 *1.417*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-12.9-36-14R1-M	02538263	12,9 *0.508*	36,0 *1.417*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-13.0-36-14R1-M	02450100	13,0 *0.512*	36,0 *1.417*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-13.5-37-14R1-M	02450101	13,5 *0.531*	37,0 *1.457*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-14.0-37-14R1-M	02450102	14,0 *0.551*	37,0 *1.457*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-14.25-38-16R1-M	02592715	14,25 *0.561*	38,0 *1.496*	115,0 *4.528*	67,0 *2.638*	48,0 *1.890*	65,0 *2.559*	16,0 *0.630*

SD205A, -M

Drilling depth ~ 5 x D





- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- Point angle: 140°
- Coating: TiAlN + TiN
- Hole tolerance: IT8-9
- For cutting data see page(s) 153-156
- For intermediate diameters see the MyDesign software.

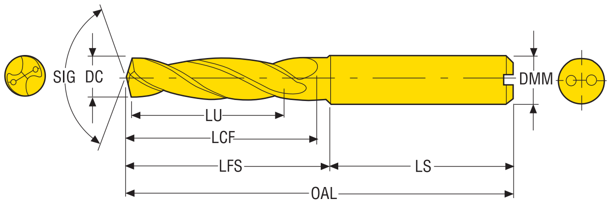
Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-2.5-13-4R1-M	02666989	2,5 *0.098*	13,0 *0.512*	46,0 *1.811*	19,0 *0.748*	27,0 *1.063*	17,5 *0.689*	4,0 *0.157*
SD205A-3.0-21-6R1-M	02556426	3,0 *0.118*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-3.1-21-6R1-M	02642448	3,1 *0.122*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-3.18-21-6R1-M	02541863	3,18 *0.125*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-3.3-21-6R1-M	02555960	3,3 *0.130*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-3.4-21-6R1-M	02554264	3,4 *0.134*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-3.5-21-6R1-M	02533780	3,5 *0.138*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	26,0 *1.024*	6,0 *0.236*
SD205A-4.0-27-6R1-M	02508340	4,0 *0.157*	27,0 *1.063*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-4.2-27-6R1-M	02502549	4,2 *0.165*	27,0 *1.063*	74,0 *2.913*	40,0 *1.575*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-4.3-27-6R1-M	02592718	4,3 *0.169*	27,0 *1.063*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-4.5-27-6R1-M	02563659	4,5 *0.177*	27,0 *1.063*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-4.7-27-6R1-M	02604031	4,7 *0.185*	27,0 *1.063*	74,0 *2.913*	40,0 *1.575*	36,0 *1.417*	34,0 *1.339*	6,0 *0.236*
SD205A-01875-126-0236R1-M	02450062	4,763 *0.188*	32,0 *1.260*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-4.9-32-6R1-M	02592720	4,9 *0.193*	32,0 *1.260*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-5.0-32-6R1-M	02450034	5,0 *0.197*	32,0 *1.260*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-5.1-32-6R1-M	02600034	5,1 *0.201*	32,0 *1.260*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-5.2-32-6R1-M	02504408	5,2 *0.205*	32,0 *1.260*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-5.5-32-6R1-M	02537341	5,5 *0.217*	32,0 *1.260*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-02188-126-0236R1-M	02450063	5,558 *0.219*	32,0 *1.260*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-5.6-32-6R1-M	02612445	5,6 *0.220*	32,0 *1.260*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-5.9-32-6R1-M	02539334	5,9 *0.232*	32,0 *1.260*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-6.0-32-6R1-M	02450035	6,0 *0.236*	32,0 *1.260*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-6.2-35-8R1-M	02547543	6,2 *0.244*	35,0 *1.378*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-02500-138-0315R1-M	02450064	6,35 *0.250*	35,0 *1.378*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-6.4-35-8R1-M	02666488	6,4 *0.252*	35,0 *1.378*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-6.5-35-8R1-M	02450036	6,5 *0.256*	35,0 *1.378*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-6.6-35-8R1-M	02450037	6,6 *0.260*	35,0 *1.378*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-6.8-40-8R1-M	02450038	6,8 *0.268*	40,0 *1.575*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-6.9-40-8R1-M	02450039	6,9 *0.272*	40,0 *1.575*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-02813-157-0315R1-M	02450066	7,145 *0.281*	40,0 *1.575*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-7.2-40-8R1-M	02519059	7,2 *0.283*	40,0 *1.575*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-7.5-40-8R1-M	02450041	7,5 *0.295*	40,0 *1.575*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-7.8-42-8R1-M	02450042	7,8 *0.307*	42,0 *1.654*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-03125-165-0315R1-M	02450067	7,938 *0.313*	42,0 *1.654*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-8.0-42-8R1-M	02450043	8,0 *0.315*	42,0 *1.654*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-8.1-42-10R1-M	02672327	8,1 *0.319*	42,0 *1.654*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-8.4-42-10R1-M	02570977	8,4 *0.331*	42,0 *1.654*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-8.5-42-10R1-M	02450044	8,5 *0.335*	42,0 *1.654*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-8.8-45-10R1-M	02450045	8,8 *0.346*	45,0 *1.772*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-9.0-45-10R1-M	02450046	9,0 *0.354*	45,0 *1.772*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-9.2-45-10R1-M	02516406	9,2 *0.362*	45,0 *1.772*	103,0 *4.055*	42,0 *1.654*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-9.5-45-10R1-M	02450047	9,5 *0.374*	45,0 *1.772*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-03750-189-0394R1-M	02450070	9,525 *0.375*	48,0 *1.890*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-9.8-48-10R1-M	02450048	9,8 *0.386*	48,0 *1.890*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-10.0-48-10R1-M	02450049	10,0 *0.394*	48,0 *1.890*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*
SD205A-10.2-48-12R1-M	02450050	10,2 *0.402*	48,0 *1.890*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-10.5-48-12R1-M	02450051	10,5 *0.413*	48,0 *1.890*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-10.8-56-12R1-M	02450052	10,8 *0.425*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-10.9-56-12R1-M	02592725	10,9 *0.429*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-11.0-56-12R1-M	02450053	11,0 *0.433*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-04375-221-0472R1-M	02450073	11,113 *0.438*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-11.5-56-12R1-M	02450054	11,5 *0.453*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-11.8-56-12R1-M	02450055	11,8 *0.465*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-12.0-56-12R1-M	02450056	12,0 *0.472*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*
SD205A-12.5-56-14R1-M	02450058	12,5 *0.492*	56,0 *2.205*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-05000-221-0551R1-M	02450074	12,7 *0.500*	56,0 *2.205*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-12.9-56-14R1-M	02592729	12,9 *0.508*	56,0 *2.205*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-13.0-56-14R1-M	02450059	13,0 *0.512*	56,0 *2.205*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-13.5-59-14R1-M	02450060	13,5 *0.531*	59,0 *2.323*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-14.0-59-14R1-M	02450061	14,0 *0.551*	59,0 *2.323*	124,0 *4.882*	79,0 *3.110*	45,0 *1.772*	77,0 *3.031*	14,0 *0.551*
SD205A-14.25-60-16R1-M	02592732	14,25 *0.561*	60,0 *2.362*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-14.5-60-16R1-M	03117534	14,5 *0.571*	60,0 *2.362*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-15.0-60-16R1-M	02570652	15,0 *0.591*	60,0 *2.362*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-15.5-62-16R1-M	02543076	15,5 *0.610*	62,0 *2.441*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*
SD205A-16.0-62-16R1-M	02555961	16,0 *0.630*	62,0 *2.441*	133,0 *5.236*	85,0 *3.346*	48,0 *1.890*	83,0 *3.268*	16,0 *0.630*

SD203A, -T

Drilling depth ~ 3 x D



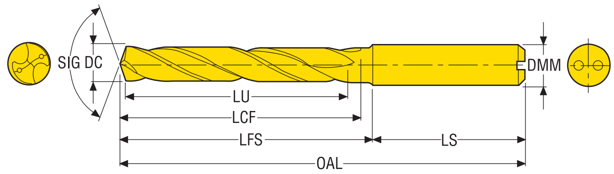
- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- Point angle: 140°
- Uncoated
- Hole tolerance: IT8-9
- Cutting data - www.secotools.com
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-01875-079-0236R1-T	02569147	4,763 *0.188*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-5.0-20-6R1-T	02523021	5,0 *0.197*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-02188-083-0236R1-T	02569156	5,558 *0.219*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-6.0-21-6R1-T	02542682	6,0 *0.236*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-02500-091-0315R1-T	02569149	6,35 *0.250*	23,0 *0.906*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-6.5-23-8R1-T	02545316	6,5 *0.256*	23,0 *0.906*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-6.9-25-8R1-T	02537280	6,9 *0.272*	25,0 *0.984*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-7.0-25-8R1-T	02525985	7,0 *0.276*	25,0 *0.984*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-02813-098-0315R1-T	02569151	7,145 *0.281*	25,0 *0.984*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-7.5-25-8R1-T	02527667	7,5 *0.295*	25,0 *0.984*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-03125-106-0315R1-T	02569152	7,938 *0.313*	27,0 *1.063*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-8.0-27-8R1-T	02513679	8,0 *0.315*	27,0 *1.063*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-8.5-27-10R1-T	02548250	8,5 *0.335*	27,0 *1.063*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-8.8-29-10R1-T	02569153	8,8 *0.346*	29,0 *1.142*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-9.0-29-10R1-T	02524440	9,0 *0.354*	29,0 *1.142*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-9.5-29-10R1-T	02545386	9,5 *0.374*	29,0 *1.142*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-10.0-31-10R1-T	02525984	10,0 *0.394*	31,0 *1.220*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-10.5-31-12R1-T	02545387	10,5 *0.413*	31,0 *1.220*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-11.0-33-12R1-T	02569155	11,0 *0.433*	33,0 *1.299*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-11.5-33-12R1-T	02567385	11,5 *0.453*	33,0 *1.299*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-11.5-33-12R1-T	02567385	11,5 *0.453*	33,0 *1.299*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-12.0-36-12R1-T	02562784	12,0 *0.472*	36,0 *1.417*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*

SD205A, -T

Drilling depth ~ 5 x D

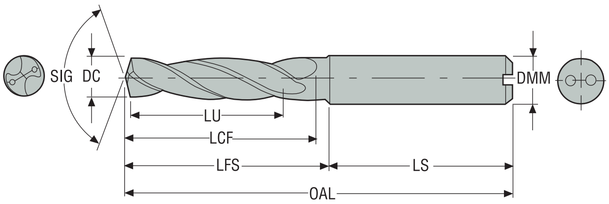


- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- Point angle: 140°
- Uncoated
- Hole tolerance: IT8-9
- Cutting data - www.secotools.com
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-8.0-42-8R1-T	02569164	8,0 *0.315*	42,0 *1.654*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205A-12.0-56-12R1-T	02527621	12,0 *0.472*	56,0 *2.205*	118,0 *4.646*	73,0 *2.874*	45,0 *1.772*	71,0 *2.795*	12,0 *0.472*

SD203A, -N

Drilling depth ~ 3 x D



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- Point angle: 140°
- DLC Coated
- Hole tolerance: IT8-9
- For cutting data see page(s) 149-152
- For intermediate diameters see MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-2.5-8-4R1-N	02691548	2,5 *0.098*	8,0 *0.315*	44,0 *1.732*	16,0 *0.630*	28,0 *1.102*	13,0 *0.512*	4,0 *0.157*
SD203A-3.0-14-6R1-N	02691549	3,0 *0.118*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-3.3-14-6R1-N	02691551	3,3 *0.130*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-3.5-15-6R1-N	02691552	3,5 *0.138*	15,0 *0.591*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-4.0-17-6R1-N	02691553	4,0 *0.157*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-4.1-17-6R1-N	02691554	4,1 *0.161*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-4.5-18-6R1-N	02691555	4,5 *0.177*	18,0 *0.709*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-5.0-20-6R1-N	02691556	5,0 *0.197*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-5.2-20-6R1-N	02691557	5,2 *0.205*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-5.5-20-6R1-N	02691558	5,5 *0.217*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-6.0-21-6R1-N	02691559	6,0 *0.236*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-02500-091-0315R1-N	02691560	6,35 *0.250*	23,0 *0.906*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-6.5-23-8R1-N	02691562	6,5 *0.256*	23,0 *0.906*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-02656-098-0315R1-N	02691564	6,746 *0.266*	25,0 *0.984*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-6.8-25-8R1-N	02691565	6,8 *0.268*	25,0 *0.984*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-7.0-25-8R1-N	02643590	7,0 *0.276*	25,0 *0.984*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-7.1-25-8R1-N	02691567	7,1 *0.280*	25,0 *0.984*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-02813-098-0315R1-N	02691568	7,145 *0.281*	25,0 *0.984*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-7.5-25-8R1-N	02691569	7,5 *0.295*	25,0 *0.984*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-03125-106-0315R1-N	02691570	7,938 *0.313*	27,0 *1.063*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-8.0-27-8R1-N	02691571	8,0 *0.315*	27,0 *1.063*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-8.5-27-10R1-N	02643592	8,5 *0.335*	27,0 *1.063*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-9.0-29-10R1-N	02691574	9,0 *0.354*	29,0 *1.142*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-9.5-29-10R1-N	02691575	9,5 *0.374*	29,0 *1.142*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-03750-122-0394R1-N	02691576	9,525 *0.375*	31,0 *1.220*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-10.0-31-10R1-N	02691577	10,0 *0.394*	31,0 *1.220*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*
SD203A-10.2-31-12R1-N	02691578	10,2 *0.402*	31,0 *1.220*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-04063-122-0472R1-N	02691579	10,32 *0.406*	31,0 *1.220*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-10.5-31-12R1-N	02691580	10,5 *0.413*	31,0 *1.220*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-11.0-33-12R1-N	02691582	11,0 *0.433*	33,0 *1.299*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-04375-130-0472R1-N	02691585	11,113 *0.438*	33,0 *1.299*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-11.5-33-12R1-N	02691588	11,5 *0.453*	33,0 *1.299*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-12.0-36-12R1-N	02691589	12,0 *0.472*	36,0 *1.417*	102,0 *4.016*	57,0 *2.244*	45,0 *1.772*	55,0 *2.165*	12,0 *0.472*
SD203A-12.5-36-14R1-N	02691591	12,5 *0.492*	36,0 *1.417*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-05000-142-0551R1-N	02691592	12,7 *0.500*	36,0 *1.417*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-13.0-36-14R1-N	02691594	13,0 *0.512*	36,0 *1.417*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-05312-146-0551R1-N	02691596	13,492 *0.531*	37,0 *1.457*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-13.5-37-14R1-N	02691597	13,5 *0.531*	37,0 *1.457*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*
SD203A-14.0-37-14R1-N	02691598	14,0 *0.551*	37,0 *1.457*	107,0 *4.213*	62,0 *2.441*	45,0 *1.772*	60,0 *2.362*	14,0 *0.551*

Composite drilling

Seco offers two distinct solutions for composite drilling: diamond-coated drills and polycrystalline diamond (PCD) drills. These tools feature geometries that are optimized specifically for regular composites or stacked materials.

- The C2 and CX2's flat-geometry drill point machines stacked composite materials that incorporate layers of aluminum or titanium
- CX1 and CX2 are polycrystalline diamond (PCD) drills that offer enhanced productivity and tool life over conventional drills when machining composite materials
- Both C1 and C2 are diamond-coated carbide drills featuring a Dura diamond coating that provides very good toughness and abrasive resistance

Composite machining

When hole Quality is in focus

With issues like entrance and exit delamination and splintering, the focus has been clear; design tools specifically optimized for composite applications, and tools specifically optimized for sandwich materials. In both cases particular consideration was given to achieving excellent performance in both entering and exiting. (In sandwich material this usually involves exiting in either Al or Ti).

- No push-up delamination (entrance)
- No pull-down delamination (exit)

The Dura diamond coating secures good dimensional tolerance throughout the long tool life.

Application Sample

Plain CFRP/GFRP (exit in composite material)

CX1 geometry

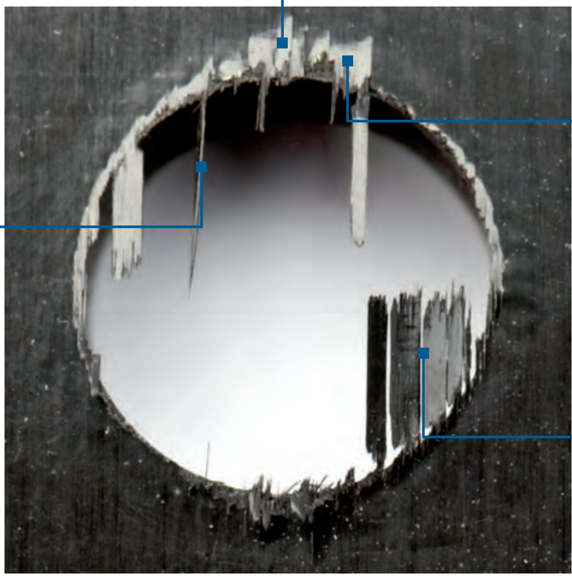
Sandwich material (exit in Al/Ti)

CX2 geometry

CX31 geometry PCD Universal geometry for both Plain CFRP/GFRP and Sandwich materials

CFRP =
Carbon Fiber Reinforced Plastic
GFRP =
Glass Fiber Reinforced Plastic

Troubleshooting – Hole exit



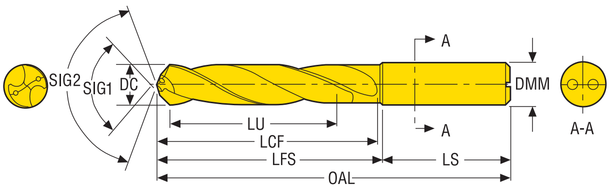
Problem:	Delamination (peel up / push down)	Spalling	Uncut fibres	Uncut resin
Solution:	**Peel up** ▪ Use tool with more negative geometry ▪ Reduce feed/rev **Push down** ▪ Reduce feed/rev	▪ Use tool with more positive geometry ▪ Reduce feed/rev	▪ Use tool with a sharper geometry ▪ Reduce feed/rev	▪ Use tool with a sharper geometry ▪ Reduce feed/rev ▪ Reduce cutting speed

Problem:	Melted resin (too much heat)	Poor tool life		
Solution:	▪ Reduce cutting speed	▪ Reduce cutting speed		

Introduction
Drilling
Reaming
Boring
Annex

SD205A-C1

Drilling depth ~ 5 x D

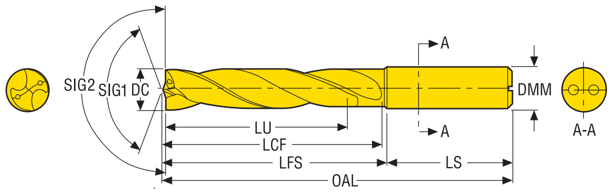


- Cylindrical shank DIN 6537A
- Internal coolant
- Point angle: 60°/130°
- Dura diamond coating
- For cutting data see page(s) 168

Designation	Item number	Expected hole tolerance		DC	LU	OAL	LFS	LS	LCF	DMM
		mm	Inch	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-6.0-31-6R1-C1	02740089	5,975/6,025	0.2352/0.2372	6,0 *0.236*	31,0 *1.220*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-9.55-46-10R1-C1	02740092	9,525/9,576	0.3750/0.3770	9,55 *0.376*	46,0 *1.811*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*

SD205A-C2

Drilling depth ~ 5 x D

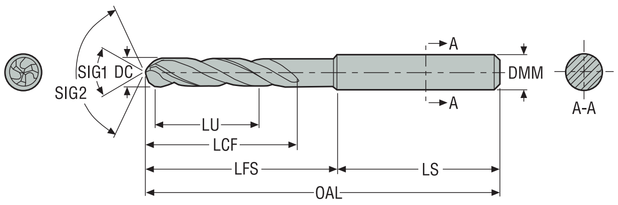


- Cylindrical shank DIN 6537A
- Internal coolant
- Point angle: 140°/180°
- Dura diamond coating
- For cutting data see page(s) 168

Designation	Item number	Expected hole tolerance		DC	LU	OAL	LFS	LS	LCF	DMM
		mm	Inch	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205A-6.0-32-6R1-C2	02740099	5,975/6,025	0.2352/0.2372	6,0 *0.236*	32,0 *1.260*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205A-9.55-48-10R1-C2	02740103	9,525/9,576	0.3750/0.3770	9,55 *0.376*	48,0 *1.890*	103,0 *4.055*	63,0 *2.480*	40,0 *1.575*	61,0 *2.402*	10,0 *0.394*

SD203-CX1

Drilling depth ~ 3 x D

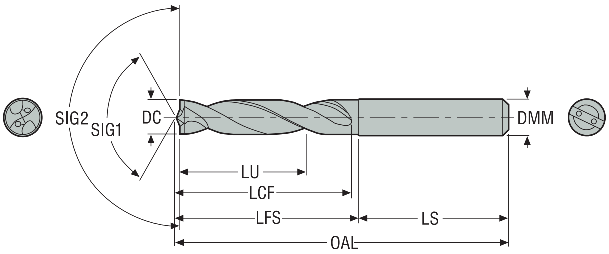


- Cylindrical shank DIN 6537A
- PCD cutting edges.
- Point angle: 60°/130°
- For cutting data see page(s) 169

Designation	Item number	Expected hole tolerance		DC	LU	OAL	LFS	LS	LCF	DMM
		mm	Inch	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203-3.26-14-6R1-CX1	02827923	3,235/3,285	0.1273/0.1293	3,26 *0.128*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	21,0 *0.827*	6,0 *0.236*
SD203-4.17-17-6R1-CX1	02827924	4,142/4,192	0.1630/0.1650	4,17 *0.164*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	25,0 *0.984*	6,0 *0.236*
SD203-4.83-20-6R1-CX1	02827925	4,805/4,855	0.1891/0.1911	4,83 *0.190*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203-6.06-21-6R1-CX1	02827926	6,035/6,085	0.2375/0.2395	6,06 *0.239*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203-6.36-23-8R1-CX1	02827927	6,33/6,38	0.2492/0.2511	6,36 *0.250*	23,0 *0.906*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203-7.94-27-8R1-CX1	02827928	7,913/7,963	0.3115/0.3135	7,94 *0.313*	27,0 *1.063*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203-9.53-31-10R1-CX1	02827929	9,504/9,554	0.3741/0.3761	9,53 *0.375*	31,0 *1.220*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*

SD203A-CX2

Drilling depth ~ 3 x D

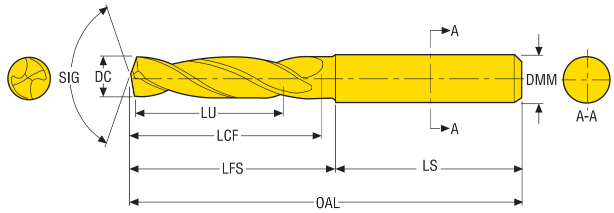


- Cylindrical shank DIN 6537A
- PCD cutting edges.
- Point angle: 120°/180°
- For cutting data see page(s) 169

Designation	Item number	Expected hole tolerance		DC	LU	OAL	LFS	LS	LCF	DMM
		mm	Inch	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD203A-3.26-14-6R1-CX2	02827930	3,235/3,285	0.1273/0.1293	3,26 *0.128*	14,0 *0.551*	62,0 *2.441*	26,0 *1.024*	36,0 *1.417*	20,0 *0.787*	6,0 *0.236*
SD203A-4.17-17-6R1-CX2	02827931	4,142/4,192	0.1630/0.1650	4,17 *0.164*	17,0 *0.669*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	24,0 *0.945*	6,0 *0.236*
SD203A-4.83-20-6R1-CX2	02827932	4,805/4,855	0.1891/0.1911	4,83 *0.190*	20,0 *0.787*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-6.06-21-6R1-CX2	02827933	6,035/6,085	0.2375/0.2395	6,06 *0.239*	21,0 *0.827*	66,0 *2.598*	30,0 *1.181*	36,0 *1.417*	28,0 *1.102*	6,0 *0.236*
SD203A-6.36-23-8R1-CX2	02827934	6,33/6,38	0.2492/0.2511	6,36 *0.250*	23,0 *0.906*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	34,0 *1.339*	8,0 *0.315*
SD203A-7.94-27-8R1-CX2	02827935	7,913/7,963	0.3115/0.3135	7,94 *0.313*	27,0 *1.063*	79,0 *3.110*	43,0 *1.693*	36,0 *1.417*	41,0 *1.614*	8,0 *0.315*
SD203A-9.53-31-10R1-CX2	02827936	9,504/9,554	0.3741/0.3761	9,53 *0.375*	31,0 *1.220*	89,0 *3.504*	49,0 *1.929*	40,0 *1.575*	47,0 *1.850*	10,0 *0.394*

SD205-CX31

Drilling depth ~ 5 x D



- Cylindrical shank DIN 6537A
- PCD cutting edges.
- Point angle: 120°
- For cutting data see page(s) 170

Designation	Item number	Expected hole tolerance		DC	LU	OAL	LFS	LS	LCF	DMM
		mm	Inch	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD205-4.10-26-6R1-CX31	02780522	4,075/4,125	0.1604/0.1624	4,1 *0.161*	26,0 *1.024*	74,0 *2.913*	38,0 *1.496*	36,0 *1.417*	37,0 *1.457*	6,0 *0.236*
SD205-4.78-31-6R1-CX31	02780523	4,755/4,805	0.1872/0.1891	4,78 *0.188*	31,0 *1.220*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205-6.00-31-6R1-CX31	02780524	5,975/6,025	0.2352/0.2372	6,0 *0.236*	31,0 *1.220*	82,0 *3.228*	46,0 *1.811*	36,0 *1.417*	44,0 *1.732*	6,0 *0.236*
SD205-6.38-34-8R1-CX31	02780525	6,350/6,401	0.2500/0.2520	6,38 *0.251*	34,0 *1.339*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*
SD205-7.963-40-8R1-CX31	02780527	7,938/7,988	0.3125/0.3144	7,963 *0.314*	40,0 *1.575*	91,0 *3.583*	55,0 *2.165*	36,0 *1.417*	53,0 *2.087*	8,0 *0.315*

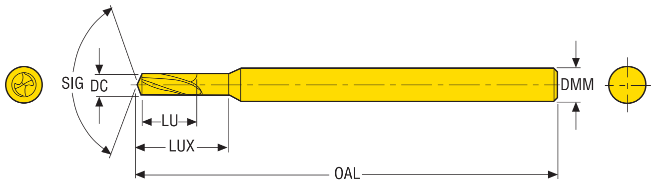
Micro drilling

Seco addresses micro drilling applications with a portfolio of dedicated products that includes the SD22 and SD26 ranges of small solid carbide micro drills.

- Capable of delivering dramatic performance increases compared to traditional HSS drills
- Suitable for applications in the automotive and medical industries, as well as for small part production in the general engineering industry

SD22

Drilling depth ~ 2 x D (Pilot drill)



- Cylindrical shank
- External coolant
- Point angle: 130°
- Uncoated
- For cutting data see page(s) 171

Designation	Item number	DC	LU	OAL	LUX	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD22-0.10-0.20-3R1	02731574	0,1 *0.004*	0,2 *0.008*	38,0 *1.496*	0,55 *0.022*	3,0 *0.118*
SD22-0.11-0.22-3R1	02730362	0,11 *0.004*	0,22 *0.009*	38,0 *1.496*	0,55 *0.022*	3,0 *0.118*
SD22-0.12-0.24-3R1	02730460	0,12 *0.005*	0,24 *0.009*	38,0 *1.496*	0,55 *0.022*	3,0 *0.118*
SD22-0.13-0.26-3R1	02730461	0,13 *0.005*	0,26 *0.010*	38,0 *1.496*	0,6 *0.024*	3,0 *0.118*
SD22-0.14-0.28-3R1	02730462	0,14 *0.006*	0,28 *0.011*	38,0 *1.496*	0,6 *0.024*	3,0 *0.118*
SD22-0.15-0.30-3R1	02731575	0,15 *0.006*	0,3 *0.012*	38,0 *1.496*	0,6 *0.024*	3,0 *0.118*
SD22-0.16-0.32-3R1	02730464	0,16 *0.006*	0,32 *0.013*	38,0 *1.496*	0,6 *0.024*	3,0 *0.118*
SD22-0.17-0.34-3R1	02730465	0,17 *0.007*	0,34 *0.013*	38,0 *1.496*	0,7 *0.028*	3,0 *0.118*
SD22-0.18-0.36-3R1	02730466	0,18 *0.007*	0,36 *0.014*	38,0 *1.496*	0,7 *0.028*	3,0 *0.118*
SD22-0.19-0.38-3R1	02730467	0,19 *0.007*	0,38 *0.015*	38,0 *1.496*	0,7 *0.028*	3,0 *0.118*
SD22-0.20-0.40-3R1	02731576	0,2 *0.008*	0,4 *0.016*	38,0 *1.496*	0,75 *0.030*	3,0 *0.118*
SD22-0.21-0.42-3R1	02730468	0,21 *0.008*	0,42 *0.017*	38,0 *1.496*	0,75 *0.030*	3,0 *0.118*
SD22-0.22-0.44-3R1	02730469	0,22 *0.009*	0,44 *0.017*	38,0 *1.496*	0,8 *0.031*	3,0 *0.118*
SD22-0.23-0.46-3R1	02730470	0,23 *0.009*	0,46 *0.018*	38,0 *1.496*	0,8 *0.031*	3,0 *0.118*
SD22-0.24-0.48-3R1	02730471	0,24 *0.009*	0,48 *0.019*	38,0 *1.496*	0,8 *0.031*	3,0 *0.118*
SD22-0.25-0.50-3R1	02731577	0,25 *0.010*	0,5 *0.020*	38,0 *1.496*	0,9 *0.035*	3,0 *0.118*
SD22-0.26-0.52-3R1	02730472	0,26 *0.010*	0,52 *0.020*	38,0 *1.496*	0,9 *0.035*	3,0 *0.118*
SD22-0.27-0.54-3R1	02730473	0,27 *0.011*	0,54 *0.021*	38,0 *1.496*	0,9 *0.035*	3,0 *0.118*
SD22-0.28-0.56-3R1	02730474	0,28 *0.011*	0,56 *0.022*	38,0 *1.496*	1,0 *0.039*	3,0 *0.118*
SD22-0.29-0.58-3R1	02730475	0,29 *0.011*	0,58 *0.023*	38,0 *1.496*	1,0 *0.039*	3,0 *0.118*
SD22-0.30-0.60-3R1	02731579	0,3 *0.012*	0,6 *0.024*	38,0 *1.496*	1,2 *0.047*	3,0 *0.118*

Designation	Item number	DC	LU	OAL	LUX	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD22-0.31-0.62-3R1	02730476	0,31 *0.012*	0,62 *0.024*	38,0 *1.496*	1,2 *0.047*	3,0 *0.118*
SD22-0.32-0.64-3R1	02730477	0,32 *0.013*	0,64 *0.025*	38,0 *1.496*	1,2 *0.047*	3,0 *0.118*
SD22-0.33-0.66-3R1	02730478	0,33 *0.013*	0,66 *0.026*	38,0 *1.496*	1,2 *0.047*	3,0 *0.118*
SD22-0.34-0.68-3R1	02730479	0,34 *0.013*	0,68 *0.027*	38,0 *1.496*	1,35 *0.053*	3,0 *0.118*
SD22-0.35-0.70-3R1	02731580	0,35 *0.014*	0,7 *0.028*	38,0 *1.496*	1,35 *0.053*	3,0 *0.118*
SD22-0.36-0.72-3R1	02730480	0,36 *0.014*	0,72 *0.028*	38,0 *1.496*	1,35 *0.053*	3,0 *0.118*
SD22-0.37-0.74-3R1	02730481	0,37 *0.015*	0,74 *0.029*	38,0 *1.496*	1,35 *0.053*	3,0 *0.118*
SD22-0.38-0.76-3R1	02730482	0,38 *0.015*	0,76 *0.030*	38,0 *1.496*	1,5 *0.059*	3,0 *0.118*
SD22-0.39-0.78-3R1	02730483	0,39 *0.015*	0,78 *0.031*	38,0 *1.496*	1,5 *0.059*	3,0 *0.118*
SD22-0.40-0.80-3R1	02731581	0,4 *0.016*	0,8 *0.031*	38,0 *1.496*	1,6 *0.063*	3,0 *0.118*
SD22-0.41-0.82-3R1	02730484	0,41 *0.016*	0,82 *0.032*	38,0 *1.496*	1,6 *0.063*	3,0 *0.118*
SD22-0.42-0.84-3R1	02730485	0,42 *0.017*	0,84 *0.033*	38,0 *1.496*	1,6 *0.063*	3,0 *0.118*
SD22-0.43-0.86-3R1	02730486	0,43 *0.017*	0,86 *0.034*	38,0 *1.496*	1,6 *0.063*	3,0 *0.118*
SD22-0.44-0.88-3R1	02730487	0,44 *0.017*	0,88 *0.035*	38,0 *1.496*	1,6 *0.063*	3,0 *0.118*
SD22-0.45-0.90-3R1	02731582	0,45 *0.018*	0,9 *0.035*	38,0 *1.496*	1,6 *0.063*	3,0 *0.118*
SD22-0.46-0.92-3R1	02730488	0,46 *0.018*	0,92 *0.036*	38,0 *1.496*	1,7 *0.067*	3,0 *0.118*
SD22-0.47-0.94-3R1	02730489	0,47 *0.019*	0,94 *0.037*	38,0 *1.496*	1,7 *0.067*	3,0 *0.118*
SD22-0.48-0.96-3R1	02730490	0,48 *0.019*	0,96 *0.038*	38,0 *1.496*	1,7 *0.067*	3,0 *0.118*
SD22-0.49-0.98-3R1	02730491	0,49 *0.019*	0,98 *0.039*	38,0 *1.496*	1,7 *0.067*	3,0 *0.118*
SD22-0.50-1.00-3R1	02731584	0,5 *0.020*	1,0 *0.039*	38,0 *1.496*	1,7 *0.067*	3,0 *0.118*
SD22-0.51-1.02-3R1	02730492	0,51 *0.020*	1,02 *0.040*	38,0 *1.496*	1,8 *0.071*	3,0 *0.118*
SD22-0.52-1.04-3R1	02730493	0,52 *0.020*	1,04 *0.041*	38,0 *1.496*	1,8 *0.071*	3,0 *0.118*
SD22-0.53-1.06-3R1	02730494	0,53 *0.021*	1,06 *0.042*	38,0 *1.496*	1,8 *0.071*	3,0 *0.118*
SD22-0.54-1.08-3R1	02730495	0,54 *0.021*	1,08 *0.043*	38,0 *1.496*	1,8 *0.071*	3,0 *0.118*
SD22-0.55-1.10-3R1	02731585	0,55 *0.022*	1,1 *0.043*	38,0 *1.496*	1,8 *0.071*	3,0 *0.118*
SD22-0.56-1.12-3R1	02730496	0,56 *0.022*	1,12 *0.044*	38,0 *1.496*	1,9 *0.075*	3,0 *0.118*
SD22-0.57-1.14-3R1	02730497	0,57 *0.022*	1,14 *0.045*	38,0 *1.496*	1,9 *0.075*	3,0 *0.118*
SD22-0.58-1.16-3R1	02730498	0,58 *0.023*	1,16 *0.046*	38,0 *1.496*	1,9 *0.075*	3,0 *0.118*
SD22-0.59-1.18-3R1	02730499	0,59 *0.023*	1,18 *0.046*	38,0 *1.496*	1,9 *0.075*	3,0 *0.118*
SD22-0.60-1.20-3R1	02731586	0,6 *0.024*	1,2 *0.047*	38,0 *1.496*	1,9 *0.075*	3,0 *0.118*
SD22-0.61-1.22-3R1	02730500	0,61 *0.024*	1,22 *0.048*	38,0 *1.496*	2,0 *0.079*	3,0 *0.118*

Designation	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LUX mm *Inch*	DMM mm *Inch*
SD22-0.62-1.24-3R1	02730501	0,62 *0.024*	1,24 *0.049*	38,0 *1.496*	2,0 *0.079*	3,0 *0.118*
SD22-0.63-1.26-3R1	02730502	0,63 *0.025*	1,26 *0.050*	38,0 *1.496*	2,0 *0.079*	3,0 *0.118*
SD22-0.64-1.28-3R1	02730503	0,64 *0.025*	1,28 *0.050*	38,0 *1.496*	2,0 *0.079*	3,0 *0.118*
SD22-0.65-1.30-3R1	02731587	0,65 *0.026*	1,3 *0.051*	38,0 *1.496*	2,0 *0.079*	3,0 *0.118*
SD22-0.66-1.32-3R1	02730504	0,66 *0.026*	1,32 *0.052*	38,0 *1.496*	2,1 *0.083*	3,0 *0.118*
SD22-0.67-1.34-3R1	02730505	0,67 *0.026*	1,34 *0.053*	38,0 *1.496*	2,1 *0.083*	3,0 *0.118*
SD22-0.68-1.36-3R1	02730506	0,68 *0.027*	1,36 *0.054*	38,0 *1.496*	2,1 *0.083*	3,0 *0.118*
SD22-0.69-1.38-3R1	02730507	0,69 *0.027*	1,38 *0.054*	38,0 *1.496*	2,1 *0.083*	3,0 *0.118*
SD22-0.70-1.40-3R1	02731589	0,7 *0.028*	1,4 *0.055*	38,0 *1.496*	2,1 *0.083*	3,0 *0.118*
SD22-0.71-1.42-3R1	02730508	0,71 *0.028*	1,42 *0.056*	38,0 *1.496*	2,2 *0.087*	3,0 *0.118*
SD22-0.72-1.44-3R1	02730509	0,72 *0.028*	1,44 *0.057*	38,0 *1.496*	2,2 *0.087*	3,0 *0.118*
SD22-0.73-1.46-3R1	02730510	0,73 *0.029*	1,46 *0.057*	38,0 *1.496*	2,2 *0.087*	3,0 *0.118*
SD22-0.74-1.48-3R1	02730511	0,74 *0.029*	1,48 *0.058*	38,0 *1.496*	2,2 *0.087*	3,0 *0.118*
SD22-0.75-1.50-3R1	02731590	0,75 *0.030*	1,5 *0.059*	38,0 *1.496*	2,2 *0.087*	3,0 *0.118*
SD22-0.76-1.52-3R1	02730512	0,76 *0.030*	1,52 *0.060*	38,0 *1.496*	2,3 *0.091*	3,0 *0.118*
SD22-0.77-1.54-3R1	02730513	0,77 *0.030*	1,54 *0.061*	38,0 *1.496*	2,3 *0.091*	3,0 *0.118*
SD22-0.78-1.56-3R1	02730514	0,78 *0.031*	1,56 *0.061*	38,0 *1.496*	2,3 *0.091*	3,0 *0.118*
SD22-0.79-1.58-3R1	02730515	0,79 *0.031*	1,58 *0.062*	38,0 *1.496*	2,3 *0.091*	3,0 *0.118*
SD22-0.80-1.60-3R1	02731592	0,8 *0.031*	1,6 *0.063*	38,0 *1.496*	2,3 *0.091*	3,0 *0.118*
SD22-0.81-1.62-3R1	02730516	0,81 *0.032*	1,62 *0.064*	38,0 *1.496*	2,4 *0.094*	3,0 *0.118*
SD22-0.82-1.64-3R1	02730517	0,82 *0.032*	1,64 *0.065*	38,0 *1.496*	2,4 *0.094*	3,0 *0.118*
SD22-0.83-1.66-3R1	02730518	0,83 *0.033*	1,66 *0.065*	38,0 *1.496*	2,4 *0.094*	3,0 *0.118*
SD22-0.84-1.68-3R1	02730519	0,84 *0.033*	1,68 *0.066*	38,0 *1.496*	2,4 *0.094*	3,0 *0.118*
SD22-0.85-1.70-3R1	02731593	0,85 *0.033*	1,7 *0.067*	38,0 *1.496*	2,4 *0.094*	3,0 *0.118*
SD22-0.86-1.72-3R1	02730520	0,86 *0.034*	1,72 *0.068*	38,0 *1.496*	2,5 *0.098*	3,0 *0.118*
SD22-0.87-1.74-3R1	02730521	0,87 *0.034*	1,74 *0.069*	38,0 *1.496*	2,5 *0.098*	3,0 *0.118*
SD22-0.88-1.76-3R1	02730522	0,88 *0.035*	1,76 *0.069*	38,0 *1.496*	2,5 *0.098*	3,0 *0.118*
SD22-0.89-1.78-3R1	02730523	0,89 *0.035*	1,78 *0.070*	38,0 *1.496*	2,5 *0.098*	3,0 *0.118*
SD22-0.90-1.80-3R1	02731594	0,9 *0.035*	1,8 *0.071*	38,0 *1.496*	2,5 *0.098*	3,0 *0.118*
SD22-0.91-1.82-3R1	02730524	0,91 *0.036*	1,82 *0.072*	38,0 *1.496*	2,6 *0.102*	3,0 *0.118*
SD22-0.92-1.84-3R1	02730525	0,92 *0.036*	1,84 *0.072*	38,0 *1.496*	2,6 *0.102*	3,0 *0.118*

Designation	Item number	DC	LU	OAL	LUX	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD22-0.93-1.86-3R1	02730526	0,93 *0.037*	1,86 *0.073*	38,0 *1.496*	2,6 *0.102*	3,0 *0.118*
SD22-0.94-1.88-3R1	02730527	0,94 *0.037*	1,88 *0.074*	38,0 *1.496*	2,6 *0.102*	3,0 *0.118*
SD22-0.95-1.90-3R1	02731595	0,95 *0.037*	1,9 *0.075*	38,0 *1.496*	2,6 *0.102*	3,0 *0.118*
SD22-0.96-1.92-3R1	02730528	0,96 *0.038*	1,92 *0.076*	38,0 *1.496*	2,7 *0.106*	3,0 *0.118*
SD22-0.97-1.94-3R1	02730529	0,97 *0.038*	1,94 *0.076*	38,0 *1.496*	2,7 *0.106*	3,0 *0.118*
SD22-0.98-1.96-3R1	02730530	0,98 *0.039*	1,96 *0.077*	38,0 *1.496*	2,7 *0.106*	3,0 *0.118*
SD22-0.99-1.98-3R1	02730531	0,99 *0.039*	1,98 *0.078*	38,0 *1.496*	2,7 *0.106*	3,0 *0.118*
SD22-1.00-2.00-3R1	02731596	1,0 *0.039*	2,0 *0.079*	38,0 *1.496*	2,7 *0.106*	3,0 *0.118*
SD22-1.01-2.02-3R1	02730532	1,01 *0.040*	2,02 *0.080*	38,0 *1.496*	3,5 *0.138*	3,0 *0.118*
SD22-1.02-2.04-3R1	02730533	1,02 *0.040*	2,04 *0.080*	38,0 *1.496*	3,5 *0.138*	3,0 *0.118*
SD22-1.03-2.06-3R1	02730534	1,03 *0.041*	2,06 *0.081*	38,0 *1.496*	3,5 *0.138*	3,0 *0.118*
SD22-1.04-2.08-3R1	02730535	1,04 *0.041*	2,08 *0.082*	38,0 *1.496*	3,5 *0.138*	3,0 *0.118*
SD22-1.05-2.10-3R1	02730536	1,05 *0.041*	2,1 *0.083*	38,0 *1.496*	3,5 *0.138*	3,0 *0.118*
SD22-1.06-2.12-3R1	02730537	1,06 *0.042*	2,12 *0.083*	38,0 *1.496*	3,6 *0.142*	3,0 *0.118*
SD22-1.07-2.14-3R1	02730538	1,07 *0.042*	2,14 *0.084*	38,0 *1.496*	3,6 *0.142*	3,0 *0.118*
SD22-1.08-2.16-3R1	02730539	1,08 *0.043*	2,16 *0.085*	38,0 *1.496*	3,6 *0.142*	3,0 *0.118*
SD22-1.09-2.18-3R1	02730540	1,09 *0.043*	2,18 *0.086*	38,0 *1.496*	3,6 *0.142*	3,0 *0.118*
SD22-1.10-2.20-3R1	02731598	1,1 *0.043*	2,2 *0.087*	38,0 *1.496*	3,6 *0.142*	3,0 *0.118*
SD22-1.11-2.22-3R1	02730541	1,11 *0.044*	2,22 *0.087*	38,0 *1.496*	3,7 *0.146*	3,0 *0.118*
SD22-1.12-2.24-3R1	02730542	1,12 *0.044*	2,24 *0.088*	38,0 *1.496*	3,7 *0.146*	3,0 *0.118*
SD22-1.13-2.26-3R1	02730543	1,13 *0.044*	2,26 *0.089*	38,0 *1.496*	3,7 *0.146*	3,0 *0.118*
SD22-1.14-2.28-3R1	02730544	1,14 *0.045*	2,28 *0.090*	38,0 *1.496*	3,7 *0.146*	3,0 *0.118*
SD22-1.15-2.30-3R1	02730545	1,15 *0.045*	2,3 *0.091*	38,0 *1.496*	3,7 *0.146*	3,0 *0.118*
SD22-1.16-2.32-3R1	02730546	1,16 *0.046*	2,32 *0.091*	38,0 *1.496*	3,8 *0.150*	3,0 *0.118*
SD22-1.17-2.34-3R1	02730547	1,17 *0.046*	2,34 *0.092*	38,0 *1.496*	3,8 *0.150*	3,0 *0.118*
SD22-1.18-2.36-3R1	02730548	1,18 *0.046*	2,36 *0.093*	38,0 *1.496*	3,8 *0.150*	3,0 *0.118*
SD22-1.19-2.38-3R1	02730549	1,19 *0.047*	2,38 *0.094*	38,0 *1.496*	3,8 *0.150*	3,0 *0.118*
SD22-1.20-2.40-3R1	02731599	1,2 *0.047*	2,4 *0.094*	38,0 *1.496*	3,8 *0.150*	3,0 *0.118*
SD22-1.21-2.42-3R1	02730550	1,21 *0.048*	2,42 *0.095*	38,0 *1.496*	4,2 *0.165*	3,0 *0.118*
SD22-1.22-2.44-3R1	02730551	1,22 *0.048*	2,44 *0.096*	38,0 *1.496*	4,2 *0.165*	3,0 *0.118*
SD22-1.23-2.46-3R1	02730552	1,23 *0.048*	2,46 *0.097*	38,0 *1.496*	4,2 *0.165*	3,0 *0.118*

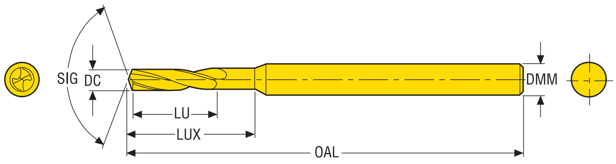
Designation	Item number	DC	LU	OAL	LUX	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD22-1.24-2.48-3R1	02730553	1,24 *0.049*	2,48 *0.098*	38,0 *1.496*	4,2 *0.165*	3,0 *0.118*
SD22-1.25-2.50-3R1	02730554	1,25 *0.049*	2,5 *0.098*	38,0 *1.496*	4,2 *0.165*	3,0 *0.118*
SD22-1.26-2.52-3R1	02730555	1,26 *0.050*	2,52 *0.099*	38,0 *1.496*	4,3 *0.169*	3,0 *0.118*
SD22-1.27-2.54-3R1	02730556	1,27 *0.050*	2,54 *0.100*	38,0 *1.496*	4,3 *0.169*	3,0 *0.118*
SD22-1.28-2.56-3R1	02730557	1,28 *0.050*	2,56 *0.101*	38,0 *1.496*	4,3 *0.169*	3,0 *0.118*
SD22-1.29-2.58-3R1	02730558	1,29 *0.051*	2,58 *0.102*	38,0 *1.496*	4,3 *0.169*	3,0 *0.118*
SD22-1.30-2.60-3R1	02731600	1,3 *0.051*	2,6 *0.102*	38,0 *1.496*	4,3 *0.169*	3,0 *0.118*
SD22-1.31-2.62-3R1	02730559	1,31 *0.052*	2,62 *0.103*	38,0 *1.496*	4,4 *0.173*	3,0 *0.118*
SD22-1.32-2.64-3R1	02730560	1,32 *0.052*	2,64 *0.104*	38,0 *1.496*	4,4 *0.173*	3,0 *0.118*
SD22-1.33-2.66-3R1	02730561	1,33 *0.052*	2,66 *0.105*	38,0 *1.496*	4,4 *0.173*	3,0 *0.118*
SD22-1.34-2.68-3R1	02730562	1,34 *0.053*	2,68 *0.106*	38,0 *1.496*	4,4 *0.173*	3,0 *0.118*
SD22-1.35-2.70-3R1	02730563	1,35 *0.053*	2,7 *0.106*	38,0 *1.496*	4,4 *0.173*	3,0 *0.118*
SD22-1.36-2.72-3R1	02730564	1,36 *0.054*	2,72 *0.107*	38,0 *1.496*	4,5 *0.177*	3,0 *0.118*
SD22-1.37-2.74-3R1	02730565	1,37 *0.054*	2,74 *0.108*	38,0 *1.496*	4,5 *0.177*	3,0 *0.118*
SD22-1.38-2.76-3R1	02730566	1,38 *0.054*	2,76 *0.109*	38,0 *1.496*	4,5 *0.177*	3,0 *0.118*
SD22-1.39-2.78-3R1	02730567	1,39 *0.055*	2,78 *0.109*	38,0 *1.496*	4,5 *0.177*	3,0 *0.118*
SD22-1.40-2.80-3R1	02731602	1,4 *0.055*	2,8 *0.110*	38,0 *1.496*	4,5 *0.177*	3,0 *0.118*
SD22-1.41-2.82-3R1	02730568	1,41 *0.056*	2,82 *0.111*	38,0 *1.496*	4,6 *0.181*	3,0 *0.118*
SD22-1.42-2.84-3R1	02730569	1,42 *0.056*	2,84 *0.112*	38,0 *1.496*	4,6 *0.181*	3,0 *0.118*
SD22-1.43-2.86-3R1	02730570	1,43 *0.056*	2,86 *0.113*	38,0 *1.496*	4,6 *0.181*	3,0 *0.118*
SD22-1.44-2.88-3R1	02730571	1,44 *0.057*	2,88 *0.113*	38,0 *1.496*	4,6 *0.181*	3,0 *0.118*
SD22-1.45-2.90-3R1	02730572	1,45 *0.057*	2,9 *0.114*	38,0 *1.496*	4,6 *0.181*	3,0 *0.118*
SD22-1.46-2.92-3R1	02730573	1,46 *0.057*	2,92 *0.115*	38,0 *1.496*	4,7 *0.185*	3,0 *0.118*
SD22-1.47-2.94-3R1	02730574	1,47 *0.058*	2,94 *0.116*	38,0 *1.496*	4,7 *0.185*	3,0 *0.118*
SD22-1.48-2.96-3R1	02730575	1,48 *0.058*	2,96 *0.117*	38,0 *1.496*	4,7 *0.185*	3,0 *0.118*
SD22-1.49-2.98-3R1	02730576	1,49 *0.059*	2,98 *0.117*	38,0 *1.496*	4,7 *0.185*	3,0 *0.118*
SD22-1.50-3.00-3R1	02731603	1,5 *0.059*	3,0 *0.118*	38,0 *1.496*	4,7 *0.185*	3,0 *0.118*
SD22-1.51-3.02-3R1	02730577	1,51 *0.059*	3,02 *0.119*	38,0 *1.496*	5,1 *0.201*	3,0 *0.118*
SD22-1.52-3.04-3R1	02730578	1,52 *0.060*	3,04 *0.120*	38,0 *1.496*	5,1 *0.201*	3,0 *0.118*
SD22-1.53-3.06-3R1	02730579	1,53 *0.060*	3,06 *0.120*	38,0 *1.496*	5,1 *0.201*	3,0 *0.118*
SD22-1.54-3.08-3R1	02730580	1,54 *0.061*	3,08 *0.121*	38,0 *1.496*	5,1 *0.201*	3,0 *0.118*

Designation	Item number	DC	LU	OAL	LUX	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD22-1.55-3.10-3R1	02730581	1,55 *0.061*	3,1 *0.122*	38,0 *1.496*	5,1 *0.201*	3,0 *0.118*
SD22-1.56-3.12-3R1	02730582	1,56 *0.061*	3,12 *0.123*	38,0 *1.496*	5,2 *0.205*	3,0 *0.118*
SD22-1.57-3.14-3R1	02730583	1,57 *0.062*	3,14 *0.124*	38,0 *1.496*	5,2 *0.205*	3,0 *0.118*
SD22-1.58-3.16-3R1	02730584	1,58 *0.062*	3,16 *0.124*	38,0 *1.496*	5,2 *0.205*	3,0 *0.118*
SD22-1.59-3.18-3R1	02730585	1,59 *0.063*	3,18 *0.125*	38,0 *1.496*	5,2 *0.205*	3,0 *0.118*
SD22-1.60-3.20-3R1	02731605	1,6 *0.063*	3,2 *0.126*	38,0 *1.496*	5,2 *0.205*	3,0 *0.118*
SD22-1.61-3.22-3R1	02730586	1,61 *0.063*	3,22 *0.127*	38,0 *1.496*	5,3 *0.209*	3,0 *0.118*
SD22-1.62-3.24-3R1	02730587	1,62 *0.064*	3,24 *0.128*	38,0 *1.496*	5,3 *0.209*	3,0 *0.118*
SD22-1.63-3.26-3R1	02730588	1,63 *0.064*	3,26 *0.128*	38,0 *1.496*	5,3 *0.209*	3,0 *0.118*
SD22-1.64-3.28-3R1	02730589	1,64 *0.065*	3,28 *0.129*	38,0 *1.496*	5,3 *0.209*	3,0 *0.118*
SD22-1.65-3.30-3R1	02730590	1,65 *0.065*	3,3 *0.130*	38,0 *1.496*	5,3 *0.209*	3,0 *0.118*
SD22-1.66-3.32-3R1	02730592	1,66 *0.065*	3,32 *0.131*	38,0 *1.496*	5,4 *0.213*	3,0 *0.118*
SD22-1.67-3.34-3R1	02730593	1,67 *0.066*	3,34 *0.131*	38,0 *1.496*	5,4 *0.213*	3,0 *0.118*
SD22-1.68-3.36-3R1	02730594	1,68 *0.066*	3,36 *0.132*	38,0 *1.496*	5,4 *0.213*	3,0 *0.118*
SD22-1.69-3.38-3R1	02730595	1,69 *0.067*	3,38 *0.133*	38,0 *1.496*	5,4 *0.213*	3,0 *0.118*
SD22-1.70-3.40-3R1	02731606	1,7 *0.067*	3,4 *0.134*	38,0 *1.496*	5,4 *0.213*	3,0 *0.118*
SD22-1.71-3.42-3R1	02730596	1,71 *0.067*	3,42 *0.135*	38,0 *1.496*	5,5 *0.217*	3,0 *0.118*
SD22-1.72-3.44-3R1	02730597	1,72 *0.068*	3,44 *0.135*	38,0 *1.496*	5,5 *0.217*	3,0 *0.118*
SD22-1.73-3.46-3R1	02730598	1,73 *0.068*	3,46 *0.136*	38,0 *1.496*	5,5 *0.217*	3,0 *0.118*
SD22-1.74-3.48-3R1	02730599	1,74 *0.069*	3,48 *0.137*	38,0 *1.496*	5,5 *0.217*	3,0 *0.118*
SD22-1.75-3.50-3R1	02730601	1,75 *0.069*	3,5 *0.138*	38,0 *1.496*	5,5 *0.217*	3,0 *0.118*
SD22-1.76-3.52-3R1	02730602	1,76 *0.069*	3,52 *0.139*	38,0 *1.496*	5,6 *0.220*	3,0 *0.118*
SD22-1.77-3.54-3R1	02730603	1,77 *0.070*	3,54 *0.139*	38,0 *1.496*	5,6 *0.220*	3,0 *0.118*
SD22-1.78-3.56-3R1	02730604	1,78 *0.070*	3,56 *0.140*	38,0 *1.496*	5,6 *0.220*	3,0 *0.118*
SD22-1.79-3.58-3R1	02730605	1,79 *0.070*	3,58 *0.141*	38,0 *1.496*	5,6 *0.220*	3,0 *0.118*
SD22-1.80-3.60-3R1	02731607	1,8 *0.071*	3,6 *0.142*	38,0 *1.496*	5,6 *0.220*	3,0 *0.118*
SD22-1.81-3.62-3R1	02730606	1,81 *0.071*	3,62 *0.143*	38,0 *1.496*	5,7 *0.224*	3,0 *0.118*
SD22-1.82-3.64-3R1	02730607	1,82 *0.072*	3,64 *0.143*	38,0 *1.496*	5,7 *0.224*	3,0 *0.118*
SD22-1.83-3.66-3R1	02730608	1,83 *0.072*	3,66 *0.144*	38,0 *1.496*	5,7 *0.224*	3,0 *0.118*
SD22-1.84-3.68-3R1	02730609	1,84 *0.072*	3,68 *0.145*	38,0 *1.496*	5,7 *0.224*	3,0 *0.118*
SD22-1.85-3.70-3R1	02730610	1,85 *0.073*	3,7 *0.146*	38,0 *1.496*	5,7 *0.224*	3,0 *0.118*

Designation	Item number	DC	LU	OAL	LUX	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD22-1.86-3.72-3R1	02730611	1,86 *0.073*	3,72 *0.146*	38,0 *1.496*	5,8 *0.228*	3,0 *0.118*
SD22-1.87-3.74-3R1	02730612	1,87 *0.074*	3,74 *0.147*	38,0 *1.496*	5,8 *0.228*	3,0 *0.118*
SD22-1.88-3.76-3R1	02730613	1,88 *0.074*	3,76 *0.148*	38,0 *1.496*	5,8 *0.228*	3,0 *0.118*
SD22-1.89-3.78-3R1	02730614	1,89 *0.074*	3,78 *0.149*	38,0 *1.496*	5,8 *0.228*	3,0 *0.118*
SD22-1.90-3.80-3R1	02731609	1,9 *0.075*	3,8 *0.150*	38,0 *1.496*	5,8 *0.228*	3,0 *0.118*
SD22-1.91-3.82-3R1	02730615	1,91 *0.075*	3,82 *0.150*	38,0 *1.496*	5,9 *0.232*	3,0 *0.118*
SD22-1.92-3.84-3R1	02730616	1,92 *0.076*	3,84 *0.151*	38,0 *1.496*	5,9 *0.232*	3,0 *0.118*
SD22-1.93-3.86-3R1	02730617	1,93 *0.076*	3,86 *0.152*	38,0 *1.496*	5,9 *0.232*	3,0 *0.118*
SD22-1.94-3.88-3R1	02730618	1,94 *0.076*	3,88 *0.153*	38,0 *1.496*	5,9 *0.232*	3,0 *0.118*
SD22-1.95-3.90-3R1	02730619	1,95 *0.077*	3,9 *0.154*	38,0 *1.496*	5,9 *0.232*	3,0 *0.118*
SD22-1.96-3.92-3R1	02730620	1,96 *0.077*	3,92 *0.154*	38,0 *1.496*	6,0 *0.236*	3,0 *0.118*
SD22-1.97-3.94-3R1	02730621	1,97 *0.078*	3,94 *0.155*	38,0 *1.496*	6,0 *0.236*	3,0 *0.118*
SD22-1.98-3.96-3R1	02730622	1,98 *0.078*	3,96 *0.156*	38,0 *1.496*	6,0 *0.236*	3,0 *0.118*
SD22-1.99-3.98-3R1	02730623	1,99 *0.078*	3,98 *0.157*	38,0 *1.496*	6,0 *0.236*	3,0 *0.118*
SD22-2.00-4.00-3R1	02731610	2,0 *0.079*	4,0 *0.157*	38,0 *1.496*	6,0 *0.236*	3,0 *0.118*

SD26

Drilling depth ~ 6 x D



- Cylindrical shank
- External coolant
- Point angle: 130°
- Uncoated
- For cutting data see page(s) 171

Designation	Item number	DC	LU	OAL	LUX	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD26-0.10-0.40-3R1	02731612	0,1 *0.004*	0,4 *0.016*	38,0 *1.496*	0,7 *0.028*	3,0 *0.118*
SD26-0.11-0.40-3R1	02730624	0,11 *0.004*	0,4 *0.016*	38,0 *1.496*	0,7 *0.028*	3,0 *0.118*
SD26-0.12-0.40-3R1	02730625	0,12 *0.005*	0,4 *0.016*	38,0 *1.496*	0,7 *0.028*	3,0 *0.118*
SD26-0.13-0.65-3R1	02730626	0,13 *0.005*	0,65 *0.026*	38,0 *1.496*	1,0 *0.039*	3,0 *0.118*
SD26-0.14-0.65-3R1	02730627	0,14 *0.006*	0,65 *0.026*	38,0 *1.496*	1,0 *0.039*	3,0 *0.118*
SD26-0.15-0.65-3R1	02731613	0,15 *0.006*	0,9 *0.035*	38,0 *1.496*	1,4 *0.055*	3,0 *0.118*
SD26-0.16-0.90-3R1	02730628	0,16 *0.006*	0,9 *0.035*	38,0 *1.496*	1,4 *0.055*	3,0 *0.118*
SD26-0.17-0.90-3R1	02730629	0,17 *0.007*	0,9 *0.035*	38,0 *1.496*	1,4 *0.055*	3,0 *0.118*
SD26-0.18-0.90-3R1	02730630	0,18 *0.007*	0,9 *0.035*	38,0 *1.496*	1,4 *0.055*	3,0 *0.118*
SD26-0.19-0.90-3R1	02730631	0,19 *0.007*	0,9 *0.035*	38,0 *1.496*	1,4 *0.055*	3,0 *0.118*
SD26-0.20-1.25-3R1	02731615	0,2 *0.008*	1,25 *0.049*	38,0 *1.496*	1,8 *0.071*	3,0 *0.118*
SD26-0.21-1.25-3R1	02730632	0,21 *0.008*	1,25 *0.049*	38,0 *1.496*	1,8 *0.071*	3,0 *0.118*
SD26-0.22-1.25-3R1	02730633	0,22 *0.009*	1,25 *0.049*	38,0 *1.496*	1,8 *0.071*	3,0 *0.118*
SD26-0.23-1.25-3R1	02730634	0,23 *0.009*	1,25 *0.049*	38,0 *1.496*	1,8 *0.071*	3,0 *0.118*
SD26-0.24-1.25-3R1	02730635	0,24 *0.009*	1,25 *0.049*	38,0 *1.496*	1,8 *0.071*	3,0 *0.118*
SD26-0.25-1.55-3R1	02731617	0,25 *0.010*	1,55 *0.061*	38,0 *1.496*	2,2 *0.087*	3,0 *0.118*
SD26-0.26-1.55-3R1	02730636	0,26 *0.010*	1,55 *0.061*	38,0 *1.496*	2,2 *0.087*	3,0 *0.118*
SD26-0.27-1.55-3R1	02730637	0,27 *0.011*	1,55 *0.061*	38,0 *1.496*	2,2 *0.087*	3,0 *0.118*
SD26-0.28-1.55-3R1	02730638	0,28 *0.011*	1,55 *0.061*	38,0 *1.496*	2,2 *0.087*	3,0 *0.118*
SD26-0.29-1.55-3R1	02730639	0,29 *0.011*	1,55 *0.061*	38,0 *1.496*	2,2 *0.087*	3,0 *0.118*
SD26-0.30-1.80-3R1	02731618	0,3 *0.012*	1,8 *0.071*	38,0 *1.496*	2,4 *0.094*	3,0 *0.118*

Designation	Item number	DC mm *Inch*	LU mm *Inch*	OAL mm *Inch*	LUX mm *Inch*	DMM mm *Inch*
SD26-0.31-1.80-3R1	02730640	0,31 *0.012*	1,8 *0.071*	38,0 *1.496*	2,4 *0.094*	3,0 *0.118*
SD26-0.32-1.80-3R1	02730641	0,32 *0.013*	1,8 *0.071*	38,0 *1.496*	2,4 *0.094*	3,0 *0.118*
SD26-0.33-1.80-3R1	02730642	0,33 *0.013*	1,8 *0.071*	38,0 *1.496*	2,4 *0.094*	3,0 *0.118*
SD26-0.34-1.80-3R1	02730643	0,34 *0.013*	1,8 *0.071*	38,0 *1.496*	2,4 *0.094*	3,0 *0.118*
SD26-0.35-2.20-3R1	02731619	0,35 *0.014*	2,2 *0.087*	38,0 *1.496*	2,8 *0.110*	3,0 *0.118*
SD26-0.36-2.20-3R1	02730644	0,36 *0.014*	2,2 *0.087*	38,0 *1.496*	2,8 *0.110*	3,0 *0.118*
SD26-0.37-2.20-3R1	02730645	0,37 *0.015*	2,2 *0.087*	38,0 *1.496*	2,8 *0.110*	3,0 *0.118*
SD26-0.38-2.20-3R1	02730646	0,38 *0.015*	2,2 *0.087*	38,0 *1.496*	2,8 *0.110*	3,0 *0.118*
SD26-0.39-2.70-3R1	02730647	0,39 *0.015*	2,7 *0.106*	38,0 *1.496*	3,6 *0.142*	3,0 *0.118*
SD26-0.40-2.70-3R1	02731620	0,4 *0.016*	2,7 *0.106*	38,0 *1.496*	3,6 *0.142*	3,0 *0.118*
SD26-0.41-2.70-3R1	02730648	0,41 *0.016*	2,7 *0.106*	38,0 *1.496*	3,6 *0.142*	3,0 *0.118*
SD26-0.42-2.70-3R1	02730649	0,42 *0.017*	2,7 *0.106*	38,0 *1.496*	3,6 *0.142*	3,0 *0.118*
SD26-0.43-2.70-3R1	02730650	0,43 *0.017*	2,7 *0.106*	38,0 *1.496*	3,6 *0.142*	3,0 *0.118*
SD26-0.44-2.70-3R1	02730651	0,44 *0.017*	2,7 *0.106*	38,0 *1.496*	3,6 *0.142*	3,0 *0.118*
SD26-0.45-2.70-3R1	02731621	0,45 *0.018*	2,7 *0.106*	38,0 *1.496*	3,6 *0.142*	3,0 *0.118*
SD26-0.46-2.70-3R1	02730652	0,46 *0.018*	2,7 *0.106*	38,0 *1.496*	3,6 *0.142*	3,0 *0.118*
SD26-0.47-2.70-3R1	02730653	0,47 *0.019*	2,7 *0.106*	38,0 *1.496*	3,6 *0.142*	3,0 *0.118*
SD26-0.48-2.70-3R1	02730654	0,48 *0.019*	2,7 *0.106*	38,0 *1.496*	3,6 *0.142*	3,0 *0.118*
SD26-0.49-3.20-3R1	02730655	0,49 *0.019*	3,2 *0.126*	38,0 *1.496*	4,0 *0.157*	3,0 *0.118*
SD26-0.50-3.20-3R1	02731622	0,5 *0.020*	3,2 *0.126*	38,0 *1.496*	4,0 *0.157*	3,0 *0.118*
SD26-0.51-3.20-3R1	02730656	0,51 *0.020*	3,2 *0.126*	38,0 *1.496*	4,0 *0.157*	3,0 *0.118*
SD26-0.52-3.20-3R1	02730657	0,52 *0.020*	3,2 *0.126*	38,0 *1.496*	4,0 *0.157*	3,0 *0.118*
SD26-0.53-3.20-3R1	02730658	0,53 *0.021*	3,2 *0.126*	38,0 *1.496*	4,0 *0.157*	3,0 *0.118*
SD26-0.54-3.60-3R1	02730659	0,54 *0.021*	3,6 *0.142*	38,0 *1.496*	4,5 *0.177*	3,0 *0.118*
SD26-0.55-3.60-3R1	02731623	0,55 *0.022*	3,6 *0.142*	38,0 *1.496*	4,5 *0.177*	3,0 *0.118*
SD26-0.56-3.60-3R1	02730660	0,56 *0.022*	3,6 *0.142*	38,0 *1.496*	4,5 *0.177*	3,0 *0.118*
SD26-0.57-3.60-3R1	02730661	0,57 *0.022*	3,6 *0.142*	38,0 *1.496*	4,5 *0.177*	3,0 *0.118*
SD26-0.58-3.60-3R1	02730662	0,58 *0.023*	3,6 *0.142*	38,0 *1.496*	4,5 *0.177*	3,0 *0.118*
SD26-0.59-3.60-3R1	02730663	0,59 *0.023*	3,6 *0.142*	38,0 *1.496*	4,5 *0.177*	3,0 *0.118*
SD26-0.60-3.60-3R1	02731624	0,6 *0.024*	3,6 *0.142*	38,0 *1.496*	4,5 *0.177*	3,0 *0.118*
SD26-0.61-3.90-3R1	02730664	0,61 *0.024*	3,6 *0.142*	38,0 *1.496*	4,5 *0.177*	3,0 *0.118*

Designation	Item number	DC	LU	OAL	LUX	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD26-0.62-3.90-3R1	02730665	0,62 *0.024*	3,9 *0.154*	38,0 *1.496*	5,0 *0.197*	3,0 *0.118*
SD26-0.63-3.90-3R1	02730666	0,63 *0.025*	3,9 *0.154*	38,0 *1.496*	5,0 *0.197*	3,0 *0.118*
SD26-0.64-3.90-3R1	02730667	0,64 *0.025*	3,9 *0.154*	38,0 *1.496*	5,0 *0.197*	3,0 *0.118*
SD26-0.65-3.90-3R1	02731625	0,65 *0.026*	3,9 *0.154*	38,0 *1.496*	5,0 *0.197*	3,0 *0.118*
SD26-0.66-3.90-3R1	02730668	0,66 *0.026*	3,9 *0.154*	38,0 *1.496*	5,0 *0.197*	3,0 *0.118*
SD26-0.67-3.90-3R1	02730669	0,67 *0.026*	3,9 *0.154*	38,0 *1.496*	5,0 *0.197*	3,0 *0.118*
SD26-0.68-4.50-3R1	02730670	0,68 *0.027*	4,5 *0.177*	38,0 *1.496*	5,6 *0.220*	3,0 *0.118*
SD26-0.69-4.50-3R1	02730671	0,69 *0.027*	4,5 *0.177*	38,0 *1.496*	5,6 *0.220*	3,0 *0.118*
SD26-0.70-4.50-3R1	02731626	0,7 *0.028*	4,5 *0.177*	38,0 *1.496*	5,6 *0.220*	3,0 *0.118*
SD26-0.71-4.50-3R1	02730672	0,71 *0.028*	4,5 *0.177*	38,0 *1.496*	5,6 *0.220*	3,0 *0.118*
SD26-0.72-4.50-3R1	02730673	0,72 *0.028*	4,5 *0.177*	38,0 *1.496*	5,6 *0.220*	3,0 *0.118*
SD26-0.73-4.50-3R1	02730674	0,73 *0.029*	4,5 *0.177*	38,0 *1.496*	5,6 *0.220*	3,0 *0.118*
SD26-0.74-4.50-3R1	02730675	0,74 *0.029*	4,5 *0.177*	38,0 *1.496*	5,6 *0.220*	3,0 *0.118*
SD26-0.75-4.50-3R1	02731627	0,75 *0.030*	4,5 *0.177*	38,0 *1.496*	5,6 *0.220*	3,0 *0.118*
SD26-0.76-5.00-3R1	02730676	0,76 *0.030*	5,0 *0.197*	38,0 *1.496*	6,3 *0.248*	3,0 *0.118*
SD26-0.77-5.00-3R1	02730677	0,77 *0.030*	5,0 *0.197*	38,0 *1.496*	6,3 *0.248*	3,0 *0.118*
SD26-0.78-5.00-3R1	02730678	0,78 *0.031*	5,0 *0.197*	38,0 *1.496*	6,3 *0.248*	3,0 *0.118*
SD26-0.79-5.00-3R1	02730679	0,79 *0.031*	5,0 *0.197*	38,0 *1.496*	6,3 *0.248*	3,0 *0.118*
SD26-0.80-5.00-3R1	02731628	0,8 *0.031*	5,0 *0.197*	38,0 *1.496*	6,3 *0.248*	3,0 *0.118*
SD26-0.81-5.00-3R1	02730680	0,81 *0.032*	5,0 *0.197*	38,0 *1.496*	6,3 *0.248*	3,0 *0.118*
SD26-0.82-5.00-3R1	02730681	0,82 *0.032*	5,0 *0.197*	38,0 *1.496*	6,3 *0.248*	3,0 *0.118*
SD26-0.83-5.00-3R1	02730682	0,83 *0.033*	5,0 *0.197*	38,0 *1.496*	6,3 *0.248*	3,0 *0.118*
SD26-0.84-5.00-3R1	02730683	0,84 *0.033*	5,0 *0.197*	38,0 *1.496*	6,3 *0.248*	3,0 *0.118*
SD26-0.85-5.00-3R1	02731629	0,85 *0.033*	5,0 *0.197*	38,0 *1.496*	6,3 *0.248*	3,0 *0.118*
SD26-0.86-5.70-3R1	02730684	0,86 *0.034*	5,7 *0.224*	38,0 *1.496*	7,1 *0.280*	3,0 *0.118*
SD26-0.87-5.70-3R1	02730685	0,87 *0.034*	5,7 *0.224*	38,0 *1.496*	7,1 *0.280*	3,0 *0.118*
SD26-0.88-5.70-3R1	02730686	0,88 *0.035*	5,7 *0.224*	38,0 *1.496*	7,1 *0.280*	3,0 *0.118*
SD26-0.89-5.70-3R1	02730687	0,89 *0.035*	5,7 *0.224*	38,0 *1.496*	7,1 *0.280*	3,0 *0.118*
SD26-0.90-5.70-3R1	02731630	0,9 *0.035*	5,7 *0.224*	38,0 *1.496*	7,1 *0.280*	3,0 *0.118*
SD26-0.91-5.70-3R1	02730688	0,91 *0.036*	5,7 *0.224*	38,0 *1.496*	7,1 *0.280*	3,0 *0.118*
SD26-0.92-5.70-3R1	02730689	0,92 *0.036*	5,7 *0.224*	38,0 *1.496*	7,1 *0.280*	3,0 *0.118*

Designation	Item number	DC	LU	OAL	LUX	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD26-0.93-5.70-3R1	02730690	0,93 *0.037*	5,7 *0.224*	38,0 *1.496*	7,1 *0.280*	3,0 *0.118*
SD26-0.94-5.70-3R1	02730691	0,94 *0.037*	5,7 *0.224*	38,0 *1.496*	7,1 *0.280*	3,0 *0.118*
SD26-0.95-5.70-3R1	02731631	0,95 *0.037*	5,7 *0.224*	38,0 *1.496*	7,1 *0.280*	3,0 *0.118*
SD26-0.96-6.50-3R1	02730692	0,96 *0.038*	6,5 *0.256*	38,0 *1.496*	8,0 *0.315*	3,0 *0.118*
SD26-0.97-6.50-3R1	02730693	0,97 *0.038*	6,5 *0.256*	38,0 *1.496*	8,0 *0.315*	3,0 *0.118*
SD26-0.98-6.50-3R1	02730694	0,98 *0.039*	6,5 *0.256*	38,0 *1.496*	8,0 *0.315*	3,0 *0.118*
SD26-0.99-6.50-3R1	02730695	0,99 *0.039*	6,5 *0.256*	38,0 *1.496*	8,0 *0.315*	3,0 *0.118*
SD26-1.00-6.50-3R1	02731632	1,0 *0.039*	6,5 *0.256*	38,0 *1.496*	8,0 *0.315*	3,0 *0.118*
SD26-1.01-6.50-3R1	02730696	1,01 *0.040*	6,5 *0.256*	38,0 *1.496*	8,0 *0.315*	3,0 *0.118*
SD26-1.02-6.50-3R1	02730697	1,02 *0.040*	6,5 *0.256*	38,0 *1.496*	8,0 *0.315*	3,0 *0.118*
SD26-1.03-6.50-3R1	02730698	1,03 *0.041*	6,5 *0.256*	38,0 *1.496*	8,0 *0.315*	3,0 *0.118*
SD26-1.04-6.50-3R1	02730699	1,04 *0.041*	6,5 *0.256*	38,0 *1.496*	8,0 *0.315*	3,0 *0.118*
SD26-1.05-6.50-3R1	02730700	1,05 *0.041*	6,5 *0.256*	38,0 *1.496*	8,0 *0.315*	3,0 *0.118*
SD26-1.06-7.30-3R1	02730701	1,06 *0.042*	7,3 *0.287*	38,0 *1.496*	9,0 *0.354*	3,0 *0.118*
SD26-1.07-7.30-3R1	02730702	1,07 *0.042*	7,3 *0.287*	38,0 *1.496*	9,0 *0.354*	3,0 *0.118*
SD26-1.08-7.30-3R1	02730703	1,08 *0.043*	7,3 *0.287*	38,0 *1.496*	9,0 *0.354*	3,0 *0.118*
SD26-1.09-7.30-3R1	02730704	1,09 *0.043*	7,3 *0.287*	38,0 *1.496*	9,0 *0.354*	3,0 *0.118*
SD26-1.10-7.30-3R1	02731633	1,1 *0.043*	7,3 *0.287*	38,0 *1.496*	9,0 *0.354*	3,0 *0.118*
SD26-1.11-7.30-3R1	02730705	1,11 *0.044*	7,3 *0.287*	38,0 *1.496*	9,0 *0.354*	3,0 *0.118*
SD26-1.12-7.30-3R1	02730706	1,12 *0.044*	7,3 *0.287*	38,0 *1.496*	9,0 *0.354*	3,0 *0.118*
SD26-1.13-7.30-3R1	02730707	1,13 *0.044*	7,3 *0.287*	38,0 *1.496*	9,0 *0.354*	3,0 *0.118*
SD26-1.14-7.30-3R1	02730708	1,14 *0.045*	7,3 *0.287*	38,0 *1.496*	9,0 *0.354*	3,0 *0.118*
SD26-1.15-7.30-3R1	02730709	1,15 *0.045*	7,3 *0.287*	38,0 *1.496*	9,0 *0.354*	3,0 *0.118*
SD26-1.16-8.20-3R1	02730710	1,16 *0.046*	8,2 *0.323*	38,0 *1.496*	10,0 *0.394*	3,0 *0.118*
SD26-1.17-8.20-3R1	02730711	1,17 *0.046*	8,2 *0.323*	38,0 *1.496*	10,0 *0.394*	3,0 *0.118*
SD26-1.18-8.20-3R1	02730712	1,18 *0.046*	8,2 *0.323*	38,0 *1.496*	10,0 *0.394*	3,0 *0.118*
SD26-1.19-8.20-3R1	02730713	1,19 *0.047*	8,2 *0.323*	38,0 *1.496*	10,0 *0.394*	3,0 *0.118*
SD26-1.20-8.20-3R1	02731634	1,2 *0.047*	8,2 *0.323*	38,0 *1.496*	10,0 *0.394*	3,0 *0.118*
SD26-1.21-8.20-3R1	02730714	1,21 *0.048*	8,2 *0.323*	38,0 *1.496*	10,0 *0.394*	3,0 *0.118*
SD26-1.22-8.20-3R1	02730715	1,22 *0.048*	8,2 *0.323*	38,0 *1.496*	10,0 *0.394*	3,0 *0.118*
SD26-1.23-8.20-3R1	02730716	1,23 *0.048*	8,2 *0.323*	38,0 *1.496*	10,0 *0.394*	3,0 *0.118*

Designation	Item number	DC	LU	OAL	LUX	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD26-1.24-8.20-3R1	02730717	1,24 *0.049*	8,2 *0.323*	38,0 *1.496*	10,0 *0.394*	3,0 *0.118*
SD26-1.25-8.20-3R1	02730718	1,25 *0.049*	8,2 *0.323*	38,0 *1.496*	10,0 *0.394*	3,0 *0.118*
SD26-1.26-8.20-3R1	02730719	1,26 *0.050*	8,2 *0.323*	38,0 *1.496*	10,0 *0.394*	3,0 *0.118*
SD26-1.27-8.20-3R1	02730720	1,27 *0.050*	8,2 *0.323*	38,0 *1.496*	10,0 *0.394*	3,0 *0.118*
SD26-1.28-8.20-3R1	02730721	1,28 *0.050*	8,2 *0.323*	38,0 *1.496*	10,0 *0.394*	3,0 *0.118*
SD26-1.29-8.20-3R1	02730722	1,29 *0.051*	8,2 *0.323*	38,0 *1.496*	10,0 *0.394*	3,0 *0.118*
SD26-1.30-8.20-3R1	02731635	1,3 *0.051*	8,2 *0.323*	38,0 *1.496*	10,0 *0.394*	3,0 *0.118*
SD26-1.31-9.20-3R1	02730723	1,31 *0.052*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.32-9.20-3R1	02730724	1,32 *0.052*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.33-9.20-3R1	02730725	1,33 *0.052*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.34-9.20-3R1	02730726	1,34 *0.053*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.35-9.20-3R1	02730727	1,35 *0.053*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.36-9.20-3R1	02730728	1,36 *0.054*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.37-9.20-3R1	02730729	1,37 *0.054*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.38-9.20-3R1	02730730	1,38 *0.054*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.39-9.20-3R1	02730731	1,39 *0.055*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.40-9.20-3R1	02731637	1,4 *0.055*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.41-9.20-3R1	02730732	1,41 *0.056*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.42-9.20-3R1	02730733	1,42 *0.056*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.43-9.20-3R1	02730734	1,43 *0.056*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.44-9.20-3R1	02730735	1,44 *0.057*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.45-9.20-3R1	02730736	1,45 *0.057*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.46-9.20-3R1	02730737	1,46 *0.057*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.47-9.20-3R1	02730738	1,47 *0.058*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.48-9.20-3R1	02730739	1,48 *0.058*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.49-9.20-3R1	02730740	1,49 *0.059*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.50-9.20-3R1	02731638	1,5 *0.059*	9,2 *0.362*	38,0 *1.496*	11,2 *0.441*	3,0 *0.118*
SD26-1.51-11.20-3R1	02730741	1,51 *0.059*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.52-11.20-3R1	02730742	1,52 *0.060*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.53-11.20-3R1	02730743	1,53 *0.060*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.54-11.20-3R1	02730744	1,54 *0.061*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*

Introduction
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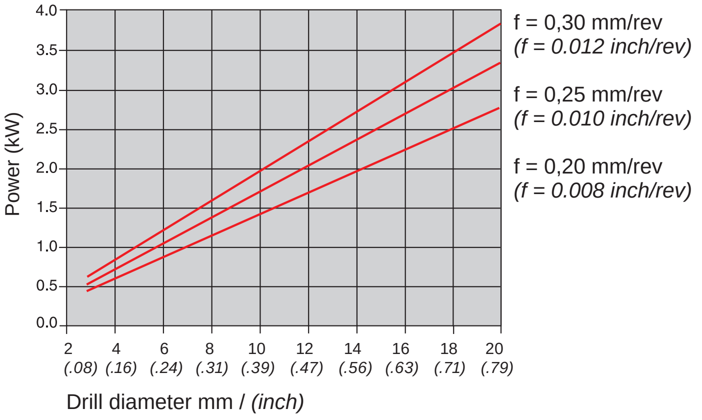
Designation	Item number	DC	LU	OAL	LUX	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD26-1.55-11.20-3R1	02730745	1,55 *0.061*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.56-11.20-3R1	02730746	1,56 *0.061*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.57-11.20-3R1	02730747	1,57 *0.062*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.58-11.20-3R1	02730748	1,58 *0.062*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.59-11.20-3R1	02730749	1,59 *0.063*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.60-11.20-3R1	02731639	1,6 *0.063*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.61-11.20-3R1	02730750	1,61 *0.063*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.62-11.20-3R1	02730751	1,62 *0.064*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.63-11.20-3R1	02730752	1,63 *0.064*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.64-11.20-3R1	02730753	1,64 *0.065*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.65-11.20-3R1	02730754	1,65 *0.065*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.66-11.20-3R1	02730755	1,66 *0.065*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.67-11.20-3R1	02730756	1,67 *0.066*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.68-11.20-3R1	02730757	1,68 *0.066*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.69-11.20-3R1	02730758	1,69 *0.067*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.70-11.20-3R1	02731640	1,7 *0.067*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.71-11.20-3R1	02730759	1,71 *0.067*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.72-11.20-3R1	02730760	1,72 *0.068*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.73-11.20-3R1	02730761	1,73 *0.068*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.74-11.20-3R1	02730762	1,74 *0.069*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.75-11.20-3R1	02730763	1,75 *0.069*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.76-11.20-3R1	02730764	1,76 *0.069*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.77-11.20-3R1	02730765	1,77 *0.070*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.78-11.20-3R1	02730766	1,78 *0.070*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.79-11.20-3R1	02730767	1,79 *0.070*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.80-11.20-3R1	02731641	1,8 *0.071*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.81-11.20-3R1	02730768	1,81 *0.071*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.82-11.20-3R1	02730769	1,82 *0.072*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.83-11.20-3R1	02730770	1,83 *0.072*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.84-11.20-3R1	02730771	1,84 *0.072*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.85-11.20-3R1	02730772	1,85 *0.073*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*

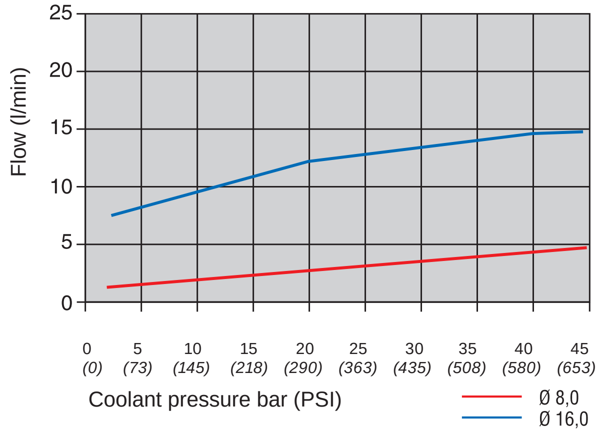
Designation	Item number	DC	LU	OAL	LUX	DMM
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD26-1.86-11.20-3R1	02730773	1,86 *0.073*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.87-11.20-3R1	02730774	1,87 *0.074*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.88-11.20-3R1	02730775	1,88 *0.074*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.89-11.20-3R1	02730776	1,89 *0.074*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.90-11.20-3R1	02731642	1,9 *0.075*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.91-11.20-3R1	02730777	1,91 *0.075*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.92-11.20-3R1	02730778	1,92 *0.076*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.93-11.20-3R1	02730779	1,93 *0.076*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.94-11.20-3R1	02730780	1,94 *0.076*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.95-11.20-3R1	02730781	1,95 *0.077*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.96-11.20-3R1	02730782	1,96 *0.077*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.97-11.20-3R1	02730783	1,97 *0.078*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.98-11.20-3R1	02730784	1,98 *0.078*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-1.99-11.20-3R1	02730785	1,99 *0.078*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*
SD26-2.00-11.20-3R1	02731643	2,0 *0.079*	11,2 *0.441*	38,0 *1.496*	13,4 *0.528*	3,0 *0.118*

Machining data

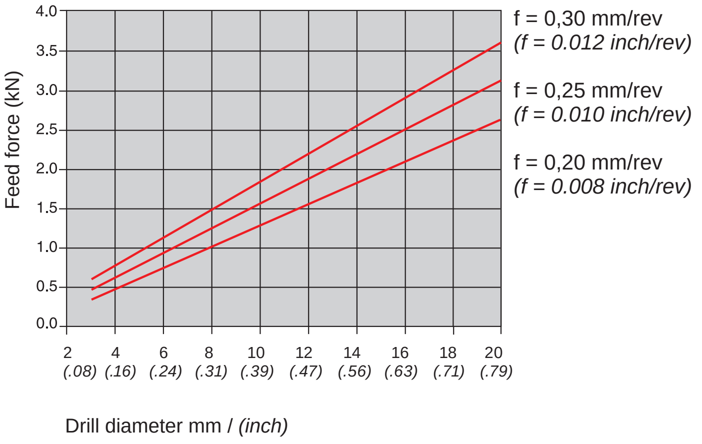
Net power consumption



Coolant flow at different pressures



Feed force



Method
Adjust feed up or down to obtain as good chip formation as possible. Increased feed/rev gives shorter chips.

The values showing feed force and net power consumption above are basic values and vary with type of cutting data, material and tool wear.

Machining data

SD1103, SD1103A, SD1105A, SD203A, SD205A, SD206, SD206A, SD207A, SD216A, SD230A
IT8–9/Ra 1–3*

Drill ∅ DC mm	**IT9 tolerance** µm	**IT10 tolerance** µm	**Drill ∅ DC** *(inch)*	**IT9 tolerance** *(inch)*	**IT10 tolerance** *(inch)*
< 3	14	25	*-0.118*	*0.0006*	*0.0010*
3-6	18	30	*> 0.118-0.236*	*0.0007*	*0.0012*
6-10	22	36	*> 0.236-0.394*	*0.0009*	*0.0014*
10-18	27	43	*> 0.394-0.709*	*0.0011*	*0.0017*
> 18	33	52	*> 0.709*	*0.0013*	*0.0020*

*Deterioration of surface finish can occur when drilling in low carbon steel or stainless steel.

Troubleshooting – Initial check points

- Fixturing stability
- Machine spindle condition
- Tool holder condition

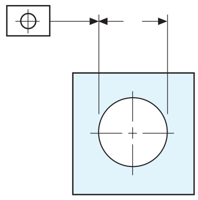
- Clamping of tool:
  - Run-out within 0,04 TIR
  - If using pre drilling within 0,04 TIR

- Chip evacuation:
  - Cutting data

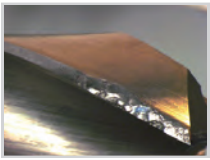
- Coolant:
  - Pressure
  - Flow
  - Concentration

Rapid flank wear
- Reduce the cutting speed
- Increase coolant concentration

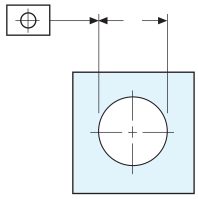
Unsatisfactory diameter tolerance
- Increase the feed/rev
- Use a reaming operation, see page 325
- Use a boring operation, see pages 479-480



Wear/Periphery land
- Reduce the cutting speed
- Increase coolant concentration

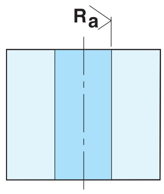


Unsatisfactory positioning of the hole
- Reduce fee/rev. on entrance
- Reduce feed/rev
- Use a boring operation, see pages 479-480
- If drilling through rough, hard and angled surfaces - reduce the feed by 30%-50% during entrance and exit
- Center drill with a 140˚ point angle



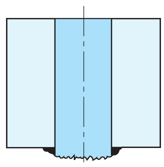
Chipping/Center
- Reduce feed during entrance
- Increase coolant pressure and adjust the feed to optimize the chip formation

Unsatisfactory surface finish-Feedmax
- Reduce the feed/rev
- Increase the cutting speed
- Use a reaming operation, see page 325

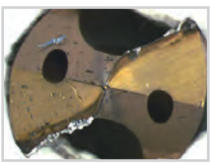


Chipping/Outer corner, cutting edge
- Reduce feed during entrance/exit
- Reduce the cutting speed
- Increase coolant concentration
- Regrind the drill

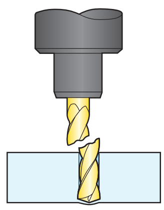
Burrs on exit
- Reduce the feed/rev. on exit
- Reduce the width of edge preparation (BN)



Built-up edge
- If closer to the periphery increase the cutting speed
- If closer to center increase feed/rev
- If the drill is worn, regrind it



Breakage on contact/at hole bottom
- Reduce the feed/rev. during entrance/exit
- Adjust cutting data for improved chip evacuation

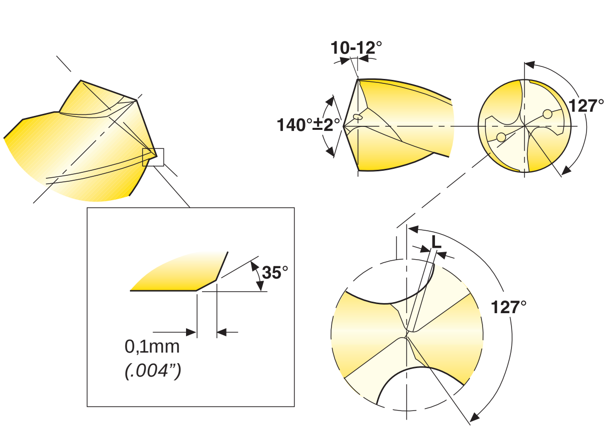


Regrinding instructions for SD1103, SD1103A, SD1105A, SD1108A and SD1112A

Specifications:
Proposed specification of diamond wheels:
Point relief: Wheel shape12A2 Grit size D54 (picture 1).
Gashing: Wheel shape 1A1 or 1V1 Grit size D64-D46 (picture 2-3).
Corner chamfer: Wheel shape 1A1 or 12A2 (picture 1).
Edge treatment: grinding K-land or brushing (picture 4).

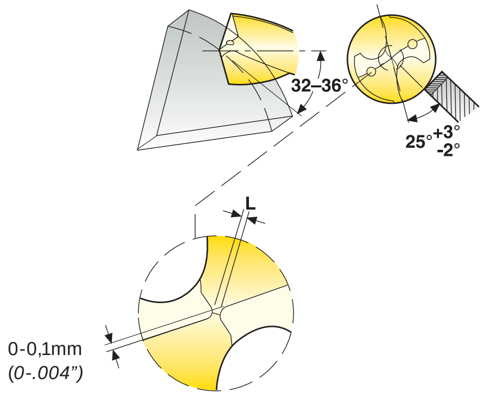
Important:
- The cutting edges must be uniform and have the same size of edge preparation.
- The edge preparation must be applied on the whole length of the cutting edges.

1. Four facet point



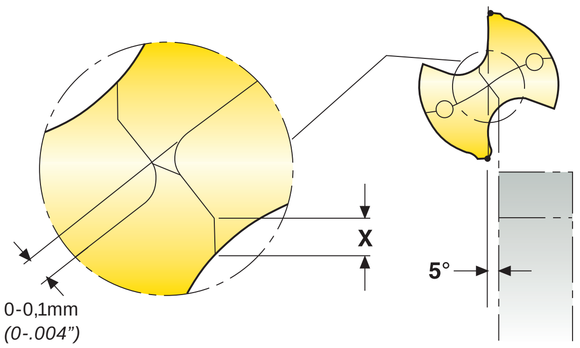
Lip height distance (axial run-out) to be within 0,02 mm *(0.008")*

2. Web thinning



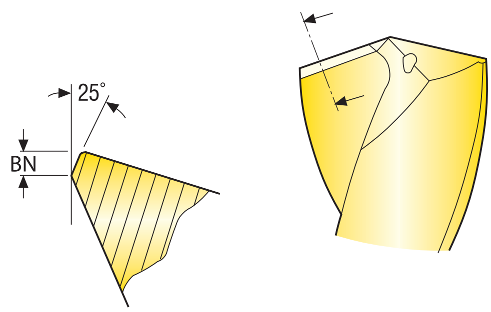
Drill ∅ DC mm	L mm	Drill ∅ DC *(inch)*	L *(inch)*
2-10	0,1-0,3	*0.079-0.394*	*0.004-0.012*
10-20	0,2-0,4	*0.394-0.787*	*0.008-0.016*

3. Grinding of flat X



X = 0,08 x *(0.003)* x drill diameter DC

4. Edge preparation



Workpiece material	BN mm *(inch)*			
	Drill ∅ ≤10 mm	Drill ∅ >10 mm	Drill ∅ ≤0.394 *(inch)*	Drill ∅ >0.394 *(inch)*
Steel	0,05	0,10	*0.002*	*0.004*
Stainless steel	0,05	0,05	*0.002*	*0.002*
Cast iron	0,05	0,10	*0.002*	*0.004*

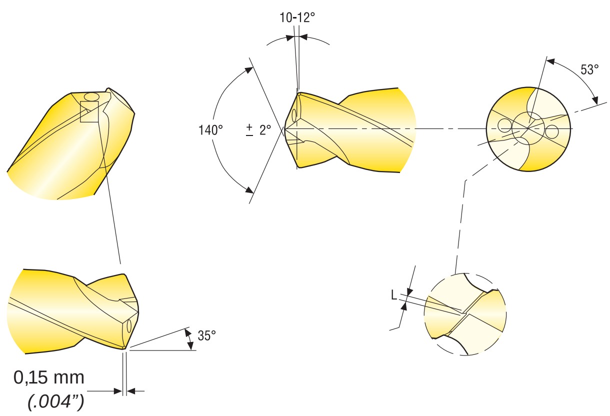
Max.allowed flank wear before regrinding is 0,1-0,3 mm *(0.004-0.012")* measured at the largest point.

Regrinding instructions for SD203A, SD205A and SD207A -P geometry

Specifications:
Proposed specification of diamond wheels:
Conical clearance: Wheel shape12A2 Grit size D54 (picture 1).
Gashing: Wheel shape 1A1 or 1V1 Grit size D64-D46 (picture 2-3).
Corner chamfer: Wheel shape 1A1 or 12A2 (picture 1).
Edge treatment: grinding K-land or brushing (picture 4).

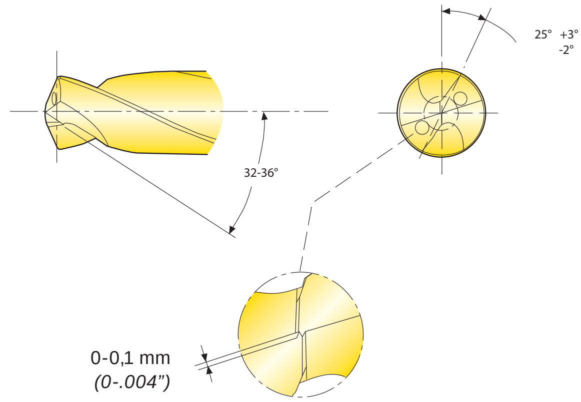
Important:
- The cutting edges must be uniform and have the same size of edge preparation.
- The edge preparation must be applied on the whole length of the cutting edges.

1. **Conical flank**



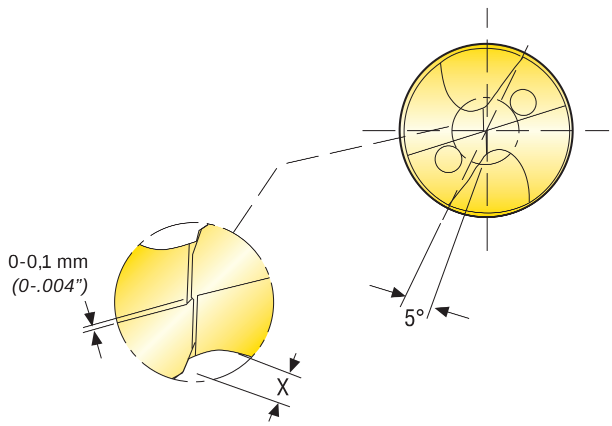
Lip height distance (axial run-out) to be within 0,02 mm *(0.0008")*

2. **Web thinning**



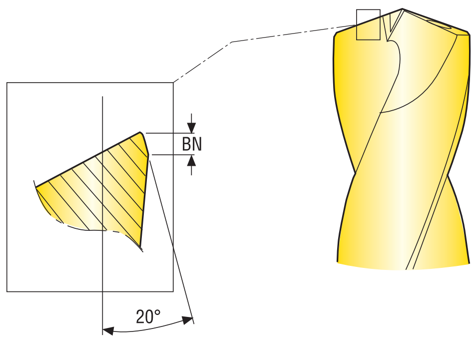
Drill ∅ DC mm	L mm	Drill ∅ DC *(inch)*	L *(inch)*
2-10	0,1-0,3	*0.079-0.394*	*0.004-0.012*
10-20	0,2-0,4	*0.394-0.787*	*0.008-0.016*

3. **Grinding of flat X**



X = 0,08 x *(0.003)* x drill diameter DC

4. **Edge preparation**



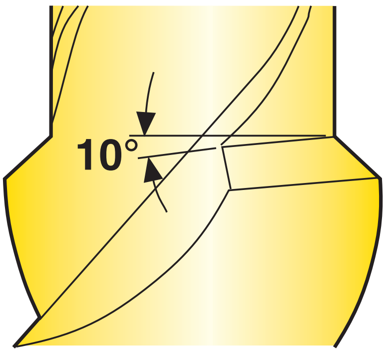
Workpiece material	BN mm *(inch)*			
	Drill ≤10 mm	Drill >10 mm	Drill ≤0.394 *(inch)*	Drill >0.394 *(inch)*
Steel	0,05	0,10	*0.002*	*0.004*
Stainless steel	0,05	0,05	*0.002*	*0.002*
Cast iron	0,05	0,10	*0.002*	*0.004*

Max. allowed flank wear before regrinding is 0,1-0,3 mm *(0.004-0.012")* measured at the largest point.

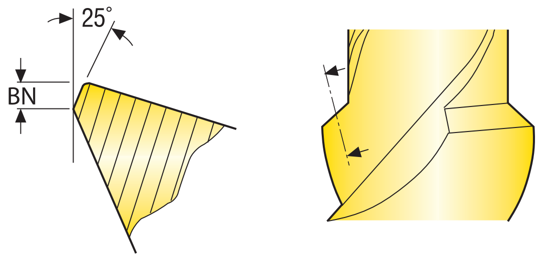
Regrinding instructions for chamfer drills

The regrinding instructions are the same as for SD203, SD203A, SD205A and SD207A except for the chamfer.

1. **Chamfer relief**



2. **Edge preparation, chamfer**



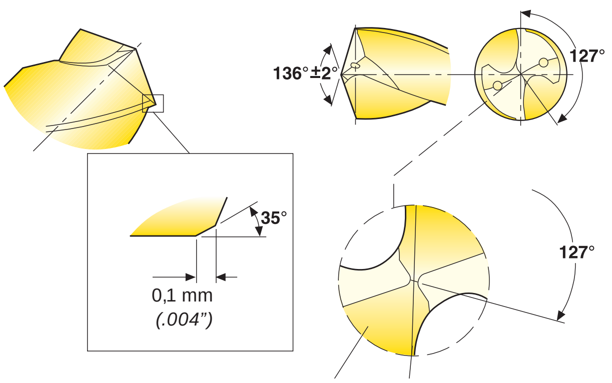
Workpiece material	BN mm *(inch)*			
	Drill ∅ ≤10 mm	Drill ∅ >10 mm	Drill ∅ ≤0.394 *(inch)*	Drill ∅ >0.394 *(inch)*
Steel	0,05	0,05	*0.002*	*0.002*
Stainless steel	0,05	0,05	*0.002*	*0.002*
Cast iron	0,05	0,05	*0.002*	*0.002*

Regrinding instructions for SD212A, SD216A, SD220A, SD225A and SD230A geometry

Specifications:
Proposed specification of diamond wheels:
Point relief: Wheel shape11V9 Grit size D54 (picture 1).
Gashing: Wheel shape 1A1 or 1V1 Grit size D64-D46 (picture 2-3).
Corner chamfer: Wheel shape 1A1 or 12A2 (picture 1).
Edge treatment: grinding K-land or brushing (picture 4).

Important:
- The cutting edges must be uniform and have the same size of edge preparation.
- The edge preparation must be applied on the whole length of the cutting edges.

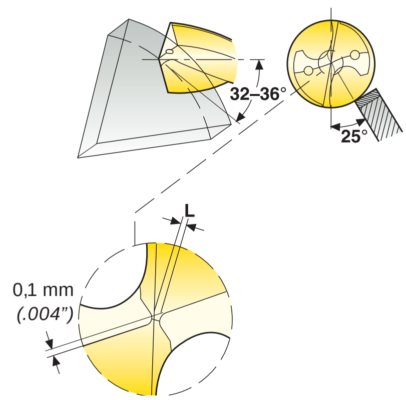
1. Conical flank



Secondary relief angle 20°   Primary relief angle 10°

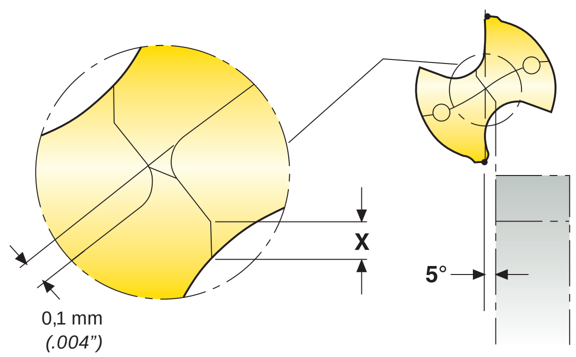
Lip height distance (axial run-out) to be within" 0,02 mm *(0.0008")*

2. Web thinning



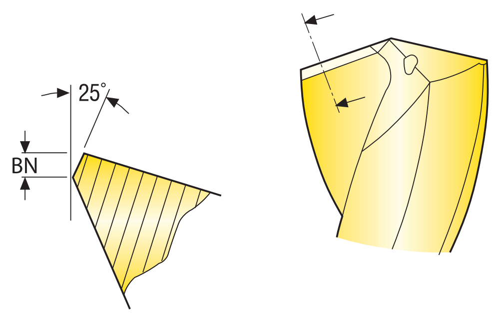
Drill ∅ DC mm	L mm	Drill ∅ DC *(inch)*	L *(inch)*
2-10	0,2	*0.079-0.394*	*0.008*
10-20	0,4	*0.394-0.787*	*0.016*

3. Grinding of flat X



X = 0,08 x *(0.003 x)* drill diameter DC

4. Edge preparation



Workpiece material	BN mm *(inch)*			
	Drill ∅ ≤10 mm	Drill ∅ >10 mm	Drill ∅ ≤0.394 *(inch)*	Drill ∅ >0.394 *(inch)*
Steel	0,05	0,10	*0.002*	*0.004*
Stainless steel	0,05	0,05	*0.002*	*0.002*
Cast iron	0,05	0,10	*0.002*	*0.004*

Max. allowed flank wear before regrinding is 0,1-0,3 mm *(0.004-0.012")* measured at the largest point.

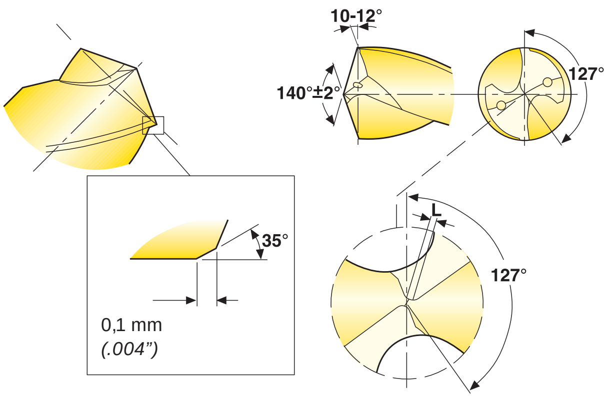
Introduction
Drilling
Reaming
Boring
Annex

Regrinding instructions for SD265A

Specifications:
Proposed specification of diamond wheels:
Conical clearance: Wheel shape12A2 Grit size D54 (picture 1).
Gashing: Wheel shape 1A1 or 1V1 Grit size D64-D46 (picture 2-3).
Corner chamfer: Wheel shape 1A1 or 12A2 (picture 1).
Edge treatment: grinding K-land or brushing (picture 4).

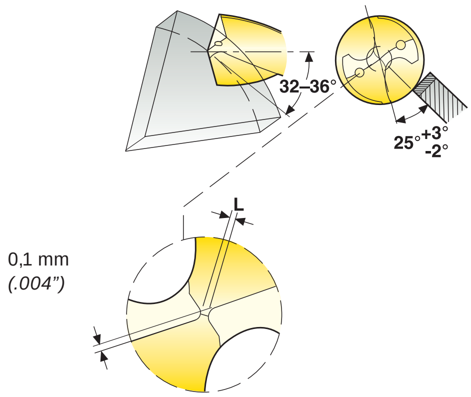
Important:
- The cutting edges must be uniform and have the same size of edge preparation.
- The edge preparation must be applied on the whole length of the cutting edges.

1. Conical flank



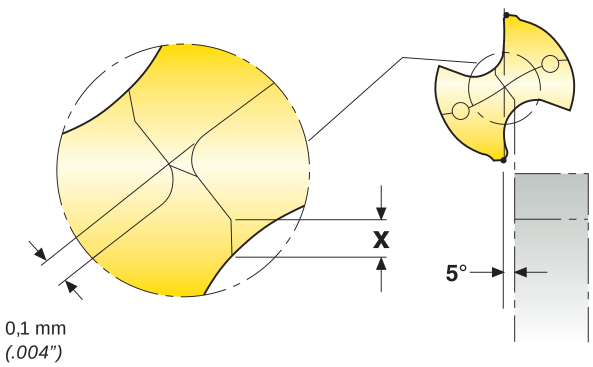
Lip height distance (axial run-out) to be within 0,02 mm *(0.0008")*

2. Web thinning



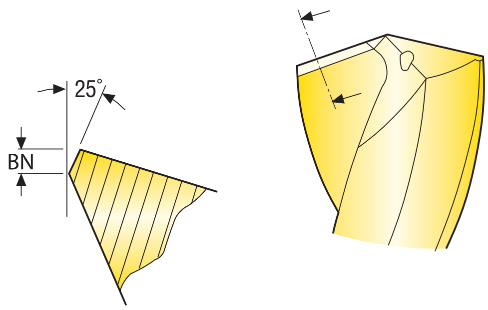
Drill ⌀ DC mm	L mm	Drill ⌀ DC *(inch)*	L *(inch)*
2-10	0,1-0,3	*0.079-0.394*	*0.004-0.012*
10-20	0,2-0,4	*0.394-0.787*	*0.008-0.016*

3. Grinding of flat X



X = 0,08 x *(0.003" x)* drill diameter DC

4. Edge preparation



Workpiece material	BN mm *(inch)*			
	Drill ⌀ ≤10 mm	Drill ⌀ >10 mm	Drill ⌀ ≤0.394 *(inch)*	Drill ⌀ >0.394 *(inch)*
Steel	0,05	0,10	*0.002*	*0.004*
Stainless steel	0,05	0,05	*0.002*	*0.002*
Cast iron	0,05	0,10	*0.002*	*0.004*

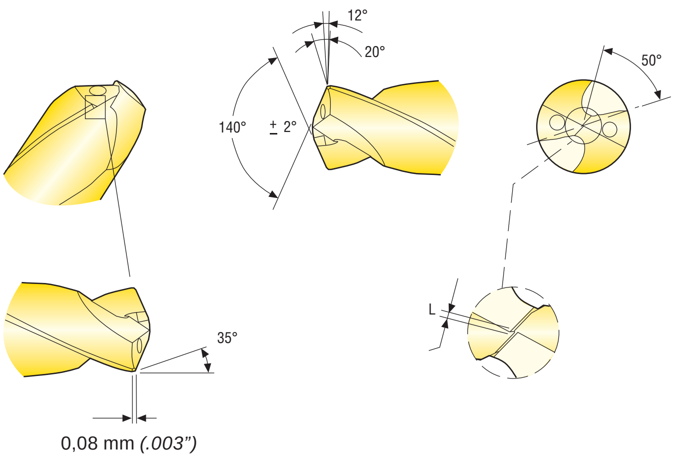
Max. allowed flank wear before regrinding is 0,1-0,3 mm *(0.004-0.012")* measured at the largest point.

Regrinding instructions for -MS geometry

Specifications:
Proposed specification of diamond wheels:
Conical clearance: Wheel shape12A2 Grit size D54 (picture 1).
Gashing: Wheel shape 1A1 or 1V1 Grit size D64-D46 (picture 2-3).
Corner chamfer: Wheel shape 1A1 or 12A2 (picture 1).
Edge treatment: grinding K-land or brushing (picture 4).

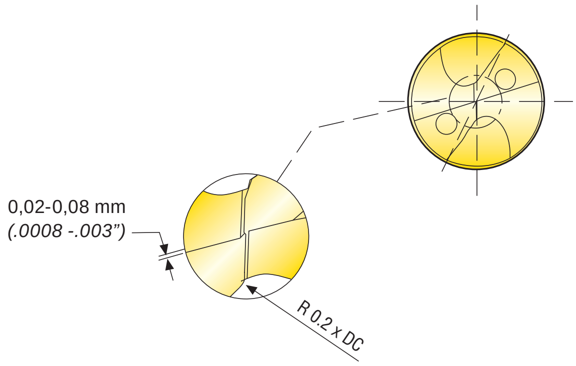
Important:
- The cutting edges must be uniform and have the same size of edge preparation.
- The edge preparation must be applied on the whole length of the cutting edges.

1. Four facet

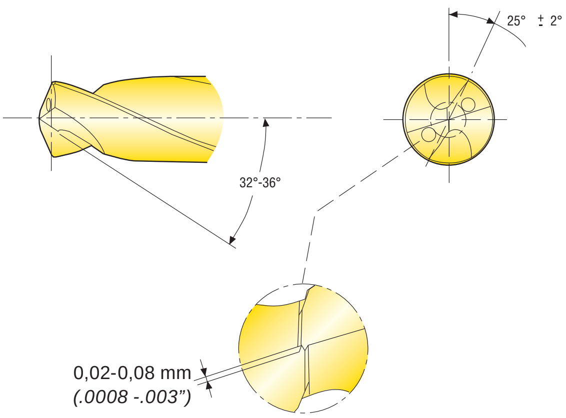


Lip height distance (axial run-out) to be within 0,02 mm *(0.0008")*

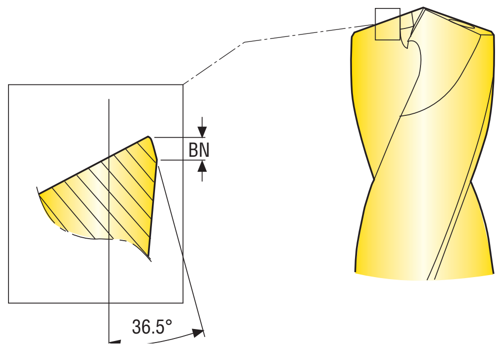
2. Grinding of radius R



3. Web thinning



4. Edge preparation



Drill ∅ DC mm	BN mm	Drill ∅ DC *(inch)*	BN *(inch)*
2-3	0,2	*0.079-0.118*	*0.00787*
3-6	0,025	*0.118-0.236*	*0.00098*
6-10	0,04	*0.236-0.394*	*0.00157*
10-20	0,055	*0.394-0.787*	*0.00216*
20-	0,07	*0.787-*	*0.00275*

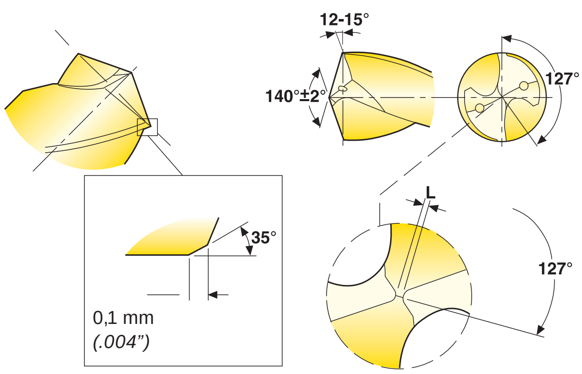
Max. allowed flank wear before regrinding is 0,1-0,3 mm *(0.004-0.012")* measured at the largest point.

Regrinding instructions for -M and -T geometry

Specifications:
Proposed specification of diamond wheels:
Conical clearance: Wheel shape12A2 Grit size D54 (picture 1).
Gashing: Wheel shape 1A1 or 1V1 Grit size D64-D46 (picture 2-3).
Corner chamfer: Wheel shape 1A1 or 12A2 (picture 1).
Edge treatment: grinding K-land or brushing (picture 4).

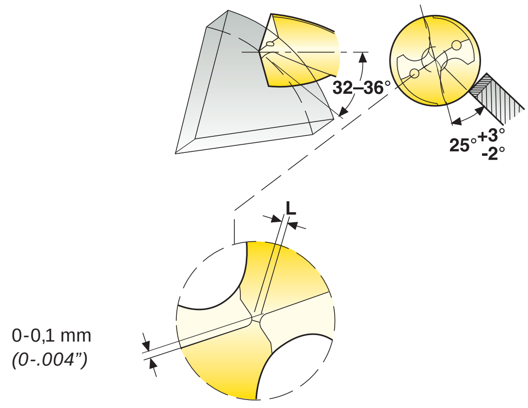
Important:
- The cutting edges must be uniform and have the same size of edge preparation.
- The edge preparation must be applied on the whole length of the cutting edges.

1. Conical flank



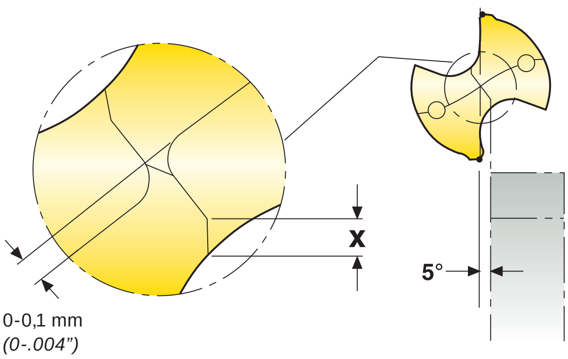
Lip height distance (axial run-out) to be within 0,01 mm *(0.0004")*

2. Web thinning

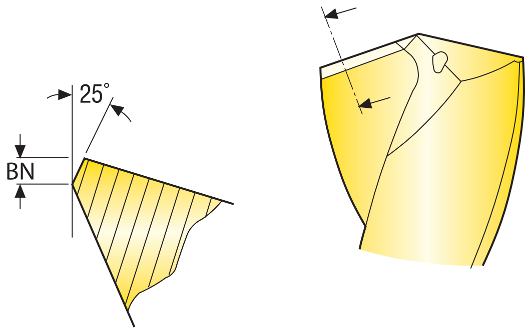


Drill ∅ DC mm	L mm	Drill ∅ DC *(inch)*	L *(inch)*
3-6	0,1-0,2	*0.118-0.236*	*0.004-0.008*
6-10	0,13-0,27	*0.236-0.394*	*0.005-0.011*
10-20	0,2-0,4	*0.394-0.787*	*0.008-0.016*

3. Grinding of flat X



4. Edge preparation



BN = 0,02 mm *(0.008")*

Max. allowed flank wear before regrinding is 0,1-0,3 mm *(0.004-0.012")* measured at the largest point.

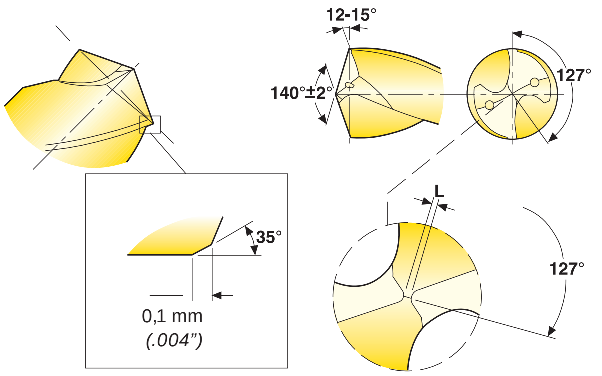
Regrinding instructions for -N geometry

General:
X = 0,08 x drill diameter DC

Specifications:
Proposed specification of diamond wheels:
Conical clearance: Wheel shape 12A2 Grit size D54 (picture 1).
Gashing: Wheel shape 1A1 or 1V1 Grit size D64-D46 (picture 2-3).
Corner chamfer: Wheel shape 1A1 or 12A2 (picture 1).
Edge treatment: grinding K-land or brushing (picture 4).

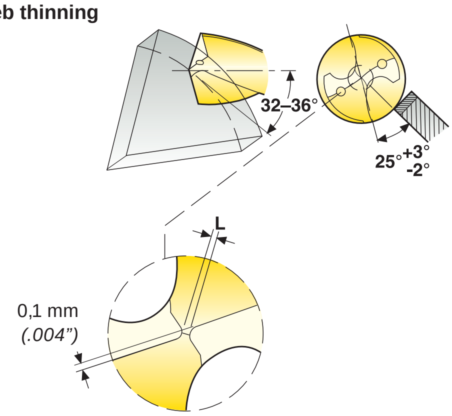
Important:
- The cutting edges must be uniform and have the same size of edge preparation.
- The edge preparation must be applied on the whole length of the cutting edges.

1. **Conical flank**



Lip height distance (axial run-out) to be within 0,01 mm *(0.0004")*

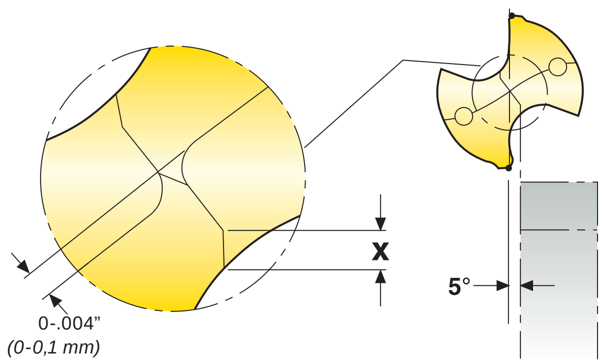
2. **Web thinning**



Chisel edge length L

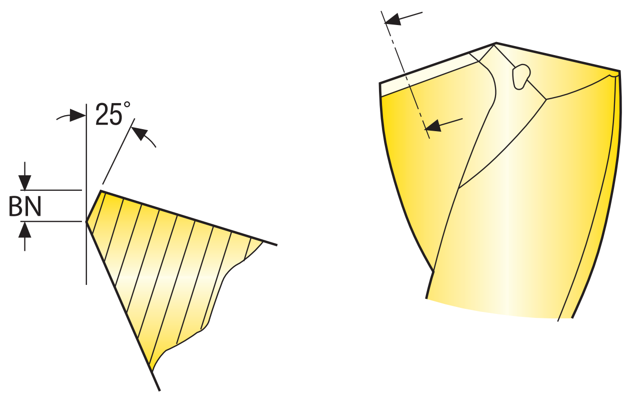
Drill ∅ DC mm	L mm	Drill ∅ DC *(inch)*	L *(inch)*
3-6	0,1-0,2	*0.118-0.236*	*0.004-0.008*
6-10	0,13-0,27	*0.236-0.394*	*0.005-0.011*
10-20	0,2-0,4	*0.394-0.787*	*0.008-0.016*

3. **Grinding of flat X**



X = 0,08 x mm *(0.003" x)* drill diameter DC

4. **Edge preparation**



BN = 0,01-0,02 mm *(0.004-0,008")*

Max. allowed flank wear before regrinding is 0,1-0,3 mm *(0.004-0.012")* measured at the largest point.

SD1103 – Ø 3-20 mm / 0.118-0.787 in

SMG	f										v_c
	Ø3,00 ***Ø 0.118***	Ø4,00 ***Ø 0.157***	Ø6,00 ***Ø 0.236***	Ø8,00 ***Ø 0.315***	Ø10,00 ***Ø 0.394***	Ø12,00 ***Ø 0.472***	Ø14,00 ***Ø 0.551***	Ø16,00 ***Ø 0.630***	Ø18,00 ***Ø 0.709***	Ø20,00 ***Ø 0.787***	
P1	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	105 *345*
P2	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,26 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,36 *0.014*	105 *345*
P3	0,11 *0.0044*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	90 *295*
P4	0,11 *0.0044*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	80 *260*
P5	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	75 *245*
P6	0,11 *0.0044*	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	85 *280*
P7	0,11 *0.0044*	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	80 *260*
P8	0,11 *0.0044*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	75 *245*
P11	0,11 *0.0044*	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	75 *245*
P12	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	46 *150*
M1	0,080 *0.0032*	0,095 *0.0038*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	55 *180*
M2	0,070 *0.0028*	0,085 *0.0034*	0,12 *0.0048*	0,15 *0.0060*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	45 *150*
K1	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,34 *0.013*	0,34 *0.013*	0,36 *0.014*	70 *230*
K2	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	60 *195*
K3	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	50 *165*
K4	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	49 *160*
K5	0,10 *0.0040*	0,11 *0.0044*	0,15 *0.0060*	0,18 *0.0070*	0,20 *0.0080*	0,24 *0.0095*	0,25 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	29 *95*
H3	0,048 *0.0019*	0,055 *0.0022*	0,075 *0.0030*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	24 *80*
H5	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	45 *150*
H7	0,048 *0.0019*	0,055 *0.0022*	0,075 *0.0030*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	24 *80*
H8	0,055 *0.0022*	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	45 *150*
H11	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	60 *195*
H12	0,055 *0.0022*	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	27 *90*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

SD1103A – Ø 3-20 mm / 0.118-0.787 in

SMG	f										v_c
	Ø3,00 *Ø 0.118*	Ø4,00 *Ø 0.157*	Ø6,00 *Ø 0.236*	Ø8,00 *Ø 0.315*	Ø10,00 *Ø 0.394*	Ø12,00 *Ø 0.472*	Ø14,00 *Ø 0.551*	Ø16,00 *Ø 0.630*	Ø18,00 *Ø 0.709*	Ø20,00 *Ø 0.787*	
P1	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	150 *490*
P2	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,26 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,36 *0.014*	145 *475*
P3	0,11 *0.0044*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	125 *410*
P4	0,11 *0.0044*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	110 *360*
P5	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	105 *345*
P6	0,11 *0.0044*	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	120 *395*
P7	0,11 *0.0044*	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	110 *360*
P8	0,11 *0.0044*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	105 *345*
P11	0,11 *0.0044*	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	75 *245*
P12	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	50 *165*
M1	0,080 *0.0032*	0,095 *0.0038*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	80 *260*
M2	0,070 *0.0028*	0,085 *0.0034*	0,12 *0.0048*	0,15 *0.0060*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	65 *215*
M3	0,055 *0.0022*	0,070 *0.0028*	0,095 *0.0038*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	48 *155*
M4	0,050 *0.0020*	0,060 *0.0024*	0,085 *0.0034*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	36 *120*
M5	0,050 *0.0020*	0,060 *0.0024*	0,085 *0.0034*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	30 *100*
K1	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,34 *0.013*	0,34 *0.013*	0,36 *0.014*	95 *310*
K2	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	80 *260*
K3	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	70 *230*
K4	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	65 *215*
K5	0,10 *0.0040*	0,11 *0.0044*	0,15 *0.0060*	0,18 *0.0070*	0,20 *0.0080*	0,24 *0.0095*	0,25 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	39 *130*
N1	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	260 *850*
N2	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	170 *560*
N3	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	110 *360*
N11	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	210 *690*
H3	0,048 *0.0019*	0,055 *0.0022*	0,075 *0.0030*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	34 *110*
H5	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	65 *215*
H7	0,048 *0.0019*	0,055 *0.0022*	0,075 *0.0030*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	34 *110*
H8	0,055 *0.0022*	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	65 *215*
H11	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	80 *260*
H12	0,055 *0.0022*	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	38 *125*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

SD1105A – Ø 3-20 mm / 0.118-0.787 in

SMG	f										v_c
	Ø3,00 ***Ø 0.118***	Ø4,00 ***Ø 0.157***	Ø6,00 ***Ø 0.236***	Ø8,00 ***Ø 0.315***	Ø10,00 ***Ø 0.394***	Ø12,00 ***Ø 0.472***	Ø14,00 ***Ø 0.551***	Ø16,00 ***Ø 0.630***	Ø18,00 ***Ø 0.709***	Ø20,00 ***Ø 0.787***	
P1	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	135 *445*
P2	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,26 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,36 *0.014*	135 *445*
P3	0,11 *0.0044*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	115 *375*
P4	0,11 *0.0044*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	100 *330*
P5	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	95 *310*
P6	0,11 *0.0044*	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	110 *360*
P7	0,11 *0.0044*	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	100 *330*
P8	0,11 *0.0044*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	95 *310*
P11	0,11 *0.0044*	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	65 *215*
P12	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	48 *155*
M1	0,080 *0.0032*	0,095 *0.0038*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	70 *230*
M2	0,070 *0.0028*	0,085 *0.0034*	0,12 *0.0048*	0,15 *0.0060*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	60 *195*
M3	0,055 *0.0022*	0,070 *0.0028*	0,095 *0.0038*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	44 *145*
M4	0,050 *0.0020*	0,060 *0.0024*	0,085 *0.0034*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	33 *110*
M5	0,050 *0.0020*	0,060 *0.0024*	0,085 *0.0034*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	27 *90*
K1	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,34 *0.013*	0,34 *0.013*	0,36 *0.014*	85 *280*
K2	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	75 *245*
K3	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	65 *215*
K4	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	60 *195*
K5	0,10 *0.0040*	0,11 *0.0044*	0,15 *0.0060*	0,18 *0.0070*	0,20 *0.0080*	0,24 *0.0095*	0,25 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	36 *120*
N1	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	240 *790*
N2	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	155 *510*
N3	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	100 *330*
N11	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	190 *620*
H3	0,048 *0.0019*	0,055 *0.0022*	0,075 *0.0030*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	31 *100*
H5	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	60 *195*
H7	0,048 *0.0019*	0,055 *0.0022*	0,075 *0.0030*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	31 *100*
H8	0,055 *0.0022*	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	60 *195*
H11	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	75 *245*
H12	0,055 *0.0022*	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	35 *115*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

SD1108A – Ø 3-20 mm / 0.118-0.787 in

SMG	f										v_c
	Ø3,00 **Ø 0.118**	Ø4,00 **Ø 0.157**	Ø6,00 **Ø 0.236**	Ø8,00 **Ø 0.315**	Ø10,00 **Ø 0.394**	Ø12,00 **Ø 0.472**	Ø14,00 **Ø 0.551**	Ø16,00 **Ø 0.630**	Ø18,00 **Ø 0.709**	Ø20,00 **Ø 0.787**	
P1	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	120 *395*
P2	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,26 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,36 *0.014*	115 *375*
P3	0,11 *0.0044*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	100 *330*
P4	0,11 *0.0044*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	85 *280*
P5	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	85 *280*
P6	0,11 *0.0044*	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	95 *310*
P7	0,11 *0.0044*	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	90 *295*
P8	0,11 *0.0044*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	85 *280*
P11	0,11 *0.0044*	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	60 *195*
P12	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	42 *140*
M1	0,080 *0.0032*	0,095 *0.0038*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	60 *195*
M2	0,070 *0.0028*	0,085 *0.0034*	0,12 *0.0048*	0,15 *0.0060*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	50 *165*
M3	0,055 *0.0022*	0,070 *0.0028*	0,095 *0.0038*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	38 *125*
M4	0,050 *0.0020*	0,060 *0.0024*	0,085 *0.0034*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	29 *95*
M5	0,050 *0.0020*	0,060 *0.0024*	0,085 *0.0034*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	24 *80*
K1	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,34 *0.013*	0,34 *0.013*	0,36 *0.014*	75 *245*
K2	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	65 *215*
K3	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	55 *180*
K4	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	50 *165*
K5	0,10 *0.0040*	0,11 *0.0044*	0,15 *0.0060*	0,18 *0.0070*	0,20 *0.0080*	0,24 *0.0095*	0,25 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	31 *100*
N1	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	205 *670*
N2	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	135 *445*
N3	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	90 *295*
N11	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	165 *540*
H3	0,048 *0.0019*	0,055 *0.0022*	0,075 *0.0030*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	27 *90*
H5	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	50 *165*
H7	0,048 *0.0019*	0,055 *0.0022*	0,075 *0.0030*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	27 *90*
H8	0,055 *0.0022*	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	50 *165*
H11	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	65 *215*
H12	0,055 *0.0022*	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	30 *100*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

When drilling in stainless steel with 8xD and 12xD a pre-drilling operation might be needed

SD1112 – Ø 3-20 mm / 0.118-0.787 in

SMG	f										v_c
	Ø3,00 **Ø 0.118**	Ø4,00 **Ø 0.157**	Ø6,00 **Ø 0.236**	Ø8,00 **Ø 0.315**	Ø10,00 **Ø 0.394**	Ø12,00 **Ø 0.472**	Ø14,00 **Ø 0.551**	Ø16,00 **Ø 0.630**	Ø18,00 **Ø 0.709**	Ø20,00 **Ø 0.787**	
P1	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	100 *330*
P2	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,26 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,36 *0.014*	100 *330*
P3	0,11 *0.0044*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	85 *280*
P4	0,11 *0.0044*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	75 *245*
P5	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	70 *230*
P6	0,11 *0.0044*	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	80 *260*
P7	0,11 *0.0044*	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	75 *245*
P8	0,11 *0.0044*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	70 *230*
P11	0,11 *0.0044*	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	50 *165*
P12	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	36 *120*
M1	0,080 *0.0032*	0,095 *0.0038*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	55 *180*
M2	0,070 *0.0028*	0,085 *0.0034*	0,12 *0.0048*	0,15 *0.0060*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	43 *140*
M3	0,055 *0.0022*	0,070 *0.0028*	0,095 *0.0038*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	33 *110*
M4	0,050 *0.0020*	0,060 *0.0024*	0,085 *0.0034*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	25 *80*
M5	0,050 *0.0020*	0,060 *0.0024*	0,085 *0.0034*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	21 *70*
K1	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,34 *0.013*	0,34 *0.013*	0,36 *0.014*	65 *215*
K2	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	55 *180*
K3	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	47 *155*
K4	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	45 *150*
K5	0,10 *0.0040*	0,11 *0.0044*	0,15 *0.0060*	0,18 *0.0070*	0,20 *0.0080*	0,24 *0.0095*	0,25 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	27 *90*
N1	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	180 *590*
N2	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	115 *375*
N3	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	75 *245*
N11	0,15 *0.0060*	0,17 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	145 *475*
H3	0,048 *0.0019*	0,055 *0.0022*	0,075 *0.0030*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	23 *75*
H5	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	43 *140*
H7	0,048 *0.0019*	0,055 *0.0022*	0,075 *0.0030*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	23 *75*
H8	0,055 *0.0022*	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	43 *140*
H11	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	55 *180*
H12	0,055 *0.0022*	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	26 *85*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

When drilling in stainless steel with 8xD and 12xD a pre-drilling operation might be needed

SD203A – Ø 2-8 mm / 0.079-0.315 in

SMG	Grade	f						v_c
		Ø2,00 *Ø 0.079*	Ø3,00 *Ø 0.118*	Ø4,00 *Ø 0.157*	Ø5,00 *Ø 0.197*	Ø6,00 *Ø 0.236*	Ø8,00 *Ø 0.315*	
P1	P	0,14	0,17	0,20	0,24	0,26	0,32	185
	P	*0.0055*	*0.0065*	*0.0080*	*0.0095*	*0.010*	*0.013*	*610*
P2	P	0,14	0,17	0,20	0,24	0,26	0,32	180
	P	*0.0055*	*0.0065*	*0.0080*	*0.0095*	*0.010*	*0.013*	*590*
P3	P	0,14	0,16	0,19	0,22	0,25	0,32	155
	P	*0.0055*	*0.0065*	*0.0075*	*0.0085*	*0.010*	*0.013*	*510*
P4	P	0,10	0,13	0,15	0,17	0,19	0,24	210
	P	*0.0040*	*0.0050*	*0.0060*	*0.0065*	*0.0075*	*0.0095*	*690*
P5	P	0,10	0,12	0,14	0,17	0,19	0,22	205
	P	*0.0040*	*0.0048*	*0.0055*	*0.0065*	*0.0075*	*0.0085*	*670*
P6	P	0,10	0,12	0,14	0,16	0,19	0,22	230
	P	*0.0040*	*0.0048*	*0.0055*	*0.0065*	*0.0075*	*0.0085*	*750*
P7	P	0,10	0,12	0,14	0,16	0,19	0,22	215
	P	*0.0040*	*0.0048*	*0.0055*	*0.0065*	*0.0075*	*0.0085*	*710*
P8	P	0,11	0,13	0,15	0,17	0,19	0,24	200
	P	*0.0044*	*0.0050*	*0.0060*	*0.0065*	*0.0075*	*0.0095*	*660*
P11	P	0,060	0,075	0,085	0,10	0,11	0,14	105
	P	*0.0024*	*0.0030*	*0.0034*	*0.0040*	*0.0044*	*0.0055*	*345*
P12	P	0,060	0,075	0,085	0,10	0,11	0,14	75
	P	*0.0024*	*0.0030*	*0.0034*	*0.0040*	*0.0044*	*0.0055*	*245*
M1	MS	0,075	0,095	0,11	0,13	0,15	0,19	110
	MS	*0.0030*	*0.0038*	*0.0044*	*0.0050*	*0.0060*	*0.0075*	*360*
M2	MS	0,065	0,085	0,10	0,12	0,14	0,17	90
	MS	*0.0026*	*0.0034*	*0.0040*	*0.0048*	*0.0055*	*0.0065*	*295*
M3	MS	0,095	0,11	0,13	0,15	0,17	0,20	45
	MS	*0.0038*	*0.0044*	*0.0050*	*0.0060*	*0.0065*	*0.0080*	*150*
M4	MS	0,048	0,060	0,070	0,085	0,095	0,12	50
	MS	*0.0019*	*0.0024*	*0.0028*	*0.0034*	*0.0038*	*0.0048*	*165*
M5	MS	0,048	0,060	0,070	0,085	0,095	0,12	42
	MS	*0.0019*	*0.0024*	*0.0028*	*0.0034*	*0.0038*	*0.0048*	*140*
K1	P	0,15	0,18	0,22	0,25	0,28	0,36	175
	P	*0.0060*	*0.0070*	*0.0085*	*0.010*	*0.011*	*0.014*	*570*
K2	P	0,14	0,17	0,20	0,22	0,26	0,32	150
	P	*0.0055*	*0.0065*	*0.0080*	*0.0085*	*0.010*	*0.013*	*490*
K3	P	0,14	0,17	0,20	0,22	0,26	0,32	125
	P	*0.0055*	*0.0065*	*0.0080*	*0.0085*	*0.010*	*0.013*	*410*
K4	P	0,14	0,17	0,20	0,22	0,26	0,32	120
	P	*0.0055*	*0.0065*	*0.0080*	*0.0085*	*0.010*	*0.013*	*395*
K5	P	0,12	0,15	0,18	0,20	0,24	0,28	70
	P	*0.0048*	*0.0060*	*0.0070*	*0.0080*	*0.0095*	*0.011*	*230*
N1	N	0,13	0,16	0,19	0,22	0,26	0,32	350
	N	*0.0050*	*0.0065*	*0.0075*	*0.0085*	*0.010*	*0.013*	*1150*
N2	MS	0,13	0,16	0,19	0,22	0,26	0,32	225
	MS	*0.0050*	*0.0065*	*0.0075*	*0.0085*	*0.010*	*0.013*	*740*
N3	MS	0,13	0,16	0,19	0,22	0,26	0,32	150
	MS	*0.0050*	*0.0065*	*0.0075*	*0.0085*	*0.010*	*0.013*	*490*
N11	MS	0,13	0,16	0,19	0,22	0,26	0,32	285
	MS	*0.0050*	*0.0065*	*0.0075*	*0.0085*	*0.010*	*0.013*	*940*
S1	MS	0,040	0,048	0,055	0,065	0,075	0,095	39
	MS	*0.0016*	*0.0019*	*0.0022*	*0.0026*	*0.0030*	*0.0038*	*130*
S2	MS	0,040	0,048	0,055	0,065	0,075	0,095	28
	MS	*0.0016*	*0.0019*	*0.0022*	*0.0026*	*0.0030*	*0.0038*	*90*
S3	MS	0,040	0,048	0,055	0,065	0,075	0,095	28
	MS	*0.0016*	*0.0019*	*0.0022*	*0.0026*	*0.0030*	*0.0038*	*90*
S11	MS	0,070	0,085	0,095	0,11	0,12	0,14	70
	MS	*0.0028*	*0.0034*	*0.0038*	*0.0044*	*0.0048*	*0.0055*	*230*
S12	MS	0,070	0,085	0,095	0,11	0,12	0,14	55
	MS	*0.0028*	*0.0034*	*0.0038*	*0.0044*	*0.0048*	*0.0055*	*180*
S13	MS	0,065	0,075	0,085	0,095	0,10	0,12	43
	MS	*0.0026*	*0.0030*	*0.0034*	*0.0038*	*0.0040*	*0.0048*	*140*
H3	P	0,055	0,070	0,080	0,090	0,10	0,12	28
	P	*0.0022*	*0.0028*	*0.0032*	*0.0036*	*0.0040*	*0.0048*	*90*
H5	P	0,085	0,10	0,12	0,13	0,15	0,18	55
	P	*0.0034*	*0.0040*	*0.0048*	*0.0050*	*0.0060*	*0.0070*	*180*
H7	P	0,055	0,070	0,080	0,090	0,10	0,12	28
	P	*0.0022*	*0.0028*	*0.0032*	*0.0036*	*0.0040*	*0.0048*	*90*
H8	P	0,065	0,080	0,090	0,10	0,12	0,14	55
	P	*0.0026*	*0.0032*	*0.0036*	*0.0040*	*0.0048*	*0.0055*	*180*
H11	P	0,085	0,10	0,12	0,13	0,15	0,18	65
	P	*0.0034*	*0.0040*	*0.0048*	*0.0050*	*0.0060*	*0.0070*	*215*
H12	P	0,065	0,080	0,090	0,10	0,12	0,14	80
	P	*0.0026*	*0.0032*	*0.0036*	*0.0040*	*0.0048*	*0.0055*	*260*
H21	P	0,065	0,080	0,090	0,10	0,12	0,14	55
	P	*0.0026*	*0.0032*	*0.0036*	*0.0040*	*0.0048*	*0.0055*	*180*

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

SD203A – Ø 10-20 mm / 0.394-0.787 in

SMG	Grade	f						v_c
		Ø10,00 ***Ø 0.394***	Ø12,00 ***Ø 0.472***	Ø14,00 ***Ø 0.551***	Ø16,00 ***Ø 0.630***	Ø18,00 ***Ø 0.709***	Ø20,00 ***Ø 0.787***	
P1	P *P*	0,38 *0.015*	0,44 *0.017*	0,48 *0.019*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	185 *610*
P2	P *P*	0,38 *0.015*	0,44 *0.017*	0,48 *0.019*	0,50 *0.020*	0,55 *0.022*	0,60 *0.024*	180 *590*
P3	P *P*	0,36 *0.014*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,50 *0.020*	0,55 *0.022*	155 *510*
P4	P *P*	0,28 *0.011*	0,30 *0.012*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	210 *690*
P5	P *P*	0,26 *0.010*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	205 *670*
P6	P *P*	0,26 *0.010*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	230 *750*
P7	P *P*	0,26 *0.010*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	215 *710*
P8	P *P*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	200 *660*
P11	P *P*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,24 *0.0095*	105 *345*
P12	P *P*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,24 *0.0095*	75 *245*
M1	MS *MS*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	110 *360*
M2	MS *MS*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	90 *295*
M3	MS *MS*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	45 *150*
M4	MS *MS*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	50 *165*
M5	MS *MS*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	42 *140*
K1	P *P*	0,42 *0.017*	0,48 *0.019*	0,50 *0.020*	0,55 *0.022*	0,60 *0.024*	0,65 *0.026*	175 *570*
K2	P *P*	0,38 *0.015*	0,42 *0.017*	0,48 *0.019*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	150 *490*
K3	P *P*	0,38 *0.015*	0,42 *0.017*	0,48 *0.019*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	125 *410*
K4	P *P*	0,38 *0.015*	0,42 *0.017*	0,48 *0.019*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	120 *395*
K5	P *P*	0,34 *0.013*	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,48 *0.019*	0,50 *0.020*	70 *230*
N1	N *N*	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	350 *1150*
N2	MS *MS*	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	225 *740*
N3	MS *MS*	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	150 *490*
N11	MS *MS*	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	285 *940*
S1	MS *MS*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	39 *130*
S2	MS *MS*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	28 *90*
S3	MS *MS*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	28 *90*
S11	MS *MS*	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	70 *230*
S12	MS *MS*	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	55 *180*
S13	MS *MS*	0,15 *0.0060*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	43 *140*
H3	P *P*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	28 *90*
H5	P *P*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	55 *180*
H7	P *P*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	28 *90*
H8	P *P*	0,16 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,24 *0.0095*	55 *180*
H11	P *P*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	65 *215*
H12	P *P*	0,16 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,24 *0.0095*	80 *260*
H21	P *P*	0,16 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,24 *0.0095*	55 *180*

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

SD205A – Ø 2-8 mm / 0.079-0.315 in

SMG		f						v_c
	Grade	Ø2,00 ***Ø 0.079***	Ø3,00 ***Ø 0.118***	Ø4,00 ***Ø 0.157***	Ø5,00 ***Ø 0.197***	Ø6,00 ***Ø 0.236***	Ø8,00 ***Ø 0.315***	
P1	P	0,14	0,17	0,20	0,24	0,26	0,32	170
	P	*0.0055*	*0.0065*	*0.0080*	*0.0095*	*0.010*	*0.013*	*560*
P2	P	0,14	0,17	0,20	0,24	0,26	0,32	165
	P	*0.0055*	*0.0065*	*0.0080*	*0.0095*	*0.010*	*0.013*	*540*
P3	P	0,14	0,16	0,19	0,22	0,25	0,32	140
	P	*0.0055*	*0.0065*	*0.0075*	*0.0085*	*0.010*	*0.013*	*460*
P4	P	0,10	0,13	0,15	0,17	0,19	0,24	195
	P	*0.0040*	*0.0050*	*0.0060*	*0.0065*	*0.0075*	*0.0095*	*640*
P5	P	0,10	0,12	0,14	0,17	0,19	0,22	185
	P	*0.0040*	*0.0048*	*0.0055*	*0.0065*	*0.0075*	*0.0085*	*610*
P6	P	0,10	0,12	0,14	0,16	0,19	0,22	210
	P	*0.0040*	*0.0048*	*0.0055*	*0.0065*	*0.0075*	*0.0085*	*690*
P7	P	0,10	0,12	0,14	0,16	0,19	0,22	200
	P	*0.0040*	*0.0048*	*0.0055*	*0.0065*	*0.0075*	*0.0085*	*660*
P8	P	0,11	0,13	0,15	0,17	0,19	0,24	185
	P	*0.0044*	*0.0050*	*0.0060*	*0.0065*	*0.0075*	*0.0095*	*610*
P11	P	0,060	0,075	0,085	0,10	0,11	0,14	95
	P	*0.0024*	*0.0030*	*0.0034*	*0.0040*	*0.0044*	*0.0055*	*310*
P12	P	0,060	0,075	0,085	0,10	0,11	0,14	65
	P	*0.0024*	*0.0030*	*0.0034*	*0.0040*	*0.0044*	*0.0055*	*215*
M1	MS	0,075	0,095	0,11	0,13	0,15	0,19	110
	MS	*0.0030*	*0.0038*	*0.0044*	*0.0050*	*0.0060*	*0.0075*	*360*
M2	MS	0,065	0,085	0,10	0,12	0,14	0,17	90
	MS	*0.0026*	*0.0034*	*0.0040*	*0.0048*	*0.0055*	*0.0065*	*295*
M3	MS	0,095	0,11	0,13	0,15	0,17	0,20	45
	MS	*0.0038*	*0.0044*	*0.0050*	*0.0060*	*0.0065*	*0.0080*	*150*
M4	MS	0,048	0,060	0,070	0,085	0,095	0,12	50
	MS	*0.0019*	*0.0024*	*0.0028*	*0.0034*	*0.0038*	*0.0048*	*165*
M5	MS	0,048	0,060	0,070	0,085	0,095	0,12	42
	MS	*0.0019*	*0.0024*	*0.0028*	*0.0034*	*0.0038*	*0.0048*	*140*
K1	P	0,15	0,18	0,22	0,25	0,28	0,36	160
	P	*0.0060*	*0.0070*	*0.0085*	*0.010*	*0.011*	*0.014*	*520*
K2	P	0,14	0,17	0,20	0,22	0,26	0,32	135
	P	*0.0055*	*0.0065*	*0.0080*	*0.0085*	*0.010*	*0.013*	*445*
K3	P	0,14	0,17	0,20	0,22	0,26	0,32	115
	P	*0.0055*	*0.0065*	*0.0080*	*0.0085*	*0.010*	*0.013*	*375*
K4	P	0,14	0,17	0,20	0,22	0,26	0,32	110
	P	*0.0055*	*0.0065*	*0.0080*	*0.0085*	*0.010*	*0.013*	*360*
K5	P	0,12	0,15	0,18	0,20	0,24	0,28	65
	P	*0.0048*	*0.0060*	*0.0070*	*0.0080*	*0.0095*	*0.011*	*215*
N1	N	0,13	0,16	0,19	0,22	0,26	0,32	350
	N	*0.0050*	*0.0065*	*0.0075*	*0.0085*	*0.010*	*0.013*	*1150*
N2	MS	0,13	0,16	0,19	0,22	0,26	0,32	225
	MS	*0.0050*	*0.0065*	*0.0075*	*0.0085*	*0.010*	*0.013*	*740*
N3	MS	0,13	0,16	0,19	0,22	0,26	0,32	150
	MS	*0.0050*	*0.0065*	*0.0075*	*0.0085*	*0.010*	*0.013*	*490*
N11	MS	0,13	0,16	0,19	0,22	0,26	0,32	285
	MS	*0.0050*	*0.0065*	*0.0075*	*0.0085*	*0.010*	*0.013*	*940*
S1	MS	0,040	0,048	0,055	0,065	0,075	0,095	39
	MS	*0.0016*	*0.0019*	*0.0022*	*0.0026*	*0.0030*	*0.0038*	*130*
S2	MS	0,040	0,048	0,055	0,065	0,075	0,095	28
	MS	*0.0016*	*0.0019*	*0.0022*	*0.0026*	*0.0030*	*0.0038*	*90*
S3	MS	0,040	0,048	0,055	0,065	0,075	0,095	28
	MS	*0.0016*	*0.0019*	*0.0022*	*0.0026*	*0.0030*	*0.0038*	*90*
S11	MS	0,070	0,085	0,095	0,11	0,12	0,14	70
	MS	*0.0028*	*0.0034*	*0.0038*	*0.0044*	*0.0048*	*0.0055*	*230*
S12	MS	0,070	0,085	0,095	0,11	0,12	0,14	55
	MS	*0.0028*	*0.0034*	*0.0038*	*0.0044*	*0.0048*	*0.0055*	*180*
S13	MS	0,065	0,075	0,085	0,095	0,10	0,12	43
	MS	*0.0026*	*0.0030*	*0.0034*	*0.0038*	*0.0040*	*0.0048*	*140*
H3	P	0,055	0,070	0,080	0,090	0,10	0,12	26
	P	*0.0022*	*0.0028*	*0.0032*	*0.0036*	*0.0040*	*0.0048*	*85*
H5	P	0,085	0,10	0,12	0,13	0,15	0,18	48
	P	*0.0034*	*0.0040*	*0.0048*	*0.0050*	*0.0060*	*0.0070*	*155*
H7	P	0,055	0,070	0,080	0,090	0,10	0,12	26
	P	*0.0022*	*0.0028*	*0.0032*	*0.0036*	*0.0040*	*0.0048*	*85*
H8	P	0,065	0,080	0,090	0,10	0,12	0,14	48
	P	*0.0026*	*0.0032*	*0.0036*	*0.0040*	*0.0048*	*0.0055*	*155*
H11	P	0,085	0,10	0,12	0,13	0,15	0,18	60
	P	*0.0034*	*0.0040*	*0.0048*	*0.0050*	*0.0060*	*0.0070*	*195*
H12	P	0,065	0,080	0,090	0,10	0,12	0,14	70
	P	*0.0026*	*0.0032*	*0.0036*	*0.0040*	*0.0048*	*0.0055*	*230*
H21	P	0,065	0,080	0,090	0,10	0,12	0,14	48
	P	*0.0026*	*0.0032*	*0.0036*	*0.0040*	*0.0048*	*0.0055*	*155*

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

SD205A – Ø 10-20 mm / 0.394-0.787 in

SMG	Grade	f						v_c
		Ø10,00 *Ø 0.394*	Ø12,00 *Ø 0.472*	Ø14,00 *Ø 0.551*	Ø16,00 *Ø 0.630*	Ø18,00 *Ø 0.709*	Ø20,00 *Ø 0.787*	
P1	P	0,38	0,44	0,48	0,50	0,55	0,55	170
	P	*0.015*	*0.017*	*0.019*	*0.020*	*0.022*	*0.022*	*560*
P2	P	0,38	0,44	0,48	0,50	0,55	0,60	165
	P	*0.015*	*0.017*	*0.019*	*0.020*	*0.022*	*0.024*	*540*
P3	P	0,36	0,42	0,46	0,50	0,50	0,55	140
	P	*0.014*	*0.017*	*0.018*	*0.020*	*0.020*	*0.022*	*460*
P4	P	0,28	0,30	0,34	0,36	0,38	0,40	195
	P	*0.011*	*0.012*	*0.013*	*0.014*	*0.015*	*0.016*	*640*
P5	P	0,26	0,30	0,32	0,34	0,36	0,38	185
	P	*0.010*	*0.012*	*0.013*	*0.013*	*0.014*	*0.015*	*610*
P6	P	0,26	0,30	0,32	0,34	0,36	0,38	210
	P	*0.010*	*0.012*	*0.013*	*0.013*	*0.014*	*0.015*	*690*
P7	P	0,26	0,30	0,32	0,34	0,36	0,38	200
	P	*0.010*	*0.012*	*0.013*	*0.013*	*0.014*	*0.015*	*660*
P8	P	0,28	0,32	0,34	0,36	0,38	0,40	185
	P	*0.011*	*0.013*	*0.013*	*0.014*	*0.015*	*0.016*	*610*
P11	P	0,16	0,18	0,20	0,22	0,24	0,24	95
	P	*0.0065*	*0.0070*	*0.0080*	*0.0085*	*0.0095*	*0.0095*	*310*
M1	MS	0,22	0,25	0,28	0,30	0,30	0,32	110
	MS	*0.0085*	*0.010*	*0.011*	*0.012*	*0.012*	*0.013*	*360*
M2	MS	0,20	0,22	0,25	0,26	0,28	0,30	90
	MS	*0.0080*	*0.0085*	*0.010*	*0.010*	*0.011*	*0.012*	*295*
M3	MS	0,24	0,26	0,28	0,30	0,32	0,34	45
	MS	*0.0095*	*0.010*	*0.011*	*0.012*	*0.013*	*0.013*	*150*
M4	MS	0,14	0,16	0,17	0,19	0,20	0,20	50
	MS	*0.0055*	*0.0065*	*0.0065*	*0.0075*	*0.0080*	*0.0080*	*165*
M5	MS	0,14	0,16	0,17	0,19	0,20	0,20	42
	MS	*0.0055*	*0.0065*	*0.0065*	*0.0075*	*0.0080*	*0.0080*	*140*
K1	P	0,42	0,48	0,50	0,55	0,60	0,65	160
	P	*0.017*	*0.019*	*0.020*	*0.022*	*0.024*	*0.026*	*520*
K2	P	0,38	0,42	0,48	0,50	0,55	0,55	135
	P	*0.015*	*0.017*	*0.019*	*0.020*	*0.022*	*0.022*	*445*
K3	P	0,38	0,42	0,48	0,50	0,55	0,55	115
	P	*0.015*	*0.017*	*0.019*	*0.020*	*0.022*	*0.022*	*375*
K4	P	0,38	0,42	0,48	0,50	0,55	0,55	110
	P	*0.015*	*0.017*	*0.019*	*0.020*	*0.022*	*0.022*	*360*
K5	P	0,34	0,38	0,42	0,46	0,48	0,50	65
	P	*0.013*	*0.015*	*0.017*	*0.018*	*0.019*	*0.020*	*215*
N1	N	0,38	0,42	0,46	0,50	0,55	0,55	350
	N	*0.015*	*0.017*	*0.018*	*0.020*	*0.022*	*0.022*	*1150*
N2	MS	0,38	0,42	0,46	0,50	0,55	0,55	225
	MS	*0.015*	*0.017*	*0.018*	*0.020*	*0.022*	*0.022*	*740*
N3	MS	0,38	0,42	0,46	0,50	0,55	0,55	150
	MS	*0.015*	*0.017*	*0.018*	*0.020*	*0.022*	*0.022*	*490*
N11	MS	0,38	0,42	0,46	0,50	0,55	0,55	285
	MS	*0.015*	*0.017*	*0.018*	*0.020*	*0.022*	*0.022*	*940*
S1	MS	0,11	0,13	0,15	0,16	0,17	0,19	39
	MS	*0.0044*	*0.0050*	*0.0060*	*0.0065*	*0.0065*	*0.0075*	*130*
S2	MS	0,11	0,13	0,15	0,16	0,17	0,19	28
	MS	*0.0044*	*0.0050*	*0.0060*	*0.0065*	*0.0065*	*0.0075*	*90*
S3	MS	0,11	0,13	0,15	0,16	0,17	0,19	28
	MS	*0.0044*	*0.0050*	*0.0060*	*0.0065*	*0.0065*	*0.0075*	*90*
S11	MS	0,17	0,19	0,22	0,24	0,25	0,26	70
	MS	*0.0065*	*0.0075*	*0.0085*	*0.0095*	*0.010*	*0.010*	*230*
S12	MS	0,17	0,19	0,22	0,24	0,25	0,26	55
	MS	*0.0065*	*0.0075*	*0.0085*	*0.0095*	*0.010*	*0.010*	*180*
S13	MS	0,15	0,17	0,19	0,20	0,22	0,22	43
	MS	*0.0060*	*0.0065*	*0.0075*	*0.0080*	*0.0085*	*0.0085*	*140*
H3	P	0,14	0,16	0,18	0,19	0,20	0,20	26
	P	*0.0055*	*0.0065*	*0.0070*	*0.0075*	*0.0080*	*0.0080*	*85*
H5	P	0,22	0,24	0,26	0,28	0,30	0,32	48
	P	*0.0085*	*0.0095*	*0.010*	*0.011*	*0.012*	*0.013*	*155*
H7	P	0,14	0,16	0,18	0,19	0,20	0,20	26
	P	*0.0055*	*0.0065*	*0.0070*	*0.0075*	*0.0080*	*0.0080*	*85*
H8	P	0,16	0,19	0,20	0,22	0,24	0,24	48
	P	*0.0065*	*0.0075*	*0.0080*	*0.0085*	*0.0095*	*0.0095*	*155*
H11	P	0,22	0,24	0,26	0,28	0,30	0,32	60
	P	*0.0085*	*0.0095*	*0.010*	*0.011*	*0.012*	*0.013*	*195*
H12	P	0,16	0,19	0,20	0,22	0,24	0,24	70
	P	*0.0065*	*0.0075*	*0.0080*	*0.0085*	*0.0095*	*0.0095*	*230*
H21	P	0,16	0,19	0,20	0,22	0,24	0,24	48
	P	*0.0065*	*0.0075*	*0.0080*	*0.0085*	*0.0095*	*0.0095*	*155*

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

SD206 – Ø 0,7-2 mm / 0.0276-0.0787 in

SMG	f			v_c
	Ø0,70 ***Ø 0.0276***	Ø1,00 ***Ø 0.0394***	Ø2,00 ***Ø 0,0787***	
P1	0,080 *0.0032*	0,090 *0.0036*	0,11 *0.0044*	140 *460*
P2	0,085 *0.0034*	0,090 *0.0036*	0,12 *0.0048*	140 *460*
P3	0,080 *0.0032*	0,085 *0.0034*	0,11 *0.0044*	120 *395*
P4	0,080 *0.0032*	0,085 *0.0034*	0,11 *0.0044*	105 *345*
P5	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	100 *330*
P6	0,075 *0.0030*	0,080 *0.0032*	0,10 *0.0040*	110 *360*
P7	0,075 *0.0030*	0,080 *0.0032*	0,10 *0.0040*	105 *345*
P8	0,080 *0.0032*	0,085 *0.0034*	0,11 *0.0044*	100 *330*
P11	0,075 *0.0030*	0,080 *0.0032*	0,10 *0.0040*	105 *345*
P12	0,050 *0.0020*	0,055 *0.0022*	0,070 *0.0028*	60 *195*
K1	0,085 *0.0034*	0,090 *0.0036*	0,12 *0.0048*	100 *330*
K2	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	85 *280*
K3	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	75 *245*
K4	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	70 *230*
K5	0,070 *0.0028*	0,075 *0.0030*	0,095 *0.0038*	42 *140*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

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SD206A – Ø 1-2 mm / 0.0394-0.0787 in

SMG	f			v_c
	Ø1,00 ***Ø 0.0394***	Ø1,50 ***Ø 0.0591***	Ø2,00 ***Ø 0.0787***	
P1	0,090 *0.0036*	0,10 *0.0040*	0,11 *0.0044*	175 *570*
P2	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	170 *560*
P3	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	145 *475*
P4	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	130 *425*
P5	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	125 *410*
P6	0,080 *0.0032*	0,095 *0.0038*	0,10 *0.0040*	140 *460*
P7	0,080 *0.0032*	0,095 *0.0038*	0,10 *0.0040*	130 *425*
P8	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	125 *410*
P11	0,080 *0.0032*	0,095 *0.0038*	0,10 *0.0040*	125 *410*
P12	0,055 *0.0022*	0,065 *0.0026*	0,070 *0.0028*	75 *245*
M1	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	95 *310*
M2	0,050 *0.0020*	0,060 *0.0024*	0,070 *0.0028*	75 *245*
M3	0,042 *0.0017*	0,048 *0.0019*	0,055 *0.0022*	60 *195*
M4	0,036 *0.0014*	0,042 *0.0017*	0,048 *0.0019*	43 *140*
M5	0,036 *0.0014*	0,042 *0.0017*	0,048 *0.0019*	36 *120*
K1	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	115 *375*
K2	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	100 *330*
K3	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	85 *280*
K4	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	80 *260*
K5	0,075 *0.0030*	0,090 *0.0036*	0,10 *0.0040*	47 *155*
N2	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	190 *620*
N3	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	125 *410*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

SD207A – Ø 3-20 mm / 0.118-0.787 in

SMG	Grade	f										v_c
		Ø3,00 ***Ø 0.118***	Ø5,00 ***Ø 0.197***	Ø6,00 ***Ø 0.236***	Ø8,00 ***Ø 0.315***	Ø10,00 ***Ø 0.394***	Ø12,00 ***Ø 0.472***	Ø14,00 ***Ø 0.551***	Ø16,00 ***Ø 0.630***	Ø18,00 ***Ø 0.709***	Ø20,00 ***Ø 0.787***	
P1	P	0,17 *0.0065*	0,24 *0.0095*	0,26 *0.010*	0,32 *0.013*	0,38 *0.015*	0,44 *0.017*	0,48 *0.019*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	155 *510*
P2	P	0,17 *0.0065*	0,24 *0.0095*	0,26 *0.010*	0,32 *0.013*	0,38 *0.015*	0,44 *0.017*	0,48 *0.019*	0,50 *0.020*	0,55 *0.022*	0,60 *0.024*	155 *510*
P3	P	0,16 *0.0065*	0,22 *0.0085*	0,25 *0.010*	0,32 *0.013*	0,36 *0.014*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,50 *0.020*	0,55 *0.022*	130 *425*
P4	P	0,13 *0.0050*	0,17 *0.0065*	0,19 *0.0075*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	180 *590*
P5	P	0,12 *0.0048*	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	175 *570*
P6	P	0,12 *0.0048*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	195 *640*
P7	P	0,12 *0.0048*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	185 *610*
P8	P	0,13 *0.0050*	0,17 *0.0065*	0,19 *0.0075*	0,24 *0.0095*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	175 *570*
P11	P	0,075 *0.0030*	0,10 *0.0040*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,24 *0.0095*	90 *295*
M1	P	0,095 *0.0038*	0,13 *0.0050*	0,15 *0.0060*	0,19 *0.0075*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	50 *165*
M2	P	0,085 *0.0034*	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	41 *135*
M3	P	0,065 *0.0026*	0,095 *0.0038*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,24 *0.0095*	31 *100*
M4	P	0,060 *0.0024*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	24 *80*
M5	P	0,060 *0.0024*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	20 *65*
K1	P	0,18 *0.0070*	0,25 *0.010*	0,28 *0.011*	0,36 *0.014*	0,42 *0.017*	0,48 *0.019*	0,50 *0.020*	0,55 *0.022*	0,60 *0.024*	0,65 *0.026*	150 *490*
K2	P	0,17 *0.0065*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	0,38 *0.015*	0,42 *0.017*	0,48 *0.019*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	130 *425*
K3	P	0,17 *0.0065*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	0,38 *0.015*	0,42 *0.017*	0,48 *0.019*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	110 *360*
K4	P	0,17 *0.0065*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	0,38 *0.015*	0,42 *0.017*	0,48 *0.019*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	105 *345*
K5	P	0,15 *0.0060*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,34 *0.013*	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,48 *0.019*	0,50 *0.020*	60 *195*
H3	P	0,070 *0.0028*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	24 *80*
H5	P	0,10 *0.0040*	0,13 *0.0050*	0,15 *0.0060*	0,18 *0.0070*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	45 *150*
H7	P	0,070 *0.0028*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	24 *80*
H8	P	0,080 *0.0032*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,24 *0.0095*	45 *150*
H11	P	0,10 *0.0040*	0,13 *0.0050*	0,15 *0.0060*	0,18 *0.0070*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	60 *195*
H12	P	0,080 *0.0032*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,24 *0.0095*	65 *215*
H21	P	0,080 *0.0032*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,24 *0.0095*	45 *150*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

SD216A – Ø 3-14 mm / 0.118-0.551 in

SMG	Grade	f							v_c
		Ø3,00 **Ø 0.118**	Ø5,00 **Ø 0.197**	Ø6,00 **Ø 0.236**	Ø8,00 **Ø 0.315**	Ø10,00 **Ø 0.394**	Ø12,00 **Ø 0.472**	Ø14,00 **Ø 0.551**	
P1	P	0,13 *0.0050*	0,18 *0.0070*	0,20 *0.0080*	0,25 *0.010*	0,30 *0.012*	0,32 *0.013*	0,36 *0.014*	125 *410*
P2	P	0,14 *0.0055*	0,18 *0.0070*	0,20 *0.0080*	0,26 *0.010*	0,30 *0.012*	0,34 *0.013*	0,36 *0.014*	120 *395*
P3	P	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	105 *345*
P4	P	0,13 *0.0050*	0,17 *0.0065*	0,19 *0.0075*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,34 *0.013*	90 *295*
P5	P	0,12 *0.0048*	0,17 *0.0065*	0,19 *0.0075*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,34 *0.013*	85 *280*
P6	P	0,12 *0.0048*	0,17 *0.0065*	0,19 *0.0075*	0,24 *0.0095*	0,26 *0.010*	0,30 *0.012*	0,32 *0.013*	95 *310*
P7	P	0,12 *0.0048*	0,17 *0.0065*	0,19 *0.0075*	0,24 *0.0095*	0,26 *0.010*	0,30 *0.012*	0,32 *0.013*	90 *295*
P8	P	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	85 *280*
P11	P	0,12 *0.0048*	0,17 *0.0065*	0,19 *0.0075*	0,24 *0.0095*	0,26 *0.010*	0,30 *0.012*	0,32 *0.013*	90 *295*
P12	P	0,085 *0.0034*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	55 *180*
M1	P	0,095 *0.0038*	0,13 *0.0050*	0,15 *0.0060*	0,19 *0.0075*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	65 *215*
M2	P	0,085 *0.0034*	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	55 *180*
M3	P	0,070 *0.0028*	0,095 *0.0038*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	41 *135*
M4	P	0,060 *0.0024*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	31 *100*
M5	P	0,060 *0.0024*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	25 *80*
K1	P	0,15 *0.0060*	0,22 *0.0085*	0,24 *0.0095*	0,30 *0.012*	0,36 *0.014*	0,40 *0.016*	0,44 *0.017*	80 *260*
K2	P	0,14 *0.0055*	0,19 *0.0075*	0,22 *0.0085*	0,28 *0.011*	0,32 *0.013*	0,36 *0.014*	0,40 *0.016*	70 *230*
K3	P	0,14 *0.0055*	0,19 *0.0075*	0,22 *0.0085*	0,28 *0.011*	0,32 *0.013*	0,36 *0.014*	0,40 *0.016*	60 *195*
K4	P	0,14 *0.0055*	0,19 *0.0075*	0,22 *0.0085*	0,28 *0.011*	0,32 *0.013*	0,36 *0.014*	0,40 *0.016*	55 *180*
K5	P	0,12 *0.0048*	0,17 *0.0065*	0,20 *0.0080*	0,25 *0.010*	0,30 *0.012*	0,32 *0.013*	0,36 *0.014*	33 *110*
N2	P	0,16 *0.0065*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	135 *445*
N3	P	0,16 *0.0065*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	90 *295*
H3	P	0,055 *0.0022*	0,075 *0.0030*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	22 *70*
H5	P	0,085 *0.0034*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	40 *130*
H7	P	0,055 *0.0022*	0,075 *0.0030*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	22 *70*
H8	P	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	40 *130*
H11	P	0,085 *0.0034*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	50 *165*
H12	P	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	31 *100*
H21	P	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	40 *130*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

SD230A – Ø 3-12 mm / 0.118-0.472 in

SMG	Grade	f						v_c
		Ø3,00 ***Ø 0.118***	Ø5,00 ***Ø 0.197***	Ø6,00 ***Ø 0.236***	Ø8,00 ***Ø 0.315***	Ø10,00 ***Ø 0.394***	Ø12,00 ***Ø 0.472***	
P1	P	0,13 *0.0050*	0,18 *0.0070*	0,20 *0.0080*	0,25 *0.010*	0,30 *0.012*	0,32 *0.013*	90 *295*
P2	P	0,14 *0.0055*	0,18 *0.0070*	0,20 *0.0080*	0,26 *0.010*	0,30 *0.012*	0,34 *0.013*	90 *295*
P3	P	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,32 *0.013*	75 *245*
P4	P	0,13 *0.0050*	0,17 *0.0065*	0,19 *0.0075*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	70 *230*
P5	P	0,12 *0.0048*	0,17 *0.0065*	0,19 *0.0075*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	65 *215*
P6	P	0,12 *0.0048*	0,17 *0.0065*	0,19 *0.0075*	0,24 *0.0095*	0,26 *0.010*	0,30 *0.012*	75 *245*
P7	P	0,12 *0.0048*	0,17 *0.0065*	0,19 *0.0075*	0,24 *0.0095*	0,26 *0.010*	0,30 *0.012*	70 *230*
P8	P	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,32 *0.013*	65 *215*
P11	P	0,12 *0.0048*	0,17 *0.0065*	0,19 *0.0075*	0,24 *0.0095*	0,26 *0.010*	0,30 *0.012*	65 *215*
P12	P	0,085 *0.0034*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	39 *130*
M1	P	0,095 *0.0038*	0,13 *0.0050*	0,15 *0.0060*	0,19 *0.0075*	0,22 *0.0085*	0,25 *0.010*	50 *165*
M2	P	0,085 *0.0034*	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	40 *130*
M3	P	0,070 *0.0028*	0,095 *0.0038*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	30 *100*
M4	P	0,060 *0.0024*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	23 *75*
M5	P	0,060 *0.0024*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	19 *60*
K1	P	0,15 *0.0060*	0,22 *0.0085*	0,24 *0.0095*	0,30 *0.012*	0,36 *0.014*	0,40 *0.016*	60 *195*
K2	P	0,14 *0.0055*	0,19 *0.0075*	0,22 *0.0085*	0,28 *0.011*	0,32 *0.013*	0,36 *0.014*	50 *165*
K3	P	0,14 *0.0055*	0,19 *0.0075*	0,22 *0.0085*	0,28 *0.011*	0,32 *0.013*	0,36 *0.014*	44 *145*
K4	P	0,14 *0.0055*	0,19 *0.0075*	0,22 *0.0085*	0,28 *0.011*	0,32 *0.013*	0,36 *0.014*	42 *140*
K5	P	0,12 *0.0048*	0,17 *0.0065*	0,20 *0.0080*	0,25 *0.010*	0,30 *0.012*	0,32 *0.013*	25 *80*
N2	P	0,16 *0.0065*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	0,38 *0.015*	0,42 *0.017*	100 *330*
N3	P	0,16 *0.0065*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	0,38 *0.015*	0,42 *0.017*	65 *215*
H3	P	0,055 *0.0022*	0,075 *0.0030*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	16 *50*
H5	P	0,085 *0.0034*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	30 *100*
H7	P	0,055 *0.0022*	0,075 *0.0030*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	16 *50*
H8	P	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	30 *100*
H11	P	0,085 *0.0034*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	39 *130*
H12	P	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	24 *80*
H21	P	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	30 *100*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

Introduction
Drilling
Reaming
Boring
Annex

SD245A – Ø 4-16 mm / 0.157-0.630 in

SMG	f							v_c
	Ø4,00 ***Ø 0.157***	Ø6,00 ***Ø 0.236***	Ø8,00 ***Ø 0.315***	Ø10,00 ***Ø 0.394***	Ø12,00 ***Ø 0.472***	Ø14,00 ***Ø 0.551***	Ø16,00 ***Ø 0.630***	
P1	0,11 *0.0044*	0,15 *0.0060*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,28 *0.011*	0,32 *0.013*	185 *610*
P2	0,11 *0.0044*	0,15 *0.0060*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,30 *0.012*	0,32 *0.013*	180 *590*
P3	0,11 *0.0044*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	155 *510*
P4	0,11 *0.0044*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,30 *0.012*	135 *445*
P5	0,10 *0.0040*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	130 *425*
P6	0,10 *0.0040*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	145 *475*
P7	0,10 *0.0040*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	140 *460*
P8	0,11 *0.0044*	0,14 *0.0055*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	130 *425*
P11	0,10 *0.0040*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	135 *445*
P12	0,070 *0.0028*	0,095 *0.0038*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	80 *260*
M1	0,11 *0.0044*	0,15 *0.0060*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,30 *0.012*	0,32 *0.013*	100 *330*
M2	0,10 *0.0040*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	80 *260*
K1	0,11 *0.0044*	0,15 *0.0060*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,30 *0.012*	0,32 *0.013*	120 *395*
K2	0,10 *0.0040*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	105 *345*
K3	0,10 *0.0040*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	90 *295*
K4	0,10 *0.0040*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	85 *280*
K5	0,095 *0.0038*	0,12 *0.0048*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	50 *165*
N2	0,14 *0.0055*	0,19 *0.0075*	0,24 *0.0095*	0,28 *0.011*	0,34 *0.013*	0,38 *0.015*	0,40 *0.016*	200 *660*
N3	0,14 *0.0055*	0,19 *0.0075*	0,24 *0.0095*	0,28 *0.011*	0,34 *0.013*	0,38 *0.015*	0,40 *0.016*	135 *445*
N11	0,14 *0.0055*	0,19 *0.0075*	0,24 *0.0095*	0,28 *0.011*	0,34 *0.013*	0,38 *0.015*	0,40 *0.016*	255 *840*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

SD265A – Ø 4-16 mm / 0.157-0.630 in

SMG	f							v_c
	Ø4,00 ***Ø 0.157***	Ø6,00 ***Ø 0.236***	Ø8,00 ***Ø 0.315***	Ø10,00 ***Ø 0.394***	Ø12,00 ***Ø 0.472***	Ø14,00 ***Ø 0.551***	Ø16,00 ***Ø 0.630***	
P1	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,34 *0.013*	180 *590*
P2	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,34 *0.013*	175 *570*
P3	0,11 *0.0044*	0,15 *0.0060*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,30 *0.012*	0,32 *0.013*	150 *490*
P4	0,11 *0.0044*	0,15 *0.0060*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,28 *0.011*	0,32 *0.013*	135 *445*
P5	0,11 *0.0044*	0,15 *0.0060*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	130 *425*
P6	0,11 *0.0044*	0,15 *0.0060*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	145 *475*
P7	0,11 *0.0044*	0,15 *0.0060*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	135 *445*
P8	0,11 *0.0044*	0,15 *0.0060*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,30 *0.012*	0,32 *0.013*	130 *425*
P11	0,11 *0.0044*	0,15 *0.0060*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	130 *425*
P12	0,075 *0.0030*	0,10 *0.0040*	0,12 *0.0048*	0,15 *0.0060*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	80 *260*
M1	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,34 *0.013*	100 *330*
M2	0,11 *0.0044*	0,15 *0.0060*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	80 *260*
K1	0,12 *0.0048*	0,16 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,28 *0.011*	0,30 *0.012*	0,34 *0.013*	120 *395*
K2	0,11 *0.0044*	0,15 *0.0060*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	100 *330*
K3	0,11 *0.0044*	0,15 *0.0060*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	85 *280*
K4	0,11 *0.0044*	0,15 *0.0060*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	85 *280*
K5	0,10 *0.0040*	0,13 *0.0050*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	49 *160*
N2	0,15 *0.0060*	0,20 *0.0080*	0,26 *0.010*	0,30 *0.012*	0,36 *0.014*	0,40 *0.016*	0,42 *0.017*	195 *640*
N3	0,15 *0.0060*	0,20 *0.0080*	0,26 *0.010*	0,30 *0.012*	0,36 *0.014*	0,40 *0.016*	0,42 *0.017*	130 *425*
N11	0,15 *0.0060*	0,20 *0.0080*	0,26 *0.010*	0,30 *0.012*	0,36 *0.014*	0,40 *0.016*	0,42 *0.017*	250 *820*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

SD203A -MS Ø 2-8 mm / 0.079-0.315 in

SMG	Grade	f						v_c
		Ø2,00 ***Ø 0.079***	Ø3,00 ***Ø 0.118***	Ø4,00 ***Ø 0.157***	Ø5,00 ***Ø 0.197***	Ø6,00 ***Ø 0.236***	Ø8,00 ***Ø 0.315***	
P11	MS	0,060 *0.0024*	0,080 *0.0032*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	90 *295*
P12	MS	0,060 *0.0024*	0,070 *0.0028*	0,080 *0.0032*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	65 *215*
M1	MS	0,075 *0.0030*	0,095 *0.0038*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,19 *0.0075*	110 *360*
M2	MS	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	90 *295*
M3	MS	0,095 *0.0038*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,17 *0.0065*	0,20 *0.0080*	45 *150*
M4	MS	0,048 *0.0019*	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	50 *165*
M5	MS	0,048 *0.0019*	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	42 *140*
N1	MS	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	345 *1125*
N2	MS	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	225 *740*
N3	MS	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	150 *490*
N11	MS	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	285 *940*
S1	MS	0,040 *0.0016*	0,048 *0.0019*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,095 *0.0038*	39 *130*
S2	MS	0,040 *0.0016*	0,048 *0.0019*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,095 *0.0038*	28 *90*
S3	MS	0,040 *0.0016*	0,048 *0.0019*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,095 *0.0038*	28 *90*
S11	MS	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	70 *230*
S12	MS	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	55 *180*
S13	MS	0,065 *0.0026*	0,075 *0.0030*	0,085 *0.0034*	0,095 *0.0038*	0,10 *0.0040*	0,12 *0.0048*	43 *140*
H3	MS	0,046 *0.0018*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,085 *0.0034*	0,10 *0.0040*	36 *120*
H5	MS	0,070 *0.0028*	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	65 *215*
H7	MS	0,046 *0.0018*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,085 *0.0034*	0,10 *0.0040*	36 *120*
H8	MS	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	65 *215*
H11	MS	0,070 *0.0028*	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	85 *280*
H12	MS	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	80 *260*
H21	MS	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	65 *215*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

SD203A -MS Ø 10-20 mm / 0.394-0.787 in

SMG	Grade	f						v_c
		Ø10,00 *Ø 0.394*	Ø12,00 *Ø 0.472*	Ø14,00 *Ø 0.551*	Ø16,00 *Ø 0.630*	Ø18,00 *Ø 0.709*	Ø20,00 *Ø 0.787*	
P11	MS	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	90 *295*
P12	MS	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,18 *0.0070*	0,18 *0.0070*	0,19 *0.0075*	65 *215*
M1	MS	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	110 *360*
M2	MS	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	90 *295*
M3	MS	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	45 *150*
M4	MS	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	50 *165*
M5	MS	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	42 *140*
N1	MS	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	345 *1125*
N2	MS	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	225 *740*
N3	MS	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	150 *490*
N11	MS	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	285 *940*
S1	MS	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	39 *130*
S2	MS	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	28 *90*
S3	MS	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	28 *90*
S11	MS	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	70 *230*
S12	MS	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	55 *180*
S13	MS	0,15 *0.0060*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	43 *140*
H3	MS	0,12 *0.0048*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	36 *120*
H5	MS	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	65 *215*
H7	MS	0,12 *0.0048*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	36 *120*
H8	MS	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	65 *215*
H11	MS	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	85 *280*
H12	MS	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	80 *260*
H21	MS	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	65 *215*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

SD205A -MS Ø 2-8 mm / 0.079-0.315 in

SMG		f						v_c
	Grade	Ø2,00 *Ø 0.079*	Ø3,00 *Ø 0.118*	Ø4,00 *Ø 0.157*	Ø5,00 *Ø 0.197*	Ø6,00 *Ø 0.236*	Ø8,00 *Ø 0.315*	
P11	MS	0,060 *0.0024*	0,080 *0.0032*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,18 *0.0070*	80 *260*
P12	MS	0,060 *0.0024*	0,070 *0.0028*	0,080 *0.0032*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	60 *195*
M1	MS	0,075 *0.0030*	0,095 *0.0038*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,19 *0.0075*	100 *330*
M2	MS	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	80 *260*
M3	MS	0,095 *0.0038*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,17 *0.0065*	0,20 *0.0080*	40 *130*
M4	MS	0,048 *0.0019*	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	46 *150*
M5	MS	0,048 *0.0019*	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	38 *125*
N1	MS	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	310 *1025*
N2	MS	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	200 *660*
N3	MS	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	135 *445*
N11	MS	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	255 *840*
S1	MS	0,040 *0.0016*	0,048 *0.0019*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,095 *0.0038*	35 *115*
S2	MS	0,040 *0.0016*	0,048 *0.0019*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,095 *0.0038*	25 *80*
S3	MS	0,040 *0.0016*	0,048 *0.0019*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,095 *0.0038*	25 *80*
S11	MS	0,020 *0.00080*	0,030 *0.0012*	0,040 *0.0016*	0,050 *0.0020*	0,060 *0.0024*	0,080 *0.0032*	45 *150*
S12	MS	0,020 *0.00080*	0,030 *0.0012*	0,040 *0.0016*	0,050 *0.0020*	0,060 *0.0024*	0,080 *0.0032*	35 *115*
S13	MS	0,017 *0.00068*	0,026 *0.0010*	0,035 *0.0014*	0,044 *0.0018*	0,050 *0.0020*	0.070 *0.0028*	27 *90*
H3	MS	0,046 *0.0018*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,085 *0.0034*	0,10 *0.0040*	33 *110*
H5	MS	0,070 *0.0028*	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	60 *195*
H7	MS	0,046 *0.0018*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,085 *0.0034*	0,10 *0.0040*	33 *110*
H8	MS	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	60 *195*
H11	MS	0,070 *0.0028*	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	75 *245*
H12	MS	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	70 *230*
H21	MS	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	60 *195*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

SD205A -MS Ø 10-20 mm / 0.394-0.787 in

SMG	Grade	f						v_c
		Ø10,00 **Ø 0.394**	Ø12,00 **Ø 0.472**	Ø14,00 **Ø 0.551**	Ø16,00 **Ø 0.630**	Ø18,00 **Ø 0.709**	Ø20,00 **Ø 0.787**	
P11	MS	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	80 *260*
P12	MS	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,18 *0.0070*	0,18 *0.0070*	0,19 *0.0075*	60 *195*
M1	MS	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	100 *330*
M2	MS	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	80 *260*
M3	MS	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	40 *130*
M4	MS	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	46 *150*
M5	MS	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	38 *125*
N1	MS	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	310 *1025*
N2	MS	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	200 *660*
N3	MS	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	135 *445*
N11	MS	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	255 *840*
S1	MS	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	35 *115*
S2	MS	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	25 *80*
S3	MS	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	25 *80*
S11	MS	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	45 *150*
S12	MS	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	35 *115*
S13	MS	0,085 *0.0034*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0070*	27 *90*
H3	MS	0,12 *0.0048*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	33 *110*
H5	MS	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	60 *195*
H7	MS	0,12 *0.0048*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	33 *110*
H8	MS	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	60 *195*
H11	MS	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	75 *245*
H12	MS	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	70 *230*
H21	MS	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	60 *195*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

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SD203A – Ø 2-8 mm / 0.079-0.315 in

SMG	Grade	f						v_c
		Ø2,00 ***Ø 0.079***	Ø3,00 ***Ø 0.118***	Ø4,00 ***Ø 0.157***	Ø5,00 ***Ø 0.197***	Ø6,00 ***Ø 0.236***	Ø8,00 ***Ø 0.315***	
P11	M *M*	0,060 *0.0024*	0,075 *0.0030*	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	0,14 *0.0055*	150 *490*
P12	M *M*	0,060 *0.0024*	0,075 *0.0030*	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	0,14 *0.0055*	90 *295*
M1	M *M*	0,075 *0.0030*	0,095 *0.0038*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,19 *0.0075*	110 *360*
M2	M *M*	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	90 *295*
M3	M *M*	0,055 *0.0022*	0,065 *0.0026*	0,080 *0.0032*	0,095 *0.0038*	0,11 *0.0044*	0,14 *0.0055*	70 *230*
M4	M *M*	0,048 *0.0019*	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	50 *165*
M5	M *M*	0,048 *0.0019*	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	42 *140*
N1	M *M*	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	345 *1125*
N2	M *M*	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	225 *740*
N3	M *M*	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	150 *490*
N11	M *M*	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	285 *940*
S1	M *M*	0,040 *0.0016*	0,048 *0.0019*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,095 *0.0038*	39 *130*
S2	M *M*	0,040 *0.0016*	0,048 *0.0019*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,095 *0.0038*	28 *90*
S3	M *M*	0,040 *0.0016*	0,048 *0.0019*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,095 *0.0038*	28 *90*
S11	M *M*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	70 *230*
S12	M *M*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	55 *180*
S13	M *M*	0,065 *0.0026*	0,075 *0.0030*	0,085 *0.0034*	0,095 *0.0038*	0,10 *0.0040*	0,12 *0.0048*	43 *140*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

When drilling in stainless steel with 8xD and 12xD a pre-drilling operation might be needed

SD203A – Ø 10-20 mm / 0.394-0.787 in

SMG	Grade	f						v_c
		Ø10,00 **Ø 0.394**	Ø12,00 **Ø 0.472**	Ø14,00 **Ø 0.551**	Ø16,00 **Ø 0.630**	Ø18,00 **Ø 0.709**	Ø20,00 **Ø 0.787**	
P11	M	0,16	0,18	0,20	0,22	0,24	0,24	150
	M	*0.0065*	*0.0070*	*0.0080*	*0.0085*	*0.0095*	*0.0095*	*490*
P12	M	0,16	0,18	0,20	0,22	0,24	0,24	90
	M	*0.0065*	*0.0070*	*0.0080*	*0.0085*	*0.0095*	*0.0095*	*295*
M1	M	0,22	0,25	0,28	0,30	0,30	0,32	110
	M	*0.0085*	*0.010*	*0.011*	*0.012*	*0.012*	*0.013*	*360*
M2	M	0,20	0,22	0,25	0,26	0,28	0,30	90
	M	*0.0080*	*0.0085*	*0.010*	*0.010*	*0.011*	*0.012*	*295*
M3	M	0,16	0,18	0,20	0,22	0,22	0,24	70
	M	*0.0065*	*0.0070*	*0.0080*	*0.0085*	*0.0085*	*0.0095*	*230*
M4	M	0,14	0,16	0,17	0,19	0,20	0,20	50
	M	*0.0055*	*0.0065*	*0.0065*	*0.0075*	*0.0080*	*0.0080*	*165*
M5	M	0,14	0,16	0,17	0,19	0,20	0,20	42
	M	*0.0055*	*0.0065*	*0.0065*	*0.0075*	*0.0080*	*0.0080*	*140*
N1	M	0,38	0,42	0,46	0,50	0,55	0,55	345
	M	*0.015*	*0.017*	*0.018*	*0.020*	*0.022*	*0.022*	*1125*
N2	M	0,38	0,42	0,46	0,50	0,55	0,55	225
	M	*0.015*	*0.017*	*0.018*	*0.020*	*0.022*	*0.022*	*740*
N3	M	0,38	0,42	0,46	0,50	0,55	0,55	150
	M	*0.015*	*0.017*	*0.018*	*0.020*	*0.022*	*0.022*	*490*
N11	M	0,38	0,42	0,46	0,50	0,55	0,55	285
	M	*0.015*	*0.017*	*0.018*	*0.020*	*0.022*	*0.022*	*940*
S1	M	0,11	0,13	0,15	0,16	0,17	0,19	39
	M	*0.0044*	*0.0050*	*0.0060*	*0.0065*	*0.0065*	*0.0075*	*130*
S2	M	0,11	0,13	0,15	0,16	0,17	0,19	28
	M	*0.0044*	*0.0050*	*0.0060*	*0.0065*	*0.0065*	*0.0075*	*90*
S3	M	0,11	0,13	0,15	0,16	0,17	0,19	28
	M	*0.0044*	*0.0050*	*0.0060*	*0.0065*	*0.0065*	*0.0075*	*90*
S11	M	0,17	0,19	0,22	0,24	0,25	0,26	70
	M	*0.0065*	*0.0075*	*0.0085*	*0.0095*	*0.010*	*0.010*	*230*
S12	M	0,17	0,19	0,22	0,24	0,25	0,26	55
	M	*0.0065*	*0.0075*	*0.0085*	*0.0095*	*0.010*	*0.010*	*180*
S13	M	0,15	0,17	0,19	0,20	0,22	0,22	43
	M	*0.0060*	*0.0065*	*0.0075*	*0.0080*	*0.0085*	*0.0085*	*140*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

When drilling in stainless steel with 8xD and 12xD a pre-drilling operation might be needed

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SD205A – Ø 2-8 mm / 0.079-0.315 in

SMG	Grade	f						v_c
		Ø2,00 **Ø 0.079**	Ø3,00 **Ø 0.118**	Ø4,00 **Ø 0.157**	Ø5,00 **Ø 0.197**	Ø6,00 **Ø 0.236**	Ø8,00 **Ø 0.315**	
P11	M *M*	0,060 *0.0024*	0,075 *0.0030*	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	0,14 *0.0055*	150 *490*
P12	M *M*	0,060 *0.0024*	0,075 *0.0030*	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	0,14 *0.0055*	90 *295*
M1	M *M*	0,075 *0.0030*	0,095 *0.0038*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,19 *0.0075*	110 *360*
M2	M *M*	0,065 *0.0026*	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	90 *295*
M3	M *M*	0,055 *0.0022*	0,065 *0.0026*	0,080 *0.0032*	0,095 *0.0038*	0,11 *0.0044*	0,14 *0.0055*	70 *230*
M4	M *M*	0,048 *0.0019*	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	50 *165*
M5	M *M*	0,048 *0.0019*	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	42 *140*
N1	M *M*	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	345 *1125*
N2	M *M*	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	225 *740*
N3	M *M*	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	150 *490*
N11	M *M*	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,32 *0.013*	285 *940*
S1	M *M*	0,040 *0.0016*	0,048 *0.0019*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,095 *0.0038*	39 *130*
S2	M *M*	0,040 *0.0016*	0,048 *0.0019*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,095 *0.0038*	28 *90*
S3	M *M*	0,040 *0.0016*	0,048 *0.0019*	0,055 *0.0022*	0,065 *0.0026*	0,075 *0.0030*	0,095 *0.0038*	28 *90*
S11	M *M*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	70 *230*
S12	M *M*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	55 *180*
S13	M *M*	0,065 *0.0026*	0,075 *0.0030*	0,085 *0.0034*	0,095 *0.0038*	0,10 *0.0040*	0,12 *0.0048*	43 *140*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

When drilling in stainless steel with 8xD and 12xD a pre-drilling operation might be needed

SD205A – Ø 10-20 mm / 0.394-0.787 in

SMG	Grade	f						v_c
		Ø10,00 ***Ø 0.394***	Ø12,00 ***Ø 0.472***	Ø14,00 ***Ø 0.551***	Ø16,00 ***Ø 0.630***	Ø18,00 ***Ø 0.709***	Ø20,00 ***Ø 0.787***	
P11	M *M*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,24 *0.0095*	150 *490*
P12	M *M*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,24 *0.0095*	90 *295*
M1	M *M*	0,22 *0.0085*	0,25 *0.010*	0,28 *0.011*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	110 *360*
M2	M *M*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	90 *295*
M3	M *M*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,24 *0.0095*	70 *230*
M4	M *M*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	50 *165*
M5	M *M*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	42 *140*
N1	M *M*	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	345 *1125*
N2	M *M*	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	225 *740*
N3	M *M*	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	150 *490*
N11	M *M*	0,38 *0.015*	0,42 *0.017*	0,46 *0.018*	0,50 *0.020*	0,55 *0.022*	0,55 *0.022*	285 *940*
S1	M *M*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	39 *130*
S2	M *M*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	28 *90*
S3	M *M*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	28 *90*
S11	M *M*	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	70 *230*
S12	M *M*	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	55 *180*
S13	M *M*	0,15 *0.0060*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	43 *140*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

SD205A-C1 – Ø 3-13 mm / 0.118-0.512 in

SMG	Grade	f						v_c
		Ø3,00 *Ø 0.118*	Ø5,00 *Ø 0.197*	Ø7,00 *Ø 0.276*	Ø9,00 *Ø 0.354*	Ø11,00 *Ø 0.433*	Ø13,00 *Ø 0.512*	
TS2	C1	0,060 *0.0024*	0,060 *0.0024*	0,065 *0.0026*	0,070 *0.0028*	0,075 *0.0030*	0,080 *0.0032*	65 *215*
TS3	C1	0,060 *0.0024*	0,060 *0.0024*	0,065 *0.0026*	0,070 *0.0028*	0,075 *0.0030*	0,080 *0.0032*	50 *165*
TP2	C1	0,060 *0.0024*	0,060 *0.0024*	0,065 *0.0026*	0,070 *0.0028*	0,075 *0.0030*	0,080 *0.0032*	65 *215*
TP3	C1	0,060 *0.0024*	0,060 *0.0024*	0,065 *0.0026*	0,070 *0.0028*	0,075 *0.0030*	0,080 *0.0032*	50 *165*

SD205A-C2 – Ø 3-13 mm / 0.118-0.512 in

SMG	Grade	f						v_c
		Ø3,00 *Ø 0.118*	Ø5,00 *Ø 0.197*	Ø7,00 *Ø 0.276*	Ø9,00 *Ø 0.354*	Ø11,00 *Ø 0.433*	Ø13,00 *Ø 0.512*	
N1	C2	0,095 *0.0038*	0,10 *0.0040*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	80 *260*
N2	C2	0,095 *0.0038*	0,10 *0.0040*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	50 *165*
N3	C2	0,095 *0.0038*	0,10 *0.0040*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	33 *110*
S11	C2	0,055 *0.0022*	0,065 *0.0026*	0,080 *0.0032*	0,090 *0.0036*	0,10 *0.0040*	0,11 *0.0044*	50 *165*
S12	C2	0,055 *0.0022*	0,065 *0.0026*	0,080 *0.0032*	0,090 *0.0036*	0,10 *0.0040*	0,11 *0.0044*	40 *130*
S13	C2	0,048 *0.0019*	0,060 *0.0024*	0,070 *0.0028*	0,080 *0.0032*	0,090 *0.0036*	0,10 *0.0040*	31 *100*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values
Cutting data depends on exiting material. N1-N3 and S11-S13 used for stack drilling application
N1-N3 = Alu
S11-S13 = Ti
TS/TP = Composite

SD203-CX1 – Ø 3-9 mm / 0.118-0.354 in

SMG	Grade	f Ø3,00 *Ø 0.118*	Ø5,00 *Ø 0.197*	Ø7,00 *Ø 0.276*	Ø9,00 *Ø 0.354*	v_c
TS2	CX1	0,075 *0.0030*	0,085 *0.0034*	0,090 *0.0036*	0,10 *0.0040*	150 *490*
TS3	CX1	0,075 *0.0030*	0,085 *0.0034*	0,090 *0.0036*	0,10 *0.0040*	120 *395*
TP2	CX1	0,075 *0.0030*	0,085 *0.0034*	0,090 *0.0036*	0,10 *0.0040*	150 *490*
TP3	CX1	0,075 *0.0030*	0,085 *0.0034*	0,090 *0.0036*	0,10 *0.0040*	120 *395*

SD203A-CX2 – Ø 3-9 mm / 0.118-0.354 in

SMG	Grade	f Ø3,00 *Ø 0.118*	Ø5,00 *Ø 0.197*	Ø7,00 *Ø 0.276*	Ø9,00 *Ø 0.354*	v_c
N1	CX2	0,048 *0.0019*	0,050 *0.0020*	0,055 *0.0022*	0,060 *0.0024*	185 *610*
N2	CX2	0,048 *0.0019*	0,050 *0.0020*	0,055 *0.0022*	0,060 *0.0024*	120 *395*
N3	CX2	0,048 *0.0019*	0,050 *0.0020*	0,055 *0.0022*	0,060 *0.0024*	80 *260*
S11	CX2	0,019 *0.00075*	0,020 *0.00080*	0,024 *0.00095*	0,025 *0.0010*	16 *50*
S12	CX2	0,019 *0.00075*	0,020 *0.00080*	0,024 *0.00095*	0,025 *0.0010*	12 *39*
S13	CX2	0,017 *0.00065*	0,018 *0.00070*	0,020 *0.00080*	0,022 *0.00085*	9 *30*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values
Cutting data depends on exiting material. N1-N3 and S11-S13 used for stack drilling application
N1-N3 = Alu
S11-S13 = Ti
TS/TP = Composite

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SD205-CX31 – Ø 4-8 mm / 0.157-0.315 in

SMG	Grade	f					v_c
		Ø4,00 **Ø 0.157**	Ø5,00 **Ø 0.197**	Ø6,00 **Ø 0.236**	Ø7,00 **Ø 0.276**	Ø8,00 **Ø 0.315**	
N1	CX31	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,12 *0.0048*	155 *510*
N2	CX31	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,12 *0.0048*	100 *330*
N3	CX31	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,12 *0.0048*	65 *215*
S11	CX31	0,040 *0.0016*	0,048 *0.0019*	0,055 *0.0022*	0,065 *0.0026*	0,070 *0.0028*	16 *50*
S12	CX31	0,040 *0.0016*	0,048 *0.0019*	0,055 *0.0022*	0,065 *0.0026*	0,070 *0.0028*	12 *39*
S13	CX31	0,034 *0.0013*	0,042 *0.0017*	0,048 *0.0019*	0,055 *0.0022*	0,065 *0.0026*	9 *30*
TS2	CX31	0,080 *0.0032*	0,085 *0.0034*	0,090 *0.0036*	0,090 *0.0036*	0,095 *0.0038*	125 *410*
TS3	CX31	0,080 *0.0032*	0,085 *0.0034*	0,090 *0.0036*	0,090 *0.0036*	0,095 *0.0038*	100 *330*
TP2	CX31	0,080 *0.0032*	0,085 *0.0034*	0,090 *0.0036*	0,090 *0.0036*	0,095 *0.0038*	125 *410*
TP3	CX31	0,080 *0.0032*	0,085 *0.0034*	0,090 *0.0036*	0,090 *0.0036*	0,095 *0.0038*	100 *330*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values
Cutting data depends on exiting material. N1-N3 and S11-S13 used for stack drilling application
N1-N3 = Alu
S11-S13 = Ti
TS/TP = Composite

SD22 & SD26 – Ø 0,1-0,3 mm / 0.0039-0.0118 in

SMG	f			v_c
	Ø0,10 ***Ø 0.0039***	Ø0,20 ***Ø 0.0079***	Ø0,30 ***Ø 0.0118***	
P1	0,0011 *0.000044*	0,0017 *0.000065*	0,0024 *0.000095*	11 *36*
P2	0,0011 *0.000044*	0,0017 *0.000065*	0,0024 *0.000095*	11 *36*
P3	0,0010 *0.000040*	0,0016 *0.000065*	0,0022 *0.000085*	10 *33*
P4	0,0010 *0.000040*	0,0016 *0.000065*	0,0022 *0.000085*	8 *26*
P5	0,0010 *0.000040*	0,0016 *0.000065*	0,0022 *0.000085*	8 *26*
P6	0,0010 *0.000040*	0,0016 *0.000065*	0,0022 *0.000085*	9 *30*
P7	0,0010 *0.000040*	0,0016 *0.000065*	0,0022 *0.000085*	8 *26*
P8	0,0010 *0.000040*	0,0016 *0.000065*	0,0022 *0.000085*	8 *26*
P11	0,0010 *0.000040*	0,0016 *0.000065*	0,0022 *0.000085*	8 *26*
P12	0,00070 *0.000028*	0,0011 *0.000044*	0,0015 *0.000060*	5 *16*
M1	0,0011 *0.000044*	0,0017 *0.000065*	0,0024 *0.000095*	2 *7*
M2	0,0010 *0.000040*	0,0016 *0.000065*	0,0022 *0.000085*	2 *7*
K1	0,0011 *0.000044*	0,0017 *0.000065*	0,0024 *0.000095*	6 *20*
K2	0,0010 *0.000040*	0,0016 *0.000065*	0,0022 *0.000085*	5 *16*
K3	0,0010 *0.000040*	0,0016 *0.000065*	0,0022 *0.000085*	4 *13*
K4	0,0010 *0.000040*	0,0016 *0.000065*	0,0022 *0.000085*	4 *13*
K5	0,00090 *0.000036*	0,0014 *0.000055*	0,0019 *0.000075*	3 *10*
N2	0,0014 *0.000055*	0,0022 *0.000085*	0,0030 *0.00012*	15 *49*
N3	0,0014 *0.000055*	0,0022 *0.000085*	0,0030 *0.00012*	10 *33*
S11	0,00080 *0.000032*	0,0013 *0.000050*	0,0017 *0.000065*	4 *13*
S12	0,00080 *0.000032*	0,0013 *0.000050*	0,0017 *0.000065*	3 *10*

SMG = Seco material group
f = mm/rev
v_c= m/min
All cutting data are start values

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SD22 & SD26 – Ø 0,4-0,5 mm / 0.0157-0.0197 in

SMG	f		v_c
	Ø0,40 ***Ø 0.0157***	Ø0,50 ***Ø 0.0197***	
P1	0,0030 *0.00012*	0,0036 *0.00014*	14 *46*
P2	0,0030 *0.00012*	0,0036 *0.00014*	14 *46*
P3	0,0028 *0.00011*	0,0034 *0.00013*	12 *39*
P4	0,0028 *0.00011*	0,0034 *0.00013*	10 *33*
P5	0,0028 *0.00011*	0,0034 *0.00013*	10 *33*
P6	0,0028 *0.00011*	0,0032 *0.00013*	11 *36*
P7	0,0028 *0.00011*	0,0032 *0.00013*	11 *36*
P8	0,0028 *0.00011*	0,0034 *0.00013*	10 *33*
P11	0,0028 *0.00011*	0,0032 *0.00013*	10 *33*
P12	0,0019 *0.000075*	0,0022 *0.000085*	6 *20*
M1	0,0030 *0.00012*	0,0036 *0.00014*	5 *16*
M2	0,0028 *0.00011*	0,0034 *0.00013*	4 *13*
K1	0,0030 *0.00012*	0,0036 *0.00014*	10 *33*
K2	0,0028 *0.00011*	0,0034 *0.00013*	9 *30*
K3	0,0028 *0.00011*	0,0034 *0.00013*	7 *23*
K4	0,0028 *0.00011*	0,0034 *0.00013*	7 *23*
K5	0,0025 *0.00010*	0,0030 *0.00012*	4 *13*
N2	0,0038 *0.00015*	0,0046 *0.00018*	30 *100*
N3	0,0038 *0.00015*	0,0046 *0.00018*	20 *65*
S11	0,0022 *0.000085*	0,0026 *0.00010*	8 *26*
S12	0,0022 *0.000085*	0,0026 *0.00010*	6 *20*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

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SD22 & SD26 – Ø 0,6-0,8 mm / 0.0236-0.0315 in

SMG	f			v_c
	Ø0,60 ***Ø 0.0236***	Ø0,70 ***Ø 0.0276***	Ø0,80 ***Ø 0.0315***	
P1	0,0042 *0.00017*	0,0048 *0.00019*	0,0055 *0.00022*	28 *90*
P2	0,0042 *0.00017*	0,0050 *0.00020*	0,0055 *0.00022*	28 *90*
P3	0,0040 *0.00016*	0,0046 *0.00018*	0,0055 *0.00022*	24 *80*
P4	0,0040 *0.00016*	0,0046 *0.00018*	0,0050 *0.00020*	21 *70*
P5	0,0038 *0.00015*	0,0044 *0.00017*	0,0050 *0.00020*	20 *65*
P6	0,0038 *0.00015*	0,0044 *0.00017*	0,0050 *0.00020*	22 *70*
P7	0,0038 *0.00015*	0,0044 *0.00017*	0,0050 *0.00020*	21 *70*
P8	0,0040 *0.00016*	0,0046 *0.00018*	0,0055 *0.00022*	20 *65*
P11	0,0038 *0.00015*	0,0044 *0.00017*	0,0050 *0.00020*	21 *70*
P12	0,0026 *0.00010*	0,0030 *0.00012*	0,0034 *0.00013*	12 *39*
M1	0,0042 *0.00017*	0,0050 *0.00020*	0,0055 *0.00022*	9 *30*
M2	0,0038 *0.00015*	0,0044 *0.00017*	0,0050 *0.00020*	7 *23*
K1	0,0042 *0.00017*	0,0050 *0.00020*	0,0055 *0.00022*	15 *49*
K2	0,0038 *0.00015*	0,0044 *0.00017*	0,0050 *0.00020*	13 *43*
K3	0,0038 *0.00015*	0,0044 *0.00017*	0,0050 *0.00020*	11 *36*
K4	0,0038 *0.00015*	0,0044 *0.00017*	0,0050 *0.00020*	10 *33*
K5	0,0036 *0.00014*	0,0040 *0.00016*	0,0046 *0.00018*	6 *20*
N2	0,0055 *0.00022*	0,0065 *0.00026*	0,0070 *0.00028*	60 *195*
N3	0,0055 *0.00022*	0,0065 *0.00026*	0,0070 *0.00028*	40 *130*
S11	0,0032 *0.00013*	0,0036 *0.00014*	0,0040 *0.00016*	13 *43*
S12	0,0032 *0.00013*	0,0036 *0.00014*	0,0040 *0.00016*	10 *33*

SMG = Seco material group
f = mm/rev
v_c= m/min
All cutting data are start values

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SD22 & SD26 – Ø 0,9-1,1 mm / 0.0354-0.0433 in

SMG	f			v_c
	Ø0,90 *Ø 0.0354*	Ø1,00 *Ø 0.0394*	Ø1,10 *Ø 0.0433*	
P1	0,0060 *0.00024*	0,0065 *0.00026*	0,0075 *0.00030*	50 *165*
P2	0,0060 *0.00024*	0,0070 *0.00028*	0,0075 *0.00030*	48 *155*
P3	0,0060 *0.00024*	0,0065 *0.00026*	0,0070 *0.00028*	42 *140*
P4	0,0055 *0.00022*	0,0065 *0.00026*	0,0070 *0.00028*	37 *120*
P5	0,0055 *0.00022*	0,0060 *0.00024*	0,0070 *0.00028*	35 *115*
P6	0,0055 *0.00022*	0,0060 *0.00024*	0,0065 *0.00026*	39 *130*
P7	0,0055 *0.00022*	0,0060 *0.00024*	0,0065 *0.00026*	37 *120*
P8	0,0060 *0.00024*	0,0065 *0.00026*	0,0070 *0.00028*	35 *115*
P11	0,0055 *0.00022*	0,0060 *0.00024*	0,0065 *0.00026*	36 *120*
P12	0,0038 *0.00015*	0,0042 *0.00017*	0,0046 *0.00018*	21 *70*
M1	0,0060 *0.00024*	0,0070 *0.00028*	0,0075 *0.00030*	12 *39*
M2	0,0055 *0.00022*	0,0060 *0.00024*	0,0070 *0.00028*	10 *33*
K1	0,0060 *0.00024*	0,0070 *0.00028*	0,0075 *0.00030*	20 *65*
K2	0,0055 *0.00022*	0,0060 *0.00024*	0,0070 *0.00028*	17 *55*
K3	0,0055 *0.00022*	0,0060 *0.00024*	0,0070 *0.00028*	15 *49*
K4	0,0055 *0.00022*	0,0060 *0.00024*	0,0070 *0.00028*	14 *46*
K5	0,0050 *0.00020*	0,0055 *0.00022*	0,0060 *0.00024*	8 *26*
N2	0,0080 *0.00032*	0,0085 *0.00034*	0,0095 *0.00038*	80 *260*
N3	0,0080 *0.00032*	0,0085 *0.00034*	0,0095 *0.00038*	55 *180*
S11	0,0046 *0.00018*	0,0050 *0.00020*	0,0055 *0.00022*	19 *60*
S12	0,0046 *0.00018*	0,0050 *0.00020*	0,0055 *0.00022*	15 *49*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

SD22 & SD26 – Ø 1,2-2,0 mm / 0.0472-0.0787 in

SMG	f					v_c
	Ø1,20 ***Ø 0.0472***	Ø1,40 ***Ø 0.0551***	Ø1,60 ***Ø 0.0630***	Ø1,80 ***Ø 0.0709***	Ø2,00 ***Ø 0.0787***	
P1	0,0080 *0.00032*	0,0090 *0.00036*	0,010 *0.00040*	0,012 *0.00048*	0,013 *0.00050*	70 *230*
P2	0,0080 *0.00032*	0,0095 *0.00038*	0,011 *0.00044*	0,012 *0.00048*	0,013 *0.00050*	70 *230*
P3	0,0075 *0.00030*	0,0090 *0.00036*	0,010 *0.00040*	0,011 *0.00044*	0,012 *0.00048*	60 *195*
P4	0,0075 *0.00030*	0,0085 *0.00034*	0,010 *0.00040*	0,011 *0.00044*	0,012 *0.00048*	50 *165*
P5	0,0075 *0.00030*	0,0085 *0.00034*	0,0095 *0.00038*	0,011 *0.00044*	0,012 *0.00048*	50 *165*
P6	0,0075 *0.00030*	0,0085 *0.00034*	0,0095 *0.00038*	0,011 *0.00044*	0,012 *0.00048*	55 *180*
P7	0,0075 *0.00030*	0,0085 *0.00034*	0,0095 *0.00038*	0,011 *0.00044*	0,012 *0.00048*	55 *180*
P8	0,0075 *0.00030*	0,0090 *0.00036*	0,010 *0.00040*	0,011 *0.00044*	0,012 *0.00048*	50 *165*
P11	0,0075 *0.00030*	0,0085 *0.00034*	0,0095 *0.00038*	0,011 *0.00044*	0,012 *0.00048*	50 *165*
P12	0,0050 *0.00020*	0,0060 *0.00024*	0,0065 *0.00026*	0,0075 *0.00030*	0,0080 *0.00032*	30 *100*
M1	0,0080 *0.00032*	0,0095 *0.00038*	0,011 *0.00044*	0,012 *0.00048*	0,013 *0.00050*	15 *49*
M2	0,0075 *0.00030*	0,0085 *0.00034*	0,0095 *0.00038*	0,011 *0.00044*	0,012 *0.00048*	12 *39*
K1	0,0080 *0.00032*	0,0095 *0.00038*	0,011 *0.00044*	0,012 *0.00048*	0,013 *0.00050*	35 *115*
K2	0,0075 *0.00030*	0,0085 *0.00034*	0,0095 *0.00038*	0,011 *0.00044*	0,012 *0.00048*	30 *100*
K3	0,0075 *0.00030*	0,0085 *0.00034*	0,0095 *0.00038*	0,011 *0.00044*	0,012 *0.00048*	26 *85*
K4	0,0075 *0.00030*	0,0085 *0.00034*	0,0095 *0.00038*	0,011 *0.00044*	0,012 *0.00048*	25 *80*
K5	0,0065 *0.00026*	0,0075 *0.00030*	0,0085 *0.00034*	0,010 *0.00040*	0,011 *0.00044*	15 *49*
N2	0,010 *0.00040*	0,012 *0.00048*	0,014 *0.00055*	0,015 *0.00060*	0,017 *0.00065*	100 *330*
N3	0,010 *0.00040*	0,012 *0.00048*	0,014 *0.00055*	0,015 *0.00060*	0,017 *0.00065*	65 *215*
S11	0,0060 *0.00024*	0,0070 *0.00028*	0,0075 *0.00030*	0,0085 *0.00034*	0,0095 *0.00038*	26 *85*
S12	0,0060 *0.00024*	0,0070 *0.00028*	0,0075 *0.00030*	0,0085 *0.00034*	0,0095 *0.00038*	20 *65*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

Seco Crownloc®

Seco Crownloc® is a range of exchangeable tip drills designed to offer high quality holes at a lower cost. Matching the quality of high precision drills, Crownloc uses replaceable crowns to eliminate the need for and cost of regrinding.

- Double coolant holes through the crown permit a high volume of coolant to reach the cutting edges.
- Crownloc® is available in a large range of optimized tip geometries for different applications and workpiece materials.

Range overview

Crownloc®	∅ Range	Drill depth	Drill ∅ tolerance	Hole tolerance (1)	Surface finish (2)
SD101  Page(s) 180	12,00-25,99 mm *0.472-1.023"*	~ 1,5 x D	k7	**IT 10**	R_a 1-3 µm R_a 39-118 µin
SD103  Page(s) 182	9,52-25,99 mm *(0.375-1.023")*	~ 3 x D	k7	**IT 10**	R_a 1-3 µm R_a 39-118 µin
SD105  Page(s) 184	10,00-25,99 mm *(0.394-1.023")*	~ 5 x D	k7	**IT 10**	R_a 1-3 µm R_a 39-118 µin
SD107  Page(s) 186	12,00-25,99 mm *(0.472-1.023")*	~ 7 x D	k7	**IT 10**	R_a 1-4 µm R_a 39-157 µin
Chamfer module  Page(s) 193	12.00-19,99mm *(0.1472-0.787")*	–	–	**–**	–

1) Variations can occur depending on the material and the cutting data used.
2) Drill depth, cutting data, coolant pressure and material can cause deterioration of the surface finish.

Code key

Code key crowns

Drill diameter

SD100 - 14.00 - P

Type of geometry
P = Steel
M = Stainless Steel
K = Cast iron

Code key drill bodies

Metric

Type of drill
SD101: 1,5 x D
SD103: 3 x D
SD105: 5 x D
SD107: 7 x D

Min/max
Crown diameter

SD103 - 14.00/14.99 - 50 - 16 - R 7

Drilling depth

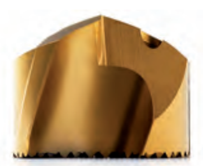
Shank diameter

Right hand rotation

Type of shank
1. Cylindrical
7. ISO 9766

Inch

50 - 0750 - R 7

Geometries		
P-geometry **- Universal geometry, first choice for drilling in steel** 	**M-geometry** **- For stainless steels and high temp alloys** 	**K-geometry** **- First choice for drilling in cast iron** 

Mounting instructions

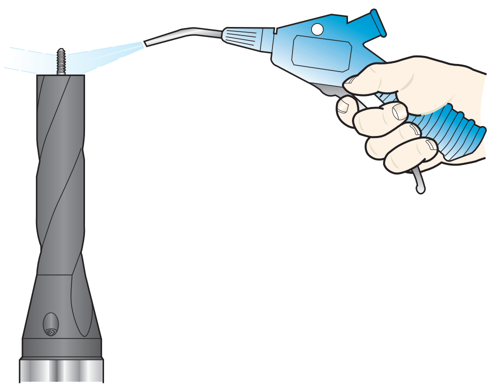
1. Clean the locking interface of the drill body carefully to remove any chips or debris.
2. Make sure that the pull rod is fully extended.
3. Mount new crown onto the pull rod and turn it until it reaches the bottom of the thread.

Turn the crown slightly counterclockwise (backwards) until the locking interfaces fit.
Push the crown towards the body into the right position while turning the clamping screw.
Make sure the interfaces fit.
Tighten the clamping screw firmly using the torque key.

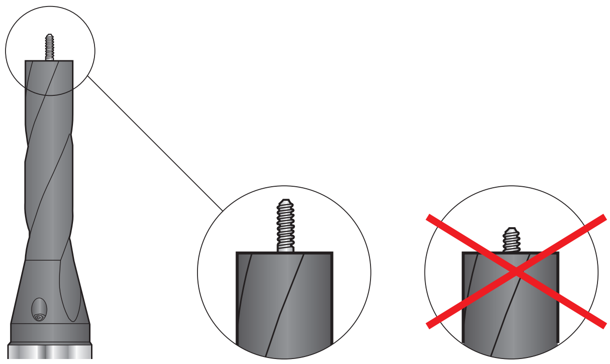
Stability
The stability of the applicationis important in obtaining the best tool life and hole accuracy. Check the condition of the machine spindle, fixture and fixturing of the component to secure maximum stability and rigidity. Unstable conditions can cause tool breakages.

Rotating
Total Indicated Run-out (TIR) should not exceed 0,06 mm *(0.002")* in a rotating application. Measure the run-out when the drill is mounted in the spindle.

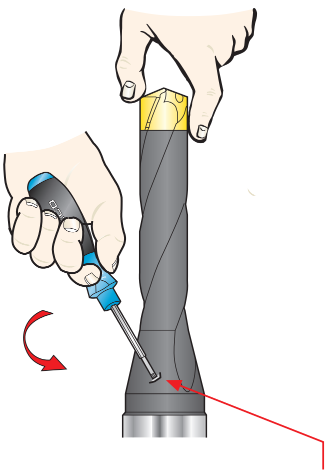
1.



2.

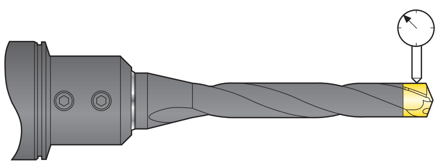


3.



Drill ∅ DC mm	Drill ∅ DC *(inch)*	M_c N_m	M_c in/lbs
10,00-13,99	*0.394-0.551*	0,8-1,0	7-9
14,00-16,99	*0.551-0.669*	1,8-2,2	16-19.5
17,00-25,99	*0.669-1.023*	2,5-3,0	22-26

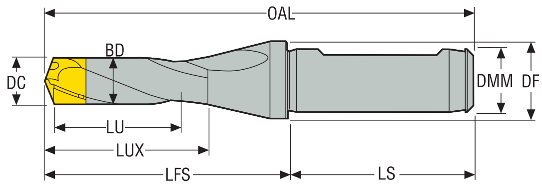
Stationary
The distance between the drill point and the rotating center of the workpiece should not exceed 0.03 mm *(0.001")* radially in a stationary application.



Recommended tool holders
For best results, use holders type DIN 1835 B/DIN 6535 HB (Weldon). For further information see Tooling catalog.

SD101

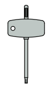
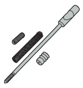
Drilling depth ~ 1,5 x D – metric shank



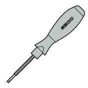
- SD101 -R7 shank
- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 196

Designation	Item number	DC	LU	OAL	LUX	BD	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm	mm
SD101-12.00/12.49-20-16R7	02445790	12,0-12,49	20,0	96,0	32,0	11,5	48,0	48,0	16,0	20,0
SD101-12.50/12.99-20-16R7	02445791	12,5-12,99	20,0	96,4	32,4	12,0	48,4	48,0	16,0	20,0
SD101-13.00/13.99-20-16R7	02445792	13,0-13,99	20,0	96,8	32,8	12,5	48,8	48,0	16,0	20,0
SD101-14.00/14.99-25-16R7	02445793	14,0-14,99	25,0	102,4	38,4	13,5	54,4	48,0	16,0	20,0
SD101-15.00/15.99-25-16R7	02445794	15,0-15,99	25,0	103,3	39,3	14,5	55,3	48,0	16,0	20,0
SD101-16.00/16.99-25-16R7	02445795	16,0-16,99	25,0	104,0	40,0	15,5	56,0	48,0	16,0	20,0
SD101-17.00/17.99-30-20R7	02445796	17,0-17,99	30,0	110,7	44,7	16,5	60,7	50,0	20,0	25,0
SD101-18.00/18.99-30-20R7	02445797	18,0-18,99	30,0	111,7	45,7	17,5	61,7	50,0	20,0	25,0
SD101-19.00/19.99-30-20R7	02445798	19,0-19,99	30,0	112,5	46,5	18,5	62,5	50,0	20,0	25,0
SD101-20.00/21.99-40-25R7	02462832	20,0-21,99	40,0	129,5	53,5	19,5	73,5	56,0	25,0	31,0
SD101-22.00/23.99-40-25R7	02462833	22,0-23,99	40,0	129,5	53,5	21,5	73,5	56,0	25,0	31,0
SD101-24.00/25.99-40-25R7	02462834	24,0-25,99	40,0	129,5	53,5	23,5	73,5	56,0	25,0	31,0

Spare parts

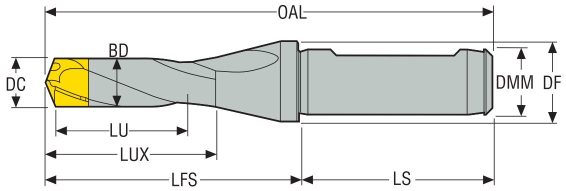
For drill dia. (mm)	Locking key	Locking screw	Spare parts set
			
12,00-13,99	H1.5-2D	MP6SS3X12	SD101-SP-5.0
14,00-16,99	H2.0-2D	MP6SS4X12	SD101-SP-6.0
17,00-19,99	H2.5-2D	MP6SS5X16	SD101-SP-7.0
20,00-25,99	H2.5-2D	MP6SS5X16	SD101-SP-8.0

Accessories

Replacement blade	Torque key
	
H00-1.5	H00-1509
H00-2.0	H00-2020
H00-2.5	H00-2530
H00-2.5	H00-2535

SD101 -R7 shank

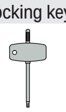
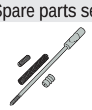
Drilling depth ~ 1,5 x D – Inch shank



- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- Internal coolant
- For cutting data see page(s) 196

Designation	Item number	Max drilling depth	Drill dia. DC	DF	OAL	LC	LFS	LUX	DMM
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
SD101-12.00/12.49-20-0625R7	02445817	0.787	0.472-0.492	0.787	3.780	1.890	1.890	1.260	0.625
SD101-12.50/12.99-20-0625R7	02445818	0.787	0.492-0.511	0.787	3.795	1.890	1.906	1.276	0.625
SD101-13.00/13.99-20-0625R7	02445819	0.787	0.512-0.551	0.787	3.811	1.890	1.921	1.291	0.625
SD101-14.00/14.99-25-0625R7	02445820	0.984	0.551-0.590	0.787	4.031	1.890	2.142	1.512	0.625
SD101-15.00/15.99-25-0625R7	02445821	0.984	0.591-0.630	0.787	4.067	1.890	2.177	1.547	0.625
SD101-16.00/16.99-25-0625R7	02445822	0.984	0.630-0.669	0.787	4.094	1.890	2.205	1.575	0.625
SD101-17.00/17.99-30-0750R7	02445823	1.181	0.669-0.708	0.984	4.358	1.969	2.390	1.760	0.750
SD101-18.00/18.99-30-0750R7	02445824	1.181	0.709-0.748	0.984	4.398	1.969	2.429	1.799	0.750
SD101-19.00/19.99-30-0750R7	02445825	1.181	0.748-0.787	0.984	4.429	1.969	2.461	1.831	0.750
SD101-20.00/21.99-40-1000R7	02466044	1.575	0.787-0.866	1.220	5.098	2.205	2.894	2.106	1.000
SD101-22.00/23.99-40-1000R7	02466045	1.575	0.866-0.944	1.220	5.098	2.205	2.894	2.106	1.000
SD101-24.00/25.99-40-1000R7	02466046	1.575	0.945-1.023	1.220	5.098	2.205	2.894	2.106	1.000

Spare parts

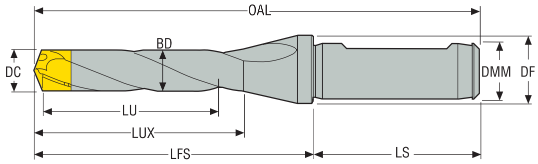
For drill dia. (inch)	Locking key	Locking screw	Spare parts set
			
0.472-0.551	H1.5-2D	MP6SS3X12	SD101-SP-5.0
0.551-0.669	H2.0-2D	MP6SS4X12	SD101-SP-6.0
0.669-0.787	H2.5-2D	MP6SS5X16	SD101-SP-7.0
0.787-1.023	H2.5-2D	MP6SS5X16	SD101-SP-8.0

Accessories

Replacement blade	Torque key
	
H00-1.5	H00-1509
H00-2.0	H00-2020
H00-2.5	H00-2530
H00-2.5	H00-2535

SD103

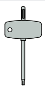
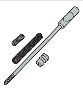
Drilling depth ~ 3 x D – Metric shank



- SD103 -R7 shank
- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 197

Designation	Item number	DC	LU	OAL	LUX	BD	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm	mm
SD103-10.00/10.49-30-16R7	02462815	10,0-10,49	30,0	101,0	38,0	9,5	53,0	48,0	16,0	20,0
SD103-10.50/10.99-30-16R7	02462818	10,5-10,99	30,0	101,0	38,0	10,0	53,0	48,0	16,0	20,0
SD103-11.00/11.49-30-16R7	02462819	11,0-11,49	30,0	101,0	38,0	10,5	53,0	48,0	16,0	20,0
SD103-11.50/11.99-30-16R7	02462820	11,5-11,99	30,0	101,0	38,0	11,0	53,0	48,0	16,0	20,0
SD103-12.00/12.49-40-16R7	02445799	12,0-12,49	40,0	116,0	48,0	11,5	68,0	48,0	16,0	20,0
SD103-12.50/12.99-40-16R7	02445800	12,5-12,99	40,0	116,4	48,4	12,0	68,4	48,0	16,0	20,0
SD103-13.00/13.99-40-16R7	02445801	13,0-13,99	40,0	116,8	48,8	12,5	68,8	48,0	16,0	20,0
SD103-14.00/14.99-50-16R7	02445802	14,0-14,99	50,0	127,4	59,4	13,5	79,4	48,0	16,0	20,0
SD103-15.00/15.99-50-16R7	02445803	15,0-15,99	50,0	128,3	60,3	14,5	80,3	48,0	16,0	20,0
SD103-16.00/16.99-50-16R7	02445804	16,0-16,99	50,0	129,0	61,0	15,5	81,0	48,0	16,0	20,0
SD103-17.00/17.99-60-20R7	02445805	17,0-17,99	60,0	140,7	67,7	16,5	90,7	50,0	20,0	25,0
SD103-18.00/18.99-60-20R7	02445806	18,0-18,99	60,0	141,7	68,7	17,5	91,7	50,0	20,0	25,0
SD103-19.00/19.99-60-20R7	02445807	19,0-19,99	60,0	142,5	69,5	18,5	92,7	50,0	20,0	25,0
SD103-20.00/21.99-75-25R7	02462836	20,0-21,99	75,0	164,5	88,5	19,5	108,5	56,0	25,0	31,0
SD103-22.00/23.99-75-25R7	02462838	22,0-23,99	75,0	164,5	88,5	21,5	108,5	56,0	25,0	31,0
SD103-24.00/25.99-75-25R7	02462841	24,0-25,99	75,0	164,5	88,5	23,5	108,5	56,0	25,0	31,0

Spare parts

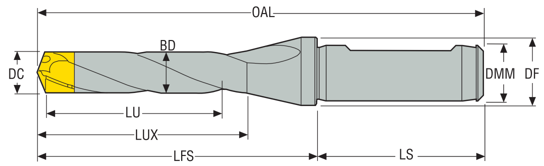
For drill dia. (mm)	Locking key	Locking screw	Spare parts set
			
10,00-11,99	H1.5-2D	MP6SS3X12	SD103-SP-4.0
12,00-13,99	H1.5-2D	MP6SS3X12	SD103-SP-5.0
14,00-16,99	H2.0-2D	MP6SS4X12	SD103-SP-6.0
17,00-19,99	H2.5-2D	MP6SS5X16	SD103-SP-7.0
20,00-25,99	H2.5-2D	MP6SS5X16	SD103-SP-8.0

Accessories

Replacement blade	Torque key
	
H00-1.5	H00-1509
H00-1.5	H00-1509
H00-2.0	H00-2020
H00-2.5	H00-2530
H00-2.5	H00-2535

SD103 -R7 shank

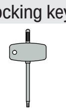
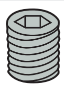
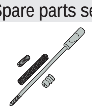
Drilling depth ~ 3 x D – Inch shank



- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- Internal coolant
- For cutting data see page(s) 197

Designation	Item number	Max drilling depth	Drill dia. DC	DF	OAL	LC	LFS	LUX	DMM
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
SD103-09.50/09.99-30-0625R7	02673828	1.181	0.374-0.393	0.787	4.252	1.969	2.323	1.835	0.625
SD103-10.00/10.49-30-0625R7	02466011	1.181	0.394-0.413	0.787	3.976	1.890	2.087	1.496	0.625
SD103-10.50/10.99-30-0625R7	02466012	1.181	0.413-0.433	0.787	3.976	1.890	2.087	1.496	0.625
SD103-11.00/11.49-30-0625R7	02466013	1.181	0.433-0.452	0.787	3.976	1.890	2.087	1.496	0.625
SD103-11.50/11.99-30-0625R7	02466014	1.181	0.453-0.472	0.787	3.976	1.890	2.087	1.496	0.625
SD103-12.00/12.49-40-0625R7	02445826	1.575	0.472-0.492	0.787	4.567	1.890	2.677	1.890	0.625
SD103-12.50/12.99-40-0625R7	02445827	1.575	0.492-0.511	0.787	4.583	1.890	2.693	1.906	0.625
SD103-13.00/13.99-40-0625R7	02445828	1.575	0.512-0.551	0.787	4.598	1.890	2.709	1.921	0.625
SD103-14.00/14.99-50-0625R7	02445829	1.969	0.551-0.590	0.787	5.016	1.890	3.126	2.339	0.625
SD103-15.00/15.99-50-0625R7	02445830	1.969	0.591-0.630	0.787	5.051	1.890	3.161	2.374	0.625
SD103-16.00/16.99-50-0625R7	02445831	1.969	0.630-0.669	0.787	5.079	1.890	3.189	2.402	0.625
SD103-17.00/17.99-60-0750R7	02445832	2.362	0.669-0.708	0.984	5.539	1.969	3.571	2.665	0.750
SD103-18.00/18.99-60-0750R7	02445833	2.362	0.709-0.748	0.984	5.579	1.969	3.610	2.705	0.750
SD103-19.00/19.99-60-0750R7	02445834	2.362	0.748-0.787	0.984	5.610	1.969	3.650	2.736	0.750
SD103-20.00/21.99-75-1000R7	02466049	2.953	0.787-0.866	1.220	6.476	2.205	4.272	3.484	1.000
SD103-22.00/23.99-75-1000R7	02466050	2.953	0.866-0.944	1.220	6.476	2.205	4.272	3.484	1.000
SD103-24.00/25.99-75-1000R7	02466051	2.953	0.945-1.023	1.220	6.476	2.205	4.272	3.484	1.000

Spare parts

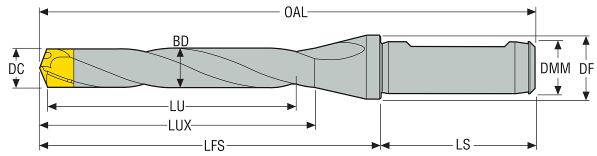
For drill dia. (inch)	Locking key	Locking screw	Spare parts set
			
0.374-0.393	H1.5-2D	MP6SS3X12	–
0.394-0.472	H1.5-2D	MP6SS3X12	SD103-SP-4.0
0.472-0.551	H1.5-2D	MP6SS3X12	SD103-SP-5.0
0.551-0.669	H2.0-2D	MP6SS4X12	SD103-SP-6.0
0.669-0.787	H2.5-2D	MP6SS5X16	SD103-SP-7.0
0.787-1.023	H2.5-2D	MP6SS5X16	SD103-SP-8.0

Accessories

Replacement blade	Torque key
	
H00-1.5	H00-1509
H00-1.5	H00-1509
H00-1.5	H00-1509
H00-2.0	H00-2020
H00-2.5	H00-2530
H00-2.5	H00-2535

SD105

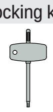
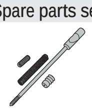
Drilling depth ~ 5 x D – Metric shank



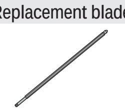
- SD105 -R7 shank
- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 198

Designation	Item number	DC	LU	OAL	LUX	BD	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm	mm
SD105-10.00/10.49-50-16R7	02462822	10,0-10,49	50,0	120,1	57,3	9,5	72,1	48,0	16,0	20,0
SD105-10.50/10.99-50-16R7	02462824	10,5-10,99	50,0	120,6	57,3	10,0	72,6	48,0	16,0	20,0
SD105-11.00/11.49-50-16R7	02462828	11,0-11,49	50,0	120,9	57,3	10,5	72,9	48,0	16,0	20,0
SD105-11.50/11.99-50-16R7	02462830	11,5-11,99	50,0	121,3	58,3	11,0	73,3	48,0	16,0	20,0
SD105-12.00/12.49-65-16R7	02445808	12,0-12,49	65,0	141,0	73,0	11,5	93,0	48,0	16,0	20,0
SD105-12.50/12.99-65-16R7	02445809	12,5-12,99	65,0	141,4	73,4	12,0	93,4	48,0	16,0	20,0
SD105-13.00/13.99-65-16R7	02445810	13,0-13,99	65,0	141,8	73,8	12,5	93,8	48,0	16,0	20,0
SD105-14.00/14.99-80-16R7	02445811	14,0-14,99	80,0	157,4	89,4	13,5	109,4	48,0	16,0	20,0
SD105-15.00/15.99-80-16R7	02445812	15,0-15,99	80,0	158,3	90,3	14,5	110,3	48,0	16,0	20,0
SD105-16.00/16.99-80-16R7	02445813	16,0-16,99	80,0	159,0	91,0	15,5	111,0	48,0	16,0	20,0
SD105-17.00/17.99-95-20R7	02445814	17,0-17,99	95,0	176,7	107,7	16,5	126,7	50,0	20,0	25,0
SD105-18.00/18.99-95-20R7	02445815	18,0-18,99	95,0	177,7	108,7	17,5	127,7	50,0	20,0	25,0
SD105-19.00/19.99-95-20R7	02445816	19,0-19,99	95,0	178,5	109,5	18,5	128,5	50,0	20,0	25,0
SD105-20.00/21.99-125-25R7	02462843	20,0-21,99	125,0	214,5	138,5	19,5	158,5	56,0	25,0	31,0
SD105-22.00/23.99-125-25R7	02462848	22,0-23,99	125,0	214,5	138,5	21,5	158,5	56,0	25,0	31,0
SD105-24.00/25.99-125-25R7	02462850	24,0-25,99	125,0	214,5	138,5	23,5	158,5	56,0	25,0	31,0

Spare parts

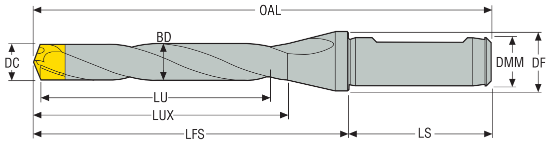
For drill dia. (mm)	Locking key	Locking screw	Spare parts set
			
10,00-11,99	H1.5-2D	MP6SS3X12	SD105-SP-4.0
12,00-13,99	H1.5-2D	MP6SS3X12	SD105-SP-5.0
14,00-16,99	H2.0-2D	MP6SS4X12	SD105-SP-6.0
17,00-19,99	H2.5-2D	MP6SS5X16	SD105-SP-7.0
20,00-25,99	H2.5-2D	MP6SS5X16	SD105-SP-8.0

Accessories

Replacement blade	Torque key
	
H00-1.5	H00-1509
H00-1.5	H00-1509
H00-2.0	H00-2020
H00-2.5	H00-2530
H00-2.5	H00-2535

SD105 -R7 shank

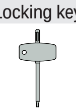
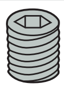
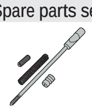
Drilling depth ~ 5 x D – Inch shank



- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- Internal coolant
- For cutting data see page(s) 198

Designation	Item number	Max drilling depth	Drill dia. DC	DF	OAL	LC	LFS	LUX	DMM
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
SD105-10.00/10.49-50-0625R7	02466034	1.969	0.394-0.413	0.787	4.728	1.890	2.839	2.256	0.625
SD105-10.50/10.99-50-0625R7	02466037	1.969	0.413-0.433	0.787	4.748	1.890	2.858	2.256	0.625
SD105-11.00/11.49-50-0625R7	02466041	1.969	0.433-0.452	0.787	4.760	1.890	2.870	2.256	0.625
SD105-11.50/11.99-50-0625R7	02466042	1.969	0.453-0.472	0.787	4.776	1.890	2.886	2.295	0.625
SD105-12.00/12.49-65-0625R7	02445835	2.559	0.472-0.492	0.787	5.551	1.890	3.661	2.874	0.625
SD105-12.50/12.99-65-0625R7	02445836	2.559	0.492-0.511	0.787	5.567	1.890	3.677	2.890	0.625
SD105-13.00/13.99-65-0625R7	02445837	2.559	0.512-0.551	0.787	5.583	1.890	3.693	2.906	0.625
SD105-14.00/14.99-80-0625R7	02445838	3.150	0.551-0.590	0.787	6.197	1.890	4.307	3.520	0.625
SD105-15.00/15.99-80-0625R7	02445839	3.150	0.591-0.630	0.787	6.232	1.890	4.343	3.555	0.625
SD105-16.00/16.99-80-0625R7	02445840	3.150	0.630-0.669	0.787	6.260	1.890	4.370	3.583	0.625
SD105-17.00/17.99-95-0750R7	02445841	3.740	0.669-0.708	0.984	6.957	1.969	4.988	4.240	0.750
SD105-18.00/18.99-95-0750R7	02445842	3.740	0.709-0.748	0.984	6.996	1.969	5.028	4.280	0.750
SD105-19.00/19.99-95-0750R7	02445843	3.740	0.748-0.787	0.984	7.028	1.969	5.059	4.311	0.750
SD105-20.00/21.99-125-1000R7	02466052	4.921	0.787-0.866	1.220	8.445	2.205	6.240	5.453	1.000
SD105-22.00/23.99-125-1000R7	02466053	4.921	0.866-0.944	1.220	8.445	2.205	6.240	5.453	1.000
SD105-24.00/25.99-125-1000R7	02466054	4.921	0.945-1.023	1.220	8.445	2.205	6.240	5.453	1.000

Spare parts

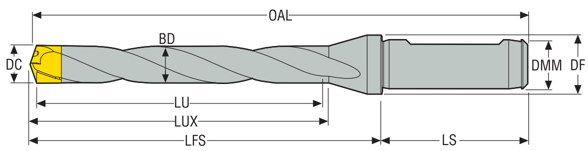
For drill dia. (mm)	Locking key	Locking screw	Spare parts set
			
0.394-0.551	H1.5-2D	MP6SS3X12	SD105-SP-4.0
0.394-0.551	H1.5-2D	MP6SS3X12	SD105-SP-5.0
0.551-0.669	H2.0-2D	MP6SS4X12	SD105-SP-6.0
0.669-0.787	H2.5-2D	MP6SS5X16	SD105-SP-7.0
0.787-1.023	H2.5-2D	MP6SS5X16	SD105-SP-8.0

Accessories

Replacement blade	Torque key
	
H00-1.5	H00-1509
H00-1.5	H00-1509
H00-2.0	H00-2020
H00-2.5	H00-2530
H00-2.5	H00-2535

SD107

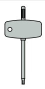
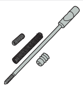
Drilling depth ~ 7 x D – Metric shank



- SD107 -R7 shank
- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 199

Designation	Item number	DC	LU	OAL	LUX	BD	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm	mm
SD107-12.00/12.49-90-16R7	02427470	12,0-12,49	90,0	166,5	100,5	11,5	118,5	48,0	16,0	20,0
SD107-12.50/12.99-90-16R7	02427472	12,5-12,99	90,0	167,0	101,0	12,0	119,0	48,0	16,0	20,0
SD107-13.00/13.99-90-16R7	02427473	13,0-13,99	90,0	167,5	101,5	12,5	119,5	48,0	16,0	20,0
SD107-14.00/14.99-110-16R7	02427474	14,0-14,99	110,0	188,0	122,0	13,5	140,0	48,0	16,0	20,0
SD107-15.00/15.99-110-16R7	02427476	15,0-15,99	110,0	189,0	123,0	14,5	141,0	48,0	16,0	20,0
SD107-16.00/16.99-110-16R7	02427443	16,0-16,99	110,0	189,5	123,5	15,5	141,5	48,0	16,0	20,0
SD107-17.00/17.99-130-20R7	02427478	17,0-17,99	130,0	212,5	144,5	16,5	162,5	50,0	20,0	25,0
SD107-18.00/18.99-130-20R7	02427479	18,0-18,99	130,0	213,5	145,5	17,5	163,5	50,0	20,0	25,0
SD107-19.00/19.99-130-20R7	02427480	19,0-19,99	130,0	214,5	146,5	18,5	164,5	50,0	20,0	25,0
SD107-20.00/21.99-175-25R7	02530422	20,0-21,99	175,0	264,5	188,5	19,5	208,5	56,0	25,0	31,0
SD107-22.00/23.99-175-25R7	02530423	22,0-23,99	175,0	264,5	188,5	21,5	208,5	56,0	25,0	31,0
SD107-24.00/25.99-175-25R7	02517867	24,0-25,99	175,0	264,5	188,5	23,5	208,5	56,0	25,0	31,0

Spare parts

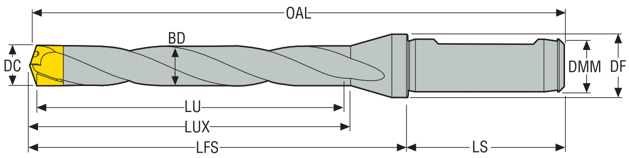
For drill dia. (mm)	Locking key	Locking screw	Spare parts set
			
12,00-13,99	H1.5-2D	MP6SS3X12	SD107-SP-5.0
14,00-16,99	H2.0-2D	MP6SS4X12	SD107-SP-6.0
17,00-19,99	H2.5-2D	MP6SS5X16	SD107-SP-7.0
20,00-25,99	H2.5-2D	MP6SS5X16	SD107-SP-8.0

Accessories

Replacement blade	Torque key
	
H00-1.5	H00-1509
H00-2.0	H00-2020
H00-2.5	H00-2530
H00-2.5	H00-2535

SD107 -R7 shank

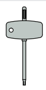
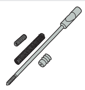
Drilling depth ~ 7 x D – Inch shank



- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- Internal coolant
- For cutting data see page(s) 199

Designation	Item number	Max drilling depth	Drill dia. DC	DF	OAL	LC	LFS	LUX	DMM
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
SD107-12.00/12.49-90-0625R7	00040003	3.543	0.472-0.492	0.787	6.555	1.890	4.665	3.957	0.625
SD107-12.50/12.99-90-0625R7	00040004	3.543	0.492-0.511	0.787	6.575	1.890	4.685	3.976	0.625
SD107-13.00/13.99-90-0625R7	00040005	3.543	0.512-0.551	0.787	6.594	1.890	4.705	3.996	0.625
SD107-14.00/14.99-110-0625R7	00040006	4.331	0.551-0.590	0.787	7.402	1.890	5.512	4.803	0.625
SD107-15.00/15.99-110-0625R7	00040007	4.331	0.591-0.630	0.787	7.441	1.890	5.551	4.843	0.625
SD107-16.00/16.99-110-0625R7	00040008	4.331	0.630-0.669	0.787	7.461	1.890	5.571	4.862	0.625
SD107-17.00/17.99-130-0750R7	00040009	5.118	0.669-0.708	0.984	8.366	1.969	6.398	5.689	0.750
SD107-18.00/18.99-130-0750R7	00040010	5.118	0.709-0.748	0.984	8.406	1.969	6.437	5.728	0.750
SD107-19.00/19.99-130-0750R7	00040011	5.118	0.748-0.787	0.984	8.445	1.969	6.476	5.768	0.750
SD107-20.00/21.99-175-1000R7	02529095	6.890	0.787-0.866	1.220	10.413	2.205	8.209	7.421	1.000
SD107-22.00/23.99-175-1000R7	02530424	6.890	0.866-0.944	1.220	10.413	2.205	8.209	7.421	1.000
SD107-24.00/25.99-175-1000R7	02530425	6.890	0.945-1.023	1.220	10.413	2.205	8.209	7.421	1.000

Spare parts

For drill dia. (inch)	Locking key	Locking screw	Spare parts set
			
0.472-0.551	H1.5-2D	MP6SS3X12	SD107-SP-5.0
0.551-0.669	H2.0-2D	MP6SS4X12	SD107-SP-6.0
0.669-0.787	H2.5-2D	MP6SS5X16	SD107-SP-7.0
0.787-1.023	H2.5-2D	MP6SS5X16	SD107-SP-8.0

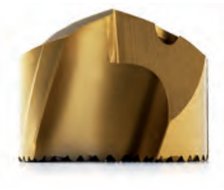
Accessories

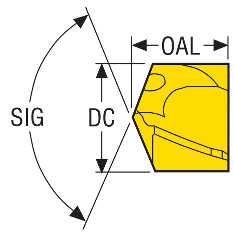
For drill dia. (inch)	Replacement blade	Torque key
		
0.472-0.551	H00-1.5	H00-1509
0.551-0.669	H00-2.0	H00-2020
0.669-0.787	H00-2.5	H00-2530
0.787-1.023	H00-2.5	H00-2535

Introduction
Drilling
Reaming
Boring
Annex

Crowns – Geometry -P, -M and -K

Point angle: 140°





P-geometry for steel		M-geometry for stainless steels and high temp alloys		K-geometry for cast iron		DC	OAL
Designation	Item number	Designation	Item number	Designation	Item number	mm *Inch*	mm *Inch*
SD100-9.52-P	02673829	SD100-9.52-M	02700334	–	–	9,52 *0.375*	8,08 *0.318*
SD100-10.00-P	02469022	SD100-10.00-M	02469072	–	–	10,0 *0.394*	8,1 *0.319*
SD100-10.10-P	02469024	–	–	–	–	10,1 *0.398*	8,1 *0.319*
SD100-10.20-P	02469025	SD100-10.20-M	02469074	SD100-10.20-K	02544440	10,2 *0.402*	8,1 *0.319*
SD100-10.30-P	02469026	–	–	–	–	10,3 *0.406*	8,1 *0.319*
SD100-10.319-P	02469027	SD100-10.319-M	02469075	–	–	10,319 *0.406*	8,1 *0.319*
SD100-10.40-P	02592734	–	–	–	–	10,4 *0.409*	8,1 *0.319*
SD100-10.50-P	02469034	SD100-10.50-M	02469076	SD100-10.50-K	02556726	10,5 *0.413*	8,5 *0.335*
SD100-10.70-P	02469036	–	–	–	–	10,7 *0.421*	8,5 *0.335*
SD100-10.716-P	02469037	–	–	–	–	10,716 *0.422*	8,5 *0.335*
SD100-10.80-P	02469038	SD100-10.80-M	02469078	–	–	10,8 *0.425*	8,5 *0.335*
SD100-10.90-P	02469041	–	–	–	–	10,9 *0.429*	8,5 *0.335*
SD100-11.00-P	02469052	SD100-11.00-M	02469079	–	–	11,0 *0.433*	8,8 *0.346*
SD100-11.113-P	02469056	SD100-11.113-M	02469080	–	–	11,113 *0.438*	8,8 *0.346*
SD100-11.20-P	02469058	SD100-11.20-M	02469082	–	–	11,2 *0.441*	8,8 *0.346*
SD100-11.30-P	02469063	–	–	–	–	11,3 *0.445*	8,8 *0.346*
SD100-11.50-P	02469065	–	–	–	–	11,5 *0.453*	9,4 *0.370*
SD100-11.509-P	02469067	SD100-11.509-M	02469083	–	–	11,509 *0.453*	9,4 *0.370*
SD100-11.70-P	02469068	–	–	–	–	11,7 *0.461*	9,4 *0.370*
SD100-11.80-P	02469069	SD100-11.80-M	02469085	SD100-11.80-K	02542583	11,8 *0.465*	9,4 *0.370*
SD100-11.907-P	02469070	SD100-11.907-M	02592744	–	–	11,907 *0.469*	9,4 *0.370*
SD100-12.00-P	00090314	SD100-12.00-M	00090315	SD100-12.00-K		12,0 *0.472*	9,6 *0.378*
SD100-12.10-P	00090316	–	–	–	–	12,1 *0.476*	9,6 *0.378*

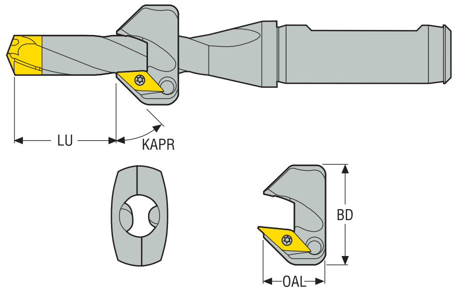
P-geometry for steel		M-geometry for stainless steels and high temp alloys		K-geometry for cast iron		DC	OAL
Designation	Item number	Designation	Item number	Designation	Item number	mm *Inch*	mm *Inch*
SD100-12.20-P	00048248	–	–	–	–	12,2 *0.480*	9,6 *0.378*
SD100-12.30-P	00071546	SD100-12.30-M	00071559	–	–	12,3 *0.484*	9,6 *0.378*
SD100-12.41-P	00059767	SD100-12.41-M	00059768	–	–	12,41 *0.489*	9,6 *0.378*
SD100-12.50-P	00090317	SD100-12.50-M	00090318	SD100-12.50-K	00090319	12,5 *0.492*	10,0 *0.394*
SD100-12.60-P	02207212	–	–	–	–	12,6 *0.496*	10,0 *0.394*
SD100-12.70-P	00059631	SD100-12.70-M	00059632	SD100-12.70-K	00059633	12,7 *0.500*	10,0 *0.394*
SD100-12.80-P	00059634	SD100-12.80-M	00059635	SD100-12.80-K	00059636	12,8 *0.504*	10,0 *0.394*
SD100-12.90-P	00030891	SD100-12.90-M	02503935	–		12,9 *0.508*	10,0 *0.394*
SD100-13.00-P	00098527	SD100-13.00-M	00098528	SD100-13.00-K	00098529	13,0 *0.512*	10,4 *0.409*
SD100-13.10-P	00059637	SD100-13.10-M	00059638	SD100-13.10-K	00059639	13,1 *0.516*	10,4 *0.409*
SD100-13.20-P	00030894	–	–	–	–	13,2 *0.520*	10,4 *0.409*
SD100-13.30-P	00059640	SD100-13.30-M	00059641	–	–	13,3 *0.524*	10,4 *0.409*
SD100-13.50-P	00098530	SD100-13.50-M	00098531	SD100-13.50-K	00098532	13,5 *0.531*	10,4 *0.409*
SD100-13.70-P	00059643	SD100-13.70-M	00059644	–	–	13,7 *0.539*	10,4 *0.409*
SD100-13.80-P	00059646	SD100-13.80-M	00059647	SD100-13.80-K	00059648	13,8 *0.543*	10,4 *0.409*
SD100-13.89-P	00059770	SD100-13.89-M	00059771	–	–	13,89 *0.547*	10,4 *0.409*
SD100-14.00-P	00090320	SD100-14.00-M	00090321	SD100-14.00-K	00090322	14,0 *0.551*	11,0 *0.433*
SD100-14.10-P	00082712	–	–	–	–	14,1 *0.555*	11,0 *0.433*
SD100-14.20-P	00071548	SD100-14.20-M	00071561	SD100-14.20-K	00071549	14,2 *0.559*	11,0 *0.433*
SD100-14.29-P	00059673	SD100-14.29-M	00059674	SD100-14.29-K	00059675	14,29 *0.563*	11,0 *0.433*
SD100-14.40-P	02207869	–	–	–	–	14,4 *0.567*	11,0 *0.433*
SD100-14.50-P	00090323	SD100-14.50-M	00090324	SD100-14.50-K	00090325	14,5 *0.571*	11,0 *0.433*
SD100-14.68-P	00059773	SD100-14.68-M	00059774	SD100-14.68-K	00059775	14,68 *0.578*	11,0 *0.433*
SD100-14.70-P	00059649	SD100-14.70-M	00059650	–	–	14,7 *0.579*	11,0 *0.433*
SD100-14.80-P	00059652	SD100-14.80-M	00059653	–	–	14,8 *0.583*	11,0 *0.433*
SD100-14.90-P	00030895	SD100-14.90-M	02592745	–	–	14,9 *0.587*	11,0 *0.433*
SD100-15.00-P	00090326	SD100-15.00-M	00090327	SD100-15.00-K	00090328	15,0 *0.591*	11,9 *0.469*
SD100-15.08-P	00059776	SD100-15.08-M	00059777	–	–	15,08 *0.594*	11,9 *0.469*
SD100-15.10-P	00079342	–	–	–	–	15,1 *0.594*	11,9 *0.469*
SD100-15.20-P	00030896	–	–	–	–	15,2 *0.598*	11,9 *0.469*

P-geometry for steel		M-geometry for stainless steels and high temp alloys		K-geometry for cast iron		DC	OAL
Designation	Item number	Designation	Item number	Designation	Item number	mm *Inch*	mm *Inch*
SD100-15.25-P	00071550	SD100-15.25-M	00071562	SD100-15.25-K	00071551	15,25 *0.600*	11,9 *0.469*
SD100-15.48-P	00059779	SD100-15.48-M	00059780	SD100-15.48-K	00022926	15,48 *0.609*	11,9 *0.469*
SD100-15.50-P	00098533	SD100-15.50-M	00098534	SD100-15.50-K	00098535	15,5 *0.610*	11,9 *0.469*
SD100-15.70-P	00059655	SD100-15.70-M	00059656	–	–	15,7 *0.618*	11,9 *0.469*
SD100-15.80-P	00059658	SD100-15.80-M	00059659	SD100-15.80-K	00059660	15,8 *0.622*	11,9 *0.469*
SD100-15.88-P	00059676	SD100-15.88-M	00059677	SD100-15.88-K	00059678	15,88 *0.625*	11,9 *0.469*
SD100-16.00-P	00098536	SD100-16.00-M	00098537	SD100-16.00-K	00098538	16,0 *0.630*	12,6 *0.496*
SD100-16.10-P	00077964	–	–	–	–	16,1 *0.634*	12,6 *0.496*
SD100-16.20-P	00047365	–	–	–	–	16,2 *0.638*	12,6 *0.496*
SD100-16.25-P	00034081	–	–	–	–	16,25 *0.640*	12,6 *0.496*
SD100-16.27-P	00022927	SD100-16.27-M	00022928	SD100-16.27-K	00022929	16,27 *0.641*	12,6 *0.496*
SD100-16.40-P	02301114	–	–	–	–	16,4 *0.646*	12,6 *0.496*
SD100-16.50-P	00098539	SD100-16.50-M	00098540	SD100-16.50-K	00098541	16,5 *0.650*	12,6 *0.496*
SD100-16.67-P	00059679	SD100-16.67-M	00059680	SD100-16.67-K	00059681	16,67 *0.656*	12,6 *0.496*
SD100-16.70-P	00059661	SD100-16.70-M	00059662	SD100-16.70-K	00059663	16,7 *0.657*	12,6 *0.496*
SD100-16.80-P	00059664	SD100-16.80-M	00059665	SD100-16.80-K	00059666	16,8 *0.661*	12,6 *0.496*
SD100-16.90-P	00030898	SD100-16.90-M	02593463	–	–	16,9 *0.665*	12,6 *0.496*
SD100-17.00-P	00090329	SD100-17.00-M	00090330	SD100-17.00-K	00090331	17,0 *0.669*	13,3 *0.524*
SD100-17.07-P	00022931	SD100-17.07-M	00022932	SD100-17.07-K	00022933	17,07 *0.672*	13,3 *0.524*
SD100-17.10-P	00034083	–	–	–	–	17,1 *0.673*	13,3 *0.524*
SD100-17.20-P	00047714	–	–	SD100-17.20-K	02515762	17,2 *0.677*	13,3 *0.524*
–	–	–	–	SD100-17.30-K	02203711	17,3 *0.681*	13,3 *0.524*
SD100-17.46-P	00059682	SD100-17.46-M	00059683	–	–	17,46 *0.687*	13,3 *0.524*
SD100-17.50-P	00090332	SD100-17.50-M	00090333	SD100-17.50-K	00090334	17,5 *0.689*	13,3 *0.524*
SD100-17.70-P	00059667	SD100-17.70-M	00059668	SD100-17.70-K	00059669	17,7 *0.697*	13,3 *0.524*
SD100-17.80-P	00059670	SD100-17.80-M	00059671	SD100-17.80-K	00059672	17,8 *0.701*	13,3 *0.524*
SD100-17.86-P	00022934	SD100-17.86-M	00022935	SD100-17.86-K	00022936	17,86 *0.703*	13,3 *0.524*
SD100-17.90-P	00047693	SD100-17.90-M	02442098	–	–	17,9 *0.705*	13,3 *0.524*
SD100-18.00-P	00090335	SD100-18.00-M	00090336	SD100-18.00-K	00090337	18,0 *0.709*	14,4 *0.567*
SD100-18.10-P	00030900	–	–	–	–	18,1 *0.713*	14,4 *0.567*

P-geometry for steel		M-geometry for stainless steels and high temp alloys		K-geometry for cast iron		DC	OAL
Designation	Item number	Designation	Item number	Designation	Item number	mm *Inch*	mm *Inch*
SD100-18.20-P	00038469	–	–	–	–	18,2 *0.717*	14,4 *0.567*
SD100-18.26-P	00022937	SD100-18.26-M	00022938	SD100-18.26-K	00035196	18,26 *0.719*	14,4 *0.567*
SD100-18.50-P	00059685	SD100-18.50-M	00059686	SD100-18.50-K	00059687	18,5 *0.728*	14,4 *0.567*
SD100-18.65-P	00035197	SD100-18.65-M	00035198	–	–	18,65 *0.734*	14,4 *0.567*
SD100-18.70-P	00059688	SD100-18.70-M	00059689	–	–	18,7 *0.736*	14,4 *0.567*
SD100-18.80-P	00059691	SD100-18.80-M	00059692	SD100-18.80-K	00059693	18,8 *0.740*	14,4 *0.567*
SD100-18.90-P	00030901	SD100-18.90-M	02592746	–	–	18,9 *0.744*	14,4 *0.567*
SD100-19.00-P	00059694	SD100-19.00-M	00059695	SD100-19.00-K	00059696	19,0 *0.748*	15,2 *0.598*
SD100-19.05-P	00059697	SD100-19.05-M	00059698	SD100-19.05-K	00059699	19,05 *0.750*	15,2 *0.598*
SD100-19.10-P	00030902	–	–	–	–	19,1 *0.752*	15,2 *0.598*
SD100-19.20-P	00071563	SD100-19.20-M	00071564	SD100-19.20-K	00071566	19,2 *0.756*	15,2 *0.598*
SD100-19.25-P	00048318	–	–	–	–	19,25 *0.758*	15,2 *0.598*
SD100-19.45-P	00035200	SD100-19.45-M	00035201	SD100-19.45-K	00035202	19,45 *0.766*	15,2 *0.598*
SD100-19.50-P	00059700	SD100-19.50-M	00059701	SD100-19.50-K	00059702	19,5 *0.768*	15,2 *0.598*
SD100-19.70-P	00059703	SD100-19.70-M	00059704	SD100-19.70-K	00059705	19,7 *0.776*	15,2 *0.598*
SD100-19.80-P	00059706	SD100-19.80-M	00059707	SD100-19.80-K	00059708	19,8 *0.780*	15,2 *0.598*
SD100-19.84-P	00035203	SD100-19.84-M	00035204	–	–	19,84 *0.781*	15,2 *0.598*
SD100-19.90-P	00010065	SD100-19.90-M	02592747	–	–	19,9 *0.783*	15,2 *0.598*
SD100-19.99-P	00081744	–	–	–	–	19,99 *0.787*	15,2 *0.598*
SD100-20.00-P	02469095	SD100-20.00-M	02469176	SD100-20.00-K	02433368	20,0 *0.787*	15,2 *0.598*
SD100-20.241-P	02469096	–	–	–	–	20,241 *0.797*	15,2 *0.598*
SD100-20.50-P	02469098	SD100-20.50-M	02469178	SD100-20.50-K	02569177	20,5 *0.807*	15,2 *0.598*
SD100-20.638-P	02469100	SD100-20.638-M	02469179	–	–	20,638 *0.813*	15,2 *0.598*
SD100-20.80-P	02508750	–	–	–	–	20,8 *0.819*	15,2 *0.598*
SD100-20.90-P	02586615	–	–	–	–	20,9 *0.823*	15,2 *0.598*
SD100-21.00-P	02469118	SD100-21.00-M	02469180	SD100-21.00-K	02523183	21,0 *0.827*	15,2 *0.598*
SD100-21.034-P	02469120	–	–	–	–	21,034 *0.828*	15,2 *0.598*
SD100-21.20-P	02469121	–	–	–	–	21,2 *0.835*	15,2 *0.598*
SD100-21.30-P	02521624	–	–	–	–	21,3 *0.839*	15,2 *0.598*
SD100-21.430-P	02469122	SD100-21.430-M	02469182	–	–	21,43 *0.844*	15,2 *0.598*

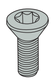
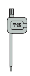
P-geometry for steel		M-geometry for stainless steels and high temp alloys		K-geometry for cast iron		DC	OAL
Designation	Item number	Designation	Item number	Designation	Item number	mm *Inch*	mm *Inch*
SD100-21.50-P	02469124	SD100-21.50-M	02469183	SD100-21.50-K	02521338	21,5 *0.846*	15,2 *0.598*
SD100-21.80-P	02592735	SD100-21.80-M	02555978	SD100-21.80-K	02592763	21,8 *0.858*	15,2 *0.598*
SD100-21.829-P	02469125	–	–	–	–	21,829 *0.859*	15,2 *0.598*
SD100-21.90-P	02592736	SD100-21.90-M	02592752	–	–	21,9 *0.862*	15,2 *0.598*
SD100-22.00-P	02469128	SD100-22.00-M	02469185	SD100-22.00-K	02511599	22,0 *0.866*	15,2 *0.598*
SD100-22.225-P	02469129	SD100-22.225-M	02469186	–	–	22,225 *0.875*	15,2 *0.598*
SD100-22.50-P	02469132	SD100-22.50-M	02469188	SD100-22.50-K	02569178	22,5 *0.886*	15,2 *0.598*
SD100-22.621-P	02469133	–	–	–	–	22,621 *0.891*	15,2 *0.598*
SD100-22.80-P	02539323	SD100-22.80-M	02592754	–		22,8 *0.898*	15,2 *0.598*
SD100-22.90-P	02592738	–	–	–	–	22,9 *0.902*	15,2 *0.598*
SD100-23.00-P	02469134	SD100-23.00-M	02469189	SD100-23.00-K	02515181	23,0 *0.906*	15,2 *0.598*
SD100-23.416-P	02469136	–	–	–	–	23,416 *0.922*	15,2 *0.598*
SD100-23.50-P	02469138	SD100-23.50-M	02469190	SD100-23.50-K	02551252	23,5 *0.925*	15,2 *0.598*
SD100-23.813-P	02469140	SD100-23.813-M	02554971	SD100-23.813-K	02592766	23,813 *0.938*	15,2 *0.598*
SD100-23.90-P	02592739	SD100-23.90-M	02592756	–	–	23,9 *0.941*	15,2 *0.598*
SD100-24.00-P	02469141	SD100-24.00-M	02469191	SD100-24.00-K	02569179	24,0 *0.945*	15,2 *0.598*
SD100-24.209-P	02469142	–	–	–	–	24,209 *0.953*	15,2 *0.598*
SD100-24.50-P	02469144	SD100-24.50-M	02469192	SD100-24.50-K	02569180	24,5 *0.965*	15,2 *0.598*
SD100-24.605-P	02469145	–	–	–	–	24,605 *0.969*	15,2 *0.598*
SD100-24.80-P	02529665	SD100-24.80-M	02508165	SD100-24.80-K	02592767	24,8 *0.976*	15,2 *0.598*
SD100-24.90-P	02592740	SD100-24.90-M	02592757	–	–	24,9 *0.980*	15,2 *0.598*
SD100-25.00-P	02469146	SD100-25.00-M	02469193	SD100-25.00-K	02524629	25,0 *0.984*	15,2 *0.598*
-	–	–	–	SD100-25.40-K	02569181	25,4 *1.000*	15,2 *0.598*
SD100-25.400-P	02469147	SD100-25.400-M	02469194	–	–	25,4 *1.000*	15,2 *0.598*
SD100-25.50-P	02536609	–	–	–	–	25,5 *1.004*	15,2 *0.598*
SD100-25.60-P	02519477	–	–	–	–	25,6 *1.008*	15,2 *0.598*
SD100-25.80-P	02581593	SD100-25.80-M	02592758	–	–	25,8 *1.016*	15,2 *0.598*
SD100-25.90-P	02592741	SD100-25.90-M	02592759	–	–	25,9 *1.020*	15,2 *0.598*
SD100-25.99-P	02516402	–	–	SD100-25.99-K	02516403	25,99 *1.023*	15,2 *0.598*

Chamfer module

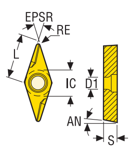


Designation	Item number	For drill body	Drill depth LU								Max chamfer depth	OAL	BD
			SD101 (min-max)		SD103 (min-max)		SD105 (min-max)		SD107 (min-max)				
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*
SD100-C45-12.00/12.49	00014922	SD10x-12.00/12.49	12,0 *0.472*	13,0 *0.512*	12,0 *0.472*	28,0 *1.102*	28,0 *1.102*	53,0 *2.087*	53,0 *2.087*	78,0 *3.071*	1,5 *0.059*	19,0 *0.748*	28,0 *1.102*
SD100-C45-12.50/12.99	00014923	SD10x-12.50/12.99	12,0 *0.472*	14,0 *0.551*	12,0 *0.472*	29,0 *1.142*	29,0 *1.142*	54,0 *2.126*	54,0 *2.126*	79,0 *3.110*	1,5 *0.059*	19,0 *0.748*	28,0 *1.102*
SD100-C45-13.00/13.99	00014924	SD10x-13.00/13.99	13,0 *0.512*	14,0 *0.551*	13,0 *0.512*	29,0 *1.142*	29,0 *1.142*	54,0 *2.126*	54,0 *2.126*	79,0 *3.110*	1,5 *0.059*	19,0 *0.748*	28,0 *1.102*
SD100-C45-14.00/14.99	00014928	SD10x-14.00/14.99	14,0 *0.551*	20,0 *0.787*	14,0 *0.551*	40,0 *1.575*	40,0 *1.575*	70,0 *2.756*	70,0 *2.756*	100,0 *3.937*	2,0 *0.079*	19,0 *0.748*	31,0 *1.220*
SD100-C45-15.00/15.99	00014931	SD10x-15.00/15.99	14,0 *0.551*	21,0 *0.827*	14,0 *0.551*	41,0 *1.614*	41,0 *1.614*	71,0 *2.795*	71,0 *2.795*	101,0 *3.976*	2,0 *0.079*	19,0 *0.748*	31,0 *1.220*
SD100-C45-16.00/16.99	00014932	SD10x-16.00/16.99	15,0 *0.591*	22,0 *0.866*	15,0 *0.591*	42,0 *1.654*	42,0 *1.654*	72,0 *2.835*	72,0 *2.835*	102,0 *4.016*	2,0 *0.079*	19,0 *0.748*	31,0 *1.220*
SD100-C45-17.00/17.99	00014933	SD10x-17.00/17.99	16,0 *0.630*	25,0 *0.984*	16,0 *0.630*	51,0 *2.008*	51,0 *2.008*	87,0 *3.425*	87,0 *3.425*	123,0 *4.843*	2,0 *0.079*	19,0 *0.748*	36,0 *1.417*
SD100-C45-18.00/18.99	00014935	SD10x-18.00/18.99	17,0 *0.669*	26,0 *1.024*	17,0 *0.669*	52,0 *2.047*	52,0 *2.047*	88,0 *3.465*	88,0 *3.465*	124,0 *4.882*	2,0 *0.079*	19,0 *0.748*	36,0 *1.417*
SD100-C45-19.00/19.99	00014936	SD10x-19.00/19.99	18,0 *0.709*	27,0 *1.063*	18,0 *0.709*	53,0 *2.087*	53,0 *2.087*	89,0 *3.504*	89,0 *3.504*	125,0 *4.921*	2,0 *0.079*	19,0 *0.748*	36,0 *1.417*

Spare parts

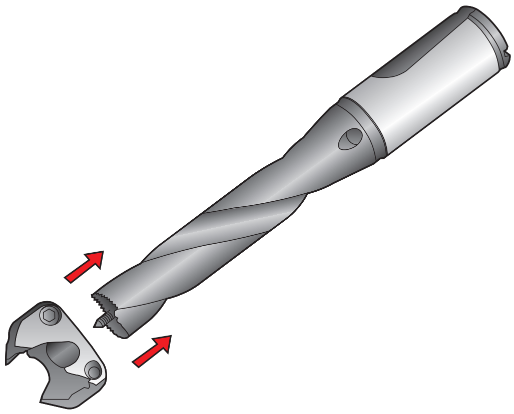
For drill dia. (mm)	Insert screw		Insert key	Locking key
				
	Insert	Module	Insert	Module
SD100-12.00–16.99	C02205-T07P	C04011-T15P	T07P-2	T15P-2
SD100-17.00–19.99	C02205-T07P	C05012-T15P	T07P-2	T15P-2

Insert

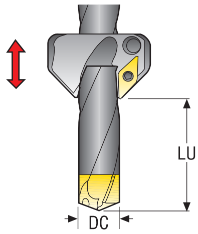
	Tolerances:	mm *Inch*	Size	IC mm *Inch*	L mm *Inch*	S mm *Inch*	D1 mm *Inch*	RE mm *Inch*
	IC =	±0,025 *±0.0009842*	09	5,556 *0.2187*	9,0 *0.2187*	2,5 *0.0984*	2,9 *0.1141*	0,2 *0.0078*
	S =	±0,07 *±0.0027559*	Grade: T400D					
	RE =	±0,10 *±0.0039370*	Designation: VCGX090202-D1					
			Item number: 00014948					

Chamfer module – Mounting instruction/placement of module

1. Fit the module on the drill without chamfer insert or crown mounted.

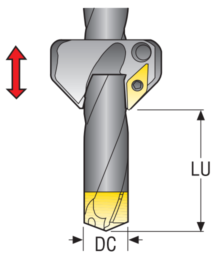


2.1 If possible, place the module as close to the shank as possible.



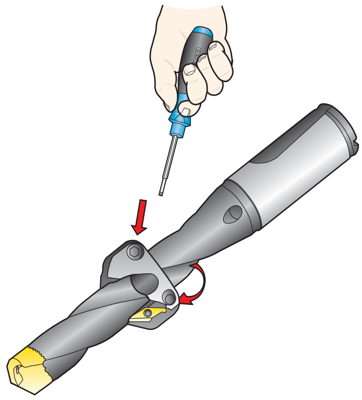
LU drilling depth					
DC		SD101 (min-max)		SD103 (min-max)	
mm	(inch)	mm	(inch)	mm	(inch)
12	.472	12-13	.472-.512	12-28	.472-1.102
12,5	.492	12-14	.472-.551	12-29	.472-1.142
13	.512	13-14	.512-.551	13-29	.512-1.142
14	.551	14-20	.551-.787	14-40	.551-1.575
15	.591	14-21	.551-.827	14-41	.551-1.614
16	.630	15-22	.591-.866	15-42	.591-1.654
17	.669	16-25	.630-.984	16-51	.630-2.008
18	.709	17-26	.669-1.024	17-52	.669-2.047
19	.748	18-27	.709-1.063	18-53	.709-2.087

2.2 If possible, place the module as close to the shank as possible.



LU drilling depth					
DC		SD105 (min-max)		SD107 (min-max)	
mm	(inch)	mm	(inch)	mm	(inch)
12	.472	28-53	1.102-2.087	53-78	2.087-3.071
12,5	.492	29-54	1.142-2.126	54-79	2.126-3.110
13	.512	29-54	1.142-2.126	54-79	2.126-3.110
14	.551	40-70	1.575-2.756	70-100	2.756-3.937
15	.591	41-71	1.614-2.785	71-101	2.795-3.976
16	.630	42-72	1.654-2.835	72-102	2.835-4.016
17	.669	51-87	2.008-3.425	87-123	3.425-4.843
18	.709	52-88	2.047-3.465	88-124	3.465-4.882
19	.748	53-89	2.087-3.504	89-125	3.504-4.921

3. Tighten both screws according to the table below.



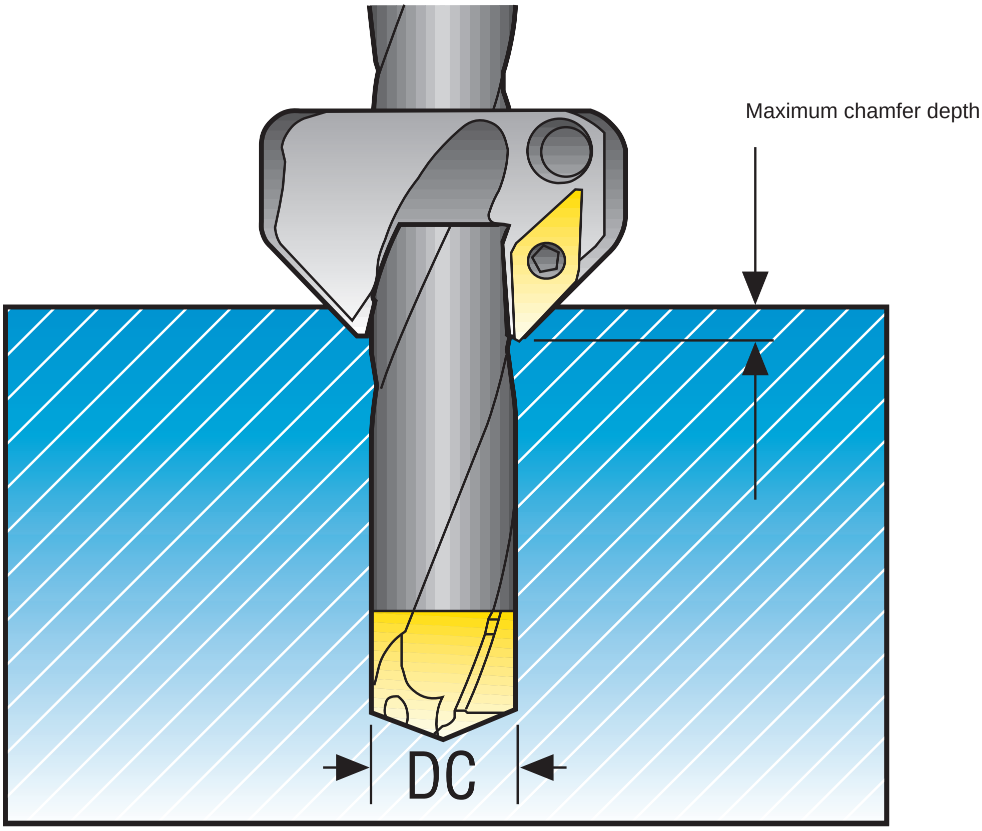
DC		M	
mm	(inch)	Nm	(in-lbs)
12-19	.472-.748	3-4	26-35

Chamfer module – Cutting data

The recommended cutting speeds and feeds for Crownloc® on page 193-196 should also be used during the chamfering operation.

Troubleshooting
Vibrations during chamfering

- Reduce cutting speed
- If possible, move the module closer to the shank of the drill
- If possible, use a shorter drill



DC		Max	
mm	*(inch)*	mm	*(inch)*
12-13	*.472-.512*	1,5	*.059*
14-19	*.551-.748*	2	*.079*

SD101 – Ø 10-26 mm / 0.394-1.024 in

SMG	Grade	f									v_c
		Ø10.00 *Ø 0.394*	Ø12.00 *Ø 0.472*	Ø14.00 *Ø 0.551*	Ø16.00 *Ø 0.630*	Ø18.00 *Ø 0.709*	Ø20.00 *Ø 0.787*	Ø22.00 *Ø 0.866*	Ø24.00 *Ø 0.945*	Ø26.00 *Ø 1.024*	
P1	P	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	0,36 *0.014*	125 *410*
P2	P	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,36 *0.014*	120 *395*
P3	P	0,19 *0.0075*	0,22 *0.0085*	0,25 *0.010*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	105 *345*
P4	P	0,19 *0.0075*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	0,34 *0.013*	95 *310*
P5	P	0,19 *0.0075*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	90 *295*
P6	P	0,18 *0.0070*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	100 *330*
P7	P	0,18 *0.0070*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	95 *310*
P8	P	0,19 *0.0075*	0,22 *0.0085*	0,25 *0.010*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	90 *295*
P11	P	0,18 *0.0070*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	90 *295*
P12	P	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	55 *180*
M1	M	0,14 *0.0055*	0,15 *0.0060*	0,15 *0.0060*	0,16 *0.0065*	0,16 *0.0065*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	85 *280*
M2	M	0,13 *0.0050*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	0,15 *0.0060*	0,15 *0.0060*	0,16 *0.0065*	0,16 *0.0065*	70 *230*
M3	M	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	50 *165*
M4	M	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	39 *130*
M5	M	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	33 *110*
K1	K	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	0,42 *0.017*	0,42 *0.017*	0,44 *0.017*	100 *330*
K2	K	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,38 *0.015*	0,40 *0.016*	85 *280*
K3	K	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,38 *0.015*	0,40 *0.016*	70 *230*
K4	K	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,38 *0.015*	0,40 *0.016*	70 *230*
K5	K	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,36 *0.014*	41 *135*
N1	M	0,18 *0.0070*	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	335 *1100*
N2	M	0,18 *0.0070*	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	215 *710*
N3	M	0,18 *0.0070*	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	145 *475*
N11	M	0,18 *0.0070*	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	170 *560*
S1	M	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	34 *110*
S2	M	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	25 *80*
S3	M	0,085 *0.0034*	0,085 *0.0034*	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	25 *80*
S11	M	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	65 *215*
S12	M	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	49 *160*
S13	M	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	38 *125*
H3	P	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	27 *90*
H5	P	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	50 *165*
H7	P	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	27 *90*
H8	P	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	50 *165*
H11	P	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	65 *215*
H12	P	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	32 *105*
H21	P *P*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	50 *165*

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

SD103 – Ø 10-26 mm / 0.394-1.024 in

SMG	Grade	f									v_c
		Ø10.00 *Ø 0.394*	Ø12.00 *Ø 0.472*	Ø14.00 *Ø 0.551*	Ø16.00 *Ø 0.630*	Ø18.00 *Ø 0.709*	Ø20.00 *Ø 0.787*	Ø22.00 *Ø 0.866*	Ø24.00 *Ø 0.945*	Ø26.00 *Ø 1.024*	
P1	P	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	0,36 *0.014*	120 *395*
P2	P	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,36 *0.014*	115 *375*
P3	P	0,19 *0.0075*	0,22 *0.0085*	0,25 *0.010*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	100 *330*
P4	P	0,19 *0.0075*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	0,34 *0.013*	85 *280*
P5	P	0,19 *0.0075*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	85 *280*
P6	P	0,18 *0.0070*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	95 *310*
P7	P	0,18 *0.0070*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	90 *295*
P8	P	0,19 *0.0075*	0,22 *0.0085*	0,25 *0.010*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	85 *280*
P11	P	0,18 *0.0070*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	85 *280*
P12	P	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	50 *165*
M1	M	0,14 *0.0055*	0,15 *0.0060*	0,15 *0.0060*	0,16 *0.0065*	0,16 *0.0065*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	80 *260*
M2	M	0,13 *0.0050*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	0,15 *0.0060*	0,15 *0.0060*	0,16 *0.0065*	0,16 *0.0065*	65 *215*
M3	M	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	49 *160*
M4	M	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	37 *120*
M5	M	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	31 *100*
K1	K	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	0,42 *0.017*	0,42 *0.017*	0,44 *0.017*	90 *295*
K2	K	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,38 *0.015*	0,40 *0.016*	80 *260*
K3	K	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,38 *0.015*	0,40 *0.016*	65 *215*
K4	K	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,38 *0.015*	0,40 *0.016*	65 *215*
K5	K	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,36 *0.014*	38 *125*
N1	M	0,18 *0.0070*	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	315 *1025*
N2	M	0,18 *0.0070*	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	200 *660*
N3	M	0,18 *0.0070*	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	135 *445*
N11	M	0,18 *0.0070*	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	160 *520*
S1	M	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	32 *105*
S2	M	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	23 *75*
S3	M	0,085 *0.0034*	0,085 *0.0034*	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	23 *75*
S11	M	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	60 *195*
S12	M	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	46 *150*
S13	M	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	36 *120*
H3	P	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	25 *80*
H5	P	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	46 *150*
H7	P	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	25 *80*
H8	P	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	46 *150*
H11	P	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	60 *195*
H12	P	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	30 *100*
H21	P	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	46 *150*

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

SECO

SD105 – Ø 10-26 mm / 0.394-1.024 in

SMG	Grade	f									v_c
		Ø10.00 *Ø 0.394*	Ø12.00 *Ø 0.472*	Ø14.00 *Ø 0.551*	Ø16.00 *Ø 0.630*	Ø18.00 *Ø 0.709*	Ø20.00 *Ø 0.787*	Ø22.00 *Ø 0.866*	Ø24.00 *Ø 0.945*	Ø26.00 *Ø 1.024*	
P1	P	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	0,36 *0.014*	110 *360*
P2	P	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,36 *0.014*	110 *360*
P3	P	0,19 *0.0075*	0,22 *0.0085*	0,25 *0.010*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	95 *310*
P4	P	0,19 *0.0075*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	0,34 *0.013*	85 *280*
P5	P	0,19 *0.0075*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	80 *260*
P6	P	0,18 *0.0070*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	90 *295*
P7	P	0,18 *0.0070*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	85 *280*
P8	P	0,19 *0.0075*	0,22 *0.0085*	0,25 *0.010*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	80 *260*
P11	P	0,18 *0.0070*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	80 *260*
P12	P	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	48 *155*
M1	M	0,14 *0.0055*	0,15 *0.0060*	0,15 *0.0060*	0,16 *0.0065*	0,16 *0.0065*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	75 *245*
M2	M	0,13 *0.0050*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	0,15 *0.0060*	0,15 *0.0060*	0,16 *0.0065*	0,16 *0.0065*	60 *195*
M3	M	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	46 *150*
M4	M	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	35 *115*
M5	M	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	29 *95*
K1	K	0,28 *0.011*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	0,42 *0.017*	0,42 *0.017*	0,44 *0.017*	90 *295*
K2	K	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,38 *0.015*	0,40 *0.016*	75 *245*
K3	K	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,38 *0.015*	0,40 *0.016*	65 *215*
K4	K	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,38 *0.015*	0,40 *0.016*	60 *195*
K5	K	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,36 *0.014*	36 *120*
N1	M	0,18 *0.0070*	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	300 *980*
N2	M	0,18 *0.0070*	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	190 *620*
N3	M	0,18 *0.0070*	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	130 *425*
N11	M	0,18 *0.0070*	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	150 *490*
S1	M	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	30 *100*
S2	M	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	22 *70*
S3	M	0,085 *0.0034*	0,085 *0.0034*	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	22 *70*
S11	M	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	55 *180*
S12	M	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	44 *145*
S13	M	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	34 *110*
H3	P	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	24 *80*
H5	P	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	44 *145*
H7	P	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	24 *80*
H8	P	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	44 *145*
H11	P	0,13 *0.0050*	0,15 *0.0060*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	55 *180*
H12	P	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	29 *95*
H21	P *P*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	44 *145*

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

SD107 – Ø 10-26 mm / 0.394-1.024 in

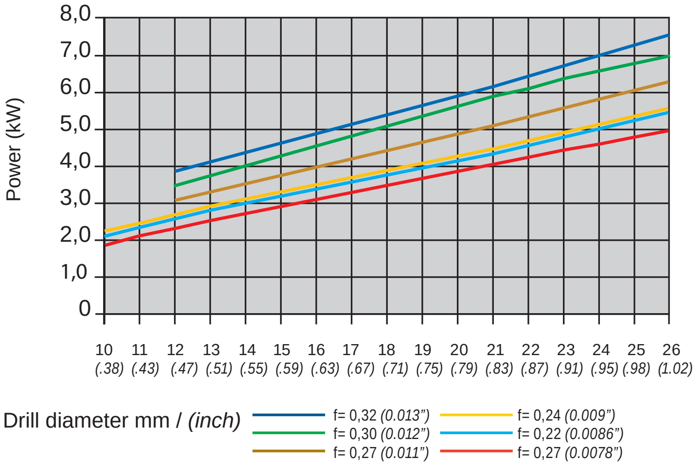
SMG	Grade	f								v_c
		Ø12.00 *Ø 0.472*	Ø14.00 *Ø 0.551*	Ø16.00 *Ø 0.630*	Ø18.00 *Ø 0.709*	Ø20.00 *Ø 0.787*	Ø22.00 *Ø 0.866*	Ø24.00 *Ø 0.945*	Ø26.00 *Ø 1.024*	
P1	P	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	0,36 *0.014*	110 *360*
P2	P	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,36 *0.014*	105 *345*
P3	P	0,22 *0.0085*	0,25 *0.010*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	90 *295*
P4	P	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	0,34 *0.013*	80 *260*
P5	P	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	75 *245*
P6	P	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	85 *280*
P7	P	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	80 *260*
P8	P	0,22 *0.0085*	0,25 *0.010*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	75 *245*
P11	P	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	0,28 *0.011*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	80 *260*
P12	P	0,15 *0.0060*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	47 *155*
M1	M	0,15 *0.0060*	0,15 *0.0060*	0,16 *0.0065*	0,16 *0.0065*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	75 *245*
M2	M	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	0,15 *0.0060*	0,15 *0.0060*	0,16 *0.0065*	0,16 *0.0065*	60 *195*
M3	M	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	45 *150*
M4	M	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	34 *110*
M5	M	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	28 *90*
K1	K	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,40 *0.016*	0,42 *0.017*	0,42 *0.017*	0,44 *0.017*	85 *280*
K2	K	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,38 *0.015*	0,40 *0.016*	75 *245*
K3	K	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,38 *0.015*	0,40 *0.016*	60 *195*
K4	K	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	0,38 *0.015*	0,40 *0.016*	60 *195*
K5	K	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,36 *0.014*	35 *115*
N1	M	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	290 *950*
N2	M	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	185 *610*
N3	M	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	125 *410*
N11	M	0,19 *0.0075*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,22 *0.0085*	145 *475*
S1	M	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	29 *95*
S2	M	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	21 *70*
S3	M	0,085 *0.0034*	0,090 *0.0036*	0,095 *0.0038*	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	21 *70*
S11	M	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	55 *180*
S12	M	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	42 *140*
S13	M	0,095 *0.0038*	0,095 *0.0038*	0,10 *0.0040*	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,11 *0.0044*	0,11 *0.0044*	33 *110*
H3	P	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	23 *75*
H5	P	0,15 *0.0060*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	43 *140*
H7	P	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	23 *75*
H8	P	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	43 *140*
H11	P	0,15 *0.0060*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	55 *180*
H12	P	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	28 *90*
H21	P	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,17 *0.0065*	43 *140*

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

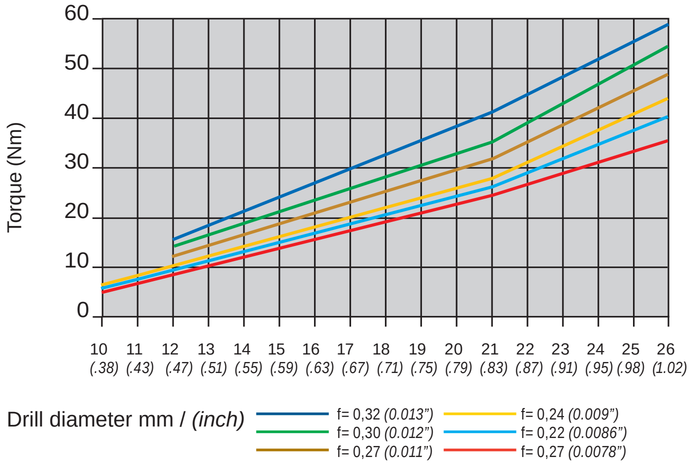
Machining data

The values in the graphs vary with e.g. cutting data, material, efficiency of the machine and tool wear.
The graphs below are valid for Seco Material Group (SMG) P5-P6 and cutting speed 90 m/min (295 SFM).

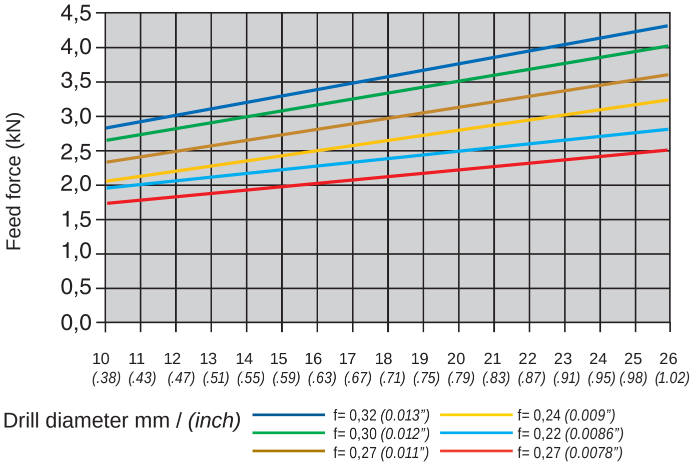
Net power consumption



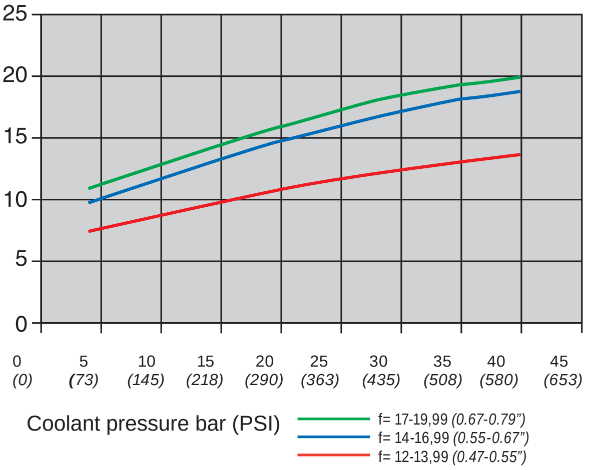
Drilling torque



Feed force



Coolant flow at different pressures



Hole tolerances/Surface finish

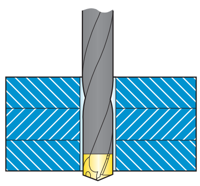
SD101, SD103, SD105 and SD107 IT9-10 / Ra 1-4*		
Drill ∅ DC (inch)	**IT9 tolerance (inch)**	**IT10 tolerance *(µin/µm)***
0.394-0.709	0.0017	0.0028
0.709-1.181	0.0020	0.0033
Drill ∅ DC *(mm)*	**IT9 tolerance *(µm)***	**IT10 tolerance *(µm)***
10-18	43	70
18-30	52	84

*Deterioration of surface finish and hole tolerance can occur when drilling in low carbon steel or stainless steel.
Use the shortest drill possible for best hole quality.

Recommended coolant flow
Dx1 l/min
Minimum coolant flow D/2 l/min
D = Drill diameter
Minimum recommended coolant pressure 10 bar (*145 PSI*) with < 3 x D
Minimum recommended coolant pressure 20 bar (*290 PSI*) with > 3 x D
Minimum recommended coolant pressure 40 bar (*580 PSI*) with > 5 x D

Coolant mix
Recommended emulsion mix is 6–8%.
When drilling in stainless steels, superalloys and high strength steels a mix of 10% is recommended.

Machining recommendations
It is possible to drill stacked material as long as the pieces are securely clamped together, so that there are no air gaps between the parts. Air gaps can affect chip evacuation, and thereby damage the drill.



Troubleshooting – Initial check points

- Fixturing stability
- Machine spindle condition
- Tool holder condition

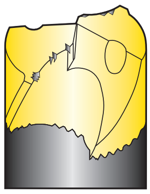
- Clamping of tool:
  - Run-out within 0,04 TIR
  - If using pre drilling within 0,04 TIR

- Chip evacuation:
  - Cutting data

- Coolant:
  - Pressure
  - Flow
  - Concentration

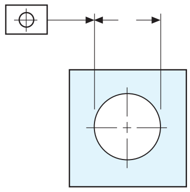
Cutting edges get chipped

- Reduce the feed/rev
- If the drill vibrates, reduce the cutting speed and increase the feed rate
- When drilling through rough, hard or angled surfaces, reduce the feed rate by 30%-50% during entrance and exit



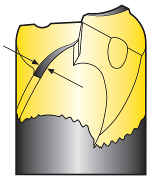
Unsatisfactory diameter tolerance

- Increase the feed/rev
- Use a Seco Feedmax solid carbide drill, see page(s) 18-21
- Use a reaming operation, see page(s) 325
- Use a boring operation, see pages 479-480



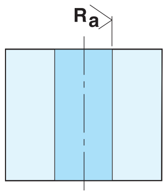
Too fast flank wear

- Check that correct geometry is used
- Reduce the cutting speed



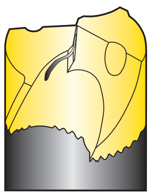
Unsatisfactory surface finish

- Reduce the feed/rev
- If drilling through rough, hard and angled surface - reduce the feed by 30%-50% during entrance and exit
- Pre drill with a 140˚ point angle
- Use a Seco Feedmax solid carbide drill see Feedmax page(s) 18-21
- Use a boring operation, see pages 479-480



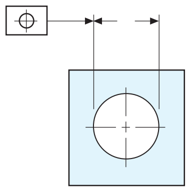
Groove wear

- Reduce the feed /rev
- Reduce the cutting speed
- Increase the coolant concentration



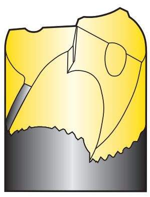
Unsatisfactory positioning of the hole

- Reduce the feed/rev
- If drilling through rough, hard and angled surface - reduce the feed by 30%-50% during entrance and exit
- Pre drill with a 140˚ point angle
- Use a Seco Feedmax solid carbide drill see Feedmax page(s) 18-21
- Use a boring operation, see pages 479-480



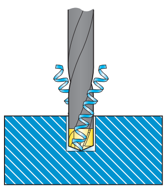
Wear of peripheral land margins

- Check that the correct geometry is used
- Reduce the cutting speed
- Increase the coolant concentration
- When drilling through rough, hard or angled surfaces, reduce the feed rate by 30%-50% during entrance and exit



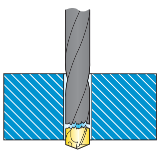
Chip jamming due to long chips

- Increase the feed
- In long chipping materials SMG P1-P4, SMG M1-M2:
  - Increase cutting speed and reduce feed/rev
  - Use the L geometry (Custom Design)



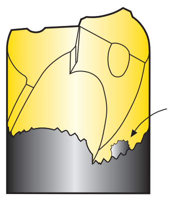
Breakage at hole exit

- If the crown connection breaks when the crown is just about to break through the material. The failure is caused by:
- The interface has not been cleaned thoroughly and there is still dirt or chips left between crown and drill body
- The crown has not been clamped securely. Use the torque key
- Too few threads are holding the crown



Chipping of the locking interface

- Minor chipping is not hazardous to the locking system. It will not affect the drilling result
- If major chipping occurs when using a high feed rate or when drilling through angled surfaces - reduce the feed rate



Crownloc® Plus

Seco Crownloc® Plus is a new generation of Seco drills with exchangeable crowns. Featuring a new locking interface, Crownloc Plus improves chip evacuation and wear resistance in a variety of materials.

- Strong drill body design, high-strength locking interface with deep and wide flutes and polished body.
- The first choice for general applications, the P geometry is a strong and versatile solution.
- The M geometry provides excellent performance in high temperature alloys, titanium, titanium alloys and stainless steel

Range overview

Crownloc® Plus	∅ Range	Drill depth	Drill ∅ tolerance	Hole tolerance (1)	Surface finish (2)
SD403  Page(s) 206	12,00-19,99 mm *(0.472-0.787")*	~ 3 x D	k7	**IT 9-10**	R_a 1-3 µm R_a 39-118 µin
SD405  Page(s) 210	12,00-19,99 mm *(0.472-0.787")*	~ 5 x D	k7	**IT 10**	R_a 1-3 µm R_a 39-118 µin
SD408  Page(s) 214	12,00-19,99 mm *(0.472-0.787")*	~ 8 x D	k7	**IT 10**	R_a 1-3 µm R_a 39-118 µin

1) Variations can occur depending on the material and the cutting data used.
2) Drill depth, cutting data, coolant pressure and material can cause deterioration of the surface finish.

Code key

Crownloc® Plus drill bodies

Metric

Type of drill
SD403: 3 x D
SD405: 5 x D
SD408: 8 x D

Min/max
Crown diameter

SD403 - 14.00/14.99 - 45 - 16 - R 7

Drilling depth

Shank diameter

Right hand rotation

Type of shank
1. Cylindrical
7. ISO 9766

Inch

45 - 0750 - R 7

Code key crowns

Drill diameter

SD400 - 14.00 - P

Type of geometry
P = Steel
M = Stainless Steel

Geometries	
P-geometry **- Universal geometry, first choice for drilling in steel**	**M-geometry** **- For stainless steels and high temp alloys**
	

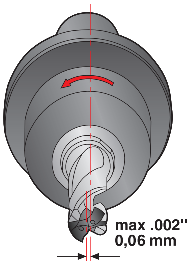
Mounting instructions

1. Stability

The stability of the application is important to obtain the best tool life and hole accuracy. Check the condition of the machine spindle, fixture and fixturing of the component to secure maximum stability and rigidity.
Unstable conditions can cause tool breakages.

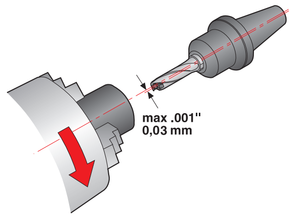
2. Rotating

Total Indicated Run-out (TIR) should not exceed 0.06 mm *(0.002")* in a rotating application. Measure the run-out when turning the drill 360° in the spindle.



3. Stationary

The distance between the drill point and the rotating center of the workpiece should not exceed 0.03 mm *(0.001")* radially in a stationary application.



4. Recommended tool holders

Seco Tools offers a wide range of tools holders (Collet chucks, Shrinkfit holders, Weldon Hydraulic chucks...), available for a variety of machine spindle types.
For best results, use holders type BT JIS B 6339-ADE Type ERHP 5672, High precision chuck.
For further information see Tooling Systems catalog.

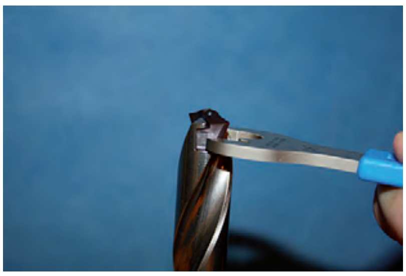
High precision collet chuck
(For cylindrical, -R1 shanks only)

Hydraulic chuck
(For cylindrical, -R1 shanks only)

Weldon

1.

To unclamp the crown, find the two flats on the Crown for the key.

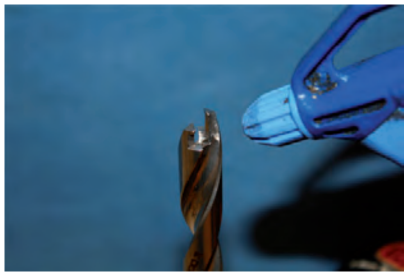


2.

Turn the key counterclockwise to unclamp it with a quarter of a turn.

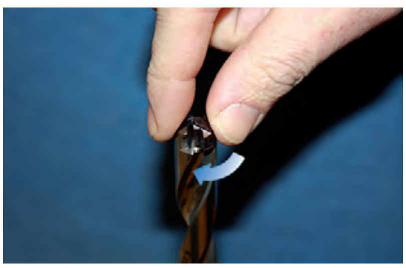
3.

Clean the connection, before mounting the crown.



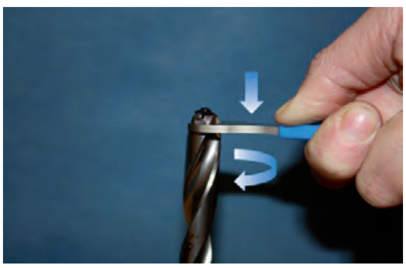
4.

Pre-clamp the crown with your fingers for easier clamping, before using the key.



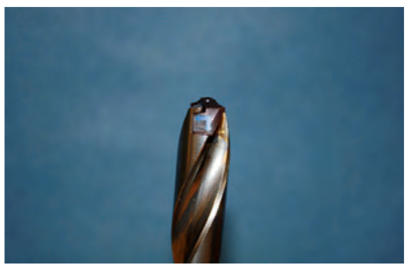
5.

Simultaneously press down the crown when clamping on a quarter of a turn clockwise using the key and keep it perpendicular to the drill body.



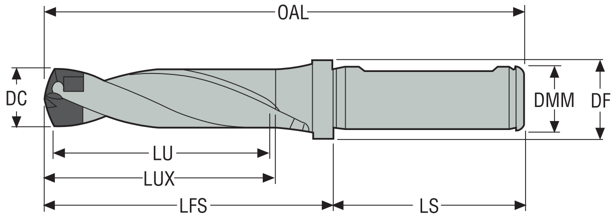
6.

When the crown is mounted in the drill body, full contact should be achieved in the connection between the suporting surfaces of the drill body and the Crown, see picture.



SD403 – R7

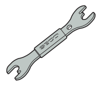
Drilling depth ~ 3 x D – Metric shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 222

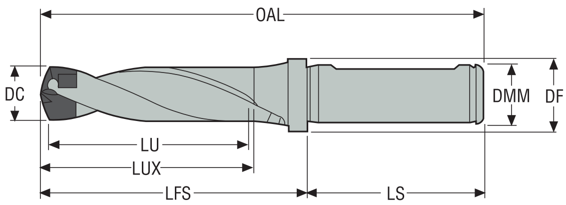
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm
SD403-12.00/12.49-38-16R7	02622894	12,0-12,49	38,0	106,2	46,2	58,2	48,0	16,0	20,0
SD403-12.50/12.99-39-16R7	02622895	12,5-12,99	39,0	108,0	47,5	60,0	48,0	16,0	20,0
SD403-13.00/13.99-42-16R7	02622896	13,0-13,99	42,0	111,9	50,9	63,9	48,0	16,0	20,0
SD403-14.00/14.99-45-16R7	02622898	14,0-14,99	45,0	116,5	54,5	68,5	48,0	16,0	20,0
SD403-15.00/15.99-48-16R7	02622899	15,0-15,99	48,0	121,2	58,2	73,2	48,0	16,0	20,0
SD403-16.00/16.99-51-20R7	02622900	16,0-16,99	51,0	127,9	61,9	77,9	50,0	20,0	24,0
SD403-17.00/17.99-54-20R7	02622902	17,0-17,99	54,0	132,6	65,6	82,6	50,0	20,0	24,0
SD403-18.00/18.99-57-20R7	02622903	18,0-18,99	57,0	137,3	69,3	87,3	50,0	20,0	24,0
SD403-19.00/19.99-60-20R7	02622905	19,0-19,99	60,0	142,0	73,0	92,0	50,0	20,0	24,0

Accessories

For drill dia. (mm)	Key
	
12,00-12,99	SD400-K05
13,00-14,99	SD400-K06
15,00-16,99	SD400-K07
17,00-18,99	SD400-K08
19,00-19,99	SD400-K09

SD403 – R7

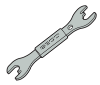
Drilling depth ~ 3 x D – Inch shank



- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- Internal - through coolant
- For cutting data see page(s) 222

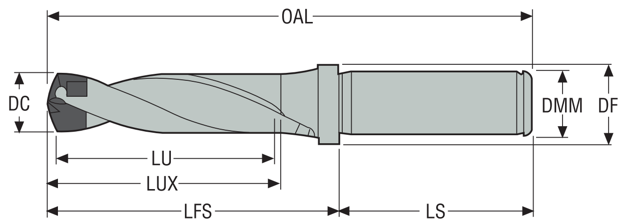
Designation	Item number	Max drilling depth	Drill dia. DC	DF	OAL	LC	LFS	LUX	DMM
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
SD403-12.00/12.49-38-0625R7	02622942	1.496	0.472-0.492	0.787	4.181	1.890	2.291	1.819	0.625
SD403-12.50/12.99-39-0625R7	02622943	1.535	0.492-0.511	0.787	4.252	1.890	2.362	1.870	0.625
SD403-13.00/13.99-42-0625R7	02622944	1.654	0.512-0.551	0.787	4.406	1.890	2.516	2.004	0.625
SD403-14.00/14.99-45-0625R7	02622945	1.772	0.551-0.590	0.787	4.587	1.890	2.697	2.146	0.625
SD403-15.00/15.99-48-0625R7	02622946	1.890	0.591-0.630	0.787	4.772	1.890	2.882	2.291	0.625
SD403-16.00/16.99-51-0750R7	02622947	2.008	0.630-0.669	0.945	5.035	1.969	3.067	2.437	0.750
SD403-17.00/17.99-54-0750R7	02622948	2.126	0.669-0.708	0.945	5.220	1.969	3.252	2.583	0.750
SD403-18.00/18.99-57-0750R7	02622949	2.244	0.709-0.748	0.945	5.406	1.969	3.437	2.728	0.750
SD403-19.00/19.99-60-0750R7	02622950	2.362	0.748-0.787	0.945	5.591	1.969	3.622	2.874	0.750

Spare parts

For drill dia. (inch)	Key
	
0.472-0.511	SD400-K05
0.512-0.590	SD400-K06
0.591-0.669	SD400-K07
0.669-0.748	SD400-K08
0.748-0.787	SD400-K09

SD403 – R1

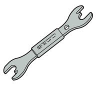
Drilling depth ~ 3 x D – Metric shank



- Internal coolant
- Cylindrical shank (R1) fits holders: 5834 and 5672
- For cutting data see page(s) 222

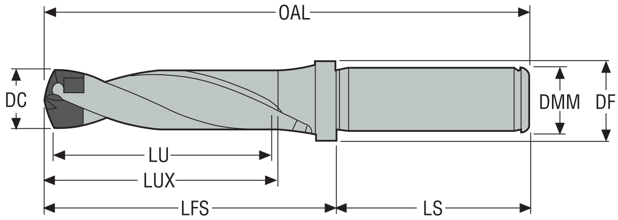
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm
SD403-12.00/12.49-38-16R1	02622920	12,0-12,49	38,0	106,2	46,2	58,2	48,0	16,0	20,0
SD403-12.50/12.99-39-16R1	02622921	12,5-12,99	39,0	108,0	47,5	60,0	48,0	16,0	20,0
SD403-13.00/13.99-42-16R1	02622922	13,0-13,99	42,0	111,9	50,9	63,9	48,0	16,0	20,0
SD403-14.00/14.99-45-16R1	02622923	14,0-14,99	45,0	116,5	54,5	68,5	48,0	16,0	20,0
SD403-15.00/15.99-48-16R1	02622924	15,0-15,99	48,0	121,2	58,2	73,2	48,0	16,0	20,0
SD403-16.00/16.99-51-20R1	02622927	16,0-16,99	51,0	127,9	61,9	77,9	50,0	20,0	24,0
SD403-17.00/17.99-54-20R1	02622928	17,0-17,99	54,0	132,6	65,6	82,6	50,0	20,0	24,0
SD403-18.00/18.99-57-20R1	02622930	18,0-18,99	57,0	137,3	69,3	87,3	50,0	20,0	24,0
SD403-19.00/19.99-60-20R1	02622931	19,0-19,99	60,0	142,0	73,0	92,0	50,0	20,0	24,0

Accessories

For drill dia. (mm)	Key
	
12,00-12,99	SD400-K05
13,00-14,99	SD400-K06
15,00-16,99	SD400-K07
17,00-18,99	SD400-K08
19,00-19,99	SD400-K09

SD403 -R1

Drilling depth ~ 3 x D – Inch shank



- Cylindrical shank (R1) fits holders: 5834 and 5672
- Internal - through coolant
- For cutting data see page(s) 222

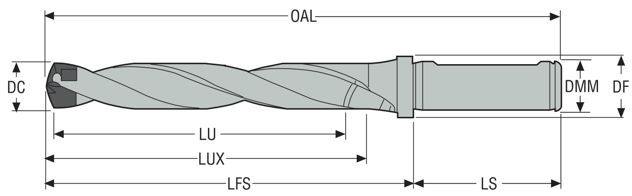
Designation	Item number	Max drilling depth	Drill dia. DC	DF	OAL	LC	LFS	LUX	DMM
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
SD403-12.00/12.49-38-0625R1	02623538	1.496	0.472-0.492	0.787	4.181	1.890	2.291	1.819	0.625
SD403-12.50/12.99-39-0625R1	02623539	1.535	0.492-0.511	0.787	4.252	1.890	2.362	1.870	0.625
SD403-13.00/13.99-42-0625R1	02623540	1.654	0.512-0.551	0.787	4.406	1.890	2.516	2.004	0.625
SD403-14.00/14.99-45-0625R1	02623541	1.772	0.551-0.590	0.787	4.587	1.890	2.697	2.146	0.625
SD403-15.00/15.99-48-0625R1	02623542	1.890	0.591-0.630	0.787	4.772	1.890	2.882	2.291	0.625
SD403-16.00/16.99-51-0750R1	02623543	2.008	0.630-0.669	0.945	5.035	1.969	3.067	2.437	0.750
SD403-17.00/17.99-54-0750R1	02623544	2.126	0.669-0.708	0.945	5.220	1.969	3.252	2.583	0.750
SD403-18.00/18.99-57-0750R1	02623545	2.244	0.709-0.748	0.945	5.406	1.969	3.437	2.728	0.750
SD403-19.00/19.99-60-0750R1	02623546	2.362	0.748-0.787	0.945	5.591	1.969	3.622	2.874	0.750

Spare parts

For drill dia. (inch)	Key
	
0.472-0.511	SD400-K05
0.512-0.590	SD400-K06
0.591-0.669	SD400-K07
0.669-0.748	SD400-K08
0.748-0.787	SD400-K09

SD405 – R7

Drilling depth ~ 5 x D – Metric shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 223

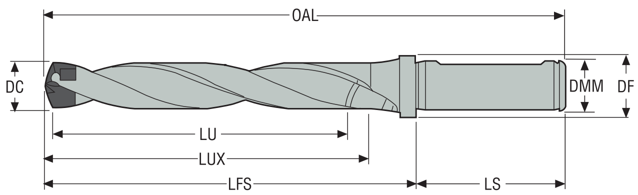
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm
SD405-12.00/12.49-63-16R7	02623554	12,0-12,49	63,0	131,2	71,2	83,2	48,0	16,0	20,0
SD405-12.50/12.99-65-16R7	02623555	12,5-12,99	65,0	134,0	73,5	86,0	48,0	16,0	20,0
SD405-13.00/13.99-70-16R7	02623556	13,0-13,99	70,0	139,9	78,9	91,9	48,0	16,0	20,0
SD405-14.00/14.99-75-16R7	02623557	14,0-14,99	75,0	146,5	84,5	98,5	48,0	16,0	20,0
SD405-15.00/15.99-80-16R7	02623558	15,0-15,99	80,0	153,2	90,2	105,2	48,0	16,0	20,0
SD405-16.00/16.99-85-20R7	02623559	16,0-16,99	85,0	161,9	95,9	111,9	50,0	20,0	24,0
SD405-17.00/17.99-90-20R7	02623560	17,0-17,99	90,0	168,6	101,6	118,6	50,0	20,0	24,0
SD405-18.00/18.99-95-20R7	02623561	18,0-18,99	95,0	175,3	107,3	125,3	50,0	20,0	24,0
SD405-19.00/19.99-100-20R7	02623562	19,0-19,99	100,0	182,0	113,0	132,0	50,0	20,0	24,0

Accessories

For drill dia. (mm)	Key
	
12,00-12,99	SD400-K05
13,00-14,99	SD400-K06
15,00-16,99	SD400-K07
17,00-18,99	SD400-K08
19,00-19,99	SD400-K09

SD405 -R7

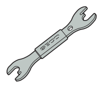
Drilling depth ~ 5 x D – Inch shank



- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- Internal - through coolant
- For cutting data see page(s) 223

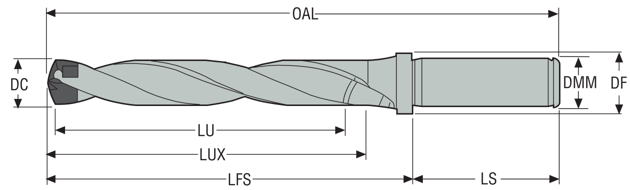
Designation	Item number	Max drilling depth	Drill dia. DC	DF	OAL	LC	LFS	LUX	DMM
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
SD405-12.00/12.49-63-0625R7	02623586	2.480	0.472-0.492	0.787	5.165	1.890	3.276	2.803	0.625
SD405-12.50/12.99-65-0625R7	02623587	2.559	0.492-0.511	0.787	5.276	1.890	3.386	2.894	0.625
SD405-13.00/13.99-70-0625R7	02623588	2.756	0.512-0.551	0.787	5.508	1.890	3.618	3.106	0.625
SD405-14.00/14.99-75-0625R7	02623589	2.953	0.551-0.590	0.787	5.768	1.890	3.878	3.327	0.625
SD405-15.00/15.99-80-0625R7	02623590	3.150	0.591-0.630	0.787	6.031	1.890	4.142	3.551	0.625
SD405-16.00/16.99-85-0750R7	02623591	3.346	0.630-0.669	0.945	6.374	1.969	4.406	3.776	0.750
SD405-17.00/17.99-90-0750R7	02623592	3.543	0.669-0.708	0.945	6.638	1.969	4.669	4.000	0.750
SD405-18.00/18.99-95-0750R7	02623593	3.740	0.709-0.748	0.945	6.902	1.969	4.933	4.224	0.750
SD405-19.00/19.99-100-0750R7	02623594	3.937	0.748-0.787	0.945	7.165	1.969	5.197	4.449	0.750

Spare parts

For drill dia. (inch)	Key
	
0.472-0.511	SD400-K05
0.512-0.590	SD400-K06
0.591-0.669	SD400-K07
0.669-0.748	SD400-K08
0.748-0.787	SD400-K09

SD405 – R1

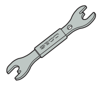
Drilling depth ~ 5 x D – Metric shank



- Internal coolant
- Cylindrical shank (R1) fits holders: 5834 and 5672
- For cutting data see page(s) 223

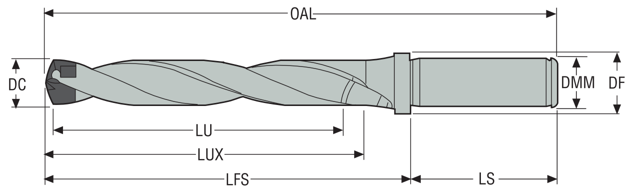
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm
SD405-12.00/12.49-63-16R1	02623570	12,0-12,49	63,0	131,2	71,2	83,2	48,0	16,0	20,0
SD405-12.50/12.99-65-16R1	02623571	12,5-12,99	65,0	134,0	73,5	86,0	48,0	16,0	20,0
SD405-13.00/13.99-70-16R1	02623572	13,0-13,99	70,0	139,9	78,9	91,9	48,0	16,0	20,0
SD405-14.00/14.99-75-16R1	02623573	14,0-14,99	75,0	146,5	84,5	98,5	48,0	16,0	20,0
SD405-15.00/15.99-80-16R1	02623574	15,0-15,99	80,0	153,2	90,2	105,2	48,0	16,0	20,0
SD405-16.00/16.99-85-20R1	02623575	16,0-16,99	85,0	161,9	95,9	111,9	50,0	20,0	24,0
SD405-17.00/17.99-90-20R1	02623576	17,0-17,99	90,0	168,6	101,6	118,6	50,0	20,0	24,0
SD405-18.00/18.99-95-20R1	02623577	18,0-18,99	95,0	175,3	107,3	125,3	50,0	20,0	24,0
SD405-19.00/19.99-100-20R1	02623578	19,0-19,99	100,0	182,0	113,0	132,0	50,0	20,0	24,0

Accessories

For drill dia. (mm)	Key
	
12,00-12,99	SD400-K05
13,00-14,99	SD400-K06
15,00-16,99	SD400-K07
17,00-18,99	SD400-K08
19,00-19,99	SD400-K09

SD405 -R1

Drilling depth ~ 5 x D – Inch shank



- Cylindrical shank (R1) fits holders: 5834 and 5672
- Internal - through coolant
- For cutting data see page(s) 223

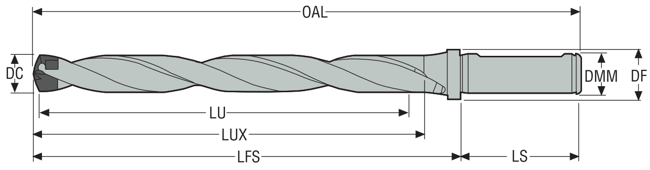
Designation	Item number	Max drilling depth	Drill dia. DC	DF	OAL	LC	LFS	LUX	DMM
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
SD405-12.00/12.49-63-0625R1	02623603	2.480	0.472-0.492	0.787	5.165	1.890	3.276	2.803	0.625
SD405-12.50/12.99-65-0625R1	02623604	2.559	0.492-0.511	0.787	5.276	1.890	3.386	2.894	0.625
SD405-13.00/13.99-70-0625R1	02623605	2.756	0.512-0.551	0.787	5.508	1.890	3.618	3.106	0.625
SD405-14.00/14.99-75-0625R1	02623606	2.953	0.551-0.590	0.787	5.768	1.890	3.878	3.327	0.625
SD405-15.00/15.99-80-0625R1	02623607	3.150	0.591-0.630	0.787	6.031	1.890	4.142	3.551	0.625
SD405-16.00/16.99-85-0750R1	02623608	3.346	0.630-0.669	0.945	6.374	1.969	4.406	3.776	0.750
SD405-17.00/17.99-90-0750R1	02623609	3.543	0.669-0.708	0.945	6.638	1.969	4.669	4.000	0.750
SD405-18.00/18.99-95-0750R1	02623610	3.740	0.709-0.748	0.945	6.902	1.969	4.933	4.224	0.750
SD405-19.00/19.99-100-0750R1	02623611	3.937	0.748-0.787	0.945	7.165	1.969	5.197	4.449	0.750

Spare parts

For drill dia. (inch)	Key
	
0.472-0.511	SD400-K05
0.512-0.590	SD400-K06
0.591-0.669	SD400-K07
0.669-0.748	SD400-K08
0.748-0.787	SD400-K09

SD408 – R7

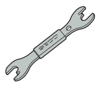
Drilling depth ~ 8 x D – Metric shank



- SD408 -R7 shank
- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 224

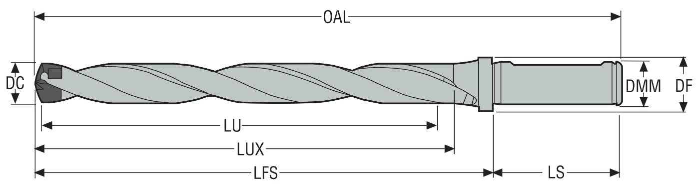
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm
SD408-12.00/12.49-100-16R7	02623615	12,0-12,49	100,0	168,2	108,2	120,2	48,0	16,0	20,0
SD408-12.50/12.99-104-16R7	02623616	12,5-12,99	104,0	173,0	112,5	125,0	48,0	16,0	20,0
SD408-13.00/13.99-112-16R7	02623617	13,0-13,99	112,0	181,9	120,9	133,9	48,0	16,0	20,0
SD408-14.00/14.99-120-16R7	02623618	14,0-14,99	120,0	191,5	129,5	143,5	48,0	16,0	20,0
SD408-15.00/15.99-128-16R7	02623619	15,0-15,99	128,0	201,2	138,2	153,2	48,0	16,0	20,0
SD408-16.00/16.99-136-20R7	02623620	16,0-16,99	136,0	212,9	146,9	162,9	50,0	20,0	24,0
SD408-17.00/17.99-144-20R7	02623621	17,0-17,99	144,0	222,6	155,6	172,6	50,0	20,0	24,0
SD408-18.00/18.99-152-20R7	02623622	18,0-18,99	152,0	232,3	164,3	182,3	50,0	20,0	24,0
SD408-19.00/19.99-160-20R7	02623623	19,0-19,99	160,0	242,0	173,0	192,0	50,0	20,0	24,0

Accessories

For drill dia. (mm)	Key
	
12,00-12,99	SD400-K05
13,00-14,99	SD400-K06
15,00-16,99	SD400-K07
17,00-18,99	SD400-K08
19,00-19,99	SD400-K09

SD408 -R7

Drilling depth ~ 8 x D – Inch shank



- ISO 9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- Internal - through coolant
- For cutting data see page(s) 224

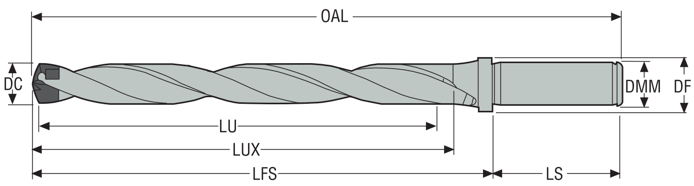
Designation	Item number	Max drilling depth	Drill dia. DC	DF	OAL	LC	LFS	LUX	DMM
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
SD408-12.00/12.49-100-0625R7	02623639	3.937	0.472-0.492	0.787	6.622	1.890	4.732	4.260	0.625
SD408-12.50/12.99-104-0625R7	02623640	4.094	0.492-0.511	0.787	6.811	1.890	4.921	4.429	0.625
SD408-13.00/13.99-112-0625R7	02623641	4.409	0.512-0.551	0.787	7.161	1.890	5.272	4.760	0.625
SD408-14.00/14.99-120-0625R7	02623642	4.724	0.551-0.590	0.787	7.539	1.890	5.650	5.098	0.625
SD408-15.00/15.99-128-0625R7	02623643	5.039	0.591-0.630	0.787	7.921	1.890	6.031	5.441	0.625
SD408-16.00/16.99-136-0750R7	02623644	5.354	0.630-0.669	0.945	8.382	1.969	6.413	5.783	0.750
SD408-17.00/17.99-144-0750R7	02623645	5.669	0.669-0.708	0.945	8.764	1.969	6.795	6.126	0.750
SD408-18.00/18.99-152-0750R7	02623646	5.984	0.709-0.748	0.945	9.146	1.969	7.177	6.469	0.750
SD408-19.00/19.99-160-0750R7	02623647	6.299	0.748-0.787	0.945	9.528	1.969	7.559	6.811	0.750

Spare parts

For drill dia. (inch)	Key
	
0.472-0.511	SD400-K05
0.512-0.590	SD400-K06
0.591-0.669	SD400-K07
0.669-0.748	SD400-K08
0.748-0.787	SD400-K09

SD408 – R1

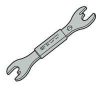
Drilling depth ~ 8 x D – Metric shank



- SD408 -R1 shank
- Internal coolant
- Cylindrical shank (R1) fits holders: 5834 and 5672
- For cutting data see page(s) 224

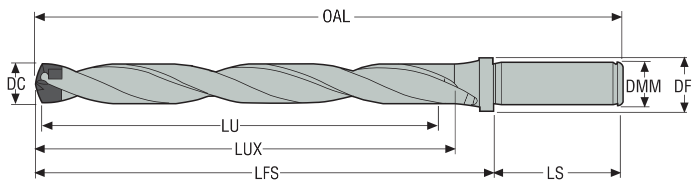
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm
SD408-12.00/12.49-100-16R1	02623627	12,0-12,49	100,0	168,2	108,2	120,2	48,0	16,0	20,0
SD408-12.50/12.99-104-16R1	02623628	12,5-12,99	104,0	173,0	112,5	125,0	48,0	16,0	20,0
SD408-13.00/13.99-112-16R1	02623629	13,0-13,99	112,0	181,9	120,9	133,9	48,0	16,0	20,0
SD408-14.00/14.99-120-16R1	02623630	14,0-14,99	120,0	191,5	129,5	143,5	48,0	16,0	20,0
SD408-15.00/15.99-128-16R1	02623631	15,0-15,99	128,0	201,2	138,2	153,2	48,0	16,0	20,0
SD408-16.00/16.99-136-20R1	02623632	16,0-16,99	136,0	212,9	146,9	162,9	50,0	20,0	24,0
SD408-17.00/17.99-144-20R1	02623633	17,0-17,99	144,0	222,6	155,6	172,6	50,0	20,0	24,0
SD408-18.00/18.99-152-20R1	02623634	18,0-18,99	152,0	232,3	164,3	182,3	50,0	20,0	24,0
SD408-19.00/19.99-160-20R1	02623635	19,0-19,99	160,0	242,0	173,0	192,0	50,0	20,0	24,0

Accessories

For drill dia. (mm)	Key
	
12,00-12,99	SD400-K05
13,00-14,99	SD400-K06
15,00-16,99	SD400-K07
17,00-18,99	SD400-K08
19,00-19,99	SD400-K09

SD408 -R1

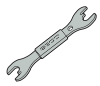
Drilling depth ~ 8 x D – Inch shank



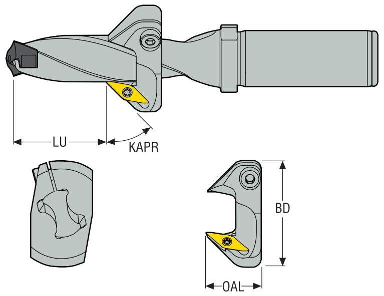
- Cylindrical shank (R1) fits holders: 5834 and 5672
- Internal - through coolant
- For cutting data see page(s) 224

Designation	Item number	Max drilling depth	Drill dia. DC	DF	OAL	LC	LFS	LUX	DMM
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
SD408-12.00/12.49-100-0625R1	02623651	3.937	0.472-0.492	0.787	6.622	1.890	4.732	4.260	0.625
SD408-12.50/12.99-104-0625R1	02623652	4.094	0.492-0.511	0.787	6.811	1.890	4.921	4.429	0.625
SD408-13.00/13.99-112-0625R1	02623653	4.409	0.512-0.551	0.787	7.161	1.890	5.272	4.760	0.625
SD408-14.00/14.99-120-0625R1	02623654	4.724	0.551-0.590	0.787	7.539	1.890	5.650	5.098	0.625
SD408-15.00/15.99-128-0625R1	02623655	5.039	0.591-0.630	0.787	7.921	1.890	6.031	5.441	0.625
SD408-16.00/16.99-136-0750R1	02623656	5.354	0.630-0.669	0.945	8.382	1.969	6.413	5.783	0.750
SD408-17.00/17.99-144-0750R1	02623657	5.669	0.669-0.708	0.945	8.764	1.969	6.795	6.126	0.750
SD408-18.00/18.99-152-0750R1	02623658	5.984	0.709-0.748	0.945	9.146	1.969	7.177	6.469	0.750
SD408-19.00/19.99-160-0750R1	02623659	6.299	0.748-0.787	0.945	9.528	1.969	7.559	6.811	0.750

Spare parts

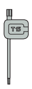
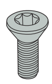
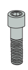
For drill dia. (inch)	Key
	
0.472-0.511	SD400-K05
0.512-0.590	SD400-K06
0.591-0.669	SD400-K07
0.669-0.748	SD400-K08
0.748-0.787	SD400-K09

Chamfer module

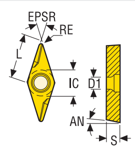


Designation	Item number	For drill body	Drill depth LU SD403 (min-max)		SD405 (min-max)		SD408 (min-max)		Max chamfer depth	OAL	BD	KAPR°
			mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	
SD400-C45-12.00/12.49	02846075	SD40x-12.00/12.49	6,0 *0.236*	22,0 *0.866*	6,0 *0.236*	47,0 *1.850*	47,0 *1.850*	84,0 *3.307*	1,5 *0.059*	20,0 *0.787*	34,0 *1.339*	45
SD400-C45-12.50/12.99	02846076	SD40x-12.50/12.99	7,0 *0.276*	23,0 *0.906*	7,0 *0.276*	48,0 *1.890*	48,0 *1.890*	88,0 *3.465*	1,5 *0.059*	20,0 *0.787*	34,0 *1.339*	45
SD400-C45-13.00/13.99	02846077	SD40x-13.00/13.99	7,0 *0.276*	27,0 *1.063*	7,0 *0.276*	55,0 *2.165*	55,0 *2.165*	97,0 *3.819*	1,5 *0.059*	20,0 *0.787*	34,0 *1.339*	45
SD400-C45-14.00/14.99	02846078	SD40x-14.00/14.99	7,0 *0.276*	33,0 *1.299*	7,0 *0.276*	60,0 *2.362*	60,0 *2.362*	105,0 *4.134*	1,5 *0.059*	20,0 *0.787*	36,0 *1.417*	45
SD400-C45-15.00/15.99	02846079	SD40x-15.00/15.99	8,0 *0.315*	35,0 *1.378*	8,0 *0.315*	67,0 *2.638*	67,0 *2.638*	114,0 *4.488*	1,5 *0.059*	20,0 *0.787*	36,0 *1.417*	45
SD400-C45-16.00/16.99	02846080	SD40x-16.00/16.99	8,0 *0.315*	38,0 *1.496*	8,0 *0.315*	72,0 *2.835*	72,0 *2.835*	123,0 *4.843*	1,5 *0.059*	20,0 *0.787*	38,0 *1.496*	45
SD400-C45-17.00/17.99	02846117	SD40x-17.00/17.99	9,0 *0.354*	43,0 *1.693*	9,0 *0.354*	79,0 *3.110*	79,0 *3.110*	132,0 *5.197*	1,5 *0.059*	20,0 *0.787*	38,0 *1.496*	45
SD400-C45-18.00/18.99	02846082	SD40x-18.00/18.99	9,0 *0.354*	45,0 *1.772*	9,0 *0.354*	83,0 *3.268*	83,0 *3.268*	140,0 *5.512*	1,5 *0.059*	20,0 *0.787*	40,0 *1.575*	45
SD400-C45-19.00/19.99	02846083	SD40x-19.00/19.99	10,0 *0.394*	49,0 *1.929*	10,0 *0.394*	89,0 *3.504*	89,0 *3.504*	149,0 *5.866*	1,5 *0.059*	20,0 *0.787*	40,0 *1.575*	45

Spare parts

For drill dia. (mm)	Insert key	Insert screw	Locking key	Locking key	Locking screw 1	Locking screw 2
						
SD400-C45...	T07P-2	C02505-T07P	2SMS795	3SMS795	MC6S4X8	P6SS4X8

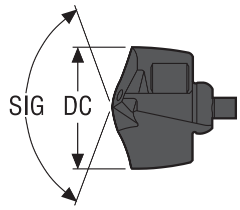
Insert



	Tolerances: mm/Inch	Size	IC mm/Inch	L mm/Inch	S mm/Inch	D1 mm/Inch	RE mm/Inch
	IC = ±0,025/0.0009842 S = ±0,07/0.0027559 RE = ±0,10/0.0039370	09	5,556/0.2187	9,0/0.2187	2,5/0.0984	2,9/0.1141	0,2/0.0078
		Grade: T400D					
		Designation: VCGX090202-D1					
		Item number: 00014948					

Crowns – Geometry -P and -M

Point angle: 140°



P-geometry for steel		M-geometry for stainless steels and high temp alloys		DC
Designation	Item number	Designation	Item number	mm *Inch*
SD400-12.00-P	02630908	SD400-12.00-M	02826210	12,0 *0.472*
SD400-12.10-P	02630910	–	–	12,1 *0.476*
SD400-12.20-P	02630911	–	–	12,2 *0.480*
SD400-12.30-P	02630912	SD400-12.30-M	02826211	12,3 *0.484*
SD400-12.41-P	02630913	SD400-12.41-M	02826212	12,41 *0.489*
SD400-12.50-P	02630915	SD400-12.50-M	02826213	12,5 *0.492*
SD400-12.60-P	02630916	–	–	12,6 *0.496*
SD400-12.70-P	02630917	SD400-12.70-M	02826214	12,7 *0.500*
SD400-12.80-P	02630918	SD400-12.80-M	02826215	12,8 *0.504*
SD400-12.90-P	02630919	SD400-12.90-M	02826216	12,9 *0.508*
SD400-13.00-P	02634577	SD400-13.00-M	02826217	13,0 *0.512*
SD400-13.10-P	02634578	SD400-13.10-M	02826218	13,1 *0.516*
SD400-13.20-P	02634579	–	–	13,2 *0.520*
SD400-13.30-P	02634580	SD400-13.30-M	02826219	13,3 *0.524*
SD400-13.50-P	02634581	SD400-13.50-M	02826220	13,5 *0.531*
SD400-13.70-P	02634582	SD400-13.70-M	02826221	13,7 *0.539*
SD400-13.80-P	02634583	SD400-13.80-M	02826222	13,8 *0.543*
SD400-13.89-P	02634584	SD400-13.89-M	02826223	13,89 *0.547*
SD400-14.00-P	02634589	SD400-14.00-M	02826224	14,0 *0.551*
SD400-14.10-P	02634590	–	–	14,1 *0.555*
SD400-14.20-P	02634591	SD400-14.20-M	02826225	14,2 *0.559*
SD400-14.288-P	02634592	SD400-14.288-M	02826226	14,288 *0.563*
SD400-14.40-P	02634593	–	–	14,4 *0.567*

P-geometry for steel		M-geometry for stainless steels and high temp alloys		DC
Designation	Item number	Designation	Item number	mm *Inch*
SD400-14.50-P	02634594	SD400-14.50-M	02826227	14,5 *0.571*
SD400-14.68-P	02634595	SD400-14.68-M	02826228	14,68 *0.578*
SD400-14.70-P	02634596	SD400-14.70-M	02826229	14,7 *0.579*
SD400-14.80-P	02634597	SD400-14.80-M	02826230	14,8 *0.583*
SD400-14.90-P	02634598	SD400-14.90-M	02826231	14,9 *0.587*
SD400-15.00-P	02634599	SD400-15.00-M	02826232	15,0 *0.591*
SD400-15.08-P	02634600	SD400-15.08-M	02826233	15,08 *0.594*
SD400-15.10-P	02634601	–	–	15,1 *0.594*
SD400-15.20-P	02634602	–	–	15,2 *0.598*
SD400-15.25-P	02634603	SD400-15.25-M	02826234	15,25 *0.600*
SD400-15.478-P	02634604	SD400-15.478-M	02826235	15,478 *0.609*
SD400-15.50-P	02634605	SD400-15.50-M	02826236	15,5 *0.610*
SD400-15.70-P	02634607	SD400-15.70-M	02826237	15,7 *0.618*
SD400-15.80-P	02634608	SD400-15.80-M	02826238	15,8 *0.622*
SD400-15.875-P	02634609	SD400-15.875-M	02826239	15,875 *0.625*
SD400-16.00-P	02635956	SD400-16.00-M	02826240	16,0 *0.630*
SD400-16.10-P	02635957	–	–	16,1 *0.634*
SD400-16.20-P	02635958	–	–	16,2 *0.638*
SD400-16.25-P	02635959	–	–	16,25 *0.640*
SD400-16.27-P	02635960	SD400-16.27-M	02826241	16,27 *0.641*
SD400-16.40-P	02635962	–	–	16,4 *0.646*
SD400-16.50-P	02635963	SD400-16.50-M	02826242	16,5 *0.650*
SD400-16.669-P	02635964	SD400-16.669-M	02826243	16,669 *0.656*
SD400-16.70-P	02635966	SD400-16.70-M	02826244	16,7 *0.657*
SD400-16.80-P	02635968	SD400-16.80-M	02826245	16,8 *0.661*
SD400-16.90-P	02635969	–	–	16,9 *0.665*
SD400-17.00-P	02635970	SD400-17.00-M	02826246	17,0 *0.669*
SD400-17.065-P	02635972	SD400-17.065-M	02826247	17,065 *0.672*
SD400-17.10-P	02635973	–	–	17,1 *0.673*
SD400-17.20-P	02635974	–	–	17,2 *0.677*
SD400-17.35-P	02888828	–	–	17,35 *0.683*

P-geometry for steel		M-geometry for stainless steels and high temp alloys		DC
Designation	Item number	Designation	Item number	mm *Inch*
SD400-17.463-P	02635975	SD400-17.463-M	02826248	17,463 *0.688*
SD400-17.50-P	02635976	SD400-17.50-M	02826249	17,5 *0.689*
SD400-17.70-P	02635977	SD400-17.70-M	02826250	17,7 *0.697*
SD400-17.80-P	02635978	SD400-17.80-M	02826251	17,8 *0.701*
SD400-17.859-P	02635979	SD400-17.859-M	02826252	17,859 *0.703*
SD400-17.90-P	02635980	SD400-17.90-M	02826253	17,9 *0.705*
SD400-18.00-P	02635981	SD400-18.00-M	02826254	18,0 *0.709*
SD400-18.10-P	02635982	–	–	18,1 *0.713*
SD400-18.20-P	02635983	–	–	18,2 *0.717*
SD400-18.256-P	02635984	SD400-18.256-M	02826255	18,256 *0.719*
SD400-18.50-P	02635985	SD400-18.50-M	02826256	18,5 *0.728*
SD400-18.653-P	02635986	SD400-18.653-M	02826257	18,653 *0.734*
SD400-18.70-P	02635987	SD400-18.70-M	02826258	18,7 *0.736*
SD400-18.80-P	02635988	SD400-18.80-M	02826259	18,8 *0.740*
SD400-18.90-P	02635989	SD400-18.90-M	02826260	18,9 *0.744*
SD400-19.00-P	02635991	SD400-19.00-M	02826261	19,0 *0.748*
SD400-19.05-P	02635992	SD400-19.05-M	02826262	19,05 *0.750*
SD400-19.10-P	02635993	–	–	19,1 *0.752*
SD400-19.20-P	02635995	SD400-19.20-M	02826263	19,2 *0.756*
–	–	SD400-19.25-M	02925410	19,25 *0.758*
SD400-19.447-P	02635997	SD400-19.447-M	02826264	19,447 *0.766*
SD400-19.50-P	02635998	SD400-19.50-M	02826265	19,5 *0.768*
SD400-19.70-P	02635999	SD400-19.70-M	02826266	19,7 *0.776*
SD400-19.80-P	02636000	SD400-19.80-M	02826267	19,8 *0.780*
SD400-19.844-P	02636001	SD400-19.844-M	02826268	19,844 *0.781*
SD400-19.90-P	02636002	SD400-19.90-M	02826269	19,9 *0.783*

Introduction Drilling Reaming Boring Annex

SD403 – Ø 12-20 / 0.472-0.787 in

SMG	Grade	f Ø12,00 Ø 0.472	Ø14,00 Ø 0.551	Ø16,00 Ø 0.630	Ø18,00 Ø 0.709	Ø20,00 Ø 0.787	v_c
P1	P	0,30 0.012	0,32 0.013	0,34 0.013	0,36 0.014	0,36 0.014	155 510
P2	P	0,30 0.012	0,32 0.013	0,34 0.013	0,36 0.014	0,38 0.015	150 490
P3	P	0,28 0.011	0,30 0.012	0,32 0.013	0,34 0.013	0,36 0.014	130 425
P4	P	0,28 0.011	0,30 0.012	0,32 0.013	0,34 0.013	0,34 0.013	115 375
P5	P	0,28 0.011	0,30 0.012	0,32 0.013	0,32 0.013	0,34 0.013	110 360
P6	P	0,28 0.011	0,30 0.012	0,30 0.012	0,32 0.013	0,34 0.013	120 395
P7	P	0,28 0.011	0,30 0.012	0,30 0.012	0,32 0.013	0,34 0.013	115 375
P8	P	0,28 0.011	0,30 0.012	0,32 0.013	0,34 0.013	0,36 0.014	110 360
P11	P	0,28 0.011	0,30 0.012	0,30 0.012	0,32 0.013	0,34 0.013	110 360
P12	P	0,19 0.0075	0,20 0.0080	0,22 0.0085	0,22 0.0085	0,24 0.0095	65 215
M1	M	0,17 0.0065	0,19 0.0075	0,20 0.0080	0,22 0.0085	0,22 0.0085	95 310
M2	M	0,16 0.0065	0,17 0.0065	0,18 0.0070	0,19 0.0075	0,20 0.0080	80 260
M3	M	0,13 0.0050	0,14 0.0055	0,14 0.0055	0,15 0.0060	0,16 0.0065	60 195
M4	M	0,11 0.0044	0,12 0.0048	0,13 0.0050	0,13 0.0050	0,14 0.0055	45 150
M5	M	0,11 0.0044	0,12 0.0048	0,13 0.0050	0,13 0.0050	0,14 0.0055	37 120
K1	P	0,28 0.011	0,30 0.012	0,32 0.013	0,34 0.013	0,36 0.014	110 360
K2	P	0,26 0.010	0,28 0.011	0,30 0.012	0,32 0.013	0,32 0.013	95 310
K3	P	0,26 0.010	0,28 0.011	0,30 0.012	0,32 0.013	0,32 0.013	80 260
K4	P	0,26 0.010	0,28 0.011	0,30 0.012	0,32 0.013	0,32 0.013	75 245
K5	P	0,24 0.0095	0,25 0.010	0,26 0.010	0,28 0.011	0,30 0.012	45 150
N2	M	0,26 0.010	0,28 0.011	0,30 0.012	0,32 0.013	0,34 0.013	215 710
N3	M	0,26 0.010	0,28 0.011	0,30 0.012	0,32 0.013	0,34 0.013	145 475
N11	M	0,26 0.010	0,28 0.011	0,30 0.012	0,32 0.013	0,34 0.013	170 560
S1	M	0,095 0.0038	0,11 0.0044	0,12 0.0048	0,13 0.0050	0,13 0.0050	34 110
S2	M	0,095 0.0038	0,11 0.0044	0,12 0.0048	0,13 0.0050	0,13 0.0050	24 80
S3	M	0,095 0.0038	0,11 0.0044	0,12 0.0048	0,13 0.0050	0,13 0.0050	24 80
S11	M	0,16 0.0065	0,17 0.0065	0,19 0.0075	0,20 0.0080	0,22 0.0085	65 215
S12	M	0,16 0.0065	0,17 0.0065	0,19 0.0075	0,20 0.0080	0,22 0.0085	49 160
S13	M	0,14 0.0055	0,15 0.0060	0,17 0.0065	0,18 0.0070	0,19 0.0075	38 125
H3	P	0,12 0.0048	0,13 0.0050	0,14 0.0055	0,15 0.0060	0,15 0.0060	32 105
H5	P	0,19 0.0075	0,20 0.0080	0,22 0.0085	0,22 0.0085	0,24 0.0095	60 195
H7	P	0,12 0.0048	0,13 0.0050	0,14 0.0055	0,15 0.0060	0,15 0.0060	32 105
H8	P	0,14 0.0055	0,15 0.0060	0,16 0.0065	0,17 0.0065	0,18 0.0070	60 195
H11	P	0,19 0.0075	0,20 0.0080	0,22 0.0085	0,22 0.0085	0,24 0.0095	75 245
H12	P	0,14 0.0055	0,15 0.0060	0,16 0.0065	0,17 0.0065	0,18 0.0070	39 130
H21	P	0,14 0.0055	0,15 0.0060	0,16 0.0065	0,17 0.0065	0,18 0.0070	60 195

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

SD405 – Ø 12-20 mm / 0.472-0.787 in

SMG	Grade	f					v_c
		Ø12,00 ***Ø 0.472***	Ø14,00 ***Ø 0.551***	Ø16,00 ***Ø 0.630***	Ø18,00 ***Ø 0.709***	Ø20,00 ***Ø 0.787***	
P1	P	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,36 *0.014*	125 *410*
P2	P	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	120 *395*
P3	P	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	105 *345*
P4	P	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	95 *310*
P5	P	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	0,34 *0.013*	90 *295*
P6	P	0,28 *0.011*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	100 *330*
P7	P	0,28 *0.011*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	95 *310*
P8	P	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	90 *295*
P11	P	0,28 *0.011*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	90 *295*
P12	P	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,24 *0.0095*	55 *180*
M1	M	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	80 *260*
M2	M	0,16 *0.0065*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	65 *215*
M3	M	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	49 *160*
M4	M	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,13 *0.0050*	0,14 *0.0055*	37 *120*
M5	M	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,13 *0.0050*	0,14 *0.0055*	31 *100*
K1	P	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	90 *295*
K2	P	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	75 *245*
K3	P	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	65 *215*
K4	P	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	60 *195*
K5	P	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	37 *120*
N2	M	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	175 *570*
N3	M	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	120 *395*
N11	M	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	140 *460*
S1	M	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,13 *0.0050*	28 *90*
S2	M	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,13 *0.0050*	20 *65*
S3	M	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,13 *0.0050*	20 *65*
S11	M	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	50 *165*
S12	M	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	40 *130*
S13	M	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	31 *100*
H3	P	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,15 *0.0060*	26 *85*
H5	P	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,24 *0.0095*	49 *160*
H7	P	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,15 *0.0060*	26 *85*
H8	P	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,18 *0.0070*	49 *160*
H11	P	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,24 *0.0095*	60 *195*
H12	P	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,18 *0.0070*	32 *105*
H21	P	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,18 *0.0070*	49 *160*

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

SD408 – Ø 12-20 mm / 0.472-0.787 in

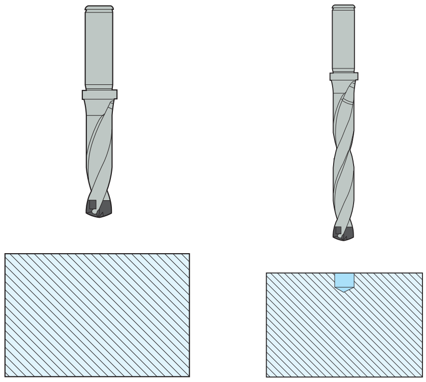
SMG	Grade	f					v_c
		Ø12,00 *Ø 0.472*	Ø14,00 *Ø 0.551*	Ø16,00 *Ø 0.630*	Ø18,00 *Ø 0.709*	Ø20,00 *Ø 0.787*	
P1	P	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,36 *0.014*	100 *330*
P2	P	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	0,38 *0.015*	100 *330*
P3	P	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	85 *280*
P4	P	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,34 *0.013*	75 *245*
P5	P	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	0,34 *0.013*	70 *230*
P6	P	0,28 *0.011*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	80 *260*
P7	P	0,28 *0.011*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	75 *245*
P8	P	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	70 *230*
P11	P	0,28 *0.011*	0,30 *0.012*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	75 *245*
P12	P	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,24 *0.0095*	43 *140*
M1	M	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	65 *215*
M2	M	0,16 *0.0065*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,20 *0.0080*	50 *165*
M3	M	0,13 *0.0050*	0,14 *0.0055*	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	39 *130*
M4	M	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,13 *0.0050*	0,14 *0.0055*	29 *95*
M5	M	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,13 *0.0050*	0,14 *0.0055*	24 *80*
K1	P	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	0,36 *0.014*	70 *230*
K2	P	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	60 *195*
K3	P	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	50 *165*
K4	P	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,32 *0.013*	49 *160*
K5	P	0,24 *0.0095*	0,25 *0.010*	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	29 *95*
N2	M	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	140 *460*
N3	M	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	95 *310*
N11	M	0,26 *0.010*	0,28 *0.011*	0,30 *0.012*	0,32 *0.013*	0,34 *0.013*	110 *360*
S1	M	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,13 *0.0050*	22 *70*
S2	M	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,13 *0.0050*	16 *50*
S3	M	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	0,13 *0.0050*	16 *50*
S11	M	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	42 *140*
S12	M	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	32 *105*
S13	M	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	25 *80*
H3	P	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,15 *0.0060*	21 *70*
H5	P	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,24 *0.0095*	39 *130*
H7	P	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,15 *0.0060*	21 *70*
H8	P	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,18 *0.0070*	39 *130*
H11	P	0,19 *0.0075*	0,20 *0.0080*	0,22 *0.0085*	0,22 *0.0085*	0,24 *0.0095*	49 *160*
H12	P	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,18 *0.0070*	26 *85*
H21	P	0,14 *0.0055*	0,15 *0.0060*	0,16 *0.0065*	0,17 *0.0065*	0,18 *0.0070*	39 *130*

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

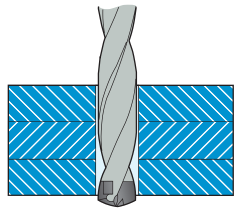
Application information

Application information

Machined suface
No pre-drilling or entrance feed needed when using SD403 and SD405.
When using a SD408 drill body pre-drilling is always recommended.
(When using SD405 in stainless steel a pre-drilling operation might be needed).



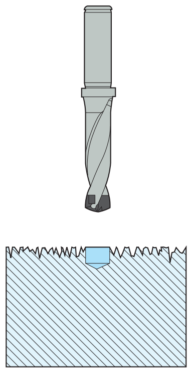
Stacked material
It is possible to drill stacked material as long as the pieces are securely clamped together, so that there are no air gaps between the parts. Air gaps can affect chip evacuation, and thereby damage the drill.



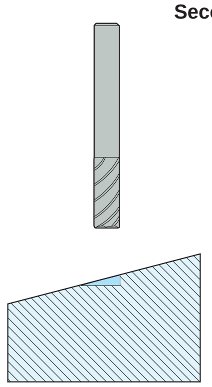
Irregular/Angled hole entrance

If irregular or angle entrance use pre operations accordingly.
When using drills >3 x D pre-drilling with a standard tool e.g. SD403 is recommended

Pre-drilling operation alternatives



Irregular hole entrance

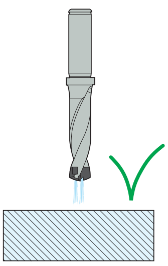


Angled hole entrance

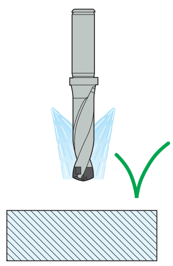
Machine a flat using an end mill from the Seco range.

Coolant recommendations

Coolant pressure
Minimum recommended coolant pressure 10 bar (145 PSI) with ≤3 x D
Minimum recommended coolant pressure 30 bar (435 PSI) with > 3 x D

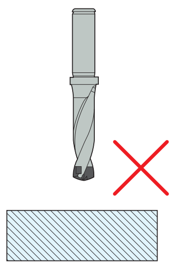


First choice



> 3 x D

Coolant mix
Recommended emulsion mix 6-8%.
When drilling in stainless steels, superalloys and high strength steels a mix of 10% is recommended

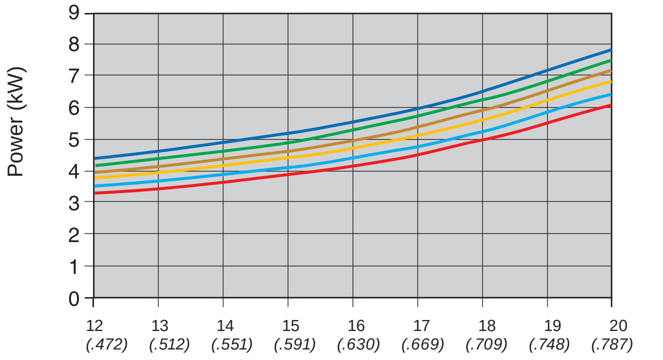


Machining data

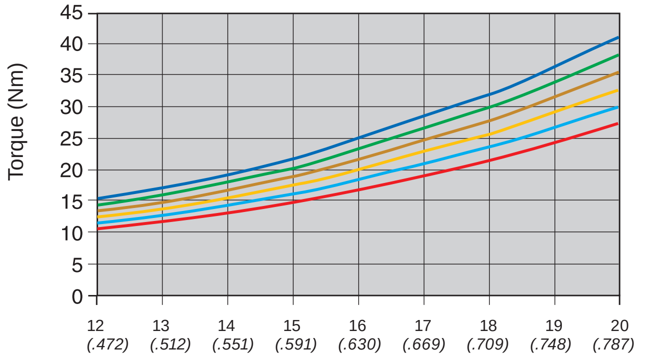
The values in the graphs vary with e.g. cutting data, material, efficiency of the machine and tool wear.

The graphs below are valid for Seco Material Group (SMG) P5-P6 and cutting speed 90 m/min (295 SFM).

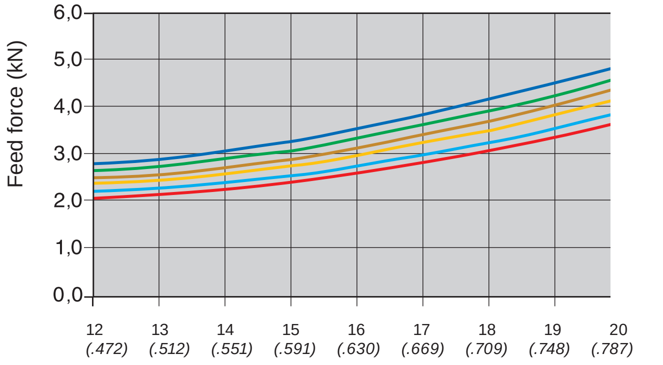
Net power consumption



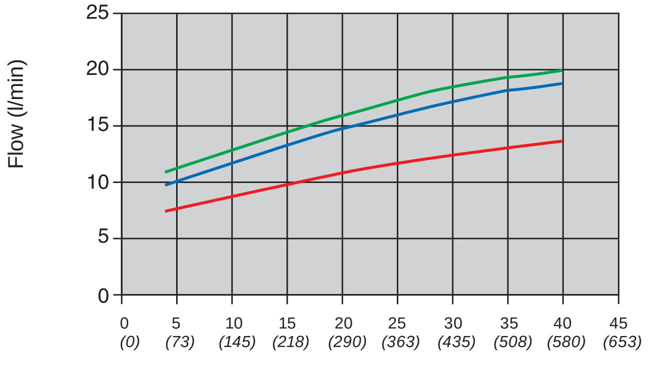
Drilling torque



Feed force



Coolant flow at different pressures



Hole tolerances/Surface finish

SD403, SD405 and SD408 IT9-10 / R_a 1-4 µm*, R_a 40-120 µin*		
Drill ∅ DC mm	**IT9 tolerance µm**	**IT10 tolerance µm**
10-18	0 - +43	0 - +70
18-30	0 - +52	0 - +84
Drill ∅ DC *(inch)*	**IT9 tolerance *(µin)***	**IT10 tolerance *(µin)***
0.394-0.709	*0 - +0.0017*	*0 - +0.0028*
0.709-1.181	*0 - +0.0020*	*0 - +0.0033*

*Deterioration of surface finish and hole tolerance can occur when drilling in low carbon steel or stainless steel.
Use the shortest drill possible for best hole quality.

Recommended coolant flow Dx1 l/min
Minimum coolant flow D/2 l/min
D = Drill diameter
Minimum recommended coolant pressure 10 bar (*145 PSI*) with ≤ 3 x D
Minimum recommended coolant pressure 20 bar (*290 PSI*) with ≤ 5 x D
Minimum recommended coolant pressure 40 bar (*580 PSI*) with > 5 x D

Coolant mix
Recommended emulsion mix is 6–8%.
When drilling in stainless steels, superalloys and high strength steels a mix of 10% is recommended.

Troubleshooting

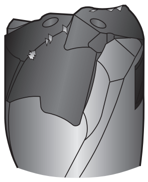
- Fixturing stability
- Machine spindle condition
- Tool holder condition

- Clamping of tool:
  - Run-out within 0,06 mm *(0.02")* TIR

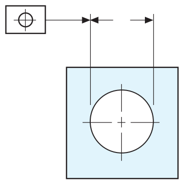
- Chip evacuation:
  - Cutting data

- Coolant:
  - Pressure
  - Flow
  - Concentration

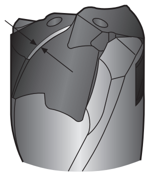
Cutting edges get chipped
- Reduce the feed/rev
- If the drill vibrates, reduce the cutting speed and increase the feed rate
- When drilling through rough, hard or angled surfaces, reduce the feed rate by 30%-50% during entrance and exit



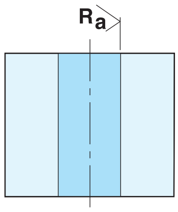
Unsatisfactory diameter tolerance
- Increase the feed/rev
- Use a Seco Feedmax solid carbide drill, see page(s) 18-21
- Use a reaming operation, see page(s) 325
- Use a boring operation, see pages 479-480



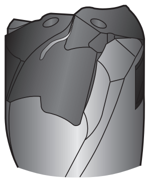
Too fast flank wear
- Check that correct geometry is used
- Reduce the cutting speed



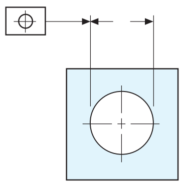
Unsatisfactory surface finish
- Reduce the feed/rev
- Increase the cutting speed
- Check that the correct geometry is used
- Use a Seco Feedmax solid carbide drill see Feedmax page(s) 18-21
- Use a boring operation, see pages 479-480



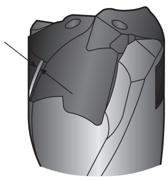
Groove wear
- Reduce the feed /rev
- Reduce the cutting speed
- Increase the coolant concentration



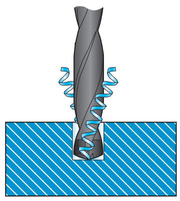
Unsatisfactory positioning of the hole
- Reduce the feed/rev
- If drilling through rough, hard and angled surface - reduce the feed by 30%-50% during entrance and exit
- Pre drill with a 140˚ point angle
- Use a Seco Feedmax solid carbide drill see Feedmax page(s) 18-21
- Use a boring operation, see pages 479-480



Wear of peripheral land margins
- Check that the correct geometry is used
- Reduce the cutting speed
- Increase the coolant concentration
- When drilling through rough, hard or angled surfaces, reduce the feed rate by 30%-50% during entrance and exit



Chip jamming due to long chips
- Increase the feed
- In long chipping materials SMG P1-P4, SMG M1-M2:
  - Increase cutting speed and reduce feed/rev



Introduction
Drilling
Reaming
Boring
Annex

Perfomax®

Perfomax® is a long-standing, proven range of indexable insert drills that offers an economical solution when it comes to productively drilling holes.

- Reliable and trustworthy, square inserts each offer four cutting edges.
- Most modern inserts grades and geometries for different workpiece materials
- The drill body design features a unique chip flute design and through coolant holes on all sizes to optimize chip evacuation.

Range overview

Perfomax®	∅ Range	Drill depth	Drill ∅ tolerance	Hole tolerance (1)
SD522  Page(s) 235	15-59 mm *(0.594-2.375")*	~ 2 x D	+/- 0,1 mm *(+/- 0.004")*	+0/+ 0,2 mm *(+ 0/+ 0.008")*
SD523  Page(s) 245	15-59 mm *(0,594-2.375")*	~ 3 x D	+/- 0,1 mm *(+/- 0.004")*	+0/+ 0,3 mm *(+ 0/+ 0.012")*
SD524  Page(s) 262	17-59 mm *(0,594-2.375")*	~ 4 x D	+/- 0,1 mm *(+/- 0.004")*	+/- 0,4 mm *(+ 0/+ 0.016")*
SD525  Page(s) 276	19-45 mm *(0,750-2.000")*	~ 5 x D	+/- 0,1 mm *(+/- 0.004")*	+0/+ 0,5 mm *(+ 0/+ 0.020")*
SD542  Page(s) 279	60-85 mm *(2.250-3.500")*	~ 2.5 x D	+/- 0,1 mm *(+/- 0.004")*	+0/+ 0,2 mm *(+0/+ 0.008")*

Range overview

Perfomax®	∅ Range	Drill depth	Drill ∅ tolerance	Hole tolerance (1)
SD572  Page(s) 281	15-47 mm *(0.591"-1.850")*	~ 2 x D	+/- 0,1 mm *(+/- 0.004")*	+0/+ 0,2 mm *(+0/+ 0.008")*
SD602  Page(s) 284	60-160 mm *(2.5"-4.000")*	~ 1-10 x D	+/- 0,2 mm *(+/- 0.008")*	–

Code keys – Indexable insert drill

Metric

Type of drill
SD542: 2,5 x D
SD572: 2 x D

Drill diameter

Shank diameter

Right hand rotation

SD522 - 20 - 60 - 25 - R 7

Type of drill
SD522: 2 x D
SD523: 3 x D
SD524: 4 x D
SD525: 5 x D

Drilling depth

Type of shank
2. ABS-compatible
7. ISO 9766
8. VDI-compatible
G. Graflex

Inch

Drill diameter

Shank diameter

Right hand rotation

Application
C. Stationary

SD522 - 0750 - 150 - 1000 R 7 - C

Type of drill
SD522: 2 x D
SD523: 3 x D
SD524: 4 x D
SD525: 5 x D
SD542: 2,5 x D
SD572: 2 x D

Drilling depth

Type of shank
2. ABS-compatible
7. ISO 9766
8. VDI-compatible
G. Graflex

Capto™

Drill diameter

Connection for Capto:
C4, C5, C6

SD523 - 20 - 60 - C5

Type of drill
SD523: 3 x D
SD524: 4 x D

Drilling depth

Introduction
Drilling
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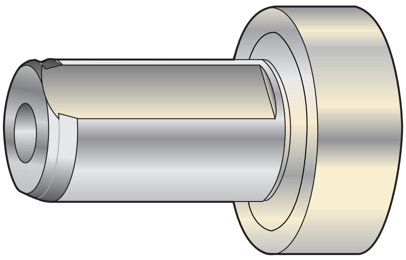
Shanks

Shanks

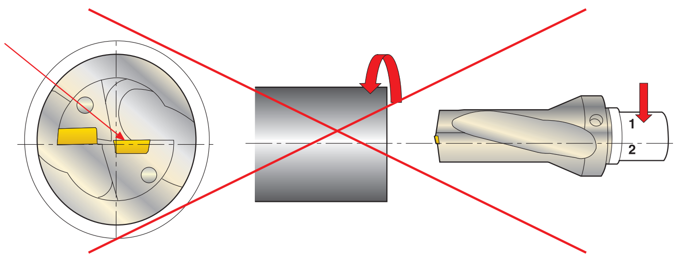
– R7



ISO 9766
Universal choice fits into most holders on the market such as:
- Weldon 1835B
- ISO 5414
- DIN 69880

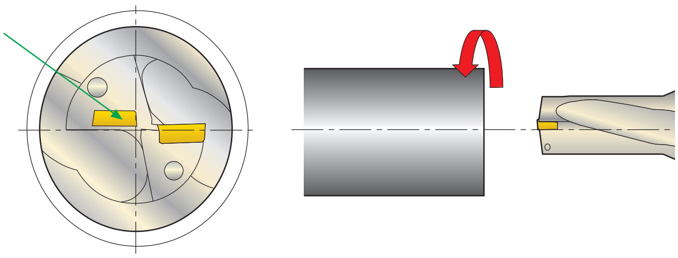
Coolant inlet at the back end of the drill

R7 & R7-C



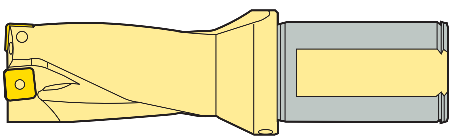
Shanks with two or four flats
Center insert cutting edge above workpiece center line

For non rotating applications:
- An additional flat is added to the shank for increased flexibility in lathe applications
- In such applications the workpiece center line and the drill center line must align.
- If they don't the center insert could be located above the workpiece center line resulting in poor performance of the drill



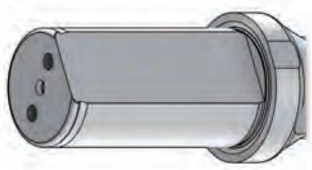
By turning the drill 180 degrees the second flat gives the possibility to compensate for this misalignment in a fast and simple way.

Shanks with four flats
Center insert cutting edge above workpiece center line



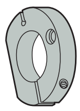
NOTE!
- If a drill with -7 shank is used in a rotating application together with our adjustable holder, the flat located on the same side as the center insert must be used.
- Otherwise the drill diameter will be positioned in the wrong way.

Shanks

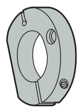
Seco-Capto	
	**Seco-Capto C4, C5, C6** ▪ Flexible - Same tool holder can easily be used in different machines ▪ Modular - Possibility to build tools with extension adapters ▪ High torque transmission - Torque load is spread symmetrically ▪ High rigidity - Tight press fit guarantees that there is no play in the coupling ▪ Accurate - Tapered polygon coupling produces a strong, self centering joint within 2 microns
Graflex	
	**- G** ▪ Fits directly into Graflex holders and locked with two ball headed locking screws placed at 120° ▪ Modular assemblies delivering rigidity and good run-out ▪ Cylinder/face connection - great accuracy ▪ Quick and easy assembling/disassembling of the modules for high flexibility ▪ Coolant inlet at the back end of the drill
ABS 50 (compartible)	
	**- 2** ▪ An ABS 50 Compatible shank ▪ Fits directly into ABS 50 holder with one locking screw ▪ Coolant inlet at the back end of the drill
VDI 30 an VDI 40 (compartible)	
	**- 8** ▪ VDI compatible shank ▪ Fits directly into holders for – VDI 3425 bl.2 – DIN 69880 **NOTE!** The coolant ring must be ordered separately

Shanks – Coolant ring

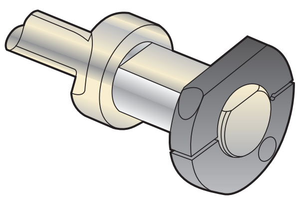
VDI 30

Drill depth	Drill diameter mm	Drill diameter *(inch)*	Accessoires Coolant ring SDA5-30R8
			
2 x D	15-31	*0.591-1.220*	SDA5-30R8
3 x D	15-31	*0.591-1.220*	SDA5-30R8
4 x D	17-31	*0.669-1.220*	SDA5-30R8
5 x D	19-31	*0.748-1.220*	SDA5-30R8

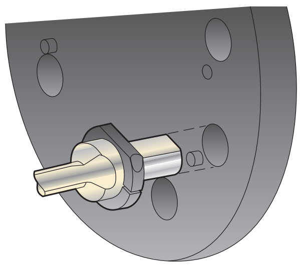
VDI 40

Drill depth	Drill diameter mm	Drill diameter *(inch)*	Blanking screw	Accessoires Coolant ring SDA5-40R8	Pflug
					
2 x D	15-40	*0.591-1.575*		SDA5-40R8	
3 x D	15-40	*0.591-1.575*		SDA5-40R8	
4 x D	17-31	*0.669-1.220*		SDA5-40R8	
5 x D	19-31	*0.748-1.220*		SDA5-40R8	
2 x D	41-59	*1.614-2.323*	R1/4"	SDA5-40R8	P6SS8x8
3 x D	41-59	*1.614-2.323*	R1/4"	SDA5-40R8	P6SS8x8

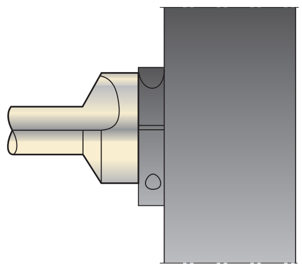
1. Fit the ring around the drill but do not tighten the locking screw



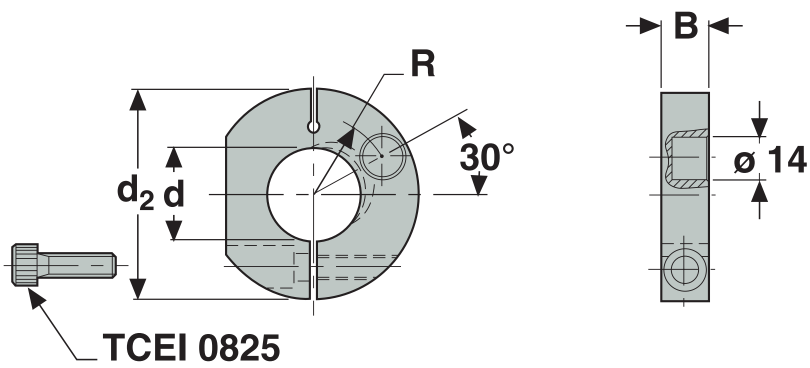
2. Lock the drill in the collet



3. Tighten the locking screw in the coolant ring

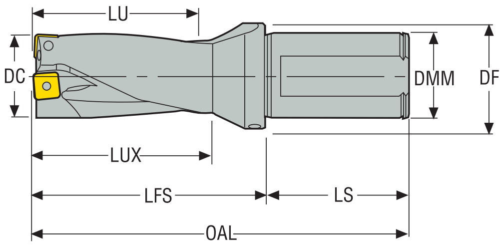


Coolant ring



SD522

Drilling depth ~ 2 X D – Metric



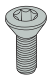
- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 300-301
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert	mm - Inch -	mm + Inch +
SD522-15-30-20R7	03080744	15,0 0.591	30,0 1.181	110,0 4.331	35,0 1.378	60,0 2.362	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0502	SCGX050204	0,22 0.009	0,31 0.012
SD522-15-30-25R7	03080745	15,0 0.591	30,0 1.181	116,0 4.567	35,0 1.378	60,0 2.362	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204	0,22 0.009	0,31 0.012
SD522-15.5-31-20R7	03080740	15,5 0.610	31,0 1.220	111,0 4.370	36,0 1.417	61,0 2.402	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0502	SCGX050204	0,17 0.007	0,36 0.014
SD522-15.5-31-25R7	03080741	15,5 0.610	31,0 1.220	117,0 4.606	36,0 1.417	61,0 2.402	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204	0,17 0.007	0,36 0.014
SD522-16-32-20R7	03080749	16,0 0.630	32,0 1.260	112,0 4.409	37,0 1.457	62,0 2.441	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0502	SCGX050204	0,12 0.005	0,41 0.016
SD522-16-32-25R7	03080750	16,0 0.630	32,0 1.260	118,0 4.646	37,0 1.457	62,0 2.441	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204	0,12 0.005	0,41 0.016
SD522-16.5-33-20R7	03080746	16,5 0.650	33,0 1.299	113,0 4.449	38,0 1.496	63,0 2.480	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0502	SCGX050204	0,07 0.003	0,46 0.018
SD522-16.5-33-25R7	03080747	16,5 0.650	33,0 1.299	119,0 4.685	38,0 1.496	63,0 2.480	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204	0,07 0.003	0,46 0.018
SD522-17-34-20R7	03080754	17,0 0.669	34,0 1.339	114,0 4.488	39,0 1.535	64,0 2.520	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0502	SCGX050204	0,02 0.001	0,5 0.020
SD522-17-34-25R7	03080755	17,0 0.669	34,0 1.339	120,0 4.724	39,0 1.535	64,0 2.520	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204	0,02 0.001	0,5 0.020
SD522-17.5-35-20R7	03080752	17,5 0.689	35,0 1.378	115,0 4.528	40,0 1.575	65,0 2.559	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0602	SCGX050204	0,43 0.017	0,1 0.004
SD522-17.5-35-25R7	03080753	17,5 0.689	35,0 1.378	121,0 4.764	40,0 1.575	65,0 2.559	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204	0,43 0.017	0,1 0.004
SD522-18-36-20R7	03080760	18,0 0.709	36,0 1.417	116,0 4.567	41,0 1.614	66,0 2.598	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0602	SCGX050204	0,32 0.013	0,21 0.008
SD522-18-36-25R7	03080761	18,0 0.709	36,0 1.417	122,0 4.803	41,0 1.614	66,0 2.598	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204	0,32 0.013	0,21 0.008
SD522-18.5-37-20R7	03080758	18,5 0.728	37,0 1.457	117,0 4.606	42,0 1.654	67,0 2.638	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0602	SCGX050204	0,22 0.009	0,31 0.012
SD522-18.5-37-25R7	03080759	18,5 0.728	37,0 1.457	123,0 4.843	42,0 1.654	67,0 2.638	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204	0,22 0.009	0,31 0.012
SD522-19-38-20R7	03080765	19,0 0.748	38,0 1.496	118,0 4.646	43,0 1.693	68,0 2.677	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0602	SCGX050204	0,11 0.004	0,42 0.017
SD522-19-38-25R7	03080766	19,0 0.748	38,0 1.496	124,0 4.882	43,0 1.693	68,0 2.677	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204	0,11 0.004	0,42 0.017
SD522-19.5-39-20R7	03080764	19,5 0.768	39,0 1.535	119,0 4.685	44,0 1.732	69,0 2.717	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0602	SCGX060204	0,11 0.004	0,42 0.017
SD522-20-40-25R7	03080771	20,0 0.787	40,0 1.575	126,0 4.961	45,0 1.772	70,0 2.756	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX060204	0,07 0.003	0,46 0.018
SD522-21-42-25R7	03080775	21,0 0.827	42,0 1.654	128,0 5.039	47,0 1.850	72,0 2.835	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX060204	0,01 0.000	0,5 0.020

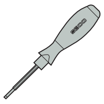
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert	mm - Inch -	mm + Inch +
SD522-22-44-25R7	03080777	22,0 0.866	44,0 1.732	130,0 5.118	49,0 1.929	74,0 2.913	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX060204	0,44 0.017	0,46 0.018
SD522-23-46-25R7	03080781	23,0 0.906	46,0 1.811	132,0 5.197	51,0 2.008	76,0 2.992	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,33 0.013	0,5 0.020
SD522-23.5-47-25R7	03192517	23,5 0.925	47,0 1.850	133,0 5.236	52,0 2.047	77,0 3.031	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,23 0.009	0,5 0.020
SD522-24-48-25R7	03080785	24,0 0.945	48,0 1.890	134,0 5.276	53,0 2.087	78,0 3.071	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD522-25-50-32R7	03080788	25,0 0.984	50,0 1.969	140,0 5.512	55,0 2.165	80,0 3.150	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD522-26-52-32R7	03080790	26,0 1.024	52,0 2.047	142,0 5.591	57,0 2.244	82,0 3.228	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,5 0.020	0,11 0.004
SD522-27-54-32R7	03080792	27,0 1.063	54,0 2.126	144,0 5.669	59,0 2.323	84,0 3.307	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,5 0.020	0,26 0.010
SD522-28-56-32R7	03080795	28,0 1.102	56,0 2.205	146,0 5.748	61,0 2.402	86,0 3.386	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,28 0.011	0,5 0.020
SD522-29-58-32R7	03080796	29,0 1.142	58,0 2.283	148,0 5.827	63,0 2.480	88,0 3.465	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,18 0.007	0,5 0.020
SD522-30-60-32R7	03080798	30,0 1.181	60,0 2.362	150,0 5.906	65,0 2.559	90,0 3.543	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD522-31-62-32R7	03080801	31,0 1.220	62,0 2.441	152,0 5.984	67,0 2.638	92,0 3.622	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD522-32-64-32R7	03080802	32,0 1.260	64,0 2.520	154,0 6.063	69,0 2.717	94,0 3.701	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX09T308	0,5 0.020	0,31 0.012
SD522-32-64-40R7	03080803	32,0 1.260	64,0 2.520	162,0 6.378	69,0 2.717	94,0 3.701	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,31 0.012
SD522-33-66-32R7	03080805	33,0 1.299	66,0 2.598	156,0 6.142	71,0 2.795	96,0 3.780	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX09T308	0,5 0.020	0,46 0.018
SD522-33-66-40R7	03080806	33,0 1.299	66,0 2.598	164,0 6.457	71,0 2.795	96,0 3.780	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,46 0.018
SD522-34-68-32R7	03080808	34,0 1.339	68,0 2.677	158,0 6.220	73,0 2.874	98,0 3.858	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX09T308	0,22 0.009	0,5 0.020
SD522-34-68-40R7	03080809	34,0 1.339	68,0 2.677	166,0 6.535	73,0 2.874	98,0 3.858	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308	0,22 0.009	0,5 0.020
SD522-35-70-32R7	03080810	35,0 1.378	70,0 2.756	160,0 6.299	75,0 2.953	100,0 3.937	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX11T308	0,22 0.009	0,5 0.020
SD522-35-70-40R7	03080811	35,0 1.378	70,0 2.756	168,0 6.614	75,0 2.953	100,0 3.937	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308	0,22 0.009	0,5 0.020
SD522-36-72-32R7	03080813	36,0 1.417	72,0 2.835	162,0 6.378	77,0 3.031	102,0 4.016	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD522-36-72-40R7	03080814	36,0 1.417	72,0 2.835	170,0 6.693	77,0 3.031	102,0 4.016	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD522-37-74-32R7	03080816	37,0 1.457	74,0 2.913	164,0 6.457	79,0 3.110	104,0 4.094	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD522-37-74-40R7	03080817	37,0 1.457	74,0 2.913	172,0 6.772	79,0 3.110	104,0 4.094	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD522-38-76-32R7	03080818	38,0 1.496	76,0 2.992	166,0 6.535	81,0 3.189	106,0 4.173	60,0 2.362	32,0 1.260	42,0 1.654	SPGX12T3	SCGX11T308	0,5 0.020	0,5 0.020
SD522-38-76-40R7	03080819	38,0 1.496	76,0 2.992	174,0 6.850	81,0 3.189	106,0 4.173	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX11T308	0,5 0.020	0,5 0.020
SD522-39-78-32R7	03080821	39,0 1.535	78,0 3.071	168,0 6.614	83,0 3.268	108,0 4.252	60,0 2.362	32,0 1.260	42,0 1.654	SPGX12T3	SCGX11T308	0,39 0.015	0,5 0.020
SD522-39-78-40R7	03080822	39,0 1.535	78,0 3.071	176,0 6.929	83,0 3.268	108,0 4.252	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX11T308	0,39 0.015	0,5 0.020
SD522-40-80-32R7	03080823	40,0 1.575	80,0 3.150	170,0 6.693	85,0 3.346	110,0 4.331	60,0 2.362	32,0 1.260	50,0 1.969	SPGX12T3	SCGX11T308	0,19 0.007	0,5 0.020
SD522-40-80-40R7	03080824	40,0 1.575	80,0 3.150	178,0 7.008	85,0 3.346	110,0 4.331	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX11T308	0,19 0.007	0,5 0.020
SD522-41-82-40R7	03080826	41,0 1.614	82,0 3.228	180,0 7.087	87,0 3.425	112,0 4.409	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX120408	0,19 0.007	0,5 0.020
SD522-42-84-40R7	03080828	42,0 1.654	84,0 3.307	182,0 7.165	89,0 3.504	114,0 4.488	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX120408	0,19 0.007	0,5 0.020

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert	mm - *Inch -*	mm + *Inch +*
SD522-43-86-40R7	03080830	43,0 *1.693*	86,0 *3.386*	184,0 *7.244*	91,0 *3.583*	116,0 *4.567*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX120408	0,05 *0.002*	0,5 *0.020*
SD522-44-88-40R7	03080832	44,0 *1.732*	88,0 *3.465*	186,0 *7.323*	93,0 *3.661*	118,0 *4.646*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX120408	0,5 *0.020*	0,41 *0.016*
SD522-45-90-40R7	03080834	45,0 *1.772*	90,0 *3.543*	188,0 *7.402*	95,0 *3.740*	120,0 *4.724*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX150512	0,5 *0.020*	0,41 *0.016*
SD522-46-92-40R7	03080835	46,0 *1.811*	92,0 *3.622*	190,0 *7.480*	97,0 *3.819*	122,0 *4.803*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX150512	0,5 *0.020*	0,5 *0.020*
SD522-47-94-40R7	03080836	47,0 *1.850*	94,0 *3.701*	192,0 *7.559*	99,0 *3.898*	124,0 *4.882*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX150512	0,5 *0.020*	0,5 *0.020*
SD522-48-96-40R7	03080837	48,0 *1.890*	96,0 *3.780*	194,0 *7.638*	101,0 *3.976*	126,0 *4.961*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1504	SCGX150512	0,45 *0.018*	0,5 *0.020*
SD522-49-98-40R7	03080838	49,0 *1.929*	98,0 *3.858*	196,0 *7.717*	103,0 *4.055*	128,0 *5.039*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1504	SCGX150512	0,2 *0.008*	0,5 *0.020*
SD522-50-100-40R7	03080839	50,0 *1.969*	100,0 *3.937*	198,0 *7.795*	105,0 *4.134*	130,0 *5.118*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1504	SCGX150512	0,2 *0.008*	0,5 *0.020*
SD522-51-102-40R7	03080840	51,0 *2.008*	102,0 *4.016*	200,0 *7.874*	107,0 *4.213*	132,0 *5.197*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1504	SCGX150512	0,2 *0.008*	0,5 *0.020*
SD522-52-104-40R7	03080841	52,0 *2.047*	104,0 *4.094*	202,0 *7.953*	109,0 *4.291*	134,0 *5.276*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512	0,5 *0.020*	0,42 *0.017*
SD522-53-106-40R7	03080842	53,0 *2.087*	106,0 *4.173*	204,0 *8.031*	111,0 *4.370*	136,0 *5.354*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512	0,5 *0.020*	0,42 *0.017*
SD522-54-108-40R7	03080843	54,0 *2.126*	108,0 *4.252*	206,0 *8.110*	113,0 *4.449*	138,0 *5.433*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512	0,5 *0.020*	0,5 *0.020*
SD522-55-110-40R7	03080844	55,0 *2.165*	110,0 *4.331*	208,0 *8.189*	115,0 *4.528*	140,0 *5.512*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512	0,5 *0.020*	0,5 *0.020*
SD522-56-112-40R7	03080845	56,0 *2.205*	112,0 *4.409*	210,0 *8.268*	117,0 *4.606*	142,0 *5.591*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512	0,5 *0.020*	0,5 *0.020*
SD522-57-114-40R7	03080846	57,0 *2.244*	114,0 *4.488*	212,0 *8.346*	119,0 *4.685*	144,0 *5.669*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512	0,39 *0.015*	0,5 *0.020*
SD522-58-116-40R7	03080847	58,0 *2.283*	116,0 *4.567*	214,0 *8.425*	121,0 *4.764*	146,0 *5.748*	68,0 *2.677*	40,0 *1.575*	63,0 *2.480*	SPGX1904	SCGX150512	0,09 *0.004*	0,5 *0.020*
SD522-59-118-40R7	03080848	59,0 *2.323*	118,0 *4.646*	216,0 *8.504*	123,0 *4.843*	148,0 *5.827*	68,0 *2.677*	40,0 *1.575*	63,0 *2.480*	SPGX1904	SCGX150512	0,09 *0.004*	0,5 *0.020*

Spare parts

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

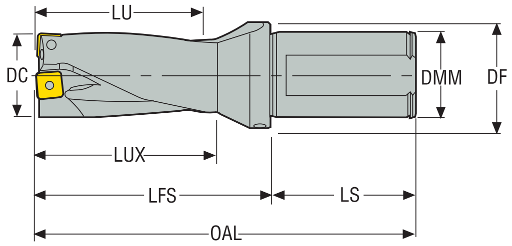
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD522

Drilling depth ~ 2 X D – Inch

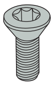
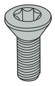
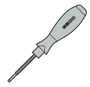


- ISO 9766 shank, R7
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 300, 301
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Center insert	Periph insert	Inch -	Inch +
SD522-0594-119-1000R7	03080704	0.594	1.190	4.621	1.387	2.371	2.250	1.000	1.378	SPGX0502	SCGX050204	0.008	0.013
SD522-0625-125-1000R7	03080705	0.625	1.250	4.681	1.447	2.431	2.250	1.000	1.378	SPGX0502	SCGX050204	0.005	0.015
SD522-0656-131-1000R7	03080707	0.656	1.310	4.741	1.507	2.491	2.250	1.000	1.378	SPGX0502	SCGX050204	0.002	0.019
SD522-0687-137-1000R7	03080709	0.687	1.370	4.801	1.567	2.551	2.250	1.000	1.378	SPGX0502	SCGX050204	–	0.020
SD522-0709-142-1000R7	03080710	0.709	1.420	4.851	1.617	2.601	2.250	1.000	1.378	SPGX0602	SCGX050204	0.013	0.008
SD522-0750-150-1000R7	03080712	0.750	1.500	4.931	1.697	2.681	2.250	1.000	1.378	SPGX0602	SCGX050204	0.004	0.017
SD522-0766-153-1000R7	03080713	0.766	1.530	4.961	1.727	2.711	2.250	1.000	1.378	SPGX0602	SCGX050204	0.001	0.020
SD522-0787-157-1000R7	03080714	0.787	1.570	5.001	1.767	2.751	2.250	1.000	1.378	SPGX0602	SCGX060204	0.003	0.018
SD522-0812-162-1000R7	03080715	0.812	1.620	5.051	1.817	2.801	2.250	1.000	1.378	SPGX0602	SCGX060204	0.001	0.020
SD522-0827-165-1000R7	03080717	0.827	1.650	5.081	1.847	2.831	2.250	1.000	1.378	SPGX0602	SCGX060204	0.000	0.020
SD522-0875-175-1000R7	03080718	0.875	1.750	5.181	1.947	2.931	2.250	1.000	1.378	SPGX0703	SCGX060204	0.015	0.020
SD522-0906-181-1000R7	03080720	0.906	1.810	5.241	2.007	2.991	2.250	1.000	1.378	SPGX0703	SCGX070308	0.013	0.020
SD522-0922-184-1000R7	03080721	0.922	1.840	5.271	2.037	3.021	2.250	1.000	1.378	SPGX0703	SCGX070308	0.010	0.020
SD522-0937-187-1000R7	03080722	0.937	1.870	5.301	2.067	3.051	2.250	1.000	1.378	SPGX0703	SCGX070308	0.004	0.020
SD522-0984-197-1250R7	03080724	0.984	1.970	5.526	2.167	3.151	2.375	1.250	1.654	SPGX0703	SCGX070308	0.004	0.020
SD522-1000-200-1250R7	03080725	1.000	2.000	5.556	2.197	3.181	2.375	1.250	1.654	SPGX0703	SCGX070308	0.004	0.020
SD522-1032-206-1250R7	03080727	1.032	2.060	5.616	2.257	3.241	2.375	1.250	1.654	SPGX0903	SCGX070308	0.020	0.004
SD522-1062-212-1250R7	03080728	1.062	2.120	5.676	2.317	3.301	2.375	1.250	1.654	SPGX0903	SCGX070308	0.020	0.010
SD522-1125-225-1250R7	03080730	1.125	2.250	5.806	2.447	3.431	2.375	1.250	1.654	SPGX0903	SCGX09T308	0.008	0.020
SD522-1187-237-1250R7	03080732	1.187	2.370	5.926	2.567	3.551	2.375	1.250	1.654	SPGX0903	SCGX09T308	0.005	0.020
SD522-1250-250-1500R7	03080735	1.250	2.500	6.306	2.697	3.681	2.625	1.500	1.969	SPGX11T3	SCGX09T308	0.020	0.011
SD522-1312-262-1500R7	03080736	1.312	2.620	6.426	2.817	3.801	2.625	1.500	1.969	SPGX11T3	SCGX09T308	0.020	0.020
SD522-1375-275-1500R7	03080737	1.375	2.750	6.556	2.947	3.931	2.625	1.500	1.969	SPGX11T3	SCGX11T308	0.009	0.020
SD522-1437-287-1500R7	03080739	1.437	2.870	6.676	3.067	4.051	2.625	1.500	1.969	SPGX11T3	SCGX11T308	0.004	0.020
SD522-1500-300-1500R7	03080743	1.500	3.000	6.806	3.197	4.181	2.625	1.500	1.969	SPGX12T3	SCGX11T308	0.020	0.020
SD522-1625-325-1500R7	03080748	1.625	3.250	7.056	3.447	4.431	2.625	1.500	1.969	SPGX12T3	SCGX120408	0.007	0.020
SD522-1750-350-1500R7	03080756	1.750	3.500	7.306	3.697	4.681	2.625	1.500	1.969	SPGX1504	SCGX120408	0.020	0.016
SD522-1875-375-1500R7	03080763	1.875	3.750	7.556	3.947	4.931	2.625	1.500	1.969	SPGX1504	SCGX150512	0.020	0.020
SD522-2000-400-1500R7	03080769	2.000	4.000	7.806	4.197	5.181	2.625	1.500	2.337	SPGX1504	SCGX150512	0.008	0.020
SD522-2125-425-1500R7	03080773	2.125	4.250	8.056	4.447	5.431	2.625	1.500	2.337	SPGX1904	SCGX150512	0.020	0.020
SD522-2250-450-1500R7	03080779	2.250	4.500	8.306	4.697	5.681	2.625	1.500	2.337	SPGX1904	SCGX150512	0.013	0.020
SD522-2375-475-1500R7	03080783	2.375	4.750	8.556	4.947	5.931	2.625	1.500	2.480	SPGX1904	SCGX150512	0.004	0.020

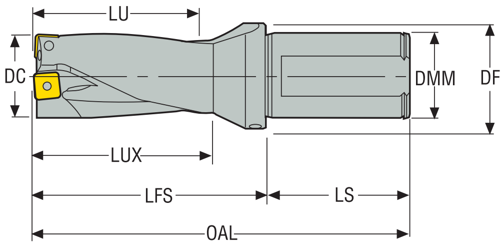
Introduction
Drilling
Reaming
Boring
Annex

Spare Parts / Accessories

For drill dia. (inch)	Insert screw centre	Insert screw periph	Key	Torque wrench
				
0.594-0.687	C02245-T07P	–	T07P-2	T00-07P09
0.709-0.766	C02205-T07P	C02245-T07P	T07P-2	T00-07P09
0.787	–	C02205-T07P	T07P-2	T00-07P09
0.812-0.827	C02205-T07P	–	T07P-2	T00-07P09
0.875	C02506-T08P	–	T08P-2	T00-08P12
0.906-1.000	C02507-T08P	C03007-T08P	T08P-2	T00-08P12
1.032-1.062	C03007-T09P	–	T09P-2	T00-09P20
1.125-1.187	C03007-T09P	C03009-T09P	T09P-2	T00-09P20
1.250-1.500	C03508-T15P	–	T15P-2D	T00-15P30
1.625	C03508-T15P	C05012-T15P	T15P-2D	T00-15P30
1.750-2.375	C04011-T15P	C05012-T15P	T15P-2D	T00-15P35

SD522

Drilling depth ~ 2 X D – *Inch*



- ISO 9766 shank, R7-C
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 300-301
- For intermediate diameters see the MyDesign software.
- For stationary applications

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		Inch	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	Center insert	Periph insert	*Inch -*	*Inch +*
SD522-0625-125-1000R7-C	03080706	0.625	1.250	5.378	1.447	2.628	2.750	1.000	1.378	SPGX0502	SCGX050204	0.005	0.015
SD522-0687-137-1000R7-C	03080708	0.687	1.370	5.498	1.567	2.748	2.750	1.000	1.378	SPGX0502	SCGX050204	–	0.020
SD522-0750-150-1000R7-C	03080711	0.750	1.500	5.628	1.697	2.878	2.750	1.000	1.378	SPGX0602	SCGX050204	0.004	0.017
SD522-0812-162-1000R7-C	03080716	0.812	1.620	5.748	1.817	2.998	2.750	1.000	1.378	SPGX0602	SCGX060204	0.001	0.020
SD522-0875-175-1000R7-C	03080719	0.875	1.750	5.878	1.947	3.128	2.750	1.000	1.378	SPGX0703	SCGX060204	0.015	0.020
SD522-0937-187-1000R7-C	03080723	0.937	1.870	5.998	2.067	3.248	2.750	1.000	1.378	SPGX0703	SCGX070308	0.004	0.020
SD522-1000-200-1250R7-C	03080726	1.000	2.000	6.128	2.197	3.378	2.750	1.250	1.654	SPGX0703	SCGX070308	0.004	0.020
SD522-1062-212-1250R7-C	03080729	1.062	2.120	6.248	2.317	3.498	2.750	1.250	1.654	SPGX0903	SCGX070308	0.020	0.010
SD522-1125-225-1250R7-C	03080731	1.125	2.250	6.378	2.447	3.628	2.750	1.250	1.654	SPGX0903	SCGX09T308	0.008	0.020
SD522-1187-237-1250R7-C	03080733	1.187	2.370	6.498	2.567	3.748	2.750	1.250	1.654	SPGX0903	SCGX09T308	0.005	0.020
SD522-1250-250-1500R7-C	03080734	1.250	2.500	6.628	2.697	3.878	2.750	1.500	1.969	SPGX11T3	SCGX09T308	0.020	0.011
SD522-1375-275-1500R7-C	03080738	1.375	2.750	6.878	2.947	4.128	2.750	1.500	1.969	SPGX11T3	SCGX11T308	0.009	0.020
SD522-1500-300-1500R7-C	03080742	1.500	3.000	7.128	3.197	4.378	2.750	1.500	1.969	SPGX12T3	SCGX11T308	0.020	0.020
SD522-1750-350-1500R7-C	03080757	1.750	3.500	7.628	3.697	4.878	2.750	1.500	1.969	SPGX1504	SCGX120408	0.020	0.016
SD522-2000-400-1500R7-C	03080770	2.000	4.000	8.128	4.197	5.378	2.750	1.500	2.337	SPGX1504	SCGX150512	0.008	0.020
SD522-2125-425-1500R7-C	03080774	2.125	4.250	8.378	4.447	5.628	2.750	1.500	2.337	SPGX1904	SCGX150512	0.020	0.020
SD522-2250-450-1500R7-C	03080780	2.250	4.500	8.628	4.697	5.878	2.750	1.500	2.337	SPGX1904	SCGX150512	0.013	0.020
SD522-2375-475-1500R7-C	03080784	2.375	4.750	8.878	4.947	6.128	2.750	1.500	2.480	SPGX1904	SCGX150512	0.004	0.020

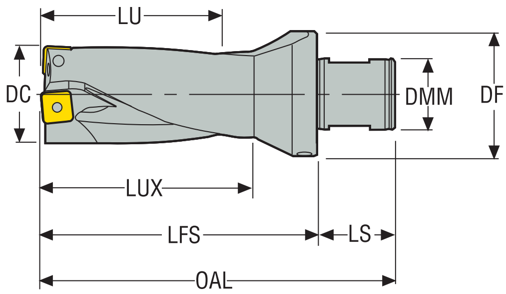
Spare Parts

Accessories

For drill dia. (inch)	Hose adapter	Insert screw centre	Insert screw periph	Key	Plug	Torque wrench
0.625	1310	–	C02245-T07P	T07P-2	R1/4	T00-07P09
0.687	1310	C02245-T07P	–	T07P-2	R1/4	T00-07P09
0.750	1310	C02205-T07P	C02245-T07P	T07P-2	R1/4	T00-07P09
0.812	1310	C02205-T07P	–	T07P-2	R1/4	T00-07P09
0.875	1310	C02506-T08P	–	T08P-2	R1/4	T00-08P12
0.937-1.000	1310	C02507-T08P	C03007-T08P	T08P-2	R1/4	T00-08P12
1.062	1310	C03007-T09P	–	T09P-2	R1/4	T00-09P20
1.125-1.187	1310	C03007-T09P	C03009-T09P	T09P-2	R1/4	T00-09P20
1.250-1.500	1310	C03508-T15P	–	T15P-2D	R1/4	T00-15P30
1.750-2.375	1310	C04011-T15P	C05012-T15P	T15P-2D	R1/4	T00-15P35

SD522

Drilling depth ~ 2 X D – Metric

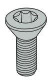


- ABS 50 compatible shank, R2
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 300, 301
- For intermediate diameters see the MyDesign software.

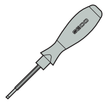
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert	mm - *Inch -*	mm + *Inch +*
SD522-15-30-50R2	03081056	15,0 *0.591*	30,0 *1.181*	91,0 *3.583*	35,0 *1.378*	60,0 *2.362*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0502	SCGX050204	0,22 *0.009*	0,31 *0.012*
SD522-15.5-31-50R2	03081057	15,5 *0.610*	31,0 *1.220*	92,0 *3.622*	36,0 *1.417*	61,0 *2.402*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0502	SCGX050204	0,17 *0.007*	0,36 *0.014*
SD522-16-32-50R2	03080751	16,0 *0.630*	32,0 *1.260*	93,0 *3.661*	37,0 *1.457*	62,0 *2.441*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0502	SCGX050204	0,12 *0.005*	0,41 *0.016*
SD522-16.5-33-50R2	03081058	16,5 *0.650*	33,0 *1.299*	94,0 *3.701*	38,0 *1.496*	63,0 *2.480*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0502	SCGX050204	0,07 *0.003*	0,46 *0.018*
SD522-17-34-50R2	03081059	17,0 *0.669*	34,0 *1.339*	95,0 *3.740*	39,0 *1.535*	64,0 *2.520*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0502	SCGX050204	0,02 *0.001*	0,5 *0.020*
SD522-17.5-35-50R2	03081060	17,5 *0.689*	35,0 *1.378*	96,0 *3.780*	40,0 *1.575*	65,0 *2.559*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0602	SCGX050204	0,43 *0.017*	0,1 *0.004*
SD522-18-36-50R2	03080762	18,0 *0.709*	36,0 *1.417*	97,0 *3.819*	41,0 *1.614*	66,0 *2.598*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0602	SCGX050204	0,32 *0.013*	0,21 *0.008*
SD522-18.5-37-50R2	03081061	18,5 *0.728*	37,0 *1.457*	98,0 *3.858*	42,0 *1.654*	67,0 *2.638*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0602	SCGX050204	0,22 *0.009*	0,31 *0.012*
SD522-19-38-50R2	03080767	19,0 *0.748*	38,0 *1.496*	99,0 *3.898*	43,0 *1.693*	68,0 *2.677*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0602	SCGX050204	0,11 *0.004*	0,42 *0.017*
SD522-20-40-50R2	03080772	20,0 *0.787*	40,0 *1.575*	101,0 *3.976*	45,0 *1.772*	70,0 *2.756*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0602	SCGX060204	0,07 *0.003*	0,46 *0.018*
SD522-20.62-42-50R2	03080768	20,62 *0.812*	42,0 *1.654*	103,0 *4.055*	47,0 *1.850*	72,0 *2.835*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0602	SCGX060204	0,03 *0.001*	0,5 *0.020*
SD522-21-42-50R2	03081062	21,0 *0.827*	42,0 *1.654*	103,0 *4.055*	47,0 *1.850*	72,0 *2.835*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0602	SCGX060204	0,01 *0.000*	0,5 *0.020*
SD522-22-44-50R2	03080778	22,0 *0.866*	44,0 *1.732*	105,0 *4.134*	49,0 *1.929*	74,0 *2.913*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0703	SCGX060204	0,44 *0.017*	0,46 *0.018*
SD522-22.23-45-50R2	03080776	22,23 *0.875*	45,0 *1.772*	106,0 *4.173*	50,0 *1.969*	75,0 *2.953*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0703	SCGX060204	0,39 *0.015*	0,5 *0.020*
SD522-23-46-50R2	03080782	23,0 *0.906*	46,0 *1.811*	107,0 *4.213*	51,0 *2.008*	76,0 *2.992*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0703	SCGX070308	0,33 *0.013*	0,5 *0.020*
SD522-24-48-50R2	03080786	24,0 *0.945*	48,0 *1.890*	109,0 *4.291*	53,0 *2.087*	78,0 *3.071*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0703	SCGX070308	0,11 *0.004*	0,5 *0.020*
SD522-25-50-50R2	03080789	25,0 *0.984*	50,0 *1.969*	111,0 *4.370*	55,0 *2.165*	80,0 *3.150*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0703	SCGX070308	0,11 *0.004*	0,5 *0.020*
SD522-25.40-51-50R2	03080787	25,4 *1.000*	51,0 *2.008*	112,0 *4.409*	56,0 *2.205*	81,0 *3.189*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0703	SCGX070308	0,11 *0.004*	0,5 *0.020*
SD522-26-52-50R2	03080791	26,0 *1.024*	52,0 *2.047*	113,0 *4.449*	57,0 *2.244*	82,0 *3.228*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX070308	0,5 *0.020*	0,11 *0.004*
SD522-27-54-50R2	03080793	27,0 *1.063*	54,0 *2.126*	115,0 *4.528*	59,0 *2.323*	84,0 *3.307*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX070308	0,5 *0.020*	0,26 *0.010*
SD522-28-56-50R2	03081087	28,0 *1.102*	56,0 *2.205*	117,0 *4.606*	61,0 *2.402*	86,0 *3.386*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX070308	0,28 *0.011*	0,5 *0.020*

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert	mm - *Inch -*	mm + *Inch +*
SD522-28.59-58-50R2	03080794	28,59 *1.126*	58,0 *2.283*	119,0 *4.685*	63,0 *2.480*	88,0 *3.465*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX09T308	0,21 *0.008*	0,5 *0.020*
SD522-29-58-50R2	03080797	29,0 *1.142*	58,0 *2.283*	119,0 *4.685*	63,0 *2.480*	88,0 *3.465*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX09T308	0,18 *0.007*	0,5 *0.020*
SD522-30-60-50R2	03080799	30,0 *1.181*	60,0 *2.362*	121,0 *4.764*	65,0 *2.559*	90,0 *3.543*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX09T308	0,12 *0.005*	0,5 *0.020*
SD522-31-62-50R2	03081063	31,0 *1.220*	62,0 *2.441*	123,0 *4.843*	67,0 *2.638*	92,0 *3.622*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX09T308	0,12 *0.005*	0,5 *0.020*
SD522-31.75-64-50R2	03080800	31,75 *1.250*	64,0 *2.520*	125,0 *4.921*	69,0 *2.717*	94,0 *3.701*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX09T308	0,5 *0.020*	0,28 *0.011*
SD522-32-64-50R2	03080804	32,0 *1.260*	64,0 *2.520*	125,0 *4.921*	69,0 *2.717*	94,0 *3.701*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX09T308	0,5 *0.020*	0,31 *0.012*
SD522-33-66-50R2	03080807	33,0 *1.299*	66,0 *2.598*	127,0 *5.000*	71,0 *2.795*	96,0 *3.780*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX09T308	0,5 *0.020*	0,46 *0.018*
SD522-34-68-50R2	03081064	34,0 *1.339*	68,0 *2.677*	129,0 *5.079*	73,0 *2.874*	98,0 *3.858*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX09T308	0,22 *0.009*	0,5 *0.020*
SD522-35-70-50R2	03080812	35,0 *1.378*	70,0 *2.756*	131,0 *5.157*	75,0 *2.953*	100,0 *3.937*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX11T308	0,22 *0.009*	0,5 *0.020*
SD522-36-72-50R2	03080815	36,0 *1.417*	72,0 *2.835*	133,0 *5.236*	77,0 *3.031*	102,0 *4.016*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX11T308	0,09 *0.004*	0,5 *0.020*
SD522-37-74-50R2	03081065	37,0 *1.457*	74,0 *2.913*	135,0 *5.315*	79,0 *3.110*	104,0 *4.094*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX11T308	0,09 *0.004*	0,5 *0.020*
SD522-38-76-50R2	03080820	38,0 *1.496*	76,0 *2.992*	137,0 *5.394*	81,0 *3.189*	106,0 *4.173*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX12T3	SCGX11T308	0,5 *0.020*	0,5 *0.020*
SD522-39-78-50R2	03081066	39,0 *1.535*	78,0 *3.071*	139,0 *5.472*	83,0 *3.268*	108,0 *4.252*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX12T3	SCGX11T308	0,39 *0.015*	0,5 *0.020*
SD522-40-80-50R2	03080825	40,0 *1.575*	80,0 *3.150*	141,0 *5.551*	85,0 *3.346*	110,0 *4.331*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX12T3	SCGX11T308	0,19 *0.007*	0,5 *0.020*
SD522-41-82-50R2	03080827	41,0 *1.614*	82,0 *3.228*	143,0 *5.630*	87,0 *3.425*	112,0 *4.409*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX12T3	SCGX120408	0,19 *0.007*	0,5 *0.020*
SD522-42-84-50R2	03080829	42,0 *1.654*	84,0 *3.307*	145,0 *5.709*	89,0 *3.504*	114,0 *4.488*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX12T3	SCGX120408	0,19 *0.007*	0,5 *0.020*
SD522-43-86-50R2	03081067	43,0 *1.693*	86,0 *3.386*	147,0 *5.787*	91,0 *3.583*	116,0 *4.567*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX12T3	SCGX120408	0,05 *0.002*	0,5 *0.020*
SD522-44.45-89-50R2	03080831	44,45 *1.750*	89,0 *3.504*	150,0 *5.906*	94,0 *3.701*	119,0 *4.685*	31,0 *1.220*	50,0 *1.969*	50,0 *1.969*	SPGX1504	SCGX120408	0,5 *0.020*	0,41 *0.016*

Spare Parts

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

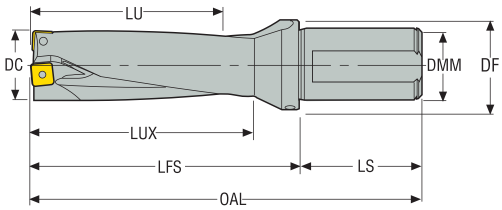
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD523

Drilling depth ~ 3 x D – Metric



- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 302-303
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert	mm - *Inch -*	mm + *Inch +*
SD523-15-45-20R7	03080548	15,0 *0.591*	45,0 *1.772*	125,0 *4.921*	50,0 *1.969*	75,0 *2.953*	50,0 *1.969*	20,0 *0.787*	30,0 *1.181*	SPGX0502	SCGX050204	0,22 *0.009*	0,31 *0.012*
SD523-15-45-25R7	03080549	15,0 *0.591*	45,0 *1.772*	131,0 *5.157*	50,0 *1.969*	75,0 *2.953*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0502	SCGX050204	0,22 *0.009*	0,31 *0.012*
SD523-15.5-47-20R7	03080544	15,5 *0.610*	47,0 *1.850*	127,0 *5.000*	52,0 *2.047*	77,0 *3.031*	50,0 *1.969*	20,0 *0.787*	30,0 *1.181*	SPGX0502	SCGX050204	0,17 *0.007*	0,36 *0.014*
SD523-15.5-47-25R7	03080545	15,5 *0.610*	47,0 *1.850*	133,0 *5.236*	52,0 *2.047*	77,0 *3.031*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0502	SCGX050204	0,17 *0.007*	0,36 *0.014*
SD523-16-48-20R7	03080557	16,0 *0.630*	48,0 *1.890*	128,0 *5.039*	53,0 *2.087*	78,0 *3.071*	50,0 *1.969*	20,0 *0.787*	30,0 *1.181*	SPGX0502	SCGX050204	0,12 *0.005*	0,41 *0.016*
SD523-16-48-25R7	03080558	16,0 *0.630*	48,0 *1.890*	134,0 *5.276*	53,0 *2.087*	78,0 *3.071*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0502	SCGX050204	0,12 *0.005*	0,41 *0.016*
SD523-16.5-50-20R7	03080552	16,5 *0.650*	50,0 *1.969*	130,0 *5.118*	55,0 *2.165*	80,0 *3.150*	50,0 *1.969*	20,0 *0.787*	30,0 *1.181*	SPGX0502	SCGX050204	0,07 *0.003*	0,46 *0.018*
SD523-16.5-50-25R7	03080554	16,5 *0.650*	50,0 *1.969*	136,0 *5.354*	55,0 *2.165*	80,0 *3.150*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0502	SCGX050204	0,07 *0.003*	0,46 *0.018*
SD523-17-51-20R7	03080568	17,0 *0.669*	51,0 *2.008*	131,0 *5.157*	56,0 *2.205*	81,0 *3.189*	50,0 *1.969*	20,0 *0.787*	30,0 *1.181*	SPGX0502	SCGX050204	0,02 *0.001*	0,5 *0.020*
SD523-17-51-25R7	03080569	17,0 *0.669*	51,0 *2.008*	137,0 *5.394*	56,0 *2.205*	81,0 *3.189*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0502	SCGX050204	0,02 *0.001*	0,5 *0.020*
SD523-17.5-53-20R7	03080562	17,5 *0.689*	53,0 *2.087*	133,0 *5.236*	58,0 *2.283*	83,0 *3.268*	50,0 *1.969*	20,0 *0.787*	30,0 *1.181*	SPGX0602	SCGX050204	0,43 *0.017*	0,1 *0.004*
SD523-17.5-53-25R7	03080563	17,5 *0.689*	53,0 *2.087*	139,0 *5.472*	58,0 *2.283*	83,0 *3.268*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0602	SCGX050204	0,43 *0.017*	0,1 *0.004*
SD523-18-54-20R7	03080574	18,0 *0.709*	54,0 *2.126*	134,0 *5.276*	59,0 *2.323*	84,0 *3.307*	50,0 *1.969*	20,0 *0.787*	30,0 *1.181*	SPGX0602	SCGX050204	0,32 *0.013*	0,21 *0.008*
SD523-18-54-25R7	03080575	18,0 *0.709*	54,0 *2.126*	140,0 *5.512*	59,0 *2.323*	84,0 *3.307*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0602	SCGX050204	0,32 *0.013*	0,21 *0.008*
SD523-18.5-56-20R7	03080570	18,5 *0.728*	56,0 *2.205*	136,0 *5.354*	61,0 *2.402*	86,0 *3.386*	50,0 *1.969*	20,0 *0.787*	30,0 *1.181*	SPGX0602	SCGX050204	0,22 *0.009*	0,31 *0.012*
SD523-18.5-56-25R7	03080571	18,5 *0.728*	56,0 *2.205*	142,0 *5.591*	61,0 *2.402*	86,0 *3.386*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0602	SCGX050204	0,22 *0.009*	0,31 *0.012*
SD523-19-57-20R7	03080583	19,0 *0.748*	57,0 *2.244*	137,0 *5.394*	62,0 *2.441*	87,0 *3.425*	50,0 *1.969*	20,0 *0.787*	30,0 *1.181*	SPGX0602	SCGX050204	0,11 *0.004*	0,42 *0.017*
SD523-19-57-25R7	03080584	19,0 *0.748*	57,0 *2.244*	143,0 *5.630*	62,0 *2.441*	87,0 *3.425*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0602	SCGX050204	0,11 *0.004*	0,42 *0.017*
SD523-19.5-59-20R7	03080579	19,5 *0.768*	59,0 *2.323*	139,0 *5.472*	64,0 *2.520*	89,0 *3.504*	50,0 *1.969*	20,0 *0.787*	30,0 *1.181*	SPGX0602	SCGX060204	0,11 *0.004*	0,42 *0.017*
SD523-19.5-59-25R7	03080580	19,5 *0.768*	59,0 *2.323*	145,0 *5.709*	64,0 *2.520*	89,0 *3.504*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0602	SCGX060204	0,11 *0.004*	0,42 *0.017*
SD523-20-60-25R7	03080590	20,0 *0.787*	60,0 *2.362*	146,0 *5.748*	65,0 *2.559*	90,0 *3.543*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0602	SCGX060204	0,07 *0.003*	0,46 *0.018*

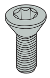
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert	mm - Inch -	mm + Inch +
SD523-20.5-62-25R7	03080586	20,5 0.807	62,0 2.441	148,0 5.827	67,0 2.638	92,0 3.622	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX060204	0,04 0.002	0,49 0.019
SD523-21-63-25R7	03080599	21,0 0.827	63,0 2.480	149,0 5.866	68,0 2.677	93,0 3.661	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX060204	0,01 0.000	0,5 0.020
SD523-21.5-65-25R7	03080595	21,5 0.846	65,0 2.559	151,0 5.945	70,0 2.756	95,0 3.740	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX060204	0,5 0.020	0,36 0.014
SD523-22-66-25R7	03080605	22,0 0.866	66,0 2.598	152,0 5.984	71,0 2.795	96,0 3.780	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX060204	0,44 0.017	0,46 0.018
SD523-22.5-68-25R7	03080602	22,5 0.886	68,0 2.677	154,0 6.063	73,0 2.874	98,0 3.858	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,42 0.017	0,47 0.019
SD523-23-69-25R7	03080608	23,0 0.906	69,0 2.717	155,0 6.102	74,0 2.913	99,0 3.898	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,33 0.013	0,5 0.020
SD523-23.5-71-25R7	03080607	23,5 0.925	71,0 2.795	157,0 6.181	76,0 2.992	101,0 3.976	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,23 0.009	0,5 0.020
SD523-24-72-25R7	03080612	24,0 0.945	72,0 2.835	158,0 6.220	77,0 3.031	102,0 4.016	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-24.5-74-25R7	03080611	24,5 0.965	74,0 2.913	160,0 6.299	79,0 3.110	104,0 4.094	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25-75-32R7	03080616	25,0 0.984	75,0 2.953	165,0 6.496	80,0 3.150	105,0 4.134	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25.5-77-32R7	03080615	25,5 1.004	77,0 3.031	167,0 6.575	82,0 3.228	107,0 4.213	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,5 0.020	0,11 0.004
SD523-26-78-32R7	03080619	26,0 1.024	78,0 3.071	168,0 6.614	83,0 3.268	108,0 4.252	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,5 0.020	0,11 0.004
SD523-26.5-80-32R7	03080618	26,5 1.043	80,0 3.150	170,0 6.693	85,0 3.346	110,0 4.331	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,5 0.020	0,19 0.007
SD523-27-81-32R7	03080622	27,0 1.063	81,0 3.189	171,0 6.732	86,0 3.386	111,0 4.370	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,5 0.020	0,26 0.010
SD523-27.5-83-32R7	03080621	27,5 1.083	83,0 3.268	173,0 6.811	88,0 3.465	113,0 4.449	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,46 0.018	0,44 0.017
SD523-28-84-32R7	03080626	28,0 1.102	84,0 3.307	174,0 6.850	89,0 3.504	114,0 4.488	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,28 0.011	0,5 0.020
SD523-28.5-86-32R7	03080624	28,5 1.122	86,0 3.386	176,0 6.929	91,0 3.583	116,0 4.567	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,21 0.008	0,5 0.020
SD523-29-87-32R7	03080629	29,0 1.142	87,0 3.425	177,0 6.969	92,0 3.622	117,0 4.606	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,18 0.007	0,5 0.020
SD523-29.5-89-32R7	03080628	29,5 1.161	89,0 3.504	179,0 7.047	94,0 3.701	119,0 4.685	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,15 0.006	0,5 0.020
SD523-30-90-32R7	03080632	30,0 1.181	90,0 3.543	180,0 7.087	95,0 3.740	120,0 4.724	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD523-30.5-92-32R7	03080631	30,5 1.201	92,0 3.622	182,0 7.165	97,0 3.819	122,0 4.803	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD523-31-93-32R7	03080636	31,0 1.220	93,0 3.661	183,0 7.205	98,0 3.858	123,0 4.843	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD523-31.5-95-32R7	03080634	31,5 1.240	95,0 3.740	185,0 7.283	100,0 3.937	125,0 4.921	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX09T308	0,5 0.020	0,24 0.009
SD523-32-96-32R7	03080638	32,0 1.260	96,0 3.780	186,0 7.323	101,0 3.976	126,0 4.961	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX09T308	0,5 0.020	0,31 0.012
SD523-32-96-40R7	03080639	32,0 1.260	96,0 3.780	194,0 7.638	101,0 3.976	126,0 4.961	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,31 0.012
SD523-33-99-32R7	03080641	33,0 1.299	99,0 3.898	189,0 7.441	104,0 4.094	129,0 5.079	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX09T308	0,5 0.020	0,46 0.018
SD523-33-99-40R7	03080642	33,0 1.299	99,0 3.898	197,0 7.756	104,0 4.094	129,0 5.079	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,46 0.018
SD523-34-102-32R7	03080644	34,0 1.339	102,0 4.016	192,0 7.559	107,0 4.213	132,0 5.197	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX09T308	0,22 0.009	0,5 0.020
SD523-34-102-40R7	03080645	34,0 1.339	102,0 4.016	200,0 7.874	107,0 4.213	132,0 5.197	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308	0,22 0.009	0,5 0.020
SD523-35-105-32R7	03080648	35,0 1.378	105,0 4.134	195,0 7.677	110,0 4.331	135,0 5.315	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX11T308	0,22 0.009	0,5 0.020
SD523-35-105-40R7	03080649	35,0 1.378	105,0 4.134	203,0 7.992	110,0 4.331	135,0 5.315	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308	0,22 0.009	0,5 0.020

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert	mm - *Inch -*	mm + *Inch +*
SD523-35.5-107-40R7	03080647	35,5 *1.398*	107,0 *4.213*	205,0 *8.071*	112,0 *4.409*	137,0 *5.394*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX11T3	SCGX11T308	0,09 *0.004*	0,5 *0.020*
SD523-36-108-32R7	03080651	36,0 *1.417*	108,0 *4.252*	198,0 *7.795*	113,0 *4.449*	138,0 *5.433*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX11T3	SCGX11T308	0,09 *0.004*	0,5 *0.020*
SD523-36-108-40R7	03080652	36,0 *1.417*	108,0 *4.252*	206,0 *8.110*	113,0 *4.449*	138,0 *5.433*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX11T3	SCGX11T308	0,09 *0.004*	0,5 *0.020*
SD523-37-111-32R7	03080653	37,0 *1.457*	111,0 *4.370*	201,0 *7.913*	116,0 *4.567*	141,0 *5.551*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX11T3	SCGX11T308	0,09 *0.004*	0,5 *0.020*
SD523-37-111-40R7	03080654	37,0 *1.457*	111,0 *4.370*	209,0 *8.228*	116,0 *4.567*	141,0 *5.551*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX11T3	SCGX11T308	0,09 *0.004*	0,5 *0.020*
SD523-38-114-32R7	03080655	38,0 *1.496*	114,0 *4.488*	204,0 *8.031*	119,0 *4.685*	144,0 *5.669*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX12T3	SCGX11T308	0,5 *0.020*	0,5 *0.020*
SD523-38-114-40R7	03080656	38,0 *1.496*	114,0 *4.488*	212,0 *8.346*	119,0 *4.685*	144,0 *5.669*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX11T308	0,5 *0.020*	0,5 *0.020*
SD523-39-117-32R7	03080658	39,0 *1.535*	117,0 *4.606*	207,0 *8.150*	122,0 *4.803*	147,0 *5.787*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX12T3	SCGX11T308	0,39 *0.015*	0,5 *0.020*
SD523-39-117-40R7	03080659	39,0 *1.535*	117,0 *4.606*	215,0 *8.465*	122,0 *4.803*	147,0 *5.787*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX11T308	0,39 *0.015*	0,5 *0.020*
SD523-40-120-32R7	03080661	40,0 *1.575*	120,0 *4.724*	210,0 *8.268*	125,0 *4.921*	150,0 *5.906*	60,0 *2.362*	32,0 *1.260*	50,0 *1.969*	SPGX12T3	SCGX11T308	0,19 *0.007*	0,5 *0.020*
SD523-40-120-40R7	03080662	40,0 *1.575*	120,0 *4.724*	218,0 *8.583*	125,0 *4.921*	150,0 *5.906*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX11T308	0,19 *0.007*	0,5 *0.020*
SD523-41-123-40R7	03080665	41,0 *1.614*	123,0 *4.843*	221,0 *8.701*	128,0 *5.039*	153,0 *6.024*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX120408	0,19 *0.007*	0,5 *0.020*
SD523-41.5-125-40R7	03080663	41,5 *1.634*	125,0 *4.921*	223,0 *8.780*	130,0 *5.118*	155,0 *6.102*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX120408	0,19 *0.007*	0,5 *0.020*
SD523-42-126-40R7	03080666	42,0 *1.654*	126,0 *4.961*	224,0 *8.819*	131,0 *5.157*	156,0 *6.142*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX120408	0,19 *0.007*	0,5 *0.020*
SD523-43-129-40R7	03080667	43,0 *1.693*	129,0 *5.079*	227,0 *8.937*	134,0 *5.276*	159,0 *6.260*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX120408	0,05 *0.002*	0,5 *0.020*
SD523-44-132-40R7	03080670	44,0 *1.732*	132,0 *5.197*	230,0 *9.055*	137,0 *5.394*	162,0 *6.378*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX120408	0,5 *0.020*	0,41 *0.016*
SD523-44.5-134-40R7	03080669	44,5 *1.752*	134,0 *5.276*	232,0 *9.134*	139,0 *5.472*	164,0 *6.457*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX150512	0,5 *0.020*	0,41 *0.016*
SD523-45-135-40R7	03080672	45,0 *1.772*	135,0 *5.315*	233,0 *9.173*	140,0 *5.512*	165,0 *6.496*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX150512	0,5 *0.020*	0,41 *0.016*
SD523-46-138-40R7	03080673	46,0 *1.811*	138,0 *5.433*	236,0 *9.291*	143,0 *5.630*	168,0 *6.614*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX150512	0,5 *0.020*	0,5 *0.020*
SD523-47-141-40R7	03080675	47,0 *1.850*	141,0 *5.551*	239,0 *9.409*	146,0 *5.748*	171,0 *6.732*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX150512	0,5 *0.020*	0,5 *0.020*
SD523-47.5-143-40R7	03080674	47,5 *1.870*	143,0 *5.630*	241,0 *9.488*	148,0 *5.827*	173,0 *6.811*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX150512	0,5 *0.020*	0,5 *0.020*
SD523-48-144-40R7	03080676	48,0 *1.890*	144,0 *5.669*	242,0 *9.528*	149,0 *5.866*	174,0 *6.850*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1504	SCGX150512	0,45 *0.018*	0,5 *0.020*
SD523-49-147-40R7	03080677	49,0 *1.929*	147,0 *5.787*	245,0 *9.646*	152,0 *5.984*	177,0 *6.969*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1504	SCGX150512	0,2 *0.008*	0,5 *0.020*
SD523-50-150-40R7	03080678	50,0 *1.969*	150,0 *5.906*	248,0 *9.764*	155,0 *6.102*	180,0 *7.087*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1504	SCGX150512	0,2 *0.008*	0,5 *0.020*
SD523-51-153-40R7	03080679	51,0 *2.008*	153,0 *6.024*	251,0 *9.882*	158,0 *6.220*	183,0 *7.205*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1504	SCGX150512	0,2 *0.008*	0,5 *0.020*
SD523-52-156-40R7	03080680	52,0 *2.047*	156,0 *6.142*	254,0 *10.000*	161,0 *6.339*	186,0 *7.323*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512	0,5 *0.020*	0,42 *0.017*
SD523-53-159-40R7	03080681	53,0 *2.087*	159,0 *6.260*	257,0 *10.118*	164,0 *6.457*	189,0 *7.441*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512	0,5 *0.020*	0,42 *0.017*
SD523-54-162-40R7	03080682	54,0 *2.126*	162,0 *6.378*	260,0 *10.236*	167,0 *6.575*	192,0 *7.559*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512	0,5 *0.020*	0,5 *0.020*
SD523-55-165-40R7	03080683	55,0 *2.165*	165,0 *6.496*	263,0 *10.354*	170,0 *6.693*	195,0 *7.677*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512	0,5 *0.020*	0,5 *0.020*
SD523-56-168-40R7	03080684	56,0 *2.205*	168,0 *6.614*	266,0 *10.472*	173,0 *6.811*	198,0 *7.795*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512	0,5 *0.020*	0,5 *0.020*
SD523-57-171-40R7	03080685	57,0 *2.244*	171,0 *6.732*	269,0 *10.591*	176,0 *6.929*	201,0 *7.913*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512	0,39 *0.015*	0,5 *0.020*

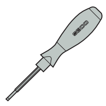
Introduction
Drilling
Reaming
Boring
Annex

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert	mm - *Inch -*	mm + *Inch +*
SD523-58-174-40R7	03080686	58,0 *2.283*	174,0 *6.850*	272,0 *10.709*	179,0 *7.047*	204,0 *8.031*	68,0 *2.677*	40,0 *1.575*	63,0 *2.480*	SPGX1904	SCGX150512	0,09 *0.004*	0,5 *0.020*
SD523-59-177-40R7	03080687	59,0 *2.323*	177,0 *6.969*	275,0 *10.827*	182,0 *7.165*	207,0 *8.150*	68,0 *2.677*	40,0 *1.575*	63,0 *2.480*	SPGX1904	SCGX150512	0,09 *0.004*	0,5 *0.020*

Spare Parts

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

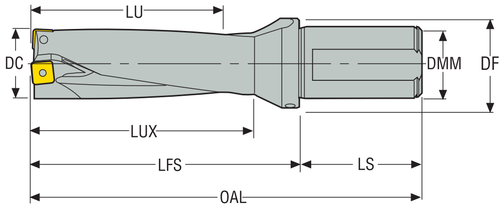
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD523

Drilling depth ~ 3 x D – *Inch*



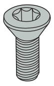
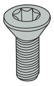
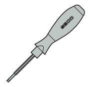
- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 302-303
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		Inch	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	Center insert	Periph insert	*Inch -*	*Inch +*
SD523-0594-178-1000R7	03080486	0.594	1.780	5.211	1.977	2.961	2.250	1.000	1.378	SPGX0502	SCGX050204	0.008	0.013
SD523-0625-188-1000R7	03080488	0.625	1.880	5.311	2.077	3.061	2.250	1.000	1.378	SPGX0502	SCGX050204	0.005	0.015
SD523-0656-197-1000R7	03080490	0.656	1.970	5.401	2.167	3.151	2.250	1.000	1.378	SPGX0502	SCGX050204	0.002	0.019
SD523-0687-206-1000R7	03080493	0.687	2.030	5.461	2.227	3.211	2.250	1.000	1.378	SPGX0502	SCGX050204	–	0.020
SD523-0709-213-1000R7	03080494	0.709	2.130	5.561	2.327	3.311	2.250	1.000	1.378	SPGX0602	SCGX050204	0.013	0.008
SD523-0750-225-1000R7	03080497	0.750	2.250	5.681	2.447	3.431	2.250	1.000	1.378	SPGX0602	SCGX050204	0.004	0.017
SD523-0766-230-1000R7	03080499	0.766	2.300	5.731	2.497	3.481	2.250	1.000	1.378	SPGX0602	SCGX050204	0.001	0.020
SD523-0787-236-1000R7	03080501	0.787	2.360	5.791	2.557	3.541	2.250	1.000	1.378	SPGX0602	SCGX060204	0.003	0.018
SD523-0812-244-1000R7	03080503	0.812	2.440	5.871	2.637	3.621	2.250	1.000	1.378	SPGX0602	SCGX060204	0.001	0.020
SD523-0827-248-1000R7	03080505	0.827	2.480	5.911	2.677	3.661	2.250	1.000	1.378	SPGX0602	SCGX060204	0.000	0.020
SD523-0875-263-1000R7	03080507	0.875	2.630	6.061	2.827	3.811	2.250	1.000	1.378	SPGX0703	SCGX060204	0.015	0.020
SD523-0906-272-1000R7	03080509	0.906	2.720	6.151	2.917	3.901	2.250	1.000	1.378	SPGX0703	SCGX070308	0.013	0.020
SD523-0922-276-1000R7	03080512	0.922	2.760	6.191	2.957	3.941	2.250	1.000	1.378	SPGX0703	SCGX070308	0.010	0.020
SD523-0937-281-1000R7	03080514	0.937	2.810	6.241	3.007	3.991	2.250	1.000	1.378	SPGX0703	SCGX070308	0.004	0.020
SD523-0984-295-1250R7	03080516	0.984	2.950	6.506	3.147	4.131	2.375	1.250	1.654	SPGX0703	SCGX070308	0.004	0.020
SD523-1000-300-1250R7	03080518	1.000	3.000	6.556	3.197	4.181	2.375	1.250	1.654	SPGX0703	SCGX070308	0.004	0.020
SD523-1032-310-1250R7	03080521	1.032	3.100	6.656	3.297	4.281	2.375	1.250	1.654	SPGX0903	SCGX070308	0.020	0.004
SD523-1062-319-1250R7	03080522	1.062	3.190	6.746	3.387	4.371	2.375	1.250	1.654	SPGX0903	SCGX070308	0.020	0.010
SD523-1109-332-1250R7	03080525	1.109	3.320	6.876	3.517	4.501	2.375	1.250	1.654	SPGX0903	SCGX070308	0.009	0.020
SD523-1125-338-1250R7	03080526	1.125	3.380	6.936	3.577	4.561	2.375	1.250	1.654	SPGX0903	SCGX09T308	0.008	0.020
SD523-1172-351-1250R7	03080528	1.172	3.510	7.066	3.707	4.691	2.375	1.250	1.654	SPGX0903	SCGX09T308	0.005	0.020
SD523-1187-356-1250R7	03080530	1.187	3.560	7.116	3.757	4.741	2.375	1.250	1.654	SPGX0903	SCGX09T308	0.005	0.020
SD523-1250-375-1500R7	03080533	1.250	3.750	7.556	3.947	4.931	2.625	1.500	1.969	SPGX11T3	SCGX09T308	0.020	0.011
SD523-1312-394-1500R7	03080535	1.312	3.940	7.746	4.137	5.121	2.625	1.500	1.969	SPGX11T3	SCGX09T308	0.020	0.020
SD523-1344-403-1500R7	03080537	1.344	4.030	7.836	4.227	5.211	2.625	1.500	1.969	SPGX11T3	SCGX09T308	0.006	0.020
SD523-1375-413-1500R7	03080539	1.375	4.130	7.936	4.327	5.311	2.625	1.500	1.969	SPGX11T3	SCGX11T308	0.009	0.020
SD523-1422-426-1500R7	03080541	1.422	4.260	8.066	4.457	5.441	2.625	1.500	1.969	SPGX11T3	SCGX11T308	0.004	0.020
SD523-1437-431-1500R7	03080542	1.437	4.310	8.116	4.507	5.491	2.625	1.500	1.969	SPGX11T3	SCGX11T308	0.004	0.020
SD523-1500-450-1500R7	03080547	1.500	4.500	8.306	4.697	5.681	2.625	1.500	1.969	SPGX12T3	SCGX11T308	0.020	0.020
SD523-1562-469-1500R7	03080550	1.562	4.690	8.496	4.887	5.871	2.625	1.500	1.969	SPGX12T3	SCGX11T308	0.010	0.020
SD523-1625-488-1500R7	03080555	1.625	4.880	8.686	5.077	6.061	2.625	1.500	1.969	SPGX12T3	SCGX120408	0.007	0.020
SD523-1687-506-1500R7	03080560	1.687	5.060	8.866	5.257	6.241	2.625	1.500	1.969	SPGX12T3	SCGX120408	0.004	0.020
SD523-1750-525-1500R7	03080565	1.750	5.250	9.056	5.447	6.431	2.625	1.500	1.969	SPGX1504	SCGX120408	0.020	0.016
SD523-1812-544-1500R7	03080572	1.812	5.440	9.246	5.637	6.621	2.625	1.500	1.969	SPGX1504	SCGX150512	0.020	0.020
SD523-1875-563-1500R7	03080577	1.875	5.630	9.436	5.827	6.811	2.625	1.500	1.969	SPGX1504	SCGX150512	0.020	0.020

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		Inch	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	Center insert	Periph insert	*Inch -*	*Inch +*
SD523-1937-581-1500R7	03080581	1.937	5.810	9.616	6.007	6.991	2.625	1.500	2.337	SPGX1504	SCGX150512	0.008	0.020
SD523-2000-600-1500R7	03080588	2.000	6.000	9.806	6.197	7.181	2.625	1.500	2.337	SPGX1504	SCGX150512	0.008	0.020
SD523-2062-619-1500R7	03080593	2.062	6.190	9.996	6.387	7.371	2.625	1.500	2.337	SPGX1904	SCGX150512	0.020	0.017
SD523-2125-638-1500R7	03080596	2.125	6.380	10.186	6.577	7.561	2.625	1.500	2.337	SPGX1904	SCGX150512	0.020	0.020
SD523-2250-675-1500R7	03080603	2.250	6.750	10.556	6.947	7.931	2.625	1.500	2.337	SPGX1904	SCGX150512	0.013	0.020
SD523-2375-713-1500R7	03080609	2.375	7.130	10.936	7.327	8.311	2.625	1.500	2.480	SPGX1904	SCGX150512	0.004	0.020

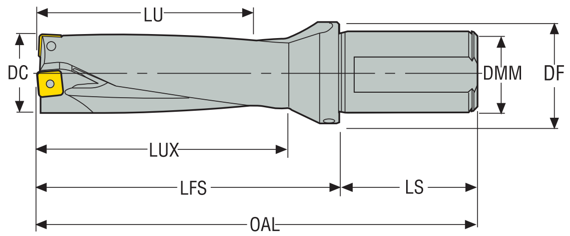
Spare Parts

Accessories

For drill dia. (inch)	Insert screw centre	Insert screw periph	Key	Torque wrench
				
0.594-0.687	C02245-T07P	–	T07P-2	T00-07P09
0.709-0.766	C02205-T07P	C02245-T07P	T07P-2	T00-07P09
0.787-0.827	C02205-T07P	–	T07P-2	T00-07P09
0.875	C02506-T08P	–	T08P-2	T00-08P12
0.906	C02507-T08P	C03007-T08P	T08P-2	T00-08P12
0.922	C02506-T08P	C03007-T08P	T08P-2	T00-08P12
0.937-1.000	C02507-T08P	C03007-T08P	T08P-2	T00-08P12
1.032-1.109	C03007-T09P	–	T09P-2	T00-09P20
1.125-1.187	C03007-T09P	C03009-T09P	T09P-2	T00-09P20
1.250-1.562	C03508-T15P	–	T15P-2D	T00-15P30
1.625-1.687	C03508-T15P	C05012-T15P	T15P-2D	T00-15P30
1.750-2.375	C04011-T15P	C05012-T15P	T15P-2D	T00-15P35

SD523

Drilling depth ~ 3 x D – *Inch*



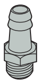
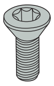
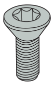
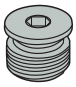
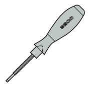
- ISO 9766 shank, R7-C
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 302-303
- For intermediate diameters see the MyDesign software.
- For stationary applications

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		Inch	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	Center insert	Periph insert	*Inch -*	*Inch +*
SD523-0594-178-1000R7-C	03080487	0.594	1.780	5.908	1.977	3.158	2.750	1.000	1.378	SPGX0502	SCGX050204	0.008	0.013
SD523-0625-188-1000R7-C	03080489	0.625	1.880	6.008	2.077	3.258	2.750	1.000	1.378	SPGX0502	SCGX050204	0.005	0.015
SD523-0656-197-1000R7-C	03080491	0.656	1.970	6.098	2.167	3.348	2.750	1.000	1.378	SPGX0502	SCGX050204	0.002	0.019
SD523-0687-206-1000R7-C	03080492	0.687	2.060	6.188	2.257	3.438	2.750	1.000	1.378	SPGX0502	SCGX050204	–	0.020
SD523-0709-213-1000R7-C	03080495	0.709	2.130	6.258	2.327	3.508	2.750	1.000	1.378	SPGX0602	SCGX050204	0.013	0.008
SD523-0750-225-1000R7-C	03080496	0.750	2.250	6.378	2.447	3.628	2.750	1.000	1.378	SPGX0602	SCGX050204	0.004	0.017
SD523-0766-230-1000R7-C	03080500	0.766	2.300	6.428	2.497	3.678	2.750	1.000	1.378	SPGX0602	SCGX050204	0.001	0.020
SD523-0787-236-1000R7-C	03080502	0.787	2.360	6.488	2.557	3.738	2.750	1.000	1.378	SPGX0602	SCGX060204	0.003	0.018
SD523-0812-244-1000R7-C	03080504	0.812	2.440	6.568	2.637	3.818	2.750	1.000	1.378	SPGX0602	SCGX060204	0.001	0.020
SD523-0827-248-1000R7-C	03080506	0.827	2.480	6.608	2.677	3.858	2.750	1.000	1.378	SPGX0602	SCGX060204	0.000	0.020
SD523-0875-263-1000R7-C	03080508	0.875	2.630	6.758	2.827	4.008	2.750	1.000	1.378	SPGX0703	SCGX060204	0.015	0.020
SD523-0906-272-1000R7-C	03080511	0.906	2.720	6.848	2.917	4.098	2.750	1.000	1.378	SPGX0703	SCGX070308	0.013	0.020
SD523-0922-276-1000R7-C	03080513	0.922	2.760	6.888	2.957	4.138	2.750	1.000	1.378	SPGX0703	SCGX070308	0.010	0.020
SD523-0937-281-1000R7-C	03080515	0.937	2.810	6.938	3.007	4.188	2.750	1.000	1.378	SPGX0703	SCGX070308	0.004	0.020
SD523-0984-295-1250R7-C	03080517	0.984	2.950	7.078	3.147	4.328	2.750	1.250	1.654	SPGX0703	SCGX070308	0.004	0.020
SD523-1000-300-1250R7-C	03080519	1.000	3.000	7.128	3.197	4.378	2.750	1.250	1.654	SPGX0703	SCGX070308	0.004	0.020
SD523-1032-310-1250R7-C	03080520	1.032	3.100	7.228	3.297	4.478	2.750	1.250	1.654	SPGX0903	SCGX070308	0.020	0.004
SD523-1062-319-1250R7-C	03080523	1.062	3.190	7.318	3.387	4.568	2.750	1.250	1.654	SPGX0903	SCGX070308	0.020	0.010
SD523-1109-332-1250R7-C	03080524	1.109	3.320	7.448	3.517	4.698	2.750	1.250	1.654	SPGX0903	SCGX070308	0.009	0.020
SD523-1125-338-1250R7-C	03080527	1.125	3.380	7.508	3.577	4.758	2.750	1.250	1.654	SPGX0903	SCGX09T308	0.008	0.020
SD523-1172-351-1250R7-C	03080529	1.172	3.510	7.638	3.707	4.888	2.750	1.250	1.654	SPGX0903	SCGX09T308	0.005	0.020
SD523-1187-356-1250R7-C	03080531	1.187	3.560	7.688	3.757	4.938	2.750	1.250	1.654	SPGX0903	SCGX09T308	0.005	0.020
SD523-1250-375-1500R7-C	03080532	1.250	3.750	7.878	3.947	5.128	2.750	1.500	1.969	SPGX11T3	SCGX09T308	0.020	0.011
SD523-1312-394-1500R7-C	03080536	1.312	3.940	8.068	4.137	5.318	2.750	1.500	1.969	SPGX11T3	SCGX09T308	0.020	0.020
SD523-1344-403-1500R7-C	03080538	1.344	4.030	8.158	4.227	5.408	2.750	1.500	1.969	SPGX11T3	SCGX09T308	0.006	0.020
SD523-1375-413-1500R7-C	03080540	1.375	4.130	8.258	4.327	5.508	2.750	1.500	1.969	SPGX11T3	SCGX11T308	0.009	0.020
SD523-1422-426-1500R7-C	03080900	1.422	4.260	8.388	4.457	5.638	2.750	1.500	1.969	SPGX11T3	SCGX11T308	0.004	0.020
SD523-1437-431-1500R7-C	03080543	1.437	4.310	8.438	4.507	5.688	2.750	1.500	1.969	SPGX11T3	SCGX11T308	0.004	0.020
SD523-1500-450-1500R7-C	03080546	1.500	4.500	8.628	4.697	5.878	2.750	1.500	1.969	SPGX12T3	SCGX11T308	0.020	0.020
SD523-1562-469-1500R7-C	03080551	1.562	4.690	8.818	4.887	6.068	2.750	1.500	1.969	SPGX12T3	SCGX11T308	0.010	0.020
SD523-1625-488-1500R7-C	03080556	1.625	4.880	9.008	5.077	6.258	2.750	1.500	1.969	SPGX12T3	SCGX120408	0.007	0.020
SD523-1687-506-1500R7-C	03080561	1.687	5.060	9.188	5.257	6.438	2.750	1.500	1.969	SPGX12T3	SCGX120408	0.004	0.020
SD523-1750-525-1500R7-C	03080566	1.750	5.250	9.378	5.447	6.628	2.750	1.500	1.969	SPGX1504	SCGX120408	0.020	0.016
SD523-1812-544-1500R7-C	03080573	1.812	5.440	9.568	5.637	6.818	2.750	1.500	1.969	SPGX1504	SCGX150512	0.020	0.020
SD523-1875-563-1500R7-C	03080578	1.875	5.630	9.758	5.827	7.008	2.750	1.500	1.969	SPGX1504	SCGX150512	0.020	0.020

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		Inch	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	Center insert	Periph insert	*Inch -*	*Inch +*
SD523-1937-581-1500R7-C	03080582	1.937	5.810	9.938	6.007	7.188	2.750	1.500	2.337	SPGX1504	SCGX150512	0.008	0.020
SD523-2000-600-1500R7-C	03080589	2.000	6.000	10.128	6.197	7.378	2.750	1.500	2.337	SPGX1504	SCGX150512	0.008	0.020
SD523-2125-638-1500R7-C	03080598	2.125	6.380	10.508	6.577	7.758	2.750	1.500	2.337	SPGX1904	SCGX150512	0.020	0.020
SD523-2250-675-1500R7-C	03080604	2.250	6.750	10.878	6.947	8.128	2.750	1.500	2.337	SPGX1904	SCGX150512	0.013	0.020
SD523-2375-713-1500R7-C	03080610	2.375	7.130	11.258	7.327	8.508	2.750	1.500	2.480	SPGX1904	SCGX150512	0.004	0.020

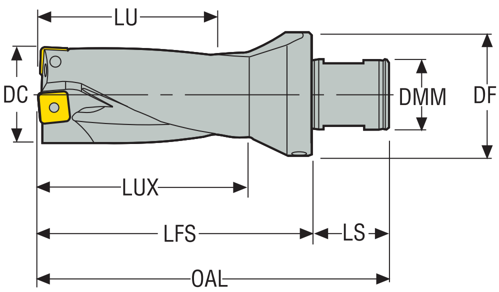
Spare Parts

Accessories

For drill dia. (inch)	Hose adapter	Insert screw centre	Insert screw periph	Key	Plug	Torque wrench
						
0.594-0.687	1310	C02245-T07P	–	T07P-2	R1/4	T00-07P09
0.709-0.766	1310	C02205-T07P	C02245-T07P	T07P-2	R1/4	T00-07P09
0.787-0.827	1310	C02205-T07P	–	T07P-2	R1/4	T00-07P09
0.875	1310	C02506-T08P	–	T08P-2	R1/4	T00-08P12
0.906-0.922	1310	C02506-T08P	C03007-T08P	T08P-2	R1/4	T00-08P12
0.937-1.000	1310	C02507-T08P	C03007-T08P	T08P-2	R1/4	T00-08P12
1.032-1.109	1310	C03007-T09P	–	T09P-2	R1/4	T00-09P20
1.125-1.187	1310	C03007-T09P	C03009-T09P	T09P-2	R1/4	T00-09P20
1.250-1.562	1310	C03508-T15P	–	T15P-2D	R1/4	T00-15P30
1.625-1.687	1310	C03508-T15P	C05012-T15P	T15P-2D	R1/4	T00-15P30
1.750-2.375	1310	C04011-T15P	C05012-T15P	T15P-2D	R1/4	T00-15P35

SD523

Drilling depth ~ 3 x D – Metric



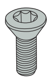
- ABS 50 compatible shank, -2
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 302-303
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert	mm - Inch -	mm + Inch +
SD523-15-45-50R2	03080864	15,0 0.591	45,0 1.772	106,0 4.173	50,0 1.969	75,0 2.953	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204	0,22 0.009	0,31 0.012
SD523-15.5-47-50R2	03080865	15,5 0.610	47,0 1.850	108,0 4.252	52,0 2.047	77,0 3.031	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204	0,17 0.007	0,36 0.014
SD523-16-48-50R2	03080559	16,0 0.630	48,0 1.890	109,0 4.291	53,0 2.087	78,0 3.071	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204	0,12 0.005	0,41 0.016
SD523-16.5-50-50R2	03080866	16,5 0.650	50,0 1.969	111,0 4.370	55,0 2.165	80,0 3.150	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204	0,07 0.003	0,46 0.018
SD523-17-51-50R2	03080867	17,0 0.669	51,0 2.008	112,0 4.409	56,0 2.205	81,0 3.189	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204	0,02 0.001	0,5 0.020
SD523-17.5-53-50R2	03080564	17,5 0.689	53,0 2.087	114,0 4.488	58,0 2.283	83,0 3.268	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204	0,43 0.017	0,1 0.004
SD523-18-54-50R2	03080576	18,0 0.709	54,0 2.126	115,0 4.528	59,0 2.323	84,0 3.307	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204	0,32 0.013	0,21 0.008
SD523-18.5-56-50R2	03080868	18,5 0.728	56,0 2.205	117,0 4.606	61,0 2.402	86,0 3.386	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204	0,22 0.009	0,31 0.012
SD523-19-57-50R2	03080585	19,0 0.748	57,0 2.244	118,0 4.646	62,0 2.441	87,0 3.425	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204	0,11 0.004	0,42 0.017
SD523-20-60-50R2	03080591	20,0 0.787	60,0 2.362	121,0 4.764	65,0 2.559	90,0 3.543	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX060204	0,07 0.003	0,46 0.018
SD523-20.62-62-50R2	03080587	20,62 0.812	62,0 2.441	123,0 4.843	67,0 2.638	92,0 3.622	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX060204	0,03 0.001	0,5 0.020
SD523-21-63-50R2	03080600	21,0 0.827	63,0 2.480	124,0 4.882	68,0 2.677	93,0 3.661	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX060204	0,01 0.000	0,5 0.020
SD523-22-66-50R2	03080606	22,0 0.866	66,0 2.598	127,0 5.000	71,0 2.795	96,0 3.780	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX060204	0,44 0.017	0,46 0.018
SD523-22.23-67-50R2	03080601	22,23 0.875	67,0 2.638	128,0 5.039	72,0 2.835	97,0 3.819	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX060204	0,39 0.015	0,5 0.020
SD523-23-69-50R2	03080869	23,0 0.906	69,0 2.717	130,0 5.118	74,0 2.913	99,0 3.898	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308	0,33 0.013	0,5 0.020
SD523-24-72-50R2	03080613	24,0 0.945	72,0 2.835	133,0 5.236	77,0 3.031	102,0 4.016	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25-75-50R2	03080617	25,0 0.984	75,0 2.953	136,0 5.354	80,0 3.150	105,0 4.134	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25.40-77-50R2	03080614	25,4 1.000	77,0 3.031	138,0 5.433	82,0 3.228	107,0 4.213	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-26-78-50R2	03080620	26,0 1.024	78,0 3.071	139,0 5.472	83,0 3.268	108,0 4.252	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX070308	0,5 0.020	0,11 0.004
SD523-27-81-50R2	03080623	27,0 1.063	81,0 3.189	142,0 5.591	86,0 3.386	111,0 4.370	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX070308	0,5 0.020	0,26 0.010
SD523-28-84-50R2	03080627	28,0 1.102	84,0 3.307	145,0 5.709	89,0 3.504	114,0 4.488	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX070308	0,28 0.011	0,5 0.020

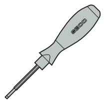
Introduction
Drilling
Reaming
Boring
Annex

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert	mm - *Inch -*	mm + *Inch +*
SD523-28.59-86-50R2	03080625	28,59 *1.126*	86,0 *3.386*	147,0 *5.787*	91,0 *3.583*	116,0 *4.567*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX09T308	0,21 *0.008*	0,5 *0.020*
SD523-29-87-50R2	03080630	29,0 *1.142*	87,0 *3.425*	148,0 *5.827*	92,0 *3.622*	117,0 *4.606*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX09T308	0,18 *0.007*	0,5 *0.020*
SD523-30-90-50R2	03080633	30,0 *1.181*	90,0 *3.543*	151,0 *5.945*	95,0 *3.740*	120,0 *4.724*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX09T308	0,12 *0.005*	0,5 *0.020*
SD523-31-93-50R2	03080637	31,0 *1.220*	93,0 *3.661*	154,0 *6.063*	98,0 *3.858*	123,0 *4.843*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX09T308	0,12 *0.005*	0,5 *0.020*
SD523-31.75-96-50R2	03080635	31,75 *1.250*	96,0 *3.780*	157,0 *6.181*	101,0 *3.976*	126,0 *4.961*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX09T308	0,5 *0.020*	0,28 *0.011*
SD523-32-96-50R2	03080640	32,0 *1.260*	96,0 *3.780*	157,0 *6.181*	101,0 *3.976*	126,0 *4.961*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX09T308	0,5 *0.020*	0,31 *0.012*
SD523-33-99-50R2	03080643	33,0 *1.299*	99,0 *3.898*	160,0 *6.299*	104,0 *4.094*	129,0 *5.079*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX09T308	0,5 *0.020*	0,46 *0.018*
SD523-34-102-50R2	03080646	34,0 *1.339*	102,0 *4.016*	163,0 *6.417*	107,0 *4.213*	132,0 *5.197*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX09T308	0,22 *0.009*	0,5 *0.020*
SD523-35-105-50R2	03080650	35,0 *1.378*	105,0 *4.134*	166,0 *6.535*	110,0 *4.331*	135,0 *5.315*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX11T308	0,22 *0.009*	0,5 *0.020*
SD523-36-108-50R2	03080870	36,0 *1.417*	108,0 *4.252*	169,0 *6.654*	113,0 *4.449*	138,0 *5.433*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX11T308	0,09 *0.004*	0,5 *0.020*
SD523-37-111-50R2	03080871	37,0 *1.457*	111,0 *4.370*	172,0 *6.772*	116,0 *4.567*	141,0 *5.551*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX11T308	0,09 *0.004*	0,5 *0.020*
SD523-38-114-50R2	03080657	38,0 *1.496*	114,0 *4.488*	175,0 *6.890*	119,0 *4.685*	144,0 *5.669*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX12T3	SCGX11T308	0,5 *0.020*	0,5 *0.020*
SD523-39-117-50R2	03080660	39,0 *1.535*	117,0 *4.606*	178,0 *7.008*	122,0 *4.803*	147,0 *5.787*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX12T3	SCGX11T308	0,39 *0.015*	0,5 *0.020*
SD523-40-120-50R2	03080872	40,0 *1.575*	120,0 *4.724*	181,0 *7.126*	125,0 *4.921*	150,0 *5.906*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX12T3	SCGX11T308	0,19 *0.007*	0,5 *0.020*
SD523-41-123-50R2	03080873	41,0 *1.614*	123,0 *4.843*	184,0 *7.244*	128,0 *5.039*	153,0 *6.024*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX12T3	SCGX120408	0,19 *0.007*	0,5 *0.020*
SD523-42-126-50R2	03080874	42,0 *1.654*	126,0 *4.961*	187,0 *7.362*	131,0 *5.157*	156,0 *6.142*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX12T3	SCGX120408	0,19 *0.007*	0,5 *0.020*
SD523-43-129-50R2	03080875	43,0 *1.693*	129,0 *5.079*	190,0 *7.480*	134,0 *5.276*	159,0 *6.260*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX12T3	SCGX120408	0,05 *0.002*	0,5 *0.020*
SD523-44-132-50R2	03080671	44,0 *1.732*	132,0 *5.197*	193,0 *7.598*	137,0 *5.394*	162,0 *6.378*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX1504	SCGX120408	0,5 *0.020*	0,41 *0.016*
SD523-44.45-134-50R2	03080668	44,45 *1.750*	134,0 *5.276*	195,0 *7.677*	139,0 *5.472*	164,0 *6.457*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX1504	SCGX120408	0,5 *0.020*	0,41 *0.016*

Spare Parts

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

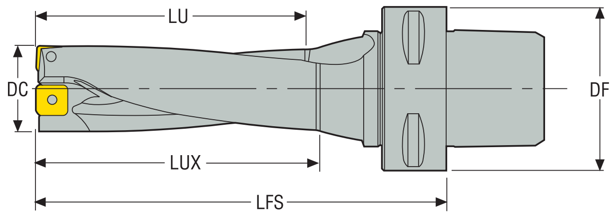
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD523

Drilling depth ~ 3 x D – Metric

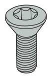
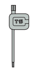


- Seco-Capto™ C4 shank
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 302-303
- For intermediate diameters see the MyDesign software.

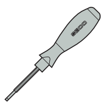
Designation	Item number	DC	LU	LUX	LFS	DF	Insert		Radial adjustment	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert	mm - *Inch -*	mm + *Inch +*
SD523-15-45-C4	03080920	15,0 *0.591*	45,0 *1.772*	50,0 *1.969*	82,0 *3.228*	40,0 *1.575*	SPGX0502	SCGX050204	0,22 *0.009*	0,31 *0.012*
SD523-15.5-47-C4	03080921	15,5 *0.610*	47,0 *1.850*	52,0 *2.047*	84,0 *3.307*	40,0 *1.575*	SPGX0502	SCGX050204	0,17 *0.007*	0,36 *0.014*
SD523-16-48-C4	03080922	16,0 *0.630*	48,0 *1.890*	53,0 *2.087*	86,0 *3.386*	40,0 *1.575*	SPGX0502	SCGX050204	0,12 *0.005*	0,41 *0.016*
SD523-16.5-50-C4	03080923	16,5 *0.650*	50,0 *1.969*	55,0 *2.165*	88,0 *3.465*	40,0 *1.575*	SPGX0502	SCGX050204	0,07 *0.003*	0,46 *0.018*
SD523-17-51-C4	03080925	17,0 *0.669*	51,0 *2.008*	56,0 *2.205*	89,0 *3.504*	40,0 *1.575*	SPGX0502	SCGX050204	0,02 *0.001*	0,5 *0.020*
SD523-17.5-53-C4	03080926	17,5 *0.689*	53,0 *2.087*	58,0 *2.283*	92,0 *3.622*	40,0 *1.575*	SPGX0602	SCGX050204	0,43 *0.017*	0,1 *0.004*
SD523-18-54-C4	03080927	18,0 *0.709*	54,0 *2.126*	59,0 *2.323*	93,0 *3.661*	40,0 *1.575*	SPGX0602	SCGX050204	0,32 *0.013*	0,21 *0.008*
SD523-18.5-56-C4	03080928	18,5 *0.728*	56,0 *2.205*	61,0 *2.402*	95,0 *3.740*	40,0 *1.575*	SPGX0602	SCGX050204	0,22 *0.009*	0,31 *0.012*
SD523-19-57-C4	03080929	19,0 *0.748*	57,0 *2.244*	62,0 *2.441*	96,0 *3.780*	40,0 *1.575*	SPGX0602	SCGX050204	0,11 *0.004*	0,42 *0.017*
SD523-20-60-C4	03080930	20,0 *0.787*	60,0 *2.362*	65,0 *2.559*	101,0 *3.976*	40,0 *1.575*	SPGX0602	SCGX060204	0,07 *0.003*	0,46 *0.018*
SD523-20.62-62-C4	03081006	20,62 *0.812*	62,0 *2.441*	67,0 *2.638*	103,0 *4.055*	40,0 *1.575*	SPGX0602	SCGX060204	0,03 *0.001*	0,5 *0.020*
SD523-21-63-C4	03080931	21,0 *0.827*	63,0 *2.480*	68,0 *2.677*	104,0 *4.094*	40,0 *1.575*	SPGX0602	SCGX060204	0,01 *0.000*	0,5 *0.020*
SD523-22-66-C4	03080932	22,0 *0.866*	66,0 *2.598*	71,0 *2.795*	107,0 *4.213*	40,0 *1.575*	SPGX0703	SCGX060204	0,44 *0.017*	0,46 *0.018*
SD523-22.23-67-C4	03081008	22,23 *0.875*	67,0 *2.638*	72,0 *2.835*	108,0 *4.252*	40,0 *1.575*	SPGX0703	SCGX060204	0,39 *0.015*	0,5 *0.020*
SD523-23-69-C4	03080933	23,0 *0.906*	69,0 *2.717*	74,0 *2.913*	111,0 *4.370*	40,0 *1.575*	SPGX0703	SCGX070308	0,33 *0.013*	0,5 *0.020*
SD523-24-72-C4	03080934	24,0 *0.945*	72,0 *2.835*	77,0 *3.031*	115,0 *4.528*	40,0 *1.575*	SPGX0703	SCGX070308	0,11 *0.004*	0,5 *0.020*
SD523-25-75-C4	03080935	25,0 *0.984*	75,0 *2.953*	80,0 *3.150*	119,0 *4.685*	40,0 *1.575*	SPGX0703	SCGX070308	0,11 *0.004*	0,5 *0.020*
SD523-25.4-77-C4	03081009	25,4 *1.000*	77,0 *3.031*	82,0 *3.228*	121,0 *4.764*	40,0 *1.575*	SPGX0703	SCGX070308	0,11 *0.004*	0,5 *0.020*
SD523-26-78-C4	03080936	26,0 *1.024*	78,0 *3.071*	83,0 *3.268*	122,0 *4.803*	40,0 *1.575*	SPGX0903	SCGX070308	0,5 *0.020*	0,11 *0.004*
SD523-27-81-C4	03080937	27,0 *1.063*	81,0 *3.189*	86,0 *3.386*	125,0 *4.921*	40,0 *1.575*	SPGX0903	SCGX070308	0,5 *0.020*	0,26 *0.010*
SD523-28-84-C4	03080938	28,0 *1.102*	84,0 *3.307*	89,0 *3.504*	129,0 *5.079*	40,0 *1.575*	SPGX0903	SCGX070308	0,28 *0.011*	0,5 *0.020*

Designation	Item number	DC	LU	LUX	LFS	DF	Insert		Radial adjustment	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert	mm - *Inch -*	mm + *Inch +*
SD523-28.59-86-C4	03081010	28,59 *1.126*	86,0 *3.386*	91,0 *3.583*	131,0 *5.157*	40,0 *1.575*	SPGX0903	SCGX09T308	0,21 *0.008*	0,5 *0.020*
SD523-29-87-C4	03080939	29,0 *1.142*	87,0 *3.425*	92,0 *3.622*	132,0 *5.197*	40,0 *1.575*	SPGX0903	SCGX09T308	0,18 *0.007*	0,5 *0.020*
SD523-30-90-C4	03080940	30,0 *1.181*	90,0 *3.543*	95,0 *3.740*	135,0 *5.315*	40,0 *1.575*	SPGX0903	SCGX09T308	0,12 *0.005*	0,5 *0.020*

Spare Parts

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

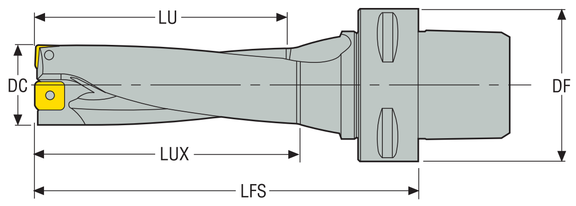
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD523

Drilling depth ~ 3 x D – Metric

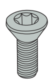


- Seco-Capto™ C5 shank
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 302-303
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	LUX	LFS	DF	Insert		Radial adjustment	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert	mm - *Inch -*	mm + *Inch +*
SD523-15-45-C5	03080941	15,0 *0.591*	45,0 *1.772*	50,0 *1.969*	82,0 *3.228*	50,0 *1.969*	SPGX0502	SCGX050204	0,22 *0.009*	0,31 *0.012*
SD523-15.5-47-C5	03080942	15,5 *0.610*	47,0 *1.850*	52,0 *2.047*	84,0 *3.307*	50,0 *1.969*	SPGX0502	SCGX050204	0,17 *0.007*	0,36 *0.014*
SD523-16-48-C5	03080943	16,0 *0.630*	48,0 *1.890*	53,0 *2.087*	86,0 *3.386*	50,0 *1.969*	SPGX0502	SCGX050204	0,12 *0.005*	0,41 *0.016*
SD523-16.5-50-C5	03080944	16,5 *0.650*	50,0 *1.969*	55,0 *2.165*	88,0 *3.465*	50,0 *1.969*	SPGX0502	SCGX050204	0,07 *0.003*	0,46 *0.018*
SD523-17-51-C5	03080945	17,0 *0.669*	51,0 *2.008*	56,0 *2.205*	89,0 *3.504*	50,0 *1.969*	SPGX0502	SCGX050204	0,02 *0.001*	0,5 *0.020*
SD523-17.5-53-C5	03080946	17,5 *0.689*	53,0 *2.087*	58,0 *2.283*	92,0 *3.622*	50,0 *1.969*	SPGX0602	SCGX050204	0,43 *0.017*	0,1 *0.004*
SD523-18-54-C5	03080947	18,0 *0.709*	54,0 *2.126*	59,0 *2.323*	93,0 *3.661*	50,0 *1.969*	SPGX0602	SCGX050204	0,32 *0.013*	0,21 *0.008*
SD523-18.5-56-C5	03080948	18,5 *0.728*	56,0 *2.205*	61,0 *2.402*	95,0 *3.740*	50,0 *1.969*	SPGX0602	SCGX050204	0,22 *0.009*	0,31 *0.012*
SD523-19-57-C5	03080949	19,0 *0.748*	57,0 *2.244*	62,0 *2.441*	96,0 *3.780*	50,0 *1.969*	SPGX0602	SCGX050204	0,11 *0.004*	0,42 *0.017*
SD523-20-60-C5	03080950	20,0 *0.787*	60,0 *2.362*	65,0 *2.559*	101,0 *3.976*	50,0 *1.969*	SPGX0602	SCGX060204	0,07 *0.003*	0,46 *0.018*
SD523-20.62-62-C5	03081001	20,62 *0.812*	62,0 *2.441*	67,0 *2.638*	103,0 *4.055*	50,0 *1.969*	SPGX0602	SCGX060204	0,03 *0.001*	0,5 *0.020*
SD523-21-63-C5	03080951	21,0 *0.827*	63,0 *2.480*	68,0 *2.677*	104,0 *4.094*	50,0 *1.969*	SPGX0602	SCGX060204	0,01 *0.000*	0,5 *0.020*
SD523-22-66-C5	03080952	22,0 *0.866*	66,0 *2.598*	71,0 *2.795*	107,0 *4.213*	50,0 *1.969*	SPGX0703	SCGX060204	0,44 *0.017*	0,46 *0.018*
SD523-22.23-67-C5	03081002	22,23 *0.875*	67,0 *2.638*	72,0 *2.835*	108,0 *4.252*	50,0 *1.969*	SPGX0703	SCGX060204	0,39 *0.015*	0,5 *0.020*
SD523-23-69-C5	03080953	23,0 *0.906*	69,0 *2.717*	74,0 *2.913*	111,0 *4.370*	50,0 *1.969*	SPGX0703	SCGX070308	0,33 *0.013*	0,5 *0.020*
SD523-24-72-C5	03080954	24,0 *0.945*	72,0 *2.835*	77,0 *3.031*	115,0 *4.528*	50,0 *1.969*	SPGX0703	SCGX070308	0,11 *0.004*	0,5 *0.020*
SD523-25-75-C5	03080955	25,0 *0.984*	75,0 *2.953*	80,0 *3.150*	119,0 *4.685*	50,0 *1.969*	SPGX0703	SCGX070308	0,11 *0.004*	0,5 *0.020*
SD523-25.4-77-C5	03081003	25,4 *1.000*	77,0 *3.031*	82,0 *3.228*	121,0 *4.764*	50,0 *1.969*	SPGX0703	SCGX070308	0,11 *0.004*	0,5 *0.020*
SD523-26-78-C5	03080956	26,0 *1.024*	78,0 *3.071*	83,0 *3.268*	122,0 *4.803*	50,0 *1.969*	SPGX0903	SCGX070308	0,5 *0.020*	0,11 *0.004*
SD523-27-81-C5	03080957	27,0 *1.063*	81,0 *3.189*	86,0 *3.386*	125,0 *4.921*	50,0 *1.969*	SPGX0903	SCGX070308	0,5 *0.020*	0,26 *0.010*
SD523-28-84-C5	03080958	28,0 *1.102*	84,0 *3.307*	89,0 *3.504*	129,0 *5.079*	50,0 *1.969*	SPGX0903	SCGX070308	0,28 *0.011*	0,5 *0.020*

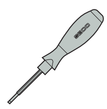
Designation	Item number	DC	LU	LUX	LFS	DF	Insert		Radial adjustment	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert	mm - *Inch -*	mm + *Inch +*
SD523-28.59-86-C5	03081004	28,59 *1.126*	86,0 *3.386*	91,0 *3.583*	131,0 *5.157*	50,0 *1.969*	SPGX0903	SCGX09T308	0,21 *0.008*	0,5 *0.020*
SD523-29-87-C5	03080959	29,0 *1.142*	87,0 *3.425*	92,0 *3.622*	132,0 *5.197*	50,0 *1.969*	SPGX0903	SCGX09T308	0,18 *0.007*	0,5 *0.020*
SD523-30-90-C5	03080960	30,0 *1.181*	90,0 *3.543*	95,0 *3.740*	135,0 *5.315*	50,0 *1.969*	SPGX0903	SCGX09T308	0,12 *0.005*	0,5 *0.020*
SD523-31-93-C5	03080961	31,0 *1.220*	93,0 *3.661*	98,0 *3.858*	138,0 *5.433*	50,0 *1.969*	SPGX0903	SCGX09T308	0,12 *0.005*	0,5 *0.020*
SD523-31.75-96-C5	03081005	31,75 *1.250*	96,0 *3.780*	101,0 *3.976*	142,0 *5.591*	50,0 *1.969*	SPGX11T3	SCGX09T308	0,5 *0.020*	0,28 *0.011*
SD523-32-96-C5	03080962	32,0 *1.260*	96,0 *3.780*	101,0 *3.976*	142,0 *5.591*	50,0 *1.969*	SPGX11T3	SCGX09T308	0,5 *0.020*	0,31 *0.012*
SD523-33-99-C5	03080963	33,0 *1.299*	99,0 *3.898*	104,0 *4.094*	145,0 *5.709*	50,0 *1.969*	SPGX11T3	SCGX09T308	0,5 *0.020*	0,46 *0.018*
SD523-34-102-C5	03080964	34,0 *1.339*	102,0 *4.016*	107,0 *4.213*	148,0 *5.827*	50,0 *1.969*	SPGX11T3	SCGX09T308	0,22 *0.009*	0,5 *0.020*
SD523-35-105-C5	03080965	35,0 *1.378*	105,0 *4.134*	110,0 *4.331*	151,0 *5.945*	50,0 *1.969*	SPGX11T3	SCGX11T308	0,22 *0.009*	0,5 *0.020*
SD523-36-108-C5	03080966	36,0 *1.417*	108,0 *4.252*	113,0 *4.449*	154,0 *6.063*	50,0 *1.969*	SPGX11T3	SCGX11T308	0,09 *0.004*	0,5 *0.020*
SD523-37-111-C5	03080967	37,0 *1.457*	111,0 *4.370*	116,0 *4.567*	157,0 *6.181*	50,0 *1.969*	SPGX11T3	SCGX11T308	0,09 *0.004*	0,5 *0.020*
SD523-38-114-C5	03080968	38,0 *1.496*	114,0 *4.488*	119,0 *4.685*	160,0 *6.299*	50,0 *1.969*	SPGX12T3	SCGX11T308	0,5 *0.020*	0,5 *0.020*
SD523-39-117-C5	03080969	39,0 *1.535*	117,0 *4.606*	122,0 *4.803*	163,0 *6.417*	50,0 *1.969*	SPGX12T3	SCGX11T308	0,39 *0.015*	0,5 *0.020*
SD523-40-120-C5	03080970	40,0 *1.575*	120,0 *4.724*	125,0 *4.921*	166,0 *6.535*	50,0 *1.969*	SPGX12T3	SCGX11T308	0,19 *0.007*	0,5 *0.020*

Spare Parts




For drill dia. (mm)	Insert screw		Insert key
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

Accessories

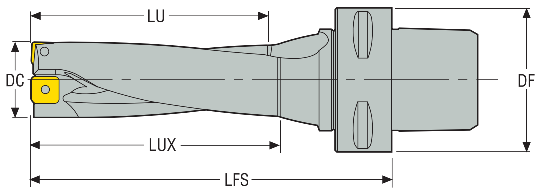



Torque wrench*	Replacement blade	Torque value
T00-07P09	T00-07P	0,9 Nm
T00-07P09	T00-07P	0,9 Nm
T00-07P09	T00-07P	0,9 Nm
T00-08P12	T00-08P	1,2 Nm
T00-08P12	T00-08P	1,2 Nm
T00-09P20	T00-09P	2,0 Nm
T00-09P20	T00-09P	2,0 Nm
T00-15P30	T00-15P	3,0 Nm
T00-15P30	T00-15P	3,0 Nm
T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD523

Drilling depth ~ 3 x D – Metric

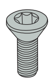
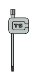


- Seco-Capto™ C6 shank
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 302-303
- For intermediate diameters see the MyDesign software.

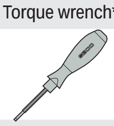
Designation	Item number	DC	LU	LUX	LFS	DF	Insert		Radial adjustment	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert	mm - Inch -	mm + Inch +
SD523-15-45-C6	03080971	15,0 0.591	45,0 1.772	50,0 1.969	84,0 3.307	63,0 2.480	SPGX0502	SCGX050204	0,22 0.009	0,31 0.012
SD523-15.5-47-C6	03080972	15,5 0.610	47,0 1.850	52,0 2.047	86,0 3.386	63,0 2.480	SPGX0502	SCGX050204	0,17 0.007	0,36 0.014
SD523-16-48-C6	03080973	16,0 0.630	48,0 1.890	53,0 2.087	88,0 3.465	63,0 2.480	SPGX0502	SCGX050204	0,12 0.005	0,41 0.016
SD523-16.5-50-C6	03080974	16,5 0.650	50,0 1.969	55,0 2.165	90,0 3.543	63,0 2.480	SPGX0502	SCGX050204	0,07 0.003	0,46 0.018
SD523-17-51-C6	03080975	17,0 0.669	51,0 2.008	56,0 2.205	91,0 3.583	63,0 2.480	SPGX0502	SCGX050204	0,02 0.001	0,5 0.020
SD523-17.5-53-C6	03080976	17,5 0.689	53,0 2.087	58,0 2.283	94,0 3.701	63,0 2.480	SPGX0602	SCGX050204	0,43 0.017	0,1 0.004
SD523-18-54-C6	03080977	18,0 0.709	54,0 2.126	59,0 2.323	95,0 3.740	63,0 2.480	SPGX0602	SCGX050204	0,32 0.013	0,21 0.008
SD523-18.5-56-C6	03080978	18,5 0.728	56,0 2.205	61,0 2.402	97,0 3.819	63,0 2.480	SPGX0602	SCGX050204	0,22 0.009	0,31 0.012
SD523-19-57-C6	03080979	19,0 0.748	57,0 2.244	62,0 2.441	98,0 3.858	63,0 2.480	SPGX0602	SCGX050204	0,11 0.004	0,42 0.017
SD523-20-60-C6	03080980	20,0 0.787	60,0 2.362	65,0 2.559	103,0 4.055	63,0 2.480	SPGX0602	SCGX060204	0,07 0.003	0,46 0.018
SD523-20.62-62-C6	03081011	20,62 0.812	62,0 2.441	67,0 2.638	105,0 4.134	63,0 2.480	SPGX0602	SCGX060204	0,03 0.001	0,5 0.020
SD523-21-63-C6	03080981	21,0 0.827	63,0 2.480	68,0 2.677	106,0 4.173	63,0 2.480	SPGX0602	SCGX060204	0,01 0.000	0,5 0.020
SD523-22-66-C6	03080982	22,0 0.866	66,0 2.598	71,0 2.795	109,0 4.291	63,0 2.480	SPGX0703	SCGX060204	0,44 0.017	0,46 0.018
SD523-22.23-67-C6	03081012	22,23 0.875	67,0 2.638	72,0 2.835	110,0 4.331	63,0 2.480	SPGX0703	SCGX060204	0,39 0.015	0,5 0.020
SD523-23-69-C6	03080983	23,0 0.906	69,0 2.717	74,0 2.913	113,0 4.449	63,0 2.480	SPGX0703	SCGX070308	0,33 0.013	0,5 0.020
SD523-24-72-C6	03080984	24,0 0.945	72,0 2.835	77,0 3.031	117,0 4.606	63,0 2.480	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25-75-C6	03080985	25,0 0.984	75,0 2.953	80,0 3.150	121,0 4.764	63,0 2.480	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25.4-77-C6	03081013	25,4 1.000	77,0 3.031	82,0 3.228	123,0 4.843	63,0 2.480	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-26-78-C6	03080986	26,0 1.024	78,0 3.071	83,0 3.268	124,0 4.882	63,0 2.480	SPGX0903	SCGX070308	0,5 0.020	0,11 0.004
SD523-27-81-C6	03080987	27,0 1.063	81,0 3.189	86,0 3.386	127,0 5.000	63,0 2.480	SPGX0903	SCGX070308	0,5 0.020	0,26 0.010
SD523-28-84-C6	03080988	28,0 1.102	84,0 3.307	89,0 3.504	131,0 5.157	63,0 2.480	SPGX0903	SCGX070308	0,28 0.011	0,5 0.020

Designation	Item number	DC	LU	LUX	LFS	DF	Insert		Radial adjustment	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert	mm - *Inch -*	mm + *Inch +*
SD523-28.59-86-C6	03081014	28,59 *1.126*	86,0 *3.386*	91,0 *3.583*	133,0 *5.236*	63,0 *2.480*	SPGX0903	SCGX09T308	0,21 *0.008*	0,5 *0.020*
SD523-29-87-C6	03080989	29,0 *1.142*	87,0 *3.425*	92,0 *3.622*	134,0 *5.276*	63,0 *2.480*	SPGX0903	SCGX09T308	0,18 *0.007*	0,5 *0.020*
SD523-30-90-C6	03080990	30,0 *1.181*	90,0 *3.543*	95,0 *3.740*	137,0 *5.394*	63,0 *2.480*	SPGX0903	SCGX09T308	0,12 *0.005*	0,5 *0.020*
SD523-31-93-C6	03080991	31,0 *1.220*	93,0 *3.661*	98,0 *3.858*	140,0 *5.512*	63,0 *2.480*	SPGX0903	SCGX09T308	0,12 *0.005*	0,5 *0.020*
SD523-31.75-96-C6	03081015	31,75 *1.250*	96,0 *3.780*	101,0 *3.976*	144,0 *5.669*	63,0 *2.480*	SPGX11T3	SCGX09T308	0,5 *0.020*	0,28 *0.011*
SD523-32-96-C6	03080992	32,0 *1.260*	96,0 *3.780*	101,0 *3.976*	144,0 *5.669*	63,0 *2.480*	SPGX11T3	SCGX09T308	0,5 *0.020*	0,31 *0.012*
SD523-33-99-C6	03080993	33,0 *1.299*	99,0 *3.898*	104,0 *4.094*	147,0 *5.787*	63,0 *2.480*	SPGX11T3	SCGX09T308	0,5 *0.020*	0,46 *0.018*
SD523-34-102-C6	03080994	34,0 *1.339*	102,0 *4.016*	107,0 *4.213*	150,0 *5.906*	63,0 *2.480*	SPGX11T3	SCGX09T308	0,22 *0.009*	0,5 *0.020*
SD523-35-105-C6	03080995	35,0 *1.378*	105,0 *4.134*	110,0 *4.331*	153,0 *6.024*	63,0 *2.480*	SPGX11T3	SCGX11T308	0,22 *0.009*	0,5 *0.020*
SD523-36-108-C6	03080996	36,0 *1.417*	108,0 *4.252*	113,0 *4.449*	156,0 *6.142*	63,0 *2.480*	SPGX11T3	SCGX11T308	0,09 *0.004*	0,5 *0.020*
SD523-37-111-C6	03080997	37,0 *1.457*	111,0 *4.370*	116,0 *4.567*	159,0 *6.260*	63,0 *2.480*	SPGX11T3	SCGX11T308	0,09 *0.004*	0,5 *0.020*
SD523-38-114-C6	03080998	38,0 *1.496*	114,0 *4.488*	119,0 *4.685*	162,0 *6.378*	63,0 *2.480*	SPGX12T3	SCGX11T308	0,5 *0.020*	0,5 *0.020*
SD523-39-117-C6	03080999	39,0 *1.535*	117,0 *4.606*	122,0 *4.803*	165,0 *6.496*	63,0 *2.480*	SPGX12T3	SCGX11T308	0,39 *0.015*	0,5 *0.020*
SD523-40-120-C6	03081000	40,0 *1.575*	120,0 *4.724*	125,0 *4.921*	168,0 *6.614*	63,0 *2.480*	SPGX12T3	SCGX11T308	0,19 *0.007*	0,5 *0.020*

Spare Parts

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

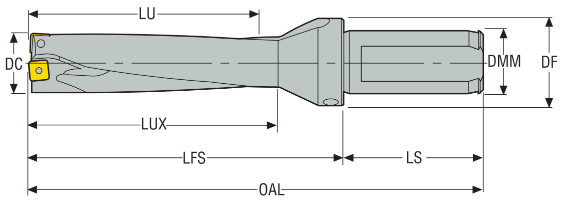
Accessories

Torque wrench*	Replacement blade	Torque value
		
T00-07P09	T00-07P	0,9 Nm
T00-07P09	T00-07P	0,9 Nm
T00-07P09	T00-07P	0,9 Nm
T00-08P12	T00-08P	1,2 Nm
T00-08P12	T00-08P	1,2 Nm
T00-09P20	T00-09P	2,0 Nm
T00-09P20	T00-09P	2,0 Nm
T00-15P30	T00-15P	3,0 Nm
T00-15P30	T00-15P	3,0 Nm
T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD524

Drilling depth ~ 4 x D – Metric

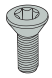


- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 304-305
- For intermediate diameters see the MyDesign software.

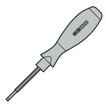
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert
SD524-17-68-25R7	03080330	17,0 *0.669*	68,0 *2.677*	154,0 *6.063*	73,0 *2.874*	98,0 *3.858*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0502	SCGX050204
SD524-17.5-70-25R7	03080326	17,5 *0.689*	70,0 *2.756*	156,0 *6.142*	75,0 *2.953*	100,0 *3.937*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0602	SCGX050204
SD524-18-72-25R7	03080333	18,0 *0.709*	72,0 *2.835*	158,0 *6.220*	77,0 *3.031*	102,0 *4.016*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0602	SCGX050204
SD524-18.5-74-25R7	03080331	18,5 *0.728*	74,0 *2.913*	160,0 *6.299*	79,0 *3.110*	104,0 *4.094*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0602	SCGX050204
SD524-19-76-25R7	03080336	19,0 *0.748*	76,0 *2.992*	162,0 *6.378*	81,0 *3.189*	106,0 *4.173*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0602	SCGX050204
SD524-20-80-25R7	03080340	20,0 *0.787*	80,0 *3.150*	166,0 *6.535*	85,0 *3.346*	110,0 *4.331*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0602	SCGX060204
SD524-21-84-25R7	03080344	21,0 *0.827*	84,0 *3.307*	170,0 *6.693*	89,0 *3.504*	114,0 *4.488*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0602	SCGX060204
SD524-22-88-25R7	03080348	22,0 *0.866*	88,0 *3.465*	174,0 *6.850*	93,0 *3.661*	118,0 *4.646*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0703	SCGX060204
SD524-23-92-25R7	03080351	23,0 *0.906*	92,0 *3.622*	178,0 *7.008*	97,0 *3.819*	122,0 *4.803*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0703	SCGX070308
SD524-24-96-25R7	03080352	24,0 *0.945*	96,0 *3.780*	182,0 *7.165*	101,0 *3.976*	126,0 *4.961*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0703	SCGX070308
SD524-25-100-32R7	03080353	25,0 *0.984*	100,0 *3.937*	190,0 *7.480*	105,0 *4.134*	130,0 *5.118*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX0703	SCGX070308
SD524-26-104-32R7	03080354	26,0 *1.024*	104,0 *4.094*	194,0 *7.638*	109,0 *4.291*	134,0 *5.276*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX0903	SCGX070308
SD524-27-108-32R7	03080355	27,0 *1.063*	108,0 *4.252*	198,0 *7.795*	113,0 *4.449*	138,0 *5.433*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX0903	SCGX070308
SD524-28-112-32R7	03080356	28,0 *1.102*	112,0 *4.409*	202,0 *7.953*	117,0 *4.606*	142,0 *5.591*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX0903	SCGX070308
SD524-29-116-32R7	03080357	29,0 *1.142*	116,0 *4.567*	206,0 *8.110*	121,0 *4.764*	146,0 *5.748*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX0903	SCGX09T308
SD524-30-120-32R7	03080358	30,0 *1.181*	120,0 *4.724*	210,0 *8.268*	125,0 *4.921*	150,0 *5.906*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX0903	SCGX09T308
SD524-31-124-32R7	03080360	31,0 *1.220*	124,0 *4.882*	214,0 *8.425*	129,0 *5.079*	154,0 *6.063*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX0903	SCGX09T308
SD524-32-128-40R7	03080361	32,0 *1.260*	128,0 *5.039*	226,0 *8.898*	133,0 *5.236*	158,0 *6.220*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX11T3	SCGX09T308
SD524-33-132-40R7	03080362	33,0 *1.299*	132,0 *5.197*	230,0 *9.055*	137,0 *5.394*	162,0 *6.378*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX11T3	SCGX09T308
SD524-34-136-40R7	03080363	34,0 *1.339*	136,0 *5.354*	234,0 *9.213*	141,0 *5.551*	166,0 *6.535*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX11T3	SCGX09T308
SD524-35-140-40R7	03080364	35,0 *1.378*	140,0 *5.512*	238,0 *9.370*	145,0 *5.709*	170,0 *6.693*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX11T3	SCGX11T308

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert
SD524-36-144-40R7	03080365	36,0 *1.417*	144,0 *5.669*	242,0 *9.528*	149,0 *5.866*	174,0 *6.850*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX11T3	SCGX11T308
SD524-37-148-40R7	03080366	37,0 *1.457*	148,0 *5.827*	246,0 *9.685*	153,0 *6.024*	178,0 *7.008*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX11T3	SCGX11T308
SD524-38-152-40R7	03080367	38,0 *1.496*	152,0 *5.984*	250,0 *9.843*	157,0 *6.181*	182,0 *7.165*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX11T308
SD524-39-156-40R7	03080368	39,0 *1.535*	156,0 *6.142*	254,0 *10.000*	161,0 *6.339*	186,0 *7.323*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX11T308
SD524-40-160-40R7	03080369	40,0 *1.575*	160,0 *6.299*	258,0 *10.157*	165,0 *6.496*	190,0 *7.480*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX11T308
SD524-41-164-40R7	03080370	41,0 *1.614*	164,0 *6.457*	262,0 *10.315*	169,0 *6.654*	194,0 *7.638*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX120408
SD524-42-168-40R7	03080371	42,0 *1.654*	168,0 *6.614*	266,0 *10.472*	173,0 *6.811*	198,0 *7.795*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX120408
SD524-43-172-40R7	03080372	43,0 *1.693*	172,0 *6.772*	270,0 *10.630*	177,0 *6.969*	202,0 *7.953*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX120408
SD524-44-176-40R7	03080373	44,0 *1.732*	176,0 *6.929*	274,0 *10.787*	181,0 *7.126*	206,0 *8.110*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX120408
SD524-45-180-40R7	03080374	45,0 *1.772*	180,0 *7.087*	278,0 *10.945*	185,0 *7.283*	210,0 *8.268*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX150512
SD524-46-184-40R7	03080375	46,0 *1.811*	184,0 *7.244*	282,0 *11.102*	189,0 *7.441*	214,0 *8.425*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX150512
SD524-47-188-40R7	03080376	47,0 *1.850*	188,0 *7.402*	286,0 *11.260*	193,0 *7.598*	218,0 *8.583*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX150512
SD524-48-192-40R7	03080377	48,0 *1.890*	192,0 *7.559*	290,0 *11.417*	197,0 *7.756*	222,0 *8.740*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1504	SCGX150512
SD524-49-196-40R7	03080378	49,0 *1.929*	196,0 *7.717*	294,0 *11.575*	201,0 *7.913*	226,0 *8.898*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1504	SCGX150512
SD524-50-200-40R7	03080379	50,0 *1.969*	200,0 *7.874*	298,0 *11.732*	205,0 *8.071*	230,0 *9.055*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1504	SCGX150512
SD524-51-204-40R7	03080380	51,0 *2.008*	204,0 *8.031*	302,0 *11.890*	209,0 *8.228*	234,0 *9.213*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1504	SCGX150512
SD524-52-208-40R7	03080381	52,0 *2.047*	208,0 *8.189*	306,0 *12.047*	213,0 *8.386*	238,0 *9.370*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512
SD524-53-212-40R7	03080382	53,0 *2.087*	212,0 *8.346*	310,0 *12.205*	217,0 *8.543*	242,0 *9.528*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512
SD524-54-216-40R7	03080383	54,0 *2.126*	216,0 *8.504*	314,0 *12.362*	221,0 *8.701*	246,0 *9.685*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512
SD524-55-220-40R7	03080384	55,0 *2.165*	220,0 *8.661*	318,0 *12.520*	225,0 *8.858*	250,0 *9.843*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512
SD524-56-224-40R7	03080385	56,0 *2.205*	224,0 *8.819*	322,0 *12.677*	229,0 *9.016*	254,0 *10.000*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512
SD524-57-228-40R7	03080386	57,0 *2.244*	228,0 *8.976*	326,0 *12.835*	233,0 *9.173*	258,0 *10.157*	68,0 *2.677*	40,0 *1.575*	59,35 *2.337*	SPGX1904	SCGX150512
SD524-58-232-40R7	03080387	58,0 *2.283*	232,0 *9.134*	330,0 *12.992*	237,0 *9.331*	262,0 *10.315*	68,0 *2.677*	40,0 *1.575*	63,0 *2.480*	SPGX1904	SCGX150512
SD524-59-236-40R7	03080388	59,0 *2.323*	236,0 *9.291*	334,0 *13.150*	241,0 *9.488*	266,0 *10.472*	68,0 *2.677*	40,0 *1.575*	63,0 *2.480*	SPGX1904	SCGX150512

Spare parts

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

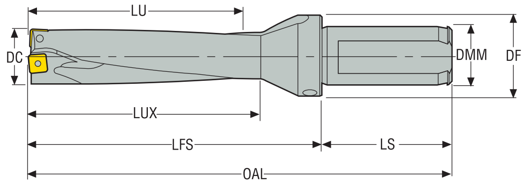
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD524

Drilling depth ~ 4 x D – *Inch*

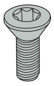
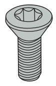
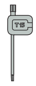


- ISO 9766 shank, R7
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 304-305
- For intermediate diameters see the MyDesign software.

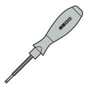
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		Inch	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	*Inch*	Center insert	Periph insert
SD524-0594-238-1000R7	03080280	0.594	2.380	5.811	2.577	3.561	2.250	1.000	1.378	SPGX0502	SCGX050204
SD524-0625-250-1000R7	03080281	0.625	2.500	5.931	2.697	3.681	2.250	1.000	1.378	SPGX0502	SCGX050204
SD524-0656-262-1000R7	03080283	0.656	2.620	6.051	2.817	3.801	2.250	1.000	1.378	SPGX0502	SCGX050204
SD524-0687-275-1000R7	03080285	0.687	2.750	6.181	2.947	3.931	2.250	1.000	1.378	SPGX0502	SCGX050204
SD524-0709-284-1000R7	03080286	0.709	2.840	6.271	3.037	4.021	2.250	1.000	1.378	SPGX0602	SCGX050204
SD524-0750-300-1000R7	03080288	0.750	3.000	6.431	3.197	4.181	2.250	1.000	1.378	SPGX0602	SCGX050204
SD524-0766-306-1000R7	03080289	0.766	3.060	6.491	3.257	4.241	2.250	1.000	1.378	SPGX0602	SCGX050204
SD524-0787-315-1000R7	03080290	0.787	3.150	6.581	3.347	4.331	2.250	1.000	1.378	SPGX0602	SCGX060204
SD524-0812-325-1000R7	03080292	0.812	3.250	6.681	3.447	4.431	2.250	1.000	1.378	SPGX0602	SCGX060204
SD524-0827-331-1000R7	03080294	0.827	3.310	6.741	3.507	4.491	2.250	1.000	1.378	SPGX0602	SCGX060204
SD524-0875-350-1000R7	03080295	0.875	3.500	6.931	3.697	4.681	2.250	1.000	1.378	SPGX0703	SCGX060204
SD524-0906-362-1000R7	03080297	0.906	3.620	7.051	3.817	4.801	2.250	1.000	1.378	SPGX0703	SCGX070308
SD524-0922-369-1000R7	03080298	0.922	3.690	7.121	3.887	4.871	2.250	1.000	1.378	SPGX0703	SCGX070308
SD524-0937-375-1000R7	03080299	0.937	3.750	7.181	3.947	4.931	2.250	1.000	1.378	SPGX0703	SCGX070308
SD524-0984-394-1250R7	03080301	0.984	3.940	7.496	4.137	5.121	2.375	1.250	1.654	SPGX0703	SCGX070308
SD524-1000-400-1250R7	03080302	1.000	4.000	7.556	4.197	5.181	2.375	1.250	1.654	SPGX0703	SCGX070308
SD524-1032-413-1250R7	03080304	1.032	4.130	7.686	4.327	5.311	2.375	1.250	1.654	SPGX0903	SCGX070308
SD524-1062-425-1250R7	03080305	1.062	4.250	7.806	4.447	5.431	2.375	1.250	1.654	SPGX0903	SCGX070308
SD524-1109-443-1250R7	03080307	1.109	4.430	7.986	4.627	5.611	2.375	1.250	1.654	SPGX0903	SCGX070308
SD524-1125-450-1250R7	03080308	1.125	4.500	8.056	4.697	5.681	2.375	1.250	1.654	SPGX0903	SCGX09T308
SD524-1172-469-1250R7	03080310	1.172	4.690	8.246	4.887	5.871	2.375	1.250	1.654	SPGX0903	SCGX09T308
SD524-1187-475-1250R7	03080311	1.187	4.750	8.306	4.947	5.931	2.375	1.250	1.654	SPGX0903	SCGX09T308
SD524-1250-500-1500R7	03080314	1.250	5.000	8.806	5.197	6.181	2.625	1.500	1.969	SPGX11T3	SCGX09T308
SD524-1312-525-1500R7	03080315	1.312	5.250	9.056	5.447	6.431	2.625	1.500	1.969	SPGX11T3	SCGX09T308
SD524-1344-538-1500R7	03080317	1.344	5.380	9.186	5.577	6.561	2.625	1.500	1.969	SPGX11T3	SCGX09T308
SD524-1375-550-1500R7	03080318	1.375	5.500	9.306	5.697	6.681	2.625	1.500	1.969	SPGX11T3	SCGX11T308
SD524-1437-575-1500R7	03080320	1.437	5.750	9.556	5.947	6.931	2.625	1.500	1.969	SPGX11T3	SCGX11T308
SD524-1500-600-1500R7	03080322	1.500	6.000	9.806	6.197	7.181	2.625	1.500	1.969	SPGX12T3	SCGX11T308
SD524-1562-625-1500R7	03080323	1.562	6.250	10.056	6.447	7.431	2.625	1.500	1.969	SPGX12T3	SCGX11T308
SD524-1625-650-1500R7	03080324	1.625	6.500	10.306	6.697	7.681	2.625	1.500	1.969	SPGX12T3	SCGX120408
SD524-1687-675-1500R7	03080325	1.687	6.750	10.556	6.947	7.931	2.625	1.500	1.969	SPGX12T3	SCGX120408
SD524-1750-700-1500R7	03080328	1.750	7.000	10.806	7.197	8.181	2.625	1.500	1.969	SPGX1504	SCGX120408
SD524-1812-725-1500R7	03080332	1.812	7.250	11.056	7.447	8.431	2.625	1.500	1.969	SPGX1504	SCGX150512
SD524-1875-750-1500R7	03080334	1.875	7.500	11.306	7.697	8.681	2.625	1.500	1.969	SPGX1504	SCGX150512
SD524-1937-775-1500R7	03080335	1.937	7.750	11.556	7.947	8.931	2.625	1.500	2.337	SPGX1504	SCGX150512

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Center insert	Periph insert
SD524-2000-800-1500R7	03080337	2.000	8.000	11.806	8.197	9.181	2.625	1.500	2.337	SPGX1504	SCGX150512
SD524-2062-825-1500R7	03080339	2.062	8.250	12.056	8.447	9.431	2.625	1.500	2.337	SPGX1904	SCGX150512
SD524-2125-850-1500R7	03080342	2.125	8.500	12.306	8.697	9.681	2.625	1.500	2.337	SPGX1904	SCGX150512
SD524-2250-900-1500R7	03080346	2.250	9.000	12.806	9.197	10.181	2.625	1.500	2.337	SPGX1904	SCGX150512
SD524-2375-950-1500R7	03080349	2.375	9.500	13.306	9.697	10.681	2.625	1.500	2.480	SPGX1904	SCGX150512

Spare Parts

For drill dia. (inch)	Insert screw centre	Insert screw periph	Key
			
0.594-0.687	C02245-T07P	–	T07P-2
0.709-0.766	C02205-T07P	C02245-T07P	T07P-2
0.787-0.827	C02205-T07P	–	T07P-2
0.875-0.905	C02506-T08P	–	T08P-2
0.906-1.000	C02507-T08P	C03007-T08P	T08P-2
1.032-1.109	C03007-T09P	–	T09P-2
1.125-1.187	C03007-T09P	C03009-T09P	T09P-2
1.250-1.562	C03508-T15P	–	T15P-2D
1.625-1.687	C03508-T15P	C05012-T15P	T15P-2D
1.750-2.375	C04011-T15P	C05012-T15P	T15P-2D

Accessories

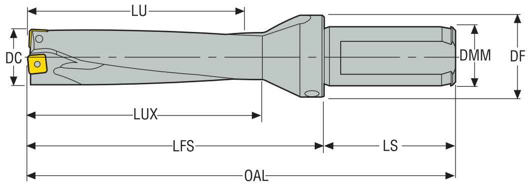
For drill dia. (inch)	Torque wrench
	
0.594-0.687	T00-07P09
0.709-0.766	T00-07P09
0.787-0.827	T00-07P09
0.875-0.905	T00-08P12
0.906-1.000	T00-08P12
1.032-1.109	T00-09P20
1.125-1.187	T00-09P20
1.250-1.562	T00-15P30
1.625-1.687	T00-15P30
1.750-2.375	T00-15P35

Torque wrench including blade.

*Including blade.

SD524

Drilling depth ~ 4 x D – *Inch*

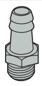
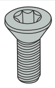
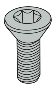
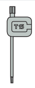
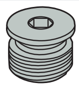
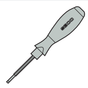


- ISO 9766 shank, R7-C
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 304-305
- For intermediate diameters see the MyDesign software.
- For stationary applications

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Center insert	Periph insert
SD524-0625-250-1000R7-C	03080282	0.625	2.500	6.628	2.697	3.878	2.750	1.000	1.378	SPGX0502	SCGX050204
SD524-0687-275-1000R7-C	03080284	0.687	2.750	6.878	2.947	4.128	2.750	1.000	1.378	SCGX0502	SCGX050204
SD524-0750-300-1000R7-C	03080287	0.750	3.000	7.128	3.197	4.378	2.750	1.000	1.378	SPGX0602	SCGX050204
SD524-0812-325-1000R7-C	03080293	0.812	3.250	7.378	3.447	4.628	2.750	1.000	1.378	SPGX0602	SCGX060204
SD524-0875-350-1000R7-C	03080296	0.875	3.500	7.628	3.697	4.878	2.750	1.000	1.378	SPGX0703	SCGX060204
SD524-0937-375-1000R7-C	03080300	0.937	3.750	7.878	3.947	5.128	2.750	1.000	1.378	SPGX0703	SCGX070308
SD524-1000-400-1250R7-C	03080303	1.000	4.000	8.128	4.197	5.378	2.750	1.250	1.654	SPGX0703	SCGX070308
SD524-1062-425-1250R7-C	03080306	1.062	4.250	8.378	4.447	5.628	2.750	1.250	1.654	SPGX0903	SCGX070308
SD524-1125-450-1250R7-C	03080309	1.125	4.500	8.628	4.697	5.878	2.750	1.250	1.654	SPGX0903	SCGX09T308
SD524-1187-475-1250R7-C	03080312	1.187	4.750	8.878	4.947	6.128	2.750	1.250	1.654	SPGX0903	SCGX09T308
SD524-1250-500-1500R7-C	03080313	1.250	5.000	9.128	5.197	6.378	2.750	1.500	1.969	SPGX11T3	SCGX09T308
SD524-1312-525-1500R7-C	03080316	1.312	5.250	9.378	5.447	6.628	2.750	1.500	1.969	SPGX11T3	SCGX09T308
SD524-1375-550-1500R7-C	03080319	1.375	5.500	9.628	5.697	6.878	2.750	1.500	1.969	SPGX11T3	SCGX11T308
SD524-1500-600-1500R7-C	03080321	1.500	6.000	10.128	6.197	7.378	2.750	1.500	1.969	SPGX12T3	SCGX11T308
SD524-1750-700-1500R7-C	03080329	1.750	7.000	11.128	7.197	8.378	2.750	1.500	1.969	SPGX1504	SCGX120408
SD524-2000-800-1500R7-C	03080338	2.000	8.000	12.128	8.197	9.378	2.750	1.500	2.337	SPGX1504	SCGX150512
SD524-2125-850-1500R7-C	03080343	2.125	8.500	12.628	8.697	9.878	2.750	1.500	2.337	SPGX1904	SCGX150512
SD524-2250-900-1500R7-C	03080347	2.250	9.000	13.128	9.197	10.378	2.750	1.500	2.337	SPGX1904	SCGX150512
SD524-2375-950-1500R7-C	03080350	2.375	9.500	13.628	9.697	10.878	2.750	1.500	2.480	SPGX1904	SCGX150512

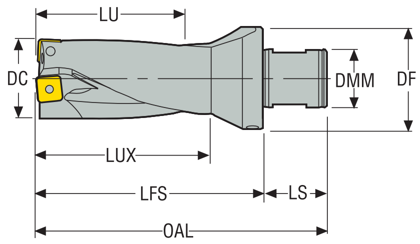
Spare parts

Accessories

For drill dia. (inch)	Hose adapter	Insert screw centre	Insert screw periph	Key	Plug	Torque wrench
						
0.625-0.687	1310	C02245-T07P	–	T07P-2	R1/4	T00-07P09
0.750	1310	C02205-T07P	C02245-T07P	T07P-2	R1/4	T00-07P09
0.812	1310	C02205-T07P	–	T07P-2	R1/4	T00-07P09
0.875	1310	C02506-T08P	–	T08P-2	R1/4	T00-08P12
0.937-1.000	1310	C02507-T08P	C03007-T08P	T08P-2	R1/4	T00-08P12
1.062	1310	C03007-T09P	–	T09P-2	R1/4	T00-09P20
1.125-1.187	1310	C03007-T09P	C03009-T09P	T09P-2	R1/4	T00-09P20
1.250-1.375	1310	C03508-T15P	–	T15P-2D	R1/4	T00-15P30
1.750-2.375	1310	C04011-T15P	C05012-T15P	T15P-2D	R1/4	T00-15P35

SD524

Drilling depth ~ 4 x D – Metric

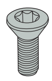
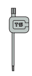


- ABS 50 compatible shank, -2
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 304-305
- For intermediate diameters see the MyDesign software.

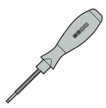
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert
SD524-17-68-50R2	03080208	17,0 *0.669*	68,0 *2.677*	129,0 *5.079*	73,0 *2.874*	98,0 *3.858*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0502	SCGX050204
SD524-17.5-70-50R2	03080327	17,5 *0.689*	70,0 *2.756*	131,0 *5.157*	75,0 *2.953*	100,0 *3.937*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0602	SCGX050204
SD524-18-72-50R2	03080209	18,0 *0.709*	72,0 *2.835*	133,0 *5.236*	77,0 *3.031*	102,0 *4.016*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0602	SCGX050204
SD524-18.5-74-50R2	03080210	18,5 *0.728*	74,0 *2.913*	135,0 *5.315*	79,0 *3.110*	104,0 *4.094*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0602	SCGX050204
SD524-19-76-50R2	03080422	19,0 *0.748*	76,0 *2.992*	137,0 *5.394*	81,0 *3.189*	106,0 *4.173*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0602	SCGX050204
SD524-20-80-50R2	03080341	20,0 *0.787*	80,0 *3.150*	141,0 *5.551*	85,0 *3.346*	110,0 *4.331*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0602	SCGX060204
SD524-20.62-83-50R2	03080215	20,62 *0.812*	83,0 *3.268*	144,0 *5.669*	88,0 *3.465*	113,0 *4.449*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0602	SCGX060204
SD524-21-84-50R2	03080345	21,0 *0.827*	84,0 *3.307*	145,0 *5.709*	89,0 *3.504*	114,0 *4.488*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0602	SCGX060204
SD524-22-88-50R2	03080193	22,0 *0.866*	88,0 *3.465*	149,0 *5.866*	93,0 *3.661*	118,0 *4.646*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0703	SCGX060204
SD524-22.23-89-50R2	03080216	22,23 *0.875*	89,0 *3.504*	150,0 *5.906*	94,0 *3.701*	119,0 *4.685*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0703	SCGX060204
SD524-23-92-50R2	03080194	23,0 *0.906*	92,0 *3.622*	153,0 *6.024*	97,0 *3.819*	122,0 *4.803*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0703	SCGX070308
SD524-24-96-50R2	03080195	24,0 *0.945*	96,0 *3.780*	157,0 *6.181*	101,0 *3.976*	126,0 *4.961*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0703	SCGX070308
SD524-25-100-50R2	03080196	25,0 *0.984*	100,0 *3.937*	161,0 *6.339*	105,0 *4.134*	130,0 *5.118*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0703	SCGX070308
SD524-25.4-102-50R2	03080217	25,4 *1.000*	102,0 *4.016*	163,0 *6.417*	107,0 *4.213*	132,0 *5.197*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0703	SCGX070308
SD524-26-104-50R2	03080423	26,0 *1.024*	104,0 *4.094*	165,0 *6.496*	109,0 *4.291*	134,0 *5.276*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX070308
SD524-27-108-50R2	03080197	27,0 *1.063*	108,0 *4.252*	169,0 *6.654*	113,0 *4.449*	138,0 *5.433*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX070308
SD524-28-112-50R2	03080424	28,0 *1.102*	112,0 *4.409*	173,0 *6.811*	117,0 *4.606*	142,0 *5.591*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX070308
SD524-28.59-115-50R2	03080218	28,59 *1.126*	115,0 *4.528*	176,0 *6.929*	120,0 *4.724*	145,0 *5.709*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX070308
SD524-29-116-50R2	03080198	29,0 *1.142*	116,0 *4.567*	177,0 *6.969*	121,0 *4.764*	146,0 *5.748*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX09T308
SD524-30-120-50R2	03080199	30,0 *1.181*	120,0 *4.724*	181,0 *7.126*	125,0 *4.921*	150,0 *5.906*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX09T308
SD524-31-124-50R2	03080200	31,0 *1.220*	124,0 *4.882*	185,0 *7.283*	129,0 *5.079*	154,0 *6.063*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX0903	SCGX09T308

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert
SD524-31.75-127-50R2	03080359	31,75 *1.250*	127,0 *5.000*	188,0 *7.402*	132,0 *5.197*	157,0 *6.181*	31,0 *1.220*	50,0 *1.969*	50,0 *1.969*	SPGX11T3	SCGX09T308
SD524-32-128-50R2	03080425	32,0 *1.260*	128,0 *5.039*	189,0 *7.441*	133,0 *5.236*	158,0 *6.220*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX09T308
SD524-33-132-50R2	03080201	33,0 *1.299*	132,0 *5.197*	193,0 *7.598*	137,0 *5.394*	162,0 *6.378*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX09T308
SD524-34-136-50R2	03080207	34,0 *1.339*	136,0 *5.354*	197,0 *7.756*	141,0 *5.551*	166,0 *6.535*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX09T308
SD524-35-140-50R2	03080202	35,0 *1.378*	140,0 *5.512*	201,0 *7.913*	145,0 *5.709*	170,0 *6.693*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX11T308
SD524-36-144-50R2	03080203	36,0 *1.417*	144,0 *5.669*	205,0 *8.071*	149,0 *5.866*	174,0 *6.850*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX11T308
SD524-37-148-50R2	03080204	37,0 *1.457*	148,0 *5.827*	209,0 *8.228*	153,0 *6.024*	178,0 *7.008*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX11T3	SCGX11T308
SD524-38-152-50R2	03080426	38,0 *1.496*	152,0 *5.984*	213,0 *8.386*	157,0 *6.181*	182,0 *7.165*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX12T3	SCGX11T308
SD524-39-156-50R2	03080205	39,0 *1.535*	156,0 *6.142*	217,0 *8.543*	161,0 *6.339*	186,0 *7.323*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX12T3	SCGX11T308
SD524-40-160-50R2	03080206	40,0 *1.575*	160,0 *6.299*	221,0 *8.701*	165,0 *6.496*	190,0 *7.480*	31,0 *1.220*	28,0 *1.102*	50,0 *1.969*	SPGX12T3	SCGX11T308

Spare parts

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

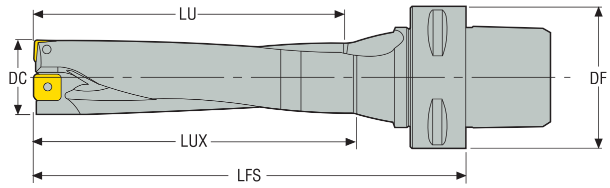
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD524

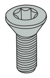
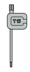
Drilling depth ~ 4 x D – Metric



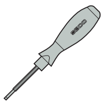
- Seco-Capto™ C4 shank
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 304-305
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	LUX	LFS	DF	Insert	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert
SD524-17-68-C4	03080219	17,0 *0.669*	68,0 *2.677*	73,0 *2.874*	106,0 *4.173*	40,0 *1.575*	SPGX0502	SCGX050204
SD524-17.5-70-C4	03080220	17,5 *0.689*	70,0 *2.756*	75,0 *2.953*	109,0 *4.291*	40,0 *1.575*	SPGX0602	SCGX050204
SD524-18-72-C4	03080221	18,0 *0.709*	72,0 *2.835*	77,0 *3.031*	111,0 *4.370*	40,0 *1.575*	SPGX0602	SCGX050204
SD524-18.5-74-C4	03080222	18,5 *0.728*	74,0 *2.913*	79,0 *3.110*	113,0 *4.449*	40,0 *1.575*	SPGX0602	SCGX050204
SD524-19-76-C4	03080223	19,0 *0.748*	76,0 *2.992*	81,0 *3.189*	115,0 *4.528*	40,0 *1.575*	SPGX0602	SCGX050204
SD524-20-80-C4	03080224	20,0 *0.787*	80,0 *3.150*	85,0 *3.346*	121,0 *4.764*	40,0 *1.575*	SPGX0602	SCGX060204
SD524-20.62-83-C4	03080413	20,62 *0.812*	83,0 *3.268*	88,0 *3.465*	124,0 *4.882*	40,0 *1.575*	SPGX0602	SCGX060204
SD524-21-84-C4	03080225	21,0 *0.827*	84,0 *3.307*	89,0 *3.504*	125,0 *4.921*	40,0 *1.575*	SPGX0602	SCGX060204
SD524-22-88-C4	03080226	22,0 *0.866*	88,0 *3.465*	93,0 *3.661*	129,0 *5.079*	40,0 *1.575*	SPGX0703	SCGX060204
SD524-22.23-89-C4	03080414	22,23 *0.875*	89,0 *3.504*	94,0 *3.701*	130,0 *5.118*	40,0 *1.575*	SPGX0703	SCGX060204
SD524-23-92-C4	03080227	23,0 *0.906*	92,0 *3.622*	97,0 *3.819*	134,0 *5.276*	40,0 *1.575*	SPGX0703	SCGX070308
SD524-24-96-C4	03080228	24,0 *0.945*	96,0 *3.780*	101,0 *3.976*	139,0 *5.472*	40,0 *1.575*	SPGX0703	SCGX070308
SD524-25-100-C4	03080229	25,0 *0.984*	100,0 *3.937*	105,0 *4.134*	144,0 *5.669*	40,0 *1.575*	SPGX0703	SCGX070308
SD524-25.4-102-C4	03080415	25,4 *1.000*	102,0 *4.016*	107,0 *4.213*	146,0 *5.748*	40,0 *1.575*	SPGX0703	SCGX070308
SD524-26-104-C4	03080230	26,0 *1.024*	104,0 *4.094*	109,0 *4.291*	148,0 *5.827*	40,0 *1.575*	SPGX0903	SCGX070308
SD524-27-108-C4	03080231	27,0 *1.063*	108,0 *4.252*	113,0 *4.449*	152,0 *5.984*	40,0 *1.575*	SPGX0903	SCGX070308
SD524-28-112-C4	03080232	28,0 *1.102*	112,0 *4.409*	117,0 *4.606*	157,0 *6.181*	40,0 *1.575*	SPGX0903	SCGX070308
SD524-28.59-115-C4	03080416	28,59 *1.126*	115,0 *4.528*	120,0 *4.724*	160,0 *6.299*	40,0 *1.575*	SPGX0903	SCGX070308
SD524-29-116-C4	03080233	29,0 *1.142*	116,0 *4.567*	121,0 *4.764*	161,0 *6.339*	40,0 *1.575*	SPGX0903	SCGX09T308
SD524-30-120-C4	03080234	30,0 *1.181*	120,0 *4.724*	125,0 *4.921*	165,0 *6.496*	40,0 *1.575*	SPGX0903	SCGX09T308

Spare parts

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

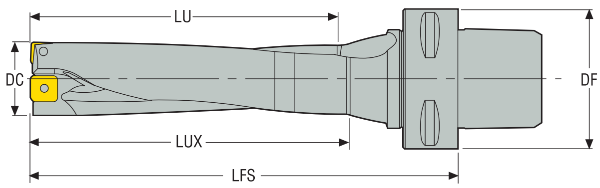
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD524

Drilling depth ~ 4 x D – Metric

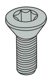
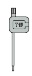


- Seco-Capto™ C5 shank
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 304-305
- For intermediate diameters see the MyDesign software.

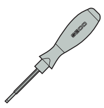
Designation	Item number	DC	LU	LUX	LFS	DF	Insert	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert
SD524-17-68-C5	03080235	17,0 *0.669*	68,0 *2.677*	73,0 *2.874*	106,0 *4.173*	50,0 *1.969*	SPGX0502	SCGX050204
SD524-17.5-70-C5	03080237	17,5 *0.689*	70,0 *2.756*	75,0 *2.953*	109,0 *4.291*	50,0 *1.969*	SPGX0602	SCGX050204
SD524-18-72-C5	03080238	18,0 *0.709*	72,0 *2.835*	77,0 *3.031*	111,0 *4.370*	50,0 *1.969*	SPGX0602	SCGX050204
SD524-18.5-74-C5	03080239	18,5 *0.728*	74,0 *2.913*	79,0 *3.110*	113,0 *4.449*	50,0 *1.969*	SPGX0602	SCGX050204
SD524-19-76-C5	03080240	19,0 *0.748*	76,0 *2.992*	81,0 *3.189*	115,0 *4.528*	50,0 *1.969*	SPGX0602	SCGX050204
SD524-20-80-C5	03080241	20,0 *0.787*	80,0 *3.150*	85,0 *3.346*	121,0 *4.764*	50,0 *1.969*	SPGX0602	SCGX060204
SD524-20.62-83-C5	03080408	20,62 *0.812*	83,0 *3.268*	88,0 *3.465*	124,0 *4.882*	50,0 *1.969*	SPGX0602	SCGX060204
SD524-21-84-C5	03080242	21,0 *0.827*	84,0 *3.307*	89,0 *3.504*	125,0 *4.921*	50,0 *1.969*	SPGX0602	SCGX060204
SD524-22-88-C5	03080243	22,0 *0.866*	88,0 *3.465*	93,0 *3.661*	129,0 *5.079*	50,0 *1.969*	SPGX0703	SCGX060204
SD524-22.23-89-C5	03080409	22,23 *0.875*	89,0 *3.504*	94,0 *3.701*	130,0 *5.118*	50,0 *1.969*	SPGX0703	SCGX060204
SD524-23-92-C5	03080244	23,0 *0.906*	92,0 *3.622*	97,0 *3.819*	134,0 *5.276*	50,0 *1.969*	SPGX0703	SCGX070308
SD524-24-96-C5	03080245	24,0 *0.945*	96,0 *3.780*	101,0 *3.976*	139,0 *5.472*	50,0 *1.969*	SPGX0703	SCGX070308
SD524-25-100-C5	03080246	25,0 *0.984*	100,0 *3.937*	105,0 *4.134*	144,0 *5.669*	50,0 *1.969*	SPGX0703	SCGX070308
SD524-25.4-102-C5	03080410	25,4 *1.000*	102,0 *4.016*	107,0 *4.213*	146,0 *5.748*	50,0 *1.969*	SPGX0703	SCGX070308
SD524-26-104-C5	03080247	26,0 *1.024*	104,0 *4.094*	109,0 *4.291*	148,0 *5.827*	50,0 *1.969*	SPGX0903	SCGX070308
SD524-27-108-C5	03080248	27,0 *1.063*	108,0 *4.252*	113,0 *4.449*	152,0 *5.984*	50,0 *1.969*	SPGX0903	SCGX070308
SD524-28-112-C5	03080249	28,0 *1.102*	112,0 *4.409*	117,0 *4.606*	157,0 *6.181*	50,0 *1.969*	SPGX0903	SCGX070308
SD524-28.59-115-C5	03080411	28,59 *1.126*	115,0 *4.528*	120,0 *4.724*	160,0 *6.299*	50,0 *1.969*	SPGX0903	SCGX070308
SD524-29-116-C5	03080250	29,0 *1.142*	116,0 *4.567*	121,0 *4.764*	161,0 *6.339*	50,0 *1.969*	SPGX0903	SCGX09T308
SD524-30-120-C5	03080251	30,0 *1.181*	120,0 *4.724*	125,0 *4.921*	165,0 *6.496*	50,0 *1.969*	SPGX0903	SCGX09T308
SD524-31-124-C5	03080252	31,0 *1.220*	124,0 *4.882*	129,0 *5.079*	169,0 *6.654*	50,0 *1.969*	SPGX0903	SCGX09T308

Designation	Item number	DC	LU	LUX	LFS	DF	Insert	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert
SD524-31.75-127-C5	03080412	31,75 *1.250*	127,0 *5.000*	132,0 *5.197*	173,0 *6.811*	50,0 *1.969*	SPGX11T3	SCGX09T308
SD524-32-128-C5	03080253	32,0 *1.260*	128,0 *5.039*	133,0 *5.236*	174,0 *6.850*	50,0 *1.969*	SPGX11T3	SCGX09T308
SD524-33-132-C5	03080254	33,0 *1.299*	132,0 *5.197*	137,0 *5.394*	178,0 *7.008*	50,0 *1.969*	SPGX11T3	SCGX09T308
SD524-34-136-C5	03080255	34,0 *1.339*	136,0 *5.354*	141,0 *5.551*	182,0 *7.165*	50,0 *1.969*	SPGX11T3	SCGX09T308
SD524-35-140-C5	03080256	35,0 *1.378*	140,0 *5.512*	145,0 *5.709*	186,0 *7.323*	50,0 *1.969*	SPGX11T3	SCGX11T308
SD524-36-144-C5	03080257	36,0 *1.417*	144,0 *5.669*	149,0 *5.866*	190,0 *7.480*	50,0 *1.969*	SPGX11T3	SCGX11T308
SD524-37-148-C5	03080258	37,0 *1.457*	148,0 *5.827*	153,0 *6.024*	194,0 *7.638*	50,0 *1.969*	SPGX11T3	SCGX11T308
SD524-38-152-C5	03080259	38,0 *1.496*	152,0 *5.984*	157,0 *6.181*	198,0 *7.795*	50,0 *1.969*	SPGX12T3	SCGX11T308
SD524-39-156-C5	03080260	39,0 *1.535*	156,0 *6.142*	161,0 *6.339*	202,0 *7.953*	50,0 *1.969*	SPGX12T3	SCGX11T308
SD524-40-160-C5	03080261	40,0 *1.575*	160,0 *6.299*	165,0 *6.496*	206,0 *8.110*	50,0 *1.969*	SPGX12T3	SCGX11T308

Spare parts

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

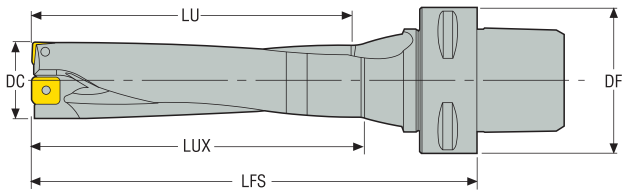
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD524

Drilling depth ~ 4 x D – Metric

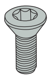
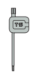


- Seco-Capto™ C6 shank
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 304-305
- For intermediate diameters see the MyDesign software.

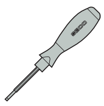
Designation	Item number	DC	LU	LUX	LFS	DF	Insert	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert
SD524-17-68-C6	03080262	17,0 *0.669*	68,0 *2.677*	73,0 *2.874*	108,0 *4.252*	63,0 *2.480*	SPGX0502	SCGX050204
SD524-17.5-70-C6	03080263	17,5 *0.689*	70,0 *2.756*	75,0 *2.953*	111,0 *4.370*	63,0 *2.480*	SPGX0602	SCGX050204
SD524-18-72-C6	03080265	18,0 *0.709*	72,0 *2.835*	77,0 *3.031*	113,0 *4.449*	63,0 *2.480*	SPGX0602	SCGX050204
SD524-18.5-74-C6	03080266	18,5 *0.728*	74,0 *2.913*	79,0 *3.110*	115,0 *4.528*	63,0 *2.480*	SPGX0602	SCGX050204
SD524-19-76-C6	03080267	19,0 *0.748*	76,0 *2.992*	81,0 *3.189*	117,0 *4.606*	63,0 *2.480*	SPGX0602	SCGX050204
SD524-20-80-C6	03080268	20,0 *0.787*	80,0 *3.150*	85,0 *3.346*	123,0 *4.843*	63,0 *2.480*	SPGX0602	SCGX060204
SD524-20.62-83-C6	03080417	20,62 *0.812*	83,0 *3.268*	88,0 *3.465*	126,0 *4.961*	63,0 *2.480*	SPGX0602	SCGX060204
SD524-21-84-C6	03080269	21,0 *0.827*	84,0 *3.307*	89,0 *3.504*	127,0 *5.000*	63,0 *2.480*	SPGX0602	SCGX060204
SD524-22-88-C6	03080270	22,0 *0.866*	88,0 *3.465*	93,0 *3.661*	131,0 *5.157*	63,0 *2.480*	SPGX0703	SCGX060204
SD524-22.23-89-C6	03080418	22,23 *0.875*	89,0 *3.504*	94,0 *3.701*	132,0 *5.197*	63,0 *2.480*	SPGX0703	SCGX060204
SD524-23-92-C6	03080271	23,0 *0.906*	92,0 *3.622*	97,0 *3.819*	136,0 *5.354*	63,0 *2.480*	SPGX0703	SCGX070308
SD524-24-96-C6	03080272	24,0 *0.945*	96,0 *3.780*	101,0 *3.976*	141,0 *5.551*	63,0 *2.480*	SPGX0703	SCGX070308
SD524-25-100-C6	03080392	25,0 *0.984*	100,0 *3.937*	105,0 *4.134*	146,0 *5.748*	63,0 *2.480*	SPGX0703	SCGX070308
SD524-25.4-102-C6	03080419	25,4 *1.000*	102,0 *4.016*	107,0 *4.213*	148,0 *5.827*	63,0 *2.480*	SPGX0703	SCGX070308
SD524-26-104-C6	03080393	26,0 *1.024*	104,0 *4.094*	109,0 *4.291*	150,0 *5.906*	63,0 *2.480*	SPGX0903	SCGX070308
SD524-27-108-C6	03080394	27,0 *1.063*	108,0 *4.252*	113,0 *4.449*	154,0 *6.063*	63,0 *2.480*	SPGX0903	SCGX070308
SD524-28-112-C6	03080395	28,0 *1.102*	112,0 *4.409*	117,0 *4.606*	159,0 *6.260*	63,0 *2.480*	SPGX0903	SCGX070308
SD524-28.59-115-C6	03080420	28,59 *1.126*	115,0 *4.528*	120,0 *4.724*	162,0 *6.378*	63,0 *2.480*	SPGX0903	SCGX070308
SD524-29-116-C6	03080396	29,0 *1.142*	116,0 *4.567*	121,0 *4.764*	163,0 *6.417*	63,0 *2.480*	SPGX0903	SCGX09T308
SD524-30-120-C6	03080397	30,0 *1.181*	120,0 *4.724*	125,0 *4.921*	167,0 *6.575*	63,0 *2.480*	SPGX0903	SCGX09T308
SD524-31-124-C6	03080398	31,0 *1.220*	124,0 *4.882*	129,0 *5.079*	171,0 *6.732*	63,0 *2.480*	SPGX0903	SCGX09T308

Designation	Item number	DC	LU	LUX	LFS	DF	Insert	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert
SD524-31.75-127-C6	03080421	31,75 *1.250*	127,0 *5.000*	132,0 *5.197*	175,0 *6.890*	63,0 *2.480*	SPGX0903	SCGX09T308
SD524-32-128-C6	03080399	32,0 *1.260*	128,0 *5.039*	133,0 *5.236*	176,0 *6.929*	63,0 *2.480*	SPGX11T3	SCGX09T308
SD524-33-132-C6	03080400	33,0 *1.299*	132,0 *5.197*	137,0 *5.394*	180,0 *7.087*	63,0 *2.480*	SPGX11T3	SCGX09T308
SD524-34-136-C6	03080401	34,0 *1.339*	136,0 *5.354*	141,0 *5.551*	184,0 *7.244*	63,0 *2.480*	SPGX11T3	SCGX09T308
SD524-35-140-C6	03080402	35,0 *1.378*	140,0 *5.512*	145,0 *5.709*	188,0 *7.402*	63,0 *2.480*	SPGX11T3	SCGX11T308
SD524-36-144-C6	03080403	36,0 *1.417*	144,0 *5.669*	149,0 *5.866*	192,0 *7.559*	63,0 *2.480*	SPGX11T3	SCGX11T308
SD524-37-148-C6	03080404	37,0 *1.457*	148,0 *5.827*	153,0 *6.024*	196,0 *7.717*	63,0 *2.480*	SPGX11T3	SCGX11T308
SD524-38-152-C6	03080405	38,0 *1.496*	152,0 *5.984*	157,0 *6.181*	200,0 *7.874*	63,0 *2.480*	SPGX12T3	SCGX11T308
SD524-39-156-C6	03080406	39,0 *1.535*	156,0 *6.142*	161,0 *6.339*	204,0 *8.031*	63,0 *2.480*	SPGX12T3	SCGX11T308
SD524-40-160-C6	03080407	40,0 *1.575*	160,0 *6.299*	165,0 *6.496*	208,0 *8.189*	63,0 *2.480*	SPGX12T3	SCGX11T308

Spare parts

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

Accessories

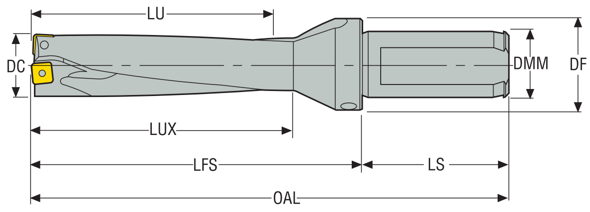
For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

Introduction
Drilling
Reaming
Boring
Annex

SD525

Drilling depth ~ 5 x D – Metric

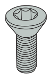


- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 306-307
- For intermediate diameters see the MyDesign software.

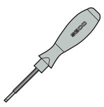
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert
SD525-19-95-25R7	03079580	19,0 *0.748*	95,0 *3.740*	181,0 *7.126*	100,0 *3.937*	125,0 *4.921*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0602	SCGX050204
SD525-20-100-25R7	03079582	20,0 *0.787*	100,0 *3.937*	186,0 *7.323*	105,0 *4.134*	130,0 *5.118*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0602	SCGX060204
SD525-21-105-25R7	03079583	21,0 *0.827*	105,0 *4.134*	191,0 *7.520*	110,0 *4.331*	135,0 *5.315*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0602	SCGX060204
SD525-22-110-25R7	03079584	22,0 *0.866*	110,0 *4.331*	196,0 *7.717*	115,0 *4.528*	140,0 *5.512*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0703	SCGX060204
SD525-23-115-25R7	03079585	23,0 *0.906*	115,0 *4.528*	201,0 *7.913*	120,0 *4.724*	145,0 *5.709*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0703	SCGX070308
SD525-24-120-25R7	03079586	24,0 *0.945*	120,0 *4.724*	206,0 *8.110*	125,0 *4.921*	150,0 *5.906*	56,0 *2.205*	25,0 *0.984*	35,0 *1.378*	SPGX0703	SCGX070308
SD525-25-125-32R7	03079587	25,0 *0.984*	125,0 *4.921*	215,0 *8.465*	130,0 *5.118*	155,0 *6.102*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX0703	SCGX070308
SD525-26-130-32R7	03079588	26,0 *1.024*	130,0 *5.118*	220,0 *8.661*	135,0 *5.315*	160,0 *6.299*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX0903	SCGX070308
SD525-27-135-32R7	03079589	27,0 *1.063*	135,0 *5.315*	225,0 *8.858*	140,0 *5.512*	165,0 *6.496*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX0903	SCGX070308
SD525-28-140-32R7	03079590	28,0 *1.102*	140,0 *5.512*	230,0 *9.055*	145,0 *5.709*	170,0 *6.693*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX0903	SCGX070308
SD525-29-145-32R7	03079591	29,0 *1.142*	145,0 *5.709*	235,0 *9.252*	150,0 *5.906*	175,0 *6.890*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX0903	SCGX09T308
SD525-30-150-32R7	03079592	30,0 *1.181*	150,0 *5.906*	240,0 *9.449*	155,0 *6.102*	180,0 *7.087*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX0903	SCGX09T308
SD525-31-155-32R7	03079593	31,0 *1.220*	155,0 *6.102*	245,0 *9.646*	160,0 *6.299*	185,0 *7.283*	60,0 *2.362*	32,0 *1.260*	42,0 *1.654*	SPGX0903	SCGX09T308
SD525-32-160-40R7	03079595	32,0 *1.260*	160,0 *6.299*	258,0 *10.157*	165,0 *6.496*	190,0 *7.480*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX11T3	SCGX09T308
SD525-33-165-40R7	03079596	33,0 *1.299*	165,0 *6.496*	263,0 *10.354*	170,0 *6.693*	195,0 *7.677*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX11T3	SCGX09T308
SD525-34-170-40R7	03079597	34,0 *1.339*	170,0 *6.693*	268,0 *10.551*	175,0 *6.890*	200,0 *7.874*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX11T3	SCGX09T308
SD525-35-175-40R7	03079598	35,0 *1.378*	175,0 *6.890*	273,0 *10.748*	180,0 *7.087*	205,0 *8.071*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX11T3	SCGX11T308
SD525-36-180-40R7	03079599	36,0 *1.417*	180,0 *7.087*	278,0 *10.945*	185,0 *7.283*	210,0 *8.268*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX11T3	SCGX11T308
SD525-37-185-40R7	03079600	37,0 *1.457*	185,0 *7.283*	283,0 *11.142*	190,0 *7.480*	215,0 *8.465*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX11T3	SCGX11T308
SD525-38-190-40R7	03079601	38,0 *1.496*	190,0 *7.480*	288,0 *11.339*	195,0 *7.677*	220,0 *8.661*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX11T308
SD525-39-195-40R7	03079602	39,0 *1.535*	195,0 *7.677*	293,0 *11.535*	200,0 *7.874*	225,0 *8.858*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX11T308

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	Center insert	Periph insert
SD525-40-200-40R7	03079603	40,0 *1.575*	200,0 *7.874*	298,0 *11.732*	205,0 *8.071*	230,0 *9.055*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX11T308
SD525-41-205-40R7	03079604	41,0 *1.614*	205,0 *8.071*	303,0 *11.929*	210,0 *8.268*	235,0 *9.252*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX120408
SD525-42-210-40R7	03079605	42,0 *1.654*	210,0 *8.268*	308,0 *12.126*	215,0 *8.465*	240,0 *9.449*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX120408
SD525-43-215-40R7	03079606	43,0 *1.693*	215,0 *8.465*	313,0 *12.323*	220,0 *8.661*	245,0 *9.646*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX12T3	SCGX120408
SD525-44-220-40R7	03079607	44,0 *1.732*	220,0 *8.661*	318,0 *12.520*	225,0 *8.858*	250,0 *9.843*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX120408
SD525-45-225-40R7	03079608	45,0 *1.772*	225,0 *8.858*	323,0 *12.717*	230,0 *9.055*	255,0 *10.039*	68,0 *2.677*	40,0 *1.575*	50,0 *1.969*	SPGX1504	SCGX150512

Spare parts

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

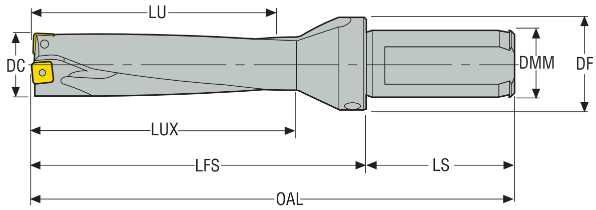
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD525

Drilling depth ~ 5 x D – Inch

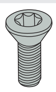
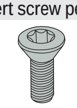
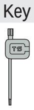
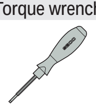


- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 302-303
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Center insert	Periph insert
SD525-0750-375-1000R7	03079565	0.750	3.750	7.181	3.947	4.931	2.250	1.000	1.378	SPGX0602	SCGX050204
SD525-0812-406-1000R7	03079566	0.812	4.060	7.491	4.257	5.241	2.250	1.000	1.378	SPGX0602	SCGX060204
SD525-0875-438-1000R7	03079567	0.875	4.380	7.811	4.577	5.561	2.250	1.000	1.378	SPGX0703	SCGX060204
SD525-0937-469-1000R7	03079568	0.937	4.690	8.121	4.887	5.871	2.250	1.000	1.378	SPGX0703	SCGX070308
SD525-1000-500-1250R7	03079569	1.000	5.000	8.556	5.197	6.181	2.375	1.250	1.654	SPGX0703	SCGX070308
SD525-1062-531-1250R7	03079570	1.062	5.310	8.866	5.507	6.491	2.375	1.250	1.654	SPGX0903	SCGX070308
SD525-1125-563-1250R7	03079571	1.125	5.630	9.186	5.827	6.811	2.375	1.250	1.654	SPGX0903	SCGX09T308
SD525-1187-594-1250R7	03079572	1.187	5.940	9.496	6.137	7.121	2.375	1.250	1.654	SPGX0903	SCGX09T308
SD525-1250-625-1500R7	03079573	1.250	6.250	10.056	6.447	7.431	2.625	1.500	1.969	SPGX11T3	SCGX09T308
SD525-1375-687-1500R7	03079574	1.375	6.870	10.676	7.067	8.051	2.625	1.500	1.969	SPGX11T3	SCGX11T308
SD525-1500-750-1500R7	03079575	1.500	7.500	11.306	7.697	8.681	2.625	1.500	1.969	SPGX12T3	SCGX11T308
SD525-1625-812-1500R7	03079576	1.625	8.120	11.926	8.317	9.301	2.625	1.500	1.969	SPGX12T3	SCGX120408
SD525-1750-875-1500R7	03079577	1.750	8.750	12.556	8.947	9.931	2.625	1.500	1.969	SPGX1504	SCGX120408
SD525-1875-937-1500R7	03079578	1.875	9.370	13.176	9.567	10.551	2.625	1.500	1.969	SPGX1504	SCGX150512
SD525-1937-968-1500R7	03079579	1.937	9.680	13.486	9.877	10.861	2.625	1.500	2.337	SPGX1504	SCGX150512
SD525-2000-1000-1500R7	03079581	2.000	10.000	13.806	10.197	11.181	2.625	1.500	2.337	SPGX1504	SCGX150512

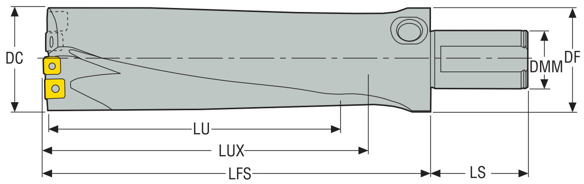
Spare parts

Accessories

For drill dia. (inch)	Insert screw centre	Insert screw periph	Key	Torque wrench
				
0.750	C02205-T07P	C02245-T07P	T07P-2	T00-07P09
0.812	C02205-T07P	–	T07P-2	T00-07P09
0.875	C02506-T08P	–	T08P-2	T00-08P12
0.937-1.000	C02507-T08P	C03007-T08P	T08P-2	T00-08P12
1.062	C03007-T09P	–	T09P-2	T00-09P20
1.125-1.187	C03007-T09P	C03009-T09P	T09P-2	T00-09P20
1.250-1.500	C03508-T15P	–	T15P-2D	T00-15P30
1.625	C03508-T15P	C05012-T15P	T15P-2D	T00-15P30
1.750-2.000	C04011-T15P	C05012-T15P	T15P-2D	T00-15P35

SD542

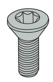
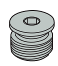
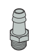
Drilling depth ~ 2,5 X D – Metric



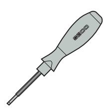
- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 308-309
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	LUX	LFS	LS	DMM	DF	Insert	
		mm	mm	mm	mm	mm	mm	mm	Center insert	Periph insert
SD542-60-150-40R7	02590456	60,0	150,0	156,0	201,5	68,0	40,0	79,0	SPGX0903-C1	SCGX09T308..
SD542-65-162.5-40R7	02590457	65,0	162,5	169,5	214,0	68,0	40,0	79,0	SPGX11T3-C1	SCGX09T308..
SD542-70-175-40R7	02590458	70,0	175,0	182,5	226,5	68,0	40,0	79,0	SPGX11T3-C1	SCGX120408..
SD542-75-187.5-50R7	02590459	75,0	187,5	196,0	239,0	78,0	50,0	79,0	SPGX11T3-C1	SCGX120408..
SD542-80-200-50R7	02590460	80,0	200,0	210,0	251,5	78,0	50,0	79,0	SPGX12T3-C1	SCGX120408..
SD542-85-212.5-50R7	02590461	85,0	212,5	221,0	264,0	78,0	50,0	89,0	SPGX12T3-C1	SCGX120408..

Spare parts

For drill dia. (mm)	Insert screw		Insert key	Plug	Hose adapter
					
	Center insert	Periph insert			
60,00-64,99	C03007-T09P	C03009-T09P	T09P-2	R3/8	R3/8-HA
65,00-68,99	C03508-T15P	C03508-T15P	T15P-2D	R3/8	R3/8-HA
69,00-86,99	C03508-T15P	C05012-T15P	T15P-2D	R3/8	R3/8-HA

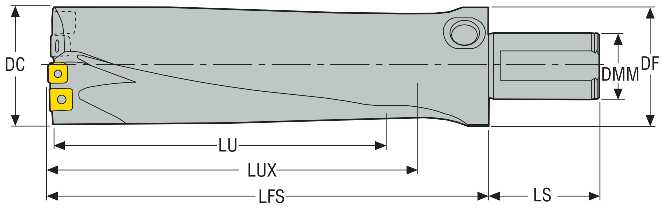
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-09P20	T00-09P	3,0 Nm
17,46-19,49	T00-15P30	T00-15P	3,0 Nm
19,50-21,24	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD542

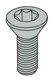
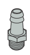
Drilling depth ~ 2.5 X D – Inch



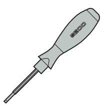
- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 308-309
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	LUX	DC	LS	DMM	DF	Insert	
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Center insert	Periph insert
SD542-2250-563-1500R7	02602085	2.250	5.630	5.800	177.800	4.500	1.500	3.110	SPGX 0903-C1	SCGX 09T308..
SD542-2500-625-1500R7	02602087	2.500	6.250	6.520	210.310	4.500	1.500	3.110	SPGX 0903-C1	SCGX 09T308..
SD542-2750-688-1500R7	02602088	2.750	6.880	7.190	226.060	4.500	1.500	3.110	SPGX 11T3-C1	SCGX 120408..
SD542-3000-750-2000R7	02602089	3.000	7.500	7.860	242.060	4.500	2.000	3.110	SPGX 11T3-C1	SCGX 120408..
SD542-3250-813-2500R7	02602090	3.250	8.130	8.460	257.810	4.500	2.500	3.500	SPGX 12T3-C1	SCGX 120408..
SD542-3500-875-2500R7	02602091	3.500	8.750	9.140	273.810	4.500	2.500	3.500	SPGX 1504-C1	SCGX 120408..

Spare parts

For drill dia. (mm)	Insert screw		Insert key	Plug	Hose adapter
					
	Center insert	Periph insert			
60,00-64,99	C03007-T09P	C03009-T09P	T09P-2	R3/8	R3/8-HA
65,00-68,99	C03508-T15P	C03508-T15P	T15P-2D	R3/8	R3/8-HA
69,00-86,99	C03508-T15P	C05012-T15P	T15P-2D	R3/8	R3/8-HA

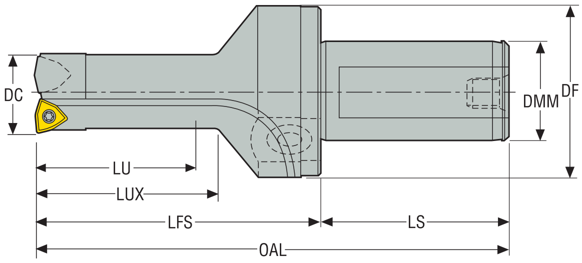
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-09P20	T00-09P	3,0 Nm
17,46-19,49	T00-15P30	T00-15P	3,0 Nm
19,50-21,24	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD572

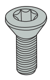
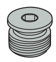
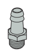
Drilling depth ~ 2 X D – Metric



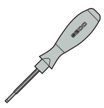
- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 310-311
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	LUX	LFS	LS	DMM	DF	Insert	
		mm	mm	mm	mm	mm	mm	mm	Center insert	Periph insert
SD572-15-30-25R7	02595777	15,0	30,0	35,0	65,0	56,0	25,0	42,0	–	WCMX030208..
SD572-16-32-25R7	02595778	16,0	32,0	37,0	67,0	56,0	25,0	42,0	–	WCMX030208..
SD572-17-34-25R7	02595779	17,0	34,0	39,0	69,0	56,0	25,0	42,0	–	WCMX030208..
SD572-19-38-25R7	02595780	19,0	38,0	43,0	73,0	56,0	25,0	42,0	–	WCMX030208..
SD572-22-44-25R7	02595781	22,0	44,0	49,0	79,0	56,0	25,0	42,0	–	WCMX040208..
SD572-27-54-32R7	02595783	27,0	54,0	59,0	89,0	60,0	32,0	50,0	–	WCMX050308..
SD572-33-66-40R7	02595784	33,0	66,0	71,0	101,0	68,0	40,0	59,0	–	WCMX06T308..
SD572-41-82-40R7	02595785	41,0	82,0	87,0	117,0	68,0	40,0	59,0	–	WCMX080412..
SD572-47-94-40R7	02595786	47,0	94,0	99,0	129,0	68,0	40,0	59,0	–	WCMX080412..

Spare parts

For drill dia. (mm)	Insert screw		Insert key	Plug	Hose adapter
					
	Center insert	Periph insert			
15,00-20,50	C02205-T07P	C02205-T07P	T07P-2	R1/4	1310
20,51-24,50	C03007-T08P	C02506-T08P	T08P-2	R1/4	1310
24,51-32,50	C03508-T15P	C03007-T08P	T08P-2, T15P-2D	R1/4	1310
32,51-36,50	C03508-T15P	C03508-T15P	T15P-2D	R1/4	1310
36,51-59,00	C04011-T15P	C04011-T15P	T15P-2D	R1/4	1310

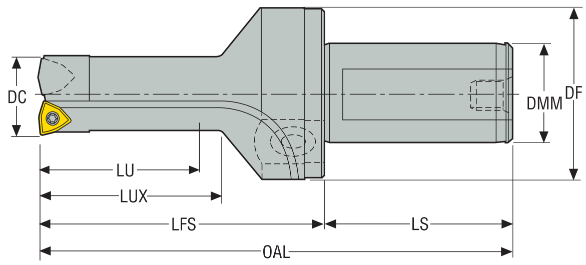
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-20,50	15,00-20,50	15,00-20,50	15,00-20,50
20,51-24,50	20,51-24,50	20,51-24,50	20,51-24,50
24,51-32,50	24,51-32,50	24,51-32,50	24,51-32,50
32,51-36,50	32,51-36,50	32,51-36,50	32,51-36,50
36,51-59,00	36,51-59,00	36,51-59,00	36,51-59,00

*Including blade.

SD572

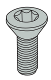
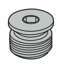
Drilling depth ~ 2 X D – Inch



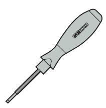
- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 310-311
- For intermediate diameters see the MyDesign software.

Designation	Item number	Hole dia. min-max (inch)	DC	LU	LUX	LFS	DF	Insert	
			Inch	Inch	Inch	Inch	Inch	Center insert	Periph insert
SD572-0591-118-1000R7	02602128	0.591-0.709	0.591	1.182	1.379	2.56	1.775	–	WCMX 030208..
SD572-0669-134-1000R7	02602129	0.669-0.748	0.669	1.338	1.535	2.716	1.775	–	WCMX 030208..
SD572-0748-150-1000R7	02602131	0.748-0.866	0.748	1.496	1.69	2.874	1.775	–	WCMX 030208..
SD572-0866-173-1000R7	02602132	0.866-1.062	0.866	1.732	1.929	3.11	1.775	–	WCMX 040208..
SD572-1062-212-1250R7	02602133	1.062-1.299	1.062	2.124	2.321	3.502	2.165	–	WCMX 050308..
SD572-1299-260-1500R7	02602134	1.299-1.614	1.299	2.598	2.795	3.976	2.303	–	WCMX 06T308..
SD572-1614-322-1500R7	02602135	1.614-1.850	1.614	3.228	3.425	4.606	2.303	–	WCMX 080412..
SD572-1850-370-1500R7	02602136	1.850-2.047	1.85	3.7	3.7	5.078	2.303	–	WCMX 080412..

Spare parts

For drill dia. (mm)	Insert screw		Insert key	Plug	Hose adapter
					
	Center insert	Periph insert			
15,00-20,50	C02205-T07P	C02205-T07P	T07P-2	R1/4	1310
20,51-24,50	C03007-T08P	C02506-T08P	T08P-2	R1/4	1310
24,51-32,50	C03508-T15P	C03007-T08P	T08P-2, T15P-2D	R1/4	1310
32,51-36,50	C03508-T15P	C03508-T15P	T15P-2D	R1/4	1310
36,51-59,00	C04011-T15P	C04011-T15P	T15P-2D	R1/4	1310

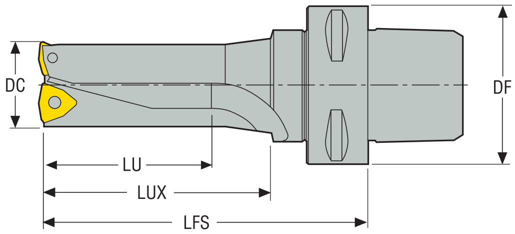
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-20,50	15,00-20,50	15,00-20,50	15,00-20,50
20,51-24,50	20,51-24,50	20,51-24,50	20,51-24,50
24,51-32,50	24,51-32,50	24,51-32,50	24,51-32,50
32,51-36,50	32,51-36,50	32,51-36,50	32,51-36,50
36,51-59,00	36,51-59,00	36,51-59,00	36,51-59,00

*Including blade.

SD572

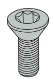
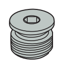
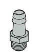
Drilling depth ~ 2 X D – Metric



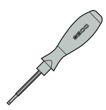
- Seco-Capto™ C5 shank
- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 310-311
- For intermediate diameters see the MyDesign software.

Designation	Item number	Hole dia min-max	DC	LU	LUX	LFS	DF	Insert	
		mm	mm	mm	mm	mm	mm	Centre insert	Periph insert
SD572-15-30-C5	02595831	14,8-18,0	15,0	30,0	35,0	85,0	50,0	WCMX030208-86	WCMX030208..
SD572-16-32-C5	02595832	15,8-18,0	16,0	32,0	37,0	87,0	50,0	WCMX030208-86	WCMX030208..
SD572-17-34-C5	02595833	16,8-19,0	17,0	34,0	39,0	89,0	50,0	WCMX030208-86	WCMX030208..
SD572-19-38-C5	02595834	18,8-22,0	19,0	38,0	43,0	93,0	50,0	WCMX040208-86	WCMX030208..
SD572-22-44-C5	02595835	21,8-27,0	22,0	44,0	49,0	99,0	50,0	WCMX050308-86	WCMX040208..
SD572-27-54-C5	02595836	26,8-33,0	27,0	54,0	59,0	109,0	50,0	WCMX06T308-86	WCMX050308..
SD572-33-66-C5	02595837	32,8-41,0	33,0	66,0	71,0	121,0	50,0	WCMX080412-86	WCMX06T308..
SD572-41-82-C5	02595838	40,8-47,0	41,0	82,0	87,0	157,0	50,0	WCMX080412-86	WCMX080412..
SD572-47-94-C5	02595839	46,8-52,0	47,0	94,0	99,0	169,0	50,0	WCMX080412-86	WCMX080412..

Spare parts

For drill dia. (mm)	Insert screw		Insert key	Plug	Hose adapter
					
	Center insert	Periph insert			
15,00-20,50	C02205-T07P	C02205-T07P	T07P-2	R1/4	1310
20,51-24,50	C03007-T08P	C02506-T08P	T08P-2	R1/4	1310
24,51-32,50	C03508-T15P	C03007-T08P	T08P-2, T15P-2D	R1/4	1310
32,51-36,50	C03508-T15P	C03508-T15P	T15P-2D	R1/4	1310
36,51-59,00	C04011-T15P	C04011-T15P	T15P-2D	R1/4	1310

Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-20,50	15,00-20,50	15,00-20,50	15,00-20,50
20,51-24,50	20,51-24,50	20,51-24,50	20,51-24,50
24,51-32,50	24,51-32,50	24,51-32,50	24,51-32,50
32,51-36,50	32,51-36,50	32,51-36,50	32,51-36,50
36,51-59,00	36,51-59,00	36,51-59,00	36,51-59,00

*Including blade.

Perfomax® SD602

Seco's Perfomax® SD602 is a modular drill head system specifically designed for deep hole applications that require large diameters drilled safely and efficiently.

- DP3000 grade inserts provide the toughness needed to optimize Perfomax® SD602
- The grade allows for high feeds and speeds
- High flexibility by using extensions to reach the required drilling depth

Code keys

Drilling bodies

- Type of drill — SD602: Pilot drill and cartridge
- Possible drill diameter — 89 - Lower diameter; 90 - Upper diameter
- Flange diameter
- Shank type

SD602 - 89/90 - 50 RG

Code key – Pilot drill

SD601 1 - 10 - R

- 1: 0 = Solid carbide; 1 = HSS
- 10: Drill diameter
- R: Right-hand rotation

(Pilot drill has to be purchased separately)

Code key – Cassette

SD600 C - 07 - N

- C: C = Center; P = Periphery
- 07: Insert size — SCGX07, SCGX09, SCGX07, SCGX09
- N: N = Nominal diameter

-N

-U

Code key – Kit

SD602 1 - P - 07 - N

- 1: 0 = incl 2 pads (< ∅ 135 mm); 1 = incl 4 pads (≤ ∅ 135 mm)
- P: Periphery
- 07: Insert size — SCGX07, SCGX09, SCGX12, SCGX15
- N: N – Nominal diameter; U – Lower diameter

Note: Please select nominal (-N) or lower (-U) diameter spare parts kit "D" on page 239 or 241 to complete drill body assembly. Kit "D" must be ordered separately.

-N

-U

Inch **SD602 - 3500 - RG**

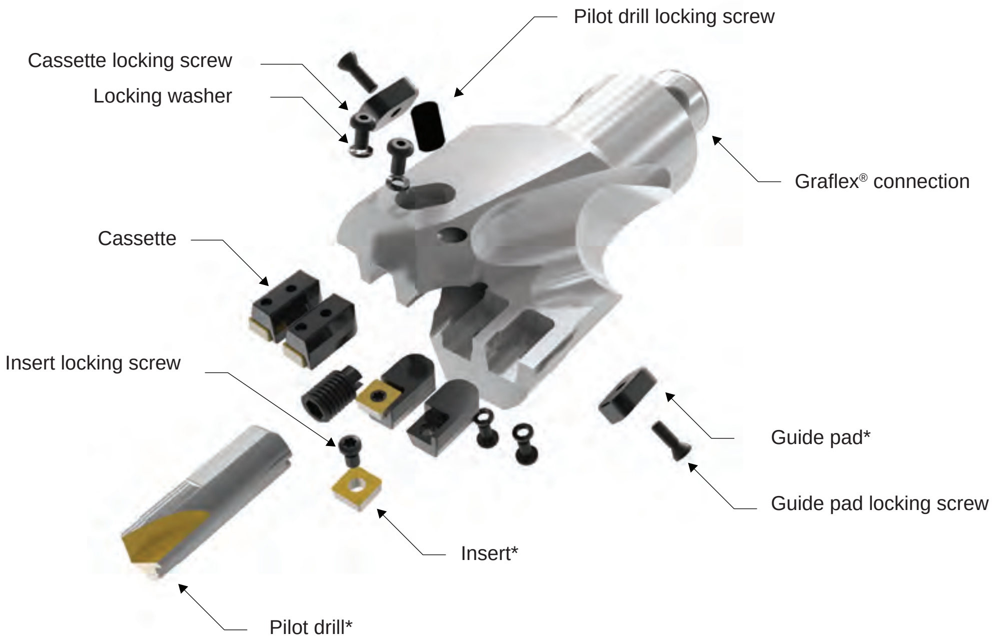
Code key – Pad

PAD - L20R25 -N

- -N: N – Nominal diameter

Modular drill head assembly

SD602-59/60-40RG



Example: Diameter 59;
SD602-59-40RG

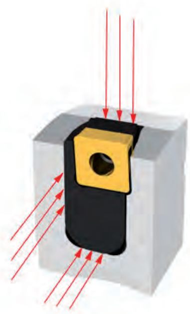
Example: Diameter 60;
SD602-60-40RG

Mounting instruction

- Tighten the cassette locking screw
- Mount the inserts
- Mount the pilot drill and fix it to the bottom of the hole if you need to extend the pilot drill use the adjusting screw
- Mount the extensions

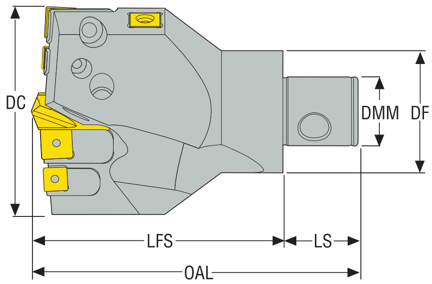
Mounting of cartridge and guide pad

- Mount the cassette
- Make sure that there are no air gaps between the cassette and the walls
- Tighten the cassette locking screw with the torque key:
  SD600-x-07: 3 Nm
  SD600-x-09: 3 Nm
  SD600-x-12: 8 Nm
  SD600-x-15: 8 Nm
- Mount the guide pad
- Tighten the pad locking screw



SD602

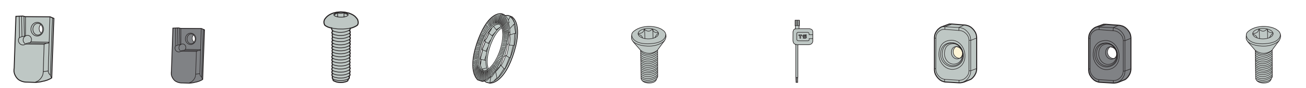
SD602 - Modular drill head – Metric



- Internal coolant
- For insert information see page(s) 294-299
- For cutting data see page(s) 312-313
- Adjustable length pilot drill

Item number	Designation	Graflex size	Capacity DCN	DCX	OAL	LFS	LS	DF	DMM	Weight	Insert
			mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
02846688	SD602-59/60-40RG	G4	59,0 *2.323*	60,0 *2.362*	129,0 *5.079*	105,0 *4.134*	24,0 *0.945*	40,0 *1.575*	22,0 *0.866*	0,9 *1.980*	SCGX07
02846689	SD602-69/70-40RG	G4	69,0 *2.717*	70,0 *2.756*	129,0 *5.079*	105,0 *4.134*	24,0 *0.945*	40,0 *1.575*	22,0 *0.866*	1,1 *2.430*	SCGX09
02846690	SD602-79/80-50RG	G5	79,0 *3.110*	80,0 *3.150*	160,0 *6.299*	130,0 *5.118*	30,0 *1.181*	50,0 *1.969*	28,0 *1.102*	1,8 *3.970*	SCGX09
02846691	SD602-89/90-50RG	G5	89,0 *3.504*	90,0 *3.543*	160,0 *6.299*	130,0 *5.118*	30,0 *1.181*	50,0 *1.969*	28,0 *1.102*	2,0 *4.410*	SCGX09/12
02846692	SD602-99/100-63RG	G6	99,0 *3.898*	100,0 *3.937*	185,0 *7.283*	145,0 *5.709*	40,0 *1.575*	63,0 *2.480*	36,0 *1.417*	3,1 *6.830*	SCGX12
02846693	SD602-119/120-63RG	G6	119,0 *4.685*	120,0 *4.724*	185,0 *7.283*	145,0 *5.709*	40,0 *1.575*	63,0 *2.480*	36,0 *1.417*	3,5 *7.720*	SCGX15
02846694	SD602-139/140-90RG	G7	139,0 *5.472*	140,0 *5.512*	210,0 *8.268*	160,0 *6.299*	50,0 *1.969*	90,0 *3.543*	46,0 *1.811*	6,1 *13.450*	SCGX12
02846695	SD602-159/160-90RG	G7	159,0 *6.260*	160,0 *6.299*	210,0 *8.268*	160,0 *6.299*	50,0 *1.969*	90,0 *3.543*	46,0 *1.811*	6,6 *14.550*	SCGX12/15
02846698	SD602-2500-40RG	G4	62,5 *2.461*	63,5 *2.500*	129,0 *5.079*	105,0 *4.134*	24,0 *0.945*	40,0 *1.575*	22,0 *0.866*	1,0 *2.200*	SCGX07
02846699	SD602-2750-40RG	G4	68,85 *2.711*	69,85 *2.750*	129,0 *5.079*	105,0 *4.134*	24,0 *0.945*	40,0 *1.575*	22,0 *0.866*	1,1 *2.430*	SCGX07/09
02846700	SD602-3000-40RG	G4	75,2 *2.961*	76,2 *3.000*	129,0 *5.079*	105,0 *4.134*	24,0 *0.945*	40,0 *1.575*	22,0 *0.866*	1,1 *2.430*	SCGX09
02846701	SD602-3250-50RG	G5	81,55 *3.211*	82,55 *3.250*	160,0 *6.299*	130,0 *5.118*	30,0 *1.181*	50,0 *1.969*	28,0 *1.102*	1,8 *3.970*	SCGX09/12
02846702	SD602-3500-50RG	G5	87,9 *3.461*	88,9 *3.500*	160,0 *6.299*	130,0 *5.118*	30,0 *1.181*	50,0 *1.969*	28,0 *1.102*	1,9 *4.190*	SCGX09/12
02846703	SD602-4000-63RG	G6	100,6 *3.961*	101,6 *4.000*	185,0 *7.283*	145,0 *5.709*	40,0 *1.575*	63,0 *2.480*	36,0 *1.417*	3,2 *7.050*	SCGX12

Spare parts

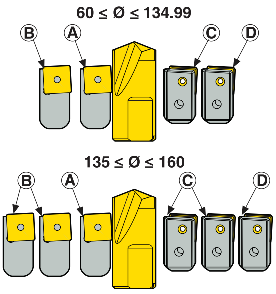


Cassette	Cassette	Cassette screw	Washer	Insert screw	Insert key	Guide pad*	Guide pad*	Pad screw
SD600-C-07	SD600-P-07-N	K6S4x8	LW0408	C03007-T09P	T09P-2, T15P-2D	PAD-L20R25	PAD-L20R25-N	C04014-T15P
SD600-C-09	SD600-P-09-N	K6S4x8	LW0408	C03508-T15P	T15P-2D	PAD-L20R25	PAD-L20R25-N	C04014-T15P
SD600-C-12	SD600-P-12-N	K6S6x10	LW0611	C05012-T15P	T15P-2D	PAD-L20R25	PAD-L20R25-N	C04014-T15P
SD600-C-15	SD600-P-15-N	K6S6x12	LW0611	C05012-T15P	T15P-2D	PAD-L20R25	PAD-L20R25-N	C04014-T15P

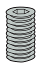
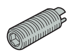
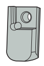
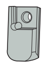
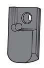
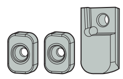
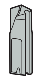
*Not included in delivery

SD602

SD602 - Modular drill head



Spare parts

Designation	For drill dia. (mm)	For drill dia. (inch)	Pilot screw	Adjusting screw	Cassette (A)	Cassette (B)	Cassette (C)	Periph kit* (D)	Pilot drill* x=0 Solid carbide x=1 HSS
									
SD602-59/60-40RG	59	2.323	P6SS 8X8	19TLR0816	SD600-C-07	SD600-C-07	SD600-P-07	SD6020-P-07-U	SD601x-10-R
SD602-59/60-40RG	60	2.362	P6SS 8X8	19TLR0816	SD600-C-07	SD600-C-07	SD600-P-07	SD6020-P-07-N	SD601x-10-R
SD602-2500-40RG	62,5	2.461	P6SS 8X8	19TLR0816	SD600-C-07	SD600-C-07	SD600-P-07	SD6020-P-07-U	SD601x-10-R
SD602-2500-40RG	63,5	2.500	P6SS 8X8	19TLR0816	SD600-C-07	SD600-C-07	SD600-P-07	SD6020-P-07-N	SD601x-10-R
SD602-2750-40RG	68,85	2.711	P6SS 8X8	19TLR0816	SD600-C-09	SD600-C-07	SD600-P-07	SD6020-P-07-U	SD601x-10-R
SD602-2750-40RG	69,85	2.750	P6SS 8X8	19TLR0816	SD600-C-09	SD600-C-07	SD600-P-07	SD6020-P-07-N	SD601x-10-R
SD602-69/70-40RG	69	2.717	P6SS 8X8	19TLR0816	SD600-C-09	SD600-C-09	SD600-P-09	SD6020-P-09-U	SD601x-10-R
SD602-69/70-40RG	70	2.756	P6SS 8X8	19TLR0816	SD600-C-09	SD600-C-09	SD600-P-09	SD6020-P-09-N	SD601x-10-R
SD602-3000-40RG	75,2	2.961	P6SS 10X10	19TLR1016	SD600-C-09	SD600-C-09	SD600-P-09	SD6020-P-09-U	SD601x-15-R
SD602-3000-40RG	76,2	3.000	P6SS 10X10	19TLR1016	SD600-C-09	SD600-C-09	SD600-P-09	SD6020-P-09-N	SD601x-15-R
SD602-79/80-50RG	79	3.110	P6SS 10X10	19TLR1016	SD600-C-09	SD600-C-09	SD600-P-09	SD6020-P-09-U	SD601x-15-R
SD602-79/80-50RG	80	3.150	P6SS 10X10	19TLR1016	SD600-C-09	SD600-C-09	SD600-P-09	SD6020-P-09-N	SD601x-15-R
SD602-3250-50RG	81,55	3.211	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-09	SD600-P-09	SD6020-P-09-U	SD601x-15-R
SD602-3250-50RG	82,55	3.250	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-09	SD600-P-09	SD6020-P-09-N	SD601x-15-R
SD602-3500-50RG	87,9	3.461	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-09	SD600-P-09	SD6020-P-12-U	SD601x-15-R
SD602-3500-50RG	88,9	3.500	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-09	SD600-P-09	SD6020-P-12-N	SD601x-15-R
SD602-89/90-50RG	89	3.504	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-09	SD600-P-09	SD6020-P-12-U	SD601x-15-R
SD602-89/90-50RG	90	3.543	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-09	SD600-P-09	SD6020-P-12-N	SD601x-15-R
SD602-99/100-63RG	99	3.898	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-12	SD600-P-12	SD6020-P-12-U	SD601x-15-R
SD602-99/100-63RG	100	3.937	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-12	SD600-P-12	SD6020-P-12-N	SD601x-15-R
SD602-4000-63RG	100,6	3.961	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-12	SD600-P-12	SD6020-P-12-U	SD601x-15-R
SD602-4000-63RG	101,6	4.000	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-12	SD600-P-12	SD6020-P-12-N	SD601x-15-R
SD602-119/120-63RG	119	4.685	P6SS 10X10	19TLR1016	SD600-C-15	SD600-C-15	SD600-P-15	SD6020-P-15-U	SD601x-15-R
SD602-119/120-63RG	120	4.724	P6SS 10X10	19TLR1016	SD600-C-15	SD600-C-15	SD600-P-15	SD6020-P-15-N	SD601x-15-R
SD602-139/140-90RG	139	5.472	P6SS 12X12	19TLR1216	SD600-C-12	SD600-C-12	SD600-P-12	SD6021-P-12-U	SD601x-25-R
SD602-139/140-90RG	140	5.512	P6SS 12X12	19TLR1216	SD600-C-12	SD600-C-12	SD600-P-12	SD6021-P-12-N	SD601x-25-R
SD602-159/160-90RG	159	6.260	P6SS 12X12	19TLR1216	SD600-C-15	SD600-C-12	SD600-P-12	SD6021-P-15-U	SD601x-25-R
SD602-159/160-90RG	160	6.299	P6SS 12X12	19TLR1216	SD600-C-15	SD600-C-12	SD600-P-12	SD6021-P-15-N	SD601x-25-R

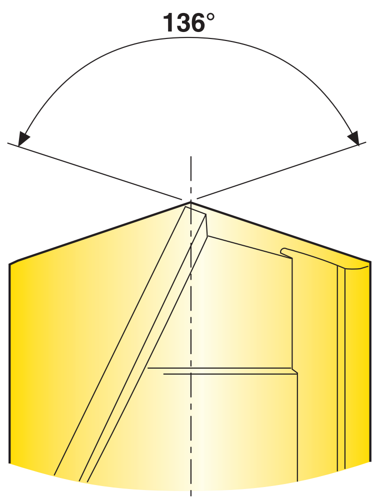
*Not included in delivery. Periph kit, U-undersize, N-nominal.
For insert size see page 294-299

Regrinding instructions for SD602

Specifications:
Proposed specification of diamond wheels:
Conical clearance: Wheel shape12A2 Grit size D54 (picture 1).
Gashing: Wheel shape 1A1 or 1V1 Grit size D64-D46 (picture 2-3).
Corner chamfer: Wheel shape 1A1 or 12A2 (picture 1).
Edge treatment: grinding K-land or brushing (picture 2).

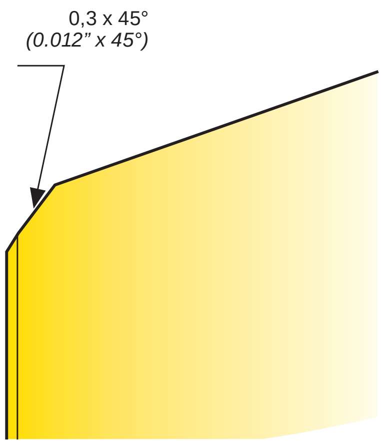
Important:
- The cutting edges must be uniform and have the same size of edge preparation.
- The edge preparation must be applied on the whole length of the cutting edges.

1. **Point angle**

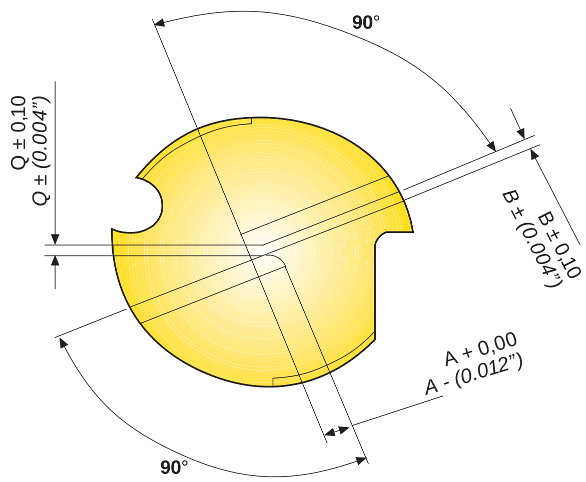


Edge preparation 0-0,1mm *(0-.004")* mm x 20°. Drill point conical relief 10°.

2. **Corner chamfer**



3.



4.

Diameter	Dimensions in mm			
	A	B	C	Minimum length
10 mm	1,5	0,5	0,57	38
15 mm	1,5	0,6	0,68	45
25 mm	1,5	1,4	1,6	57
Diameter	**Dimensions in *(inch)***			
	A	**B**	**C**	**Minimum length**
10 mm	*0.059*	*0.020*	*0.022*	*1.496*
15 mm	*0.059*	*0.024*	*0.027*	*1.772*
25 mm	*0.059*	*0.055*	*0.063*	*2.244*

Introduction
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Introduction
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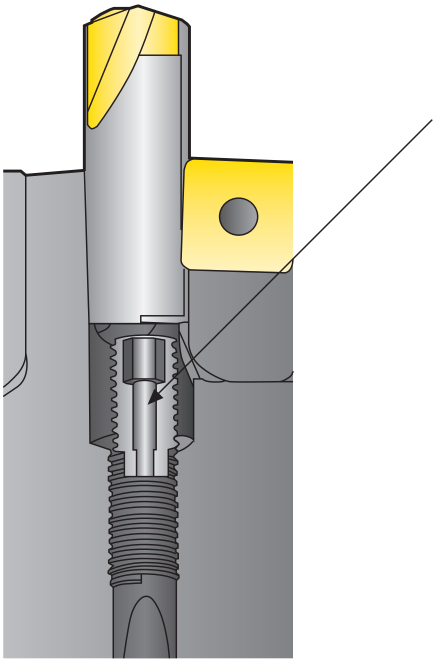
Boring
Annex

Modular drill head assembly

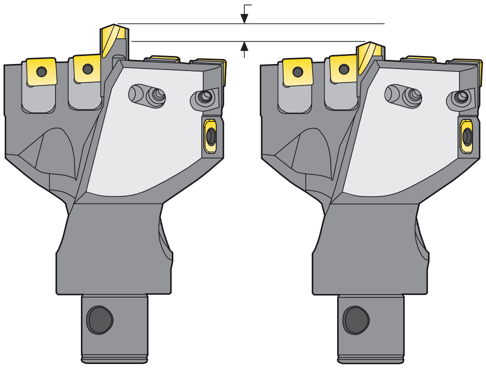
Feature: Adjustable pilot drill



Drill	Adjustable lenght distance ADJRG	
	mm	*(inch)*
SD602-59/60-40RG	3	*0.118*
SD602-69/70-40RG	3	*0.118*
SD602-79/80-50RG	5	*0.197*
SD602-89/90-50RG	5	*0.197*
SD602-99/100-63RG	5	*0.197*
SD602-119/120-63RG	5	*0.197*
SD602-139/140-90RG	5	*0.197*
SD602-159/160-90RG	5	*0.197*
SD602-2500-40RG	3	*0.118*
SD602-2750-40RG	3	*0.118*
SD602-3000-40RG	5	*0.197*
SD602-3250-50RG	5	*0.197*
SD602-3500-50RG	5	*0.197*
SD602-4000-63RG	5	*0.197*

Feature: Adjustable length distance

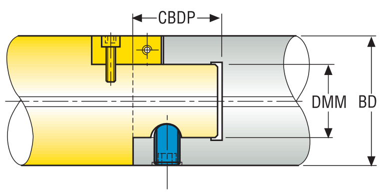
Benefits: Same setting length after regrinding of pilot drill.
Possibility to adjust the pilot drill overhang.
With drill depths > 5 x D it is recommended to adjust it 5 mm *(0.197")* further out.
Recommendation: In case of re-entering the hole the pilot drill should be adjusted 3 mm *(0.118")* further out from its original position to ensure a better centering.

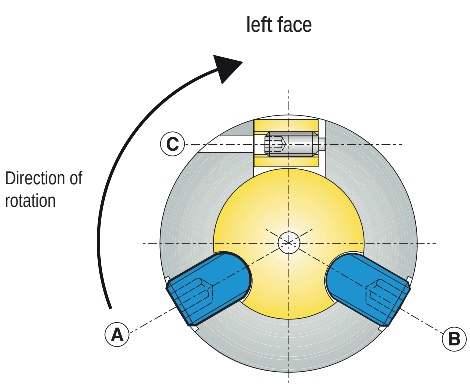


Mounting instructions – Graflex assemblies

Mounting instruction

- Clean the parts to be assembled and apply thin oxidation protection film.
- Assemble the parts ensuring that the left face of the tenon contacts the left face of the tenon slot.
- Lightly tighten screw A (drill heads needs to be moved back and forth to find the lowest point for screw A).
- Lightly tighten screw B.
- 'Torque' the blocking screw C.
- 'Torque' screw A.
- 'Torque' screw B.
- Double check the blocking screw tightening.





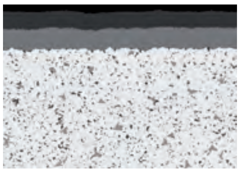
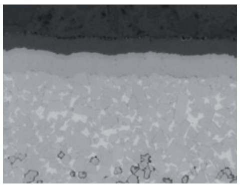
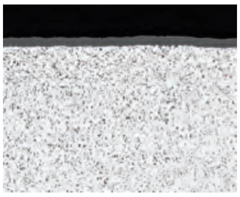
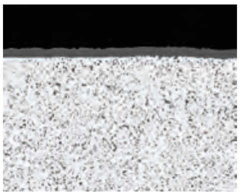
Graflex size	DMM mm *inch*	BD mm *inch*	DBDP mm *inch*	Recommended Graflex connection locking torques: Ball nose screws (A) & (B)	Recommended Graflex connection locking torques: Tenon blocking screw (C)
4	22 *0.866*	40 *1.575*	24 *0.945*	20 Nm *(14.7 ft/lbs)*	0.7 Nm *(0.5 ft/lbs)*
5	28 *1.102*	50 *1.969*	30 *1.181*	25 Nm *(18.4 ft/lbs)*	2 Nm *(1.5 ft/lbs)*
6	36 *1.417*	63 *2.480*	40 *1.575*	35 Nm *(25.8 ft/lbs)*	4 Nm *(2.9 ft/lbs)*
7	46 *1.811*	90 *3.543*	50 *1.969*	60 Nm *(44.2 ft/lbs)*	8 Nm *(5.9 ft/lbs)*

Insert grade

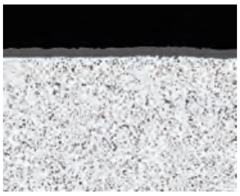
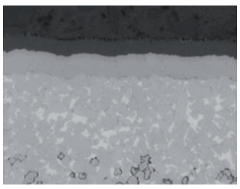
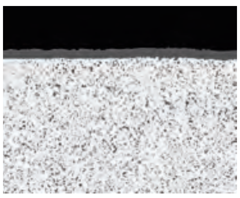
Insert grade
Features:
- 4 cutting edges per insert
- Strong square inserts

Benefits:
- Economy
- Reliability
- Performance
- Low cost per hole

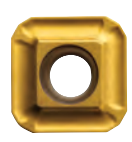
Peripheral insert

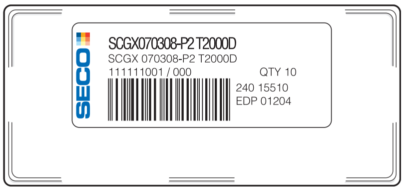
	**DP2000**	**Duratomic Coating Technology** Optimization grade for steel and cast iron applications where high cutting speed can be used Edge toughness in combination with a thick wear resistant coating Ti(C,N) + Al2O3 Duratomic
	**DP3000**	**Duratomic Coating Technology** General grade for machining steel and stainless steel The grade for interrupted cuts and offer difficult applications when high toughness is required Ti(C,N) + Al2O3 Duratomic
	**T250D**	First choice in hardened steel and in high Si content aluminum Sharp cutting edge through micrograin substrate and pvd coating (TiAl)N + TiN
	**DS2050**	Optimized grade for machining Titanium, super alloys and difficult stainless steel Sharp yet strong cutting edge generates low cutting force TiAlN + NbN

Center insert

	**T400D**	First choice for machining steel, stainless steel and cast iron Tough PVD coated garde for maximum application security (Ti,Al)N + TiN
	**DP3000**	**Duratomic Coating Technology** Grade for productivity oriented applications Superior wear resistance Ti(C,N) + Al2O3 Duratomic
	**DS4050**	Optimized grade for machining Titanium, super alloys and difficult stainless steel Sharp yet strong cutting edge generates low cutting force TiAlN + NbN

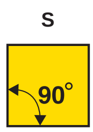
Geometries

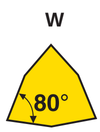
SCGX-P1	SCGX-P2	SCGX-MP	SCGX-C1	SCGX-MC	WCMX-85	WCMX-86
						



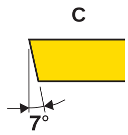
S	C	G	X	06	02	04	-	P1
1	2	3	4	5	6	7		10

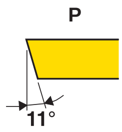
1. Insert shape





2. Insert side clearance angle





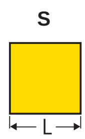
4. Type

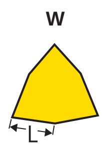
X = Special

3. Tolerances

	Tolerance +/- mm / *inch*			For d dimension in mm / *inch*								
Tol. class		S		5,556 *(0.2187)*	6,35 *(0.2500)*	7,937 *(0.3125)*	7,94 *(0.3126)*	9,525 *(0.3750)*	11,509 *(0.4531)*	12,7 *(0.5000)*	15,875 *(0.6250)*	19,05 *(0.7500)*
G	0,025 *(0.001)*	0,13 *(0.005)*	0,025 *(0.001)*	•	•	•		•	•	•	•	•
M	0,013 *(0.005)*	0,13 *(0.005)*	0,05 *(0.002)*	•	•		•	•				
	0,013 *(0.005)*	0,13 *(0.005)*	0,08 *(0.003)*							•		

5. Cutting edge length

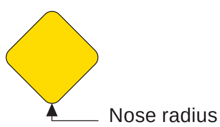




6. Thickness

02 = 2,38 mm *(0.094")*
03 = 3,18 mm *(0.125")*
T3 = 3,97 mm *(0.156")*
04 = 4,76 mm *(0.187")*
05 = 5,56 mm *(0.219")*

7. Insert with corner chamfers / nose radius



04 = 0,4 mm *(0.016")*
08 = 0,8 mm *(0.031")*
12 = 1,2 mm *(0.047") etc.*

10. Integral designation

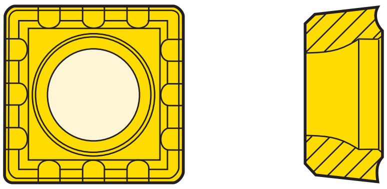
e.g. Chipbreaker designation

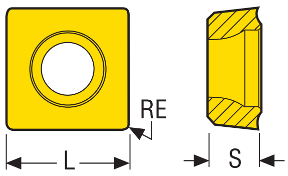
P1 = xx
P2 = xx
85 = xx
86 = xx

SECO

Indexable inserts – Peripherial insert, type P1*

for SD522, SD523, SD524, SD525, SD542, SD602


SCGX-P1



Tolerances:
L = ±0,025 (0.001 in)
S = ±0,13 (0.005 in)
RE = ±0,1 (0.004 in)

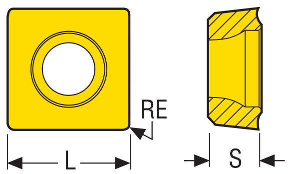
Designation	Inserts	L	S	RE	Grades		
		mm *Inch*	mm *Inch*	mm *Inch*	T250D	DP2000	DP3000
SCGX060204-P1	SCGX-P1	6,35 *0.250*	2,381 *0.094*	0,4 *0.016*	00059712	02590849	02807362
SCGX070308-P1	SCGX-P1	7,938 *0.313*	3,175 *0.125*	0,8 *0.031*	00059713	02590850	02807363
SCGX09T308-P1	SCGX-P1	9,525 *0.375*	3,969 *0.156*	0,8 *0.031*	00059714	02590851	02807364
SCGX11T308-P1	SCGX-P1	11,509 *0.453*	3,97 *0.156*	0,8 *0.031*	03136962	03136963	03136964
SCGX120408-P1	SCGX-P1	12,7 *0.500*	4,762 *0.187*	0,8 *0.031*	00059715	02590852	02807365
SCGX150512-P1	SCGX-P1	15,875 *0.625*	5,556 *0.219*	1,2 *0.047*	00059716	02590853	02807366

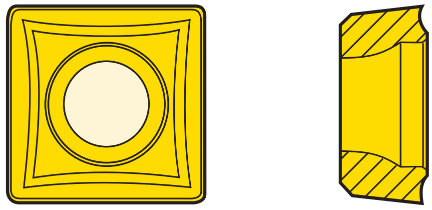
*Chipbreaker for low feed rates and for good surface finish in all materials

Indexable inserts – Peripherial insert, type P2**

for SD522, SD523, SD524, SD525, SD542, SD602

Tolerances:
L = ±0,025 (0.001 in)
S = ±0,13 (0.005 in)
RE = ±0,1 (0.004 in)





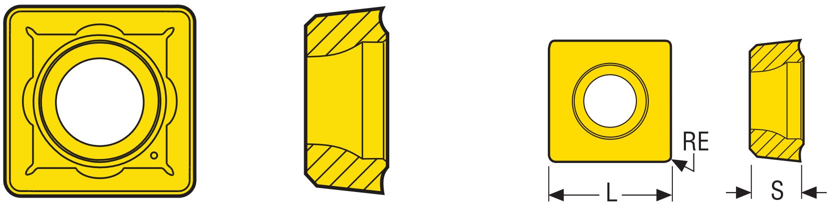
SCGX-P2

Designation	Inserts	L	S	RE	Grades		
		mm *Inch*	mm *Inch*	mm *Inch*	T250D	DP2000	DP3000
SCGX050204-P2	SCGX-P2	5,556 *0.219*	2,38 *0.094*	0,4 *0.016*	00059711	02590854	02807356
SCGX060204-P2	SCGX-P2	6,35 *0.250*	2,38 *0.094*	0,4 *0.016*	02526803	02590855	02807357
SCGX070308-P2	SCGX-P2	7,937 *0.312*	3,18 *0.125*	0,8 *0.031*	02526787	02590856	02807358
SCGX09T308-P2	SCGX-P2	9,525 *0.375*	3,97 *0.156*	0,8 *0.031*	02794476	02590857	02807359
SCGX11T308-P2	SCGX-P2	11,509 *0.453*	3,97 *0.156*	0,8 *0.031*	03097760	03097761	03097762
SCGX120408-P2	SCGX-P2	12,7 *0.500*	4,76 *0.187*	0,8 *0.031*	02794477	02590858	02807360
SCGX150512-P2	SCGX-P2	15,875 *0.625*	5,56 *0.219*	1,2 *0.047*	02794478	02590859	02807361

**Chipbreaker for high feed rates in steel, stainless steel and cast iron

Indexable inserts – Peripherial insert, type MP

for SD522, SD523, SD524, SD525, SD542, SD602



SCGX-MP

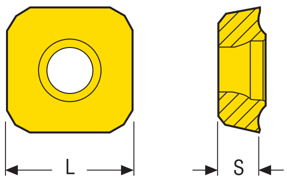
Tolerances:
L = ±0,025 (0.001 in)
S = ±0,13 (0.005 in)
RE = ±0,1 (0.004 in)

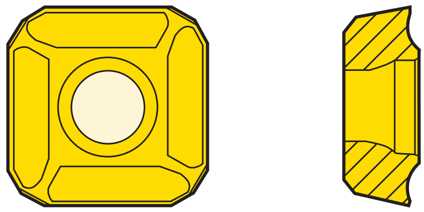
Designation	Inserts	L	S	RE	Grades
		mm *Inch*	mm *Inch*	mm *Inch*	DS2050
SCGX050204-MP	SCGX-MP	5,56 *0.219*	2,38 *0.094*	0,4 *0.016*	03134312
SCGX060204-MP	SCGX-MP	6,35 *0.250*	6,35 *0.250*	0,4 *0.016*	03134313
SCGX070308-MP	SCGX-MP	7,94 *0.313*	3,18 *0.125*	0,8 *0.031*	03134314
SCGX09T308-MP	SCGX-MP	9,525 *0.375*	3,97 *0.156*	0,8 *0.031*	03134315
SCGX11T308-MP	SCGX-MP	11,509 *0.453*	3,97 *0.156*	0,8 *0.031*	03134316
SCGX120408-MP	SCGX-MP	12,7 *0.500*	4,76 *0.187*	0,8 *0.031*	03134317
SCGX150512-MP	SCGX-MP	15,875 *0.625*	5,56 *0.219*	1,2 *0.047*	03134318

Indexable inserts – Center insert, type C1

for SD522, SD523, SD524, SD525, SD542

Tolerances:
L = ±0,025 (0.001 in)
S = ±0,13 (0.005 in)



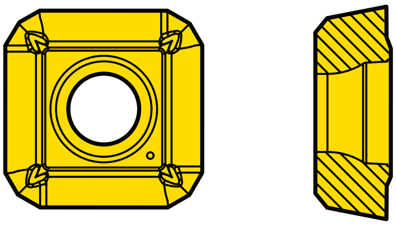


SPGX-C1

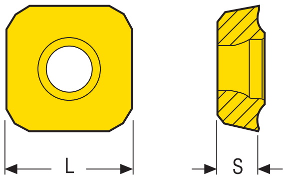
Designation	Inserts	L	S	Grades	
		mm *Inch*	mm *Inch*	T400D	DP3000
SPGX0502-C1	SPGX-C1	5,556 *0.219*	2,38 *0.094*	74077370	02807367
SPGX0602-C1	SPGX-C1	6,35 *0.250*	2,38 *0.094*	74077371	02807368
SPGX0703-C1	SPGX-C1	7,937 *0.312*	3,18 *0.125*	74077372	02807369
SPGX0903-C1	SPGX-C1	9,525 *0.375*	3,18 *0.125*	74077373	02807370
SPGX11T3-C1	SPGX-C1	11,509 *0.453*	3,97 *0.156*	74077374	02807371
SPGX12T3-C1	SPGX-C1	12,7 *0.500*	3,97 *0.156*	74077375	02807372
SPGX1504-C1	SPGX-C1	15,875 *0.625*	4,76 *0.187*	74077376	02807373
SPGX1904-C1	SPGX-C1	19,05 *0.750*	4,76 *0.187*	74077377	02807374

Indexable inserts – Center insert type MC

for SD522, SD523, SD524, SD525, SD542



SPGX-MC



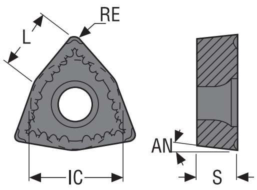
Tolerances:
L = ±0,025 (0.001 in)
S = ±0,13 (0.005 in)

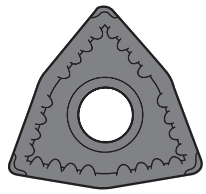
Designation	Inserts	L	S	Grades
		mm *Inch*	mm *Inch*	DS4050
SPGX0502-MC	SPGX-MC	5,56 *0.219*	2,38 *0.094*	03134319
SPGX0602-MC	SPGX-MC	6,35 *0.250*	2,38 *0.094*	03134320
SPGX0703-MC	SPGX-MC	7,94 *0.313*	3,18 *0.125*	03134321
SPGX0903-MC	SPGX-MC	9,525 *0.375*	3,18 *0.125*	03134322
SPGX11T3-MC	SPGX-MC	11,509 *0.453*	3,97 *0.156*	03134323
SPGX12T3-MC	SPGX-MC	12,7 *0.500*	3,97 *0.156*	03134324
SPGX1504-MC	SPGX-MC	15,875 *0.625*	4,76 *0.187*	03134325
SPGX1904-MC	SPGX-MC	19,05 *0.750*	4,76 *0.187*	03134326

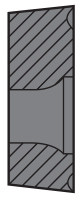
Indexable inserts – Peripherial insert, type 85*

for SD572

Tolerances:
S = ±0,13 (0.005 in)
RE = ±0,1 (0.004 in







WCMX-85

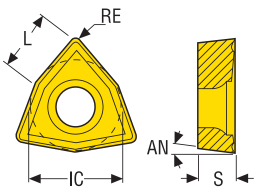
Designation	Inserts	IC	L	S	RE	Grades
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	DP3000
WCMX040208-85	WCMX-85	6,35 *0.250*	3,99 *0.157*	2,38 *0.094*	0,8 *0.031*	02807375
WCMX050308-85	WCMX-85	7,94 *0.313*	5,07 *0.200*	3,18 *0.125*	0,8 *0.031*	02807376
WCMX06T308-85	WCMX-85	9,525 *0.375*	6,14 *0.242*	3,97 *0.156*	0,8 *0.031*	02807377
WCMX080412-85	WCMX-85	12,7 *0.500*	8,14 *0.320*	4,76 *0.187*	1,2 *0.047*	02807378

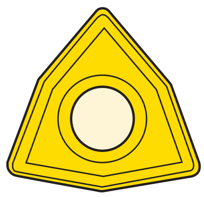
* Chipbreaker for low feed rates and for good surface finish in all materials.

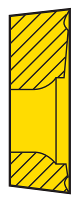
Indexable inserts – Center insert & Peripherial insert, type 86**

for SD572

Tolerances:
S = ±0,13 (0.005 in)
RE = ±0,1 (0.004 in







WCMX-86

Designation	Inserts	IC	L	S	RE	Grades		
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	T400D	DP2000	DP3000
WCMX030208-86	WCMX-86	5,556 *0.219*	3,46 *0.136*	2,38 *0.094*	0,8 *0.031*	02506629	02899808	02807379
WCMX040208-86	WCMX-86	6,35 *0.250*	3,99 *0.157*	2,38 *0.094*	0,8 *0.031*	02506638	02899809	02807380
WCMX050308-86	WCMX-86	7,94 *0.313*	5,07 *0.200*	3,18 *0.125*	0,8 *0.031*	02506640	02899810	02807381
WCMX06T308-86	WCMX-86	9,525 *0.375*	6,14 *0.242*	3,97 *0.156*	0,8 *0.031*	02506645	02899811	02807382
WCMX080412-86	WCMX-86	12,7 *0.500*	8,14 *0.320*	4,76 *0.187*	1,2 *0.047*	02506646	02899812	02807383

** Chipbreaker for high feed rates in steel, stainless steel and cast iron.

SD522 Ø 15-60 mm / 0.590-2.375 in

SMG	Grade	f = mm/rev (IPR)							v_c
		Ø 15,00-19,49 *Ø 0.590-0.767*	Ø 19,50-22,49 *Ø 0.768-0.885*	Ø 22,50-28,49 *Ø 0.886-1.121*	Ø 28,50-34,49 *Ø 1.122-1.357*	Ø 34,50-40,49 *Ø1.358-1.593*	Ø 40,49-44,49 *Ø 1.594-1.751*	Ø 44,50-59,99 *Ø 1.752-2.375*	m/min *sf/min*
P1	P1 DP2000	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	460 *1500*
P2	P1 DP2000	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	450 *1475*
P3	P2 DP3000	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,22 *0.0085*	0,26 *0.010*	345 *1125*
P4	P2 DP3000	0,12 *0.0048*	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,22 *0.0085*	0,25 *0.010*	220 *720*
P5	P2 DP3000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	210 *690*
P6	P2 DP3000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	235 *770*
P7	P2 DP3000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	225 *740*
P8	P2 DP3000	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,22 *0.0085*	0,26 *0.010*	210 *690*
P11	P2 DP3000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	215 *710*
P12	P2 DP3000	0,075 *0.0030*	0,090 *0.0036*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	130 *425*
M1	P2 DP3000	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	260 *850*
M2	P2 DP3000	0,080 *0.0032*	0,090 *0.0036*	0,11 *0.0044*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	210 *690*
M3	MP DS2050	0,065 *0.0026*	0,075 *0.0030*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	160 *520*
M4	MP DS2050	0,055 *0.0022*	0,065 *0.0026*	0,080 *0.0032*	0,090 *0.0036*	0,10 *0.0040*	0,11 *0.0044*	0,12 *0.0048*	140 *460*
M5	MP DS2050	0,055 *0.0022*	0,065 *0.0026*	0,080 *0.0032*	0,090 *0.0036*	0,10 *0.0040*	0,11 *0.0044*	0,12 *0.0048*	115 *375*
K1	P2 DP2000	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	250 *820*
K2	P2 DP2000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	215 *710*
K3	P2 DP2000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	185 *610*
K4	P2 DP2000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	175 *570*
K5	P2 DP2000	0,10 *0.0040*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,22 *0.0085*	105 *345*
N1	P1 T250D	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	365 *1200*
N2	P1 T250D	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	235 *770*
N3	P1 T250D	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	155 *510*
N11	P1 T250D	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	310 *1025*
S1	MP DS2050	0,090 *0.0036*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	60 *195*
S2	MP DS2050	0,090 *0.0036*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	48 *155*
S3	MP DS2050	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	41 *135*
S11	MP DS2050	0,11 *0.0044*	0,12 *0.0048*	0,15 *0.0060*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,24 *0.0095*	85 *280*
S12	MP DS2050	0,11 *0.0044*	0,12 *0.0048*	0,15 *0.0060*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,24 *0.0095*	65 *215*
S13	MP DS2050	0,090 *0.0036*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	50 *165*
H3	P1 T250D	0,050 *0.0020*	0,060 *0.0024*	0,070 *0.0028*	0,080 *0.0032*	0,095 *0.0038*	0,10 *0.0040*	0,11 *0.0044*	70 *230*
H5	P1 T250D	0,075 *0.0030*	0,090 *0.0036*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	130 *425*
H7	P1 T250D	0,050 *0.0020*	0,060 *0.0024*	0,070 *0.0028*	0,080 *0.0032*	0,095 *0.0038*	0,10 *0.0040*	0,11 *0.0044*	70 *230*
H8	P1 T250D	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	130 *425*
H11	P1 T250D	0,075 *0.0030*	0,090 *0.0036*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	165 *540*
H12	P1 T250D	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	150 *490*
H21	P1 T250D	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	130 *425*

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

SD522 Cutting speed

SMG	V_c m/min *sf/min*			
	DP2000	DP3000	T250D	DS2050
P1	460 *1500*	415 *1350*	315 *1025*	415 *1350*
P2	450 *1475*	405 *1325*	305 *1000*	405 *1325*
P3	385 *1275*	345 *1125*	265 *870*	345 *1125*
P4	285 *940*	220 *720*	140 *460*	— —
P5	270 *890*	210 *690*	135 *445*	— —
P6	305 *1000*	235 *770*	150 *490*	— —
P7	285 *940*	225 *740*	140 *460*	— —
P8	270 *890*	210 *690*	135 *445*	— —
P11	280 *920*	215 *710*	140 *460*	— —
P12	165 *540*	130 *425*	80 *260*	— —
M1	— —	260 *850*	160 *520*	— —
M2	— —	210 *690*	130 *425*	— —
M3	— —	160 *520*	100 *330*	160 *520*
M4	— —	120 *395*	75 *245*	140 *460*
M5	— —	100 *330*	60 *195*	115 *375*
K1	250 *820*	235 *770*	— —	— —
K2	215 *710*	205 *670*	— —	— —
K3	185 *610*	175 *570*	— —	— —
K4	175 *570*	165 *540*	— —	— —
K5	105 *345*	100 *330*	— —	— —
N1	— —	420 *1375*	365 *1200*	365 *1200*
N2	— —	270 *890*	235 *770*	235 *770*
N3	— —	180 *590*	155 *510*	155 *510*
N11	— —	350 *1150*	310 *1025*	310 *1025*
S1	— —	— —	40 *130*	60 *195*
S2	— —	— —	30 *100*	48 *155*
S3	— —	— —	30 *100*	41 *135*
S11	— —	— —	80 *260*	85 *280*
S12	— —	— —	60 *195*	65 *215*
S13	— —	— —	46 *150*	50 *165*
H3	— —	70 *230*	70 *230*	— —
H5	— —	130 *425*	130 *425*	— —
H7	— —	70 *230*	70 *230*	— —
H8	— —	130 *425*	130 *425*	— —
H11	— —	165 *540*	165 *540*	— —
H12	— —	75 *245*	150 *490*	— —
H21	— —	130 *425*	130 *425*	— —

SMG = Seco material group. V_c = m/min (sf/min). All cutting data are start values

SD523 Ø 15-60 mm / 0.590-2.375 in

SMG		f = mm/rev (IPR)							v_c
	Grade	Ø 15,00-19,49 **Ø 0.590-0.767**	Ø 19,50-22,49 **Ø 0.768-0.885**	Ø 22,50-28,49 **Ø 0.886-1.121**	Ø 28,50-34,49 **Ø 1.122-1.357**	Ø 34,50-40,49 **Ø1.358-1.593**	Ø 40,49-44,49 **Ø 1.594-1.751**	Ø 44,50-59,99 **Ø 1.752-2.375**	m/min **sf/min**
P1	P1 DP2000	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	415 *1350*
P2	P1 DP2000	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	405 *1325*
P3	P2 DP3000	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,22 *0.0085*	0,26 *0.010*	310 *1025*
P4	P2 DP3000	0,12 *0.0048*	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,22 *0.0085*	0,25 *0.010*	190 *620*
P5	P2 DP3000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	180 *590*
P6	P2 DP3000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	200 *660*
P7	P2 DP3000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	190 *620*
P8	P2 DP3000	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,22 *0.0085*	0,26 *0.010*	180 *590*
P11	P2 DP3000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	185 *610*
P12	P2 DP3000	0,075 *0.0030*	0,090 *0.0036*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	110 *360*
M1	P2 DP3000	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	245 *800*
M2	P2 DP3000	0,080 *0.0032*	0,090 *0.0036*	0,11 *0.0044*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	195 *640*
M3	MP DS2050	0,065 *0.0026*	0,075 *0.0030*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	150 *490*
M4	MP DS2050	0,055 *0.0022*	0,065 *0.0026*	0,080 *0.0032*	0,090 *0.0036*	0,10 *0.0040*	0,11 *0.0044*	0,12 *0.0048*	120 *395*
M5	MP DS2050	0,055 *0.0022*	0,065 *0.0026*	0,080 *0.0032*	0,090 *0.0036*	0,10 *0.0040*	0,11 *0.0044*	0,12 *0.0048*	100 *330*
K1	P2 DP2000	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	225 *740*
K2	P2 DP2000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	195 *640*
K3	P2 DP2000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	165 *540*
K4	P2 DP2000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	160 *520*
K5	P2 DP2000	0,10 *0.0040*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,22 *0.0085*	95 *310*
N1	P1 T250D	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	310 *1025*
N2	P1 T250D	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	200 *660*
N3	P1 T250D	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	135 *445*
N11	P1 T250D	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	260 *850*
S1	MP DS2050	0,090 *0.0036*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	55 *180*
S2	MP DS2050	0,090 *0.0036*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	43 *140*
S3	MP DS2050	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	37 *120*
S11	MP DS2050	0,11 *0.0044*	0,12 *0.0048*	0,15 *0.0060*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,24 *0.0095*	75 *245*
S12	MP DS2050	0,11 *0.0044*	0,12 *0.0048*	0,15 *0.0060*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,24 *0.0095*	60 *195*
S13	MP DS2050	0,090 *0.0036*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	45 *150*
H3	P1 T250D	0,050 *0.0020*	0,060 *0.0024*	0,070 *0.0028*	0,080 *0.0032*	0,095 *0.0038*	0,10 *0.0040*	0,11 *0.0044*	60 *195*
H5	P1 T250D	0,075 *0.0030*	0,090 *0.0036*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	110 *360*
H7	P1 T250D	0,050 *0.0020*	0,060 *0.0024*	0,070 *0.0028*	0,080 *0.0032*	0,095 *0.0038*	0,10 *0.0040*	0,11 *0.0044*	60 *195*
H8	P1 T250D	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	110 *360*
H11	P1 T250D	0,075 *0.0030*	0,090 *0.0036*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	140 *460*
H12	P1 T250D	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	130 *425*
H21	P1 T250D *P1 T250D*	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	110 *360*

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

SD523 Cutting speed

SMG	V_c m/min *sf/min* DP2000	DP3000	T250D	DS2050
P1	415 *1350*	370 *1225*	265 *870*	370 *1225*
P2	405 *1325*	360 *1175*	260 *850*	360 *1175*
P3	345 *1125*	310 *1025*	225 *740*	310 *1025*
P4	230 *750*	190 *620*	120 *395*	— —
P5	220 *720*	180 *590*	115 *375*	— —
P6	250 *820*	200 *660*	130 *425*	— —
P7	235 *770*	190 *620*	120 *395*	— —
P8	220 *720*	180 *590*	115 *375*	— —
P11	225 *740*	185 *610*	115 *375*	— —
P12	135 *445*	110 *360*	70 *230*	— —
M1	— —	245 *800*	135 *445*	— —
M2	— —	195 *640*	110 *360*	— —
M3	— —	150 *490*	85 *280*	150 *490*
M4	— —	115 *375*	65 *215*	120 *395*
M5	— —	95 *310*	55 *180*	100 *330*
K1	225 *740*	215 *710*	— —	— —
K2	195 *640*	185 *610*	— —	— —
K3	165 *540*	160 *520*	— —	— —
K4	160 *520*	150 *490*	— —	— —
K5	95 *310*	90 *295*	— —	— —
N1	— —	360 *1175*	310 *1025*	310 *1025*
N2	— —	230 *750*	200 *660*	200 *660*
N3	— —	155 *510*	135 *445*	135 *445*
N11	— —	300 *980*	260 *850*	260 *850*
S1	— —	— —	34 *110*	55 *180*
S2	— —	— —	25 *80*	43 *140*
S3	— —	— —	25 *80*	37 *120*
S11	— —	— —	65 *215*	75 *245*
S12	— —	— —	50 *165*	60 *195*
S13	— —	— —	39 *130*	45 *150*
H3	— —	60 *195*	60 *195*	— —
H5	— —	115 *375*	110 *360*	— —
H7	— —	60 *195*	60 *195*	— —
H8	— —	115 *375*	110 *360*	— —
H11	— —	145 *475*	140 *460*	— —
H12	— —	65 *215*	130 *425*	— —
H21	— —	115 *375*	110 *360*	— —

SMG = Seco material group. V_c = m/min (sf/min). All cutting data are start values

SD524 Ø 17-60 mm / 0.590-2.375 in

SMG	Grade	f = mm/rev (IPR)							v_c
		Ø 15,00-19,49 *Ø 0.590-0.767*	Ø 19,50-22,49 *Ø 0.768-0.885*	Ø 22,50-28,49 *Ø 0.886-1.121*	Ø 28,50-34,49 *Ø 1.122-1.357*	Ø 34,50-40,49 *Ø1.358-1.593*	Ø 40,49-44,49 *Ø 1.594-1.751*	Ø 44,50-59,99 *Ø 1.752-2.375*	m/min *sf/min*
P1	P1 DP2000	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	380 *1250*
P2	P1 DP2000	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	0,12 *0.0048*	0,13 *0.0050*	370 *1225*
P3	P2 DP3000	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,22 *0.0085*	0,26 *0.010*	285 *940*
P4	P2 DP3000	0,12 *0.0048*	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,22 *0.0085*	0,25 *0.010*	165 *540*
P5	P2 DP3000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	160 *520*
P6	P2 DP3000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	180 *590*
P7	P2 DP3000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	170 *560*
P8	P2 DP3000	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,22 *0.0085*	0,26 *0.010*	160 *520*
P11	P2 DP3000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,25 *0.010*	165 *540*
P12	P2 DP3000	0,075 *0.0030*	0,090 *0.0036*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	95 *310*
M1	P2 DP3000	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	235 *770*
M2	P2 DP3000	0,080 *0.0032*	0,090 *0.0036*	0,11 *0.0044*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	190 *620*
M3	MP DS2050	0,065 *0.0026*	0,075 *0.0030*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	0,14 *0.0055*	145 *475*
M4	MP DS2050	0,055 *0.0022*	0,065 *0.0026*	0,080 *0.0032*	0,090 *0.0036*	0,10 *0.0040*	0,11 *0.0044*	0,12 *0.0048*	105 *345*
M5	MP DS2050	0,055 *0.0022*	0,065 *0.0026*	0,080 *0.0032*	0,090 *0.0036*	0,10 *0.0040*	0,11 *0.0044*	0,12 *0.0048*	90 *295*
K1	P2 DP2000	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	210 *690*
K2	P2 DP2000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	180 *590*
K3	P2 DP2000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	155 *510*
K4	P2 DP2000	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	145 *475*
K5	P2 DP2000	0,10 *0.0040*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	0,22 *0.0085*	85 *280*
N1	P1 T250D	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	270 *890*
N2	P1 T250D	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	175 *570*
N3	P1 T250D	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	115 *375*
N11	P1 T250D	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	0,26 *0.010*	230 *750*
S1	MP DS2050	0,090 *0.0036*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	48 *155*
S2	MP DS2050	0,090 *0.0036*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	39 *130*
S3	MP DS2050	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	0,19 *0.0075*	33 *110*
S11	MP DS2050	0,11 *0.0044*	0,12 *0.0048*	0,15 *0.0060*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,24 *0.0095*	70 *230*
S12	MP DS2050	0,11 *0.0044*	0,12 *0.0048*	0,15 *0.0060*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	0,24 *0.0095*	55 *180*
S13	MP DS2050	0,090 *0.0036*	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	41 *135*
H3	P1 T250D	0,050 *0.0020*	0,060 *0.0024*	0,070 *0.0028*	0,080 *0.0032*	0,095 *0.0038*	0,10 *0.0040*	0,11 *0.0044*	50 *165*
H5	P1 T250D	0,075 *0.0030*	0,090 *0.0036*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	95 *310*
H7	P1 T250D	0,050 *0.0020*	0,060 *0.0024*	0,070 *0.0028*	0,080 *0.0032*	0,095 *0.0038*	0,10 *0.0040*	0,11 *0.0044*	50 *165*
H8	P1 T250D	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	95 *310*
H11	P1 T250D	0,075 *0.0030*	0,090 *0.0036*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	0,17 *0.0065*	125 *410*
H12	P1 T250D	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	110 *360*
H21	P1 T250D *P1 T250D*	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	95 *310*

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

SD524 Cutting speed

SMG	V_c m/min *sf/min*			
	DP2000	DP3000	T250D	DS2050
P1	380 *1250*	340 *1125*	230 *750*	340 *1125*
P2	370 *1225*	330 *1075*	225 *740*	330 *1075*
P3	320 *1050*	285 *940*	195 *640*	285 *940*
P4	195 *640*	165 *540*	105 *345*	— —
P5	185 *610*	160 *520*	100 *330*	— —
P6	210 *690*	180 *590*	110 *360*	— —
P7	195 *640*	170 *560*	105 *345*	— —
P8	185 *610*	160 *520*	100 *330*	— —
P11	190 *620*	165 *540*	100 *330*	— —
P12	110 *360*	95 *310*	60 *195*	— —
M1	— —	235 *770*	120 *395*	— —
M2	— —	190 *620*	95 *310*	— —
M3	— —	145 *475*	75 *245*	145 *475*
M4	— —	110 *360*	55 *180*	105 *345*
M5	— —	90 *295*	46 *150*	90 *295*
K1	210 *690*	200 *660*	— —	— —
K2	180 *590*	170 *560*	— —	— —
K3	155 *510*	145 *475*	— —	— —
K4	145 *475*	140 *460*	— —	— —
K5	85 *280*	85 *280*	— —	— —
N1	— —	315 *1025*	270 *890*	270 *890*
N2	— —	205 *670*	175 *570*	175 *570*
N3	— —	135 *445*	115 *375*	115 *375*
N11	— —	265 *870*	230 *750*	230 *750*
S1	— —	— —	29 *95*	48 *155*
S2	— —	— —	22 *70*	39 *130*
S3	— —	— —	22 *70*	33 *110*
S11	— —	— —	55 *180*	70 *230*
S12	— —	— —	44 *145*	55 *180*
S13	— —	— —	34 *110*	41 *135*
H3	— —	55 *180*	50 *165*	— —
H5	— —	100 *330*	95 *310*	— —
H7	— —	55 *180*	50 *165*	— —
H8	— —	100 *330*	95 *310*	— —
H11	— —	125 *410*	125 *410*	— —
H12	— —	55 *180*	110 *360*	— —
H21	— —	100 *330*	95 *310*	— —

SMG = Seco material group. V_c = m/min (sf/min). All cutting data are start values

SD525 Ø 19-45 mm / 0.768-2.000 in

SMG	Grade	f = mm/rev (IPR)					v_c
		Ø 19,50-22,49 ***Ø 0.768-0.885***	Ø 22,50-28,49 ***Ø 0.886-1.121***	Ø 28,50-34,49 ***Ø 1.122-1.357***	Ø 34,50-40,49 ***Ø1.358-1.593***	Ø 40,49-45,00 ***Ø 1.594-2.000***	m/min ***sf/min***
P1	P2 DP3000	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,12 *0.0048*	320 *1050*
P2	P2 DP3000	0,070 *0.0028*	0,085 *0.0034*	0,10 *0.0040*	0,11 *0.0044*	0,12 *0.0048*	310 *1025*
P3	P2 DP3000	0,14 *0.0055*	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,22 *0.0085*	265 *870*
P4	P2 DP3000	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,22 *0.0085*	150 *490*
P5	P2 DP3000	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	140 *460*
P6	P2 DP3000	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	160 *520*
P7	P2 DP3000	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	150 *490*
P8	P2 DP3000	0,14 *0.0055*	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,22 *0.0085*	140 *460*
P11	P2 DP3000	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	145 *475*
P12	P2 DP3000	0,090 *0.0036*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	85 *280*
M1	P2 DP3000	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	225 *740*
M2	P2 DP3000	0,090 *0.0036*	0,11 *0.0044*	0,13 *0.0050*	0,14 *0.0055*	0,15 *0.0060*	180 *590*
M3	MP DS2050	0,075 *0.0030*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	140 *460*
M4	MP DS2050	0,065 *0.0026*	0,080 *0.0032*	0,090 *0.0036*	0,10 *0.0040*	0,11 *0.0044*	95 *310*
M5	MP DS2050	0,065 *0.0026*	0,080 *0.0032*	0,090 *0.0036*	0,10 *0.0040*	0,11 *0.0044*	80 *260*
K1	P2 DP3000	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	185 *610*
K2	P2 DP3000	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	160 *520*
K3	P2 DP3000	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	135 *445*
K4	P2 DP3000	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,20 *0.0080*	0,22 *0.0085*	130 *425*
K5	P2 DP3000	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,18 *0.0070*	0,19 *0.0075*	80 *260*
N1	P1 T250D	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	240 *790*
N2	P1 T250D	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	155 *510*
N3	P1 T250D	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	100 *330*
N11	P1 T250D	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,22 *0.0085*	0,24 *0.0095*	200 *660*
S1	MP DS2050	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	44 *145*
S2	MP DS2050	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	36 *120*
S3	MP DS2050	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,16 *0.0065*	0,17 *0.0065*	31 *100*
S11	MP DS2050	0,12 *0.0048*	0,15 *0.0060*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	65 *215*
S12	MP DS2050	0,12 *0.0048*	0,15 *0.0060*	0,17 *0.0065*	0,19 *0.0075*	0,20 *0.0080*	49 *160*
S13	MP DS2050	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,17 *0.0065*	0,18 *0.0070*	38 *125*
H3	P1 T250D	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,10 *0.0040*	46 *150*
H5	P1 T250D	0,090 *0.0036*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	85 *280*
H7	P1 T250D	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,10 *0.0040*	46 *150*
H8	P1 T250D	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,11 *0.0044*	85 *280*
H11	P1 T250D	0,090 *0.0036*	0,11 *0.0044*	0,12 *0.0048*	0,14 *0.0055*	0,15 *0.0060*	110 *360*
H12	P1 T250D	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,11 *0.0044*	100 *330*
H21	P1 T250D	0,070 *0.0028*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,11 *0.0044*	85 *280*

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

SD525 Cutting speed

SMG	Vc m/min *sf/min*			
	DP2000	DP3000	T250D	DS2050
P1	355 *1175*	320 *1050*	205 *670*	320 *1050*
P2	345 *1125*	310 *1025*	200 *660*	310 *1025*
P3	295 *970*	265 *870*	170 *560*	265 *870*
P4	165 *540*	150 *490*	90 *295*	— —
P5	155 *510*	140 *460*	90 *295*	— —
P6	175 *570*	160 *520*	100 *330*	— —
P7	165 *540*	150 *490*	95 *310*	— —
P8	155 *510*	140 *460*	90 *295*	— —
P11	160 *520*	145 *475*	90 *295*	— —
P12	95 *310*	85 *280*	55 *180*	— —
M1	— —	225 *740*	105 *345*	— —
M2	— —	180 *590*	85 *280*	— —
M3	— —	140 *460*	65 *215*	140 *460*
M4	— —	105 *345*	49 *160*	95 *310*
M5	— —	85 *280*	41 *135*	80 *260*
K1	195 *640*	185 *610*	— —	— —
K2	170 *560*	160 *520*	— —	— —
K3	145 *475*	135 *445*	— —	— —
K4	140 *460*	130 *425*	— —	— —
K5	80 *260*	80 *260*	— —	— —
N1	— —	285 *940*	240 *790*	240 *790*
N2	— —	185 *610*	155 *510*	155 *510*
N3	— —	120 *395*	100 *330*	100 *330*
N11	— —	235 *770*	200 *660*	200 *660*
S1	— —	— —	26 *85*	44 *145*
S2	— —	— —	20 *65*	36 *120*
S3	— —	— —	20 *65*	31 *100*
S11	— —	— —	50 *165*	65 *215*
S12	— —	— —	39 *130*	49 *160*
S13	— —	— —	30 *100*	38 *125*
H3	— —	48 *155*	46 *150*	— —
H5	— —	90 *295*	85 *280*	— —
H7	— —	48 *155*	46 *150*	— —
H8	— —	90 *295*	85 *280*	— —
H11	— —	115 *375*	110 *360*	— —
H12	— —	50 *165*	100 *330*	— —
H21	— —	90 *295*	85 *280*	— —

SMG = Seco material group. V_c = m/min (sf/min). All cutting data are start values

SD542 Ø 60-85 mm / 2.250-3.500 in

SMG	Grade	f = mm/rev (IPR) Ø60,00-65,00 *Ø 2.250-2.559*	f = mm/rev (IPR) Ø70,00-85,00 *Ø 2.750-3.500*	v_c m/min *sf/min*
P1	P2 DP3000	0,095 *0.0038*	0,12 *0.0048*	390 *1275*
P2	P2 DP3000	0,10 *0.0040*	0,12 *0.0048*	380 *1250*
P3	P2 DP3000	0,19 *0.0075*	0,22 *0.0085*	325 *1075*
P4	P2 DP3000	0,19 *0.0075*	0,22 *0.0085*	205 *670*
P5	P2 DP3000	0,18 *0.0070*	0,22 *0.0085*	195 *640*
P6	P2 DP3000	0,18 *0.0070*	0,22 *0.0085*	220 *720*
P7	P2 DP3000	0,18 *0.0070*	0,22 *0.0085*	205 *670*
P8	P2 DP3000	0,19 *0.0075*	0,22 *0.0085*	195 *640*
P11	P2 DP3000	0,18 *0.0070*	0,22 *0.0085*	200 *660*
P12	P2 DP3000	0,12 *0.0048*	0,15 *0.0060*	120 *395*
M1	P2 DP3000	0,14 *0.0055*	0,17 *0.0065*	250 *820*
M2	P2 DP3000	0,13 *0.0050*	0,15 *0.0060*	205 *670*
M3	P1 T250D	0,10 *0.0040*	0,12 *0.0048*	90 *295*
M4	P1 T250D	0,090 *0.0036*	0,11 *0.0044*	70 *230*
M5	P1 T250D	0,090 *0.0036*	0,11 *0.0044*	55 *180*
K1	P2 DP3000	0,20 *0.0080*	0,24 *0.0095*	225 *740*
K2	P2 DP3000	0,18 *0.0070*	0,22 *0.0085*	195 *640*
K3	P2 DP3000	0,18 *0.0070*	0,22 *0.0085*	165 *540*
K4	P2 DP3000	0,18 *0.0070*	0,22 *0.0085*	160 *520*
K5	P2 DP3000	0,16 *0.0065*	0,19 *0.0075*	95 *310*
N1	P1 T250D	0,20 *0.0080*	0,24 *0.0095*	335 *1100*
N2	P1 T250D	0,20 *0.0080*	0,24 *0.0095*	215 *710*
N3	P1 T250D	0,20 *0.0080*	0,24 *0.0095*	145 *475*
N11	P1 T250D	0,20 *0.0080*	0,24 *0.0095*	285 *940*
S1	MP DS2050	0,15 *0.0060*	0,18 *0.0070*	55 *180*
S2	MP DS2050	0,15 *0.0060*	0,18 *0.0070*	45 *150*
S3	MP DS2050	0,14 *0.0055*	0,17 *0.0065*	39 *130*
S11	MP DS2050	0,17 *0.0065*	0,20 *0.0080*	80 *260*
S12	MP DS2050	0,17 *0.0065*	0,20 *0.0080*	60 *195*
S13	MP DS2050	0,15 *0.0060*	0,18 *0.0070*	48 *155*
H3	P1 T250D	0,080 *0.0032*	0,10 *0.0040*	65 *215*
H5	P1 T250D	0,12 *0.0048*	0,15 *0.0060*	120 *395*
H7	P1 T250D	0,080 *0.0032*	0,10 *0.0040*	65 *215*
H8	P1 T250D	0,095 *0.0038*	0,11 *0.0044*	120 *395*
H11	P1 T250D	0,12 *0.0048*	0,15 *0.0060*	155 *510*
H12	P1 T250D	0,095 *0.0038*	0,11 *0.0044*	140 *460*
H21	P1 T250D *P1 T250D*	0,095 *0.0038*	0,11 *0.0044*	120 *395*

SMG = Seco material group. f = mm/rev (IPR). V_c = m/min (sf/min). All cutting data are start values

SD542 Cutting speed

SMG	Vc m/min *sf/min*			
	DP2000	DP3000	T250D	DS2050
P1	435 *1425*	390 *1275*	290 *950*	390 *1275*
P2	425 *1400*	380 *1250*	280 *920*	380 *1250*
P3	365 *1200*	325 *1075*	240 *790*	325 *1075*
P4	255 *840*	205 *670*	130 *425*	— —
P5	245 *800*	195 *640*	125 *410*	— —
P6	275 *900*	220 *720*	140 *460*	— —
P7	260 *850*	205 *670*	130 *425*	— —
P8	245 *800*	195 *640*	125 *410*	— —
P11	250 *820*	200 *660*	125 *410*	— —
P12	150 *490*	120 *395*	75 *245*	— —
M1	— —	250 *820*	150 *490*	— —
M2	— —	205 *670*	120 *395*	— —
M3	— —	155 *510*	90 *295*	155 *510*
M4	— —	115 *375*	70 *230*	130 *425*
M5	— —	95 *310*	55 *180*	105 *345*
K1	235 *770*	225 *740*	— —	— —
K2	205 *670*	195 *640*	— —	— —
K3	175 *570*	165 *540*	— —	— —
K4	165 *540*	160 *520*	— —	— —
K5	100 *330*	95 *310*	— —	— —
N1	— —	390 *1275*	335 *1100*	335 *1100*
N2	— —	250 *820*	215 *710*	215 *710*
N3	— —	165 *540*	145 *475*	145 *475*
N11	— —	325 *1075*	285 *940*	285 *940*
S1	— —	— —	37 *120*	55 *180*
S2	— —	— —	27 *90*	45 *150*
S3	— —	— —	27 *90*	39 *130*
S11	— —	— —	70 *230*	80 *260*
S12	— —	— —	55 *180*	60 *195*
S13	— —	— —	43 *140*	48 *155*
H3	— —	65 *215*	65 *215*	— —
H5	— —	120 *395*	120 *395*	— —
H7	— —	65 *215*	65 *215*	— —
H8	— —	120 *395*	120 *395*	— —
H11	— —	155 *510*	155 *510*	— —
H12	— —	70 *230*	140 *460*	— —
H21	— —	120 *395*	120 *395*	— —

SMG = Seco material group. V_c = m/min (sf/min). All cutting data are start values

SD572 Ø 15-52 mm / 1.850 in

SMG	Grade	f = mm/rev (IPR)						v_c
		Ø15,00-17,00 ***Ø 0.590-0.669***	Ø18,00-20,00 ***Ø 0.670-0.787***	Ø21,00-24,00 ***Ø 0.788-0.944***	Ø25,00-32,00 ***Ø 0.945-1.259***	Ø33,00-36,00 ***Ø 1.260-1.417***	Ø37,00-52,00 ***Ø 1.418-1.850***	m/min ***sf/min***
P1	85 DP3000	0,042 *0.0017*	0,042 *0.0017*	0,048 *0.0019*	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	310 *1025*
P2	85 DP3000	0,042 *0.0017*	0,042 *0.0017*	0,050 *0.0020*	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	305 *1000*
P3	86 DP3000	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	260 *850*
P4	86 DP3000	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	230 *750*
P5	86 DP3000	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,22 *0.0085*	220 *720*
P6	86 DP3000	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,22 *0.0085*	245 *800*
P7	86 DP3000	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,22 *0.0085*	235 *770*
P8	86 DP3000	0,12 *0.0048*	0,12 *0.0048*	0,13 *0.0050*	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	220 *720*
P11	86 DP3000	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,22 *0.0085*	225 *740*
P12	86 DP3000	0,075 *0.0030*	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,12 *0.0048*	0,15 *0.0060*	135 *445*
M1	86 DP3000	0,075 *0.0030*	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,12 *0.0048*	0,15 *0.0060*	235 *770*
M2	86 DP3000	0,070 *0.0028*	0,070 *0.0028*	0,080 *0.0032*	0,10 *0.0040*	0,11 *0.0044*	0,14 *0.0055*	190 *620*
M3	85 DP3000	0,034 *0.0013*	0,034 *0.0013*	0,040 *0.0016*	0,048 *0.0019*	0,055 *0.0022*	0,070 *0.0028*	145 *475*
M4	85 DP3000	0,030 *0.0012*	0,030 *0.0012*	0,034 *0.0013*	0,042 *0.0017*	0,050 *0.0020*	0,060 *0.0024*	110 *360*
M5	85 DP3000	0,030 *0.0012*	0,030 *0.0012*	0,034 *0.0013*	0,042 *0.0017*	0,050 *0.0020*	0,060 *0.0024*	90 *295*
K1	86 DP3000	0,12 *0.0048*	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	180 *590*
K2	86 DP3000	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,22 *0.0085*	155 *510*
K3	86 DP3000	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,22 *0.0085*	130 *425*
K4	86 DP3000	0,11 *0.0044*	0,11 *0.0044*	0,13 *0.0050*	0,16 *0.0065*	0,18 *0.0070*	0,22 *0.0085*	125 *410*
K5	86 DP3000	0,10 *0.0040*	0,10 *0.0040*	0,11 *0.0044*	0,14 *0.0055*	0,16 *0.0065*	0,19 *0.0075*	75 *245*
S1	85 DP3000	0,055 *0.0022*	0,055 *0.0022*	0,060 *0.0024*	0,075 *0.0030*	0,090 *0.0036*	0,11 *0.0044*	40 *130*
S2	85 DP3000	0,055 *0.0022*	0,055 *0.0022*	0,060 *0.0024*	0,075 *0.0030*	0,090 *0.0036*	0,11 *0.0044*	30 *100*
S3	85 DP3000	0,050 *0.0020*	0,050 *0.0020*	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,10 *0.0040*	30 *100*
S11	85 DP3000	0,060 *0.0024*	0,060 *0.0024*	0,070 *0.0028*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	80 *260*
S12	85 DP3000	0,060 *0.0024*	0,060 *0.0024*	0,070 *0.0028*	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	60 *195*
S13	85 DP3000	0,055 *0.0022*	0,055 *0.0022*	0,060 *0.0024*	0,075 *0.0030*	0,090 *0.0036*	0,11 *0.0044*	47 *155*
H3	86 DP3000	0,050 *0.0020*	0,050 *0.0020*	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,10 *0.0040*	80 *260*
H5	86 DP3000	0,075 *0.0030*	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,12 *0.0048*	0,15 *0.0060*	150 *490*
H7	86 DP3000	0,050 *0.0020*	0,050 *0.0020*	0,060 *0.0024*	0,070 *0.0028*	0,085 *0.0034*	0,10 *0.0040*	80 *260*
H8	86 DP3000	0,060 *0.0024*	0,060 *0.0024*	0,065 *0.0026*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	150 *490*
H11	86 DP3000	0,075 *0.0030*	0,075 *0.0030*	0,085 *0.0034*	0,11 *0.0044*	0,12 *0.0048*	0,15 *0.0060*	195 *640*
H12	86 DP3000	0,060 *0.0024*	0,060 *0.0024*	0,065 *0.0026*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	80 *260*
H21	86 DP3000 *86 DP3000*	0,060 *0.0024*	0,060 *0.0024*	0,065 *0.0026*	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	150 *490*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

SD572 Cutting speed

SMG	V_c m/min *sf/min* DP2000
P1	375 *1225*
P2	365 *1200*
P3	315 *1025*
P4	280 *920*
P5	265 *870*
P6	300 *980*
P7	280 *920*
P8	265 *870*
P11	275 *900*
P12	160 *520*
M1	285 *940*
M2	230 *750*
M3	175 *570*
M4	130 *425*
M5	110 *360*
K1	215 *710*
K2	185 *610*
K3	160 *520*
K4	150 *490*
K5	90 *295*
S1	— —
S2	— —
S3	— —
S11	— —
S12	— —
S13	— —
H3	80 *260*
H5	150 *490*
H7	80 *260*
H8	150 *490*
H11	195 *640*
H12	95 *310*
H21	150 *490*

SMG = Seco material group
V_c = m/min (sf/min)
All cutting data are start values

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SD602 Ø 60-160 mm / 2.362-6.300 in

SMG	Grade	f = mm/rev (IPR)					v_c
		Ø60,00-69,99 *Ø 2.362-2.755*	Ø70,00-91,99 *Ø 2.756-3.621*	Ø92,00-110,99 *Ø 3.622-4.369*	Ø111,00-134,99 *Ø 4.370-4.314*	Ø135,00-160,00 *Ø 4.315-6.300*	m/min *sf/min*
P1	P2 DP3000	0,085 *0.0034*	0,095 *0.0038*	0,12 *0.0048*	0,13 *0.0050*	0,12 *0.0048*	295 *970*
P2	P2 DP3000	0,085 *0.0034*	0,10 *0.0040*	0,12 *0.0048*	0,13 *0.0050*	0,12 *0.0048*	285 *940*
P3	P2 DP3000	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,22 *0.0085*	245 *800*
P4	P2 DP3000	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,25 *0.010*	0,22 *0.0085*	130 *425*
P5	P2 DP3000	0,16 *0.0065*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,22 *0.0085*	125 *410*
P6	P2 DP3000	0,16 *0.0065*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,22 *0.0085*	140 *460*
P7	P2 DP3000	0,16 *0.0065*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,22 *0.0085*	135 *445*
P8	P2 DP3000	0,17 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,26 *0.010*	0,22 *0.0085*	125 *410*
P11	P2 DP3000	0,16 *0.0065*	0,18 *0.0070*	0,22 *0.0085*	0,25 *0.010*	0,22 *0.0085*	130 *425*
P12	P2 DP3000	0,11 *0.0044*	0,12 *0.0048*	0,15 *0.0060*	0,17 *0.0065*	0,15 *0.0060*	75 *245*
M1	P2 DP3000	0,12 *0.0048*	0,14 *0.0055*	0,17 *0.0065*	0,19 *0.0075*	0,17 *0.0065*	215 *710*
M2	P2 DP3000	0,11 *0.0044*	0,13 *0.0050*	0,15 *0.0060*	0,17 *0.0065*	0,15 *0.0060*	175 *570*
M3	P1 DP3000	0,090 *0.0036*	0,10 *0.0040*	0,12 *0.0048*	0,14 *0.0055*	0,12 *0.0048*	135 *445*
M4	P1 DP3000	0,075 *0.0030*	0,090 *0.0036*	0,11 *0.0044*	0,12 *0.0048*	0,11 *0.0044*	100 *330*
M5	P1 DP3000	0,075 *0.0030*	0,090 *0.0036*	0,11 *0.0044*	0,12 *0.0048*	0,11 *0.0044*	85 *280*
K1	P2 DP3000	0,17 *0.0065*	0,20 *0.0080*	0,24 *0.0095*	0,26 *0.010*	0,24 *0.0095*	175 *570*
K2	P2 DP3000	0,16 *0.0065*	0,18 *0.0070*	0,22 *0.0085*	0,24 *0.0095*	0,22 *0.0085*	150 *490*
K3	P2 DP3000	0,16 *0.0065*	0,18 *0.0070*	0,22 *0.0085*	0,24 *0.0095*	0,22 *0.0085*	130 *425*
K4	P2 DP3000	0,16 *0.0065*	0,18 *0.0070*	0,22 *0.0085*	0,24 *0.0095*	0,22 *0.0085*	120 *395*
K5	P2 DP3000	0,14 *0.0055*	0,16 *0.0065*	0,19 *0.0075*	0,22 *0.0085*	0,19 *0.0075*	75 *245*
H3	P2 DP3000	0,070 *0.0028*	0,080 *0.0032*	0,10 *0.0040*	0,11 *0.0044*	0,10 *0.0040*	42 *140*
H5	P2 DP3000	0,11 *0.0044*	0,12 *0.0048*	0,15 *0.0060*	0,17 *0.0065*	0,15 *0.0060*	80 *260*
H7	P2 DP3000	0,070 *0.0028*	0,080 *0.0032*	0,10 *0.0040*	0,11 *0.0044*	0,10 *0.0040*	42 *140*
H8	P2 DP3000	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,13 *0.0050*	0,11 *0.0044*	80 *260*
H11	P2 DP3000	0,11 *0.0044*	0,12 *0.0048*	0,15 *0.0060*	0,17 *0.0065*	0,15 *0.0060*	100 *330*
H12	P2 DP3000	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,13 *0.0050*	0,11 *0.0044*	45 *150*
H21	P2 DP3000	0,085 *0.0034*	0,095 *0.0038*	0,11 *0.0044*	0,13 *0.0050*	0,11 *0.0044*	80 *260*

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

SD602 Cutting speed

SMG	V_c m/min *sf/min*	
	T250D	DS2050
P1	180 *590*	295 *970*
P2	175 *570*	285 *940*
P3	150 *490*	245 *800*
P4	80 *260*	— —
P5	75 *245*	— —
P6	85 *280*	— —
P7	80 *260*	— —
P8	75 *245*	— —
P11	80 *260*	— —
P12	46 *150*	— —
M1	90 *295*	— —
M2	75 *245*	— —
M3	55 *180*	135 *445*
M4	43 *140*	85 *280*
M5	36 *120*	70 *230*
K1	— —	— —
K2	— —	— —
K3	— —	— —
K4	— —	— —
K5	— —	— —
H3	40 *130*	— —
H5	75 *245*	— —
H7	40 *130*	— —
H8	75 *245*	— —
H11	95 *310*	— —
H12	85 *280*	— —
H21	75 *245*	— —

SMG = Seco material group
V_c = m/min (sf/min)
All cutting data are start values

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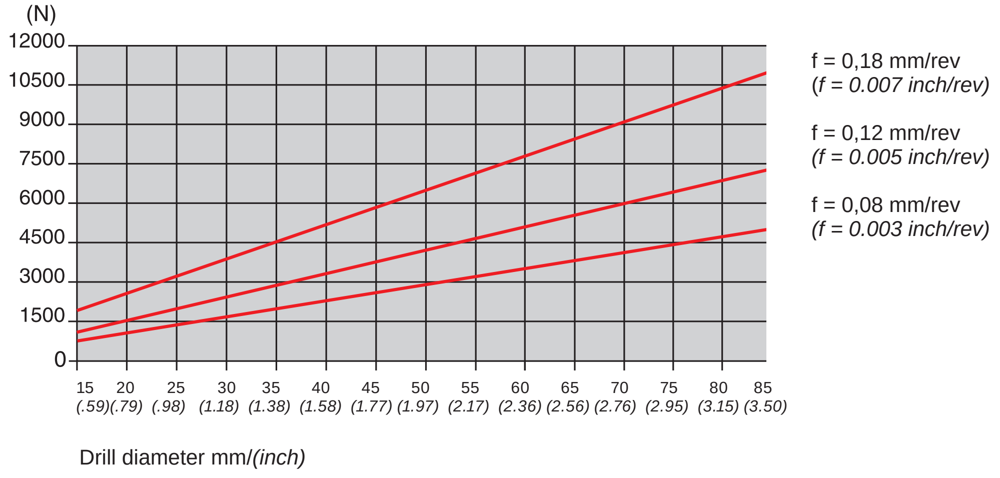
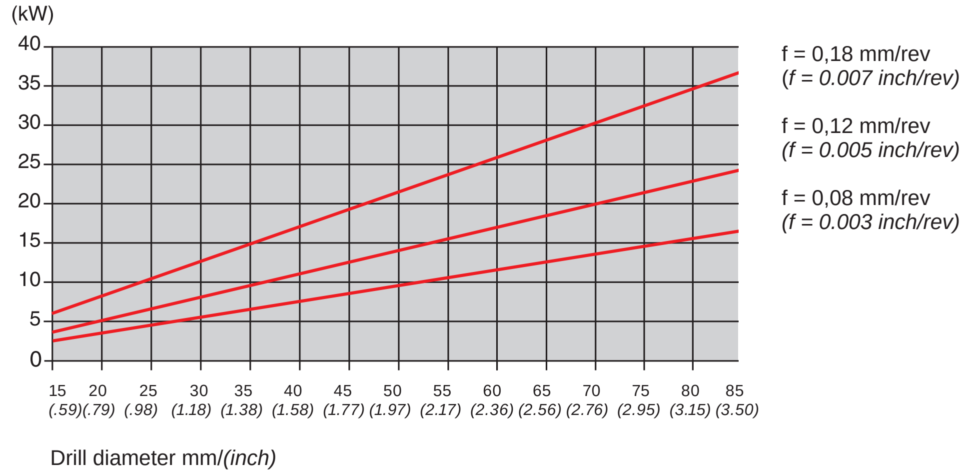
Machining data SD522, SD523, SD524, SD525, SD542 and SD572 - Power consumption, coolant volume requirement and force graphs

The values in the graphs vary with e.g. cutting data, material, efficiency of the machine and tool wear.
The graphs below are valid for Seco Material Group (SMG) P5-P6 and cutting speed 200 m/min *(655 sf/min)*.

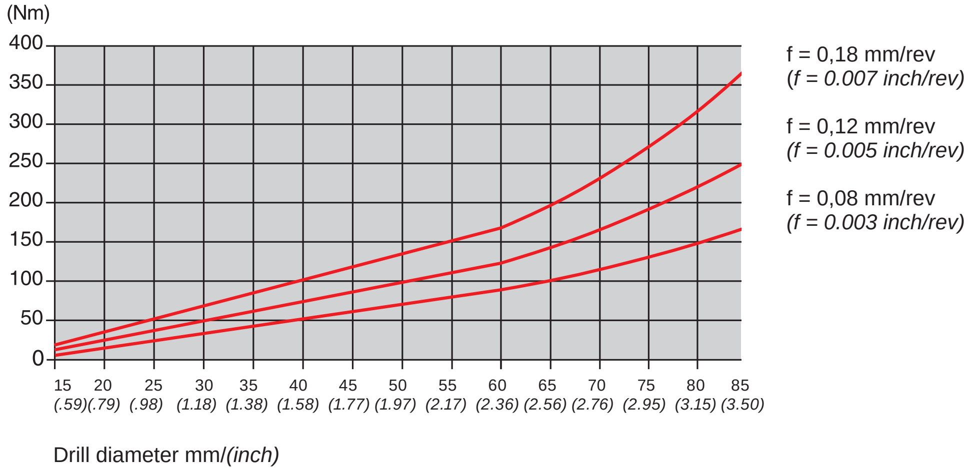
Feed force



Net power consumption

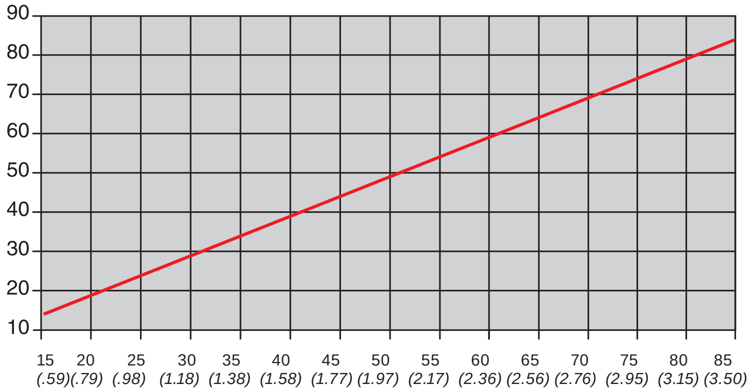


Drilling torque



Machining data – Coolant volume requirement

Machining data – Coolant volume requirement

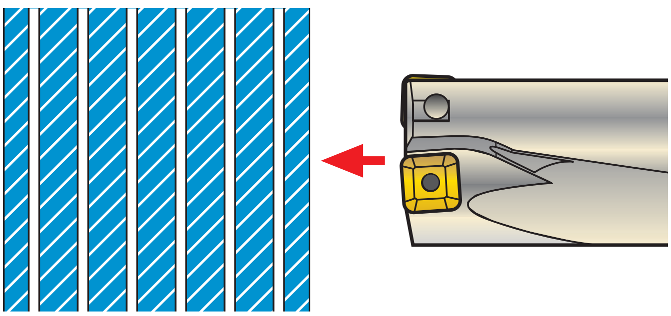


Drill diameter mm/*(inch)*

Coolant pressure requirement

Recommended pressure (psi / bar)			
Drilling depth	**Drill diameter mm**		
	15-25	**> 25-40**	**> 40**
< 3 x D	6	4,5	3
≥ 3 x D	12	9	6
Drilling depth	**Drill diameter *(inch)***		
	0.591-0.984	**> 0.984-1.575**	**> 1.575**
< 3 x D	*87*	*65*	*44*
≥ 3 x D	*174*	*130*	*87*

Drilling of stacked materials



Drilling of stacked materials with no air gaps between the layers, max 0,2 mm *(0.008")*, can be done with SD522 2xD, SD523 3xD and the SD542 2.5xD and the SD542 2.5 x D drill. The component must be securely fixed so no flexing occurs when breaking through each layer.

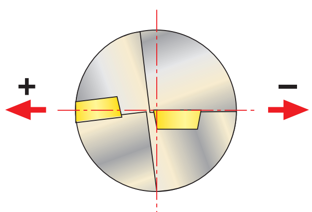
Cutting data and insert recommendations for drilling of stacked materials

Insert geometry:	**Carbidge grade:**
Center insert: SPGX-C1	Center insert: T400D
Periph insert: SPGX-P2	Periph insert: DP3000
Cutting speed: See recommendations for DP3000 carbide grade	
Feed / rev: See recommendations for P2 geometry	
If a problem occurs when breaking through each layer, reduce the fed / rev by 30-50 %.	

Caution!
The disc produced when the drill breaks through can be ejected at high speed when using the drill as a stationary tool, (rotating workpiece).
It is most important to ensure that the machine is adequately guarded to ensure operator safety.

Set up

Hole diameter adjustment and set-up recommendation
The insert drills can be displaced off-center to achieve a smaller or larger hole diameter than the actual drill.
For measurement see 'Radial adjustment' in the tool data table in the catalogue pages.



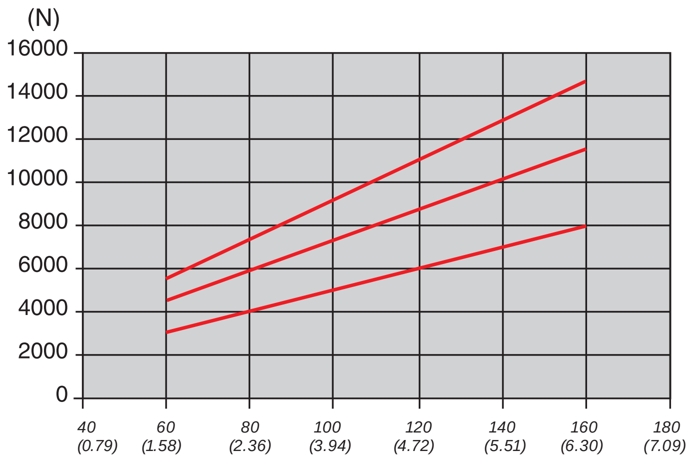
Rotating
Seco's adjustable holder is recommended for precision hole diameter IT10 setting when using SD522 and SD523, 3 x D as rotating drills.

Stationary
When mounting the drill make sure the cutting edges are parallel with the guide ways of the cross slide and that the drill center line and workpiece center line align. To achieve a larger hole diameter, displace the drill so that the periphery insert moves away from the workpiece center line.

Machining data SD602 - Power consumption, coolant volume requirement and force graphs

The values in the graphs vary with e.g., cutting data, material, with a machine efficiency of 80%.
The graphs below are valid for SMG P5-P6 and cutting speed 200 m/min *(655 sf/min)*.

Feed force



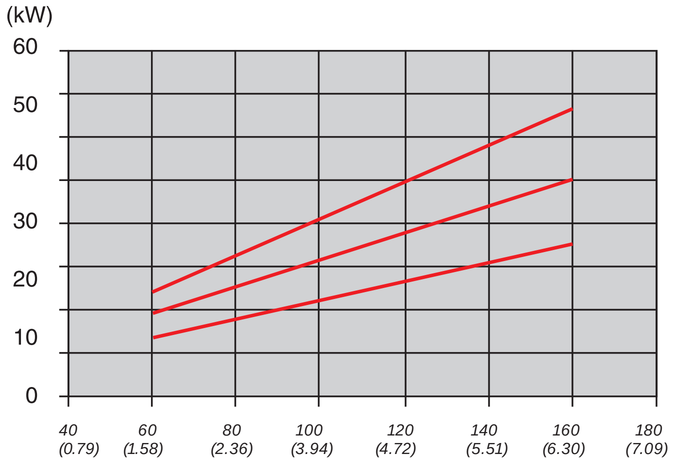
Drill diameter mm/*(inch)*

f = 0,18 mm/rev
(f = 0.007 inch/rev)

f = 0,12 mm/rev
(f = 0.005 inch/rev)

f = 0,08 mm/rev
(f = 0.003 inch/rev)

Net power consumption



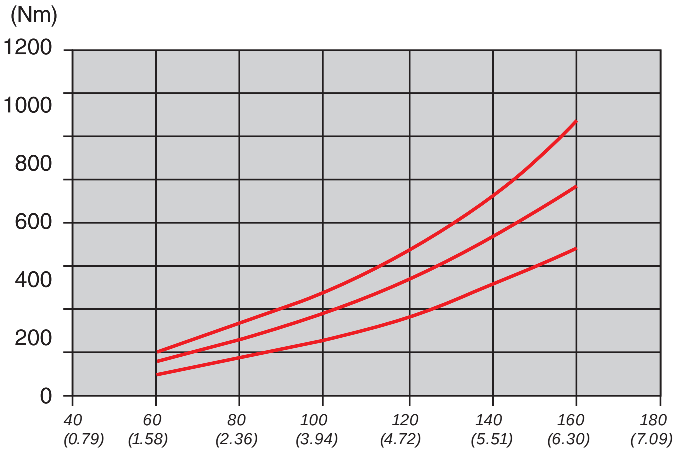
Drill diameter mm/*(inch)*

f = 0,18 mm/rev
(f = 0.007 inch/rev)

f = 0,12 mm/rev
(f = 0.005 inch/rev)

f = 0,08 mm/rev
(f = 0.003 inch/rev)

Drilling torque



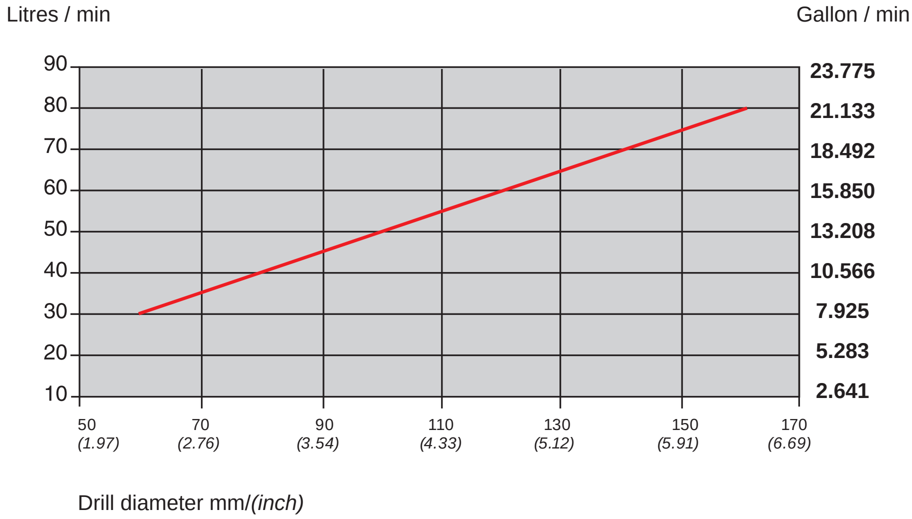
Drill diameter mm/*(inch)*

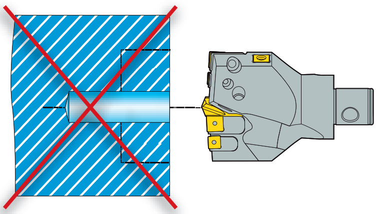
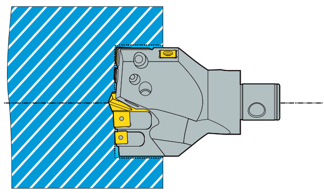
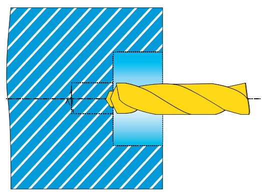
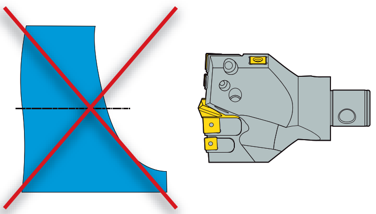
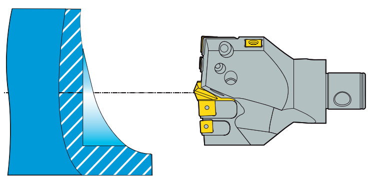
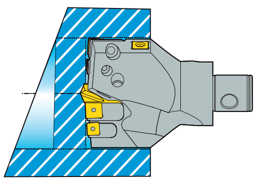
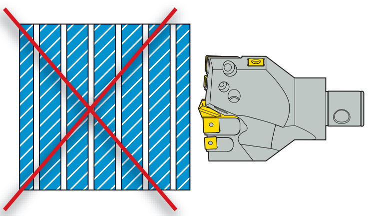
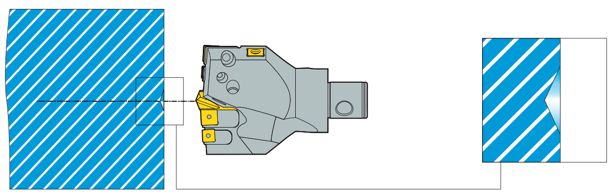
f = 0,18 mm/rev
(f = 0.007 inch/rev)

f = 0,12 mm/rev
(f = 0.005 inch/rev)

f = 0,08 mm/rev
(f = 0.003 inch/rev)

Machining data SD602 - Coolant volume requirement



Methods Not recommended	Solution	
	1. 	2. 
	1. 	2. 
	1. 2.  > 5 x D	

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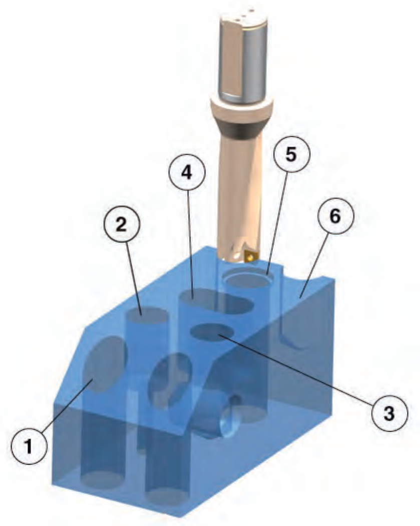
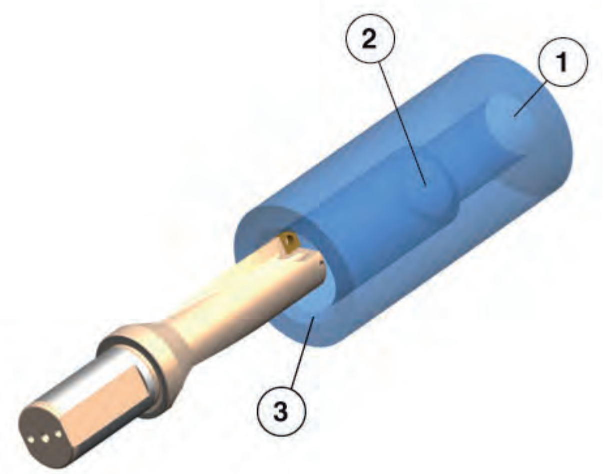
Versatility

Applications

1. Hole with angled entrance
2. Boring
3. Drilling across an existing hole
4. Drilling and plunging
5. Drilling and milling countersink by circular interpolation
6. Plunging



Multiple choice in non rotating operations
- Drilling
- Boring / Conical hole
- Chamfering

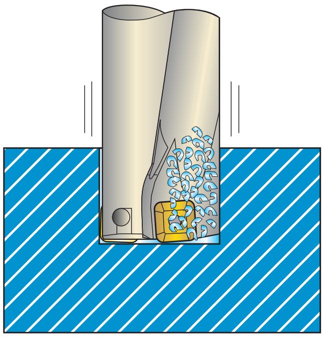


Recommendations
- 2 x D and 3 x D drills (SD522, SD523)
- Reduce the feed ~ 50% when the drill is not fully engaged
- Use grade DP3000
- Use -P2 chipbreaker

Troubleshooting

Vibrations

Applications
- Check mounting of drill
- Check mounting of workpiece
- Increase feed. If a very soft material, reduce feed and increase speed
- Reduce the cutting speed

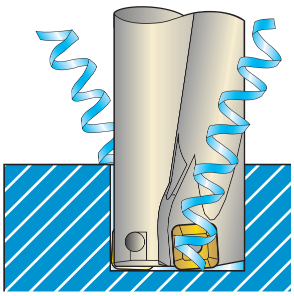


Insufficient torque
- Reduce feed
- Choose a geometry with harder chipbreaking for lower feeds

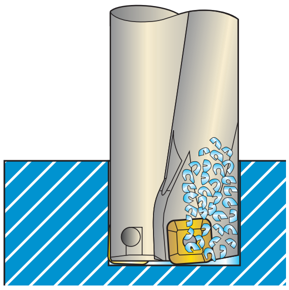
Insufficient power
- Reduce cutting speed
- Reduce feed
- Choose a geometry with harder chipbreaking for lower feeds. (SCGX-P1)

Chip jamming problems

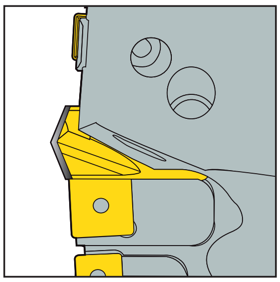
Chip jamming problems due to long chips
- Increase feed. If a very soft material, reduce feed and increase speed
- Choose a geometry with harder chipbreaking for lower feeds (SCGX-P1)



Chip jamming problems despite short chips
- Increase coolant pressure / volume
- Reduce cutting speed

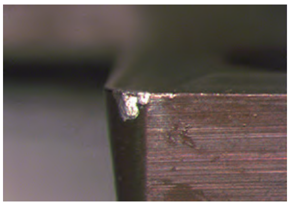


Rapid flank wear on pilot drill
- Reduce the cutting speed
- Increase coolant concentration

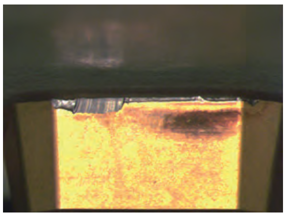


Tool life problems

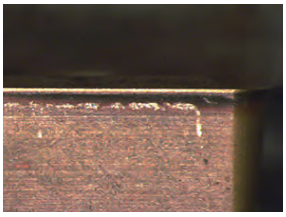
Chipping of periphery insert
- Reduce entrance feed
- Choose a tougher grade
- Choose a geometry with softer chipbreaking for higher feeds (SCGX-P2)
- Reduce feed
- Reduce cutting speed



Chipping of center insert
- Check mounting of drill
- Check mounting of workpiece
- Reduce entrance feed
- Increase feed
- Reduce cutting speed



Rapid flank wear on periphery insert
- Reduce cutting speed
- Increase coolant pressure volume
- Choose a more wear resistant grade



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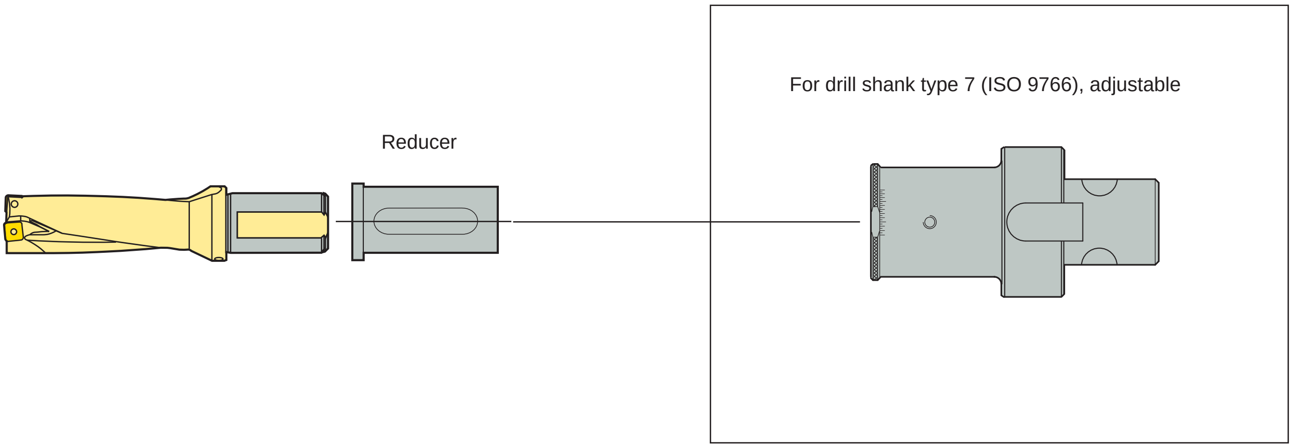
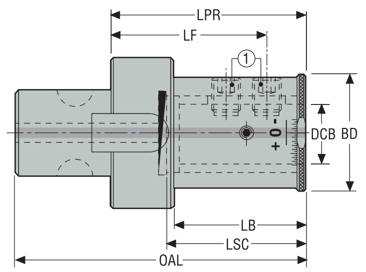
Adjustable holders for drills



ADH 6101 – Adjustable drill holders, for type 7 drill shanks

Graflex®

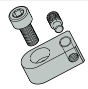


1. Locking screw

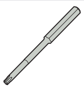
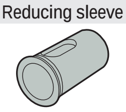
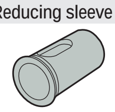
- For Perfomax® drills
- Adjustable from -0,3 mm to +0,8

		Machine side	Workpiece side									
Item number	Designation	Graflex shank size	For drill shank type	DCB	OAL	LPR	BD	LF	LB	LSC	Weight	Balancing
				mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	
02422113	BM061610025	G6	R7	25,0 *0.984*	110,0 *4.331*	70,0 *2.756*	49,0 *1.929*	55,0 *2.165*	54,0 *2.126*	54,0 *2.126*	1,12 *2.470*	PB
02422116	BM061610125	G6	R7	25,4 *1.000*	110,0 *4.331*	70,0 *2.756*	49,0 *1.929*	55,0 *2.165*	54,0 *2.126*	54,5 *2.146*	1,11 *2.450*	PB
02422114	BM061610032	G6	R7	32,0 *1.260*	125,0 *4.921*	85,0 *3.346*	71,0 *2.795*	70,0 *2.756*	66,0 *2.598*	60,5 *2.382*	2,09 *4.610*	PB
02422118	BM061610138	G6	R7	38,1 *1.500*	125,0 *4.921*	85,0 *3.346*	81,0 *3.189*	70,0 *2.756*	66,0 *2.598*	60,5 *2.382*	2,45 *5.400*	PB
02422115	BM061610040	G6	R7	40,0 *1.575*	125,0 *4.921*	85,0 *3.346*	81,0 *3.189*	70,0 *2.756*	66,0 *2.598*	60,5 *2.382*	2,38 *5.250*	PB

Spare parts

For DCB	Locking screw	Tenon
		
25/0.984	950AF1210014	90M61
25,4/1.000	950AF1210014	90M61
32/1.260	950AF1210020	90M61
38,1/1.500	950AF1210020	90M61
40/1.575	950AF1210020	90M61

Accessories

For DCB	Key	Key (T-handle)	Reducing sleeve	Reducing sleeve 2
				
25/0.984	H6B-H6.0L	DOUBLE-T	–	–
25,4/1.000	H6B-H6.0L	DOUBLE-T	–	–
32/1.260	H6B-H6.0L	DOUBLE-T	05B61003225	–
38,1/1.500	H06-4	–	–	–
40/1.575	H6B-H6.0L	DOUBLE-T	05B61004025	05B61004032

PB=Pre-balanced by design (see Balancing Guide page in Tooling Systems catalogue for more details)

PRECIMASTER™ PLUS

EXCHANGEABLE REAMING HEAD FOR FAST AND EASY HANDLING

Precimaster™ Plus is a modular reamer system that boosts reaming speed, stability and versatility for more-precise, cost-effective hole production. Building on the success of the original Precimaster™, the system features an innovative high-precision connection, solid-carbide disposable heads and common holders for blind and through-hole applications.

TOLERANCES

Holds tolerances between 15-25 microns and enables surface finishes of Ra 0.4 to Ra 0.8 µm (RMS 15 to 35 micro/inch)

SECO

REAMING

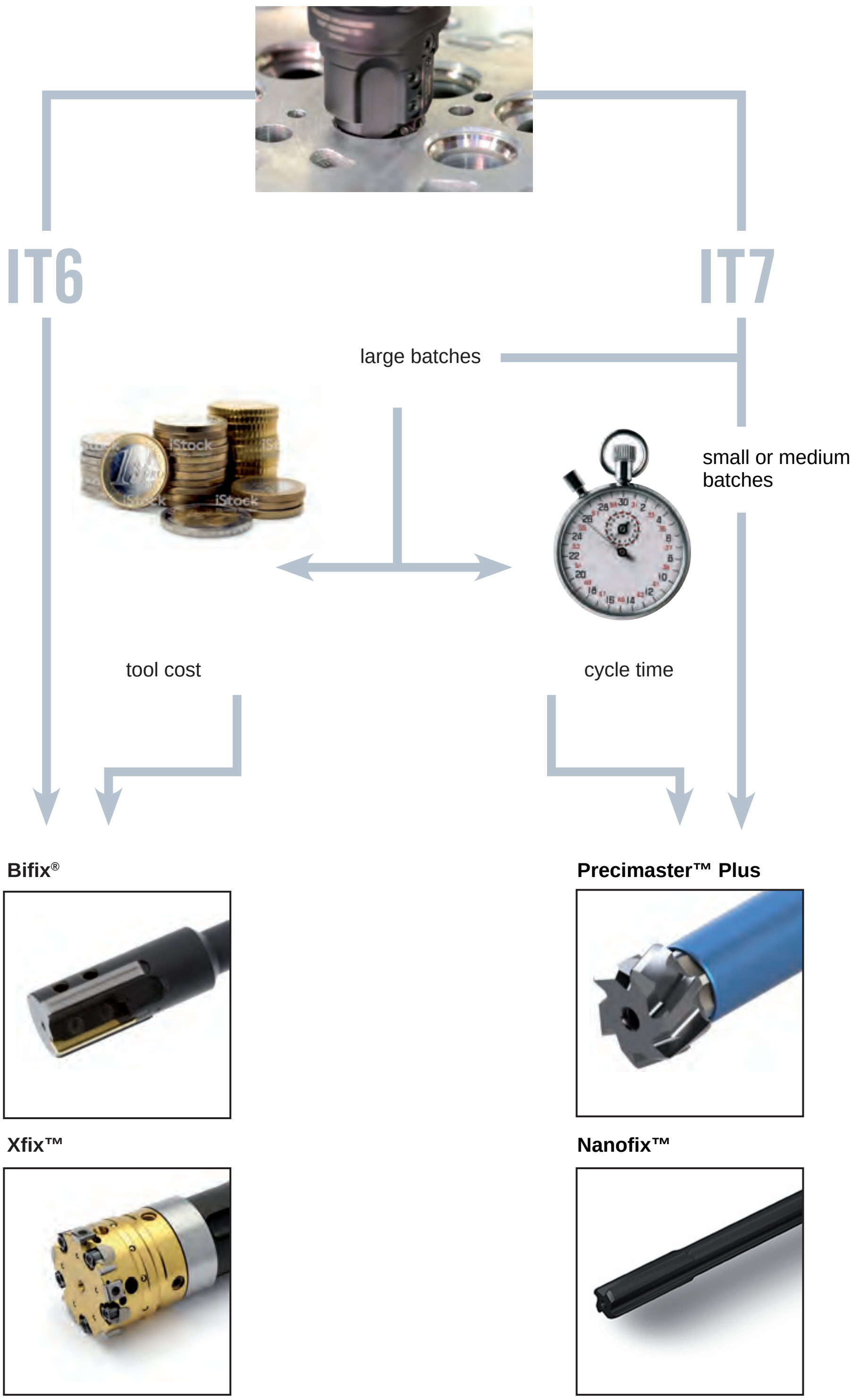
FEATURES

The system features an innovative high-precision connection, solid-carbide disposable heads as well as common holders for blind and through-hole applications.

Multi-cut or indexable insert – Choosing the best solution

Multi-cut or indexable insert – Choosing the best solution
Quality, performance and tool cost, all these objectives can be met. The choice of a reaming tool depends on hole tolerance, production quantity and cycle time. Seco Holemaking systems can meet these demands.
With Precimaster Plus, Bifix, Xfix and Nanofix reamers Seco can solve all problems related to reaming operations.

The chart below helps you to choose the ideal reaming tool



Range overview

	∅ Range	Reaming depth	Hole tolerance	Intermediate diameters	Surface finish
Precimaster™Plus  Page(s) 327-361	7,75-60,500 mm *(0.3051-2.3818")*	~ 2-10 x D	IT 6-7-8	Yes, available through Custom design	R_a 0,2-1,2 µm *R_a 8-47 µin*
Nanofix™  Page(s) 362-388	2,970-12,050 mm *(0.1169-0.4744")*	~ 5-12 x D	IT 7	Yes, available through Custom design	R_a 0,8-1,2 µm *R_a 31-47 µin*
Bifix®  Page(s) 389-412	5,900-60,500 mm *(0.2323-2.3819")*	~ 2-7 x D	IT 6-7	Yes, available through Custom design	R_a 0,2-1,2 µm *R_a 8-47 µin*
Xfix™  Page(s) 413-451	39,500-154,500 mm *(1.5551-6.0827")*	~ 2,5-6,5 x D	IT 6	Yes, available through Custom design	R_a 0,8-1,6 µm *R_a 31-63 µin*

Range overview

	∅ Range	Reaming depth	Hole tolerance	Intermediate diameters	Surface finish
PMX5 / PMX6 / PMX8 	7,75-60 mm *(0.3051-2.3622")*	~ 2-3 x D	IT 6-7-8	Yes, available through Custom design	R_a 0,2-1,2 µm *R_a 8-47 µin*
PMX5 / PMX6 / PMX8 	7,75-60 mm *(0.3051-2.3622")*	~ 4-5 x D	IT 6-7-8	Yes, available through Custom design	R_a 0,2-1,2 µm *R_a 8-47 µin*
PMX5 / PMX6 / PMX8 	7,75-60 mm *(0.3051-2.3622")*	~ 8-10 x D	IT 6-7-8	Yes, available through Custom design	R_a 0,2-1,2 µm *R_a 8-47 µin*

Precimaster™ Plus

Precimaster™ Plus is a modular reamer system that boosts reaming speed, stability and versatility for more precise, cost-effective hole production.

- The system features an innovative high-precision connection, solid-carbide disposable heads as well as common holders for blind and through-hole applications
- Enables tolerances held between 15 and 25 microns and surface finishes of Ra 0.4 to Ra 0.8 µm (RMS 15 to 35 micro/inch)

Code key

Reamer body size | Max reaming depth | Neutral

PMX08 - 08200 - 20 - N 1

Cyl. shank diameter | Type of shank 1. Cylindral DIN1835

Precimaster Plus toolholders are suitable for both blind and through holes.

Code key head

Head type | Entrance geometry

PMX6 - 18H7 - EB45 - RX2000

Hole dia and hole tolerance | Carbide grade

PMX6

Code key head intermediate diameter

Head type | Hole dia and hole tolerance | Entrance geometry | Carbide grade

PMX5 - 15,515 P7 - EB845 - RX2000

0.6108”/0.6115”

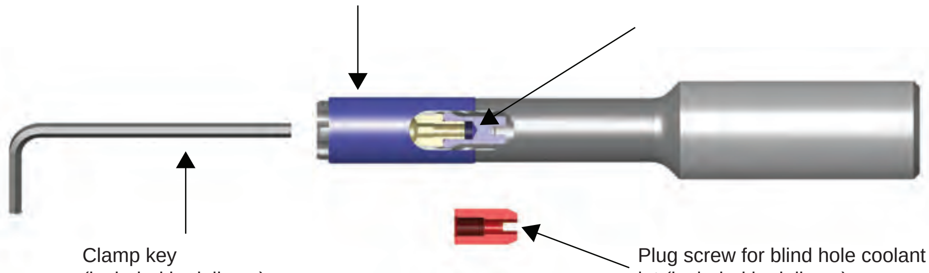
PMX5

PMX8

PMX5 : Straight flutes design, suitable for blind and through bores.
PMX6 : Helical flutes design, suitable for through bores only.
PMX8: Straight flutes expandable, suitable for blind and through bores
The left hand flutes design improves the action of pushing the chips forward.
See Precimaster Plus head choice page 330.

Coolant set-up

Coolant outlet set-up procedure: Spare parts description



Coolant outlet set-up procedure: Blind bores coolant outlet set-up

1.

Remove plug screw for through bore (blue)
Note: plug screws are LH screw

Use flat screw driver OR allen key, recommended hand-tool sizes as per table

Body size	Flat blade screw driver size mm	Flat blade screw driver size *(inch)*	Allen key size mm	Allen key size *(inch)*
				
PMX05	1,2 x 4 x 120		2 x 120	
PMX06	1,0 x 5,5 x 150	*0.04 x 0.22 x 5.9*	2,5 x 150	*0.10 x 5.9*
PMX08	1,2 x 6,5 x 200	*0.05 x 0.26 x 7.87*	3 x 200	*0.12 x 7.87*
PMX12	1,2 x 8 x 200	*0.05 x 0.31 x 6.89*	5 x 200	*0.2 x 6.89*

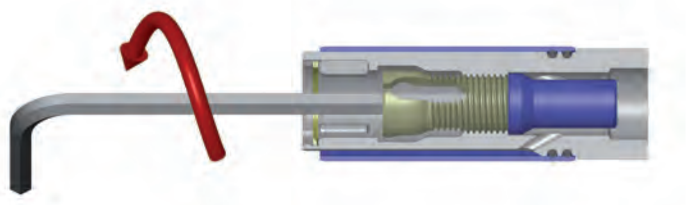
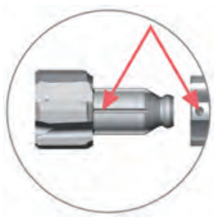
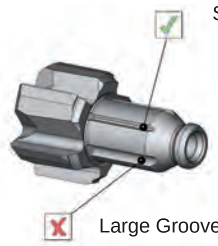
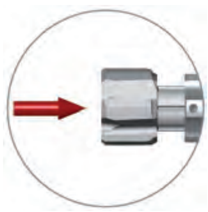
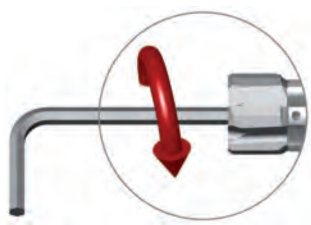
2.

Remove coolant sleeve

3.

Mount plug screw for blind bores (red)
Note: plug screws are LH screw

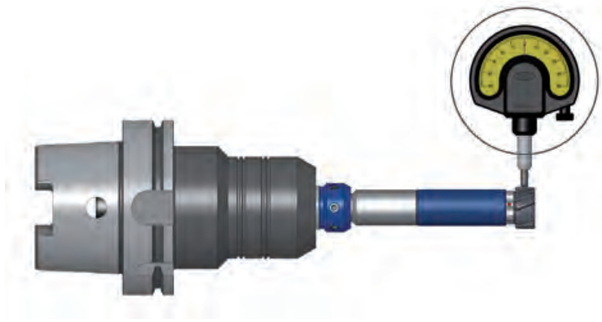
Head mounting

1. Make sure head geometry is suitable with coolant style	 PMX5/PMX8  PMX6  Through bores  PMX5/PMX8  Blind bores
2. Position clamp before head mounting	
3. Align index groove with red dot on body	 Small Groove  Large Grooves
4. Place head into body	
5. Push head inside body until “click” is achieved	
6. Clamp head using allen key	

Set up – Run-out

Rotating tool

Max recommended run-out : 10-15 µm *(393.7008-590.5512 µin)*.
Hydraulic chuck , Shrinkfit, holder or precision collet holder is recommended.
For best run-out control, we recommend to use Precimaster Plus PMX-AD adjustable adapters, see page 345-346



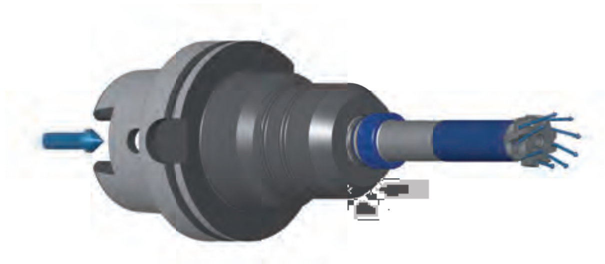
Static tool

Use Precimaster Plus floating holders PMX - FL, see page 347-348

Floating holders allow reamer self-centering in pre-bore.

Coolant requirements

To reach maximum tool life and hole quality, the following coolant requirements should be observed.
Coolant through the tool is recommended.
External coolant supply can be used if reaming depth < 2 x D.
Quality soluble oil with 40% minimum mineral oil.
Neat oil recommended for stainless steel.
Concentration minimum 6–8%.
Filtration 30–50 µm *(1200-2000 µin)*.
Volume min 0,5 l/min/mm *(3.35 gal/min/inch)* in tool diameter.
(Ex: Reamer ∅ 10, min volume is 5 l/min *(1.3 gal/min)*.

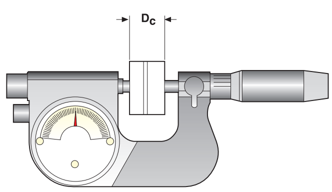


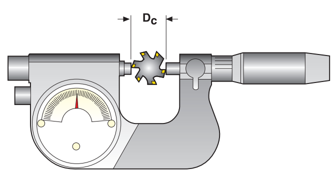
Diameter measurement

Gauge clock micrometer prior to ∅ measurement.

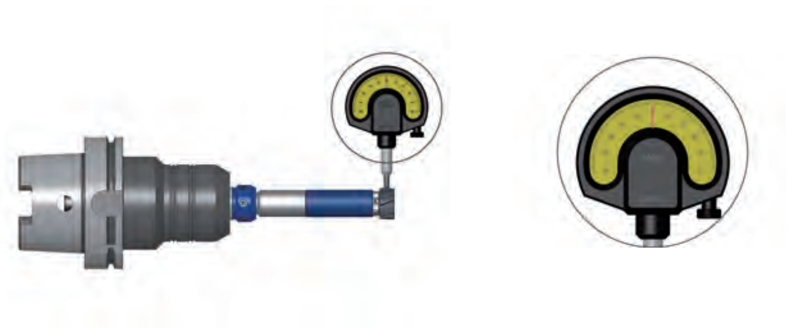
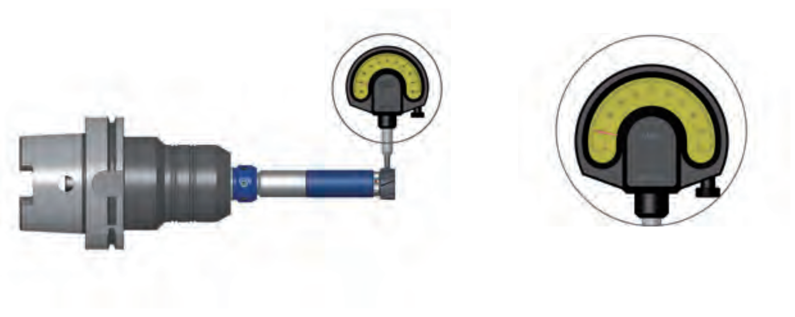
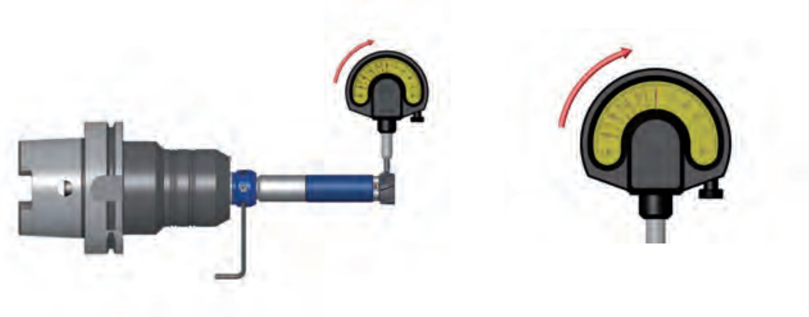
Important
Precimaster reamers have differential pitch between the teeth.
When measuring the diameter, make sure that you have 2 teeth 180° opposite.

Use clock micrometer and measuring blocks for gauging.





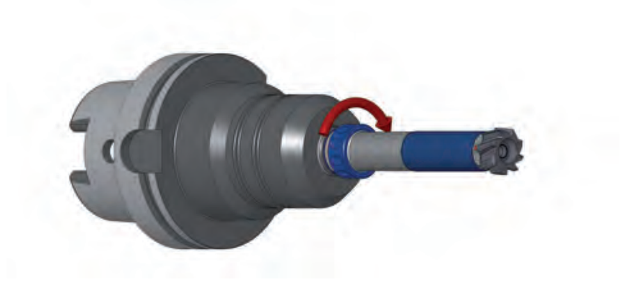
Adjustable shank set-up

1. Mount tool in machine spindle **2.** Set-up clock as shown	
3. Rotate tool manually till lowest point is reached	
4. Proceed to run-out compensation using adjusting screws. Direction as shown with arrows **5.** Check run-out and repeat compensation if necessary	
6. When maximum run-out is less than 5 mm *(0.0002”)*, secure adjusting screws clamping to avoid loosing adjustment	

Floating shank set-up

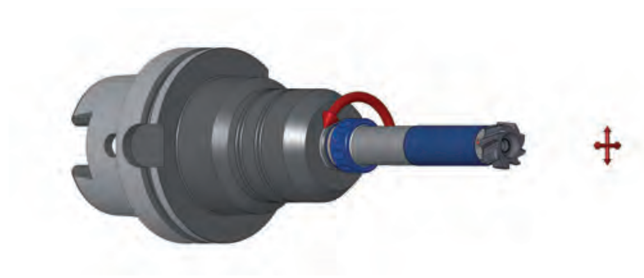
1.

Completely lock floating shank turning adjusting ring clockwise



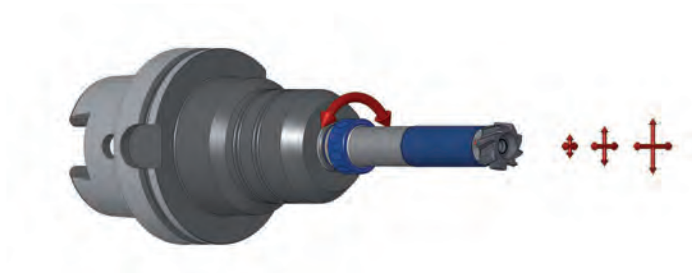
2.

Open floating shank 2 or 3 clicks turning adjusting ring anti-clockwise



3.

Proceed to further floating value adjustment if necessary.
Too much floating value can create unstable conditions at bore entry.
Too few floating value can create vibrations and tapered bore.



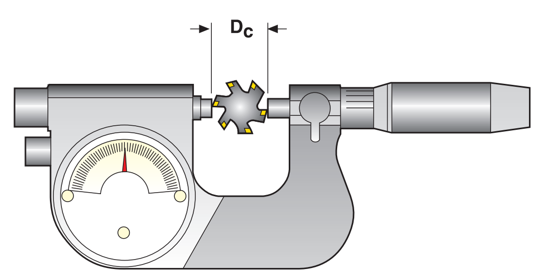
Precimaster Plus expandable reamer wear compensation

1.

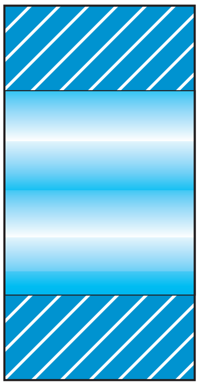
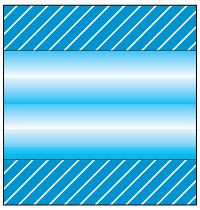
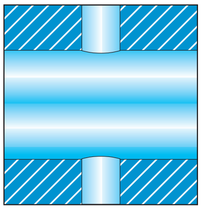
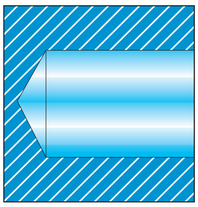
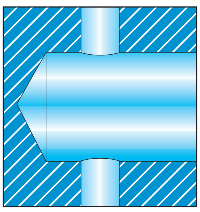
Use hexagonal allen key to compensate tool Ø wearing (60° increments = approximately 0,005 mm *(0.0002")* compensaton on Ø)

2.

Check Ø dimension after expansion using clock micrometer



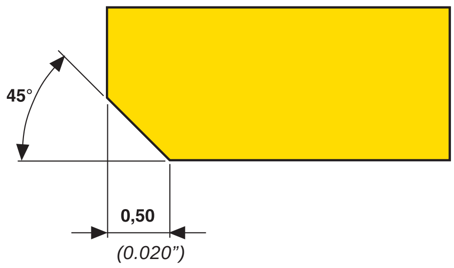
Head choice

Workpiece	Diameter to ream ∅ 8-60 mm *(0.3150-2.3622")*	
Short through hole < 3 x D 	**PMX5 / PMX8**  	
Long through hole > 3 x D 	**PMX6** For through bore application, toolholder coolant outlet must be set for through holes: see coolant set-up pages 	
Crossing hole 		
Blind hole 	**PMX5 / PMX8** For blind bore application, toolholder coolant outlet must be set for blind holes: see coolant set-up pages  	
Blind and crossing hole 		

Lead geometry

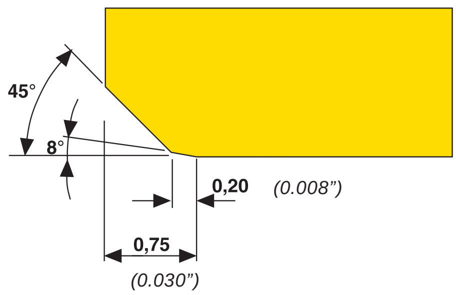
Lead geometry - EB45

Chip control +++
Surface Finish + R_a 0,8 - 1,2 µm
Surface Finish + *(R_a 31 - 47 µin)*
Versatile



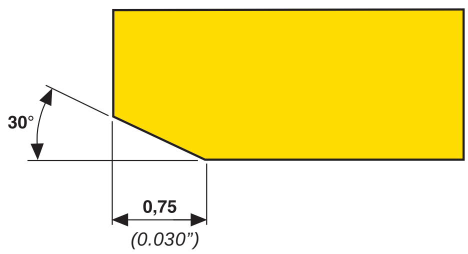
Lead geometry - EB845

Chip control ++
Surface Finish +++ R_a 0,2 - 0,8 µm
Surface Finish +++ *(R_a 8 - 31 µin)*



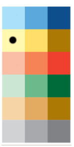
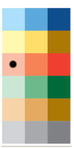
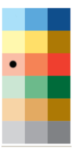
Lead geometry - EB30

Feed performance +++
Surface Finish ++ R_a 0,4 - 0,8 µm
Surface Finish ++ *(R_a 16 - 31 µin)*
Chip control +



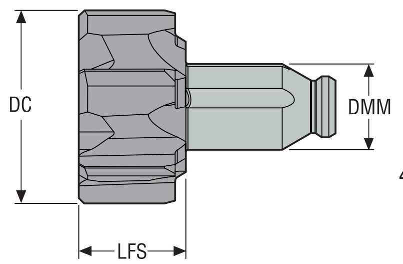
Introduction
Drilling
Reaming
Boring
Annex

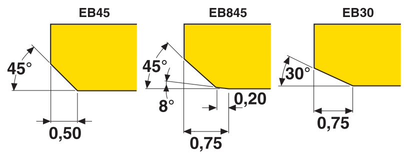
Grades

Grades		
	RX2000	Coated High performance coated grade suitable for all materials.
	CP20	Coated A versatile coated grade suitable for most materials, except aluminum. TiN
	H15	Uncoated A tough micrograin grade for all materials. Suitable for fine-reaming operations due to edge sharpness.
	CF	Cermet A wear resistant grade for performance optimization in steel.
	RX1500	Coated Cermet A resistant coated grade for performance optimization in steel and cast iron.
	RN2010	Uncoated A sub-micrograin uncoated grade with optimized geometries for N-materials (non ferrous).
	RM2020	Coated A tough coated grade suitable for fine reaming operation with optimized geometries for M materials.
	RM2090	Coated A wear resistant coated grade with specific geometries for M materials. Optimization in M materials.
	RK2050	Coated A tough coated grade suitable for fine reaming operation with optimized geometries for K materials
	RK1550	Coated cermet A wear resistant coated grade with specific geometries for K materials. Optimization in K materials.
	RS2090	Coated A wear resistant coated grade with specific geometries for S materials. Optimization in S materials.

Heads for through and blind holes

Ø 8-32 mm / 0.315-1.260 in





- For cutting data see page(s) 354-361
- For choice of lead geometry EB45, EB845 or EB30 see page(s) 335

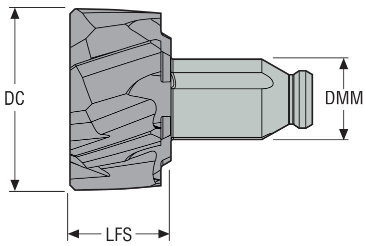
Designation	DC	Drill size*		LFS	DMM	Body size	Geometries			Grades				
	mm	mm	⊕	mm	mm		EB45	EB845	EB30	H15	CP20	RX2000	CF	RX1500
PMX5-8H7-EB45	8,0	7,8/7,9	6	6,0	4,5	PMX05-xx	03123158	□	□	□	□	■	–	–
PMX5-9H7-EB45	9,0	8,8/8,9	6	6,0	4,5	PMX05-xx	03123159	□	□	□	□	■	–	–
PMX5-10H7-EB45	10,0	9,8/9,9	6	7,0	6,0	PMX06-xx	02965840	□	10020602	□	□	■	□	□
PMX5-11H7-EB45	11,0	10,8/10,9	6	7,0	6,0	PMX06-xx	02925754	□	□	□	□	■	□	□
PMX5-12H7-EB45	12,0	11,8/11,908	6	7,0	6,0	PMX06-xx	02925755	□	10019482	□	□	■	□	□
PMX5-13H7-EB45	13,0	12,8/12,9	6	7,0	6,0	PMX06-xx	02925756	□	10019483	□	□	■	□	□
PMX5-14H7-EB45	14,0	13,8/13,891	6	7,0	6,0	PMX06-xx	02925757	□	10019484	□	□	■	□	□
PMX5-15H7-EB45	15,0	14,8/14,9	6	10,0	8,0	PMX08-xx	02925758	□	10019485	□	□	■	□	□
PMX5-16H7-EB45	16,0	15,8/15,9	6	10,0	8,0	PMX08-xx	02925759	□	10019486	□	□	■	□	□
PMX5-17H7-EB45	17,0	16,8/16,9	6	10,0	8,0	PMX08-xx	02925760	□	10019487	□	□	■	□	□
PMX5-18H7-EB45	18,0	17,8/17,9	6	10,0	8,0	PMX08-xx	02925761	□	10019488	□	□	■	□	□
PMX5-19H7-EB45	19,0	18,8/18,9	6	10,0	8,0	PMX08-xx	02925762	□	10019489	□	□	■	□	□
PMX5-20H7-EB45	20,0	19,8/19,9	6	10,0	8,0	PMX08-xx	02925763	□	10020603	□	□	■	□	□
PMX5-21H7-EB45	21,0	20,8/20,9	6	10,0	8,0	PMX08-xx	02925764	□	□	□	□	■	□	□
PMX5-22H7-EB45	22,0	21,8/21,9	8	12,0	12,0	PMX12-xx	02925765	□	10020604	□	□	■	□	□
PMX5-23H7-EB45	23,0	22,8/22,9	8	12,0	12,0	PMX12-xx	02925766	□	10019490	□	□	■	□	□
PMX5-24H7-EB45	24,0	23,813/23,9	8	12,0	12,0	PMX12-xx	02925767	□	10019491	□	□	■	□	□
PMX5-25H7-EB45	25,0	24,8/24,9	8	12,0	12,0	PMX12-xx	02925768	□	10019492	□	□	■	□	□
PMX5-26H7-EB45	26,0	25,8/25,9	8	12,0	12,0	PMX12-xx	02925769	□	10019493	□	□	■	□	□

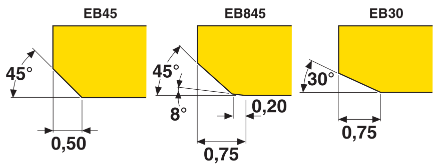
Designation	DC	Drill size*		LFS	DMM	Body size	Geometries			Grades				
	mm	mm	⚙	mm	mm		EB45	EB845	EB30	H15	CP20	RX2000	CF	RX1500
PMX5-27H7-EB45	27,0	26,8/26,9	8	12,0	12,0	PMX12-xx	02925770	□	□	□	□	■	□	□
PMX5-28H7-EB45	28,0	27,8/27,9	8	12,0	12,0	PMX12-xx	02925771	□	10019494	□	□	■	□	□
PMX5-29H7-EB45	29,0	28,8/28,9	8	12,0	12,0	PMX12-xx	02925772	□	□	□	□	■	□	□
PMX5-30H7-EB45	30,0	29,8/29,9	8	12,0	12,0	PMX12-xx	02925773	□	10019495	□	□	■	□	□

*For further information on which drill to use and how to use it see page(s) 9.
■ Stock standard. □ Non stock standard.

Heads for through holes

Ø 8-32 mm / 0.315-1.260 in





- For cutting data see page(s) 354-361
- For choice of lead geometry EB45, EB845 or EB30 see page(s) 335

Designation	DC	Drill size*		LFS	DMM	Body size	Geometries			Grades				
	mm	mm		mm	mm		EB45	EB845	EB30	H15	CP20	RX2000	CF	RX1500
PMX6-8H7-EB45	8,0	7,8/7,9	6	6,0	4,5	PMX05-xx	03123161	☐	☐	☐	☐	■	–	–
PMX6-9H7-EB45	9,0	8,8/8,9	6	6,0	4,5	PMX05-xx	03123162	☐	☐	☐	☐	■	–	–
PMX6-10H7-EB45	10,0	9,8/9,9	6	7,0	6,0	PMX06-xx	02965863	☐	☐	☐	☐	■	☐	☐
PMX6-11H7-EB45	11,0	10,8/10,9	6	7,0	6,0	PMX06-xx	02925776	☐	☐	☐	☐	■	☐	☐
PMX6-12H7-EB45	12,0	11,8/11,908	6	7,0	6,0	PMX06-xx	02925777	☐	☐	☐	☐	■	☐	☐
PMX6-13H7-EB45	13,0	12,8/12,9	6	7,0	6,0	PMX06-xx	02925778	☐	☐	☐	☐	■	☐	☐
PMX6-14H7-EB45	14,0	13,8/13,891	6	7,0	6,0	PMX06-xx	02925779	☐	☐	☐	☐	■	☐	☐
PMX6-15H7-EB45	15,0	14,8/14,9	6	10,0	8,0	PMX08-xx	02925780	☐	☐	☐	☐	■	☐	☐
PMX6-16H7-EB45	16,0	15,8/15,9	6	10,0	8,0	PMX08-xx	02925781	☐	☐	☐	☐	■	☐	☐
PMX6-17H7-EB45	17,0	16,8/16,9	6	10,0	8,0	PMX08-xx	02925782	☐	☐	☐	☐	■	☐	☐
PMX6-18H7-EB45	18,0	17,8/17,9	6	10,0	8,0	PMX08-xx	02925783	☐	☐	☐	☐	■	☐	☐
PMX6-19H7-EB45	19,0	18,8/18,9	6	10,0	8,0	PMX08-xx	02925784	☐	☐	☐	☐	■	☐	☐
PMX6-20H7-EB45	20,0	19,8/19,9	6	10,0	8,0	PMX08-xx	02925785	☐	☐	☐	☐	■	☐	☐
PMX6-21H7-EB45	21,0	20,8/20,9	6	10,0	8,0	PMX08-xx	02925786	☐	☐	☐	☐	■	☐	☐
PMX6-22H7-EB45	22,0	21,8/21,9	8	12,0	12,0	PMX12-xx	02925030	☐	☐	☐	☐	■	☐	☐
PMX6-23H7-EB45	23,0	22,8/22,9	8	12,0	12,0	PMX12-xx	02925031	☐	☐	☐	☐	■	☐	☐
PMX6-24H7-EB45	24,0	23,813/23,9	8	12,0	12,0	PMX12-xx	02925032	☐	☐	☐	☐	■	☐	☐
PMX6-25H7-EB45	25,0	24,8/24,9	8	12,0	12,0	PMX12-xx	02925033	☐	☐	☐	☐	■	☐	☐
PMX6-26H7-EB45	26,0	25,8/25,9	8	12,0	12,0	PMX12-xx	02925034	☐	☐	☐	☐	■	☐	☐
PMX6-27H7-EB45	27,0	26,8/26,9	8	12,0	12,0	PMX12-xx	02925035	☐	☐	☐	☐	■	☐	☐
PMX6-28H7-EB45	28,0	27,8/27,9	8	12,0	12,0	PMX12-xx	02925036	☐	☐	☐	☐	■	☐	☐
PMX6-29H7-EB45	29,0	28,8/28,9	8	12,0	12,0	PMX12-xx	02925037	☐	☐	☐	☐	■	☐	☐
PMX6-30H7-EB45	30,0	29,8/29,9	8	12,0	12,0	PMX12-xx	02925038	☐	☐	☐	☐	■	☐	☐

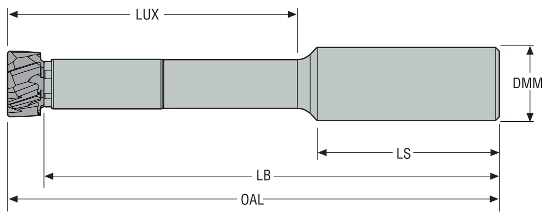
Introduction
Drilling
Reaming
Boring
Annex

Designation	DC	Drill size*		LFS	DMM	Body size	Geometries					Grades		
	mm	mm		mm	mm		EB45	EB845	EB30	H15	CP20	RX2000	CF	RX1500
PMX6-31H7-EB45	31,0	30,8/30,9	8	12,0	12,0	PMX12-xx	02925039	□	□	□	□	■	□	□
PMX6-32H7-EB45	32,0	31,8/31,9	8	12,0	12,0	PMX12-xx	02925040	□	□	□	□	■	□	□

*For further information on which drill to use and how to use it see page(s) 9.
■ Stock standard. □ Non stock standard.

Shanks for through and blind holes

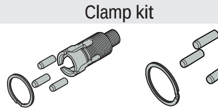
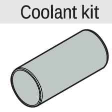
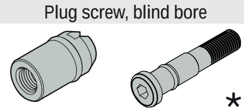
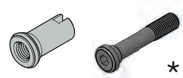
Ø 7,75-60,500 mm / 0.305-2.381 in



- For cutting data see page(s) 354-361
- For choice of lead geometry EB45, EB845 or EB30 see page(s) 335

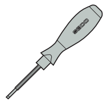
Designation	Item number	Tool holder material	DC	OAL	LB	LS	LUX	DMM
			mm	mm	mm	mm	mm	mm
PMX05-02800-10N1	03123012	Steel	7,75 - 9,9	69,0	63,0	40,0	28,0	10,0
PMX05-04100-10N1	02929923	Steel	7,75 - 9,9	84,0	78,0	40,0	41,0	10,0
PMX05-10000-10N1	03123013	Steel	7,75 - 9,9	143,0	137,0	40,0	100,0	10,0
PMX06-03700-12N1	02925828	Steel	9,901 - 14,499	84,0	77,0	45,0	37,0	12,0
PMX06-05700-12N1	02925829	Steel	9,901 - 14,499	104,0	97,0	45,0	57,0	12,0
PMX06-12000-12N1	02925830	Steel	9,901 - 14,499	167,0	160,0	45,0	120,0	12,0
PMX06HM-12000-12N1	02925831	Carbide	9,901 - 14,499	167,0	160,0	45,0	120,0	12,0
PMX08-04600-20N1	02925832	Steel	14,5 - 21,499	99,0	89,0	50,0	46,0	20,0
PMX08-08200-20N1	02925833	Steel	14,5 - 21,499	135,0	125,0	50,0	82,0	20,0
PMX08-14500-20N1	02925834	Steel	14,5 - 21,499	198,0	188,0	50,0	145,0	20,0
PMX08HM-14500-20N1	02925835	Carbide	14,5 - 21,499	198,0	188,0	50,0	145,0	20,0
PMX12-06800-25N1	02925836	Steel	21,5 - 32,499	127,0	115,0	56,0	68,0	25,0
PMX12-10400-25N1	02925837	Steel	21,5 - 32,499	163,0	151,0	56,0	104,0	25,0
PMX12-17000-25N1	02925838	Steel	21,5 - 32,499	229,0	217,0	56,0	170,0	25,0
PMX12HM-17000-25N1	02925839	Carbide	21,5 - 32,499	229,0	217,0	56,0	170,0	25,0
PMX16-06300-32N1	02925840	Steel	32,5 - 60,5	124,0	110,0	61,0	63,0	32,0
PMX16-12700-32N1	02925841	Steel	32,5 - 60,5	188,0	174,0	61,0	127,0	32,0
PMX16-17000-32N1	02925842	Steel	32,5 - 60,5	231,0	217,0	61,0	170,0	32,0
PMX16HM-17000-32N1	02925843	Carbide	32,5 - 60,5	231,0	217,0	61,0	170,0	32,0

Spare parts

For shank	For ∅ (mm)	Clamp key	Clamp kit	Coolant kit	Plug screw, blind bore	Plug screw, through bore
			 *		 *	 *
PMX05	7,75-9,900	1.5SMS795	PMX05-CLKI	RT05-KI	SB05	ST05
PMX06	9,901-14,499	2SMS795	PMX06-CLKI	RT06-KI	SB06	ST06
PMX08	14,5-21,499	2.5SMS795	PMX08-CLKI	RT08-KI	SB08	ST08
PMX12	21,5-32,499	4SMS795	PMX12-CLKI	RT12-KI	SB12	ST12
PMX16	32,5-60	5SMS795	PMX16-CLKI	–	SB16	ST16

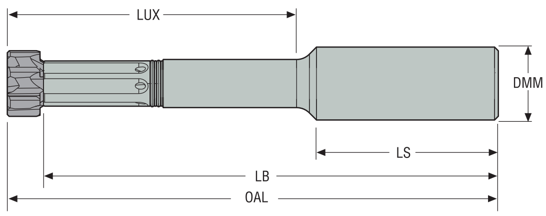
* Spare parts for PMX16 bodies only. For PMX16, plug screws are also used for clamping.

Accessories

For dia. (mm)	Shank Size	Ordering and Product No.	Replacement blade	Ordering and Product No.	Torque key	Torque value
						
7,750-9,900	PMX05	03178237	H00-1.5-27	03178196	H00-1505-24	0,5 Nm
9,901-14,499	PMX06	03178238	H00-2.0-33	03178197	H00-2009-33	0,9 Nm
14,500-21,499	PMX08	03178240	H00-2.5-40	03178199	H00-2512-40	1,2 Nm
21,500-32,499	PMX12	03178242	H00-4.0-60	03178201	H00-4020-60	2,0 Nm

Shanks for blind holes

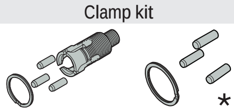
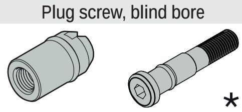
Ø 7,75-60,500 mm / 0.305-2.381 in



- For cutting data see page(s) 354-361
- For choice of lead geometry EB45, EB845 or EB30 see page(s) 335

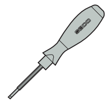
Designation	Item number	Tool holder material	DC	OAL	LB	LS	LUX	DMM
			mm	mm	mm	mm	mm	mm
PMX05B-02800-10N1	03144322	Steel	7,75 - 9,9	69,0	63,0	40,0	28,0	10,0
PMX05B-04100-10N1	03144323	Steel	7,75 - 9,9	84,0	78,0	40,0	41,0	10,0
PMX05B-10000-10N1	03144324	Steel	7,75 - 9,9	143,0	137,0	40,0	100,0	10,0
PMX06B-03700-12N1	03075433	Steel	9,901 - 14,499	84,0	77,0	45,0	37,0	12,0
PMX06B-05700-12N1	03075434	Steel	9,901 - 14,499	104,0	97,0	45,0	57,0	12,0
PMX06B-12000-12N1	03075435	Steel	9,901 - 14,499	167,0	160,0	45,0	120,0	12,0
PMX06BHM-12000-12N1	03075436	Carbide	9,901 - 14,499	167,0	160,0	45,0	120,0	12,0
PMX08B-04600-20N1	03075437	Steel	14,5 - 21,499	99,0	89,0	50,0	46,0	20,0
PMX08B-08200-20N1	03075438	Steel	14,5 - 21,499	135,0	125,0	50,0	82,0	20,0
PMX08B-14500-20N1	03075439	Steel	14,5 - 21,499	198,0	188,0	50,0	145,0	20,0
PMX08BHM-14500-20N1	03075440	Carbide	14,5 - 21,499	198,0	188,0	50,0	145,0	20,0
PMX12B-06800-25N1	03075441	Steel	21,5 - 32,499	127,0	115,0	56,0	68,0	25,0
PMX12B-10400-25N1	03075442	Steel	21,5 - 32,499	163,0	151,0	56,0	104,0	25,0
PMX12B-17000-25N1	03075443	Steel	21,5 - 32,499	229,0	217,0	56,0	170,0	25,0
PMX12BHM-17000-25N1	03075444	Carbide	21,5 - 32,499	229,0	217,0	56,0	170,0	25,0
PMX16B-06300-32N1	03075445	Steel	32,5 - 60,5	124,0	110,0	61,0	63,0	32,0
PMX16B-12700-32N1	03075446	Steel	32,5 - 60,5	188,0	174,0	61,0	127,0	32,0
PMX16B-17000-32N1	03075447	Steel	32,5 - 60,5	231,0	217,0	61,0	170,0	32,0
PMX16BHM-17000-32N1	03075448	Carbide	32,5 - 60,5	231,0	217,0	61,0	170,0	32,0

Spare parts

For shank	For ∅ (mm)	Clamp key	Clamp kit	Plug screw, blind bore
			 *	 *
PMX05B	7,75-9,900	1.5SMS795	PMX05-CLKI	SB05
PMX06B	9,901-14,499	2SMS795	PMX06-CLKI	SB06
PMX08B	14,500-21,499	2.5SMS795	PMX08-CLKI	SB08
PMX12B	21,500-32,499	4SMS795	PMX12-CLKI	SB12
PMX16B	32,500-60,000	5SMS795	PMX16-CLKI	SB16

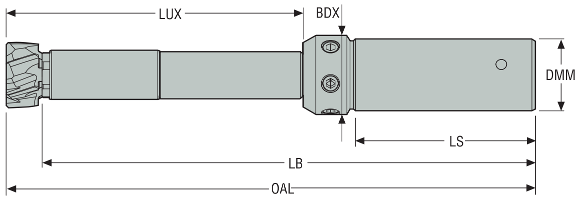
* Spare parts for PMX16 bodies only. For PMX16, plug screws are also used for clamping.

Accessories

For dia. (mm)	Shank Size	Ordering and Product No.	Replacement blade	Ordering and Product No.	Torque key	Torque value
						
7,750-9,900	PMX05	03178237	H00-1.5-27	03178196	H00-1505-24	0,5 Nm
9,901-14,499	PMX06	03178238	H00-2.0-33	03178197	H00-2009-33	0,9 Nm
14,500-21,499	PMX08	03178240	H00-2.5-40	03178199	H00-2512-40	1,2 Nm
21,500-32,499	PMX12	03178242	H00-4.0-60	03178201	H00-4020-60	2,0 Nm

Adjustable shanks for through holes

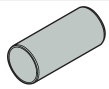
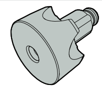
Ø 7,75-60,500 mm / 0.305-2.381 in



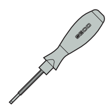
- For cutting data see page(s) 354-361
- For choice of lead geometry EB45, EB845 or EB30 see page(s) 335

Designation	Item number	DC	OAL	LB	LS	LUX	DMM
		mm	mm	mm	mm	mm	mm
PMX05T-AD-04100-16N1	03271918	7,75 - 9,9	102,0	96,0	48,0	41,0	16,0
PMX06T-AD-05700-16N1	03002833	9,901 - 14,499	117,0	110,0	48,0	57,0	16,0
PMX08T-AD-08200-20N1	03002835	14,5 - 21,499	147,0	137,0	50,0	82,0	20,0
PMX12T-AD-10400-25N1	03002837	21,5 - 32,499	179,0	167,0	56,0	104,0	25,0
PMX16T-AD-12700-32N1	03002839	32,5 - 60,5	214,0	200,0	60,0	127,0	32,0

Spare parts

For shank	For ∅ (mm)	Clamp key	Coolant ring	Setting key	Setting Master
					
PMX05T	7,750-9,900	1.5SMS795	RT05-KI	2SMS795	PMX05-MSTR
PMX06T	9,901-14,499	2SMS795	RT06-KI	2SMS795	PMX06-MSTR
PMX08T	14,50-21,499	2.5SMS795	RT08-KI	2.5SMS795	PMX08-MSTR
PMX12T	21,50-32,499	4SMS795	RT12-KI	3SMS795	PMX12-MSTR
PMX16T	32,50-60,000	5SMS795	–	3SMS795	–

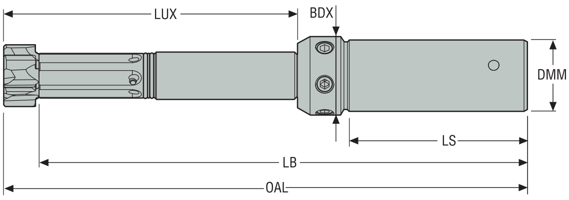
Accessories

For dia. (mm)	Shank Size	Ordering and Product No.	Replacement blade	Ordering and Product No.	Torque key	Torque value
						
7,750-9,900	PMX05	03178237	H00-1.5-27	03178196	H00-1505-24	0,5 Nm
9,901-14,499	PMX06	03178238	H00-2.0-33	03178197	H00-2009-33	0,9 Nm
14,500-21,499	PMX08	03178240	H00-2.5-40	03178199	H00-2512-40	1,2 Nm
21,500-32,499	PMX12	03178242	H00-4.0-60	03178201	H00-4020-60	2,0 Nm

Note: Repair clamp kit PMxx-CLKI are not suitable for PMX FL & AD type

Adjustable shanks for blind holes

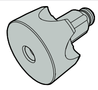
Ø 7,75-60,500 mm / 0.305-2.381 in



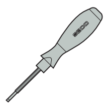
- For cutting data see page(s) 354-361
- For choice of lead geometry EB45, EB845 or EB30 see page(s) 335

Designation	Item number	DC	OAL	LB	LS	LUX	DMM
		mm	mm	mm	mm	mm	mm
PMX05B-AD-04100-16N1	03271919	7,75 - 9,9	102,0	96,0	48,0	41,0	16,0
PMX06B-AD-05700-16N1	03002834	9,901 - 14,499	117,0	110,0	48,0	57,0	16,0
PMX08B-AD-08200-20N1	03002836	14,5 - 21,499	147,0	137,0	50,0	82,0	20,0
PMX12B-AD-10400-25N1	03002838	21,5 - 32,499	179,0	167,0	56,0	104,0	25,0
PMX16B-AD-12700-32N1	03002840	32,5 - 60,5	214,0	200,0	60,0	127,0	32,0

Spare parts

For shank	For ∅ (mm)	Clamp key	Setting key	Setting Master
				
PMX05B	7,750-9,900	1.5SMS795	2SMS795	PMX05-MSTR
PMX06B	9,901-14,499	2SMS795	2SMS795	PMX06-MSTR
PMX08B	14,50-21,499	2.5SMS795	2.5SMS795	PMX08-MSTR
PMX12B	21,50-32,499	4SMS795	3SMS795	PMX12-MSTR
PMX16B	32,50-60,000	5SMS795	3SMS795	–

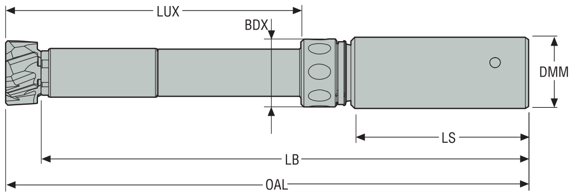
Accessories

For dia. (mm)	Shank Size	Ordering and Product No.	Replacement blade	Ordering and Product No.	Torque key	Torque value
						
7,750-9,900	PMX05	03178237	H00-1.5-27	03178196	H00-1505-24	0,5 Nm
9,901-14,499	PMX06	03178238	H00-2.0-33	03178197	H00-2009-33	0,9 Nm
14,500-21,499	PMX08	03178240	H00-2.5-40	03178199	H00-2512-40	1,2 Nm
21,500-32,499	PMX12	03178242	H00-4.0-60	03178201	H00-4020-60	2,0 Nm

Note: Repair clamp kit PMxx-CLKI are not suitable for PMX FL & AD type

Floating shanks for through holes

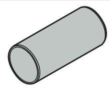
Ø 7,75-60,500 mm / 0.305-2.381 in



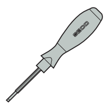
- For cutting data see page(s) 354-361
- For choice of lead geometry EB45, EB845 or EB30 see page(s) 335

Designation	Item number	DC	OAL	LB	LS	LUX	DMM
		mm	mm	mm	mm	mm	mm
PMX05T-FL-04100-16N1	03197751	7,75 - 9,9	102,0	96,0	48,0	41,0	16,0
PMX06T-FL-05700-16N1	03002825	9,901 - 14,499	117,0	110,0	48,0	57,0	16,0
PMX08T-FL-08200-20N1	03002827	14,5 - 21,499	147,0	137,0	50,0	82,0	20,0
PMX12T-FL-10400-25N1	03002829	21,5 - 32,499	179,0	167,0	56,0	104,0	25,0
PMX16T-FL-12700-32N1	03002831	32,5 - 60,5	214,0	200,0	60,0	127,0	32,0

Spare parts

For shank	For ∅ (mm)	Clamp key	Coolant ring
			
PMX05T	7,750-9,900	1.5SMS795	RT05-KI
PMX06T	9,901-14,499	2SMS795	RT06-KI
PMX08T	14,50-21,499	2.5SMS795	RT08-KI
PMX12T	21,50-32,499	4SMS795	RT12-KI
PMX16T	32,50-60,000	5SMS795	–

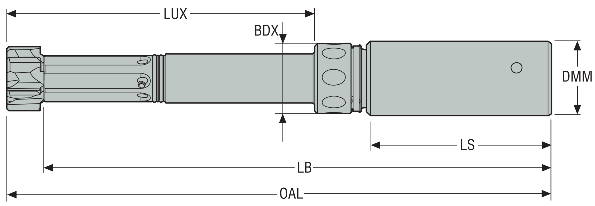
Accessories

For dia. (mm)	Shank Size	Ordering and Product No.	Replacement blade	Ordering and Product No.	Torque key	Torque value
						
7,750-9,900	PMX05	03178237	H00-1.5-27	03178196	H00-1505-24	0,5 Nm
9,901-14,499	PMX06	03178238	H00-2.0-33	03178197	H00-2009-33	0,9 Nm
14,500-21,499	PMX08	03178240	H00-2.5-40	03178199	H00-2512-40	1,2 Nm
21,500-32,499	PMX12	03178242	H00-4.0-60	03178201	H00-4020-60	2,0 Nm

Note: Repair clamp kit PMxx-CLKI are not suitable for PMX FL & AD type

Floating shanks for blind holes

Ø 7,75-60,500 mm / 0.305-2.381 in



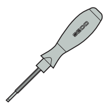
- For cutting data see page(s) 354-361
- For choice of lead geometry EB45, EB845 or EB30 see page(s) 335

Designation	Item number	DC	OAL	LB	LS	LUX	DMM
		mm	mm	mm	mm	mm	mm
PMX05B-FL-04100-16N1	03271916	7,75 - 9,9	102,0	96,0	48,0	41,0	16,0
PMX06B-FL-05700-16N1	03002826	9,901 - 14,499	117,0	110,0	48,0	57,0	16,0
PMX08B-FL-08200-20N1	03002828	14,5 - 21,499	147,0	137,0	50,0	82,0	20,0
PMX12B-FL-10400-25N1	03002830	21,5 - 32,499	179,0	167,0	56,0	104,0	25,0
PMX16B-FL-12700-32N1	03002832	32,5 - 60,5	214,0	200,0	60,0	127,0	32,0

Spare parts

For shank	For ∅ (mm)	Clamp key
		
PMX05B	7,750-9,900	1.5SMS795
PMX06B	9,901-14,499	2SMS795
PMX08B	14,50-21,499	2.5SMS795
PMX12B	21,50-32,499	4SMS795
PMX16B	32,50-60,500	5SMS795

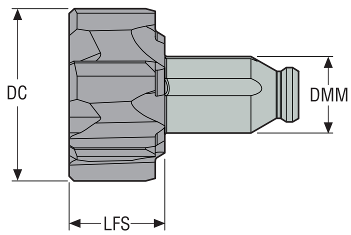
Accessories

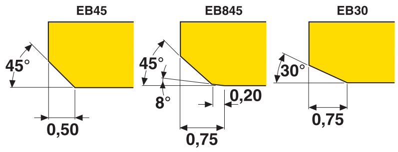
For dia. (mm)	Shank Size	Ordering and Product No.	Replacement blade	Ordering and Product No.	Torque key	Torque value
						
7,750-9,900	PMX05	03178237	H00-1.5-27	03178196	H00-1505-24	0,5 Nm
9,901-14,499	PMX06	03178238	H00-2.0-33	03178197	H00-2009-33	0,9 Nm
14,500-21,499	PMX08	03178240	H00-2.5-40	03178199	H00-2512-40	1,2 Nm
21,500-32,499	PMX12	03178242	H00-4.0-60	03178201	H00-4020-60	2,0 Nm

Note: Repair clamp kit PMxx-CLKI are not suitable for PMX FL & AD type

Heads for through and blind holes, Custom design

Ø 7,75-60,500 mm / 0.305-2.381 in





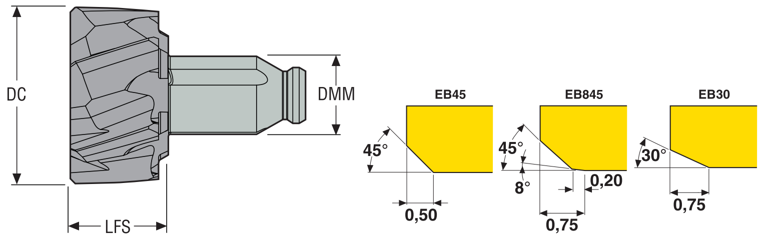
- For cutting data see page(s) 354-361
- For choice of lead geometry EB45, EB845 or EB30 see page(s) 335

Designation	DCN	DCX	LFS	DMM		Body size	Geometries	Grades										
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*				H15	CP20	RX2000	RK2050	RK1550	CF	RX1500	RN2010	RM2020	RM2090	RS2090
PMX5-7.75-XX-XXXX	7,75 *0.305*	9,999 *0.394*	6,0 *0.236*	4,5 *0.177*	6	PMX05-xx	EB45 EB845 EB30	□	□	□	□	□	–	–	□	□	□	□
PMX5-10.0-XX-XXXX	10,0 *0.394*	14,499 *0.571*	7,0 *0.276*	6,0 *0.236*	6	PMX06-xx	EB45 EB845 EB30	□	□	□	□	□	□	□	□	□	□	□
PMX5-14.5-XX-XXXX	14,5 *0.571*	21,499 *0.846*	10,0 *0.394*	8,0 *0.315*	6	PMX08-xx	EB45 EB845 EB30	□	□	□	□	□	□	□	□	□	□	□
PMX5-21.5-XX-XXXX	21,5 *0.846*	32,499 *1.279*	12,0 *0.472*	12,0 *0.472*	8	PMX12-xx	EB45 EB845 EB30	□	□	□	□	□	□	□	□	□	□	□
PMX5-32.5-XX-XXXX	32,5 *1.280*	60,5 *2.382*	14,0 *0.551*	16,0 *0.630*	10	PMX16-xx	EB45 EB845 EB30	□	□	□	□	□	□	□	□	□	□	□

□= Non stock standard.
Note: When ordering Precimaster Plus reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.
Ordering example: PMX5-16.515 P7-EB45 RM2020. PMX6-16.515 P7-EB45 RM2020.

Heads for through holes, Custom design

Ø 7,75-60,500 mm / 0.305-2.381 in



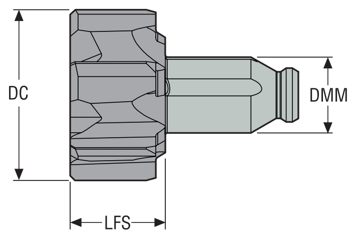
- For cutting data see page(s) 354-361
- For choice of lead geometry EB45, EB845 or EB30 see page(s) 335

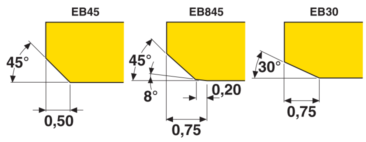
Designation	DCN	DCX	LFS	DMM		Body size	Geometries	Grades										
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*				H15	CP20	RX2000	RK2050	RK1550	CF	RX1500	RN2010	RM2020	RM2090	RS2090
PMX6-7.75-XX-XXXX	7,75 *0.305*	9,999 *0.394*	6,0 *0.236*	4,5 *0.177*	6	PMX05-xx	EB45 EB845 EB30	□	□	□	□	□	–	–	□	□	□	□
PMX6-10.0-XX-XXXX	10,0 *0.394*	14,499 *0.571*	7,0 *0.276*	6,0 *0.236*	6	PMX06-xx	EB45 EB845 EB30	□	□	□	□	□	□	□	□	□	□	□
PMX6-14.5-XX-XXXX	14,5 *0.571*	21,499 *0.846*	10,0 *0.394*	8,0 *0.315*	6	PMX08-xx	EB45 EB845 EB30	□	□	□	□	□	□	□	□	□	□	□
PMX6-21.5-XX-XXXX	21,5 *0.846*	32,499 *1.279*	12,0 *0.472*	12,0 *0.472*	8	PMX12-xx	EB45 EB845 EB30	□	□	□	□	□	□	□	□	□	□	□
PMX6-32.5-XX-XXXX	32,5 *1.280*	60,5 *2.382*	14,0 *0.551*	16,0 *0.630*	10	PMX16-xx	EB45 EB845 EB30	□	□	□	□	□	□	□	□	□	□	□

□= Non stock standard.
Note: When ordering Precimaster Plus reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.
Ordering example: PMX5-16.515 P7-EB45 RM2020. PMX6-16.515 P7-EB45 RM2020.

Expandable heads for through and blind holes

Ø 10,00-32,500 mm / 0.393-1.279 in





- For cutting data see page(s) 354-361
- For choice of lead geometry EB45, EB845 or EB30 see page(s) 335

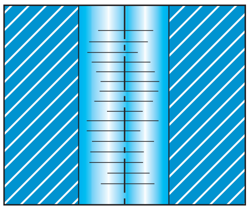
Designation	DCN	DCX	LFS	DMM		Body size	Geometries	Grades										
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*				H15	CP20	RX2000	RK2050	RK1550	CF	RX1500	RN2010	RM2020	RM2090	RS2090
PMX8-10.0-XX-XXXX	10,0 *0.394*	14,499 *0.571*	7,0 *0.276*	6,0 *0.236*	6	PMX06-xx	EB45 EB845 EB30	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
PMX8-14.5-XX-XXXX	14,5 *0.571*	21,499 *0.846*	10,0 *0.394*	8,0 *0.315*	6	PMX08-xx	EB45 EB845 EB30	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
PMX8-21.5-XX-XXXX	21,5 *0.846*	32,499 *1.279*	12,0 *0.472*	12,0 *0.472*	8	PMX12-xx	EB45 EB845 EB30	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

☐= Non stock standard.
Note: When ordering Precimaster Plus reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.
Ordering example: PMX8-16.515 P7-EB45 RM2020.

Troubleshooting

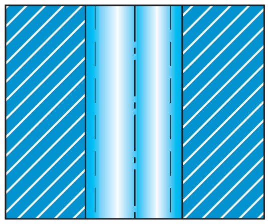
Poor surface finish

- Check material allowance
- Improve coolant conditions (outlet type, pressure, quality)
- Reduce feed rate



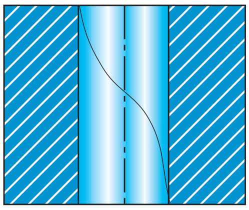
Too large diameter

- Improve Centering (part/tool)



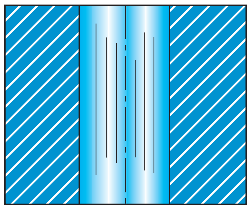
Retraction marks

- Improve coolant conditions (outlet type, pressure, quality)
- Improve Centering (part/tool)
- Reduce feed-out speed



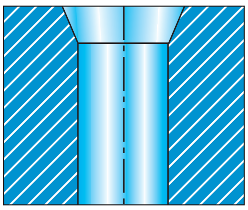
Facets

- Improve Centering (part/tool)
- Check material allowance



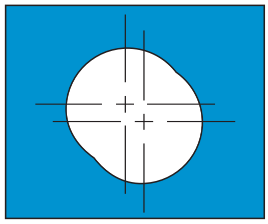
Tapered entry

- Reduce feed rate
- Improve Centering (part/tool)
- Reduce radial run-out



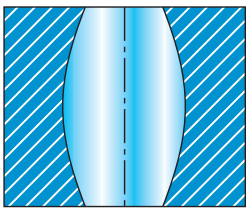
Off center / Ovality

- Improve clamping (workpiece deformation)
- Check material allowance
- Improve Centering (part/tool)



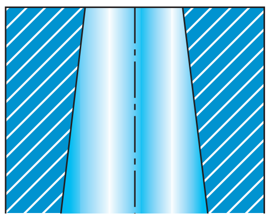
Deformed hole

- Improve clamping (workpiece deformation)



Tapered hole

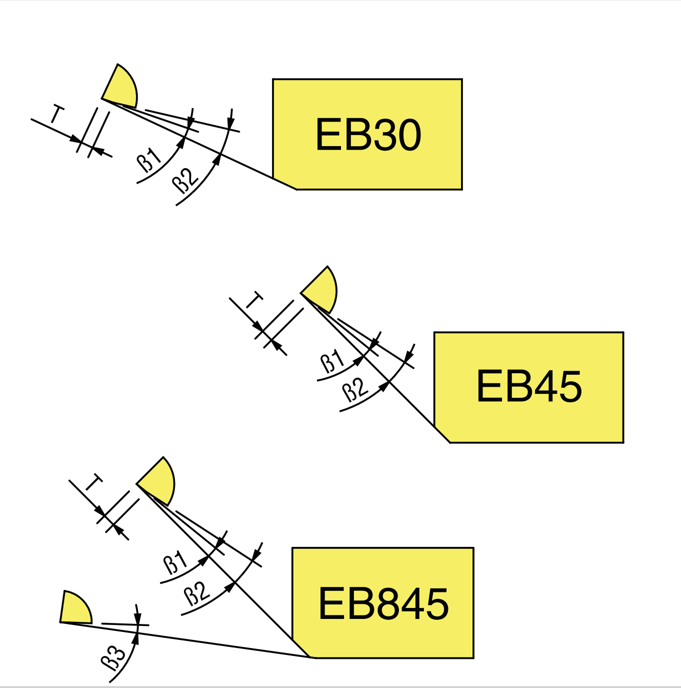
- Improve Centering (part/tool)

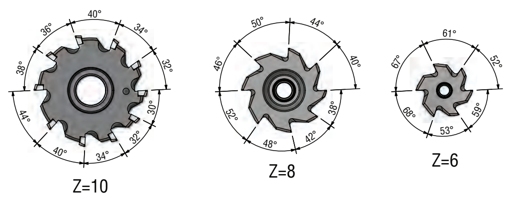


Regrinding instructions

Specifications
Diamond grinding wheel
Grain size:
D6 – For first clearance angle (β1–β3)
D64 – For second clearance angle (β2)

Important
Regrinding reduces reamer diameter
Recoating may produce oversized diameter
Max run-out on lead chamfers 0,010 mm *(0.0004")*





∅ Precimaster Plus mm	∅ Precimaster Plus *(inch)*	ß1	ß2	ß3	T mm	T *(inch)*
7,75-9,999	*0.3151-0.3937*	8°	18°	8°	0,20	*0.008*
10,000-14,499	*0.3937-0.5708*	8°	18°	8°	0,20	*0.008*
14,500-21,499	*0.5709-0.8464*	8°	18°	8°	0,20	*0.008*
21,500-32,499	*0.8465-1.2795*	8°	15°	8°	0,25	*0.010*
32,500-60,499	*1.2795-2.3819*	8°	15°	8°	0,30	*0.012*

PM Plus... -EB845 (metric)

		a_p (Ø)		f			v_c						
SMG		z=6	z=8	z=6	z=8	z=10	H15	CP20	RX2000	RK2050	CF	RX1500	RK1550
P3	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,10-0,30	0,20-0,90	0,30-1,20	0,30-1,50	-	60 (30-100)	80 (30-150)	-	180 (90-200)	220 (120-300)	-
P4	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,10-0,30	0,20-0,70	0,30-0,90	0,40-1,10	-	50 (30-80)	60 (30-120)	-	120 (80-150)	180 (90-200)	-
P5	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,10-0,30	0,20-0,70	0,30-0,90	0,40-1,10	20 (10-25)	50 (30-80)	60 (30-120)	-	120 (80-150)	180 (90-200)	-
P6	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,10-0,30	0,20-0,70	0,30-0,90	0,40-1,10	20 (10-25)	50 (30-80)	60 (30-120)	-	120 (80-150)	180 (90-200)	-
P7	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,10-0,30	0,20-0,70	0,30-0,90	0,40-1,10	20 (10-25)	50 (30-80)	60 (30-120)	-	120 (80-150)	180 (90-200)	-
P8	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,10-0,30	0,20-0,70	0,30-0,90	0,40-1,10	15 (10-20)	35 (20-60)	40 (20-80)	-	80 (60-120)	120 (80-180)	-
P11	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,10-0,30	0,20-0,70	0,30-0,90	0,40-1,10	15 (10-20)	35 (20-60)	40 (20-80)	-	80 (60-120)	120 (80-180)	-
P12	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,10-0,30	0,20-0,70	0,30-0,90	0,40-1,10	12 (8-15)	25 (15-45)	30 (15-65)	-	65 (45-95)	95 (65-145)	-
M1	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,40-1,10	12 (9-15)	25 (15-40)	35 (20-70)	-	-	-	-
M2	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,40-1,10	-	25 (15-40)	35 (20-70)	-	-	-	-
M3	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,40-1,10	-	25 (15-40)	35 (20-70)	-	-	-	-
M4	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,40-1,10	-	20 (10-30)	25 (15-50)	-	-	-	-
M5	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,40-1,10	-	20 (10-30)	25 (15-50)	-	-	-	-
K1	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,10-0,25	0,30-0,90	0,30-1,20	0,40-1,50	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)	-	220 (120-300)	245 (135-335)
K2	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,10-0,25	0,30-0,90	0,30-1,20	0,40-1,50		25 (20-40)	40 (30-70)	45 (35-80)	-	80 (50-100)	90 (55-110)
K3	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,10-0,25	0,30-0,90	0,30-1,20	0,40-1,50	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)	-	220 (120-300)	245 (135-335)
K4	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,10-0,25	0,30-0,90	0,30-1,20	0,40-1,50	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)	100 (70-150)	150 (80-200)	170 (90-225)
K5	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,10-0,25	0,30-0,90	0,30-1,20	0,40-1,50	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)	100 (70-150)	150 (80-200)	170 (90-225)
K6	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,10-0,25	0,30-0,90	0,30-1,20	0,40-1,50	-	60 (40-100)	80 (30-150)	90 (35-170)	-	220 (120-300)	245 (135-335)
K7	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,10-0,25	0,30-0,90	0,30-1,20	0,40-1,50	-	60 (40-100)	80 (30-150)	90 (35-170)	-	220 (120-300)	245 (135-335)
S1	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,40-1,00	-	20 (10-25)	20 (10-25)	-	-	-	-
S2	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,40-1,00	-	20 (10-25)	20 (10-25)	-	-	-	-
S3	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,40-1,00	-	20 (10-25)	20 (10-25)	-	-	-	-
S11	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,40-1,00	20 (15-30)	30 (15-40)	40 (20-50)	-	-	-	-
S12	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,40-1,00	20 (15-30)	30 (15-40)	40 (20-50)	-	-	-	-
S13	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,40-1,00	20 (15-30)	30 (15-40)	40 (20-50)	-	-	-	-
H3	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,55	0,40-0,70	-	-	10 (8-15)	-	-	-	-
H5	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,55	0,40-0,70	-	-	10 (8-15)	-	-	-	-
H7	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,55	0,40-0,70	-	-	10 (8-15)	-	-	-	-
H8	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,55	0,40-0,70	-	-	10 (8-15)	-	-	-	-
H11	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,55	0,40-0,70	-	-	10 (8-15)	-	-	-	-
H12	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,55	0,40-0,70	-	-	10 (8-15)	-	-	-	-
H21	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,55	0,40-0,70	-	-	10 (8-15)	-	-	-	-
H31	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,55	0,40-0,70	-	-	10 (8-15)	-	-	-	-
PM1	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,1-0,30	0,20-0,60	0,30-0,80	0,40-1,00	-	50 (30-80)	70 (40-100)	-	-	-	-
PM2	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,1-0,30	0,20-0,60	0,30-0,80	0,40-1,00	-	50 (30-80)	70 (40-100)	-	-	-	-
PM3	PMX5/PMX6/PMX8-EB845	0,10-0,20	0,1-0,30	0,20-0,60	0,30-0,80	0,40-1,00	-	50 (30-80)	70 (40-100)	-	-	-	-

SMG = Seco material group
a_p = mm
f = mm/rev
v_c = m/min
All cutting data are start values

PM Plus... -EB845 (*inch*)

SMG		a_p on (Ø) inch		f (in/rev)		V_c (sf/min)						
		z=6	z=8	z=6	z=8	H15	CP20	RX2000	RK2050	CF	RX1500	RK1550
P3	PMX5/PMX6-EB845	.004 –.008	.004 –.012	.008 –.035	.012 –.047	–	195 (100-330)	260 (100-490)	–	590 (295-655)	720 (395-985)	–
P4	PMX5/PMX6-EB845	.004 –.008	.004 –.012	.008 –.028	.012 –.035	–	165 (100-260)	195 (100-395)	–	395 (260-490)	590 (295-655)	–
P5	PMX5/PMX6-EB845	.004 –.008	.004 –.012	.008 –.028	.012 –.035	65 (35-80)	165 (100-260)	195 (100-395)	–	395 (260-490)	590 (295-655)	–
P6	PMX5/PMX6-EB845	.004 –.008	.004 –.012	.008 –.028	.012 –.035	65 (35-80)	165 (100-260)	195 (100-395)	–	395 (260-490)	590 (295-655)	–
P7	PMX5/PMX6-EB845	.004 –.008	.004 –.012	.008 –.028	.012 –.035	65 (35-80)	165 (100-260)	195 (100-395)	–	395 (260-490)	590 (295-655)	–
P8	PMX5/PMX6-EB845	.004 –.008	.004 –.012	.008 –.028	.012 –.035	50 (35-65)	115 (65-195)	130 (65-260)	–	260 (195-395)	395 (260-590)	–
P11	PMX5/PMX6-EB845	.004 –.008	.004 –.012	.008 –.028	.012 –.035	50 (35-65)	115 (65-195)	130 (65-260)	–	260 (195-395)	395 (260-590)	–
M1	PMX5/PMX6-EB845	.003 –.006	.004 –.008	.008 –.024	.012 –.031	40 (30-50)	80 (50-130)	115 (65-230)	–	–	–	–
M2	PMX5/PMX6-EB845	.003 –.006	.004 –.008	.008 –.024	.012 –.031	–	80 (50-130)	115 (65-230)	–	–	–	–
M3	PMX5/PMX6-EB845	.003 –.006	.004 –.008	.008 –.024	.012 –.031	–	80 (50-130)	115 (65-230)	–	–	–	–
M4	PMX5/PMX6-EB845	.003 –.006	.004 –.008	.008 –.024	.012 –.031	–	65 (35-100)	80 (50-165)	–	–	–	–
M5	PMX5/PMX6-EB845	.003 –.006	.004 –.008	.008 –.024	.012 –.031	–	65 (35-100)	80 (50-165)	–	–	–	–
K1	PMX5/PMX6-EB845	.004 –.008	.004 –.010	.012 –.035	.012 –.047	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)	–	720 (395-985)	805 (440-1105)
K2	PMX5/PMX6-EB845	.004 –.008	.004 –.010	.012 –.035	.012 –.047	–	80 (65-130)	130 (100-230)	145 (110-260)	–	260 (165-330)	290 (185-370)
K3	PMX5/PMX6-EB845	.004 –.008	.004 –.010	.012 –.035	.012 –.047	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)	–	720 (395-985)	805 (440-1105)
K4	PMX5/PMX6-EB845	.004 –.008	.004 –.010	.012 –.035	.012 –.047	80 (50-100)	150 (100-230)	230 (130-395)	260 (145-440)	330 (230-490)	490 (260-655)	550 (290-735)
K5	PMX5/PMX6-EB845	.004 –.008	.004 –.010	.012 –.035	.012 –.047	80 (50-100)	150 (100-230)	230 (130-395)	260 (145-440)	330 (230-490)	490 (260-655)	550 (290-735)
K6	PMX5/PMX6-EB845	.004 –.008	.004 –.010	.012 –.035	.012 –.047	–	195 (130-330)	260 (100-490)	290 (110-550)	–	720 (395-985)	805 (440-1105)
K7	PMX5/PMX6-EB845	.004 –.008	.004 –.010	.012 –.035	.012 –.047	–	195 (130-330)	260 (100-490)	290 (110-550)	–	720 (395-985)	805 (440-1105)
S1	PMX5/PMX6-EB845	.003 –.006	.004 –.006	.008 –.024	.012 –.031	–	65 (35-80)	65 (35-80)	–	–	–	–
S2	PMX5/PMX6-EB845	.003 –.006	.004 –.006	.008 –.024	.012 –.031	–	65 (35-80)	65 (35-80)	–	–	–	–
S3	PMX5/PMX6-EB845	.003 –.006	.004 –.006	.008 –.024	.012 –.031	–	65 (35-80)	65 (35-80)	–	–	–	–
S11	PMX5/PMX6-EB845	.003 –.006	.004 –.006	.008 –.024	.012 –.031	65 (50-100)	100 (50-130)	130 (65-165)	–	–	–	–
S12	PMX5/PMX6-EB845	.003 –.006	.004 –.006	.008 –.024	.012 –.031	65 (50-100)	100 (50-130)	130 (65-165)	–	–	–	–
S13	PMX5/PMX6-EB845	.003 –.006	.004 –.006	.008 –.024	.012 –.031	65 (50-100)	100 (50-130)	130 (65-165)	–	–	–	–
H3	PMX5/PMX6-EB845	.003 –.006	.004 –.006	.008 –.016	.012 –.022	–	–	35 (25-50)	–	–	–	–
H5	PMX5/PMX6-EB845	.003 –.006	.004 –.006	.008 –.016	.012 –.022	–	–	35 (25-50)	–	–	–	–
H7	PMX5/PMX6-EB845	.003 –.006	.004 –.006	.008 –.016	.012 –.022	–	–	35 (25-50)	–	–	–	–
H8	PMX5/PMX6-EB845	.003 –.006	.004 –.006	.008 –.016	.012 –.022	–	–	35 (25-50)	–	–	–	–
H11	PMX5/PMX6-EB845	.003 –.006	.004 –.006	.008 –.016	.012 –.022	–	–	35 (25-50)	–	–	–	–
H12	PMX5/PMX6-EB845	.003 –.006	.004 –.006	.008 –.016	.012 –.022	–	–	35 (25-50)	–	–	–	–
H21	PMX5/PMX6-EB845	.003 –.006	.004 –.006	.008 –.016	.012 –.022	–	–	35 (25-50)	–	–	–	–
H31	PMX5/PMX6-EB845	.003 –.006	.004 –.006	.008 –.016	.012 –.022	–	–	35 (25-50)	–	–	–	–
PM1	PMX5/PMX6-EB845	.004 –.008	.004 –.012	.008 –.024	.012 –.031	–	165 (100-260)	230 (130-330)	–	–	–	–
PM2	PMX5/PMX6-EB845	.004 –.008	.004 –.012	.008 –.024	.012 –.031	–	165 (100-260)	230 (130-330)	–	–	–	–
PM3	PMX5/PMX6-EB845	.004 –.008	.004 –.012	.008 –.024	.012 –.031	–	165 (100-260)	230 (130-330)	–	–	–	–

SMG = Seco material group
a_p = in
f = IPR
V_c = sf/min
All cutting data are start values

PM Plus... -EB25/EB30 (metric)

		a_p (Ø)		f			v_c						
SMG		z=6	z=8	z=6	z=8	z=10	H15	CP20	RX2000	RK2050	CF	RX1500	RK1550
P1	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,30	0,80-1,80	1,00-2,40	1,20-3,00	25 (15-30)	60 (30-100)	80 (30-150)	-	180 (90-200)	220 (120-300)	-
P2	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,30	0,80-1,80	1,00-2,40	1,20-3,00	25 (15-30)	60 (30-100)	80 (30-150)	-	180 (90-200)	220 (120-300)	-
P3	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,30	0,80-1,80	1,00-2,40	1,20-3,00	25 (15-30)	60 (30-100)	80 (30-150)	-	180 (90-200)	220 (120-300)	-
P4	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,30	0,80-1,80	1,00-2,40	1,20-3,00	20 (10-25)	50 (30-80)	60 (30-120)	-	120 (80-150)	180 (90-200)	-
P5	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,30	0,80-1,80	1,00-2,40	1,20-3,00	20 (10-25)	50 (30-80)	60 (30-120)	-	120 (80-150)	180 (90-200)	-
P6	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,30	0,80-1,80	1,00-2,40	1,20-3,00	20 (10-25)	50 (30-80)	60 (30-120)	-	120 (80-150)	180 (90-200)	-
P7	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,30	0,80-1,80	1,00-2,40	1,20-3,00	20 (10-25)	50 (30-80)	60 (30-120)	-	120 (80-150)	180 (90-200)	-
M1	PMX5/PMX6/PMX8-EB25/EB30	0,08-0,15	0,10-0,20	0,80-1,20	1,00-2,00	1,20-2,50	-	25 (15-40)	35 (20-70)	-	-	-	-
K1	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,25	0,80-2,20	1,00-2,80	1,20-3,50	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)	-	220 (120-300)	245 (135-335)
K2	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,25	0,80-1,80	1,00-2,40	1,20-3,00	-	25 (20-40)	40 (30-70)	45 (35-80)	-	80 (50-100)	90 (55-110)
K3	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,25	0,80-2,20	1,00-2,80	1,20-3,50	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)	-	220 (120-300)	245 (135-335)
K4	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,25	0,80-2,20	1,00-2,80	1,20-3,50	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)	100 (70-150)	150 (80-200)	170 (90-225)
K5	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,25	0,80-2,20	1,00-2,80	1,20-3,50	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)	100 (70-150)	150 (80-200)	170 (90-225)
K6	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,25	0,80-1,80	1,00-2,40	1,20-3,00	-	60 (40-100)	80 (30-150)	90 (35-170)	-	220 (120-300)	245 (135-335)
K7	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,25	0,80-1,80	1,00-2,40	1,20-3,00	-	60 (40-100)	80 (30-150)	90 (35-170)	-	220 (120-300)	245 (135-335)
N1	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,30	0,80-2,20	1,00-2,80	1,20-3,50	50 (30-100)	-	-	-	-	-	-
N2	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,30	0,80-2,20	1,00-2,80	1,20-3,50	50 (30-100)	-	-	-	-	-	-
N3	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,30	0,80-2,20	1,00-2,80	1,20-3,50	50 (30-100)	-	-	-	-	-	-
N11	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,30	0,80-2,20	1,00-2,80	1,20-3,50	50 (30-100)	-	-	-	-	-	-
PM1	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,30	0,50-1,80	0,80-2,00	1,00-2,50	-	50 (30-80)	70 (40-100)	-	-	-	-
PM2	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,30	0,50-1,80	0,80-2,00	1,00-2,50	-	50 (30-80)	70 (40-100)	-	-	-	-
PM3	PMX5/PMX6/PMX8-EB25/EB30	0,10-0,20	0,10-0,30	0,50-1,80	0,80-2,00	1,00-2,50	-	50 (30-80)	70 (40-100)	-	-	-	-

SMG = Seco material group
a_p = mm
f = mm/rev
V_c = m/min
All cutting data are start values

PM Plus... -EB25/EB30 (*inch*)

SMG		a_p on (Ø) inch		f (in/rev)		V_c (sf/min)						
		z=6	z=8	z=6	z=8	H15	CP20	RX2000	RK2050	CF	RX1500	RK1550
P1	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.012*	*.031 –.071*	*.039 –.094*	*80 (50-100)*	*195 (100-330)*	*260 (100-490)*	–	*590 (295-655)*	*720 (395-985)*	–
P2	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.012*	*.031 –.071*	*.039 –.094*	*80 (50-100)*	*195 (100-330)*	*260 (100-490)*	–	*590 (295-655)*	*720 (395-985)*	–
P3	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.012*	*.031 –.071*	*.039 –.094*	*80 (50-100)*	*195 (100-330)*	*260 (100-490)*	–	*590 (295-655)*	*720 (395-985)*	–
P4	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.012*	*.031 –.071*	*.039 –.094*	*65 (35-80)*	*165 (100-260)*	*195 (100-395)*	–	*395 (260-490)*	*590 (295-655)*	–
P5	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.012*	*.031 –.071*	*.039 –.094*	*65 (35-80)*	*165 (100-260)*	*195 (100-395)*	–	*395 (260-490)*	*590 (295-655)*	–
P6	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.012*	*.031 –.071*	*.039 –.094*	*65 (35-80)*	*165 (100-260)*	*195 (100-395)*	–	*395 (260-490)*	*590 (295-655)*	–
P7	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.012*	*.031 –.071*	*.039 –.094*	*65 (35-80)*	*165 (100-260)*	*195 (100-395)*	–	*395 (260-490)*	*590 (295-655)*	–
M1	*PMX5/PMX6-EB25/EB30*	*.003 –.006*	*.004 –.008*	*.031 –.047*	*.039 –.079*	–	*80 (50-130)*	*115 (65-230)*	–	–	–	–
K1	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.010*	*.031 –.087*	*.039 –.110*	*80 (50-100)*	*195 (130-330)*	*260 (100-490)*	*290 (110-550)*	–	*720 (395-985)*	*805 (440-1105)*
K2	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.010*	*.031 –.071*	*.039 –.094*	–	*80 (65-130)*	*130 (100-230)*	*145 (110-260)*	–	*260 (165-330)*	*290 (185-370)*
K3	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.010*	*.031 –.087*	*.039 –.110*	*80 (50-100)*	*195 (130-330)*	*260 (100-490)*	*290 (110-550)*	–	*720 (395-985)*	*805 (440-1105)*
K4	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.010*	*.031 –.087*	*.039 –.110*	*80 (50-100)*	*150 (100-230)*	*230 (130-395)*	*260 (145-440)*	*330 (230-490)*	*490 (260-655)*	*550 (290-735)*
K5	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.010*	*.031 –.087*	*.039 –.110*	*80 (50-100)*	*150 (100-230)*	*230 (130-395)*	*260 (145-440)*	*330 (230-490)*	*490 (260-655)*	*550 (290-735)*
K6	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.010*	*.031 –.071*	*.039 –.094*	–	*195 (130-330)*	*260 (100-490)*	*290 (110-550)*	–	*720 (395-985)*	*805 (440-1105)*
K7	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.010*	*.031 –.071*	*.039 –.094*	–	*195 (130-330)*	*260 (100-490)*	*290 (110-550)*	–	*720 (395-985)*	*805 (440-1105)*
N1	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.012*	*.031 –.087*	*.039 –.110*	*165 (100-330)*	–	–	–	–	–	–
N2	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.012*	*.031 –.087*	*.039 –.110*	*165 (100-330)*	–	–	–	–	–	–
N3	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.012*	*.031 –.087*	*.039 –.110*	*165 (100-330)*	–	–	–	–	–	–
N11	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.012*	*.031 –.087*	*.039 –.110*	*165 (100-330)*	–	–	–	–	–	–
PM1	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.012*	*.020 –.071*	*.031 –.079*	–	*165 (100-260)*	*230 (130-330)*	–	–	–	–
PM2	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.012*	*.020 –.071*	*.031 –.079*	–	*165 (100-260)*	*230 (130-330)*	–	–	–	–
PM3	*PMX5/PMX6-EB25/EB30*	*.004 –.008*	*.004 –.012*	*.020 –.071*	*.031 –.079*	–	*165 (100-260)*	*230 (130-330)*	–	–	–	–

SMG = Seco material group
a_p = in
f = IPR
V_c = sf/min
All cutting data are start values

PM Plus... -EB45 (metric)

SMG		a_p (Ø)		f			v_c						
		z=6	z=8	z=6	z=8	z=10	H15	CP20	RX2000	RK2050	CF	RX1500	RK1550
P1	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,30-0,90	0,40-1,20	0,50-1,50	25 (15-30)	60 (30-100)	80 (30-150)	-	180 (90-200)	220 (120-300)	-
P2	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,30-0,90	0,40-1,20	0,50-1,50	25 (15-30)	60 (30-100)	80 (30-150)	-	180 (90-200)	220 (120-300)	-
P3	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,30-0,90	0,40-1,20	0,50-1,50	25 (15-30)	60 (30-100)	80 (30-150)	-	180 (90-200)	220 (120-300)	-
P4	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,20-0,70	0,30-1,00	0,40-1,20	20 (10-25)	50 (30-80)	60 (30-120)	-	120 (80-150)	180 (90-200)	-
P5	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,20-0,70	0,30-1,00	0,40-1,20	20 (10-25)	50 (30-80)	60 (30-120)	-	120 (80-150)	180 (90-200)	-
P6	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,20-0,70	0,30-1,00	0,40-1,20	20 (10-25)	50 (30-80)	60 (30-120)	-	120 (80-150)	180 (90-200)	-
P7	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,20-0,70	0,30-1,00	0,40-1,20	20 (10-25)	50 (30-80)	60 (30-120)	-	120 (80-150)	180 (90-200)	-
P8	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,20-0,70	0,30-1,00	0,40-1,20	15 (10-20)	35 (20-60)	40 (20-80)	-	80 (60-120)	120 (80-180)	-
P11	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,20-0,70	0,30-1,00	0,40-1,20	15 (10-20)	35 (20-60)	40 (20-80)	-	80 (60-120)	120 (80-180)	-
P12	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,20-0,70	0,30-1,00	0,40-1,20	12 (8-15)	25 (15-45)	30 (15-65)	-	65 (45-95)	95 (65-145)	-
M1	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,40-1,00	12 (9-15)	25 (15-40)	35 (20-70)	-	-	-	-
M2	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,40-1,00	-	25 (15-40)	35 (20-70)	-	-	-	-
M3	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,40-1,00	-	25 (15-40)	35 (20-70)	-	-	-	-
M4	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,40-1,00	-	20 (10-30)	25 (15-50)	-	-	-	-
M5	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,40-1,00	-	20 (10-30)	25 (15-50)	-	-	-	-
K1	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,25	0,30-0,90	0,40-1,20	0,50-1,50	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)	-	220 (120-300)	245 (135-335)
K2	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,25	0,30-0,90	0,40-1,20	0,50-1,50	-	25 (20-40)	40 (30-70)	45 (35-80)	-	80 (50-100)	90 (55-110)
K3	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,25	0,30-0,90	0,40-1,20	0,50-1,50	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)	-	220 (120-300)	245 (135-335)
K4	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,25	0,30-0,90	0,40-1,20	0,50-1,50	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)	100 (70-150)	150 (80-200)	170 (90-225)
K5	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,25	0,30-0,90	0,40-1,20	0,50-1,50	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)	100 (70-150)	150 (80-200)	170 (90-225)
K6	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,25	0,30-0,90	0,40-1,20	0,50-1,50	-	60 (40-100)	80 (30-150)	90 (35-170)	-	220 (120-300)	245 (135-335)
K7	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,25	0,30-0,90	0,40-1,20	0,50-1,50	-	60 (40-100)	80 (30-150)	90 (35-170)	-	220 (120-300)	245 (135-335)
N1	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,30-0,90	0,40-1,20	0,50-1,50	50 (30-100)	-	80 (30-150)	-	-	-	-
N2	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,30-0,90	0,40-1,20	0,50-1,50	50 (30-100)	-	80 (30-150)	-	-	-	-
N3	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,30-0,90	0,40-1,20	0,50-1,50	50 (30-100)	-	80 (30-150)	-	-	-	-
N11	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,30-0,90	0,40-1,20	0,50-1,50	50 (30-100)	-	80 (30-150)	-	-	-	-
S1	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,40-1,00	-	20 (10-25)	20 (10-25)	-	-	-	-
S2	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,40-1,00	-	20 (10-25)	20 (10-25)	-	-	-	-
S3	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,40-1,00	-	20 (10-25)	20 (10-25)	-	-	-	-
S11	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,40-1,00	20 (15-30)	30 (15-40)	40 (20-50)	-	-	-	-
S12	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,40-1,00	20 (15-30)	30 (15-40)	40 (20-50)	-	-	-	-
S13	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,40-1,00	20 (15-30)	30 (15-40)	40 (20-50)	-	-	-	-
H3	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,60	0,40-0,75	-	-	10 (8-15)	-	-	-	-
H5	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,60	0,40-0,75	-	-	10 (8-15)	-	-	-	-
H7	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,60	0,40-0,75	-	-	10 (8-15)	-	-	-	-
H8	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,60	0,40-0,75	-	-	10 (8-15)	-	-	-	-
H11	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,60	0,40-0,75	-	-	10 (8-15)	-	-	-	-
H12	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,60	0,40-0,75	-	-	10 (8-15)	-	-	-	-
H21	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,60	0,40-0,75	-	-	10 (8-15)	-	-	-	-
H31	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,40	0,30-0,60	0,40-0,75	-	-	10 (8-15)	-	-	-	-
PM1	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,30-0,90	0,40-1,20	0,50-1,50	-	50 (30-80)	70 (40-100)	-	-	-	-
PM2	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,30-0,90	0,40-1,20	0,50-1,50	-	50 (30-80)	70 (40-100)	-	-	-	-
PM3	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,30-0,90	0,40-1,20	0,50-1,50	-	50 (30-80)	70 (40-100)	-	-	-	-
TS1	PMX5/PMX6/PMX8-EB45	0,10-0,15	0,10-0,20	0,30-0,90	0,40-1,20	0,50-1,50	20 (15-25)	-	40 (20-60)	-	-	-	-
TS2	PMX5/PMX6/PMX8-EB45	0,10-0,15	0,10-0,20	0,30-0,90	0,40-1,20	0,50-1,50	20 (15-25)	-	40 (20-60)	-	-	-	-
TS3	PMX5/PMX6/PMX8-EB45	0,10-0,15	0,10-0,20	0,30-0,90	0,40-1,20	0,50-1,50	20 (15-25)	-	40 (20-60)	-	-	-	-
TS4	PMX5/PMX6/PMX8-EB45	0,10-0,15	0,10-0,20	0,30-0,90	0,40-1,20	0,50-1,50	20 (15-25)	-	40 (20-60)	-	-	-	-
TP1	PMX5/PMX6/PMX8-EB45	0,10-0,15	0,10-0,20	0,30-0,90	0,40-1,20	0,50-1,50	20 (15-25)	-	40 (20-60)	-	-	-	-
TP2	PMX5/PMX6/PMX8-EB45	0,10-0,15	0,10-0,20	0,30-0,90	0,40-1,20	0,50-1,50	20 (15-25)	-	40 (20-60)	-	-	-	-
TP3	PMX5/PMX6/PMX8-EB45	0,10-0,15	0,10-0,20	0,30-0,90	0,40-1,20	0,50-1,50	20 (15-25)	-	40 (20-60)	-	-	-	-
TP4	PMX5/PMX6/PMX8-EB45	0,10-0,15	0,10-0,20	0,30-0,90	0,40-1,20	0,50-1,50	20 (15-25)	-	40 (20-60)	-	-	-	-
GR1	PMX5/PMX6/PMX8-EB45	0,10-0,30	0,10-0,40	0,30-0,90	0,40-1,20	0,50-1,50	40 (80-20)	-	60 (30-120)	-	-	-	-

SMG = Seco material group. a_p = mm, f = mm/rev, v_c = m/min. All cutting data are start values

PM Plus... -EB45 (*inch*)

SMG		a_p on (Ø) inch		f (in/rev)		V_c (sf/min)						
		z=6	z=8	z=6	z=8	H15	CP20	RX2000	RK2050	CF	RX1500	RK1550
P1	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.012 –.035	.016 –.047	80 (50-100)	195 (100-330)	260 (100-490)	–	590 (295-655)	720 (395-985)	–
P2	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.012 –.035	.016 –.047	80 (50-100)	195 (100-330)	260 (100-490)	–	590 (295-655)	720 (395-985)	–
P3	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.012 –.035	.016 –.047	80 (50-100)	195 (100-330)	260 (100-490)	–	590 (295-655)	720 (395-985)	–
P4	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.008 –.028	.012 –.039	65 (35-80)	165 (100-260)	195 (100-395)	–	395 (260-490)	590 (295-655)	–
P5	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.008 –.028	.012 –.039	65 (35-80)	165 (100-260)	195 (100-395)	–	395 (260-490)	590 (295-655)	–
P6	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.008 –.028	.012 –.039	65 (35-80)	165 (100-260)	195 (100-395)	–	395 (260-490)	590 (295-655)	–
P7	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.008 –.028	.012 –.039	65 (35-80)	165 (100-260)	195 (100-395)	–	395 (260-490)	590 (295-655)	–
P8	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.008 –.028	.012 –.039	50 (35-65)	115 (65-195)	130 (65-260)	–	260 (195-395)	395 (260-590)	–
P11	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.008 –.028	.012 –.039	50 (35-65)	115 (65-195)	130 (65-260)	–	260 (195-395)	395 (260-590)	–
M1	PMX5/PMX6-EB45	.003 –.006	.004 –.008	.008 –.024	.012 –.031	40 (30-50)	80 (50-130)	115 (65-230)	–	–	–	–
M2	PMX5/PMX6-EB45	.003 –.006	.004 –.008	.008 –.024	.012 –.031	–	80 (50-130)	115 (65-230)	–	–	–	–
M3	PMX5/PMX6-EB45	.003 –.006	.004 –.008	.008 –.024	.012 –.031	–	80 (50-130)	115 (65-230)	–	–	–	–
M4	PMX5/PMX6-EB45	.003 –.006	.004 –.008	.008 –.024	.012 –.031	–	65 (35-100)	80 (50-165)	–	–	–	–
M5	PMX5/PMX6-EB45	.003 –.006	.004 –.008	.008 –.024	.012 –.031	–	65 (35-100)	80 (50-165)	–	–	–	–
K1	PMX5/PMX6-EB45	.004 –.008	.004 –.010	.012 –.035	.016 –.047	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)	–	720 (395-985)	805 (440-1105)
K2	PMX5/PMX6-EB45	.004 –.008	.004 –.010	.012 –.035	.016 –.047	–	80 (65-130)	130 (100-230)	145 (110-260)	–	260 (165-330)	290 (185-370)
K3	PMX5/PMX6-EB45	.004 –.008	.004 –.010	.012 –.035	.016 –.047	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)	–	720 (395-985)	805 (440-1105)
K4	PMX5/PMX6-EB45	.004 –.008	.004 –.010	.012 –.035	.016 –.047	80 (50-100)	150 (100-230)	230 (130-395)	260 (145-440)	330 (230-490)	490 (260-655)	550 (290-735)
K5	PMX5/PMX6-EB45	.004 –.008	.004 –.010	.012 –.035	.016 –.047	80 (50-100)	150 (100-230)	230 (130-395)	260 (145-440)	330 (230-490)	490 (260-655)	550 (290-735)
K6	PMX5/PMX6-EB45	.004 –.008	.004 –.010	.012 –.035	.016 –.047	–	195 (130-330)	260 (100-490)	290 (110-550)	–	720 (395-985)	805 (440-1105)
K7	PMX5/PMX6-EB45	.004 –.008	.004 –.010	.012 –.035	.016 –.047	–	195 (130-330)	260 (100-490)	290 (110-550)	–	720 (395-985)	805 (440-1105)
N1	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.012 –.035	.016 –.047	165 (100-330)	–	260 (100-490)	–	–	–	–
N2	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.012 –.035	.016 –.047	165 (100-330)	–	260 (100-490)	–	–	–	–
N3	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.012 –.035	.016 –.047	165 (100-330)	–	260 (100-490)	–	–	–	–
N11	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.012 –.035	.016 –.047	165 (100-330)	–	260 (100-490)	–	–	–	–
S1	PMX5/PMX6-EB45	.003 –.006	.004 –.006	.008 –.024	.012 –.031	–	65 (35-80)	65 (35-80)	–	–	–	–
S2	PMX5/PMX6-EB45	.003 –.006	.004 –.006	.008 –.024	.012 –.031	–	65 (35-80)	65 (35-80)	–	–	–	–
S3	PMX5/PMX6-EB45	.003 –.006	.004 –.006	.008 –.024	.012 –.031	–	65 (35-80)	65 (35-80)	–	–	–	–
S11	PMX5/PMX6-EB45	.003 –.006	.004 –.006	.008 –.024	.012 –.031	65 (50-100)	100 (50-130)	130 (65-165)	–	–	–	–
S12	PMX5/PMX6-EB45	.003 –.006	.004 –.006	.008 –.024	.012 –.031	65 (50-100)	100 (50-130)	130 (65-165)	–	–	–	–
S13	PMX5/PMX6-EB45	.003 –.006	.004 –.006	.008 –.024	.012 –.031	65 (50-100)	100 (50-130)	130 (65-165)	–	–	–	–
H3	PMX5/PMX6-EB45	.003 –.006	.004 –.006	.008 –.016	.012 –.024	–	–	35 (25-50)	–	–	–	–
H5	PMX5/PMX6-EB45	.003 –.006	.004 –.006	.008 –.016	.012 –.024	–	–	35 (25-50)	–	–	–	–
H7	PMX5/PMX6-EB45	.003 –.006	.004 –.006	.008 –.016	.012 –.024	–	–	35 (25-50)	–	–	–	–
H8	PMX5/PMX6-EB45	.003 –.006	.004 –.006	.008 –.016	.012 –.024	–	–	35 (25-50)	–	–	–	–
H11	PMX5/PMX6-EB45	.003 –.006	.004 –.006	.008 –.016	.012 –.024	–	–	35 (25-50)	–	–	–	–
H12	PMX5/PMX6-EB45	.003 –.006	.004 –.006	.008 –.016	.012 –.024	–	–	35 (25-50)	–	–	–	–
H21	PMX5/PMX6-EB45	.003 –.006	.004 –.006	.008 –.016	.012 –.024	–	–	35 (25-50)	–	–	–	–
H31	PMX5/PMX6-EB45	.003 –.006	.004 –.006	.008 –.016	.012 –.024	–	–	35 (25-50)	–	–	–	–
PM1	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.012 –.035	.016 –.047	–	165 (100-260)	230 (130-330)	–	–	–	–
PM2	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.012 –.035	.016 –.047	–	165 (100-260)	230 (130-330)	–	–	–	–
PM3	PMX5/PMX6-EB45	.004 –.008	.004 –.012	.012 –.035	.016 –.047	–	165 (100-260)	230 (130-330)	–	–	–	–
TS1	PMX5/PMX6-EB45	.004 –.006	.004 –.008	.012 –.035	.016 –.047	65 (50-80)	–	130 (65-195)	–	–	–	–
TS2	PMX5/PMX6-EB45	.004 –.006	.004 –.008	.012 –.035	.016 –.047	65 (50-80)	–	130 (65-195)	–	–	–	–
TS3	PMX5/PMX6-EB45	.004 –.006	.004 –.008	.012 –.035	.016 –.047	65 (50-80)	–	130 (65-195)	–	–	–	–
TS4	PMX5/PMX6-EB45	.004 –.006	.004 –.008	.012 –.035	.016 –.047	65 (50-80)	–	130 (65-195)	–	–	–	–
TP1	PMX5/PMX6-EB45	.004 –.006	.004 –.008	.012 –.035	.016 –.047	65 (50-80)	–	130 (65-195)	–	–	–	–
TP2	PMX5/PMX6-EB45	.004 –.006	.004 –.008	.012 –.035	.016 –.047	65 (50-80)	–	130 (65-195)	–	–	–	–
TP3	PMX5/PMX6-EB45	.004 –.006	.004 –.008	.012 –.035	.016 –.047	65 (50-80)	–	130 (65-195)	–	–	–	–
TP4	PMX5/PMX6-EB45	.004 –.006	.004 –.008	.012 –.035	.016 –.047	65 (50-80)	–	130 (65-195)	–	–	–	–
GR1	PMX5/PMX6-EB45	.004 –.012	.004 –.016	.012 –.035	.016 –.047	130 (260-65)	–	195 (100-395)	–	–	–	–

SMG = Seco material group.
a_p = in, f = IPR, v_c = sf/min.
All cutting data are start values

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PM Plus... -EB45 (metric)

SMG		a_p (Ø)		f			v_c			
		z=6	z=8 /z=10	z=6	z=8	z=10	RN2010	RM2020	RM2090	RS2090
M1	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,35-1,00	-	25 (15-40)	40 (25-80)	-
M2	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,35-1,00	-	25 (15-40)	40 (25-80)	-
M3	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,35-1,00	-	25 (15-40)	40 (25-80)	-
M4	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,35-1,00	-	20 (10-30)	30 (20-60)	-
M5	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,35-1,00	-	20 (10-30)	30 (20-60)	-
N1	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,30-0,90	0,40-1,20	0,50-1,50	50 (30-100)	-	-	-
N2	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,30-0,90	0,40-1,20	0,50-1,50	50 (30-100)	-	-	-
N3	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,30-0,90	0,40-1,20	0,50-1,50	50 (30-100)	-	-	-
N11	PMX5/PMX6/PMX8-EB45	0,10-0,20	0,10-0,30	0,30-0,90	0,40-1,20	0,50-1,50	50 (30-100)	-	-	-
S1	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,35-1,00	-	-	-	25 (12-30)
S2	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,35-1,00	-	-	-	25 (12-30)
S3	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,35-1,00	-	-	-	25 (12-30)
S11	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,35-1,00	-	-	-	50 (25-65)
S12	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,35-1,00	-	-	-	50 (25-65)
S13	PMX5/PMX6/PMX8-EB45	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,35-1,00	-	-	-	50 (25-65)

PM Plus... -EB845 (metric)

SMG		a_p (Ø)		f			v_c		
		z=6	z=8 /z=10	z=6	z=8	z=10	RM2020	RM2090	RS2090
M1	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,35-1,00	25 (15-40)	35 (20-70)	-
M2	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,35-1,00	25 (15-40)	35 (20-70)	-
M3	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,35-1,00	25 (15-40)	35 (20-70)	-
M4	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,35-1,00	20 (10-30)	25 (15-50)	-
M5	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,20	0,20-0,60	0,30-0,80	0,35-1,00	20 (10-30)	25 (15-50)	-
S1	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,35-1,00	-	-	25 (12-30)
S2	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,35-1,00	-	-	25 (12-30)
S3	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,35-1,00	-	-	25 (12-30)
S11	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,35-1,00	-	-	50 (25-65)
S12	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,35-1,00	-	-	50 (25-65)
S13	PMX5/PMX6/PMX8-EB845	0,08-0,15	0,10-0,15	0,20-0,60	0,30-0,80	0,35-1,00	-	-	50 (25-65)

SMG = Seco material group
a_p = mm
f = mm/rev (IPR)
v_c = m/min (sf/min)
All cutting data are start values

PM Plus... -EB45 (*inch*)

		a_p (Ø)		f			v_c			
SMG		z=6	z=8 /z=10	z=6	z=8	z=10	RN2010	RM2020	RM2090	RS2090
M1	*PMX5/PMX6/PMX8-EB45*	*0.003-0.006*	*0.004-0.008*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	*80 (50-130)*	*130 (80-260)*	-
M2	*PMX5/PMX6/PMX8-EB45*	*0.003-0.006*	*0.004-0.008*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	*80 (50-130)*	*130 (80-260)*	-
M3	*PMX5/PMX6/PMX8-EB45*	*0.003-0.006*	*0.004-0.008*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	*80 (50-130)*	*130 (80-260)*	-
M4	*PMX5/PMX6/PMX8-EB45*	*0.003-0.006*	*0.004-0.008*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	*65 (35-100)*	*100 (65-195)*	-
M5	*PMX5/PMX6/PMX8-EB45*	*0.003-0.006*	*0.004-0.008*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	*65 (35-100)*	*100 (65-195)*	-
N1	*PMX5/PMX6/PMX8-EB45*	*0.004-0.008*	*0.004-0.012*	*0.012-0.035*	*0.016-0.047*	*0.02-0.059*	*165 (100-330)*	-	-	-
N2	*PMX5/PMX6/PMX8-EB45*	*0.004-0.008*	*0.004-0.012*	*0.012-0.035*	*0.016-0.047*	*0.02-0.059*	*165 (100-330)*	-	-	-
N3	*PMX5/PMX6/PMX8-EB45*	*0.004-0.008*	*0.004-0.012*	*0.012-0.035*	*0.016-0.047*	*0.02-0.059*	*165 (100-330)*	-	-	-
N11	*PMX5/PMX6/PMX8-EB45*	*0.004-0.008*	*0.004-0.012*	*0.012-0.035*	*0.016-0.047*	*0.02-0.059*	*165 (100-330)*	-	-	-
S1	*PMX5/PMX6/PMX8-EB45*	*0.003-0.006*	*0.004-0.006*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	-	-	*80 (40-100)*
S2	*PMX5/PMX6/PMX8-EB45*	*0.003-0.006*	*0.004-0.006*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	-	-	*80 (40-100)*
S3	*PMX5/PMX6/PMX8-EB45*	*0.003-0.006*	*0.004-0.006*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	-	-	*80 (40-100)*
S11	*PMX5/PMX6/PMX8-EB45*	*0.003-0.006*	*0.004-0.006*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	-	-	*165 (80-215)*
S12	*PMX5/PMX6/PMX8-EB45*	*0.003-0.006*	*0.004-0.006*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	-	-	*165 (80-215)*
S13	*PMX5/PMX6/PMX8-EB45*	*0.003-0.006*	*0.004-0.006*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	-	-	*165 (80-215)*

PM Plus... -EB845 (*inch*)

		a_p (Ø)		f			v_c		
SMG		z=6	z=8 /z=10	z=6	z=8	z=10	RM2020	RM2090	RS2090
M1	*PMX5/PMX6/PMX8-EB845*	*0.003-0.006*	*0.004-0.008*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	*80 (50-130)*	*115 (65-230)*	-
M2	*PMX5/PMX6/PMX8-EB845*	*0.003-0.006*	*0.004-0.008*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	*80 (50-130)*	*115 (65-230)*	-
M3	*PMX5/PMX6/PMX8-EB845*	*0.003-0.006*	*0.004-0.008*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	*80 (50-130)*	*115 (65-230)*	-
M4	*PMX5/PMX6/PMX8-EB845*	*0.003-0.006*	*0.004-0.008*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	*65 (35-100)*	*80 (50-165)*	-
M5	*PMX5/PMX6/PMX8-EB845*	*0.003-0.006*	*0.004-0.008*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	*65 (35-100)*	*80 (50-165)*	-
S1	*PMX5/PMX6/PMX8-EB845*	*0.003-0.006*	*0.004-0.006*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	-	*80 (40-100)*
S2	*PMX5/PMX6/PMX8-EB845*	*0.003-0.006*	*0.004-0.006*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	-	*80 (40-100)*
S3	*PMX5/PMX6/PMX8-EB845*	*0.003-0.006*	*0.004-0.006*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	-	*80 (40-100)*
S11	*PMX5/PMX6/PMX8-EB845*	*0.003-0.006*	*0.004-0.006*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	-	*165 (80-215)*
S12	*PMX5/PMX6/PMX8-EB845*	*0.003-0.006*	*0.004-0.006*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	-	*165 (80-215)*
S13	*PMX5/PMX6/PMX8-EB845*	*0.003-0.006*	*0.004-0.006*	*0.008-0.024*	*0.012-0.031*	*0.014-0.039*	-	-	*165 (80-215)*

SMG = Seco material group
a_p = in
f = IPR
V_c = sf/min
All cutting data are start values

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Nanofix™

Nanofix™ Solid Carbide Reamers are designed for small diameters from 2.97 to 12.05 mm (.117" - .474").

- Internal coolant with simple adjustable system so the outlet style can be set for either through or blind bore, depending on application
- Enables tolerances held between 10 and 15µm (.0004-.0006')
- Three available geometries: EB45, EB845 and EB30

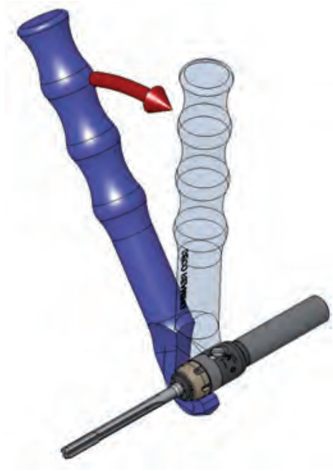
Range overview

	∅ Range	Reaming depth	Hole tolerance	Intermediate diameters	Surface finish
Nanofix™  Page(s) 364-388	2,97-12,05 mm *(0.1169-0.4744")*	5-12 x D	IT 7	Yes, available through Custom design	R_a 0,8-1,2 µm *(R_a 31-47 µin)*

Nanofix™ is a Seco solid carbide reamer program dedicated for small ∅ from 2,97 to 12,05 mm *(0.1169 to 0.4744 inch)*.
Design includes a unique patented Quick-fit clamping system that will allow it to hold the entire diameter range with only 2 tool holders .
Tool holders have internal coolant with a simple adjustable system so the outlet style can be set for either through or blind bore, depending on application.

Quick-fit clamping

Quick and easy tool change.
Accurate repositioning in run-out and length.



2 Quick-fit sizes to over the complete diameter range

Quick-fit ∅ 10 mm for
6,051-12,050 mm
(∅ 0.2382-0.4744 inch)

Quick-fit ∅ 6 mm for
2,97-6,050 mm
(∅ 0.1169-0.2382 inch)

Same tool for blind or through hole application

Turn coolant style adjusting screw by 1/4 of a revolution to change coolant outlet from through to blind and vice-versa.

through

blind

Code keys

Reamer type: NF06
Hole diameter and tolerance: 4H7
Lead geometry: EB45
Grade: RX2000

NF06 - 4H7 - EB45 - RX2000

Code key – Intermediate diameter reamers

Reamer type: NF10
Hole diameter and tolerance: 10,1H7 (0.3976”-0.3983”)
Lead geometry: EB845
Grade: RX2000

NF10 - 10,1H7 - EB845 - RX2000

0.3976”-0.3983”

Code key – Shanks

Shank type: NFQF06
Working length: 03300
Cylindrical shank diameter: 12
Neutral: N
Cyl. shank DIN 1835: 1

NFQF06 - 03300 - 12 - N - 1

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Run-out

Rotating tool

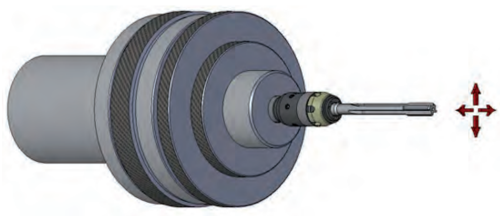
Max. run-out recommended: 5 µm *(0.0002")*.
Precision holder is recommended: Hydraulic chuck, D-type collet chuck or 5672 collet chuck.

Note:
due to coolant outlet adjustment sealing o-ring, the use of a Shrinkfit holder is not recommended.

Static tool

Use a Seco floating holder, see page 472.

Floating holders allow reamer self-centering in pre-bore.



Coolant requirements

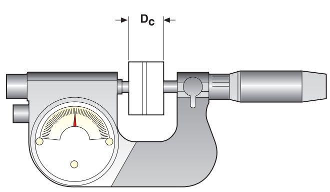
To reach maximum tool life and hole quality, the following coolant requirements should be observed.
Coolant through the tool is recommended.
External coolant supply can be used with cutting condition reduced by 75 %.
Soluble oil with 40% minimum mineral oil.
Neat oil recommended for stainless steel.
Concentration minimum 6–8%.
Filtration 30–50 µm *(1-2 µin)*.
Volume min 0,5 l/min/mm *(0.13 gal/min/inch)* in tool diameter.
(Ex: Reamer ∅ 10, min volume is 5 l/min *(1.3 gal/min)*.

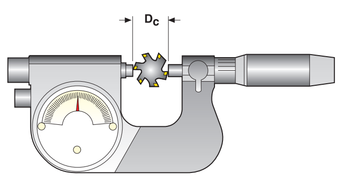
Diameter measurement

Gauge clock micrometer prior to ∅ measurement.

Important
Nanofix reamers have differential pitch on teeth.
When measuring the diameter, make sure that you have 2 teeth 180° opposite.

Use clock micrometer and measuring blocks for gauging.

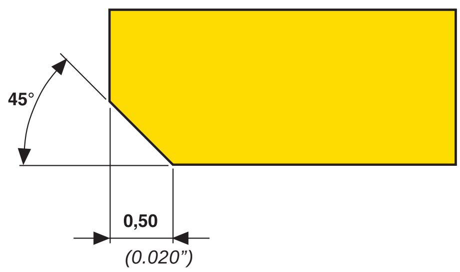




Lead geometries

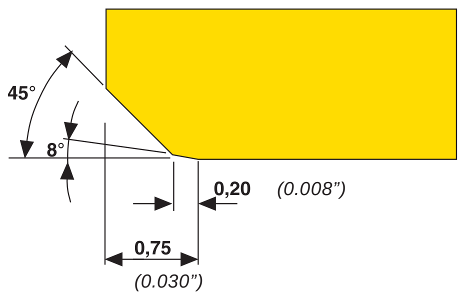
Lead geometry - EB45

Chip control +++
Surface Finish + R_a 0,8 - 1,2 µm
Surface Finish + *(R_a 31 - 47 µin)*
Versatile



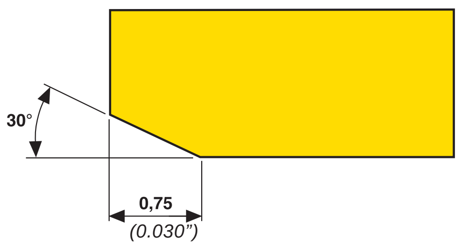
Lead geometry - EB845

Chip control ++
Surface Finish +++ R_a 0,2 - 0,8 µm
Surface Finish +++ *(R_a 8 - 31 µin)*



Lead geometry - EB30

Feed performance +++
Surface Finish ++ R_a 0,4 - 0,8 µm
Surface Finish ++ *(R_a 16 - 31 µin)*
Chip control +

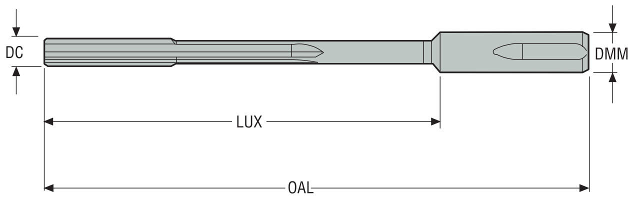


Grades

Grades		
	RX2000	Coated High performance coated grade suitable for all materials.
	CP20	Coated A versatile coated grade suitable for most materials, except aluminum. TiN
	H15	Uncoated A tough micrograin grade for all materials. Suitable for fine-reaming operations due to edge sharpness.
	RN2010	Uncoated A sub-micrograin uncoated grade with optimized geometries for N-materials (non ferrous).
	RM2020	Coated A tough coated grade suitable for fine reaming operation with optimized geometries for M materials.
	RM2090	Coated A wear resistant coated grade with specific geometries for M materials. Optimisation in M materials.
	RK2050	Coated A tough coated grade suitable for fine reaming operation with optimized geometries for K materials
	RS2090	Coated A wear resistant coated grade with specific geometries for S materials. Optimisation in S materials.

Reamers for blind and through holes

Ø 2,97-12,05 mm / 0.116-0.474 in



Designation	DC	Hole dia ISO	Drill size	Hole dia min-max		LUX	DMM	OAL		Body size	Geometries			Grades		
	mm Inch	mm	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			EB45	EB845	EB30	RX2000	RK2050	H15
NF06-2.98 H7-EB..	2,98 0.1173	2,98 H7	2,8-2,9 0.110-0.114	2,980 0.1173	2,990 0.1177	40,0 1.575	6,0 0.236	60,0 2.362	4	NFQF06...	□	□	□	■	□	□
NF06-2.99 H7-EB..	2,99 0.1177	2,99 H7/3 K7	2,8-2,9 0.110-0.114	2,990 0.1177	3,000 0.1181	40,0 1.575	6,0 0.236	60,0 2.362	4	NFQF06...	□	□	□	■	□	□
NF06-3 H7-EB..	3 0.1181	3 H7	2,8-2,9 0.110-0.114	3,000 0.1181	3,010 0.1185	40,0 1.575	6,0 0.236	60,0 2.362	4	NFQF06...	□	□	□	■	□	□
NF06-3.01 H7-EB..	3,01 0.1185	3,01 H7	2,8-2,9 0.110-0.114	3,010 0.1185	3,022 0.1190	40,0 1.575	6,0 0.236	60,0 2.362	4	NFQF06...	□	□	□	■	□	□
NF06-3.02 H7-EB..	3,02 0.1189	3,02 H7/3 D7	2,9 0.114	3,020 0.1189	3,032 0.1194	40,0 1.575	6,0 0.236	60,0 2.362	4	NFQF06...	□	□	□	■	□	□
NF06-3.03 H7-EB..	3,03 0.1193	3,03 H7	2,9 0.114	3,030 0.1193	3,042 0.1198	40,0 1.575	6,0 0.236	60,0 2.362	4	NFQF06...	□	□	□	■	□	□
NF06-3.04 H7-EB..	3,04 0.1197	3,04 H7/3D10	2,9 0.114	3,040 0.1197	3,052 0.1202	40,0 1.575	6,0 0.236	60,0 2.362	4	NFQF06...	□	□	□	■	□	□
NF06-3.05 H7-EB..	3,05 0.1201	3,05 H7	2,9 0.114	3,050 0.1201	3,062 0.1206	40,0 1.575	6,0 0.236	60,0 2.362	4	NFQF06...	□	□	□	■	□	□
NF06-3.167 H7-EB..	3,167 0.1247	3,167 H7	3 0.118	3,167 0.1247	3,179 0.1252	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-3.175 H7-EB...	3,175 0.1250	3,175 H7	3 0.118	3,175 0.1250	3,187 0.1255	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-3.5 H7-EB..	3,5 0.1378	3,5 H7	3,3-3,4 0.130-0.134	3,500 0.1378	3,512 0.1383	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-3.51 H7-EB..	3,51 0.1382	3,51 H7	3,3-3,4 0.130-0.134	3,510 0.1382	3,522 0.1387	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-3.97 H7-EB..	3,97 0.1563	3,97 H7	3,8-3,9 0.150-0.154	3,970 0.1563	3,982 0.1568	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-3.98 H7-EB..	3,98 0.1567	3,98 H7/4 P7	3,8-3,9 0.150-0.154	3,980 0.1567	3,992 0.1572	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-3.99 H7-EB..	3,99 0.1571	3,99 H7/4 K8	3,8-3,9 0.150-0.154	3,990 0.1571	4,002 0.1576	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-4 H7-EB..	4 0.1575	4 H7	3,8-3,9 0.150-0.154	4,000 0.1575	4,012 0.1580	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-4.01 H7-EB..	4,01 0.1579	4,01 H7/4 F7	3,8-3,9 0.150-0.154	4,010 0.1579	4,022 0.1583	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-4.02 H7-EB..	4,02 0.1583	4,02 H7/4 E7	3,9 0.154	4,020 0.1583	4,032 0.1587	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-4.04 H7-EB..	4,04 0.1591	4,04 H7	3,9 0.154	4,040 0.1591	4,052 0.1595	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-4.05 H7-EB..	4,05 0.1594	4,05 H7	3,9 0.154	4,050 0.1594	4,062 0.1599	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-4.5 H7-EB..	4,5 0.1772	4,5 H7	4,3-4,4 0.169-0.173	4,500 0.1772	4,512 0.1776	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-4.750 H7-EB..	4,75 0.1870	4,75 H7	4,5 0.177	4,750 0.1870	4,762 0.1875	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-4.762 H7-EB..	4,762 0.1875	4,762 H7	4,5 0.177	4,762 0.1875	4,774 0.1880	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□

Designation	DC	Hole dia ISO	Drill size	Hole dia min-max		LUX	DMM	OAL		Body size	Geometries			Grades		
	mm Inch	mm	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			EB45	EB845	EB30	RX2000	RK2050	H15
NF06-4.97 H7-EB..	4,97 0.1957	4,97 H7	4,8-4,9 0.189-0.193	4,970 0.1957	4,982 0.1961	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-4.98 H7-EB..	4,98 0.1961	4,98 H7/5 P7	4,8-4,9 0.189-0.193	4,980 0.1961	4,992 0.1965	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-4.99 H7-EB..	4,99 0.1965	4,99 H7/5 K8	4,8-4,9 0.189-0.193	4,990 0.1965	5,002 0.1969	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-5 H7-EB..	5 0.1969	5 H7	4,8-4,9 0.189-0.193	5,000 0.1969	5,012 0.1973	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-5.01 H7-EB..	5,01 0.1972	5,01 H7/5 F7	4,8-4,9 0.189-0.193	5,010 0.1972	5,022 0.197	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-5.02 H7-EB..	5,02 0.1976	5,02 H7/5 E7	4,9 0.193	5,020 0.1976	5,032 0.1981	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-5.03 H7-EB..	5,03 0.1980	5,03 H7/5 D7	4,9 0.193	5,030 0.1980	5,042 0.1985	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-5.05 H7-EB..	5,05 0.1988	5,05 H7	4,9 0.193	5,050 0.1988	5,062 0.1993	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-5.5 H7-EB..	5,5 0.2165	5,5 H7	5,3-5,4 0.209-0.213	5,500 0.2165	5,512 0.2170	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-5.97 H7-EB..	5,97 0.2350	5,97 H7	5,8-5,9 0.228-0.232	5,970 0.2350	5,982 0.2355	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-5.98 H7-EB..	5,98 0.2354	5,98 H7/6 P7	5,8-5,9 0.228-0.232	5,980 0.2354	5,992 0.2359	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-5.99 H7-EB..	5,99 0.2358	5,99 H7/6 K8	5,8-5,9 0.228-0.232	5,990 0.2358	6,002 0.2363	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-6 H7-EB..	6 0.2362	6 H7	5,8-5,9 0.228-0.232	6,000 0.2362	6,012 0.2367	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-6.01 H7-EB..	6,01 0.2366	6,01 H7/6 F7	5,8-5,9 0.228-0.232	6,010 0.2366	6,025 0.2372	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-6.02 H7-EB..	6,02 0.2370	6,02 H7/6 E7	5,9 0.232	6,020 0.2370	6,035 0.2376	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-6.03 H7-EB..	6,03 0.2374	6,03 H7/6 D7	5,9 0.232	6,030 0.2374	6,045 0.2380	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-6.04 H7-EB..	6,04 0.2378	6,04 H7	5,9 0.232	6,040 0.2378	6,055 0.2384	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF06-6.05 H7-EB..	6,05 0.2382	6,05 H7	5,9 0.232	6,050 0.2382	6,065 0.2388	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06...	□	□	□	■	□	□
NF10-6.334 H7-EB..	6,334 0.2494	6,334 H7	6,1-6,2 0.240-0.244	6,334 0.2494	6,349 0.2500	83,0 3.268	10,0 0.394	115,0 4.528	6	NFQF10...	□	□	□	■	□	□
NF10-6.350 H7-EB..	6,35 0.2500	6,35 H7	6,2 0.244	6,350 0.2500	6,365 0.2506	83,0 3.268	10,0 0.394	115,0 4.528	6	NFQF10...	□	□	□	■	□	□
NF10-6.375 H7-EB..	6,375 0.2510	6,375 H7	6,2 0.244	6,375 0.2510	6,390 0.2516	83,0 3.268	10,0 0.394	115,0 4.528	6	NFQF10...	□	□	□	■	□	□
NF10-6.5 H7-EB..	6,5 0.2559	6,5 H7	6,3-6,35-6,4 0.248-0.250- 0.252	6,500 0.2559	6,515 0.2565	83,0 3.268	10,0 0.394	115,0 4.528	6	NFQF10...	□	□	□	■	□	□
NF10-6.98 H7-EB..	6,98 0.2748	6,98 H7	6,8-6,9 0.268-0.272	6,980 0.2748	6,995 0.2754	83,0 3.268	10,0 0.394	115,0 4.528	6	NFQF10...	□	□	□	■	□	□
NF10-7 H7-EB..	7 0.2756	7 H7	6,8-6,9 0.268-0.272	7,000 0.2756	7,015 0.2762	83,0 3.268	10,0 0.394	115,0 4.528	6	NFQF10...	□	□	□	■	□	□
NF10-7.01 H7-EB..	7,01 0.2760	7,01 H7	6,8-6,9 0.268-0.272	7,010 0.2760	7,025 0.2766	83,0 3.268	10,0 0.394	115,0 4.528	6	NFQF10...	□	□	□	■	□	□
NF10-7.02 H7-EB..	7,02 0.2764	7,02 H7	6,9 0.272	7,020 0.2764	7,035 0.2770	83,0 3.268	10,0 0.394	115,0 4.528	6	NFQF10...	□	□	□	■	□	□
NF10-7.05 H7-EB..	7,05 0.2776	7,05 H7	6,9 0.272	7,050 0.2776	7,065 0.2781	83,0 3.268	10,0 0.394	115,0 4.528	6	NFQF10...	□	□	□	■	□	□
NF10-7.5 H7-EB..	7,5 0.2953	7,5 H7	7,3-7,4 0.287-0.291	7,500 0.2953	7,515 0.2959	83,0 3.268	10,0 0.394	115,0 4.528	6	NFQF10...	□	□	□	■	□	□
NF10-7.9375 H7-EB..	7,937 0.3125	7,937 H7	7,8 0.307	7,937 0.3125	7,952 0.3133	83,0 3.268	10,0 0.394	115,0 4.528	6	NFQF10...	□	□	□	■	□	□
NF10-7.97 H7-EB..	7,97 0.3138	7,97 H7	7,8-7,9 0.307-0.311	7,970 0.3138	7,985 0.3144	83,0 3.268	10,0 0.394	115,0 4.528	6	NFQF10...	□	□	□	■	□	□

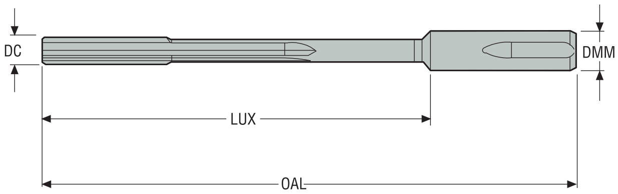
Designation	DC	Hole dia ISO	Drill size	Hole dia min-max		LUX	DMM	OAL		Body size	Geometries			Grades		
	mm *Inch*	mm	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*			EB45	EB845	EB30	RX2000	RK2050	H15
NF10-7.98 H7-EB..	7,98 *0.3142*	7,98 H7	7,8-7,9 *0.307-0.311*	7,980 *0.3142*	7,995 *0.3148*	83,0 *3.268*	10,0 *0.394*	115,0 *4.528*	6	NFQF10...	□	□	□	■	□	□
NF10-7.99 H7-EB..	7,99 *0.3146*	7,99 H7/8 K7	7,8-7,9 *0.307-0.311*	7,990 *0.3146*	8,005 *0.3152*	83,0 *3.268*	10,0 *0.394*	115,0 *4.528*	6	NFQF10...	□	□	□	■	□	□
NF10-8 H7-EB..	8,00 *0.3150*	8 H7	7,8-7,9 *0.307-0.311*	8,000 *0.3150*	8,015 *0.3156*	83,0 *3.268*	10,0 *0.394*	115,0 *4.528*	6	NFQF10...	□	□	□	■	□	□
NF10-8.01 H7-EB..	8,01 *0.3154*	8,01 H7	7,8-7,9 *0.307-0.311*	8,010 *0.3154*	8,025 *0.3159*	83,0 *3.268*	10,0 *0.394*	115,0 *4.528*	6	NFQF10...	□	□	□	■	□	□
NF10-8.02 H7-EB..	8,02 *0.3157*	8,02 H7	7,9 *0.311*	8,020 *0.3157*	8,035 *0.3163*	83,0 *3.268*	10,0 *0.394*	115,0 *4.528*	6	NFQF10...	□	□	□	■	□	□
NF10-8.03H7-EB..	8,03 *0.3161*	8,03 H7/8 E8	7,9 *0.311*	8,030 *0.3161*	8,045 *0.3167*	83,0 *3.268*	10,0 *0.394*	115,0 *4.528*	6	NFQF10...	□	□	□	■	□	□
NF10-8.04 H7-EB..	8,04 *0.3165*	8,04 H7/8 D7	7,9 *0.311*	8,040 *0.3165*	8,055 *0.3171*	83,0 *3.268*	10,0 *0.394*	115,0 *4.528*	6	NFQF10...	□	□	□	■	□	□
NF10-8.05 H7-EB..	8,05 *0.3169*	8,05 H7	7,9 *0.311*	8,050 *0.3169*	8,065 *0.3175*	83,0 *3.268*	10,0 *0.394*	115,0 *4.528*	6	NFQF10...	□	□	□	■	□	□
NF10-8.5 H7-EB..	8,5 *0.3346*	8,5 H7	8,3-8,338-8,4 *0.327-0.3-0.331 28*	8,500 *0.3346*	8,515 *0.3352*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10...	□	□	□	■	□	□
NF10-8.97 H7-EB..	8,97 *0.3531*	8,97 H7	8,8-8,9 *0.346-0.350*	8,970 *0.3531*	8,985 *0.3537*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10...	□	□	□	■	□	□
NF10-9 H7-EB..	9 *0.3543*	9 H7	8,8-8,9 *0.346-0.350*	9,000 *0.3543*	9,015 *0.3549*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10...	□	□	□	■	□	□
NF10-9.01 H7-EB..	9,01 *0.3547*	9,01 H7	8,8-8,9 *0.346-0.350*	9,010 *0.3547*	9,025 *0.3553*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10...	□	□	□	■	□	□
NF10-9.05 H7-EB..	9,05 *0.3563*	9,05 H7	8.9 *0.350*	9,050 *0.3563*	9,065 *0.3569*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10...	□	□	□	■	□	□
NF10-9.5 H7-EB..	9,5 *0.3740*	9,5 H7	9,3-9,4 *0.366-0.370*	9,500 *0.3740*	9,515 *0.3746*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10...	□	□	□	■	□	□
NF10-9.525 H7-EB..	9,525 *0.3750*	9,525 H7	9,8-9,9 *0.386-0.390*	9,525 *0.3750*	9,540 *0.3756*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10...	□	□	□	■	□	□
NF10-9.97 H7-EB..	9,97 *0.3925*	9,97 H7	9,8-9,9 *0.386-0.390*	9,970 *0.3925*	9,985 *0.3931*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10...	□	□	□	■	□	□
NF10-9.98 H7-EB..	9,98 *0.3929*	9,98 H7	9,8-9,9 *0.386-0.390*	9,980 *0.3929*	9,995 *0.3935*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10...	□	□	□	■	□	□
NF10-9.99 H7-EB..	9,99 *0.3933*	9,99 H7/10 K7	9,8-9,9 *0.386-0.390*	9,990 *0.3933*	10,005 *0.3939*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10...	□	□	□	■	□	□
NF10-10 H7-EB..	10 *0.3937*	10 H7	9,8-9,9 *0.386-0.390*	10,000 *0.3937*	10,015 *0,3943*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10...	□	□	□	■	□	□
NF10-10.01 H7-EB..	10,01 *0.3941*	10,01 H7	9,8-9,9 *0.386-0.390*	10,010 *0.3941*	10,028 *0.3948*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10...	□	□	□	■	□	□
NF10-10.02 H7-EB..	10,02 *0.3945*	10,02 H7	9,8-9,9 *0.386-0.390*	10,020 *0.3945*	10,038 *0.3952*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10...	□	□	□	■	□	□
NF10-10.04 H7-EB..	10,04 *0.3953*	10,04 H7/10 D7	9,9 *0.390*	10,040 *0.3953*	10,058 *0.3960*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10...	□	□	□	■	□	□
NF10-10.05 H7-EB..	10,05 *0.3957*	10,05 H7	9,9 *0.390*	10,050 *0.3957*	10,068 *0.3964*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10...	□	□	□	■	□	□
NF10-11 H7-EB..	11 *0.4331*	11 H7	10,8 *0.425*	11,000 *0.4331*	11,018 *0.4338*	114,0 *4.488*	10,0 *0.394*	145,0 *5.709*	6	NFQF10...	□	□	□	■	□	□
NF10-11.04 H7-EB..	11,04 *0.4346*	11,04 H7/11 E7	10,8 *0.425*	11,040 *0.4346*	11,058 *0.4354*	114,0 *4.488*	10,0 *0.394*	145,0 *5.709*	6	NFQF10...	□	□	□	■	□	□
NF10-11.05 H7-EB..	11,05 *0.4350*	11,05 H7/11 D7	10,8 *0.425*	11,050 *0.4350*	11,068 *0.4357*	114,0 *4.488*	10,0 *0.394*	145,0 *5.709*	6	NFQF10...	□	□	□	■	□	□
NF10-11.112 H7-EB..	11,112 *0.4375*	11,112 H7	10,9-11 *0.429-0.433*	11,112 *0.4375*	11,130 *0.4382*	114,0 *4.488*	10,0 *0.394*	145,0 *5.709*	6	NFQF10...	□	□	□	■	□	□
NF10-11.97 H7-EB..	11,97 *0.4713*	11,97 H7	11,8 *0.465*	11,970 *0.4713*	11,988 *0.4720*	114,0 *4.488*	10,0 *0.394*	145,0 *5.709*	6	NFQF10...	□	□	□	■	□	□
NF10-11.98 H7-EB..	11,98 *0.4717*	11,98 H7	11,8 *0.465*	11,980 *0.4717*	11,998 *0.4724*	114,0 *4.488*	10,0 *0.394*	145,0 *5.709*	6	NFQF10...	□	□	□	■	□	□
NF10-11.99 H7-EB..	11,99 *0.4720*	11,99 H7	11,8 *0.465*	11,990 *0.4720*	12,008 *0.4728*	114,0 *4.488*	10,0 *0.394*	145,0 *5.709*	6	NFQF10...	□	□	□	■	□	□

Designation	DC	Hole dia ISO	Drill size	Hole dia min-max		LUX	DMM	OAL		Body size	Geometries			Grades		
	mm *Inch*	mm	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*			EB45	EB845	EB30	RX2000	RK2050	H15
NF10-12 H7-EB..	12 *0.4724*	12 H7	11,8 *0.465*	12,000 *0.4724*	12,018 *0.4731*	114,0 *4.488*	10,0 *0.394*	145,0 *5.709*	6	NFQF10…	□	□	□	■	□	□
NF10-12.01 H7-EB..	12,01 *0.4728*	12,01 H7	11,8 *0.465*	12,010 *0.4728*	12,028 *0.4735*	114,0 *4.488*	10,0 *0.394*	145,0 *5.709*	6	NFQF10…	□	□	□	■	□	□
NF10-12.02 H7-EB..	12,02 *0.4732*	12,02 H7/12 F8	11,8-11,906 *0.465-0.469*	12,020 *0.4732*	12,038 *0.4739*	114,0 *4.488*	10,0 *0.394*	145,0 *5.709*	6	NFQF10…	□	□	□	■	□	□
NF10-12.03 H7-EB..	12,03 *0.4736*	12,03 H7	11,8-11,906 *0.465-0.469*	12,030 *0.4736*	12,048 *0.4743*	114,0 *4.488*	10,0 *0.394*	145,0 *5.709*	6	NFQF10…	□	□	□	■	□	□
NF10-12.04 H7-EB..	12,04 *0.4740*	12,04 H7/12 E7	11,8-11,906 *0.465-0.469*	12,040 *0.4740*	12,058 *0.4747*	114,0 *4.488*	10,0 *0.394*	145,0 *5.709*	6	NFQF10…	□	□	□	■	□	□
NF10-12.05 H7-EB..	12,05 *0.4744*	12,05 H7/12 D7	11,8-11,906 *0.465-0.469*	12,050 *0.4744*	12,068 *0.4751*	114,0 *4.488*	10,0 *0.394*	145,0 *5.709*	6	NFQF10…	□	□	□	■	□	□

■ Stock standard. □ Non stock standard.
Note: When ordering Nanofix reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.
Ordering example: NF10-10,187/10,213-EB845, RX2000.

Reamers for blind and through holes

Ø 2,97-12,05 mm / 0.116-0.474 in

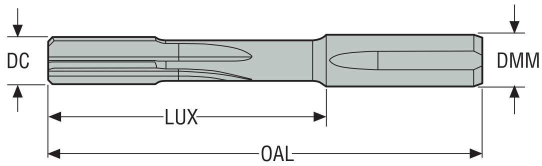


Designation	DCN	DCX	LUX	DMM	OAL		Body size	Geometries	Grades						
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*				H15	RK2050	RX2000	RN2010	RM2020	RM2090	RS2090
NF06-2.970-XX-XXXX	2,97 *0.117*	3,05 *0.120*	40,0 *1.575*	6,0 *0.236*	60,0 *2.362*	4	NFQF06-xx	EB45 EB845	☐	☐	☐	☐	☐	☐	☐
NF06-3.051-XX-XXXX	3,051 *0.120*	6,05 *0.238*	60,0 *2.362*	6,0 *0.236*	80,0 *3.150*	4	NFQF06-xx	EB45 EB845	☐	☐	☐	☐	☐	☐	☐
NF10-6.051-XX-XXXX	6,051 *0.238*	8,05 *0.317*	83,0 *3.268*	10,0 *0.394*	115,0 *4.528*	6	NFQF10-xx	EB45 EB845	☐	☐	☐	☐	☐	☐	☐
NF10-8.051-XX-XXXX	8,051 *0.317*	10,05 *0.396*	93,0 *3.661*	10,0 *0.394*	125,0 *4.921*	6	NFQF10-xx	EB45 EB845	☐	☐	☐	☐	☐	☐	☐
NF10-10.051-XX-XXXX	10,051 *0.396*	12,05 *0.474*	114,0 *4.488*	10,0 *0.394*	145,0 *5.709*	6	NFQF10-xx	EB45 EB845	☐	☐	☐	☐	☐	☐	☐

☐ Non stock standard.
Note: When ordering Nanofix reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.
Ordering example: NF10-10,187/10,213-EB845, RX2000.

Reamers for blind and through holes – short version

Ø 2,97-12,05 mm / 0.116-0.474 in



Designation	DC	Hole dia ISO	Drill size	Hole dia min-max		LUX	DMM	OAL		Body size	Geometries			Grades		
	mm *Inch*	mm	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*			EB45	EB845	EB30	RX2000	RK2050	H15
NS06-2.97 H7-EB...	2,97 *0.1169*	2,97 H7	2,8-2,9 *0.110-0.114*	2,97 *0.1169*	2,98 *0.1173*	25,0 *0.984*	6,0 *0.236*	45,0 *1.772*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-2.98 H7-EB...	2,98 *0.1173*	2,98 H7	2,8-2,9 *0.110-0.114*	2,98 *0.1173*	2,99 *0.1177*	25,0 *0.984*	6,0 *0.236*	45,0 *1.772*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-2.99 H7-EB...	2,99 *0.1177*	2,99 H7/3 K7	2,8-2,9 *0.110-0.114*	2,99 *0.1177*	3,00 *0.1181*	25,0 *0.984*	6,0 *0.236*	45,0 *1.772*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-3 H7-EB...	3,00 *0.1181*	3 H7	2,8-2,9 *0.110-0.114*	3,00 *0.1181*	3,01 *0.1185*	25,0 *0.984*	6,0 *0.236*	45,0 *1.772*	4	NFQF06...	☐	☐	☐	10019456	☐	☐
NS06-3.01 H7-EB...	3,01 *0.1185*	3,01 H7	2,8-2,9 *0.110-0.114*	3,01 *0.1185*	3,02 *0.1189*	25,0 *0.984*	6,0 *0.236*	45,0 *1.772*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-3.02 H7-EB...	3,02 *0.1189*	3,02 H7/3 D7	2,9 *0.114*	3,02 *0.1189*	3,03 *0.1193*	25,0 *0.984*	6,0 *0.236*	45,0 *1.772*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-3.03 H7-EB...	3,03 *0.1193*	3,03 H7	2,9 *0.114*	3,03 *0.1193*	3,04 *0.1197*	25,0 *0.984*	6,0 *0.236*	45,0 *1.772*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-3.04 H7-EB...	3,04 *0.1197*	3,04 H7/3D10	2,9 *0.114*	3,04 *0.1197*	3,05 *0.1201*	25,0 *0.984*	6,0 *0.236*	45,0 *1.772*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-3.05 H7-EB...	3,05 *0.1201*	3,05 H7	2,9 *0.114*	3,05 *0.1201*	3,167 *0.1247*	25,0 *0.984*	6,0 *0.236*	45,0 *1.772*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-3.167 H7-EB...	3,167 *0.1247*	3,167 H7	3 *0.118*	3,167 *0.1247*	3,175 *0.1250*	30,0 *1.181*	6,0 *0.236*	50,0 *1.969*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-3.175 H7-EB...	3,175 *0.1250*	3,175 H7	3 *0.118*	3,175 *0.1250*	3,49 *0.1374*	30,0 *1.181*	6,0 *0.236*	50,0 *1.969*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-3.49 H7-EB...	3,49 *0.1374*	3,49 H7	3,3-3,4 *0.130-0.134*	3,49 *0.1374*	3,50 *0.1378*	30,0 *1.181*	6,0 *0.236*	50,0 *1.969*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-3.5 H7-EB...	3,50 *0.1378*	3,5 H7	3,3-3,4 *0.130-0.134*	3,50 *0.1378*	3,51 *0.1382*	30,0 *1.181*	6,0 *0.236*	50,0 *1.969*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-3.51 H7-EB...	3,51 *0.1382*	3,51 H7	3,3-3,4 *0.130-0.134*	3,51 *0.1382*	3,52 *0.1386*	30,0 *1.181*	6,0 *0.236*	50,0 *1.969*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-3.52 H7-EB...	3,52 *0.1386*	3,52 H7	3,3-3,4 *0.130-0.134*	3,52 *0.1386*	3,97 *0.1563*	30,0 *1.181*	6,0 *0.236*	50,0 *1.969*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-3.97 H7-EB...	3,97 *0.1563*	3,97 H7	3,8-3,9 *0.150-0.154*	3,97 *0.1563*	3,98 *0.1567*	30,0 *1.181*	6,0 *0.236*	50,0 *1.969*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-3.98 H7-EB...	3,98 *0.1567*	3,98 H7/4 P7	3,8-3,9 *0.150-0.154*	3,98 *0.1567*	3,99 *0.1571*	30,0 *1.181*	6,0 *0.236*	50,0 *1.969*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-3.99 H7-EB...	3,99 *0.1571*	3,99 H7/4 K8	3,8-3,9 *0.150-0.154*	3,99 *0.1571*	4,00 *0.1575*	30,0 *1.181*	6,0 *0.236*	50,0 *1.969*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-4 H7-EB...	4,00 *0.1575*	4 H7	3,8-3,9 *0.150-0.154*	4,00 *0.1575*	4,01 *0.1579*	30,0 *1.181*	6,0 *0.236*	50,0 *1.969*	4	NFQF06...	☐	☐	☐	10019457	☐	☐
NS06-4.01 H7-EB...	4,01 *0.1579*	4,01 H7/4 F7	3,8-3,9 *0.150-0.154*	4,01 *0.1579*	4,02 *0.1583*	30,0 *1.181*	6,0 *0.236*	50,0 *1.969*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-4.02 H7-EB...	4,02 *0.1583*	4,02 H7/4 E7	3,9 *0.154*	4,02 *0.1583*	4,03 *0.1587*	30,0 *1.181*	6,0 *0.236*	50,0 *1.969*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-4.03 H7-EB...	4,03 *0.1587*	4,03 H7/4 D7	3,9 *0.154*	4,03 *0.1587*	4,04 *0.1591*	30,0 *1.181*	6,0 *0.236*	50,0 *1.969*	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-4.04 H7-EB...	4,04 *0.1591*	4,04 H7	3,9 *0.154*	4,04 *0.1591*	4,05 *0.1594*	30,0 *1.181*	6,0 *0.236*	50,0 *1.969*	4	NFQF06...	☐	☐	☐	☐	☐	☐

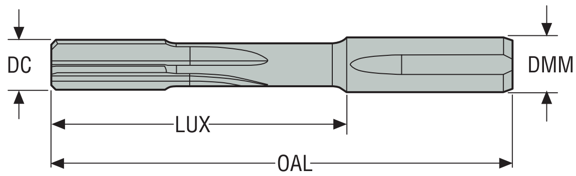
Designation	DC	Hole dia ISO	Drill size	Hole dia min-max		LUX	DMM	OAL		Body size	Geometries			Grades		
	mm Inch	mm	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			EB45	EB845	EB30	RX2000	RK2050	H15
NS06-4.05 H7-EB...	4,05 0.1594	4,05 H7	3,9 0.154	4,05 0.1594	4,06 0.1598	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-4.5 H7-EB...	4,50 0.177	4,5 H7	4,3-4,4 0.169-0.173	4,50 0.177	4,51 0.1776	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-4.750 H7-EB...	4,75 0.187	4,75 H7	4,5 0.177	4,75 0.187	4,76 0.1874	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	10019458	☐	☐
NS06-4.762 H7-EB...	4,762 0.187	4,762 H7	4,5 0.177	4,762 0.187	4,77 0.1878	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-4.97 H7-EB...	4,97 0.196	4,97 H7	4,8-4,9 0.189-0.193	4,97 0.196	4,98 0.1961	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-4.98 H7-EB...	4,98 0.1961	4,98 H7/5 P7	4,8-4,9 0.189-0.193	4,98 0.1961	4,99 0.1965	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-4.99 H7-EB...	4,99 0.1965	4,99 H7/5 K8	4,8-4,9 0.189-0.193	4,99 0.1965	5,00 0.1969	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-5 H7-EB...	5,00 0.1969	5 H7	4,8-4,9 0.189-0.193	5,00 0.1969	5,01 0.1972	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	10019459	☐	☐
NS06-5.01 H7-EB...	5,01 0.1972	5,01 H7/5 F7	4,8-4,9 0.189-0.193	5,01 0.1972	5,02 0.1976	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-5.02 H7-EB...	5,02 0.1976	5,02 H7/5 E7	4,9 0.193	5,02 0.1976	5,03 0.1980	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-5.03 H7-EB...	5,03 0.1980	5,03 H7/5 D7	4,9 0.193	5,03 0.1980	5,04 0.1984	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-5.04 H7-EB...	5,04 0.1984	5,04 H7	4,9 0.193	5,04 0.1984	5,05 0.1988	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-5.05 H7-EB...	5,05 0.1988	5,05 H7	4,9 0.193	5,05 0.1988	5,06 0.1992	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-5.5 H7-EB...	5,50 0.217	5,5 H7	5,3-5,4 0.209-0.213	5,50 0.217	5,51 0.2169	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-5.97 H7-EB...	5,97 0.2350	5,97 H7	5,8-5,9 0.228-0.232	5,97 0.2350	5,98 0.2354	31,0 1.220	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-5.98 H7-EB...	5,98 0.2354	5,98 H7/6 P7	5,8-5,9 0.228-0.232	5,98 0.2354	5,99 0.2358	31,0 1.220	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-5.99 H7-EB...	5,99 0.2358	5,99 H7/6 K8	5,8-5,9 0.228-0.232	5,99 0.2358	6,00 0.2362	31,0 1.220	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-6 H7-EB...	6,00 0.2362	6 H7	5,8-5,9 0.228-0.232	6,00 0.2362	6,01 0.2366	31,0 1.220	6,0 0.236	31,0 1.220	4	NFQF06...	☐	☐	☐	10019460	☐	☐
NS06-6,01 H7-EB...	6,01 0.2366	6,01 H7/6 F7	5,8-5,9 0.228-0.232	6,01 0.2366	6,03 0.2374	31,0 1.220	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-6.02 H7-EB...	6,02 0.2370	6,02 H7/6 E7	5,9 0.232	6,02 0.2370	6,04 0.2378	31,0 1.220	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-6.03 H7-EB...	6,03 0.2374	6,03 H7/6 D7	5,9 0.232	6,03 0.2374	6,05 0.2382	31,0 1.220	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-6.04 H7-EB...	6,04 0.2378	6,04 H7	5,9 0.232	6,04 0.2378	6,06 0.2386	31,0 1.220	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS06-6.05 H7-EB...	6,05 0.2382	6,05 H7	5,9 0.232	6,05 0.2382	6,07 0.239	31,0 1.220	6,0 0.236	50,0 1.969	4	NFQF06...	☐	☐	☐	☐	☐	☐
NS10-6.350 H7-EB...	6,35 0.250	6,35 H7	6,2 0.244	6,35 0.250	6,37 0.2508	46,0 1.811	10,0 0.394	78,0 3.071	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-6.5 H7-EB...	6,50 0.256	6,5 H7	6,3-6,35-6,4 0.248-0.250- 0.252	6,50 0.256	6,52 0.2567	46,0 1.811	10,0 0.394	78,0 3.071	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-6.97 H7-EB...	6,97 0.2744	6,97 H7	6,8-6,9 0.268-0.272	6,97 0.2744	6,99 0.2752	46,0 1.811	10,0 0.394	78,0 3.071	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-6.98 H7-EB...	6,98 0.2748	6,98 H7	6,8-6,9 0.268-0.272	6,98 0.2748	7,00 0.2756	46,0 1.811	10,0 0.394	78,0 3.071	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-6.99 H7-EB...	6,99 0.2752	6,99 H7/7 K7	6,8-6,9 0.268-0.272	6,99 0.2752	7,01 0.2760	46,0 1.811	10,0 0.394	78,0 3.071	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-7 H7-EB...	7,00 0.2756	7 H7	6,8-6,9 0.268-0.272	7,00 0.2756	7,02 0.2764	46,0 1.811	10,0 0.394	78,0 3.071	6	NFQF10...	☐	☐	☐	10019463	☐	☐
NS10-7.01 H7-EB...	7,01 0.2760	7,01 H7	6,8-6,9 0.268-0.272	7,01 0.2760	7,03 0.2768	46,0 1.811	10,0 0.394	78,0 3.071	6	NFQF10...	☐	☐	☐	☐	☐	☐

Designation	DC	Hole dia ISO	Drill size	Hole dia min-max		LUX	DMM	OAL		Body size	Geometries			Grades		
	mm *Inch*	mm	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*			EB45	EB845	EB30	RX2000	RK2050	H15
NS10-7.02 H7-EB...	7,02 *0.2764*	7,02 H7	6,9 *0.272*	7,02 *0.2764*	7,04 *0.2772*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-7.03 H7-EB...	7,03 *0.2768*	7,03 H7/7 E8	6,9 *0.272*	7,03 *0.2768*	7,05 *0.2776*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-7.04 H7-EB...	7,04 *0.2772*	7,04 H7/7 D7	6,9 *0.272*	7,04 *0.2772*	7,06 *0.2780*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-7.05 H7-EB...	7,05 *0.2776*	7,05 H7	6,9 *0.272*	7,05 *0.2776*	7,07 *0.2783*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-7.5 H7-EB...	7,50 *0.295*	7,5 H7	7,3-7,4 *0.287-0.291*	7,50 *0.295*	7,52 *0.2961*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-7.9375 H7-EB...	7,937 *0.312*	7,937 H7	7,8 *0.307*	7,937 *0.312*	7,95 *0.3130*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-7.97 H7-EB...	7,97 *0.3138*	7,97 H7	7,8-7,9 *0.307-0.311*	7,97 *0.3138*	7,99 *0.315*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-7.98 H7-EB...	7,98 *0.3142*	7,98 H7	7,8-7,9 *0.307-0.311*	7,98 *0.3142*	8,00 *0.3146*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-7.99 H7-EB...	7,99 *0.315*	7,99 H7/8 K7	7,8-7,9 *0.307-0.311*	7,99 *0.315*	8,01 *0.3154*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-8 H7-EB...	8,00 *0.3146*	8 H7	7,8-7,9 *0.307-0.311*	8,00 *0.3146*	8,02 *0.3157*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	10019464	☐	☐
NS10-8.01 H7-EB...	8,01 *0.3154*	8,01 H7	7,8-7,9 *0.307-0.311*	8,01 *0.3154*	8,03 *0.3161*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-8.02 H7-EB...	8,02 *0.3157*	8,02 H7	7,9 *0.311*	8,02 *0.3157*	8,04 *0.3165*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-8.03 H7-EB...	8,03 *0.3161*	8,03 H7/8 E8	7,9 *0.311*	8,03 *0.3161*	8,05 *0.3169*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-8.04 H7-EB...	8,04 *0.3165*	8,04 H7/8 D7	7,9 *0.311*	8,04 *0.3165*	8,06 *0.3173*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-8.05 H7-EB...	8,05 *0.3169*	8,05 H7	7,9 *0.311*	8,05 *0.3169*	8,07 *0.3177*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-8.5 H7-EB...	8,50 *0.335*	8,5 H7	8,3-8,338-8,4 *0.327-0.328-0.331*	8,50 *0.335*	8,52 *0.3354*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-8.97 H7-EB...	8,97 *0.3531*	8,97 H7	8,8-8,9 *0.346-0.350*	8,97 *0.3531*	8,99 *0.3539*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-8.98 H7-EB...	8,98 *0.3535*	8,98 H7	8,8-8,9 *0.346-0.350*	8,98 *0.3535*	9,00 *0.3543*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-8.99 H7-EB...	8,99 *0.3539*	8,99 H7/9 K7	8,8-8,9 *0.346-0.350*	8,99 *0.3539*	9,01 *0.3547*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-9 H7-EB...	9,00 *0.3543*	9 H7	8,8-8,9 *0.346-0.350*	9,00 *0.3543*	9,02 *0.3551*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	10019465	☐	☐
NS10-9.01 H7-EB...	9,01 *0.3547*	9,01 H7	8,8-8,9 *0.346-0.350*	9,01 *0.3547*	9,03 *0.3555*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-9.02 H7-EB...	9,02 *0.3551*	9,02 H7	8,9 *0.350*	9,02 *0.3551*	9,04 *0.3559*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-9.03 H7-EB...	9,03 *0.3555*	9,03 H7/9 E8	8,9 *0.350*	9,03 *0.3555*	9,05 *0.3563*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-9.04 H7-EB...	9,04 *0.3559*	9,04 H7/9 D7	8,9 *0.350*	9,04 *0.3559*	9,06 *0.3567*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-9.05 H7-EB...	9,05 *0.3563*	9,05 H7	8,9 *0.350*	9,05 *0.3563*	9,07 *0.3571*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-9.5 H7-EB...	9,50 *0.374*	9,5 H7	9,3-9,4 *0.366-0.370*	9,50 *0.374*	9,52 *0.3748*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-9.5123 H7-EB...	9,512 *0.3745*	9,512 H7	9,3-9,4 *0.366-0.370*	9,512 *0.3745*	9,53 *0.3752*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-9.5250 H7-EB...	9,525 *0.375*	9,525 H7	9,3-9,4 *0.366-0.370*	9,525 *0.375*	9,54 *0.3756*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	10019466	☐	☐
NS10-9.97 H7-EB...	9,97 *0.3925*	9,97 H7	9,8-9,9 *0.386-0.390*	9,97 *0.3925*	9,99 *0.3933*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-9.98 H7-EB...	9,98 *0.3929*	9,98 H7	9,8-9,9 *0.386-0.390*	9,98 *0.3929*	10,00 *0.3937*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐

Designation	DC	Hole dia ISO	Drill size	Hole dia min-max		LUX	DMM	OAL		Body size	Geometries			Grades		
	mm *Inch*	mm	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*			EB45	EB845	EB30	RX2000	RK2050	H15
NS10-9.99 H7-EB...	9,99 *0.3933*	9,99 H7/10 K7	9,8-9,9 *0.386-0.390*	9,99 *0.3933*	10,01 *0.3941*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-10 H7-EB...	10,00 *0.3937*	10 H7	9,8-9,9 *0.386-0.390*	10,00 *0.3937*	10,02 *0.3945*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	10019467	☐	☐
NS10-10.01 H7-EB...	10,01 *0.3941*	10,01 H7	9,8-9,9 *0.386-0.390*	10,01 *0.3941*	10,03 *0.3949*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-10.02 H7-EB...	10,02 *0.3945*	10,02 H7	9,8-9,9 *0.386-0.390*	10,02 *0.3945*	10,04 *0.3953*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-10.03 H7-EB...	10,03 *0.3949*	10,03 H7/10 E8	9,9 *0.390*	10,03 *0.3949*	10,05 *0.3957*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-10.04 H7-EB...	10,04 *0.3953*	10,04 H7/10 D7	9,9 *0.390*	10,04 *0.3953*	10,06 *0.3961*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-10.05 H7-EB...	10,05 *0.3957*	10,05 H7	9,9 *0.390*	10,05 *0.3957*	10,07 *0.3965*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-10.5 H7-EB...	10,50 *0.413*	10,5 H7	10,319-10,4 *0.406-0.409*	10,50 *0.413*	10,52 *0.4142*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-10.97 H7-EB...	10,97 *0.4319*	10,97 H7	10,8 *0.425*	10,97 *0.4319*	10,99 *0.4327*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-10.98 H7-EB...	10,98 *0.4323*	10,98 H7	10,8 *0.425*	10,98 *0.4323*	11,00 *0.4331*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-10.99 H7-EB...	10,99 *0.4327*	10,99 H7	10,8 *0.425*	10,99 *0.4327*	11,01 *0.4335*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-11 H7-EB...	11,00 *0.4331*	11 H7	10,8 *0.425*	11,00 *0.4331*	11,02 *0.4339*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-11.01 H7-EB...	11,01 *0.4335*	11,01 H7	10,8 *0.425*	11,01 *0.4335*	11,03 *0.4343*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-11.02 H7-EB...	11,02 *0.4339*	11,02 H7/11 F8	10,8 *0.425*	11,02 *0.4339*	11,04 *0.4346*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-11.03 H7-EB...	11,03 *0.4343*	11,03 H7	10,8 *0.425*	11,03 *0.4343*	11,05 *0.4350*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-11.04 H7-EB...	11,04 *0.4346*	11,04 H7/11 E7	10,8 *0.425*	11,04 *0.4346*	11,06 *0.4354*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-11.05 H7-EB...	11,05 *0.4350*	11,05 H7/11 D7	10,8 *0.425*	11,05 *0.4350*	11,07 *0.4358*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-11.112 H7-EB...	11,112 *0.4375*	11,112 H7	10,9-11 *0.429-0.433*	11,112 *0.4375*	11,13 *0.4382*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-11.5 H7-EB...	11,50 *0.453*	11,5 H7	11,3 *0.445*	11,50 *0.453*	11,52 *0.4535*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-11.97 H7-EB...	11,97 *0.4713*	11,97 H7	11,8 *0.465*	11,97 *0.4713*	11,99 *0.4720*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-11.98 H7-EB...	11,98 *0.4717*	11,98 H7	11,8 *0.465*	11,98 *0.4717*	12,00 *0.4724*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-11.99 H7-EB...	11,99 *0.4720*	11,99 H7	11,8 *0.465*	11,99 *0.4720*	12,01 *0.4728*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-12 H7-EB...	12,00 *0.4724*	12 H7	11,8 *0.465*	12,00 *0.4724*	12,02 *0.4732*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	10019468	☐	☐
NS10-12.01 H7-EB...	12,01 *0.4728*	12,01 H7	11,8 *0.465*	12,01 *0.4728*	12,03 *0.4736*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-12.02 H7-EB...	12,02 *0.4732*	12,02 H7/12 F8	11,8-11,906 *0.465-0.469*	12,02 *0.4732*	12,04 *0.4740*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-12.03 H7-EB...	12,03 *0.4736*	12,03 H7	11,8-11,906 *0.465-0.469*	12,03 *0.4736*	12,05 *0.4744*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-12.04 H7-EB...	12,04 *0.4740*	12,04 H7/12 E7	11,8-11,906 *0.465-0.469*	12,04 *0.4740*	12,06 *0.4748*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐
NS10-12.05 H7-EB...	12,05 *0.4744*	12,05 H7/12 D7	11,8-11,906 *0.465-0.469*	12,05 *0.4744*	12,07 *0.4752*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10...	☐	☐	☐	☐	☐	☐

☐ Non stock standard.
Note: When ordering Nanofix reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.
Ordering example: NF10-10,187/10,213-EB845, RX2000.

Intermediate diameter

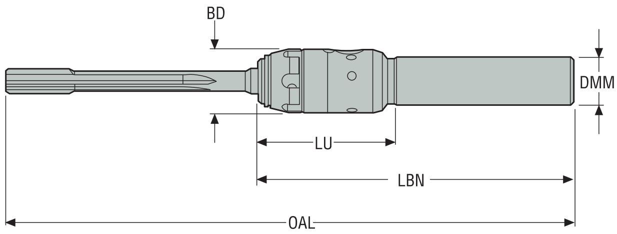


- For cutting data see page(s) 380-387
- For choice of geometry EB45 or EB845, please see page(s) 335

Designation	DCN	DCX	LUX	DMM	OAL		Body size	Geometries	Grades						
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*				H15	RK2050	RX2000	RN2010	RM2020	RM2090	RS2090
NS06-2.970-XX-XXXX	2,97 *0.117*	3,05 *0.120*	25,0 *0.984*	6,0 *0.236*	45,0 *1.772*	4	NFQF06-xx	EB45 EB845	☐	☐	☐	☐	☐	☐	☐
NS06-3.051-XX-XXXX	3,051 *0.120*	6,05 *0.238*	30,0 *1.181*	6,0 *0.236*	50,0 *1.969*	4	NFQF06-xx	EB45 EB845	☐	☐	☐	☐	☐	☐	☐
NS10-6.051-XX-XXXX	6,051 *0.238*	10,05 *0.396*	46,0 *1.811*	10,0 *0.394*	78,0 *3.071*	6	NFQF10-xx	EB45 EB845	☐	☐	☐	☐	☐	☐	☐
NS10-10.051-XX-XXXX	10,051 *0.396*	12,05 *0.474*	57,0 *2.244*	10,0 *0.394*	88,0 *3.465*	6	NFQF10-xx	EB45 EB845	☐	☐	☐	☐	☐	☐	☐

☐ = Non stock standard.
Note: When ordering Nanofix reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.
Ordering example: NS10-10,187/10,213-EB845, RS2090.

Nanofix tool holder

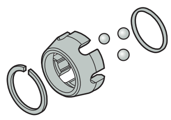
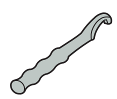


Item number	Designation	DC	DMM	BD	LU	LBN
		mm	mm	mm	mm	mm
02729036	NFQF06-03700-10N1	2,97-6,05	10,0	16,0	37,0	80,0
02729037	NFQF06-03300-12N1	2,97-6,05	12,0	16,0	35,28	80,0
02729041	NFQF06-03000-16N1	2,97-6,05	16,0	16,0	30,0	80,0
02729044	NFQF10-05200-12N1	6,051-12,05	12,0	23,0	52,0	100,0
02729045	NFQF10-04900-16N1	6,051-12,05	16,0	23,0	49,0	100,0
02729046	NFQF10-04700-20N1	6,051-12,05	20,0	23,0	47,0	100,0

Spare clamping kit for Nanofix holders includes:
- 1 clamping nut
- 1 axial stop spring ring
- 3 clamping balls (dia 3,5 mm for size NF06 & dia 5 mm for size NF10)
- 1 fool-proof ball (dia 3 mm for size NF06 & dia 4 mm for size NF10)
- 1 o-ring

Note: fool-proof ball not shown on above view.

Spare parts

DC	Spare Clamping Kit	Key
		
2,97-6,050	NF06-CLKI	CLC06KEY
6,051-12,050	NF10-CLKI	CLC10KEY

Introduction Drilling Reaming Boring Annex

NF/NS...-EB845 (metric)

		a_p (Ø)		f		v_c			
SMG		z=4	z=6	z=4	z=6	H15	CP20	RX2000	RK2050
P3	NF/NS-EB845	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	-	60 (30-100)	80 (30-150)	-
P4	NF/NS-EB845	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	-	50 (30-80)	60 (30-120)	-
P5	NF/NS-EB845	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	20 (10-25)	50 (30-80)	60 (30-120)	-
P6	NF/NS-EB845	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	20 (10-25)	50 (30-80)	60 (30-120)	-
P7	NF/NS-EB845	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	20 (10-25)	50 (30-80)	60 (30-120)	-
P8	NF/NS-EB845	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	15 (10-20)	35 (20-60)	40 (20-80)	-
P11	NF/NS-EB845	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	15 (10-20)	35 (20-60)	40 (20-80)	-
P12	NF/NS-EB845	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	12 (8-15)	25 (15-45)	30 (15-65)	-
M1	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	12 (9-15)	25 (15-40)	35 (20-60)	-
M2	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	25 (15-40)	35 (20-60)	-
M3	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	25 (15-40)	35 (20-60)	-
M4	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	20 (10-30)	25 (15-40)	-
M5	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	20 (10-30)	25 (15-40)	-
K1	NF/NS-EB845	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)
K2	NF/NS-EB845	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	-	25 (20-40)	40 (30-70)	45 (35-80)
K3	NF/NS-EB845	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)
K4	NF/NS-EB845	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	25 (15-30)	45 (30-70)	70 (40-120)	80 (30-150)
K5	NF/NS-EB845	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)
K6	NF/NS-EB845	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	-	60 (40-100)	80 (30-150)	80 (45-135)
K7	NF/NS-EB845	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	-	60 (40-100)	80 (30-150)	90 (35-170)
S1	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	15 (8-20)	20 (10-25)	-
S2	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	15 (8-20)	20 (10-25)	-
S3	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	15 (8-20)	20 (10-25)	-
S11	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	20 (15-30)	30 (15-40)	40 (20-50)	-
S12	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	20 (15-30)	30 (15-40)	40 (20-50)	-
S13	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	20 (15-30)	30 (15-40)	40 (20-50)	-
H3	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
H5	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
H7	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
H8	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
H11	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
H12	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
H21	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
H31	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
PM1	NF/NS-EB845	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	-	50 (30-80)	70 (40-100)	-
PM2	NF/NS-EB845	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	-	50 (30-80)	70 (40-100)	-
PM3	NF/NS-EB845	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	-	50 (30-80)	70 (40-100)	-

SMG = Seco material group
a_p = mm
f = mm/rev
v_c = m/min
All cutting data are start values

NF/NS...-EB845 (inch)

SMG		a_p on (Ø) inch		f (in/rev)		V_c (sf/min)			
		z=4	z=6	z=4	z=6	H15	CP20	RX2000	RK2050
P3	NF/NS-EB845	0.004–0.006	0.004–0.008	0.004–0.012	0.008–0.024	–	195 (100-330)	260 (100-490)	–
P4	NF/NS-EB845	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	–	165 (100-260)	195 (100-395)	–
P5	NF/NS-EB845	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	65 (35-80)	165 (100-260)	195 (100-395)	–
P6	NF/NS-EB845	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	65 (35-80)	165 (100-260)	195 (100-395)	–
P7	NF/NS-EB845	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	65 (35-80)	165 (100-260)	195 (100-395)	–
P8	NF/NS-EB845	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	50 (35-65)	115 (65-195)	130 (65-260)	–
P11	NF/NS-EB845	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	50 (35-65)	115 (65-195)	130 (65-260)	–
K1	NF/NS-EB845	0.004–0.008	0.004–0.010	0.004–0.012	0.008–0.024	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)
K2	NF/NS-EB845	0.004–0.008	0.004–0.010	0.004–0.012	0.008–0.024	–	80 (65-130)	130 (100-230)	145 (110-260)
K3	NF/NS-EB845	0.004–0.008	0.004–0.010	0.004–0.012	0.008–0.024	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)
K4	NF/NS-EB845	0.004–0.008	0.004–0.010	0.004–0.012	0.008–0.024	80 (50-100)	150 (100-330)	230 (130-395)	260 (145-440)
K5	NF/NS-EB845	0.004–0.008	0.004–0.010	0.004–0.012	0.008–0.024	80 (50-100)	150 (100-330)	230 (130-395)	260 (145-440)
K6	NF/NS-EB845	0.004–0.008	0.004–0.010	0.004–0.012	0.008–0.024	–	195 (130-330)	260 (100-490)	290 (110-550)
K7	NF/NS-EB845	0.004–0.008	0.004–0.010	0.004–0.012	0.008–0.024	–	195 (130-330)	260 (100-490)	290 (110-550)
S1	NF/NS-EB845	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	50 (25-65)	65 (35-80)	–
S2	NF/NS-EB845	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	50 (25-65)	65 (35-80)	–
S3	NF/NS-EB845	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	50 (25-65)	65 (35-80)	–
S11	NF/NS-EB845	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	65 (50-100)	100 (50-130)	130 (65-165)	–
S12	NF/NS-EB845	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	65 (50-100)	100 (50-130)	130 (65-165)	–
S13	NF/NS-EB845	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	65 (50-100)	100 (50-130)	130 (65-165)	–
H3	NF/NS-EB845	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
H5	NF/NS-EB845	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
H7	NF/NS-EB845	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
H8	NF/NS-EB845	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
H11	NF/NS-EB845	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
H12	NF/NS-EB845	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
H21	NF/NS-EB845	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
H31	NF/NS-EB845	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
PM1	NF/NS-EB845	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	–	165 (100-260)	230 (130-350)	–
PM2	NF/NS-EB845	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	–	165 (100-260)	230 (130-350)	–
PM3	NF/NS-EB845	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	–	165 (100-260)	230 (130-350)	–

SMG = Seco material group
a_p = in
f = IPR
v_c = sf/min
All cutting data are start values

NF/NS...-EB25/EB30 (metric)

		a_p (Ø)		f		v_c			
SMG		z=4	z=6	z=4	z=6	H15	CP20	RX2000	
P1	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,9	0,5-1,2	25 (15-30)	60 (30-100)	80 (30-150)	-
P2	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,9	0,5-1,2	25 (15-30)	60 (30-100)	80 (30-150)	-
P3	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,9	0,5-1,2	25 (15-30)	60 (30-100)	80 (30-150)	-
P4	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,7	0,5-1	20 (10-25)	50 (30-80)	60 (30-120)	-
P5	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,7	0,5-1	20 (10-25)	50 (30-80)	60 (30-120)	-
P6	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,7	0,5-1	20 (10-25)	50 (30-80)	60 (30-120)	-
P7	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,7	0,5-1	20 (10-25)	50 (30-80)	60 (30-120)	-
M1	NF/NS-EB25/EB30	0,08-0,15	0,10-0,15	0,3-0,7	0,5-1	-	25 (15-40)	35 (20-60)	-
K1	NF/NS-EB25/EB30	0,10-0,20	0,10-0,25	0,3-0,9	0,5-1,2	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)
K2	NF/NS-EB25/EB30	0,10-0,20	0,10-0,25	0,3-0,9	0,5-1,2		25 (20-40)	40 (30-70)	45 (35-80)
K3	NF/NS-EB25/EB30	0,10-0,20	0,10-0,25	0,3-0,9	0,5-1,2	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)
K4	NF/NS-EB25/EB30	0,10-0,20	0,10-0,25	0,3-0,9	0,5-1,2	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)
K5	NF/NS-EB25/EB30	0,10-0,20	0,10-0,25	0,3-0,9	0,5-1,2	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)
K6	NF/NS-EB25/EB30	0,10-0,20	0,10-0,25	0,3-0,9	0,5-1,2	-	60 (40-100)	80 (30-150)	90 (35-170)
K7	NF/NS-EB25/EB30	0,10-0,20	0,10-0,25	0,3-0,9	0,5-1,2	-	60 (40-100)	80 (30-150)	90 (35-170)
N1	NF/NS-EB25/EB30	0,10-20	0,10-0,30	0,3-0,9	0,5-1,2	50 (20-80)	-	-	-
N2	NF/NS-EB25/EB30	0,10-20	0,10-0,30	0,3-0,9	0,5-1,2	50 (20-80)	-	-	-
N3	NF/NS-EB25/EB30	0,10-20	0,10-0,30	0,3-0,9	0,5-1,2	50 (20-80)	-	-	-
N11	NF/NS-EB25/EB30	0,10-20	0,10-0,30	0,3-0,9	0,5-1,2	50 (20-80)	-	-	-
PM1	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,9	0,5-1,2	-	50 (30-80)	70 (40-100)	-
PM2	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,9	0,5-1,2	-	50 (30-80)	70 (40-100)	-
PM3	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,9	0,5-1,2	-	50 (30-80)	70 (40-100)	-

SMG = Seco material group
a_p = mm
f = mm/rev
v_c = m/min
All cutting data are start values

NF/NS...-EB25/EB30 (inch)

SMG		a_p on (Ø) inch		f (in/rev)		V_c (sf/min)			
		z=4	z=6	z=4	z=6	H15	CP20	RX2000	RK2050
P1	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.035	0.020–0.047	80 (50-100)	195 (100-330)	260 (100-490)	–
P2	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.035	0.020–0.047	80 (50-100)	195 (100-330)	260 (100-490)	–
P3	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.035	0.020–0.047	80 (50-100)	195 (100-330)	260 (100-490)	–
P4	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.028	0.020–0.039	65 (35-80)	165 (100-265)	195 (100-395)	–
P5	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.028	0.020–0.039	65 (35-80)	165 (100-265)	195 (100-395)	–
P6	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.028	0.020–0.039	65 (35-80)	165 (100-265)	195 (100-395)	–
P7	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.028	0.020–0.039	65 (35-80)	165 (100-265)	195 (100-395)	–
M1	NF/NS-EB25/EB30	0.003–0.006	0.004–0.006	0.012–0.028	0.020–0.039	–	80 (50-130)	115 (65-195)	–
K1	NF/NS-EB25/EB30	0.004–0.008	0.004–0.010	0.012–0.035	0.020–0.047	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)
K2	NF/NS-EB25/EB30	0.004–0.008	0.004–0.010	0.012–0.035	0.020–0.047	–	80 (65-130)	130 (100-230)	145 (110-260)
K3	NF/NS-EB25/EB30	0.004–0.008	0.004–0.010	0.012–0.035	0.020–0.047	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)
K4	NF/NS-EB25/EB30	0.004–0.008	0.004–0.010	0.012–0.035	0.020–0.047	80 (50-100)	150 (100-230)	230 (130-395)	260 (145-440)
K5	NF/NS-EB25/EB30	0.004–0.008	0.004–0.010	0.012–0.035	0.020–0.047	80 (50-100)	150 (100-230)	230 (130-395)	260 (145-440)
K6	NF/NS-EB25/EB30	0.004–0.008	0.004–0.010	0.012–0.035	0.020–0.047	–	195 (130-330)	260 (100-490)	290 (110-550)
K7	NF/NS-EB25/EB30	0.004–0.008	0.004–0.010	0.012–0.035	0.020–0.047	–	195 (130-330)	260 (100-490)	290 (110-550)
N1	NF/NS-EB25/EB30	0.004–0.787	0.004–0.012	0.012–0.035	0.020–0.047	165 (65-265)	–	–	–
N2	NF/NS-EB25/EB30	0.004–0.787	0.004–0.012	0.012–0.035	0.020–0.047	165 (65-265)	–	–	–
N3	NF/NS-EB25/EB30	0.004–0.787	0.004–0.012	0.012–0.035	0.020–0.047	165 (65-265)	–	–	–
N11	NF/NS-EB25/EB30	0.004–0.787	0.004–0.012	0.012–0.035	0.020–0.047	165 (65-265)	–	–	–
PM1	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.035	0.020–0.047	–	165 (100-265)	230 (130-330)	–
PM2	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.035	0.020–0.047	–	165 (100-265)	230 (130-330)	–
PM3	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.035	0.020–0.047	–	165 (100-265)	230 (130-330)	–

SMG = Seco material group
a_p= in
f = IPR
v_c = sf/min
All cutting data are start values

NF/NS...-EB45 (metric)

		a_p (Ø)		f		v_c			
SMG		z=4	z=6	z=4	z=6	H15	CP20	RX2000	RK2050
P1	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	25 (15-30)	60 (30-100)	80 (30-150)	-
P2	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	25 (15-30)	60 (30-100)	80 (30-150)	-
P3	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	25 (15-30)	60 (30-100)	80 (30-150)	-
P4	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	20 (10-25)	50 (30-80)	60 (30-120)	-
P5	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	20 (10-25)	50 (30-80)	60 (30-120)	-
P6	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	20 (10-25)	50 (30-80)	60 (30-120)	-
P7	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	20 (10-25)	50 (30-80)	60 (30-120)	-
P8	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	15 (10-20)	35 (20-60)	40 (20-80)	-
P11	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	15 (10-20)	35 (20-60)	40 (20-80)	-
P12	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	12 (8-15)	25 (15-45)	30 (15-65)	-
M1	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	12 (9-15)	25 (15-40)	35 (20-60)	-
M2	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	25 (15-40)	35 (20-60)	-
M3	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	25 (15-40)	35 (20-60)	-
M4	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	20 (10-30)	25 (15-40)	-
M5	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	20 (10-30)	25 (15-40)	-
K1	NF/NS-EB45	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)
K2	NF/NS-EB45	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	-	25 (20-40)	40 (30-70)	45 (35-80)
K3	NF/NS-EB45	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)
K4	NF/NS-EB45	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)
K5	NF/NS-EB45	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)
K6	NF/NS-EB45	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	-	60 (40-100)	80 (30-150)	90 (35-170)
K7	NF/NS-EB45	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	-	60 (40-100)	80 (30-150)	90 (35-170)
N1	NF/NS-EB45	0,10-20	0,10-0,30	0,10-0,30	0,20-0,60	50 (20-80)	-	80 (30-150)	-
N2	NF/NS-EB45	0,10-20	0,10-0,30	0,10-0,30	0,20-0,60	50 (20-80)	-	80 (30-150)	-
N3	NF/NS-EB45	0,10-20	0,10-0,30	0,10-0,30	0,20-0,60	50 (20-80)	-	80 (30-150)	-
N11	NF/NS-EB45	0,10-20	0,10-0,30	0,10-0,30	0,20-0,60	50 (20-80)	-	80 (30-150)	-
S1	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	15 (8-20)	20 (10-25)	-
S2	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	15 (8-20)	20 (10-25)	-
S3	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	15 (8-20)	20 (10-25)	-
S11	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	20 (15-30)	30 (15-40)	40 (20-50)	-
S12	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	20 (15-30)	30 (15-40)	40 (20-50)	-
S13	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	20 (15-30)	30 (15-40)	40 (20-50)	-
H3	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
H5	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
H7	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
H8	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
H11	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
H12	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
H21	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
H31	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-
PM1	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	-	50 (30-80)	70 (40-100)	-
PM2	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	-	50 (30-80)	70 (40-100)	-
PM3	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	-	50 (30-80)	70 (40-100)	-
TS1	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-
TS2	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-
TS3	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-
TS4	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-
TP1	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-
TP2	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-
TP3	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-
TP4	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-
GR1	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	40 (80-20)	-	60 (30-120)	-

SMG = Seco material group. a_p = mm, f = mm/rev , v_c = m/min . All cutting data are start values

NF/NS...-EB45 (inch)

SMG		a_p on (Ø) inch		f (in/rev)		V_c (sf/min)			
		z=4	z=6	z=4	z=6	H15	CP20	RX2000	RK2050
P1	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.012	0.008–0.024	80 (50-100)	195 (100-330)	260 (100-490)	–
P2	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.012	0.008–0.024	80 (50-100)	195 (100-330)	260 (100-490)	–
P3	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.012	0.008–0.024	80 (50-100)	195 (100-330)	260 (100-490)	–
P4	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	65 (35-80)	165 (100-260)	195 (100-395)	–
P5	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	65 (35-80)	165 (100-260)	195 (100-395)	–
P6	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	65 (35-80)	165 (100-260)	195 (100-395)	–
P7	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	65 (35-80)	165 (100-260)	195 (100-395)	–
P8	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	50 (35-65)	115 (65-195)	130 (65-260)	–
P11	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	50 (35-65)	115 (65-195)	130 (65-260)	–
M1	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.020	40 (30-50)	80 (50-130)	115 (65-195)	–
M2	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.020	–	80 (50-130)	115 (65-195)	–
M3	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.020	–	80 (50-130)	115 (65-195)	–
M4	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.020	–	65 (35-100)	80 (50-130)	–
M5	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.020	–	65 (35-100)	80 (50-130)	–
K1	NF/NS-EB45	0.004–0.008	0.004–0.010	0.004–0.012	0.008–0.024	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)
K2	NF/NS-EB45	0.004–0.008	0.004–0.010	0.004–0.012	0.008–0.024	–	80 (65-130)	130 (100-230)	145 (110-260)
K3	NF/NS-EB45	0.004–0.008	0.004–0.010	0.004–0.012	0.008–0.024	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)
K4	NF/NS-EB45	0.004–0.008	0.004–0.010	0.004–0.012	0.008–0.024	80 (50-100)	150 (100-230)	230 (130-395)	260 (145-440)
K5	NF/NS-EB45	0.004–0.008	0.004–0.010	0.004–0.012	0.008–0.024	80 (50-100)	150 (100-230)	230 (130-395)	260 (145-440)
K6	NF/NS-EB45	0.004–0.008	0.004–0.010	0.004–0.012	0.008–0.024	–	195 (130-330)	260 (100-490)	290 (110-550)
K7	NF/NS-EB45	0.004–0.008	0.004–0.010	0.004–0.012	0.008–0.024	–	195 (130-330)	260 (100-490)	290 (110-550)
N1	NF/NS-EB45	0.004–0.787	0.004–0.012	0.004–0.012	0.008–0.024	165 (65-260)	–	260 (100-490)	–
N2	NF/NS-EB45	0.004–0.787	0.004–0.012	0.004–0.012	0.008–0.024	165 (65-260)	–	260 (100-490)	–
N3	NF/NS-EB45	0.004–0.787	0.004–0.012	0.004–0.012	0.008–0.024	165 (65-260)	–	260 (100-490)	–
N11	NF/NS-EB45	0.004–0.787	0.004–0.012	0.004–0.012	0.008–0.024	165 (65-260)	–	260 (100-490)	–
S1	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	50 (25-65)	65 (35-80)	–
S2	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	50 (25-65)	65 (35-80)	–
S3	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	50 (25-65)	65 (35-80)	–
S11	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	65 (50-100)	100 (50-130)	130 (65-165)	–
S12	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	65 (50-100)	100 (50-130)	130 (65-165)	–
S13	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	65 (50-100)	100 (50-130)	130 (65-165)	–
H3	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
H5	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
H7	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
H8	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
H11	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
H12	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
H21	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
H31	NF/NS-EB45	0.003–0.006	0.004–0.006	0.004–0.008	0.008–0.012	–	–	35 (25-50)	–
PM1	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	–	165 (100-260)	230 (130-350)	–
PM2	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	–	165 (100-260)	230 (130-350)	–
PM3	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.008	0.008–0.020	–	165 (100-260)	230 (130-350)	–
TS1	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.012	0.008–0.024	65 (50-80)	–	130 (65-195)	–
TS2	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.012	0.008–0.024	65 (50-80)	–	130 (65-195)	–
TS3	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.012	0.008–0.024	65 (50-80)	–	130 (65-195)	–
TS4	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.012	0.008–0.024	65 (50-80)	–	130 (65-195)	–
TP1	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.012	0.008–0.024	65 (50-80)	–	130 (65-195)	–
TP2	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.012	0.008–0.024	65 (50-80)	–	130 (65-195)	–
TP3	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.012	0.008–0.024	65 (50-80)	–	130 (65-195)	–
TP4	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.012	0.008–0.024	65 (50-80)	–	130 (65-195)	–
GR1	NF/NS-EB45	0.004–0.006	0.004–0.008	0.004–0.012	0.008–0.024	130 (65-260)	–	195 (100-395)	–

SMG = Seco material group. a_p= in, f = IPR, v_c = sf/min. All cutting data are start valuess

Introduction
Drilling
Reaming
Boring
Annex

NF/NS...-EB45 (metric)

SMG		a_p (Ø)		f		v_c			
		z=4	z=6	z=4	z=6	RN2010	RM2020	RM2090	RS2090
M1	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	25 (15-40)	40 (20-60)	-
M2	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	25 (15-40)	40 (20-60)	-
M3	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	25 (15-40)	40 (20-60)	-
M4	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	20 (10-30)	30 (15-40)	-
M5	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	20 (10-30)	30 (15-40)	-
N1	NF/NS-EB45	0,10-0,20	0,10-0,30	0,10-0,30	0,20-0,60	50 (20-80)	-	-	-
N2	NF/NS-EB45	0,10-0,20	0,10-0,30	0,10-0,30	0,20-0,60	50 (20-80)	-	-	-
N3	NF/NS-EB45	0,10-0,20	0,10-0,30	0,10-0,30	0,20-0,60	50 (20-80)	-	-	-
N11	NF/NS-EB45	0,10-0,20	0,10-0,30	0,10-0,30	0,20-0,60	50 (20-80)	-	-	-
S1	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	-	20 (10-25)
S2	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	-	20 (10-25)
S3	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	-	25 (10-25)
S11	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	-	30 (20-50)
S12	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	-	30 (20-50)
S13	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	-	30 (20-50)

NF/NS...-EB845 (metric)

SMG		a_p (Ø)		f		v_c		
		z=4	z=6	z=4	z=6	RM2020	RM2090	RS2090
M1	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	25 (15-40)	40 (20-60)	-
M2	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	25 (15-40)	40 (20-60)	-
M3	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	25 (15-40)	40 (20-60)	-
M4	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	25 (10-30)	30 (15-40)	-
M5	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	25 (10-30)	30 (15-40)	-
S1	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	20 (10-25)
S2	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	20 (10-25)
S3	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	25 (10-25)
S11	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	30 (20-50)
S12	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	30 (20-50)
S13	NF/NS-EB845	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	30 (20-50)

SMG = Seco material group
a_p = mm
f = mm/rev
v_c = m/min
All cutting data are start values

NF/NS...-EB45 (inch)

SMG		a_p (Ø) z=4	a_p (Ø) z=6	f z=4	f z=6	v_c RN2010	v_c RM2020	v_c RM2090	v_c RS2090
M1	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.02	-	80 (50-130)	130 (65-195)	-
M2	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.02	-	80 (50-130)	130 (65-195)	-
M3	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.02	-	80 (50-130)	130 (65-195)	-
M4	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.02	-	65 (35-100)	100 (50-130)	-
M5	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.02	-	65 (35-100)	100 (50-130)	-
N1	NF/NS-EB45	0.004-0.008	0.004-0.012	0.004-0.012	0.008-0.024	165 (65-260)	-	-	-
N2	NF/NS-EB45	0.004-0.008	0.004-0.012	0.004-0.012	0.008-0.024	165 (65-260)	-	-	-
N3	NF/NS-EB45	0.004-0.008	0.004-0.012	0.004-0.012	0.008-0.024	165 (65-260)	-	-	-
N11	NF/NS-EB45	0.004-0.008	0.004-0.012	0.004-0.012	0.008-0.024	165 (65-260)	-	-	-
S1	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	-	65 (35-80)
S2	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	-	65 (35-80)
S3	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	-	80 (35-80)
S11	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	-	100 (65-165)
S12	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	-	100 (65-165)
S13	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	-	100 (65-165)

NF/NS...-EB845 (inch)

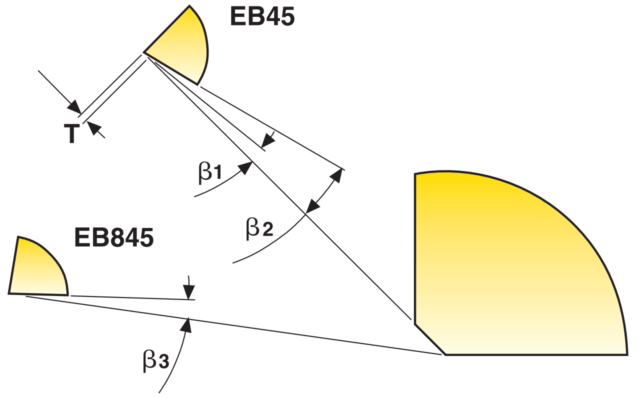
SMG		a_p (Ø) z=4	a_p (Ø) z=6	f z=4	f z=6	v_c RM2020	v_c RM2090	v_c RS2090
M1	NF/NS-EB845	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.02	80 (50-130)	130 (65-195)	-
M2	NF/NS-EB845	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.02	80 (50-130)	130 (65-195)	-
M3	NF/NS-EB845	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.02	80 (50-130)	130 (65-195)	-
M4	NF/NS-EB845	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.02	80 (35-100)	100 (50-130)	-
M5	NF/NS-EB845	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.02	80 (35-100)	100 (50-130)	-
S1	NF/NS-EB845	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	65 (35-80)
S2	NF/NS-EB845	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	65 (35-80)
S3	NF/NS-EB845	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	80 (35-80)
S11	NF/NS-EB845	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	100 (65-165)
S12	NF/NS-EB845	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	100 (65-165)
S13	NF/NS-EB845	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	100 (65-165)

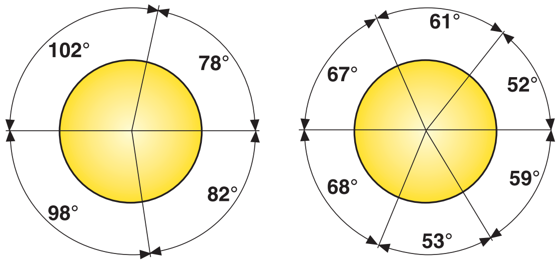
SMG = Seco material group
a_p= in
f = IPR
v_c = sf/min
All cutting data are start values

Regrinding instructions

Specifications
Diamond grinding wheel
Grain size:
D6 – For first clearance angle (β1–β3)
D64 – For second clearance angle (β2)

Important
Regrinding reduces reamer diameter
Recoating may produce oversized diameter
Max run-out on lead chamfers 10 µm *(0.0004”)*





∅ Nanofix mm	∅ Nanofix *(inch)*	ß1	ß2	ß2	t mm	t *(inch)*
2,97-9,999	*0.1169-0.3936*	8°	25°	10°	0,15	*0.006*
10,12-12,050	*0.3937-0.4744*	8°	25°	10°	0,15	*0.006*

Bifix®

Bifix® indexable blade reamers bring high-precision performance to all workpiece material groups

- Enables tolerances held between 8 and 16µm and a surface finish of Ra 0.25 (RMS 12 micro/inch)
- Indexable blades feature two cutting edges per blade
- Three cermet guide pads and an accurate adjusting system

Range overview

	∅ Range	Reaming depth	∅ Drill tolerance	Intermediate diameters	Surface finish
SR80 for through holes 	6,875-60,500 mm *(0.2707-2.3819")*	5-7 x D	IT 6	Yes, available through Custom design	R_a 0,2-0,8 µm *R_a 8-31 µin*
SR81 for blind holes 	7,875-60,500 mm *(0.3100-2.3819")*	5-7 x D	IT 6-7	Yes, available through Custom design	R_a 0,2-0,8 µm *R_a 8-31 µin*
SR82 for blind holes short version 	7,875-60,500 mm *(0.3100-2.3819")*	3-5 x D	IT 6-7	Yes, available through Custom design	R_a 0,2-0,8 µm *R_a 8-31 µin*

Code key

Code key – Reamers

Unless requested otherwise, reamers are designed to produce a diameter in the middle of the required tolerance.

Reamer type:
Type 80: Through hole
Type 81: Blind hole
Type 82: Blind hole, short version

Hole diameter and tolerance

Type of lead geometry
EN1, EN2, N3

SR80 - 16,85 P6 - EN1 - R - 9

0.6624"-0.6628"

Shank type: (to be stated when requested style is not standard)
SR80 and SR81: R1 without flat is standard
SR82: R9 with flat is standard

Code key – Blades

Important:
The reamer and the blade must have the same lead geometry.

Blade size:
P0, P1,
P2, P4

Cutting rake angle:
0°, 6°, 12°

P2 - EN1 - 06 - CP20

Type of lead geometry
EN1, EN2, EN3

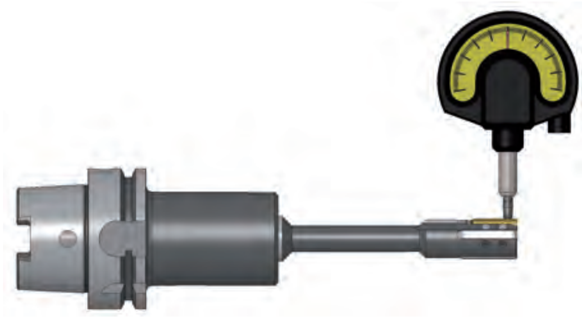
Carbide grade:
CP20, H15

Set up and maching data

Rotating and stationary tool

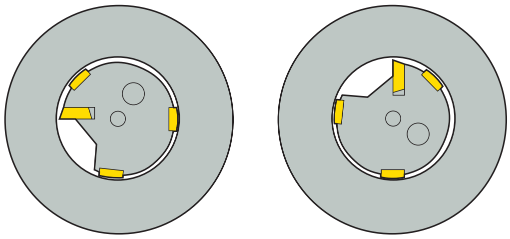
Max. run-out allowed: 0,02 mm *(0.0008")*.
Precision holder is recommended : Hydraulic chuck, D-type collet chuck, 5672 collet chuck or shrink-fit.

Stationary tool
Use Seco floating holders, see pages 467-469.



For optimal chip evacuation

Recommended blade orientation for static tools (see drawing, view from front of tools).



Coolant requirements

To reach maximum tool life and hole quality, the following coolant requirements should be observed.
Coolant through the tool is recommended.
External coolant supply can be used if reaming depth < 2 x D.
Quality soluble oil with 40% minimum mineral oil.
Neat oil recommended for stainless steel.
Concentration minimum 6–8%.
Filtration 30–50 µm *(1200-2000 µin)*.
Volume min 0,5 l/min/mm *(3.35 gal/min/inch)* in tool diameter.
(Ex: Reamer ∅ 10, min volume is 5 l/min *(1.3 gal/min)*.

Setting fixture

SF-60200-C160C190: Part No. 02885396
- Horizontal stand
- First choice for Ø smaller than 60 mm *(2.362")*
- 2 clocks
- Maximum tool Ø: 60,5 mm *(2.382")*
- Maximum tool length: 200 mm *(7.784")*

Lead geometry

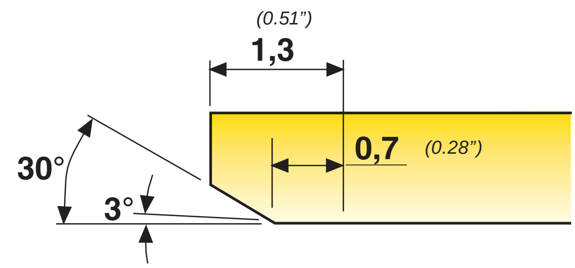
Note, reamer and blade must have the same lead geometry.

Grade and rake angle
To classify the workpiece material into SMG please use the tables on pages 580-591

Cutting data recommendation table pages 404-409.
Blade programme page 402-403.

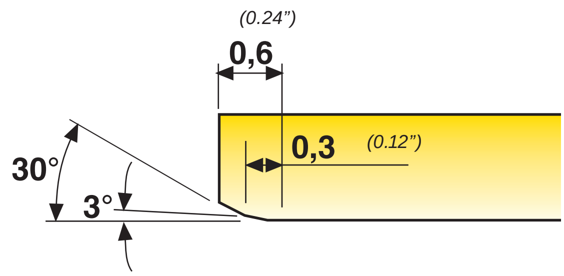
EN1 – Application

Maximum machining allowance on ∅ 0,5 mm *(0.020")*
Surface Finish + Ra 0,3 - 0,8 µm
Surface Finish + *(Ra 12 - 31 µin)*



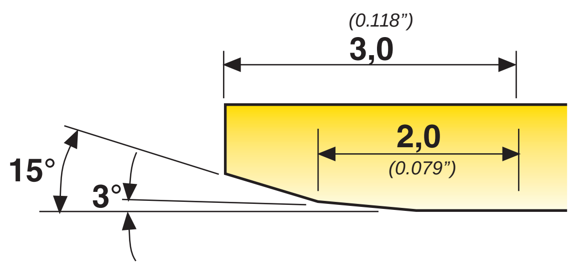
EN2 – Short lead

Maximum machining allowance on ∅ 0,3 mm *(0.012")*
Surface Finish + Ra 0,4 - 1,2 µm
Surface Finish + *(Ra 16 - 47 µin)*
Maximum feed rate 0,2 mm/rev *(0.008")* in/rev.
Only to be used when a short lead is required
Designed with end cutting



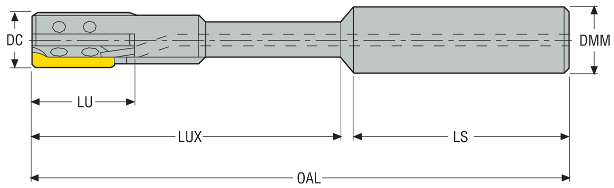
EN3 – Extreme surface finish

Maximum machining allowance on ∅ 0,5 mm *(0.020")*
Surface Finish + Ra 0,2 - 0,6 µm
Surface Finish + *(Ra 8 - 24 µin)*
Suitable for all materials except aluminium
To be used when R_a should be < 0,3–0,4 µm *(12-16 µin)*



For through holes ∅ 7H6-26H6

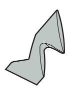
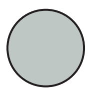
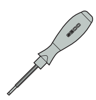
Shank type R1, cylindrical without flat, SR80



- Blade information on page 402-403
- Internal 'through' coolant

Designation	Item number	DC	OAL	LS	LUX	LU	DMM	Blade size
		mm	mm	mm	mm	mm	mm	
SR80-7H6-EN1	00024974	7	105	40	63	25	10	P0-EN1-xx
SR80-8H6-EN1	00024975	8	115	40	73	25	10	P0-EN1-xx
SR80-9H6-EN1	00024986	9	115	40	73	25	10	P1-EN1-xx
SR80-10H6-EN1	00024987	10	115	40	74	25	10	P1-EN1-xx
SR80-11H6-EN1	00024989	11	133	48	81	25	16	P1-EN1-xx
SR80-12H6-EN1	00024995	12	133	48	81	25	16	P1-EN1-xx
SR80-13H6-EN1	00024996	13	133	48	81	25	16	P2-EN1-xx
SR80-14H6-EN1	00024998	14	133	48	81	25	16	P2-EN1-xx
SR80-15H6-EN1	00024999	15	133	48	82	25	16	P2-EN1-xx
SR80-16H6-EN1	00025163	16	133	48	82	25	16	P2-EN1-xx
SR80-17H6-EN1	00025223	17	155	50	100	25	20	P2-EN1-xx
SR80-18H6-EN1	00025254	18	155	50	100	25	20	P2-EN1-xx
SR80-19H6-EN1	00025255	19	155	50	100	25	20	P2-EN1-xx
SR80-20H6-EN1	00025266	20	155	50	100	30	20	P4-EN1-xx
SR80-21H6-EN1	00025285	21	191	56	128	30	25	P4-EN1-xx
SR80-22H6-EN1	00025364	22	191	56	129	30	25	P4-EN1-xx
SR80-23H6-EN1	00025373	23	191	56	129	30	25	P4-EN1-xx
SR80-24H6-EN1	00025374	24	191	56	129	30	25	P4-EN1-xx
SR80-25H6-EN1	00025376	25	191	56	129	30	25	P4-EN1-xx
SR80-26H6-EN1	00025381	26	191	56	129	30	25	P4-EN1-xx

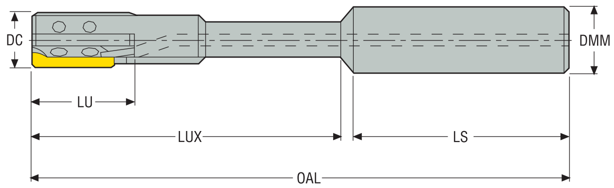
Spare parts

For dia. (mm)	Adjusting screw	Clamp	Clamp screw	Setting key	Support ball	Torque key	Torque value
							
7-8	SH2020	SR-B0	LH2040	0.9SMS795	BB1.5	-	-
9	SH2025	SR-B1	LH2540	1.3SMS795	BB2.0	H00-1305	0,5 Nm
10-12	SH2525	SR-B2	LH2540	1.3SMS795	BB2.0	H00-1305	0,5 Nm
13-19	SH2540	SR-B3	LH3050	1.5SMS795	BB2.5	H00-1509	0,9 Nm
20-60	SH3060	SR-B5	LH4010	2SMS795	BB3.0	H00-2020	2,0 Nm

* Torque key is delivered with driving blade

For through holes ∅ 27H6–60H6

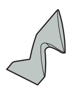
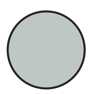
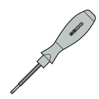
Shank type R1, cylindrical without flat, SR80



- Blade information on page 402-403
- Internal 'through' coolant

Designation	Item number	DC	OAL	LS	LUX	LU	DMM	Blade size
		mm	mm	mm	mm	mm	mm	
SR80-27H6-EN1	00025382	27	221	56	159	30	25	P4-EN1-xx
SR80-28H6-EN1	00025383	28	221	56	159	30	25	P4-EN1-xx
SR80-29H6-EN1	00025384	29	221	56	159	30	25	P4-EN1-xx
SR80-30H6-EN1	00025411	30	221	56	159	30	25	P4-EN1-xx
SR80-31H6-EN1	00025431	31	221	56	160	30	25	P4-EN1-xx
SR80-32H6-EN1	00025434	32	221	56	160	30	25	P4-EN1-xx
SR80-34H6-EN1	00025438	34	226	56	165	30	25	P4-EN1-xx
SR80-35H6-EN1	00025441	35	226	56	165	30	25	P4-EN1-xx
SR80-36H6-EN1	00025442	36	226	56	166	30	25	P4-EN1-xx
SR80-38H6-EN1	00025444	38	226	56	166	30	25	P4-EN1-xx
SR80-40H6-EN1	00025446	40	226	56	166	30	25	P4-EN1-xx
SR80-42H6-EN1	00025447	42	226	56	167	30	25	P4-EN1-xx
SR80-44H6-EN1	00025449	44	226	56	167	30	25	P4-EN1-xx
SR80-48H6-EN1	00025451	48	226	56	168	30	25	P4-EN1-xx
SR80-50H6-EN1	00025455	50	226	56	168	30	25	P4-EN1-xx
SR80-52H6-EN1	00025456	52	226	56	169	30	25	P4-EN1-xx
SR80-54H6-EN1	00025475	54	226	56	169	30	25	P4-EN1-xx
SR80-58H6-EN1	00025479	58	226	56	169	30	25	P4-EN1-xx
SR80-60H6-EN1	00025514	60	226	56	169	30	25	P4-EN1-xx

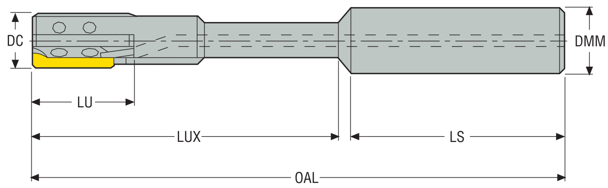
Spare parts

For dia. (mm)	Adjusting screw	Clamp	Clamp screw	Setting key	Support ball	Torque key*	Torque value
							
20-60	SH4060	SR-B5	LH4010	2SMS795	BB3.0	H00-2020	2,0 Nm

* Torque key is delivered with driving blade

For through holes – Intermediate diameter

Shank type R1, cylindrical without flat, SR80

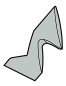
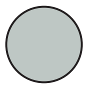
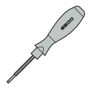


- Blade information on page 402-403
- Important! Reamer and blade must have the same lead geometry
- For choice of lead geometry EN1, EN2 or EN3 see page(s) 393

Designation	DC	OAL	LS	LUX	LU	DMM	Blade size
	mm	mm	mm	mm	mm	mm	
SR80-6.875-XX-XXXX-EN	6,875 - 7,874	105,0	40,0	63,0	15,0	10,0	P0-EN-xx
SR80-7.875-XX-XXXX-EN	7,875 - 8,749	115,0	40,0	73,0	25,0	10,0	P0-EN-xx
SR80-8.750-XX-XXXX-EN	8,75 - 9,749	115,0	40,0	73,0	25,0	10,0	P1-EN-xx
SR80-9.750-XX-XXXX-EN	9,75 - 10,749	115,0	40,0	73,0	25,0	10,0	P1-EN-xx
SR80-10.750-XX-XXXX-EN	10,75 - 12,749	133,0	48,0	81,0	25,0	16,0	P1-EN-xx
SR80-12.750-XX-XXXX-EN	12,75 - 16,749	133,0	48,0	81,0	25,0	16,0	P2-EN-xx
SR80-16.750-XX-XXXX-EN	16,75 - 19,499	155,0	50,0	100,0	25,0	20,0	P2-EN-xx
SR80-19.500-XX-XXXX-EN	19,5 - 20,499	155,0	50,0	100,0	30,0	20,0	P3-EN-xx
SR80-20.500-XX-XXXX-EN	20,5 - 26,499	191,0	56,0	129,0	30,0	25,0	P4-EN-xx
SR80-26.500-XX-XXXX-EN	26,5 - 32,499	221,0	56,0	160,0	30,0	25,0	P4-EN-xx
SR80-32.500-XX-XXXX-EN	32,5 - 38,499	226,0	56,0	165,0	30,0	25,0	P4-EN-xx
SR80-38.500-XX-XXXX-EN	38,5 - 40,499	226,0	56,0	166,0	30,0	25,0	P4-EN-xx
SR80-40.500-XX-XXXX-EN	40,5 - 44,499	226,0	56,0	167,0	30,0	25,0	P4-EN-xx
SR80-44.500-XX-XXXX-EN	44,5 - 50,499	226,0	56,0	168,0	30,0	25,0	P4-EN-xx
SR80-50.500-XX-XXXX-EN	50,5 - 60,5	226,0	56,0	169,0	30,0	25,0	P4-EN-xx

Spare parts

Accessories

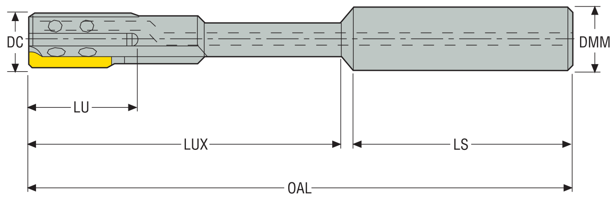
For ∅ (mm)	Adjusting screw	Clamp	Clamp screw	Setting key	Support ball	Torque key
						
6,875-8,749	SH2020	SR-B0	LH2040	0.9SMS795	BB1.5	–
8,750-9,749	SH2525	SR-B1	LH2540	1.3SMS795	BB2.0	H00-1305
9,750-12,749	SH2525	SR-B2	LH2540	1.3SMS795	BB2.0	H00-1305
12,750-19,499	SH3040	SR-B3	LH3050	1.5SMS795	BB2.0	H00-1509
19,500-60,500	SH4060	SR-B5	LH4010	2SMS795	BB3.0	H00-2020

Torque key is delivered with driving blade. To be ordered separately.

Note! When ordering reamers for intermediate diameter, please state: ∅ and tolerance of bore to be reamed, lead geometry (EN1, EN2 or EN3). **Ordering example:** SR80-11.50 H7-EN2, P1-EN2-06, CP20.

For blind holes ∅ 8H6-26H6

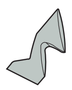
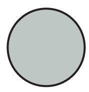
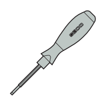
Shank type R1, cylindrical without flat, SR81



- Blade information on page 402-403
- Internal 'through' coolant

Designation	Item number	DC	OAL	LS	LUX	LU	DMM	Blade size
		mm	mm	mm	mm	mm	mm	
SR81-8H6-EN1	00025517	8	115	40	73	25	10	P0-EN1-xx
SR81-9H6-EN1	00025527	9	115	40	73	25	10	P1-EN1-xx
SR81-11H6-EN1	00025539	11	133	48	81	25	16	P1-EN1-xx
SR81-13H6-EN1	00025556	13	133	48	81	25	16	P2-EN1-xx
SR81-14H6-EN1	00025557	14	133	48	81	25	16	P2-EN1-xx
SR81-15H6-EN1	00025571	15	133	48	82	25	16	P2-EN1-xx
SR81-16H6-EN1	00025577	16	133	48	82	25	16	P2-EN1-xx
SR81-17H6-EN1	00025578	17	155	50	100	25	20	P2-EN1-xx
SR81-18H6-EN1	00025753	18	155	50	100	25	20	P2-EN1-xx
SR81-19H6-EN1	00025825	19	155	50	100	25	20	P2-EN1-xx
SR81-20H6-EN1	00027069	20	155	50	100	30	20	P4-EN1-xx
SR81-21H6-EN1	00027076	21	191	56	128	30	25	P4-EN1-xx
SR81-22H6-EN1	00027197	22	191	56	129	30	25	P4-EN1-xx
SR81-23H6-EN1	00027466	23	191	56	129	30	25	P4-EN1-xx
SR81-25H6-EN1	00027614	25	191	56	129	30	25	P4-EN1-xx
SR81-26H6-EN1	00027847	26	191	56	129	30	25	P4-EN1-xx

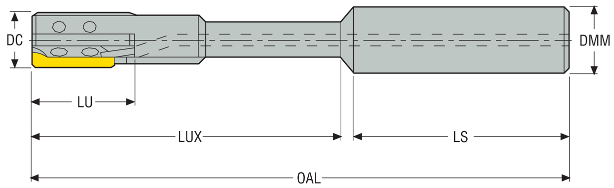
Spare parts

For dia. (mm)	Adjusting screw	Clamp	Clamp screw	Setting key	Support ball	Torque key*	Torque value
							
8	SH2020	SR-B0	LH2040	0.9SMS795	BB1.5	-	-
9	SH2525	SR-B1	LH2540	1.3SMS795	BB2.0	H00-1305	0,5 Nm
10-12	SH2525	SR-B2	LH2540	1.3SMS795	BB2.0	H00-1305	0,5 Nm
13-19	SH3040	SR-B3	LH3050	1.5SMS795	BB2.5	H00-1509	0,9 Nm
20-60	SH4060	SR-B5	LH4010	2SMS795	BB3.0	H00-2020	2,0 Nm

* Torque key is delivered with driving blade

For blind holes ∅ 27H6–60H6

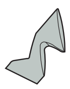
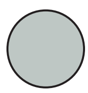
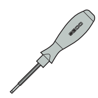
Shank type R1, cylindrical without flat, SR81



- Blade information on page(s) 402-403
- Internal 'through' coolant

Designation	Item number	DC	OAL	LS	LUX	LU	DMM	Blade size
		mm	mm	mm	mm	mm	mm	
SR81-27H6-EN1	00028229	27	221	56	159	30	25	P4-EN1-xx
SR81-28H6-EN1	00028335	28	221	56	159	30	25	P4-EN1-xx
SR81-29H6-EN1	00028628	29	221	56	159	30	25	P4-EN1-xx
SR81-30H6-EN1	00028629	30	221	56	159	30	25	P4-EN1-xx
SR81-31H6-EN1	00028631	31	221	56	160	30	25	P4-EN1-xx
SR81-32H6-EN1	00028633	32	221	56	160	30	25	P4-EN1-xx
SR81-34H6-EN1	00028634	34	226	56	165	30	25	P4-EN1-xx
SR81-35H6-EN1	00028636	35	226	56	165	30	25	P4-EN1-xx
SR81-36H6-EN1	00028637	36	226	56	166	30	25	P4-EN1-xx
SR81-38H6-EN1	00028638	38	226	56	166	30	25	P4-EN1-xx
SR81-40H6-EN1	00028639	40	226	56	166	30	25	P4-EN1-xx
SR81-42H6-EN1	00028643	42	226	56	167	30	25	P4-EN1-xx
SR81-44H6-EN1	00028644	44	226	56	167	30	25	P4-EN1-xx
SR81-48H6-EN1	00028648	48	226	56	168	30	25	P4-EN1-xx
SR81-50H6-EN1	00028649	50	226	56	168	30	25	P4-EN1-xx
SR81-52H6-EN1	00028651	52	226	56	169	30	25	P4-EN1-xx
SR81-54H6-EN1	00028653	54	226	56	169	30	25	P4-EN1-xx
SR81-58H6-EN1	00028654	58	226	56	169	30	25	P4-EN1-xx
SR81-60H6-EN1	00028656	60	226	56	169	30	25	P4-EN1-xx

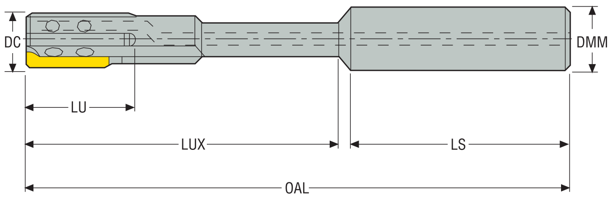
Spare parts

For dia. (mm)	Adjusting screw	Clamp	Clamp screw	Setting key	Support ball	Torque key*	Torque value
							
20-60	SH4060	SR-B5	LH4010	2SMS795	BB3.0	H00-2020	2,0 Nm

* Torque key is delivered with driving blade

For blind holes – Intermediate diameter

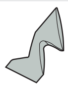
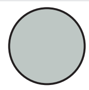
Shank type R1, cylindrical without flat, SR81



- Blade information on page(s) 402-403
- Important! Reamer and blade must have the same lead geometry
- For choice of lead geometry EN1, EN2 or EN3 see page(s) 393

Designation	DC	OAL	LS	LUX	LU	DMM	Blade size
	mm	mm	mm	mm	mm	mm	
SR81-7.875-XX-XXXX-EN	7,875 - 8,749	115,0	40,0	73,0	25,0	10,0	P0-EN-xx
SR81-8.750-XX-XXXX-EN	8,75 - 9,749	115,0	40,0	73,0	25,0	10,0	P1-EN-xx
SR81-9.750-XX-XXXX-EN	9,75 - 10,749	115,0	40,0	73,0	25,0	10,0	P1-EN-xx
SR81-10.750-XX-XXXX-EN	10,75 - 12,749	133,0	48,0	81,0	25,0	16,0	P1-EN-xx
SR81-12.750-XX-XXXX-EN	12,75 - 16,749	133,0	48,0	81,0	25,0	16,0	P2-EN-xx
SR81-16.750-XX-XXXX-EN	16,75 - 19,499	155,0	50,0	100,0	25,0	20,0	P2-EN-xx
SR81-19.500-XX-XXXX-EN	19,5 - 20,499	155,0	50,0	100,0	30,0	20,0	P4-EN-xx
SR81-20.500-XX-XXXX-EN	20,5 - 26,499	191,0	56,0	129,0	30,0	25,0	P4-EN-xx
SR81-26.500-XX-XXXX-EN	26,5 - 32,499	221,0	56,0	160,0	30,0	25,0	P4-EN-xx
SR81-32.500-XX-XXXX-EN	32,5 - 38,499	226,0	56,0	165,0	30,0	25,0	P4-EN-xx
SR81-38.500-XX-XXXX-EN	38,5 - 40,499	226,0	56,0	166,0	30,0	25,0	P4-EN-xx
SR81-40.500-XX-XXXX-EN	40,5 - 44,499	226,0	56,0	167,0	30,0	25,0	P4-EN-xx
SR81-44.500-XX-XXXX-EN	44,5 - 50,499	226,0	56,0	168,0	30,0	25,0	P4-EN-xx
SR81-50.500-XX-XXXX-EN	50,5 - 60,5	226,0	56,0	169,0	30,0	25,0	P4-EN-xx

Spare parts / Accessories

For ∅ (mm)	Adjusting screw	Clamp	Clamp screw	Setting key	Support ball	Torque key
						
9,75-12,749	SH2525	SR-B2	LH2540	1.3SMS795	BB2.0	H00-1305
12,75-19,499	SH3040	SR-B3	LH3050	1.5SMS795	BB2.5	H00-1509
19,5-60,5	SH4060	SR-B5	LH4010	2SMS795	BB3.0	H00-2020
7,875-8,749	SH2020	SR-B0	LH2040	0.9SMS795	BB1.5	–
8,75-9,749	SH2525	SR-B1	LH2540	1.3SMS795	BB2.0	H00-1305

Torque key is delivered with driving blade. To be ordered separately.

Note! When ordering reamers for intermediate diameter, please state: ∅ and tolerance of bore to be reamed, lead geometry (EN1, EN2 or EN3). **Ordering example:** SR81-11.50 H7-EN2, P1-EN2-06, CP20.

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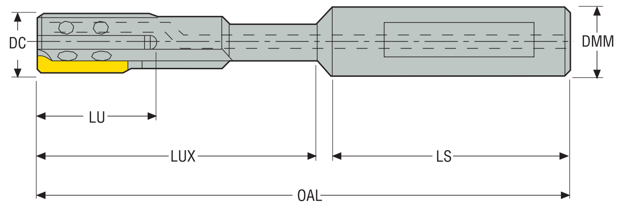
For blind holes – Short range for turning applications

Shank type R9, cylindrical with flat, SR82

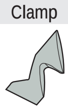
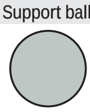


- Blade information on page(s) 402-403
- Important! Reamer and blade must have the same lead geometry
- For choice of lead geometry EN1, EN2 or EN3 see page(s) 393

Designation	DC	OAL	LS	LUX	LU	DMM	Blade size
	mm	mm	mm	mm	mm	mm	
SR82-7.875-XX-XXXX-EN	7,875 - 8,749	95,0	40,0	53,0	25,0	10,0	P0-EN-xx
SR82-8.750-XX-XXXX-EN	8,75 - 9,749	95,0	40,0	53,0	25,0	10,0	P1-EN-xx
SR82-9.750-XX-XXXX-EN	9,75 - 10,749	95,0	40,0	53,0	25,0	10,0	P1-EN-xx
SR82-10.750-XX-XXXX-EN	10,75 - 12,749	113,0	40,0	61,0	25,0	16,0	P1-EN-xx
SR82-12.750-XX-XXXX-EN	12,75 - 16,749	113,0	48,0	61,0	25,0	16,0	P2-EN-xx
SR82-16.750-XX-XXXX-EN	16,75 - 19,499	113,0	48,0	60,0	25,0	20,0	P2-EN-xx
SR82-19.500-XX-XXXX-EN	19,5 - 20,499	115,0	50,0	60,0	30,0	20,0	P4-EN-xx
SR82-20.500-XX-XXXX-EN	20,5 - 32,499	115,0	50,0	89,0	30,0	25,0	P4-EN-xx
SR82-32.500-XX-XXXX-EN	32,5 - 36,499	151,0	56,0	105,0	30,0	25,0	P4-EN-xx
SR82-36.500-XX-XXXX-EN	36,5 - 40,499	166,0	56,0	106,0	30,0	25,0	P4-EN-xx
SR82-40.500-XX-XXXX-EN	40,5 - 44,499	166,0	56,0	107,0	30,0	25,0	P4-EN-xx
SR82-44.500-XX-XXXX-EN	44,5 - 50,499	166,0	56,0	108,0	30,0	25,0	P4-EN-xx
SR82-50.500-XX-XXXX-EN	50,5 - 60,5	166,0	56,0	109,0	30,0	25,0	P4-EN-xx

Spare parts

Accessories

For ∅ (mm)	Adjusting screw	Clamp	Clamp screw	Setting key	Support ball	Torque key
						
9,75-12,749	SH2525	SR-B2	LH2540	1.3SMS795	BB2.0	H00-1305
12,75-19,499	SH3040	SR-B3	LH3050	1.5SMS795	BB2.5	H00-1509
19,5-60,5	SH4060	SR-B5	LH4010	2SMS795	BB3.0	H00-2020
7,875-8,749	SH2020	SR-B0	LH2040	0.9SMS795	BB1.5	–
8,75-9,749	SH2525	SR-B1	LH2540	1.3SMS795	BB2.0	H00-1305

Torque key is delivered with driving blade. To be ordered separately.

Note! When ordering reamers for intermediate diameter, please state: ∅ and tolerance of bore to be reamed, lead geometry (EN1, EN2 or EN3). **Ordering example:** SR82-11.50 H7EN2, P1-EN2-06, CP20.

Grades

Use the blade selection table to choose alternative blades for higher productivity or better security

Optimization/Grades

Blade size	Steel	Stainless steel	Cast iron	Non-ferrous	Aluminium	Wear resistance ⟷ Toughness			Designation	
						Productivity	Versatility	Security	Blade	Grade
P0, P1, P2, P4			•	•				X	Pxx-ENx-00	H15
	•		•		•			X	Pxx-ENx-06	H15
		•		•	•			X	Pxx-ENx-12	H15
	•					X			Pxx-ENx-00	CP20
	•		•				X		Pxx-ENx-06	CP20
	•	•					X		Pxx-ENx-12	CP20
	•		•			X			Pxx-ENx-00	CP15
	•		•			X			Pxx-ENx-06	CP15
	•	•		•	•	X			Pxx-ENx-12	CP15

Grades

	CP15	Coated A wear-resistant coated grade alternative to CP20. For optimization in cast iron and steels. Also suitable for non-ferrous. Ti(C, N)
	CP20	Coated A versatile coated grade suitable for most materials, except aluminum. TiN
	H15	Uncoated A tough micrograin grade for all materials. Suitable for fine-reaming operations due to edge sharpness.

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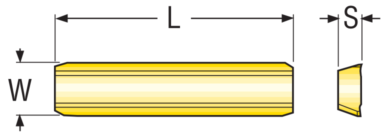
P0-P4



Designation	Inserts	L	S	W	Grades	
		mm *Inch*	mm *Inch*	mm *Inch*	H15	CP20
P0-EN1-0	P0	20,0 *0.787*	1,2 *0.047*	2,5 *0.098*	00098229	00098244
P0-EN1-06	P0	20,0 *0.787*	1,2 *0.047*	2,5 *0.098*	00091786	00091762
P0-EN1-12	P0	20,0 *0.787*	1,2 *0.047*	2,5 *0.098*	00097299	00091971
P0-EN2-0	P0	20,0 *0.787*	1,2 *0.047*	2,5 *0.098*	00098234	00098249
P0-EN2-06	P0	20,0 *0.787*	1,2 *0.047*	2,5 *0.098*	00098160	00098170
P0-EN2-12	P0	20,0 *0.787*	1,2 *0.047*	2,5 *0.098*	00098165	00098175
P0-EN3-0	P0	20,0 *0.787*	1,2 *0.047*	2,5 *0.098*	00098239	00098254
P0-EN3-06	P0	20,0 *0.787*	1,2 *0.047*	2,5 *0.098*	00098185	00098195
P0-EN3-12	P0	20,0 *0.787*	1,2 *0.047*	2,5 *0.098*	00098190	00098200
P1-EN1-0	P1	20,0 *0.787*	1,5 *0.059*	3,0 *0.118*	00098230	00098245
P1-EN1-06	P1	20,0 *0.787*	1,5 *0.059*	3,0 *0.118*	00091787	00091764
P1-EN1-12	P1	20,0 *0.787*	1,5 *0.059*	3,0 *0.118*	00097300	00091972
P1-EN2-0	P1	20,0 *0.787*	1,5 *0.059*	3,0 *0.118*	00098235	00098250
P1-EN2-06	P1	20,0 *0.787*	1,5 *0.059*	3,0 *0.118*	00098161	00098171
P1-EN2-12	P1	20,0 *0.787*	1,5 *0.059*	3,0 *0.118*	00098166	00098176
P1-EN3-0	P1	20,0 *0.787*	1,5 *0.059*	3,0 *0.118*	00098240	00098255
P1-EN3-06	P1	20,0 *0.787*	1,5 *0.059*	3,0 *0.118*	00098186	00094702
P1-EN3-12	P1	20,0 *0.787*	1,5 *0.059*	3,0 *0.118*	00098191	00098201
P2-EN1-0	P2	20,0 *0.787*	2,0 *0.079*	4,5 *0.177*	00098231	00098246
P2-EN1-06	P2	20,0 *0.787*	2,0 *0.079*	4,5 *0.177*	00091788	00091765
P2-EN1-12	P2	20,0 *0.787*	2,0 *0.079*	4,5 *0.177*	00097301	00091973
P2-EN2-0	P2	20,0 *0.787*	2,0 *0.079*	4,5 *0.177*	00098236	00098251
P2-EN2-06	P2	20,0 *0.787*	2,0 *0.079*	4,5 *0.177*	00098162	00098172
P2-EN2-12	P2	20,0 *0.787*	2,0 *0.079*	4,5 *0.177*	00098167	00098177
P2-EN3-0	P2	20,0 *0.787*	2,0 *0.079*	4,5 *0.177*	00098241	00098256

Designation	Inserts	L	S	W	Grades	
		mm *Inch*	mm *Inch*	mm *Inch*	H15	CP20
P2_EN3-06	P2	20,0 *0.787*	2,0 *0.079*	4,5 *0.177*	00098187	00098197
P2-EN3-12	P2	20,0 *0.787*	2,0 *0.079*	4,5 *0.177*	00098192	00098202
P4-EN1-0	P4	25,0 *0.984*	2,3 *0.091*	7,0 *0.276*	00098232	00098247
P4-EN1-06	P4	25,0 *0.984*	2,3 *0.091*	7,0 *0.276*	00091789	00091766
P4-EN1-12	P4	25,0 *0.984*	2,3 *0.091*	7,0 *0.276*	00098128	00091974
P4-EN2-0	P4	25,0 *0.984*	2,4 *0.094*	7,0 *0.276*	00098237	00098252
P4-EN2-06	P4	25,0 *0.984*	2,3 *0.091*	7,0 *0.276*	00098163	00098173
P4-EN2-12	P4	25,0 *0.984*	2,3 *0.091*	7,0 *0.276*	00098168	00098178
P4-EN3-0	P4	25,0 *0.984*	2,3 *0.091*	7,0 *0.276*	00098242	00098257
P4-EN3-06	P4	25,0 *0.984*	2,3 *0.091*	7,0 *0.276*	00098188	00098198
P4-EN3-12	P4	25,0 *0.984*	2,3 *0.091*	7,0 *0.276*	00098193	00098203

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Pxx-EN1/EN2-00 (metric)

SMG		a_p (Ø) Ø < 9	Ø ≥ 9	f	v_c CP20	CP15
P5	Pxx-EN1/EN2-00	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-50)	-
P6	Pxx-EN1/EN2-00	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-50)	-
P7	Pxx-EN1/EN2-00	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-50)	-
K1	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
K2	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	35 (25-50)	50 (25-70)
K3	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
K4	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	70 (60-80)	90 (80-100)
K5	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	70 (60-80)	90 (80-100)
K6	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
K7	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
PM1	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	50 (25-70)	-
PM2	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	50 (25-70)	-
PM3	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	50 (25-70)	-

Pxx-EN1/EN2-06 (metric)

SMG		a_p (Ø) Ø < 9	Ø ≥ 9	f	v_c H15	CP20	CP15
P1	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P2	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P3	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P4	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P5	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P6	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P7	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P8	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P11	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P12	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	40 (25-45)	45 (30-55)
M1	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	35 (25-40)	35 (25-40)
M2	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	35 (25-40)	35 (25-40)
M3	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	35 (25-40)	35 (25-40)
M4	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	20 (15-30)	30 (25-40)	30 (25-40)
M5	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	20 (15-30)	30 (25-40)	30 (25-40)
K1	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
K2	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	35 (25-50)	50 (25-70)
K3	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
K4	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	70 (60-80)	90 (80-100)
K5	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	70 (60-80)	90 (80-100)
K6	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
K7	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
N11	Pxx-EN1/EN2-06	0,10-0,30	0,20-0,50	0,10-0,30	65 (50-150)	90 (70-150)	-
S1	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	-	25 (15-30)	-
S2	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	-	25 (15-30)	-
S3	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	-	25 (15-30)	-
PM1	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-
PM2	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-
PM3	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-

SMG = Seco material group
a_p=mm
f = mm/rev
v_c = m/min
All cutting data are start values

Pxx-EN1/EN2-00 (inch)

SMG		a_p on (Ø) inch			V_c (sf/min)	
		Ø < 9 mm	Ø ≥ 9 mm	f (in/rev)	CP20	CP15
P5	Pxx-EN1/EN2-00	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-165)	–
P6	Pxx-EN1/EN2-00	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-165)	–
P7	Pxx-EN1/EN2-00	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-165)	–
K1	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
K2	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	115 (80-165)	165 (80-230)
K3	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
K4	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	230 (195-260)	295 (260-330)
K5	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	230 (195-260)	295 (260-330)
K6	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
K7	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
PM1	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	165 (80-230)	–
PM2	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	165 (80-230)	–
PM3	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	165 (80-230)	–

Pxx-EN1/EN2-06 (inch)

SMG		a_p on (Ø) inch			V_c (sf/min)		
		Ø < 9 mm	Ø ≥ 9 mm	f (in/rev)	H15	CP20	CP15
P1	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P2	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P3	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P4	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P5	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P6	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P7	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P8	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	100 (80-130)	165 (100-195)	195 (130-230)
P11	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	100 (80-130)	165 (100-195)	195 (130-230)
M1	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	80 (65-100)	115 (80-130)	115 (80-130)
M2	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	80 (65-100)	115 (80-130)	115 (80-130)
M3	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	80 (65-100)	115 (80-130)	115 (80-130)
M4	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	65 (50-100)	100 (80-130)	100 (80-130)
M5	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	65 (50-100)	100 (80-130)	100 (80-130)
K1	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	395 (260-490)
K2	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	115 (80-165)	165 (80-230)
K3	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	395 (260-490)
K4	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	230 (195-260)	295 (260-330)
K5	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	230 (195-260)	295 (260-330)
K6	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	395 (260-490)
K7	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	395 (260-490)
N1	Pxx-EN1/EN2-06	0.004–0.012	0.008–0.020	0.004–0.012	215 (165-150)	295 (230-490)	–
N2	Pxx-EN1/EN2-06	0.004–0.012	0.008–0.020	0.004–0.012	215 (165-150)	295 (230-490)	–
N3	Pxx-EN1/EN2-06	0.004–0.012	0.008–0.020	0.004–0.012	215 (165-150)	295 (230-490)	–
N11	Pxx-EN1/EN2-06	0.004–0.012	0.008–0.020	0.004–0.012	215 (165-150)	295 (230-490)	–
S1	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	–	80 (50-100)	–
S2	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	–	80 (50-100)	–
S3	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	–	80 (50-100)	–
PM1	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–
PM2	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–
PM3	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–

SMG = Seco material group
a_p=in
f = IPR
v_c = sf/min
All cutting data are start values

Pxx-EN1/EN2-12 (metric)

		a_p (Ø)			v_c		
SMG		**Ø < 9**	**Ø ≥ 9**	**f**	**H15**	**CP20**	**CP15**
P1	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P2	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P3	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P4	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P5	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P6	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P7	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P8	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P11	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P12	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	40 (25-45)	45 (30-55)
M1	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	35 (25-40)	35 (25-40)
M2	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	35 (25-40)	35 (25-40)
M3	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	35 (25-40)	35 (25-40)
M4	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	20 (15-30)	30 (25-40)	30 (25-40)
M5	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	20 (15-30)	30 (25-40)	30 (25-40)
K1	Pxx-EN1/EN2-12	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	-
K3	Pxx-EN1/EN2-12	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	-
K4	Pxx-EN1/EN2-12	0,10-0,20	0,10-0,30	0,10-0,30	-	70 (60-80)	-
K5	Pxx-EN1/EN2-12	0,10-0,20	0,10-0,30	0,10-0,30	-	70 (60-80)	-
N11	Pxx-EN1/EN2-12	0,10-0,30	0,20-0,50	0,10-0,30	65 (50-150)	90 (70-150)	-
S1	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	-	25 (15-30)	-
S2	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	-	25 (15-30)	-
S3	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	-	25 (15-30)	-
PM1	Pxx-EN1/EN2-12	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-
PM2	Pxx-EN1/EN2-12	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-
PM3	Pxx-EN1/EN2-12	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-

Pxx-EN3-00 (metric)

		a_p (Ø)			v_c	
SMG		**Ø < 9**	**Ø ≥ 9**	**f**	**CP20**	**CP15**
P5	Pxx-EN3-00	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-50)	-
P6	Pxx-EN3-00	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-50)	-
P7	Pxx-EN3-00	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-50)	-
K1	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
K2	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	35 (25-50)	50 (25-70)
K3	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
K4	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	70 (60-80)	90 (80-100)
K5	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	70 (60-80)	90 (80-100)
K6	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
K7	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
PM1	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	50 (25-70)	-
PM2	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	50 (25-70)	-
PM3	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	50 (25-70)	-

SMG = Seco material group
a_p=mm
f = mm/rev
v_c = m/min
All cutting data are start values

Pxx-EN1/EN2-12 (inch)

		a_p on (Ø) inch			V_c (sf/min)		
SMG		Ø < 9 mm	Ø ≥ 9 mm	f (in/rev)	H15	CP20	CP15
P1	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P2	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P3	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P4	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P5	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P6	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P7	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P8	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	100 (80-130)	165 (100-195)	195 (130-230)
P11	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	100 (80-130)	165 (100-195)	195 (130-230)
M1	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	80 (65-100)	115 (80-130)	115 (80-130)
M2	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	80 (65-100)	115 (80-130)	115 (80-130)
M3	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	80 (65-100)	115 (80-130)	115 (80-130)
M4	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	65 (50-100)	100 (80-130)	100 (80-130)
M5	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	65 (50-100)	100 (80-130)	100 (80-130)
K1	Pxx-EN1/EN2-12	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	–
K3	Pxx-EN1/EN2-12	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	–
K4	Pxx-EN1/EN2-12	0.004–0.008	0.004–0.012	0.004–0.012	–	230 (195-260)	–
K5	Pxx-EN1/EN2-12	0.004–0.008	0.004–0.012	0.004–0.012	–	230 (195-260)	–
N1	Pxx-EN1/EN2-12	0.004–0.012	0.008–0.020	0.004–0.012	215 (165-490)	295 (230-490)	–
N2	Pxx-EN1/EN2-12	0.004–0.012	0.008–0.020	0.004–0.012	215 (165-490)	295 (230-490)	–
N3	Pxx-EN1/EN2-12	0.004–0.012	0.008–0.020	0.004–0.012	215 (165-490)	295 (230-490)	–
N11	Pxx-EN1/EN2-12	0.004–0.012	0.008–0.020	0.004–0.012	215 (165-490)	295 (230-490)	–
S1	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	–	80 (50-100)	–
S2	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	–	80 (50-100)	–
S3	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	–	80 (50-100)	–
PM1	Pxx-EN1/EN2-12	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–
PM2	Pxx-EN1/EN2-12	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–
PM3	Pxx-EN1/EN2-12	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–

Pxx-EN3-00 (inch)

		a_p on (Ø) inch			V_c (sf/min)	
SMG		Ø < 9 mm	Ø ≥ 9 mm	f (in/rev)	CP20	CP15
P5	Pxx-EN3-00	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-165)	–
P6	Pxx-EN3-00	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-165)	–
P7	Pxx-EN3-00	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-165)	–
K1	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
K2	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	115 (80-165)	165 (80-230)
K3	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
K4	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	230 (195-260)	295 (260-330)
K5	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	230 (195-260)	295 (260-330)
K6	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
K7	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
PM1	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	165 (80-230)	–
PM2	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	165 (80-230)	–
PM3	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	165 (80-230)	–

SMG = Seco material group
a_p=in
f = IPR
v_c = sf/min
All cutting data are start values

Pxx-EN3-06 (metric)

		a_p (Ø)				v_c	
SMG		Ø < 9	Ø ≥ 9	f		CP20	CP15
P1	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P2	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P3	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P4	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P5	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P6	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P7	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P8	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P11	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P12	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	40 (25-45)	45 (30-55)
M1	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	-	-	35 (25-40)
M2	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	-	-	35 (25-40)
M3	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	-	-	35 (25-40)
M4	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	-	-	30 (25-40)
M5	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	-	-	30 (25-40)
K1	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
K2	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	35 (25-50)	50 (25-70)
K3	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
K4	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	70 (60-80)	90 (80-100)
K5	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	70 (60-80)	90 (80-100)
K6	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
K7	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
PM1	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-
PM2	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-
PM3	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-

Pxx-EN3-12 (metric)

		a_p (Ø)				v_c	
SMG		Ø < 9	Ø ≥ 9	f	H15	CP20	CP15
P1	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P2	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P3	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P4	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P5	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P6	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P7	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P8	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P11	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P12	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	40 (25-45)	45 (30-55)
K1	Pxx-EN3-12	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	-
K3	Pxx-EN3-12	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	-
K4	Pxx-EN3-12	0,10-0,20	0,10-0,30	0,10-0,30	-	70 (60-80)	-
K5	Pxx-EN3-12	0,10-0,20	0,10-0,30	0,10-0,30	-	70 (60-80)	-
PM1	Pxx-EN3-12	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-
PM2	Pxx-EN3-12	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-
PM3	Pxx-EN3-12	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-

SMG = Seco material group
a_p=mm
f = mm/rev
v_c = m/min
All cutting data are start values

Pxx-EN3-06 (inch)

SMG		a_p on (Ø) inch			V_c (sf/min)		
		Ø < 9 mm	Ø ≥ 9 mm	f (in/rev)	H15	CP20	CP15
P1	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P2	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P3	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P4	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P5	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P6	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P7	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P8	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	100 (80-130)	165 (100-195)	195 (130-230)
P11	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	100 (80-130)	165 (100-195)	195 (130-230)
M1	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	–	–	115 (80-130)
M2	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	–	–	115 (80-130)
M3	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	–	–	115 (80-130)
M4	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	–	–	100 (80-130)
M5	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	–	–	100 (80-130)
K1	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	395 (260-490)
K2	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	115 (80-165)	165 (80-230)
K3	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	395 (260-490)
K4	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	230 (195-260)	295 (260-330)
K5	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	230 (195-260)	295 (260-330)
K6	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	395 (260-490)
K7	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	395 (260-490)
PM1	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–
PM2	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–
PM3	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–

Pxx-EN3-12 (inch)

SMG		a_p on (Ø) inch			V_c (sf/min)		
		Ø < 9 mm	Ø ≥ 9 mm	f (in/rev)	H15	CP20	CP15
P1	Pxx-EN3-12	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P2	Pxx-EN3-12	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P3	Pxx-EN3-12	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P4	Pxx-EN3-12	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P5	Pxx-EN3-12	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P6	Pxx-EN3-12	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P7	Pxx-EN3-12	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P8	Pxx-EN3-12	0.004–0.006	0.004–0.008	0.004–0.012	100 (80-130)	165 (100-195)	195 (130-230)
P11	Pxx-EN3-12	0.004–0.006	0.004–0.008	0.004–0.012	100 (80-130)	165 (100-195)	195 (130-230)
K1	Pxx-EN3-12	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	–
K3	Pxx-EN3-12	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	–
K4	Pxx-EN3-12	0.004–0.008	0.004–0.012	0.004–0.012	–	230 (195-260)	–
K5	Pxx-EN3-12	0.004–0.008	0.004–0.012	0.004–0.012	–	230 (195-260)	–
PM1	Pxx-EN3-12	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–
PM2	Pxx-EN3-12	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–
PM3	Pxx-EN3-12	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–

SMG = Seco material group
a_p=in
f = IPR
v_c = sf/min
All cutting data are start values

Adjustment instructions

1. 	Loosen the two adjustment screws (7) by a 1/4 turn.
2. 	Loosen the two clamping screws (5).
3. 	Clean the blade seat thoroughly then, index the used blade (2) edge or replace it.
4. 	Firmly push the blade against the axial end stop and the adjustment balls (6).
5. 	Tighten the clamping screws carefully. (Hold the key at its shortest end for correct torque).
6. 	Set the µm clock to zero using the cylindrical rear end of guiding pads (3).

Adjustment instructions

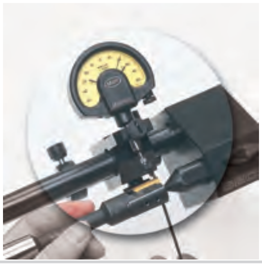
7.

Set the rear end of the blade to a diameter so that a back taper of 0,01 mm/10 mm *(0.0004" per every 0.394")* blade length is achieved (see figure 2).

8.

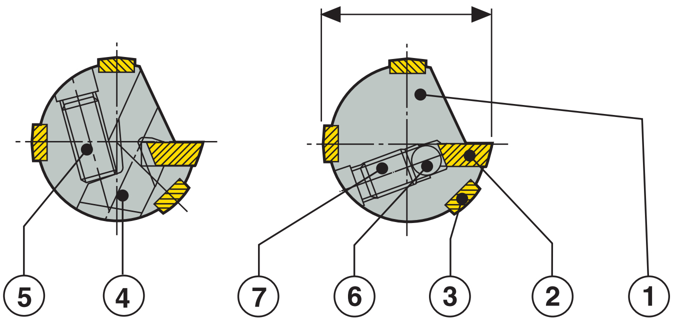
Set the µm clock to zero using the cylindrical front end of guiding pads (3).

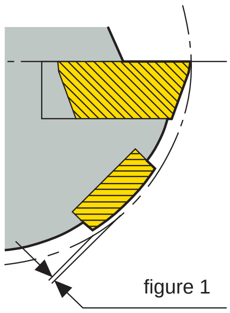
9.



Set the front end of the blade to 0,02 mm or 0,015 mm above the guide pads (3) clock A, see figure 1.
Check again back taper value (steps 6 and 7) clock B.

10.

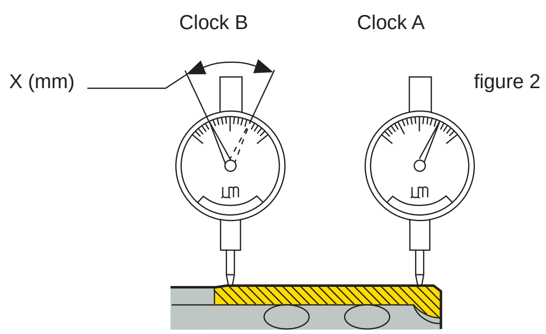




0,015 mm (∅ ≤ 10 mm)
0,020 mm (∅ > 10 mm)
clock A value for ∅ setting

0,0006" (∅ ≤ 0.394")
0,0008" (∅ > 0.394")
clock A value for ∅ setting

Note: If the required diameter is exceeded during adjustment, start again from the beginning to eliminate backlash on adjustment screws.



Diameter	Dimensions in mm		
	Blade size	Front clock A	Rear clock B
6,875-8,749	P0	+15	-5
8,750-10,000	P1	+15	-5
10,001-12,749	P1	+20	0
12,750-19,499	P2	+20	0
19,500-60,500	P4	+20	0

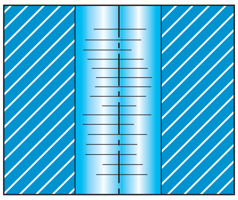
Diameter	Dimensions in *(inch)*		
	Blade size	Front clock A	Rear clock B
0.271-0.344"	P0	*+0.0006"*	*+0.0002"*
0.344-0.394"	P1	*+0.0006"*	*+0.0002"*
0.394-0.502"	P1	*+0.0008"*	*0*
0.502-0.768"	P2	*+0.0008"*	*0*
0.768-2.382"	P4	*+0.0008"*	*0*

- Clock unit = 1 µm *(0.00004")*
- Front & rear clock values valid when set zero on adjacent pad
- Rear clock values calculated on back taper of 1 µm/mm *(0.00004")* of blade

Troubleshooting

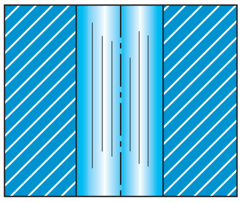
Poor surface finish

- Check material allowances
- Improve coolant conditions (outlet type, pressure, quality)
- Reduce feed rate
- Change blade (wrong lead geometry or wrong rake angle)
- Check axial position of blade



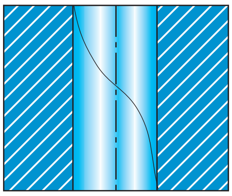
Facets

- Improve centering (part/tool)
- Increase back taper



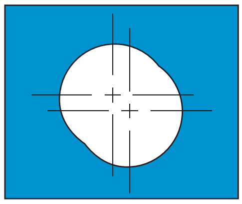
Retraction marks

- Improve coolant conditions (outlet type, pressure, quality)
- Improve centering (part/tool)
- Increase back taper



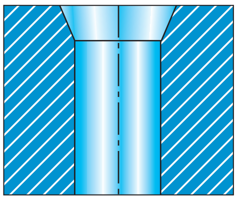
Off center/Ovality

- Improve clamping (workpiece deformation)
- Check material allowance
- Improve centering (part/tool)
- Check axial position of blade



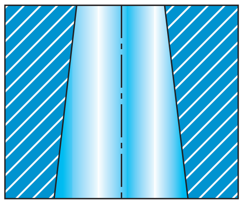
Tapered entry

- Reduce feed rate
- Improve centering (part/tool)
- Check back taper
- Reduce radial run-out



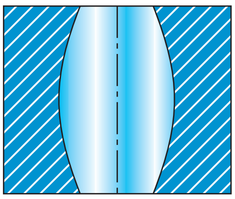
Tapered hole

- Improve centering (part/tool)
- Check back taper



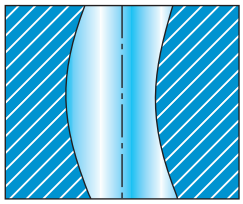
Deformed hole

- Improve clamping (workpiece deformation)



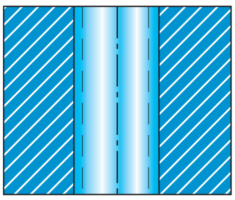
Curved hole

- Change blade (wrong lead geometry)
- Check axial position of blade



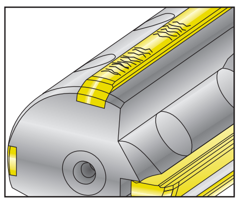
Too large diameter

- Improve centering (part/tool)
- Adjust diameter (too large)



Adhesion to pads

- Improve coolant conditions (outlet type, pressure, quality)
- Adjust diameter (too small)



Xfix™

Xfix™ large-diameter, multi-tooth reamers are all about bringing the highest possible performance and precision to hole production.

- Cutting depths up to 6.5xD within a diameter range of 39.5 – 154.5 mm (2.03'- 6.083')
- Quick and easy to adjust, only one screw per tooth is required to set the diameter and only one screw is required to set each tooth
- Accurate adjusting system to achieve tight tolerances between 16 to 25 µm (.0006-.0010')
- Inserts that have either four or eight numbered edges

Range overview

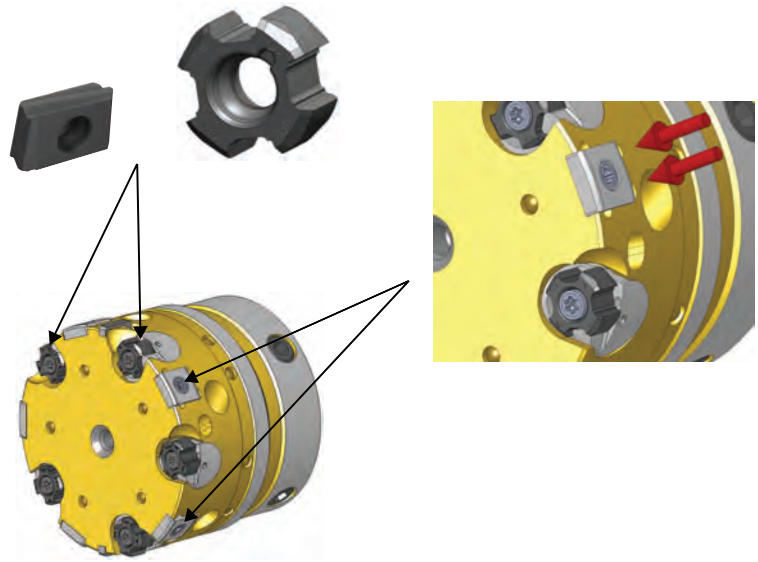
Xfix™	∅ Range	Reaming depth	Hole tolerance	Intermediate diameters	Surface finish (2)
	39,500-154,500 mm *(1.5551-6.0827")*	2,5-6,5 x D	IT 6	Yes, available through Custom design	R_a 0,8-1,2 µm *(R_a 31-47 µin)*

Xfix™ is a specially developed Seco Reaming programme, dedicated for large ∅ 39,5 *(1.555")* to 154,5 mm *(6.083")*.
Design includes adjustable and indexable inserts to achieve IT 6 accurate tolerance, as well as a built in adjustable run-out adapter to guarantee component quality.
Multi-teeth construction and patented pre-loaded guiding pads offering maximum stability and productivity for large ∅ reaming operations.

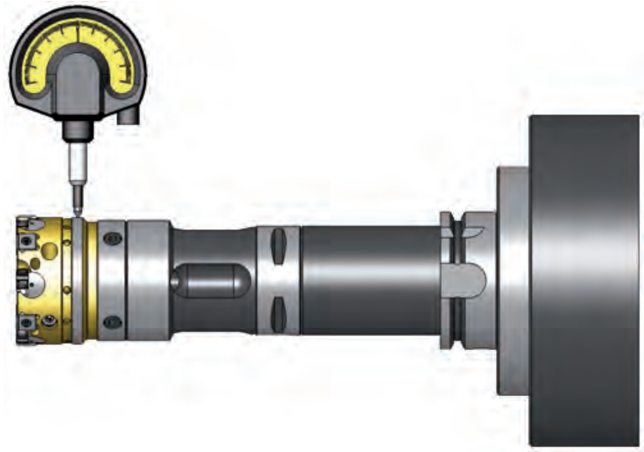
Feature details

- 4 or 8 cutting edges for optimization in all materials
- Stable clamping system
- Easy adjustment with 1 adjusting screw for easy setting
- Grade and geometry choice for different applications

- Patended pre-loaded guiding pads system for application stability
- Pads lubrication for performance and safety



- Integrated adjustable adapter for perfect run-out control



- Shanks and extension programme from Seco Tooling Systems catalogue offer maximum modularity

Code keys

Adapters

Flange size		Length		Shank type
HF55	-	088	-	C5

Code key – Standard heads

Head type		Diameter and tolerance		Number of teeth		Flange size D
HF85	-	60H6	-	05	-	55

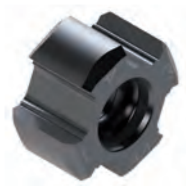
Code key – Heads intermediate

Head type		Diameter and tolerance		Number of teeth		Flange size D
HF85	-	65,2G7	-	05	-	55

Head type information :
- HF85 , through bore, short chipping material
- HF85B, blind bore, short chipping material
- HF86, through bore, all material
- HF86B, blind bore, all material

Code key – Inserts

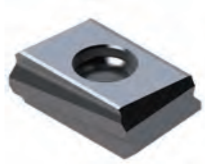
Insert size		Lead geometry		Rake angle		Grade
RNAX1005	-	EB45	-	03	-	RX2000



RNAX insert for
HF85 & HF 85B Xfix heads

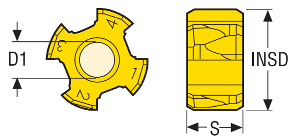
Code key – Inserts

Insert size		Lead geometry		Rake angle		Grade
LNEG	-	EB45	-	06	-	RX2000



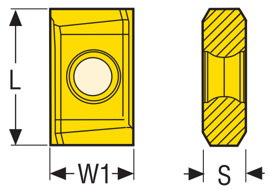
LNEG inserts for HF86 &
HF86B Xfix heads

RNAX



Designation	Inserts	INSD	S	D1	Grades		Rake angle
		mm *Inch*	mm *Inch*	mm *Inch*	RX1500	RX2000	
RNAX1005-EB1570-03	RNAX	10,0 *0.394*	5,5 *0.217*	3,5 *0.138*	02687601	02687603	3 °
RNAX1005-EB45-03	RNAX	10,0 *0.394*	5,5 *0.217*	3,5 *0.138*	02687600	02688608	3 °
RNAX1005-EB845-03	RNAX	10,0 *0.394*	5,5 *0.217*	3,5 *0.138*	02687593	02688606	3 °

LNEG

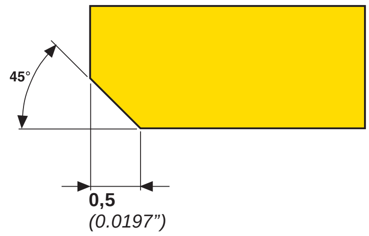


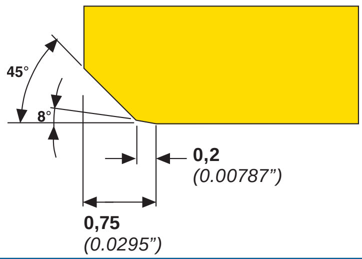
Designation	Inserts	L	S	W1	Grades			Rake angle
		mm *Inch*	mm *Inch*	mm *Inch*	RX1500	RX2000	CF	
LNEG1003-EB45-03	LNEG	10,0 *0.394*	3,5 *0.138*	6,35 –		02781311		3 °
LNEG1003-EB45-06		10,0 *0.394*	3,5 *0.138*	6,35 –	02904277	02781313	02904276	6 °
LNEG1003-EB845-03	LNEG	10,0 *0.394*	3,5 *0.138*	6,35 –		02781314		3 °
LNEG1003-EB845-06		10,0 *0.394*	3,5 *0.138*	6,35 –		02781315		6 °

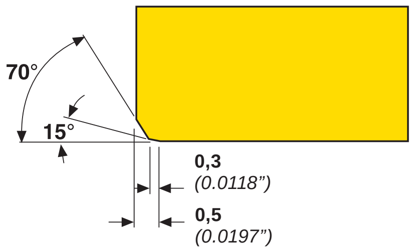
Grades

Grades		
	RX1500	Coated Cermet A resistant coated grade for performance optimization in steel and cast iron.
	RX2000	Coated High performance coated grade suitable for all materials.
	CF	Cermet A wear resistant grade for performance optimization in steel.

Lead geometry

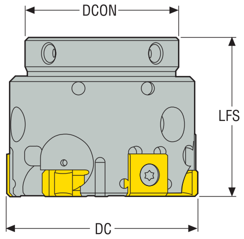
Lead Geometry - EB45	
Chip control +++ Surface Finish + R_a 1,2 - 2 µm Surface Finish + *(R_a 0.047 - 0.0787 µin)* First choice geometry	

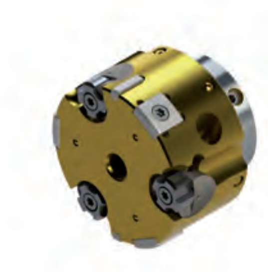
Lead Geometry - EB845	
Chip control ++ Surface Finish +++ R_a 0,4 - 1,2 µm Surface Finish +++ *(R_a 0.0157 - 0,047 µin)*	

Lead Geometry - EB1570	
Chip control ++ Surface Finish ++ R_a 0,8 - 1,6 µm Surface Finish ++ *(R_a 0.031 - 0.0630 µin)* Stability for long reach application +++	

HF85

Heads for RNAX inserts, through bore ∅ 39,5-59,499 mm

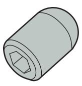
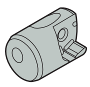
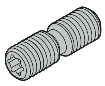
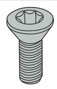
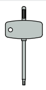
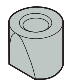




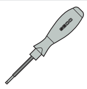
- For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF85-39.5/44.499-03-32	39,5 *1.555*	44,499 *1.752*	33,0 *1.299*	32,0 *1.260*	0,41 *0.900*	3	RNAX1005...
HF85-44.5/49.499-03-32	44,5 *1.752*	49,499 *1.949*	33,0 *1.299*	32,0 *1.260*	0,51 *1.120*	3	RNAX1005...
HF85-49.5/54.499-03-32	49,5 *1.949*	54,499 *2.146*	33,0 *1.299*	32,0 *1.260*	0,62 *1.370*	3	RNAX1005...
HF85-54.5/59.499-03-32	54,5 *2.146*	59,499 *2.342*	33,0 *1.299*	32,0 *1.260*	0,74 *1.630*	3	RNAX1005...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF85 03-32	SH4075S	CARTCYHF16	LDH4010	C03010-T09P	H2.0-2D	2SMS795	B6027

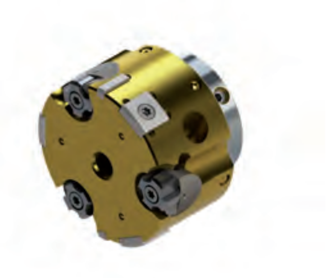
Accessories

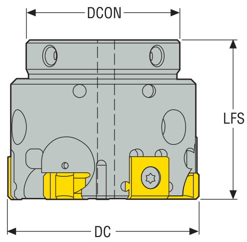
For head	Torque key	Torx driver for insert/holder locking screw
		
HF85 03-32	H00-2020	T00-09P20

Torque value T00-09P20: 2 Nm
Torque value H00-2020: 2 Nm.

HF85B

Heads for RNAX inserts, blind bore ∅ 39,5-59,499 mm

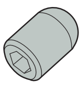
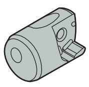
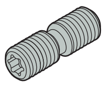
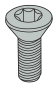
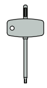
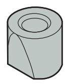




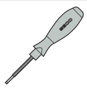
- For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF85B-39.5/44.499-03-32	39,5 *1.555*	44,499 *1.752*	33,0 *1.299*	32,0 *1.260*	0,41 *0.900*	3	RNAX1005...
HF85B-44.5/49.499-03-32	44,5 *1.752*	49,499 *1.949*	33,0 *1.299*	32,0 *1.260*	0,51 *1.120*	3	RNAX1005...
HF85B-49.5/54.499-03-32	49,5 *1.949*	54,499 *2.146*	33,0 *1.299*	32,0 *1.260*	0,62 *1.370*	3	RNAX1005...
HF85B-54.5/59.499-03-32	54,5 *2.146*	59,499 *2.342*	33,0 *1.299*	32,0 *1.260*	0,74 *1.630*	3	RNAX1005...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF85B 03-32	SH4075S	CARTCYHF16B	LDH4010	C03010-T09P	H2.0-2D	2SMS795	B6027

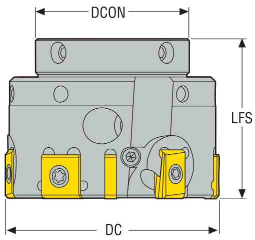
Accessories

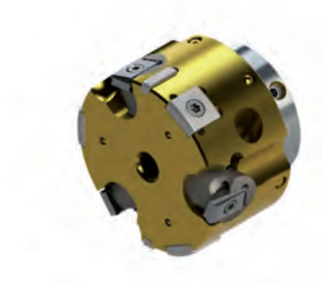
For head	Torque key	Torx driver for insert/holder locking screw
		
HF85B 03-32	H00-2020	T00-09P20

Torque value T00-09P20: 2 Nm.
Torque value H00-2020 2 Nm.

HF86

Heads for LNEG inserts, through bore ∅ 39,5-59,499 mm

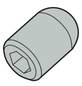
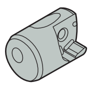
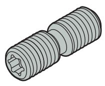
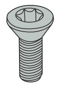
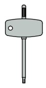
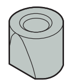




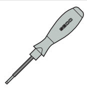
• For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF86-39.5/44.499-03-32	39,5 *1.555*	44,499 *1.752*	33,0 *1.299*	32,0 *1.260*	0,41 *0.900*	3	LNEG1003...
HF86-44.5/49.499-03-32	44,5 *1.752*	49,499 *1.949*	33,0 *1.299*	32,0 *1.260*	0,51 *1.120*	3	LNEG1003...
HF86-49.5/54.499-03-32	49,5 *1.949*	54,499 *2.146*	33,0 *1.299*	32,0 *1.260*	0,62 *1.370*	3	LNEG1003...
HF86-54.5/59.499-03-32	54,5 *2.146*	59,499 *2.342*	33,0 *1.299*	32,0 *1.260*	0,74 *1.630*	3	LNEG1003...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF86 03-32	SH4075S	CARTCYLN16	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

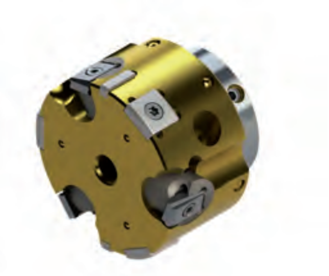
Accessories

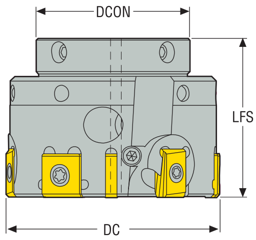
For head	Torque key	Torx driver for insert/holder locking screw
		
HF86 03-32	H00-2020	T00-07P09

Torque value T00-07P09: 0,9 Nm.
Torque value H00-2020 2 Nm.

HF86B

Heads for LNEG inserts, blind bore ∅ 39,5-59,499 mm

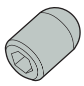
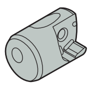
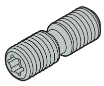
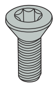
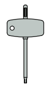
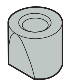




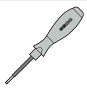
- For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF86B-39.5/44.499-03-32	39,5 *1.555*	44,499 *1.752*	33,0 *1.299*	32,0 *1.260*	0,41 *0.900*	3	LNEG1003...
HF86B-44.5/49.499-03-32	44,5 *1.752*	49,499 *1.949*	33,0 *1.299*	32,0 *1.260*	0,51 *1.120*	3	LNEG1003...
HF86B-49.5/54.499-03-32	49,5 *1.949*	54,499 *2.146*	33,0 *1.299*	32,0 *1.260*	0,62 *1.370*	3	LNEG1003...
HF86B-54.5/59.499-03-32	54,5 *2.146*	59,499 *2.342*	33,0 *1.299*	32,0 *1.260*	0,74 *1.630*	3	LNEG1003...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF86B 03-32	SH4075S	CARTCYLN16B	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

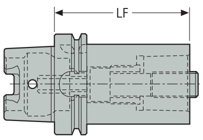
Accessories

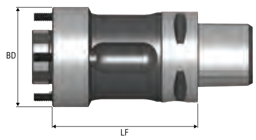
For head	Torque key	Torx driver for insert/holder locking screw
		
HF86B 03-32	H00-2020	T00-07P09

Torque value T00-07P09: 0,9 Nm.
Torque value H00-2020: 2 Nm.

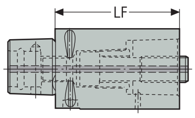
HF32

Seco-Capto™ shank for ∅ 39,5-59,499 mm

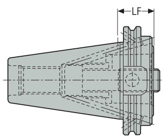




Reamer holder



Extension



Shank

Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm	mm	mm	kg
HF32-050-C3	02688610	–	50	C3	32	0,3
HF32...HSKA63	–	65	245	HSK-A63	32	0,0
HF32...HSKA80	–	100	209	HSK-A80	32	0,0
HF32...HSKA100	–	70	245	HSK-A100	32	0,0
HF32...DIN40ADB	–	60	252	DIN40ADB	32	0,0
HF32...DIN50ADB	–	60	317	DIN50ADB	32	0,0
HF32...BT40ADB	–	65	252	BT40ADB	32	0,0
HF32...BT50ADB	–	75	317	BT50ADB	32	0,0

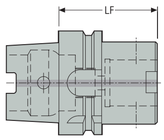
Shanks and extensions for HF32-050-C3 (see Seco Tooling Systems for more details).

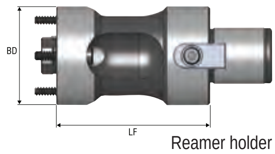
Designation Shank	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
C3-390.410-63075C	75039871	75	HSK-A63	C3	0,9
C3-390.410-100080A	75039873	80	HSK-A100	C3	2,3
C3-390B.140-40030	02924104	30	DIN40 ADB	C3	0,8
C3-390B.55-40030	02925959	30	BT40 ADB	C3	0,9
C3-390B.55-40060	02925960	60	BT40 ADB	C3	1,1
C3-390B.140-50030	02924106	30	DIN50 ADB	C3	2,6
C3-390B.140-50060	02924107	60	DIN50 ADB	C3	2,7
C3-390B.58-50040	02925961	40	BT50 ADB	C3	3,5
C3-390B.58-50070	02925962	70	BT50 ADB	C3	3,7

Designation Extension	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
C3-391.01-32060A	75039884	60	C3	C3	0,34
C3-391.01-32080A	00090847	80	C3	C3	0,45
C4-391.02-32055A	75039889	55	C4	C3	0,42
C4-391.02-32070A	02535687	70	C4	C3	0,56
C5-391.02-32060A	75039890	60	C5	C3	0,64
C6-391.02-32070A	75039892	70	C6	C3	1,06

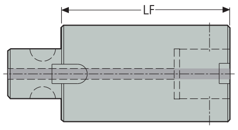
HF32

Graflex® shank for ∅ 39,5-59,499 mm

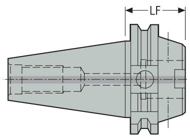




Reamer holder



Extension



Shank

Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm	mm	mm	kg
HF32-050-G3	02698870	–	50	G3	32	0,4
HF32...HSKA63	–	65	245	HSK-A63	32	0,0
HF32...HSKA80	–	100	209	HSK-A80	32	0,0
HF32...HSKA100	–	70	245	HSK-A100	32	0,0
HF32...DIN40ADB	–	60	252	DIN40ADB	32	0,0
HF32...DIN50ADB	–	60	317	DIN50ADB	32	0,0
HF32...BT40ADB	–	65	252	BT40ADB	32	0,0
HF32...BT50ADB	–	75	317	BT50ADB	32	0,0

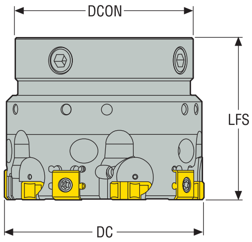
Shanks and extensions for HF32-050-G3 (see Seco Tooling Systems for more details).

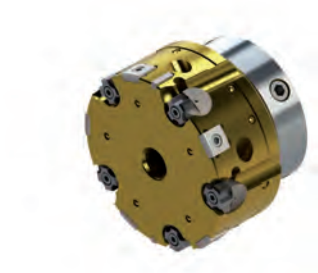
Designation Shank	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
EM93044011850	00086918	50	HSK-A63	G3	0,73
EM93064011855	00086925	55	HSK-A100	G3	2,1
EM34694011835	02420097	35	DIN40 ADB	G3	0,91
EM346940118100	02503298	100	DIN40 ADB	G3	1,22
EM34144011840	02503366	40	BT40 ADB	G3	1,07
EM341440118100	02503367	100	BT40 ADB	G3	1,31
EM34714011835	02503307	35	DIN50 ADB	G3	2,67
EM34164011845	02503376	45	BT50 ADB	G3	3,58
EM341640118120	02503377	120	BT50 ADB	G3	3,9

Designation Extension	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
M402330	00056758	40	G3	G3	0,24
M402331	75056759	60	G3	G3	0,36

HF85

Heads for RNAX inserts, through bore ∅ 59,5-84,499 mm

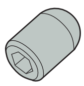
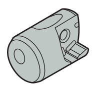
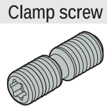
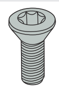
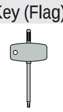
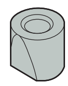




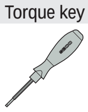
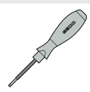
- For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF85-59.5/64.499-05-55	59,5 *2.343*	64,499 *2.539*	50,0 *1.969*	55,0 *2.165*	1,3 *2.870*	5	RNAX1005...
HF85-64.5/69.499-05-55	64,5 *2.539*	69,499 *2.736*	50,0 *1.969*	55,0 *2.165*	1,5 *3.310*	5	RNAX1005...
HF85-69.5/74.499-05-55	69,5 *2.736*	74,499 *2.933*	50,0 *1.969*	55,0 *2.165*	1,75 *3.860*	5	RNAX1005...
HF85-74.5/79.499-05-55	74,5 *2.933*	79,499 *3.130*	50,0 *1.969*	55,0 *2.165*	2,0 *4.410*	5	RNAX1005...
HF85-79.5/84.499-05-55	79,5 *3.130*	84,499 *3.327*	50,0 *1.969*	55,0 *2.165*	2,2 *4.850*	5	RNAX1005...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF85 05-55	SH4075S	CARTCYHF20	LDH4012	C03010-T09P	H2.0-2D	4SMS795	B6027

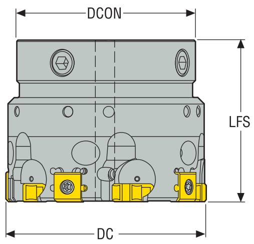
Accessories

For head	Torque key	Torx driver for insert/holder locking screw
		
HF85 05-55	H00-2020	T00-09P20

Torque value T00-09P20: 2 Nm.
Torque value H00-2020 2 Nm.

HF85B

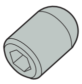
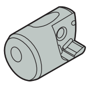
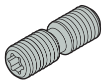
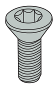
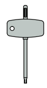
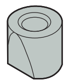
Heads for RNAX inserts, blind bore ∅ 59,5-84,499 mm



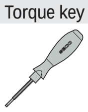
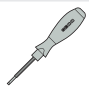
- For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF85B-59.5/64.499-05-55	59,5 *2.343*	64,499 *2.539*	50,0 *1.969*	55,0 *2.165*	1,3 *2.870*	5	RNAX1005...
HF85B-64.5/69.499-05-55	64,5 *2.539*	69,499 *2.736*	50,0 *1.969*	55,0 *2.165*	1,5 *3.310*	5	RNAX1005...
HF85B-69.5/74.499-05-55	69,5 *2.736*	74,499 *2.933*	50,0 *1.969*	55,0 *2.165*	1,75 *3.860*	5	RNAX1005...
HF85B-74.5/79.499-05-55	74,5 *2.933*	79,499 *3.130*	50,0 *1.969*	55,0 *2.165*	2,0 *4.410*	5	RNAX1005...
HF85B-79.5/84.499-05-55	79,5 *3.130*	84,499 *3.327*	50,0 *1.969*	55,0 *2.165*	2,2 *4.850*	5	RNAX1005...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF85B 05-55	SH4075S	CARTCYHF20B	LDH4012	C03010-T09P	H2.0-2D	2SMS795	B6027

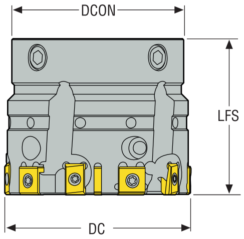
Accessories

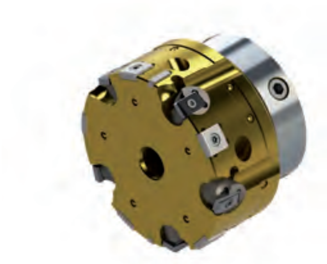
For head	Torque key	Torx driver for insert/holder locking screw
		
HF85B 05-55	H00-2020	T00-09P20

Torque value T00-09P20: 2 Nm.
Torque value H00-2020 2 Nm.

HF86

Heads for LNEG inserts, through bore ∅ 59,5-84,499 mm

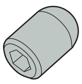
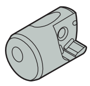
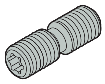
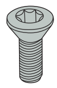
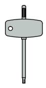
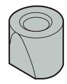




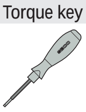
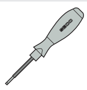
- For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF86-59.5-64.499-05-55	59,5 *2.343*	64,499 *2.539*	50,0 *1.969*	55,0 *2.165*	1,3 *2.870*	5	LNEG1003...
HF86-64.5-69.499-05-55	64,5 *2.539*	69,499 *2.736*	50,0 *1.969*	55,0 *2.165*	1,5 *3.310*	5	LNEG1003...
HF86-69.5-74.499-05-55	69,5 *2.736*	74,499 *2.933*	50,0 *1.969*	55,0 *2.165*	1,75 *3.860*	5	LNEG1003...
HF86-74.5-79.499-05-55	74,5 *2.933*	94,499 *3.720*	50,0 *1.969*	55,0 *2.165*	2,0 *4.410*	5	LNEG1003...
HF86-79.5-84.499-05-55	79,5 *3.130*	84,499 *3.327*	50,0 *1.969*	55,0 *2.165*	2,2 *4.850*	5	LNEG1003...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF86 05-55	SH4075S	CARTCYLN20	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

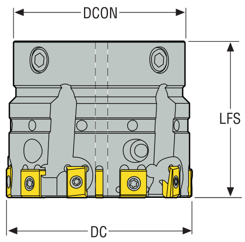
Accessories

For head	Torque key	Torx driver for insert/holder locking screw
		
HF86 05-55	H00-2020	T00-07P09

Torque value T00-07P09: 0,9 Nm.
Torque value H00-2020: 2 Nm.

HF86B

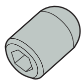
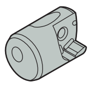
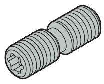
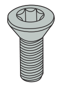
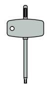
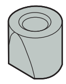
Heads for LNEG inserts, blind bore ∅ 59,5-84,499 mm



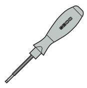
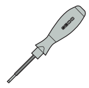
- For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF86B-59.5/64.499-05-55	59,5 *2.343*	64,499 *2.539*	50,0 *1.969*	55,0 *2.165*	1,3 *2.870*	5	LNEG1003...
HF86B-64.5/69.499-05-55	64,5 *2.539*	69,499 *2.736*	50,0 *1.969*	55,0 *2.165*	1,5 *3.310*	5	LNEG1003...
HF86B-69.5/74.499-05-55	69,5 *2.736*	74,499 *2.933*	50,0 *1.969*	55,0 *2.165*	1,75 *3.860*	5	LNEG1003...
HF86B-74.5/79.499-05-55	74,5 *2.933*	79,499 *3.130*	50,0 *1.969*	55,0 *2.165*	2,0 *4.410*	5	LNEG1003...
HF86B-79.5/84.499-05-55	79,5 *3.130*	84,499 *3.327*	50,0 *1.969*	55,0 *2.165*	2,2 *4.850*	5	LNEG1003...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF86B 05-55	SH4075S	CARTCYLN20B	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

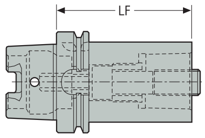
Accessories

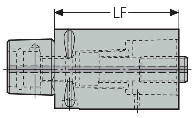
For head	Torque key	Torx driver for insert/holder locking screw
		
HF86B 05-55	H00-2020	T00-07P09

Torque value T00-07P09: 2 Nm.
Torque value H00-2020: 2 Nm.

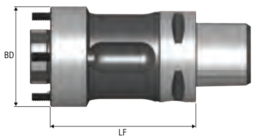
HF55

Seco-Capto™ shank for ∅ 59,5-84,499 mm

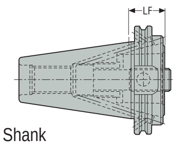




Extension



Reamer holder



Shank

Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm	mm	mm	kg
HF55-080-C5	02688647	–	80	C5	55	1,5
HF55...HSKA63	–	80	239	HSK-A63	55	0,0
HF55...HSKA80	–	100	239	HSK-A80	55	0,0
HF55...HSKA100	–	100	239	HSK-A100	55	0,0
HF55...DIN40ADB	–	80	239	DIN40ADB	55	0,0
HF55...DIN50ADB	–	80	304	DIN50ADB	55	0,0
HF55...BT40ADB	–	80	239	BT40ADB	55	0,0
HF55...BT50ADB	–	80	304	BT50ADB	55	0,0

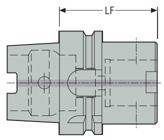
Shanks and extensions for HF55-080-C5 (see Seco Tooling Systems for more details).

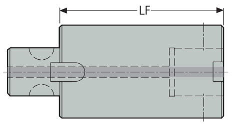
Designation Shank	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
C5-390.410-63090C	75039878	90	HSK-A63	C5	1,41
C5-390.410-100100A	75039880	100	HSK-A100	C5	2,9
C5-390B.140-40040	02924112	40	DIN40 ADB	C5	0,9
C5-390B.140-40080	02924113	80	DIN40 ADB	C5	1,5
C5-390B.55-40050	02925967	50	BT40 ADB	C5	1,1
C5-390B.55-40090	02925968	90	BT40 ADB	C5	1,7
C5-390B.140-50030	02924114	30	DIN50 ADB	C5	2,6
C5-390B.140-50070	02924115	70	DIN50 ADB	C5	3,1
C5-390B.58-50040	02925969	40	BT50 ADB	C5	3,4
C5-390B.58-50080	02925970	80	BT50 ADB	C5	4,0

Designation Extension	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
C5-391.01-50080A	75039886	80	C5	C5	1,12
C5-391.01-50100A	00004773	100	C5	C5	1,39
C6-391.02-50080A	75039894	80	C6	C5	1,45
C6-391.02-50110A	02207400	110	C6	C5	2,15
C8-391.02-50080B	03080011	80	–	–	2,4

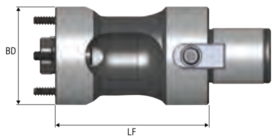
HF55

Graflex® shank for ∅ 59,5-84,499 mm

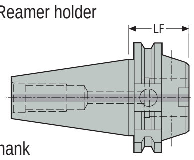




Extension



Reamer holder



Shank

Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm	mm	mm	kg
HF55-080-G5	02698871	–	80	G5	55	1,3
HF55...HSKA63	–	80	239	HSK-A63	55	0,0
HF55...HSKA80	–	100	239	HSK-A80	55	0,0
HF55...HSKA100	–	100	239	HSK-A100	55	0,0
HF55...DIN40ADB	–	80	239	DIN40ADB	55	0,0
HF55...DIN50ADB	–	80	304	DIN50ADB	55	0,0
HF55...BT40ADB	–	80	239	BT40ADB	55	0,0
HF55...BT50ADB	–	80	304	BT50ADB	55	0,0

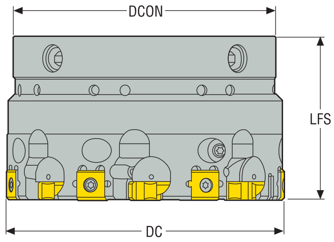
Shanks and extensions for HF55-080-G5 (see Seco Tooling Systems for more details).

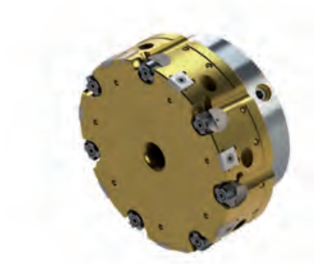
Designation Shank	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
EM93044012860	00086920	60	HSK-A63	G5	0,98
EM930440128100	00086921	100	HSK-A63	G5	1,58
EM930440128140	00086922	140	HSK-A63	G5	2,18
EM93064012865	00086927	65	HSK-A100	G5	2,37
EM930640128110	00086928	110	HSK-A100	G5	3,02
EM930640128150	00086929	150	HSK-A100	G5	3,7
EM34694012840	02458421	40	DIN40 ADB	G5	0,93
EM34694012880	02503301	80	DIN40 ADB	G5	1,5
EM346940128120	02503302	120	DIN40 ADB	G5	2,08
EM34144012845	02457989	45	BT40 ADB	G5	1,12
EM34144012880	02503371	80	BT40 ADB	G5	1,54
EM341440128120	02503372	120	BT40 ADB	G5	2,12
EM34714012840	02503312	40	DIN50 ADB	G5	2,75
EM341640128100	02503381	100	BT50 ADB	G5	4,22
EM34164012855	02503380	55	BT50 ADB	G5	4,0
EM341640128140	02503382	140	BT50 ADB	G5	4,8

Designation Extension	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
M402550	00056762	50	G5	G5	0,72
M402551	00056763	75	G5	G5	1,12
M402552	00056764	100	G5	G5	1,48

HF85

Heads for RNAX inserts, through bore ∅ 84,5-119,499 mm

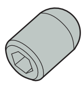
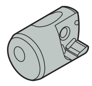
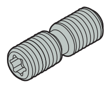
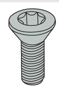
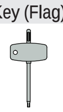
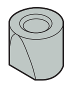




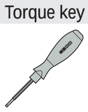
- For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF85-84.5/89.499-07-80	84,5 *3.327*	89,499 *3.524*	50,0 *1.969*	80,0 *3.150*	1,68 *3.700*	7	RNAX1005...
HF85-89.5/94.499-07-80	89,5 *3.524*	94,499 *3.720*	50,0 *1.969*	80,0 *3.150*	1,85 *4.080*	7	RNAX1005...
HF85-94.5/99.499-07-80	94,5 *3.720*	99,499 *3.917*	50,0 *1.969*	80,0 *3.150*	2,02 *4.450*	7	RNAX1005...
HF85-99.5/104.499-07-80	99,5 *3.917*	104,499 *4.114*	50,0 *1.969*	80,0 *3.150*	2,2 *4.850*	7	RNAX1005...
HF85-104.5/109.499-07-80	104,5 *4.114*	109,499 *4.311*	50,0 *1.969*	80,0 *3.150*	2,4 *5.290*	7	RNAX1005...
HF85-109.5/114.499-07-80	109,5 *4.311*	114,499 *4.508*	50,0 *1.969*	80,0 *3.150*	2,61 *5.750*	7	RNAX1005...
HF85-114.5/119.499-07-80	114,5 *4.508*	119,499 *4.705*	50,0 *1.969*	80,0 *3.150*	2,82 *6.220*	7	RNAX1005...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF85 07-80	SH4075S	CARTCYHF20	LDH4012	C03010-T09P	H2.0-2D	4SMS795	B6027

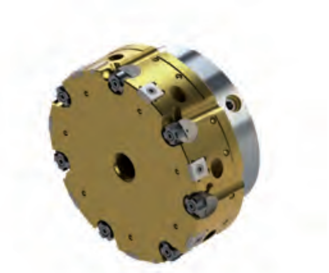
Accessories

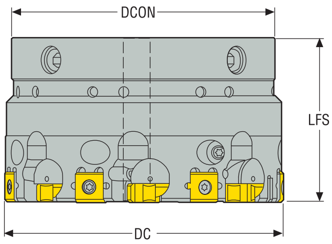
For head	Torque key	Torx driver for insert/holder locking screw
		
HF85 07-80	H00-2020	T00-09P20

Torque value T00-09P20: 2 Nm.
Torque value H00-2020 2 Nm.

HF85B

Heads for RNAX inserts, blind bore ∅ 84,5-119,499 mm

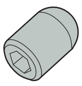
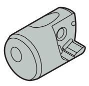
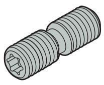
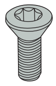
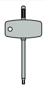
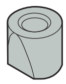




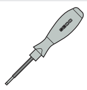
- For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF85B-84.5/89.499-07-80	84,5 *3.327*	89,499 *3.524*	50,0 *1.969*	80,0 *3.150*	1,68 *3.700*	7	RNAX1005...
HF85B-89.5/94.499-07-80	89,5 *3.524*	94,499 *3.720*	50,0 *1.969*	80,0 *3.150*	1,85 *4.080*	7	RNAX1005...
HF85B-94.5/99.499-07-80	94,5 *3.720*	99,499 *3.917*	50,0 *1.969*	80,0 *3.150*	2,02 *4.450*	7	RNAX1005...
HF85B-99.5/104.499-07-80	99,5 *3.917*	104,499 *4.114*	50,0 *1.969*	80,0 *3.150*	2,2 *4.850*	7	RNAX1005...
HF85B-104.5/109.499-07-80	104,5 *4.114*	109,499 *4.311*	50,0 *1.969*	80,0 *3.150*	2,4 *5.290*	7	RNAX1005...
HF85B-109.5/114.499-07-80	109,5 *4.311*	114,499 *4.508*	50,0 *1.969*	80,0 *3.150*	2,61 *5.750*	7	RNAX1005...
HF85B-114.5/119.499-07-80	114,5 *4.508*	119,499 *4.705*	50,0 *1.969*	80,0 *3.150*	2,82 *6.220*	7	RNAX1005...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF85B 07-80	SH4075S	CARTCYHF20B	LDH4010	C03010-T09P	H2.0-2D	2SMS795	B6027

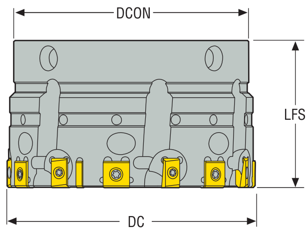
Accessories

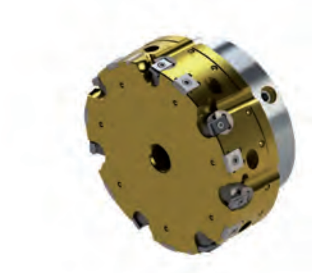
For head	Torque key	Torx driver for insert/holder locking screw
		
HF85B 07-80	H00-2020	T00-09P20

Torque value T00-09P20: 2 Nm.
Torque value H00-2020 2 Nm.

HF86

Heads for LNEG inserts, through bore ∅ 84,5-119,499 mm

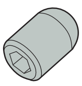
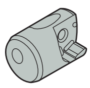
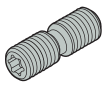
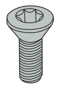
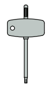
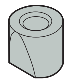




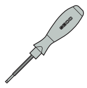
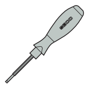
• For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF86-84.5/89.499-07-80	84,5 *3.327*	89,499 *3.524*	50,0 *1.969*	80,0 *3.150*	1,68 *3.700*	7	LNEG1003...
HF86-89.5/94.499-07-80	89,5 *3.524*	94,499 *3.720*	50,0 *1.969*	80,0 *3.150*	1,85 *4.080*	7	LNEG1003...
HF86-94.5/99.499-07-80	94,5 *3.720*	99,499 *3.917*	50,0 *1.969*	80,0 *3.150*	2,02 *4.450*	7	LNEG1003...
HF86-99.5/104.499-07-80	99,5 *3.917*	104,499 *4.114*	50,0 *1.969*	80,0 *3.150*	2,2 *4.850*	7	LNEG1003...
HF86-104.5/109.499-07-80	104,5 *4.114*	109,499 *4.311*	50,0 *1.969*	80,0 *3.150*	2,4 *5.290*	7	LNEG1003...
HF86-109.5/114.499-07-80	109,5 *4.311*	114,499 *4.508*	50,0 *1.969*	80,0 *3.150*	2,61 *5.750*	7	LNEG1003...
HF86-114.5/119.499-07-80	114,5 *4.508*	119,499 *4.705*	50,0 *1.969*	80,0 *3.150*	2,82 *6.220*	7	LNEG1003...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF86 07-80	SH4075S	CARTCYLN20	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

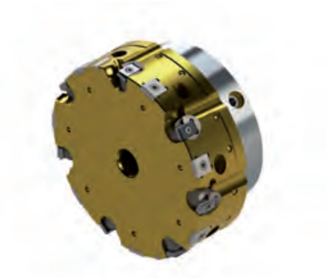
Accessories

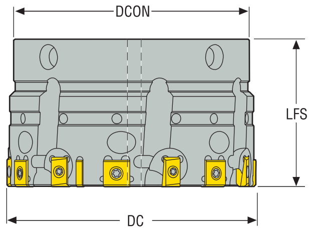
For head	Torque key	Torx driver for insert/holder locking screw
		
HF86 07-80	H00-2020	T00-07P09

Torque value T00-07P09: 0,9 Nm.
Torque value H00-2020: 2 Nm.

HF86B

Heads for LNEG inserts, blind bore ∅ 84,5-119,499 mm

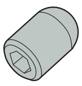
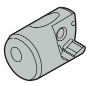
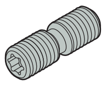
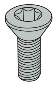
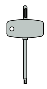
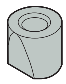




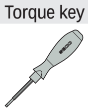
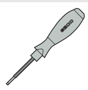
- For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF86B-84.5/89.499-07-80	84,5 *3.327*	89,499 *3.524*	50,0 *1.969*	80,0 *3.150*	1,68 *3.700*	7	LNEG1003...
HF86B-89.5/94.499-07-80	89,5 *3.524*	94,499 *3.720*	50,0 *1.969*	80,0 *3.150*	1,85 *4.080*	7	LNEG1003...
HF86B-94.5/99.499-07-80	94,5 *3.720*	99,499 *3.917*	50,0 *1.969*	80,0 *3.150*	2,02 *4.450*	7	LNEG1003...
HF86B-99.5/104.499-07-80	99,5 *3.917*	104,499 *4.114*	50,0 *1.969*	80,0 *3.150*	2,2 *4.850*	7	LNEG1003...
HF86B-104.5/109.499-07-80	104,5 *4.114*	109,499 *4.311*	50,0 *1.969*	80,0 *3.150*	2,4 *5.290*	7	LNEG1003...
HF86B-109.5/114.499-07-80	109,5 *4.311*	114,499 *4.508*	50,0 *1.969*	80,0 *3.150*	2,61 *5.750*	7	LNEG1003...
HF86B-114.5/119.499-07-80	114,5 *4.508*	119,499 *4.705*	50,0 *1.969*	80,0 *3.150*	2,82 *6.220*	7	LNEG1003...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF86B	SH4075S	CARTCYLN20B	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

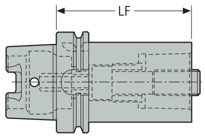
Accessories

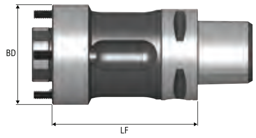
For head	Torque key	Torx driver for insert/holder locking screw
		
HF86B	H00-2020	T00-07P09

Torque value T00-07P09: 0,9 Nm.
Torque value H00-2020: 2 Nm.

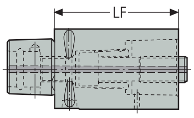
HF80

Seco-Capto™ shank for ∅ 84,5-119,499 mm

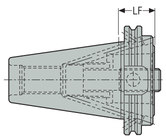




Reamer holder



Extension



Shank

Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm	mm	mm	kg
HF80-080-C6	02688648	–	80	C6	80	2,5
HF80...HSKA80	–	100	239	HSK-A80	80	0,0
HF80...HSKA100	–	100	239	HSK-A100	80	0,0
HF80...DIN50ADB	–	80	304	DIN50ADB	80	0,0
HF80...BT50ADB	–	80	304	BT50ADB	80	0,0

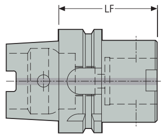
Shanks and extensions for HF80-080-C6 (see Seco Tooling Systems for more details).

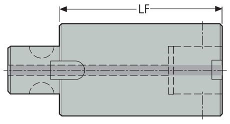
Designation Shank	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
C6-390.410-100110A	75039882	110	HSK-A100	C6	3,56
C6-390B.140-40085	02924116	85	DIN40 ADB	C6	1,8
C6-390B.140-50030	02924117	30	DIN50 ADB	C6	2,5
C6-390B.140-50080	02924118	80	DIN50 ADB	C6	3,6
C6-390B.55-40075	02925971	75	BT40 ADB	C6	1,7
C6-390B.58-50100	02925973	100	BT50 ADB	C6	4,6
C6-390B.58-50050	02925972	50	BT50 ADB	C6	3,5

Designation Extension	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
C6-391.01-63100A	75039887	100	C6	C6	2,2
C6-391.01-63140A	00004840	140	C6	C6	3,1
C6-391.01-63060	02300834	60	C6	C6	1,31

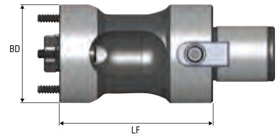
HF80

Graflex® shank for ∅ 84,5-119,499 mm

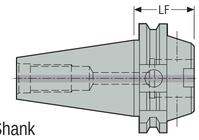




Extension



Reamer holder



Shank

Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm	mm	mm	kg
HF80-080-G6	02698873	–	80	G6	80	3,0
HF80...HSKA80	–	100	239	HSK-A80	80	0,0
HF80...HSKA100	–	100	239	HSK-A100	80	0,0
HF80...DIN50ADB	–	80	304	DIN50ADB	80	0,0
HF80...BT50ADB	–	80	304	BT50ADB	80	0,0

Shanks and extensions for HF80-080-G6 (see Seco Tooling Systems for more details).

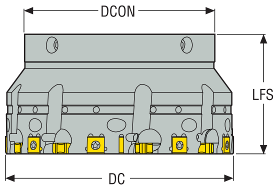
Designation Shank	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
EM93044013670	00086923	70	HSK-A63	G6	1,21
EM930440136120	00086924	120	HSK-A63	G6	2,38
EM930640136120	00086931	120	HSK-A100	G6	3,82
EM930640136160	00086932	160	HSK-A100	G6	4,72
EM34694013660	02503303	60	DIN40 ADB	G6	1,24
EM346940136120	02503304	120	DIN40 ADB	G6	2,65
EM34144013650	02503373	50	BT40 ADB	G6	1,13
EM341440136120	02503374	120	BT40 ADB	G6	2,78
EM34714013645	02503317	45	DIN50 ADB	G6	2,88
EM347140136100	02503318	100	DIN50 ADB	G6	4,1
EM347140136140	02503319	140	DIN50 ADB	G6	4,99
EM34164013663	02503383	63	BT50 ADB	G6	4,2
EM341640136100	02503384	100	BT50 ADB	G6	4,6
EM341640136140	02503385	140	BT50 ADB	G6	5,54

Shanks and extensions for HF32-050-G3 (see Seco Tooling Systems for more details).

Designation Extension	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
M402660	00056765	60	G6	G6	1,38
M402661	00056766	90	G6	G6	2,1
M402662	00056767	120	G6	G6	2,82

HF85

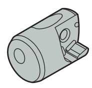
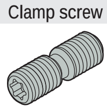
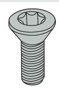
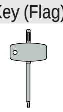
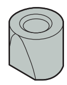
Heads for RNAX inserts, through bore ∅ 119,5-154,499 mm



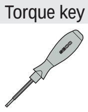
- For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF85-119.5/124.499-09-100	119,5 *4.705*	124,499 *4.902*	63,0 *2.480*	100,0 *3.937*	3,89 *8.580*	9	RNAX1005...
HF85-124.5/129.499-09-100	124,5 *4.902*	129,499 *5.098*	63,0 *2.480*	100,0 *3.937*	4,15 *9.150*	9	RNAX1005...
HF85-129.5/134.499-09-100	129,5 *5.098*	134,499 *5.295*	63,0 *2.480*	100,0 *3.937*	4,42 *9.740*	9	RNAX1005...
HF85-134.5/139.499-09-100	134,5 *5.295*	139,499 *5.492*	63,0 *2.480*	100,0 *3.937*	4,7 *10.360*	9	RNAX1005...
HF85-139.5/144.499-09-100	139,5 *5.492*	144,499 *5.689*	63,0 *2.480*	100,0 *3.937*	4,99 *11.000*	9	RNAX1005...
HF85-144.5/149.499-09-100	144,5 *5.689*	149,499 *5.886*	63,0 *2.480*	100,0 *3.937*	5,29 *11.660*	9	RNAX1005...
HF85-149.5/154.499-09-100	149,5 *5.886*	154,499 *6.083*	63,0 *2.480*	100,0 *3.937*	5,6 *12.350*	9	RNAX1005...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF86 09-100	SH4075S	CARTCYLN20	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

Accessories

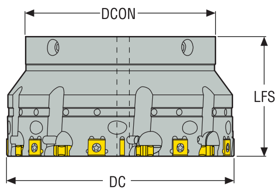
For head	Torque key	Torx driver for insert/holder locking screw
		
HF86 09-100	H00-2020	T00-07P09

Torque value T00-09P20: 2 Nm.
Torque value H00-2020 2 Nm.

Introduction
Drilling
Reaming
Boring
Annex

HF85B

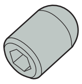
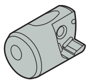
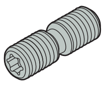
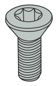
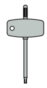
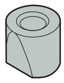
Heads for RNAX inserts, blind bore ∅ 119,5-154,499 mm



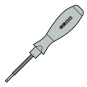
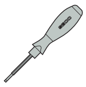
- For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF85B-119.5/124.499-09-100	119,5 *4.705*	124,499 *4.902*	63,0 *2.480*	100,0 *3.937*	3,89 *8.580*	9	RNAX1005...
HF85B-124.5/129.499-09-100	124,5 *4.902*	129,499 *5.098*	63,0 *2.480*	100,0 *3.937*	4,15 *9.150*	9	RNAX1005...
HF85B-134.5/139.499-09-100	134,5 *5.295*	139,499 *5.492*	63,0 *2.480*	100,0 *3.937*	4,7 *10.360*	9	RNAX1005...
HF85B-139.5/144.499-09-100	139,5 *5.492*	144,499 *5.689*	63,0 *2.480*	100,0 *3.937*	4,99 *11.000*	9	RNAX1005...
HF85B-144.5/149.499-09-100	144,5 *5.689*	149,499 *5.886*	63,0 *2.480*	100,0 *3.937*	5,29 *11.660*	9	RNAX1005...
HF85B-149.5/154.499-09-100	149,5 *5.886*	154,499 *6.083*	63,0 *2.480*	100,0 *3.937*	5,6 *12.350*	9	RNAX1005...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF85B 09-100	SH4075S	CARTCYHF20B	LDH4012	C03010-T09P	H2.0-2D	2SMS795	B6027

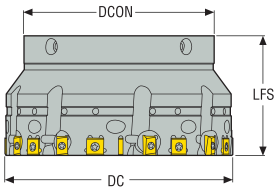
Accessories

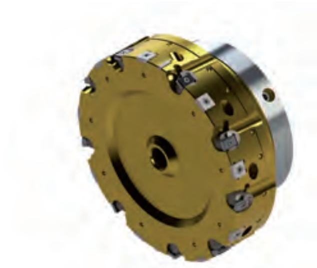
For head	Torque key	Torx driver for insert/holder locking screw
		
HF85B 09-100	H00-2020	T00-09P20

Torque value T00-09P20: 2 Nm.
Torque value H00-2020 2 Nm.

HF86

Heads for LNEG inserts, through bore ∅ 119,5-154,499 mm

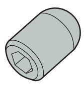
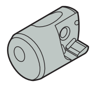
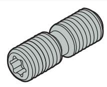
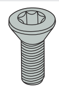
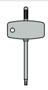
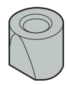




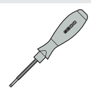
• For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF86-119.5/124.499-09-100	119,5 *4.705*	124,499 *4.902*	63,0 *2.480*	100,0 *3.937*	3,89 *8.580*	9	LNEG1003...
HF86-124.5/129.499-09-100	124,5 *4.902*	129,499 *5.098*	63,0 *2.480*	100,0 *3.937*	4,15 *9.150*	9	LNEG1003...
HF86-129.5/134.499-09-100	129,5 *5.098*	134,499 *5.295*	63,0 *2.480*	100,0 *3.937*	4,42 *9.740*	9	LNEG1003...
HF86-134.5/139.499-09-100	134,5 *5.295*	139,499 *5.492*	63,0 *2.480*	100,0 *3.937*	4,7 *10.360*	9	LNEG1003...
HF86-139.5/144.499-09-100	139,5 *5.492*	144,499 *5.689*	63,0 *2.480*	100,0 *3.937*	4,99 *11.000*	9	LNEG1003...
HF86-144.5/149.499-09-100	144,5 *5.689*	149,499 *5.886*	63,0 *2.480*	100,0 *3.937*	5,29 *11.660*	9	LNEG1003...
HF86-149.5/154.499-09-100	149,5 *5.886*	154,499 *6.083*	63,0 *2.480*	100,0 *3.937*	5,6 *12.350*	9	LNEG1003...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF86 09-100	SH4075S	CARTCYLN20	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

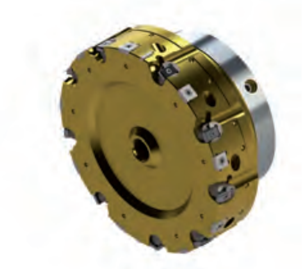
Accessories

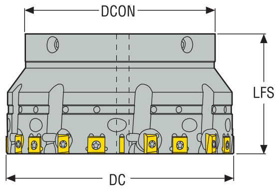
For head	Torque key	Torx driver for insert/holder locking screw
		
HF86 09-100	H00-2020	T00-07P09

Torque value T00-07P09: 0,9 Nm.
Torque value H00-2020: 2 Nm.

HF86B

Heads for LNEG inserts, blind bore ∅ 119,5-154,499 mm

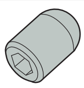
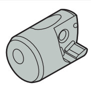
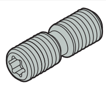
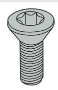
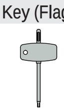




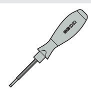
- For grades and geometries, see page(s) 418

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
HF86B-119.5/124.499-09-100	119,5 *4.705*	124,499 *4.902*	63,0 *2.480*	100,0 *3.937*	3,89 *8.580*	9	LNEG1003...
HF86B-124.5/129.499-09-100	124,5 *4.902*	129,499 *5.098*	63,0 *2.480*	100,0 *3.937*	4,15 *9.150*	9	LNEG1003...
HF86B-129.5/134.499-09-100	129,5 *5.098*	134,499 *5.295*	63,0 *2.480*	100,0 *3.937*	4,42 *9.740*	9	LNEG1003...
HF86B-134.5/139.499-09-100	134,5 *5.295*	139,499 *5.492*	63,0 *2.480*	100,0 *3.937*	4,7 *10.360*	9	LNEG1003...
HF86B-139.5/144.499-09-100	139,5 *5.492*	144,499 *5.689*	63,0 *2.480*	100,0 *3.937*	4,99 *11.000*	9	LNEG1003...
HF86B-144.5/149.499-09-100	144,5 *5.689*	149,499 *5.886*	63,0 *2.480*	100,0 *3.937*	5,29 *11.660*	9	LNEG1003...
HF86B-149.5/154.499-09-100	149,5 *5.886*	154,499 *6.083*	63,0 *2.480*	100,0 *3.937*	5,6 *12.350*	9	LNEG1003...

Spare parts

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF86B 09-100	SH4075S	CARTCYLN20B	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

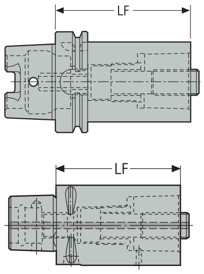
Accessories

For head	Torque key	Torx driver for insert/holder locking screw
		
HF86B 09-100	H00-2020	T00-07P09

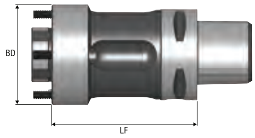
Torque value T00-07P09: 0,9 Nm.
Torque value H00-2020: 2 Nm.

HF100

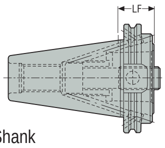
Seco-Capto™ shank for ∅ 119,5-154,499 mm



Extension



Reamer holder



Shank

Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm	mm	mm	kg
HF100-100-C8	02688649	–	100	C8	100	4,9
HF100...HSKA80	–	100	238	HSK-A80	100	0,0
HF100...HSKA100	–	100	238	HSK-A100	100	0,0
HF100...DIN50ADB	–	100	238	DIN50ADB	100	0,0
HF100...BT50ADB	–	100	238	BT50ADB	100	0,0

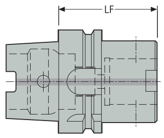
Shanks and extensions for HF100-100-C8 (see Seco Tooling Systems for more details).

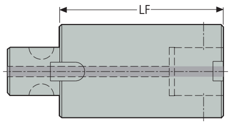
Designation Shank	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
C8-390.410-100120A	75039883	120	HSK-A100	C8	4,72
C8-390B.140-50070	02924119	70	DIN50 ADB	C8	3,7
C8-390B.140-50120	02924120	120	DIN50 ADB	C8	5,6
C8-390B.58-50070	02925974	70	BT50 ADB	C8	4,0
C8-390B.58-50120	02925975	120	BT50 ADB	C8	5,9

Designation Extension	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
C8-391.01-80100A	75039888	100	C8	C8	3,62
C8-391.01-80125A	00004841	125	C8	C8	4,54

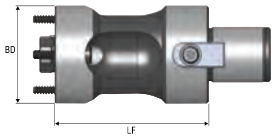
HF100

Graflex® shank for ∅ 119,5-154,499 mm

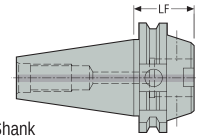




Extension



Reamer holder



Shank

Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm	mm	mm	kg
HF100-100-G7	02698874	–	100	G7	100	5,2
HF100...HSKA80	–	100	238	HSK-A80	100	0,0
HF100...HSKA100	–	100	238	HSK-A100	100	0,0
HF100...DIN50ADB	–	100	238	DIN50ADB	100	0,0
HF100...BT50ADB	–	100	238	BT50ADB	100	0,0

Shanks and extensions for HF100-100-G7 (see Seco Tooling Systems for more details).

Designation Shank	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
EM93064014685	00074385	85	HSK-A100	G7	3,99
EM930640146160	00086933	160	HSK-A100	G7	7,67
EM34714014650	02503320	50	DIN50 ADB	G7	3,23
EM347140146120	02503321	120	DIN50 ADB	G7	6,48
EM347140146200	02503324	200	DIN50 ADB	G7	10,4
EM34164014665	02503386	65	BT50 ADB	G7	4,4
EM341640146120	02503387	120	BT50 ADB	G7	6,8
EM341640146200	02503388	200	BT50 ADB	G7	10,7

Designation Extension	Item number	LF	Taper	Seco-Capto size	Weight
		mm	mm	mm	kg
M402770	00056768	60	G7	G7	2,9
M402771	00056769	90	G7	G7	4,03
M402772	00056770	120	G7	G7	5,8

LNEG...-EB45 (metric)

			f				v_c		
SMG		a_p (Ø)	z=3	z=5	z=7	z=9	RX2000	CF	RX1500
P1	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	120 (80-200)	180 (120-250)	220 (120-300)
P2	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	120 (80-200)	180 (120-250)	220 (120-300)
P3	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	120 (80-200)	180 (120-250)	220 (120-300)
P4	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)	80 (60-150)	100 (80-200)
P5	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)	80 (60-150)	100 (80-200)
P6	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)	80 (60-150)	100 (80-200)
P7	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)	80 (60-150)	100 (80-200)
P8	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	40 (30-70)	60 (50-100)	80 (60-120)
P11	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	40 (30-70)	60 (50-100)	80 (60-120)
P12	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	30 (25-55)	45 (40-80)	65 (45-95)
M1	LNEG1003-EB45	0,10-0,20	0,15-0,30	0,25-0,50	0,35-0,70	0,45-0,90	35 (25-60)	-	-
M2	LNEG1003-EB45	0,10-0,20	0,15-0,30	0,25-0,50	0,35-0,70	0,45-0,90	35 (25-60)	-	-
M3	LNEG1003-EB45	0,10-0,20	0,15-0,30	0,25-0,50	0,35-0,70	0,45-0,90	35 (25-60)	-	-
M4	LNEG1003-EB45	0,10-0,20	0,15-0,30	0,25-0,50	0,35-0,70	0,45-0,90	25 (20-50)	-	-
M5	LNEG1003-EB45	0,10-0,20	0,15-0,30	0,25-0,50	0,35-0,70	0,45-0,90	25 (20-50)	-	-
K1	LNEG1003-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	-	220 (150-300)
K2	LNEG1003-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	50 (35-80)	-	70 (50-120)
K3	LNEG1003-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	-	220 (150-300)
K4	LNEG1003-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	70 (50-120)	100 (60-120)	150 (110-200)
K5	LNEG1003-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	70 (50-120)	100 (60-120)	150 (110-200)
K6	LNEG1003-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	-	220 (150-300)
K7	LNEG1003-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	-	220 (150-300)
H3	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-
H5	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-
H7	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-
H8	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-
H11	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-
H12	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-
H21	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-
H31	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

LNEG...-EB45 (inch)

SMG		a_p on (Ø) inch	z=3	z=5	z=7	z=9	RX2000	CF	RX1500
			f (in/rev)				V_c (sf/min)		
P1	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	395 (260-655)	590 (395-820)	720 (395-985)
P2	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	395 (260-655)	590 (395-820)	720 (395-985)
P3	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	395 (260-655)	590 (395-820)	720 (395-985)
P4	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	195 (130-395)	260 (195-490)	330 (260-655)
P5	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	195 (130-395)	260 (195-490)	330 (260-655)
P6	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	195 (130-395)	260 (195-490)	330 (260-655)
P7	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	195 (130-395)	260 (195-490)	330 (260-655)
P8	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	130 (100-230)	195 (165-330)	260 (195-395)
P11	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	130 (100-230)	195 (165-330)	260 (195-395)
M1	LNEG1003-EB45	0.004–0.008	0.006–0.012	0.010–0.020	0.014–0.028	0.018–0.035	115 (80-195)	–	–
M2	LNEG1003-EB45	0.004–0.008	0.006–0.012	0.010–0.020	0.014–0.028	0.018–0.035	115 (80-195)	–	–
M3	LNEG1003-EB45	0.004–0.008	0.006–0.012	0.010–0.020	0.014–0.028	0.018–0.035	115 (80-195)	–	–
M4	LNEG1003-EB45	0.004–0.008	0.006–0.012	0.010–0.020	0.014–0.028	0.018–0.035	80 (65-165)	–	–
M5	LNEG1003-EB45	0.004–0.008	0.006–0.012	0.010–0.020	0.014–0.028	0.018–0.035	80 (65-165)	–	–
K1	LNEG1003-EB45	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	330 (195-655)	–	720 (490-985)
K2	LNEG1003-EB45	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	165 (115-260)	–	230 (165-395)
K3	LNEG1003-EB45	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	330 (195-655)	–	720 (490-985)
K4	LNEG1003-EB45	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	230 (165-395)	330 (195-395)	490 (360-655)
K5	LNEG1003-EB45	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	230 (165-395)	330 (195-395)	490 (360-655)
K6	LNEG1003-EB45	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	330 (195-655)	–	720 (490-985)
K7	LNEG1003-EB45	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	330 (195-655)	–	720 (490-985)
H3	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–
H5	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–
H7	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–
H8	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–
H11	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–
H12	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–
H21	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–
H31	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

LNEG...-EB845 (metric)

SMG		a_p (Ø)	f z=3	f z=5	f z=7	f z=9	v_c RX2000
P1	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	120 (80-200)
P2	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	120 (80-200)
P3	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	120 (80-200)
P4	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	60 (40-120)
P5	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	60 (40-120)
P6	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	60 (40-120)
P7	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	60 (40-120)
P8	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	40 (30-70)
P11	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	40 (30-70)
P12	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	30 (25-55)
M1	LNEG1003-EB845	0,10-0,20	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	35 (25-60)
M2	LNEG1003-EB845	0,10-0,20	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	35 (25-60)
M3	LNEG1003-EB845	0,10-0,20	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	35 (25-60)
M4	LNEG1003-EB845	0,10-0,20	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	25 (20-50)
M5	LNEG1003-EB845	0,10-0,20	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	25 (20-50)
K1	LNEG1003-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)
K2	LNEG1003-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	50 (35-80)
K3	LNEG1003-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)
K4	LNEG1003-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	70 (50-120)
K5	LNEG1003-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	70 (50-120)
K6	LNEG1003-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)
K7	LNEG1003-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

Introduction
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LNEG...-EB845 (inch)

SMG		a_p on (Ø) inch	f (in/rev) z=3	z=5	z=7	z=9	V_c (sf/min) RX2000
P1	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	395 (260-655)
P2	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	395 (260-655)
P3	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	395 (260-655)
P4	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	195 (130-395)
P5	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	195 (130-395)
P6	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	195 (130-395)
P7	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	195 (130-395)
P8	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	130 (100-230)
P11	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	130 (100-230)
M1	LNEG1003-EB845	0.004–0.008	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	115 (80-195)
M2	LNEG1003-EB845	0.004–0.008	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	115 (80-195)
M3	LNEG1003-EB845	0.004–0.008	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	115 (80-195)
M4	LNEG1003-EB845	0.004–0.008	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	80 (65-165)
M5	LNEG1003-EB845	0.004–0.008	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	80 (65-165)
K1	LNEG1003-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	330 (195-655)
K2	LNEG1003-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	165 (115-260)
K3	LNEG1003-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	330 (195-655)
K4	LNEG1003-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	230 (165-395)
K5	LNEG1003-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	230 (165-395)
K6	LNEG1003-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	330 (195-655)
K7	LNEG1003-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	330 (195-655)

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

LNEG...-EB1570 (metric)

SMG		a_p (Ø)	f z=3	z=5	z=7	z=9	v_c RX2000
P4	LNEG1005-EB1570	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)
P5	LNEG1005-EB1570	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)
P6	LNEG1005-EB1570	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)
P7	LNEG1005-EB1570	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)
P8	LNEG1005-EB1570	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	40 (30-70)
P11	LNEG1005-EB1570	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	40 (30-70)
P12	LNEG1005-EB1570	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	30 (25-55)
K1	LNEG1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)
K2	LNEG1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	50 (35-80)
K3	LNEG1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)
K4	LNEG1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	70 (50-120)
K5	LNEG1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	70 (50-120)
K6	LNEG1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)
K7	LNEG1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)

RNAX...-EB45 (metric)

SMG		a_p (Ø)	f z=3	z=5	z=6	z=9	v_c RX2000	RX1500
K1	RNAX1005-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	220 (150-300)
K2	RNAX1005-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	50 (35-80)	70 (50-120)
K3	RNAX1005-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	220 (150-300)
K4	RNAX1005-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	70 (50-120)	150 (110-200)
K5	RNAX1005-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	70 (50-120)	150 (110-200)
K6	RNAX1005-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	220 (150-300)
K7	RNAX1005-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	220 (150-300)

RNAX...-EB845 (metric)

SMG		a_p (Ø)	f z=3	z=5	z=6	z=9	v_c RX2000	RX1500
K1	RNAX1005-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)	220 (150-300)
K2	RNAX1005-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	50 (35-80)	70 (50-120)
K3	RNAX1005-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)	220 (150-300)
K4	RNAX1005-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	70 (50-120)	150 (110-200)
K5	RNAX1005-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	70 (50-120)	150 (110-200)
K6	RNAX1005-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)	220 (150-300)
K7	RNAX1005-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)	220 (150-300)

RNAX...-EB1570 (metric)

SMG		a_p (Ø)	f z=3	z=5	z=6	z=9	v_c RX2000	RX1500
K1	RNAX1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	220 (150-300)
K2	RNAX1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	50 (35-80)	70 (50-120)
K3	RNAX1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	220 (150-300)
K4	RNAX1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	70 (50-120)	150 (110-200)
K5	RNAX1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	70 (50-120)	150 (110-200)
K6	RNAX1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	220 (150-300)
K7	RNAX1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	220 (150-300)

SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

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LNEG...-EB1570 (inch)

			f (in/rev)				V_c (sf/min)
SMG		a_p on (Ø) inch	z=3	z=5	z=7	z=9	RX2000
P4	*LNEG1003-EB1570*	*0.006–0.010*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*195 (130–395)*
P5	*LNEG1003-EB1570*	*0.006–0.010*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*195 (130–395)*
P6	*LNEG1003-EB1570*	*0.006–0.010*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*195 (130–395)*
P7	*LNEG1003-EB1570*	*0.006–0.010*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*195 (130–395)*
P8	*LNEG1003-EB1570*	*0.006–0.010*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*130 (100–230)*
P11	*LNEG1003-EB1570*	*0.006–0.010*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*130 (100–230)*
K1	*LNEG1003-EB1570*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*330 (195–655)*
K2	*LNEG1003-EB1570*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*165 (115–260)*
K3	*LNEG1003-EB1570*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*330 (195–655)*
K4	*LNEG1003-EB1570*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*230 (165–395)*
K5	*LNEG1003-EB1570*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*230 (165–395)*
K6	*LNEG1003-EB1570*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*330 (195–655)*
K7	*LNEG1003-EB1570*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*330 (195–655)*

RNAX...-EB45 (inch)

			f (in/rev)				V_c (sf/min)	
SMG		a_p on (Ø) inch	z=3	z=5	z=6	z=9	RX2000	T100R
K1	*RNAX1005-EB45*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*330 (195-655)*	*720 (490-985)*
K2	*RNAX1005-EB45*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*165 (115-260)*	*230 (165-395)*
K3	*RNAX1005-EB45*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*330 (195-655)*	*720 (490-985)*
K4	*RNAX1005-EB45*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*230 (165-395)*	*490 (360-655)*
K5	*RNAX1005-EB45*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*230 (165-395)*	*490 (360-655)*
K6	*RNAX1005-EB45*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*330 (195-655)*	*720 (490-985)*
K7	*RNAX1005-EB45*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*330 (195-655)*	*720 (490-985)*

RNAX...-EB845 (inch)

			f (in/rev)				V_c (sf/min)	
SMG		a_p on (Ø) inch	z=3	z=5	z=6	z=9	RX2000	RX1500
K1	*RNAX1005-EB845*	*0.008–0.020*	*0.006–0.024*	*0.010–0.039*	*0.014–0.055*	*0.018–0.071*	*330 (195-655)*	*720 (490-985)*
K2	*RNAX1005-EB845*	*0.008–0.020*	*0.006–0.024*	*0.010–0.039*	*0.014–0.055*	*0.018–0.071*	*165 (115-260)*	*230 (165-395)*
K3	*RNAX1005-EB845*	*0.008–0.020*	*0.006–0.024*	*0.010–0.039*	*0.014–0.055*	*0.018–0.071*	*330 (195-655)*	*720 (490-985)*
K4	*RNAX1005-EB845*	*0.008–0.020*	*0.006–0.024*	*0.010–0.039*	*0.014–0.055*	*0.018–0.071*	*230 (165-395)*	*490 (360-655)*
K5	*RNAX1005-EB845*	*0.008–0.020*	*0.006–0.024*	*0.010–0.039*	*0.014–0.055*	*0.018–0.071*	*230 (165-395)*	*490 (360-655)*
K6	*RNAX1005-EB845*	*0.008–0.020*	*0.006–0.024*	*0.010–0.039*	*0.014–0.055*	*0.018–0.071*	*330 (195-655)*	*720 (490-985)*
K7	*RNAX1005-EB845*	*0.008–0.020*	*0.006–0.024*	*0.010–0.039*	*0.014–0.055*	*0.018–0.071*	*330 (195-655)*	*720 (490-985)*

RNAX...-EB1570 (inch)

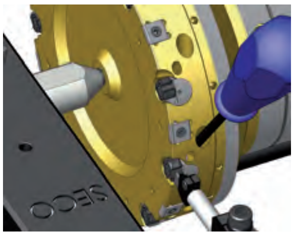
			f (in/rev)				V_c (sf/min)	
SMG		a_p on (Ø) inch	z=3	z=5	z=6	z=9	RX2000	RX1500
K1	*RNAX1005-EB1570*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*330 (195-655)*	*720 (490- 985)*
K2	*RNAX1005-EB1570*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*165 (115-260)*	*230 (165- 395)*
K3	*RNAX1005-EB1570*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*330 (195-655)*	*720 (490- 985)*
K4	*RNAX1005-EB1570*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*230 (165-395)*	*490 (360- 655)*
K5	*RNAX1005-EB1570*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*230 (165-395)*	*490 (360- 655)*
K6	*RNAX1005-EB1570*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*330 (195-655)*	*720 (490- 985)*
K7	*RNAX1005-EB1570*	*0.008–0.020*	*0.006–0.018*	*0.010–0.030*	*0.010–0.041*	*0.018–0.053*	*330 (195-655)*	*720 (490- 985)*

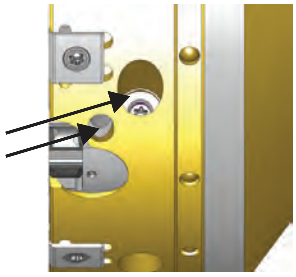
SMG = Seco material group
f = mm/rev (IPR)
V_c = m/min (sf/min)
All cutting data are start values

Adjusting instructions

1.

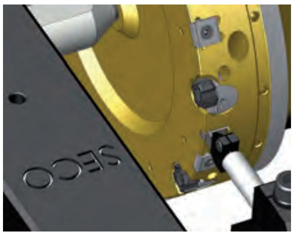
- Loosen cartridge clamping screw
- Index or replace insert
- Unclamp adjusting screw by 1/4 of a turn and push cartridge back
- Gently re-clamp cartridge clamping screw 0,5 Nm approx *(4.4 in/lbs)*

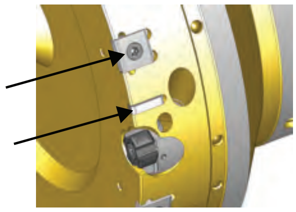


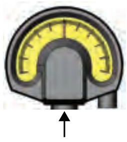


2.

- Set clock to “zero” on reference pad.
- Make sure measuring point is positioned after the lead angle.

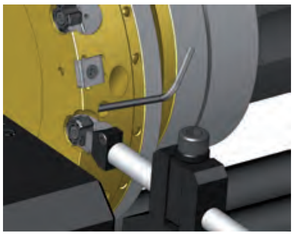


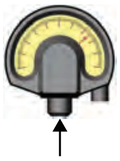




3.

- Set insert 0,025 mm *(0.001“)* above reference pad using adjusting screw
- Repeat adjusting process for all inserts





4.

- Final clamp cartridge clamping screw 2 Nm *(17.7 in/lbs)*.

Note: If the required diameter is exceeded during adjustment, start again from the beginning to eliminate backlash on adjustment screws.

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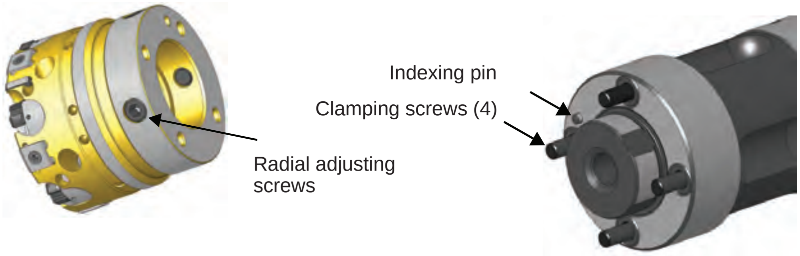
Adjusting instructions, adapter

1.

Assembly
- Thoroughly clean flange contact surface.
- Loosen 4 radial adjusting screws so they do not interfere for assembly.
- Put reaming head onto adapter (indexing pin) and tighten the 4 clamping screws (drawing 3).

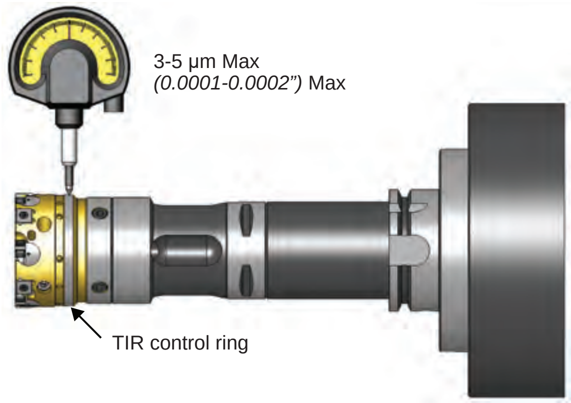
Assembly (drawing 1)



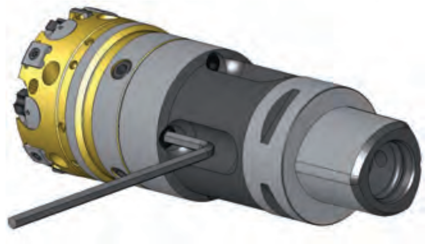
2.

Setting
- Mount tool in the machine spindle.
- Place mm clock as shown in (drawing 2).
- Unlock spindle so it can rotate freely by hand.
- Start run-out correction using 4 adjusting screws (drawing 4).
- Max run-out 5 µm *(0.0002")*.
- When run-out values get lower than 10 µm *(0.0004")*, proceed to final clamping (drawing 1) see clamping torque table for torque recommended values.

Setting operation in the machine spindle (drawing 2)



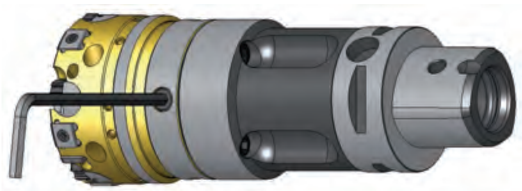
Clamping screws (drawing 3)



3.

- Finalize run-out adjustment Max 5µm *(0.0002")*

Radial adjusting screws (drawing 4)



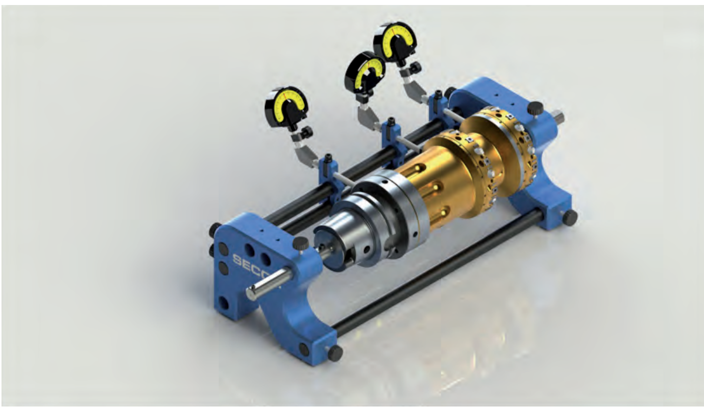
Clamping torque table

Diameter mm	Diameter inch	Adapter size	Clamping screw	Clamping torque Nm	Clamping torque in/lbs
39,5-59,499	*1.555-2.342*	HF32	CHC M3 x 16	2,7	*24*
59,5-84,499	*2.342-3.372*	HF55	CHC M5 x 25	5,7	*50*
84,5-119,499	*3.372-4.705*	HF80	CHC M6 x 25	9,8	*87*
119,5-154,499	*4.705-6.083*	HF100	CHC M8 x 30	24	*212*

Setting fixture – Single clock

SF-210340-C160: Ordering and Part No. 02885391 ▪ Horizontal stand ▪ First choice for Xfix reamers ▪ 1 clock ▪ Maximum tool Ø: 210 mm *(8.268")* ▪ Maximum tool length: 340 mm *(13.386")* ▪ Additional Ø 57 mm *(2.244")* spring center for HSK 63/80/100 and Capto C8 Center point SSC5700 included in delivery	
SF-210290V-C160: Ordering and Part No. 02885392 ▪ Vertical stand ▪ First choice for Xfix reamers ▪ Maximum tool Ø: 210 mm *(8.268")* ▪ Maximum tool length: 290 mm *(11.417")* ▪ Additional Ø 57 mm *(2.244")* spring center for HSK 63/80/100 and Capto C8 Center point SSC5700 included in delivery	

Setting fixture – Multiple clocks

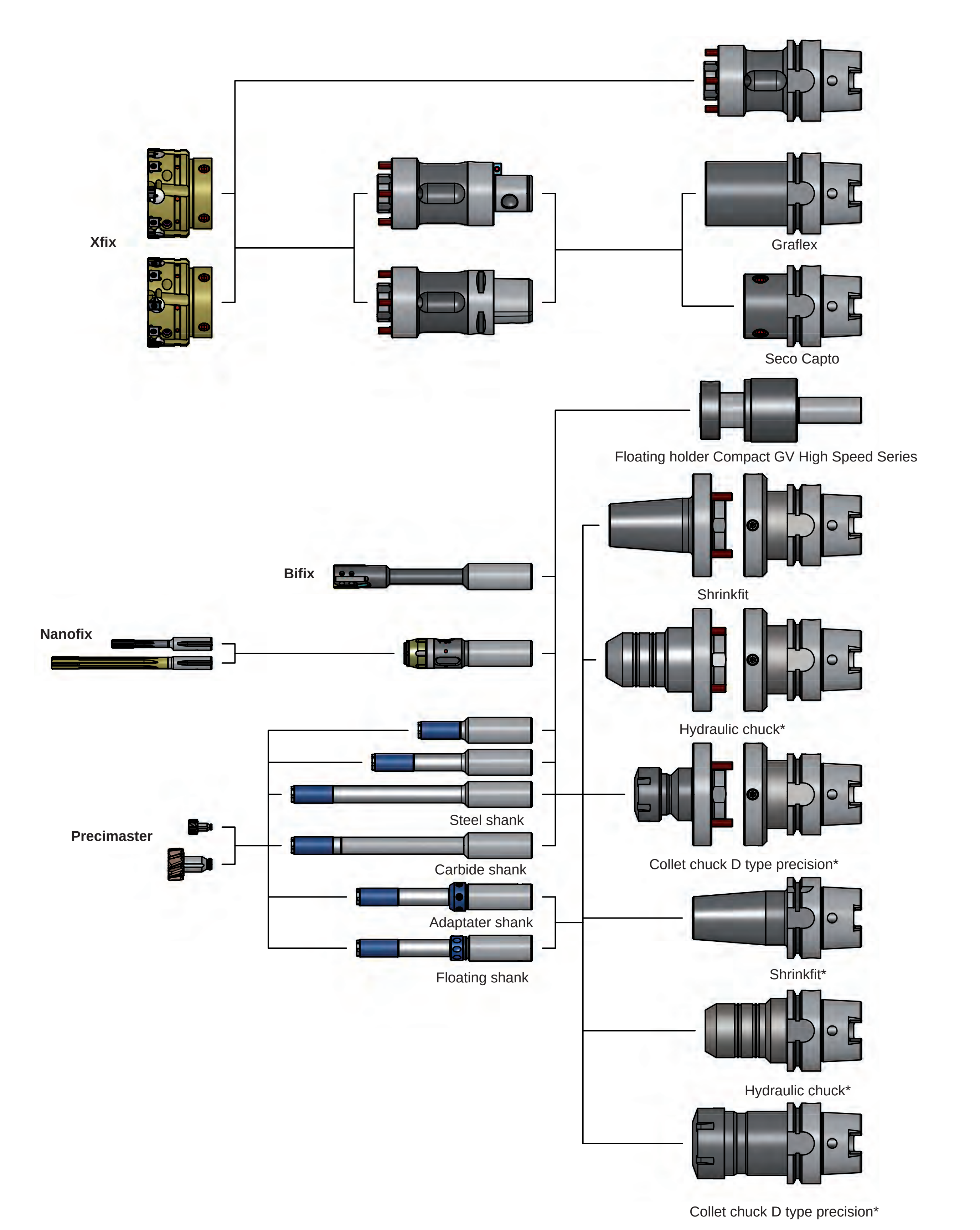


Tooling overview

Diameter mm	Diameter inch	Max dia/ length ratio
39,5-59,499	*1.555-2.342*	6,5 x D
59,5-84,499	*2.342-3.372*	4,5 x D
84,5-119,499	*3.372-4.705*	3,3 x D
119,5-154,499	*4.705-6.083*	2,5 x D

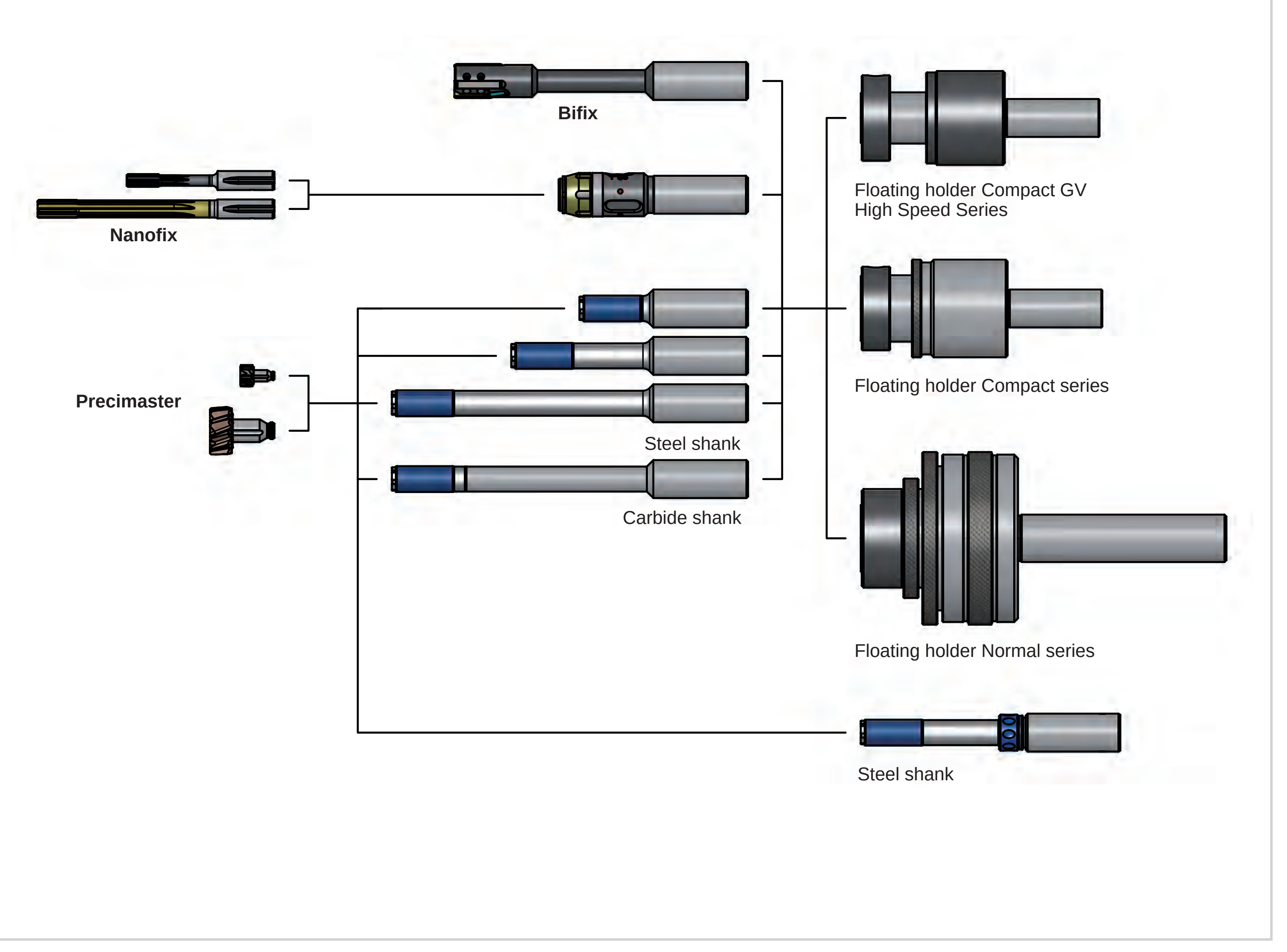
Note: For diameters > 100 mm *(3.937")* or L > 3 x D check max tool weight acceptable in the machine.

Rotating applications

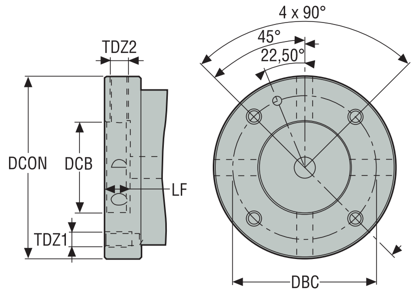


*See catalogue TOOLING SYSTEMS
Best performance achieved with rigid mounting (Hydraulic chuck, D type or Shrinkfit)

Static applications



Flange dimension



DCON	DBC +/- 0,1	DCB F8	LF	TDZ1	TDZ2
60	44	30	12	M5	M8x1
70	53	35	12	M6	M8x1
80	63	40	12	M6	M8x1
100	79	50	14	M8	M10x1
117	96	60	14	M8	M10x1
140	119	80	14	M10	M10x1

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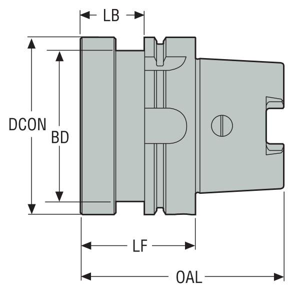
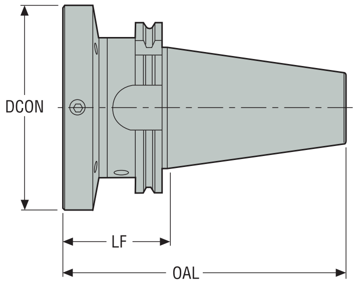
Back end HSK-A



- Note: Coolant tube and screws included in delivery

Designation	Item number	Taper	DCON	BD	LB	LF	OAL	Weight
			mm	mm	mm	mm	mm	kg
SAH-2340540001	02836564	HSK-A 40	60,0	34,0	35,0	55,0	75,0	0,8
SAH-2340550001	02836566	HSK-A 50	60,0	42,0	34,0	60,0	85,0	0,95
SAH-2340550003	02836567	HSK-A 50	70,0	42,0	34,0	60,0	85,0	1,0
SAH-2340550002	02836573	HSK-A 50	80,0	42,0	34,0	60,0	85,0	1,2
SAH-2340563001	02836574	HSK-A 63	60,0	53,0	34,0	60,0	92,0	1,2
SAH-2340563003	02836575	HSK-A 63	70,0	53,0	34,0	60,0	92,0	1,3
SAH-2340563002	02836576	HSK-A 63	80,0	53,0	34,0	60,0	92,0	1,4
SAH-2340563004	02836577	HSK-A 63	100,0	53,0	39,0	65,0	97,0	1,95
SAH-2340580001	02836655	HSK-A 80	60,0	60,0	24,0	50,0	90,0	1,4
SAH-2340580003	02836657	HSK-A 80	70,0	67,0	34,0	60,0	100,0	1,5
SAH-2340580002	02836658	HSK-A 80	80,0	67,0	34,0	60,0	100,0	1,6
SAH-2340580004	02836660	HSK-A 80	100,0	67,0	39,0	65,0	105,0	2,2
SAH-23405100001	02836663	HSK-A 100	60,0	60,0	26,0	55,0	105,0	2,5
SAH-23405100007	02836664	HSK-A 100	70,0	70,0	26,0	55,0	105,0	2,8
SAH-23405100002	02836665	HSK-A 100	80,0	80,0	26,0	55,0	105,0	2,9
SAH-23405100003	02836666	HSK-A 100	100,0	85,0	36,0	65,0	115,0	3,5

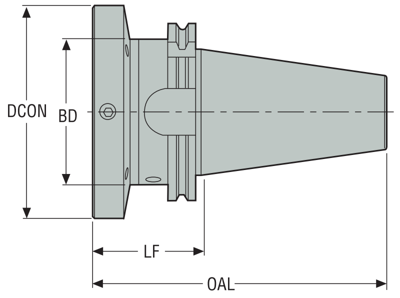
Back end DIN 69871



- Note: Screws included in delivery

Designation	Item number	Taper	DCON	LF	OAL	Weight
			mm	mm	mm	kg
SAH-2340640201	02836683	DIN40 ADB	60,0	50,0	118,4	1,1
SAH-2340640204	02836684	DIN40 ADB	70,0	50,0	118,4	1,2
SAH-2340640202	02836685	DIN40 ADB	80,0	55,0	123,4	1,5
SAH-2340640203	02836686	DIN40 ADB	100,0	60,0	128,4	2,3
SAH-2340650201	02836687	DIN50 ADB	60,0	50,0	151,8	3,1
SAH-2340650206	02836688	DIN50 ADB	70,0	50,0	151,8	3,3
SAH-2340650202	02836690	DIN50 ADB	80,0	50,0	151,8	3,6
SAH-2340650203	02836691	DIN50 ADB	100,0	60,0	161,8	4,3

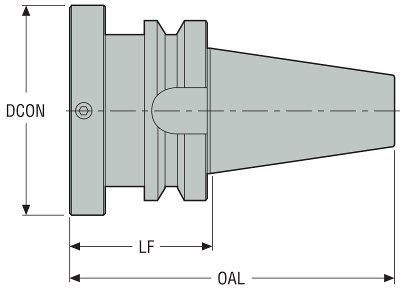
Back end ANSI CAT



- Note: Screws included in delivery
- Pull-stud thread imperial

Designation	Item number	Taper	DCON	LF	OAL	Weight
			mm	mm	mm	kg
SAH-2784940201	02836698	CAT 40	60,0	50,0	118,4	1,1
SAH-2784940202	02836702	CAT 40	80,0	55,0	123,4	1,5
SAH-2784940203	02836704	CAT 40	100,0	60,0	128,4	2,3
SAH-2784950201	02836707	CAT 50	60,0	50,0	151,8	3,1
SAH-2784950206	02836708	CAT 50	70,0	50,0	151,8	3,3
SAH-2784950202	02836709	CAT 50	80,0	50,0	151,8	3,4
SAH-2784950203	02836710	CAT 50	100,0	60,0	161,8	5,5

Back end BT



• Note: Screws included in delivery

Designation	Item number	Taper	DCON	LF	OAL	Weight
			mm	mm	mm	kg
SAH-2340740001	02836717	BT40 ADB	60,0	55,0	120,4	1,4
SAH-2340740004	02836718	BT40 ADB	70,0	55,0	120,4	1,5
SAH-2340740002	02836719	BT40 ADB	80,0	65,0	130,4	2,0
SAH-2340740003	02836721	BT40 ADB	100,0	60,0	125,4	2,7
SAH-2340750001	02836724	BT50 ADB	60,0	70,0	171,8	4,2
SAH-2340750002	02836725	BT50 ADB	70,0	70,0	171,8	4,4
SAH-2340750003	02836726	BT50 ADB	80,0	70,0	171,8	4,6
SAH-2340750004	02836727	BT50 ADB	100,0	70,0	171,8	4,9

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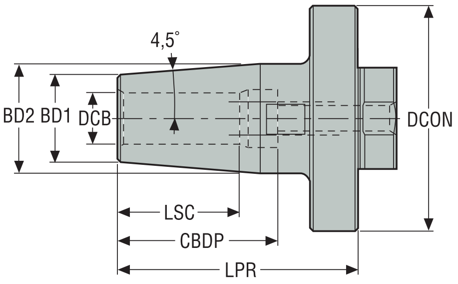
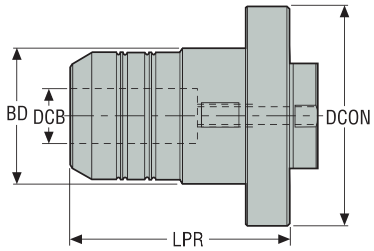
Front end shrinkfit



Designation	Item number	DCB	DCON	BD1	BD2	LSC	CBDP	LPR	Weight
		mm	mm	mm	mm	mm	mm	mm	kg
SAH-2341006235	02836735	6,0	60,0	21,0	27,0	22,0	37,5	70,0	0,5
SAH-2341010237	02836736	10,0	60,0	24,0	32,0	31,0	42,5	70,0	0,5
SAH-2341012238	02836737	12,0	60,0	24,0	32,0	34,0	47,5	70,0	0,52
SAH-2341016241	02836741	16,0	70,0	27,0	34,0	39,0	50,5	75,0	0,7
SAH-2341020251	02836742	20,0	80,0	33,0	42,0	41,0	52,5	80,0	1,0
SAH-2341025260	02836743	25,0	100,0	44,0	53,0	47,0	58,5	80,0	2,2
SAH-2341032261	02836744	32,0	100,0	44,0	53,0	51,0	62,5	80,0	2,5

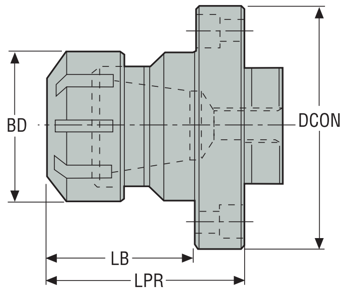
Front end hydraulic chuck



- Note: Adjusting screws included in delivery

Designation	Item number	DCB	DCON	LPR	Weight
		mm	mm	mm	kg
SAH-2341112255	02836752	12,0	80,0	77,5	1,1
SAH-2341112259	02836757	12,0	100,0	90,0	1,9
SAH-2341116253	02836749	16,0	70,0	50,0	0,75
SAH-2341116256	02836754	16,0	80,0	82,5	1,2
SAH-2341120257	02836755	20,0	80,0	82,5	1,3
SAH-2341125258	02836756	25,0	80,0	90,0	1,7
SAH-2341125260	02836758	25,0	100,0	100,0	2,8
SAH-2341132261	02836759	32,0	100,0	103,0	2,9

Front end ER collet chuck

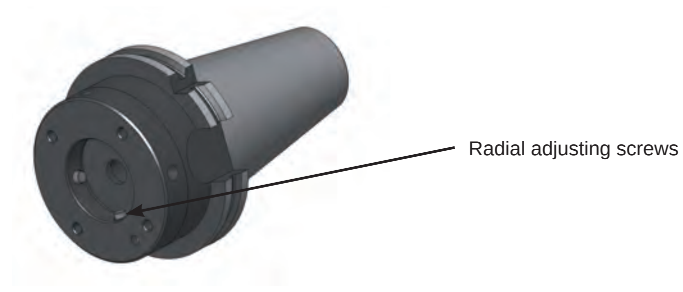


- Note: Adjusting screws included in delivery

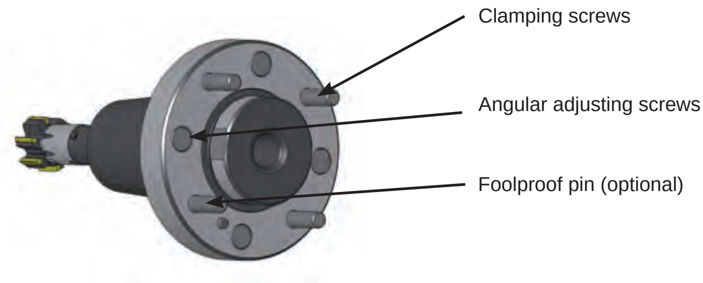
Designation	Item number	Size	DC	DCON	LPR	BD	LB	Weight
			mm	mm	mm	mm	mm	kg
SAH-23412ER25254	02836762	ER25	1,0-16,0	80,0	60,0	42,0	45,0	1,0
SAH-23412ER32255	02836763	ER32	2,0-20,0	80,0	60,0	50,0	45,0	1,2
SAH-23412ER40256	02836764	ER40	3,0-26,0	100,0	70,0	63,0	50,0	1,6

Assembly instructions

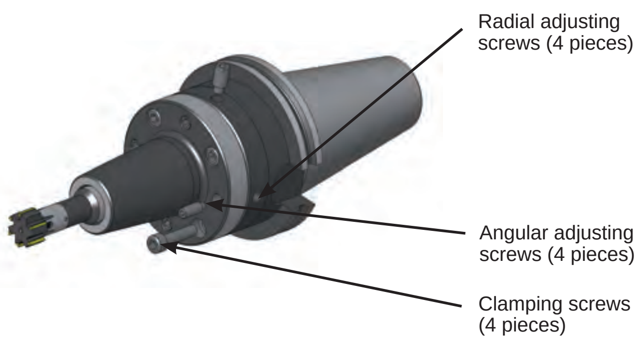
- Clean contact surface
- Make sure radial adjusting screws are not interfering with the assembly



- Make sure angular adjusting screws are not interfering with the assembly

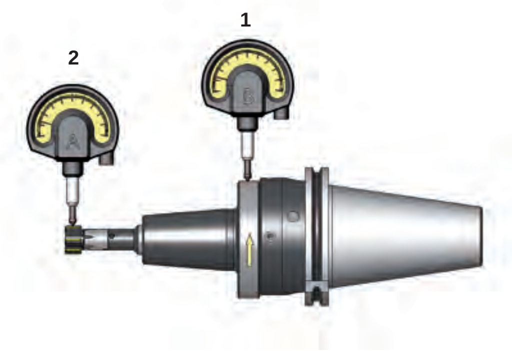


- Proceed to assembly and gently pre-clamp clamping screws (x4)

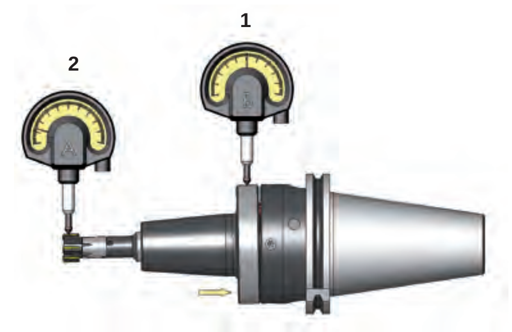


Adjusting instructions

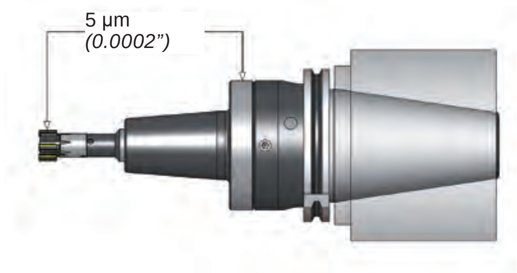
- Mount tool in the machine spindle
- Set up clock 1 as shown (clock 2 not needed at this stage)
- Rotate tool manually until lowest point is reached
- Proceed to radial run-out compensation as shown with arrow
- Check and repeat compensation if necessary



- Set up clock 2 as shown
- Rotate tool manually until lowest point is reached
- Proceed to radial run-out compensation as shown with arrow
- Check and repeat compensation if necessary



When finished with adjustment run-out < 5 µm *(0.0002")* finalize clamping to secure assembly
Note:
- Adjustable adapter can be pre-set away from the machine using any tool pre-setting device available in the workshop
- Final adjusting must always be made in the machine spindle
- Micron clock must be used. It is acceptable to use one clock for both operations



Range overview

The use of a Seco floating holder is recommended
- When run-out exceeds 0.02 mm *(0.0008")*
- For stationary tools

Compact GV high speed series
- First choice for rotating tools
- No adjustment required (factory preset)
- Rotation up to 3000 rpm depending on application
- Suitable for static applications

Compact series
- First choice for stationary tools
- Radial adjustment only
- Suitable for rotating applications – 800 rpm max

Normal series
- When both angular and radial correction is required
- Suitable for rotating applications – 800 rpm max

All floating holders for through coolant
2 types of coolant induction available

JJL: side inlet
JJ: through shank

Users manual included in delivery

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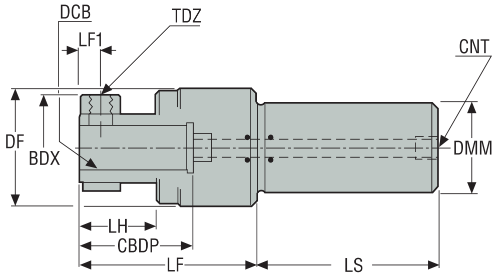
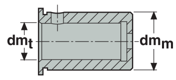
Compact GV high speed series

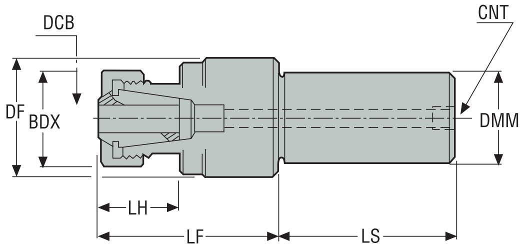


Item number	Designation	DCB	DMM	LF	LS	DF	BDX	LH	CBDP	CNT	LF1	TDZ	ADJRG	Weight
		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
00088959	SFH-GV11019JJ	10,0	19,05	47,5	40,0	33,0	30,0	11,5	25,0	1/8	5,5	M6	0,2	0,7
00088945	SFH-GV11020JJ	10,0	20,0	47,5	40,0	33,0	30,0	11,5	25,0	1/8	5,5	M6	0,2	0,8
00076815	SFH-GV21619JJ	16,0	19,05	66,0	50,0	49,5	39,0	24,5	40,0	1/8	8,0	M8	0,2	0,8
00072133	SFH-GV21620JJ	16,0	20,0	66,0	50,0	49,5	39,0	24,5	40,0	1/8	8,0	M8	0,2	0,8
00076827	SFH-GV22019JJ	20,0	19,05	76,0	50,0	49,5	45,0	34,5	50,0	1/8	8,0	M8	0,2	0,8
00072134	SFH-GV22020JJ	20,0	20,0	76,0	50,0	49,5	45,0	34,5	50,0	1/8	8,0	M8	0,2	0,8
00076828	SFH-GV32525JJ	25,0	25,4	89,0	60,0	62,0	52,0	43,5	60,0	1/4	11,0	M10	0,3	1,4
00072135	SFH-GV32525MJJ	25,0	25,0	89,0	60,0	62,0	52,0	43,5	60,0	1/4	11,0	M10	0,3	1,4
00088960	SFH-GV325425JJ	25,4	25,4	89,0	60,0	62,0	52,0	43,5	60,0	1/4	11,0	M10	0,3	0,7
02602671	SFH-GV43232JJ	32,0	32,0	90,0	80,0	72,0	60,0	34,0	60,0	3/8	9,0	M10	0,3	2,2

Accessories

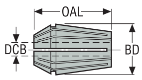
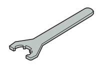
Designation	Reduction ring	
		
	DCB	DMM
SRR-BR11016	10	16
SRR-BR11216	12	16
SRR-BR11220	12	20
SRR-BR21620	16	20
SRR-BR31625	16	25
SRR-BR32025	20	25
SRR-GV42532	25	32

Compact GV high speed series with collet chuck



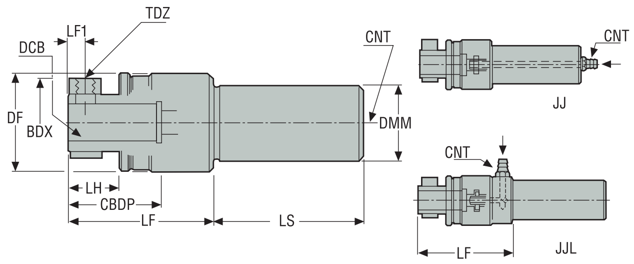
Item number	Designation	CZC	DMM	LF	LS	DF	BDX	LH	CNT	ADJRG	Weight
			mm	mm	mm	mm	mm	mm	mm	mm	kg
00088946	SFH-GV3BC25MJJ	ER32	25,0	80,0	60,0	62,0	50,0	35,0	1/4	0,3	1,3
00088961	SFH-GV3BC25JJ	ER32	25,4	80,0	60,0	62,0	50,0	35,0	1/4	0,3	1,3
00088962	SFH-GV4BC31JJ	ER40	31,75	94,0	80,0	72,0	63,0	39,0	3/8	0,3	0,7
00088947	SFH-GV4BC32JJ	ER40	32,0	94,0	80,0	72,0	63,0	39,0	3/8	0,3	2,4

Accessories

Designation	Size		Collet*		Size	Spanner*
						
		DCB	BD	OAL		
58803210	ER32	10	33	40	ER32	03B587532
58803212	ER32	12	33	40	ER40	03B537540
58803213	ER32	13	33	40	-	-
58803216	ER32	16	33	40	-	-
58803220	ER32	20	33	40	-	-
58804016	ER40	16	41	46	-	-
58804020	ER40	20	41	46	-	-
58804025	ER40	25	41	46	-	-
58804026	ER40	26	41	46	-	-

*Collet and wrenches are not delivered with chucks.

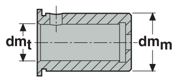
Compact series



Item number	Designation	DCB	DMM	LF	LS	DF	BDX	LH	CBDP	CNT	LF1	TDZ	ADJRG	Weight
		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
00088963	SFH-C01019JJ	10,0	19,05	44,5	40,0	38,5	30,0	11,0	25,0	1/8	6,0	M6	1,0	0,575
00088964	SFH-C01019JJL	10,0	19,05	62,0	60,0	38,5	30,0	11,0	25,0	1/8	6,0	M6	1,0	0,575
00088965	SFH-C21619JJL	16,0	19,05	87,0	60,0	51,5	34,0	17,0	40,0	1/4	8,0	M6	1,5	1,1
00076829	SFH-C21619CJJ	16,0	19,05	67,5	50,0	51,5	34,0	17,0	40,0	1/4	8,0	M6	1,5	0,97
00088966	SFH-C22019JJL	20,0	19,05	97,0	70,0	51,5	44,0	27,0	50,0	1/4	8,0	M8	1,5	1,1
00076830	SFH-C22019CJJ	20,0	19,05	77,5	50,0	51,5	44,0	27,0	50,0	1/4	8,0	M8	1,5	0,97
00088948	SFH-C01020JJ	10,0	20,0	44,5	40,0	38,5	30,0	11,0	25,0	1/8	6,0	M6	1,0	0,59
00088949	SFH-C01020JJL	10,0	20,0	62,0	60,0	38,5	30,0	11,0	25,0	1/8	6,0	M6	1,0	0,59
00088950	SFH-C21620JJL	16,0	20,0	87,0	60,0	51,5	34,0	17,0	40,0	1/4	8,0	M6	1,5	1,1
00072142	SFH-C21620CJJ	16,0	20,0	67,5	50,0	51,5	34,0	17,0	40,0	1/4	8,0	M6	1,5	0,97
00072145	SFH-C22020CJJ	20,0	20,0	77,5	50,0	51,5	44,0	27,0	50,0	1/4	8,0	M8	1,5	1,0
00088951	SFH-C22020JJL	20,0	20,0	97,0	60,0	51,5	44,0	27,0	50,0	1/4	8,0	M8	1,5	1,1
00076846	SFH-C32525JJ	25,0	25,4	90,0	110,0	59,5	50,0	31,0	60,0	3/8	11,0	M8	1,5	1,7
00088967	SFH-C32525JJL	25,0	25,4	125,0	70,0	59,5	50,0	31,0	60,0	3/8	11,0	M8	1,5	1,98
00072149	SFH-C32525MJJ	25,0	25,0	90,0	110,0	59,5	50,0	31,0	60,0	3/8	11,0	M8	1,5	1,7
00088952	SFH-C32525MJJL	25,0	25,0	125,0	70,0	59,5	50,0	31,0	60,0	3/8	11,0	M8	1,5	1,98

Accessories

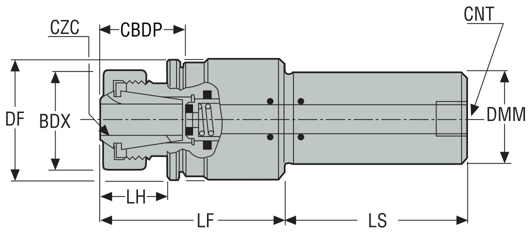
Designation		Reduction ring



	DCB	DMM
SRR-BR11016	10	16
SRR-BR11216	12	16
SRR-BR11220	12	20
SRR-BR21620	16	20
SRR-BR31625	16	25
SRR-BR32025	20	25

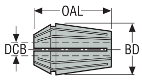
Hose adapter is not included in delivery.

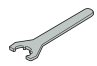
Compact series with collet chuck



Item number	Designation	CZC	DMM	LF	LS	DF	BDX	DCB	CBDP	LH	CNT	ADJRG	Weight
			mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
00088953	SFH-C65BC25MCJJ	ER32	25,0	94,0	50,0	64,5	50,0	–	42,0	33,0	3/8	1,5	1,7
00088968	SFH-C65BC25CJJ	ER32	25,4	94,0	50,0	64,5	50,0	–	42,0	33,0	3/8	1,5	1,7

Accessories





Designation	Size	Collet*			Size	Spanner*
		DCB	BD	OAL		
58803210	ER32	10	33	40	ER32	03B587532
58803212	ER32	12	33	40	ER40	03B537540
58803213	ER32	13	33	40	-	-
58803216	ER32	16	33	40	-	-
58803220	ER32	20	33	40	-	-
58804016	ER40	16	41	46	-	-
58804020	ER40	20	41	46	-	-
58804025	ER40	25	41	46	-	-
58804026	ER40	26	41	46	-	-

*Collets and wrenches are not delivered with chucks.

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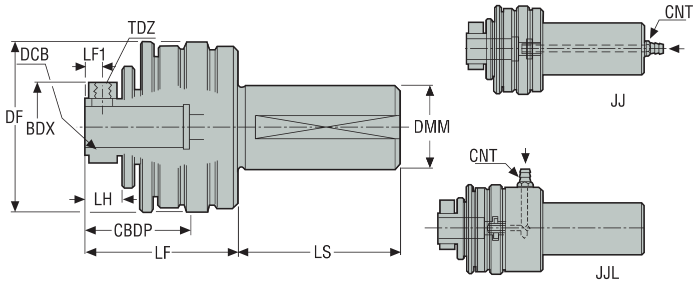
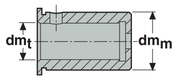
Normal series



Item number	Designation	DCB	DMM	LF	LS	DF	BDX	LH	CBDP	CNT	LF1	TDZ	ADJRG	ANADJ	Weight
		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm		kg
00088969	SFH-11619JJ	16,0	19,05	64,0	50,0	62,0	34,0	16,0	40,0	1/4	8,0	M6	1,5	1 °	0,9
00088970	SFH-11619JJL	16,0	19,05	81,0	40,0	62,0	34,0	16,0	40,0	1/4	8,0	M6	1,5	1 °	1,32
00088954	SFH-11620JJ	16,0	20,0	64,0	50,0	62,0	34,0	16,0	40,0	1/4	8,0	M6	1,5	1 °	0,95
00088955	SFH-11620JJL	16,0	20,0	81,0	40,0	62,0	34,0	16,0	40,0	1/4	8,0	M6	1,5	1 °	1,34
00088971	SFH-22025JJ	20,0	25,4	74,0	65,0	82,0	44,0	16,0	50,0	3/8	8,0	M8	1,5	1 °	1,9
00088972	SFH-22025JJL	20,0	25,4	98,0	70,0	82,0	44,0	16,0	50,0	1/4	8,0	M8	1,5	1 °	2,2
00088956	SFH-22025MJJ	20,0	25,0	74,0	65,0	82,0	44,0	16,0	50,0	3/8	8,0	M8	1,5	1 °	1,9
00088957	SFH-22025MJJL	20,0	25,0	98,0	70,0	82,0	44,0	16,0	50,0	1/4	8,0	M8	1,5	1 °	2,2
00088973	SFH-32525JJ	25,0	25,4	82,5	110,0	91,0	52,0	22,0	60,0	3/8	11,0	M8	2,0	1 °	2,5
00088958	SFH-32525MJJ	25,0	25,0	82,5	110,0	91,0	52,0	22,0	60,0	3/8	11,0	M8	2,0	1 °	2,5

Accessories

Designation	Reduction ring	



	DCB	DMM
SRR-BR11016	10	16
SRR-BR11216	12	16
SRR-BR11220	12	20
SRR-BR21620	16	20
SRR-BR31625	16	25
SRR-BR32025	20	25

Hose adapter is not included in delivery.

Setting fixture – Single clock

SF-210340-C160: Ordering and Part No. 02885391
- Horizontal stand
- First choice for Xfix reamers
- 1 clock
- Maximum tool Ø: 210 mm *(8.268")*
- Maximum tool length: 340 mm *(13.386")*
- Additional Ø 57 mm *(2.244")* spring center for HSK 63/80/100 and Capto C8

Center point SSC5700 included in delivery

SF-210290V-C160: Ordering and Part No. 02885392
- Vertical stand
- First choice for Xfix reamers
- Maximum tool Ø: 210 mm *(8.268")*
- Maximum tool length: 290 mm *(11.417")*
- Additional Ø 57 mm *(2.244")* spring center for HSK 63/80/100 and Capto C8

Center point SSC5700 included in delivery

Setting fixture – Dual clock

SF-210340-C160C190: Ordering and Part No. 02885393
- Horizontal stand
- First choice for Bifix reamers
- 2 clocks
- Maximum tool Ø: 210 mm *(8.268")*
- Maximum tool length: 340 mm *(13.386")*
- Additional Ø 57 mm *(2.244")* spring center for HSK 63/80/100 and Capto C8

Center point SSC5700 included in delivery

SF-210290V-C160C190: Ordering and Part No. 02885394
- Vertical stand
- First choice for Bifix reamers
- 2 clocks
- Maximum tool Ø: 210 mm *(8.268")*
- Maximum tool length: 290 mm *(11.417")*
- Additional Ø 57 mm *(2.244")* spring center for HSK 63/80/100 and Capto C8

Center point SSC5700 included in delivery

For ordering information, contact your local Seco Tools representative.

Setting fixture – Single clock fixtures large capacity

SF-210740-C160: Ordering and Part No. 02885385
- Horizontal stand
- First choice for Xfix reamers
- 1 clock
- Maximum tool Ø: 210 mm *(8.268")*
- Maximum tool length: 740 mm *(29.134")*
- Additional Ø 57 mm *(2.244")* spring center for HSK 63/80/100 and Capto C8

Center point SSC5700 included in delivery

SF-210690V-C160: Ordering and Part No. 02885387
- Vertical stand
- First choice for Xfix reamers
- Maximum tool Ø: 210 mm *(8.268")*
- Maximum tool length: 690 mm *(27.165")*
- Additional Ø 57 mm *(2.244")* spring center for HSK 63/80/100 and Capto C8

Center point SSC5700 included in delivery

Setting fixture – Dual clock fixtures large capacity

SF-210740-C160C190: Ordering and Part No. 02885388
- Horizontal stand
- First choice for Bifix reamers
- 2 clocks
- Maximum tool Ø: 210 mm *(8.268")*
- Maximum tool length: 740 mm *(29.134")*
- Additional Ø 57 mm *(2.244")* spring center for HSK 63/80/100 and Capto C8

Center point SSC5700 included in delivery

SF-210690V-C160C190: Ordering and Part No. 02885390
- Vertical stand
- First choice for Bifix reamers
- 2 clocks
- Maximum tool Ø: 210 mm *(8.268")*
- Maximum tool length: 690 mm *(27.165")*
- Additional Ø 57 mm *(2.244")* spring center for HSK 63/80/100 and Capto C8

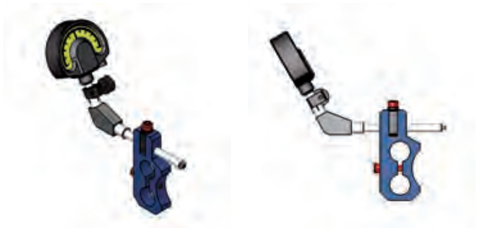
Center point SSC5700 included in delivery

Setting fixture – Compact

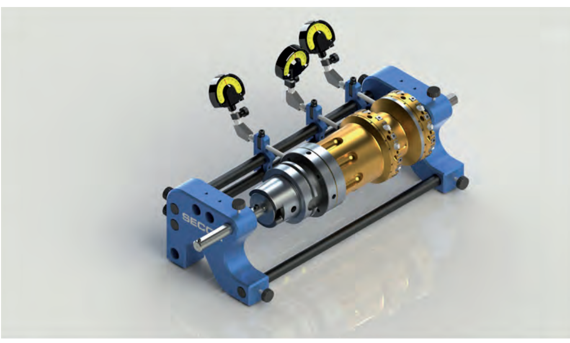
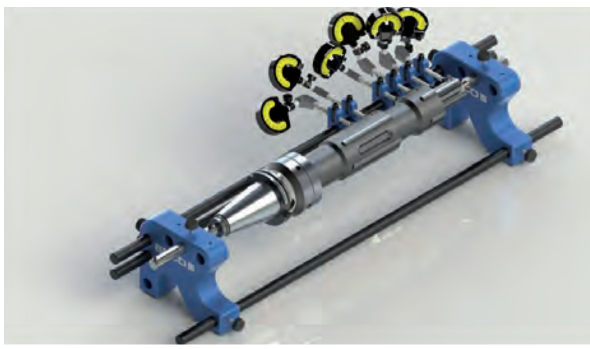
SF-60200-C160: Ordering and Part No. 02885395
- Horizontal stand
- First choice for Ø smaller than 60 mm *(2.362")*
- 1 clock
- Maximum tool Ø: 60,5 mm *(82.382")*
- Maximum tool length: 200 mm *(7.874")*

SF-60200-C160C190: Ordering and Part No. 02885396
- Horizontal stand
- First choice for Ø smaller than 60 mm *(2.362")*
- 2 clocks
- Maximum tool Ø: 60,5 mm *(82.382")*
- Maximum tool length: 200 mm *(7.874")*

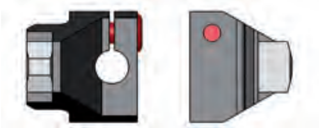
Additional measuring arms

	**SFB-60: Ordering and Part No. 02208619** ▪ Measuring arm 60° ▪ Dial gauge included in delivery ▪ Measuring point not included, see page 475
	**SFB-60 WC: Ordering and Part No. 02885754** ▪ Measuring arm 60° ▪ Dial gauge not included in delivery ▪ Measuring point not included, see page 475
	**SFB-90: Ordering and Part No. 02208622** ▪ Measuring arm 90° ▪ Dial gauge included in delivery ▪ Measuring point not included, see page 475
	**SFB-90 WC: Ordering and Part No. 02885755** ▪ Measuring arm 90° ▪ Dial gauge not included in delivery ▪ Measuring point not included, see page 475
	**DG-1: Ordering and Part No. 75079579** ▪ Dial gauge, 1 mm *(0,00004")*

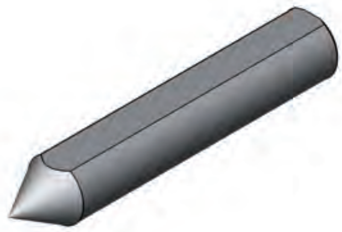
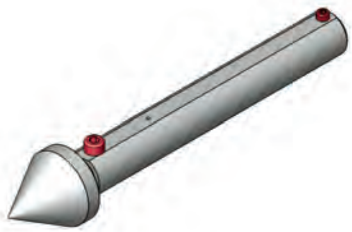
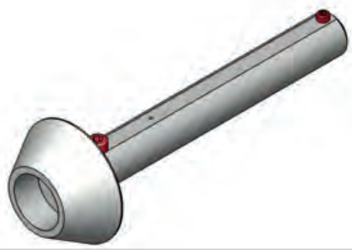
Examples of multi clocks setting fixture assembly

Accessories

	**SMES-406: Ordering and Part No. 02819156** ▪ Measuring point for Xfix reamers ▪ Ø 4mm *(0.157")* ▪ Carbide tipped
	**SMES-900: Ordering and Part No. 02208610** ▪ Measuring point for Bifix reamers ▪ Carbide tipped
	**SMES-909:Ordering and Part No. 02208613** ▪ Measuring point for Bifix reamers ▪ Carbide tipped ▪ 9 mm *(0.354")* offset
	**SMES-915: Ordering and Part No. 02208616** ▪ Measuring point for Bifix reamers ▪ Carbide tipped ▪ 15 mm *(0.591")* offset
	**SFHS-20: Ordering and Part No. 02884025** ▪ Hand-screw ▪ Suitable for the entire setting fixture range
 	**SFVST- 100: Ordering and Part No. 02884026** ▪ Steel stand (set of 3) ▪ Ø 100 mm *(3.937")* ▪ Suitable to convert horizontal setting fixture to vertical position

Center points

SFC-2000HM: Ordering and Part No. 02884023 ▪ Solid carbide fixed center point ▪ Ø 20 mm *(0.787")* ▪ Suitable for Xfix and Bifix range standard and special ▪ To be used at front end of the tool	
SSC-3400: Ordering and Part No. 02208617 ▪ Spring center point ▪ Ø 34 mm *(1.339")* ▪ Suitable for Xfix and Bifix range standard and special ▪ To be used at back end of the tool ▪ Not suitable for HSK63/80/100 and capto C8	
SSC5700: Ordering and Part No. 02208620 ▪ Spring center point ▪ Truncated Ø 57 mm *(2.244")* ▪ Suitable for Xfix and Bifix range standard and special ▪ To be used at back end of the tool ▪ Suitable for HSK63/80/100 and capto C8	

BORING HEADS

ROUGH AND FINE BORING HEADS DESIGNED FOR FLEXIBILITY AND EXCELLENT RESULTS

Seco offers a wide range of boring heads with Graflex® and Seco-Capto™ machine side connections. Rough boring heads offer strong, rigid assemblies to deliver high metal removal rates and enable geometric hole precision, starting with cast, flame-cut or drilled holes. Fine boring heads set precisions down to 2.5µ on diameter, delivering excellent surface finish and very tight IT5 tolerances.

ASSOCIATED TOOLING SYSTEMS

- Graflex® and Seco-Capto™ modular systems for optimized and polyvalent assemblies
- Steadyline® vibration damping solutions available for excellent performance on deep boring applications

BORING

BORING HEADS

- Diameters range from 0.3 mm up to 3205 mm
- Rough boring heads for high removal rates
- Fine boring heads for high precision, down to IT5, with excellent surface finish

Rough boring

Seco's range of rough boring products maximize material removal rates and accuracy through strong, highly rigid performance. Designed for symmetrical and staggered designs. Steadyline™ vibration damping solutions complete the range to deliver even greater levels of stability for the machining of deep cavities, where long tool overhangs are needed.

- RB 750 rough boring heads offer the highest possible rough boring performance
- RB 610 rough boring heads are short, simple, robust boring heads for roughing operations

Overview

RB 750 boring heads, rough boring		
Twin cutting heads, with insert holders coupling mechanism  Page(s) 489-497	▪ High metal removal, precise hole geometry and hole position ▪ Both symmetrical and staggered settings ▪ Simultaneous adjustment by an insert holders coupling mechanism ▪ With Graflex® or Seco-Capto™ connections	Ø range 18 to 205 mm *(0.709 to 8.071")* IT 9/10
RB 610 boring heads, rough boring		
Twin cutting heads  Page(s) 498-505	▪ High metal removal, precise hole geometry and hole position ▪ Both symmetrical and staggered settings ▪ With Graflex® connection for Graflex® modular system ▪ With GL or BA connection for Steadyline® vibration damping bars	Ø range 28 mm to 116 mm *(1.102 to 4.567")* IT 9/10
FB 760 boring heads, Axiabore™ type, fine boring		
Fine boring heads, with axial tools  Page(s) 506-536	▪ Micrometer adjustment for hole precision up to IT5 ▪ High tool rigidity for precise hole geometry and position ▪ Nanobore™ head for smaller diameters ▪ Axialibrabore™ and - Axialibrabore™ Plus - are fine balanceable, HSM suitable ▪ Multi-purpose adapter (MPA) for larger boring diameters, OD-overturning and grooving ▪ With Graflex® or Seco-Capto™ connections	Ø range 0,3 to 108 mm *(0.012 to 4.252")* + OD-overturning and face grooving IT 5/6
FB 620, FB 780 & FB 790 boring heads, radial type		
Fine boring heads, with radial insert holder  Page(s) 537-550	▪ Micrometer adjustment for hole precision up to IT5 ▪ Precise hole geometry and position ▪ A790 Libraflex® heads are fine balanceable, HSM suitable Insert holder clamping for highest reliability ▪ Long bores achievable, using carbide extensions (up to 7xD) or Steadyline® bars (up to 10xD) ▪ Also for chamfering and back-boring ▪ With Graflex® or Seco-Capto™ connections for modular systems ▪ With GL or BA connection for Steadyline® vibration damping bars	Ø range 15 to 205 mm *(0.591 to 8.071")* IT 5/6

SECO

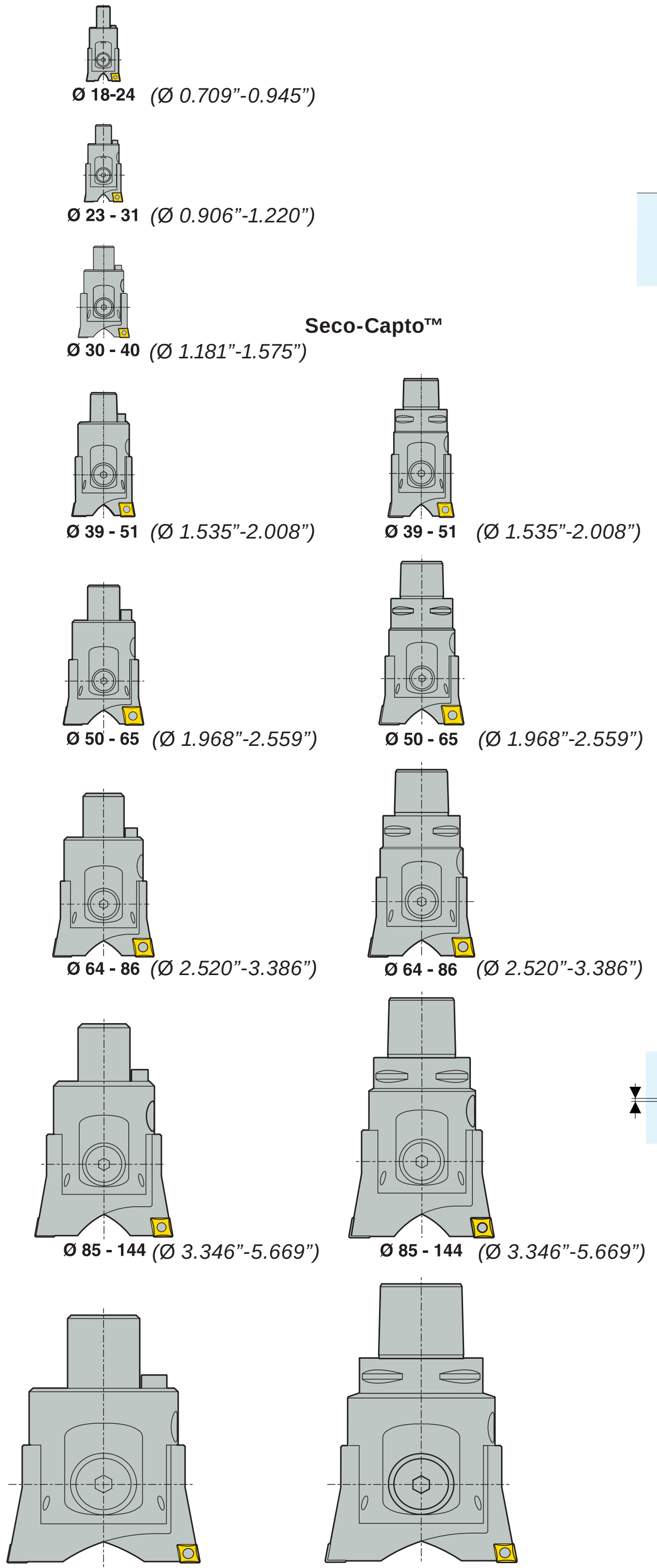
Overview

Bridge bars & Jumbo boring heads		
For rough and fine boring large diameters  Page(s) 551-568	▪ Boring blocks available for rough and fine boring, OD-overturning and back-boring ▪ Strong design for high metal removal in rough boring ▪ Micrometric adjustment for fine boring ▪ Optimized boring block design and Jumbo Bridge bars made from high tensile aluminum for high speeds ▪ To be fitted onto milling cutter holders, flange mounting type	Ø range 204 to 3205 mm *(8.031-126.181")* IT 5/6 (fine boring) or 9/10 (rough boring)+ OD-overturning IT6
Inserts for boring		
 Page(s) 570-577	▪ For boring applications in all materials ▪ High toughness for rough boring ▪ Positive geometries for fine boring ▪ Grades selected for long life	
Graflex® or Seco-Capto™ modular holding system		
Fine boring heads, with radial insert holder  Page(s) 578-580	▪ The boring heads have a Graflex® or a Seco-Capto™ machine side connection shank enabling a full range of boring depths and diameters ▪ Select the required Graflex® or Seco-Capto™ arbors and intermediates from the TOOLING SYSTEMS catalog (HSK, DIN, BT, ANSI-CAT, Seco-Capto™) ▪ Graflex® connections spare parts for boring heads are shown in that chapter	

Rough boring heads RB 750 – Overview

Graflex®

Seco-Capto™



Graflex®:

Ø 18-24 *(Ø 0.709”-0.945”)*

Ø 23 - 31 *(Ø 0.906”-1.220”)*

Ø 30 - 40 *(Ø 1.181”-1.575”)*

Ø 39 - 51 *(Ø 1.535”-2.008”)*

Ø 50 - 65 *(Ø 1.968”-2.559”)*

Ø 64 - 86 *(Ø 2.520”-3.386”)*

Ø 85 - 144 *(Ø 3.346”-5.669”)*

Ø 114 - 205 *(Ø 4.488”-8.071”)*

Seco-Capto™:

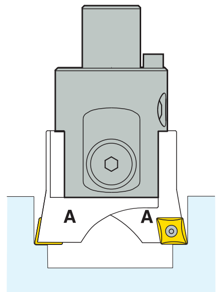
Ø 39 - 51 *(Ø 1.535”-2.008”)*

Ø 50 - 65 *(Ø 1.968”-2.559”)*

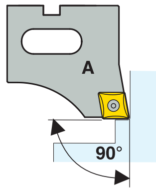
Ø 64 - 86 *(Ø 2.520”-3.386”)*

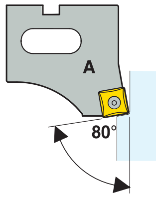
Ø 85 - 144 *(Ø 3.346”-5.669”)*

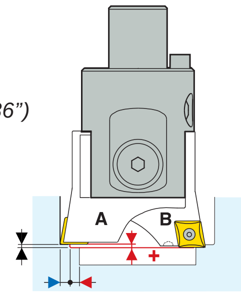
Ø 114 - 205 *(Ø 4.488”-8.071”)*



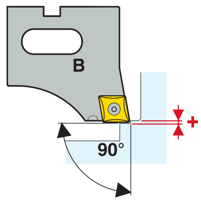
Symmetrical boring:
2 standard type A insert holders

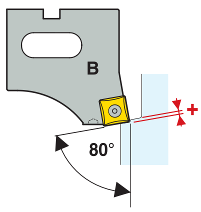




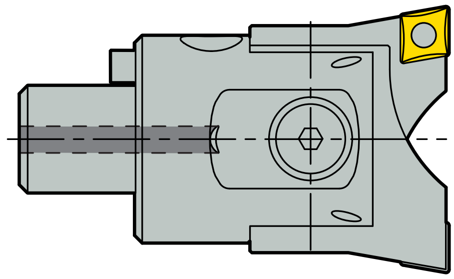
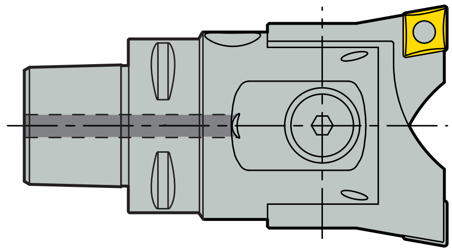
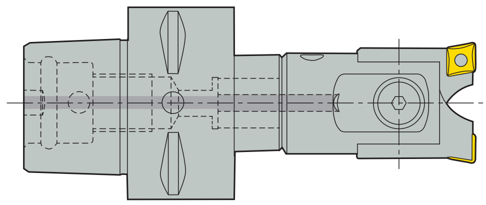


Staggered boring:
1 extended type B and 1 standard type A insert holders





Features

Graflex® rough boring heads **Ø 18 to 205 mm** (0.709-8.071") 8 rough boring heads RB 750 with Graflex® connection for bores Ø 18 to 205 mm *(0.709-8.071")*	
Seco-Capto™ rough boring heads **Note:** The minimum bore size of the smallest Capto™ rough boring head is Ø 39 mm *(1.535")* with the smallest available Capto™ C3 connection. For Ø 18 to 40 mm *(0.709-1.575")* use Graflex® boring heads with connection sizes G0 to G2 in conjunction with the appropriate Capto™/Graflex® adaptor.	
Seco-Capto™ rough boring heads **Note:** Features, Instructions (insert holder fitting, diameter setting, back boring instructions, troubleshooting, recommended machining conditions, maximum speeds), suitable insert holders and suitable inserts are similar for both types of RB 750 rough boring heads of similar boring capacity size, regardless of connection type. Modular assemblies and cutting conditions Seco-CaptoTM and Graflex® adapters and modular extensions: please see the Tooling Systems catalogue.	

Features

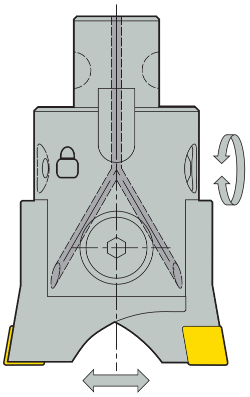
A rough boring head assembly is a combination of 1 body (head) and 2 insert holders.

Simultaneous or independent adjustments of the insert holders are possible:

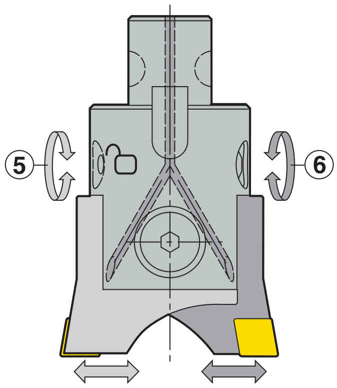
Simultaneous adjustment by the insert holders coupling mechanism (no coupling mechanism in the smallest head Ø 18 to 24 mm *(0.709-0.9445")*).

Each adjusting screw moves both insert holders simultaneously (they are gear coupled).

Diameter adjustment is possible without a presetter (1 increment = 0,1 mm *(0.004")* on the diameter).
Independent adjustment is also possible: disengage the coupling mechanism so that each adjusting screw acts only on its insert holder.



Simultaneous adjustment



Independant adjustment

Symmetrical boring:

Symmetrical boring means both cutting edges are set on the same diameter:
It requires two identical type A standard insert holders (with identical lead angle).

Staggered boring:

Staggered boring means one cutting edge is offset as a leading cutting edge operating on a smaller diameter than the second edge set on the diameter to be realised: It requires one type A standard insert holder and one type B extended insert holder, achieving the required (+) axial offset.

90° or 80° lead angle insert holders

A75…CC… and A75…CP… insert holders have a 90° lead angle for rhombic inserts: mostly suitable for blind holes and requiring less spindle torque.

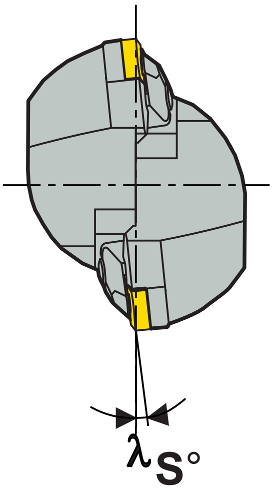
A75…SC… insert holders have an 80° lead angle for square inserts: mostly suitable for through holes and heavy duty.
Angular orientation of the cutting edges according to ISO.

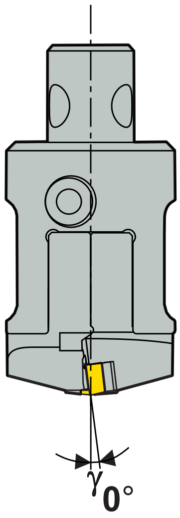
CC, CP, SC or CN type insert holders

A750...CC..., A750...CP... and A750...SC... insert holders are with 0° rake angle (γo°) and 0° inclination angle (lS°).

A750...CN... insert holders are with -6° rake angle (γo°) and -6° inclination angle (lS°), allowing use of 'negative' CNMM inserts and particularly multi-edges CNMG inserts with 4 cutting edges. In this case, it is particularly important to select the recommended CN inserts and to respect the recommended cutting data (see pages 574-575).

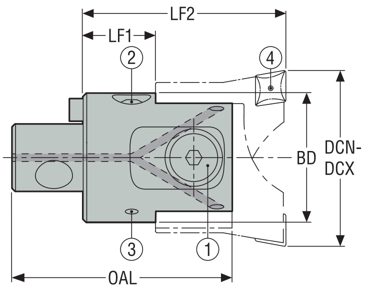
Using other inserts, e.g. with smaller effective cutting angle, and/or incorrect cutting data, could result in high cutting stresses and machine / workpiece damage.





RB750

Graflex®



1. Assembly screw
2. Adjusting screw
3. Locking screw of coupling mechanism
4. Insert screw

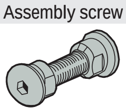
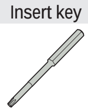
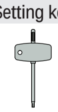
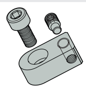
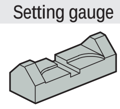
- Symmetrical and staggered boring is possible
- Simultaneous adjustment by insert holders coupling mechanism

Item number	Designation	Machine side Graflex size	Workpiece side Capacity DCN-DCX Ø		OAL	LF1	LF2	BD	Weight	Simultaneous adjustment mode		Independent adjustment mode		Max. RPM
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	Yes	No	Yes	No	
00026687	A75000	G0	18,0 *0.709*	24,0 *0.945*	38,0 *1.496*	12,5 *0.492*	35,0 *1.378*	16,5 *0.650*	0,03 *0.070*	–	■	■	–	15000
00026688	A75010	G1	23,0 *0.906*	31,0 *1.220*	42,5 *1.673*	13,5 *0.531*	40,0 *1.575*	21,5 *0.846*	0,1 *0.220*	■	–	■	–	12000
00026689	A75020	G2	30,0 *1.181*	40,0 *1.575*	51,0 *2.008*	16,0 *0.630*	46,0 *1.811*	27,0 *1.063*	0,11 *0.240*	■	–	■	–	9500
00026690	A75030	G3	39,0 *1.535*	51,0 *2.008*	69,0 *2.717*	24,0 *0.945*	65,0 *2.559*	35,0 *1.378*	0,27 *0.600*	■	–	■	–	7500
00026691	A75040	G4	50,0 *1.969*	65,0 *2.559*	78,0 *3.071*	27,0 *1.063*	72,0 *2.835*	43,0 *1.693*	0,46 *1.010*	■	–	■	–	5700
00026692	A75050	G5	64,0 *2.520*	86,0 *3.386*	92,0 *3.622*	30,0 *1.181*	82,0 *3.228*	54,0 *2.126*	0,8 *1.760*	■	–	■	–	4500
00026693	A75060	G6	85,0 *3.346*	144,0 *5.669*	119,0 *4.685*	37,0 *1.457*	105,0 *4.134*	70,0 *2.756*	1,69 *3.730*	■	–	■	–	3500
00026694	A75070	G7	114,0 *4.488*	205,0 *8.071*	143,0 *5.630*	39,0 *1.535*	120,0 *4.724*	95,0 *3.740*	3,7 *8.160*	■	–	■	–	2500

Insert holders have to be ordered separately, see page(s) 491-495.
Note, weight is without insert holder

Spare parts

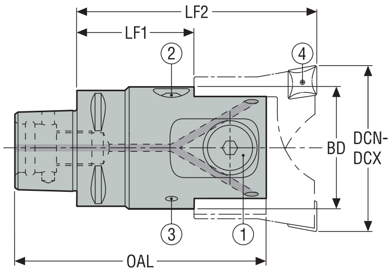
Accessories

For head	Assembly screw	Clamp key	Driving key	Insert key	Key (T-handle)	Setting key	Tenon	Setting gauge
								
A75000	90A75000	03HL03	–	H4B-T07P	DOUBLE-T	H1.5-2D	90M0	–
A75010	90A75010	03HL03	H4B-T06P	H4B-T07P	DOUBLE-T	H1.5-2D	90M11	CAA75010
A75020	90A75020	03HL04	H4B-T07P	H4B-T07P	DOUBLE-T	H2.0-2D	90M21	CAA75020
A75030	90A75030	03HL05	H4B-T08P	H6B-T15PL	DOUBLE-T	H2.0-2D	90M31	CAA75030
A75040	90A75040	03HL05	H4B-T09P	H6B-T15PL	DOUBLE-T	H2.5-2D	90M41	CAA75040
A75050	90A75050	03HL06	H6B -T15P	H6B-T15PL	DOUBLE-T	03M03C	90M51	CAA75050
A75060	90A75060	03HL08	H6B -T15P	H6B-T15PL	DOUBLE-T	H04-4	90M61	CAA75060
A75070	90A75070	03HL10	H6B -T15P	H6B-T15PL	DOUBLE-T	H04-4	90M71	CAA75070

Accessories, to be ordered separately

RB750

Seco-Capto™



1. Assembly screw
2. Adjusting screw
3. Locking screw of coupling mechanism
4. Insert screw

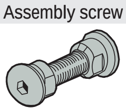
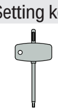
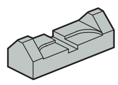
- Symmetrical and staggered boring is possible
- Simultaneous adjustment by insert holders coupling mechanism

Item number	Designation	Machine side Capto size	Workpiece side Capacity DCN-DCX Ø		OAL	LF1	LF2	BD	Weight	Simultaneous adjustment mode		Independent adjustment mode		Max. RPM
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	Yes	No	Yes	No	
02809726	C3-391.0750-30	C3	39,0 *1.535*	51,0 *2.008*	73,1 *2.878*	29,0 *1.142*	79,0 *3.110*	35,0 *1.378*	0,28 *0.620*	■	–	■	–	7500
02809728	C4-391.0750-40	C4	50,0 *1.969*	65,0 *2.559*	88,0 *3.465*	37,0 *1.457*	82,0 *3.228*	43,0 *1.693*	0,52 *1.150*	■	–	■	–	5700
02809733	C5-391.0750-50	C5	64,0 *2.520*	86,0 *3.386*	102,0 *4.016*	40,0 *1.575*	92,0 *3.622*	54,0 *2.126*	0,94 *2.070*	■	–	■	–	4500
02809735	C6-391.0750-60	C6	85,0 *3.346*	144,0 *5.669*	129,0 *5.079*	49,0 *1.929*	117,0 *4.606*	70,0 *2.756*	1,88 *4.140*	■	–	■	–	3500
02809736	C8-391.0750-70	C8	114,0 *4.488*	205,0 *8.071*	159,0 *6.260*	57,0 *2.244*	138,0 *5.433*	95,0 *3.740*	4,14 *9.130*	■	–	■	–	2500

Insert holders have to be ordered separately, see page(s) 491-495
Note, weight is without insert holder

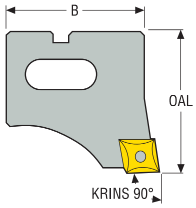
Spare parts

Accessories

For head	Assembly screw	Clamp key	Driving key	Key (T-handle)	Setting key	Setting gauge
						
C3-...-30	90A75030	03HL05	H4B-T08P	DOUBLE-T	H2.0-2D	CAA75030
C4-...-40	90A75040	03HL05	H4B-T09P	DOUBLE-T	H2.5-2D	CAA75040
C5-...-50	90A75050	03HL06	H6B-T15P	DOUBLE-T	03M03C	CAA75050
C6-...-60	90A75060	03HL08	H6B-T15P	DOUBLE-T	H04-4	CAA75060
C8-...-70	90A75070	03HL10	H6B-T15P	DOUBLE-T	H04-4	CAA75070

Accessories, to be ordered separately

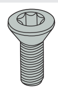
Insert holders 90° for CC.. and CP.. inserts



- For fitting onto heads RB 750
- Symmetrical boring requires two standard type A insert holders
- Staggered boring requires one standard type A and one extended type B insert holders

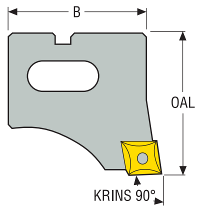
Item number	Designation	Insert holders type	For head	Capacity DCN-DCX ∅		OAL	B	Weight	KRINS°	Suitable insert size
				mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
00026695	A75000CP0590	Standard type A	RB 75000	18,0 *0.709*	24,0 *0.945*	22,5 *0.886*	16,5 *0.650*	0,01 *0.020*	90	CP...0502...
00026696	A75010CC0690	Standard type A	RB 75010	23,0 *0.906*	31,0 *1.220*	26,5 *1.043*	21,5 *0.846*	0,02 *0.040*	90	CC...0602...
00026697	A75020CC0690	Standard type A	RB 75020	30,0 *1.181*	40,0 *1.575*	30,0 *1.181*	27,0 *1.063*	0,04 *0.090*	90	CC...0602...
00026698	A75030CC0990	Standard type A	RB 75030	39,0 *1.535*	51,0 *2.008*	41,0 *1.614*	35,0 *1.378*	0,08 *0.180*	90	CC...09T3...
00026699	A75040CC1290	Standard type A	RB 75040	50,0 *1.969*	65,0 *2.559*	45,0 *1.772*	43,0 *1.693*	0,14 *0.310*	90	CC...1204...
00026700	A75050CC1290	Standard type A	RB 75050	64,0 *2.520*	86,0 *3.386*	52,0 *2.047*	54,0 *2.126*	0,25 *0.550*	90	CC...1204...
00026701	A75060CC1290	Standard type A	RB 75060	85,0 *3.346*	115,0 *4.528*	68,0 *2.677*	70,0 *2.756*	0,55 *1.210*	90	CC...1204...
00030763	A75060CC1690	Standard type A	RB 75060	85,0 *3.346*	115,0 *4.528*	68,0 *2.677*	70,0 *2.756*	0,55 *1.210*	90	CC...1605...
00026702	A75065CC1290	Standard type A	RB 75060	114,0 *4.488*	144,0 *5.669*	68,0 *2.677*	100,0 *3.937*	0,89 *1.960*	90	CC...1204...
00030765	A75065CC1690	Standard type A	RB 75060	114,0 *4.488*	144,0 *5.669*	68,0 *2.677*	100,0 *3.937*	0,9 *1.980*	90	CC...1605...
00026703	A75070CC1290	Standard type A	RB 75070	114,0 *4.488*	160,0 *6.299*	81,0 *3.189*	95,0 *3.740*	1,18 *2.600*	90	CC...1204...
00030766	A75070CC1690	Standard type A	RB 75070	114,0 *4.488*	160,0 *6.299*	81,0 *3.189*	95,0 *3.740*	1,18 *2.600*	90	CC...1605...
00026704	A75075CC1290	Standard type A	RB 75070	159,0 *6.260*	205,0 *8.071*	81,0 *3.189*	141,0 *5.551*	2,0 *4.410*	90	CC...1204...
00030771	A75075CC1690	Standard type A	RB 75070	159,0 *6.260*	205,0 *8.071*	81,0 *3.189*	141,0 *5.551*	2,0 *4.410*	90	CC...1605...

Spare parts

For insert size	Insert key	Key (T-handle)	Screw
			
CP...0502...	H4B-T07P	DOUBLE-T	C02245-T07P
CC...0602...	H4B-T07P	DOUBLE-T	C02504-T07P
CC...09T3...	H4B-T15P	DOUBLE-T	C04008-T15P
CC...1204...	H4B-T15P	DOUBLE-T	C05012-T15P
CC...1605...	H4B-T15P	DOUBLE-T	C05012-T15P

For rough boring recommended inserts, see page(s) 574

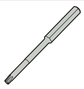
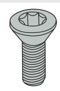
Insert holders 90° for CC.. and CP.. inserts



- For fitting onto heads RB 750
- Symmetrical boring requires two standard type A insert holders
- Staggered boring requires one standard type A and one extended type B insert holders

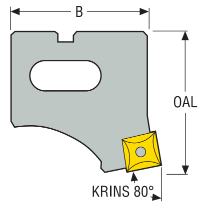
Item number	Designation	Insert holders type	For head	Capacity DCN-DCX ∅		OAL	B	Weight	KRINS°	Suitable insert size
				mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
00026705	A75001CP0590	Extended type B	RB 75000	18,0 *0.709*	24,0 *0.945*	22,8 *0.898*	16,5 *0.650*	0,01 *0.020*	90	CP...0502...
00026706	A75011CC0690	Extended type B	RB 75010	23,0 *0.906*	31,0 *1.220*	26,85 *1.057*	21,5 *0.846*	0,02 *0.040*	90	CC...0602...
00026707	A75021CC0690	Extended type B	RB 75020	30,0 *1.181*	40,0 *1.575*	30,35 *1.195*	27,0 *1.063*	0,04 *0.090*	90	CC...0602...
00026708	A75031CC0990	Extended type B	RB 75030	39,0 *1.535*	51,0 *2.008*	41,4 *1.630*	35,0 *1.378*	0,08 *0.180*	90	CC...09T3...
00026709	A75041CC1290	Extended type B	RB 75040	50,0 *1.969*	65,0 *2.559*	45,5 *1.791*	43,0 *1.693*	0,13 *0.290*	90	CC...1204...
00026710	A75051CC1290	Extended type B	RB 75050	64,0 *2.520*	86,0 *3.386*	52,6 *2.071*	54,0 *2.126*	0,25 *0.550*	90	CC...1204...
00026711	A75061CC1290	Extended type B	RB 75060	85,0 *3.346*	115,0 *4.528*	68,6 *2.701*	70,0 *2.756*	0,55 *1.210*	90	CC...1204...
00030774	A75061CC1690	Extended type B	RB 75060	85,0 *3.346*	115,0 *4.528*	68,6 *2.701*	70,0 *2.756*	0,55 *1.210*	90	CC...1605...
00026712	A75066CC1290	Extended type B	RB 75060	114,0 *4.488*	144,0 *5.669*	68,6 *2.701*	100,0 *3.937*	0,91 *2.010*	90	CC...1204...
00030775	A75066CC1690	Extended type B	RB 75060	114,0 *4.488*	144,0 *5.669*	68,6 *2.701*	100,0 *3.937*	0,91 *2.010*	90	CC...1605...
00026713	A75071CC1290	Extended type B	RB 75070	114,0 *4.488*	160,0 *6.299*	81,6 *3.213*	95,0 *3.740*	1,16 *2.560*	90	CC...1204...
00030776	A75071CC1690	Extended type B	RB 75070	114,0 *4.488*	160,0 *6.299*	81,6 *3.213*	95,0 *3.740*	1,16 *2.560*	90	CC...1605...
00026714	A75076CC1290	Extended type B	RB 75070	159,0 *6.260*	205,0 *8.071*	81,6 *3.213*	141,0 *5.551*	2,0 *4.410*	90	CC...1204...
00030778	A75076CC1690	Extended type B	RB 75070	159,0 *6.260*	205,0 *8.071*	81,6 *3.213*	141,0 *5.551*	2,01 *4.430*	90	CC...1605...

Spare parts

For insert size	Key	Key (T-handle)	Screw
			
CP...0502...	H4B-T07P	DOUBLE-T	C02245-T07P
CC...0602...	H4B-T07P	DOUBLE-T	C02504-T07P
CC...09T3...	–	DOUBLE-T	C04008-T15P
CC...1204...	–	DOUBLE-T	C05012-T15P
CC...1605...	–	DOUBLE-T	C05012-T15P

For rough boring recommended inserts, see page(s) 574

Insert holders 80° for SC.. inserts



- For fitting onto heads RB 750
- Symmetrical boring requires two standard type A insert holders
- Staggered boring requires one standard type A and one extended type B insert holders

Item number	Designation	Insert holders type	For head	Capacity DCN-DCX ∅		OAL	B	Weight	KRINS°	Suitable insert size
				mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
00026715	A75000SC0580	Standard type A	RB 75000	18,0 *0.709*	24,0 *0.945*	22,5 *0.886*	16,5 *0.650*	0,01 *0.020*	80	SC...0502...
00026716	A75010SC0680	Standard type A	RB 75010	23,0 *0.906*	31,0 *1.220*	26,5 *1.043*	21,5 *0.846*	0,02 *0.040*	80	SC...0602...
00026717	A75020SC0680	Standard type A	RB 75020	30,0 *1.181*	40,0 *1.575*	30,0 *1.181*	27,0 *1.063*	0,04 *0.090*	80	SC...0602...
00026718	A75030SC0980	Standard type A	RB 75030	39,0 *1.535*	51,0 *2.008*	41,0 *1.614*	35,0 *1.378*	0,08 *0.180*	80	SC...09T3...
00026719	A75040SC1280	Standard type A	RB 75040	50,0 *1.969*	65,0 *2.559*	45,0 *1.772*	43,0 *1.693*	0,03 *0.070*	80	SC...1204...
00051986	A75050SC1280	Standard type A	RB 75050	64,0 *2.520*	86,0 *3.386*	52,0 *2.047*	54,0 *2.126*	0,25 *0.550*	80	SC...1204...
00052207	A75060SC1280	Standard type A	RB 75060	85,0 *3.346*	115,0 *4.528*	68,0 *2.677*	70,0 *2.756*	0,56 *1.230*	80	SC...1204...
00039863	A75060SC1580	Standard type A	RB 75060	85,0 *3.346*	115,0 *4.528*	68,0 *2.677*	70,0 *2.756*	0,56 *1.230*	80	SC...1505...
00051989	A75065SC1280	Standard type A	RB 75060	114,0 *4.488*	144,0 *5.669*	68,0 *2.677*	100,0 *3.937*	0,94 *2.070*	80	SC...1204...
00039865	A75065SC1580	Standard type A	RB 75060	114,0 *4.488*	144,0 *5.669*	68,0 *2.677*	100,0 *3.937*	1,0 *2.200*	80	SC...1505...
00026723	A75070SC1280	Standard type A	RB 75070	114,0 *4.488*	160,0 *6.299*	81,0 *3.189*	95,0 *3.740*	1,2 *2.650*	80	SC...1204...
00039867	A75070SC1580	Standard type A	RB 75070	114,0 *4.488*	160,0 *6.299*	81,0 *3.189*	95,0 *3.740*	1,18 *2.600*	80	SC...1505...
00026724	A75075SC1280	Standard type A	RB 75070	159,0 *6.260*	205,0 *8.071*	81,0 *3.189*	141,0 *5.551*	2,09 *4.610*	80	SC...1204...
00039869	A75075SC1580	Standard type A	RB 75070	159,0 *6.260*	205,0 *8.071*	81,0 *3.189*	141,0 *5.551*	2,1 *4.630*	80	SC...1505...
00092946	A75001SC0580	Extended type B	RB 75000	18,0 *0.709*	24,0 *0.945*	23,2 *0.913*	16,5 *0.650*	0,01 *0.020*	80	SC...0502...
00092947	A75011SC0680	Extended type B	RB 75010	23,0 *0.906*	31,0 *1.220*	27,3 *1.075*	21,5 *0.846*	0,02 *0.040*	80	SC...0602...
00092948	A75021SC0680	Extended type B	RB 75020	30,0 *1.181*	40,0 *1.575*	30,9 *1.217*	27,0 *1.063*	0,04 *0.090*	80	SC...0602...
00092949	A75031SC0980	Extended type B	RB 75030	39,0 *1.535*	51,0 *2.008*	42,2 *1.661*	35,0 *1.378*	0,08 *0.180*	80	SC...09T3...
00092961	A75041SC1280	Extended type B	RB 75040	50,0 *1.969*	65,0 *2.559*	46,4 *1.827*	43,0 *1.693*	0,14 *0.310*	80	SC...1204...
00092962	A75051SC1280	Extended type B	RB 75050	64,0 *2.520*	86,0 *3.386*	53,7 *2.114*	54,0 *2.126*	0,26 *0.570*	80	SC...1204...
00039864	A75061SC1580	Extended type B	RB 75060	85,0 *3.346*	115,0 *4.528*	70,3 *2.768*	70,0 *2.756*	0,57 *1.260*	80	SC...1505...
00092963	A75061SC1280	Extended type B	RB 75060	85,0 *3.346*	115,0 *4.528*	69,8 *2.748*	70,0 *2.756*	0,57 *1.260*	80	SC...1204...

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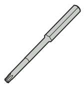
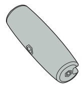
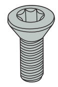
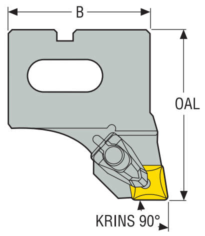
Item number	Designation	Insert holders type	For head	Capacity DCN-DCX ∅		OAL	B	Weight	KRINS°	Suitable insert size
				mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
00092964	A75066SC1280	Extended type B	RB 75060	114,0 *4.488*	144,0 *5.669*	69,8 *2.748*	100,0 *3.937*	0,96 *2.120*	80	SC...1204...
00039866	A75066SC1580	Extended type B	RB 75060	114,0 *4.488*	144,0 *5.669*	70,3 *2.768*	100,0 *3.937*	0,96 *2.120*	80	SC...1505...
00092965	A75071SC1280	Extended type B	RB 75070	114,0 *4.488*	160,0 *6.299*	82,8 *3.260*	95,0 *3.740*	1,21 *2.670*	80	SC...1204...
00039868	A75071SC1580	Extended type B	RB 75070	114,0 *4.488*	160,0 *6.299*	83,3 *3.280*	95,0 *3.740*	1,21 *2.670*	80	SC...1505...
00092968	A75076SC1280	Extended type B	RB 75070	159,0 *6.260*	205,0 *8.071*	82,8 *3.260*	141,0 *5.551*	2,16 *4.760*	80	SC...1204...
00039870	A75076SC1580	Extended type B	RB 75070	159,0 *6.260*	205,0 *8.071*	83,3 *3.280*	141,0 *5.551*	2,14 *4.720*	80	SC...1505...

Spare parts

For insert size	Key	Key (T-handle)	Screw
			
SC...0502...	H4B-T07P	DOUBLE-T	C02245-T07P
SC...0602...	H4B-T07P	DOUBLE-T	C02504-T07P
SC...09T3...	–	DOUBLE-T	C04008-T15P
SC...1204...	–	DOUBLE-T	C05012-T15P
SC...1505...	–	DOUBLE-T	C05012-T15P

For rough boring recommended inserts, see page(s) 574

Insert holders 90° for CN.. inserts



- For fitting onto heads RB 750
- Symmetrical boring requires two standard type A insert holders (Type B extended insert holders for CN.. inserts not available)
- GAMO = Rake angle = - 6°
- LAMS = Inclination angle = - 6°

Item number	Designation	Insert holders type	For head	Capacity DCN-DCX ∅		OAL	B	Weight	KRINS°	Suitable insert size
				mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
02786307	A75050CN1290	Standard type A	RB 75050	64,0 *2.520*	86,0 *3.386*	63,0 *2.480*	55,0 *2.165*	0,28 *0.620*	90	CN...1204...
02786308	A75060CN1290	Standard type A	RB 75060	85,0 *3.346*	115,0 *4.528*	68,0 *2.677*	69,5 *2.736*	0,58 *1.280*	90	CN...1204...
02786309	A75065CN1290	Standard type A	RB 75060	114,0 *4.488*	144,0 *5.669*	68,0 *2.677*	99,5 *3.917*	0,98 *2.160*	90	CN...1204...
02786310	A75070CN1290	Standard type A	RB 75070	114,0 *4.488*	160,0 *6.299*	85,0 *3.346*	95,0 *3.740*	1,25 *2.760*	90	CN...1204...
02786311	A75075CN1290	Standard type A	RB 75070	159,0 *6.260*	205,0 *8.071*	85,0 *3.346*	140,0 *5.512*	2,03 *4.480*	90	CN...1204...

Spare parts

For insert size	Anvil screw	Clamp kit	Insert shim	Key (T-handle)
CN...1204...	CSC6312-T15P	CD12-S12	UCN120612	DOUBLE-T

For rough boring recommended inserts, see page(s) 574

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Recommended machining conditions

Spindle power:

As rough boring requires high machine power, we recommend to check that the machine is suitable. Staggered boring is a solution to reduce the power needs, as the feed is divided by two for the same total depth of cut, compared to symmetrical setting.
Optimum performance is obtained with through coolant (higher machining data, better surface fi nish, better chip evacuation, longer insert life).
For detailed user instructions, please refer to the operating instructions supplied as part of the delivery content of the boring heads and with the Steadyline® bars. These operating instructions can also be downloaded from www.secotools.com.

Head	Capacity Ø	Max RPM r/min	Implied max cutting speed v_c at min. Cap.	Implied max cutting speed v_c at max. Cap.
Rough boring heads (with two identical insert holders set symmetrically), with Graflex® connection				
A75000	18-24	15000	848	1131
A75010	23-31	12000	867	1169
A75020	30-40	9500	895	1194
A75030	39-51	7500	919	1202
A75040	50-65	5700	895	1164
A75050	64-86	4500	905	1216
A75060	85-115	3500	935	1264
A75060	114-144	2700	967	1221
A75070	114-160	2500	895	1257
A75070	159-205	2000	999	1288
Rough boring heads (with two identical insert holders set symmetrically), with Graflex® connection				
C3-391.0750-30	39-51	7500	919	1202
C4-391.0750-40	50-65	5700	895	1164
C5-391.0750-50	64-86	4500	905	1216
C6-391.0750-60	85-115	3500	935	1264
C6-391.0750-60	114-144	2700	967	1221
C8-391.0750-70	114-160	2500	895	1257
C8-391.0750-70	159-205	2000	999	1288

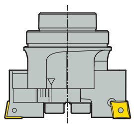
Note: The maximum speeds are related to the boring head's mechanical design and balancing quality. Speeds inside these limits have to be chosen in regard to the other machining conditions, e.g. workpiece material, cutting edge (insert), tooling length, machine spindle. At speeds from approx. 8000 RPM and above, the basic holders and the extensions/reducers should be fi ne balanced.

Instructions Troubleshooting

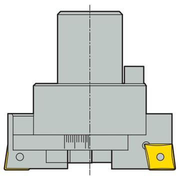
Position	Possible cause	Solution
Poor chip control	Feed rate too low	Increase feed rate
	Excessive DOC	Use staggered method
Chatter & Vibrations	Excessive speed	Reduce cutting speed, not feed
	Extreme L/D ratio	Shorten tool to increase stiffness
		Increase holding arbor's and intermediate's OD
		Use Steadyline bar
		Use carbide or heavy metal extensions
	Too large insert radius	Use insert with smaller radius
	Unstable workpiece	Improve fixture and clamping support
	Lead angle k is 80°	Change to k=90°, type CC insert
Insert chipping or breaking	Wrong insert	Change to tougher grade of insert
		Use larger radius if available
	Severe interrupted cut	Decrease speed, decrease feed
	Chips packing and re-cutting	Check for boring bar/bore diameter clearance
		Improve chip control, increase feed
Poor tool life	Wrong insert	Change to higher wear resistant grade
	Excessive cutting speed	Reduce speed
	Insert chipping	Check DOC and feed rate
	Too low coolant pressure	Increase coolant pressure
Chips not evacuating	Boring assembly to large	Reduce to a smaller head with extended insert holders when possible
	Excessive DOC	Use staggered method; prefer CC.. instead of CN.. inserts (particu-larly when using the boring head at its small diameters).
	Inadequate space below bore	Set the workpiece higher onto the table
	Poor chip control	See above
Insufficient machine power	Excessive feed rate	Reduce feed (not less then 25% of insert radius)
	Excessive DOC	Use staggered method
	Low machine power	RPM in area of low spindle torque: increase speed
		RPM in area of gear change: adjust RPM
		Change insert to higher rake angle (to HSS in extreme cases)
		Reduce DOC
Excessive hole exit burr	Excessive feed rate	Reduce feed
	CC type insert holders 90°	Use 80° square insert holder
	Cutting forces too high	Reduce DOC
		Reduce insert radius

RB 610 Rough boring heads – Overview

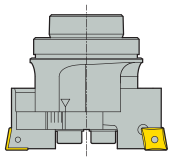
Graflex® connection | **GL connection** | **BA connection**



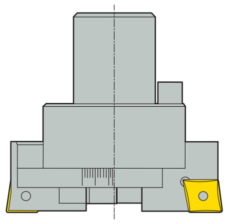
Ø 28–37 mm *(Ø 1.102–1.457")*



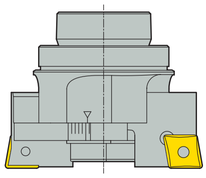
Ø 39–51 mm *(Ø 1.535–2.008")*



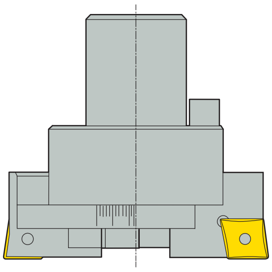
Ø 36–46 mm *(Ø 1.417–1.811")*



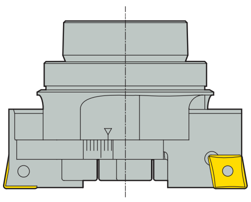
Ø 50–65 mm *(Ø 1.969–2.559")*



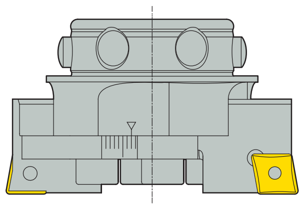
Ø 45–56 mm *(Ø 1.772–2.205")*



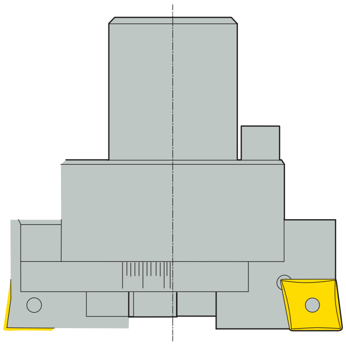
Ø 64–86 mm *(Ø 2.520–3.386")*



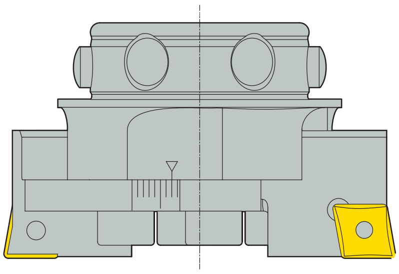
Ø 55–69 mm *(Ø 2.165–2.717")*



Ø 66–88 mm *(Ø 2.598–3.465")*



Ø 85–115 mm *(Ø 3.346–4.528")*



Ø 86–116 mm *(Ø 3.386–4.567")*

RB 610 Rough boring heads – Guide

Features
A rough boring head assembly is a combination of 1 body (head) and 2 insert holders
- Achieving geometrical hole precision starting from cast, flame cut or drilled hole
- Minimised unbalance thanks to a symmetrical design

Compact
- Short body to maximise the rigidity of the boring assembly and to deliver the best damping performances when used on Steadyline® turning and boring bars
- Reduced weight for fast tool changing and spindle acceleration

Intuitive and fast setting
- Each insert holder features its push and pull setting mechanism allowing easy and fast setting of the diameter, using a pre-setter
- Diameter scales roughly visualise the insert holders positions Insert holders
- A610…CC… insert holders achieve a 90° lead angle for rhombic inserts, 0° rake angle and 0° inclination angle
- The insert holders are suitable for both RB 610 Graflex® and RB 610 GL heads

Productivity
- High rigidity resulting from a tight fitting of the insert holders into the head's body, and large clamping screws
- Possibility to take a depth of cut ap up to half of the insert's width, maximising the chip removal rate and allowing a total exploitation of the inserts
- Staggered boring using a shim (part of heads delivery contents) to offset one insert holder in order to increase or to split the radial depth of cut
- Through coolant delivery directed towards the cutting edges

Product range
- RB 610 rough boring heads are available with Graflex® machine side connection, for conventional boring operations up to 6xD overhangs,
- RB 610 rough boring heads with GL and BA machine side connections are designed for longer overhangs with vibration damping Steadyline assemblies.

RB 610 Graflex®

- Graflex®: 4 compact rough boring heads for Ø 39–115 mm *(Ø 1.535–4.528")*
- The flexible Graflex® modular System allows to build up optimal boring assemblies from Graflex® adapters, intermediate modules and boring heads

RB 610 GL and BA, for Steadyline® vibration damping bars

GL

BA

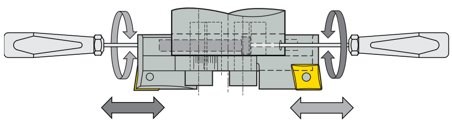
- GL: 4 short and compact rough boring heads, for Ø 28–69 mm *(Ø 1.102–2.717 ")*
- BA: 2 short and compact rough boring heads, for Ø 66–116 mm *(Ø 1.417 – 2.717")*
- Particularly adapted to the Steadyline® turning and boring bars. Boring performances, when used on long Steadyline® bars, are similar to non-damped shorter assemblies (<6xD).

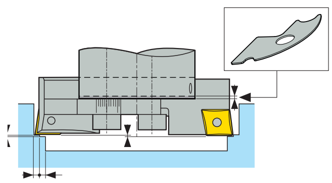
RB 610 Rough boring heads – Guide

Setting
Symmetrical boring:
Symmetrical boring means both cutting edges are set on the same diameter and same height.

Staggered boring:
Staggered boring means one cutting edge is offset as a leading cutting edge (entering the bore first), operating on a smaller diameter than the second edge set on the diameter to be realised: It requires a shim (part of the head delivery content) to be fitted between the boring head's body and one insert holder to achieve the (+) axial offset, see table below.

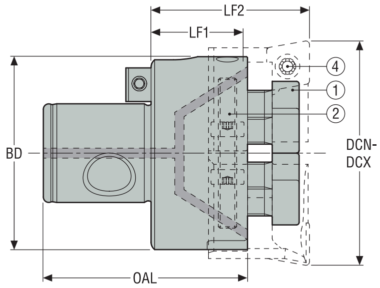
Shim Part No.	Thickness (mm)	Thickness *(inch)*
AU6101003	0,2	*0.008*
AU6103003	0,4	*0.016*
AU6104003	0,5	*0.020*
AU6105003	0,6	*0.024*
AU6106003	0,6	*0.024*





RB610

Graflex®



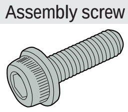
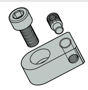
1. Assembly screw and clamp key
2 & 4. Insert key for diameter setting and insert screw clamping

- Symmetrical and staggered boring modes are possible
- Individual insert holder adjusting mechanism
- Internal coolant supply towards cutting edge

Item number	Designation	Machine side Graflex size	Workpiece side Capacity DCN-DCX Ø		OAL	LF1	LF2	BD	Weight	Max. RPM*
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	
02904453	A61030	G3	39,0 *1.535*	51,0 *2.008*	43,5 *1.713*	23,5 *0.925*	36,4 *1.433*	34,0 *1.339*	0,18 *0.400*	7500
02904454	A61040	G4	50,0 *1.969*	65,0 *2.559*	45,5 *1.791*	21,5 *0.846*	35,3 *1.390*	43,0 *1.693*	0,27 *0.600*	5700
02904455	A61050	G5	64,0 *2.520*	86,0 *3.386*	55,0 *2.165*	25,0 *0.984*	42,3 *1.665*	54,0 *2.126*	0,54 *1.190*	4500
02904457	A61060	G6	85,0 *3.346*	115,0 *4.528*	69,0 *2.717*	29,0 *1.142*	47,8 *1.882*	63,0 *2.480*	0,93 *2.050*	3500

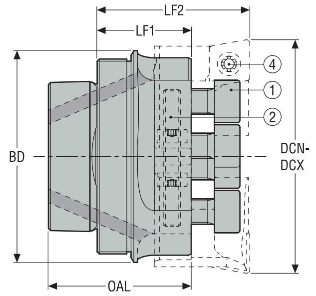
Insert holders have to be ordered separately, see page(s) 500
* Additional information about max RPM, see Instruction pages. Note, weight is without insert holder

Spare parts

For head	Assembly screw	Clamp key	Key (T-handle)	Shim, staggered boring	Tenon
					
A61030	950DC0616	03HL05	DOUBLE-T	AU6103003	90M31
A61040	950D0616	03HL05	DOUBLE-T	AU6104003	90M41
A61050	950D0820	03HL06	DOUBLE-T	AU6105003	90M51
A61060	950D0822	03HL06	DOUBLE-T	AU6106003	90M61

RB610 Compact

GL



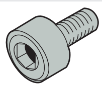
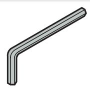
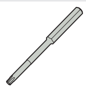
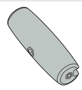
- Designed for GL25, GL32, GL40 and GL50 Steadyline® turning and boring bars
- Symmetrical and staggered boring modes are possible
- Individual insert holder adjusting mechanism
- Internal coolant supply towards cutting edge

1. Assembly screw and clamp key
2 & 4. Insert key for diameter setting and insert screw clamping

Item number	Designation	Machine side GL size	Workpiece side Capacity DCN-DCX Ø		OAL	LF1	LF2	BD	Weight	Max. RPM*
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	
03307854	GL25-RB610-10	GL25	28,0 *1.102*	37,0 *1.457*	21,7 *0.854*	16,2 *0.638*	25,0 *0.984*	25,0 *0.984*	0,1 *0.220*	9500
02904458	GL32-0610-20	GL32	36,0 *1.417*	46,0 *1.811*	27,6 *1.087*	21,1 *0.831*	32,0 *1.260*	32,0 *1.260*	0,1 *0.220*	7500
02904459	GL40-0610-30	GL40	45,0 *1.772*	56,0 *2.205*	31,6 *1.244*	22,1 *0.870*	35,0 *1.378*	40,0 *1.575*	0,2 *0.440*	5700
02904460	GL50-0610-40	GL50	55,0 *2.165*	69,0 *2.717*	33,7 *1.327*	22,2 *0.874*	36,0 *1.417*	50,0 *1.969*	0,3 *0.660*	4500

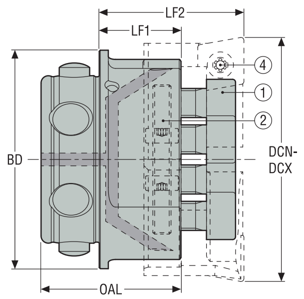
Insert holders have to be ordered separately, see page(s) 500
* Additional information about max RPM, see Instruction pages. Note, weight is without insert holder

Spare parts

For head	Assembly screw	Clamp key	Insert key	Key (T-handle)	Shim, staggered boring
					
GL25-0610-10	950D0410	03HL03	–	–	AU6101003
GL32-0610-20	950DC0412	03HL03	H4B-T07P	DOUBLE-T	AU6102003
GL40-0610-30	950DC0616	03HL05	–	DOUBLE-T	AU6103003
GL50-0610-40	950D0616	03HL05	–	DOUBLE-T	AU6104003

RB610

BA



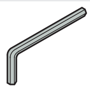
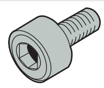
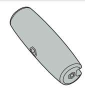
1. Assembly screw and clamp key
2 & 4. Insert key for diameter setting and insert screw clamping

- Designed for BA60 and BA80 Steadyline® turning and boring bars
- Symmetrical and staggered boring modes are possible
- Individual insert holder adjusting mechanism
- Internal coolant supply towards cutting edge

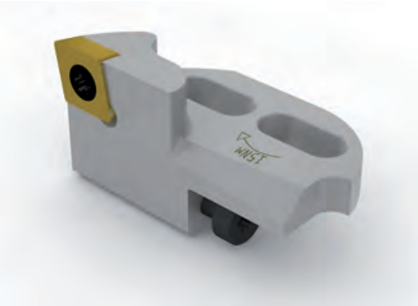
Item number	Designation	Machine side BA size	Workpiece side Capacity DCN-DCX Ø		OAL	LF1	LF2	BD	Weight	Max. RPM*
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	
03204092	BA060-RB610-50	BA060	66,0 *2.598*	88,0 *3.465*	38,5 *1.516*	22,5 *0.886*	39,8 *1.567*	60,0 *2.362*	0,8 *1.760*	4000
03204093	BA080-RB610-60	BA080	86,0 *3.386*	116,0 *4.567*	44,5 *1.752*	22,5 *0.886*	39,8 *1.567*	80,0 *3.150*	1,1 *2.430*	3000

Insert holders have to be ordered separately, see page(s) 500
* Additional information about max RPM, see Instruction pages. Note, weight is without insert holder

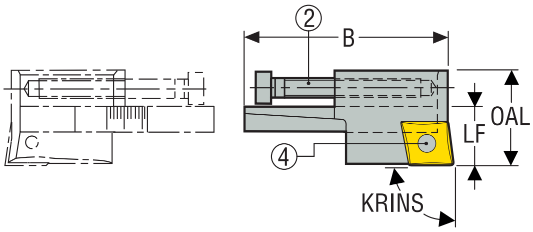
Spare parts

For head	Clamp key	Clamp screw	Key (T-handle)	Shim, staggered boring
				
BA060-RB610-50	03HL06	950D0820	DOUBLE-T	AU6105003
BA080-RB610-60	03HL06	950D0822	DOUBLE-T	AU6106003

Insert holders



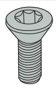
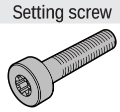
- Suitable for boring heads RB 610 with Graflex®, GL or BA connection



2. Setting screw
4. Insert screw

Item number	Designation	For boring head	Workpiece side Capacity DCN-DCX Ø		OAL	LF	B	Weight
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*
03307856	A61010CC0690	RB 61010	28,0 *1.102*	37,0 *1.457*	15,1 *0.594*	15,1 *0.594*	21,75 *0.856*	0,1 *0.220*
02971268	A61020CC0690	RB 61020	36,0 *1.417*	46,0 *1.811*	17,6 *0.693*	10,9 *0.429*	26,0 *1.024*	0,1 *0.220*
02904461	A61030CC0990	RB 61030	39,0 *1.535*	56,0 *2.205*	21,6 *0.850*	12,9 *0.508*	33,0 *1.299*	0,1 *0.220*
02904462	A61040CC0990	RB 61040	50,0 *1.969*	69,0 *2.717*	22,5 *0.886*	13,8 *0.543*	43,8 *1.724*	0,1 *0.220*
02904463	A61050CC1290	RB 61050	64,0 *2.520*	86,0 *3.386*	27,5 *1.083*	17,3 *0.681*	57,4 *2.260*	0,2 *0.440*
02904464	A61060CC1290	RB 61060	85,0 *3.346*	115,0 *4.528*	30,5 *1.201*	18,8 *0.740*	75,0 *2.953*	0,3 *0.660*

Spare parts

For insert holder	Insert screw	Setting screw
		
A61010CC0690	C02504-T07P	–
A61020CC0690	C02504-T07P	19A61020
A61030CC0990	C04008-T15P	19A61030
A61040CC0990	C04008-T15P	19A61040
A61050CC1290	C05012-T15P	19A61050
A61060CC1290	C05012-T15P	19A61060

For rough boring recommended inserts, see page(s) 570-575
Note: A key for insert screw clamping is part of RB 610 heads delivery contents.

RB 610 Rough boring heads – Instructions

Recommended tightening torques. Maximum feed per rev. when staggered

RB 610 boring heads size	30	40	50	60
Tightening torque of clamp screws for insert holders clamping (N.m)	2 x 25	4 x 25	4 x 40	4 x 40
f Max. feed rate when staggered boring mm/rev (in/rev)	0,4 *(0.016 ")*	0,5 *(0.020 ")*	0,6 *(0.024 ")*	0,6 *(0.024 ")*

Recommended machining conditions
Spindle power:

As rough boring requires high machine power, we recommend to check that the machine is suitable. Staggered boring is a solution to reduce the power needs, as the feed is divided by two for the same total depth of cut, compared to symmetrical setting. Optimum performance is obtained with through coolant (higher machining data, better surface finish, better chip evacuation, longer insert life).

For detailed user instructions, please refer to the operating instructions supplied as part of the delivery content of the boring heads and with the Steadyline® bars. These operating instructions can also be downloaded from www.secotools.com.

Maximum speeds for RB 610 rough boring heads

NOTE! The maximum speeds shown in boring heads Product pages are related to the boring head's mechanical design and balancing quality.

Speeds inside these limits have to be chosen in regard to the other machining conditions, e.g. workpiece material, cutting edge (insert), tooling length, machine spindle.

By boring applications with Steadyline® bars, make sure not to overpass the max. RPM of the bars : See the Operating instructions supplied with the Steadyline® turning and boring bars.

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Fine boring

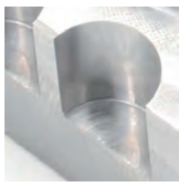
Covering a wide range of hole sizes and materials, Seco's fine boring product families allow for precision adjustments within microns, achieve surface finishes of Ra <1 (RMS 44 micro/inch) and deliver bores within IT6 tolerances. With a consistent focus on precision and rigidity, these products make it easy to maintain even the strictest of part specifications. Steadyline™ vibration damping solutions complete the range to deliver even greater levels of stability for the machining of deep cavities, where long tool overhangs are needed.

- FB 760 Axiabore type fine boring heads are designed for precision and surface finish on small diameters
- FB 620/780/790 radial fine boring heads are designed to deliver the best bore geometries on larger diameters (up to 205 mm)

Overview

OD-overturning

Grooving



Interrupted cut boring

Boring

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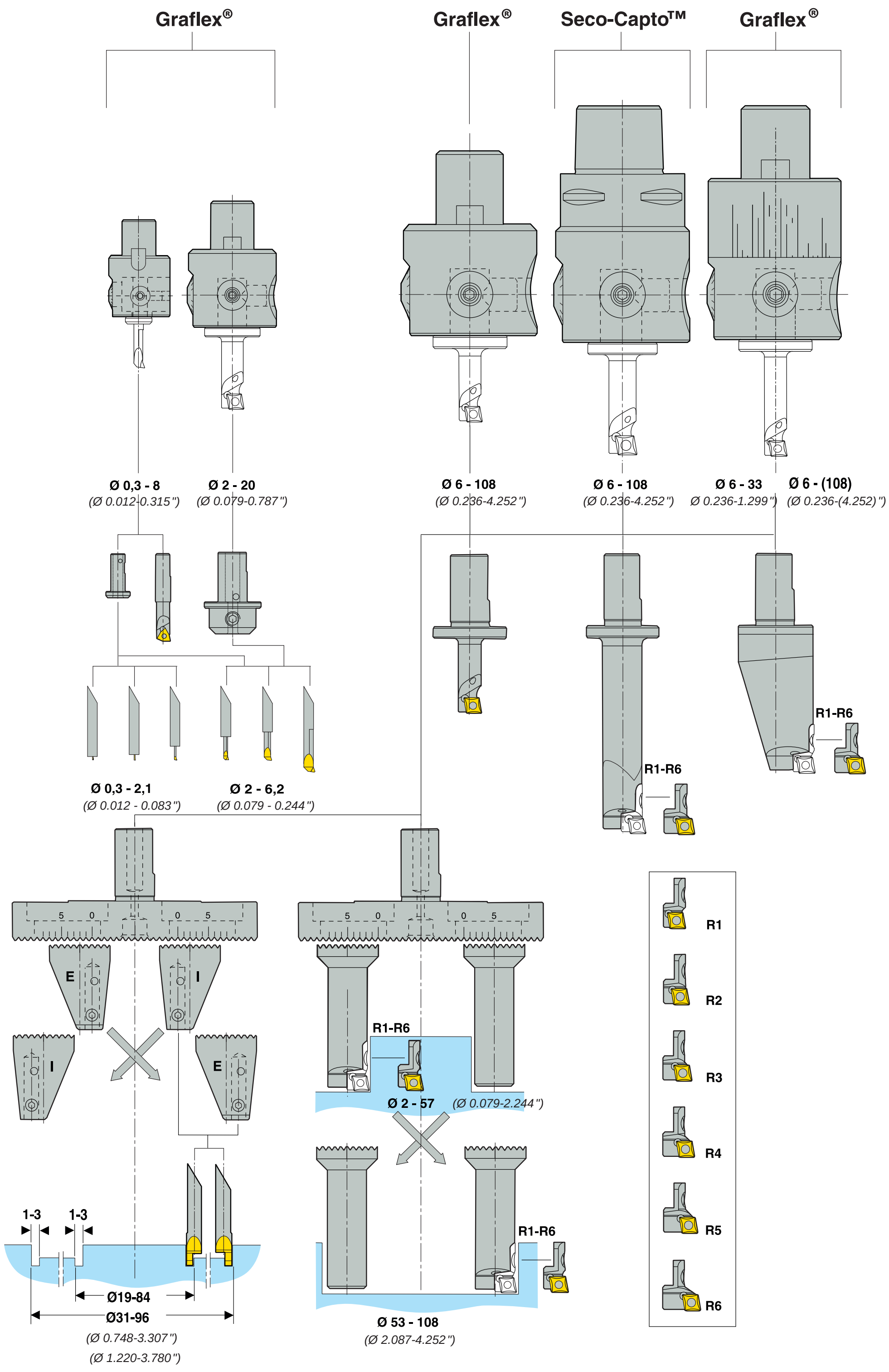
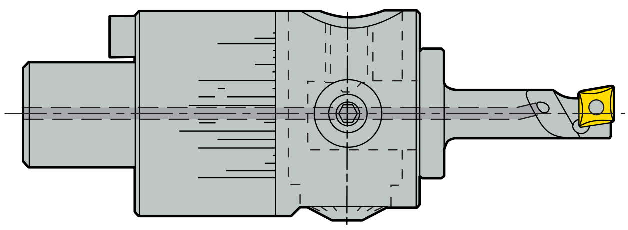


Axiabore™ type fine boring heads for bores Ø 0,3–108 mm *(Ø 0.012–4.252 ")*

An Axiabore™ type head is an assembly of a body (head) and a tool.

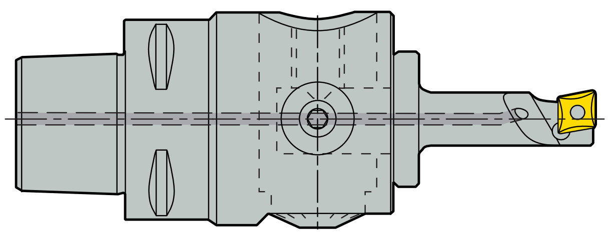
Axiabore™ type head selection	Capacity mm	Capacity inch	HSM/ Max speeds	Hole geometry	Cost effective	Multipurpose
Nanobore™ A760 01	Ø 0,3–8	*Ø 0.012–0.315 "*	30000 RPM	■ ■	■ ■	
Axiabore™ A760 02	Ø 2–20	*Ø 0.079–0.787 "*	12000 RPM	■	■ ■	
Axiabore™ Plus - A760 03	Ø 6–108	*Ø 0.236–4.252 "*	8000* RPM or 1000 m/min	■	■ ■ ■	■ ■ ■
Axiabore™ Plus C5-391.0760-03	Ø 6–108	*Ø 0.236–4.252 "*	8000* RPM	■	■ ■ ■	■ ■ ■
Axialibrabore™ Plus - A760 13	Ø 6–33	*Ø 0.236–1.299 "*	20000 RPM or 1500 m/min	■ ■	■	

Axiabore™ type heads exists with Graflex® or Seco-Capto™ connection: 5 Axiabore™ fine boring heads FB 760 with Graflex® connection for bores Ø 0,3–108 mm *(Ø 0.012–4.252 "):*



Nanobore™ A760 01
Axiabore™ A760 02
Axiabore™ Plus - A760 03
Axialibrabore™ Plus - A760 13

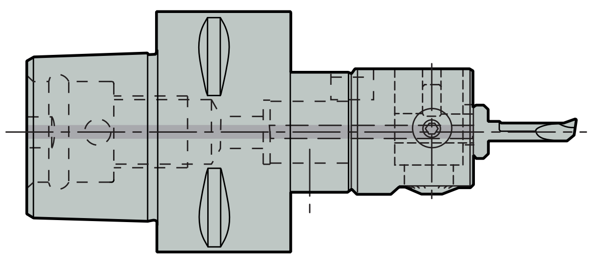
2 Axiabore™ fine boring heads FB 760 with Seco-Capto™ connection for bores Ø 2–108 mm *(Ø 0.079–4.252 "):*



Axiabore™ Plus- C5-391.0760-03

NOTE! The minimum bore size of the smallest Seco-Capto™ fine boring head is Ø 2 mm (*ø 0.079")* with the smallest available Seco-Capto™ C3 connection. For Ø 0,3 to 8 mm (*Ø 0.012 to 0.315")* use Nanobore™ head with connection size G2 in conjunction with the appropriate Seco-Capto™/Graflex® adapter.

Seco-Capto™ adapter and Graflex® head: Ø 0,3–8 mm *(Ø 0.012–0.315 ")*



Graflex® and Seco-CaptoTM adapters and modular extensions: please see the Tooling Systems catalogue.

NOTE! Features, Instructions (tool fitting procedure, diameter setting, MPA assembly procedure, maximum speeds, recommended cutting speeds, troubleshooting), **suitable tools and insert holders** are similar for both types of 760 fine boring heads of similar boring capacity size, regardless of connection type.

Boring tools

Note! In the Product pages, it is clearly mentioned which tools are suitable for which heads.

Boring tools, solid carbide shank Ø 4 mm (Ø 0.1574 *“)* for the smallest diameters Ø 0,3–6,2 mm *(Ø 0.012–0.244 “)*, lead angle 98°. Require reduction bushes to fit into Nanobore™ and Axia(libra) bore™ heads. The tools have an angled machine side for cutting edge orientation according to ISO.

Boring bars, insert type shanks Ø 6, 12 or 16 mm (*Ø 0.236, 0.472, 0.630 “)* for Ø 6–13 mm *(Ø 0.236–0.512 “)*, ‘steel’ type for short tools, ‘carbide’ type for long tools. For WB..0301.. or CC..0602.. inserts and 90° lead angle. Direct fitting into the heads. The locking flat achieves a cutting edge orientation according to ISO.

Boring bars, modular composed of a ‘shank’ and an ‘insert holder’ for Ø 13–63 mm *(Ø 0.512–2.480 “)*. Shanks Ø 12 or 16 mm (*Ø 0.472, 0.630 “)* in ‘steel’ for short, ‘carbide’ for long and ‘Lightweight / aluminium’ for the largest diameters. Direct fitting into the heads.

Six insert holders for CC..0602.. inserts and 90° lead angle, compatible with all shanks to build up a wide boring capacity on a common shank.

Multi-purpose adapter (MPA)

MPA for boring and OD-overturning, as well as face grooving on the - Axiabore™ Plus - head. The MPA and tools have a serrated interface, for precise orientation and positioning increments 2,5 mm on diameter (*0.098 “*). Directional through coolant nozzle included.

Select the components to build up an MPA type tool on the MPA tool selection charts. See assembly details in the Instructions chapter.

Set up a Boring or OD-overturning assembly.
Boring and OD-overturning assemblies use the same shank equipped with an insert holder, and a counterweight. Boring assembly: Select the appropriate insert holder to be assembled onto the boring/OD-overturning shank, using the selection chart ‘Boring with MPA’ (part of following Product pages).

OD–overturning assembly: Select the appropriate insert holder to be assembled onto the boring/OD-overturning shank, using the selection chart ‘OD-overturning with MPA’ (part of following Product pages). See assembly details in the Instructions chapter.

Building a grooving assembly
A grooving assembly requires:
- a pair of grooving tool holders (one E=‘External’ and one I=‘Internal’),
- one grooving tool ‘against Spigot’ or ‘against Bore’.When the groove is not against a spigot wall nor against a bore wall, both tool types are suitable. See the selection charts ‘Grooving tool for grooving with MPA’.

Features

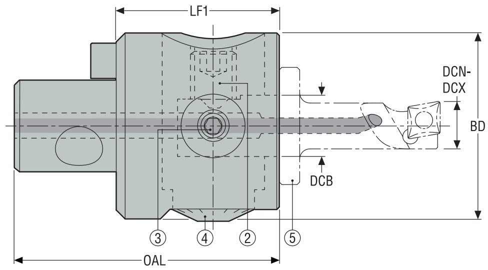
Nanobore™ head Part No. A76001	
	**Ultra small head for fine boring Ø 0,3–8 mm *(Ø 0.012–0.315 "):*** External diameter 25 mm (*0.984 "*), length 25 mm (*0.984 "*), with Graflex® connection size G2, tool fitting Ø 6 mm (*Ø 0.236 ")*. Operating speeds up to 30 000 RPM allows performance machining of very small diameters. **The reduction bush** 6–4 mm (*0.236–0.157 ")* with orientation flat and pin for fitting the solid boring tools is part of the head delivery content.
Axiabore™ head Part No. A76002	
	**Small heads for fine boring Ø 2–20 mm *(Ø 0.079–0.787 "):*** External diameter 36,5 mm *(1.401 ")*, length 32 mm *(1.260 ")*, with Graflex® connection size G3 and Seco-Capto™ connection size C3, tool fitting Ø 12 mm *(Ø 0.472 ")*. These heads sizes are optimised for difficult-to-access bores. **The reduction bush** 12-4 mm *(0.472–0.157 ")* with orientation flat and pin for fitting the solid boring tools is part of the head delivery content. **NOTE!** Smaller tools from Nanobore™ 0,3–2,1 mm *(0.012–0.083 ")* can also be fitted, but the machining speed will be limited to 12000 RPM: Nanobore® head should be preferred.

Features

Axiabore™ Plus - head Part No. A76003 and C5-391.0760-03	
  	**Multi-purpose heads for fine boring Ø 6–108 mm *(Ø 0.236–4.252 ")*, OD-overturning Ø 2–57 mm** (Ø 0.079–2.244 ") **and grooving Ø 19–96 mm *(Ø 0.748–3.780 "):*** External diameter 54 mm *(Ø 2.126 ")*, length 45 mm *(Ø 1.772 ")*, with Graflex® connection size 5 and Seco-Capto™ connection size 5, tool fitting Ø 16 mm *(Ø 0.630 ")*. **Suitable tools:** all tools with shank Ø 16 mm *(Ø 0.630 ")*, for direct fitting into the heads. This head has also been designed to be equipped with the MPA (multi-purpose adapter), to perform large diameter fine boring, OD–overturning and face grooving.
Axialibrabore™ Plus - head Part No. A76013	
	**Balanceable head for fine boring Ø 6–33 mm** (Ø 0.236–1.299 ")**:** Same features as the - Axiabore™ Plus - head, but with fine balancing body length 65 mm *(2.559 ")*. With Graflex® connection size G5. Fine balanceable heads allow higher speeds up to 20 000 RPM or 1500 m/min (whichever is reached first without exceeding either of them), improve the hole geometry and reduce the machine spindle stress. 'LibraOne' balancing is performed by setting the graduated balancing ring in line with the mark on the boring head (balancing code of the tool used, and the diameter to be bored). No chart needed. Fine balancing is only possible for the smallest boring tools Ø 6–33 mm *(Ø 0.236–1.299 ")*. **NOTE!** If using a larger 'Alu', or a 'MPA' tool from the - Axiabore™ Plus - onto the - Axialibrabore™ Plus - head, fine balancing is not possible and the balancing ring should be set in the head's pre-balancing position (depending on the operation to be performed, see Instructions chapter). The maximum speed becomes the same as for the - Axiabore™ Plus.

FB 760 – Axiabore™ type heads, not balanceable

Graflex®



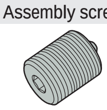
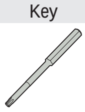
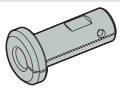
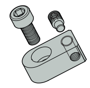
2. Assembly screw
3. Locking screw
4. Micrometric adjusting screw
5. Tool

- With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)
- Axiabore™ Plus – allows boring, as well as OD-overturning and face grooving

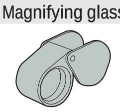
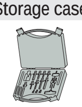
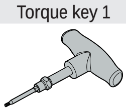
Item number	Designation	Machine side Graflex size	Workpiece side Capacity DCN-DCX Ø		***	OAL	LF1	BD	DCB	Weight	Max operating speed**		****
			mm *Inch*	mm *Inch*		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	Max. RPM**	Max. m/min**	
02462575	A76001	G2	0,3 *0.012*	8,0 *0.315*	–	41,0 *1.614*	25,0 *0.984*	25,0 *0.984*	6,0 *0.236*	0,1 *0.220*	30000	1500,0	–
02594930	A76002	G3	2,0 *0.079*	20,0 *0.787*	–	52,0 *2.047*	32,0 *1.260*	36,5 *1.437*	12,0 *0.472*	0,29 *0.640*	12000	1500,0	–
02594935	A76003	G5	6,0 *0.236*	108,0 *4.252*	***	75,0 *2.953*	45,0 *1.772*	54,0 *2.126*	16,0 *0.630*	0,82 *1.810*	8000	1000,0	****

Note, weight is without insert holder
For tools, see page(s) 512-514
*Without tool.
**Maximum speed, whichever is reached first without exceeding either of them.
***Capacities - Axiabore™ Plus - head for boring 6 to 108 mm, OD-overturning 2 to 57 mm, face grooving 19 to 96 mm.
****Max 5000 RPM when using MPA.

Spare parts

For head	Assembly screw	Key	Key (T-handle)	Locking screw	Reduction bush	Sealing Screws	Tenon
							
A76001	–	H4B-H2.0	DOUBLE-T	19M4001A	05A7600604	950A0406	90M21
A76002	AU7601212	03M03C	–	19A71030	05A7601204	–	90M3A
A76003	AU7601312	H6B-H4.0L	DOUBLE-T	19A71008125	–	–	90M5A

Accessories

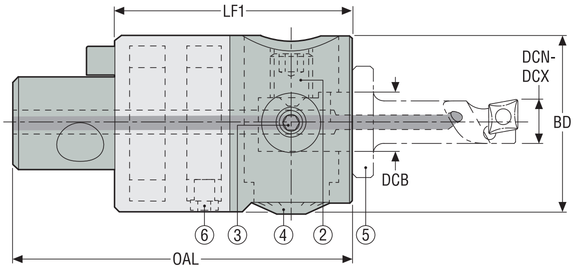
For head	Magnifying glass	Storage case	Torque key 1	Torque key 2
				
A76001	935L01	–	–	H00-2009
A76002	–	42M06	–	H00-3030
A76003	–	42M07	H00T-4060	–

Torque key 1 = for balancing ring locking screws
Torque key 2 = for locking and assembly screws

Accessories, to be ordered separately

FB 760 – Axiabore™ type heads, balanceable

Graflex®



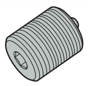
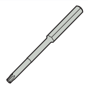
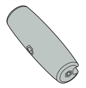
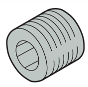
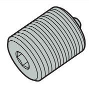
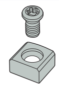
- LibraOne built-in balancing system based on a single balancing setting ring
- With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)

2. Assembly screw
3. Locking screw 1
4. Micrometric adjusting screw
5. Tool
6. Locking screw 2

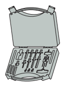
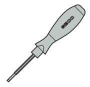
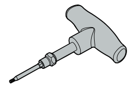
Item number	Designation	Machine side Graflex size	Workpiece side Capacity DCN-DCX Ø		***	OAL	LF1	BD	DCB	Weight	Max operating speed**		****
			mm *Inch*	mm *Inch*		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	Max. RPM**	Max. m/min**	
02594943	A76013	G5	6,0 *0.236*	33,0 *1.299*	***	95,0 *3.740*	65,0 *2.559*	54,0 *2.126*	16,0 *0.630*	1,16 *2.560*	20000	1500,0	–

Note, weight is without insert holder
For tools, see page(s) 512-514
*Without tool.
**Maximum speed, whichever is reached first without exceeding either of them.
***Capacities – Axialibrabore™ Plus - head, with balancing.

Spare parts

For head	Assembly screw	Key	Key (T-handle)	Locking screw 1	Locking screw 2	Tenon
						
A76013	AU7601312	H6B-H4.0L	DOUBLE-T	19A71008125	AU7601318	90M5A1

Accessories

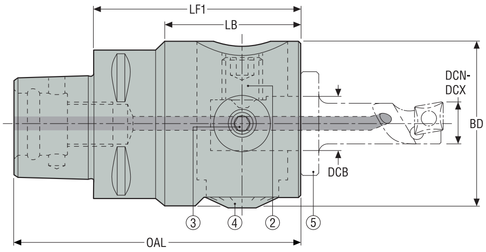
For head	Storage case	Torque key 1	Torque key 2
			
A76013	42M07	H00-4020-60	H00T-4060

Torque key 1 = for balancing ring locking screws
Torque key 2 = for locking and assembly screws

Accessories, to be ordered separately

FB 760 – Axiabore™ type heads

Seco-Capto™



2. Assembly screw
3. Clamp
4. Micrometric adjusting screw
5. Tool

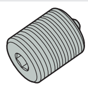
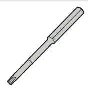
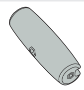
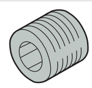
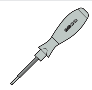
- With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)
- Axiabore™ Plus – allows boring, as well as OD-overturning and face grooving

Item number	Designation	Machine side Capto size	Workpiece side Capacity DCN-DCX Ø		***	OAL	LF1	LB	BD	DCB	Weight	Max operating speed**		****
			mm *Inch*	mm *Inch*		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	Max. RPM**	Max. m/min**	
02822777	C5-391.0760-03	C5	6,0 *0.236*	108,0 *4.252*	***	95,0 *3.740*	65,0 *2.559*	44,0 *1.732*	54,0 *2.126*	16,0 *0.630*	1,12 *2.470*	8000	1500,0	–

Note, weight is without insert holder
For tools, see page(s) 512-514
*Without tool.
**Capacities - Axiabore™ Plus - head for boring 6 to 108 mm, OD-overturning 2 to 57 mm, face grooving 19 to 96 mm.
***Max 5000 RPM when using MPA.

Spare parts

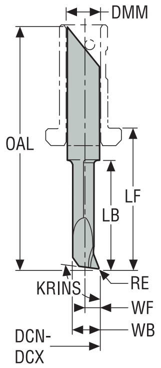
Accessories

For head	Assembly screw	Key	Key (T-handle)	Locking screw	Torque key 2
					
C5-...-03	AU7601312	H6B-H4.0L	DOUBLE-T	19A71008125	H00-3030

Torque key 2 = for locking and assembly screws
Accessories, to be ordered separately

Boring tools, solid carbide

for FB 760 heads



- KRINS 98°
- Cutting edge orientation ISO
- Coolant along the tool

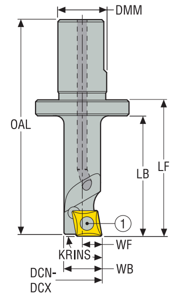
Item number	Designation	Tool material*	For head	** Capacity DCN-DCX ∅		OAL	LB	LF	DMM	WB	WF	RE	Recom-mended cutting data** a_p	Recom-mended cutting data** f	Weight	Balancing code
				mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	
02462579	A761402	Solid carbide	FB 76001	0,3 *0.012*	0,6 *0.024*	30,7 *1.209*	1,2 *0.047*	15,5 *0.610*	4,0 *0.157*	0,25 *0.010*	0,1 *0.004*	0,0 –	0,02 *0.001*	0,01 –	0,01 *0.020*	–
02462581	A761412	Solid carbide	FB 76001	0,5 *0.020*	1,1 *0.043*	30,7 *1.209*	2,0 *0.079*	15,5 *0.610*	4,0 *0.157*	0,45 *0.018*	0,2 *0.008*	0,0 –	0,02 *0.001*	0,01 –	0,01 *0.020*	–
02462583	A761422	Solid carbide	FB 76001	1,0 *0.039*	2,1 *0.083*	30,7 *1.209*	5,0 *0.197*	15,5 *0.610*	4,0 *0.157*	0,95 *0.037*	0,45 *0.018*	0,1 *0.004*	0,03 *0.001*	0,02 *0.001*	0,01 *0.020*	–
02462584	A761432	Solid carbide	FB 76001/02	2,0 *0.079*	3,2 *0.126*	30,7 *1.209*	8,0 *0.315*	15,5 *0.610*	4,0 *0.157*	1,8 *0.071*	0,88 *0.035*	0,1 *0.004*	0,05 *0.002*	0,02 *0.001*	0,01 *0.020*	E13
02462586	A761442	Solid carbide	FB 76001/02	3,0 *0.118*	4,7 *0.185*	30,7 *1.209*	10,0 *0.394*	15,5 *0.610*	4,0 *0.157*	2,75 *0.108*	1,35 *0.053*	0,15 *0.006*	0,06 *0.002*	0,03 *0.001*	0,01 *0.020*	E14
02462587	A761452	Solid carbide	FB 76001/02	4,5 *0.177*	6,2 *0.244*	35,7 *1.406*	15,0 *0.591*	20,5 *0.807*	4,0 *0.157*	3,95 *0.156*	1,95 *0.077*	0,15 *0.006*	0,08 *0.003*	0,03 *0.001*	0,01 *0.020*	E15

*These tools with shank dia 4 mm require the use of a reduction bush, delivered with the suitable heads and kits.
**For cutting speeds, see page(s) 572-573.
***+0,1 mm complementary capacity achievable.

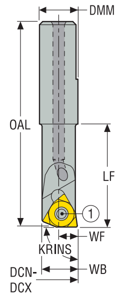
Boring bars, insert type

for FB 760 heads

B



A

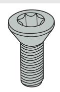


1 = Insert screw

- Cutting edge orientation ISO
- Through coolant
- Only two insert sizes for all tools
- Tool material * = Steel, indexable insert type
- Tool material ** = Carbide, indexable insert type
- KRINS 90°

Item number	Designation	Tool mate-rial	For head	** Capacity DCN-DCX ∅		OAL	LB	LF	DMM	WB	WF	Weight	Design	Suitable insert size	Balancing code
				mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*			
02462590	A762001	*	FB 76001	6,0 *0.236*	8,0 *0.315*	31,7 *1.248*	0,0 *–*	16,0 *0.630*	6,0 *0.236*	5,5 *0.217*	2,9 *0.114*	0,01 *0.020*	A	WB..0301..	–
02594947	A762002	*	FB 76002	6,0 *0.236*	8,0 *0.315*	39,7 *1.563*	16,0 *0.630*	20,0 *0.787*	12,0 *0.472*	5,5 *0.217*	2,9 *0.114*	0,03 *0.070*	B	WB..0301..	S21
02594967	A762003	*	FB 76003/13	6,0 *0.236*	8,0 *0.315*	50,2 *1.976*	16,0 *0.630*	21,0 *0.827*	16,0 *0.630*	5,5 *0.217*	2,9 *0.114*	0,07 *0.150*	B	WB..0301..	S31
02594948	A763002	*	FB 76002	8,0 *0.315*	10,0 *0.394*	45,7 *1.799*	22,0 *0.866*	26,0 *1.024*	12,0 *0.472*	7,4 *0.291*	3,9 *0.154*	0,04 *0.090*	B	WB..0301..	S22
02594968	A763003	*	FB 76003/13	8,0 *0.315*	10,0 *0.394*	56,2 *2.213*	22,0 *0.866*	27,0 *1.063*	16,0 *0.630*	7,4 *0.291*	3,9 *0.154*	0,08 *0.180*	B	WB..0301..	S32
02594957	A765002	*	FB 76002	10,0 *0.394*	13,0 *0.512*	53,5 *2.106*	30,0 *1.181*	34,0 *1.339*	12,0 *0.472*	9,35 *0.368*	4,8 *0.189*	0,04 *0.090*	B	CC..0602..	S23
02594969	A765003	*	FB 76003/13	10,0 *0.394*	13,0 *0.512*	64,0 *2.520*	30,0 *1.181*	35,0 *1.378*	16,0 *0.630*	9,35 *0.368*	4,8 *0.189*	0,08 *0.180*	B	CC..0602..	S33
02462591	A762201	**	FB 76001	6,0 *0.236*	8,0 *0.315*	41,7 *1.642*	0,0 *–*	26,0 *1.024*	6,0 *0.236*	5,5 *0.217*	2,9 *0.114*	0,02 *0.040*	A	WB..0301..	–
02594958	A762202	**	FB 76002	6,0 *0.236*	8,0 *0.315*	50,7 *1.996*	27,0 *1.063*	31,0 *1.220*	12,0 *0.472*	5,5 *0.217*	2,9 *0.114*	0,06 *0.130*	B	WB..0301..	E21
02594970	A762203	**	FB 76003/13	6,0 *0.236*	8,0 *0.315*	61,2 *2.409*	27,0 *1.063*	32,0 *1.260*	16,0 *0.630*	5,5 *0.217*	2,9 *0.114*	0,13 *0.290*	B	WB..0301..	E31
02594961	A763202	**	FB 76002	8,0 *0.315*	10,0 *0.394*	60,7 *2.390*	37,0 *1.457*	41,0 *1.614*	12,0 *0.472*	7,4 *0.291*	3,9 *0.154*	0,07 *0.150*	B	WB..0301..	E22
02594971	A763203	**	FB 76003/13	8,0 *0.315*	10,0 *0.394*	71,2 *2.803*	37,0 *1.457*	42,0 *1.654*	16,0 *0.630*	7,4 *0.291*	3,9 *0.154*	0,14 *0.310*	B	WB..0301..	E32
02594962	A765202	**	FB 76002	10,0 *0.394*	13,0 *0.512*	78,5 *3.091*	55,0 *2.165*	59,0 *2.323*	12,0 *0.472*	9,35 *0.368*	4,8 *0.189*	0,09 *0.200*	B	CC..0602..	E23
02594972	A765203	**	FB 76003/13	10,0 *0.394*	13,0 *0.512*	89,0 *3.504*	55,0 *2.165*	60,0 *2.362*	16,0 *0.630*	9,35 *0.368*	4,8 *0.189*	0,17 *0.370*	B	CC..0602..	E33

Spare parts

For insert size	Insert screw
	
WB...0301..	C02035-T06P
CC...0602..	C02504-T07P

**+0,2 mm complementary capacity achievable.

Accessories

Insert key	Key (T-handle)
	
H4B-T06P	DOUBLE-T
H4B-T07P	DOUBLE-T

Accessories, to be ordered separately

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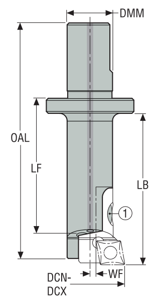
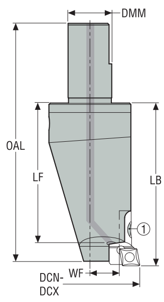
Boring shanks, for modular fine boring bars

for FB 760 heads

A



B

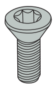


- Several capacities achievable by interchangeable insert holders
- Shank types 'steel' for short bars, 'carbide' for long bars, 'aluminium' for large bars
- Through coolant

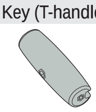
1 = Locking screw

Item number	Designation	Modular boring shank type	For head	***	** Capacity DCN-DCX ∅		OAL	LB	LF	DMM	WF	Weight	Design
					mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	
02594963	A760S20	Steel	FB 76002		13,0 *0.512*	20,0 *0.787*	62,5 *2.461*	40,0 *1.575*	34,0 *1.339*	12,0 *0.472*	1,4 *0.055*	0,06 *0.130*	A
02594973	A760S30	Steel	FB 76003/13		13,0 *0.512*	18,0 *0.709*	73,0 *2.874*	40,0 *1.575*	35,0 *1.378*	16,0 *0.630*	1,4 *0.055*	0,1 *0.220*	A
02594974	A760S31	Steel	FB 76003/13		18,0 *0.709*	33,0 *1.299*	83,0 *3.268*	50,0 *1.969*	45,0 *1.772*	16,0 *0.630*	3,9 *0.154*	0,13 *0.290*	A
02594964	A760E20	Carbide	FB 76002		13,0 *0.512*	20,0 *0.787*	82,5 *3.248*	60,0 *2.362*	54,0 *2.126*	12,0 *0.472*	1,4 *0.055*	0,2 *0.440*	A
02594965	A760E30	Carbide	FB 76003/13		13,0 *0.512*	18,0 *0.709*	103,0 *4.055*	70,0 *2.756*	65,0 *2.559*	16,0 *0.630*	1,4 *0.055*	0,21 *0.460*	A
02594966	A760E31	Carbide	FB 76003/13		18,0 *0.709*	33,0 *1.299*	113,0 *4.449*	80,0 *3.150*	75,0 *2.953*	16,0 *0.630*	3,9 *0.154*	0,3 *0.660*	A
02594977	A760A32	Aluminium	FB 76003/13	***	33,0 *1.299*	48,0 *1.890*	88,0 *3.465*	60,0 *2.362*	50,0 *1.969*	16,0 *0.630*	11,5 *0.453*	0,14 *0.310*	B
02594978	A760A33	Aluminium	FB 76003/13	***	48,0 *1.890*	63,0 *2.480*	108,0 *4.252*	80,0 *3.150*	70,0 *2.756*	16,0 *0.630*	19,0 *0.748*	0,34 *0.750*	B

Spare parts

For head	Locking screw
	
A76002/12	C04008-T15P
A76003/13	C04008-T15P
A76003	C04008-T15P

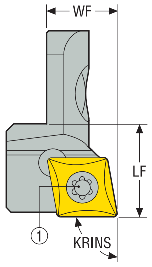
Accessories

Key (T-handle)

DOUBLE-T
DOUBLE-T
DOUBLE-T

**+0,2 mm complementary capacity achievable.
*** When used on A760 13, no fine balancing possible.
Select the required shank and insert holder(s) combination(s) using the selection chart on page(s) 516-517.
Weight without insert holder.
Accessories, to be ordered separately

Insert holders, for modular fine boring bars

for FB 760 heads

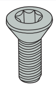


1 = Insert screw

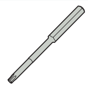
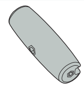
- Single fitting size suitable for all boring (and OD-overturning) shanks
- One insert size for all insert holders

Item number	Designation	LF	WF*	Weight	Suitable insert size	KRINS°
		mm *Inch*	mm *Inch*	kg *lbs*		
02594979	A765R1	10,0 *0.394*	4,95 *0.195*	0,01 *0.020*	CC..0602..	90,0
02594983	A765R2	10,0 *0.394*	6,2 *0.244*	0,01 *0.020*	CC..0602..	90,0
02594984	A765R3	10,0 *0.394*	7,45 *0.293*	0,01 *0.020*	CC..0602..	90,0
02594987	A765R4	10,0 *0.394*	8,7 *0.343*	0,01 *0.020*	CC..0602..	90,0
02594989	A765R5	10,0 *0.394*	9,97 *0.393*	0,01 *0.020*	CC..0602..	90,0
02594990	A765R6	10,0 *0.394*	11,2 *0.441*	0,01 *0.020*	CC..0602..	90,0

Spare parts

For insert size	Insert screw
	
CC...0602...	C02504-T07P

Accessories

Insert key	Key (T-handle)
	
H4B-T07P	DOUBLE-T

Accessories, to be ordered separately

*WF when fitted with insert type CC..060204.
Select the required shank and insert holder(s) combination(s) using the selection chart on page(s) 516-517.

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Selection chart: Boring tools and insert holders suitable for FB 760 heads

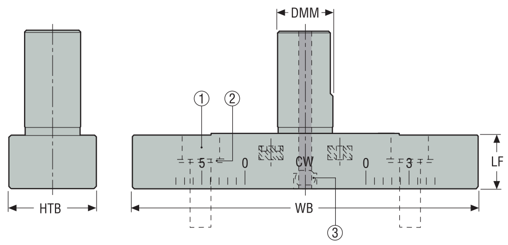
For head	Boring capacity DCN-DCX Ø mm	Boring length LB mm	Designation		DMM (mm)	Suitable insert size	Tool type
			Boring tool	Insert holder			
A760 01	0,3-0,6	1,2	A761402	–	4	–	Solid carbide
	0,5-1,1	2	A761412	–	4	–	Solid carbide
	1-2,1	5	A761422	–	4	–	Solid carbide
	2-3,2	8	A761432	–	4	–	Solid carbide
	3-4,7	10	A761442	–	4	–	Solid carbide
	4,5-6,2	15	A761452	–	4	–	Solid carbide
	6-8	16	A762001	–	6	WB..0301..	Steel, inserts type
	6-8	26	A762201	–	6	WB..0301..	Carbide, inserts type
A760 02	2-3,2	8	A761432	–	4	–	Solid carbide
	3-4,7	10	A761442	–	4	–	Solid carbide
	4,5-6,2	15	A761452	–	4	–	Solid carbide
	6-8	16	A762002	–	12	WB..0301..	Steel, inserts type
	6-8	27	A762202	–	12	WB..0301..	Carbide, inserts type
	8-10	22	A763002	–	12	WB..0301..	Steel, inserts type
	8-10	37	A763202	–	12	WB..0301..	Carbide, inserts type
	10-13	30	A765002	–	12	CC..0602..	Steel, inserts type
	10-13	55	A765202	–	12	CC..0602..	Carbide, inserts type
	13-15,5	40	A760S20	A765R1	12	CC..0602..	Steel shank with insert holder
	13-15,5	60	A760E20	A765R1	12	CC..0602..	Carbide shank with insert holder
	15,5-18	40	A760S20	A765R2	12	CC..0602..	Steel shank with insert holder
	15,5-18	60	A760E20	A765R2	12	CC..0602..	Carbide shank with insert holder
	18-20	40	A760S20	A765R3	12	CC..0602..	Steel shank with insert holder
	18-20	60	A760E20	A765R3	12	CC..0602..	Carbide shank with insert holder

For head	Boring capacity DCN-DCX Ø mm	Boring length LB mm	Designation		DMM (mm)	Suitable insert size	Tool type
			Boring tool	Insert holder			
A760 03/ A760 13	6-8	16	A762003	–	16	WB..0301..	Steel, inserts type
	6-8	32	A762203	–	16	WB..0301..	Carbide, inserts type
	8-10	22	A763003	–	16	WB..0301..	Steel, inserts type
	8-10	37	A763203	–	16	WB..0301..	Carbide, inserts type
	10-13	30	A765003	–	16	CC..0602..	Steel, inserts type
	10-13	55	A765203	–	16	CC..0602..	Carbide, inserts type
	13-15,5	40	A760S30	A765R1	16	CC..0602..	Steel shank with insert holder
	13-15,5	70	A760E30	A765R1	16	CC..0602..	Carbide shank with insert holder
	15,5-18	40	A760S30	A765R2	16	CC..0602..	Steel shank with insert holder
	15,5-18	70	A760E30	A765R2	16	CC..0602..	Carbide shank with insert holder
	18-20,5	50	A760S31	A765R1	16	CC..0602..	Steel shank with insert holder
	18-20,5	80	A760E31	A765R1	16	CC..0602..	Carbide shank with insert holder
	20,5-23	50	A760S31	A765R2	16	CC..0602..	Steel shank with insert holder
	20,5-23	80	A760E31	A765R2	16	CC..0602..	Carbide shank with insert holder
	23-25,5	50	A760S31	A765R3	16	CC..0602..	Steel shank with insert holder
	23-25,5	80	A760E31	A765R3	16	CC..0602..	Carbide shank with insert holder
	25,5-28	50	A760S31	A765R4	16	CC..0602..	Steel shank with insert holder
	25,5-28	80	A760E31	A765R4	16	CC..0602..	Carbide shank with insert holder
	28-30,5	50	A760S31	A765R5	16	CC..0602..	Steel shank with insert holder
	28-30,5	80	A760E31	A765R5	16	CC..0602..	Carbide shank with insert holder
	30,5-33	50	A760S31	A765R6	16	CC..0602..	Steel shank with insert holder
	30,5-33	80	A760E31	A765R6	16	CC..0602..	Carbide shank with insert holder
	33-35,5*	60	A760A32	A765R1	16	CC..0602..	Aluminium shank with insert holder
	35,5-38*	60	A760A32	A765R2	16	CC..0602..	Aluminium shank with insert holder
	38-40,5*	60	A760A32	A765R3	16	CC..0602..	Aluminium shank with insert holder
	40,5-43*	60	A760A32	A765R4	16	CC..0602..	Aluminium shank with insert holder
	43-45,5*	60	A760A32	A765R5	16	CC..0602..	Aluminium shank with insert holder
	45,5-48*	60	A760A32	A765R6	16	CC..0602..	Aluminium shank with insert holder
	48-50,5*	80	A760A33	A765R1	16	CC..0602..	Aluminium shank with insert holder
	50,5-53*	80	A760A33	A765R2	16	CC..0602..	Aluminium shank with insert holder
	53-55,5*	80	A760A33	A765R3	16	CC..0602..	Aluminium shank with insert holder
	55,5-58*	80	A760A33	A765R4	16	CC..0602..	Aluminium shank with insert holder
	58-60,5*	80	A760A33	A765R5	16	CC..0602..	Aluminium shank with insert holder
	60,5-63*	80	A760A33	A765R6	16	CC..0602..	Aluminium shank with insert holder

For larger diameters, see Multi-purpose adapter (MPA) section.
* When used on A760 13, no fine balancing possible.

Multi-purpose adapter (MPA)

for FB 760 heads

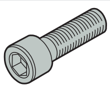
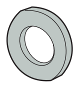


- Suitable for - Axiabore™ Plus - A760 03 head only*
- Designed to hold a shank and a counterweight (for boring or OD-overturning) or two grooving tool holders (for face grooving)
- Through coolant with an adjustable nozzle (3)

1. Assembly screw
2. Washer
3. Adjustable nozzle

Item number	Designation	Capacity DCN-DCX ∅ For boring		For OD-overturning		For grooving		HTB	LF	DMM	WB	Weight
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*
02595014	BDA16BS25100	53,0 *2.087*	108,0 *4.252*	2,0 *0.079*	57,0 *2.244*	31,0 *1.220*	96,0 *3.780*	25,0 *0.984*	16,0 *0.630*	16,0 *0.630*	100,0 *3.937*	0,28 *0.620*

Spare parts

For	Assembly screw	Washer
		
BDA16BS25100	950D0618	940ZC06

*When used on an - Axialibrabore™ Plus - A760 13 head, no fine balancing possible, see page(s) 508.
Select the required components to realise boring, OD-overturning or grooving assemblies, using following page(s) 522-530.

Accessories

Clamp key

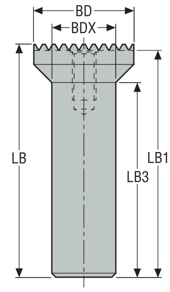
03HL05

Accessories, to be ordered separately

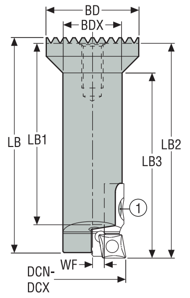
Shank & counterweight, for boring or OD-overturning on a MPA

for FB 760 heads

B



A

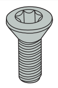


1. Assembly screw

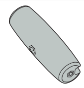
- For fitting on to the MPA
- Shank can be used for boring or OD-overturning
- Takes the same insert holders as the modular boring shanks

Item number	Designation	Type	** Capacity DCN-DCX ∅				LB	LB1	LB2	LB3	WF	BDX	BD	Weight	Design
			For boring		For OD-overturning										
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	
02595019	BAS25MH1660	Shank*	53,0 *2.087*	108,0 *4.252*	2,0 *0.079*	57,0 *2.244*	58,5 *2.303*	48,5 *1.909*	58,5 *2.303*	50,0 *1.969*	4,0 *0.157*	16,0 *0.630*	25,0 *0.984*	0,1 *0.220*	A
02595016	BAS25CW1660	Counter-weight	53,0 *2.087*	108,0 *4.252*	2,0 *0.079*	57,0 *2.244*	58,0 *2.283*	56,6 *2.228*	–	48,5 *1.909*	–	16,0 *0.630*	25,0 *0.984*	0,11 *0.240*	B

Spare parts

For	Assembly screw
	
BAS25MH1660	C04008-T15P
BAS25CW1660	–

Accessories

Key (T-handle)

DOUBLE-T
–

*Insert holders to be ordered separately, see page(s) 515
**Capacities in boring and OD-overturning are related to the selected insert holder and the setting position of the shanks using the 'Insert holders for boring or OD-overturning selection chart' on page(s) 522-530
Accessories, to be ordered separately

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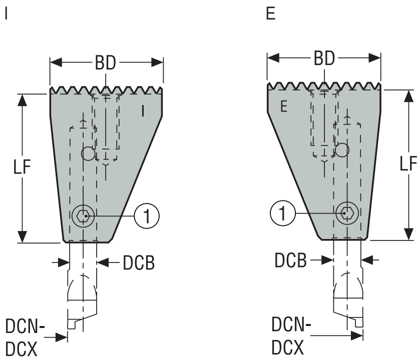
Grooving tool holders, for face grooving on a MPA

for FB 760 heads

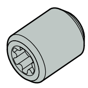


1. Locking screw

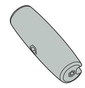
- For fitting on to the MPA
- A grooving tool holder is used either to hold a grooving tool, or to act as a counterweight

Item number	Designation	Type	* Capacity DCN-DCX ∅		DCB	LF	BD	Weight	Design
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	
02595021	BAS25FGI35	Grooving tool holder I (internal)*	19,0 *0.748*	76,0 *2.992*	6,0 *0.236*	34,0 *1.339*	25,0 *0.984*	0,1 *0.220*	I (Internal)
02595020	BAS25FGE35	Grooving tool holder E (external)*	39,0 *1.535*	96,0 *3.780*	6,0 *0.236*	34,0 *1.339*	25,0 *0.984*	0,1 *0.220*	E (External)

Spare parts

For	Locking screw
	
BAS25FGI35	950L0607T15P
BAS25FGE35	950L0607T15P

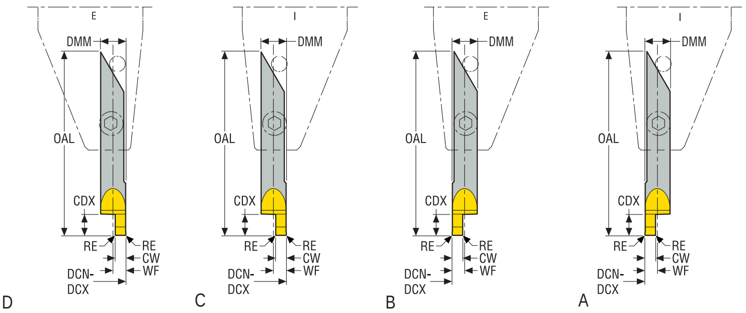
Accessories

Key (T-handle)

DOUBLE-T
DOUBLE-T

*Grooving tools to be ordered separately, see page(s) 521
* Capacity in grooving is related to the selected grooving tool, the setting position and orientation of the grooving tool holder, using the ' Grooving tool against spigot (or against bore) selection charts' see page(s) 522-530.
Accessories, to be ordered separately

Grooving tools

for FB 760 heads

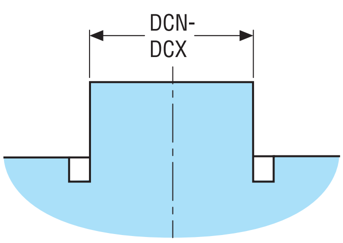
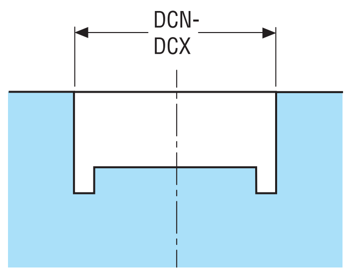


- Can be used for either 'external' or 'internal' grooving tool holders, depending on capacity

			* Capacity DCN-DCX ∅															
Item number	Designation	Type	Design A		Design B		Design C		Design D		OAL	CW	RE	DMM	WF	Groove max. **	Weight
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*
02595028	AFG0629101582	Against spigot	19,0 *0.748*	64,0 *2.520*	39,0 *1.535*	84,0 *3.307*	–	–	–	–	42,0 *1.654*	1,0 *0.039*	0,15 *0.006*	6,0 *0.236*	2,95 *0.116*	2,0 *0.079*	0,07 *0.150*
02595029	AFG0629151582	Against spigot	19,0 *0.748*	64,0 *2.520*	39,0 *1.535*	84,0 *3.307*	–	–	–	–	42,0 *1.654*	1,5 *0.059*	0,15 *0.006*	6,0 *0.236*	2,95 *0.116*	3,0 *0.118*	0,07 *0.150*
02595031	AFG0629201582	Against spigot	19,0 *0.748*	64,0 *2.520*	39,0 *1.535*	84,0 *3.307*	–	–	–	–	42,0 *1.654*	2,0 *0.079*	0,15 *0.006*	6,0 *0.236*	2,95 *0.116*	5,0 *0.197*	0,07 *0.150*
02595032	AFG0629251582	Against spigot	19,0 *0.748*	64,0 *2.520*	39,0 *1.535*	84,0 *3.307*	–	–	–	–	42,0 *1.654*	2,5 *0.098*	0,15 *0.006*	6,0 *0.236*	2,95 *0.116*	5,0 *0.197*	0,07 *0.150*
02595033	AFG0629301582	Against spigot	19,0 *0.748*	64,0 *2.520*	39,0 *1.535*	84,0 *3.307*	–	–	–	–	42,0 *1.654*	3,0 *0.118*	0,15 *0.006*	6,0 *0.236*	2,95 *0.116*	6,0 *0.236*	0,07 *0.150*
02595022	AFG0629101581	Against bore	–	–	–	–	31,0 *1.220*	76,0 *2.992*	51,0 *2.008*	96,0 *3.780*	42,0 *1.654*	1,0 *0.039*	0,15 *0.006*	6,0 *0.236*	2,95 *0.116*	2,0 *0.079*	0,02 *0.040*
02595023	AFG0629151581	Against bore	–	–	–	–	31,0 *1.220*	76,0 *2.992*	51,0 *2.008*	96,0 *3.780*	42,0 *1.654*	1,5 *0.059*	0,15 *0.006*	6,0 *0.236*	2,95 *0.116*	3,0 *0.118*	0,07 *0.150*
02595024	AFG0629201581	Against bore	–	–	–	–	31,0 *1.220*	76,0 *2.992*	51,0 *2.008*	96,0 *3.780*	42,0 *1.654*	2,0 *0.079*	0,15 *0.006*	6,0 *0.236*	2,95 *0.116*	4,0 *0.157*	0,07 *0.150*
02595026	AFG0629251581	Against bore	–	–	–	–	31,0 *1.220*	76,0 *2.992*	51,0 *2.008*	96,0 *3.780*	42,0 *1.654*	2,5 *0.098*	0,15 *0.006*	6,0 *0.236*	2,95 *0.116*	5,0 *0.197*	0,07 *0.150*
02595027	AFG0629301581	Against bore	–	–	–	–	31,0 *1.220*	76,0 *2.992*	51,0 *2.008*	96,0 *3.780*	42,0 *1.654*	3,0 *0.118*	0,15 *0.006*	6,0 *0.236*	2,95 *0.116*	6,0 *0.236*	0,07 *0.150*

* Capacity in grooving is related to the selected grooving tool, the setting position and orientation of the grooving tool holder, using the ' Grooving tool against spigot (or against bore) selection charts' see page(s) 522-530.
** Groove max. depth CDX

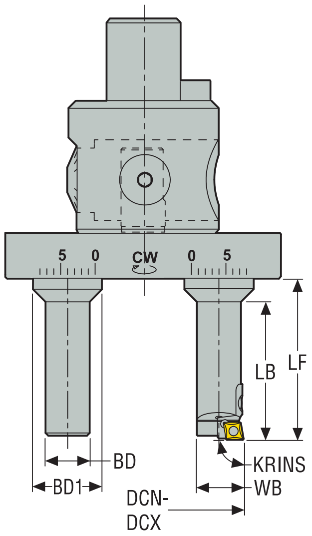
Spare parts

Grooving tool -against spigot-	Grooving tool -against bore-
 	

Selection chart: Boring tools and insert holders suitable for FB 760 heads

Select a suitable insert holder, and note the shank position on the MPA to obtain the required bore capacity.

Note: A OD-overturning assembly requires:
- an - Axiabore™ Plus - head (A760 03)
- a MPA (BDA16BS25100)
- a shank (BAS25MH1660)
- a counterweight (BAS25CW1660).
- an insert holder (A765R.) to be selected in the chart
- an insert



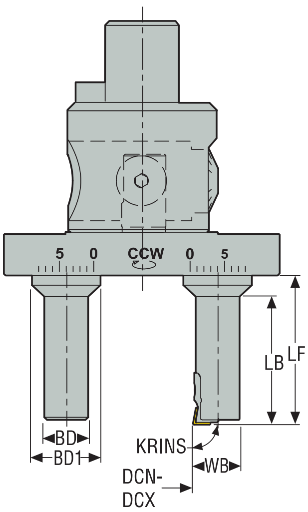
Boring capacity DCN-DCX Ø mm	Insert holder Designation	Shank position	Dimensions in mm BD	BD1	LF	LB	WB	Lead angle KRINS°	Suitable insert size
53-55,5	A765 R1	0	16	25	58,5	50	17	90°	CC..0602..
55,5-58	A765 R2	0	16	25	58,5	50	18,2	90°	CC..0602..
58-60,5	A765 R1	1	16	25	58,5	50	17	90°	CC..0602..
	A765 R3	0	16	25	58,5	50	19,5	90°	CC..0602..
60,5-63	A765 R2	1	16	25	58,5	50	18,2	90°	CC..0602..
	A765 R4	0	16	25	58,5	50	20,7	90°	CC..0602..
63-65,5	A765 R1	2	16	25	58,5	50	17	90°	CC..0602..
	A765 R3	1	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R5	0	16	25	58,5	50	22	90°	CC..0602..
65,5-68	A765 R2	2	16	25	58,5	50	18,2	90°	CC..0602..
	A765 R4	1	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R6	0	16	25	58,5	50	23,3	90°	CC..0602..
68-70,5	A765 R1	3	16	25	58,5	50	17	90°	CC..0602..
	A765 R3	2	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R5	1	16	25	58,5	50	22	90°	CC..0602..
70,5-73	A765 R2	3	16	25	58,5	50	18,2	90°	CC..0602..
	A765 R4	2	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R6	1	16	25	58,5	50	23,2	90°	CC..0602..
73-75,5	A765 R1	4	16	25	58,5	50	17	90°	CC..0602..
	A765 R3	3	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R5	2	16	25	58,5	50	22	90°	CC..0602..
75,5-78	A765 R2	4	16	25	58,5	50	18,2	90°	CC..0602..
	A765 R4	3	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R6	2	16	25	58,5	50	23,2	90°	CC..0602..
78-80,5	A765 R1	5	16	25	58,5	50	17	90°	CC..0602..
	A765 R3	4	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R5	3	16	25	58,5	50	22	90°	CC..0602..
80,5-83	A765 R2	5	16	25	58,5	50	18,2	90°	CC..0602..
	A765 R4	4	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R6	3	16	25	58,5	50	23,2	90°	CC..0602..
83-85,5	A765 R1	6	16	25	58,5	50	17	90°	CC..0602..
	A765 R3	5	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R5	4	16	25	58,5	50	22	90°	CC..0602..
85,5-88	A765 R2	6	16	25	58,5	50	18,2	90°	CC..0602..
	A765 R4	5	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R6	4	16	25	58,5	50	23,2	90°	CC..0602..
88-90,5	A765 R1	7	16	25	58,5	50	17	90°	CC..0602..
	A765 R3	6	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R5	5	16	25	58,5	50	22	90°	CC..0602..
90,5-93	A765 R2	7	16	25	58,5	50	18,2	90°	CC..0602..
	A765 R4	6	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R6	5	16	25	58,5	50	23,2	90°	CC..0602..
93-95,5	A765 R1	8	16	25	58,5	50	17	90°	CC..0602..
	A765 R3	7	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R5	6	16	25	58,5	50	22	90°	CC..0602..
95,5-98	A765 R2	8	16	25	58,5	50	18,2	90°	CC..0602..
	A765 R4	7	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R6	6	16	25	58,5	50	23,2	90°	CC..0602..

Boring capacity DCN-DCX Ø mm	Insert holder Designation	Shank position	Dimensions in mm					Lead angle KRINS°	Suitable insert size
			BD	BD1	LF	LB	WB		
98-100,5	A765 R3	8	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R5	7	16	25	58,5	50	22	90°	CC..0602..
100,5-103	A765 R4	8	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R6	7	16	25	58,5	50	23,2	90°	CC..0602..
103-105,5	A765 R5	8	16	25	58,5	50	22	90°	CC..0602..
105,5-108	A765 R6	8	16	25	58,5	50	23,2	90°	CC..0602..

* +0,2 mm complementary capacity achievable.
Detailed description of insert holders, see page(s) 515.

Selection chart: Insert holders for OD-overturning with MPA, for FB 760 heads

Select a suitable insert holder, and note the shank position on the MPA to obtain the required bore capacity.
Note: A OD-overturning assembly requires :
- an - Axiabore™ Plus - head (A760 03)
- a MPA (BDA16BS25100)
- a shank (BAS25MH1660)
- a counterweight (BAS25CW1660).
- an insert holder (A765R.) to be selected in the chart
- an insert



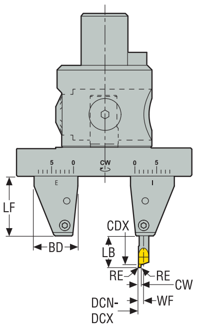
Boring capacity DCN-DCX Ø mm	Insert holder Designation	Shank position	Dimensions in mm					Lead angle KRINS°	Suitable insert size
			BD	BD1	LF	LB	WB		
0	A765 R6	0	16	25	58,5	50	23,2	90°	CC..0602..
4,5-7	A765 R5	0	16	25	58,5	50	22	90°	CC..0602..
7-9,5	A765 R6	1	16	25	58,5	50	23,2	90°	CC..0602..
	A765 R4	0	16	25	58,5	50	20,7	90°	CC..0602..
9,5-12	A765 R5	1	16	25	58,5	50	22	90°	CC..0602..
	A765 R3	0	16	25	58,5	50	19,5	90°	CC..0602..
=	A765 R6	2	16	25	58,5	50	23,2	90°	CC..0602..
	A765 R4	1	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R2	0	16	25	58,5	50	18,2	90°	CC..0602..
14,5-17	A765 R5	2	16	25	58,5	50	22	90°	CC..0602..
	A765 R3	1	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R1	0	16	25	58,5	50	17	90°	CC..0602..
17-19,5	A765 R6	3	16	25	58,5	50	23,2	90°	CC..0602..
	A765 R4	2	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R2	1	16	25	58,5	50	18,2	90°	CC..0602..
19,5-22	A765 R5	3	16	25	58,5	50	22	90°	CC..0602..
	A765 R3	2	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R1	1	16	25	58,5	50	17	90°	CC..0602..
22-24,5	A765 R6	4	16	25	58,5	50	23,2	90°	CC..0602..
	A765 R4	3	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R2	2	16	25	58,5	50	18,2	90°	CC..0602..
24,5-27	A765 R5	4	16	25	58,5	50	22	90°	CC..0602..
	A765 R3	3	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R1	2	16	25	58,5	50	17	90°	CC..0602..
27-29,5	A765 R6	5	16	25	58,5	50	23,2	90°	CC..0602..
	A765 R4	4	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R2	3	16	25	58,5	50	18,2	90°	CC..0602..
29,5-32	A765 R5	5	16	25	58,5	50	22	90°	CC..0602..
	A765 R3	4	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R1	3	16	25	58,5	50	17	90°	CC..0602..
32-34,5	A765 R6	6	16	25	58,5	50	23,2	90°	CC..0602..
	A765 R4	5	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R2	4	16	25	58,5	50	18,2	90°	CC..0602..
34,5-37	A765 R5	6	16	25	58,5	50	22	90°	CC..0602..
	A765 R3	5	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R1	4	16	25	58,5	50	17	90°	CC..0602..

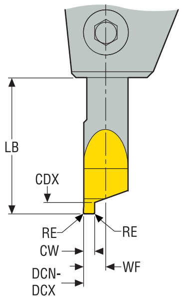
Boring capacity DCN-DCX Ø mm	Insert holder Designation	Shank position	Dimensions in mm					Lead angle KRINS°	Suitable insert size
			BD	BD1	LF	LB	WB		
37-39,5	A765 R6	7	16	25	58,5	50	23,2	90°	CC..0602..
	A765 R4	6	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R2	5	16	25	58,5	50	18,2	90°	CC..0602..
39,5-42	A765 R5	7	16	25	58,5	50	22	90°	CC..0602..
	A765 R3	6	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R1	5	16	25	58,5	50	17	90°	CC..0602..
42-44,5	A765 R6	8	16	25	58,5	50	23,2	90°	CC..0602..
	A765 R4	7	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R2	6	16	25	58,5	50	18,2	90°	CC..0602..
44,5-47	A765 R5	8	16	25	58,5	50	22	90°	CC..0602..
	A765 R3	7	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R1	6	16	25	58,5	50	17	90°	CC..0602..
47-49,5	A765 R4	8	16	25	58,5	50	20,7	90°	CC..0602..
	A765 R2	7	16	25	58,5	50	18,2	90°	CC..0602..
49,5-52	A765 R3	8	16	25	58,5	50	19,5	90°	CC..0602..
	A765 R1	7	16	25	58,5	50	17	90°	CC..0602..
52-54,5	A765 R2	8	16	25	58,5	50	18,2	90°	CC..0602..
54,5-57	A765 R1	8	16	25	58,5	50	17	90°	CC..0602..

* +0,2 mm complementary capacity achievable.
Detailed description of insert holders, see page(s) 515.

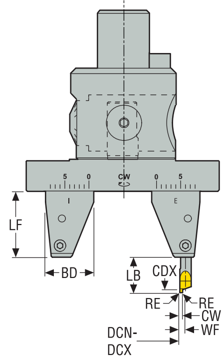
Selection chart: Grooving tool -against spigot- for grooving with MPA, for FB 760 heads

Assembly case 1

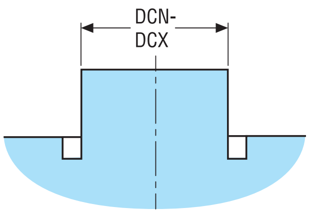




Assembly case 2



Select the suitable grooving tool, and note the grooving tool holder position on the MPA to obtain the required groove capacity.



Note : An -against spigot- grooving assembly requires :
- an - Axiabore™ Plus - head (A760 03)
- a MPA (BDA16BS25100)
- an I (internal position) and an E (external position) grooving tool holder (BAS25FGI35 and BAS25FGE35) to either hold a grooving tool or act as a counterweight (see setting position in the chart)
- an -against spigot- grooving tool (AFG...82) to be selected from the chart, related to groove width and diameter.

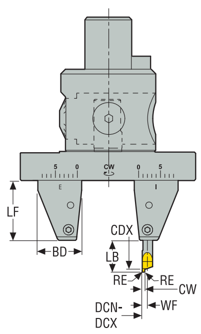
CW	Boring capacity DCN-DCX Ø mm*	Against spigot grooving tool Designation	Grooving toolholder position**	Design	Dimensions in mm BD	LF	LB	WF	RE	Groove max. depth CDX
1	19-24		0-I	1	25	34	18	2,95	0,15	2
1	24-29		1-I	1	25	34	18	2,95	0,15	2
1	29-34		2-I	1	25	34	18	2,95	0,15	2
1	34-39		3-I	1	25	34	18	2,95	0,15	2
1	39-44		0-E / 4-I	1/2	25	34	18	2,95	0,15	2
1	44-49		1-E / 5-I	1/2	25	34	18	2,95	0,15	2
1	49-54	AFG0629 10 1582	2-E / 6-I	1/2	25	34	18	2,95	0,15	2
1	54-59		3-E / 7-I	1/2	25	34	18	2,95	0,15	2
1	59-64		4-E / 8-I	1/2	25	34	18	2,95	0,15	2
1	64-69		5-E	2	25	34	18	2,95	0,15	2
1	69-74		6-E	2	25	34	18	2,95	0,15	2
1	74-79		7-E	2	25	34	18	2,95	0,15	2
1	79-84		8-E	2	25	34	18	2,95	0,15	2
1,5	19-24		0-I	1	25	34	18	2,95	0,15	3
1,5	24-29		1-I	1	25	34	18	2,95	0,15	3
1,5	29-34		2-I	1	25	34	18	2,95	0,15	3
1,5	34-39		3-I	1	25	34	18	2,95	0,15	3
1,5	39-44		0-E / 4-I	1/2	25	34	18	2,95	0,15	3
1,5	44-49		1-E / 5-I	1/2	25	34	18	2,95	0,15	3
1,5	49-54	AFG0629 15 1582	2-E / 6-I	1/2	25	34	18	2,95	0,15	3
1,5	54-59		3-E / 7-I	1/2	25	34	18	2,95	0,15	3
1,5	59-64		4-E / 8-I	1/2	25	34	18	2,95	0,15	3
1,5	64-69		5-E	2	25	34	18	2,95	0,15	3
1,5	69-74		6-E	2	25	34	18	2,95	0,15	3
1,5	74-79		7-E	2	25	34	18	2,95	0,15	3
1,5	79-84		8-E	2	25	34	18	2,95	0,15	3

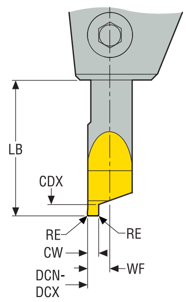
CW	Boring capacity DCN-DCX Ø mm*	Against spigot grooving tool Designation	Grooving toolholder position**	Design	Dimensions in mm BD	LF	LB	WF	RE	Groove max. depth CDX
2	19-24		0-I	1	25	34	18	2,95	0,15	4
2	24-29		1-I	1	25	34	18	2,95	0,15	4
2	29-34		2-I	1	25	34	18	2,95	0,15	4
2	34-39		3-I	1	25	34	18	2,95	0,15	4
2	39-44		0-E / 4-I	1/2	25	34	18	2,95	0,15	4
2	44-49		1-E / 5-I	1/2	25	34	18	2,95	0,15	4
2	49-54	AFG0629 20 1582	2-E / 6-I	1/2	25	34	18	2,95	0,15	4
2	54-59		3-E / 7-I	1/2	25	34	18	2,95	0,15	4
2	59-64		4-E / 8-I	1/2	25	34	18	2,95	0,15	4
2	64-69		5-E	2	25	34	18	2,95	0,15	4
2	69-74		6-E	2	25	34	18	2,95	0,15	4
2	74-79		7-E	2	25	34	18	2,95	0,15	4
2	79-84		8-E	2	25	34	18	2,95	0,15	4

* +0,2 mm complementary capacity achievable. ** Recommended values in bold.
Detailed description of the grooving tools, see page(s) 521.

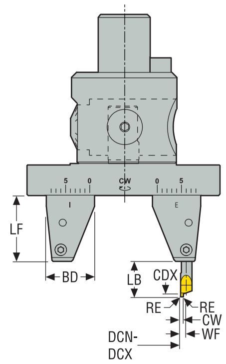
Selection chart: Grooving tool -against spigot- for grooving with MPA, for FB 760 heads

Assembly case 1

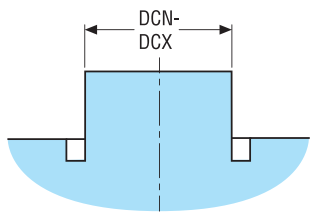




Assembly case 2



Select the suitable grooving tool, and note the grooving tool holder position on the MPA to obtain the required groove capacity.



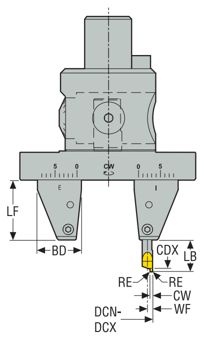
Note : An -against spigot- grooving assembly requires :
- an - Axiabore™ Plus - head (A760 03)
- a MPA (BDA16BS25100)
- n I (internal position) and an E (external position) grooving tool holder (BAS25FGI35 and BAS25FGE35) to either hold a grooving tool or act as a counterweight (see setting position in the chart)
- n -against spigot- grooving tool (AFG...82) to be selected from the chart, related to groove width and diameter.

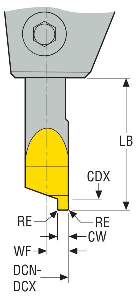
CW	Boring capacity DCN-DCX Ø mm*	Against spigot grooving tool Designation	Grooving toolholder position**	Design	Dimensions in mm					Groove max. depth CDX
					BD	LF	LB	WF	RE	
2,5	19-24		0-I	1	25	34	18	2,95	0,15	5
2,5	24-29		1-I	1	25	34	18	2,95	0,15	5
2,5	29-34		2-I	1	25	34	18	2,95	0,15	5
2,5	34-39		3-I	1	25	34	18	2,95	0,15	5
2,5	39-44		0-E / 4-I	1/2	25	34	18	2,95	0,15	5
2,5	44-49		1-E / 5-I	1/2	25	34	18	2,95	0,15	5
2,5	49-54	AFG0629 25 1582	2-E / 6-I	1/2	25	34	18	2,95	0,15	5
2,5	54-59		3-E / 7-I	1/2	25	34	18	2,95	0,15	5
2,5	59-64		4-E / 8-I	1/2	25	34	18	2,95	0,15	5
2,5	64-69		5-E	2	25	34	18	2,95	0,15	5
2,5	69-74		6-E	2	25	34	18	2,95	0,15	5
2,5	74-79		7-E	2	25	34	18	2,95	0,15	5
2,5	79-84		8-E	2	25	34	18	2,95	0,15	5
3	19-24		0-I	1	25	34	18	2,95	0,15	6
3	24-29		1-I	1	25	34	18	2,95	0,15	6
3	29-34		2-I	1	25	34	18	2,95	0,15	6
3	34-39		3-I	1	25	34	18	2,95	0,15	6
3	39-44		0-E / 4-I	1/2	25	34	18	2,95	0,15	6
3	44-49		1-E / 5-I	1/2	25	34	18	2,95	0,15	6
3	49-54	AFG0629 30 1582	2-E / 6-I	1/2	25	34	18	2,95	0,15	6
3	54-59		3-E / 7-I	1/2	25	34	18	2,95	0,15	6
3	59-64		4-E / 8-I	1/2	25	34	18	2,95	0,15	6
3	64-69		5-E	2	25	34	18	2,95	0,15	6
3	69-74		6-E	2	25	34	18	2,95	0,15	6
3	74-79		7-E	2	25	34	18	2,95	0,15	6
3	79-84		8-E	2	25	34	18	2,95	0,15	6

* +0,2 mm complementary capacity achievable.
** Recommended values in bold.
Detailed description of the grooving tools, see page(s) 521.

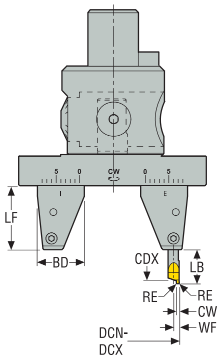
Selection chart: Grooving tool -against bore- for grooving with MPA, for FB 760 heads

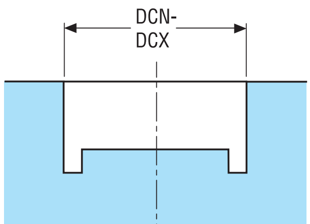
Assembly case 3





Assembly case 4



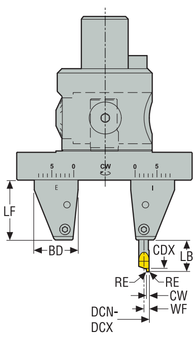
	CW	Boring capacity DCN-DCX Ø mm*	Against spigot grooving tool Designation	Grooving toolholder position**	Design	Dimensions in mm BD	LF	LB	WF	RE	Groove max. depth CDX
Select the suitable grooving tool, and note the grooving tool holder position on the MPA to obtain the required groove capacity.	1	31-36		0-I	3	25	34	18	2,95	0,15	2
	1	36-41		1-I	3	25	34	18	2,95	0,15	2
	1	41-46		2-I	3	25	34	18	2,95	0,15	2
	1	46-51		3-I	3	25	34	18	2,95	0,15	2
	1	51-56		0-E / 4-I	3/4	25	34	18	2,95	0,15	2
	1	56-61		1-E / 5-I	3/4	25	34	18	2,95	0,15	2
	1	61-66	AFG0629 10 1581	2-E / 6-I	3/4	25	34	18	2,95	0,15	2
	1	66-71		3-E / 7-I	3/4	25	34	18	2,95	0,15	2
	1	71-76		4-E / 8-I	3/4	25	34	18	2,95	0,15	2
	1	76-81		5-E	4	25	34	18	2,95	0,15	2
	1	81-86		6-E	4	25	34	18	2,95	0,15	2
	1	86-91		7-E	4	25	34	18	2,95	0,15	2
	1	91-96		8-E	4	25	34	18	2,95	0,15	2
	1,5	31-36		0-I	3	25	34	18	2,95	0,15	3
Note : An -against spigot- grooving assembly requires : - an - Axiabore™ Plus - head (A760 03) - a MPA (BDA16BS25100) - an I (internal position) and an E (external position) grooving tool holder (BAS25FGI35 and BAS25FGE35) to either hold a grooving tool or act as a counterweight (see setting position in the chart) - an -against spigot- grooving tool (AFG...82) to be selected from the chart, related to groove width and diameter.	1,5	39-41		1-I	3	25	34	18	2,95	0,15	3
	1,5	41-46		2-I	3	25	34	18	2,95	0,15	3
	1,5	46-51		3-I	3	25	34	18	2,95	0,15	3
	1,5	51-56		0-E / 4-I	3/4	25	34	18	2,95	0,15	3
	1,5	56-61		1-E / 5-I	3/4	25	34	18	2,95	0,15	3
	1,5	61-66	AFG0629 15 1581	2-E / 6-I	3/4	25	34	18	2,95	0,15	3
	1,5	66-71		3-E / 7-I	3/4	25	34	18	2,95	0,15	3
	1,5	71-76		4-E / 8-I	3/4	25	34	18	2,95	0,15	3
	1,5	76-81		5-E	4	25	34	18	2,95	0,15	3
	1,5	81-86		6-E	4	25	34	18	2,95	0,15	3
	1,5	86-91		7-E	4	25	34	18	2,95	0,15	3
	1,5	91-96		8-E	4	25	34	18	2,95	0,15	3

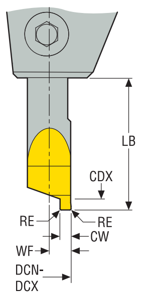
CW	Boring capacity DCN-DCX Ø mm*	Against spigot grooving tool Designation	Grooving toolholder position**	Design	Dimensions in mm BD	LF	LB	WF	RE	Groove max. depth CDX
2	31-36		0-I	3	25	34	18	2,95	0,15	4
2	39-41		1-I	3	25	34	18	2,95	0,15	4
2	41-46		2-I	3	25	34	18	2,95	0,15	4
2	46-51		3-I	3	25	34	18	2,95	0,15	4
2	51-56		0-E / 4-I	3/4	25	34	18	2,95	0,15	4
2	56-61		1-E / 5-I	3/4	25	34	18	2,95	0,15	4
2	61-66	AFG0629 20 1581	2-E / 6-I	3/4	25	34	18	2,95	0,15	4
2	66-71		3-E / 7-I	3/4	25	34	18	2,95	0,15	4
2	71-76		4-E / 8-I	3/4	25	34	18	2,95	0,15	4
2	76-81		5-E	4	25	34	18	2,95	0,15	4
2	81-86		6-E	4	25	34	18	2,95	0,15	4
2	86-91		7-E	4	25	34	18	2,95	0,15	4
2	91-96		8-E	4	25	34	18	2,95	0,15	4

* +0,2 mm complementary capacity achievable.
** Recommended values in bold.
Detailed description of the grooving tools, see page(s) 521.

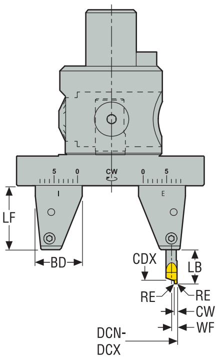
Selection chart: Grooving tool -against bore- for grooving with MPA, for FB 760 heads

Assembly case 3

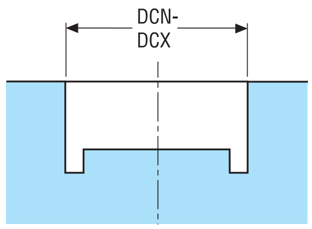




Assembly case 4



Select the suitable grooving tool, and note the grooving tool holder position on the MPA to obtain the required groove capacity.



Note : An -against spigot- grooving assembly requires :
- an - Axiabore™ Plus - head (A760 03)
- a MPA (BDA16BS25100)
- an I (internal position) and an E (external position) grooving tool holder (BAS25FGI35 and BAS25FGE35) to either hold a grooving tool or act as a counterweight (see setting position in the chart)
- an -against spigot- grooving tool (AFG...82) to be selected from the chart, related to groove width and diameter.

CW	Boring capacity DCN-DCX Ø mm*	Against spigot grooving tool Designation	Grooving toolholder position**	Design	Dimensions in mm BD	LF	LB	WF	RE	Groove max. depth CDX
2,5	31-36		0-I	3	25	34	18	2,95	0,15	5
2,5	36-41		1-I	3	25	34	18	2,95	0,15	5
2,5	41-46		2-I	3	25	34	18	2,95	0,15	5
2,5	46-51		3-I	3	25	34	18	2,95	0,15	5
2,5	51-56		0-E / 4-I	3/4	25	34	18	2,95	0,15	5
2,5	56-61		1-E / 5-I	3/4	25	34	18	2,95	0,15	5
2,5	61-66	AFG0629 25 1581	2-E / 6-I	3/4	25	34	18	2,95	0,15	5
2,5	66-71		3-E / 7-I	3/4	25	34	18	2,95	0,15	5
2,5	71-76		4-E / 8-I	3/4	25	34	18	2,95	0,15	5
2,5	76-81		5-E	4	25	34	18	2,95	0,15	5
2,5	81-86		6-E	4	25	34	18	2,95	0,15	5
2,5	86-91		7-E	4	25	34	18	2,95	0,15	5
2,5	91-96		8-E	4	25	34	18	2,95	0,15	5
3	31-36		0-I	3	25	34	18	2,95	0,15	6
3	39-41		1-I	3	25	34	18	2,95	0,15	6
3	41-46		2-I	3	25	34	18	2,95	0,15	6
3	46-51		3-I	3	25	34	18	2,95	0,15	6
3	51-56		0-E / 4-I	3/4	25	34	18	2,95	0,15	6
3	56-61		1-E / 5-I	3/4	25	34	18	2,95	0,15	6
3	61-66	AFG0629 30 1581	2-E / 6-I	3/4	25	34	18	2,95	0,15	6
3	66-71		3-E / 7-I	3/4	25	34	18	2,95	0,15	6
3	71-76		4-E / 8-I	3/4	25	34	18	2,95	0,15	6
3	76-81		5-E	4	25	34	18	2,95	0,15	6
3	81-86		6-E	4	25	34	18	2,95	0,15	6
3	86-91		7-E	4	25	34	18	2,95	0,15	6
3	91-96		8-E	4	25	34	18	2,95	0,15	6

* +0,2 mm complementary capacity achievable.
** Recommended values in bold.
Detailed description of the grooving tools, see page(s) 521.

Instructions – Maximum speeds for Axiabore™ type heads

For further application details refer to the operating instructions supplied with the boring heads and with the GL bars.

Head	Capacity Ø mm	Max. RPM with tool (RPM)	Max. RPM with MPA (RPM)	Max. cutting speed v_c at min. Cap. (m/min)	Max. cutting speed v_c at max. Cap. (m/min)
Axiabore™ type with Graflex® connection					
A76001	0,3 – 8	30000	-	28*	754*
A76002	2 – 20	12000	-	75*	754*
A76003	6 – 108	8000**	5000	151*	1000***
A76013	6 – 33	20000**	5000	377*	1500***
Axiabore™ type with Seco-Capto™ connection					
C5-391.0760-03	*6-108*	*8000***	*5000*	*151**	*1000***

Note: The maximum speeds are related to the boring head's mechanical design and balancing quality. Speeds inside these limits have to be chosen in regard to the other *machining conditions, e.g. workpiece material, cutting edge (tools and inserts), tooling length, machine spindle. At speeds from approx. 8000 RPM and above, the holding arbors and intermediates should be fine balanced. Using balanceable heads and fine balanced holders improves the tool life and the boring performances even at lower speeds.*

* Implied max. cutting speed with max. RPM.

** Not reachable with all tools, see ***.

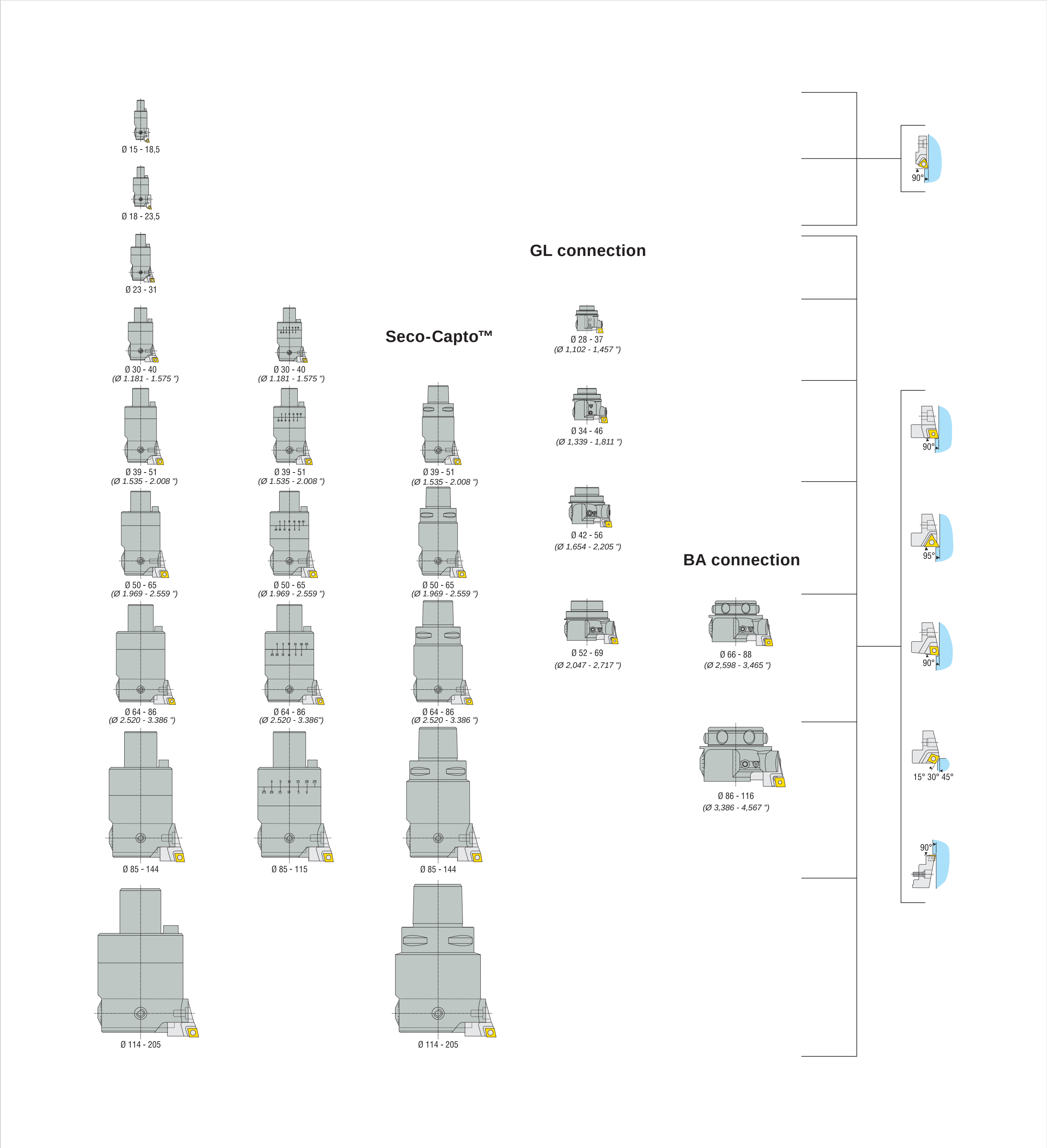
*** Max. cutting speed not to be exceeded

Introduction Drilling Reaming Boring Annex

Troubleshooting

Problem	Possible cause	Solution
Poor tool life	Wrong insert grade	Change to more wear resistant grade
	Excessive cutting speed	Reduce cutting speed
	Excessive DOC	Decrease DOC
Chatter & Vibrations	Excessive cutting speed	Reduce cutting speed
	High L/D ratio	Shorten tool to increase stiffness
		Use stronger boring tool
		Use Steadyline bar
		Use carbide or heavy metal extensions
	Wrong insert	Reduce nose radius of insert
		Use ground geometry inserts
	Incorrect stock allowance	Change pre-hole diameter
Poor hole diameter tolerance & repeatability	Inaccurate tool changes	Worn and damaged tool shank: replace
		Clean spindle and tool shank
	Variation of stock allowance	Add semi-finishing boring step
	Low spindle stability	Use sharper ground geometry inserts
Poor roundness	Excessive boring tool imbalance	Check the spindle runout
		Change to LIBRAFLEX® boring head
		Check balance ring setting
		Reduce speed
	Excessive cutting forces	Check stock allowance and feed rate
	Insufficient workpiece	Check for uniform workpiece clamping
	Workpiece non-symmetrical	Reduce cutting forces, change to ground insert
		Increase cutting speed, reduce feed
Poor positional tolerance	Original bore misaligned	Add a semi-finishing boring step
	Excessive DOC	Decrease DOC, make two passes
Poor surface finish	Wrong insert radius	Use larger insert radius
	Excessive feed rate	Reduce feed to be max. 30% of insert nose radius
	Poor chip evacuation	Apply through coolant
		Change insert to higher rake angle (HSS: please
		Check DOC
Tapered bore	Premature tool wear	Change to more wear resistant grade
		Modify cutting speed
		Increase coolant flow

Overview


Ø 15 - 18,5
Ø 18 - 23,5
Ø 23 - 31
Ø 30 - 40
(Ø 1.181 - 1.575 ")
Ø 39 - 51
(Ø 1.535 - 2.008 ")
Ø 50 - 65
(Ø 1.969 - 2.559 ")
Ø 64 - 86
(Ø 2.520 - 3.386 ")
Ø 85 - 144
Ø 114 - 205
Ø 30 - 40
(Ø 1.181 - 1.575 ")
Ø 39 - 51
(Ø 1.535 - 2.008 ")
Ø 50 - 65
(Ø 1.969 - 2.559 ")
Ø 64 - 86
(Ø 2.520 - 3.386")
Ø 85 - 115
Seco-Capto™
Ø 39 - 51
(Ø 1.535 - 2.008 ")
Ø 50 - 65
(Ø 1.969 - 2.559 ")
Ø 64 - 86
(Ø 2.520 - 3.386 ")
Ø 85 - 144
Ø 114 - 205
GL connection
Ø 28 - 37
(Ø 1,102 - 1,457 ")
Ø 34 - 46
(Ø 1,339 - 1,811 ")
Ø 42 - 56
(Ø 1,654 - 2,205 ")
Ø 52 - 69
(Ø 2,047 - 2,717 ")
BA connection
Ø 66 - 88
(Ø 2,598 - 3,465 ")
Ø 86 - 116
(Ø 3,386 - 4,567 ")
90°
90°
95°
90°
15° 30° 45°
90°

Fine boring heads – Guide

Features
A radial type fine boring head is an assembly of a body (head) and an insert holder. **FB 620, FB 780 and FB 790 radial, fine boring heads feature**:

Product range
Seco offers a variety of radial fine boring heads to fulfill all your needs with the most suitable solution:

FB 620, FB 780 and FB 790 radial, fine boring heads

- Micrometric adjustment: Insert holder setting mechanism with a micrometric adjusting screw (1 increment = 0,01 mm *(0.0004 ")* on the diameter) and a vernier scale (resolution of 2,5 µm on the diameter)
- The precision of the mechanism guarantees repeatable accuracy
- Angular orientation of the cutting edge according to DIN 69871/ISO 7388 for SA and ISO 12164 for HSK
- Coolant through the head directed towards the cutting edge
- FB 780 and FB 620 boring heads are pre-balanced on median diameter setting. FB 790 are balanceable, for optimized performance.

NOTE! Features, Instructions (insert holder fitting, diameter setting, back boring instructions, troubleshooting,nrecommended machining conditions, maximum speeds), suitable insert holders and suitable inserts are identical for all types of FB 620, FB 780 and FB 790 fine boring heads of similar boring capacity size, regardless of their machine side connection types.

FB 620 fine boring heads, tradial types, for Steadyline virbration damping bars

GL

BA

- 4 fine boring heads with GL machine side connection for fine boring Ø 27–69 mm *(Ø 1.102–2.717 ")*
- 2 fine boring heads with BA machine side connection for fine boring Ø 66–116 mm *(Ø 2.598–4.567 ")*

Their compact design achieves best damping performances when used on Steadyline® GL turning and boring bars.

FB 780 Fine boring heads, radial types

9 precision boring heads with Graflex® machine side connection for fine boring Ø 15–205 mm *(Ø 0.591–8.071 ")* using radially fitted insert holders.

5 precision boring heads with Seco-Capto™ machine side connection for fine boring Ø 39–205 mm *(Ø 1.535–8.071 ")*.

Seco-Capto™ adapter and Graflex® head: Ø 15–40 mm *(Ø 0.591– 1.575 ")*.

Note! The minimum bore size of the smallest Seco-Capto™ fine boring head is Ø 39 mm *(Ø 1.535 ")* with the smallest available Seco-Capto™ C3 connection. For Ø 15–40 mm *(Ø 0.591–1.575 ")* use Graflex® boring heads with connection sizes G0 to G2 in conjunction with the appropriate Seco-Capto™/Graflex® adaptor. This offers also boring length modularity when using additional Graflex® extensions.

Note! Features, Instructions (insert holder fitting, diameter setting, back boring instructions, troubleshooting, recommended machining conditions, maximum speeds), suitable insert holders and suitable inserts are similar for both types of FB 780 fine boring heads of similar boring capacity size, regardless of connection type.

FB 790 Balanceable fine boring heads, radial type

5 balanceable 'Libraflex®' boring heads with Graflex® machine side connection for fine boring Ø 30–115 mm *(Ø 1.181–4.528 ")*, at high speeds (up to 1500 m/min), using radially fitted insert holders.

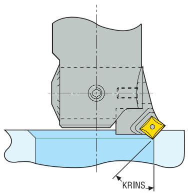
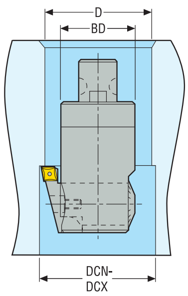
Balancing reduces spindle stress, cutting parameters can be optimized, better machining qualities are achieved even at conventional speeds.

Balancing is performed by setting both graduated rings in accordance with the diameter to be bored (no chart needed).

Features

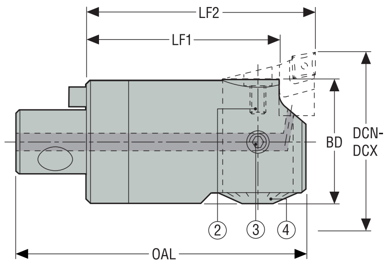
Insert holders
A radial type fine boring head is an assembly of a body (head) and an insert holder.

The wide range of fine boring, chamfering and back boring insert holders are suitable for FB 620, FB 780 and FB 790 fine boring heads, radial types.

Fine boring insert holders	
	FB 782: lead angle 90° for WB inserts FB 724: lead angle 90° for TC inserts FB 725: lead angle 90° for CC inserts FB 726: lead angle 95° for CC inserts
NOTE! 95° lead angle insert holders should be used to avoid face contact when boring up a shoulder	
Chamfering insert holders, Ø 23–160 mm *(Ø 0.906–6.299 ")*	
	FB 729: available with a 15°, 30° or 45° lead angle for CC inserts. Libraflex® balancing can also be achieved when using chamfering insert holders
Back-boring insert holders, Ø 26,5–164 mm *(Ø 1.043–6.457 ")*	
	FB 789: lead angle 90° for WB and CC inserts. Libraflex® balancing is not possible when using back-boring insert holders. In this case, the highest unbalance reduction is obtained when both balancing rings are set on their largest graduation.

FB780

Graflex®



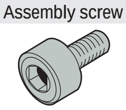
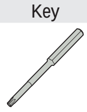
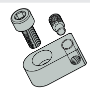
2. Assembly screw
3. Locking screw
4. Micrometric adjusting screw

- With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)

Item number	Designation	Machine side Graflex size	Workpiece side Capacity DCN-DCX Ø		OAL	LF1	LF2	BD	Weight	Insert holder size
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	
00056632	A78008	G0	15,0 *0.591*	18,5 *0.728*	44,0 *1.732*	27,5 *1.083*	35,0 *1.378*	14,0 *0.551*	0,1 *0.220*	09
00056633	A78009	G0	18,0 *0.709*	23,5 *0.925*	44,0 *1.732*	27,5 *1.083*	35,0 *1.378*	17,0 *0.669*	0,1 *0.220*	09
00072991	A78010	G1	23,0 *0.906*	31,0 *1.220*	51,5 *2.028*	32,5 *1.280*	40,0 *1.575*	21,5 *0.846*	0,11 *0.240*	10
00072992	A78020	G2	30,0 *1.181*	40,0 *1.575*	59,5 *2.343*	37,5 *1.476*	45,0 *1.772*	27,0 *1.063*	0,22 *0.490*	20
00072993	A78030	G3	39,0 *1.535*	51,0 *2.008*	82,0 *3.228*	54,5 *2.146*	65,0 *2.559*	35,0 *1.378*	0,5 *1.100*	30
00072995	A78040	G4	50,0 *1.969*	65,0 *2.559*	93,0 *3.661*	61,5 *2.421*	72,0 *2.835*	43,0 *1.693*	0,8 *1.760*	40
00072996	A78050	G5	64,0 *2.520*	86,0 *3.386*	109,0 *4.291*	71,5 *2.815*	82,0 *3.228*	54,0 *2.126*	1,49 *3.280*	50
00056551	A78060	G6	85,0 *3.346*	144,0 *5.669*	140,0 *5.512*	88,5 *3.484*	105,0 *4.134*	70,0 *2.756*	3,1 *6.830*	60/65
00056552	A78070	G7	114,0 *4.488*	205,0 *8.071*	160,0 *6.299*	98,5 *3.878*	115,0 *4.528*	95,0 *3.740*	6,3 *13.890*	70/75

Insert holders have to be ordered separately, see page(s) 542-545. Note, weight is without insert holder

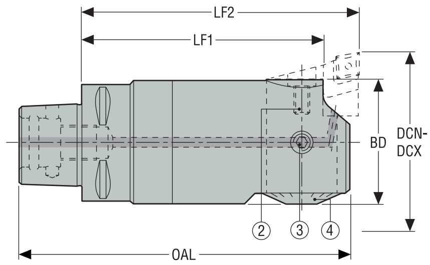
Spare parts

For	Assembly screw	Key	Key (T-handle)	Locking screw	Tenon
					
A78008	960D30050S	H4B-H2.0	DOUBLE-T	19A7100403	90M01
A78009	LBHF0306R	H4B-H2.0	DOUBLE-T	19A71000	90M0
A78010	19TB0305	H4B-H2.0	DOUBLE-T	19A71000	90M1
A78020	19TB0305	H4B-H2.0	–	950L0406	90M2
A78030	19TB04075	03M03C	–	950L0608	90M3
A78040	19TB04075	03M03C	–	950L0612	90M4
A78050	950D0410	03M03C	–	950L0616	90M5
A78060	950D0612	H6B-H5.0L	DOUBLE-T	950L1016	90M6
A78070	950D0616	H6B-H5.0L	DOUBLE-T	950L1030	90M7

FB780

Seco-Capto™

- With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)

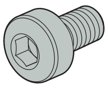
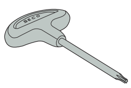
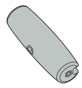
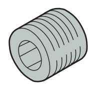


2. Assembly screw
3. Locking screw
4. Micrometric adjusting screw

Item number	Designation	Machine side Capto size	Workpiece side Capacity DCN-DCX Ø		OAL	LF1	LF2	BD	Weight	Insert holder size
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	
02809740	C3-391.0780-30	C3	39,0 *1.535*	51,0 *2.008*	86,0 *3.386*	59,5 *2.343*	70,0 *2.756*	35,0 *1.378*	0,48 *1.060*	30
02809742	C4-391.0780-40	C4	50,0 *1.969*	65,0 *2.559*	103,0 *4.055*	71,5 *2.815*	82,0 *3.228*	43,0 *1.693*	0,89 *1.960*	40
02809744	C5-391.0780-50	C5	64,0 *2.520*	86,0 *3.386*	119,0 *4.685*	81,5 *3.209*	92,0 *3.622*	54,0 *2.126*	1,62 *3.570*	50
02809745	C6-391.0780-60	C6	85,0 *3.346*	144,0 *5.669*	150,0 *5.906*	100,5 *3.957*	117,0 *4.606*	70,0 *2.756*	3,3 *7.280*	60
02809747	C8-391.0780-70	C8	114,0 *4.488*	205,0 *8.071*	181,0 *7.126*	121,5 *4.783*	138,0 *5.433*	95,0 *3.740*	7,15 *15.760*	70

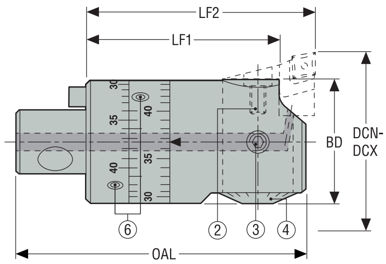
Insert holders have to be ordered separately, see page(s) 542-545. Note, weight is without insert holder

Spare parts

For	Assembly screw	Key	Key (T-handle)	Locking screw
				
C3-391.0780-30	19TB04075	03M03C	–	950L0608
C4-391.0780-40	19TB04075	03M03C	–	950L0612
C5-391.0780-50	950D0410	03M03C	–	950L0616
C6-391.0780-60	950D0612	H6B-H5.0L	DOUBLE-T	950L0616
C8-391.0780-70	950D0616	H6B-H5.0L	DOUBLE-T	950L1030

FB780 Libraflex® balanceable

Graflex®



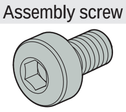
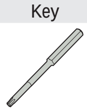
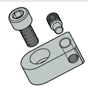
2. Assembly screw
3. Locking screw 1
4. Micrometric adjusting screw
6. Locking screw 2

- With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)
- Balancing by setting both rings in accordance with the diameter to be bored
- For speeds v_c up to 1 495 m/min and more, see page(s) 546

Item number	Designation	Machine side Graflex size	Workpiece side Capacity DCN-DCX Ø		OAL	LF1	LF2	BD	Weight	Insert holder size
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	
00055932	A79020	G2	30,0 *1.181*	40,0 *1.575*	59,5 *2.343*	37,5 *1.476*	45,0 *1.772*	27,0 *1.063*	0,19 *0.420*	20
00056005	A79030	G3	39,0 *1.535*	51,0 *2.008*	82,0 *3.228*	54,5 *2.146*	65,0 *2.559*	35,0 *1.378*	0,45 *0.990*	30
00056006	A79040	G4	50,0 *1.969*	65,0 *2.559*	93,0 *3.661*	61,5 *2.421*	72,0 *2.835*	43,0 *1.693*	0,78 *1.720*	40
00056007	A79050	G5	64,0 *2.520*	86,0 *3.386*	109,0 *4.291*	71,5 *2.815*	82,0 *3.228*	54,0 *2.126*	1,42 *3.130*	50
00001451	A79060	G6	85,0 *3.346*	115,0 *4.528*	140,0 *5.512*	88,5 *3.484*	105,0 *4.134*	70,0 *2.756*	2,87 *6.330*	60

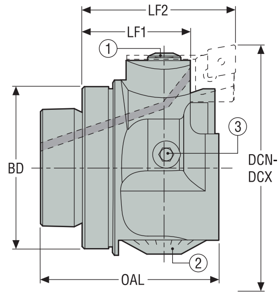
Insert holders have to be ordered separately, see page(s) 542-545. Note, weight is without insert holder

Spare parts

For head	Assembly screw	Key	Key (T-handle)	Locking screw 1	Locking screw 2	Tenon
						
A79020	19TB0305	H4B-H2.0	DOUBLE-T	950L0406	960D30045S	90M2
A79030	19TB04075	03M03C	–	950L0608	AU7901030	90M3
A79040	19TB04075	03M03C	–	950L0612	AU7901040	90M4
A79050	950D0410	03M03C	–	950L0616	AU7901050	90M51
A79060	950D0612	H6B-H5.0L	DOUBLE-T	950L1016	AU7901060	90M6

FB 620 GL – Fine boring heads

compact with GL connection



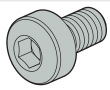
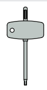
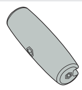
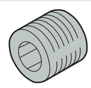
- Designed for GL25, GL32, GL40 and GL50 Steadyline® turning and boring bars
- Internal coolant supply towards cutting edge
- With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)

1. Assembly screw
2. Micrometric adjusting screw
3. Locking screw

Item number	Designation	Machine side GL size	Workpiece side Capacity DCN-DCX Ø		OAL	LF1	LF2	BD	Weight	Max. RPM**
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	
03307855	GL25-FB620-10	GL25	27,0 *1.063*	35,0 *1.378*	29,5 *1.161*	17,7 *0.697*	28,0 *1.102*	25,0 *0.984*	0,1 *0.220*	9000
02904469	GL32-0620-20	GL32	34,0 *1.339*	46,0 *1.811*	35,2 *1.386*	23,75 *0.935*	32,1 *1.264*	32,0 *1.260*	0,13 *0.290*	7000
02904470	GL40-0620-30	GL40	42,0 *1.654*	56,0 *2.205*	40,7 *1.602*	24,75 *0.974*	35,1 *1.382*	40,0 *1.575*	0,22 *0.490*	5600
02904471	GL50-0620-40	GL50	52,0 *2.047*	69,0 *2.717*	43,7 *1.720*	25,75 *1.014*	36,1 *1.421*	50,0 *1.969*	0,32 *0.710*	4800

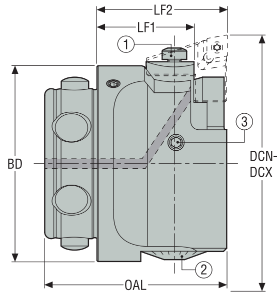
Insert holders have to be ordered separately, see page(s) 542-545.
** Additional information about max RPM, see Instruction pages.
Note, weight is without insert holder

Spare parts

For head	Assembly screw	Clamp key	Key (T-handle)	Locking screw
				
GL25-FB620-10	19TB0305	H2.0-2D	–	19A71000
GL32-FB620-20	19TB0305	H4B-H2.0	DOUBLE-T	950L0406
GL40-FB620-30	19TB04075	03M03C	–	950L0608
GL50-FB620-40	19TB04075	03M03C	–	950L0608

FB 620 BA – Fine boring heads

with BA connection



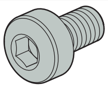
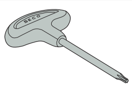
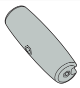
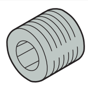
1. Assembly screw
2. Micrometric adjusting screw
3. Locking screw

- Designed for BA60 and BA80 Steadyline® turning and boring bars
- Internal coolant supply towards cutting edge
- With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)

Item number	Designation	Machine side BA size	Workpiece side Capacity DCN-DCX Ø		OAL	LF1	LF2	BD	Weight	Max. RPM**
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	
03204094	BA060-FB620-50	BA060	65,0 *2.559*	87,0 *3.425*	55,7 *2.193*	29,7 *1.169*	40,0 *1.575*	60,0 *2.362*	0,7 *1.540*	4000
03204095	BA080-FB620-60	BA080	85,0 *3.346*	115,0 *4.528*	58,2 *2.291*	26,7 *1.051*	41,2 *1.622*	80,0 *3.150*	1,1 *2.430*	3000

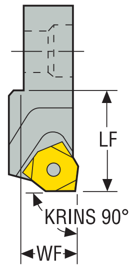
Insert holders have to be ordered separately, see page(s) 542-545.
** Additional information about max RPM, see Instruction pages.
Note, weight is without insert holder

Spare parts

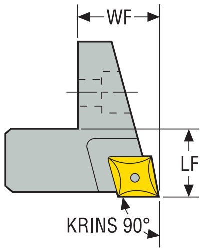
For head	Assembly screw	Clamp key	Key (T-handle)	Locking screw
				
BA060-FB620-50	19TB04075	03M03C	–	950L0608
BA080-FB620-60	950D0514	H6B-H5.0L	DOUBLE-T	950L0608

Insert holders

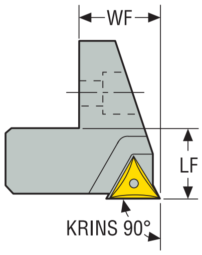
for fine boring heads FB 620/ 780/ 790



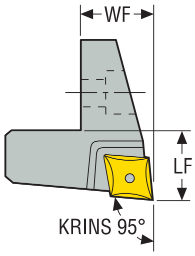
A



B



C



D

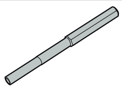
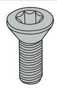
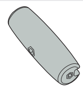
- Suitable for radial boring heads FB 620/ 780/ 790

Item number	Designation	Insert holders type	Capacity DCN-DCX ∅		LF	WF	Weight	For boring head	**	Insert holder size	Suitable insert size	Design
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*					
00056634	A78209	90° for WB inserts	15 *0.591*	23.5 *0.925*	7,2 *0.283*	4,0 *0.157*	0,01 *0.020*	FB 78008 / FB 78009	–	09	WB...0301...	A
00056580	A72510	90° for CC inserts	23 *0.906*	31 *1.220*	10,3 *0.406*	4,5 *0.177*	0,01 *0.020*	FB 78010 / FB62010	–	10	CC...0602...	B
00056581	A72520	90° for CC inserts	30-40 *1.181-1.575*	34-46 *1.338-1.811*	8,3 *0.327*	5,0 *0.197*	0,02 *0.040*	FB 78020 / FB 79020 / FB 62020	–	20	CC...0602...	B
00056582	A72530	90° for CC inserts	39-51 *1.535-2.008*	42-56 *1.653-2.205*	10,3 *0.406*	8,0 *0.315*	0,02 *0.040*	FB 78030 / FB 79030 / FB 62030	–	30	CC...0602...	B
00056583	A72540	90° for CC inserts	50-65 *1.968-2.559*	52-69 *2.047-2.716*	10,3 *0.406*	9,5 *0.374*	0,02 *0.040*	FB 78040 / FB 79040 / FB 62040	–	40	CC...0602...	B
00056584	A72550	90° for CC inserts	64 *2.520*	86 *3.386*	10,3 *0.406*	12,5 *0.492*	0,02 *0.040*	FB 78050 / FB 79050 / FB 62050	–	50	CC...0602...	B
02689978	A7256A	90° for CC inserts	85 *3.346*	115 *4.528*	14,5 *0.571*	18,5 *0.728*	0,05 *0.110*	FB 7806AL / FB 62060	–	6A	CC...09T3...	B
00056585	A72560	90° for CC inserts	85 *3.346*	115 *4.528*	16,5 *0.650*	18,9 *0.744*	0,08 *0.180*	FB 78060 / FB 79060 / FB 731S500	–	60	CC...09T3...	B
00056587	A72565	90° for CC inserts	114 *4.488*	144 *5.669*	16,5 *0.650*	33,7 *1.327*	0,09 *0.200*	FB 78060 / FB 79060 / FB 731S500	**	65	CC...09T3...	B
00056588	A72570	90° for CC inserts	114 *4.488*	160 *6.299*	16,5 *0.650*	18,9 *0.744*	0,09 *0.200*	FB 78070	–	70	CC...09T3...	B
00056589	A72575	90° for CC inserts	159 *6.260*	205 *8.071*	16,5 *0.650*	41,7 *1.642*	0,12 *0.260*	FB 78070	–	75	CC...09T3...	B
00056572	A72430	90° for TC inserts	39-51 *1.535-2.008*	42-56 *1.653-2.205*	10,3 *0.406*	7,9 *0.311*	0,01 *0.020*	FB 78030 / FB 79030 / FB 62030	–	30	TC...1102...	C
00056573	A72440	90° for TC inserts	50-65/ *1.968-2.559*	52-69 *2.047-2.716*	10,3 *0.406*	9,4 *0.370*	0,02 *0.040*	FB 78040 / FB 79040 / FB 62040	–	40	TC...1102...	C
00056574	A72450	90° for TC inserts	64 *2.520*	86 *3.386*	10,3 *0.406*	12,4 *0.488*	0,02 *0.040*	FB 78050 / FB 79050 / FB 62050	–	50	TC...1102...	C
00056575	A72460	90° for TC inserts	85 *3.346*	115 *4.528*	16,3 *0.642*	18,9 *0.744*	0,08 *0.180*	FB 78060 / FB 79060 / FB 731S500	–	60	TC...1102...	C
00056577	A72465	90° for TC inserts	114 *4.488*	144 *5.669*	16,5 *0.650*	33,7 *1.327*	0,09 *0.200*	FB 78060 / FB 79060 / FB 731S500	**	65	TC...1102...	C
00056578	A72470	90° for TC inserts	114 *4.488*	160 *6.299*	16,3 *0.642*	18,9 *0.744*	0,1 *0.220*	FB 78070	–	70	TC...1102...	C
00056579	A72475	90° for TC inserts	159 *6.260*	205 *8.071*	16,5 *0.650*	41,7 *1.642*	0,13 *0.290*	FB 78070	–	75	TC...1102...	C
00056590	A72610	95° for CC inserts	23 *0.906*	31 *1.220*	10,3 *0.406*	4,5 *0.177*	0,01 *0.020*	FB 78010	–	10	CC...0602...	D
00056591	A72620	95° for CC inserts	30-40 *1.181-1.575*	34-46 *1.338-1.811*	8,3 *0.327*	5,0 *0.197*	0,01 *0.020*	FB 78020 / FB 79020 / FB 62020	–	20	CC...0602...	D
00056592	A72630	95° for CC inserts	39-51 *1.535-2.008*	42-56 *1.653-2.205*	10,3 *0.406*	8,0 *0.315*	0,01 *0.020*	FB 78030 / FB 79030 / FB 62030	–	30	CC...0602...	D
00056593	A72640	95° for CC inserts	50-65 *1.968-2.559*	52-69 *2.047-2.716*	10,3 *0.406*	9,5 *0.374*	0,02 *0.040*	FB 78040 / FB 79040/ FB 62040	–	40	CC...0602...	D
00056594	A72650	95° for CC inserts	64 *2.520*	86 *3.386*	10,3 *0.406*	12,5 *0.492*	0,02 *0.040*	FB 78050 / FB 79050 / FB 62050	–	50	CC...0602...	D

Item number	Designation	Insert holders type	Capacity DCN-DCX ∅		LF	WF	Weight	For boring head	**	Insert holder size	Suitable insert size	Design
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*					
00056595	A72660	95° for CC inserts	85 *3.346*	115 *4.528*	16,5 *0.650*	18,9 *0.744*	0,07 *0.150*	FB 78060 / FB 79060 / FB 731S500	–	60	CC...09T3...	D
00056597	A72665	95° for CC inserts	114 *4.488*	144 *5.669*	16,5 *0.650*	33,7 *1.327*	0,09 *0.200*	FB 78060 / FB 79060 / FB 731S500	**	65	CC...09T3...	D
00056598	A72670	95° for CC inserts	114 *4.488*	160 *6.299*	16,5 *0.650*	18,9 *0.744*	0,09 *0.200*	FB 78070	–	70	CC...09T3...	D
00056599	A72675	95° for CC inserts	159 *6.260*	205 *8.071*	16,5 *0.650*	41,7 *1.642*	0,12 *0.260*	FB 78070	–	75	CC...09T3...	D
02689979	A7256B	90° for CC inserts	114 *4.488*	205 *8.071*	14,5 *0.571*	18,5 *0.728*	0,05 *0.110*	FB 7806BL / FB 7807AL	–	6B	CC...09T3...	B

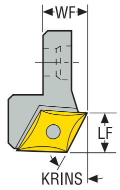
**The precision balancing of FB A790 heads is not possible when using the large insert holders.

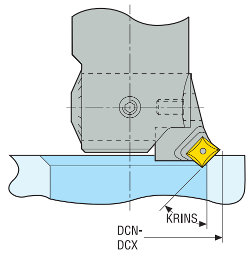
Spare parts

For insert size	Insert key	Insert screw	Key (T-handle)
			
WB...0301...	H6B-H3.0	C02035-T06P	DOUBLE-T
CC...0602...	H4B-T07P	C02504-T07P	DOUBLE-T
CC...09T3...	H4B-T15P	C04008-T15P	DOUBLE-T
TC...1102...	H4B-T07P	C02504-T07P	DOUBLE-T
CC...09T3...	–	C04008-T15P	DOUBLE-T

Chamfering insert holders

for fine boring heads FB 620/ 780/ 790



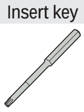
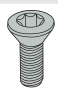


- Suitable for radial boring heads FB 620/ 780/ 790

Item number	Designation	For boring head	Insert holder size	Capacity DCN-DCX ∅		LF	WF	Weight	KRINS°	Suitable insert size
				mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
00086885	A72910CC0630	FB 78010	10	23 *0.906*	31 *1.220*	10,8 *0.425*	4,5 *0.177*	0,01 *0.020*	30	CC...0602...
00086888	A72920CC0630	FB 78020 / FB 79020/ GL32-0620-20	20	30-40 *1.181-1.575*	34-36 *1.338-1.417*	10,0 *0.394*	4,9 *0.193*	0,01 *0.020*	30	CC...0602...
00086891	A72930CC0630	FB 78030 / FB 79030 / FB 62030	30	39-51 *1.535-2.008*	42-56 *1.653-2.205*	10,5 *0.413*	8,1 *0.319*	0,01 *0.020*	30	CC...0602...
00086894	A72940CC0630	FB 78040 / FB 79040 / FB 62040	40	50-65 *1.968-2.559*	52-69 *2.047-2.716*	10,5 *0.413*	9,5 *0.374*	0,02 *0.040*	30	CC...0602...
00086897	A72950CC0630	FB 78050 / FB 79050	50	64 *2.520*	86 *3.386*	10,5 *0.413*	12,5 *0.492*	0,02 *0.040*	30	CC...0602...
00086900	A72960CC0930	FB 78060 / FB 79060 / A731S500	60	85 *3.346*	115 *4.528*	16,5 *0.650*	19,1 *0.752*	0,08 *0.180*	30	CC...09T3...
00086903	A72970CC0930	FB 78070	70	114 *4.488*	160 *6.299*	16,4 *0.646*	18,8 *0.740*	0,09 *0.200*	30	CC...09T3...
00086886	A72910CC0645	FB 78010	10	23 *0.906*	31 *1.220*	11,5 *0.453*	4,5 *0.177*	0,01 *0.020*	45	CC...0602...
00086889	A72920CC0645	FB 78020 / FB 79020 / FB 62020	20	30-40 *1.181-1.575*	34-46 *1.338-1.811*	10,0 *0.394*	5,0 *0.197*	0,01 *0.020*	45	CC...0602...
00086892	A72930CC0645	FB 78030 / FB 79030 / FB 62030	30	39-51 *1.535-2.008*	42-56 *1.653-2.205*	10,5 *0.413*	8,1 *0.319*	0,01 *0.020*	45	CC...0602...
00086895	A72940CC0645	FB 78040 / FB 79040 / FB 62040	40	50-65 *1.968-2.559*	52-69 *2.047-2.716*	10,5 *0.413*	9,5 *0.374*	0,02 *0.040*	45	CC...0602...
00086898	A72950CC0645	FB 78050 / FB 79050	50	64 *2.520*	86 *3.386*	10,3 *0.406*	12,4 *0.488*	0,02 *0.040*	45	CC...0602...
00086901	A72960CC0945	FB 78060 / FB 79060 / A731S500	60	85 *3.346*	115 *4.527*	16,5 *0.650*	19,1 *0.752*	0,07 *0.150*	45	CC...09T3...
00086904	A72970CC0945	FB 78070	70	114 *4.488*	160 *6.299*	16,4 *0.646*	18,8 *0.740*	0,09 *0.200*	45	CC...09T3...

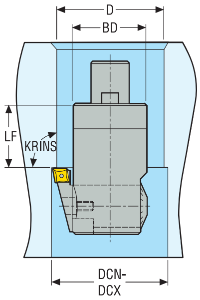
**For capacity DC with Bridge bars and Jumbo Bridge bars, see page 558

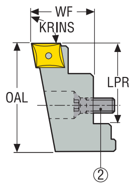
Spare parts

For insert size	Insert key	Insert screw	Key (T-handle)
			
CC...0602...	H4B-T07P	C02504-T07P	DOUBLE-T
CC...09T3...	H4B-T15P	C04008-T15P	DOUBLE-T

Fine back boring insert holders

for fine boring heads FB 620/ 780/ 790



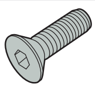
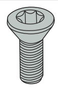
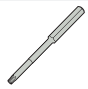
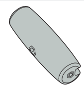


- Suitable for radial boring heads FB 620/ 780/ 790
- The precision balancing of FB 790 heads is not possible when using back-boring insert holders
- KRINS 90°
- Suitable insert size: CC...0602...

Item number	Designation	For head	Back-boring capacity DCN-DCX Ø	LF	BD	OAL	LPR	WF	Weight
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*
00086907	A789X10CC0690	A78010 // A78020 & A79020 // GL32-0620-20	39,5-47,5 // 46-56 // 49,7-61,7 *1.555-1.870 // 1.811-2.205 // 1.957-2.429*	16,5 // 21,5 // 7,75 *0.650 // 0.846 // 0.305*	21,5 // 27 // 32 *0.846 // 1.063 // 1.260*	22,0 *0.866*	16,0 *0.630*	12,8 *0.504*	0,01 *0.020*
00086910	A789X30CC0690	A78030 & A79030 // A78040 & A79040 // A78050 & A79050 // GL40-0620-30 // GL50-0620-40	53-65 // 61-76 // 69-91 // 57,6-70,2 // 67,6-80,2 *2.087-2.559 // 2.401-2.992 // 2.716-3.583 // 2.268-2.764 // 2.661-3.157*	32 // 39 // 49 // 1,75 // 2,75 *1.260 // 1.535 // 1.929 // 0.069 // 0.108*	35 // 43 // 54 // 40 // 50 *1.378 // 1.693 // 2.126 // 1.575 // 1.968*	30,0 *1.181*	23,0 *0.906*	15,0 *0.591*	0,03 *0.070*
00086909	A789X60CC0690	A78060 & A79060 // A731S500	89-119 *3.504-4.685*	50 *1.969*	70 *1.969*	50,0 *1.969*	38,5 *1.516*	21,0 *0.827*	0,09 *0.200*
00086911	A789X70CC0690	A78070	118-164 *4.646-6.457*	60 *2.362*	95 *2.362*	50,0 *2.362*	38,5 *1.516*	21,0 *0.827*	0,1 *0.220*

*For Back-boring capacity DC with Bridge bars and Jumbo Bridge bars, see page 558.
The fine back boring insert holders delivery content includes a specific insert holder clamp screw, to be used instead the standard clamp screw delivered with the boring heads.

Spare parts

For	Assembly screw	Insert screw	Key	Key (T-handle)
				
A789X10CC0690	950F0308	C02504-T07P	H4B-T07P	DOUBLE-T
A789X30CC0690	950F0410	C02504-T07P	H4B-T07P	DOUBLE-T
A789X60CC0690	950F0620	C02504-T07P	H4B-T07P	DOUBLE-T
A789X70CC0690	950F0620	C02504-T07P	H4B-T07P	DOUBLE-T

Introduction Drilling Reaming Boring Annex

FB 780/ 790 Fine boring heads – Instructions

Recommended machining conditions
For further application details refer to the operating instructions supplied with the boring heads and with the GL bars.

Maximum speeds for fine boring heads, radial type
The maximum speeds shown in boring heads Product pages are related to the boring head's mechanical design and balancing quality. Speeds inside these limits have to be chosen in regard to the other machining conditions, e.g. workpiece material, cutting edge (insert), tooling length, machine spindle.
By boring applications with Steadyline® bars, make sure not to overpass the max. RPM of the bars: See the Operating instructions supplied with the Steadyline® bars.
Below max. RPM are for boring heads equipped with boring insert holders or chamfering insert holders. When using back boring insert holders on holders on FB 620, FB 790 or FB 780 heads type heads, use max. rpm for A780.. type, similar size.

Head	Capacity Ø mm	Max. RPM	Implied max. cutting speed v_c at min. Cap.	Implied max. cutting speed v_c at max. Cap.
FB 620 Fine boring heads, with GL and BA machine side connection, for Steadyline® vibration damping turning and boring bars				
GL25-FB620-10	27 - 35	9000	760	1000
GL32-FB620-20	34 - 46	7000	748	1012
GL32-FB620-30	42 - 56	5600	739	985
GL32-FB620-40	52 - 69	4800	784	1040
BA060-FB620-50	66 - 88	4000	830	1105
BA080-FB620-60	86 - 116	3000	810	1093
FB 790 Fine boring heads, balanceable, with Graflex® connection				
A79020	30 - 40	16000	1508	2011
A79030	39 - 51	12250	1501	1963
A79040	50 - 65	10000	1571	2042
A79050	64 - 86	7500	1508	2026
A79060	85 - 115	5600	1495	2023
FB 780 Fine boring heads, with Graflex® connection				
A78008	15 - 18,5	16000	754	930
A78009	18 - 23,5	13000	735	960
A78010	23 - 31	10000	723	974
A78020	30 - 40	8000	754	1005
A78030	39 - 51	6000	735	961
A78040	50 - 65	5000	785	1021
A78050	64 - 86	3700	744	1000
A78060	85 - 115	2700	721	975
	114 - 144	2200	788	995
A78070	114 - 160	2000	716	1005
	159 - 205	1600	799	1030
FB 780 Fine boring heads, with Seco-Capto™ connection				
C3-391.0780-30	39-51	6000	735	961
C4-391.0780-40	50-65	5000	785	1021
C5-391.0780-50	64-86	3700	744	1000
C6-391.0780-60	85-115	2700	721	975
	114-144	2200	788	995
C8-391.0780-70	114-160	2000	716	1005
	159-205	1600	799	1030

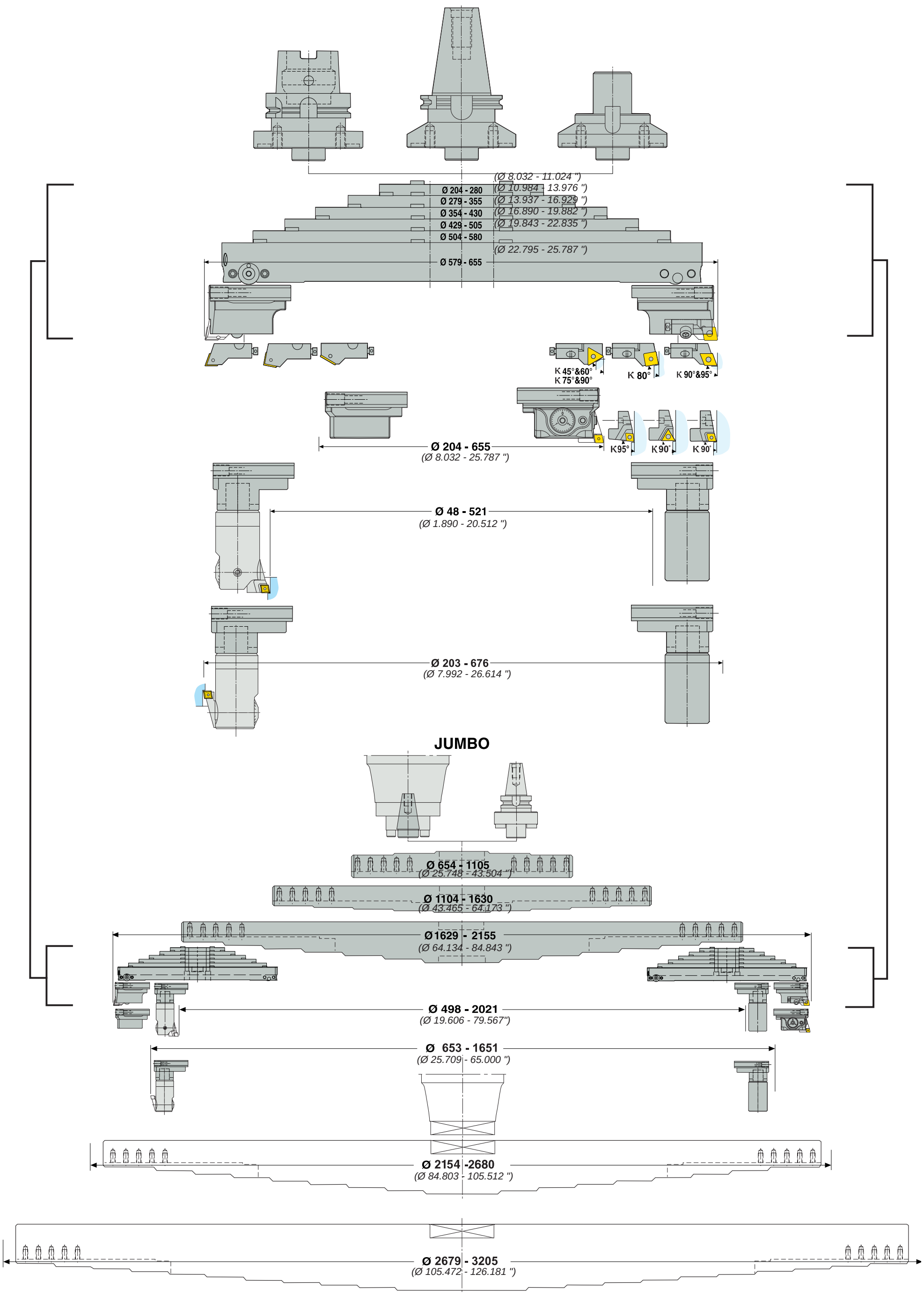
Note: The maximum speeds are related to the boring head's mechanical design and balancing quality. Speeds inside these limits have to be chosen in regard to the other machining conditions, e.g. workpiece material, cutting edge (insert), tooling length, machine spindle. At speeds from approx. 8000 RPM and above, the basic holders and the extensions/reducers should be fine balanced.

Bridge bars

Seco offers a complete range of Bridge Bars and Jumbo Bridge Bars for large diameter boring and overturning operations.

- Designed for maximum flexibility, Bridge Bars are available in a large range of diameters as standard products, covering a diameter range of 204 - 655 mm (8.03 - 25.78 inch)
- Seco Jumbo Bridge Bars are made of high tensile aluminum with steel interfaces, and cover the 654 - 2155 mm (25.75 - 84.843 inch) diameter range

Overview


(Ø 8.032 - 11.024 ")
Ø 204 - 280
(Ø 10.984 - 13.976 ")
Ø 279 - 355
(Ø 13.937 - 16.929 ")
Ø 354 - 430
(Ø 16.890 - 19.882 ")
Ø 429 - 505
(Ø 19.843 - 22.835 ")
Ø 504 - 580
(Ø 22.795 - 25.787 ")
Ø 579 - 655
K 45°&60°
K 75°&90°
K 80°
K 90°&95°
Ø 204 - 655
(Ø 8.032 - 25.787 ")
K95°
K90°
K 90°
Ø 48 - 521
(Ø 1.890 - 20.512 ")
Ø 203 - 676
(Ø 7.992 - 26.614 ")
JUMBO
Ø 654 - 1105
(Ø 25.748 - 43.504 ")
Ø 1104 - 1630
(Ø 43.465 - 64.173 ")
Ø 1629 - 2155
(Ø 64.134 - 84.843 ")
Ø 498 - 2021
(Ø 19.606 - 79.567")
Ø 653 - 1651
(Ø 25.709 - 65.000 ")
Ø 2154 -2680
(Ø 84.803 - 105.512 ")
Ø 2679 - 3205
(Ø 105.472 - 126.181 ")

Features

5 Bridge bars for boring

Ø 654–3205 mm *(Ø 25.748–126.181 ")* (also OD-overturning Ø 498–3071 mm (Ø 19.606–120.906 ") and back-boring Ø 653–3226 mm *(Ø 25.709–127.008 ")*.

Jumbo Bridge bars made of high tensile aluminium with spindle steel interfaces, are designed to hold two classic Bridge bars in several positions.

Sizes A731S001, 002, 003 are delivered with 4 locking screws to be fitted onto a milling cutter holder, flange mounting Type 569, spigot Ø 60 mm *(Ø 2.362 ")*- or to be fitted directly onto the machine spindle (DIN 2079/50 workpiece side), using the centering spigot shown in accessories. Jumbo Bridge bars are delivered with two lifting rings.

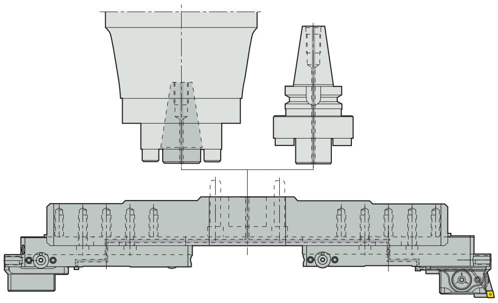
Sizes A731S004-...* and A731S005-...* are available on request, with standard or specific spindle fitting possibilities, according to the machine:

Capacity DCN-DCX Ø mm *(inch)*	Designation	Dimensions in mm (inch) (see drawing on Product page)							KG
		DCB	LF	HaTB	LB	CBDP	WB	DCON	
2154–2680 *(84.803–105.512 ")*	A731S004-...*	*	70 *(2.75591")*	300 *(11.811")*	160 *(6.29921")*	*	2140 *(84.25197")*	*	*
2679–3205 *(105.472–126.181 ")*	A731S005-...*	*	110 *(4.33071")*	400 *(15.748")*	200 *(7.87402")*	*	2665 *(104.9213")*	*	*

*designation code and dimensions will be completed related to the spindle fitting type.

Main features

Jumbo Bridge bars



The new Jumbo Bridge bars 'S' feature through coolant channels to feed the coolant from the holder or the flange mount towards the two standard Bridge bars, and have a complementary locking screw of the standard Bridge bars.

Note! These new Jumbo Bridge bars 'S' can hold all classic Bridge bars (the new 'S', or the previous ones): when using the previous ones, the complementary clamping screw cannot be used. Through coolant to the cutting edge is only possible when using 'S' Jumbo Bridge bars and 'S' standard Bridge bars. In order to keep balance, do not mix new and previous standard Bridge Bars and blocks on the same Jumbo Bridge bar.

Features

6 Bridge bars for boring

Ø 204–655 mm *(Ø 8.032–25.787 ")* also OD-overturning Ø 48–521 mm *(Ø 1.890–20.512 ")* and back-boring)

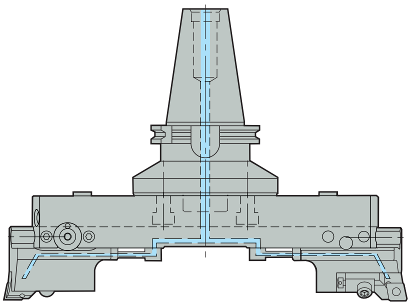
Bridge bars have a machine side connection Ø 130 mm *(Ø 5.118 ")* for direct fitting onto arbors for Bridge bars (SA and HSK) or onto the Graflex® adapter.

When using the Graflex® adapter, extensions are possible as well as spindle flange clamping, see Graflex® modular system.
Angular position of the Bridge bar every 30° onto the arbors or Graflex® adapter, for optimized magazine storage.

Bridge bars can hold rough, fine, counterweight or Graflex® boring blocks.
The boring blocks are locked onto the Bridge bar by means of two cylinders actuated by three clamping screws: One of the clamping screws has a stop disc, which limits the block's sliding stroke inside its setting capacity and stops the block from sliding out of the Bridge bar. Precise and step free block sliding for diameter adjustment 38 mm *(Ø 1.496 ")* stroke on radius, using the block's adjusting screw which is linked to the retaining pin of the Bridge bar.

Coolant through the Bridge bars and the boring blocks, towards the cutting edges.

Max RPM, see page 564.



For the Bridge bar and Jumbo Bridge bar selection, related to the boring, OD-overturning or back-boring diameter to be produced, see Bridge bar selection charts, pages 553-558.

Features

Rough boring block

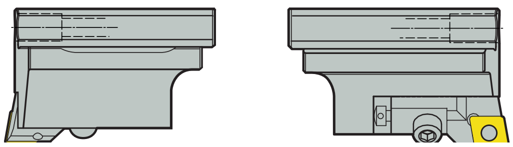
A large twin rough boring head requires two rough boring blocks, each equipped with a cartridge.
Rough boring block through coolant, towards the cutting edge.

When using the Graflex® adapter, extensions are possible as well as spindle flange clamping, see Graflex® modular system.

Angular position of the Bridge bar every 30° onto the arbors or Graflex® adapter, for optimized magazine storage.

Bridge bars can hold rough, fine, counterweight or Graflex® boring blocks.

Cartridges



A large range of cartridges is available:
- Cartridges with 90° lead angle, recommended in most of the boring applications for a lower power consumption.
- Cartridges with 80° lead angle, recommended for through hole boring (and chamfering), particularly in cast iron to avoid exit failure. The power consumption is higher.
- Other cartridges with ISO5611/h1 = 16 mm *(0.629 ")* fitting interface are suitable.

NOTE! The two cartridges can be set on the same diameter (symmetrical boring) or in a staggered position (staggered boring). A cartridge raising corner shim is available as an accessory (Part No. 18LS0316). Assembling and setting procedures, see Instructions pages.

Fine boring block and counterweight block

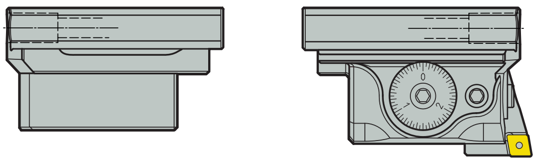
A large fine boring head requires one fine boring block equipped with an insert holder and one counterweight block.

Diameter setting mechanism of the fine boring block with a micro-metric setting screw (1 increment = 5 mm *(0.197 ")* on the diameter). The setting system is protected and lubricated for life.

The precision of the mechanism guarantees repeatable accuracy. The diameter adjusting screw is located on the side of the block to offer easy access.

Fine boring block through coolant, towards the cutting edge.

Suitable fine boring insert holders A72460, A72560 or A72660



Suitable fine boring insert holders A72460, A72560 or A72660 have to be ordered separately: they are the same as on radial type fine boring heads, see page 542-543.

Assembling and setting procedures, see Instructions page.

Features

Graflex® boring blocks, for OD-overturning or back-boring

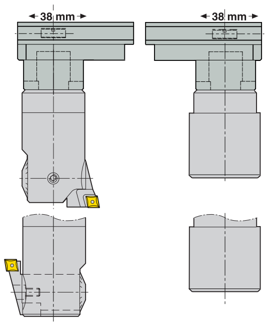
This block has a female Graflex® front connection size G5.

Any Graflex® boring head, special tool or standard Graflex® module size G5 can be mounted onto the Bridge bars, e.g. the drawing showing set-ups for OD-overturning or back-boring using two Graflex® boring blocks fitted with a Graflex® fine boring head A78050 with insert holder (e.g. A72550 for OD-turning) a OD-turningg insert holder (e.g. A789X30CC0690) and a Graflex® counterweight (e.g. Part No. BM050W78050).

Two positions of the Graflex® module are possible on the block, as it has 2x2 ball nose screw positions, and two tenon notches placed at 180°. Block and boring head through coolant, towards the cutting edge.

Assembling and setting procedures, see Instructions pages.

Graflex® boring blocks, for OD-overturning or back-boring



These new boring blocks (Part No. A731S 400, A731S 500, A731S 600, A731S 40128) can also be fitted onto the previous type of Bridge bars (Part No. A731 0_0 -without S-). Assembling and max. RPM instructions of the previous type of Bridge bars being valid. In order to keep balance, do not mix new and previous blocks on the same Bridge bar.

NOTE! These new boring blocks can also be fitted onto the previous type of Bridge bars

Advice for ’ through coolant’ accessories selection

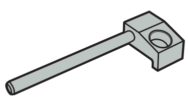
Roughing (Bridge bar with 2 rough boring blocks):

For directable coolant supply onto both cutting edges, use 2 coolant pipe connectors (Part No. AU731S00700), to be mounted onto the Bridge Bar, and 2 directable coolant supply nozzle sets (Part No. AU731S40700), to be mounted onto each rough boring block.
For normal through coolant from the block’s channel, use 2 coolant pipe connectors (Part No. AU731S00700), to be mounted onto the Bridge Bar.

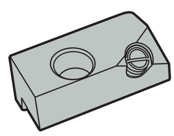
Fine boring (Bridge bar with 1 fine boring block & 1 counterweight):

Use 1 coolant pipe connector (Part No. AU731S00700), to be mounted onto the Bridge Bar in order to connect the fine boring block. As the fine boring block originally features a coolant supply nozzles, directable coolant supply is directly obtained.
OD-overturning (e.g. Bridge bar with 2 Graflex® boring blocks equipped with one fine boring head and one counterweight): Use 1 coolant pipe connector (Part No. AU731S00700), to be mounted onto the Bridge bar in order to connect the Graflex® boring block with fitted boring head. Graflex® boring block’s central coolant channel will feed coolant into the fitted boring head

Coolant pipe connector
(Part No. AU731S00700)

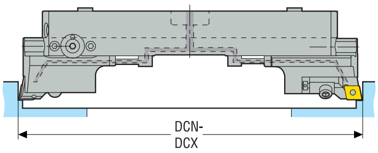


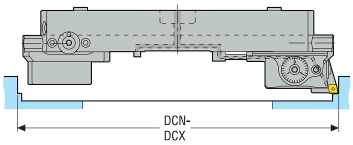
Directive coolant supply nozzle set
(Part No. AU731S40700)

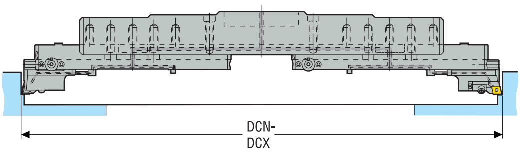


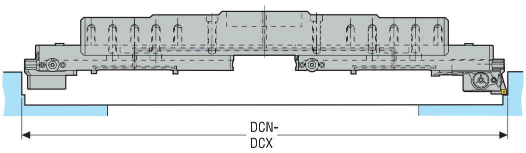
NOTE! Allowable coolant pressure = 70 bars maximum.

Building Bridge bar boring assemblies

A rough boring assembly up to Ø 655 mm requires (Ø 25.787 "): 1 Bridge bar (A731S 0_0) + 2 rough boring blocks (2x A731S 400) with 2 cartridges*.	
	Fig.1

A fine boring assembly up to Ø 655 mm requires (Ø 25.787 "): 1 Bridge bar (A731S 0_0) + 1 fine boring block (A731S 500) with 1 fine boring insert holder size 60** + 1 counterweight block (A731S 600).	
	Fig. 2

A rough boring assembly up to Ø 3205 mm (Ø 126.181 ") requires: 1 Jumbo Bridge bar (A731S 00_) + 2 Bridge bars (A731S 0_0) + 2 rough boring blocks (2x A731S 400) with 2 cartridges*.	
	Fig. 3

A fine boring assembly up to Ø 3205 mm (Ø 126.181 ") requires: 1 Jumbo Bridge bar (A731S 00_) + 2 Bridge bars (A731S 0_0) + 1 fine boring block (A731S 500) with 1 fine boring insert holder size 60** + 1 counterweight block (A731S 600).	
	Fig. 4

* Cartridges to be ordered separately.
** Insert holders to be ordered separately.

Building Bridge bar boring assemblies:
Bridge bar(s) selection chart to build a required BORING diameter

For boring DCN-DCX Ø (mm)	Jumbo Bridge bar	Classic Bridge bar(s)	For rough boring	Fig.	For fine boring	Fig.
204-280	–	A731S 010	2x A731S 400 + *2 cartridges"*	1	A731S 500 + 1 insert holder + A731S 600	2
279-355	–	A731S 020				
354-430	–	A731S 030				
429-505	–	A731S 040				
504-580	–	A731S 050				
579-655	–	A731S 060				
654-805	A731S 001	2x A731S 010	2x A731S 400 + *2 cartridges"*	3	A731S 500 + 1 insert holder + A731S 600	4
654-880		2x A731S 020				
804-955		2x A731S 030				
879-1030		2x A731S 040				
1029-1105		2x A731S 050				
1104-1255	A731S 002	2x A731S 010	2x A731S 400 + *2 cartridges"*	3	A731S 500 + 1 insert holder + A731S 600	4
1104-1330		2x A731S 020				
1179-1405		2x A731S 030				
1254-1480		2x A731S 040				
1329-1555		2x A731S 050				
1404-1630		2x A731S 060				
1629-1780	A731S 003	2x A731S 010	2x A731S 400 + *2 cartridges"*	3	A731S 500 + 1 insert holder + A731S 600	4
1629-1855		2x A731S 020				
1704-1930		2x A731S 030				
1779-2005		2x A731S 040				
1854-2080		2x A731S 050				
1929-2155		2x A731S 060				
2154-2305	A731S 004	2x A731S 010	2x A731S 400 + *2 cartridges"*	3	A731S 500 + 1 insert holder + A731S 600	4
2154-2380		2x A731S 020				
2229-2455		2x A731S 030				
2304-2530		2x A731S 040				
2379-2605		2x A731S 050				
2454-2680		2x A731S 060				
2679-2830	A731S 005	2x A731S 010	2x A731S 400 + *2 cartridges"*	3	A731S 500 + 1 insert holder + A731S 600	4
2679-2905		2x A731S 020				
2754-2980		2x A731S 030				
2829-3055		2x A731S 040				
2904-3130		2x A731S 050				
2979-3205		2x A731S 060				

Building Bridge bar OD-overturning assemblies:

A fine OD-overturning assembly up to Ø 521 mm *(Ø 20.512 ")* requires: 1 Bridge bar (A731S 0_0) + 2 Graflex® blocks (2x A731S 40128) + e.g. 1 fine boring head (A780 50) with 1 fine boring insert holder size 60* + 1 counterweight (BM050W78050).

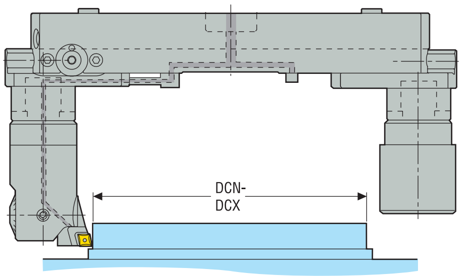


Fig. 1

A rough boring assembly up to Ø 3205 mm *(Ø 120.906 ")* requires: 1 Jumbo Bridge bar (A731S 00_) + 2 Bridge bars (A731S 0_0) + 2 rough boring blocks (2x A731S 400) with 2 cartridges*.

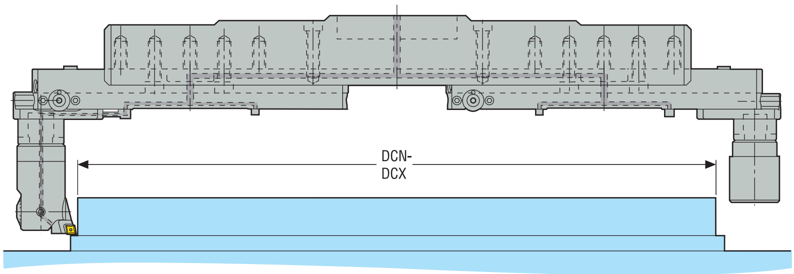


Fig. 2

* Insert holders to be ordered separately.

Building Bridge bar OD-overturning assemblies: Bridge bar(s) selection chart to build a required OD-overturning diameter

For OD-overturning DCN-DCX Ø (mm)	Jumbo Bridge bar	Classic Bridge bar(s)	For fine OD-overturning	Fig.
48-146	–	A731S 010	2x A731S 40128 + 1x A780 50 + 1 insert holder + 1x BM050W78050	1
123-221	–	A731S 020		
198-296	–	A731S 030		
273-371	–	A731S 040		
348-446	–	A731S 050		
423-521	–	A731S 060		
498-671	A731S 001	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 insert holder + 1x BM050W78050	2
498-746		2x A731S 020		
648-821		2x A731S 030		
723-896		2x A731S 040		
873-971		2x A731S 050		
948-1121	A731S 002	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 insert holder + 1x BM050W78050	2
948-1196		2x A731S 020		
1098-1271		2x A731S 030		
1173-1346		2x A731S 040		
1323-1421		2x A731S 050		
1398-1496		2x A731S 060		
1473-1646	A731S 003	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 insert holder + 1x BM050W78050	2
1473-1721		2x A731S 020		
1623-1796		2x A731S 030		
1698-1871		2x A731S 040		
1848-1946		2x A731S 050		
1923-2021		2x A731S 060		
1998-2171	A731S 004	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 insert holder + 1x BM050W78050	2
1998-2246		2x A731S 020		
2148-2321		2x A731S 030		
2223-2396		2x A731S 040		
2373-2471		2x A731S 050		
2448-2546		2x A731S 060		
2523-2696	A731S 005	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 insert holder + 1x BM050W78050	2
2523-2771		2x A731S 020		
2973-2846		2x A731S 030		
2748-2921		2x A731S 040		
2898-2996		2x A731S 050		
2973-3071		2x A731S 060		

Introduction Drilling Reaming Boring Annex

Building Bridge bar back-boring assemblies:

A fine back-boring assembly up to Ø 676 mm *(Ø 26.614 ")* requires: 1 Bridge bar (A731S 0_0) + 2 Graflex® blocks (2x A731S 40128) + e.g. 1 fine boring head (A780 50) with 1 back boring insert holder size 50* + 1 counterweight (BM050W78050).

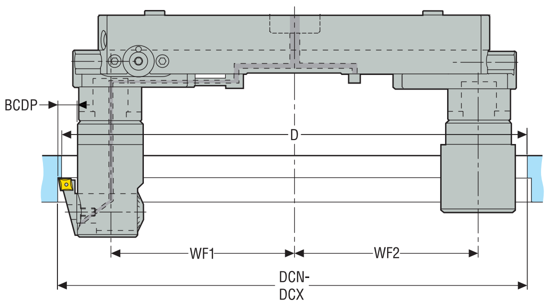


Fig. 1

A fine back-boring assembly up to Ø 3226 mm *(Ø 127.008 ")* requires: 1 Jumbo Bridge bar (A731S 00_) + 2 Bridge bars (A731S 0_0) + e.g. 1 fine boring head (A780 50) with 1 back boring insert holder size 50* + 1 counterweight (BM050W78050).

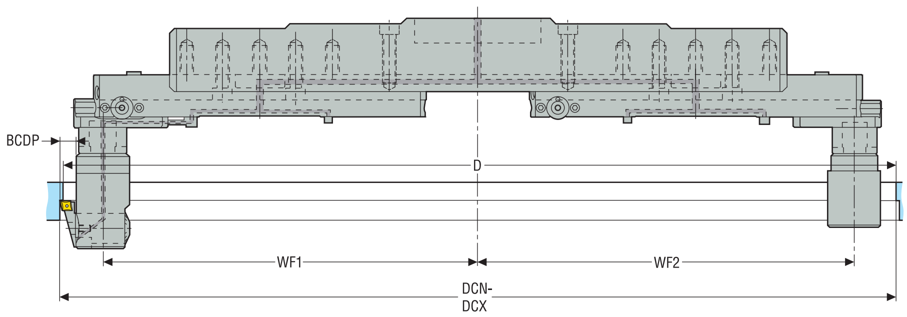


Fig. 2

* Insert holders to be ordered separately.

Determination of minimum access diameter (D min)

Balancing condition: WF1 = WF2

D min = DC + 5- BCDP

BCDP = distance between insert's cutting edge and fitted boring head's A78050 body (7,5 < BCDP < 18,5).

The two extreme cases:

Boring head A78050 set to capacity mini:

D min = DCN - 2,5

Boring head A78050 set to capacity maxi:

D min = DCX -13,5

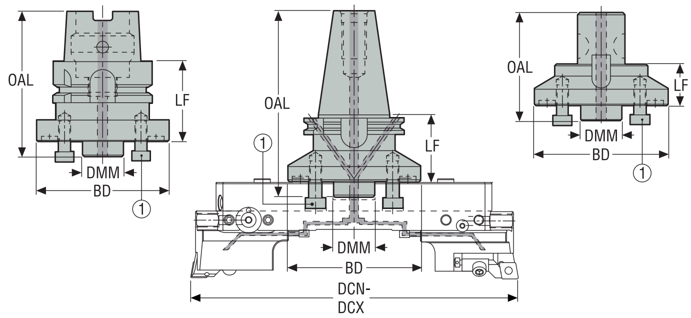
SECO

Introduction Drilling Reaming Boring Annex

Building Bridge bar back-boring assemblies: Bridge bar(s) selection chart to build a required BACK-BORING diameter

For back boring DCN-DCX Ø (mm)	Jumbo Bridge bar	Classic Bridge bar(s)	For fine back-boring	Fig.
203-301	–	A731S 010	2x A731S 40128 + 1x A780 50 + 1 back boring insert holder + 1x BM050W78050	1
278-376	–	A731S 020		
353-451	–	A731S 030		
428-526	–	A731S 040		
503-601	–	A731S 050		
578-676	–	A731S 060		
653-826	A731S 001	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 back boring insert holder + 1x BM050W78050	2
653-901		2x A731S 020		
803-976		2x A731S 030		
878-1051		2x A731S 040		
1028-1126		2x A731S 050		
1103-1276	A731S 002	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 back boring insert holder + 1x BM050W78050	2
1103-1351		2x A731S 020		
1253-1426		2x A731S 030		
1328-1501		2x A731S 040		
1478-1576		2x A731S 050		
1553-1651		2x A731S 060		
1628-1801	A731S 003	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 back boring insert holder + 1x BM050W78050	2
1628-1876		2x A731S 020		
1778-1951		2x A731S 030		
1853-2026		2x A731S 040		
2003-2101		2x A731S 050		
2078-2176		2x A731S 060		
2153-2326	A731S 004	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 back boring insert holder + 1x BM050W78050	2
2153-2401		2x A731S 020		
2303-2476		2x A731S 030		
2378-2551		2x A731S 040		
2528-2626		2x A731S 050		
2603-2701		2x A731S 060		
2678-2851	A731S 005	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 back boring insert holder + 1x BM050W78050	2
2678-2926		2x A731S 020		
2828-3001		2x A731S 030		
2903-3076		2x A731S 040		
3053-3151		2x A731S 050		
3128-3226		2x A731S 060		

ABB 731 200 – Holders and adapter for Bridge bars

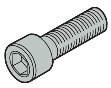
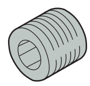
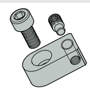


1. Adjusting screw

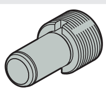
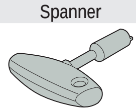
- HSK and SA holders for short assemblies
- Graflex® adapter for extended assemblies
- Angular position of the Bridge bar every 30°
- Delivered with a spigot sealing o'ring ∅ 58×3 mm

Item number	Designation	Machine side connection	Size	Workpiece side Capacity DCN-DCX Ø		OAL	LF	BD	DMM	Weight
				mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*
02503392	E3471731200	DIN 69871-ADB	DIN50 ADB	204,0 *8.031*	655,0 *25.787*	166,75 *6.565*	65,0 *2.559*	130,0 *5.118*	40,0 *1.575*	5,74 *12.650*
02503393	E3416731200	BT JIS B 6339-ADB	BT50 ADB	204,0 *8.031*	655,0 *25.787*	166,75 *6.565*	65,0 *2.559*	130,0 *5.118*	40,0 *1.575*	5,64 *12.430*
02417268	E9306731200	ISO 12164-1/ DIN 69893-A	HSK-A100	204,0 *8.031*	655,0 *25.787*	115,0 *4.528*	65,0 *2.559*	130,0 *5.118*	40,0 *1.575*	4,72 *10.410*
00056616	A731200	GRAFLEX	G7	204,0 *8.031*	655,0 *25.787*	90,0 *3.543*	40,0 *1.575*	130,0 *5.118*	40,0 *1.575*	3,78 *8.330*

Spare parts

For	Assembly screw	Key	Sealing Screws	Tenon
				
E3471731200	950D1230	10SMS795	950A0606	–
E3416731200	950D1230	10SMS795	950A0606	–
E9306731200	950D1230	10SMS795	–	–
A731200	950D1230	10SMS795	–	90M7

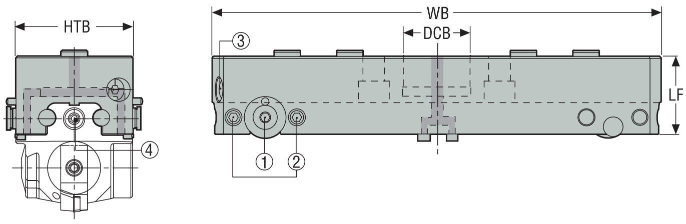
Accessories

For	Coolant tube	Sealing plugs	Spanner
			
E3471731200	–	–	–
E3416731200	–	–	–
E9306731200	20E9306	02E9306	03E9306
A731200	–	–	–

*Tightening torque 80 Nm. For application details, refer to the operating instructions supplied with the Bridge bars and Boring blocks.
Accessories, to be ordered separately

BB 731S0x0 – Bridge bars

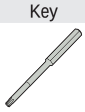
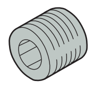
- Coolant through the Bridge bar



1. Locking screw with stop disc
2. Locking screw
3. Retaining pin
4. Diameter setting screw

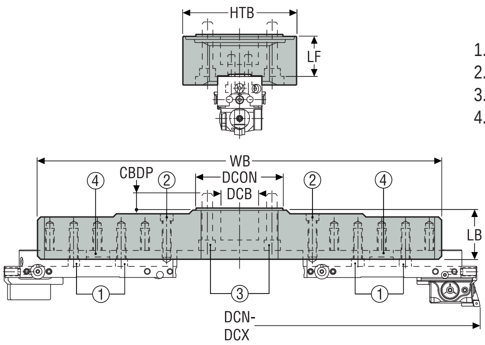
Item number	Designation	Workpiece side Capacity DCN-DCX Ø		HTB	WB	DCB	LF	Weight
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*
02753664	A731S010	204,0 *8.031*	280,0 *11.024*	70,0 *2.756*	195,0 *7.677*	40,0 *1.575*	47,0 *1.850*	3,43 *7.560*
02753668	A731S020	279,0 *10.984*	355,0 *13.976*	70,0 *2.756*	269,0 *10.591*	40,0 *1.575*	47,0 *1.850*	4,92 *10.850*
02753670	A731S030	354,0 *13.937*	430,0 *16.929*	70,0 *2.756*	344,0 *13.543*	40,0 *1.575*	47,0 *1.850*	6,4 *14.110*
02753673	A731S040	429,0 *16.890*	505,0 *19.882*	70,0 *2.756*	419,0 *16.496*	40,0 *1.575*	47,0 *1.850*	7,9 *17.420*
02753675	A731S050	504,0 *19.843*	580,0 *22.835*	70,0 *2.756*	494,0 *19.449*	40,0 *1.575*	47,0 *1.850*	10,4 *22.930*
02753677	A731S060	579,0 *22.795*	655,0 *25.787*	70,0 *2.756*	569,0 *22.402*	40,0 *1.575*	47,0 *1.850*	12,3 *27.120*

Spare parts

For DCN-DCX	Key	Key (T-handle)	Locking key	Locking screw
				
204-655	H6B-H5.0L	DOUBLE-T	03HL05	19A71060

**Tightening torque 20 Nm of the locking screws (2) and locking screw with stop disc (1).
Before diameter setting, make sure retaining pin is engaged. For application details, refer to the operating instructions supplied with the Bridge bars and boring blocks.
Max RPM, see page(s) 564
*For OD-overturning capacities, see Guide page(s) 555-556
For larger diameters, see Jumbo Bridge bars on page(s) 561

JBB 731S00 – Jumbo Bridge bars



1. Assembly screw
2. Locking screw
3. Fixing screw
4. Sealing plug

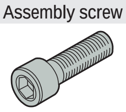
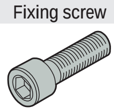
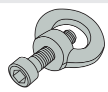
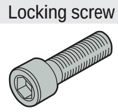
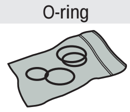
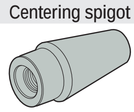
- Jumbo Bridge bars are designed to hold two classic Bridge bars in several positions
- Through coolant Jumbo Bridge bars

Item number	Designation	Workpiece side Capacity DCN-DCX Ø		HTB	LF	WB	DCON	DCB	CBDP	LB	Weight	**
		mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	
02828506	A731S001	654,0 *25.748*	1105,0 *43.504*	180,0 *7.087*	63,0 *2.480*	640,0 *25.197*	135,0 *5.315*	60,0 *2.362*	24,0 *0.945*	77,0 *3.031*	20,25 *44.640*	–
02828516	A731S002	1104,0 *43.465*	1630,0 *64.173*	200,0 *7.874*	50,0 *1.969*	1090,0 *42.913*	135,0 *5.315*	60,0 *2.362*	24,0 *0.945*	80,0 *3.150*	34,5 *76.060*	–
02904383	A731S003	1629,0 *64.134*	2155,0 *84.843*	200,0 *7.874*	50,0 *1.969*	1615,0 *63.583*	135,0 *5.315*	60,0 *2.362*	24,0 *0.945*	80,0 *3.150*	58,0 *127.870*	**

*Boring, OD-overturning and back-boring capacities for Jumbo and Bridge bars combinations, see Guide page(s) 553-558.
**Larger sizes A731S004-... (∅ 2154-2680 mm) and A731S005-... (∅ 2679-3205 mm) available on request, see Guide page(s) 549

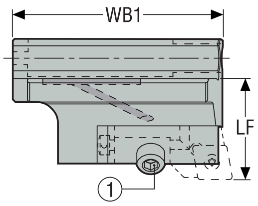
Spare parts

Accessories

For DCN-DCX	Assembly screw	Fixing screw	Lever screw	Locking screw	O-ring	Sealing plugs	Centering spigot
							
654-1105	950D1240	950D1670	90AS03	950D1250	90JT02	AU731S01100	E447153960
1104-1630	950D1240	950D1680	90AS03	950D1250	90JT02	AU731S01100	E447153960
1629-2155	950D1240	950D16120	90AS03	950D1250	90JT02	AU731S01100	E447153960

*** Set of O-ring seals contains 6 O-ring seals ∅ 6 mm for the coolant channels and 1 O-ring seal ∅ 60 mm for the holding bore of Jumbo Bridge bars.
Accessories, to be ordered separately

BBB 731S0xx – for boring blocks and Jumbo bridge bars

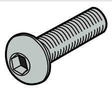
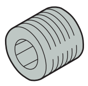
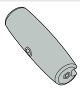
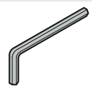
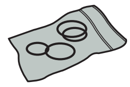


- For fitting onto Bridge bars
- Coolant through the rough, fine and Graflex boring blocks

1. Assembly screw

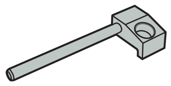
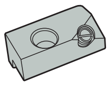
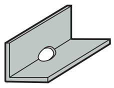
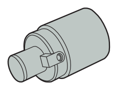
Item number	Designation	Type of boring block	Workpiece side Capacity DCN-DCX Ø		DCB	BD	WB1	WB2	LF	LF1	HTB	Weight	Design
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*	
02753679	A731S400	Rough boring block*	204,0 *8.031*	2155,0 *84.843*	–	–	97,0 *3.819*	–	47,0 *1.850*	–	70,0 *2.756*	1,33 *2.930*	A
02753680	A731S500	Fine boring block**	204,0 *8.031*	2155,0 *84.843*	–	–	97,0 *3.819*	–	47,0 *1.850*	–	70,0 *2.756*	1,41 *3.110*	B
02753682	A731S600	Counterweight	204,0 *8.031*	2155,0 *84.843*	–	–	97,0 *3.819*	–	–	–	70,0 *2.756*	1,49 *3.280*	C
02753687	A731S40128	Graflex size G5***	48,0 *1.890*	2021,0 *79.567*	28,0 *1.102*	50,0 *1.969*	97,0 *3.819*	30,0 *1.181*	38,0 *1.496*	25,0 *0.984*	70,0 *2.756*	0,98 *2.160*	D

Spare parts

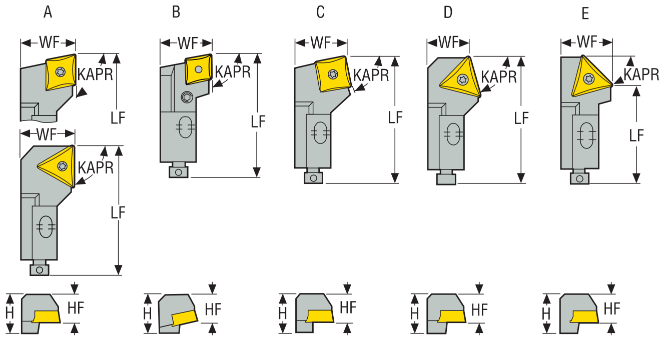
For	Assembly screw	Barrel locking screw	Key	Key (T-handle)	Locking key	O-ring
						
A731S400	950CB0830	–	H6B-H5.0L	DOUBLE-T	–	90JT01
A731S500	950D0612	950L1016	H6B-H5.0L	DOUBLE-T	–	90JT01
A731S600	–	–	H6B-H5.0L	DOUBLE-T	–	–
A731S40128	90F5	–	H6B-H5.0L	DOUBLE-T	03H05	90JT01

* Cartridges to be ordered separately, see page(s) 563
** Fine boring insert holders size 60 to be ordered separately, see page 542
*** When using boring head A78050, use the counterweight mass BM050W78050, see Accessories below.
****Set of O-ring seals contains 6 O-ring seals ∅ 6 mm for the coolant channels and 1 O-ring seal ∅ 60 mm for the holding bore of Jumbo Bridge bars.
Accessories, to be ordered separately

Accessories

For	Connecting pipe	Coolant kit	Corner shim	Counterweight
				
A731S400	AU731S00700	AU731S40700	18LS0316	–
A731S500	AU731S00700	–	–	–
A731S600	–	–	–	–
A731S40128	AU731S00700	–	–	BM050W78050

Cartridges, for Bridge bars rough boring block A731S400



- For fitting onto the rough boring block

Item number	Designation	KAPR°	LF	WF	H	HF	Weight	Suitable insert size	Design
			mm *Inch*	mm *Inch*	mm *Inch*	mm *Inch*	kg *lbs*		
00039871	SCGCL16CA-16	90,0 °	55,0 *2.165*	25,0 *0.984*	20,0 *0.787*	16,0 *0.630*	0,2 *0.440*	CC..16..	A
00009197	STGCL16CA-16	90,0 °	63,0 *2.480*	24,96 *0.983*	25,0 *0.984*	16,0 *0.630*	0,2 *0.440*	TC..16T3..	A
02600181	STGCL16CA-22	90,0 °	55,0 *2.165*	25,0 *0.984*	20,0 *0.787*	16,0 *0.630*	0,2 *0.440*	TC..2204..	A
02484356	PCGNL16CA-12	90,2 °	63,0 *2.480*	25,0 *0.984*	25,0 *0.984*	16,0 *0.630*	0,2 *0.440*	CN..12..	B
00039872	SSRCL16CA-15	75,0 °	63,0 *2.480*	25,0 *0.984*	20,0 *0.787*	16,0 *0.630*	0,2 *0.440*	SC..15..	C
00008750	STRCL16CA-16	75,0 °	63,0 *2.480*	24,96 *0.983*	25,0 *0.984*	16,0 *0.630*	0,2 *0.440*	TC..16T3..	D
02585320	STRCL16CA-22	75,0 °	63,0 *2.480*	25,0 *0.984*	20,0 *0.787*	16,0 *0.630*	0,2 *0.440*	TC..2204..	D
00009194	STTCL16CA-16	60,0 °	63,0 *2.480*	14,96 *0.589*	25,0 *0.984*	16,0 *0.630*	0,2 *0.440*	TC..16T3..	D
00009193	STSCL16CA-16	45,0 °	53,0 *2.087*	24,96 *0.983*	25,0 *0.984*	16,0 *0.630*	0,2 *0.440*	TC..16T3..	E

Spare parts for cartridges; see catalog Turning

Introduction Drilling Reaming Boring Annex

Recommended machining conditions

Best performances are obtained with through coolant (higher machining data, better surface finish, better chip evacuation).

Rough boring depends on the priorities: higher feed or larger chip removal use symmetrical setting of the cartridges (most common method, double feed compared to staggered setting), or staggered setting (double depth of cut).
In fine boring in steel, with good conditions, we recommend to use Cermet inserts, for high speeds and long life.

For detailed user instructions, please refer to the operating instructions supplied as part of the delivery content of the boring heads and with the Steadyline® bars. These operating instructions can also be downloaded from www.secotools.com.

Troubleshooting

Please refer to troubleshooting advice, in rough boring chapter page 497, or fine boring chapter page 536. Balancing is performed by setting both graduated rings in accordance with the diameter to be bored (no chart needed).

Maximum speeds for Bridge bars

Due to the large sizes of Bridge bar boring heads, unsuitable RPM programming could cause unpredictable damage.
Below max. RPM are for present Bridge bar boring assemblies using present Bridge bar types (Part No. A731S 0_0) rough boring, fine boring and counterweight boring blocks (Part No. A731S _00) and Jumbo Bridge bar (Part No. A731 00_). For other assemblies, please contact your local Seco representative.

NOTE! when using present boring blocks (Part No. A731S 400, A731S 500, A731S 600, A731S 40128) onto previous type Bridge bars (Part No.A731 0_0 -without S-), the max RPM to consider are the ones recommended for the previous type Bridge Bars.To maintain balance,do not mix new and previous blocks on the same Bridge bar.

Head based on	Capacity DCN-DCX Ø mm *(inch)*	Max. RPM	Implied max cutting speed v_c at min. Cap.	Implied max cutting speed v_c at max. Cap.
	mm *(inch)*	(RPM)	(m/min)	(m/min)
Bridge bar boring heads (with two boring blocks set symmetrically)				
A731S010	204 - 280 (*8.0315 - 11.0236 "*)	1600	1025	1407
A731S020	279 - 355 (*10.9843 - 13.9764 "*)	1150	1007	1282
A731S030	354 - 430 (*13.937 - 16.9291 "*)	900	1000	1215
A731S040	429 - 505 (*16.8898 - 19.8819 "*)	750	1010	1189
A731S050	504 - 580 (*19.8425 - 22.8346 "*)	650	1029	1184
A731S060	579 - 655 (*22.7953 - 25.7874 "*)	550	1000	1131
Jumbo bridge bars (with two identical Bridge bars and boring blocks set symmetrically)				
A731S 001	654-1105 (*25.748 - 43.50394 "*)	170	349	590
A731S 002	1104-1630 (*43.46457 - 64.17323 "*)	100	346	512
A731S 003	1629-2155 (*64.13386 - 84.84252 "*)	70	358	473
A731S 004	2154-2680 (*84.80315 - 105.5118 "*)	50	338	420
A731S 005	2679-3205 (*105.4724 - 126.1811 "*)	40	336	402

Note! The maximum speeds are related to the boring head's mechanical design and balancing quality. Speeds inside these limits have to be chosen in regard to the other machining conditions, e.g. workpiece material, cutting edge (insert), tooling length, machine spindle.

Custom made boring solutions

Seco Tools Tooling Systems has a strong experience in the design of custom made solutions for boring operations:

- Steadyline® vibration damping rough and fine boring solutions
- Multi-edge boring bars
- Special extensions with guiding pads, for long overhang operations
- Combined bars for drilling, boring, chamfering, reaming, threading operations...

Please contact your local Seco representatives for more information.

A selection of inserts for boring

This is a selection of inserts from the total Seco range, which are particularly suitable for boring. The selected insert sizes are those suitable for the range of boring heads.
Inserts for rough boring have high toughness to guarantee high metal removal and positive geometries to minimise spindle torque requirement.

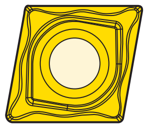
Inserts for fine boring have positive geometries and sharp edge wear resistant grades for accurate control of the bore tolerance, geometry and surface finish.

Code key, examples

Geometry

CCMT120408 - F2 - TP3501

Size (ISO designation) | Seco grade

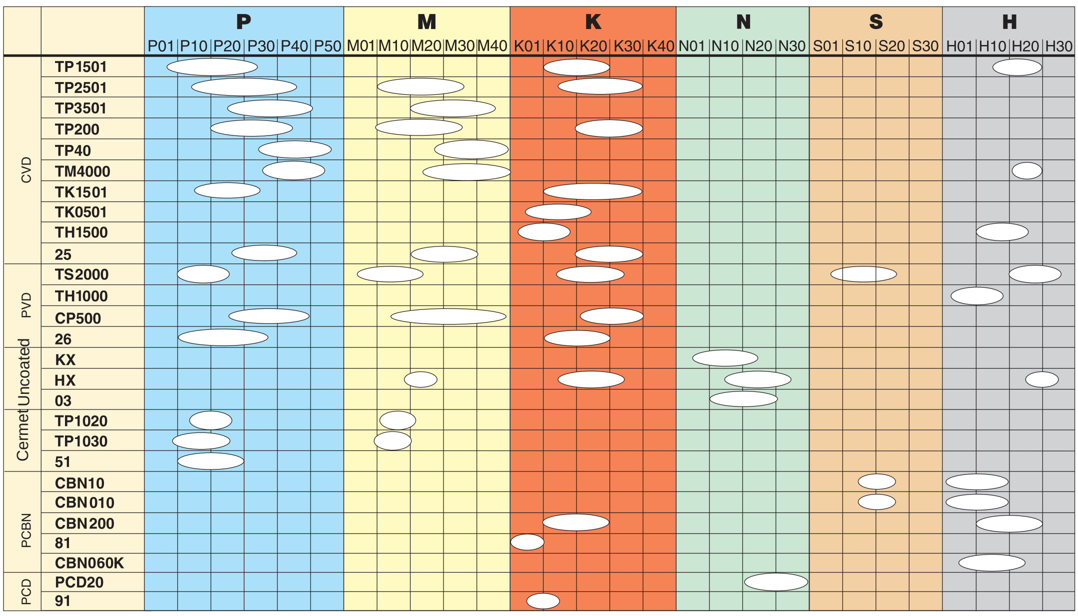


Geometry

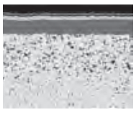
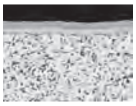
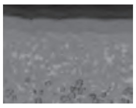
CCGT09T304 - 03 - G3

Size (ISO designation) | EPB geometry

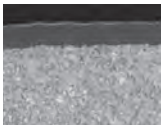
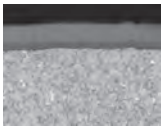
Insert grades for boring – ISO workpiece material classification



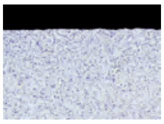
CVD coated grades recommended for boring

	**TP1501**	Duratomic® technology coated grade. Highly heat and wear resistant grade extremely well suited for productive general turning of steels and a useful backup in other material groups. Ti(C,N) + Al_2O_3 + ...
	**TP2501**	Duratomic® technology coated grade. Designed with high wear resistance and edge strength applicable in a wide range of turning applications in steels as well as many stainless steels and cast irons. Ti(C,N) + Al_2O_3 + ...
	**TP3501**	TP3501 is intended for boring operations where the primary demand is toughness and reliability in machining steels and stainless steels. Ti(C,N) + Al_2O_3 DURATOMIC®
	**TP200**	TP200 is a universal grade with high versatility. The grade is intended for a wide range of turning applications in both steel and stainless steel and is also a good choice for cast iron. Ti(C,N) + Al_2O_3 + TiN
	**TP40**	TP40 is the basic grade for turning in the P40 range. Very tough grade for demanding operations on steel castings and forging, and on all types of stainless steel. TiC/Ti(C,N) + TiN
	**TK0501**	Duratomic® technology coated grade. A extremely wear resistant optimized grade choice for machining of grey cast iron and easier ductile cast irons. Ti(C,N) + Al_2O_3 + Used Edge Detection (Chrome)
	**TK1501**	Duratomic® technology coated grade. A highly wear resistant grade for cast irons in general as well as in steels. The grade is particularly capable in machining of ductile (nodular) cast irons also in more demanding setups and interrupted cuts. Ti(C,N) + Al_2O_3 + Used Edge Detection (Chrome)
	**TM4000**	TM4000 is intended for machining of stainless steel. The wear resistance together with the superior edge toughness make the grade the first choice in stainless steel applications. Ti(C,N) + Al_2O_3 DURATOMIC®
	**TH1500**	DURATOMIC® technology coated grade. An extremetly hard super micrograin grade intended for machining of partly hardened steels and provide an alternative for cast iron finishing. Ti(C,N) + Al_2O_3
	**25**	Universal grade. The grade is intended for a wide range of boring applications in steel, stainless steel and cast iron. Good combination of wear resistance and toughness. Ti (C, N) + Al2O3.

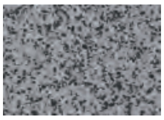
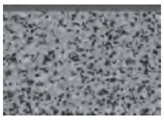
PVD coated grades recommended for boring

	**TS2000**	Hard micrograin principally intended for finishing operations in superalloys and titanium alloys. Also performs well in finishing operations on stainless steel. (Ti,Al)N + TiN
	**CP500 & 26**	A very tough micrograin intended for finishing and medium roughing of stainless steel. Can handle intermittent cutting operations very well. CP500 is also an alternative for aluminium alloys. (Ti,Al)N + TiN
	**TH1000**	Very hard supermicrograin grade intended for partly hardened steel components as well as generally work-piece materials such as superalloys and due to remarkable edge toughness it also provides high performance in interupted cuts and hard-surface removal.

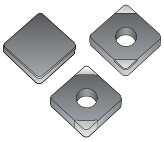
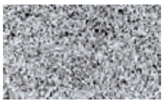
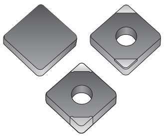
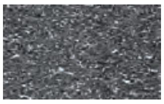
Uncoated grades recommended for boring

	**KX & 03**	Micrograin intended for machining aluminum and other non-ferrous materials.
	**HX**	Universal uncoated grade intended for machining of cast iron and hardened steels useful also in non-ferrous materials.

Cermet recommended for boring

	**TP1020**	Cermet with very high wear resistance intended for highest surface finish requirements with predictability and control in steel and stainless steel.
	**TP1030**	PVD-coated Cermet with very high wear resistance intended for high surface finish and productivity requirements with predictability in steel and stainless steel mainly. Ti-Al-Si-N nanolaminate coating.
	**51**	Cermet with very high wear resistance. Intended for finishing operations on steels, in which strict demands are made on surface finish.

CBN and PCD grades recommended for boring

	**CBN010**	Format: Solid, full-face brazed layer and brazed tips (single and double sided). Composition: 50% CBN content grade with an average grain size of 2 µm and a TiC ceramic binder. Coating: No coating.
	**CBN10 & 81 (EPB)**	CBN, Cubic boron nitride grade, for light continuous to moderate interrupted cuts. Intended for fine boring in hardened steel and in superalloys.
	**CBN060K**	Solid, brazed tips (single and double sided) or sintered layer First choice for continuous to moderate interrupted cuts in hardened steel ap < 0,5 mm (*0.019685 "*). New (Ti,Si,Al)N PVD coating developed for high speed machining. New unique superalloy binder.
	**CBN200**	CBN, Cubic boron nitride grade, for finishing of pearlitic cast iron, and sintered iron.
	**PCD20 & 91**	PCD, polycrystalline diamond, for boring in aluminium and Al-alloys, copper, brass, bronze and synthetic materials.

Inserts, recommended for rough boring, with cutting data

Designation	Uncoated Ground flank and pressed chipbreaker			Coated Pressed chipbreaker							Coated Ground flank direct chip-breaker, left hand cutting	Max depth of cut ap (mm)	Feed per tooth Fz (mm/ tooth)
	KX	HX	03D3	TP2501	TP3501	TP40	TM4000	23C4	TP200	TK1501	CP500		
CPGT050204			02434654					02434652				2	0,08-0,2
CCMT060204-F1				02960857	03095430	00008505	02566087		74066010	03062942	00096854	2	0,1-0,22
CCMT060204-F2		74011732				74018652	02566088		74068123			2	0,1-0,22
CCGT060204L-UX											02497631	2	0,1-0,22
CCGT060204F-AL	00015710											2	0,1-0,22
CCMT060204-M3				02960858	03095431					03062944		2	0,1-0,22
CCMT09T308-F1				02960861	03095443	00008518	02566095		74065997	03063857	00096858	2,5	0,1-0,3
CCMT09T308-MF2				02956309	03095446		02754823				02754822	2,5	0,1-0,3
CCGT09T304L-UX											02497640	2,5	0,1-0,3
CCGT09T308F-AL	00015754											2,5	0,1-0,3
CCMT120408-F1				02960854	03095449					03062626		4	0,15-0,4
CCMT120408-MF2				02956311	03095452							4	0,15-0,4
CCGT120408L-UX											02610062	4	0,15-0,4
CCGT120408F-AL	00015790											5	0,15-0,4
SCMT060204-M3				02960423	03096621							2,5	0,1-0,22
SCMT09T308-F1				02960396	03096625				74069789	03062629	00099708	2,5	0,1-0,3
SCMT09T308-MF2				02956318	03096627						02755042	2,5	0,1-0,3
SCMT120408-F1				02960397	03096630						00099804	4	0,15-0,4
SCMT120408-M3				02960429	03096631					03063990		4	0,15-0,4
TCMT16T308-F1				02960408	03096643	74004572	02566147		74066002		00091357	5	0,15-0,4
TCMT16T308-MF2				02956323	03096645						02755046	5	0,15-0,4
TCGT16T308F-AL	00015875											4	0,15-0,4
CCMT160508-F2							02566098		00018067			7	0,2-0,5
CCMT160512-F2							02566099		00018082			7	0,2-0,5
SCMT150512-F2						74007348						7	0,2-0,5
TCMT220408-F2									74068150			7	0,2-0,5

For recommended cutting speeds, see pages 576-577

CN.. inserts, recommended for rough boring (double sided), with cutting data

Designation	Coated Pressed chipbreaker				Max depth of cut a_p (mm)	Feed pf (mm/rev)
	TP3501	TP40	TM4000	TP200		
CNMG120408-M3	03093856			74037351	4,5	0,25-0,35
CNMG120408-MF3	03094138	74030598	02839059	00024328	4,5	0,25-0,35
CNMG120408-MF4	03272737		02566104		4,5	0,25-0,35
CNMG120408-MF			02566103		4,5	0,25-0,35
CNMG120408-MR7	03094140	74017309	02593726		4,5	0,25-0,35

For recommended cutting speeds, see pages 576-577

Warning:
When using CN.. inserts it is important to use the recommended inserts and cutting data. Using other inserts and incorrect cutting data could result in high cutting stresses and machine/workpiece damage.

Inserts, recommended for fine boring, with cutting data

Designation	Coated							Cermet			CBN				PCD		Depth of cut a_p (mm)	Feed f (mm/ rev)
	TP1501	TS2000	TK1501	CP500	26G6	TH1000	TH1500	51G1	TP1020	TP1030	CBN010	CBN060K	CBN200	81B1	PCD20	91J3		
CCGT060200								00083915									0,01-0,3	0,03-0,15
CCGT0602005-F1				02430287													0,01-0,3	0,03-0,15
CCGT060201-F1				02430307													0,01-0,3	0,03-0,15
CCGT060202					00039546			00096634									0,01-0,3	0,03-0,15
CCGT060204					00081826			00048334									0,01-0,3	0,03-0,15
CCGT060204L-UX				02497631													2	0,1-0,22
CCMT060202-F1	02960383	02614299		00096853					02754786	02754435							0,01-0,3	0,03-0,15
CCMT060204-F1	02960856	02615873	03062942	00096854		02825858	02825859		02754791	02754792							2	0,1-0,22
CCMW060202F-L1															00089760		0,01-0,3	0,03-0,15
CCMW060204F-L1															00005684		0,01-0,3	0,03-0,15
CCGW060202S-01020-LF													02464698				0,01-0,3	0,03-0,15
CCGW060204S-01020-LF											02916281		02464699				0,01-0,3	0,03-0,15
CCGW060204E-L1-B											02843086	02776337	02649599				0,01-0,3	0,03-0,15
CCGT09T301-F1				02430311													0,01-0,3	0,03-0,15
CCGT09T302					00048337			00048339									0,01-0,3	0,03-0,15
CCGT09T304					00077338			00048344									0,01-0,3	0,03-0,15
CCGT09T304L-UX				02497640													2,5	0,1-0,3
CCMT09T302-F1	02960837			00096856					02754805	02754806							0,01-0,3	0,03-0,15
CCMT09T304-F1	02960844	02615874	03063856	00096857		02731806	02731808		02754811	02754812							0,01-0,3	0,03-0,15
CCMT09T308-F1	02960853	02615876	03063857	00096858		02731807	02731809			02754821							2,5	0,1-0,3
CCMW09T304F-L1															00005686		0,01-0,3	0,03-0,15
CCMW09T308F-L1															00095357		0,01-0,3	0,03-0,15
CCGW09T304E-L1-B											02843126	02776338	02649607				0,01-0,3	0,03-0,15
CCGW09T308E-L1-B											02937148		02649608				0,01-0,3	0,03-0,15
CCGW09T304S-01020-LF											02916282		02464702				0,01-0,3	0,03-0,15
CCGW09T308S-01020-LF													02464703				0,01-0,3	0,03-0,15
TCGT110204								00000721									0,01-0,3	0,03-0,15
TCGT110201-F1				02430376													0,01-0,3	0,03-0,15
TCMT110202-F1				02430419													0,01-0,3	0,03-0,15
TCMT110204-F1	02960401			02430421													0,01-0,3	0,03-0,15
TCMT110208-F1	02960403			00098986													0,01-0,3	0,03-0,15
TCGW110204E-L1-C											02848657	02776346					0,01-0,3	0,03-0,15
TCGW110208E-L1-C											02848792						0,01-0,3	0,03-0,15
TCGW110204S-01020-LF													02464742				0,01-0,3	0,03-0,15
TCGW110208S-01020-LF													02464744				0,01-0,3	0,03-0,15
TCMW110204F-L1															00005689		0,01-0,3	0,03-0,15
WBGT030100								00083089									0,01-0,3	0,03-0,15
WBGT030102								00091845									0,01-0,3	0,03-0,15
WBGT030102L				02416632													0,01-0,3	0,03-0,15
WBGW030102														00096761		00096763	0,01-0,3	0,03-0,15
WBGW030102E-L-LF												02775169	02775170				0,01-0,3	0,03-0,15
WBGW030104E-L-LF												02775171	02775172					

For recommended cutting speeds, see page 572-573

SECO

Recommended cutting speeds for boring (related to workpiece material and insert grade)

	v_c											
SMG	KX & HX	03	TP40	TM4000	TP1501	TP2501	TP3501	TK0501	TK1501	TH1000	TH1500	CP500
P1			60-180		60-350	60-250	60-230					80-200
P2			60-180		60-350	60-250	60-230					80-200
P3			60-180		60-350	60-250	60-230					80-200
P4			60-180		60-350	60-250	60-230					80-200
P5			60-150		60-300	60-250	60-230					80-200
P6			60-140		60-300	60-230	60-200					80-180
P7			60-140		60-300	60-230	60-200					80-160
P8			60-120		60-250	60-230	60-200					80-130
P11			60-120		60-300	60-250	60-200					80-180
M1			60-130	60-180	100-200	60-200	60-200					60-160
M2			60-130	60-180	100-200	60-200	60-200					60-160
M3			60-120	60-170	100-180	60-200	60-200					60-150
M4			60-110	60-160	100-180	60-190	60-190					60-150
M5			60-110	60-150	100-180	60-180	60-180					60-150
K1			60-140		100-250		60-180	60-230	60-230			60-160
K2			60-140		100-250		60-180	60-230	60-230			60-160
K3			60-140		100-250		60-180	60-230	60-230			60-160
K4			60-140		100-250		60-180	60-200	60-200			60-160
K5			60-140		100-250		60-180	60-200	60-200			60-160
K6			60-130		100-250		60-180	60-200	60-200			60-160
K7			60-130		100-250		60-180	60-200	60-200			60-160
N1	150-800	150-800										150-800
N2	150-800	150-800										150-800
N3	150-500	150-500										150-500
N11	150-400	150-400										150-400
S1	20-50	20-50										20-50
S2	20-50	20-50										20-50
S3	20-50	20-50										20-50
S11	20-50	20-50										20-50
S12	20-50	20-50										20-50
S13	20-50	20-50										20-50
H3										50-150	50-150	
H5										50-140	50-140	
H7										50-150	50-150	
H8										30-130	30-130	
H11										30-120	30-120	
H12										30-120	30-120	
H21												
H31												

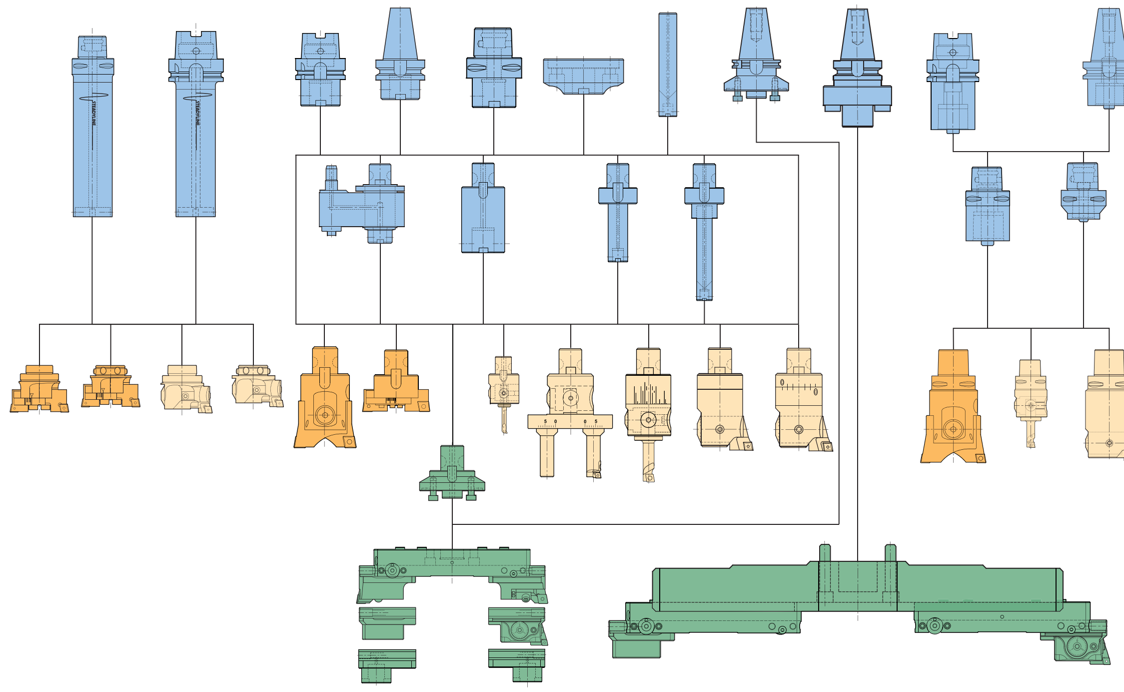
SMG = Seco material group vc= m/min
All cutting data are start values

Recommended cutting speeds for boring (related to workpiece material and insert grade)

SMG	vc												
	26	25	TS2000	TP1020	TP1030	51	CBN10/ CBN010	81	CBN200	82	PCD20	91	Axiabore
P1	80-200	60-180		100-350	100-350	100-350							80-250
P2	80-200	60-180		100-350	100-350	100-350							80-250
P3	80-200	60-180		100-350	100-350	100-350							80-250
P4	80-200	60-180		100-350	100-350	100-350							80-250
P5	80-200	60-180		100-350	100-350	100-350							70-230
P6	80-180	60-160		100-300	100-300	100-300							70-230
P7	80-160	60-160		100-250	100-250	100-250							70-230
P8	80-130	60-130		100-250	100-250	100-250							70-200
P11	80-180	60-150		100-300	100-300	100-300							70-200
M1	60-160	60-140	60-200	80-200	80-200	80-200							60-200
M2	60-160	60-140	60-200	80-200	80-200	80-200							60-200
M3	60-150	60-130	60-200	80-200	80-200	80-200							60-180
M4	60-150	60-120	60-180	80-180	80-180	80-180							60-170
M5	60-150	60-120	60-180	80-180	80-180	80-180							60-170
K1	60-160	60-160		100-250	100-250	100-250			300-1000	300-1000			60-150
K2	60-160	60-160		100-250	100-250	100-250			300-1000	300-1000			60-150
K3	60-160	60-160		100-250	100-250	100-250			300-1000	300-1000			60-150
K4	60-160	60-160		100-250	100-250	100-250			300-1000	300-1000			60-130
K5	60-160	60-160		100-250	100-250	100-250							50-100
K6	60-160	60-160		100-180	100-180	100-180							50-100
K7	60-160	60-160		100-180	100-180	100-180							50-100
N1	150-800										300-1500	300-1500	200-800
N2	150-800										300-1500	300-1500	200-800
N3	150-500										200-800	200-800	200-800
N11	150-400										180-800	180-800	200-800
S1	20-50		20-80										20-60
S2	20-50		20-80										20-60
S3	20-50		20-80										60-50
S11	20-50		20-80										20-50
S12	20-50		20-80										20-50
S13	20-50		20-80										20-50
H3							80-180	80-180					
H5							80-200	80-200					
H7							80-150	80-150					
H8							80-150	80-150					
H11													
H12													
H21													
H31													

SMG = Seco material group vc= m/min
All cutting data are start values

Suitable holders for boring heads



The boring heads feature Graflex®, Seco-Capto™, GL or BA machine side connection

The boring heads can be used on any machine type, using the suitable Graflex® adapter, Seco-Capto™ adapter or Steadyline® vibration boring/turning bar.

Steadyline® vibration damping for boring operations
Boring heads with GL or BA machine side connections are designed to be mounted on Steadyline® boring/turning bars with HSK-T/A and Seco-Capto™ machine side connections. This allows to perform rough and fine boring operations with 6xD, 8xD and 10xD projections, in very stable conditions.

Modular Graflex® and Seco-Capto™ boring bars
All bore lengths up to 6xD can be reached by selecting the required Graflex® intermediates, e.g. the extra-long ones with extension section in carbide. Highest assembly rigidity is obtained by selecting the longest and widest arbor possible, then completing with smaller intermediates.

The Graflex® and Seco-Capto™ connections guarantees a unique orientation of the boring heads, achieving a cutting edge orientation according to ISO. The Graflex® modules are designed to be clamped together by the side.

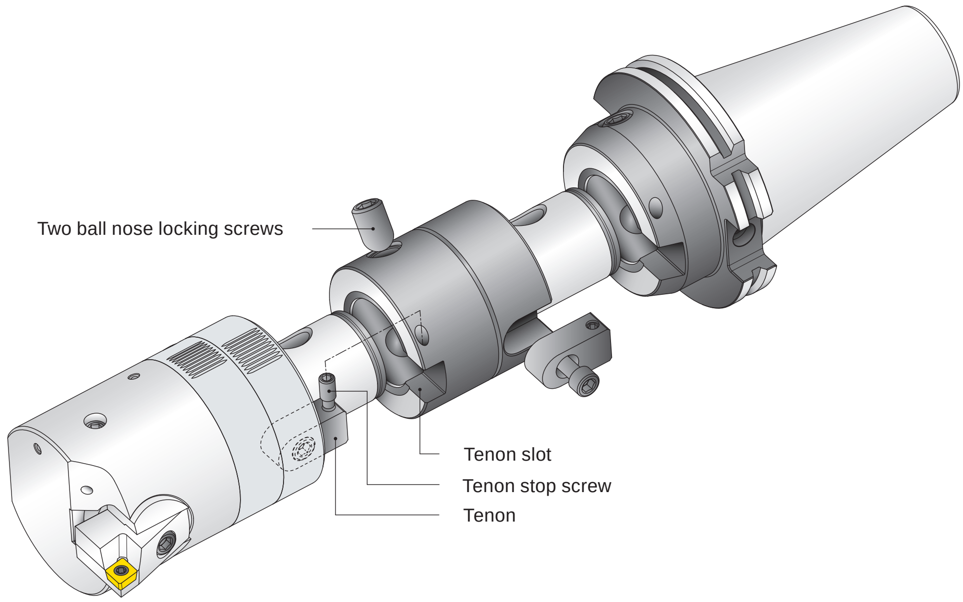
For boring heads with GL machine side connection for Steadyline®, select the shortest Steadyline® bar from the TOOLING SYSTEMS catalogue. These bar exist with HSK-T/A and Seco-Capto™ machine side connection. Other spindle types can be equipped, using the shortest Seco-Capto™ adapters.
For classic boring heads (steel), select the classic Graflex® and Seco-Capto™ arbors and intermediates from the TOOLING SYSTEMS catalogue.
For Bridge bars, see Graflex® adapters and direct holders page 559.

Note! Jumbo Bridge bars are designed to be held on milling cutter holders or to be fitted directly on a machine's spindle front.

Locking advice for Graflex® classic connection shanks G. on boring heads (using a tenon with stop screw).

For boring, no need to tighten the tenon's stop screw, as the connection's self locking action is allowed.
For rough boring in heavy duty, we recommend to apply the 'high value' torques for the Graflex® ball nose screws.

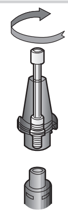
See also the detailed 'Graflex® connection assembly procedure' in the TOOLING SYSTEMS catalogue.



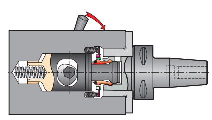
Locking advice for Seco-Capto™ connection shanks C. on boring heads: No specific advice.
For boring heads, the general instructions are applicable, see below.

Tightening torques for Seco-Capto™ receivers connections with center bolt clamping (Basic Holders, Intermediates).

Seco-Capto Size	Center bolt tightening torque (Nm)	Center bolt tightening torque (ft/lbs)
C3	40-50	30-37
C4	50-60	37-44
C5	90-100	66-74
C6	160-180	118-133
C8	160-180	118-133

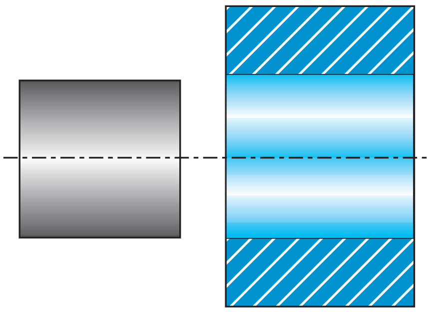


v-Capto Size	Cam tightening torque (Nm)	Cam tightening torque (ft/lbs)
C3	35	26
C4	50	37
C5	70	52
C6	90	66
C8	130	96



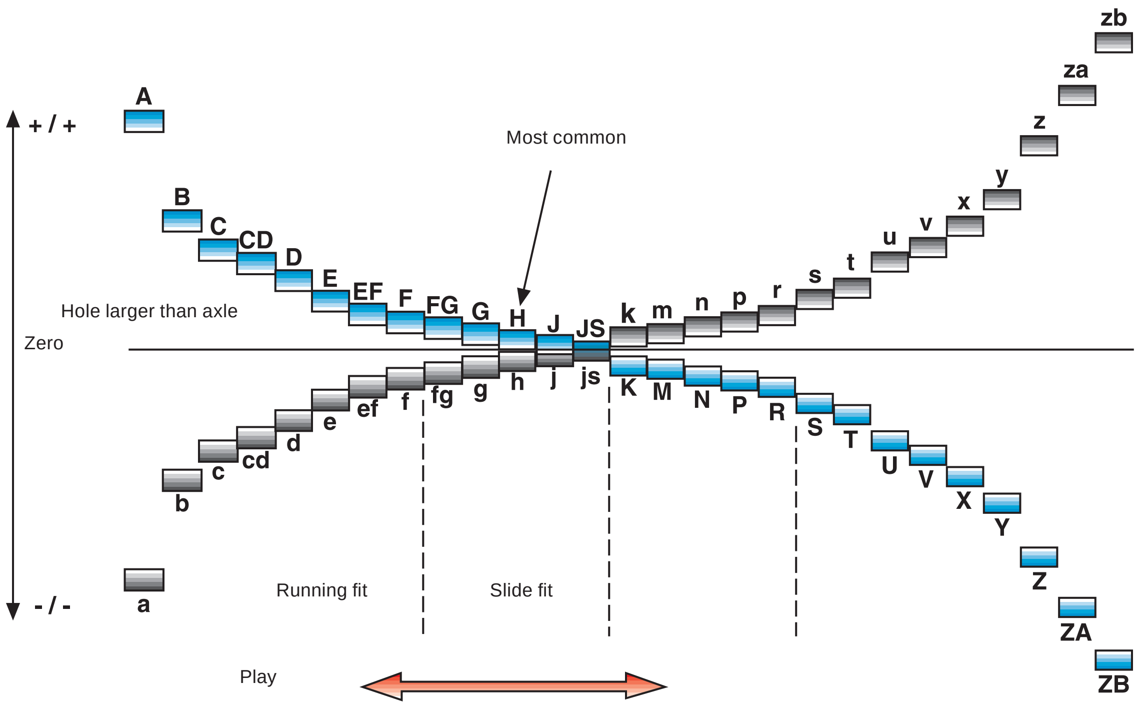
The Seco-Capto™ joint features a self-locking taper. Where the center bolt system is used, unscrew the centre bolt until the bolt head makes contact with the tool holder, causing the bolt to force the taper joint apart. When using the cam shaft side clamping system, over untightening of the cam will force the taper joint apart.

ISO Standard tolerance for holes and shafts



Axle tolerance position is denominated with small letters.

Bore tolerance position is denominated with CAPITAL LETTERS.



ISO tolerance table

ISO tolerances for holes (µm)													
Hole dia mm *(inch)*	**D10**	**E9**	**F7**	**F8**	**G7**	**G9**	**H6**	**H7**	**H8**	**H9**	**H10**	**H11**	**H12**
≤ 3 *(0.118 ")*	+60 +20	+39 +14	+16 +6	+20 +6	+12 +2	+27 +2	+6 0	+10 0	+14 0	+25 0	+40 0	+60 0	+100 0
3 ≥ 6 *(0.236 ")*	+78 +30	+50 +20	+22 +10	+28 +10	+16 +4	+34 +4	+8 0	+12 0	+18 0	+30 0	+48 0	+75 0	+120 0
6 ≥ 10 *(0.394 ")*	+98 +40	+61 +25	+28 +13	+35 +13	+20 +5	+41 +5	+9 0	+15 0	+22 0	+36 0	+58 0	+90 0	+150 0
10 ≥ 18 *(0.708 ")*	+120 +50	+75 +32	+34 +16	+43 +16	+24 +6	+49 +6	+11 0	+18 0	+27 0	+43 0	+70 0	+110 0	+180 0
18 ≥ 30 *(1.181 ")*	+149 +65	+92 +40	+41 +20	+53 +20	+28 +7	+59 +7	+13 0	+21 0	+33 0	+52 0	+84 0	+130 0	+210 0
30 ≥ 50 *(1.969 ")*	+180 +80	+112 +50	+50 +25	+64 +25	+34 +9	+71 +9	+16 0	+25 0	+39 0	+62 0	+100 0	+160 0	+250 0
50 ≥ 65 *(2.559 ")* 65 ≥ 80 *(3.150 ")*	+220 +100	+134 +60	+60 +30	+76 +30	+40 +10	-	+19 0	+30 0	+46 0	+74 0	+120 0	+190 0	+300 0
80 ≥ 100 *(3.937 ")* 100 ≥ 120 *(4.724 ")*	+260 +120	+159 +72	+71 +36	+90 +36	+47 +12	-	+22 0	+35 0	+54 0	+87 0	+140 0	+220 0	+350 0
120 ≥ 140 *(5.512 ")* 140 ≥ 160 *(6.299 ")* 160 ≥ 180 *(7.087 ")*	+305 +145	+185 +85	+83 +43	+106 +43	+54 +14	-	+25 0	+40 0	+63 0	+100 0	+160 0	+250 0	+400 0
180 ≥ 200 *(7.874 ")* 200 ≥ 225 *(8.858 ")* 225 ≥ 250 *(9.843 ")*	+355 +170	+215 +110	+96 +50	+122 +50	+61 +15	-	+29 0	+46 0	+72 0	+115 0	+185 0	+290 0	+460 0
250 ≥ 280 *(11.0236 ")* 280 ≥ 315 *(12.402 ")*	+400 +190	+240 +110	+108 +56	+137 +56	+69 +17	-	+32 0	+52 0	+81 0	+130 0	210 0	+320 0	+520 0
315 ≥ 355 *(13.976 ")* 355 ≥ 400 *(15.748 ")*	+440 +210	+265 +125	+119 +62	+151 +62	+75 +18	-	+36 0	+57 0	+89 0	+140 0	+230 0	+360 0	+570 0

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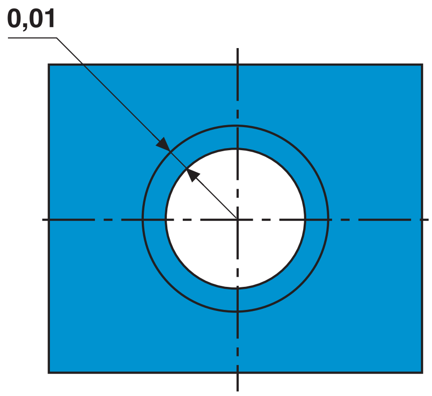
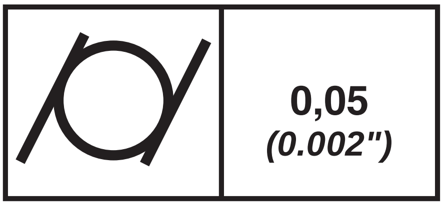
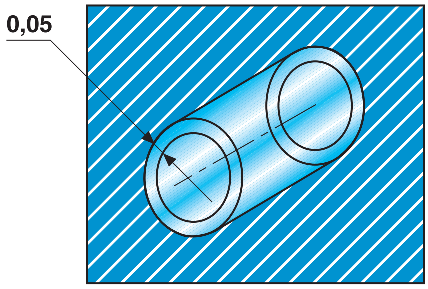
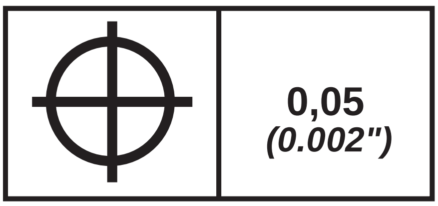
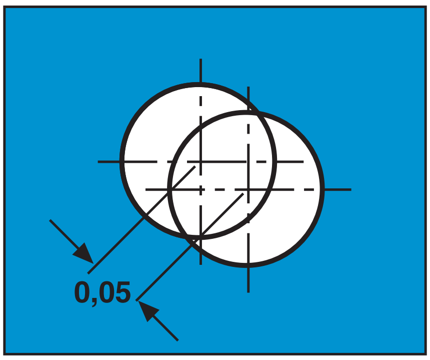
ISO tolerance table

ISO tolerances for holes (µm)												
Hole dia mm *(inch)*	**H13**	**JS7**	**JS9**	**K6**	**K7**	**M6**	**M7**	**N7**	**N9[1]**	**P7**	**P9**	**R7**
≤ 3 *(0.118 ")*	+140 0	+/-5	+/-12,5	0 -6	0 -10	-2 -8	-2 -12	-4 -14	-4 -29	-6 -16	-6 -31	-10 -20
3 ≥ 6 *(0.236 ")*	+180 0	+/-6	+/-15	+2 -6	+3 -9	-1 -9	0 -12	-4 -16	0 -30	-8 -20	-12 -42	-11 -23
6 ≥ 10 *(0.394 ")*	+220 0	+/-7,5	+/-18	+2 -7	+5 -10	-3 -12	0 -15	-4 -19	0 -36	-9 -24	-15 -51	-13 -28
10 ≥ 18 *(0.708 ")*	+270 0	+/-9	+/-21,5	+2 -9	+6 -12	-4 -15	0 -18	-5 -23	0 -43	-11 -29	-18 -61	-16 -34
18 ≥ 30 *(1.181 ")*	+330 0	+/-10,5	+/-26	+2 -11	+6 -15	-4 -17	0 -21	-7 -28	0 -52	-14 -35	-22 -74	-20 -41
30 ≥ 50 *(1.969 ")*	+390 0	+/-12,5	+/-31	+3 -13	+7 -18	-4 -20	0 -25	-8 -33	0 -62	-17 -42	-26 -88	-25 -50
50 ≥ 65 *(2.559 "* 65 ≥ 80 *(3.150 ")*	+460 0	+/-15	+/-37	+4 -15	+9 -21	-5 -24	0 -30	-9 -39	0 -74	-21 -51	-32 -106	-30 -62 -32 -62
80 ≥ 100 *(3.937 ")* 100 ≥ 120 *(4.724 ")*	+540 0	+/-17,5	+/-43,5	+4 -18	+10 -15	-6 -28	0 -35	-10 -45	0 -87	-24 -59	-37 -124	-38 -73 -41 -76
120 ≥ 140 *(5.512 ")* 140 ≥ 160 *(6.299 ")* 160 ≥ 180 *(7.087 ")*	+630 0	+/-20	+/-50	+4 -21	+12 -28	-8 -33	0 -40	-12 -52	0 -100	-28 -68	-43 -143	-48 -88 -50 -90 -53 -93
180 ≥ 200 *(7.874 ")* 200 ≥ 225 *(8.858 ")* 225 ≥ 250 *(9.843 ")*	+720 0	+/-23	+/-57,5	+5 -24	+13 -33	-8 -37	0 -46	-14 -60	0 -115	-33 -79	+50 +165	-60 -106 -63 -109 -67 -113
250 ≥ 280 *(11.0236 ")* 280 ≥ 315 *(12.402 ")*	+810 0	+/-26	+/-65	+5 -27	+16 -36	-9 -41	0 -52	-14 -66	0 -130	-36 -88	-56 -186	-74 -126 -78 -130
315 ≥ 355 355 ≥ 400	+890 0	+/-28,5	+/-70	+7 -29	+17 -40	-10 -46	0 -57	-16 -73	0 -140	-41 -98	-62 -202	-87 -144 -93 -150

Geometrical tolerance

	Drawing symbol	Tolerance area
Circularity		
Cylindricity		
Positioning localisation		

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Steels, ferritic and martensitic stainless steels

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
P1	Free-cutting steels	$360 < R_m < 880$	11 SMn30 R_m = 385 N/mm²	1500	0,14
P2	Low-alloy ferritic steels, C < 0.25%wt Low-alloy weldable general structural steels	$320 < R_m < 600$	S235JRG2 R_m = 420 N/mm²	1600	0,23
P3	Ferritic & ferritic/pearlitic steels, C < 0.25%wt Weldable general structural steels Case-hardening steels	$430 < R_m < 610$	16 MnCr 5 R_m = 550 N/mm²	1800	0,14
P4	Low-alloy general structural steels, 0.25% < C < 0.67%wt Low-alloy Quench & Temper steels	$520 < R_m < 1200$	C 45E R_m = 660 N/mm²	2000	0,15
P5	Structural steels, 0.25% < C < 0.67%wt Quench & Temper steels	$550 < R_m < 1200$	42 CrMo 4 R_m = 700 N/mm²	2020	0,18
P6	Low-alloy through-hardening steels, C > 0.67%wt Low-alloy spring and bearing steels	$520 < R_m < 1200$	C 100S R_m = 600 N/mm²	2100	0,17
P7	Through-hardening steels, C > 0.67%wt Spring and bearing steels	$600 < R_m < 1200$	100 Cr 6 R_m = 650 N/mm²	2160	0,17
P8	Tool steels High Speed Steels (HSS)	$600 < R_m < 1200$	X 40 CrMoV 5 1 R_m = 700 N/mm²	2400	0,20
P11	Ferritic & martensitic stainless steels	$415 < R_m < 1200$	X 20 Cr 13 R_m = 675 N/mm²	2000	0,15
P12	Maraging and precipitation-hardening stainless steels	$500 < R_m < 1200$	X 5 CrNiCuNb 16 4 R_m = 1100 N/mm²	2100	0,17

Free-cutting, austenitic and duplex stainless steels

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
M1	Free-cutting austenitic stainless steels		X 10 CrNiS 18 9	1700	0,14
M2	Low-alloy austenitic stainless steels		X 5 CrNi 18 10	1920	0,18
M3	Medium-alloy austenitic stainless steels		X 2 CrNiMo 18 14 3	2070	0,17
M4	High-alloy austenitic and duplex stainless steels		X 2 CrNiMoN 22 5 3	2230	0,16
M5	Difficult high-alloy austenitic and duplex stainless steels		X 2 CrNiMoN 25 7 4	2510	0,13

Cast irons

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
K1	Grey cast irons (GCI)		EN-GJL-250	930	0,32
K2	Compacted graphite irons (CGI)		EN-GJV-400	1000	0,35
K3	Malleable cast irons (MCI)		EN-GJMB-550-4	1050	0,37
K4	Nodular cast irons (SGI)		EN-GJS-500-7	1160	0,37
K5	Austempered ductile irons (ADI)		EN-GJS-1000-5		
K6	Austenitic lamellar cast irons		EN-GJLA-XNiCuCr15-6-2		
K7	Austenitic nodular cast irons		EN-GJSA-XNiMn23-4		

Non-ferrous metals

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
N1	Aluminium alloys, Si < 9%		AW-7075		
N2	Aluminium alloys, 9% < Si < 16%		AC-44200 Si = 12%		
N3	Aluminium alloys, Si >16%		AlSi17Cu5		
N11	Copper alloys		CW614N	740	0,26

Superalloys and titanium

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
S1	Iron-based superalloys		Discalloy		
S2	Cobalt-based superalloys		Stellite 21		
S3	Nickel-based superalloys		Inconel 718	2530	0,21
S11	Titanium, low alloyed, (α)		Ti		
S12	Titanium, medium alloyed, (α+β)		TiAl6V4	1500	0,24
S13	Titanium, high alloyed, (near β and β)		Ti10V2Fe3Al		

Hard materials

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
H3	Case-hardened steels	58 < HRC < 62	16 MnCr 5 60 HRC	2070	0,14
H5	Quenched & Tempered steels	38 < HRC < 56	42 CrMo 4 50 HRC	2320	0,18
H7	Quenched & Tempered steels Bearing steels	56 < HRC < 64	100 Cr 6 60 HRC	2480	0,17
H8	Tool steels High Speed Steels (HSS)	38 < HRC < 64	X 40 CrMoV 5 1 50 HRC	2750	0,20
H11	Martensitic stainless steels	38 < HRC < 50	X 20 Cr 13 45 HRC	2300	0,15
H12	Maraged and precipitation-hardened stainless steels	1200 < R_m < 1650	X 5 CrNiCuNb 16 4 R_m = 1450 N/mm^2	2410	0,17
H21	Manganese steels	23 < HRC < 64	X 120 Mn 12 50 HRC		
H31	White cast irons	50 < HRC < 64	EN-GJN-HV600(XCr11) 55 HRC		

Other difficult materials

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
PM1	Low-alloy PM-materials		F-0008 Fe-0.7C		
PM2	Medium-alloy PM-materials		FLC-4608 Fe2Cu1.8Ni 0.5Mo0.2Mn0.8C		
PM3	High-alloy PM-materials Exhaust valve seat materials, etc.				
HF1	Hardfacing alloys Welded or plasma-deposited iron-based alloys				
HF2	Hardfacing alloys Welded or plasma-deposited cobalt- and nickel-based alloys				
CC1	Sintered tungsten carbide		G50		

Plastics and Composites

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
TS1	Thermosetting polymers		Urea formaldehyde (UF)		
TS2	Thermosetting carbon-fibre composites		T300 T700 T800 HTA-S IMA - Epoxy (M21)...		
TS3	Thermosetting glass-fibre composites		Epoxy - HX..(42..)/E glass (7781...)...		
TS4	Thermosetting aramide-fibre composites		Kevlar 49		
TP1	Thermoplastic polymers		Polycarbonate (PC)		
TP2	Thermoplastic carbon-fibre composites		PPS/PEEK - T300..		
TP3	Thermoplastic glass-fibre composites		PPS/PEEK - E glass or A glass...		
TP4	Thermoplastic aramide-fibre composites				

Graphite

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
GR1	Graphite		R 8500		

SMG

SMG	EN	EN-Nr	W.-Nr	DIN	AFNOR	BS	UNI	JIS	SS	UNS
	11 SMn 30	1.0715	1.0715	9 SMn 28	S 250	230 M 07	CF 9 SMn 28	SUM 22	1912	G12130
	11 SMnPb 30	1.0718	1.0718	9 SMnPb 28	S 250 Pb		CF 9 SMnPb 28	SUM 22 L	1914	G12134
	10 S 20	1.0721	1.0721	10 S 20	10 F 1	210 M 15	CF 10 S 20			
			1.0722	10 SPb 20	10 PbF 2		CF 10 SPb 20			
P1	15 SMn 13	1.0725	1.0723	15 S 20		210 A 15		SUM 32	1922	
	35 S20	1.0726	1.0726	35 S 20	35 MF 4	212 M 36			1957	G11400
	46 S20	1.0727	1.0727	46 S 20	45 MF 4	212 M 44			1973	G11460
	11 SMn 37	1.0736	1.0736	9 SMn 36	S 300	240 M 07	CF 9 SMn 36			G12150
	11 SMn 37	1.0736	1.0736	9 SMn 36	S 300	240 M 07	CF 9 SMn 36			G12150
	S235JR	1.0037	1.0037	St 37-2	E 24-2		Fe 360 B	STKM 12 C	1311	
	S235JRG2	1.0038	1.0116	St 37-3	E 24-3, E 24-4	4360-40 C	Fe 360 D FF		1312, 1313	
	S275J2G3	1.0144	1.0144	St 44-3 N	E 28-3, E 28-4	4360-43 C	Fe 430 D FF	SM 41 C	1412, 1414	
	C 10	1.0301	1.0301	C 10	34 C 10, XC 10	045 M 10	C 10	S 10 C		G10100
P2			1.0401	C 15	37 C 12, XC 18	080 M 15	C 15, C 16		1350	G10170
	C22	1.0402	1.0402	C 22	C 20	050 A 20	C 20, C 21		1450	G10200
	S355JR	1.0570	1.0570	St 52-3	E 36-3, E 36-4	4360-50 C	Fe 510 B	SM 50 YA	2172, 2132	
	C 15R	1.1141	1.1141	Ck 15	XC 15, XC 18	080 M 15	C 15, C 16	S 15 C, S 15 CK	1370	G10170
			1.1158	Ck 25	XC 25	060 A 25	C 25	S 25 C		G10250
			1.2162	21 MnCr 5	20 NC 5			SCR 420 H		
	16 Mo 3	1.5415	1.5415	15 Mo 3	15 D 3	1501-240	16 Mo 3		2912	
			1.5423	16 Mo 5		1503-245-420	16 Mo 5	SB 450 M		G45200
	14 NiCr 14	1.5752	1.5752	14 NiCr 14	12 NC 15	655 M 13		SNC 815 (H)		G33106
			1.5919	15 CrNi 6	16 NC 6	S 107	16 CrNi 4			
	18 NiCrMo 7 6	1.6587	1.6587	18 CrNiMo 7 6	18 NCD 6	820 A 16	18 NiCrMo 7			
P3	16 MnCr 5	1.7131	1.7131	16 MnCr 5	16 MC 5	527 M 17	16 MnCr 5	SCR 415	2511	G51170
	16 MnCrS 5	1.7139	1.7139	16 MnCrS 5						
	20 MnCr 5	1.7147	1.7147	20 MnCr 5	20 MC 5		20 MnCr 5	SMnC 420 (H)		G51200
	20 MnCrS 5	1.7149	1.7149	20 MnCrS 5	20 MnCrS 5			SMnC 21 H		
	13 CrMo 4 5	1.7335	1.7335	13 CrMo 4 4	15 CD 3.5	1501-620 Gr. 27	14 CrMo 4 5		2216	
			1.7337	16 CrMo 4 4	15 CD 4.5	1501-620 Gr. 27	14 CrMo 4 5		2216	
	10 CrMo 9 10	1.7380	1.7380	10 CrMo 9 10	10 CD 9.10	1501-622 Gr. 31	12 CrMo 9 10		2218	J21890
	C35		1.0501	C 35	55 C 35	060 A 35	C 35		1550	G10350
	E 335	1.0503	1.0503	C 45	65 C 45	80 M 46	C 45	S 45 C	1650	G10430
	C40		1.0511	C 40	60 C 40	080 M 40	C 40	S 40 C		
	E 360	1.0070	1.0535	St 70-2	A 70-2		Fe 690		1655	
	C60	1.0601	1.0601	C 60	CC 55	080 A 62	C 60			G10600
P4			1.1157	40 Mn 4	35 M 5	150 M 36				G10390
	G 28 Mn6	1.1165	1.1165	30 Mn 5		120 M 36		SMn 1 H, SCMn 2		G13300
	C 35E	1.1181	1.1181	Ck 35	XC 38 H1	080 M 36	C 35	S 35 C	1572	G10340
	C 45E	1.1191	1.1191	Ck 45	XC 42	080 M 46	C 45	S 45 C	1672	G10420
	C 60E	1.1221	1.1221	Ck 60	XC 60	080 A 62	C 60	S 58 C	1665, 1678	G10640
			1.1740	C 60 W	Y3 55			SK 7		
	55 SiCr7	1.7100	1.0904	55 Si 7	55 S 7	250 A 53	55 Si 8		2085, 2090	
			1.2330	35 CrMo 4	34 CD 4	708 A 37	35 CrMo 4		2234	T51620
			1.2542	45 WCrV 7		BS 1	45 WCrV 8 KU		2710	T41901
		1.2714	1.2714	56 NiCrMoV 7		BH 224-5	56 NiCrMoV7-KU	SKT 4		T61206
			1.5121	46 MnSi 4						
			1.5710	36 NiCr 6	35 NC 6	640 A 35		SNC 236		
			1.5736	36 NiCr 10	35 NC 11		35 NiCr 9	SNC 631 (H)		
	36 CrNiMo 4		1.6511	36 CrNiMo 4	40 NCD 3	816 M 40	38 NiCrMo 4 (KB)			G98400
P5	34 CrNiMo 6	1.6582	1.6582	34 CrNiMo 6	35 NCD 6	817 M 40	35 NiCrMo 6 (KW)	SNCM 447	2541	G43400
	34 Cr 4	1.7033	1.7033	34 Cr 4	32 C 4	530 A 32	34 Cr 4 (KB)	SCR 430 (H)		G51320
	41 Cr 4	1.7035	1.7035	41 Cr 4	42 C 4	530 M 40	41 Cr 4	SCR 440 (H)		G51400
	25 CrMo 4	1.7218	1.7218	25 CrMo 4	25 CD 4 S	708 M 25	25 CrMo 4 (KB)	SCM 425	2225	G41300
	42 CrMo 4	1.7225	1.7225	42 CrMo 4	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	2244	G41400
	42 CrMo 4	1.7225	1.7225	42 CrMo 4	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	2244	G41400
			1.7361	32 CrMo 12	30 CD 12	722 M 24	32 CrMo 12		2240	
	50 CrV 4	1.8159	1.8159	50 CrV 4	50 CV 4	735 A 50	51 CrV 4	SUP 10	2230	H61500
	41 CrAlMo 7 10	1.8509	1.8509	41 CrAlMo 7	40 CAD 6.12	905 M 39	41 CrAlMo 7	SACM 645	2940	K24065
	C 67S	1.1231	1.1231	Ck 67	XC 68	060 A 67	C 70		1770	G10700
	C 100S	1.1274	1.1274	Ck 101		060 A 96		SUP 4	1870	G10950
P6	C 105U	1.1545	1.1545	C 105 W1	Y1 105		C 100 KU		1880	
			1.1645	C 105 W2	Y1 105		C 100 KU	SK 3		
			1.1663	C 125 W	Y2 120		C 120 KU	SK 2		

SMG

U.N.E./ I.H.A.	AISI / ASTM	GOST	ČSN	Misc. Brands	Condition	Structure
	1213				Annealed	
	12 L 13				Annealed	
	1108				Annealed	
	11 L 08				Annealed	
					Annealed	
	1140	40			Annealed	
	1146				Annealed	
	1215				Annealed	
	12 L 14				Annealed	
		16D			Annealed	
	A573 Grade 58	18kp	11 378		Annealed	
	A573 Grade 70	St14kP	11 448		Annealed	
	1010	10			Annealed	
F.1110	1015	15			Annealed	
	1020, 1023	20	12 024		Annealed	
		17G1S	11 523		Annealed	
F.1511	1015	15			Annealed	
F.1120	1025	25			Annealed	
					Annealed	
	A204 Grade A		15 020		Annealed	
	4520				Annealed	
	3310, 9314	20X2H4A	16 420		Annealed	
	4320		16 220		Annealed	
					Annealed	
F.1516	5115	12KHN2	14 220		Annealed	
		18HG			Annealed	
	5120	20KH	14 221		Annealed	
	5120 H	20KH			Annealed	
	A182-F11, A182-F12	12KHM	15 121		Annealed	
	A387 Grade 12 Cl. 2				Annealed	
F.155	A182-F22	12KH8	15 313		Annealed	
F.1130	1035	35	12 040		Annealed	
F.5110	1045	45	12 050		Annealed	
	1040	40	12 041		Annealed	
F.1150	1055	55			Annealed	
	1060	60	12 061		Annealed	
	1039	40G			Annealed	
	1330	30G2			Annealed	
F.1135	1035	35			Annealed	
F.1140	1045	45	12 050		Annealed	
F.1150	1064	60			Annealed	
	1060	60			Annealed	
F.144	9255	55S2			Annealed	
F.1250	4135	35KHM			Annealed	
F.5241	S1	5KHV2S			Annealed	
	L6	5KHNV			Annealed	
	5045				Annealed	
	3135				Quenched & Tempered	
	3435				Annealed	
	9840				Quenched & Tempered	
F.1280	4340	38H2N2MA	16 343		Annealed	
	5132	35KH			Quenched & Tempered	
	5140	40H	14 140		Quenched & Tempered	
F.1251	4130	20KHM	15 130		Quenched & Tempered	
F.1252	4142, 4140	38HM	15 142		Annealed	
F.1252	4142, 4140	38HM	15 142		Quenched & Tempered	
					Quenched & Tempered	
F.143	6150	50KHFA	15 260		Quenched & Tempered	
F.1740	A355 Cl. A				Annealed	
F.5103	1070	70			Annealed	
F.5117	1095				Annealed	
F.5118	W1	U10A			Annealed	
		U10			Annealed	
	W1	U13			Annealed	

SMG

SMG	EN	EN-Nr	W.-Nr	DIN	AFNOR	BS	UNI	JIS	SS	UNS
P7	107 CrV 3	1.2210	1.2210	115 CrV 3	100 C 3		107 CrV 3 KU			T61202
			1.2510	100 MnCrW 4	90 MWCV 5	BO 1	95 MnWCr 5 KU	SKS 3	2140	T31501
	90 MnCrV 8	1.2842	1.2842	90 MnCrV 8	90 MV 8	BO 2	90 MnVCr 8 KU			T31502
	100 Cr 6	1.3505	1.3505	100 Cr 6	100 C 6	534 A 99	100 Cr 6	SUJ 2	2258	G51986
P8	X 210 Cr 12	1.2080	1.2080	X 210 Cr 12	Z 200 C 12	BD 3	X 210 Cr 13 KU	SKD 1		T30403
			1.2343	X 38 CrMoV 5 1	Z 38 CDV 5	BH 11	X 37 CrMoV 5 1 KU	SKD 6		T20811
	X 40 CrMoV 5 1	1.2344	1.2344	X 40 CrMoV 5 1	Z 40 CDV 5	BH 13	X 40 CrMo 5 1 1 KU	SKD 61	2242	T20813
	X 100 CrMoV 5	1.2363	1.2363	X 100 CrMoV 5 1	Z 100 CDV 5	BA 2	X 100 CrMoV 5 1 KU	SKD 12	2260	T30102
			1.2365	X 32 CrMoV 3 3	32 DCV 28	BH 10	30 CrMoV 12 27 KU	SKD 7		T20810
			1.2436	X 210 CrW 12			X 215 CrW 12 1 KU	SKD 2	2312	
			1.2601	X 165 CrMoV 12			X 165 CrMoW 12 KU		2310	
			1.2713	55 NiCrMoV 6	55 NCDV 7			SKT 4		T61206
	HS 6-5-2-5	1.3243	1.3243	S 6-5-2-5	Z 85 WDKCV 06-05-05-04-02		HS 6-5-2-5	SKH 55	2723	
	HS 2-10-1-8	1.3247	1.3247	S 2-10-1-8	Z 110 DKCWV 09-08-04	BM 42	HS 2-9-1-8	SKH 51		T11342
	HS 18-1-2-5	1.3255	1.3255	S 18-1-2-5	Z 80 WKCV 18-05-04-01	BT 4	HS 18-1-1-5	SKH 3		T12004
	HS 6-5-2	1.3343	1.3343	S 6-5-2	Z 85 WDCV 06-05-04-02	BM 2	HS 6-5-2	SKH 9, SKH 51	2722	T11302
	HS 2-9-2	1.3348	1.3348	S 2-9-2	Z 100 DCWV 09-04-02-02		HS 2-9-2	SKH 58	2782	T11307
	HS 18-0-1	1.3355	1.3355	S 18-0-1	Z 80 WCV 18-04-01	BT 1	HS 18-0-1	SKH 2		T12001
P11	X 6 Cr 13	1.4000	1.4000	X 6 Cr 13	Z 6 C 12	403 S 17	X 6 Cr 13	SUS 403	2301	S41008
	X 12 Cr 13	1.4006	1.4006	X 10 Cr 13	Z 10 C 13	410 S 21	X 12 Cr 13	SUS 410	2302	S41000
	X 6 Cr 17	1.4016	1.4016	X 6 Cr 17	Z 8 C 17	430 S 15	X 8 Cr 17	SUS 430	2320	S43000
	X 20 Cr 13	1.4021	1.4021	X 20 Cr 13	Z 20 C 13	420 S 37	X 20 Cr 13	SUS 420 J 1	2303	S42000
	X 39 Cr 13	1.4031	1.4031	X 40 Cr 13	Z 40 C 14	420 S 45	X 40 Cr 14	SUS 420	2304	S40280
	X 70 CrMo 15	1.4109	1.4109	X 65 CrMo 14	Z 70 D 14			SUS 440 A		S44002
	X 90 CrMoV 18	1.4112	1.4112	X 90 CrMoV 18	Z 2 CND 18 05	409 S 19	X CrTi 12	SUS 440 B	2327	S44003
	X 105 CrMo 17	1.4125	1.4125	X 105 CrMo 17	Z 100 CD 17		X 105 CrMo 17	SUS 440 C		S44004
	X 3 CrNIMo 13 3	1.4313	1.4313	X 5 CrNi 13 4	Z 5 CN 13.4	425 C 11	X 6 CrNi 13 04	SCS 5	2385	S41500
	X 18 CrN 28	1.4749	1.4749	X 18 CrN 28	Z 18 C 25				2322	S44600
P12	X 6 NiCrTiMoV 25 15	1.4534	1.4534	X 3 CrNiMoAl 13 8 2						S13800
	X 4 CrNiCuNb 16 4	1.4540	1.4540	X 4 CrNiCuNb 16 4						S15500
		1.4540	1.4540	X 4 CrNiCuNb 16 4	Z 4 CNUNb 16.4 M					S15500
	X 4 CrNiCuNb 16 4	1.4540	1.4540	X 4 CrNiCuNb 16 4						S15500
	X 5 CrNiCuNb 16 4	1.4542	1.4542	X 5 CrNiCuNb 16 4				SUS 630		S17400
	X 5 CrNiCuNb 17 4	1.4548	1.4542	X 5 CrNiCuNb 17 4	Z 6 CNU 17.4			SCS 24, SUS 630		S17400
	X 7 CrNiAl 17 7	1.4564	1.4564	X 7 CrNiAl 17 7	Z 9 CAN 17.7	301 S 81	X 7 CrNiAl 17 7	SUS 631	2388	S17700
	X 2 NiCoMoTi 18 12 4	1.6356	1.6356	X 2 NiCoMoTi 18 12 4						K93160
	X 2 NiCoMoTi 18 9 5	1.6358	1.6358	X 2 NiCoMoTi 18 9 5	Z 2 NKD 19-09					K93120
	X 2 NiCoMo 18 9 5	1.6358	1.6358	X 2 NiCoMoTi 18 9 5	Z 2 NKD 19-09					K93120
	X 2 NiCoMo 18 8 5	1.6359	1.6359	X 2 NiCoMo 18 8 5		S 162				K92890
	X 2 NiCoMo 18 8 5	1.6359	1.6359	X 2 NiCoMo 18 8 5		S 162				K92890
M1	X 10 CrNiS 18 9	1.4305	1.4305	X 10 CrNiS 18 9	Z 10 CNF 18.09	303 S 31	X 10 CrNi 18 09	SUS 303	2346	S30300
M2	X 2 CrNi 19 11	1.4306	1.4306	X 2 CrNi 19 11	Z 2 CN 18.10	304 S 12	X 3 Cr Ni 18 11	SUS 304 L	2352	S30403
	X 5 CrNi 18 10	1.4301	1.4301	X 5 CrNi 18 10	Z 6 CN 18.09	304 S 31	X 5 CrNi 18 11	SUS 304	2333	S30400
	X 5 CrNiMo 17 12 2	1.4401	1.4401	X 5 CrNiMo 17 12 2	Z 3 CND 17.11.1	316 S 31	X 5 CrNiMo 17 12	SUS 316	2347	S31600
	X 6 CrNiNb 18 10	1.4550	1.4550	X 6 CrNiNb 18 10	Z 6 CNNb 18.10	347 S 31	X 6 CrNiNb 18 11	SUS 347	2338	S34700
	X 9 CrNi 18 8	1.4310	1.4310	X 12 CrNi 17 7	Z 12 CN 17.07	301 S 21	X 12 CrNi 17 07	SUS 301	(2331)	S30100
	X 12 CrNi 18 8	1.4300	1.4300	X 12 CrNi 18 8	Z 12 CN 18	302 S 25		SUS 302	2331	S30200
M3	X 2 CrNiMo 18 14 3	1.4435	1.4435	X 2 CrNiMo 18 14 3	Z 2 CND 17.13	316 S 12	X 2 CrNiMo 17 13 2	SCS 16, SUS 316 L	2353	S31603
	X 2 CrNiMoN 17 13 3	1.4429	1.4429	X 2 CrNiMoN 17 13 3	Z 2 CND 17.13 Az	316 S 62	X 2 CrNiMoN 17 13 3	SUS 316 LN	2375	S31653
	X 2 CrNiN 18 10	1.4311	1.4311	X 2 CrNiN 19 11	Z 2 CN 18 .10 Az	304 S 62	X 2 CrNiN 18 11	SUS 304 LN	2371	S30453
	X 3 CrNiMo 18 12 3	1.4466	1.4466	X 5 CrNi 18 15		317 S 16	X 5 CrNi 18 15	SUS 317	2366	S31700
	X 9 CrNiSiNCe 21 11 2	1.4835	1.4893	X 9 CrNiSiNCe 21 11 2		310 S 31			2368	S30815
	X 12 CrNi 25 21	1.4335	1.4335	X 12 CrNi 25 21	Z 12 CN 25.20	310 S 24	X 6 CrNi 26 20	SUH 310, SUS 310 S	2361	S31008
M4	X 2 CrNiMoN 22 5 3	1.4462	1.4462	X 2 CrNiMoN 22 5	Z 2 CND 22.05 Az	332 S 15	X 2 CrNiMoN 22 5		2377	S31803
	X 2 CrNiMoSi 19 5	1.4424	1.4417	X 2 CrNiMoSi 19 5	Z 2 CND 18.05.03				2376	S31500
	X 2 NiCrMoCu 25 20 5	1.4539	1.4539	X 2 NiCrMoCu 25 20 5	Z 2 NCDU 25 20	904 S 13			2562	N08904
	X 3 CrNiMo 27 5 2	1.4460	1.4460	X 4 CrNiMo 27 5 2	Z 3 CND 25.7 Az		X 3 CrNiMo 27 5 2	SUS 329 J 1	2324	S32900
	X 5 CrNiCuNb 16 4	1.4980	1.4943	X 4 NiCrTi 25 15	Z 6 NCTDV 25.15	HR 51		SUH 660	2570	S66286
M5	X 1 CrNiMoN 20 18 7	1.4547	1.4529	X 1 CrNiMoN 20 18 7	Z 1 CNDU 20.18.05 Az		X 1 CrNiMoN 20 18 7		2778	S31254
	X 1 CrNiMoN 25 22 8	1.4652	1.4652	X 2 CrNiMoN 25 22 7						S32654
	X 10 NiCrAlTi 32 20	1.4876	1.4876	X 10 NiCrAlTi 32 20	Z 10 NC 32.21			NCF 800		N08800
	X 2 CrNiMoN 25 7 4	1.4410	1.4410	X 2 CrNiMoN 25 7 4	Z 3 CND 25.07 Az		X 2 CrNiMoN 25 7 4		2328	S32750

SECO

SMG

U.N.E./ I.H.A.	AISI / ASTM	GOST	ČSN	Misc. Brands	Condition	Structure
F.520L	L2	11KHF			Annealed	
F.5220	O1	9KHVG			Annealed	
	O2	9G2F			Annealed	
F.5230	52100	SHKH15	14 109		Annealed	
F.5212	D3	KH12			Annealed	
	H11	4KH5MFS			Annealed	
F.5318	H13	4KH5MF1S			Annealed	
F.5227	A2	9KH5VF			Annealed	
	H10	3KH3M3F			Annealed	
F.5213		KH12			Annealed	
		KH12MF			Annealed	
F.520.S	L6	5KHNM			Annealed	
F.5613	M35	R6M5K5			Annealed	
	M42	R2AM9K5			Annealed	
	T4	R18K5F2			Annealed	
F.5603	M2	R6M5			Annealed	
	M7				Annealed	
	T1	R18			Annealed	
	403	08KH13			Annealed	Ferritic
F.3401	410, CA-15	12KH13, 08KH13			Annealed	Martensitic
F.3113	430	12KH17			Annealed	Ferritic
F.5261	420	20KH13	17 022		Annealed	Martensitic
F.3404	420	40KH13			Annealed	Martensitic
	440 A				Annealed	Martensitic
	440 B	95KH18			Annealed	Martensitic
	440 C	95KH18			Annealed	Martensitic
	A182 F6NM			F6NM	Annealed	Martensitic
	446	15KH28			Annealed	Ferritic
	XM-13			PH 13-8 Mo	Solution annealed	Austenitic
	XM-12			15-5 PH	H1150	Martensitic
	XM-12			15-5 PH	Solution annealed	Martensitic
	XM-12			15-5 PH	H1025	Martensitic
	SAE 630			17-4 PH	H1150	Martensitic
	630			17-4 PH	Solution annealed	Martensitic
	631	09KH17N7YU1		17-7 PH	Solution annealed	Austenitic/Ferritic
	AMS 6515			Marage 350	Solution annealed	Martensitic
	AMS 6521			Marage 300	Solution annealed	Martensitic
	AMS 6514			Marage 300, Vascomax C300	Solution annealed	Martensitic
	AMS 6512			Marage 250	Solution annealed	Martensitic
	AMS 6512			Marage 250, Vascomax C250	Solution annealed	Martensitic
F.3508	303	12KH19N9			Annealed	Austenitic
F.3504	304 L	03KH18N11			Annealed	Austenitic
F.3504	304	08KH18N10	17 240		Annealed	Austenitic
F.3534	316	08KH17H13M2T	17 346		Annealed	Austenitic
F.3524	347	08KH18N12B			Annealed	Austenitic
F.3517	301	07KH16N6			Annealed	Austenitic
	302	12KH18N9			Annealed	Austenitic
F.3533	(316 L)	03KH17N14M3	17 349		Annealed	Austenitic
	316 LN	03KH16N15M3			Annealed	Austenitic
F.3541	304 LN	03KH18N11			Annealed	Austenitic
	317	08KH17H15M3T			Annealed	Austenitic
				253 MA	Annealed	Austenitic
	310 S	12KH25N20			Annealed	Austenitic
	329 LN			SAF 2205	Annealed	Duplex
				3RE60	Annealed	Duplex
	904L				Annealed	Super austenitic
	329				Annealed	Duplex
	660			A286	Solution annealed	Austenitic
				254 SMO	Annealed	Super austenitic
				654 SMO	Annealed	Super austenitic
				Alloy 800	Annealed	Austenitic
	F 53			SAF 2507	Annealed	Super duplex

SECO

SMG

SMG	EN	EN-Nr	W.-Nr	DIN	AFNOR	BS	UNI	JIS	SS	UNS
K1	EN-GJL-150	0.6150	0.6150	GG-15	Ft 15 D	Grade 150	G15	FC 150	01 15-00	F11601
	EN-GJL-200	0.6200	0.6200	GG-20	Ft 20 D	Grade 220	G20	FC 200	01 20-00	F12101
	EN-GJL-250	0.6250	0.6250	GG-25	Ft 25 D	Grade 260	G25	FC 250	01 25-00	F12401
	EN-GJL-350	0.6350	0.6350	GG-35	Ft 35 D	Grade 350	G35	FC 350	01 35-00	F13502
	EN-GJL-215			GG-220 HB					02 19	
K2	EN-GJV-300			GJV-300						
	EN-GJV-350			GJV-350						
	EN-GJV-400			GJV-400						
	EN-GJV-450			GJV-450						
	EN-GJV-500			GJV-500						
K3	EN-GJMB-550-4	0.8155		GTS-55-04	P 540/5	P 540/5	P 55-04	PCMP55-04	08 54-00	F24130
K4	EN-GJS-350-22	0.7033	0.7033	GGG-35.3	FGS 370-17	Grade 350/22		FCD 350-22L	07 17-15	
	EN-GJS-400-15	0.7040	0.7040	GGG-40	FGS 400-12	Grade 420/12	GS 400-12	FCD 400-18L	07 17-02	F32800
	EN-GJS-400-18	0.7043	0.7043	GGG-40.3	FGS 370-17	Grade 370/17	GSO 42/17		07 17-12	F32800
	EN-GJS-500-7	0.7050	0.7050	GGG-50	FGS 500-7	Grade 500/7	GS 500-7	FCD 500-7	07 27-02	F33800
	EN-GJS-600-3	0.7060	0.7060	GGG-60	FGS 600-3	Grade 600/3	GS 600-3	FCD 600-3	07 32-03	F34100
	EN-GJS-700-2	0.7070	0.7070	GGG-70	FGS 700-2	Grade 700/2	GS 700-2	FCD 700-2	07 37-01	F34800
K5										ADI grade 5
	EN-GJS-1000-5			GJS-1000-5						ADI grade 2
	EN-GJS-1200-2			GJS-1200-2						ADI grade 3
	EN-GJS-1400-1			GJS-1400-1						ADI grade 4
	EN-GJS-800-8			GJS-800-8						ADI grade 1
K6	EN-GJLA-XNiCr 20-2	0.6660	0.6660	GGL-NiCr 20 2	FGL Ni20 Cr2	Grade F2			05 23-00	F41002
	EN-GJLA-XNiCr 30-3	0.6676	0.6676	GGL-NiCr 30 3	FGL Ni30 Cr3	Grade F3				F41004
	EN-GJLA-XNiCuCr 15-6-2	0.6655	0.6655	GGL-NiCuCr 15 6 2	FGL Ni15 Cu6 Cr2	Grade F1				F41000
K7	EN-GJSA-XNiMn 13-7	0.7652	0.7652	GGG-NiMn 13 7	FGS Ni13 Mn7	Grade S6			07 72-00	
	EN-GJSA-XNiCr 20-2	0.7660	0.7660	GGG-NiCr 20 2	FGS Ni20 Cr2	Grade S2				F43000
	EN-GJSA-XNiMn 23-4	0.7673	0.7673	GGG-NiMn 23 4	FGS Ni23 Mn4	Grade S2M				F43010
	EN-GJSA-XNiCr 30-3	0.7676	0.7676	GGG-NiCr 30 3	FGS Ni30 Cr3	Grade S3				F43003
	EN-GJSA-XNi 35	0.7683	0.7683	GGG-Ni 35	FGS Ni35					F43006
N1	AW-1050A	Al99.5	3.0255	Al99.5	A-5/1050A	1B		(A1050)	4007	AA1050A
	AW-2011	AlCuBiPb	3.1655	AlCuBiPb	A-U5PbBi/2011	FC1		A2011	4355	AA2011
	AW-2014	AlCuSiMn	3.1255	AlCuSiMn	A-U4SG/2014	H15			4338	AA2014
	AW-5005	AlMg1	3.3315	AlMg1	A-G0.6	N41			4106	AA5005
	AW-6060	AlMgSi0.5	3.3206	AlMgSi0.5	A-GS/6060	(H9)			4103	AA6060
	AW-6063	AlMgSi0.7	3.3210	AlMgSi0.7	A-GSUC/6061	(H10)		(A6063)	4104, 4107	AA6005
	AW-3103	AlMn1	3.0515	AlMn1		N3			4054	AA3103
	AW-3003	AlMn1Cu	3.0517	AlMn1Cu	A-M1/3003			A3003		AA3003
	AW-7020	AlZn4.5Mg1	3.4335	AlZn4.5Mg1	A-Z5G/7020	H17			4425	AA7020
	AW-7075		3.4365	AlZnMgCu1.5	A-Z5GU/7075	2L95/2L96		A7075		AA7075
	AC-42000		3.2341	G-AlSi5Mg	A-S7G	LM25	3599	AC 4C	4244	
	AC-46200	AlSi8Cu3(Si)	3.2161	G-AlSi8Cu3					4251	A13800
	MG-P-63	MgAl6Zn	3.5612	G-MgAl6Zn	G-A6-Z1	MAG-E-121				M11600
	MG-P-61	MgAl8Zn	3.5812	G-MgAl8Zn	(G-A7-Z1)					
	MN65120	MgSe3Zn2Zr1	3.5103	G-MgSe3Zn2Zr1	ZRE1	MAG6-TE				M12330
N2	AC-43400	AlSi10Mg(Fe)	3.2381	G-AlSi10Mg	A-S10G	LM9			4253	A13600
	AC-44200	AlSi12	3.2382	GD-AlSi12						
	AW-6082	AlMgSi1	3.2315	AlMgSi1	A-SGM0.7/6082	H30			4212	AA6082
N3		AlSi17Cu5						ADC14		
N11	CC331G		2.0940.01	CuAl10Fe	CuAl10Fe	AB1			5710	C95200
	CC333G		2.0975.01	CuAl10Ni	CuAl10Ni5Fe5	AB2			5716	C95500
		CuNi10Fe1Mn	2.0872	CuNi10Fe1Mn	CuNi10Fe1Mn	CN102			5667	C70600
				CuNi10Zn45						
		CW408J	2.0790	CuNi18Zn19Pb	CuNi18Zn19Pb1					C76300
	CW352H		2.1176	CuPb10Sn	CuSn10Pb10	LB2			5640	C93700
	CC480K		2.1050.01	CuSn10	CuSn10	CT1			5443	C90700
			2.1087	CuSn10Zn					5458	C90500
	CW452K	CuSn6	2.1020	CuSn6	CuSn6	PB103		C5191	5428	C51900
	CW502L	CuZn15	2.0240	CuZn15	CuZn15	CZ102		C2300	5112	C23000
	CW706R	CuZn28Sn1	2.0470	CuZn28Sn1	CuZn29Sn1				5220	C44300
	CW508L	CuZn37	2.0321	CuZn37	CuZn37	CZ108			5150	C27200
	CW717R	CuZn38Sn1	2.0530	CuZn38Sn1						C46400
	CW614N	CuZn39Pb3	2.0401	CuZn39Pb3	CuZn39Pb3	CZ121			5170	C38500
	CW612N	CuZn40Pb2	2.0402	CuZn40Pb2	CuZn39Pb2	CZ120			5168	C37800
	CW622N	CuZn44Pb2	2.0410	CuZn44Pb2		CZ104			5272	C68700

SMG

U.N.E./ I.H.A.	AISI / ASTM	GOST	ČSN	Misc. Brands	Condition	Structure
	A48 25 B	Sc 15	422 415			Grey cast iron (GCI)
	A48 30 B	Sc 20	422 420			Grey cast iron (GCI)
	A48 35 B	Sc 25	422 425			Grey cast iron (GCI)
	A48 50 B	Sc 35				Grey cast iron (GCI)
	G 3500					Grey cast iron (GCI)
	Grade 350					Compacted graphite iron (CGI)
	Grade 400					Compacted graphite iron (CGI)
	Grade 400-15					Compacted graphite iron (CGI)
	Grade 450					Compacted graphite iron (CGI)
	Grade 500					Compacted graphite iron (CGI)
	A220 60004				Tempered	Malleable cast iron (MCI)
						Nodular cast iron (SGI)
FGE 38-17	60-40-18	Vc 42-12	422 304			Nodular cast iron (SGI)
	60-40-18	Vc 42-12				Nodular cast iron (SGI)
FGE 50-7	A536, 80-55-06	Vc 50-2	422 305			Nodular cast iron (SGI)
FGE 60-2	A476, 80-60-03	Vc 60-2	422 306			Nodular cast iron (SGI)
FGE 70-2	A536, 100-70-03	Vc 70-2				Nodular cast iron (SGI)
	1600/1300/-					Austempered ductile iron (ADI)
	1050/700/7					Austempered ductile iron (ADI)
	1200/850/4					Austempered ductile iron (ADI)
	1400/1100/1					Austempered ductile iron (ADI)
	850/550/10					Austempered ductile iron (ADI)
	A436 Type 2			Ni-Resist 2		Austenitic lamellar cast iron
	A436 Type 3			Ni-Resist 3		Austenitic lamellar cast iron
	A436 Type 1			Ni-Resist 1		Austenitic lamellar cast iron
				Nodumag		Austenitic nodular cast iron
	A436 Type D-2			Ni-Resist D-2		Austenitic nodular cast iron
	A439 Type D-2M			Ni-Resist D-2M		Austenitic nodular cast iron
	A436 Type D-3			Ni-Resist D-3		Austenitic nodular cast iron
	A439 Type D-5			Ni-Resist D-5		Austenitic nodular cast iron
	B26					
	A380					
	AZ61A					
	AZ80A					
	AMS 4442					
	B85					
	A413.2					
	B390.0					
	CA952	BrA9ZH3L				
	CA955	BrA10ZH4N4L				
	CA937					
		BrOF6.5-0.15				
		L90				
		LOMsh70-1-0.05				
		LO60-1				
		LAMsh77-2-0.05				

SECO

SMG

SMG	EN	EN-Nr	W.-Nr	DIN	AFNOR	BS	UNI	JIS	SS	UNS
S1										
S2										
S3	NiMo30		2.4810							N10002
	NiMo16Cr15W		2.4819							N10276
	NiCr19Fe19Nb5Mo3		2.4668							N07718
			2.4669							N07750
	NiCr20TiAl		2.4631							N07080
	NiCr19Co18Mo4Ti3Al3									N07500
	NiCr20Co13Mo4Ti3Al		2.4654							N07001
S11			3.7024							
										R54620
S12										R56320
	TiAl6V4		3.7164							R56400
S13				TiV10Fe2Al3						
H3	16 MnCr 5	1.7131	1.7131	16 MnCr 5	16 MC 5	527 M 17	16 MnCr 5	SCR 415	2511	G51170
H5	C 67S	1.1231	1.1231	Ck 67	XC 68	060 A 67	C 70		1770	G10700
	C 75S	1.1248	1.1248	Ck 75	XC 75	060 A 78	C 75		1774, 1778	G10780
	C 100S	1.1274	1.1274	Ck 101		060 A 96		SUP 4	1870	G10950
	C 105U	1.1545	1.1545	C 105 W1	Y1 105		C 100 KU		1880	
			1.2550	60 WCrV 7	55 WC 20		55 WCrV 8 KU			
	55 Cr 3	1.7176	1.7176	55 Cr 3	55 C 3	527 A 60	55 Cr 3	SUP 9 (A)	2253	G51550
	42 CrMo 4	1.7225	1.7225	42 CrMo 4	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	2244	G41400
H7	107 CrV 3	1.2210	1.2210	115 CrV 3	100 C 3		107 CrV 3 KU			T61202
			1.2510	100 MnCrW 4	90 MWCV 5	BO 1	95 MnWCr 5 KU	SKS 3	2140	T31501
	90 MnCrV 8	1.2842	1.2842	90 MnCrV 8	90 MV 8	BO 2	90 MnVCr 8 KU			T31502
	100 Cr 6	1.3505	1.3505	100 Cr 6	100 C 6	534 A 99	100 Cr 6	SUJ 2	2258	G51986
H8	X 40 CrMoV 5 1	1.2344	1.2344	X 40 CrMoV 5 1	Z 40 CDV 5	BH 13	X 40 CrMo 5 1 1 KU	SKD 61	2242	T20813
	X 100 CrMoV 5	1.2363	1.2363	X 100 CrMoV 5 1	Z 100 CDV 5	BA 2	X 100 CrMoV 5 1 KU	SKD 12	2260	T30102
	X 155 CrVMo 12 1		1.2379	X 155 CrVMo 12 1	Z 160 CDV 12	BD 2	X 155 CrVMo 12 1 KU	SKD 11		T30402
			1.2436	X 210 CrW 12			X 215 CrW 12 1 KU	SKD 2	2312	
			1.2601	X 165 CrMoV 12			X 165 CrMoW 12 KU		2310	
			1.2713	55 NiCrMoV 6	55 NCDV 7			SKT 4		T61206
	HS 6-5-2-5	1.3243	1.3243	S 6-5-2-5	Z 85 WDKCV 06-05-05-04-02		HS 6-5-2-5	SKH 55	2723	
	HS 2-10-1-8	1.3247	1.3247	S 2-10-1-8	Z 110 DKCWV 09-08-	BM 42	HS 2-9-1-8	SKH 51		T11342
	HS 18-0-1	1.3355	1.3355	S 18-0-1	Z 80 WCV 18-04-01	BT 1	HS 18-0-1	SKH 2		T12001
H11	X 20 Cr 13	1.4021	1.4021	X 20 Cr 13	Z 20 C 13	420 S 37	X 20 Cr 13	SUS 420 J 1	2303	S42000
	X 70 CrMo 15	1.4109	1.4109	X 65 CrMo 14	Z 70 D 14			SUS 440 A		S44002
	X 90 CrMoV 18	1.4112	1.4112	X 90 CrMoV 18	Z 2 CND 18 05	409 S 19	X CrTi 12	SUS 440 B	2327	S44003
	X 105 CrMo 17	1.4125	1.4125	X 105 CrMo 17	Z 100 CD 17		X 105 CrMo 17	SUS 440 C		S44004
H12	X 4 CrNiCuNb 16 4	1.4540	1.4540	X 4 CrNiCuNb 16 4						S15500
	X 5 CrNiCuNb 16 4	1.4542	1.4542	X 5 CrNiCuNb 16 4				SUS 630		S17400
	X 5 CrNiCuNb 16 4	1.4542	1.4542	X 5 CrNiCuNb 16 4				SUS 630		S17400
	X 7 CrNiAl 17 7	1.4568	1.4568	X 7 CrNiAl 17 7	Z 9 CAN 17.7	301 S 81	X 7 CrNiAl 17 7	SUS 631	2388	S17700
	X 8 CrNiMoAl 15 7 5	1.4574	1.4574	X 8 CrNiMoAl 15 7 5						S15700
	X 6 NiCrTiMoV 25 15	1.4980	1.4943	X 4 NiCrTi 25 15	Z 6 NCTDV 25.15	HR 51		SUH 660	2570	S66286
	X 2 NiCoMo 18 8 5	1.6359	1.6359	X 2 NiCoMo 18 8 5		S 162				K92890
	X 2 NiCoMoTi 18 9 5	1.6358	1.6358	X 2 NiCoMoTi 18 9 5	Z 2 NKD 19-09					K93120
	X 2 NiCoMoTi 18 9 5	1.6358	1.6358	X 2 NiCoMoTi 18 9 5	Z 2 NKD 19-09					K93120
	X 2 NiCoMoTi 18 12 4	1.6356	1.6356	X 2 NiCoMoTi 18 12 4						K93160
H21	X 120 Mn 12	1.3401	1.3401	X 120 Mn 12	Z 120 M 12	BW 10		SC MnH 1	2183	
H31	EN-GJN-HV520	0.9620	0.9620	G-X330 NiCr 4 2	FB Ni4 Cr2 BC	Grade 2 A			05 12-00	F45001
	EN-GJN-HV550	0.9625	0.9625	G-X260 NiCr 4 2	FB Ni4 Cr2 HC	Grade 2 B			05 13-00	F45000
	EN-GJN-HV600(XCr11)	0.9630	0.9630	G-X300 CrNiSi 9 5 2	FB Cr9 Ni5	Grade 2 C, D, E			04 57-00	F45003

SMG

U.N.E./ I.H.A.	AISI / ASTM	GOST	ČSN	Misc. Brands	Condition	Structure
				Discalloy	Precipitation hardened	
				Haynes 25		
				Stellite 21		
				Hastelloy C		
		KHN65MV		Hastelloy C-276		
				IN 100		
				Inconel 718		
				Inconel X-750	Solution annealed	
				Nimonic 80A		
				René 41		
				Udimet 500		
				Waspalloy		
				Ti	Commercially pure	Ti (α)
	AMS 4919			Ti 6-2-4-2	Annealed	Ti (α)
	AMS 4943			Ti 3Al-2.5V (grd 9)	Annealed	Ti (α+β)
	AMS 4920, Grade 5	VT6		Ti 6Al-4V	Annealed	Ti (α+β)
	AMS 4986			Ti 10V-2Fe-3Al	Annealed	Ti (β)
F.1516	5115	12KHN2	14 220		Case hardened	
F.5103	1070	70			Quenched & Tempered	
F.5107	1078, 1080	75			Quenched & Tempered	
F.5117	1095				Quenched & Tempered	
F.5118	W1	U10A			Quenched & Tempered	
	S1	5KHV2SF			Quenched & Tempered	
	5155				Quenched & Tempered	
F.1252	4142, 4140	38HM	15 142		Quenched & Tempered	
F.520L	L2	11KHF			Quenched & Tempered	
F.5220	O1	9KHVG			Quenched & Tempered	
	O2	9G2F			Quenched & Tempered	
F.5230	52100	SHKH15	14 109		Quenched & Tempered	
F.5318	H13	4KH5MF1S			Quenched & Tempered	
F.5227	A2	9KH5VF			Quenched & Tempered	
F.5211	D2	KH12MF			Quenched & Tempered	
F.5213		KH12			Quenched & Tempered	
		KH12MF			Quenched & Tempered	
F.520.S	L6	5KHNM			Quenched & Tempered	
F.5613	M35	R6M5K5			Quenched & Tempered	
	M42	R2AM9K5			Quenched & Tempered	
	T1	R18			Quenched & Tempered	
F.5261	420	20KH13	17 022		Quenched & Tempered	Martensitic
	440 A				Quenched & Tempered	Martensitic
	440 B	95KH18			Quenched & Tempered	Martensitic
	440 C	95KH18			Quenched & Tempered	Martensitic
	XM-12			15-5 PH	H900	Martensitic
	SAE 630			17-4 PH	H1025	Martensitic
	SAE 630			17-4 PH	H900	Martensitic
	AMS 5528	09KH17N7YU1		17-7 PH	TH1050	Martensitic
	632			PH 15-7 Mo	TH1050	Martensitic
	660			A286	Precipitation hardened	Austenitic
	AMS 6512			Marage 250	Precipitation hardened	Martensitic
	AMS 6521			Marage 300	Precipitation hardened	Martensitic
	AMS 6521			Marage 300	Precipitation hardened	Martensitic
	AMS 6515			Marage 350	Precipitation hardened	Martensitic
	A128 Grade A			Hadfield		
	A532 IB (NiCr-LC			Ni-Hard 2		White cast iron
	A532 IA (NiCr-HC)			Ni-Hard 1		White cast iron
	A532 ID (Ni-HiCr)			Ni-Hard 4		White cast iron

Cemented carbide inserts and insert carriers

Cemented carbide inserts and cemented carbide insert carriers from Seco Tools are not included in the product range intended for the following requirements. Nevertheless Seco Tools can make the following declaration.
These products meet all requirements in RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment), WEEE (Waste Electrical & Electronic Equipment) and ELV (End of Life Vehicles) requirements.
Products do not contain mercury, lead, hexavalent chromium, cadmium, CFC, HCFC, flame retardants or solvents in concentrations that exceed specifications in the regulations.

Regrinding:
Wet or dry grinding can produce potentially hazardous dusts or mists that can irritate skin, eyes, nose, throat and result in lung damage or disease. To avoid injury use proper safety precautions and protective equipment.

Disposal:
Seco Tools will buy back used inserts and solid carbide tools for recycling. Inserts and solid carbide tools should be separated from other metal waste (steel, aluminium, copper etc).
All packing material is fully recyclable.

CBN and PCD inserts

Inserts from Seco Tools are not included in the product range intended for the following requirements. Nevertheless Seco Tools can make the following declaration.
This product meets all requirements in RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment), WEEE (Waste Electrical & Electronic Equipment) and ELV (End of Life Vehicles) requirements.
Products do not contain mercury, lead, hexavalent chromium, cadmium, CFC, HCFC, flame retardants or solvents in concentrations that exceed specifications in the regulations.

Regrinding:
Wet or dry grinding can produce potentially hazardous dusts or mists that can irritate skin, eyes, nose, throat and result in lung damage or disease. To avoid injury use proper safety precautions and protective equipment.

Disposal:
Seco Tools will buy back used CBN- or PCD-tipped inserts for recycling. Inserts should be separated from other metal waste (steel, aluminium, copper etc). Solid CBN-inserts may be discarded as landfill waste.
All packing material is fully recyclable.

Black oxide insert carriers

Insert carriers from Seco Tools are not included in the product range intended for the following requirements. Nevertheless Seco Tools can make the following declaration.
This product meets all requirements in RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment), WEEE (Waste Electrical & Electronic Equipment) and ELV (End of Life Vehicles) requirements.
Products do not contain mercury, lead, hexavalent chromium, cadmium, CFC, HCFC, flame retardants or solvents in concentrations that exceed specifications in the regulations.

Disposal:
Used insert carriers may be sent for recycling together with ordinary steel waste (swarf and discarded steel scrap) for recycling.
All packing material is fully recyclable.

Cermet inserts

Inserts from Seco Tools are not included in the product range intended for the following requirements. Nevertheless Seco Tools can make the following declaration.
This product meets all requirements in RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment), WEEE (Waste Electrical & Electronic Equipment) and ELV (End of Life Vehicles) requirements.
Cermet grade C15M inserts do contain nickel and will leach nickel when in contact with the skin. Amount of leaching is higher than specified in norm SS-EN 1811 Reference test method for release of nickel from products intended to come into direct and prolonged contact with the skin. These norms are intended for products that are in direct and prolonged contact with the skin and are therefore not directly applicable for cermet inserts. Persons with known allergic reactions to nickel are advised to wear protective gloves when handling cermet inserts.

Regrinding:
Wet or dry grinding can produce potentially hazardous dusts or mists that can irritate skin, eyes, nose, throat and result in lung damage or disease. To avoid injury use proper safety precautions and protective equipment.

Disposal:
Used inserts may be recycled. Inserts should be separated from other metal waste (steel, aluminium, copper, etc) including cemented carbide inserts.
All packing material is fully recyclable.

Nickel coated insert carriers

Insert carriers from Seco Tools are not included in the product range intended for the following requirements. Nevertheless Seco Tools can make the following declaration.
This product meets all requirements in RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment), WEEE (Waste Electrical & Electronic Equipment) and ELV (End of Life Vehicles) requirements.
Products do not contain mercury, lead, hexavalent chromium, cadmium, CFC, HCFC, flame retardants or solvents in concentrations that exceed specifications in the regulations.
Insert carriers do contain nickel and will leach nickel when in contact with the skin. Amount of leaching is not higher then norm SS-EN 1811 Reference test method for release of nickel from products intended to come into direct and prolonged contact with the skin.
These norms are intended for products that are in direct and prolonged contact with the skin and are therefore not directly applicable for insert carriers. Persons with known allergic reactions to nickel are advised to wear protective gloves when handling nickel coated insert carriers.

Disposal:
Used tools maybe sent for recycling together with ordinary steel waste (swarf and discarded steel scrap) for recycling.
All packing material is fully recyclable.

Intentionally added alloying elements

Grade	Cemented carbide											Coating						
	W	Ti	Ta	Nb	Co	Cr	Ni	Mo	C	N	Ru	Ti	Al	C	N	O	Si	Nb
CP20	■				■				■			■			■			
CP200	■				■	■			■			■	■		■			
CP300	■	■	■	■	■				■			■	■		■			
CP500	■				■	■			■			■	■		■			
CP600	■				■	■			■			■	■		■			
C15M	■	■	■	■	■		■	■	■	■								
CF	■		■		■		■	■	■									
CM	■		■		■		■	■	■									
DP2000	■		■	■	■				■			■	■	■	■	■		
DP3000	■	■	■	■	■				■	■		■	■	■	■	■		
DS2050	■				■	■			■			■	■		■			■
DS4050	■				■	■			■			■	■		■			■
F15M	■				■	■			■			■	■		■			
F25M	■	■	■	■	■				■			■	■		■			
F30M	■				■	■			■			■	■		■			
F40M	■				■	■			■			■	■		■			
HX	■		■		■				■									
H02	■		■		■	■			■									
H15	■				■	■			■									
H25	■				■	■			■									
KX	■				■	■			■									
MH1000	■				■	■			■			■	■		■			
MK1500	■		■		■				■			■	■	■	■	■		
MK2050	■		■		■	■			■			■	■		■		■	
MM4500	■				■	■			■			■	■	■	■	■		
MP1501	■		■	■	■				■			■	■	■	■	■		
MP2050	■				■						■	■	■		■		■	
MP2501	■		■	■	■				■			■	■	■	■	■		
MP3000	■				■	■			■			■	■		■			
MS2500	■		■	■	■				■			■	■	■	■	■		
MS2050	■				■	■			■			■	■		■			■
RX1500	■		■		■		■	■	■			■	■		■			
RX2000	■		■		■	■			■			■	■		■			
RM2020	■				■				■			■						
RM2090	■				■	■			■			■	■				■	
RN2010	■				■	■			■									
RS2090	■				■	■			■			■	■				■	
T350M	■		■	■	■				■			■	■	■	■	■		
T25M	■		■	■	■				■			■		■	■			
TGH1050	■				■	■			■			■	■		■		■	
TGK1500	■		■		■				■			■	■	■	■	■		
TGP25	■	■	■	■	■				■			■	■	■	■	■		
TGP35	■		■	■	■				■			■	■	■	■	■		
TGP45	■		■	■	■				■			■	■	■	■	■		
TH1000	■				■	■			■			■	■		■		■	
TH1500	■				■	■			■			■	■	■	■	■		
TK0501	■				■	■			■			■	■	■	■	■		
TK1501	■		■		■	■			■			■	■	■	■	■		
TM1501	■	■	■	■	■	■			■	■		■	■	■	■	■		
TM2000	■	■	■	■	■				■	■		■	■	■	■	■		
TM2501	■	■	■	■	■				■	■		■	■	■	■	■		
TM3501	■				■				■			■	■	■	■	■		
TM4000	■	■	■	■	■				■	■		■	■	■	■	■		
TP0501	■	■	■	■	■	■			■			■	■	■	■	■		
TP1020	■	■	■	■	■				■	■								
TP1030	■	■	■	■	■				■	■		■	■		■		■	
TP1501	■	■	■	■	■				■	■		■	■	■	■	■		
TP25	■	■	■	■	■	■			■	■		■	■	■	■	■		
TP200	■	■	■	■	■				■	■		■	■	■	■	■		
TP2501	■	■	■	■	■	■			■	■		■	■	■	■	■		
TP3501	■	■	■	■	■				■	■		■	■	■	■	■		
TP40	■		■	■	■				■			■		■	■			
TS2000	■				■	■			■			■	■		■			
TS2050	■				■	■			■			■	■		■		■	
TS2500	■		■		■				■			■	■		■			
T250D	■				■	■			■			■	■		■			
T400D	■				■	■			■			■	■		■			
T100R	■		■		■	■			■			■	■		■			
T60M	■	■	■	■	■				■			■	■		■			
883	■		■		■				■									
890	■				■	■			■									

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