

BIG KAISER



TOOLING & MACHINERY, INC.
COMPLETE METALWORKING SOLUTIONS
(800) 991-4225 www.ahbinc.com
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SUPPLEMENTAL PRODUCTS
HIGH PERFORMANCE TOOLING SOLUTIONS
2018-2019



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ULTRA PRECISION SUPER SLIM

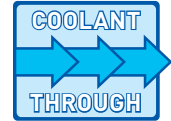
CLAMPING RANGE: $\phi 3$ -6mm

Ultimate HYDRAULIC CHUCK with precision.

Runout accuracy of 1 micron at 4xD.

**NEW
SIZES**

**MAX
60,000
RPM**



**ULTRA
PRECISION
1 μ m**

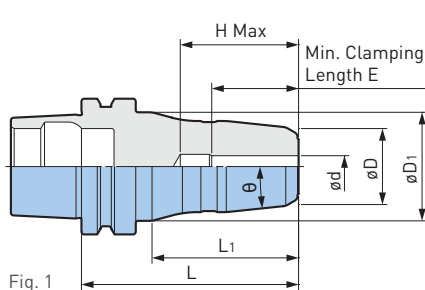


Fig. 1

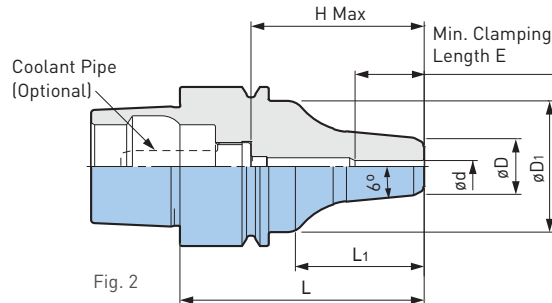


Fig. 2

Catalog Number	Fig.	ϕd	ϕD	$\phi D1$	L	L1	θ	E	H Max	Max RPM	Weight (lbs.)
HSK-E25-HDC3S-40UP	1	3mm	.551	.79	1.58	1.06	6°	.63	.86	60,000	.2
-HDC3.175S-40UP NEW		.125									
-HDC4S-40UP		4mm									
-HDC6S-45UP NEW		6mm									
HSK-E32-HDC3S-52UP	1	3mm	.551	1.02	2.05	.59	6°	.63	1.10	45,000	.4
-HDC3.175S-52UP NEW		.125									
-HDC4S-52UP		4mm									
-HDC6S-57UP		6mm									
HSK-E40-HDC3S-55UP NEW	2	3mm	.551	1.30	2.17	1.14	6°	.63	1.54	40,000	.7
-HDC3.175S-55UP NEW		.125									
-HDC4S-55UP NEW		4mm									
-HDC6S-60UP NEW		6mm									
					2.36	1.34		.98	1.57		

- Coolant pipe must be ordered separately
- Adjusting screws cannot be used

CAUTION

Use only cutting tools that have a shank tolerance of h6. Do not use with cutting tools made with a flat on the shank (ie: Weldon type shank). Roughing end mills are not recommended for use with Hydraulic Chucks. Do not tighten the clamping screw without first inserting a cutting tool into the tool holder. Always insert the cutting tool into the hydraulic tool holder beyond min. clamping length "E."

SUPER SLIM

CLAMPING RANGE: $\varnothing 3$ -12mm

Small design for micro machining.

NEW SIZES

MAX 60,000 RPM

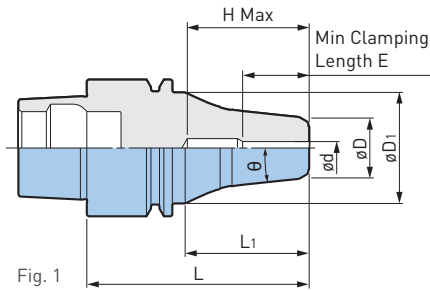
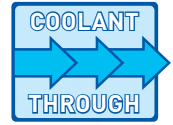


Fig. 1

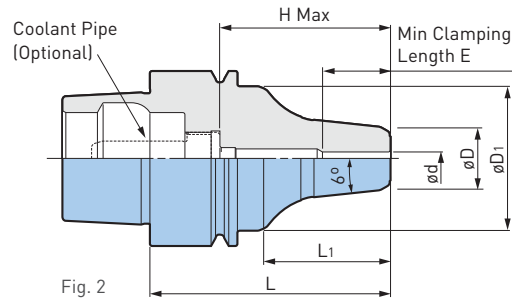


Fig. 2

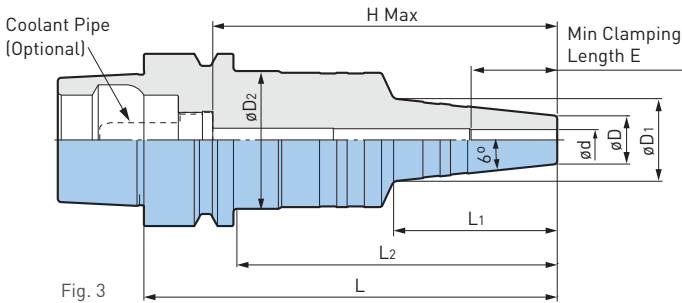


Fig. 3

CAUTION

Use only cutting tools that have a shank tolerance of h6. Do not use with cutting tools made with a flat on the shank (ie: Weldon type shank). Roughing end mills are not recommended for use with Hydraulic Chucks. Do not tighten the clamping screw without first inserting a cutting tool into the tool holder. Always insert the cutting tool into the hydraulic tool holder beyond min. clamping length "E."

Catalog Number	Fig.	$\varnothing d$	$\varnothing D$	$\varnothing D1$	$\varnothing D2$	L	L1	L2	θ	E	H Max	Max RPM	Weight (lbs.)
HSK-E25-HDC3S-40	1	3mm	.551	.79	-	1.575	1.06	-	6°	.63	.86	60,000	.2
-HDC3.175S-40 NEW													
-HDC4S-40													
-HDC6S-45 NEW													
HSK-E32-HDC3S-52	1	3mm	.551	1.02	-	2.05	1.14	-	6°	.63	1.10	45,000	.4
-HDC3.175S-52 NEW													
-HDC4S-52													
-HDC6S-57													
HSK-E40-HDC3S-55	2	3mm	.551	1.30	-	2.17	1.14	-	6°	.63	1.54	40,000	.7
-HDC3.175S-55 NEW													
-HDC4S-55													
-HDC6S-60													
HSK-E50-HDC4S-120 NEW	3	4mm	.551	.94	1.57	4.72	1.85	3.66	6°	.75	3.94	30,000	2.0
-HDC6S-120 NEW													
-HDC8S-120 NEW													
-HDC10S-120 NEW													
-HDC12S-120 NEW													

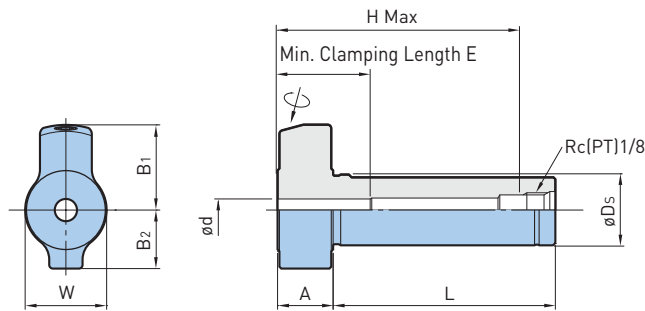
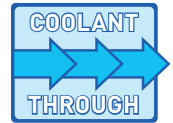
- HSK-E25/32 does not have coolant-through hole
- Coolant pipe must be ordered separately
- Adjusting screws cannot be used

HYDRAULIC CHUCK FOR SWISS-TYPE AUTOMATIC LATHES

CLAMPING RANGE: $\varnothing 4$ -8mm

High-precision cutting with HYDRAULIC CHUCK is achieved on an automatic lathe.

NEW



Catalog Number	$\varnothing d$	$\varnothing Ds$	L	A	B1	B2	W	H Max	E	Weight (lbs.)
SL19.05-HDC4-60 NEW	4mm	.750	2.36	.59	.91	.62	.87	2.56	.75	.4
-HDC6-60 NEW	6mm								.98	.4
-HDC8-60 NEW	8mm								1.22	.3
SL22-HDC4-70 NEW	4mm	22mm	2.75	.59	.91	.62	.98	2.95	.75	.5
-HDC6-70 NEW	6mm								.98	.5
-HDC8-70 NEW	8mm								1.22	.5

• Adjusting Screw cannot be used

CAUTION

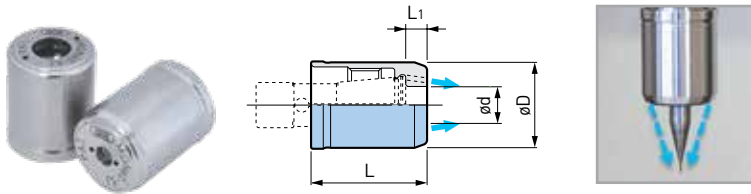
Use only cutting tools that have a shank tolerance of h6. Do not use with cutting tools made with a flat on the shank (ie: Weldon type shank). Do not tighten the clamping screw without first inserting a cutting tool into the tool holder. Always insert the cutting tool into the hydraulic tool holder beyond min. clamping length "E."



MEGA MICRO COOLANT NUT (PAT. PENDING)

For MEGA MICRO CHUCK 6S provides a more efficient coolant supply for micro cutting tools. Ideal design for high-speed micro machining up to $\phi 6\text{mm}$.

NEW

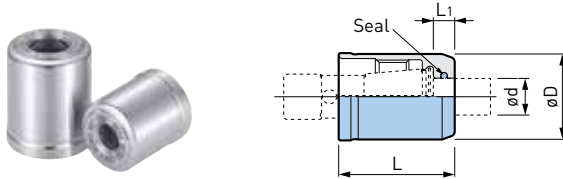


Up to 35% higher tool lifetime compared to standard nut.

MEGA 6S

Catalog Number	ød	øD	L	L1
MGN6S-2J NEW	2mm	.55 (14mm)	.75 (19mm)	.14 (3.5mm)
-3J NEW	3mm			
-4J NEW	4mm			
-5J NEW	5mm			
-6J NEW	6mm			

MEGA MICRO SEAL NUT



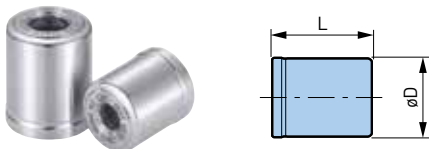
MEGA 6S

Catalog Number	ød	øD	L	L1
MGN6S-PS3	3mm	.55 (14mm)	.75 (19mm)	.14 (3.5mm)
-PS3.175	.125			
-PS4	4mm			
-PS5	5mm			
-PS6	6mm			

MEGA 8S

Catalog Number	ød	øD	L	L1
MGN8S-PS3	3mm	.71 (18mm)	.80 (20.2mm)	.14 (3.5mm)
-PS4	4mm			
-PS5	5mm			
-PS6	6mm			
-PS7	7mm			
-PS8	8mm			

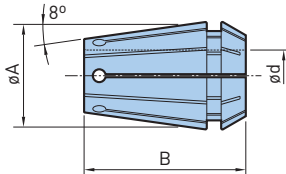
MEGA MICRO NUT



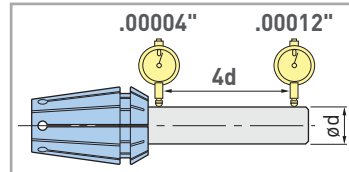
Catalog Number	øD	L	Body Type
MGN3S	.39 (10mm)	.51 (13mm)	MEGA3S
MGN4S	.47 (12mm)	.57 (14.5mm)	MEGA4S
MGN6S	.55 (14mm)	.67 (17mm)	MEGA6S
MGN8S	.71 (18mm)	.73 (18.5mm)	MEGA8S

ERC COLLET SET

Each ERC collet is inspected twice (0° and 180°) at 4 times diameter to guarantee the runout accuracy. The "AA grade" is marked on only those collets that pass the inspection process for accuracy. The ERC COLLET SET contains all the common collets to cover entire clamping range.



Guaranteed Max Runout



All BIG Collets are AA Grade and inspected twice for accuracy

MEGA ER16

Catalog Number	Number of Collets	Case Size (LxWxH)	Corresponding Chuck Model
SERC16AA-10 NEW	10	7.87 x 6.69 x 1.97 (200mm x 170mm x 50mm)	MEGAER16

- BIG's ERC collets have a maximum clamping capacity of $.020/\phi$ (.5mm/ ϕ)
- To obtain the best runout accuracy and rigidity, ERC collets for smaller tools have a reduced clamping range
- For best results, users should avoid clamping tools with shank diameters less than the recommended clamping range
- Provided with a polypropylene case

CAUTION

Conventional DIN collets have a clamping range of $1\text{mm}/\phi$. Never use ERC collets for more than $.020/\phi$ (.5mm/ ϕ) below nominal size. To maintain the accuracy of the tool assembly, do not use collets and nuts manufactured by another company with the chuck body of BIG's MEGA ER GRIP. We cannot guarantee the accuracy statement for our collets if they are assembled on the chuck body of another manufacturer.

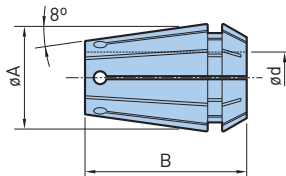
SET CONTENTS

Catalog Number	Clamping Range ϕd
ERC16-3AA	.108-.118
-4AA	.148-.157
-6AA	.217-.236
-8AA	.295-.315
-10AA	.376-.394
ERC16-1/8EAA	.125
-3/16EAA	.188
-1/4EAA	.250
-5/16EAA	.312
-3/8EAA	.375

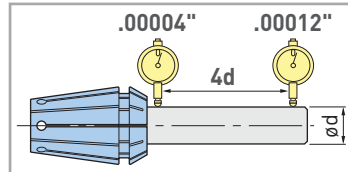
$\phi A = .63$ (16mm) $B = 1.08$ (27.5mm)

ERC COLLET SET

Each ERC collet is inspected twice (0° and 180°) at 4 times diameter to guarantee the runout accuracy. The "AA grade" is marked on only those collets that pass the inspection process for accuracy. The ERC COLLET SET contains all the common collets to cover entire clamping range.



Guaranteed Max Runout



All BIG Collets are AA Grade and inspected twice for accuracy

MEGA ER32

Catalog Number	Number of Collets	Case Size (LxWxH)	Corresponding Chuck Model
SERC32AA-19 NEW	19	12.20 x 10.24 x 2.95 (310mm x 260mm x 75mm)	MEGAER32

- BIG's ERC collets have a maximum clamping capacity of $.020/\phi$ (.5mm/ ϕ)
- To obtain the best runout accuracy and rigidity, ERC collets for smaller tools have a reduced clamping range
- For best results, users should avoid clamping tools with shank diameters less than the recommended clamping range
- Provided with a polypropylene case

CAUTION

Conventional DIN collets have a clamping range of $1\text{mm}/\phi$. Never use ERC collets for more than $.020/\phi$ (.5mm/ ϕ) below nominal size. To maintain the accuracy of the tool assembly, do not use collets and nuts manufactured by another company with the chuck body of BIG's MEGA ER GRIP. We cannot guarantee the accuracy statement for our collets if they are assembled on the chuck body of another manufacturer.

SET CONTENTS

Catalog Number	Clamping Range ϕd
ERC32-3AA	.108-.118
-4AA	.148-.157
-6AA	.217-.236
-8AA	.295-.315
-10AA	.376-.394
-12AA	.453-.472
-14AA	.531-.551
-16AA	.610-.630
-18AA	.690-.709
-20AA	.768-.787
ERC32-1/8EAA	.125
-3/16EAA	.188
-1/4EAA	.250
-5/16EAA	.312
-3/8EAA	.375
-1/2EAA	.500
-9/16EAA	.563
-5/8EAA	.625
-3/4EAA	.750

$\phi A=1.26$ (32mm) $B=1.58$ (40mm)

COLLET CHUCKS BIG CAPTO TOOLING, C4

BIG KAISER

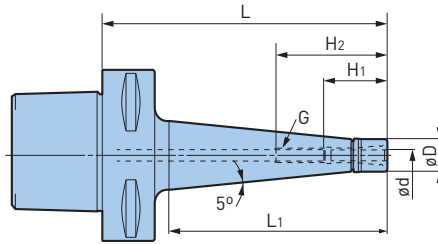
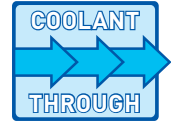
MEGA MICRO CHUCK

CLAMPING RANGE: ϕ .018"-.238" (ϕ .45-6.05mm)

For Micro Drill & End Mill Applications

HIGHER
RIGIDITY

MAX
35,000
RPM



Catalog Number	ϕd	ϕD	L	L ₁	H ₁	H ₂	G	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
C4-MEGA3S-60T	.018-.125	.394	2.36	1.38	.87	1.50	M4 P0.7	NBC3S-□	MGN3S	MGR10	35,000	.7
-MEGA6S-60T	.018-.238	.551	2.36	1.38	1.10	1.85	M7 P0.75	NBC6S-□	MGN6S	MGR14	30,000	.7
-MEGA6S-90T			3.54	2.56		1.89					22,000	.9

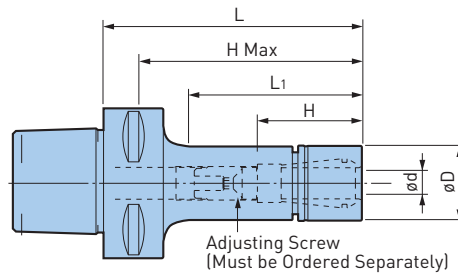
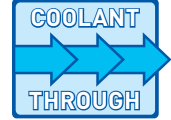
- MEGA MICRO NUT is included; collet and wrench must be ordered separately
- Weight includes nut but not collet
- Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance; when using, slowly ramp up to the appropriate speed starting from slow speeds

MEGA NEW BABY CHUCK

CLAMPING RANGE: ϕ .010"-.787" (ϕ .25-20mm)

For Drills, Reamers, Taps & Finishing End Mills

MAX
35,000
RPM



Catalog Number	ϕd	ϕD	L	L ₁	H	H Max	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
C4-MEGA6N-75	.010-.236	.787	2.95	1.89	.91-1.69	2.72	NBC6-□	MGN6	MGR20	30,000	.9
-MEGA8N-75	.020-.315	.984	2.95	1.93	1.02-1.77	2.72	NBC8-□	MGN8	MGR25	30,000	1.1
-MEGA10N-50❖	.059-.394	1.181	1.97	1.10	1.73	1.73	NBC10-□	MGN10	MGR30	33,000	1.1
-75❖			2.95	2.05	1.50-1.89	2.72				30,000	1.3
-MEGA13N-50❖	.098-.512	1.378	1.97	1.14	1.73	1.73	NBC13-□	MGN13	MGR35	30,000	1.1
-75			2.95	2.13	2.52	2.52				28,000	1.5
-MEGA16N-55❖	.098-.630	1.654	2.17	—	1.89	1.89	NBC16-□	MGN16	MGR42	30,000	1.5
-MEGA20N-60❖	.098-.787	1.811	2.36	—	2.09	2.09	NBC20-□	MGN20	MGR46	25,000	1.8

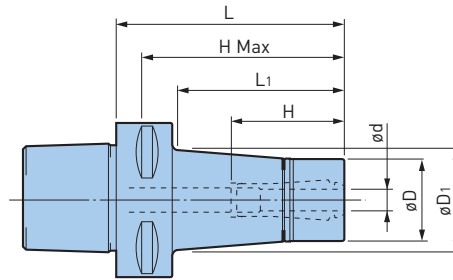
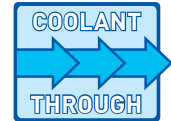
- MEGA NEW BABY NUT is included; collet, wrench and adjusting screw must be ordered separately
- Weight includes nut but not collet
- Center-through coolant supply is available
- Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance; when using, slowly ramp up to the appropriate speed starting from slow speeds
- "H" dimension is the Max tool shank length that can be inserted into the holder
- Adjusting screws cannot be used with models marked ❖

MEGA E CHUCK

CLAMPING RANGE: ϕ .125"-.500" (ϕ 3-12mm)

Exclusively for High Speed Finish End Milling

MAX
35,000
RPM



Catalog Number	ϕd	ϕD	$\phi D1$	L	L1	H	H Max	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
C4-MEGA6E-50❖	.125-.250 (3-6mm)	.984	1.02	1.97	.98	1.73	1.73	MEC6-□	MEN6	MGR25	35,000	.9
-MEGA8E-50❖	.125-.250 (3-8mm)	1.181	1.22	1.97	1.10	1.73	1.73	MEC8-□	MEN8	MGR30	35,000	1.1
-MEGA10E-55❖	.125-.375 (3-10mm)	1.378	1.46	2.17	1.34	1.93	1.93	MEC10-□	MEN10	MGR35	30,000	1.1
-MEGA13E-60❖	.125-.500 (3-12mm)	1.654	—	2.36	—	1.97	1.97	MEC13-□	MEN13	MGR42	25,000	1.3

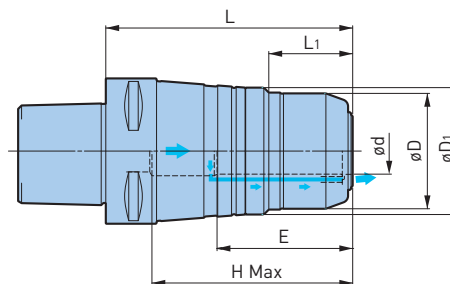
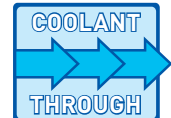
- MEGA E NUT is included; collet, wrench and adjusting screw must be ordered separately
- Weight includes nut but not collet
- Center-through coolant supply is available
- Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance; when using, slowly ramp up to the appropriate speed starting from slow speeds
- "H" indicates the adjustment length with an adjusting screw
- Adjusting screws cannot be used with models marked ❖

MEGA DOUBLE POWER CHUCK

CLAMPING RANGE: ϕ 16-20mm

For Heavy Duty End Milling

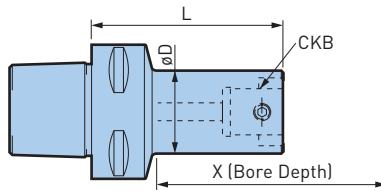
MAX
30,000
RPM



Catalog Number	ϕd	ϕD	$\phi D1$	L	L1	H	Min Clamping Length E	Wrench	Weight (lbs.)
C4-MEGA16D-70	16mm	1.811	1.850	2.756	—	2.520	1.969	MGR46L	1.8
-MEGA20D-65	20mm	1.969	2.008	2.559	—	2.323	2.008	MGR50L	1.8

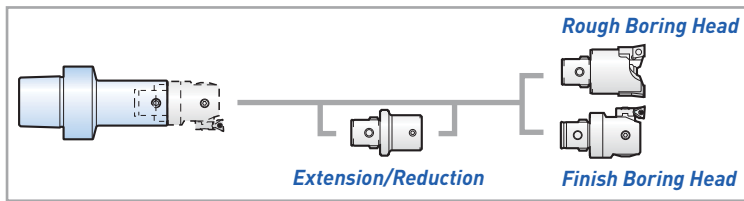
- Wrench must be ordered separately
- Jet-through type provides coolant form the chuck nose, thus tools with oil holes cannot be used

CKB SHANK



Catalog Number	CK	ϕD	L	X	Weight (lbs.)
C4-CKB1-48	CKB1	.748	1.890	2.165	.9
-CKB2-45	CKB2	.945	1.772	2.165	.9
-CKB3-40	CKB3	1.220	1.575	2.244	1.1
-CKB4-33	CKB4	1.535	1.299	2.441	1.1

- X dimensions on the table are reference figures when EWN/EWE/SW head is mounted
- Center through coolant supply is available



Integral Versions Available



EWN Finish Boring Head

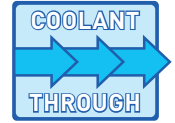
Boring Range: $\phi 1.614$ "-2.913"

Multifunctional and balance optimized for highest efficiency.

INTEGRAL MODEL—90° TYPE F



NEW



Right Hand

Left Hand

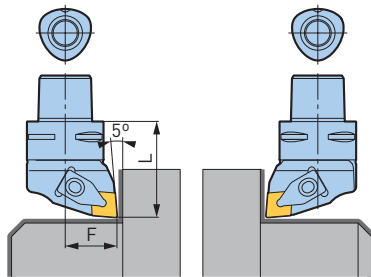


Fig. 1

Right Hand

Left Hand

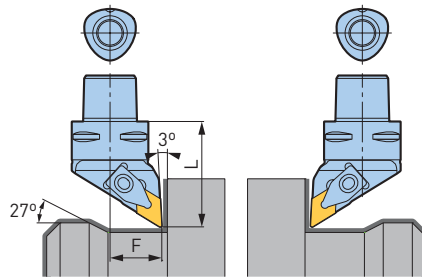


Fig. 2

Right Hand

Left Hand

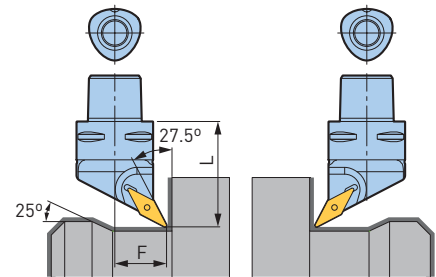


Fig. 3

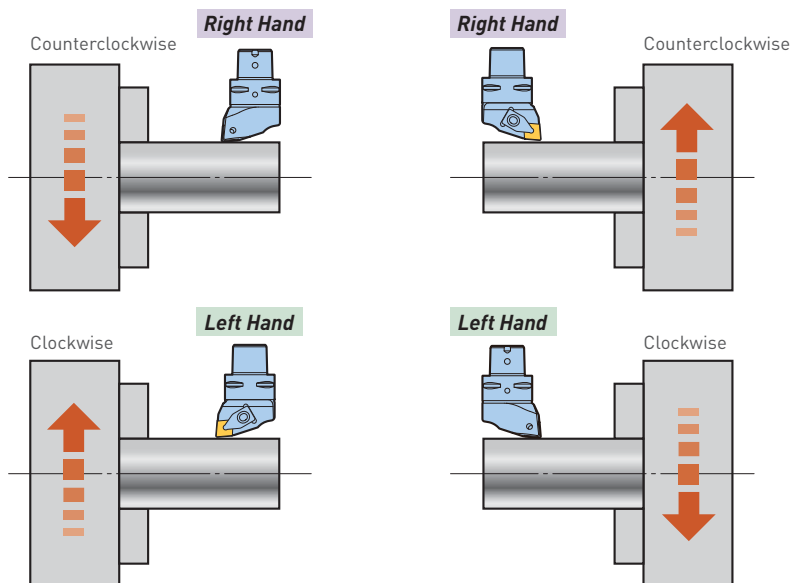
Entering Angle	Hand	Catalog Number	Fig.	L	F	Insert	Clamp Piece	Weight (lbs.)
95°	R	C4 -DCLNR-27050-12 NEW	1	1.969	1.06	CN1204 Rhombic 80°	CP2	1.0
	L	-DCLNL-27050-12 NEW						
93°	R	-DDJNR-27055-15 NEW	2	2.165	1.06	DN1504* (DN1506) Rhombic 55°	CP2	.9
	L	-DDJNL-27055-15 NEW						
117.5°	R	-SVQBR-27055-16 NEW	3	2.165	1.06	VB1604* VC1604** Rhombic 35°	M3.5***	.9
	L	-SVQBL-27055-16 NEW						

*Carbide shim for 4.76mm thick DIN1504 insert is included as standard, in case of DN1506 insert (thickness of 6.35mm), please replace the standard carbide shim with DNS1506 (option)

**VB1604 and VC1604 inserts are suitable

***M3.5 is screw-on type

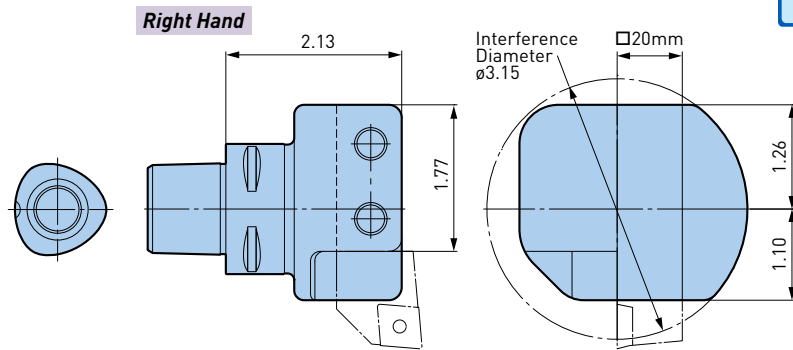
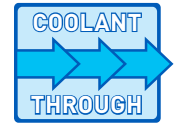
• Wrench and inserts must be ordered separately



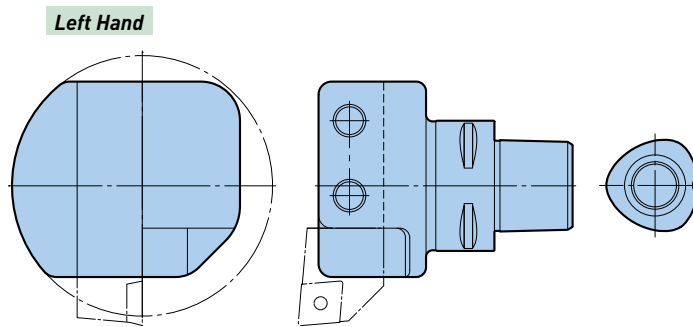
SQUARE HOLDER—90° TYPE



NEW



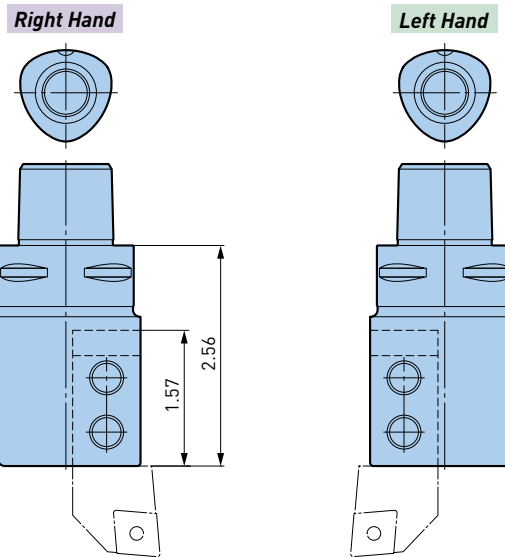
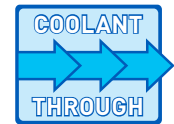
Hand	Catalog Number	Weight (lbs.)
R	C4-90-BH20R-2854 NEW	2.1
L	-BH20L-2854 NEW	



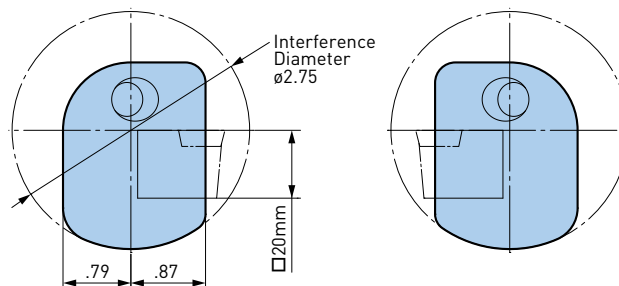
SQUARE HOLDER—180° TYPE



NEW



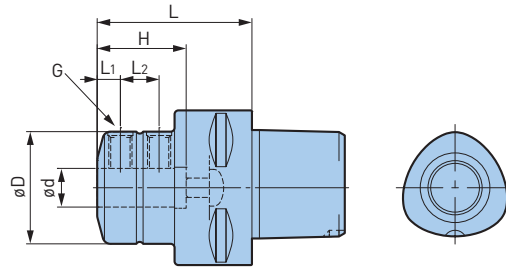
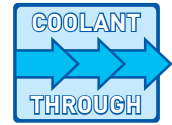
Hand	Catalog Number	Weight (lbs.)
R	C4-180-BH20R-2265 NEW	1.9
L	-BH20L-2265 NEW	



BORING BAR HOLDER

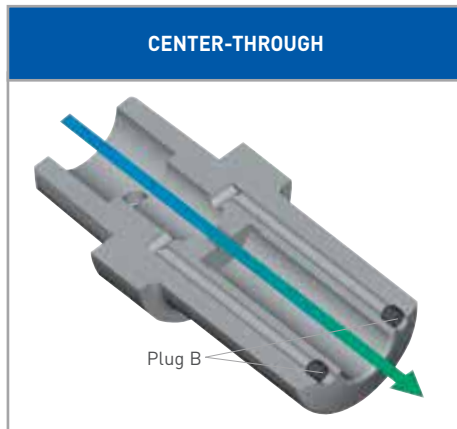
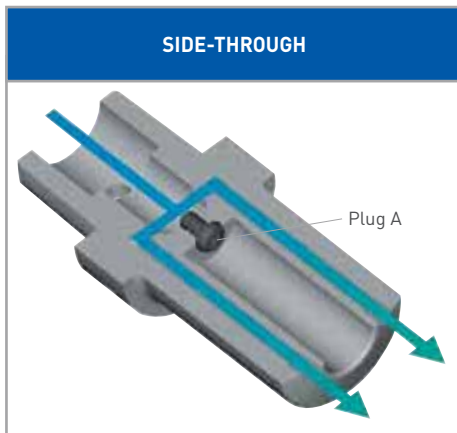
CLAMPING RANGE: $\phi 6$ -20mm

NEW



Catalog Number	ϕd	ϕD	L	L1	L2	H	Clamp Screw G	Weight (lbs.)
C4-BSL6-40 NEW	6mm	.906	1.57	.20	.35	.91	M5P0.8	.7
-BSL8-40 NEW	8mm	.984		.24	.39		M6P1.0	.7
-BSL10-40 NEW	10mm	1.142		M8P1.0	.7			
-BSL12-45 NEW	12mm	1.339	1.77	.31	.47	1.10	M8P1.0	.9
-BSL16-50 NEW	16mm	1.575	1.97	.39	.55	1.30	M10P1.25	1.1
-BSL20-60 NEW	20mm	1.969	2.36	.47	.59	1.69		1.6

BSL SPARE PARTS



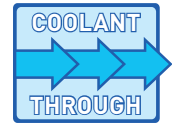
Catalog Number	Plug A	Plug B
BSL6	M5P0.8	M4xP0.7
BSL8		M5xP0.8
BSL10		M5xP0.8
BSL12		M6xP1.0
BSL16		M6xP1.0
BSL20		M6xP1.0

- Plug A and Plug B are included
- Bottom-head bolt with models marked ❖

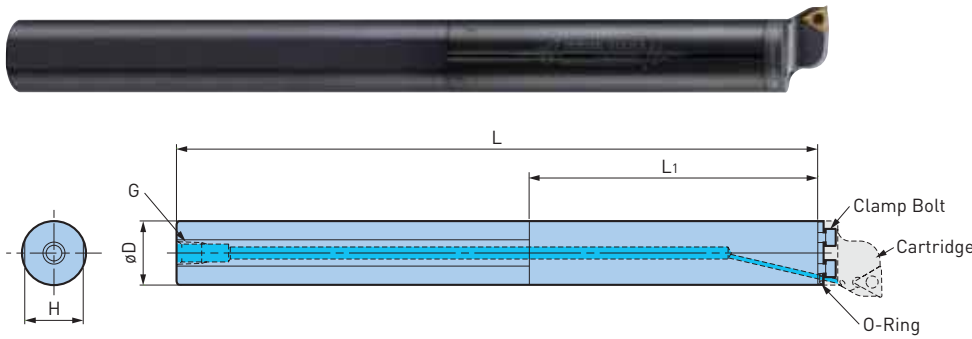
SMART DAMPER TURNING ANTI-VIBRATION BORING BAR

Integrated Damping System

Unprecedented machining depths without chatter is made possible with this heavyweight, strengthened dynamic damper.

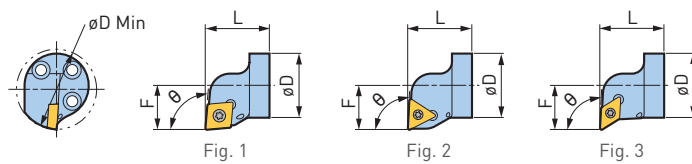


- Machining Dia.: $\phi 1.58$ or more
- Depth: $L/D \phi 7 \times d$



Catalog Number	Cartridge	ϕD	L	L1	H	G	Clamp Bolt (1 pc.)	O-Ring Set (2 pcs.)
ST32-SDB40DP-320	B32-□	32mm	12.60	5.67	1.18	PT1/4	C0510 (M5×10L)	SDB200R
ST40-SDB50DP-410	B40-□	40mm	16.14	6.69	1.46	PT3/8	C0610 (M6×10L)	SDB200R
ST1.250-SDB40DP-12.5	B32-□	1.25	12.50	5.67	1.18	NPT1/4	C0510 (M5×10L)	SDB200R
ST1.500-SDB50DP-16	B40-□	1.50	16.00	6.69	1.47	NPT1/4	C0610 (M6×10L)	SDB200R

- Clamp Bolts (3 pcs.) and O-Rings (2 pcs.) are included
- Cartridge must be ordered separately
- Insert must be ordered separately
- Designed to be capable of supplying coolant through body
- Do not clamp the L1 section, where the anti-vibration mechanism is located



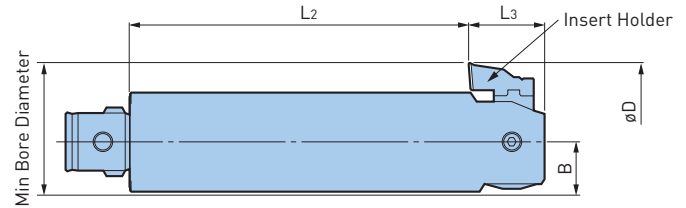
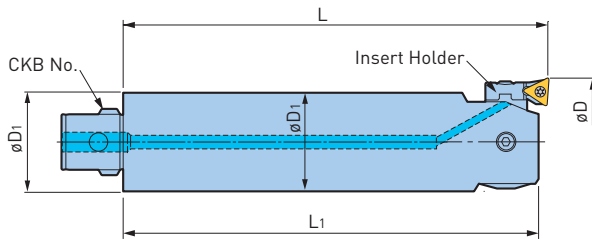
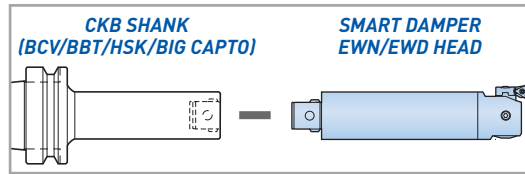
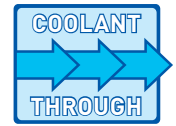
NEW SIZES

Catalog Number	Fig.	Insert	Hand	ϕD Min	ϕD	F	L	θ	Set Screw
B32-SCLCR-22032-12	1	CC1204	Right Hand	1.57	1.26	.87	1.26	95°	S5S-20IP
-STUCR-22032-11 NEW	2	TC1102						93°	S2.5S-7IP
-STUPR-22032-16		TP1604						S4S-15IP	
-SDUCR-22032-11	3	DC11T3							
B40-SCLCR-27032-12	1	CC1204	Right Hand	1.97	1.57	1.06	1.26	95°	S5S-20IP
-STUCR-27032-11 NEW	2	TC1102						93°	S2.5S-7IP
-STUPR-27032-16		TP1604						S4S-15IP	
-SDUCR-27032-11	3	DC11T3							

- A single chip clamping screw is included with each cartridge
- Insert must be ordered separately, an ISO standard insert is fitted
- Insert Clamp Screw Set (option) comprises 10 pcs. of screw and 1 pc. of wrench
- Left hand models are B.T.O.; please contact BIG KAISER for details

SMART DAMPER BORING EWN Finishing Head—Dial Readout

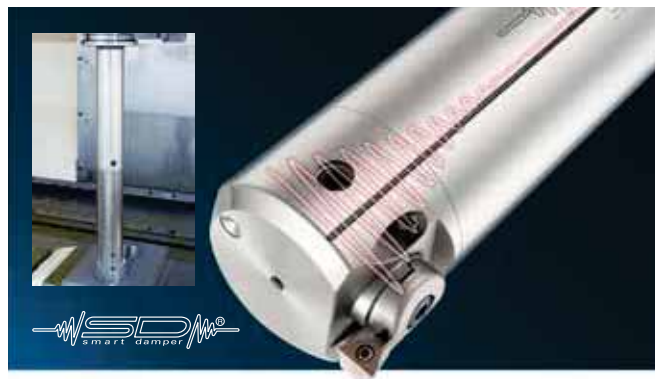
**NEW
SIZES**



Back Boring
Minimum pilot hole diameter = $B + (\text{back boring diameter} / 2)$

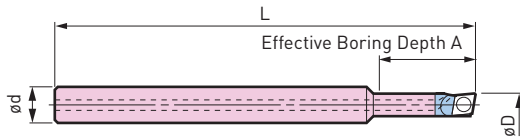
Catalog Number	CK	Insert Holder	Boring			Back Boring			B	øD1	Weight (lbs.)	Insert			
			øD	L	L1	øD	L2	L3							
CKB3-EWN32EDP-160 NEW	CKB3	10.626.131	1.260-1.654	6.30	6.10	—	5.12	.98	.63	1.22	2.6	TC11			
		10.626.132	1.614-2.008			—									
		10.626.133	1.970-2.362			2.24-2.36									
CKB4-EWN41EDP-185	CKB4	10.626.141	1.614-2.162	7.28	7.13	—	5.98	1.14	.79	1.54	5.1		TC11		
		10.626.142	1.969-2.480			2.40-2.48									
		10.626.143	2.402-2.913			2.64-2.91									
CKB5-EWN53EDP-210	CKB5	10.626.151	2.087-2.756	8.27	8.11	—	6.77	1.34	1.00	1.97	9.7			TC11	
		10.626.152	2.559-3.228			2.91-3.23									
		10.626.153	3.070-3.740			3.07-3.74									
CKB6-EWN68EDP-240	CKB6	10.626.161	2.677-3.937	9.45	9.30	3.54-3.94	7.52	1.78	1.28	2.52	18.3				TC11
		10.626.162	3.700-4.960			3.70-4.96									
		10.626.162	4.646-5.906			4.65-5.91									
CKB6-EWN100EDP-240 NEW	CKB6	10.626.161	3.937-6.024	9.45	9.30	4.21-6.02	7.52	1.78	1.79	2.52	19.4	TC11			
		10.626.162	4.961-7.047			4.96-7.05									
		10.626.163	5.906-8.000			5.91-7.99									
CKB7-EWN100EDP-240 NEW	CKB7	10.626.161	3.937-6.024	9.45	9.30	4.21-6.02	7.52	1.78	1.79	3.54	19.4		TC11		
		10.626.162	4.961-7.047			4.96-7.05									
		10.626.163	5.906-8.000			5.91-7.99									

- The minimum boring range represents the range when insert with .016" nose radius is used
- Insert must be ordered separately, the suitable size is TC11
- Designed to be capable of supplying coolant through body




CARBIDE CYLINDRICAL INSERT HOLDER

Indexable insert offered in the minimal diameter. Stable cutting achieved by the integral carbide insert holder.



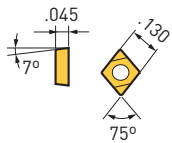
Catalog Number	ød	øD	A	L	Insert
ST06W-EB4-16 NEW	6mm	.157-.197	.63	2.76	EC03
-EB5-20 NEW		.197-.236	.79	2.95	

 Carbide tool holders

- Inserts must be ordered separately
- An exclusive straight collet is required when used with a boring head

INSERTS

EC03



Catalog Number	Radius	Workpiece	Grade	Material
ECGM03X102ELA NEW	.2	Carbon Steel, Alloy Steel	T1500A	Cermet
		Aluminium	H1	Carbide (K10)

- Inserts are available in a packet of 10 pcs.

SCREW & WRENCH SET

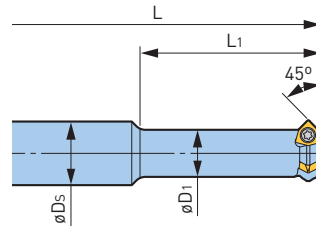
Catalog Number	Insert	Carbide Bar	Clamping Screw	
			Screw	Wrench
S1.6S-T3-S NEW	EC03	ST06W-EB4-16	M1.6Fx2	DA-T3
S1.6S-T3 NEW		ST06W-EB5-20	M1.6Fx2.5	

C-CUTTER MINI—MULTI-INSERT

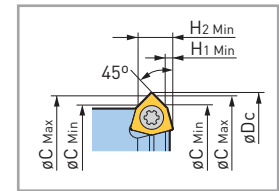
For Front & Back Chamfering

**WORLD'S
SMALLEST
INSERTS**

NEW



CUTTING EDGE DETAILS



Catalog Number	ϕD_c	ϕD_s	ϕD_1	L	L ₁	ϕC_{Min}	ϕC_{Max}	H _{1 Min}	H _{2 Min}	Insert	No. of Inserts
ST10-C0810-45B-15 NEW	.413	.394	.291	3.071	.591	.315	.394	.028	.126	CM03...	3
-27 NEW				3.543	1.063						

- Wrench and screw are included; inserts tip must be ordered separately

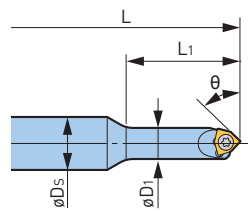
ACCESSORIES



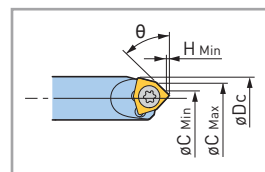
C-CUTTER MINI—SINGLE INSERT

For Surface Preparation

NEW



CUTTING EDGE DETAILS



Catalog Number	θ	ϕD_c	ϕD_s	ϕD_1	L	L ₁	ϕC_{Min}	ϕC_{Max}	H Min	Insert
ST8-C0103-45-16 NEW	45°	.193	.315	.185	2.677	.630	.039	.118	.004	CM03...

- Wrench and screw are included; inserts tip must be ordered separately
- Centering is not possible

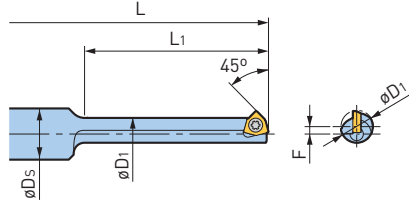
ACCESSORIES



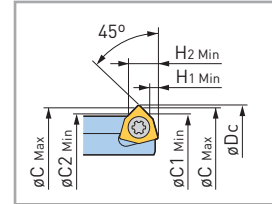
C-CUTTER MINI—SINGLE INSERT

For Tapping Hole & Bolt Hole
Available with front & back chamfering.

NEW



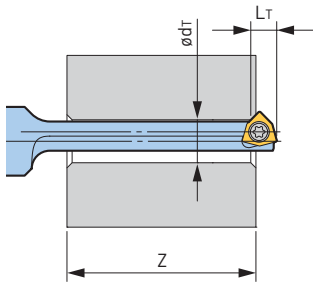
CUTTING EDGE DETAILS



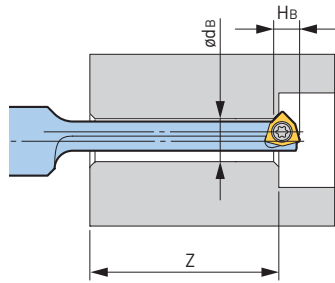
Catalog Number	øDc	øDs	øD1	L	L1	øC1 Min	øC2 Min	øC Max	H1 Min	H2 Min	Offset F	Insert
ST8-CM06-45B-14 NEW	.276	.315	.181	2.598	.551	.193	.193	.248	.035	.122	.047	CM03...
-26 NEW				3.071	1.024							

- Wrench and screws are included; inserts must be ordered separately
- Items marked ● indicates Long Type

TAP PILOT HOLE

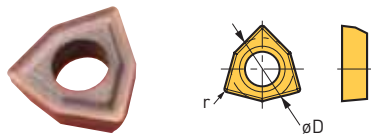


BOLT HOLE



Body	Tap Hole		Bolt Hole		Z	
	ødT	H _T	ødB	H _B	Standard	Long
CM06	5mm (M6)	.118	5.5mm (M5)	.110	.394	.866

C-CUTTER MINI INSERT



World's Smallest Hex Insert

Highly-efficient back chamfering from 5 mm starting hole diameter. 3-corner insert saves cost.

Insert	øD	r	Insert Grade	Insert Clamping Screw Set
CM0302 NEW	.130	.008	ACP300	S1.63-T3

- Inserts are available in packages of 10 pcs.
- Please clarify the insert model and grade when ordering (ex: CM0302ACP300)
- 10 screws and 1 wrench are included with Insert Clamping Screw Set
- It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained

INSERT CLASSIFICATIONS

ACP200/ACP300
For all steel & stainless steel materials.
Multi-layer PVD coating on carbide base with nanoscale TiAlN & AlCrN. Excellent performance and wear resistance.

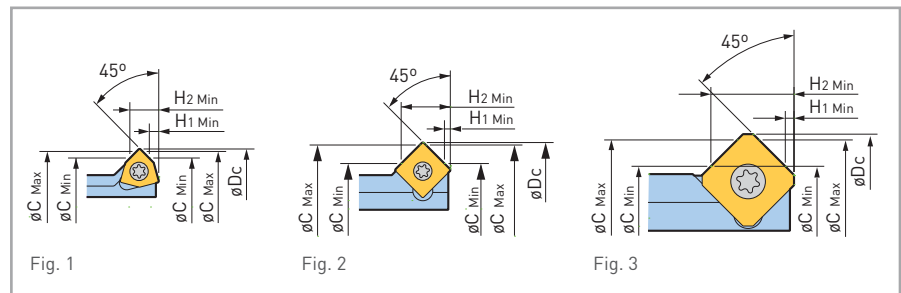
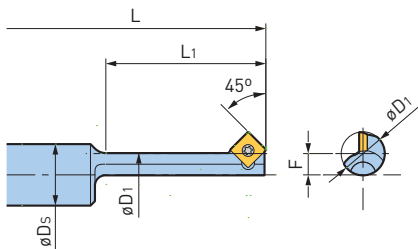
C-CUTTER MINI—SINGLE INSERT

LOWER HOLE DIAMETER: $\phi 10$ -27mm
 For Counterbore Hole
 Available with front & back chamfering.

NEW



CUTTING EDGE DETAILS



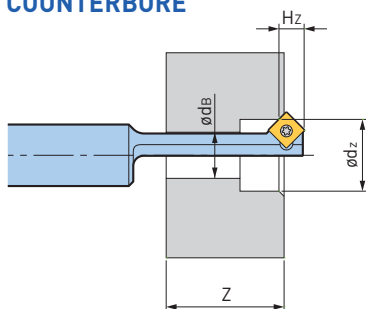
Catalog Number	Fig.	ϕD_c	ϕD_s	ϕD_1	L	L ₁	ϕC Min	ϕC Max	H ₁ Min	H ₂ Min	Offset Amount F	Insert
ST10-CZ06-45B-23 NEW	1	.504	.394	.240	3.346	.906	.394	.472	.039	.150	.132	CM04...
ST12-CZ08-45B-31 NEW	2	.661	.472	.335	4.094	1.220	.433	.630	.020	.248	.163	CM05...
ST16-CZ10-45B-37 NEW		.799	.630	.413	4.370	1.457	.571	.768				
ST16-CZ12-45B-50 NEW	3	.976	.630	.531	4.882	1.969	.551	.945	.012	.472	.222	CM10...
ST20-CZ14-45B-56 NEW		1.094		.787	.610	5.472	2.205	.669				

• Wrench and screws are included; inserts must be ordered separately

ACCESSORIES



COUNTERBORE



Cutter Size	ϕD_B	Counterbore		z
		ϕD_z	H _z	
CZ06	6.6mm (M6)	11mm (M6)	.130	.669
CZ08	9mm (M8)	14mm (M8)	.193	.906
CZ10	11mm (M10)	17.5mm (M10)	.193	1.142
CZ12	14mm (M12)	20mm (M12)	.370	1.457
CZ14	16mm (M14)	23mm (M14)	.370	1.693

C-CUTTER MINI INSERTS

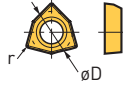


Fig. 1

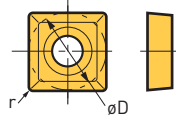


Fig. 2

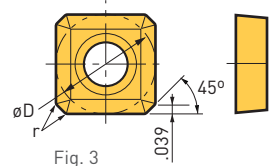


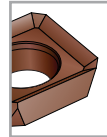
Fig. 3



Inscribed Circle
ø.156

World's Smallest Hex Insert

Highly-efficient back chamfering from 6mm starting hole diameter. 3-corner insert saves cost.



SE (SHARP EDGE) TYPE

Sharp edge prevents burrs. Recommended for stainless steel & mild steel.

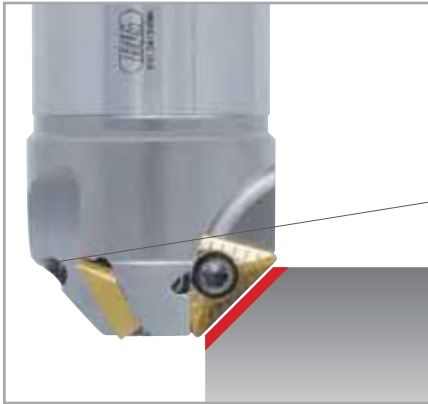
Insert Model	Fig.	øD	Nose Radius	Insert Grade			Insert Clamping Screw Set
				ACP200	ACP300	DS20	
CM0402	1	.156	.008	—	○	—	S2SS-T6
CM0502	2	.197	.008	○	—	○	S2TS-T6
CM0502SE				○	○	—	
CM10C1	3	.394	.008	○	—	○	S4S-T15
CM10C1SE				○	—	—	

- Inserts are available in packages of 10 pcs.
- Please clarify the insert model and grade when ordering (ex: CM0402ACP200)
- 10 screws and 1 wrench are included with Insert Clamping Screw Set
- It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained
- **SE** in the Insert Model means Sharp Edge Type

INSERT CLASSIFICATIONS

ACP200/ACP300	DS20
For all steel & stainless steel materials.	For aluminum & /non-ferrous materials.
Multi-layer PVD coating on carbide base with nanoscale TiAlN & AlCrN. Excellent performance and wear resistance.	DLC coating on carbide base with very smooth surface for a low coefficient of friction. Excellent performance against built-up edge.

C-CENTERING CUTTER—3 INSERT

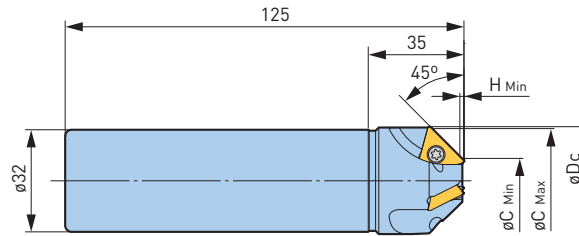
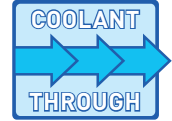


Immediate Evacuation of Chips with Coolant Supply

By providing coolant holes, it is possible to cool the cutting edge and immediately discharge the chips.



NEW



Catalog Number	øD	øC Min	øC Max	H Min	Insert
ST32-CN1433-45-125 NEW	1.339	.551	1.299	.024	CN0906

- Wrench and screw are included; inserts tip is must be ordered separately
- Centering is not possible



Catalog Number	øD	Insert Grade		Insert Clamping Screw Set
		ACZ150	ACM250F NEW	
CN0906	.375	○	○	S4S-15IP

- Inserts are available in packages of 10 pcs.
- Please clarify the insert model and grade when ordering (ex: CN0906-ACZ150)
- 10 screws and 1 wrench are included with Insert Clamping Screw Set
- It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained

CENTERING MICRO CUTTING DATA

Workpiece Material	Cutting Speed Vc (m/min)	Feed per Tooth fz (mm/flute)
Unalloyed Steel, Carbon Steel, Alloy Steel	50-150	.002-.008
Stainless Steel	50-120	
Cast Iron/Ductile Cast Iron	70-200	
Aluminum/Non-ferrous	100-300	

This table is a guideline for selecting cutting parameters. Because it depends on the state of machine and work, please adjust in a timely manner.

During chamfering of cross feed, dry cutting (including air blow) is recommended. However, when severe welding occurs on the cutting edge such as aluminum processing, please use water-soluble cutting oil.

BIG KAISER Precision Tooling Inc.

A Member of the BIG DAISHOWA Group

2600 Huntington Blvd | Hoffman Estates, IL 60192 | P: (224) 770-2999 | F: (224) 770-2997 | bigkaiser@us.bigkaiser.com | www.bigkaiser.com

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