BIG DAISHOWA

HIGH PERFORMANCE TOOLING SOLUTIONS

VOL. 1

OPEN

BIG DAISHOWA

TOOL HOLDERS

BCV/CV SHANKS	A.1 64-113
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HSK SHANKS	A.3 176-237
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This Catalog Contains Patents and Trademarks of the BIG DAISHOWA Group Pending and Patented at the U.S. Patent Office

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COLLET CHUCKS

CLAMPING RANGE:
Ø.018"-.317"
(Ø.45-8.05mm)

MAX 50,000 RPM

OVERVIEW ▶18

MEGA MICRO CHUCK

BCV SHANK 66
BBT SHANK 116
HSK SHANK 179/222/229
BIG CAPTO SHANK 242
ST SHANK 296
N/C LATHE 305

COLLET CHUCKS

CLAMPING RANGE:
Ø.010"-1.000"
(Ø.25-25.4mm)

MAX 40,000 RPM

OVERVIEW ▶19

MEGA NEW BABY CHUCK

BCV SHANK 67
BBT SHANK 118
HSK SHANK 180/224/230
BIG CAPTO TYPE 244

COLLET CHUCKS

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

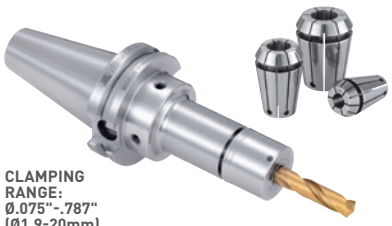
MAX 25,000 RPM

OVERVIEW ▶24

NEW BABY CHUCK

ST SHANK 306
N/C LATHE 308

COLLET CHUCKS



CLAMPING RANGE:
Ø.075"-.787"
(Ø1.9-20mm)

MAX 35,000 RPM

OVERVIEW ▶20

MEGA ER GRIP

BCV SHANK 69
BBT SHANK 122
HSK SHANK 184
BIG CAPTO TYPE 248
CKB SHANK 274
ST SHANK 309

COLLET CHUCKS

CLAMPING RANGE:
Ø.125"-.500"
(Ø3-12mm)

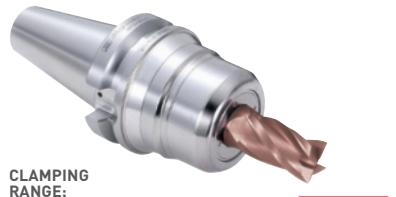
MAX 40,000 RPM

OVERVIEW ▶21

MEGA E CHUCK

BCV SHANK 70
BBT SHANK 124
HSK SHANK 186/231
BIG CAPTO SHANK 250

MILLING CHUCKS



CLAMPING RANGE:
Ø.625"-1.500"
(Ø16-50mm)

MAX 30,000 RPM

OVERVIEW ▶22

MEGA DOUBLE POWER CHUCK

BCV SHANK 71
BBT SHANK 126
HSK SHANK 188/232
BIG CAPTO SHANK 252

MILLING CHUCKS

CLAMPING RANGE:
Ø.750"-1.250"
(Ø16-32mm)

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BCV SHANK 73
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Ø.500"-1.500"
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OVERVIEW ▶25

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CKB SHANK 276
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CLAMPING RANGE:
Ø.125"-1.250"
(Ø3-32mm)

OVERVIEW ▶26

HYDRAULIC CHUCK

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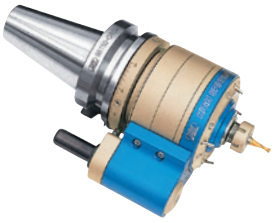
BBT SHANK 166
HSK SHANK 220

SPINDLE SPEEDERS



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TOOL HOLDER ACCESSORIES

PULLSTUD BOLT

CV SHANK 111
BT SHANK 172

CAUTION

Only use Pullstud Bolts made by BIG. Accuracy is not guaranteed if poor-quality Pullstud Bolts are used.

TOOL HOLDER ACCESSORIES

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HIGH-PRECISION TEST BAR DYNA TEST

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TOOL HOLDER ACCESSORIES

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HSK SHANK 599
BIG CAPTO SHANK 599

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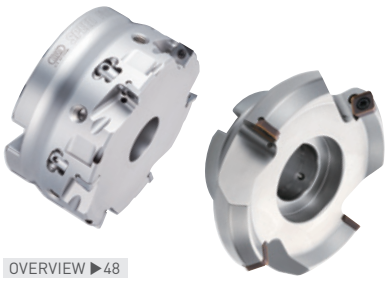
FULLCUT MILL

ARBOR TYPE 600

FACE MILLS



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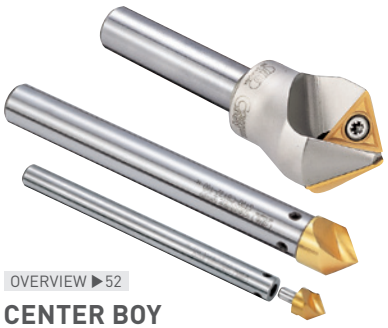
ST TYPE 617

CHAMFER MILLS



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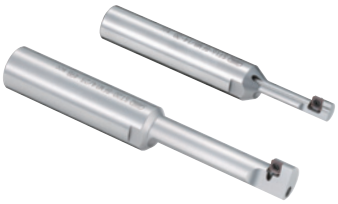

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CLEANERS

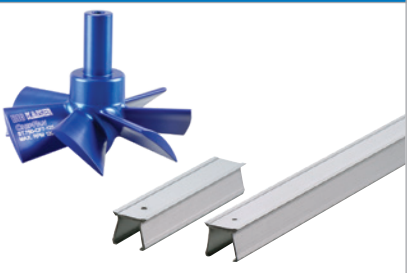

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TABLE CLEANING

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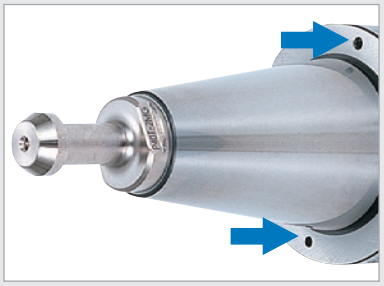
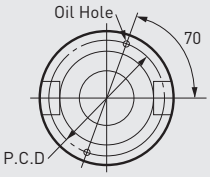
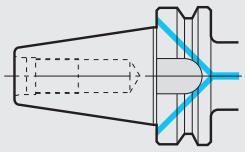
T-SLOT CLEAN 661

FLANGE THROUGH COOLANT

We offer DIN69871/B flange through coolant upon request.

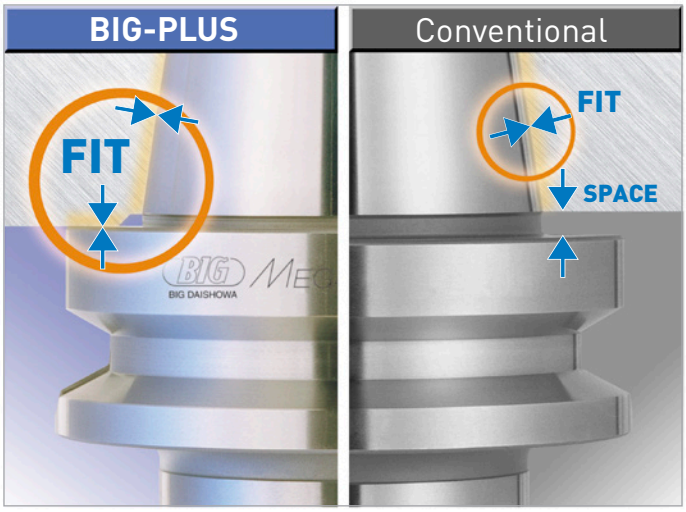






CAUTION

Tool holders modified for flange through coolant must use proper pullstud to seal backflow of coolant into the spindle.



BIG-PLUS® SPINDLE SYSTEM
DUAL CONTACT

BCV | BBT | BDV

SIMULTANEOUS TAPER & FLANGE FIT

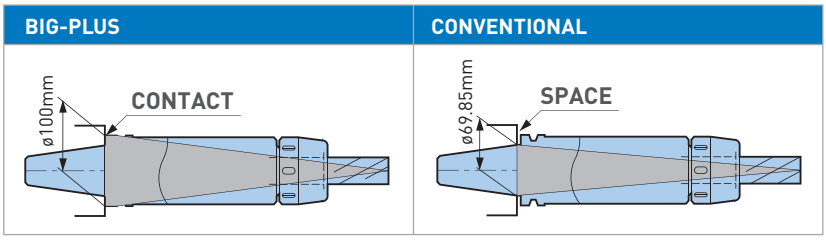
BIG-PLUS surpasses all other spindle concepts while offering interchangeability with existing machines and tool holders.

- Improved surface finish & dimensional accuracy
- Extended tool life
- Prevention of fretting corrosion caused by heavy cutting
- Improvement of ATC repeatability
- Elimination of Z-axial movement at high speeds
- Improved roundness of boring operations

BASIC CONCEPT

The BIG-PLUS Spindle System is based on the most current available standards in ASME B5.50, JIS B6339 and DIN 69871. A conventional steep taper tool holder is supported on a reference diameter called the gage line. On the contrary, a BIG-PLUS tool holder is supported on the flange face, which brings remarkable improvement to rigidity.

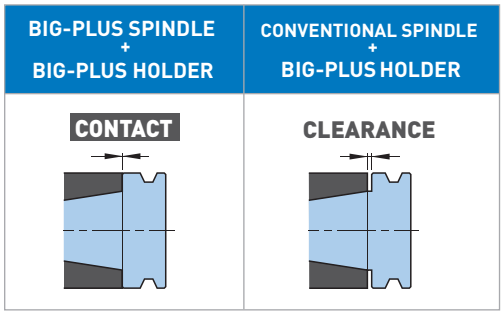
INCREASED CONTACT DIAMETER (EXAMPLE OF BT50)



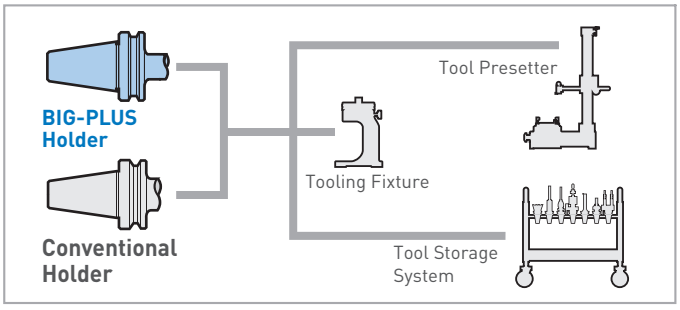
Taper No.	Conventional	BIG-PLUS
CV50	Ø2.750	Ø3.875
CV40	Ø1.750	Ø2.500
BT30	Ø1.250	Ø1.811

PERFECT INTERCHANGEABILITY

BIG-PLUS tool holders can be used on existing standard machine spindles. Existing standard tool holders can also be used on BIG-PLUS spindles. In this case, however, simultaneous contact cannot be attained. Although other simultaneous contact systems require exclusive new accessories, BIG-PLUS tooling uses existing accessories such as a tool presetter and tool holder fixture as it is based on a conventional steep taper shank. Further, it is not necessary to modify tool magazines and ATC devices of existing machines.



EXISTING ACCESSORIES UTILIZED

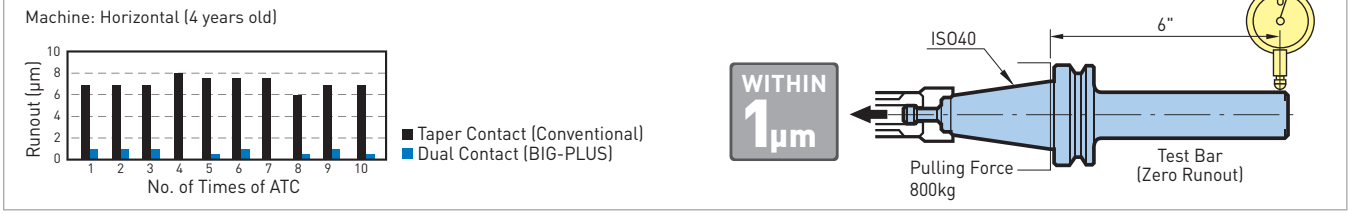


BIG-PLUS spindles have been adopted by licensed machine or spindle builders around the world under strictly controlled dimensions using BIG's master gage. In order to protect the spindle or prevent possible accident, only use tool holders with the BIG-PLUS trademark.

IMPROVEMENT OF ATC REPEATABILITY

The BIG-PLUS Spindle System ensures the highest precision location of the tool holder in the spindle when using the ATC for loading tools as a result of the dual contact, which precisely positions the tool holder within 1 micron.

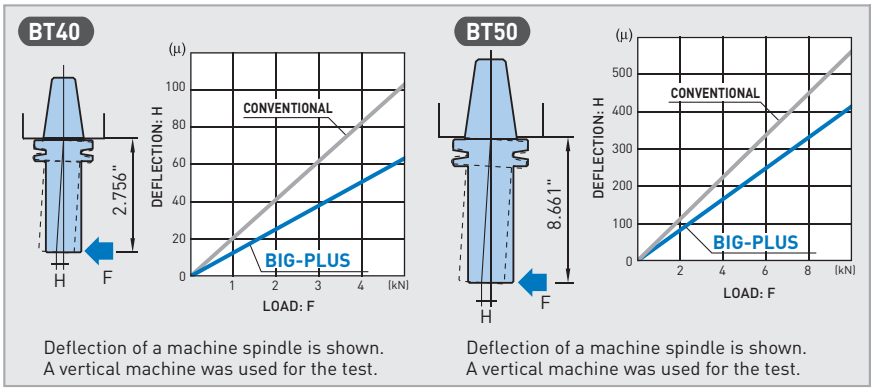
ATC REPEATABILITY



MINIMIZED DEFLECTION FOR MAXIMUM MACHINING ACCURACY & SUPERIOR FINISH

With BIG-PLUS simultaneous contact, machining rigidity is greatly enhanced due to the larger contact diameter of the tool holder flange face. This larger face contact, combined with the taper contact, works together to resist deflection. With less deflection, greater machining accuracy and superior finish can be achieved.

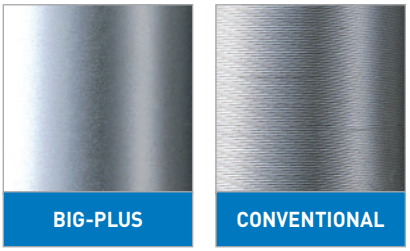
COMPARISON OF DEFLECTION



Deflection of a machine spindle is shown. A vertical machine was used for the test.

Deflection of a machine spindle is shown. A vertical machine was used for the test.

STRICT GAGE CONTROL



Cutting Conditions

Machine: 40 Taper (Horizontal Machining Center)
Cutter: Face Mill Ø5" (6 cutting edges)
Work Material: A2017 Duralumin
Cutting Depth: .094"

STRICT GAGE CONTROL

BIG-PLUS spindles produced by the licensed machine or spindle builders are strictly controlled in dimensions by the original BIG master gage. Only BIG-PLUS trademarked tool holders can achieve the optimal performance fully and safely.

Gages for Machine Spindle

Master Gage

Measuring Device

Master Arbor

BIG-PLUS SPINDLE SYSTEM MACHINE BUILDERS

The BIG-PLUS Spindle System is offered by many of the world's leading manufacturers of machining centers. Some of the machine and spindle builders who have produced BIG-PLUS spindles are as follows:

ACCUWAY, **ADVANCED MACHINE**, ALEX-TECH, AMS, ANCA, AONO GIKEN, ARES, ASADA SEIKI, ASA TECH, AWEA, BERG SPANNTECHNIK, BFW, BOST, BROTHER, CERI, CHEVALIER, CHUO-SEIKI, CITIZEN, COLGAR, D.S.TECHNOLOGIE, DAH LIH, DAITO, DAIYA SEIKI, DIXI, DMC, DMG MORI SEIKI AD, DMG MORI SEIKI CO.,LTD., DOOSAN, **DYNOMAX**, EGIN-HEINISCH, EGURO, ENSHU, FADAL, FANUC, FEELER, FEMCO, FIRST, FIRST, **FISCHER**, FOREST-LINÉ, FPT, FRANZ KESSLER, FUJI SEIKI, GIDDINGS & LEWIS, GMN, GROB, **GTI**, HAIDE, HARDINGE, HARTFORD, HEYLIGENSTAEDT, HISION, HNK, HOMMA, HORKOS, HOWA, HST, HURCO, HWACHEON, IBAG, IBARMIA INNOVATEK, IKEGAI, INOUE KOSOKU KIKAI, JHENG TAI, JOBS, JOHNFORD, JTEKT, JUNGWOO M.S., JYOTI, KARATS, KASHIFUJI, KASWIN, KENTURN, KIRA, KITAMURA, KIWA, KMT, KOMATSU NTC, KONDIA, KOYO, KPTEC, KURAKI, LAZZATI, LMW, MAG, MAGNIX, MAKINO, MAKINO SEIKI, MANDELLI, MATSUURA, MAZAK, MECTRON, MILLTRONICS, MITSUBISHI, MITSUBOSHI KOGYO, MITSUI SEIKI, MOTOKUBO, MTE, MYL, N.S.S, NACHI, NAKAMURA, NEWAY, NICOLÀS CORREA, NIIGATA, NIPPON BEARING, NISHIJIMAX, NISSIN-MFG, NOMURA, **NORTHLAND TOOL**, NSK, NUMEN, O-M, OBATAKE, OHTORI, OKK, OKUMA, OMLAT, OMV, PAMA, **PDS**, PIETRO CARNAGHI, PMC, QUASER, REIDEN, ROKU ROKU, ROYAL, RS TEC, SAJO, SEMA, SEMPUCO, **SETCO**, SHAN RONG, SHIBAURA, SHODA, SHW, SKF USA, SKG, SKODA, SKYNC, SMEC, SNK, SODICK, SORALUCE, SPINDER, SPINTEC, SPINTRUE, **SPS**, STARRAGHECKERT, STUDER, SUFENG, SUGINO, SUNWOO, **SUPERIOR SPINDLE SERVICE**, SWIFT, TAJMAC-ZPS, TAKAMAZ KIKAI KOUGYOU, TAKISAWA, TANABE, THETA, TONGTAI, TOS KURIM, TOS VARNSDORF, TOYO SEIKI, TSUDAKOMA, TSUGAMI, UGINT, UTSUNOMIYA, VICTOR TAICHUNG, VTEC, VYU CHENG, WALDRICH COBURG, WELE, WIA, YAMASAKI GIKEN, YAMASHINA SEIKI, YASDA, YASUNAGA, YCM, YU HUNG, ZAYER

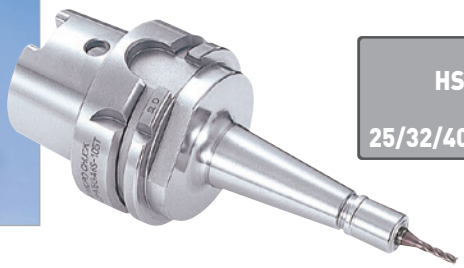
(As of July 2021)

• Bold company names are North American licensed BIG-PLUS spindle rebuilders

HSK TOOLING SYSTEM

ISO 12164/DIN 69893/ASME B5.62

Selected materials and strict control of dimensional accuracy for the optimum quality. Wide range of standard holders to meet all production requirements.

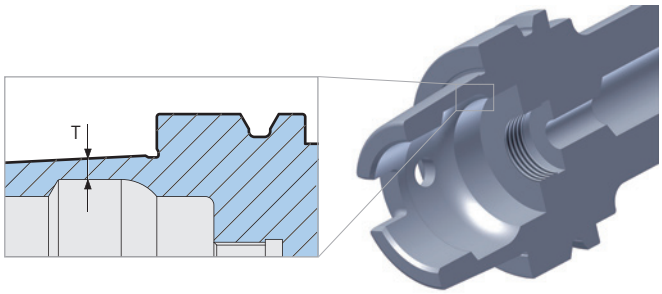


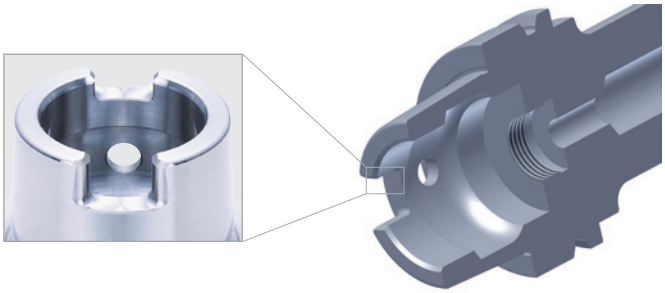
AVAILABLE IN
HSK TYPE A/E/F
HSK SIZES
25/32/40/50/63/80/100/125

PREMIUM MATERIAL SELECTION

Since HSK is a hollow taper shank, the material has a critical role for optimum performance. BIG uses carefully selected high-grade alloy steels. Particularly, BIG uses die steel materials for HSK40 and smaller where the cross section of shank taper is very thin.

HSK Type	HSK Size						
	25	32	40	50	63	100	.125
T	.043	.049	.076	.102	.137	.204	.254



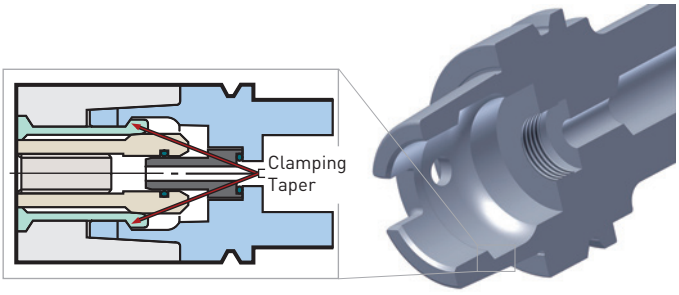


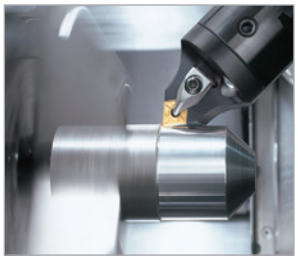
DRIVE KEY FORM

HSK Shanks according to Form A are designed to carry out torque transmission by the round shaped key-way at the end of the taper. Because of the importance of this round shaped geometry, BIG provides finishing of this feature after heat treatment.

IMPORTANT TOOL RETENTION FEATURE

Internal clamping of HSK tools is defined by the location of highly concentrated forces from the machine tool. Accuracy and position of this form will affect the rigidity, repeatability and precision of tool holders. BIG provides finish machining of this area after heat treatment.





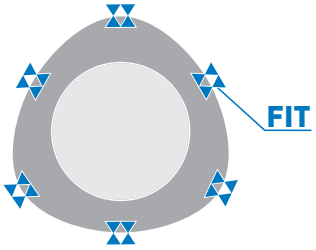
AVAILABLE IN
TURNING TOOLS
HSK FORM T
HSK-T63/T100 (ISO 12164-3)

BIG CAPTO

ISO 26623-1

A dual contact modular turning and rotating tool holder system that strengthens the performance of MTCs. The BIG CAPTO modular tooling system offers better efficiency, material selection and heat treatment.

The trademark CAPTO is licensed from Sandvik Coromant



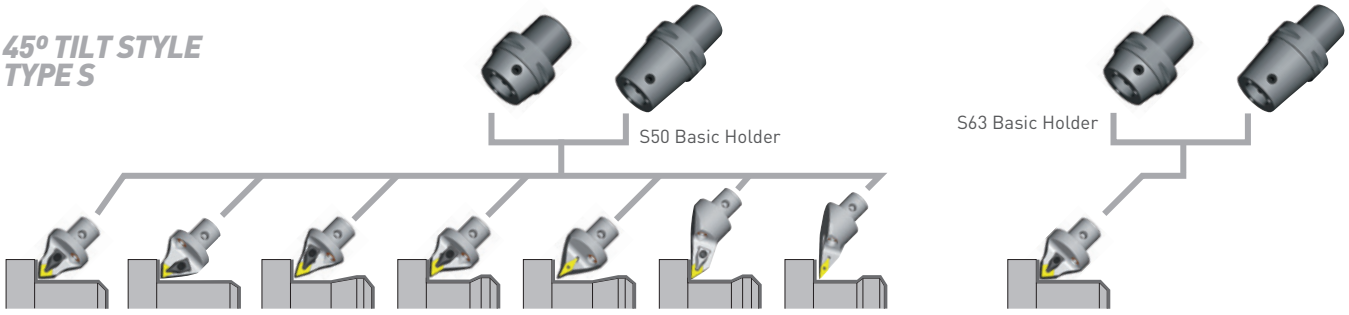
EXCELLENT REPEATABILITY & RUNOUT

High repeatability is achieved due to the perfect fit of the polygon taper to drive spindle rotation. The combination of a self-centering 1:20 taper and the long taper edge ensures stable runout accuracy.

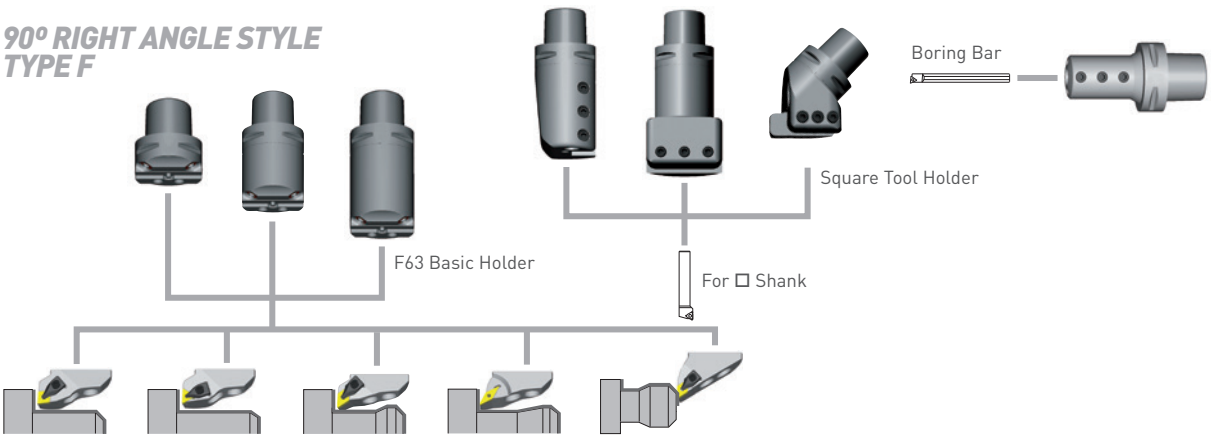
WIDER RANGE OF ROTATING BIG CAPTO TOOLING THAN ANY OTHER PROVIDER

As a licensed manufacturer since 2002, BIG DAISHOWA offers a wider range of rotating BIG CAPTO tooling than any other provider. Extended-reach collet chucks feature the world-class NEW BABY collet system with less than 3 microns guaranteed accuracy at 4xD. Other solutions with BIG CAPTO include the MEGA ER GRIP, HYDRAULIC CHUCKS, the MEGA E CHUCK system, MEGA DOUBLE POWER CHUCKS for the highest rigidity while end milling, MEGA MICRO CHUCKS with the world's smallest collet system for reaching into tight areas, and many more.

45° TILT STYLE TYPE S



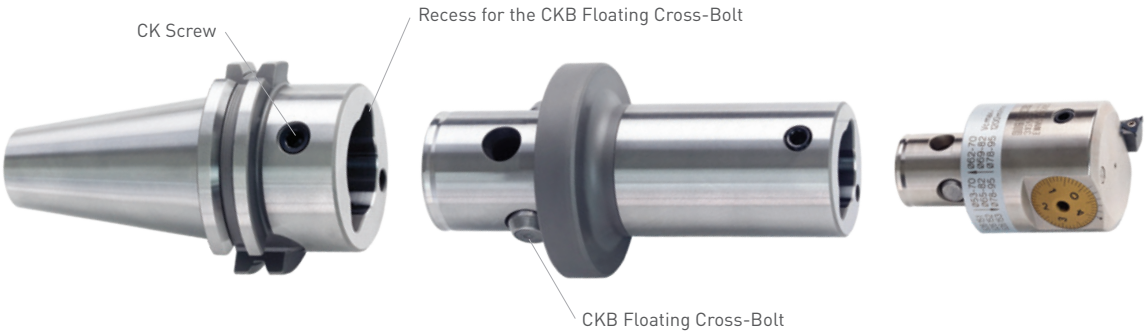
90° RIGHT ANGLE STYLE TYPE F



CK, CKB & CKN

VARIOUS CONNECTIONS — ONE SYSTEM

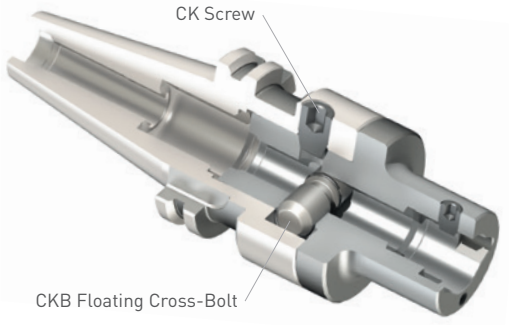
Based on a cylindrical connection with radial locking screw, the world-famous modular precision tool system by BIG KAISER has continuously been improved over the years, and has adapted to customer's needs and the increases in machine tool performance. Compatibility to existing tools has always been a requirement for newer designs. This means that all BIG KAISER connections are almost 100% compatible, and all the components are in stock.

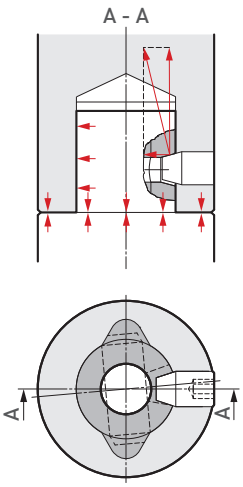


CKB CONNECTION: HIGHLY EFFICIENT AND EASY TO HANDLE

The modular components are clamped with the lateral locking screw (CK-screw). The floating cross bolt is automatically centered in the trapezoid-shaped recesses in the mating part and ensures an absolutely uniform distribution of the torque forces.

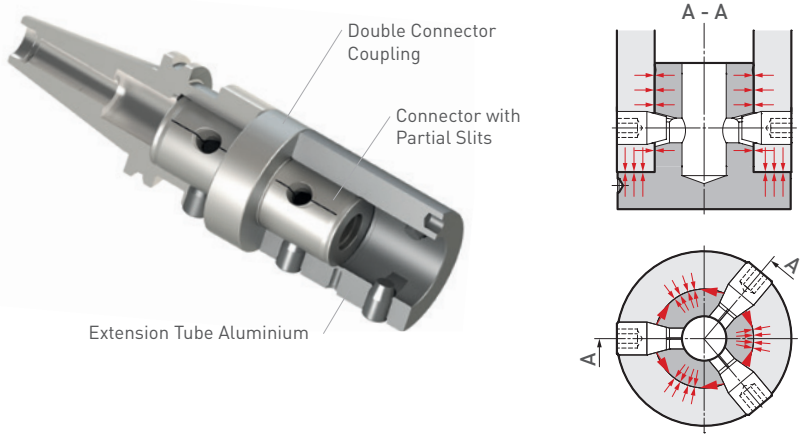
- Simple, efficient operation -no special equipment or tools needed
- Maximum rigidity due to high preloading forces and large contact surfaces
- Precise cutting edge location even when using several adapters
- High interchange accuracy, maximum radial change error is .0001"





CKN CONNECTION: FOR LIGHTWEIGHT AND HIGH PERFORMANCE TOOLS

Based on a 3-screw connection and a male pilot with 3 partial slits, the CKN connection is designed for lightweight and high performance tools. The main components for the program are double connector couplings made of steel and extension tubes made of aluminium. The high performance program for enhanced radial stiffness is entirely made of steel components.

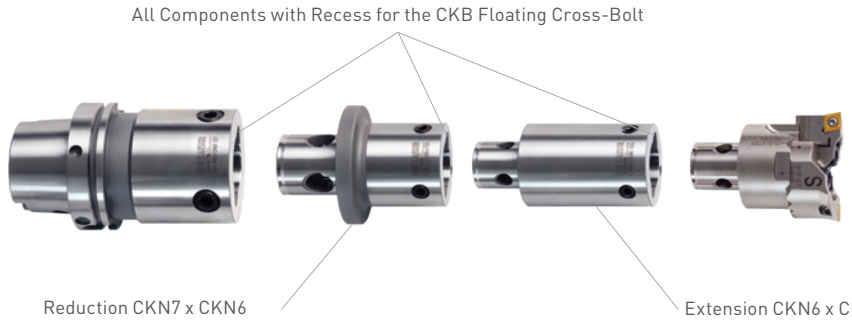


CKN CONNECTION: THE STRONGEST TOOL CONNECTION FOR LIGHTWEIGHT TOOLS

The double connector coupling enables the use of aluminium extension tubes which result in a considerable weight reduction for larger tools. The torque transmission from the aluminium tube to the connector made of steel over three screws guarantees no reduction of cutting performance in comparison to tool combinations made of steel only.

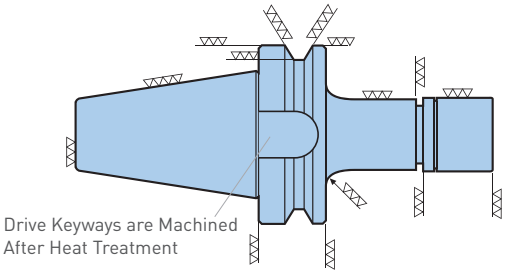
CKN CONNECTION: HIGH PERFORMANCE PROGRAM

Tool combinations made of steel components offer the highest bending resistance for heavy duty milling with long tools.



MEGA CHUCK® SERIES

Wide variety of collets and chuck bodies to cover all high-speed ultra-precision machining applications.

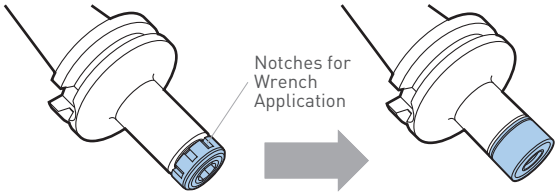


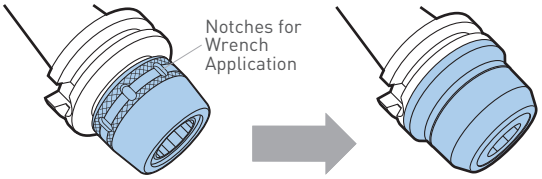
PRECISION GROUND AND BALANCED FOR HIGH SPEED MACHINING

MEGA CHUCKS are micro-mirror ground-finished on all surfaces to ensure perfect concentricity for high speed machining. The drive keyway is machined after heat treatment.

NOTCH-FREE DESIGN MEGA NUT PREVENTS VIBRATION & REDUCES NOISE

Vibration at high speeds is eliminated with the use of notch-free nuts, which offer superior balance and concentricity. This ideal nut design not only reduces whistling noise and splattering coolant, but also ensures increased strength of the nut itself.

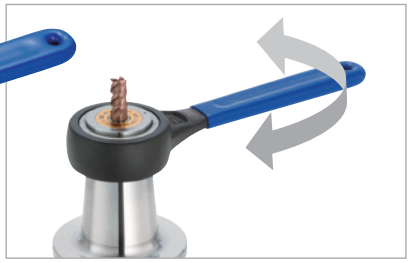




EASY & FIRM CLAMPING BY THE MEGA WRENCH

The unique MEGA WRENCH has a one-way clutch system with roller bearings and a ratchet function which is capable of safely and evenly applying force to the entire nut periphery.

SMOOTH TIGHTENING OPERATION BY RATCHET FUNCTION

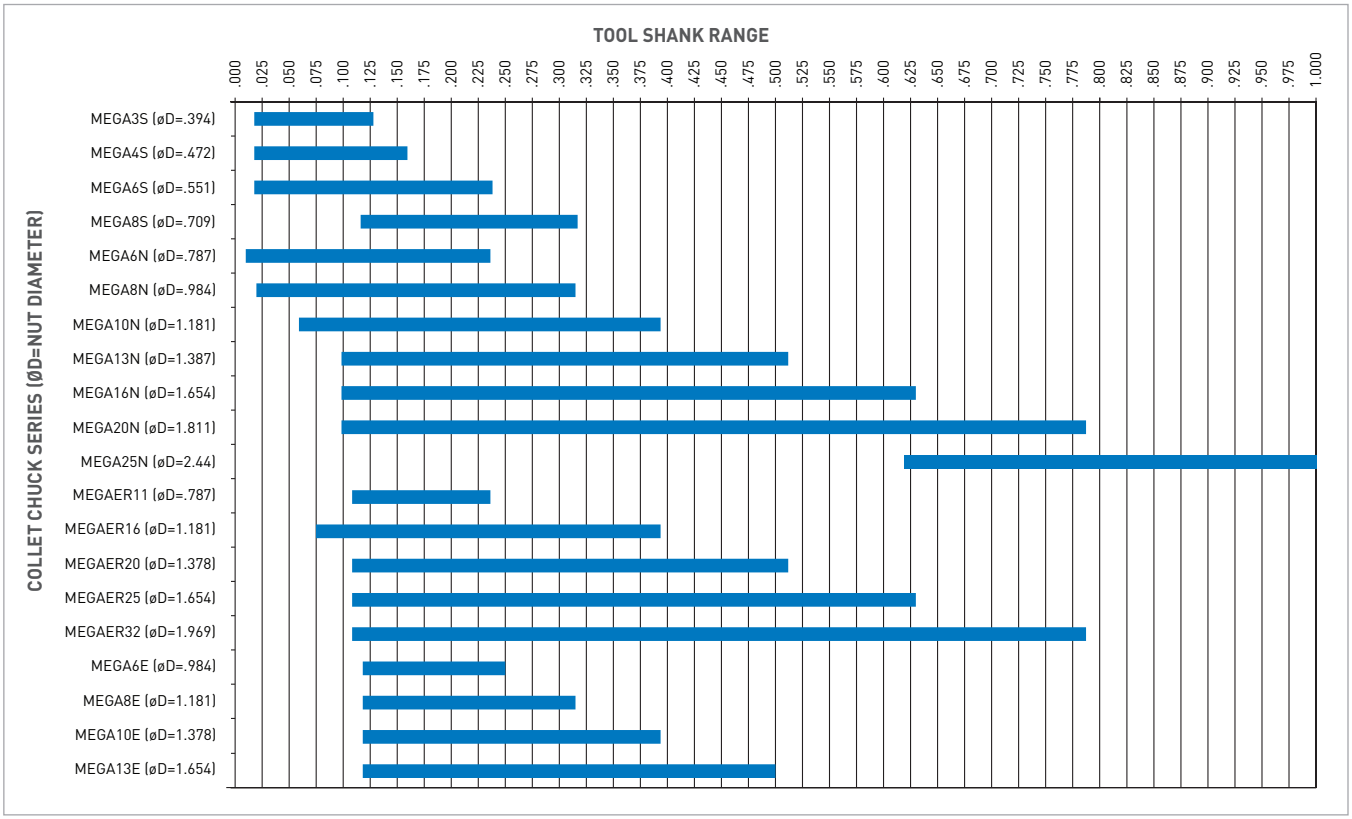


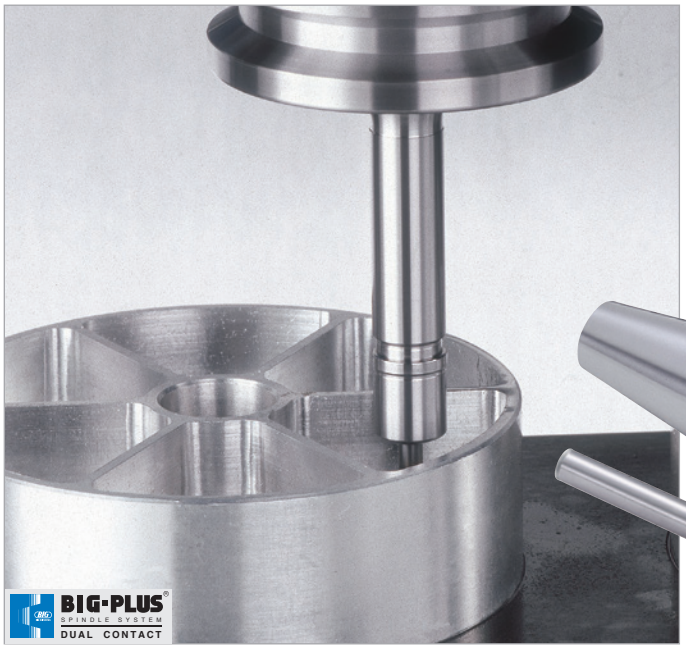
A VARIETY OF MEGA CHUCKS AVAILABLE

MEGA MICRO CHUCK | MEGA NEW BABY CHUCK | MEGA ER GRIP | MEGA E CHUCK | MEGA DOUBLE POWER CHUCK

COLLET CHUCK PROGRAM OVERVIEW

Collet Chuck Series	Taper Type																			
	BCV		BBT			HSK										BIG CAPTO				
	40	50	30	40	50	A40	A50	A63	A100	A125	E25	E32	E40	E50	F63	C3	C4	C5	C6	C8
MEGA3S	•		•	•		•	•	•			•	•	•	•			•	•	•	
MEGA4S	•		•	•		•	•	•			•	•	•	•	•			•	•	
MEGA6S	•		•	•		•	•	•			•	•	•	•	•	•	•	•	•	
MEGA8S	•		•	•				•				•								
MEGA6N	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•
MEGA8N	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•
MEGA10N	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•
MEGA13N	•	•	•	•	•	•	•	•	•			•	•	•	•	•	•	•	•	•
MEGA16N	•	•	•	•	•	•	•	•	•				•	•	•	•	•	•	•	•
MEGA20N	•	•	•	•	•	•	•	•	•					•	•		•	•	•	•
MEGA25N	•	•	•	•	•		•	•	•											
MEGAER11	•																			
MEGAER16	•	•	•	•	•			•	•	•								•	•	
MEGAER20	•	•	•	•	•			•	•									•	•	
MEGAER25	•	•	•	•	•			•	•									•	•	
MEGAER32	•	•	•	•	•			•	•	•								•	•	
MEGA6E	•		•	•	•	•	•	•	•						•		•	•	•	•
MEGA8E	•		•	•	•	•	•	•	•						•		•	•	•	•
MEGA10E	•		•	•	•	•	•	•	•						•		•	•	•	•
MEGA13E	•	•	•	•	•	•	•	•	•				•	•	•		•	•	•	•





MEGA MICRO CHUCK®

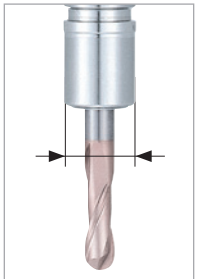
CLAMPING RANGE: Ø.018"-.317" (Ø.45-8.05mm)

Extremely slim design of body and nut provides superior balance and concentricity and is ideal for reaching into confined areas.

MAX 50,000 RPM

End Milling

Drilling


Ø.394"
FULL SCALE
(3S TYPE)

EXTREMELY SLIM DESIGN NUT

Ø.394"/.472"/.551"/.709"
3S/4S/6S/8S Type

Slim design avoids interference. Ideal for small moldmaking, combining speed and high precision capability.

Sealed Nut for Through-Tool Coolant (available for 6S & 8S only)

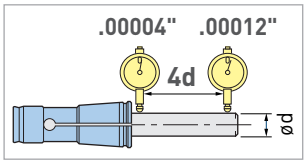
STRICT GAGE CONTROL

HIGH CONCENTRICITY

HIGH PRECISION

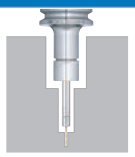
MEGA MICRO COLLET

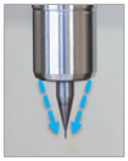
100% concentricity inspection. Guaranteed runout within .00004" at the nose. Available for higher precision in steps of Ø.004" (Ø.1mm)



All BIG Collets are AA Grade and inspected twice for accuracy

A VARIETY OF INTERFACES FOR HIGH-SPEED MACHINING

STRAIGHT TYPE	TAPER TYPE	STRAIGHT SHANK TYPE
		
Where Access is Restricted	For Increased Rigidity	For Increased Versatility

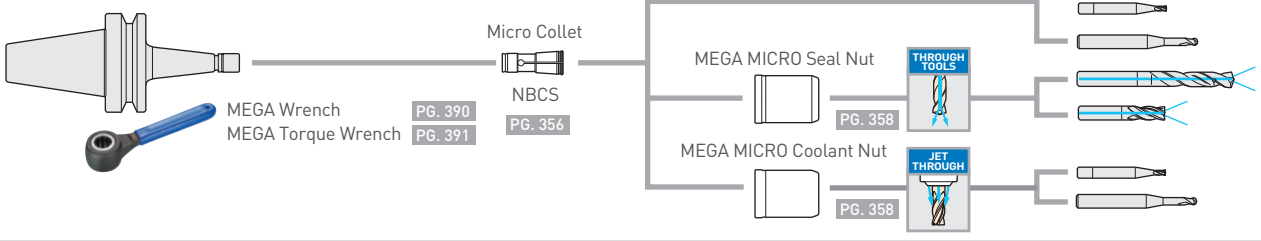


MEGA MICRO COOLANT NUT (PAT. PENDING)

For MEGA MICRO CHUCK 6S

Provides a more efficient coolant supply for micro cutting tools. Ideal design for high-speed micro machining up to Ø6mm.

Up to 35% higher tool lifetime compared to standard nut

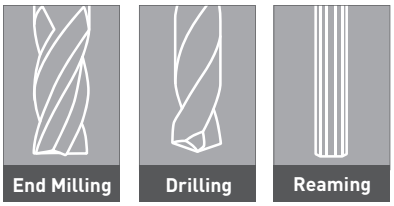


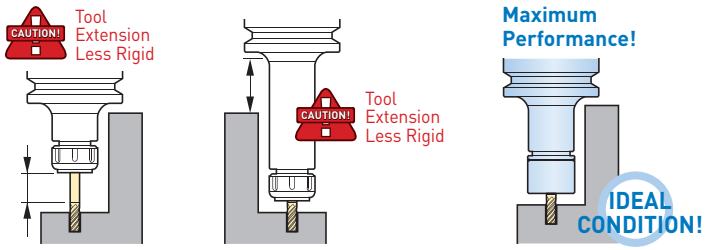
MEGA NEW BABY CHUCK®

CLAMPING RANGE: Ø.010"-1.000" (Ø.25-25.4mm)

High-speed design, offered in six different collet series sizes. Utilizes ultra precise NEW BABY COLLETS which guarantee a runout at the collet nose of less than .00004".

MAX 50,000 RPM





WIDE RANGE AVAILABLE AS STANDARD

Ideal length and diameter of the holder is the key to precision machining. If selection is limited, an increased tool extension reduces performance.

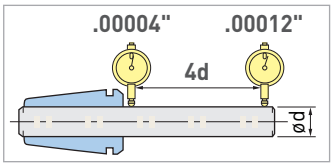
HIGH PRECISION COLLET, CLOSE TO SUBMICRON

HIGH PRECISION

NEW BABY COLLET

The NBC collet is 100% inspected to guarantee accuracy. Material, production, heat treatment... everything is selected for precision.

STRICT GAGE CONTROL

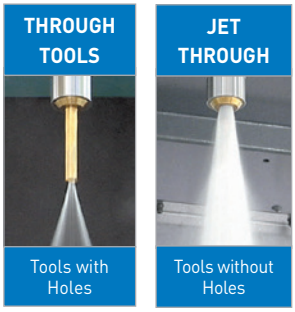


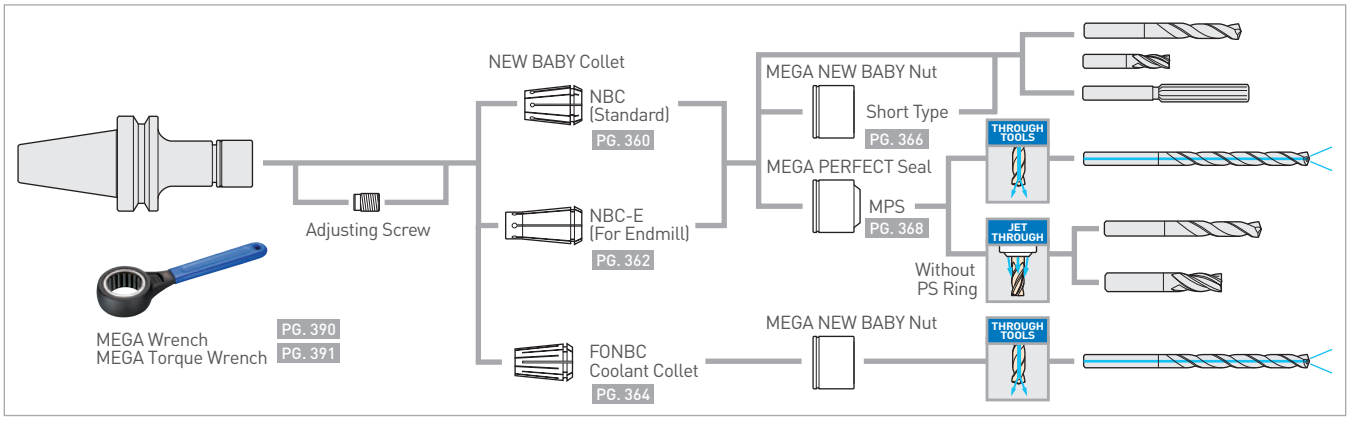
All BIG Collets are AA Grade and inspected twice for accuracy

TWO WAY COOLANT SEALED COLLET NUT

MEGA PERFECT SEAL

- Standard NBC collet is used
- High dust resistance



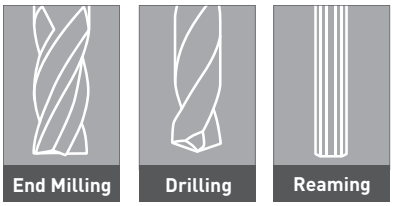


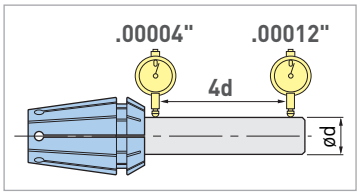
MEGA ER® GRIP

CLAMPING RANGE: Ø.075"-.787" (Ø1.9-20mm)

High precision collet, nut and body that outperforms standard ER systems. Reliable and stable runout accuracy will also contribute to improving machining capability and cost reduction.

MAX 35,000 RPM



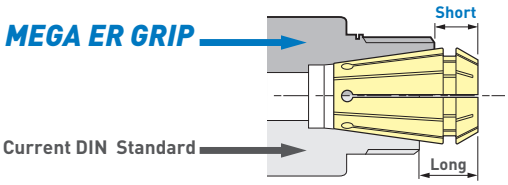


ER COLLET WITH THE BEST RUNOUT ACCURACY IN THE WORLD
Measurement standards in accordance with DIN 6499 and ISO 15488

Clamping Range	DIN/ISO		BIG MEGA ER® GRIP
	Class 1	Class 2	
Ø.079 - Ø.394	.0004	.0006	Within .00012
Ø.394 - Ø.787	.0006	.0008	

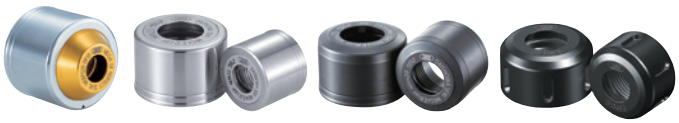
HIGH RIGIDITY BODY THAT INCREASES COLLET CONTACT AREA

By increasing the contact length of the internal taper of chuck bodies, the undesired overhang of the collet is reduced. This modification of the standard improves 3 of the most important requirements for the collet chuck: rigidity, runout accuracy and clamping force. (Conventional DIN collets can also be used)



VARIETY OF NUT SELECTION

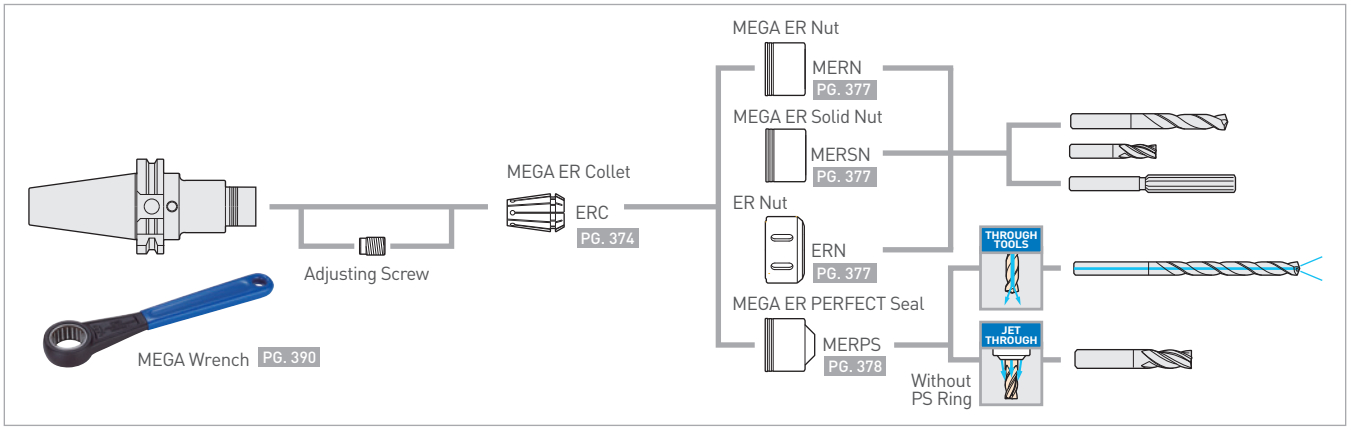
Two types of ER nut as well as sealing nut offer the most suitable solution for your demand. These nuts can also be used for conventional ER chuck models.

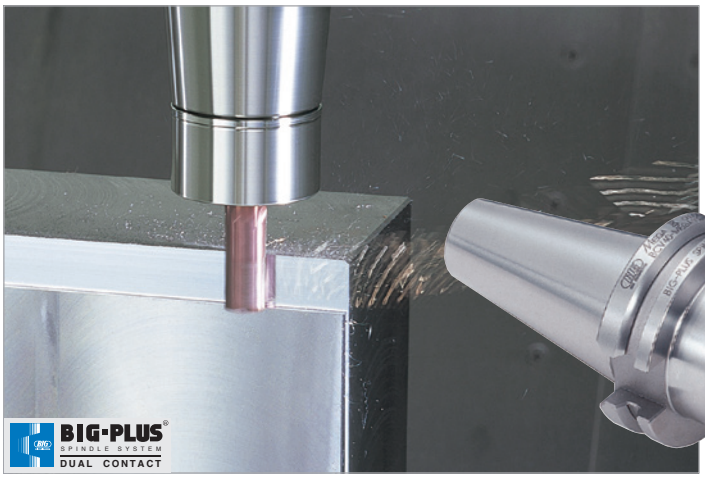


MEGA ER PERFECT SEAL | MEGA ER NUT | MEGA ER SOLID NUT | ER NUT

2-WAY COOLANT SUPPLY

Sealed nut MEGA PERFECT SEAL offers two coolant solutions.



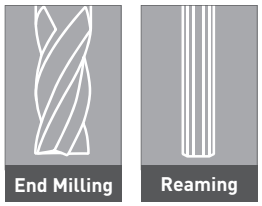


MEGA E CHUCK®

CLAMPING RANGE: Ø.125"-.500" (Ø3-12mm)

Collet chuck designed exclusively for end milling up to Ø.500" with high concentricity & rigidity.

MAX 40,000 RPM



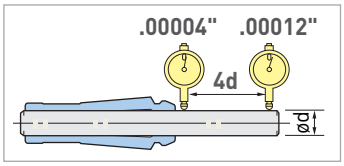
HIGH CONCENTRICITY

HIGH PRECISION

MEGA E COLLET

100% concentricity inspection. Runout within 1µm at nose is guaranteed.

GUARANTEED MAX RUNOUT



1µm AT COLLET NOSE
3µm at end of test bar

All BIG Collets are AA Grade and inspected twice for accuracy

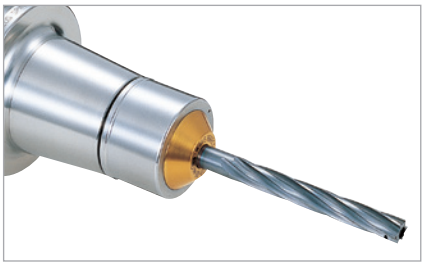
- Use only cutting tool shanks with the exact same diameter as the collet bore diameter.

SEALED COLLET NUT

MEGA E PERFECT SEAL

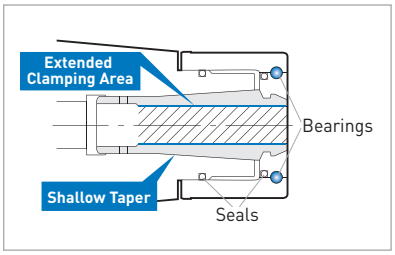
Sealed collet nut to supply coolant reliably through cutting tool. Ideal for burnishing drills and reamers due to the extended gripping length of the MEGA E CHUCK.

MAX COOLANT PRESSURE 1,000 PSI



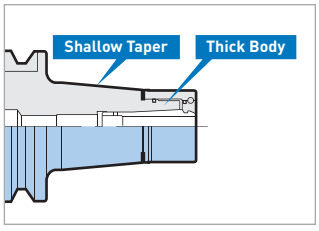
HIGH GRIPPING STRENGTH COLLET

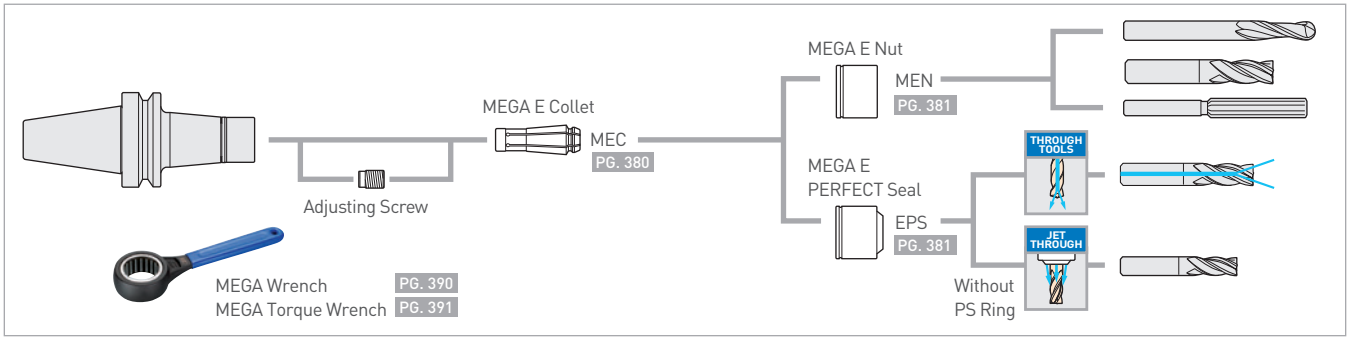
Gripping force is an important element for end milling with a collet chuck. The long gripping length of the collet in the MEGA E series provides a powerful gripping force. The shallower taper of the collet improves concentricity in order to achieve better surface finishes and longer cutting tool life.



SUBSTANTIAL AND TAPERED BODY DESIGN

Thick body eliminates chatter and deflection. Tapered extension provides the rigidity to prevent vibration.





MEGA DOUBLE POWER CHUCK®

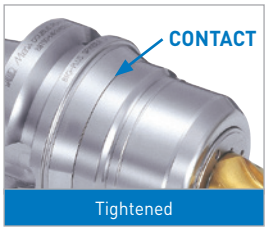
CLAMPING RANGE: Ø.625"-Ø1.500" (Ø16-50mm)

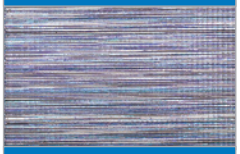
High rigidity design for heavy cutting. Flange contacting nut and simultaneous taper & flange contact ensure highest rigidity.

MAX 30,000 RPM

STABILIZING CONTACT BETWEEN FLANGE & NUT PROVIDES EXCEPTIONAL RIGIDITY

The expanded contact diameter of the nut of the MEGA DOUBLE POWER CHUCK to the flange provides the highest rigidity as if the chuck and nut were one solid piece. This superior rigidity ensures heavier duty machining without chatter.



BIG-PLUS	CONVENTIONAL
	
BBT50-MEGA32D-105 Radial d= .551" (14mm) Power= 20.3hp (15.2kW)	Other Manufacturer (L=90) Radial d= .374" (9.5mm) Power= 12.3hp (9.2kW)

Cutting Conditions

Cutter: Coated Carbide End Mill Ø32mm, 4-flutes
Work Material: A36 Steel (JIS SS400)
Cutting Speed: 925 SFM (282 m/min)
Spindle Speed: 2,800 RPM
Feed Rate: 44 IPM (1,120 mm/min)

JET THROUGH

SECURE COOLANT SUPPLY

Two types are individually designed for the most effective coolant supply.

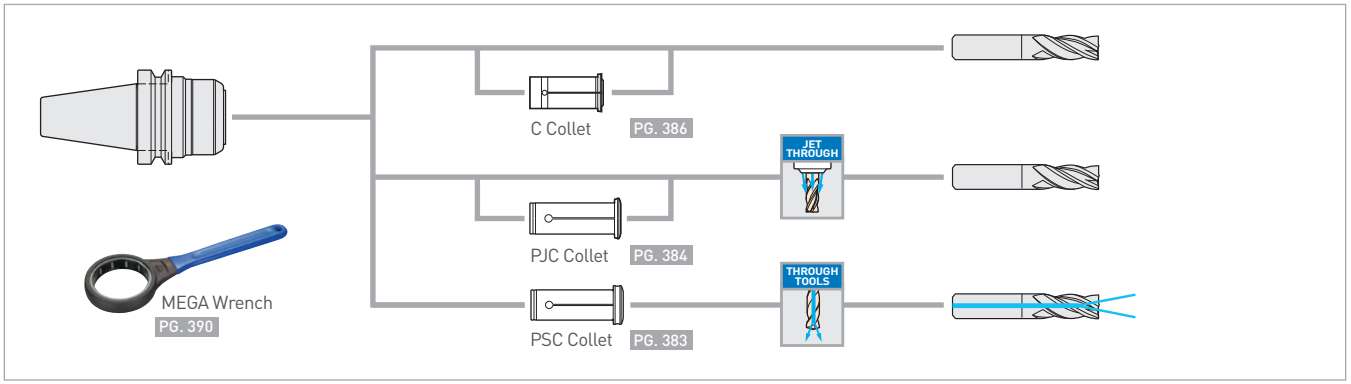
- Improved surface finish
- Smoother chip evacuation
- Extended tool life
- Cooling & lubrication of tools

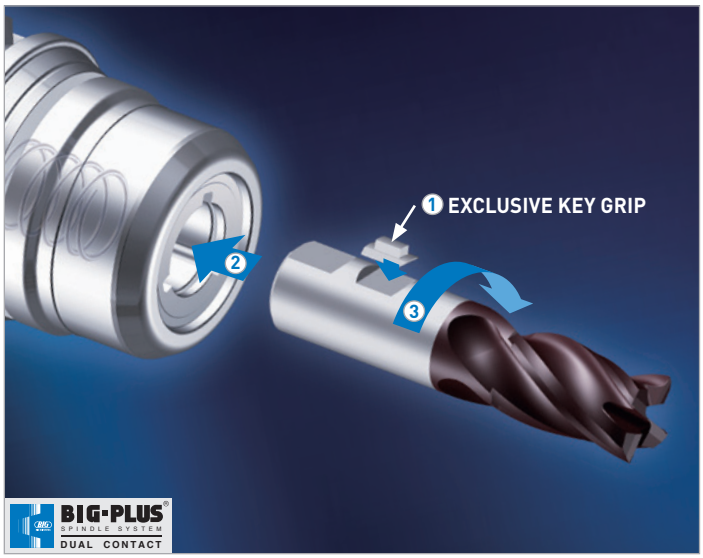
A VARIETY OF STRAIGHT COLLETS AVAILABLE

For jet through
PJC collet

For through tools
PSC collet

For through tools
OCA collet





MEGA PERFECT GRIP

CLAMPING RANGE: Ø.750"-1.250" (Ø16-32mm)

FEATURES 100% SECURITY AGAINST END MILL SLIP OR PULLOUT UNDER ANY TORQUE LOAD

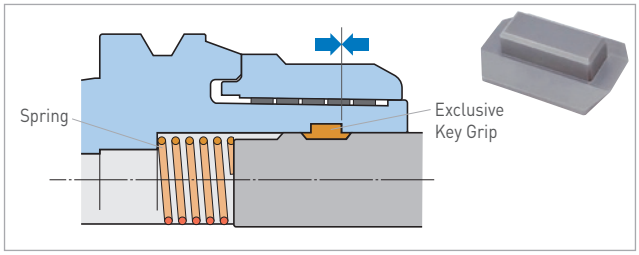
- A unique lock mechanism using a Key Grip prevents the slip and pullout of the tool during heavy cutting
- By simply using straight shank cutters with a Weldon flat, no special cutter is required. If your cutter doesn't have a flat, adding your own flat according to the general Weldon standard allows its use in the MEGA PERFECT GRIP

SIMPLE, EASY HANDLING WITH SECURE CLAMPING

1. Place the exclusive Key Grip into the Weldon flat of the end mill shank.
2. Insert the end mill with the Key Grip in alignment with one of the three Key Grip grooves inside the milling chuck.
3. Rotate the end mill approximately 20° clockwise until the Key Grip stops securely against the stopper pin.
4. Finish clamping the tool until the clamping nut contacts the positive stop of the chuck body.

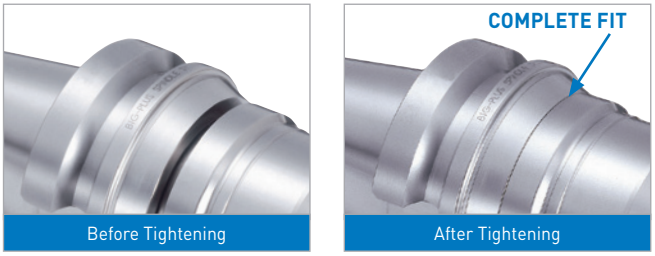
NON-PULLOUT MECHANISM

The Key Grip engages in the groove of the chuck body to ensure no tool pullout.



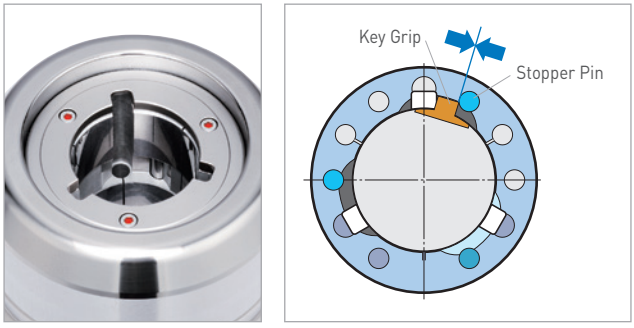
COMPLETE FIT OF NUT AND BODY

Tightening the nut achieves dual contact between the nut and body for rigidity close to that of an integral cutter.



NON-SLIP MECHANISM

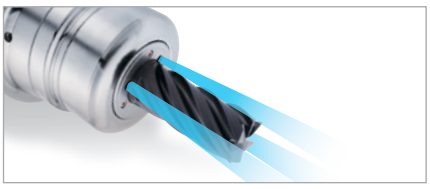
The Key Grip maintains contact with the stopper pin to prevent any slip under high torque.



FLOOD JET-THROUGH COOLANT

The Key Grip grooves provide channels for high volume coolant to the cutter.

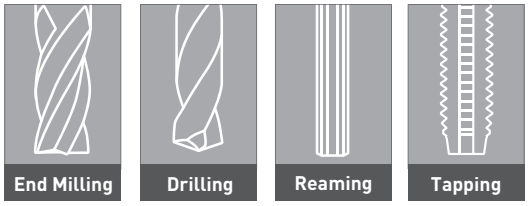
Effective end milling of HRSAs requires a high volume of coolant to the cutting edge to dissipate heat and aid in the removal of chips.



NEW BABY CHUCK

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

High-precision collet chuck system with an accuracy of 1 micron at the nose.



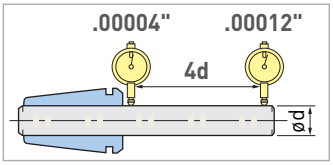
HIGH PRECISION COLLET, CLOSE TO SUBMICRON

HIGH PRECISION

NEW BABY COLLET

The NBC collet is 100% inspected to guarantee accuracy. Material, production, heat treatment... everything is selected for precision.

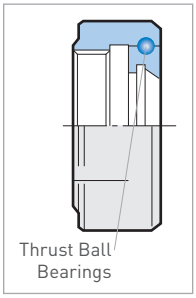
STRICT GAGE CONTROL



All BIG Collets are AA Grade and inspected twice for accuracy

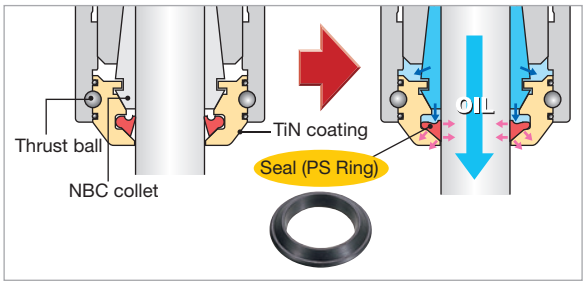
ENSURES HIGH ACCURACY

The double effect of precision threads finished after heat treatment and the smooth tightening of the thrust balls without torsion on the collet achieves stable high-precision collet tightening. Furthermore, the mechanism acts to prevent the thrust ball from jumping out due to centrifugal force generated by high speed rotation, promising stable machining.



COOLANT THROUGH TOOLS (BPS)

The sealing functionality of the PERFECT SEAL means that the higher the coolant pressure is, the tighter the PS Ring adheres to the tool shank, increasing the sealing effect. The secure sealing function allows coolant to be securely supplied to the tip for high-pressure machining in high-speed applications. A sealing nut is used with a standard collet.



COOLANT METHODS TO SUIT THE APPLICATION

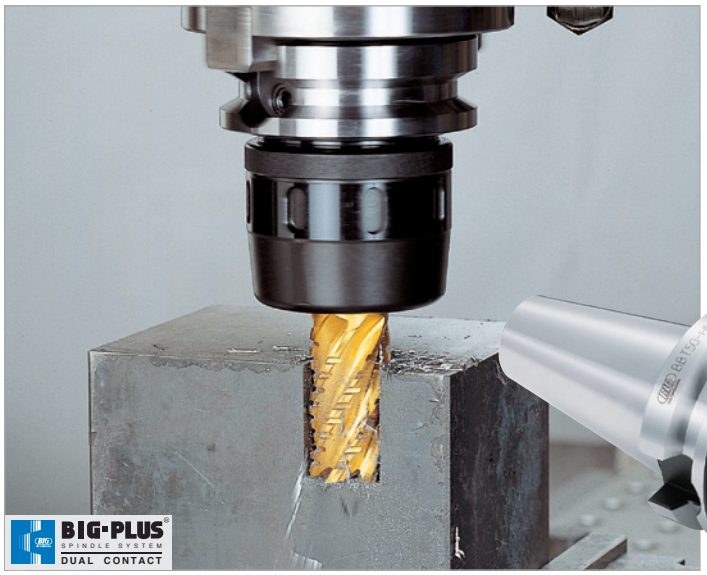
BABY PERFECT SEAL

A coolant nut with oil sealing functionality.

Removing the internal PS Ring allows jet-through coolant supply.

MAX COOLANT PRESSURE 1,000 PSI

The runout accuracy heavily affects finish quality and tool life. For holding an end mill, we recommend the use of an E Collet.



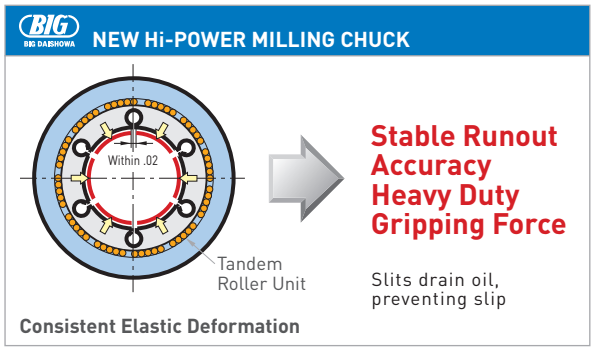
NEW Hi-POWER MILLING CHUCK

CLAMPING RANGE: Ø.500"-1.500" (Ø12-42mm)

Highly rigid chuck for resistance against chatter. Supports end milling with its heavy duty gripping force and high runout accuracy.

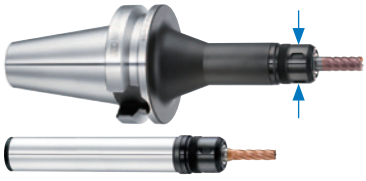
RELIABLE SLIT DESIGN ENSURES HIGH ACCURACY

A unique BIG slit shape is adopted to achieve both the essential runout accuracy and gripping force which are the key elements of a milling chuck. Stable clamping is possible due to sufficient elastic deformation and the ability to remove oil film from the tool shank.



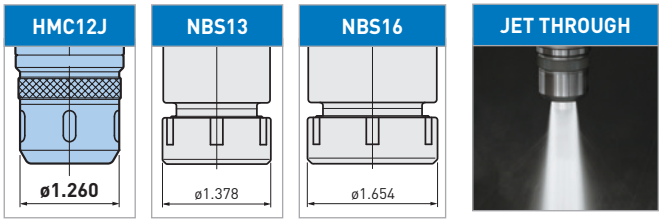
RELIABLE SLIT DESIGN ENSURES HIGH ACCURACY

CLAMPING DIAMETER: Ø12mm & .500"



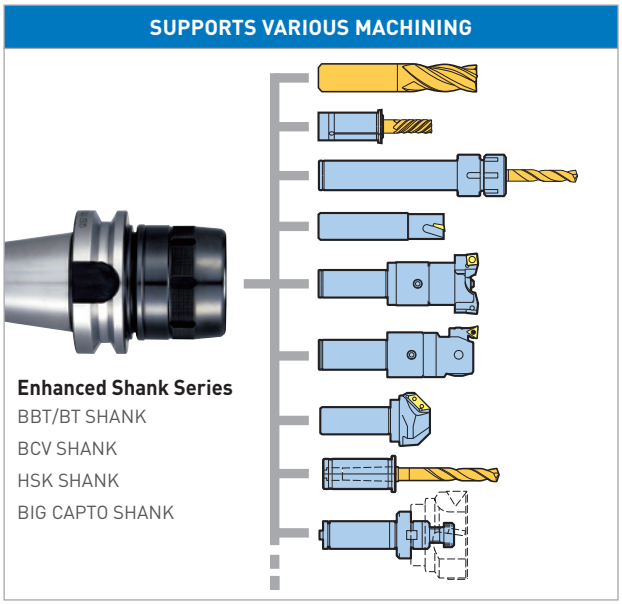
Slim Nut Diameter of Ø1.260" Reduces Interference

DIAMETER SLIMMER THAN COLLET CHUCKS



THE MILLING CHUCK IS ALSO IDEAL AS A BASIC HOLDER

Allows the reliable use of straight collets as well as boring bars and arbors such as face milling cutters.

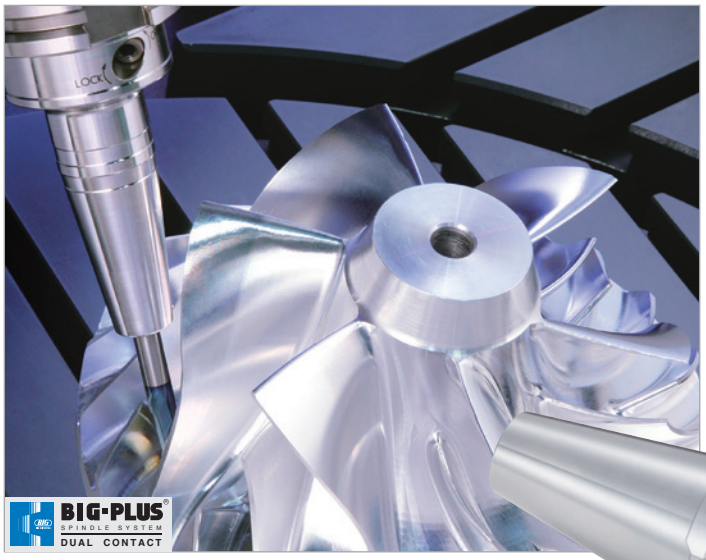


RUNOUT ADJUSTABLE RA HOLDER

Simple Structure Allows for Easy Adjustment of Runout Accuracy

Compensates for increased runout of machine tool spindles caused by extended use. Simple structure allows for easy adjustment in the machine.

- Consistent hole diameter
- Improved surface roughness
- Increased tool life

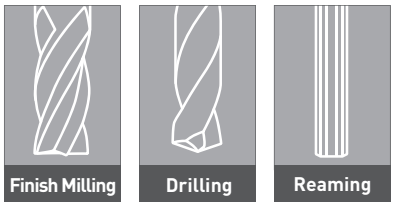


HYDRAULIC CHUCK

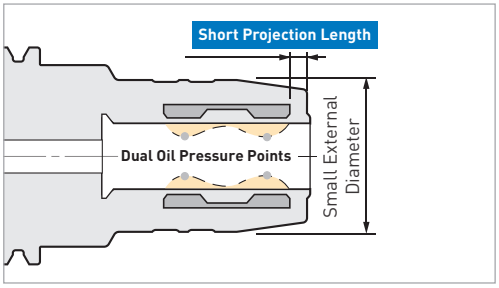
CLAMPING RANGE: Ø.125"-1.250" (Ø3-32mm)

For high precision machining. Ideal tool holders for machining processes that require high accuracy such as drills, reamers, ball mills, end mills, diamond reamers and grinding tools.

MAX 40,000 RPM

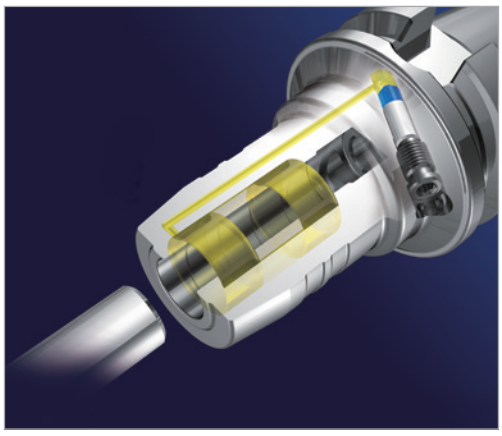


A WIDE VARIETY OF CLAMPING DIAMETERS & PROJECTIONS AVAILABLE



INTERNAL STRUCTURE WITH INCREASED ACCURACY AND RIGIDITY

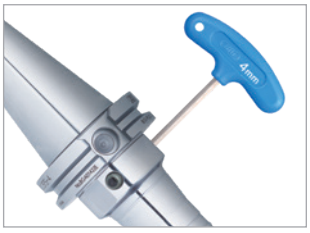
The integrated structure of the body and clamp sleeve gives greater rigidity and achieves better accuracy compared to the traditional two-part construction sealed with O-rings. 2-point tightening with dual hydraulic chambers and a short overhang area where the tool is not clamped give improved runout accuracy.



RUNOUT ACCURACY LESS THAN .00012"

High precision runout accuracy less than .00012" at 4xD improves the workpiece surface finish and extends tool life.

HIGH RUNOUT ACCURACY <3µm



EASY CLAMPING WITH 1 WRENCH

The cutting tool can be clamped or unclamped easily and securely with just 1 wrench.

ALLOWABLE SHANK TOLERANCE OF CUTTING TOOLS (H6)

REFERENCE INFORMATION "h6" INCH SERIES		REFERENCE INFORMATION "h6" METRIC SERIES	
Cutting Tool Shank Ø	Allowable Tolerance	Cutting Tool Shank Ø	Allowable Tolerance (µm)
1/8, 1/4, 3/8	+0, -.00035	3, 4, 6, 8, 10mm	+0, -8µm
1/2, 5/8	+0, -.00043	12, 14, 16, 18mm	+0, -11µm
3/4, 1, 1 1/4	+0, -.0005	20, 25, 32mm	+0, -13µsm

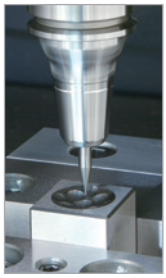
Meets a variety of machining applications. Extensive offering of length and clamping diameters.

SUPER SLIM TYPE

MIN. BODY DIAMETER: Ø.551"

Slim design eliminates interference. Ideal for high precision 5-axis machining.

MAX 60,000 RPM



HSK-E25/E32/E40/E50/F63 SERIES

Ultra-Compact and High Precision

Hydraulic chuck suitable for small machining centers.

PREBALANCING HSK-E25 <.5G.MM

CYLINDRICAL SHANK SERIES

High precision cylindrical shank hydraulic chuck suitable for solving interference problems.

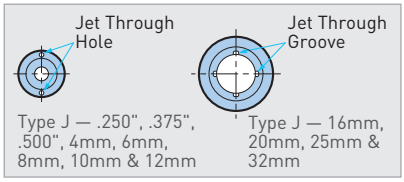
JET THROUGH TYPE

MIN. BODY DIAMETER: .79"

Securely supplies coolant or oil mist to the tool periphery. Delivers outstanding results with high accuracy finishing in 5-axis machines.

MAX 35,000 RPM

Coolant Hole at Nose Supplies Coolant

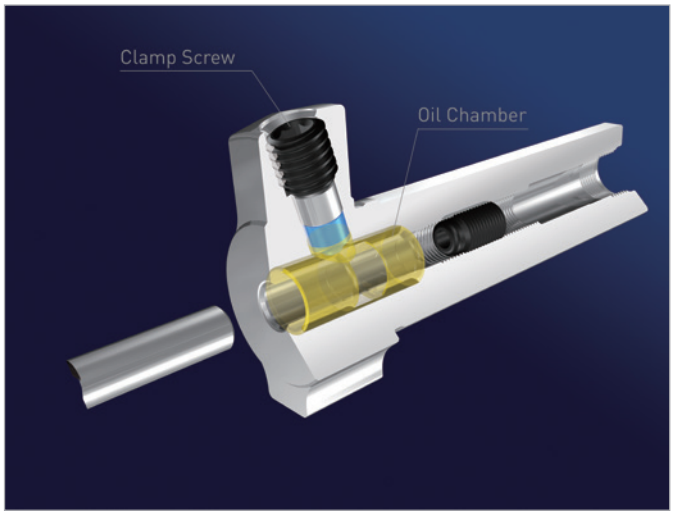


HYDRAULIC CHUCKS FOR SWISS-TYPE AUTOMATIC LATHES

Hydraulic chuck system provides high accuracy and easy tool changes.

Improved Accuracy and Rigidity

The lathe type hydraulic chuck was developed from decades of knowledge accumulated on milling machines. In addition to high accuracy and rigidity, the slim design helps avoid interference with adjacent tools.



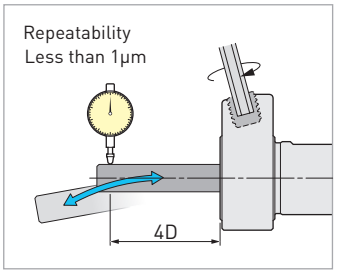
Safe and Quick Operation

The ability to change cutting tools with a single T-wrench drastically reduces the time required for tool changes.

It also reduces the need to work in extremely limited spaces and improves operator safety.

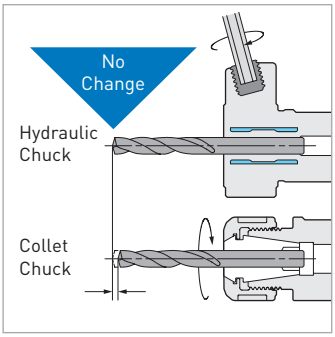
±1μm Repeatability

Even changing the tool, the repeatability at 4D is stable at ±1μm or less. In addition, the tightening is completed when the clamping screw hits the bottom, controlling tightening torque is not needed.



No Change in Tool Length

Since the tool projection length does not change after the clamping, it is easy to control the tool projection length in the machine.



THREE TYPES FOR DIFFERENT TOOL POSTS

Standard Type

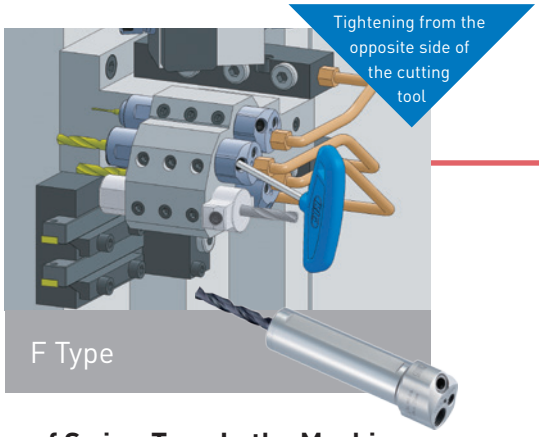
- Tighten from the tool side
- Coolant delivery is possible with Rc(PT)1/8 screw
- An adjusting screw can also be fitted (some models)
- Length can be adjusted by cutting the shank
- Easy to install in various tool posts

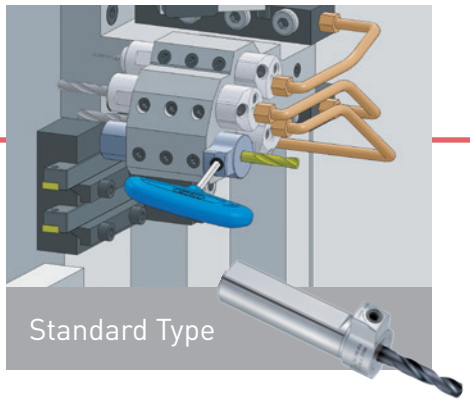
F Type

- Tighten from the opposite side of the tool
- Coolant delivery is possible with Rc(PT)1/8 screw
- Optimum overall length for easy use
- Ideal for use on a front tool post

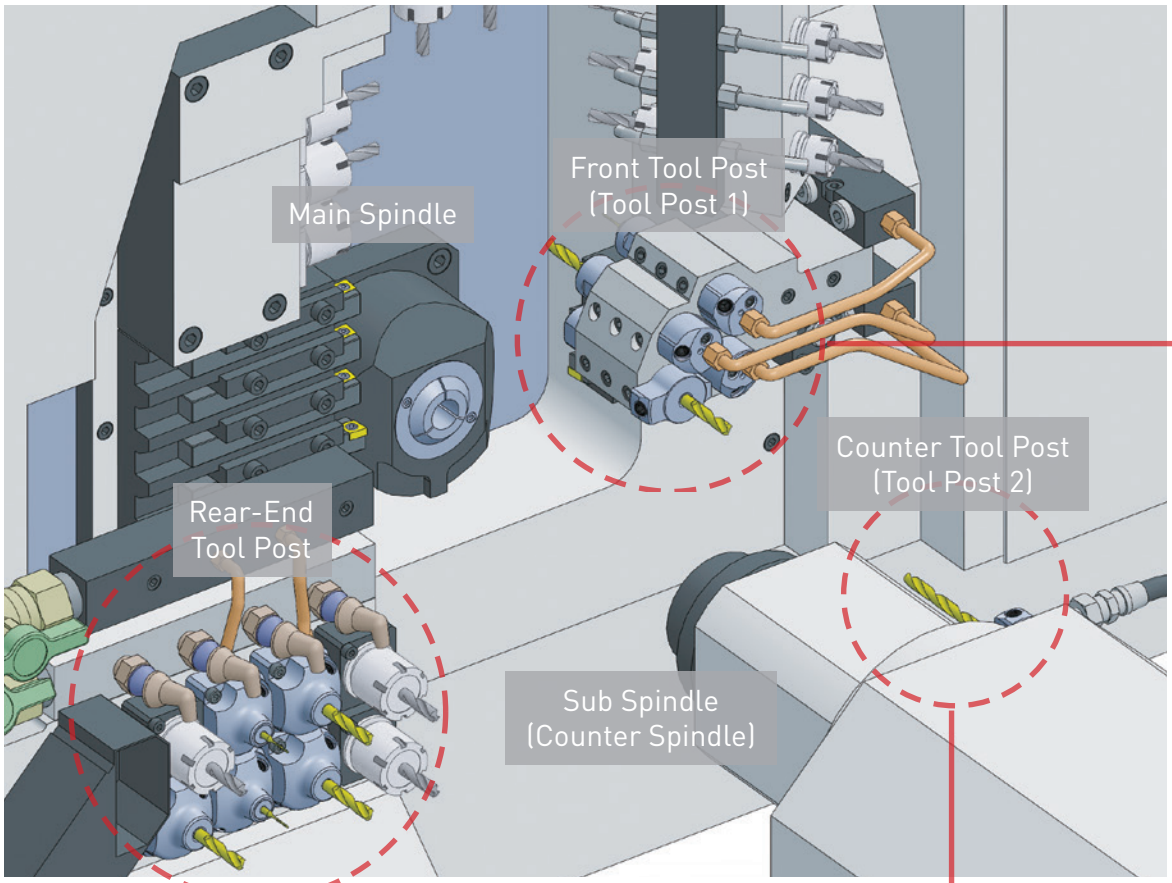
R Type

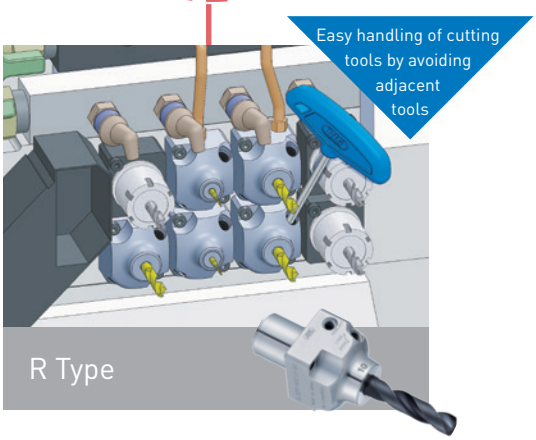
- Unique design for use with both upper and lower sections without interference
- Tightening at an offset position in the tool side
- Coolant delivery with M6 is possible when mounted on the upper section

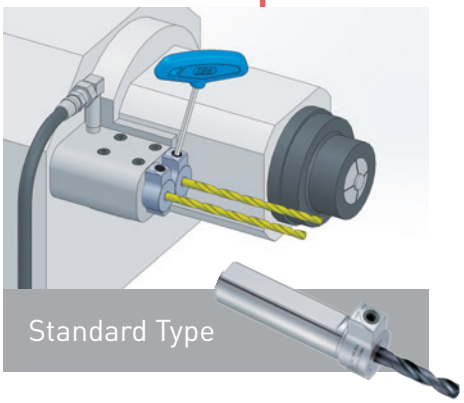


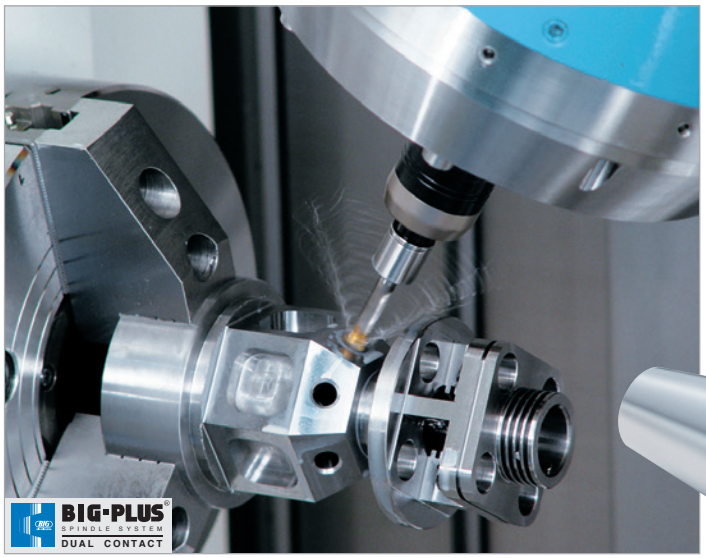


View of Swiss-Type Lathe Machine







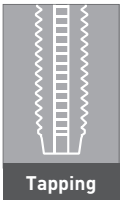


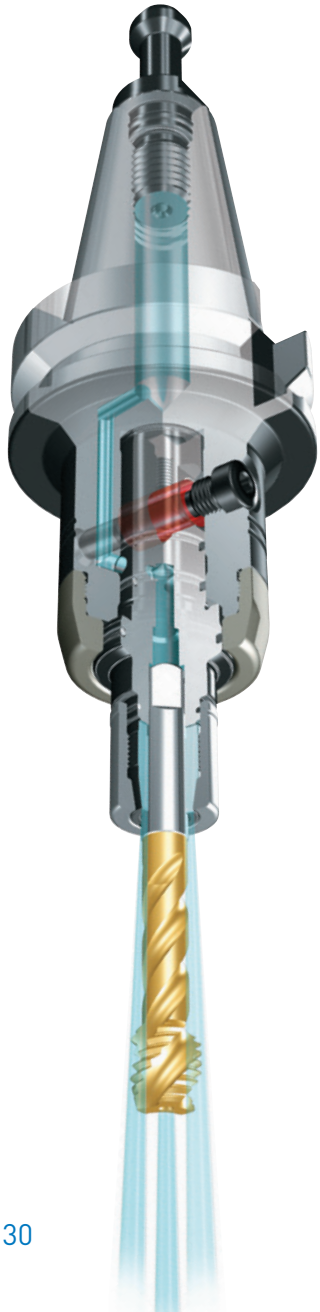
MEGA SYNCHRO® Tapping Holder

TAPPING RANGE: ANSI: No.0-NPT1", JIS/DIN/ISO: M1-M36

Tool holder for rigid tapping compensates for synchronization errors during tapping. Improves thread quality and tool life by reducing thrust loads caused by synchronization errors up to 90%.

- Patent is licensed from EMUGE



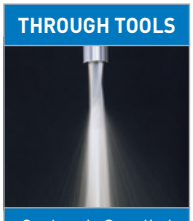


54 BODY MODELS AND 276 TAP HOLDER MODELS ARE AVAILABLE

Large tap series achieves a maximum of NPT1". An extensive variety of bodies suitable for many spindle types. Short, middle & long tap holders are standardized to cover between No.2 and NPT1" (M2 and M36). The slim design avoids interference.

SECURE DRIVE

The body and Tap Holder are fixed with a drive key in the rotation direction as well as the square of the tap.



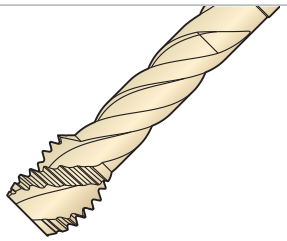
COOLANT THROUGH CENTER CAPABILITY FOR ALL MODELS

Coolant is supplied both through the tool and to the tool periphery simultaneously.

BIG MEGA SYNCHRO tapping holder compensates for synchronization errors with any type of tap.

Minimized thrust load to both the tap and workpiece improves thread quality and tap life.

LOAD TO TAP

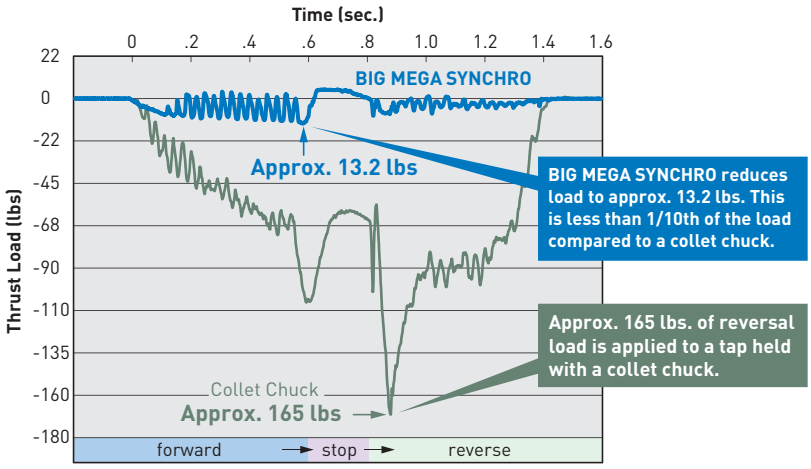


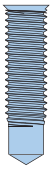
SPIRAL TAP

AU:1/4-20, N=1,000 RPM

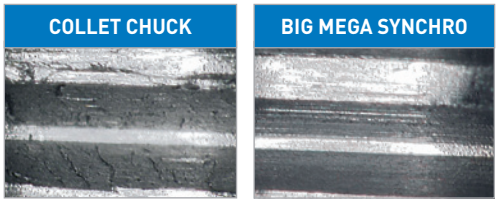
Spiral grooves on spiral tap cause loading in the reverse direction, similar to an end mill.

• Measured by Kistler Dynamometer





Cutting Conditions
Spiral Tap
No.10-24
Material: 4130



COMPARISON OF SURFACE FINISH

Tapping of exotic materials tends to cause a compressed burr on the thread surface. BIG MEGA SYNCHRO compensates for synchronization errors and minimizes the cutting load. Fine surface finish of threads is achieved.

PATENT # 9446463

MGT3

MEGA MICRO COLLET

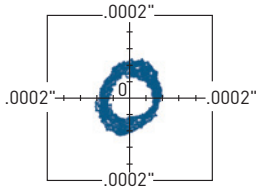
FOR SMALL TAP

TAPPING RANGE: ANSI: No.0-No.6, JIS/DIN/ISO: M1-M3

Eliminating synchronization errors and minimizing dynamic runout at high speeds provides stable thread quality and extended tool life.

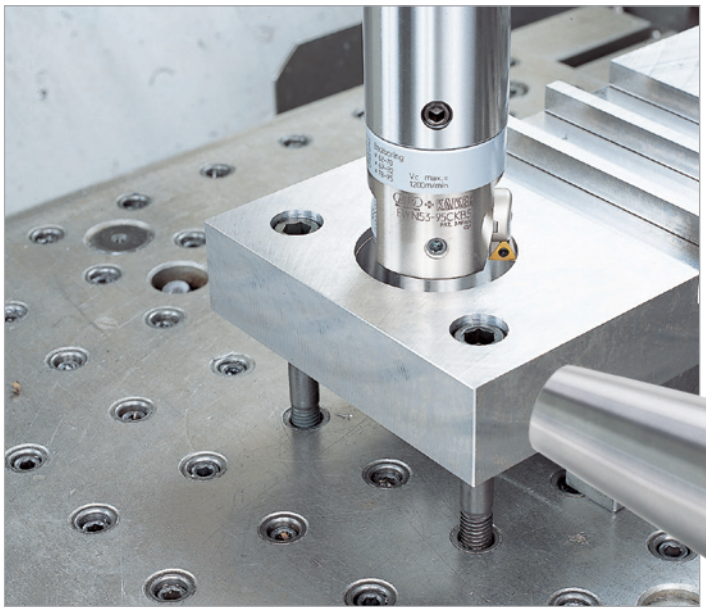
• BBT Shank • HSK Shank • Cylindrical Shank • N/C Lathe Tooling

MEGA MICRO NUT



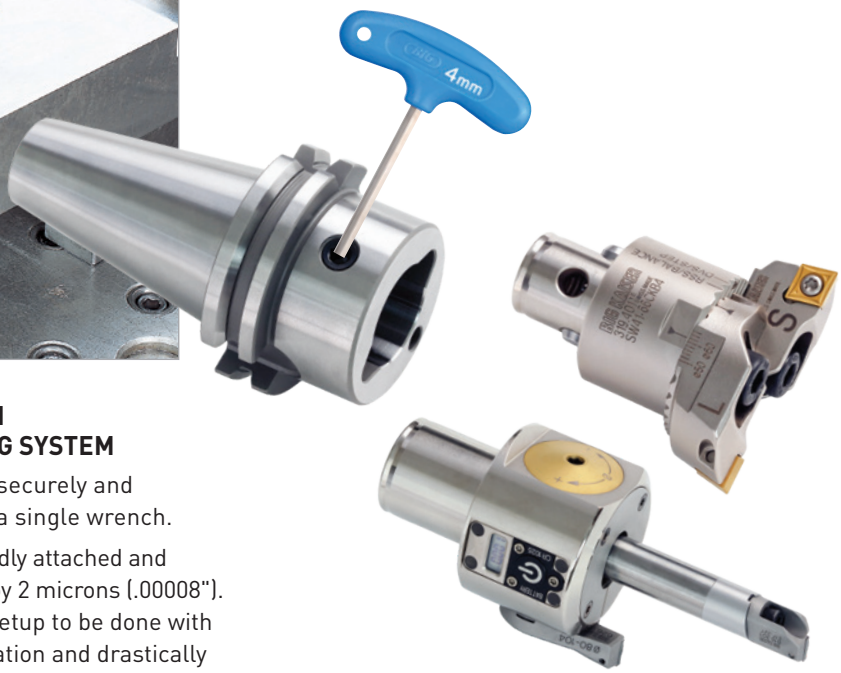
DYNAMIC RUNOUT ACCURACY WITHIN .0002" (5μM) EVEN AT 5,000 RPM

Plotted position of a test bar (at .630" distance on .157" diameter)



CK MODULAR BORING SYSTEM

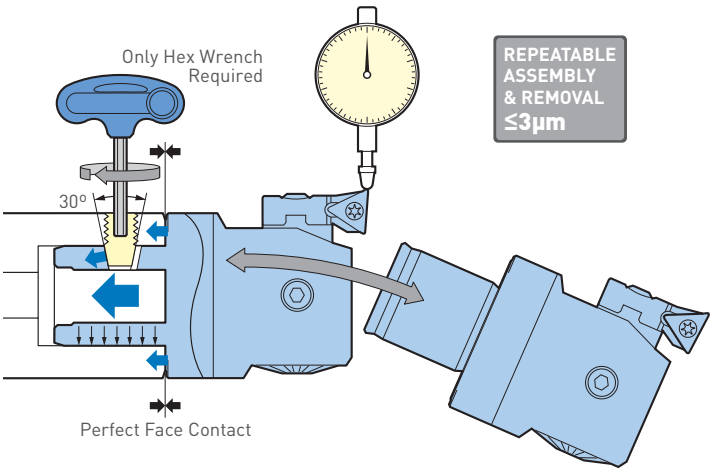
Supports various applications from rough to fine boring with a large assortment of boring heads and accessories. Secure contact using a single wrench.

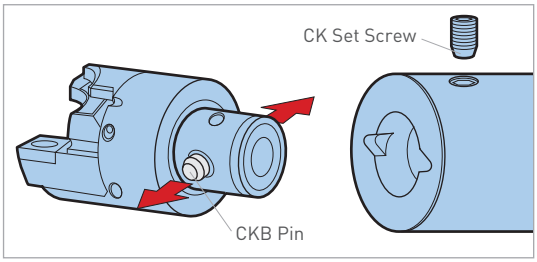


SECURE CONTACT USING A SINGLE WRENCH
THE SIMPLEST MODULAR BORING CLAMPING SYSTEM

The CK modular system is a simple method for securely and powerfully clamping multiple components with a single wrench.

Moreover, even if the same boring head is repeatedly attached and removed, the cutting edge position does not vary by 2 microns (.00008"). This accurate clamping allows boring diameter setup to be done with a boring head only, increasing the machine utilization and drastically reducing labor.



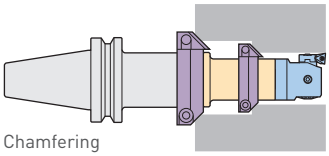


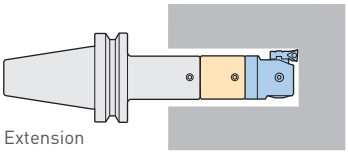
SAFE STRUCTURE AT HIGH TORQUE

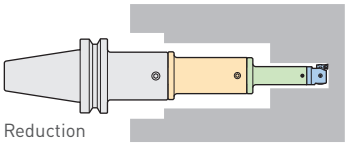
Adopts a proprietary CKB pin for high cutting torque. The CKB pin is a floating type which gives it good horizontal balance, dampening cutting torque and making it possible to withstand heavy duty torque.

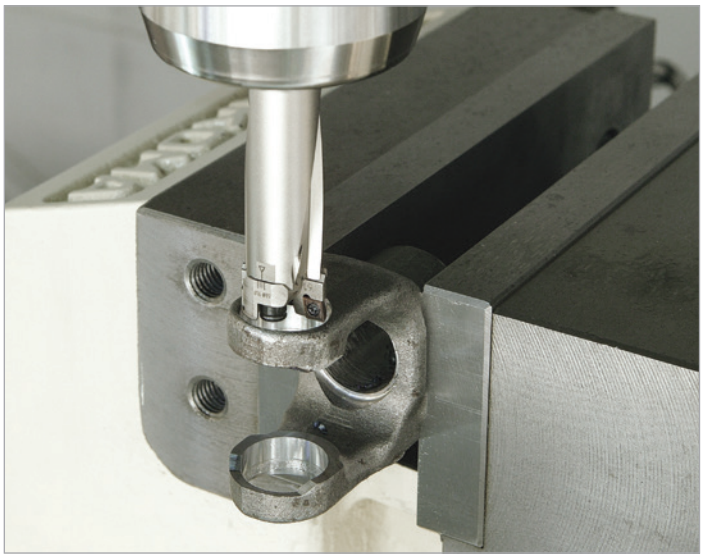
RAPID ADAPTATION TO SPECIAL TOOLS

Modular system that can be used to assemble special tools with standard items allows for flexibility.









SERIES 319 SW

ROUGH BORING HEADS

The short and compact design of the components combined with a positive and friction locked connection between the tool body and insert holders provide maximum rigidity and highest cutting performance.

SW 319 X CKB1-CKB7 & CKN6-CKN7

RANGE: Ø.787"-8.000"

Designed with ultimate performance and versatility in mind. Balanced or stepped cutting by simply switching mounting locations of the insert holders which feature varied heights.

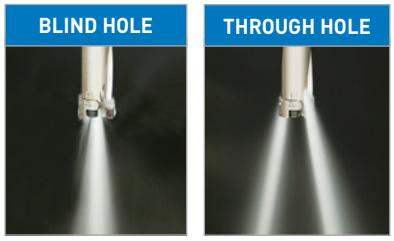
Versatile Tool

Insert holders for back boring, chamfering or face grooving.

MW 'MINI' TWIN ROUGH BORING TOOL

RANGE: Ø.630"-.827" (Ø16-21mm)

Adjustable twin cutter boring tool on a Ø20mm shank. Ideal solution for rough and semi-fine boring of small die cast holes.



CENTER-THROUGH

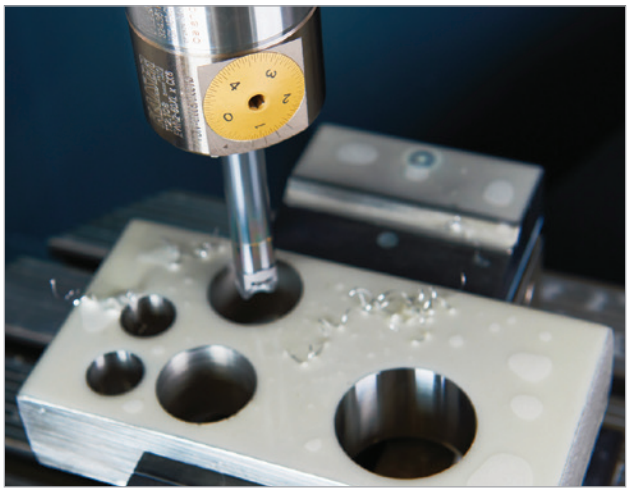
In blind hole situations, center-through coolant aids in chip evacuation. The coolant hole can be closed by the stop screw when required.

SERIES 315 TWN

ROUGH BORING HEADS

RANGE: Ø.787"-6.000"

Insert holders and head feature triple-contact precision and ground mating surfaces, greatly increasing the rigidity. For stable boring even in high feed, heavy duty operations. No variable insert height.



SERIES 112

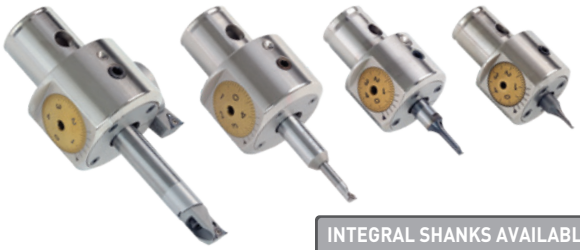
HIGH PRECISION FINE BORING HEADS

Designed for precision production boring on machining centers, jig mills, boring mills, transfer machines and high speed milling machines. Their fully enclosed, compact and rugged design allows reliable operation, even under extreme cutting conditions.

EWN, SERIES 112

Centric boring bars in modular and integral execution for accurate, high-performance boring operations.

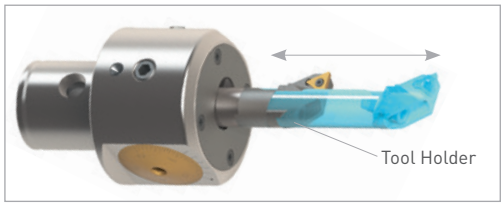
- Same accessories for precision boring heads EWN and EWD, series 112



INTEGRAL SHANKS AVAILABLE IN
CV40, BT40, HSK-A63 & C6

Variable Tool Length Adjustment of the Tool Holder

Best cutting results are only reachable if the tool holder is as short as possible. The EWN features variable length adjustment of the tool holders which ensures the shortest and therefore the most rigid tool assembly.



EWB, SERIES 112 — AUTO-BALANCE TYPE

Maximize cutting speeds and feeds due to an integrated counterweight, which allows for precision balancing of the tool assembly. Significant improvements to bore quality, surface finish and tool life.

EWE, SERIES 112

Digital display and direct electronic measuring system on the tool carrier feature absolute setting accuracy. The boring heads are designed for ultra precise boring operations.

Body Protection Grade: IP 69K

Ensures a complete protection against corrosion. The built-in electronics are safe from dust and high-pressure water.

Digital Display With A Resolution of .00005"/Ø

Automatic off function stores the last displayed value and integrated power management for optimized battery life.

Single Button For The Functions "On" And "Reset"

Electronic Components — Made by BIG KAISER

All electronic components are entirely developed and manufactured in the electronic lab of BIG KAISER in Switzerland. Before shipping, every digital boring head is calibrated and tested.

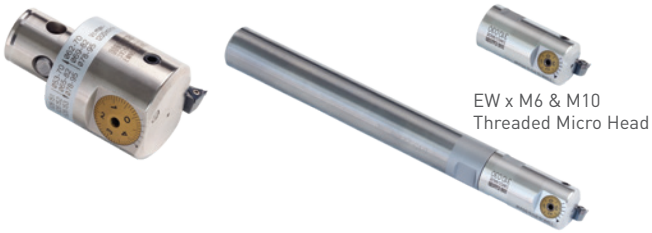
SERIES 310

HIGH PRECISION FINE BORING HEADS

EWN, SERIES 310

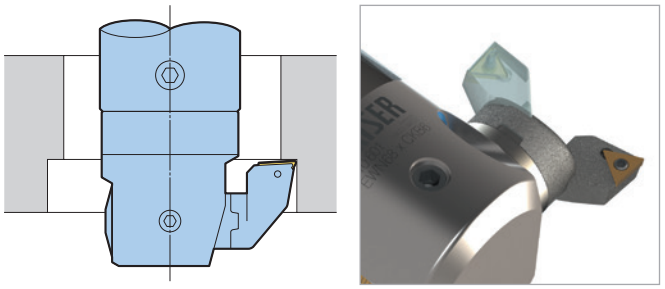
The precision boring heads EWN series 310 cover a range of Ø.590"-8.000" with only 7 precision boring heads. Due to the optimized balance over the entire adjustment range, cutting speeds up to 4,000 SFM are possible.

- Precision boring heads EWN and EWD, series 310 feature equal boring ranges and body dimensions and allow the use of the same accessories.



Back Boring

Insert holder can be mounted in opposite direction for an easy changeover to back boring.



Versatile Tool

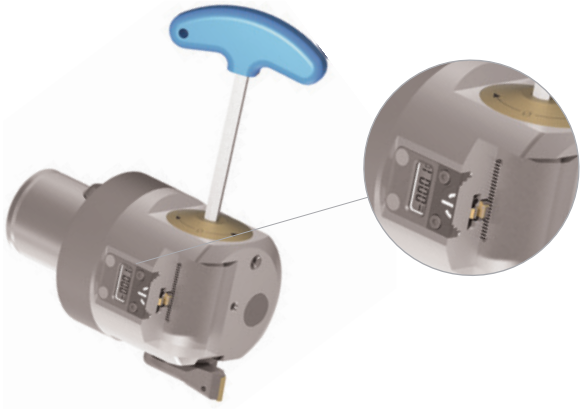
Insert holders for many types of inserts (TP/TC, CC, and different angles) as well as accessories for face grooving are available.

EWD, SERIES 310

The boring heads EWD series 310 with digital technology combine all advantages of the analog boring heads EWN. Thanks to the large display with a resolution of .00005"/Ø bores with extremely tight tolerances can be machined.

Direct Measuring Diameter Allows Corrections In Both Directions

With a direct electronic measuring system on the tool carrier and a resolution of .00005"/Ø enable diameter corrections with an unmatched accuracy.



EWB, SERIES 310 — AUTO-BALANCE TYPE

Maximize cutting speeds and feeds due to an integrated counterweight, which allows for precision balancing of the tool assembly. Significant improvements to bore quality, surface finish and tool life. Cutting speeds up to 6,600 SFM are possible.

SERIES 318

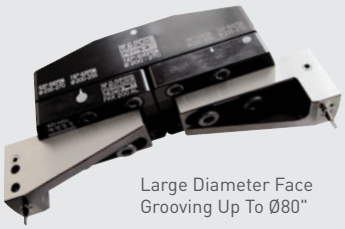
LARGE DIAMETER BORING SYSTEM

High-speed, light-weight aluminum system for rough and fine boring, as well as OD turning and grooving applications. Pinned-to-fit mounting ensures absolute safe operation in high speeds — up to 6,600 SFM. Features coolant supply through all components direct to the cutting edge.

UP TO **6,600** SFM

LARGER MACHINES UP TO Ø118"

AVAILABLE IN **DIGITAL**



Large Diameter Face Grooving Up To Ø80"

Versatile System

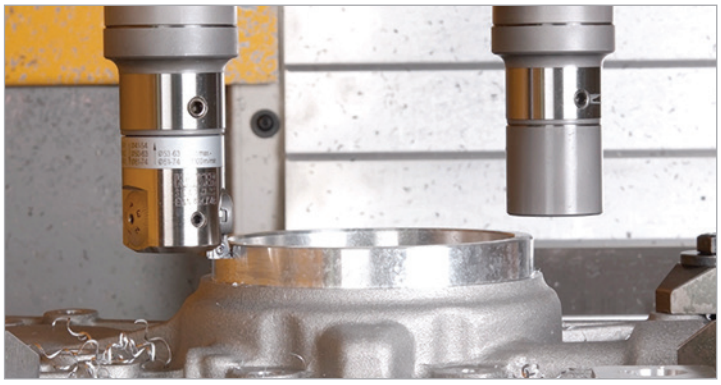
Series 318 is for various applications such as roughing, finishing, pin turning, and face grooving.

Roughing

Finishing

Face Grooving

Pin Turning



OD TURNING

TURNING SYSTEMS

Radial adjustment of insert holder and counterweight allows for concentric location of turning attachment resulting in balance of the assembly.

SERIES 112

Small Diameter System

Short, lightweight turning adapter for use with EWN 2-50XL heads. Through-tool coolant to insert holder.

- Balanced tool assembly for entire work range of Ø.039"-1.260" (Ø1mm-32mm)
- Through tool coolant to insert holder
- Fine adjustment of diameter with precision graduated head
- Short, lightweight assembly

SERIES 310/315

Intermediate Diameter System

CKB5 & CKB6 modular adapters accepting CKB3-CKB5 EWN & TWN heads.

- Simple and cost effective execution
- Through tool coolant supply
- Modular construction, extendable, for long workpieces
- Suitable for boring operations

SERIES 318

Light Weight Large Diameter System

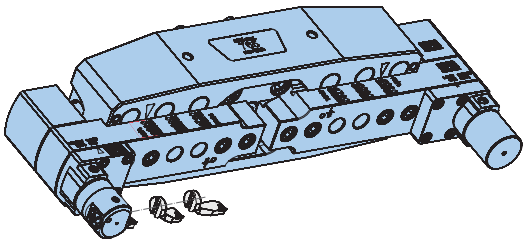
Turning adapter for use with EWN/TWN x CKB5 heads.

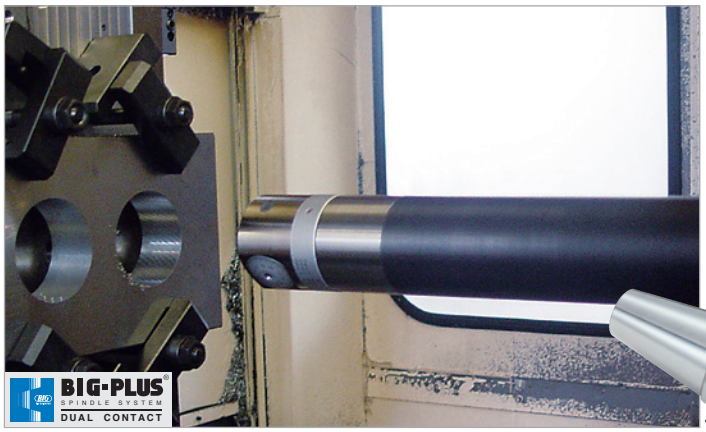
- Turning adapter with CK5 connection
- Can be mounted on any extension slide

SERIES 318

X-Large Diameter System

Bridge tool holder for X-large diameter pin turning.





SMART DAMPER BORING

UNIQUE DYNAMIC DAMPER ELIMINATES CHATTER

Achieves high speed and high efficiency machining for work requiring a long projection length.

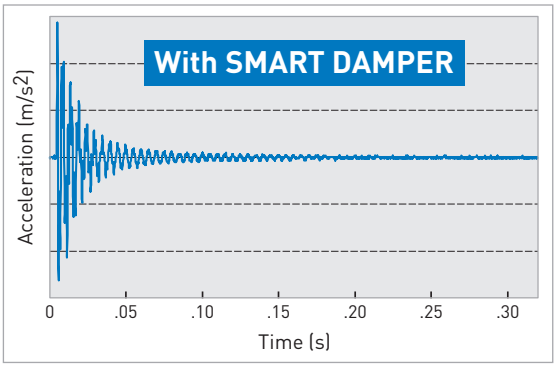
EWN BORING HEAD
Integrated Type

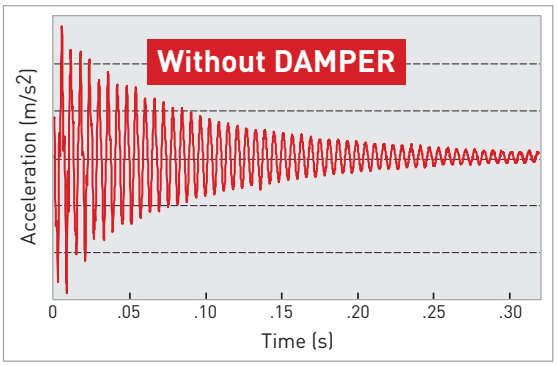
SW BORING

PATENT # 9027720

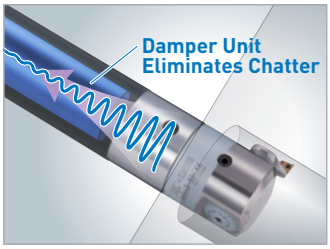
COMPARISON OF OSCILLATORY WAVEFORMS

The Smart Damper incorporates a damping mechanism and reduces chatter instantly. The Smart Damper solves various problems caused by chatter due to long projection, such as poor surface roughness, unacceptable cutting time, and shortened tool life.





CHATTER SUPPRESSING MECHANISM



An incorporated unique damper that functions as both a counterdamper and friction damper.

Patented counterweight maximizes effect of the friction damper. Chatter is absorbed effectively and higher machining accuracy is achieved.

MEETS A VARIETY OF REQUIREMENTS

CK BORING SYSTEM

STRAIGHT SHANK FOR N/C LATHE

FINE BORING OF DUCTILE CAST IRON (FCD500)

Tool Holder	Cutting Speed (SFM)				Result
	80	165	325	500	
Competitor (w/o damping system)	○	×	×		Outperforms competitor's holder by 6X higher productivity.
SMART DAMPER Built-in damping mechanism	○	○	○		Superior surface finish and better tool life due to the increased cutting speed.

× = Vibration ○ = Acceptable ◎ = Excellent Surface Finish

Cutting Conditions
Machine: HMC (BBT50) BIG-PLUS
Boring Dia: Ø2.677"
Depth of Hole: 16" (L/D=6:1)
Insert Nose Radius: R .016"
Feed Rate: .008"/rev.
Depth of Cut: .012"/Ø

SMART DAMPER MILLING

INTEGRATED DAMPING SYSTEM

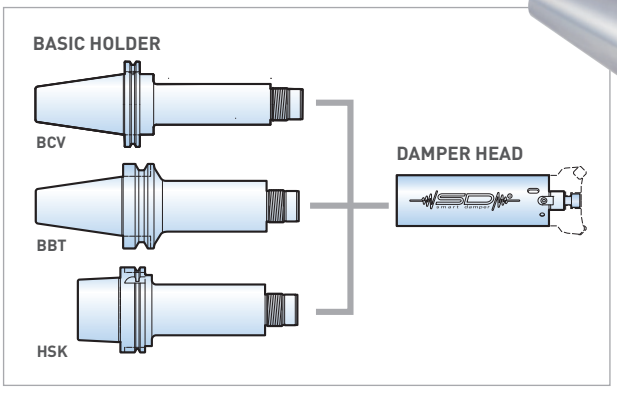
During extended reach face milling, a unique dynamic damping system eliminates vibration for higher productivity. Quiet, vibration-free milling with Smart Damper long projection tools provides better surface finishes and higher metal removal rates.

ACHIEVES HIGH-SPEED AND HIGH-EFFICIENCY MACHINING

- For FMH22/FMH27/SMC.750/SMC1.000
- One damper head (common to BBT/HSK shank) join basic holders with different lengths

COMBINATIONS

Select a suitable basich holder and damper head according to your application.



The damper head cannot be removed after the basic holder and damper head have been attached and used for processing.

FACE MILLING OF DUCTILE NODULAR CAST IRON

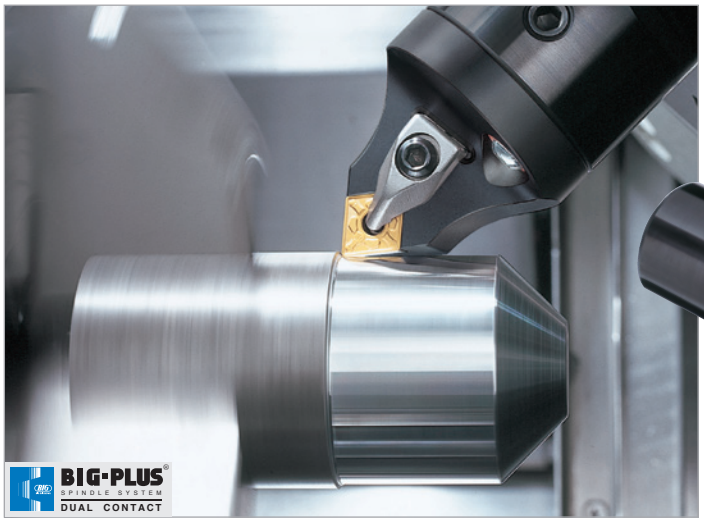
Tool Holder	Radial Depth of Cut (inches)				Result
	.20	.40	.78	1.18	
Standard Holder (w/o damping system)	○	×	×		**6X Deeper Depth of Cut**
SMART DAMPER **Built-in damping mechanism** BBT50-SDF36-47-170 + SDF36-FMH22DP-47-180	○	○	○		

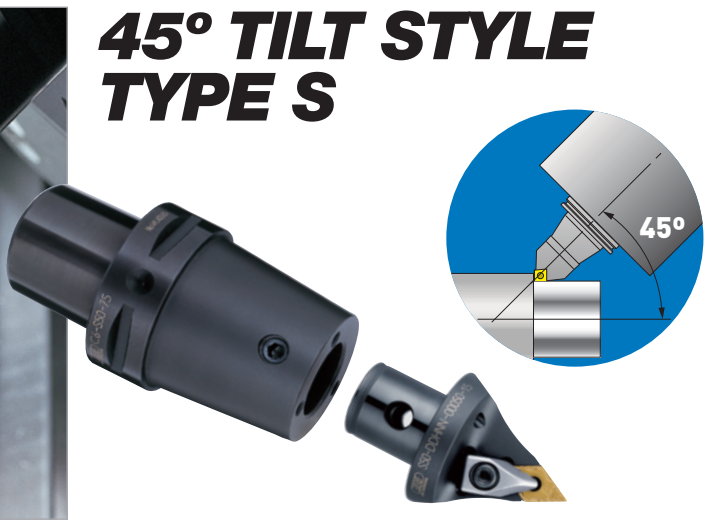
× = Vibration ○ = Acceptable ◎ = Excellent Surface Finish

Cutting Conditions
Machine: VMC
BBT50 (BIG-PLUS)
Cutter: Ø1.968 (4 inserts)
Speed: 300 SFM
Feed: .040"/tooth
Depth: .08"
Overhang: 13.67"

THE FIRST MODULAR TOOLING SYSTEM FOR TURNING APPLICATIONS ON MILL-TURN MACHINES

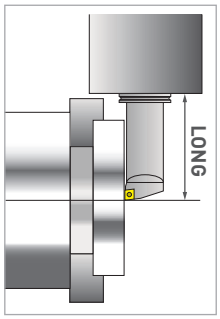
A modular tooling system offers better efficiency, material selection, heat treatment and optimal tool lengths. Easily replace broken inserts. Boring bar & square tool holders options also available.

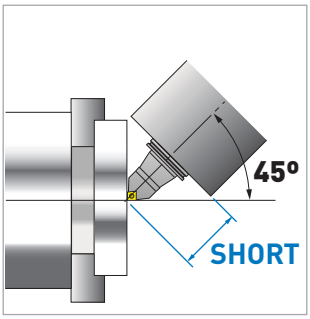




MINIMIZED CUTTING FORCES

Tilting the B axis 45º helps to minimize the cutting forces transmitted to the machine spindle. This force reduction increases the life of the machine spindle & insert life.



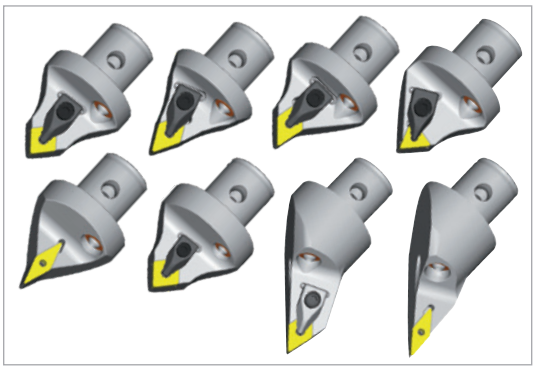


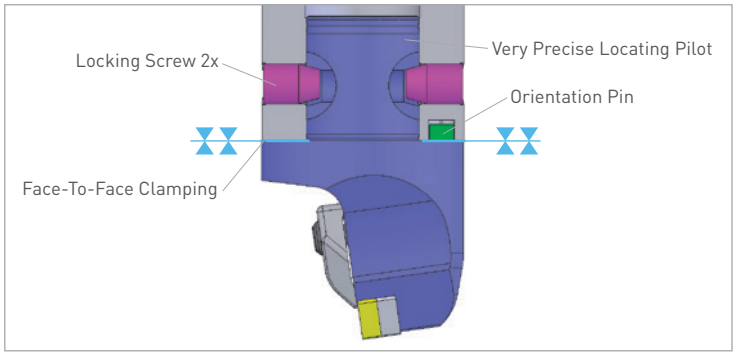
With the B axis at 45º, accessibility problems with the chuck or tailstock are overcome to minimize tool length.

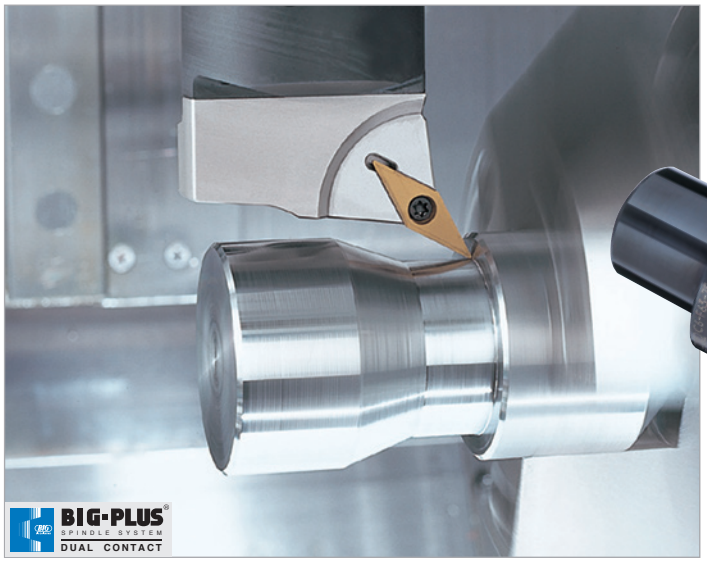
SECURE AND RIGID TYPE S CARTRIDGE CLAMPING SYSTEM

Using highly sophisticated and modern machine tools, Type S cartridges are made to very close tolerances required for turning accuracy and repeatability. The cartridge is located in the basic holder by means of a precision ground pilot and secured by 2 opposing radial screws with a 15º taper. With a slight offset to locating sockets, high face-to-face clamping force of the two components is generated. To maintain precise locations and orientation, an additional locating pin is included for positive transfer of cutting torque.

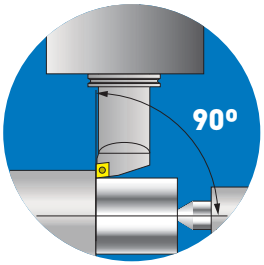
15 CARTRIDGES FOR 45º TILT STYLE TYPE S





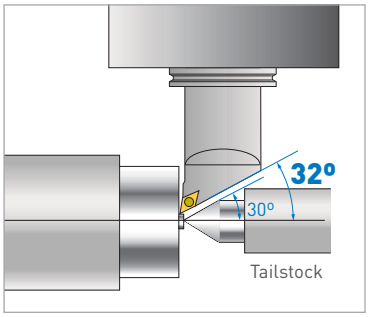


90º RIGHT ANGLE STYLE TYPE F



RIGHT OR LEFT HAND VERSIONS AVAILABLE

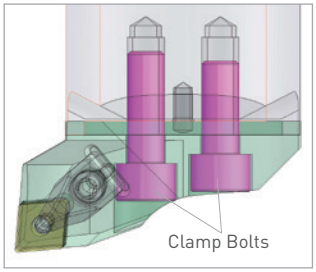
Two different basic holders are available and all can be assembled with either the right or left hand version of cartridges.

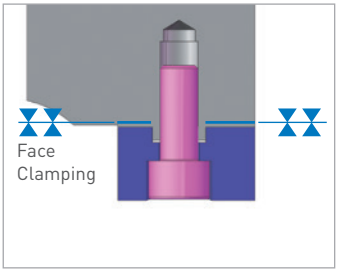


Center proximity type cartridge is also available, minimizing tailstock interference.

SIMPLE AND POSITIVE CLAMPING

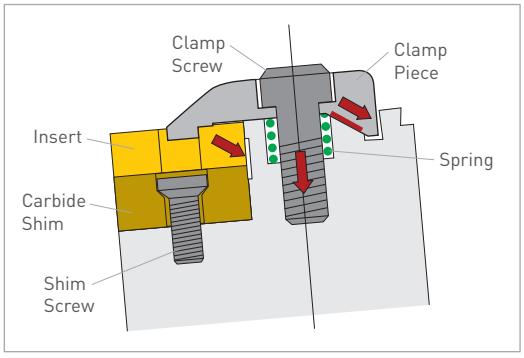
Type F uses two clamping bolts that press the cartridge onto the basic holder. The torque is transmitted by an interlocking drive slot.





SAFE AND EASY CLAMPING OF INSERTS

The double-clamping system simultaneously pushes an insert downward and draws it into the contact faces to achieve secure and rigid clamping.



24 CARTRIDGES FOR 90º RIGHT ANGLE STYLE TYPE F

ANGLE HEAD

Eliminate multiple set-ups and combine vertical, horizontal and angular operations on one machine. One original set-up saves time, speeds production and guarantees better accuracy.

A Variety of Compact and Rigid Heads Suitable for all Kinds of Machining Applications

AG90 SERIES

NBS TYPE
High precision collet chuck system

TWIN HEAD

LONG TYPE

HMC TYPE
Ø1.25" high power design

BUILD-UP TYPE
Interchangeable adapter system

COMPACT TYPE
For drilling-tapping

SLENDER DRIVE
Min. Ø1.18" bore

AGU SERIES

UNIVERSAL TYPE
Angle adjustment by 1° increments

AGU30 TYPE
30° limited version

AG45 SERIES

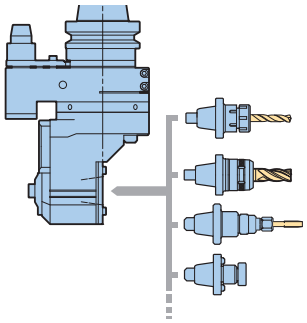
NBS TYPE
45° spindle angle

SPECIAL VERSIONS AVAILABLE

We are able to design and manufacture special ANGLE HEADS such as custom angles or long type models to address every machining condition.

A wide range of compact and rigid heads, from milling chuck types to universal types, suitable for all kinds of machining applications.

BUILD-UP & HMC TYPE

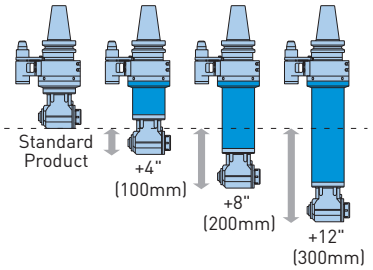


Overhang is minimized for added rigidity and strength. As a result, the projection length with the cutting tool is shorter, which reduces the overall load on the angle head and improves the unit's cutting capabilities. Further, the minimized overhang helps eliminate interference with the ATC (automatic tool changer) and connecting storage pockets in the tool magazine. High Rigidity S-Type, which has a steel housing and a stronger locating pin assembly, is also available.

• ATC may not be utilized for some machining centers.

LONG TYPE ANGLE HEADS

Any 50 taper or HSK-A100 size NBS head can be extended for long reach requirements.

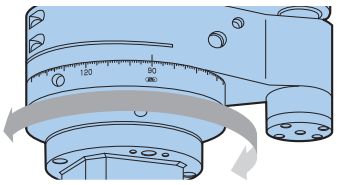


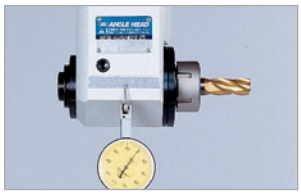
SUPERIOR QUALITY COMPONENTS

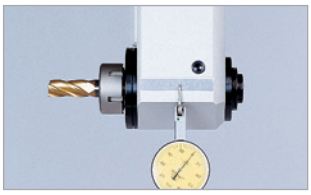
For smooth and powerful operation and to minimize noise and vibration, all angle heads are equipped with hardened and ground chrome-nickel steel spiral bevel gears, super precision hardened and ground spindles, and high precision angular contact ball bearings.

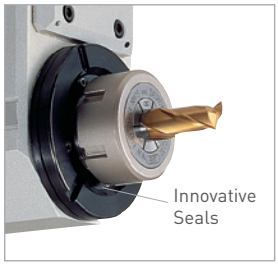
CUTTER HEAD ADJUSTABLE 360°

Reference faces are provided on both sides of all heads for easier setting of cutter directions.









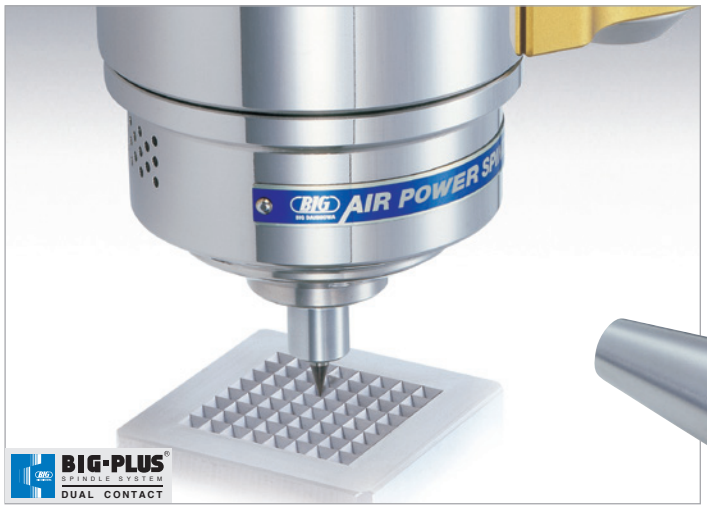
INNOVATIVE SEALING METHOD

The advanced no contact sealing method prevents coolant and particle contamination better than any other sealing method.

MAX COOLANT PRESSURE **150** PSI

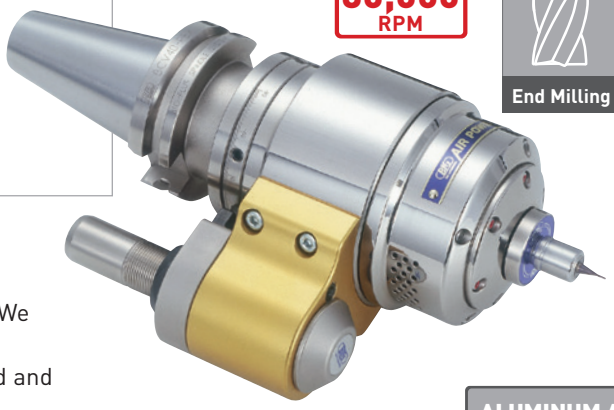
UNIQUE COOLANT JACKET

Jacket allows coolant coming through the stop block to be efficiently directed to the cutting tool edge while simultaneously cooling the ANGLE HEAD.



AIR POWER SPINDLE

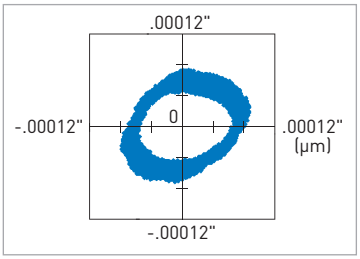
High-speed micro-machining can be done on a normal machining center, eliminating the need for an expensive high-speed machine.



DYNAMIC RUNOUT ACCURACY

Most problems associated with micro-machining are caused by poor dynamic runout of a machine spindle. We have established a runout measuring system that can detect spindle movement during rotation at high speed and achieved the best dynamic runout accuracy.

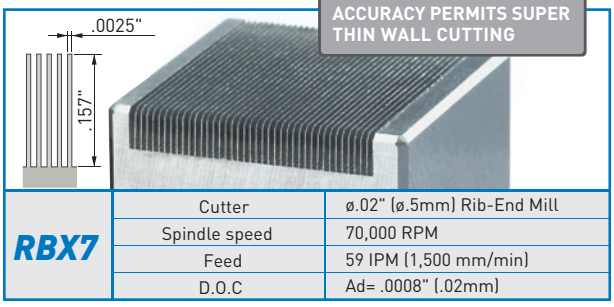
RBX (80,000 RPM)



Plotted Position of a Test Bar at the Max Spindle Speed

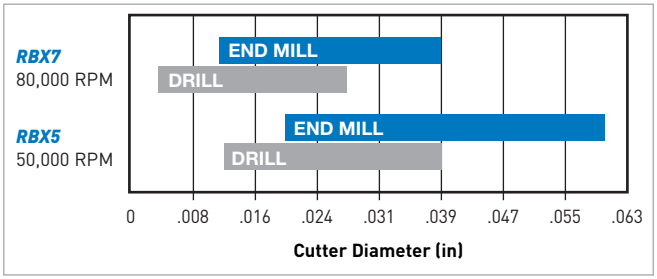
- Improved machining accuracy
- Extended tool life
- Superior surface finish

APPLICATION EXAMPLE



RBX7	Cutter	ø.02" (ø.5mm) Rib-End Mill
	Spindle speed	70,000 RPM
	Feed	59 IPM (1,500 mm/min)
	D.O.C	Ad= .0008" (.02mm)

RECOMMENDED CLAMPING RANGE

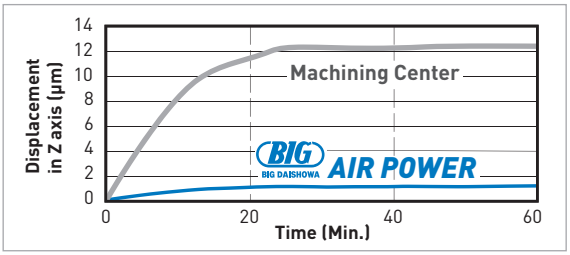


- The table is for reference only. Machining range may change according to material, cutting conditions and cutting tools

MINIMIZED SPINDLE EXPANSION

Air turbine drive prevents thermal expansion of the spindle, which is essential for high accuracy micro-machining.

AXIAL DISPLACEMENT COMPARED TO OPERATING TIME



Automatic Tool Change

ATC type is available by supplying air via a stop block to enhance productivity with unmanned operation.

Air Pressure: 90 PSI
Air Consumption: 7 CFM

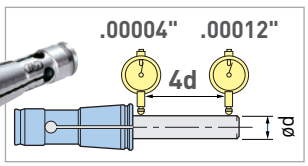
HIGH PRECISION

MEGA MICRO COLLET

NBC4S COLLET

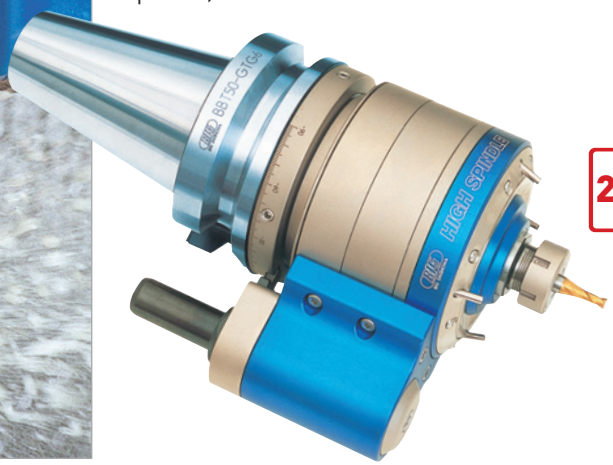
Max Cutter Shank: .157"

GUARANTEED MAX RUNOUT



HIGH SPINDLE

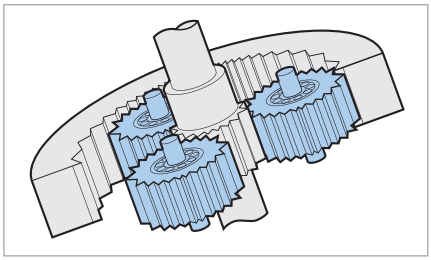
HIGH SPINDLE improves drilling and end milling performance on existing machining centers by multiplying the spindle speed 4, 5 or 6 times.



MAX 20,000 RPM

REINFORCED GEAR DRIVING SYSTEM

The planetary gears, which have been constantly upgraded since the development of our first HIGH SPINDLE back in 1970, achieves smooth operation with minimal heat generation and high torque transmission.



REDUCE LOAD TO MACHINE SPINDLE

Continuous use at HIGH SPINDLE speeds will reduce the life of a machine spindle due to the excessive load to the motor and bearings. The HIGH SPINDLE reduces this load and greatly extends the life of a costly machine spindle.

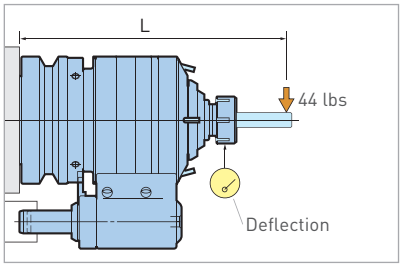
MULTI-DIRECTIONAL COOLANT SUPPLY

Universal coolant nozzles are capable of being adjusted to suit the length of the cutting tool for maximum coolant delivery to the cutting edge.

- HIGH SPINDLE can be operated without coolant running through the housing

RIGIDITY INCREASED 1.7 TIMES

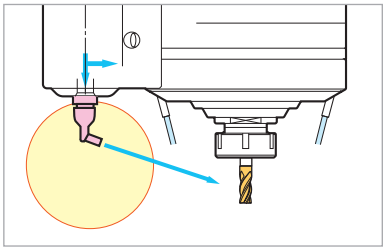
Larger diameter body and spindle with double angular contact bearings and reinforced locating pin assembly greatly increase rigidity.



Catalog Number	L	Deflection	Comparison
BBT40-GTG5-10-140-65	7.87	.0014	58% less
BBT50-GTG6-10-158-80	8.66	.0010	78% less
BBT50-GTG4-16-177-80	9.45	.0004	93% less

PINPOINT COOLANT JET FOR SHORTER CUTTING TOOLS

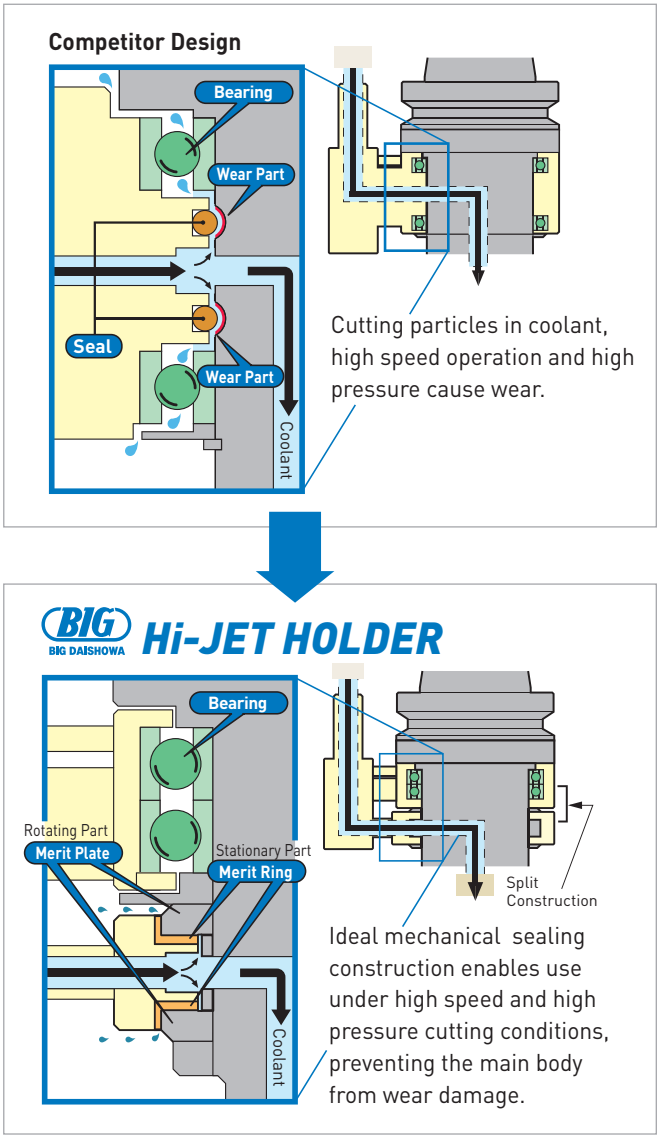
A 1/8 pipe tap thread is provided in the HIGH SPINDLE so various types of coolant-jet nozzles can be utilized which will provide pinpoint delivery to the cutting edge of short tools (BCV/BBT taper models only).



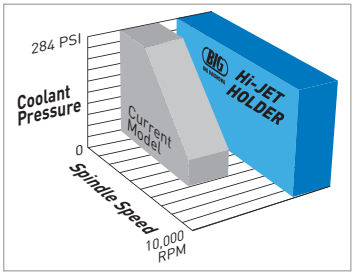
Hi-JET HOLDER

Coolant feed for water-soluble coolant only. Bearings are in a separate housing from the coolant for extended life.

NON-CONTACT SEAL DESIGN ELIMINATES WEAR DAMAGE TO BODY



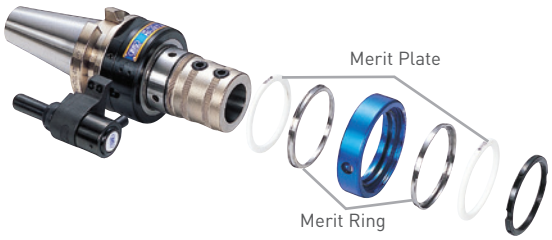
SUITABLE FOR SMALL DIAMETER CUTTERS DUE TO HIGH SPEED AND PRESSURE



Small diameter cutters require high spindle speeds to maintain high cutting speed and high coolant pressure due to their small diameter coolant holes. The Hi-JET HOLDER accepts even smaller diameter shanks, providing high spindle speeds (Max 10,000 RPM) and high coolant pressures (Max 284 PSI).

EASY MAINTENANCE BY REPLACEMENT OF WORN

Easily replaceable Merit Sets consist of Merit Plates, Merit Rings and O-Rings.



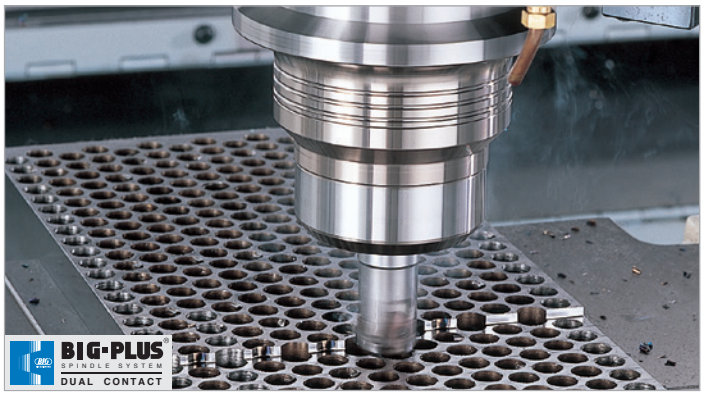
A Variety of Hi-JET HOLDERS Available

NEW BABY Chuck Type

Collet Chuck Type

BIG KAISER Shank Type

Side Lock Type



FULLCUT MILL

SHARP CUTTING EDGE BY BOTH HIGH RADIAL AND AXIAL RAKE ANGLES

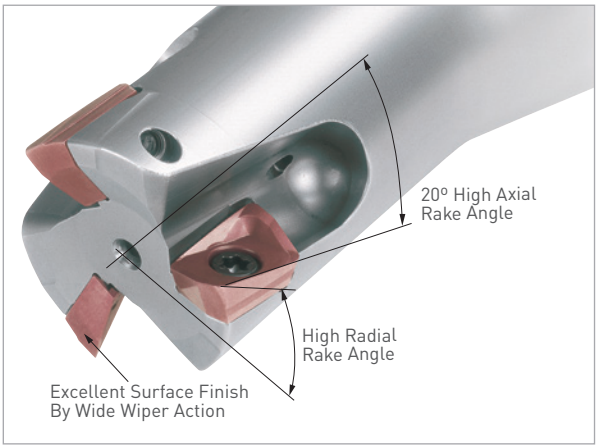
Positive high rake cutting edge for both radial and axial directions achieves smooth and quiet end milling.

LOW CUTTING RESISTANCE

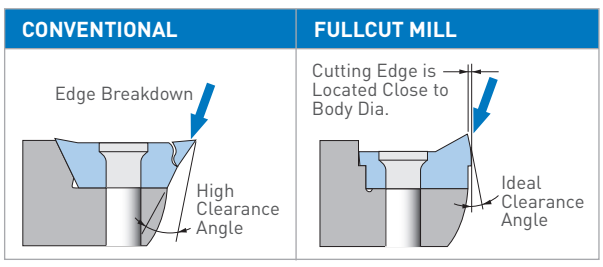
TYPE FCR

Ramping & Helical Milling Cutter

Unique inserts designed for ramping make multi-functional cutting possible. For ramping, helical milling, peck-milling, grooving & shoulder milling.



POSITIVE RAKE ANGLE OFFERS HIGH TOUGHNESS— STRONG CUTTING EDGE REDUCES EDGE CHIPPING

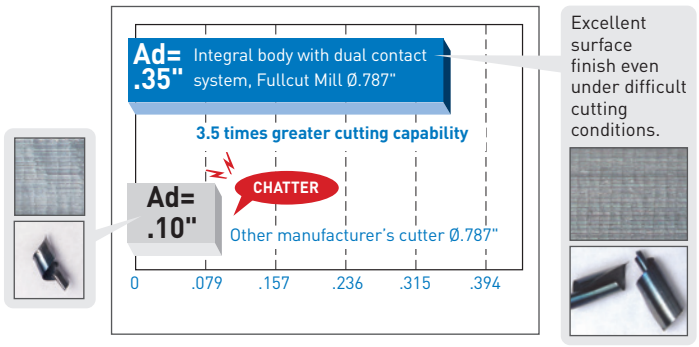


TYPE FCM

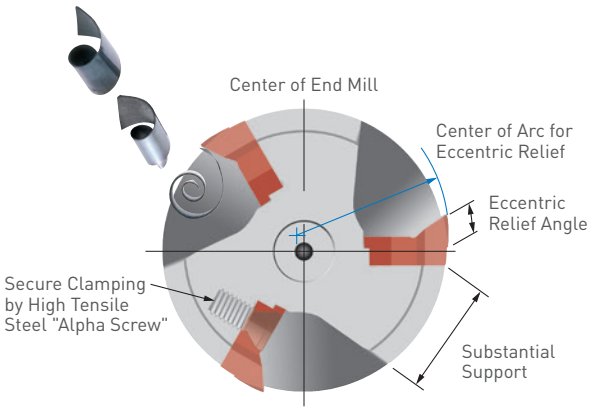
Square Shoulder & Slot Milling Cutter

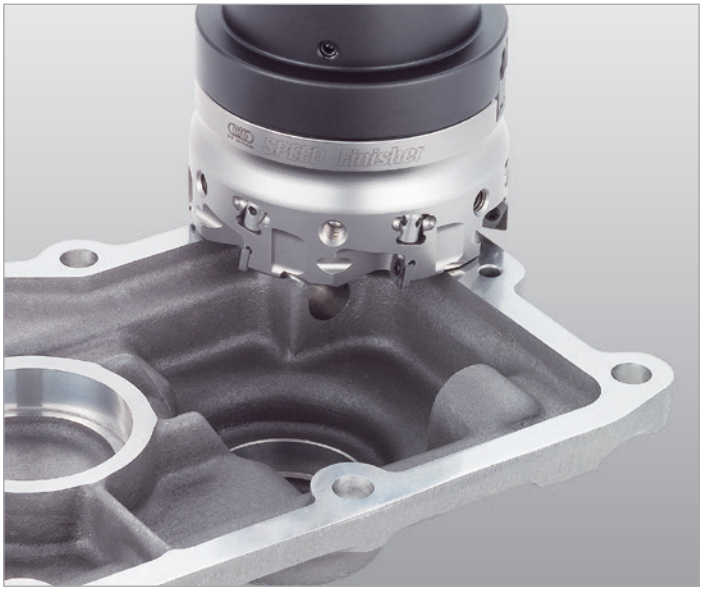
Low resistance, high efficiency cutter especially for cross-feed machining. For grooving & shoulder milling.

AMAZING CUTTING PERFORMANCE ON A #40 TAPER MACHINE



FIRST INDEXABLE END MILL WITH ECCENTRIC RELIEF ANGLE





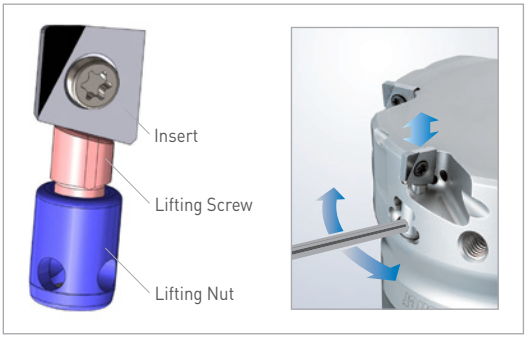
SPEED Finisher

CUTTER DIAMETER: Ø50, Ø63, Ø80, Ø100, Ø125, Ø160mm

HIGH SPEED CUTTER FOR ALUMINUM AND CAST IRON

Greatly Improves the Surface Finish in Ultra-High-Speed Machining

Achieves Rz = .55µm for die-cast aluminum ADC12 and Rz = .67µm for gray cast iron FC250.



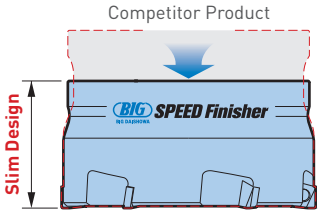
QUICKLY ADJUST THE CUTTING EDGE HEIGHT

It has a simple and highly operable mechanism in which the cutting edge height is adjusted after clamping the insert by turning the lifting nut from the side, then directly pushing up the insert with the lifting screw. Since the lifting screw has a fine pitch (.25mm), accurate adjustment is possible.

COMBINES LIGHT WEIGHT AND HIGH RIGIDITY

The slim body allows increased rigidity and reduced vibration and deflection. Therefore, height difference of the machined surface is minimized.

Also, as it is lighter than other cutters, it can be safely used with a small 30 taper machining center.



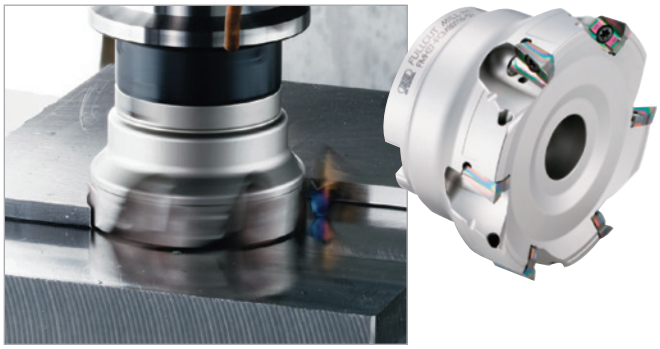
DIRECT COOLANT SUPPLY TO THE CUTTING EDGE

Use in combination with the Face Mill Arbor Type FMH for coolant delivery directly to the cutting edge.

This prevents welding and re-cutting of chips in aluminum workpieces.

APPLICATION ADVICE

Not only has the finishing surface roughness been improved, but by correctly aligning the cutting edge height, feed per tooth can also be increased for the same surface roughness, allowing high-efficiency machining. As the insert uniformly touches the workpiece, the life can also be extended.



FULLCUT MILL

CUTTER DIAMETER: Ø50, Ø63, Ø80, Ø100mm

ARBOR TYPE INDEXABLE INSERT END MILL

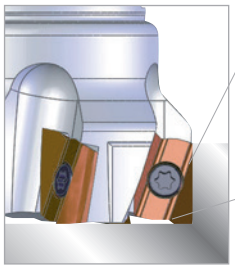
Sharp and Powerful Cutting

Exhibits incredible cutting capacity even with 40 taper machining centers or mill-turn machines.

Compatible with new-standard Face Mill Arbor type FMH.

PERPENDICULARITY AND SURFACE FINISH UNMATCHED IN INDEXABLE INSERT CUTTERS

Machined with holder BBT40-FMH22-47-45 and FULLCUT MILL FMH22-FCM63116-40



Perpendicularity	
Cutting Speed Vc (m/min)	150
Feed Rate fz (mm/blade)	.1
Axial DOC ap (mm)	5
Radial DOC ae (mm)	.1

BIG DAISHOWA	**10µm**
General Cutter	40µm

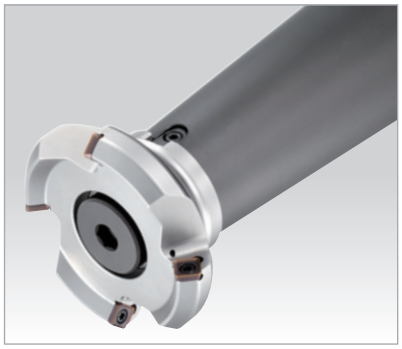
Wiper Flat	
Cutting speed Vc (m/min)	250
Feed rate fz (mm/t)	.2
Axial DOC ap (mm)	.1
Radial DOC ae (mm)	50

	Ra	Rz
BIG DAISHOWA	**.51**	**2.89**
General Cutter	1.56	7.77

- The perpendicularity & surface roughness will vary depending on the cutting conditions, material, machine tool & workpiece rigidity.

APPLICATION ADVICE

In 90º corner milling, the insert with a positive shape and large rake angle reliably curls the cutting chips, increasing the evacuation performance. The high rake insert used in the FULLCUT MILL will be helpful.



SURFACE MILL

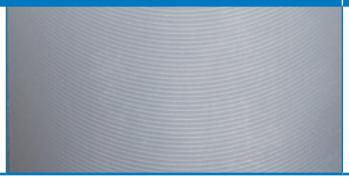
CUTTER DIAMETER: Ø80

FACE MILL CUTTER

Exhibits difference in the top surface finish of the workpiece.

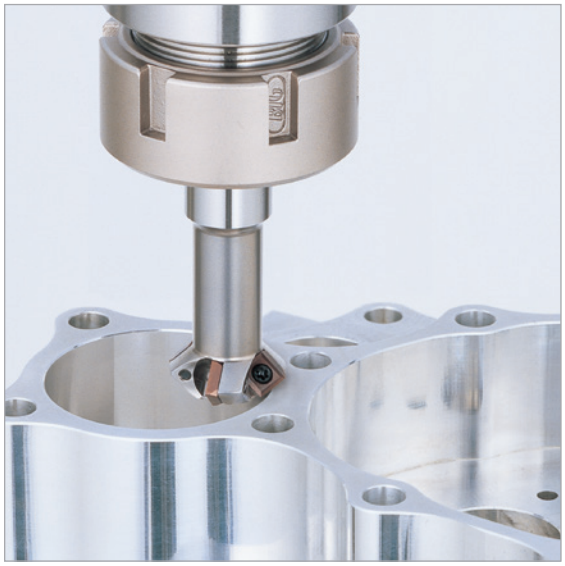
Surface Finish Comparison with a General Cutter

Workpiece Material	1050
Cutting Speed Vc (SFM)	660
Feed Rate fz (in/insert)	.008"
Axial DOC ap	.118"
Radial DOC ae	3"
Cutting Method	Dry

BIG DAISHOWA SURFACE MILL (FM25.4-SFM804-40)		General Cutter	
Rz=1.42		Rz=9.04	

APPLICATION ADVICE

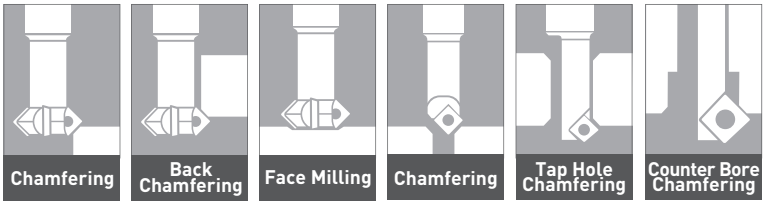
Glossiness of the machined surface with a face cutter is affected by the sharpness of the insert. By using different cutters between roughing and finishing operations, not only can a smooth surface finish be achieved, but the life of the insert can also be easily managed to obtain stable quality.



C-CUTTER mini

ULTRA HIGH FEED CHAMFER MILL

Compact design with 4 inserts & small cutting diameter. High performance chamfer cutter achieves ultra high feed rate by reducing the cutting diameter to the lowest limit.



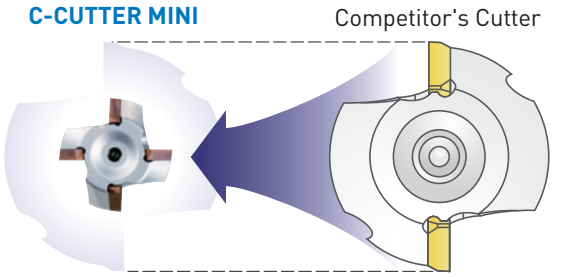
A VARIETY OF INTERFACES AVAILABLE

FOUR INSERTS, SMALL DIAMETER AND NEW COATING ACHIEVE A TRIPLE EFFECT

EFFECT 1 — Maverick Design with Ultra High Feed by 4 Inserts
Compared with 1 or 2 inserts per cutter, a 4 insert cutter multiplies the feed rate.

EFFECT 2 — Increased Spindle Speed by Ultra Compact Diameter
A smaller tool diameter means faster spindle speeds.

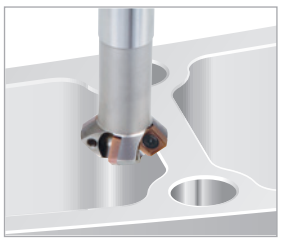
EFFECT 3 — Latest Coatings [ACP200/300] Increases the Cutting Speed
Wear resistant multi-layer PVD coating increases the cutting speed.



Considerably Improved!

Feed Rate = Spindle Speed (UP) × Feed Per Tooth × No. of Teeth (UP)

Spindle Speed (UP) = Cutting Speed (UP) / π x Cutting Diameter (Small dia.)



8 TIMES GREATER CUTTING EFFICIENCY

Cutting Conditions
Workpiece: S55C
Chamfering Amount: C1
Feed Per Tooth fz: .1mm/t

	General Products	C-CUTTER MINI (ST12-C116-45B-25)
Chamfering diameter	ø29	ø13.5 Small Diameter
Number of inserts	2	4 UP
Cutting speed Vc (m/min)	150	300 UP
Spindle speed n (min-1)	1,646	7,040 UP
Feed Vf (mm/min)	329	2,820 Much Higher!

HEX INSERT

Highly-efficient back chamfering from 5mm starting hole diameter.

C-CUTTER

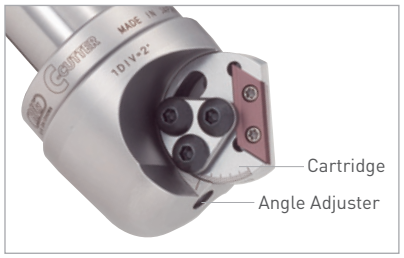
CHAMFERING TOOL

HOLE DIAMETER: Ø.200"-4.000"

Wide chamfering range reduces number of tools and ATC.

CHAMFERING ANGLE CAN BE EASILY ADJUSTED BY 5º TO 85º (UNIVERSAL TYPE)

The cartridge swings when the angle adjuster is turned.

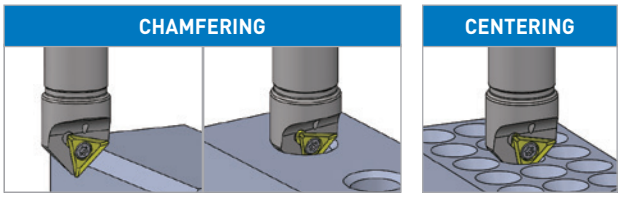


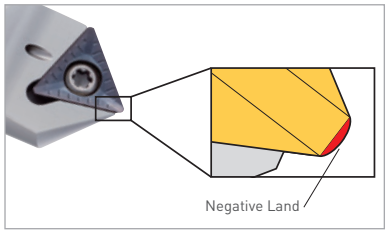
C-CENTERING CUTTER

A multifunction cutter capable of both spot drilling and chamfering. Negative insert tip shape dramatically improves tool life.

3 INSERT

CAPABLE OF BOTH SPOT DRILLING AND CHAMFERING



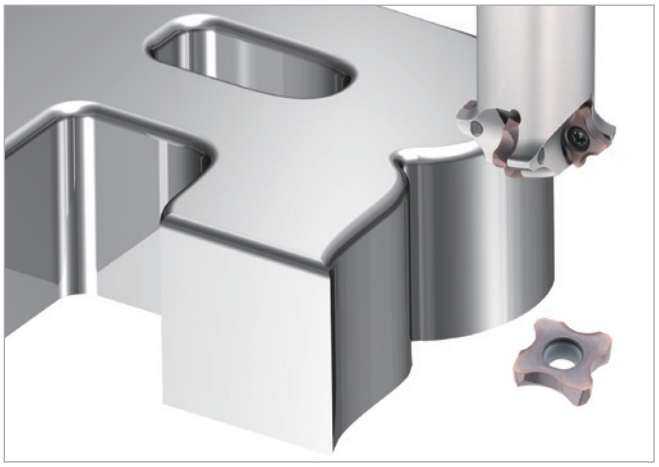


PREVENTS CHIPPING DURING SPOT DRILLING

As the nose radius on the insert forms negative land, it has high chipping resistance, and the tool life is significantly extended.

Immediate Evacuation of Chips with Coolant Supply

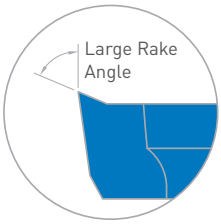
By providing coolant holes, it is possible to cool the cutting edge and immediately discharge the chips.



R-CUTTER

ULTRA HIGH FEED RADIUS CHAMFER MILL

Automates rounded chamfering for both the front and back.



EXCELLENT SHARPNESS

High Rake Angle with 4 Indexes

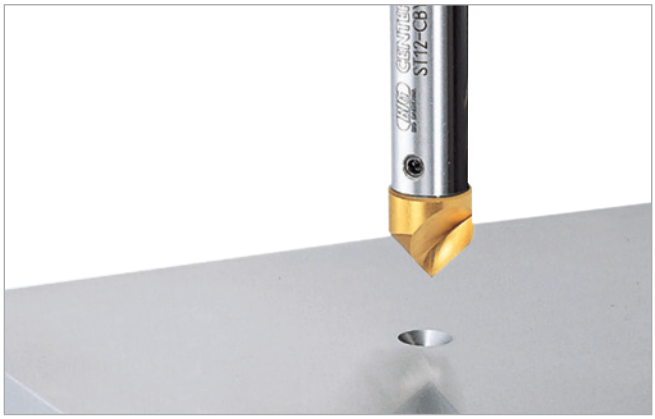
Unique insert geometry with excellent sharpness. High rake angle reduces cutting resistance and minimizes the generation of burrs.

FOUR CORNERS CAN BE USED FOR BETTER ECONOMIC EFFICIENCY

A throw-away insert that allows all four corners to be used, making cost reduction possible.

APPLICATION ADVICE

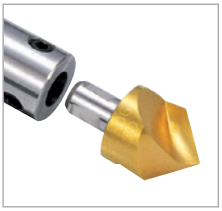
It is well known that changing the chamfer of the workpiece from the C-plane to the R-plane will considerably change the texture of the workpiece. This can be considered an added value.



CENTER BOY

CENTERING AND CHAMFERING TOOL

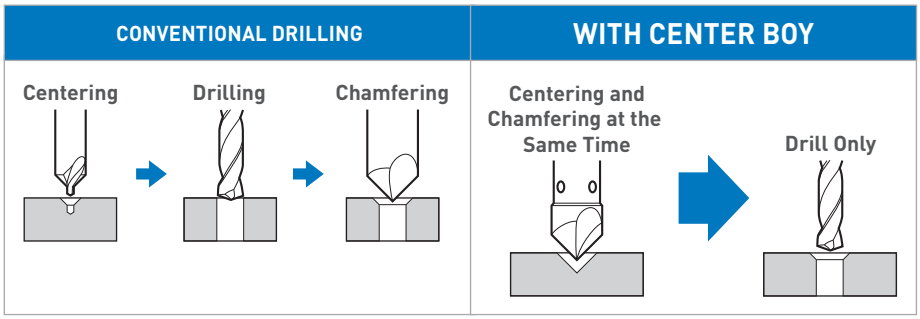
Accurate positioning in drilling and chamfering can be performed simultaneously.

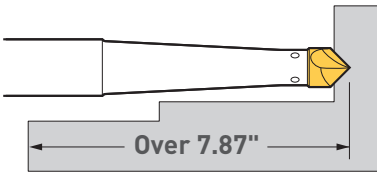


HIGHLY ACCURATE REPLACEABLE INSERT

- Sharp cutting with optimum cutting edge
- No more regrinding
- Minimum interference with a slim, extended shank
- 90° and 120°

EASE OF OPERATION SHORTENS CYCLE TIME



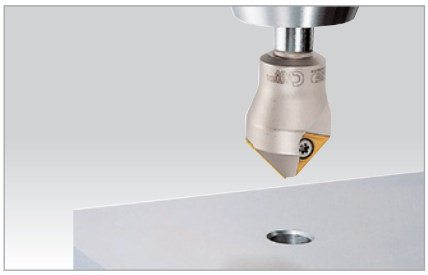


LONG TYPE AVOIDS INTERFERENCE

The long type covers workpieces with maximum depth of 200mm or more.

APPLICATION ADVICE

Centering before drilling can be considered the most important process in determining the center of the compass. Correct centering has a great effect in extending tool life.



C CUTTER BOY

CHAMFERING TOOL

HOLE DIAMETER: Ø.20"-1.00"

The carbide guide prevents chatter on bench drilling machines.
Economical three-corner insert.

CHAMFERING TOOL FOR DRILL PRESS

Carbide Guide

CARBIDE GUIDE ALLOWS STABLE CUTTING

Carbide guide allows stable cutting and prevents triangular chamfering. It does not damage the body, extending the life.

INSERT DOES NOT NEED TO BE REGROUND

Inserts do not require regrinding. Moreover, the carbide coating insert with 3 usable corners offers lower cost and extended tool life.

APPLICATION ADVICE

Although the C-CUTTER BOY has been developed for chamfering using a drill press, it is also capable of stable chamfering without chattering even in low-rigidity conditions such as horizontal machining with long projection, thanks to the carbide guide.

BF-CUTTER

BACK SPOT FACER

CAP BOLT SIZE: M6-M30

- Economical insert type
- Optimal design that matches the cap bolt size

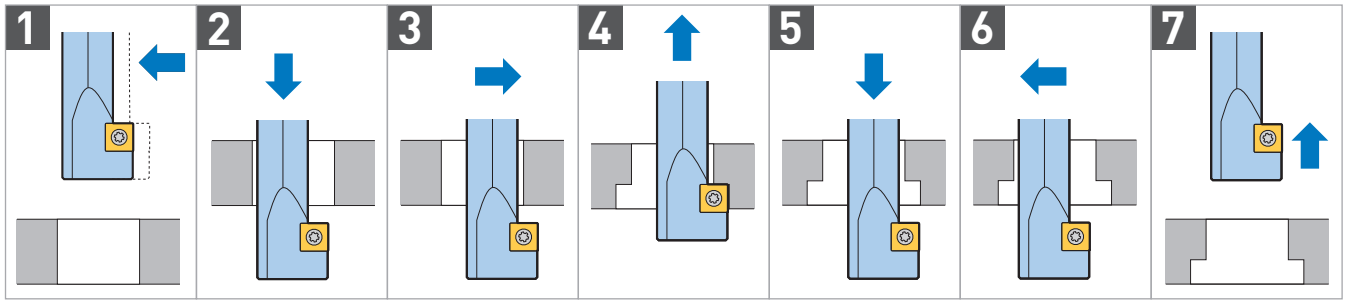
RELIABLE COOLING THROUGH OIL HOLE

Coolant can be Supplied to Cutting Edges

It securely supplies coolant even in places that are hard to reach such as when machining a rear surface, contributing to the extension of tool life.

EASY NC PROGRAMMING

Simple programming: Offset the machine spindle and starting hole centers before inserting the BF-CUTTER into the hole.

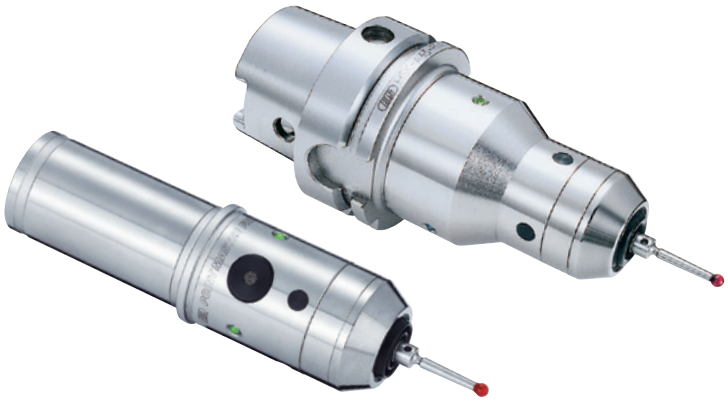


APPLICATION ADVICE

There is no official standard spot facing diameter for the cap bolt. Unifying the cap bolt spot facing diameter is one of the ways to reduce costs. In doing so, consider the spot facing diameter of the BF-CUTTER.

QUICK DETECTION OF REFERENCE POSITION

Sensor series minimizes machine down time.



Touch Probe & Edge Finder

3-DIMENSIONAL TOUCH SENSOR SERIES

POINT MASTER PRO

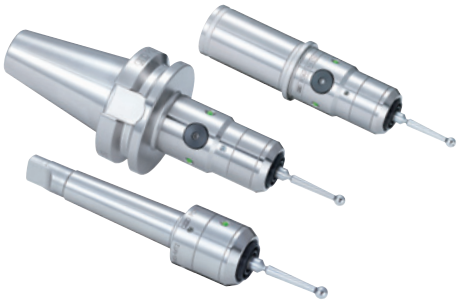
3-D Touch Probe

For all cutting tools, workpieces and machine tools.

POINT MASTER

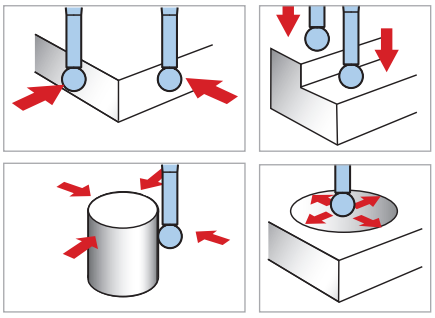
For use with conductive cutting tools, workpieces, and machine tools.

Detection with LED and sound.



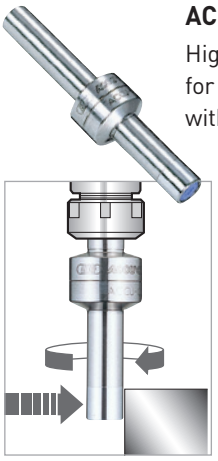
3D MASTER RED

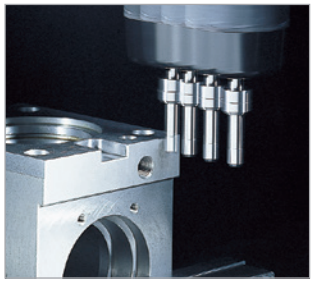
Dial indicator 3-D measuring instrument.



ACCU CENTER

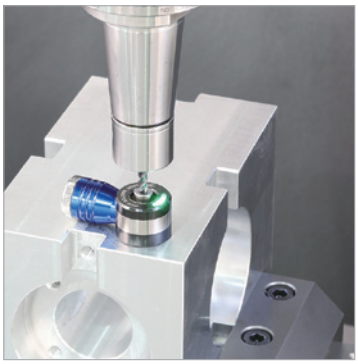
High precision edge finder suitable for all materials. Repeatability within 3µm.





APPLICATION ADVICE

Make sure to check the coating material on the cutting tool before using conductive compact sensors. TiN coatings are conductive, but some multi-layer coatings do not conduct electricity. High speed machine tool spindles often use non-conductive ceramic bearings. Select sensors available for any material for use under nonconductive environments.



INSTANTLY DETECT POSITION OF THE CUTTING EDGE AND THE WORKPIECE

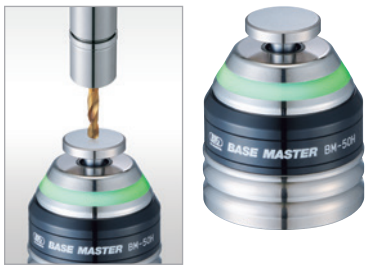
Series available for various tool materials and diameters.

BASE MASTER SERIES

BM-2H / BM-50H

Measures 2" or 50mm from cutting edge and workpiece top surface.

For use with conductive cutting tools, workpieces and machine tools.



BM-2GH / BM-50GH

Electronic detection of cutting edge position.

For all cutting tools, workpieces and machine tools.

BM-100GH

BM-2MH / BM-50MH

Cutting edge position detection for Ø.002" tool diameters.

For all cutting tools, workpieces and machine tools.

BM-50R / BM-2R

Measuring unit can be easily replaced.

For all cutting tools, workpieces and machine tools.

BMM-20D

World's smallest tool offset sensor with diameter of Ø.787" (Ø20mm).

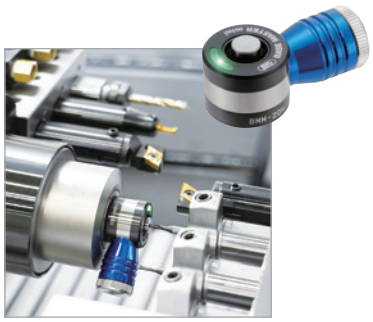
Easy maintenance by replacing measurement part.

With Loupe
(5x Magnification)

BMM-20H

Compact and lightweight design.

For all cutting tools, workpieces and machine tools.



BMM-10H

10mm ultra-thin design

For all cutting tools, workpieces and machine tools.

TOOL MASTER

Detects tool position for all materials including non-conductive tools and workpieces.

For all cutting tools, workpieces and machine tools.

DYNA TEST

STATIC

Static precision test bar with a focus on superb quality and accuracy. Prevents trouble through the periodic inspection of machine runout accuracy.

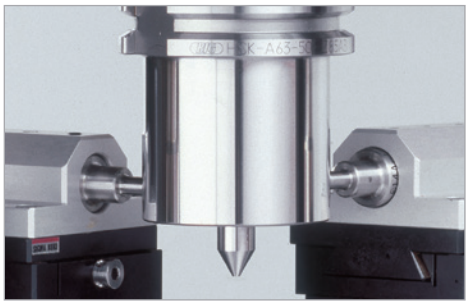
- A high-precision test bar developed with BIG's precise machining technology
- Periodic accuracy evaluation eliminates machining defects
- Abundant variation to suit the standards of each holder

PRECISION STANDARDS OF BIG DAISHOWA TEST ARBORS	
Runout	.002mm (.00008)
Roundness	.001mm (.00004)
Cylindricity	.003mm (.00012)
Roughness	Ra: .1μm (.000004)
Taper Contact	AT1
Diameter Tol.	±.005mm (.0002)

- BIG DAISHOWA provides high quality test bars produced under a strict quality control system

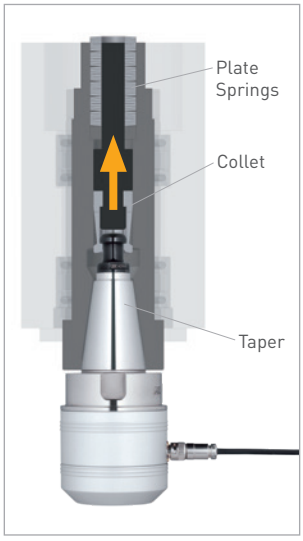
ALUMINUM CASE

An aluminum case is provided to protect and store the test bars.



DYNAMIC

Measures dynamic runout of machine spindle during rotation. Knowing the dynamic accuracy of the machine tool spindle affected by centrifugal forces, vibrations and heat will aid in finding the appropriate cutting parameters for actual machining.

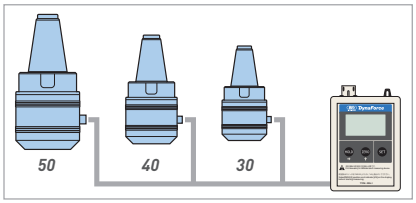


DYNA FORCE

Tool clamp measuring device for measuring pulling force of machine tool spindle, a vital factor of machine tool performance. The pulling force produced by the clamping device of machine tools could deteriorate due to degradation of disc springs or wear of the components of the amplifier.

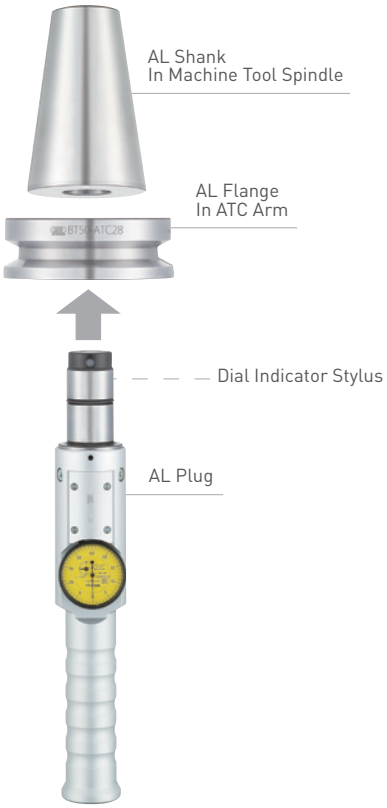
Pulling force is especially vital when it comes to dual face contact spindle interface, thus regular inspection is recommended.

ONLY ONE DISPLAY FOR ALL TAPER SIZES



APPLICATION ADVICE

The spindle is the most essential part of a machine tool. Maintaining the accuracy of the spindle is almost equal to extending the life of the machine tool itself. Even periodical inspection of the runout accuracy makes a difference.



ATC ALIGNMENT TOOL

Misalignment of the center between the machine tool spindle and ATC gripper may cause damage to the spindle taper. A clamped tool holder under misalignment leads to increased runout, resulting in shorter life of machine tools and tool holders. The ATC Alignment Tool can also be used for re-aligning the ATC gripper and tool magazine pots.

HOW TO USE

1. Load the AL Shank in the machine spindle and mount the AL Flange on the ATC arm.
2. Insert the AL Plug into the AL Flange.
3. Rotate the AL Plug and read the highest and lowest values of the dial indicator. This direction is the eccentric direction. Half of the gap of the values is the eccentric amount.
4. Adjust the position of the ATC arm so that the front end of the AL Plug will be inserted into the AL Flange fully.

Provided with ATC Alignment Tool
& Plastic Storage Case

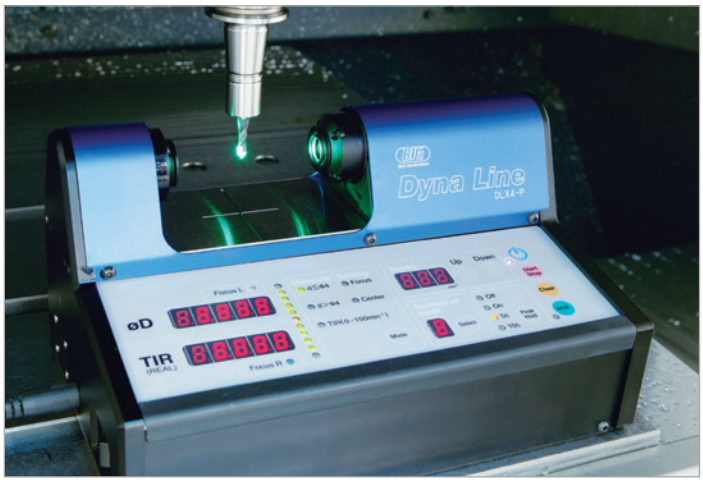
DYNA CONTACT

A ceramic taper gage allowing inspection of machine spindle tapers at a glance.

- Made of ceramic
- Clearly shows Prussian blue
- Scratch resistance
- Rustproof
- Non-magnetizing
- No aging deterioration
- 10x the wear resistance of steel
- Same linear expansion coefficient as steel

TAPER ANGLE: 8º 17' 50" ±1"

Provided with an
Aluminum Case



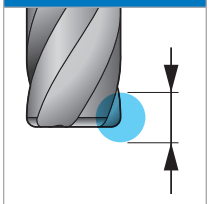
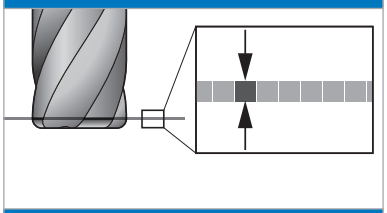
DYNA LINE

PRECISION MEASURING OF TOOL DIAMETER AND RUNOUT ACCURACY

Non-contact tool measuring equipment which uses a CMOS linear image sensor. It eliminates machining defects by measuring total runout accuracy at high rotation speeds. Also usable as a maintenance/evaluation tool for runout accuracy of a machine spindle.

Measurement at High Rotation Speeds up to 1,300 sfm

- No potential of damage to delicate tools
- Measurement range: Ø.004"-2.000" (Ø.1-50mm)
- Indicated resolution: 1µm
- Can run on 6 C-Cell batteries
- Able to measure tools with an odd number of teeth

LASER DOT METHOD	DYNA LINE LINEAR SENSOR
	
Over 10µm	1.4µm pixels

Provided with a protective case

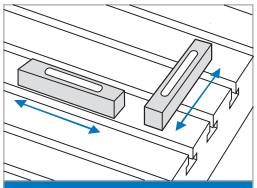
STANDARD TYPE

WIRELESS TYPE

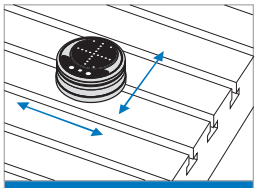
LEVEL MASTER

FOR THE LEVELING OF MACHINE TOOL TABLES

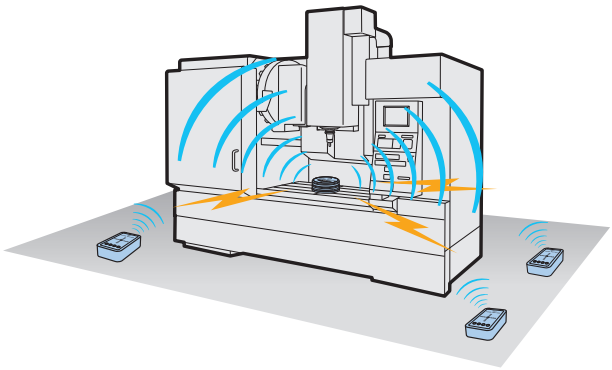
- Simultaneous two-axis detection leveler
- LED and buzzer indication when leveling is complete
- Uses optical level sensor technology
- 10 micron per meter precision (.01mm/m)



Traditional Method Where Two Levelers Are Used



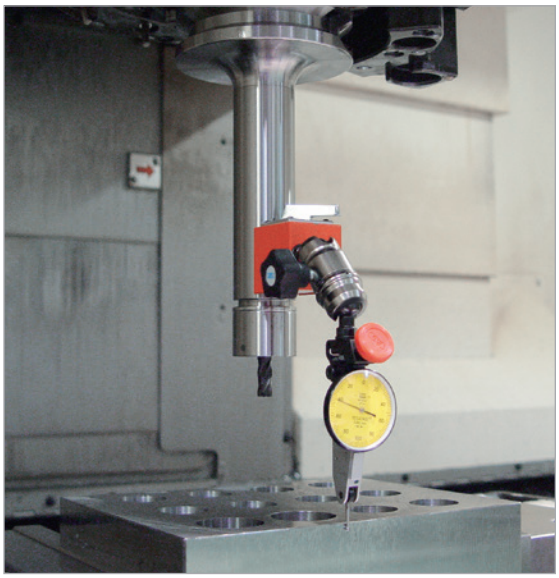
Easy Leveling with Simultaneous Two-Axis Detection



Remote Work Solution Wireless Type

Easy and quick leveling with a single operator.

Provided with Level Master, Aluminum Storage Case, Alkaline Batteries (AAA x 4 pcs.), Manual, Guarantee Certificate & Inspection Sheet



DIAL INDICATOR STANDS

Articulated stands for the demanding user, offering the highest positioning precision and exact measurements in the µm range.

- High clamping force thanks to a strong internal cam structure
- Extremely flexible with 360 degrees freedom of positioning controlled by one progressive clamping star grip
- Ideal design for use in measurement, inspection (quality control) and machining
- Ultra strong earth magnet holds stand firmly in place
- Each stand is equipped standard with (1) magnet, (2) extension arms, (1) dgh dove-tail adapter and (1) cylindrical gage adapter (Ø.375")

Accu Mini Mini

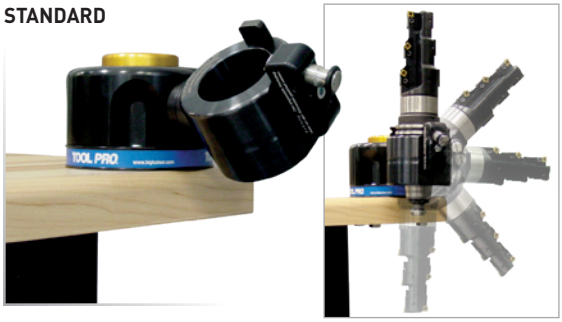
Type SU/F

Type MU/F

Type MUVZ/F

Type SUVZ/F

STANDARD



TOOL PRO

TOOL HOLDING DEVICE FOR THE ASSEMBLY OF TOOLING

Depressing the large gold button permits the adapter to rotate 360° and lock in 45° increments. Integral taper units and modular taper units for nearly all shank styles.

VARIO

Quick-change system uses one permanently mounted base unit and multiple adapters for different types and sizes of tool shanks.

SPIN

Full 360° radial tool rotation permits easy access to tools.

KOMBI GRIP

TWO-WAY CLUTCH AND NEEDLE ROLLER CLAMPING SYSTEM

Ensures secure clamping at the tool flange periphery of HSK and polygon tapers.

TOOLING MATE

Replaceable adapters that feature drive keys to secure steep taper shanks, or a two-way clutch needle and roller clamping system.

ST LOCK

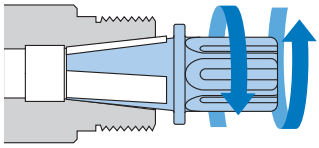
Ideal fixture for the set-up of cylindrical shank tool holders. Clamps Ø20, 25 & 32mm shanks by replacing the sleeve.

TORQUE FIT

TOOLING FIXTURE WITH TIGHTENING TORQUE INDICATE FUNCTION

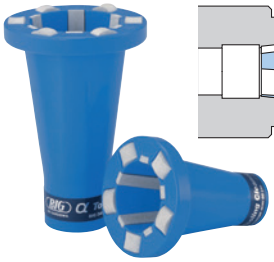
- Torque values of all BIG DAISHOWA collet chucks are preset
- Notification by buzzer near the correct torque
- User Mode allows setting of desired torque value

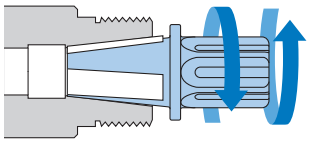
TOOLING CLEANERS



α TAPER CLEANER

Maintain the accuracy of collet chucks by cleaning the internal collet taper.





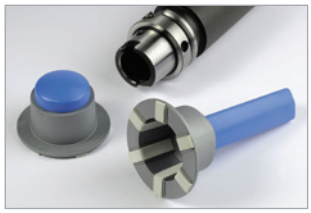
α TOOLING CLEANER

For the cleaning of both mating surfaces of BIG-PLUS 30 and 40 taper tool holders.

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

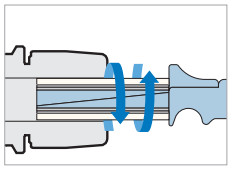
HSK EXTERNAL TAPER CLEANER

Cleaning strips will remove even large residual particles.



TK CLEANER

Perfectly cleans the clamping bore of a tool holder.



α WIPER CLEANER

Easy cleaning of smaller cylindrical bores.

T-SLOT CLEAN

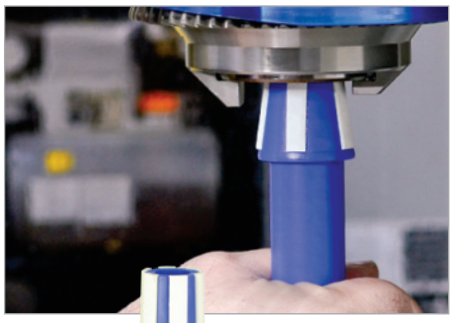
Save the time required to clean T-slots packed with chips.

T-slots packed with difficult to remove chips

T-slots protected & clear by T-Slot Clean

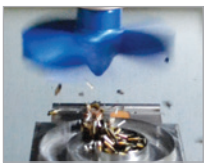
SPINDLE CLEANERS

Ensures absolute cleanliness of tapered spindles.



Polygon Taper

CHIP & COOLANT FAN



CHIPFAN

Fast, safe chip and coolant cleaning without stopping production.

- Made from high strength aluminum

CHIP BLOWER

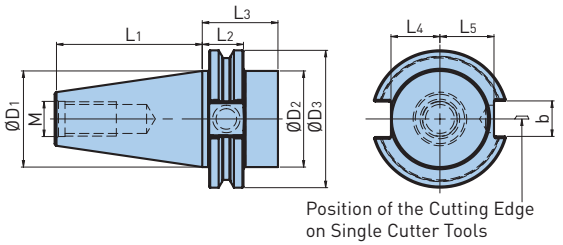
Air pressure removes cutting chips and coolant.

- Can be used with vertical and horizontal machining centers

STEEP TAPER SHANKS ASME B5.50, CV/BCV

Taper	ØD1	ØD2	L1	L2	L3	L4	L5	b	M
CV40	1.75	2.48	2.57	.98	.89	.89	.98	.63	5/8"-11
CV50	2.75	3.94	4.01	1.38	1.39	1.14	1.23	1.01	1"-8

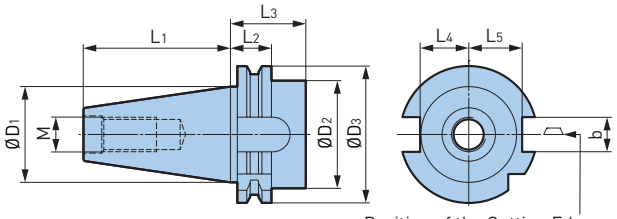
• For high rigidity information see pg. 82



Position of the Cutting Edge on Single Cutter Tools

STEEP TAPER SHANKS JIS B6339, BT/BBT

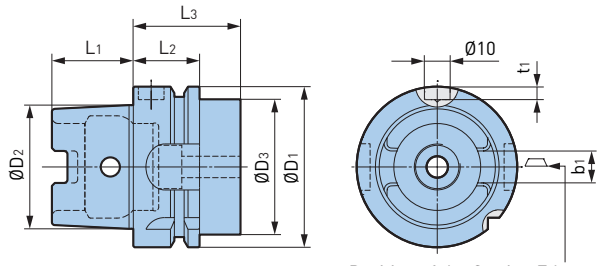
Taper	ØD1	ØD2	L1	L2	L3	b	M
BT30	1.25	1.81	1.91	.79	.64	.63	M12
BT40	1.75	2.48	2.57	.98	.89	.63	M16
BT50	2.75	3.94	4.01	1.38	1.39	1.01	M24



Position of the Cutting Edge on Single Cutter Tools

HOLLOW TAPER SHANKS DIN 69893, FORM A

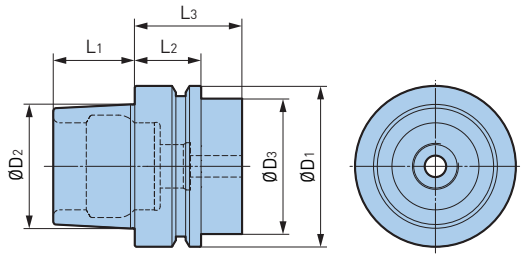
Taper	ØD1	ØD2	ØD3 Max	L1	L2	L3 Min	b1	t1
HSK-A32	1.26	9.5	1.02	.63	.79	1.38	.28	.21
HSK-A40	1.57	1.18	1.34	.79	.79	1.38	.32	.20
HSK-A50	1.97	1.50	1.65	.98	1.02	1.65	.41	.20
HSK-A63	2.48	1.89	2.09	1.26	1.02	1.65	.42	.20
HSK-A80	3.15	2.36	2.68	1.57	1.02	1.65	.63	.19
HSK-A100	3.94	2.95	3.46	1.97	1.14	1.77	.79	.19



Position of the Cutting Edge on Single Cutter Tools

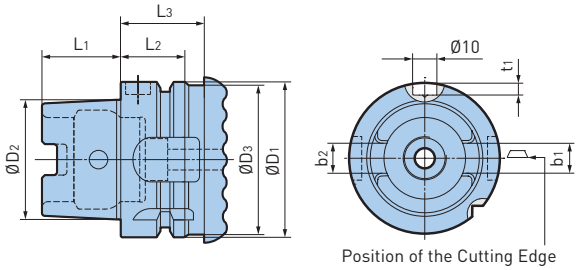
HOLLOW TAPER SHANKS DIN 69893, FORM E

Taper	ØD1	ØD2	ØD3 Max	L1	L2	L3 Min
HSK-E25	.98	.75	.79	.51	.79	.79
HSK-E32	1.26	.95	1.02	.63	.79	1.38
HSK-E40	1.57	1.18	1.34	.79	.79	1.38
HSK-E50	1.97	1.50	1.65	.98	1.02	1.65
HSK-E63	2.48	1.89	2.07	1.26	1.02	1.65



HOLLOW TAPER SHANKS ISO 12164-3, FORM T

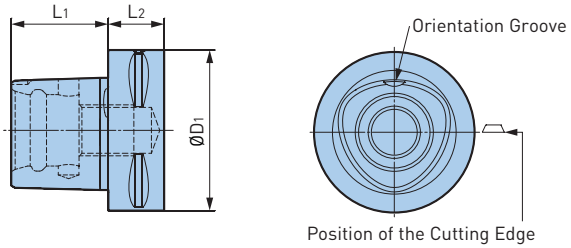
Taper	ØD1	ØD2	ØD3 Max	L1	L2	L3 Min	b1	b2	t1
HSK-T50	1.97	1.50	1.93	.98	1.02	1.18	.41	.41	.20
HSK-T63	2.48	1.89	2.44	1.26	1.02	1.18	.49	.50	.20
HSK-T80	3.15	2.36	3.11	1.57	1.02	1.18	.63	.63	.19
HSK-T100	3.93	2.95	3.90	1.97	1.14	1.34	.78	.78	.19



Position of the Cutting Edge on Single Cutter Tools

BIG CAPTO (COMPATIBLE WITH ISO 26623-1, POLYGON HOLLOW SHANK TAPER WITH FACE CONTACT)

Taper	ØD1	L1	L2
C3	1.26	.75	.59
C4	1.57	.94	.79
C5	1.97	1.18	.79
C6	2.48	1.50	.87
C8	3.15	1.89	1.18



Position of the Cutting Edge on Single Cutting Tools

BIG DAISHOWA BALANCING ACCORDING TO ISO 16084

WHAT DOES BALANCING, UNBALANCE AND BALANCE QUALITY MEAN?

BIG DAISHOWA tool holders are designed for high-speed machines. If a rotating tool holder (Fig. 1) is not rotationally symmetrical, imbalance occurs (Fig. 2). As a result, when the rotational speed is increased, non-symmetrical centrifugal forces occur at the tool holder and the cutting tool, causing vibration and premature spindle bearing failure. To correct for the imbalance, the tool is balanced by various methods such as drilling (Fig. 3), milling, or grinding a flat, moving the center of mass as close as possible to the center of the axis of rotation.

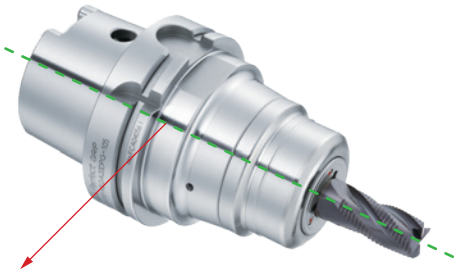


Fig. 1

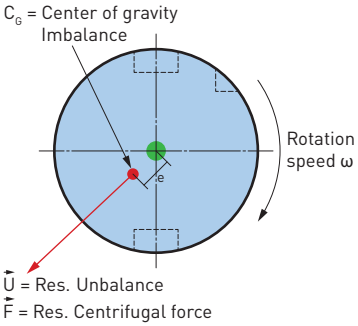


Fig. 2: Unbalanced

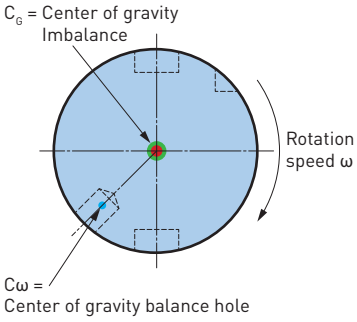


Fig. 3: Balanced

BALANCING REQUIREMENTS IN PRACTICE USING G2.5

The balancing quality G2.5 is widely used in the industry and is described in the ISO 1940-1 standard, issued in 2003. However, this quality class is often overspecified, and, is in many cases, not economically or technically feasible, especially when applied to smaller and lighter tools. The standard described above is designed for rigid rotors and is practical in a broader use for balancing. However, it cannot be applied to a complete system of spindles, tool holders and tools adequately and within technical constraints. For example, for a tool to be compliant, it will need to be balanced to less than 1 gmm/kg at a speed of 25,000 rpm, which in turn, corresponds to a mass eccentricity of less than 1 µm. This allowable tolerance is less than the interchange accuracy for even HSK, essentially negating all the cost and time for balancing the tool to such a strict tolerance.

BIG DAISHOWA BALANCING POLICY

For this reason, all BIG DAISHOWA tool holders are balanced according to ISO 16084 (issued in 2017), specifically developed for rotating tool systems. ISO 16084 focuses on the interaction between spindle and tool, factoring in the allowable load on the spindle bearings generated by the tool's imbalance. This load must not exceed 1% of the dynamic load capacity of the spindle bearings. According to ISO 16084, the allowable unbalance tolerance is specified in [gmm], and is not expressed using a special quality grade [G].

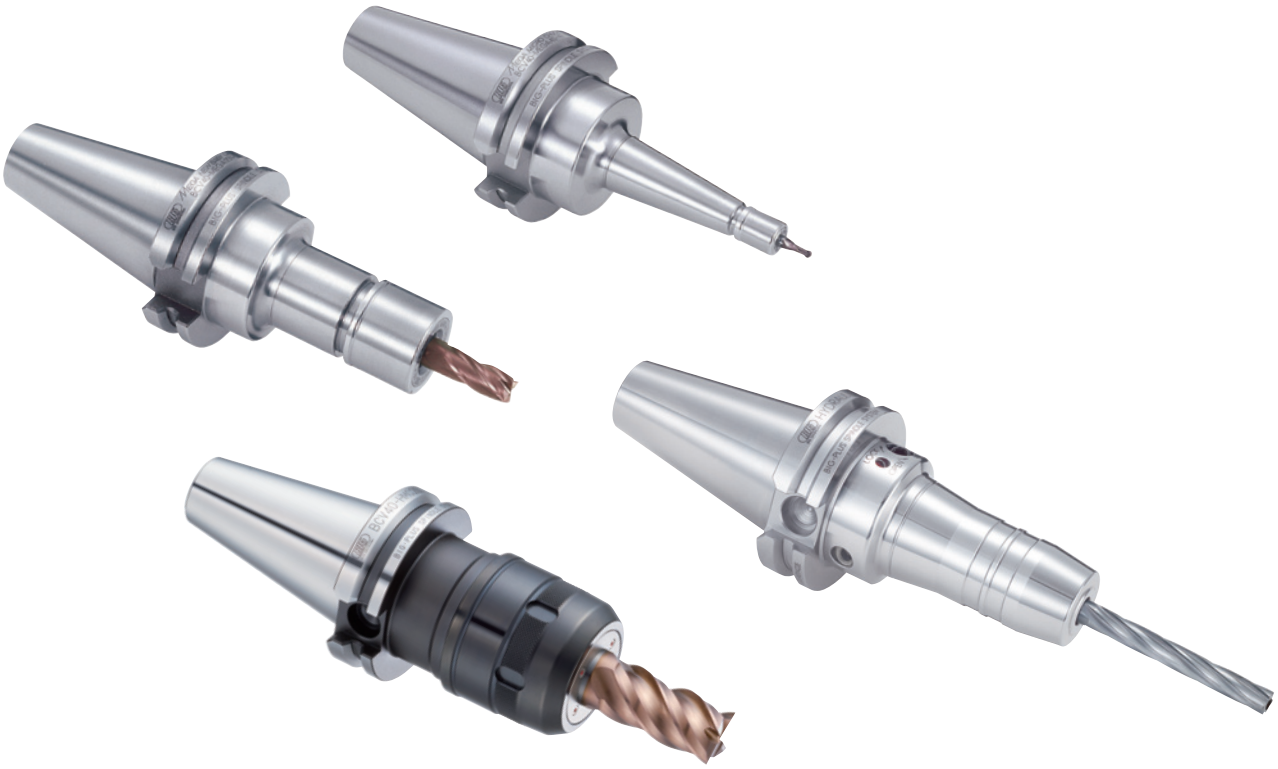
In conclusion, BIG DAISHOWA does not indicate any G-values for balancing quality, but rather the maximum rotational speeds of the individual tool holder. The values shown for each item number in our catalog are in compliance with the requirements for standard balance quality according to ISO 16084.

DUAL CONTACT BIG-PLUS

BCV/CV SHANK

BIG-PLUS® SPINDLE SYSTEM DUAL CONTACT

A.1



COLLET CHUCKS 66-70

MEGA MICRO CHUCK 66
MEGA NEW BABY CHUCK 67-68
MEGA ER GRIP 69
MEGA E CHUCK 70

MILLING CHUCKS 71-75

MEGA DOUBLE POWER CHUCK 71-72
MEGA PERFECT GRIP 73
NEW Hi-POWER MILLING CHUCK 74-75

HYDRAULIC CHUCKS 76-78

BASIC ARBORS 79-85

SHRINK FIT HOLDER 79
SHELL/FACE MILL HOLDER 80-83
END MILL HOLDER 84
SMART DAMPER MILLING 85

TAP HOLDERS 86-87

MEGA SYNCHRO TAPPING HOLDER 86-87

MODULAR HOLDERS 88-93

CKB SHANK (STANDARD & BIG-PLUS) 88-91
BIG CAPTO SHANK 92
ABS SHANK 93

ANGLE HEADS 94-105

AG 94-103
AGU 104-105

SPEED INCREASERS 106-108

AIR POWER SPINDLE 106-107
HIGH SPINDLE 108

COOLANT INDUCERS 109-110

Hi-JET HOLDER 109-110

ACCESSORIES 111-113

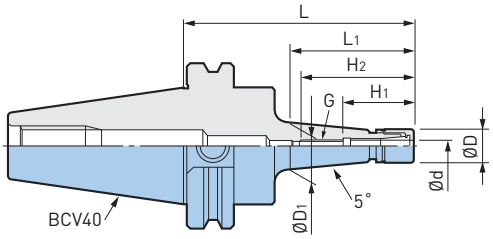
PULLSTUD BOLTS 111
DYNA TEST 112
ATC ALIGNMENT TOOL 112
BIG-PLUS CLEANER 113
BLANK BAR 113

MEGA MICRO CHUCK—TYPE T

CLAMPING RANGE: Ø.018"-.317" For Micro Drill & End Mill Applications

MAX 35,000 RPM

COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØD	D1	L	L1	H1	H2	G	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
BCV40-MEGA3S-2.5T	**.018-.128**	.394	.47	2.50	1.01	.87	1.50	M4 P0.7	NBC3S-□	MGN3S	MGR10	35,000	2.2
BCV40-MEGA3S-4T			.76	4.00	2.38							25,000	2.4
BCV40-MEGA4S-2.5T	**.018-.159**	.472	.54	2.50	1.01	1.04	1.85	M5 P0.8	NBC4S-□	MGN4S	MGR12	35,000	2.2
BCV40-MEGA4S-4T			.78	4.00	2.38							25,000	2.4
BCV40-MEGA6S-2.5T	**.018-.238**	.551	.60	2.50	1.01	1.12	1.93	M7 P0.75	NBC6S-□	MGN6S	MGR14	35,000	2.2
BCV40-MEGA6S-4T			.84	4.00	2.38							25,000	2.4
BCV40-MEGA8S-3.5T	**.116-.317**	.709	.91	3.50	1.93	1.22	1.99	M9 P0.75	NBC8S-□	MGN8S	MGR18	30,000	2.4
BCV40-MEGA8S-6T			1.35	6.00	4.50							15,000	3.1

- 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

ACCESSORIES

COLLET PG. 356

MEGA NUT PG. 358

SEAL NUT PG. 358

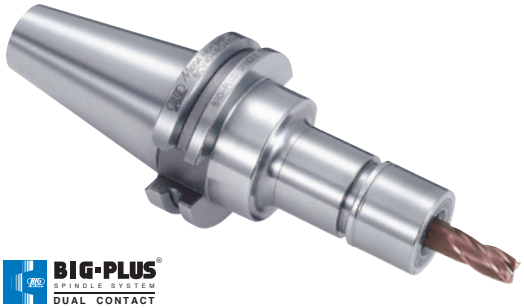
MEGA WRENCH PG. 390

MEGA NEW BABY CHUCK

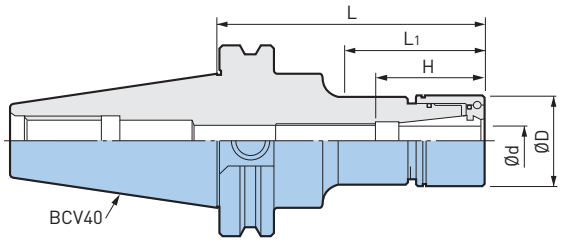
CLAMPING RANGE: Ø.010"-1.000" For Drills, Reamers, Taps & Finishing End Mills

MAX 35,000 RPM

COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



Catalog Number	Ød	ØD	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
BCV40-MEGA6N-2.5	.010-.236	.787	2.50	1.04	.91-1.69	NBC6-□	MGN6	MGR20	35,000	2.3
BCV40-MEGA6N-4			4.00	2.22					30,000	2.5
BCV40-MEGA6N-5			5.00	3.22					20,000	2.7
BCV40-MEGA6N-6			6.00	4.22					15,000	2.8
BCV40-MEGA8N-2.5	.020-.315	.984	2.50	1.04	1.02-1.77	NBC8-□	MGN8	MGR25	35,000	2.4
BCV40-MEGA8N-4			4.00	2.30					30,000	2.7
BCV40-MEGA8N-5			5.00	3.30					20,000	2.9
BCV40-MEGA8N-6			6.00	4.30					15,000	3.1
BCV40-MEGA10N-2.5	.059-.394	1.181	2.50	1.05	1.50-1.89	NBC10-□	MGN10	MGR30	35,000	2.5
BCV40-MEGA10N-4			4.00	2.38					25,000	3.0
BCV40-MEGA10N-5			5.00	3.38					20,000	3.2
BCV40-MEGA10N-6			6.00	4.38					15,000	3.5
BCV40-MEGA13N-2.5	.098-.512	1.387	2.50	1.17	1.73-2.48	NBC13-□	MGN13	MGR35	30,000	2.7
BCV40-MEGA13N-4			4.00	2.46					25,000	3.2
BCV40-MEGA13N-5			5.00	3.46					20,000	3.5
BCV40-MEGA13N-6			6.00	4.46					15,000	4.0
BCV40-MEGA16N-2.5	.098-.630	1.654	2.50	1.18	1.89-2.48	NBC16-□	MGN16	MGR42	30,000	2.9
BCV40-MEGA16N-4			4.00	2.62	1.89-2.68				20,000	3.6
BCV40-MEGA16N-5			5.00	3.62					15,000	4.2
BCV40-MEGA16N-6			6.00	4.62					12,000	4.7
BCV40-MEGA20N-2.5	.098-.787	1.811	2.50	1.75	2.01	NBC20-□	MGN20	MGR46	30,000	3.0
BCV40-MEGA20N-4			4.00	3.25	2.01-2.68				20,000	4.0
BCV40-MEGA20N-5			5.00	4.25					15,000	4.6
BCV40-MEGA20N-6			6.00	5.25					12,000	5.3
BCV40-MEGA25N-3	.610-1.000	2.362	3.00	2.25	2.52-2.91	NBC25-□	MGN25	MGR60L	25,000	3.2
BCV40-MEGA25N-4			4.00	3.25					20,000	4.1

- 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" indicates the adjustment length with an adjusting screw

ACCESSORIES

COLLET PG. 360

MEGA NUT PG. 366

PERFECT SEAL PG. 368

MEGA WRENCH PG. 390

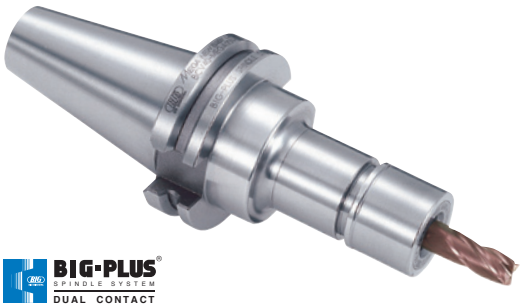
SCREW PG. 411

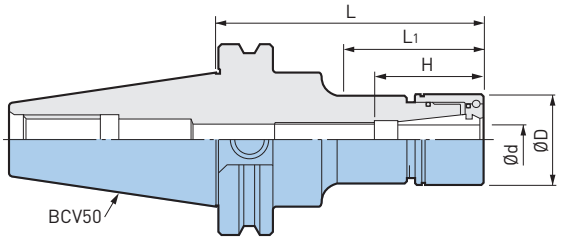
MEGA NEW BABY CHUCK

CLAMPING RANGE: Ø.010"-1.000" For Drills, Reamers, Taps & Finishing End Mills

MAX 20,000 RPM

COOLANT THROUGH





BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØD	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
BCV50-MEGA6N-3.5	.010-.236	.787	3.50	1.72	.91-1.69	NBC6-□	MGN6	MGR20	20,000	7.0
BCV50-MEGA6N-5			5.00	3.03					20,000	7.1
BCV50-MEGA6N-6			6.00	4.03					15,000	7.3
BCV50-MEGA8N-3.5	.020-.315	.984	3.50	1.72	1.02-1.77	NBC8-□	MGN8	MGR25	20,000	7.1
BCV50-MEGA8N-5			5.00	3.03					20,000	7.4
BCV50-MEGA8N-6			6.00	4.03					15,000	7.6
BCV50-MEGA10N-3.5	.059-.394	1.181	3.50	1.72	1.50-1.89	NBC10-□	MGN10	MGR30	20,000	7.3
BCV50-MEGA10N-5			5.00	3.03					20,000	7.7
BCV50-MEGA10N-6			6.00	4.03					15,000	7.9
BCV50-MEGA10N-8			8.00	6.03					12,000	8.6
BCV50-MEGA13N-3.5	.098-.512	1.378	3.50	1.72	1.73-2.48	NBC13-□	MGN13	MGR35	18,000	7.5
BCV50-MEGA13N-5			5.00	3.22					18,000	8.1
BCV50-MEGA13N-6			6.00	4.03					16,000	8.5
BCV50-MEGA13N-8			8.00	6.03					12,000	9.3
BCV50-MEGA16N-3.5	.098-.630	1.654	3.50	1.72	1.89-2.68	NBC16-□	MGN16	MGR42	17,000	7.8
BCV50-MEGA16N-5			5.00	3.22					17,000	8.7
BCV50-MEGA16N-6			6.00	4.22					16,000	9.3
BCV50-MEGA16N-8			8.00	6.22					13,000	10.4
BCV50-MEGA20N-3.5	.098-.787	1.811	3.50	1.80	2.01-2.68	NBC20-□	MGN20	MGR46	16,000	8.1
BCV50-MEGA20N-5			5.00	3.22					16,000	9.0
BCV50-MEGA20N-6			6.00	4.22					15,000	9.7
BCV50-MEGA20N-8			8.00	6.22					13,000	11.0
BCV50-MEGA25N-4	.610-1.000	2.362	4.00	2.50	2.52-2.91	NBC25-□	MGN25	MGR60L	15,000	8.8
BCV50-MEGA25N-6			6.00	4.50					13,000	10.9

- 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" indicates the adjustment length with an adjusting screw

ACCESSORIES

COLLET PG. 360

MEGA NUT PG. 366

PERFECT SEAL PG. 368

MEGA WRENCH PG. 390

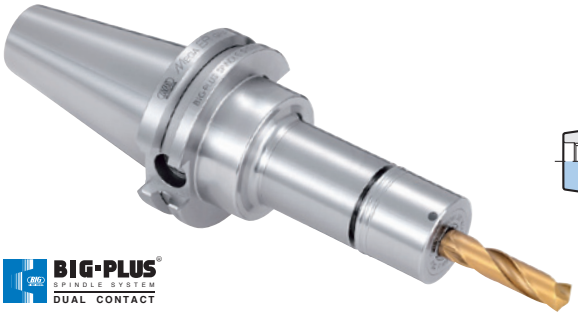
SCREW PG. 411

MEGA ER GRIP

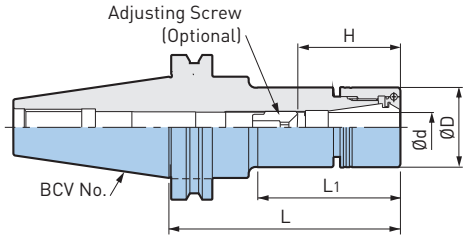
CLAMPING RANGE: Ø.075"-.787" For Drills, Reamers, Taps & Finishing End Mills

MAX 35,000 RPM

COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



Catalog Number	Ød	ØD	L	L1	H	Collet	Nut (NOT Included)	Wrench	Max RPM	Weight (lbs.)
BCV40-MEGAER11-4NL	.108-.236	.787	4.00	2.48	.91-1.69	ERC11-□	MERN11*	MGR20	30,000	2.5
BCV40-MEGAER16-3NL	.075-.394	1.181	3.00	1.50	1.38-1.85	ERC16-□	MERN16*	MGR30L	35,000	3.1
BCV40-MEGAER16-4NL			4.00	2.48					25,000	3.3
BCV40-MEGAER16-5NL			5.00	3.46					20,000	3.5
BCV40-MEGAER16-6NL			6.00	4.49					15,000	4.0
BCV40-MEGAER20-3NL	.108-.512	1.378	3.00	1.50	1.65-2.44	ERC20-□	MERN20*	MGR35L	30,000	3.3
BCV40-MEGAER20-4NL			4.00	2.48					25,000	3.5
BCV40-MEGAER20-5NL			5.00	3.50					20,000	4.0
BCV40-MEGAER20-6NL			6.00	4.49					15,000	4.2
BCV40-MEGAER25-3NL	.108-.630	1.654	3.00	1.61	1.73-2.56	ERC25-□	MERN25*	MGR42L	30,000	3.5
BCV40-MEGAER25-4NL			4.00	2.60	1.73-2.64				20,000	4.0
BCV40-MEGAER25-5NL			5.00	3.58					15,000	4.4
BCV40-MEGAER25-6NL			6.00	4.61					12,000	4.8
BCV40-MEGAER32-3.25NL	.108-.787	1.969	3.25	—	1.97-2.68	ERC32-□	MERN32*	MGR50L	30,000	3.7
BCV40-MEGAER32-4NL			4.00						20,000	4.4
BCV40-MEGAER32-5NL			5.00						15,000	5.1
BCV40-MEGAER32-6NL			6.00						12,000	5.9
BCV50-MEGAER16-3.5NL	.075-.394	1.181	3.50	1.85	1.39-1.84	ERC16-□	MERN16*	MGR30L	20,000	8.4
BCV50-MEGAER16-5NL			5.00	3.35					20,000	8.8
BCV50-MEGAER16-6NL			6.00	4.33					15,000	9.0
BCV50-MEGAER20-3.5NL	.108-.512	1.378	3.50	1.85	1.65-2.43	ERC20-□	MERN20*	MGR35L	18,000	8.6
BCV50-MEGAER20-5NL			5.00	3.35					18,000	9.0
BCV50-MEGAER20-6NL			6.00	4.33					16,000	9.5
BCV50-MEGAER25-3.5NL	.108-.630	1.654	3.50	1.85	1.74-2.65	ERC25-□	MERN25*	MGR42L	17,000	8.8
BCV50-MEGAER25-5NL			5.00	3.35					17,000	9.5
BCV50-MEGAER25-6NL			6.00	4.33					16,000	9.9
BCV50-MEGAER32-3.5NL	.108-.787	1.969	3.50	1.89	1.97-2.68	ERC32-□	MERN32*	MGR50L	16,000	9.0
BCV50-MEGAER32-5NL			5.00	3.39					16,000	10.1
BCV50-MEGAER32-6NL			6.00	4.37					15,000	11.0

***Nut, adjusting screw, collet and wrench are not included**

- Weight does not include collet
- MEGA ER GRIP is not able to use DIN6499 Form-A collets and ESX collets
- 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

CAUTION

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.

ACCESSORIES

COLLET PG. 374

MEGA NUT* PG. 377

PERFECT SEAL PG. 378

SOLID NUT PG. 377

MEGA WRENCH PG. 390

SCREW PG. 411

***MEGA NUT is the recommended nut to achieve high accuracy and clamping force**

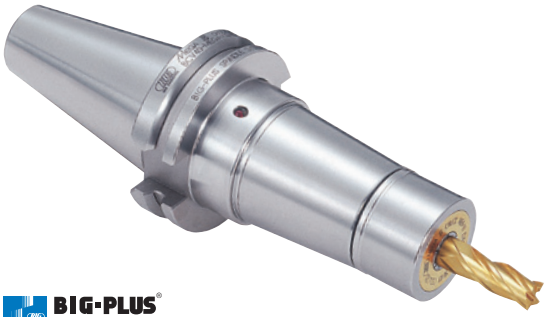
MEGA E CHUCK

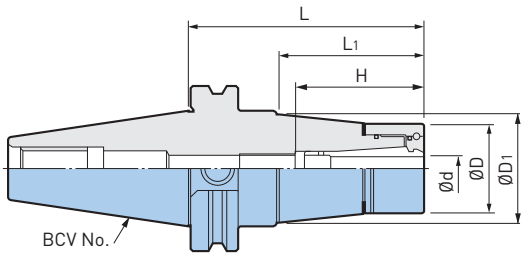
CLAMPING RANGE: Ø.125"-.500" (Ø3-12mm)

Exclusively for High Speed Finish End Milling

MAX 35,000 RPM

COOLANT THROUGH





BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØD	ØD1	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
BCV40-MEGA6E-3	.125-.250 (3-6mm)	.984	1.09	3.00	1.50	1.45-1.77	MEC6-□	MEN6	MGR25	35,000	2.5
BCV40-MEGA6E-4			1.25	4.00	2.42					29,000	3.0
BCV40-MEGA6E-5			1.45	5.00	3.54					29,000	3.4
BCV40-MEGA6E-6			1.50	6.00	4.54					20,000	3.8
BCV40-MEGA8E-3	.125-.250 (3-8mm)	1.181	1.28	3.00	1.50	1.65-2.00	MEC8-□	MEN8	MGR30	30,000	2.8
BCV40-MEGA8E-4			1.46	4.00	2.54					29,000	3.2
BCV40-MEGA8E-5			1.55	5.00	3.58					29,000	3.6
BCV40-MEGA8E-6			1.69	6.00	4.58					20,000	4.3
BCV40-MEGA10E-3	.125-.375 (3-10mm)	1.378	1.48	3.00	1.54	1.89-2.28	MEC10-□	MEN10	MGR35	30,000	2.9
BCV40-MEGA10E-4			1.65	4.00	2.58					29,000	3.4
BCV40-MEGA10E-5			1.65	5.00	3.58					29,000	3.9
BCV40-MEGA10E-6			1.65	6.00	4.58					22,000	4.5
BCV40-MEGA10E-8			1.65	8.00	6.62					16,000	5.2
BCV40-MEGA13E-3	.125-.500 (3-12mm)	1.654	1.65	3.00	1.62	1.96-2.36	MEC13-□	MEN13	MGR42	30,000	3.2
BCV40-MEGA13E-4			1.65	4.00	2.62					29,000	3.8
BCV40-MEGA13E-5			1.65	5.00	3.62					29,000	4.3
BCV40-MEGA13E-6			1.65	6.00	4.62					22,000	4.9
BCV40-MEGA13E-8			1.65	8.00	6.62					16,000	6.1
BCV50-MEGA13E-4	.125-.500 (3-12mm)	1.654	1.90	4.00	2.42	1.96-2.36	MEC13-□	MEN13	MGR42	18,000	8.5
BCV50-MEGA13E-5			2.07	5.00	3.42					18,000	9.3
BCV50-MEGA13E-6			2.25	6.00	4.42					16,000	10.6
BCV50-MEGA13E-8			2.42	8.00	6.50					12,000	12.8

- 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

ACCESSORIES

COLLET PG. 380

MEGA NUT PG. 381

PERFECT SEAL PG. 381

MEGA WRENCH PG. 390

SCREW PG. 411

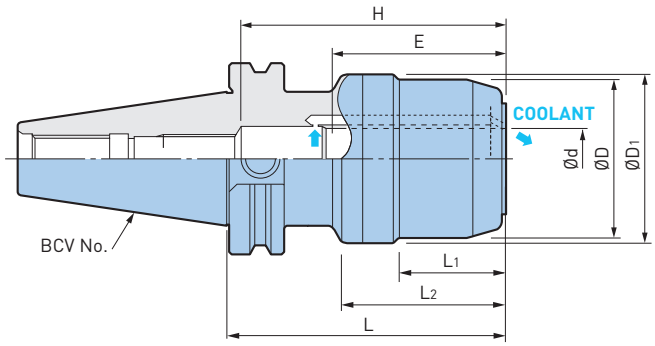
MEGA DOUBLE POWER CHUCK

CLAMPING RANGE: Ø.625"-1.500"

For Heavy Duty End Milling

MAX 30,000 RPM

COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØD	ØD1	L	L1	L2	H	Min Clamping Length E	Wrench	Max RPM	Weight (lbs.)
BCV40-MEGA.625DS-3.5A	**.625**	1.654	2.071	3.59	1.06	2.01	2.88	2.13	MGR42L	30,000	3.9
BCV40-MEGA.750DS-3.5A	**.750**	1.969	2.193	3.59	1.40	2.09	3.44	2.25	MGR50L	30,000	4.0
BCV40-MEGA1.000DS-3.5A	**1.000**	2.441	2.469	3.59	1.61	2.09	3.44	2.50	MGR62L	27,000	4.6
BCV40-MEGA1.250DS-4A	**1.250**	2.756	2.783	4.09	1.42	2.36	3.63	2.75	MGR70L	26,000	5.1
BCV50-MEGA.625DS-4	**.625**	1.811	2.165	4.09	1.02	1.42	2.88	2.13	MGR46L	21,000	8.8
BCV50-MEGA.625DS-6				6.09		1.42				19,000	10.8
BCV50-MEGA.750DS-4	**.750**	2.362	2.717	4.09	1.10	2.72	3.44	2.25	MGR60L	20,000	9.9
BCV50-MEGA.750DS-6				6.09		4.72				17,000	13.0
BCV50-MEGA1.000DS-4	**1.000**	2.756	3.031	4.09	1.34	2.58	3.63	2.50	MGR70L	20,000	10.6
BCV50-MEGA1.000DS-6				6.09		4.58				17,000	14.3
BCV50-MEGA1.250DS-4	**1.250**	3.150	3.386	4.09	1.65	2.53	4.22	2.75	MGR80L	20,000	11.3
BCV50-MEGA1.250DS-6				6.09		4.53				15,000	15.9
BCV50-MEGA1.500DS-4.5	**1.500**	3.898	3.925	4.58	1.65	2.86	4.29	2.75	MGR99L	15,000	14.6

- Wrench must be ordered separately
- 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
- MEGA.625DS requires the hex socket head screw (M8) for axial adjustment, however, please contact us if using for center through applications
- DS types have jet-through coolant supply, thus tools with holes cannot be used

ACCESSORIES

COLLET PG. 386

PERFECT SEAL/ JET COLLET PG. 383

MEGA WRENCH PG. 390

SCREW PG. 412

MEGA DOUBLE POWER CHUCK

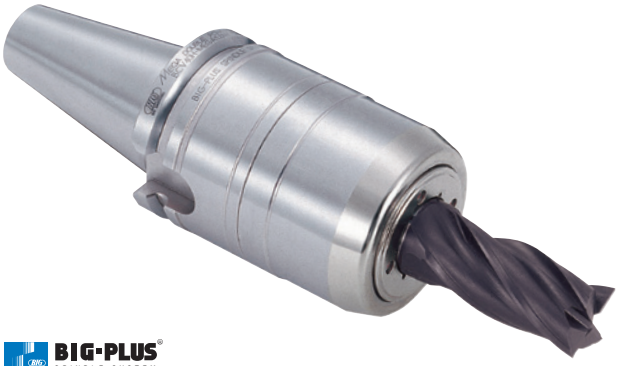
CLAMPING RANGE: Ø.625"-1.500"

High Rigidity Type for Heavy Duty End Milling

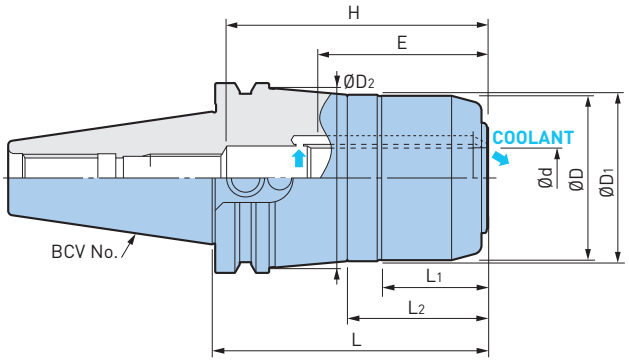
HIGHER RIGIDITY

MAX 30,000 RPM

COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



Catalog Number	Ød	ØD	ØD1	ØD2	L	L1	L2	H	Min Clamping Length E	Wrench	Max RPM	Weight (lbs.)
BCV40H-MEGA.625DS-3.5A	.625	1.654	2.071	2.39	3.59	1.06	1.42	2.87	2.25	MGR42L	30,000	3.6
BCV40H-MEGA.750DS-3.5A	.750	1.969	2.193	2.39	3.59	1.40	1.85	3.44	2.29	MGR50L	30,000	4.0
BCV40H-MEGA1.000DS-3.5A	1.000	2.441	2.469	—	3.59	1.61	—	3.42	2.33	MGR62L	27,000	4.6
BCV40H-MEGA1.250DS-4A	1.250	2.756	2.783	—	4.09	1.42	—	3.63	2.64	MGR70L	26,000	5.1
BCV50H-MEGA.750DS-4	.750	2.362	2.717	2.99	4.09	1.10	1.51	3.44	2.29	MGR60L	20,000	9.9
BCV50H-MEGA1.000DS-4	1.000	2.756	3.031	3.32	4.09	1.34	1.87	3.63	2.64	MGR70L	20,000	10.6
BCV50H-MEGA1.250DS-4	1.250	3.150	3.386	3.57	4.09	1.65	2.23	4.22	2.88	MGR80L	20,000	11.3
BCV50H-MEGA1.500DS-4.5	1.500	3.898	3.925	—	4.58	1.65	—	4.29	2.88	MGR99L	15,000	14.6

- Wrench must be ordered separately
- 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
- MEGA.625DS requires the hex socket head screw (M8) for axial adjustment, however, please contact us if using for center through applications
- DS types have jet-through coolant supply, thus tools with holes cannot be used

ACCESSORIES

COLLET PG. 386

PERFECT SEAL/ JET COLLET PG. 383

MEGA WRENCH PG. 390

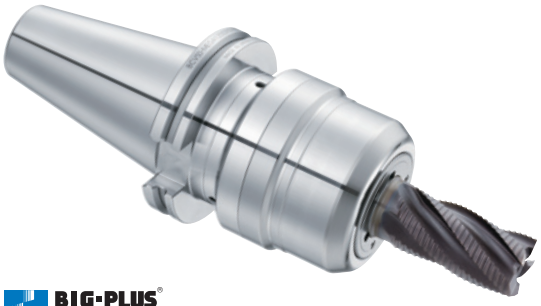
SCREW PG. 412

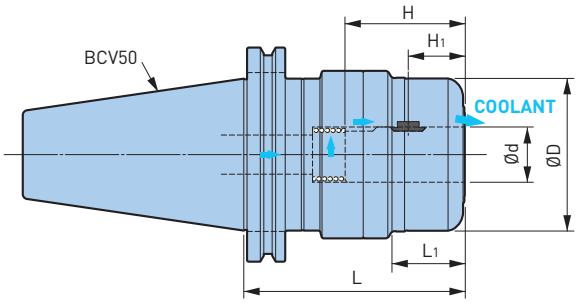
CAUTION

H type conforms to ASME B5.50-2015 standard for safe zone. Interference with tool changer may occur on machines made to an older standard. Consult engineering for specific information about the intended machine.

MEGA PERFECT GRIP

COOLANT THROUGH





BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØD	L	L1	H	H1	Wrench	Weight (lbs.)
BCV50-MEGA.750DPG-4	**.750**	2.362	4.000	1.062	1.929	.913	MGR60L	9.9
BCV50-MEGA1.000DPG-4	**1.000**	2.756	4.000	1.299	2.165	1.024	MGR70L	10.6
BCV50-MEGA1.250DPG-4.25	**1.250**	3.150	4.250	1.614	2.244	1.102	MGR80L	12.3

- Key grip and spring are included; wrench must be ordered separately
- "H" indicates the adjustment length with an adjusting screw
- "H1" is the dimension from the center of the Key Grip to the front end of the chuck

CAUTION

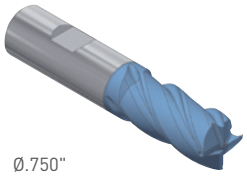
Always replace worn or damaged key grips immediately for safe operation.

Clamping Ø	Key Grip (2 pcs.)	Spring
.750	**PKG.750-2P**	**PSP1823**
1.000	**PKG1.000-2P**	**PSP2420**
1.250	**PKG1.250-2P**	**PSP3128**

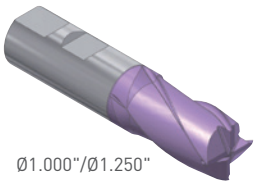
- Spare key grips are available in 2 pcs. per set

CYLINDRICAL SHANK WITH FLAT SECTION

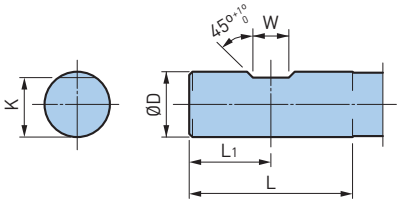
The following standard shank is required for MEGA PERFECT GRIP.



Ø.750"



Ø1.000"/Ø1.250"



ØD		L	L1	W		K	
Nominal	**Tolerance**			**Nominal**	**Tolerance**	**Nominal**	**Tolerance**
.750	-.0001 -.0005	2.032	1.016	.455	+.002 -0	.675	+0 -.016
1.000		2.281	1.141	.515		.925	
1.250						1.156	

- Please contact your cutting tool supplier for conformance to this standard. Reprinted from ASME B94.19-1997, by permission of The American Society of Mechanical Engineers. All rights reserved.

CAUTION

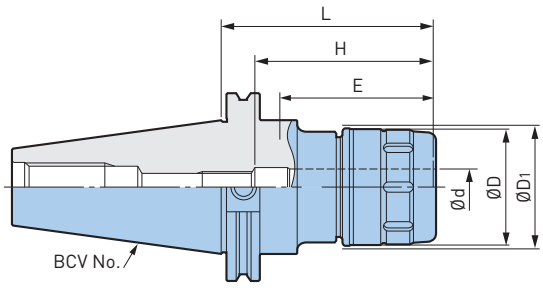
In case you are adding your own flat, the tool projection length in the MEGA PERFECT GRIP will be decided by the flat position. Refer to H1 in the MEGA PERFECT GRIP chart, decide the flat position to add, and then cut the cutter at L1 on cutter shank.

NEW Hi-POWER MILLING CHUCK

CLAMPING RANGE: Ø.750"-1.500" (Ø20-32mm)

For Heavy Duty End Milling

COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØD	ØD1	L	H	Min Clamping Length E	Wrench	Weight (lbs.)
BCV40-HMC.750S-3.5	.750	1.969	2.008	3.50	3.34	2.25	FK45-50L	3.4
BCV40-HMC1.000S-3.5	1.000	2.323	2.362	3.50	3.42	2.50	FK58-62L	4.2
BCV40-HMC1.250S-4	1.250	2.677	2.717	4.00	3.54	2.75	FK68-75L	4.7
BCV40-HMC20S-85	20mm	1.969	1.996	3.35	2.72-3.11	2.20	FK45-50L	3.4
BCV40-HMC32S-100	32mm	2.677	2.705	3.94	3.03-3.42	2.52	FK-68-75L	4.4
BCV50-HMC.750-4	.750	2.362	2.402	4.00	3.34	2.25	FK58-62	9.3
BCV50-HMC1.000-4	1.000	2.441	2.480	4.00	3.54	2.50	FK58-62	8.9
BCV50-HMC1.250-4	1.250	3.150	3.189	4.00	4.13	2.75	FK80-90	10.2
BCV50-HMC1.500-4.5	1.500	3.898	3.937	4.50	4.21	2.75	FK92-100	13.2
BCV50-HMC20S-105	20mm	1.969	1.996	4.13	2.72-3.11	2.20	FK45-50L	8.4
BCV50-HMC32S-105	32mm	2.677	2.705	4.13	3.46-3.86	2.83	FK68-75L	9.6

- Wrench and axial adjusting screw must be ordered separately
- "H" indicates the adjustment length with an adjusting screw

ACCESSORIES

COLLET PG. 386

PERFECT SEAL/ JET COLLET PG. 383

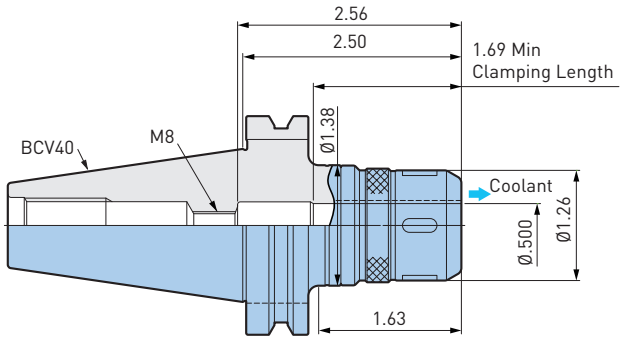
WRENCH PG. 389

SCREW PG. 412

NEW Hi-POWER MILLING CHUCK

CLAMPING RANGE: Ø.500"

COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Wrench	Weight (lbs.)
BCV40-HMC.500J-2.5	FK31-33	2.4

• Wrench must be ordered separately

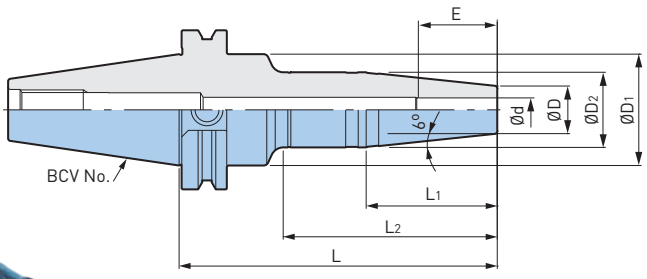
ACCESSORIES

SUPER SLIM TYPE

CLAMPING RANGE: Ø.250"-.500" (Ø6-12mm)

For Drills, Reamers, Ball Mills, End Mills, Diamond Reamers & Grinding Tools

COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØD	ØD1	ØD2	L	L1	L2	Min Clamping Length E	Max RPM	Weight (lbs.)
BCV40-HDC.250S-5	.250	.56	1.75	1.03	5.00	2.24	3.32	.99	30,000	2.8
BCV40-HDC.375S-5	.375	.75		1.99		2.06	3.36	1.30	28,000	3.0
BCV40-HDC.500S-5	.500	.87		1.30			3.44	1.42	28,000	3.1
BCV40-HDC6S-125	6mm	.551		1.024	4.92	2.24	3.34	.99	30,000	2.9
BCV40-HDC8S-125	8mm	.669		1.102		2.05	3.38	1.18	30,000	2.9
BCV40-HDC10S-125	10mm	.748		1.181				1.26	28,000	3.1
BCV40-HDC12S-125	12mm	.827		1.260			3.42	1.38	28,000	3.1
BCV50-HDC6S-150	6mm	.551	2.75	1.024	5.91	2.24	3.54	.99	20,000	7.7
BCV50-HDC8S-150	8mm	.669		1.102		2.05		1.18	20,000	7.9
BCV50-HDC10S-150	10mm	.748		1.181			3.66	1.26	20,000	7.9
BCV50-HDC12S-150	12mm	.827		1.260			3.74	1.38	20,000	8.1

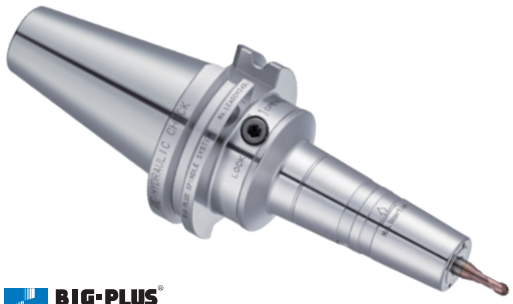
• Adjusting screw cannot be used

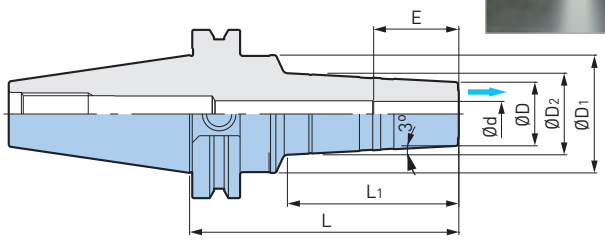
JET COOLANT TYPE

CLAMPING RANGE: Ø.250"-.500" Coolant Holes Through Body of Holder

JET THROUGH

COOLANT THROUGH





BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØD	ØD1	ØD2	L	L1	Min Clamping Length E	Weight (lbs)
BCV40-HDC.250J-4	.250	.79	1.75	1.06	4.00	2.50	.99	2.7
BCV40-HDC.375J-4	.375	.95		1.22		2.54	1.30	2.8
BCV40-HDC.500J-4	.500	1.07		1.34		2.57	1.42	2.9

• Adjusting screws cannot be used

CAUTION

Use only cutting tools that have a shank tolerance of h6 (see table pg. 26). 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".

CLAMPING RANGE: Ø.250"-1.250" (Ø6-20mm)

For Drills, Reamers, Ball Mills, End Mills, Diamond Reamers & Grinding Tools

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

COOLANT THROUGH

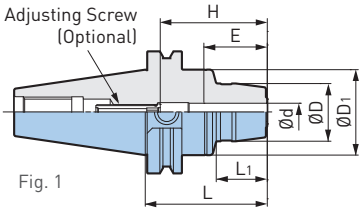


Fig. 1

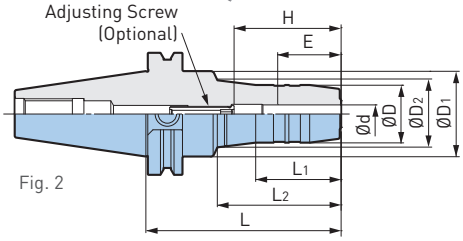


Fig. 2

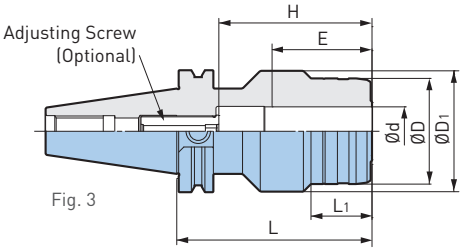


Fig. 3

Catalog Number	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	H	Min Clamping Length E	Adjusting Screw	Weight (lbs.)
BCV40-HDC.250-2.5	1	**.250**	1.024	1.750	—	2.50	1.02	—	1.10-1.97	1.10	HDA6-05032	2.4
BCV40-HDC.250-4	2				1.20	4.00	1.75	2.48				3.1
BCV40-HDC.250-5.5					1.75	5.50		4.09				3.8
BCV40-HDC.375-2.5	1	**.375**	1.181	1.750	—	2.50	1.04	—	1.30-2.17	1.30	HDA10-08032	2.7
BCV40-HDC.375-4	2				1.37	4.00	1.75	2.52				3.1
BCV40-HDC.375-5.5					1.75	5.50		4.09				4.0
BCV40-HDC.500-2.5	1	**.500**	1.299	1.750	—	2.50	.98	—	1.50-2.36	1.50	HDA12-10032	2.7
BCV40-HDC.500-4	2				1.75	4.00	1.75	2.60				3.3
BCV40-HDC.500-5.5					—	5.50		4.09				4.0
BCV40-HDC.625-3	1	**.625**	1.496	1.750	1.75	3.00	1.54	—	1.69-2.76	1.69	HDA16-12030	2.9
BCV40-HDC.625-4	2					4.00	2.00	2.60			HDA16-12037	3.3
BCV40-HDC.625-5.5						5.50		—				4.2
BCV40-HDC.750-3	1	**.750**	1.654	1.750	—	3.00	1.57	2.60	1.69-2.76	1.69	HDA16-12030	3.1
BCV40-HDC.750-4	2				1.75	4.00	2.00	4.09			HDA16-12037	3.6
BCV40-HDC.750-5.5						5.50		4.13				4.4
BCV40-HDC1.000-3	3	**1.000**	2.165	2.480	—	3.00	.61	—	2.05-3.15	2.05	HDA16-12015	4.0
BCV40-HDC1.000-4						4.00	1.25				HDA25-16039	4.7
BCV40-HDC1.000-5						5.00	1.75					5.8
BCV40-HDC1.250-4	3	**1.250**	2.677	2.953	—	4.00	1.25	—	2.20-3.15	2.20	HDA25-16039	5.8
BCV40-HDC6-90	1	**6mm**	1.024	1.750	—	3.54	1.89	—	1.10-1.97	1.10	HDA6-05032	2.8
BCV40-HDC8-90		**8mm**	1.102				1.72				HDA8-06032	
BCV40-HDC10-90		**10mm**	1.181				1.75		1.30-2.17	1.30	HDA10-08032	2.9
BCV40-HDC12-90		**12mm**	1.260				1.76		1.50-2.36	1.50	HDA12-10032	
BCV40-HDC20-90	2	**20mm**	1.653	1.750	—	3.54	1.58	—	1.69-2.76	1.69	HDA16-12037	4.4

• Adjustable cutter length H is the adjustable length in the use of adjusting screw

CAUTION

Use only cutting tools that have a shank tolerance of h6 (see table pg. 26). 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".

ACCESSORIES

PERFECT SEAL/ JET COLLET PG. 383

CLAMPING RANGE: Ø.250"-1.250" (Ø32mm)

For Drills, Reamers, Ball Mills, End Mills, Diamond Reamers & Grinding Tools

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

COOLANT THROUGH

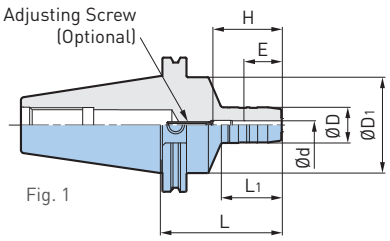


Fig. 1

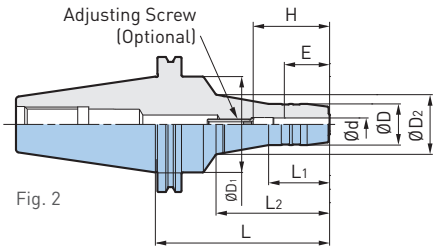


Fig. 2

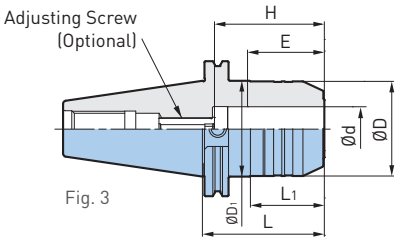


Fig. 3

Catalog Number	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	H	Min Clamping Length E	Adjusting Screw	Weight (lbs.)
BCV50-HDC.250-3.5	1	.250	1.024	2.750	—	3.50	1.75	—	1.10-1.97	1.10	HDA6-05032	7.3
BCV50-HDC.250-5	2				1.53	5.00		3.19				8.0
BCV50-HDC.250-6.5					2.13	6.50		4.92				9.1
BCV50-HDC.375-3.5	1	.375	1.181	2.750	—	3.50	1.75	—	1.30-2.17	1.30	HDA10-08032	7.3
BCV50-HDC.375-5	2				1.71	5.00		3.27				8.0
BCV50-HDC.375-6.5					2.31	6.50		4.96				9.3
BCV50-HDC.500-3.5	1	.500	1.299	2.750	—	3.50	1.75	—	1.50-2.36	1.50	HDA12-10032	7.6
BCV50-HDC.500-5	2				1.85	5.00		3.31				8.2
BCV50-HDC.500-6.5					2.45	6.50		5.00				9.6
BCV50-HDC.625-3.5	1	.625	1.496	2.750	—	3.50	1.75	—	1.69-2.76	1.69	HDA16-12037	7.8
BCV50-HDC.625-5	2				1.97	5.00	2.00	3.35				8.7
BCV50-HDC.625-6.5					2.57	6.50		—				10.2
BCV50-HDC.750-3.5	1	.750	1.654	2.750	—	3.50	1.75	3.43	1.69-2.76	1.69	HDA16-12037	8.0
BCV50-HDC.750-5	2				2.15	5.00	2.00	5.04				8.9
BCV50-HDC.750-6.5					2.75	6.50		5.12				10.7
BCV50-HDC1.000-3.5	3	1.000	2.480	2.750	—	3.50	2.03	—	2.05-3.15	2.05	HDA25-16039	8.9
BCV50-HDC1.000-5						5.00	3.54					10.7
BCV50-HDC1.000-6.5						6.50	5.04					12.7
BCV50-HDC1.250-3.5	3	1.250	2.717	2.750	—	3.50	2.09	—	2.20-3.15	2.20	HDA25-16039	10.6
BCV50-HDC1.250-5						5.00	3.58					11.8
BCV50-HDC1.250-6.5						6.50	5.08					14.4
BCV50-HDC32-90	3	32mm	2.677	2.953	—	3.54	2.13	—	2.20-3.15	2.20	HDA25-16039	9.6

- "H" indicates the adjustment length with an adjusting screw

ACCESSORIES

PERFECT SEAL/
JET COLLET
PG. 383

CAUTION

Use only cutting tools that have a shank tolerance of h6 (see table pg. 26). 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".

SHRINK FIT HOLDER

CLAMPING RANGE: Ø.250"-1.250" (Ø8-12mm)

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

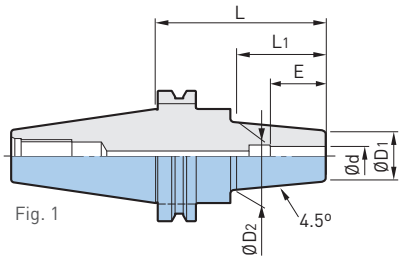


Fig. 1

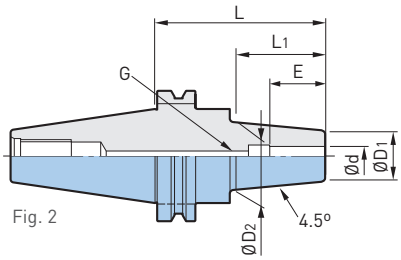


Fig. 2

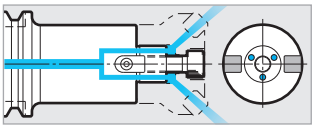
Catalog Number	Fig.	Ød	ØD1	ØD2	L	L1	Min Clamping Length E	G	Weight (lbs.)
BCV40-SF.250-3.5	1	**.250**	.827	1.06	3.50	1.50	.87	—	2.6
BCV40-SF.375-3.5		**.375**	.945	1.26		2.00	1.22		2.7
BCV40-SF.500-3.5	2	**.500**					1.42	M10 P1	2.7
BCV40-SF.500-6					6.00				3.4
BCV40-SF.625-3.5		**.625**	1.063	1.34	3.50	1.50	1.54	M12 P1	2.7
BCV40-SF.625-6					6.00				3.6
BCV40-SF.750-4		**.750**	1.299	1.65	4.00	2.25	1.85	M16 P1	3.1
BCV40-SF.750-6					6.00				4.2
BCV40-SF1.000-4		**1.000**	1.732	2.09	4.00			M16 P1	3.8
BCV40-SF1.000-6					6.00				5.6
BCV40-SF8-80	1	**8mm**	.827	1.06	3.15	2.17	1.02	—	2.2
BCV40-SF10-80		**10mm**	.945	1.26	3.15	2.17	1.22		2.4
BCV40-SF12-80		**12mm**	.945	1.26	3.15	2.17	1.42		2.4
BCV50-SF.500-4	2	**.500**	.945	1.26	4.00	2.00	1.42	M10 P1	7.2
BCV50-SF.625-4		**.625**	1.063	1.34	4.00	1.75	1.54	M12 P1	7.5
BCV50-SF.750-4		**.750**	1.299	1.65	4.00	2.27	1.61	M16 P1	7.7
BCV50-SF.750-6					6.00				8.8
BCV50-SF1.000-4		**1.000**	1.732	2.09	4.00		1.85	M16 P1	8.4
BCV50-SF1.000-6					6.00				10.2
BCV50-SF1.250-4		**1.250**			4.00		2.01	M16 P1	8.1
BCV50-SF1.250-6					6.00				9.8

- Use a carbide shank cutter within a tolerance of h6
- Center through coolant supply is available with tools with oil holes

CAUTION

Please refer to the operation manual of heating/cooling equipment, as some equipment may not be compatible.

SHELL/FACE MILL HOLDER



COOLANT THROUGH

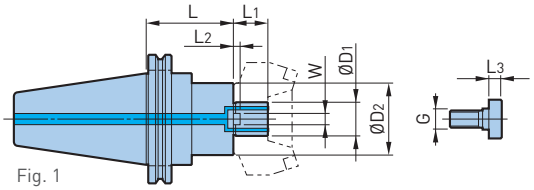


Fig. 1

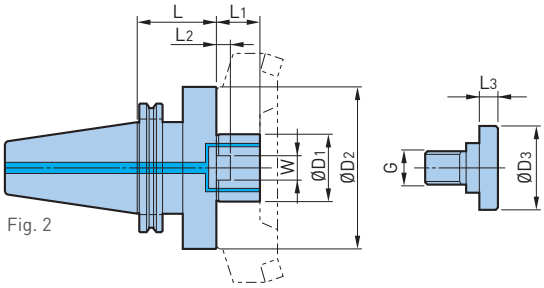


Fig. 2

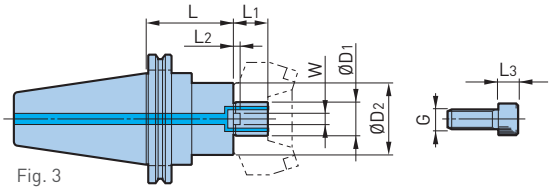


Fig. 3

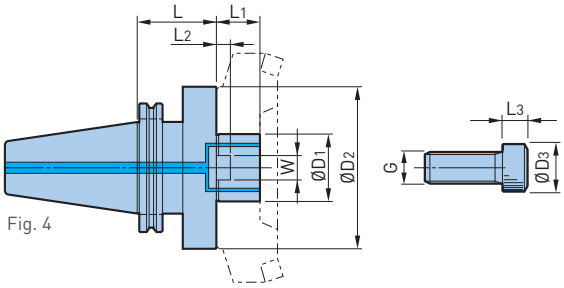


Fig. 4

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	ØD1	ØD2	ØD3	L	L1	L2	L3	W	G	Weight (lbs.)
BCV40-SMC.750-2	1	.750	1.689	.88	2.00	.69	.16	.38	.313	3/8"-24	2.7
BCV40-SMC.750-4					4.00						4.0
BCV40-SMC.750-6					6.00						5.2
BCV40-SMC1.000-2	2	1.000	2.189	1.12	2.00		.22		.375	1/2"-20	3.1
BCV40-SMC1.000-4					4.00						4.4
BCV40-SMC1.000-6					6.00						5.6
BCV40-SMC1.250-2		1.250	2.752	1.50	2.00		.28	.50	.500	5/8"-18	3.6
BCV40-SMC1.500-2		1.500	3.626	1.86		.93	.38		.625	3/4"-16	4.8
BCV40-FMH22-47-50	3	22mm	1.850	.63	1.97	.71	.20	.39	.394	M10x1.5	2.8
BCV40-FMH22-60-50	4		2.362								3.1
BCV40-FMH27-76-50		27mm	2.992	.71		.79	.24	.47	.472	M12x1.75	3.5
BCV40-FMH32-76-50		32mm	2.992	.94		.87	.28	.63	.551	M16x2	3.5

Catalog Number	Fig.	ØD1	ØD2	ØD3	L	L1	L2	L3	W	G	Weight (lbs.)
BCV50-SMC.750-2	1	.750	1.689	.88	2.00	.69	.16	.38	.313	3/8"-24	7.4
BCV50-SMC.750-4					4.00						8.7
BCV50-SMC.750-6					6.00						9.9
BCV50-SMC1.000-2		1.000	2.189	1.12	2.00		.22		.375	1/2"-20	7.6
BCV50-SMC1.000-4					4.00						9.6
BCV50-SMC1.000-6					6.00						11.7
BCV50-SMC1.000-8					8.00						13.7
BCV50-SMC1.000-10					10.00						15.7
BCV50-SMC1.000-12					12.00						17.7
BCV50-SMC1.250-2		1.250	2.752	1.50	2.00		.28		.500	5/8"-18	8.2
BCV50-SMC1.250-4					4.00						11.4
BCV50-SMC1.250-6					6.00						14.6
BCV50-SMC1.250-8					8.00						17.8
BCV50-SMC1.250-10					10.00						20.5
BCV50-SMC1.250-12					12.00						23.7
BCV50-SMC1.500-2	2	1.500	3.626	1.88	2.00	.93	.38	.50	.625	3/4"-16	9.2
BCV50-SMC1.500-4					4.00						12.8
BCV50-SMC1.500-6					6.00						16.0
BCV50-SMC1.500-8					8.00						25.5
BCV50-SMC1.500-10					10.00						31.1
BCV50-SMC1.500-12					12.00						37.0
BCV50-SMC2.000-2.5		2.000	4.874	2.50	2.50		.44		.750	1"-14	11.1
BCV50-SMC2.000-4					4.00						16.0
BCV50-SMC2.000-6					6.00						25.5
BCV50-SMC2.500-2.5		2.500	4.874	3.13	2.50	1.13			1.000	1"-14	13.7
BCV50-FMH22-47-50	3	22mm	1.850	.63	1.97	.71	.20	.39	.394	M10x1.5	7.4
BCV50-FMH22-60-50			2.362								7.7
BCV50-FMH27-76-50	4	27mm	2.992	.71		.79	.24	.47	.472	M12x1.75	8.0
BCV50-FMH32-76-50		32mm	2.992	.94		.87	.28	.63	.551	M16x2	8.0

- Cutter clamping screw is included
- The weight does not include the cutter
- If the provided clamping screw is not compatible, separately select one from the clamping screw table on pg. 413
- ØD2 indicates the smallest mounting surface diameter of the cutter that can be mounted on the arbor; be careful when using a cutter with the mounting diameter considerably smaller than the cutting diameter, as it may not fit

ACCESSORIES

CAUTION

For high speed applications, shell mill holders should be balanced together with the cutters.

HIGH RIGIDITY SHELL MILL HOLDER

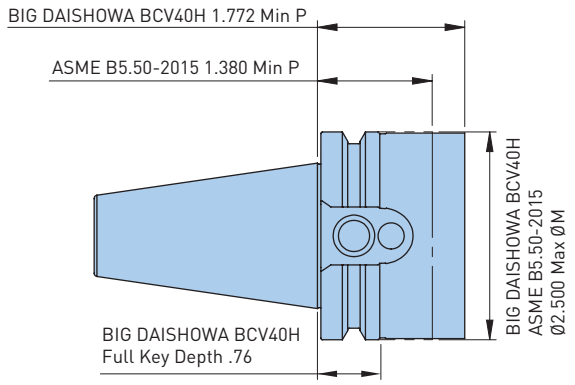
BIG DAISHOWA offers tool holders that are compatible with the 2015 revision of the ASME B5.50 (CAT) standard

The elimination of the reduced section past the v-groove greatly improves radial rigidity for higher performance milling applications.

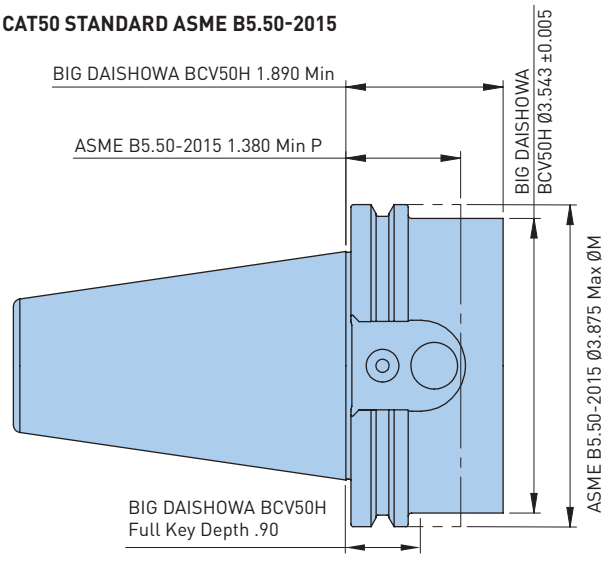
Not all machining centers are capable of accepting the 2015 revision and caution should be taken before installing these high rigidity tool holders. Always consult your machine tool manual or the machine tool builder for information about tool change requirements.

HIGH RIGIDITY CAT TAPERS

CAT40 STANDARD ASME B5.50-2015

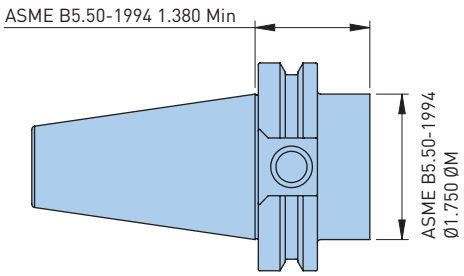


CAT50 STANDARD ASME B5.50-2015

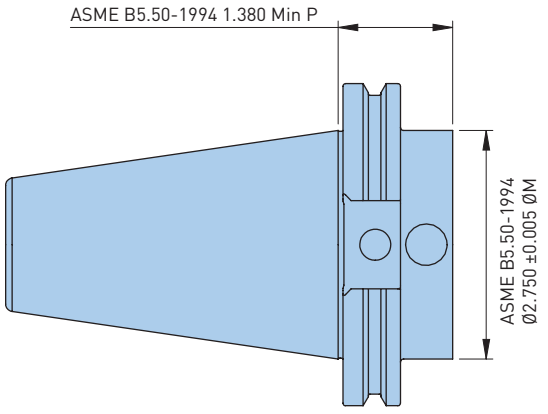


STANDARD CAT TAPERS

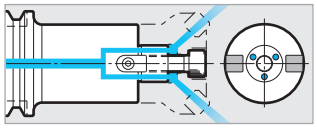
CAT40 STANDARD ASME B5.50-1994



CAT50 STANDARD ASME B5.50-1994



HIGH RIGIDITY SHELL MILL HOLDER



COOLANT THROUGH

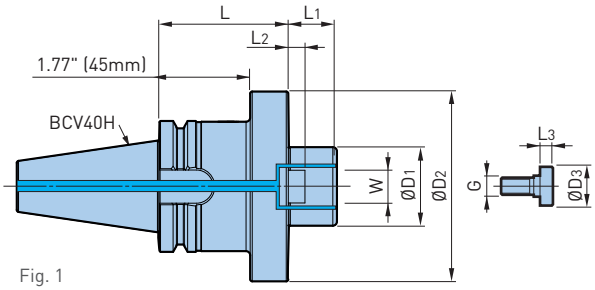


Fig. 1

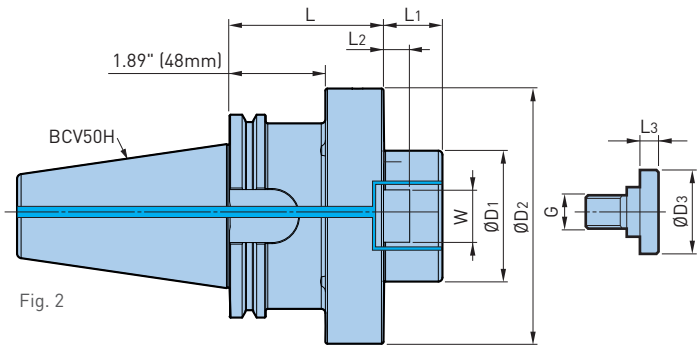


Fig. 2

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	ØD1	ØD2	ØD3	L	L1	L2	L3	W	G	Weight (lbs.)
BCV40H-SMC1.000-2	1	1.000	2.189	1.12	2.000	.69	.22	.38	.375	1/2"-20	3.3
BCV40H-SMC1.250-2.5		1.250	2.752	1.50	2.500		.28	.50	.500	5/8"-18	4.7
BCV40H-SMC1.500-2.5		1.500	3.626	1.88		.93	.38		.625	3/4"-16	6.0
BCV50H-SMC1.500-4	2	1.500	3.626	1.88	4.000	.93	.38	.50	.625	3/4"-16	15.2
BCV50H-SMC2.000-4		2.000	4.874	2.50			.44		.750	1"-14	19.4
BCV50H-SMC2.500-3		2.500		3.13	3.000	1.13			1.000	1"-14	16.6
BCV50H-FMH60-90		60mm	5.512	—	3.54	1.58	.44	—	1.000	M20 P2.5	20.0

- Cutter clamping screw is included
- The weight does not include the cutter
- If the provided clamping screw is not compatible, separately select one from the clamping screw table on pg. 413
- ØD2 indicates the smallest mounting surface diameter of the cutter that can be mounted on the arbor; be careful when using a cutter with the mounting diameter considerably smaller than the cutting diameter, as it may not fit

CAUTION

H Type conforms to ASME B5.50-2015 standard for safe zone. Interference with tool changer may occur on machines made to an older standard. Consult engineering for specific information about the intended machine.

END MILL HOLDER

CLAMPING RANGE: Ø.375"-2.500"

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

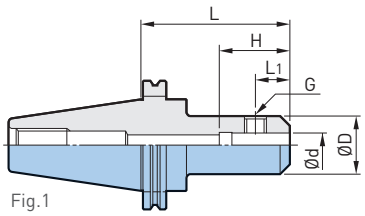


Fig.1

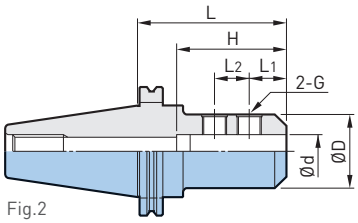


Fig.2

Catalog Number	Fig.	Ød	ØD	L	L1	L2	H	G	Weight (lbs.)
BCV40-EM.500-3	1	**.500**	1.375	3.00	.87	—	3.00	7/16"-20	2.7
BCV40-EM.500-4.5				4.50					3.3
BCV40-EM.625-3		**.625**	1.625	3.00	.94		3.50	9/16"-18	2.8
BCV40-EM.625-4.5				4.50					3.6
BCV40-EM.750-1.5		**.750**	1.750	1.50	1.13		2.25	5/8"-18	2.0
BCV40-EM.750-3				3.00	1.00		3.88		2.8
BCV40-EM.750-4.5	1			4.50					3.8
BCV40-EM1.000-3	2	**1.000**	2.252	3.00	1.13	1.00	3.13	3/4"-16	3.2
BCV40-EM1.000-4.5				4.50					4.8
BCV40-EM1.250-4.5		**1.250**	2.750						6.1
BCV40-EM1.500-5		**1.500**	2.750	5.00					6.4
BCV50-EM.375-6	1	**.375**	1.000	6.00	.75	—	3.00	3/8"-24	7.4
BCV50-EM.500-4.5		**.500**	1.375	4.50	.87		3.00	7/16"-20	7.7
BCV50-EM.500-6				6.00					8.3
BCV50-EM.625-4.5		**.625**	1.625	4.50	.94		3.50	9/16"-18	8.0
BCV50-EM.625-6				6.00					8.8
BCV50-EM.750-4.5		**.750**	1.750	4.50	1.00		3.88	5/8"-18	8.2
BCV50-EM.750-6				6.00					9.0
BCV50-EM1.000-4.5	2	**1.000**	2.252	4.50	1.13	1.00	3.13	3/4"-16	9.1
BCV50-EM1.000-6				6.00					10.5
BCV50-EM1.000-8				8.00					12.5
BCV50-EM1.250-4.5		**1.250**	2.750	4.50					10.3
BCV50-EM1.250-6				6.00					12.6
BCV50-EM1.250-8				8.00					15.6
BCV50-EM1.500-4.5		**1.500**		4.50					9.9
BCV50-EM1.500-6				6.00					12.2
BCV50-EM1.500-8				8.00					15.2
BCV50-EM2.000-6		**2.000**	3.500	6.00	1.38	1.38	4.33	1"-14	14.4
BCV50-EM2.500-6		**2.500**	3.937	6.00	1.56	1.56	3.74	1"-14	16.3

• For high speed applications MEGA DOUBLE POWER CHUCKS are recommended instead of End Mill Holders

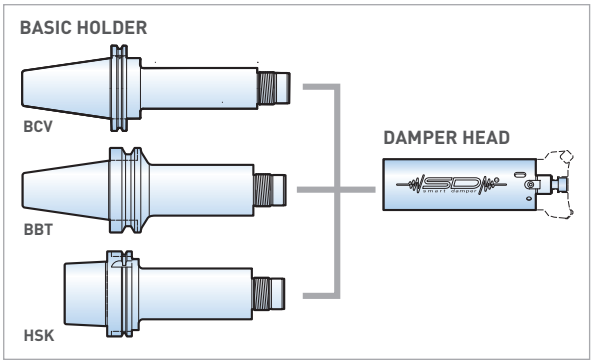
ACCESSORIES

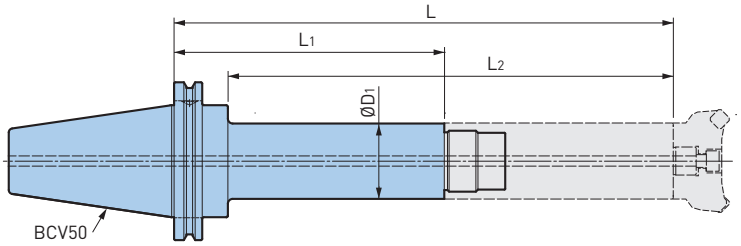
SET SCREW
PG. 412

SMART DAMPER MILLING—FACE MILL ARBOR TYPE

COOLANT THROUGH

PATENT # 9027720



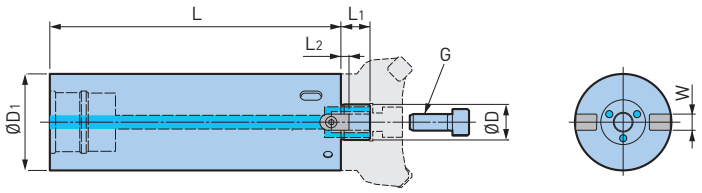


BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	ØD1	L	L1	L2	Weight (lbs.)	Damper Head Model
BCV50-SDF36-47-70	47mm	9.843	2.756	8.465	8.6	FMH□□DP-47
BCV50-SDF36-47-170		13.780	6.693	12.402	12.3	
BCV50-SDF36-60-120	60mm	11.811	4.724	10.433	11.5	FMH□□DP-60
BCV50-SDF36-60-220		15.748	8.661	14.370	17.2	
BCV50-SDF57-72-270	72mm	17.717	10.63	15.63	26.5	SMC□□DP-72

SMART DAMPER MILLING—DAMPER HEAD

COOLANT THROUGH

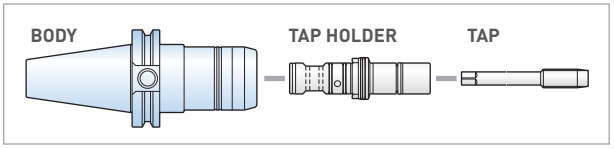


Catalog Number	ØD	ØD1	L	L1	L2	W	G	Weight (lbs.)	C-Spanner Model
SDF36-FMH22DP-47-180	22mm	47mm	7.087	.709	.197	.394	M10	6.6	FK45-50L
SDF36-FMH22DP-60-180		60mm						9.9	FK58-62L
SDF36-FMH27DP-60-180	27mm				.236	.472	M12	9.9	FK58-62L
SDF36-SMC.750DP-47-180	.750	47mm	7.087	.689	.160	.313	3/8"-24	6.6	FK45-50L
SDF36-SMC1.000DP-60-180	1.000	60mm			.220	.375	1/2"-20	9.9	FK58-62L
SDF57-SMC1.000DP-72-180		72mm						16.3	FK68-75L

- Hook wrench and cutter clamping screw are included
- The weight does not include the cutter
- Refer to the operation manual regarding the mounting method to the basic holder
- If the provided clamping screw is not compatible, separately select one from the clamping screw table on pg. 413
- The damper head cannot be removed after the basic holder and damper head have been attached and used for processing

MEGA SYNCHRO TAPPING HOLDER

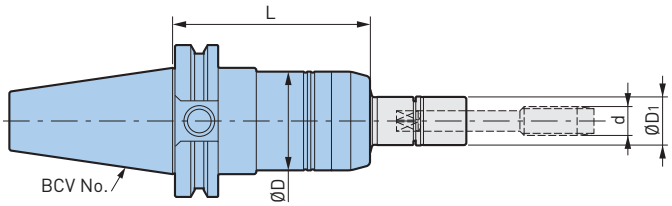
TAPPING RANGE: No.2-AU3/4



COOLANT THROUGH

PATENT # 8226337

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



Catalog Number	Tapping Range d (Inch)	Tapping Range d (Metric)	ØD	ØD1	L	Weight (lbs.)	Wrench
BCV40-MGT6-3.25	**No.2-No.12**	**M2-M6**	1.42	.63	3.25	2.9	MGR16
BCV40-MGT12-3.25	**AU1/4-AU7/16**	**M6-M12**	1.61	.79	3.25	3.1	MGR20L
BCV40-MGT20-4.5	**AU1/2-AU3/4 AP1/8-AP1/4**	**M12-M20**	2.13	1.18	4.50	4.0	MGR30L
BCV50-MGT6-3.25	**No.2-No.12**	**M2-M6**	1.42	.63	3.25	8.6	MGR16
BCV50-MGT12-3.25	**AU1/4-AU7/16**	**M6-M12**	1.61	.79	3.25	8.8	MGR20L
BCV50-MGT20-4	**AU1/2-AU3/4 AP1/8-AP1/4**	**M12-M20**	2.13	1.18	4.00	9.7	MGR30L

***AU3/8 is included in the MGT20 series**

- MGT set screw is included; tap holder and wrench must be ordered separately

ACCESSORIES

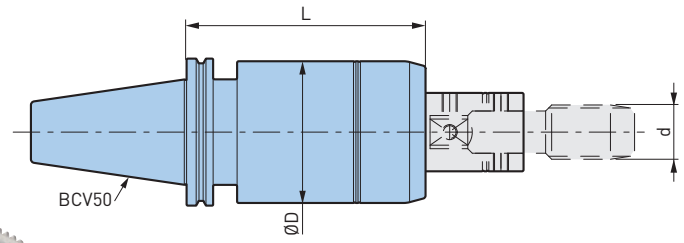
CAUTION

Cannot be used with machining center without synchronized tapping function.

MEGA SYNCHRO TAPPING HOLDER

TAPPING RANGE: AU13/16-AU1-1/2

COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Tapping Range d (Inch)	Tapping Range d (Metric)	ØD	L	Weight (lbs.)
BCV50-MGT36-6.5	**AU13/16-AU1-1/2 AP3/8-AP1**	**M20-M36**	3.70	6.50	15.8

- MGT set screw is included; tap holder must be ordered separately

ACCESSORIES

TAP HOLDER PG. 404

SYNCHRO ADJUSTER PG. 405

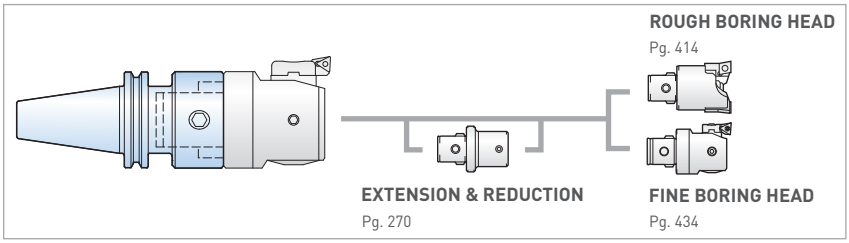
O-RING PG. 405

SCREW PG. 405

CAUTION

Cannot be used with machining center without synchronized tapping function.

CKB SHANKS



COOLANT THROUGH

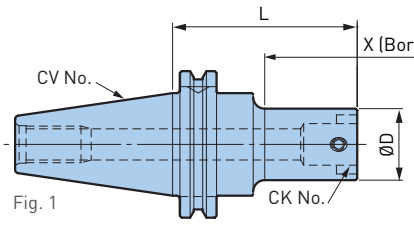


Fig. 1

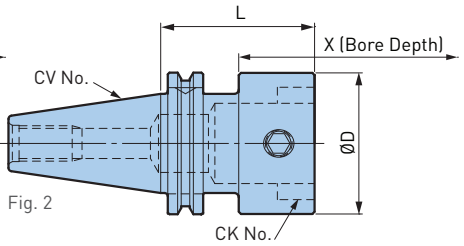


Fig. 2

Catalog Number	Reference Number	Fig.	CK	ØD	L	X	Weight (lbs.)
CV40-CKB1-48	11.326.410	1	CKB1	.750	1.870	1.570	2.2
CV40-CKB1-91	11.326.411				3.562	3.150	2.5
CV40-CKB2-53	11.326.420	1	CKB2	.944	2.067	1.970	2.3
CV40-CKB2-85	11.326.421				3.327	3.150	2.5
CV40-CKB2-105	11.326.422				4.114	3.937	3.0
CV40-CKB3-54	11.326.430	1	CKB3	1.220	2.126	2.165	2.5
CV40-CKB3-80	11.326.431				3.150	3.150	3.0
CV40-CKB3-130	11.326.433				5.118	5.118	3.5
CV40-CKB4-38	11.326.440	1	CKB4	1.535	1.496	1.970	2.5
CV40-CKB4-73	11.326.441				2.874	3.150	3.0
CV40-CKB4-153	11.326.444				6.024	6.300	5.0
CV40-CKB5-63	11.326.451	2	CKB5	1.968	2.480	3.150	3.0
CV40-CKB5-143	11.326.454				5.630	6.300	6.0
CV40-CKB6-69	11.326.462	2	CKB6	2.500	2.716	3.937	3.0
CV40-CKB6-129	11.326.464				5.079	6.300	6.5
CV45-CKB4-92	11.326.542	1	CKB4	1.535	3.661	3.937	4.5
CV45-CKB5-83	11.326.552	1	CKB5	1.968	3.268	3.937	5.0
CV45-CKB6-69	11.326.562	2	CKB6	2.500	2.716	3.937	5.0
CV45-CKB7-83	11.326.574	2	CKB7	3.543	3.268	6.300*	7.8
CV50-CKB1-48	11.326.610	1	CKB1	.750	1.870	1.570	6.2
CV50-CKB1-91	11.326.611				3.562	3.150	7.0
CV50-CKB2-53	11.326.620	1	CKB2	.944	2.067	1.970	6.5
CV50-CKB2-105	11.326.622				4.114	3.937	7.5
CV50-CKB2-135	11.326.623				5.295	5.118	7.6
CV50-CKB3-54	11.326.630	1	CKB3	1.220	2.126	2.165	7.0
CV50-CKB3-100	11.326.632				3.937	3.937	7.5
CV50-CKB3-130	11.326.633				5.118	5.118	7.8
CV50-CKB3-160	11.326.634				6.300	6.300	8.0
CV50-CKB4-93	11.326.642	1	CKB4	1.535	3.611	3.937	8.0
CV50-CKB4-153	11.326.644				6.023	6.300	8.3
CV50-CKB4-193	11.326.645				7.598	7.875	8.8

Catalog Number	Reference Number	Fig.	CK	ØD	L	X	Weight (lbs.)
CV50-CKB5-83	11.326.652	1	CKB5	1.968	3.268	3.937	7.5
CV50-CKB5-143	11.326.654				5.630	6.300	9.2
CV50-CKB5-183	11.326.655				7.205	7.875	11.0
CV50-CKB5-243	11.326.656				9.567	10.236	12.8
CV50-CKB6-69	11.326.662	1	CKB6	2.500	2.716	3.937	7.6
CV50-CKB6-129	11.326.664				5.079	6.300	10.5
CV50-CKB6-169	11.326.665				6.654	7.875	13.0
CV50-CKB6-229	11.326.666				9.016	10.236	15.8
CV50-CKB6-289	11.326.667				11.378	12.598	18.5
CV50-CKB7-83	11.326.674	2	CKB7	3.543	3.268	6.300*	9.8
CV50-CKB7-135	11.326.675				5.315	8.546*	15.7
CV50-CKB7-183	11.326.676				7.205	10.236*	21.0
CV60-CKB6-79	11.360.562	1	CKB6	2.500	3.100	4.200	23.5
CV60-CKB6-130	11.360.564				5.100	6.200	26.0
CV60-CKB6-180	11.360.565				7.100	8.200	28.0
CV60-CKB7-135	11.360.575		CKB7	3.543	5.300	8.215	30.5
CV60-CKB7-185	11.360.576				7.300	10.215	35.5
CV60-CKB7-287	11.360.578				11.300	14.215	45.0

***For CKB7, Bore Depth applies for boring heads with length of 4.606"**
• X dimensions on the table are reference figures when EWN/EWE head is mounted

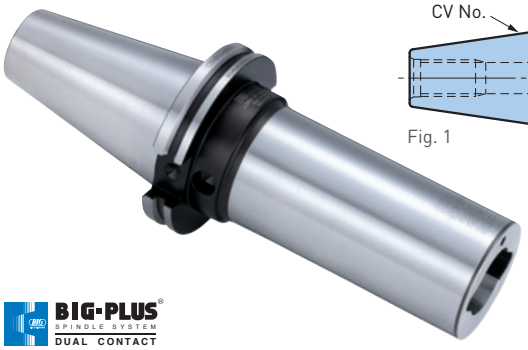
ACCESSORIES

SPARE PARTS
PG. 538

CKN SHANKS

Catalog Number	Reference Number	Fig.	CK	ØD	L	X	Weight (lbs.)
CV50-CKN6-69	11.326.662N	1	CKN6	2.500	2.716	3.937	7.6
CV50-CKN6-129	11.326.664N			2.500	5.079	6.300	10.5
CV50-CKN6-169	11.326.665N			2.500	6.654	7.875	13.0
CV50-CKN6-228	11.326.666N			2.500	9.016	10.236	15.8
CV50-CKN6-289	11.326.667N			2.500	11.378	12.598	18.5
CV50-CKN7-135	11.326.675N	2	CKN7	3.543	5.315	8.546	15.7

CKB SHANKS—BIG-PLUS



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

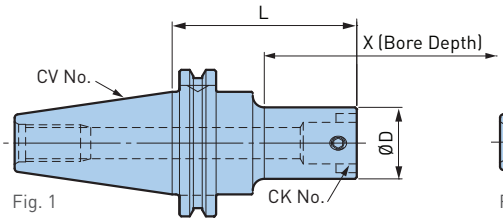


Fig. 1

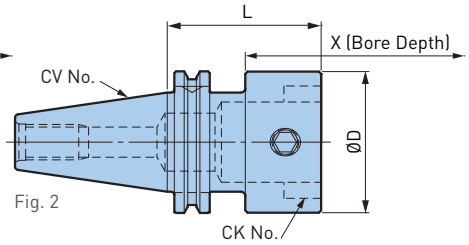


Fig. 2

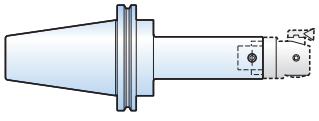
COOLANT THROUGH

Catalog Number	Reference Number	Fig.	CK	ØD	L	X	Weight (lbs.)
BCV40-CKB4-73	11.368.441	1	CKB4	1.535	2.874	3.150	3.0
BCV40-CKB4-153	11.368.444				6.024	6.300	5.0
BCV40-CKB5-63	11.368.451	2	CKB5	1.968	2.480	3.150	3.0
BCV40-CKB5-143	11.368.454				5.630	6.300	6.0
BCV40-CKB6-69	11.368.462	2	CKB6	2.500	2.716	3.937	3.0
BCV40-CKB6-129	11.368.464				5.079	6.300	6.5
BCV50-CKB4-93	11.368.642	1	CKB4	1.535	3.661	3.937	8.0
BCV50-CKB4-153	11.368.644				6.023	6.300	8.3
BCV50-CKB4-193	11.368.645				7.598	7.875	8.8
BCV50-CKB5-83	11.368.652	1	CKB5	1.968	3.268	3.937	7.5
BCV50-CKB5-143	11.368.654				5.630	6.300	9.2
BCV50-CKB5-183	11.368.655				7.205	7.875	11.0
BCV50-CKB5-243	11.368.656				9.567	10.236	12.8
BCV50-CKB6-69	11.368.662	1	CKB6	2.500	2.716	3.937	7.6
BCV50-CKB6-129	11.368.664				5.079	6.300	10.5
BCV50-CKB6-169	11.368.665				6.654	7.875	13.0
BCV50-CKB6-229	11.368.666				9.016	10.236	15.8
BCV50-CKB6-289	11.368.667				11.378	12.598	18.5
BCV50-CKB7-83	11.368.674	2	CKB7	3.543	3.268	6.300*	9.8
BCV50-CKB7-135	11.368.675				5.315	8.546*	15.7
BCV50-CKB7-183	11.368.676				7.205	10.236*	21.0

• X dimensions on the table are reference figures when EWN/EWE head is mounted

CKN SHANKS—BIG-PLUS

Catalog Number	Reference Number	Fig.	CK	ØD	L	X	Weight (lbs.)
BCV40-CKN6-69	11.368.462N	2	CKN6	2.500	2.716	3.937	3.0
BCV50-CKN6-69	11.368.662N	1	CKN6	2.500	2.716	3.937	7.6
BCV50-CKN6-129	11.368.664N			2.500	5.079	6.300	10.5
BCV50-CKN6-228	11.368.666N			2.500	9.016	10.236	15.8
BCV50-CKN7-83	11.368.674N	2	CKN7	3.543	3.268	6.300	9.8



EXTENSION & REDUCTION
Pg. 270

ROUGH BORING HEAD
Pg. 414

FINE BORING HEAD
Pg. 434

CKB SHANKS—WITH FLANGE COOLANT HOLES

COOLANT THROUGH

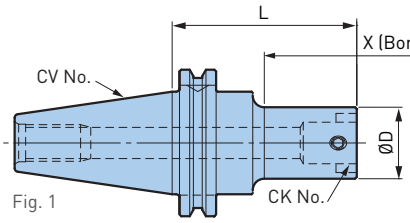


Fig. 1

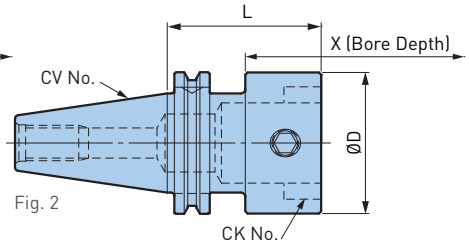
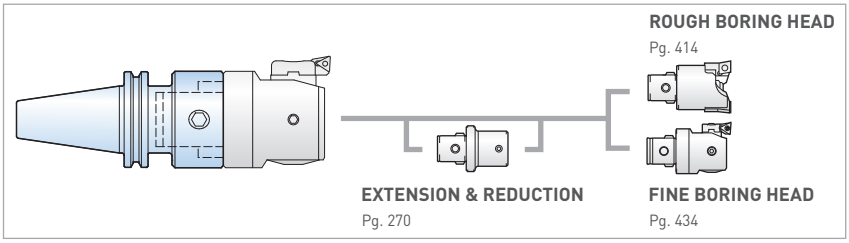


Fig. 2

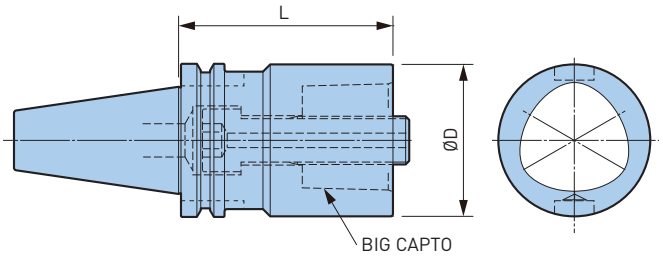
Catalog Number	Reference Number	Fig.	CK	ØD	L	X	Weight (lbs.)
CV40-CKB5-63UDF	11.326.851	1	CKB5	1.968	2.480	3.150	3.0
CV40-CKB6-69UDF	11.326.862	2	CKB6	2.500	2.716	3.937	3.0
CV50-CKB6-69UDF	11.326.962	1	CKB6	2.500	2.716	3.937	7.6
CV50-CKB7-83UDF	11.326.974	2	CKB7	3.543	3.268	6.300*	9.8

***For CKB7 Bore Depth applies for boring heads with length of 4.606"**
• X dimensions on the table are reference figures when EWN/EWE head is mounted

ACCESSORIES



BIG CAPTO SHANKS



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

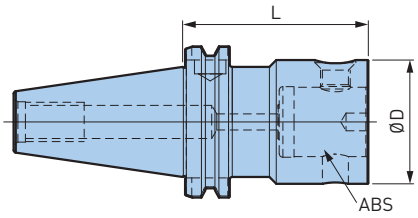
Catalog Number	BIG CAPTO	ØD	L	Weight (lbs.)
BCV40Y-C5-3	C5	1.969	3.000	3.6
BCV40Y-C6-3.5	C6	2.480	3.500	4.2
BCV50Y-C5-1.5	C5	1.969	1.500	7.5
BCV50Y-C6-2	C6	2.480	2.000	7.5
BCV50Y-C8-3	C8	3.150	3.000	8.9

• Clamp bolt is included

CAUTION

Y Style BCV tool holders include a tight tolerance drive key for turning applications. Does not conform to older ASME B5.50 safe zone standard. Interference with tool change may occur on machines made to an older standard. Consult engineering for specific information about the intended machine.

ABS SHANKS



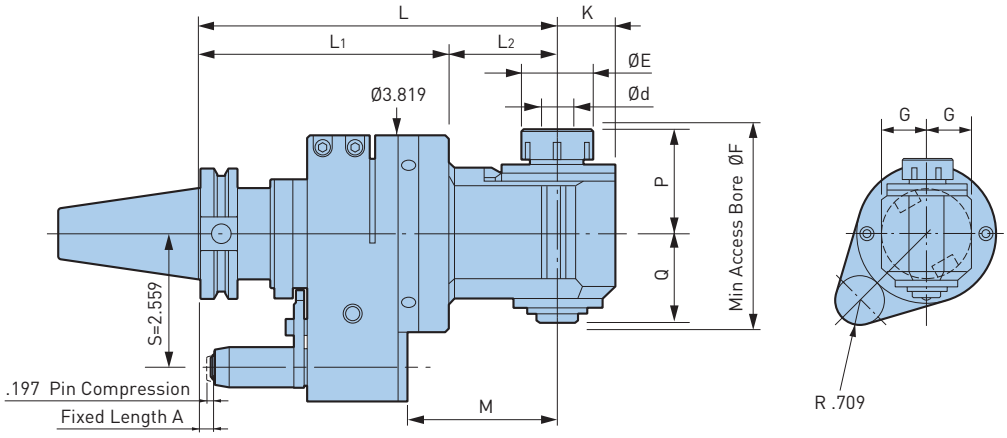
BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	ABS	ØD	L	Weight (lbs.)
BCV40-ABS50-75	ABS50	1.969	2.953	2.8
BCV40-ABS63-90	ABS63	2.480	3.543	3.5
BCV50-ABS40-60	ABS40	1.575	2.362	7.0
BCV50-ABS50-60	ABS50	1.969	2.362	7.1
BCV50-ABS63-80	ABS63	2.480	3.150	7.7
BCV50-ABS80-100	ABS80	3.150	3.937	10.0
BCV50-ABS100-125	ABS100	3.937	4.921	15.0

AG90 NBS TYPE

CLAMPING RANGE: Ø.010"-.787"

MAX 6,000 RPM



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØE	G	K	L	L1	L2	M	P	Q	ØF	Collet	Max RPM	Weight (lbs.)
BCV40-AG90/NBS6-180	**.010-.236**	.787	.827	.669	7.09	4.92	2.17	3.03	1.30	1.14	2.638	NBC6-□	6,000	11.2
BCV40-AG90/NBS6-210					8.27		3.35	4.21						11.7
BCV40-AG90/NBS6-240					9.45		4.53	5.39						12.1
BCV40-AG90/NBS6-270					10.63		5.71	6.58						12.5
BCV40-AG90/NBS10-180	**.059-.394**	1.181	1.181	.984	7.09	4.92	2.17	3.03	1.77	1.69	3.583	NBC10-□	6,000	12.1
BCV40-AG90/NBS10-210					8.27		3.35	4.21						13.0
BCV40-AG90/NBS10-240					9.45		4.53	5.39						13.7
BCV40-AG90/NBS13-180	**.098-.512**	1.378	1.220	1.102	7.09	4.92	2.17	3.03	2.05	1.77	3.976	NBC13-□	6,000	12.3
BCV40-AG90/NBS13-210					8.27		3.35	4.21						13.2
BCV40-AG90/NBS13-240					9.45		4.53	5.39						13.9
BCV40-AG90/NBS20S-175S	**.098-.787**	1.811	1.378	1.299	6.89	4.80	2.09	2.84	2.56	2.44	5.197	NBC20-□	3,000	17.6

- Nut and wrench are included; collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

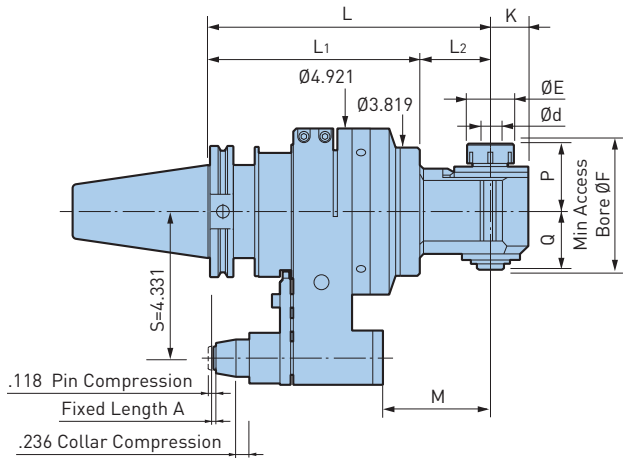
CAUTION

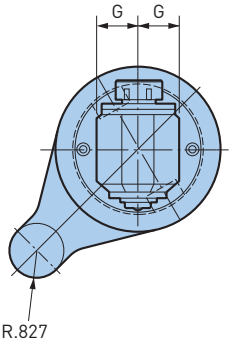
A stop block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

AG90 NBS TYPE

CLAMPING RANGE: Ø.010"-.787"

MAX 6,000 RPM





BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØE	G	K	L	L1	L2	M	P	Q	ØF	Collet	Max RPM	Weight (lbs.)
BCV50-AG90/NBS6-215	.010-.236	.787	.827	.669	8.47	6.30	2.17	3.23	1.30	1.14	2.638	NBC6-□	6,000	27.8
BCV50-AG90/NBS6-245					9.65		3.35	4.41						28.2
BCV50-AG90/NBS6-275					10.83		4.53	5.59						28.7
BCV50-AG90/NBS6-305					12.01		5.71	6.77						29.1
BCV50-AG90/NBS10-215	.059-.394	1.181	1.181	.984	8.47	6.30	2.17	3.23	1.77	1.69	3.583	NBC10-□	6,000	28.7
BCV50-AG90/NBS10-245					9.65		3.35	4.41						29.5
BCV50-AG90/NBS10-275					10.83		4.53	5.59						30.2
BCV50-AG90/NBS13-215	.098-.512	1.378	1.220	1.102	8.47	6.30	2.17	3.23	2.05	1.77	3.976	NBC13-□	6,000	28.9
BCV50-AG90/NBS13-245					9.65		3.35	4.41						29.8
BCV50-AG90/NBS13-275					10.83		4.53	5.59						30.4
BCV50-AG90/NBS20-230	.098-.787	1.811	1.378	1.378	9.06	6.30	2.76	3.82	2.56	2.44	5.197	NBC20-□	3,000	31.3

- Nut and wrench are included; collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

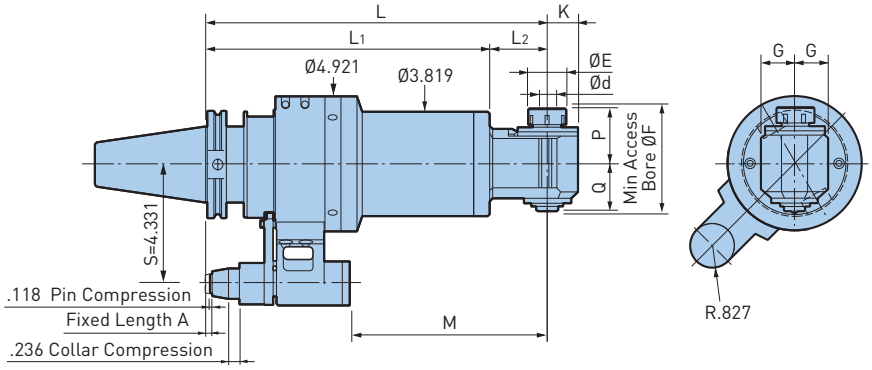
CAUTION

A stop block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

AG90 NBS EXTRA LONG TYPE

CLAMPING RANGE: Ø.010"-.787"

MAX 6,000 RPM



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØE	G	K	L	L1	L2	M	P	Q	ØF	Collet	Max RPM	Weight (lbs.)
BCV50-AG90/NBS6-315LS	.010-.236	.787	.827	.669	12.40	10.24	2.17	7.17	1.30	1.14	2.638	NBC6-□	6,000	41.7
BCV50-AG90/NBS6-345LS					13.58		3.35	8.35						42.1
BCV50-AG90/NBS6-375LS					14.76		4.53	9.53						42.5
BCV50-AG90/NBS6-405LS					15.95		5.71	10.71						43.0
BCV50-AG90/NBS6-415LS					16.34	14.17	2.17	11.10			2.638			51.4
BCV50-AG90/NBS6-445LS					17.52		3.35	12.28						51.8
BCV50-AG90/NBS6-475LS					18.70		4.53	13.47						52.2
BCV50-AG90/NBS6-505LS					19.88		5.71	14.65						52.7
BCV50-AG90/NBS6-515LS					20.28	18.11	2.17	15.04			2.638			61.1
BCV50-AG90/NBS6-545LS					21.46		3.35	16.22						61.5
BCV50-AG90/NBS6-575LS					22.64		4.53	17.40						61.9
BCV50-AG90/NBS6-605LS					23.82		5.71	18.58						62.4

Catalog Number	Ød	ØE	G	K	L	L1	L2	M	P	Q	ØF	Collet	Max RPM	Weight (lbs.)
BCV50-AG90/NBS10-315LS					12.40		2.17	7.17						42.5
BCV50-AG90/NBS10-345LS					13.58	10.24	3.35	8.35						43.4
BCV50-AG90/NBS10-375LS					14.76		4.53	9.53						44.1
BCV50-AG90/NBS10-415LS					16.34		2.17	11.10						52.2
BCV50-AG90/NBS10-445LS	**.059-.394**	1.181	1.181	.984	17.52	14.17	3.35	12.28	1.77	1.69	3.583	NBC10-□	6,000	53.1
BCV50-AG90/NBS10-475LS					18.70		4.53	13.47						53.8
BCV50-AG90/NBS10-515LS					20.28		2.17	15.04						61.9
BCV50-AG90/NBS10-545LS					21.46	18.11	3.35	16.22						62.8
BCV50-AG90/NBS10-575LS					22.64		4.53	17.40						63.5
BCV50-AG90/NBS13-315LS					12.40		2.17	7.17						42.8
BCV50-AG90/NBS13-345LS					13.58	10.24	3.35	8.35						43.7
BCV50-AG90/NBS13-375LS					14.76		4.53	9.53						44.3
BCV50-AG90/NBS13-415LS					16.34		2.17	11.10						52.5
BCV50-AG90/NBS13-445LS	**.098-.511**	1.378	1.220	1.102	17.52	14.17	3.35	12.28	2.05	1.77	3.976	NBC13-◆	6,000	53.4
BCV50-AG90/NBS13-475LS					18.70		4.53	13.47						54.0
BCV50-AG90/NBS13-515LS					20.28		2.17	15.04						62.2
BCV50-AG90/NBS13-545LS					21.46	18.11	3.35	16.22						63.1
BCV50-AG90/NBS13-575LS					22.64		4.53	17.40						63.7
BCV50-AG90/NBS20-330LS					12.99	10.24	2.76	7.76						45.2
BCV50-AG90/NBS20-430LS	**.098-.787**	1.811	1.378	1.378	16.93	14.17	2.76	11.69	2.56	2.44	5.197	NBC20-□	3,000	54.9
BCV50-AG90/NBS20-530LS					20.87	18.11	2.76	15.63						64.6

- Nut and wrench are included; collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

CAUTION

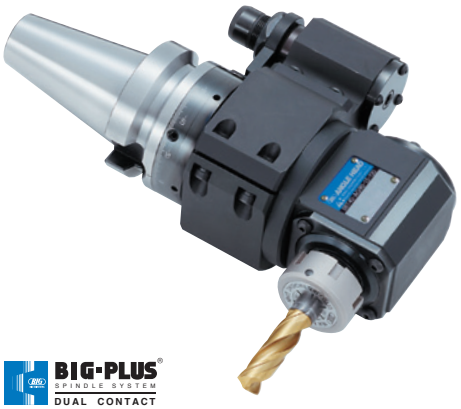
A stop block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

AG90 COMPACT TYPE

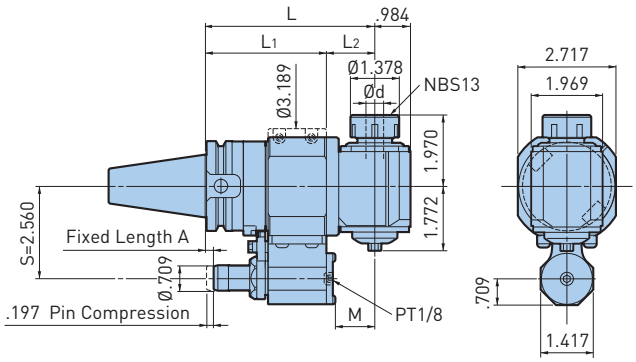
CLAMPING RANGE: Ø.098"-.512"

MAX 5,000 RPM

For Drilling Only—Ideal Size for Small Machining Centers



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



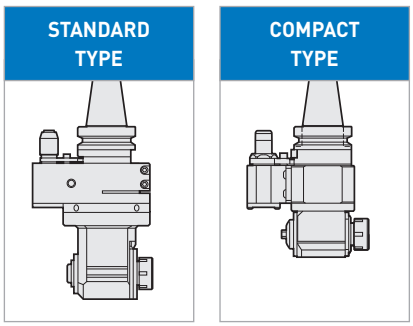
Catalog Number	Ød	L	L1	L2	M	Collet	Max RPM	Weight (lbs.)
BCV40-AG90-13-120	**.098-.512**	4.72	3.39	1.34	1.10	NBC13-□	1:1	10.0

- Nut and wrench are included; collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- A tapped hole (PT1/8) is prepared at the bottom cover of the locating pin housing so that a pipe for coolant can be connected
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

CAUTION

A stop block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1). AG90 Compact Type is for drilling only.



CASE & HEAD SIZES ARE SUBSTANTIALLY REDUCED

- High precision NEW BABY COLLET
- Spiral bevel gears and angular contact bearings
- Advanced non-contact sealing structure

APPLICATION EXAMPLE

Stable machining is obtained due to high rigidity and good runout.

DRILLING	
Cutter	Ø.472" (12mm) Carbide Drill
Workpiece	1050 Steel
Cutting Speed	230 SFM
Cutting Feed	14.6 IPM
	.008 IPR
Spindle Speed	1,860 RPM

AG90 TWIN HEAD

CLAMPING RANGE: Ø.059"-.394"

MAX 6,000 RPM

Compact design. Symmetrical machining can be performed using one unit.

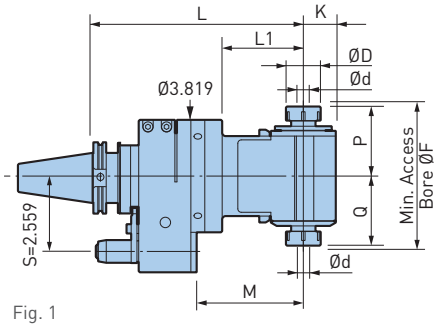
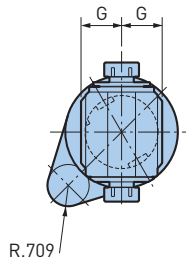


Fig. 1



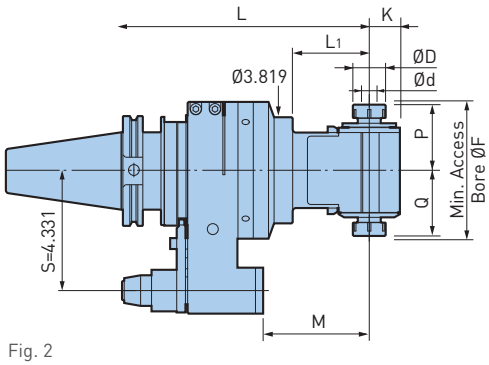
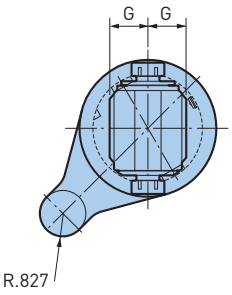


Fig. 2



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	ød	øD	G	K	L	L1	M	P	Q	øF	Collet	Weight (lbs.)
BCV40-AG90/NBS10W-195	1	**.059-.394**	1.181	1.220	1.102	7.68	2.76	3.62	2.36	2.36	4.88	NBC10	13.9
BCV50-AG90/NBS10W-230	2	**.059-.394**	1.181	1.220	1.102	9.06	2.76	3.81	2.36	2.36	4.88	NBC10	30.4

- Nut and wrench are included; collet must be ordered separately
- Output spindles do not rotate in forward direction simultaneously
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

CAUTION

A stop block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

AG45 NBS

CLAMPING RANGE: Ø.060"-.512"

MAX 6,000 RPM

Exclusive fixing housing allows for secure diagonal machining.

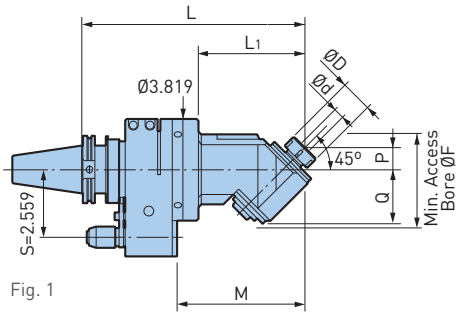


Fig. 1

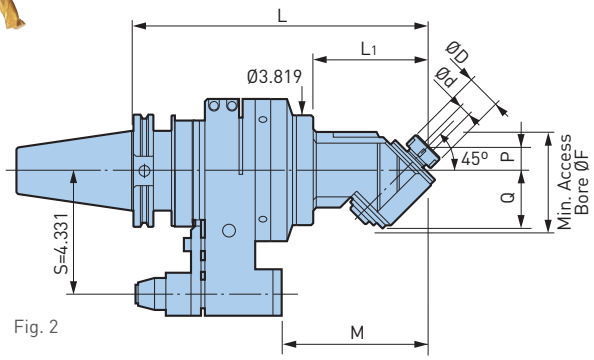
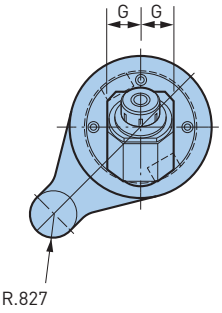


Fig. 2



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	Ød	ØD	G	L	L1	M	P	Q	øF	Collet	Weight (lbs.)
BCV40-AG45/NBS10-225	1	**.060-.394**	1.181	1.181	8.86	3.94	4.80	.79	2.03	3.54	NBC10	12.6
BCV40-AG45/NBS13-230		**.098-.512**	1.378		9.06	4.13	5.00	.98			NBC13	12.8
BCV50-AG45/NBS10-260	2	**.060-.394**	1.181	1.181	10.24	3.94	5.00	.79	2.03	3.54	NBC10	29.1
BCV50-AG45/NBS13-265		**.098-.512**	1.378		10.43	4.13	5.20	.98			NBC13	29.3

- Nut and wrench are included; collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

COLLET PG. 360

WRENCH PG. 389

STOP BLOCK PG. 407

CAUTION

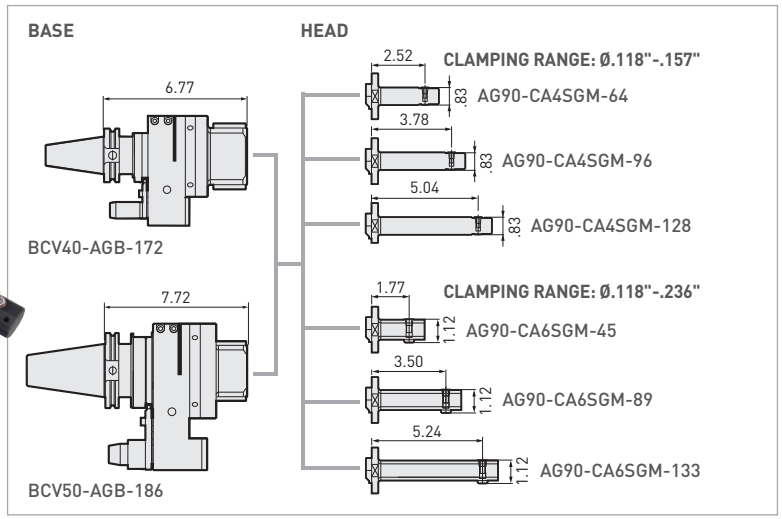
A stop block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

AG90 SLENDER DRIVE

CLAMPING RANGE: Ø.118"-.236" For Angular Operations within a Ø1.181 Inch Bore

MAX 2,000 RPM

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



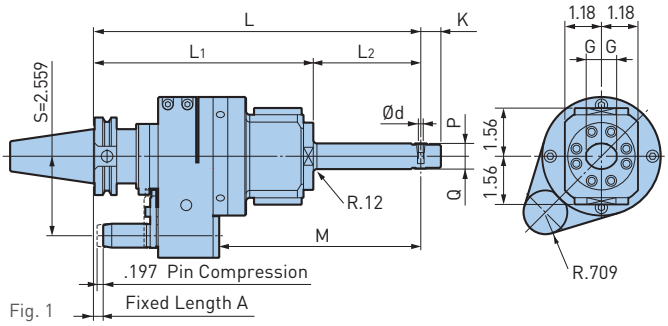


Fig. 1

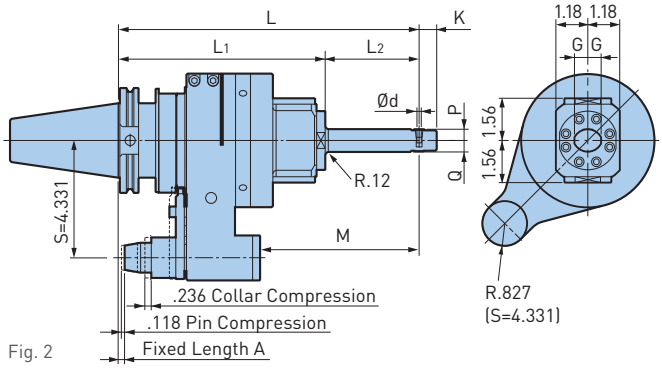


Fig. 2

Base	Head	Fig.	Ød	G	K	L	L1	L2	M	P	Q	Speed Ratio	Weight (lbs.)
BCV40-AGB-172	AG90-CA4SGM-64	1	.118-.157	.492	.650	9.29	7.09	2.21	5.24	.41	.41	1:1.06 (Increase)	12.3
	AG90-CA4SGM-96					10.55		3.47	6.50				12.6
	AG90-CA4SGM-128					11.81		4.72	7.76				12.9
	AG90-CA6SGM-45	1	.118-.236	.591	.787	8.54	7.09	1.46	4.49	.49	.63	1:0.77 (Decrease)	12.6
	AG90-CA6SGM-89					10.28		3.19	6.22				13.0
	AG90-CA6SGM-133					12.01		4.92	7.95				13.5
BCV50-AGB-186	AG90-CA4SGM-64	2	.118-.157	.492	.650	9.84	7.64	2.21	4.61	.41	.41	1:1.06 (Increase)	26.2
	AG90-CA4SGM-96					11.10		3.47	5.87				26.5
	AG90-CA4SGM-128					12.36		4.72	7.13				26.7
	AG90-CA6SGM-45	2	.118-.236	.591	.787	9.09	7.64	1.46	3.86	.49	.63	1:0.77 (Decrease)	26.5
	AG90-CA6SGM-89					10.83		3.19	5.59				26.9
	AG90-CA6SGM-133					12.56		4.92	7.32				27.3

- Collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately

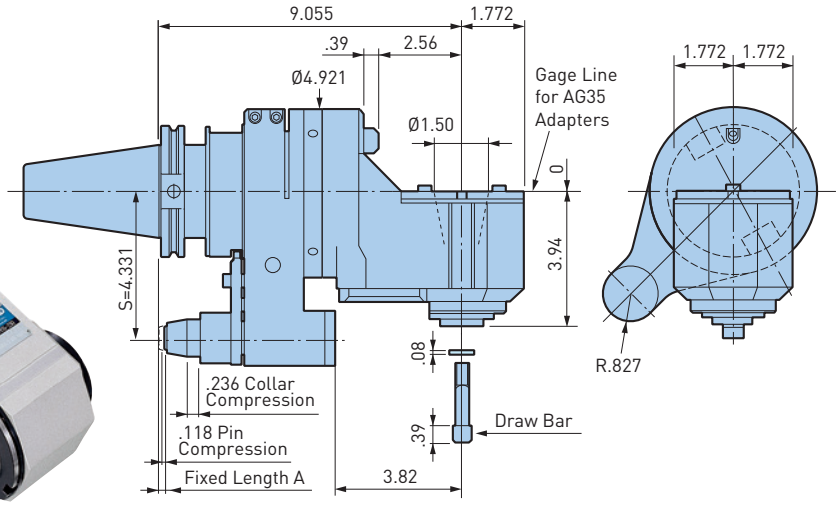
ACCESSORIES

CAUTION

A stop block is required. The rotation of the cutting tool is in same direction of the machine spindle.

AG90 BUILD-UP TYPE

For All Machinery Applications



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

CAUTION

A stop block is required. The rotation of the cutting tool is in same direction of the machine spindle.

Catalog Number	Weight (lbs.)
BCV50-AG90/AGH35-230	33.1

- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models

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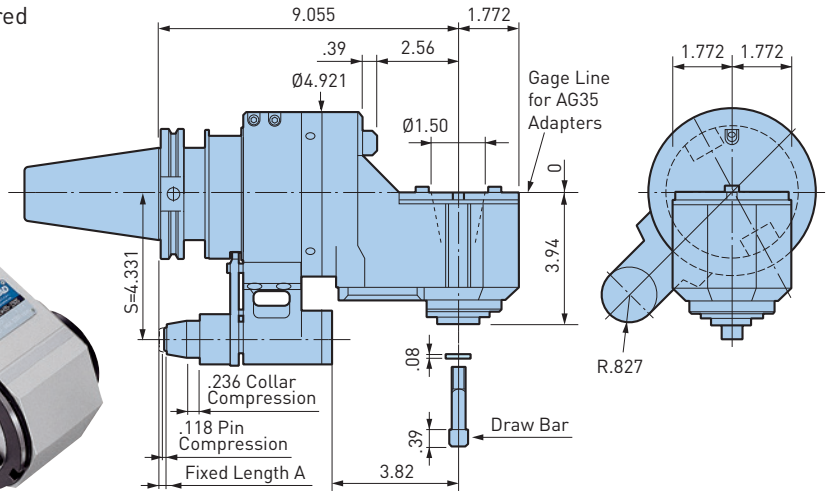
For Application Where Increased Rigidity is Required



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

CAUTION

A stop block is required. The rotation of the cutting tool is in same direction of the machine spindle.

Catalog Number	Weight (lbs.)
BCV50-AG90/AGH35-230S	35.9

- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models

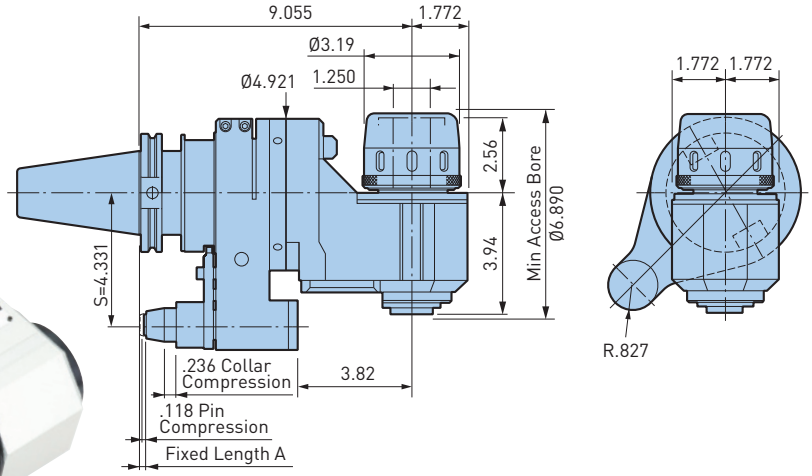
ACCESSORIES

ADAPTERS PG. 406 | WRENCH PG. 389 | STOP BLOCK PG. 407

AG90 HMC TYPE

For Heavy Duty End Milling

MAX 3,000 RPM



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Weight (lbs.)
BCV50-AG90/HMC1.250-230	37.0

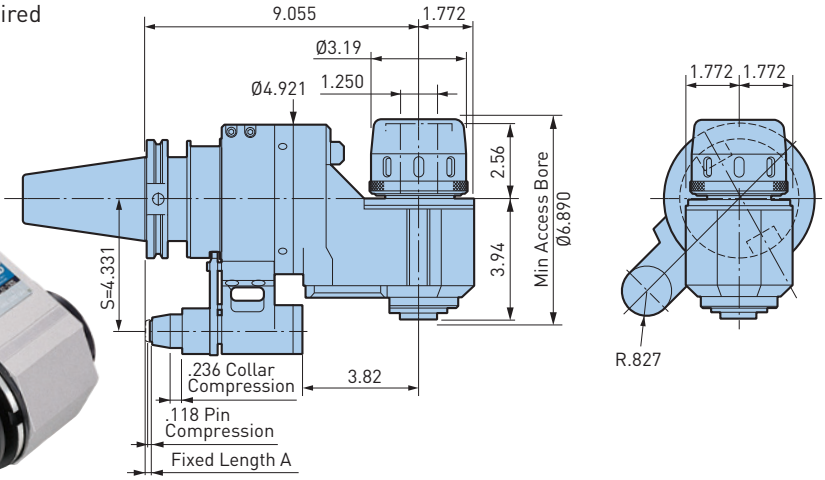
CAUTION

A stop block is required. The rotation of the cutting tool is in same direction of the machine spindle.

- Wrench is included
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models

For Applications Where Increased Rigidity is Required

MAX 3,000 RPM



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Weight (lbs.)
BCV50-AG90/HMC1.250-230S	39.9

CAUTION

A stop block is required. The rotation of the cutting tool is in same direction of the machine spindle.

- Wrench is included
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models

ACCESSORIES

COLLET PG. 386

WRENCH PG. 389

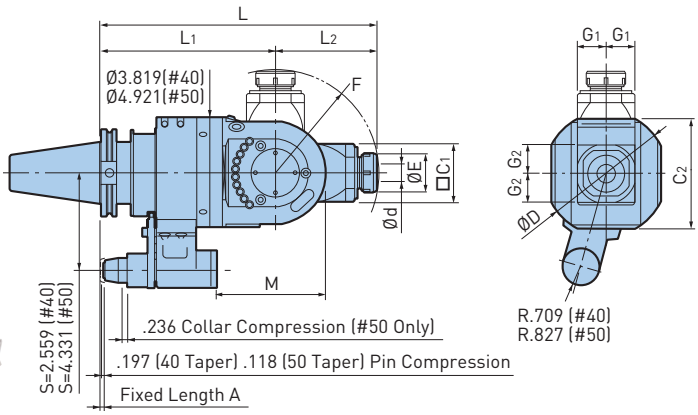
STOP BLOCK PG. 407

AGU UNIVERSAL TYPE

CLAMPING RANGE: Ø.098"-.787" For Angular Operations

MAX 6,000 RPM

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



Catalog Number	Ød	ØE	ØD	□C1	C2	G1	G2	L	L1	L2	M	F	Collet	Max RPM	Weight (lbs.)
BCV40-AGU/NBS13-280	**.098-.512**	1.378	4.53	2.00	3.82	1.024	1.014	11.02	7.09	3.94	4.88	4.02	NBC13-□	6,000	21.4
BCV50-AGU/NBS20-315	**.098-.787**	1.811	5.51	2.56	4.92	1.299	1.280	12.40	7.87	4.53	4.92	4.65	NBC20-□	4,000	44.1

- Nut and wrench are included; collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- Automatic tool change may not be available depending on machine tool models

ACCESSORIES

COLLET PG. 360 | WRENCH PG. 389 | STOP BLOCK PG. 407 | STOP BLOCK PG. 407

CAUTION

A stop block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

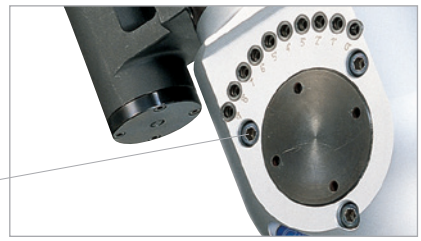
EASILY ADJUST SPINDLE ANGLE FROM 0° TO 90°

PRECISE ANGLE ADJUSTMENT

Unique setting mechanism enables the spindle angle to be precisely set at 1° increments.

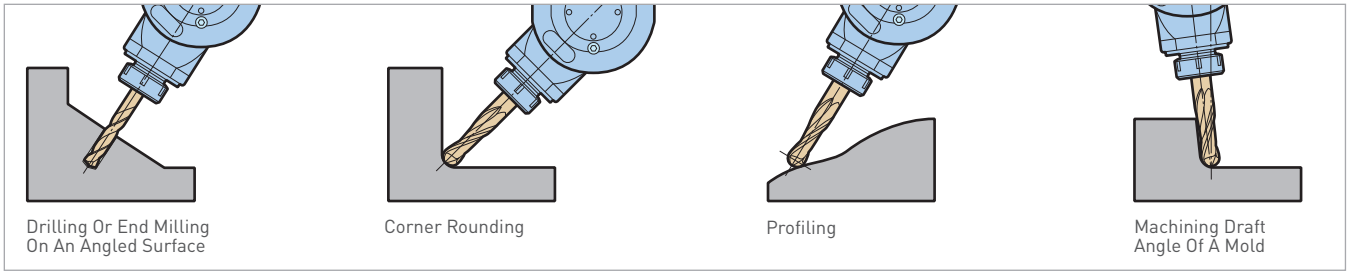
EXCLUSIVE CLAMPING BOLTS AND NUTS

Specially selected materials and special design for clamping the head guarantees rigidity even for end milling applications.



APPLICATION EXAMPLE

Adjustable AGU Universal Series expands ANGLE HEAD capabilities to accomplish various angular machining applications.



Drilling Or End Milling On An Angled Surface

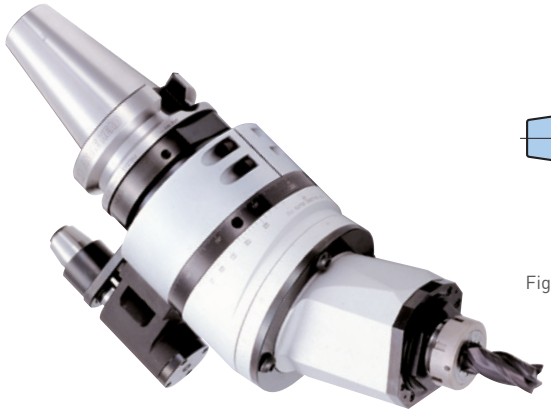
Corner Rounding

Profiling

Machining Draft Angle Of A Mold

AGU30 TYPE

CLAMPING RANGE: Ø.098"-.787" For Angular Operations



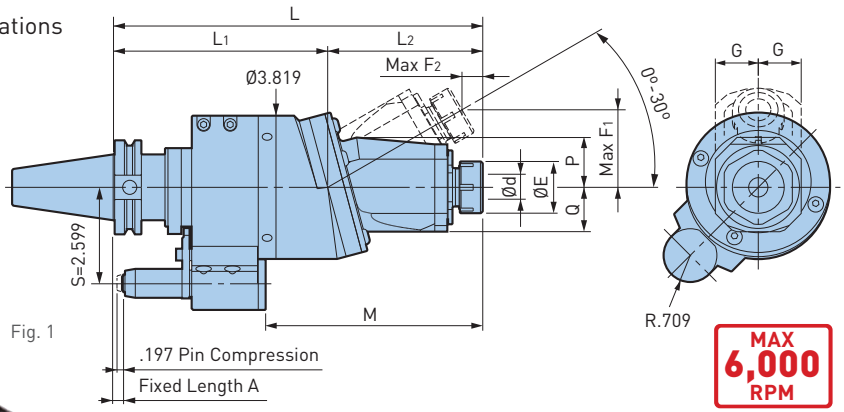
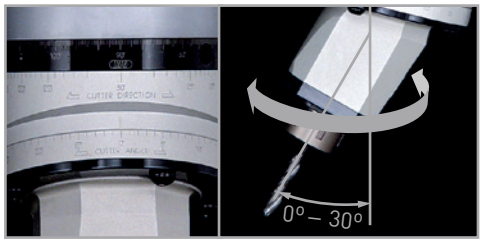


Fig. 1

MAX 6,000 RPM

ANGLE ADJUSTMENT BY ALIGNING DIVISIONS

Spindle angle is easily adjustable from 0° to 30° using the scale indication on the body.



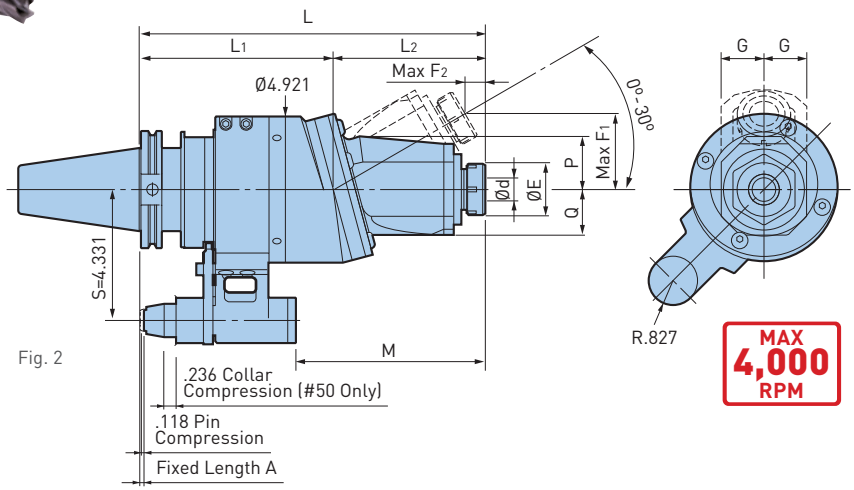


Fig. 2

MAX 4,000 RPM

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	Ød	ØE	G	L	L1	L2	M	P	Q	F1	F2	Collet	Max RPM	Weight (lbs.)
BCV40-AGU30/NBS13-250	1	**.098-.512**	1.378	1.142	9.84	5.71	4.13	5.79	1.34	1.18	2.07	.55	NBC13-☐	6,000	15.3
BCV50-AGU30/NBS20-295	2	**.098-.787**	1.811	1.437	11.61	6.50	5.12	6.38	1.77	1.54	2.56	.67	NBC20-☐	4,000	35.8

- Nut and wrench are included; collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- Automatic tool change may not be available depending on machine tool models
- When supplied through the stop block, coolant can be ejected from the housing

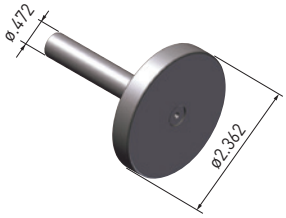
ACCESSORIES

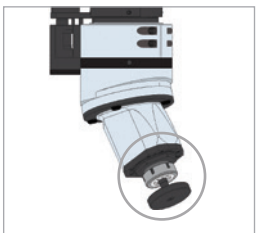
CAUTION

A stop block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

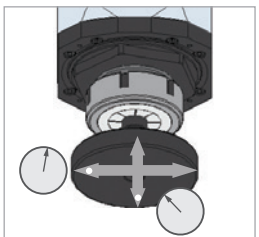
SETTING DISC (INCLUDED)

For the precise adjustment of spindle angle or direction.





Clamp the Setting Disc Into the Angled Spindle



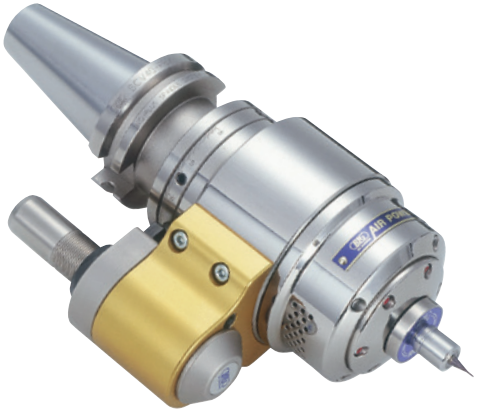
Check the Cutter Alignment and the Setting Angle

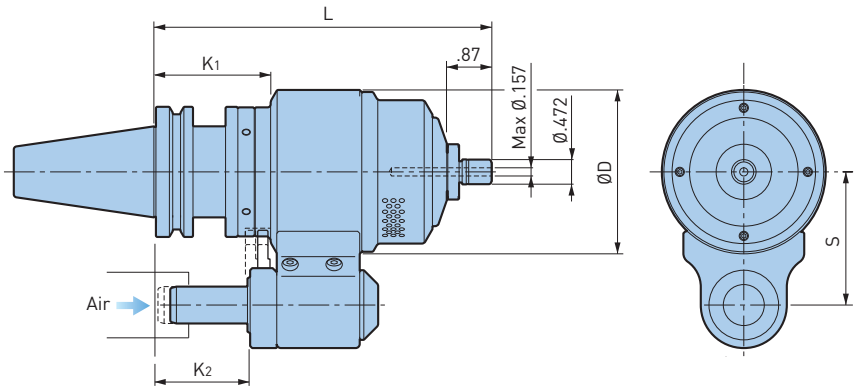
AIR POWER SPINDLE—RBX5 & RBX7

For High Speed Micro Machining with Automatic Tool Change

ZERO MACHINE SPINDLE ROTATION

MAX 80,000 RPM





BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Practical Spindle Speed (RPM)	Cutting Diameter	L	ØD	K1	K2	S	Weight (lbs.)
BCV40-RBX7-4S-165-65	60,000-80,000	Ø.039 or smaller	6.50	3.150	2.24	1.85	2.559	8.8
BCV40-RBX5-4S-165-65	40,000-50,000	Ø.059 or smaller		3.780				11.0
BCV50-RBX7-4S-170-80	60,000-80,000	Ø.039 or smaller	6.69	3.937	2.44	2.05	3.150	19.1
BCV50-RBX5-4S-170-80	40,000-50,000	Ø.059 or smaller						21.3

- Nut and wrench are included; collet must be ordered separately
- XF1-NPT (Air Unit) is required; must be ordered separately

ACCESSORIES

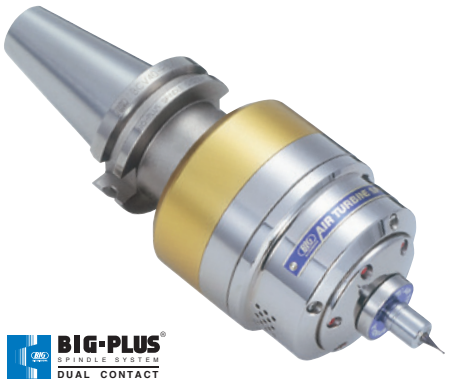
CAUTION

Compressed air to drive the AIR POWER SPINDLE must be clean. Coolant should not be supplied through the spindle on the machine that uses the AIR POWER SPINDLE.

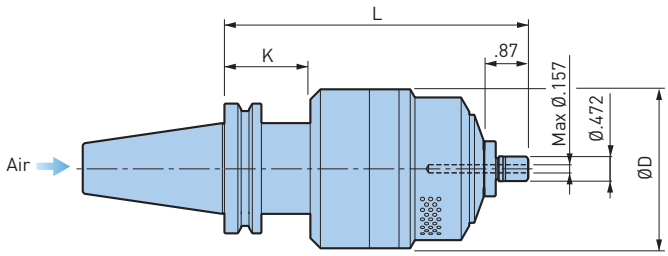
AIR POWER SPINDLE—RBX5 & RBX7

For High Speed Micro Machining with Compressed Air Through the Machine Spindle

MAX 80,000 RPM



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



Catalog Number	Practical Spindle Speed (RPM)	Cutting Diameter	L	ØD	K1	Weight (lbs.)
BCV40H-RBX7C-4S-150	60,000-80,000	Ø.039 or smaller	5.91	3.150	1.69	6.8
BCV40H-RBX5C-4S-150	40,000-50,000	Ø.059 or smaller		3.780		9.0
BCV50-RBX7C-4S-145	60,000-80,000	Ø.039 or smaller	5.71	3.150	1.50	12.8
BCV50-RBX5C-4S-145	40,000-50,000	Ø.059 or smaller		3.780		15.0

- Nut and wrench are included; collet must be ordered separately
- XF1-NPT (Air Unit) is required; must be ordered separately

ACCESSORIES

CAUTION

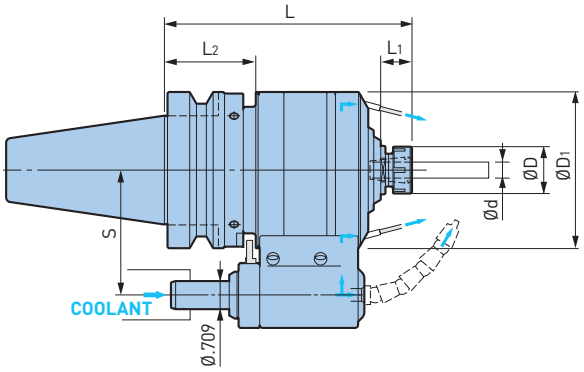
Compressed air to drive the AIR POWER SPINDLE must be clean. Coolant should not be supplied through the spindle on the machine that uses the AIR POWER SPINDLE.

HIGH SPINDLE

CLAMPING RANGE: Ø.059"-.630" For Higher Spindle Speeds

MAX 20,000 RPM

COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØD	ØD1	L	L1	L2	S	Collet	Speed Ratio	Max RPM	Weight (lbs.)
BCV40-GTG5-10-155-65	**.059-.394**	1.181	3.150	6.10	.79	2.28	2.559	NBC10	4.67	20,000	11.0
BCV50-GTG6-10-163-80	**.059-.394**	1.181	3.937	6.42	.79	2.48	3.150	NBC10	5.67	20,000	19.8
BCV50-GTG4-16-182-80	**.098-.630**	1.654	4.331	7.17	1.00	2.48	3.150	NBC16	3.80	15,000	23.8

- NEW BABY COLLET, nut and 2 tightening wrenches are included
- The allowable torque is a calculated value of the drive system, and not the actual torque in cutting
- The maximum diameter when using an end mill is Ø8mm (GTG5, GTG6) and Ø12 (GTG4)
- A stop block is required when mounting on machines
- For continuous rotation of over 30 minutes, the spindle speed should be set within 80% of the maximum speed

CAUTION

A stop block is required.

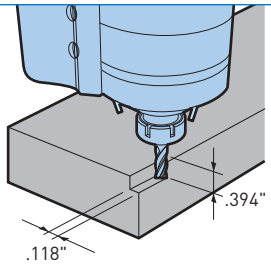
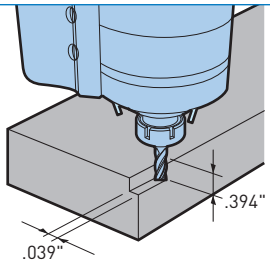
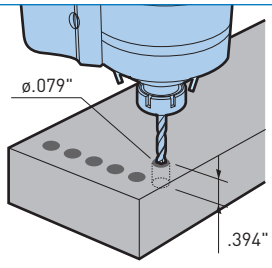
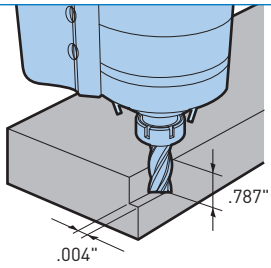
ACCESSORIES

COLLET PG. 360

WRENCH PG. 389

STOP BLOCK PG. 407

APPLICATION EXAMPLE

	GTG5	GTG6	GTG6	GTG4
Cutter	Solid carbide end mill Ø.315"/ 2 flutes	Solid carbide end mill Ø.236"/ 2 flutes	Solid carbide drill Ø.079"	Solid carbide end mill Ø.630"
Workpiece	Duralumin (A-2017)	1055	Duralumin (A-2017)	Duralumin (A-2017)
Spindle Speed	20,000 RPM	16,000 RPM	20,000 RPM	15,000 RPM
Cutting Feed	118.1 IPM	137.8 IPM	78.7 IPM	39.4 IPM
Results	High metal removal rate 5.5 cu.in./min.	High metal removal rate 137.8 IPM	Extended tool life 1,200 holes by 1 drill	Surface roughness RMS max. .00008"
				

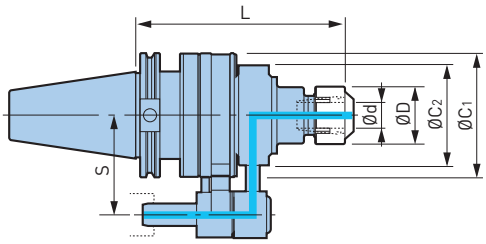
- Results will vary depending on workpiece, cutting tool, machine model and other conditions
- The rigidity and concentricity are often affected by the projection length of a cutting tool; it is recommended to keep the projection as short as possible

Hi-JET HOLDER—NBS TYPE

CLAMPING RANGE: Ø.118"-.787" For Small Diameter Drills, Gun Drills & End Mills

MAX 10,000 RPM

COOLANT THROUGH



Catalog Number	Ød	ØD	L	ØC1	ØC2	S	Max RPM	Merit Set (2 pcs. of Merit Ring) (2 pcs. of Merit Plate)	Perfect Seal	Weight (lbs.)
CV40-ONBS13N-165	.118-.512	1.378	6.61	3.213	2.87	2.559	10,000	MES-40	BPS13	8.8
CV40-ONBS20N-165	.118-.787	1.811			3.15		8,000	MES-50	BPS20	9.5
CV50-ONBS13N-165	.118-.512	1.378	6.61	3.921	3.15	3.150	8,000	MES-50	BPS13	16.1
CV50-ONBS20N-165	.118-.787	1.811			3.15		8,000		BPS20	16.5

- Collet, adjusting screw and wrench must be ordered separately
- Max coolant pressure is 284 PSI
- Clamping nut is sold separately, please order BABY PERFECT SEAL (BPS) for your application

CAUTION

A stop block is required.

ACCESSORIES

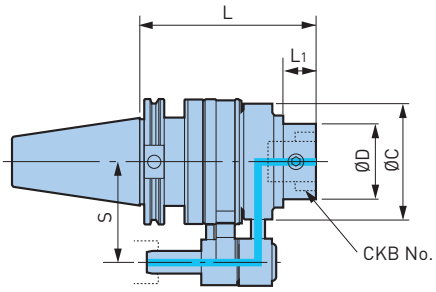
COLLET PG. 360

BABY PERFECT SEAL PG. 370

WRENCH PG. 389

STOP BLOCK PG. 407

Hi-JET HOLDER—CKB TYPE



MAX 5,000 RPM

COOLANT THROUGH

Catalog Number	CK	ØD	L	L1	ØC	S	Max RPM	Merit Set (2 pcs. of Merit Ring) (2 pcs. of Merit Plate)	Weight (lbs.)
CV40-OCKB6N-144	CKB6	2.520	5.67	1.102	3.92	2.559	6,000	MES-65	13.4
CV50-OCKB6N-142	CKB6	2.520	5.59	1.063	3.92	3.150	6,000	MES-65	15.9
CV50-OCKB7N-165	CKB7	3.543	6.50	1.358	5.10	3.150	4,000	MES-90	27.0

- Max coolant pressure is 284 PSI

CAUTION

A stop block is required.

ACCESSORIES

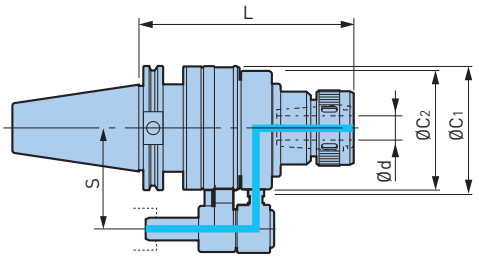
STOP BLOCK PG. 407

Hi-JET HOLDER—TG TYPE

CLAMPING RANGE: Ø.093"-1.000" For TG100 Single Angle Style Collets

MAX 8,000 RPM

COOLANT THROUGH



Catalog Number	Collet Series	Ød	L	ØC1	ØC2	S	Max RPM	Merit Set (2 pcs. of Merit Ring) (2 pcs. of Merit Plate)	Weight (lbs.)
CV40-OHC1.000N-175	TG100	**.093-1.000**	6.89	3.213	3.15	2.559	8,000	MES-50	11.1
CV50-OHC1.000N-172	TG100	**.093-1.000**	6.77	3.921	3.86	3.150	6,000	MES-65	16.5

- Max coolant pressure is 284 PSI
- Nut included, collets not available from BIG DAISHOWA

ACCESSORIES

STOP BLOCK PG. 407

CAUTION

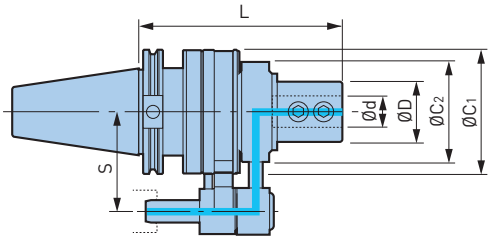
A stop block is required.

Hi-JET HOLDER—OSL TYPE

CLAMPING RANGE: Ø.750"-2.000" For Straight Shanks with Flat

MAX 8,000 RPM

COOLANT THROUGH



Catalog Number	Ød	ØD	L	ØC1	ØC2	S	Max RPM	Merit Set (2 pcs. of Merit Ring) (2 pcs. of Merit Plate)	Weight (lbs.)
CV40-OSL1.000N-165	**1.000**	1.890	6.50	3.213	3.15	2.559	8,000	MES-50	9.7
CV40-OSL1.250N-160	**1.250**	2.283	6.30	3.921	3.86		6,000	MES-65	12.6
CV50-OSL.750N-150	**.750**	1.890	5.91	3.921	3.15	3.150	8,000	MES-50	16.3
CV50-OSL1.000N-165	**1.000**		6.50						16.5
CV50-OSL1.250N-165	**1.250**	2.283			3.86		6,000	MES-65	17.4
CV50-OSL1.500N-165	**1.500**	2.500							17.6
CV50-OSL2.000N-180	**2.000**	3.307	7.09	5.079	4.76		4,000	MES-90	26.2

- Max coolant pressure is 284 PSI

ACCESSORIES

REDUCTION COLLET PG. 388

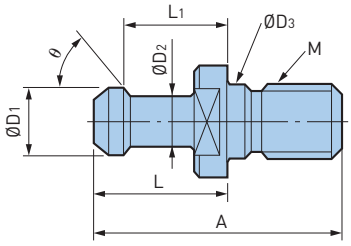
STOP BLOCK PG. 407

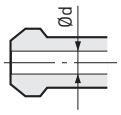
CAUTION

A stop block is required.

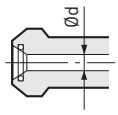
BEFORE ORDERING

Be sure to check the dimensions of the required pullstud bolt by referring to the specification sheet of the machine tool. In the case of machines with coolant-through spindle capability, provide us a copy of the pullstud bolt drawing, as the sealing method may vary even among machines with the same model number.

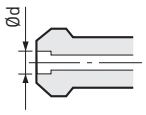




Hole Type 1



Hole Type 2



Hole Type 3

CAT40

Catalog Number	ØD1	ØD2	ØD3	A	L	L1	θ	M	Hole Type	Ød	Standard or Machine Make
P40T-1CMGHA	.591	.394	—	2.126	1.266	.990	45°	5/8"-11	1	**.118**	MAS -1 CAT with Hole
P40T-1CMGH2			.641	2.250					2		TOYODA
P40T-1CMGH											OKUMA
P40T-2CH	.591	.394	—	2.126	1.266	.990	60°		1	**.118**	MAS-2 CAT with Hole
PVD40CMGH1	.748	.551	.641	2.008	1.024	.787	75°		1	**.276**	KITAMURA
40PCMGH	.748	.551	.641	2.126	1.029	.793	75°		1	**.276**	JIS CAT with Hole
PMO40CMG	.748	.551	—	1.887	1.029	.793	75°		2	**.276**	MORI SEIKI
POM40CFMG	.591	.394		2.244	1.266	.990	90°		None	—	MORI SEIKI
PYN40CMG	.740	.490	.641	1.500	.640	.440	45°		1	**.276**	MAZAK
PMK40CMG	.748	.551	—	1.882	1.024	.787	75°		1	**.276**	MATSUURA
PCV40MGH2	.740	.490	.181	1.624	1.104	.440	45°		2	**.158**	OKUMA (Ground Face)

- Machine tool builders have used many various shapes and sizes of retention knobs
- The use of the incorrect knob may result in injury or property damage for your machining center

CAT50

Catalog Number	ØD1	ØD2	ØD3	A	L	L1	θ	M	Hole Type	Ød	Standard or Machine Make
P50T-1CH	.906	.669	—	3.346	1.780	1.386	45°	1"-8	1	**.315**	MAS-1 CAT with Hole
P50T-1CH4				3.346	1.780	1.386			2	**.236**	TOYODA
P50T-2CH	.906	.669	—	3.346	1.780	1.386	60°		1	**.315**	MAS-2 CAT with Hole
P50T-2CH2				3.071	1.771	1.377			1	**.158**	SNK
P50T-2CH11				3.346					2	**.237**	OKUMA
P50T-2CH14	.906	.669	—	3.256	1.780	1.386	60°		2	**.237**	OKUMA (Ground Face)
PVD50CH2	1.102	.826	1.031	2.919	1.344	.990	75°		1	**.453**	KITAMURA
POM50CH1	.906	.669	—	3.346	1.780	1.386	90°		2	**.315**	MORI SEIKI
POM50CF									None	—	MORI SEIKI
PYN50C5	1.140	.820	1.031	2.303	1.000	.700	45°		3	**.394**	MAZAK
PMK50CH	1.102	.827	—	2.598	1.347	.988	75°		1	**.394**	MATSUURA
PCV50H1	1.140	.820	1.031	2.300	1.500	.700	45°		2	**.237**	OKUMA (Ground Face)

- Machine tool builders have used many various shapes and sizes of retention knobs
- The use of the incorrect knob may result in injury or property damage for your machining center

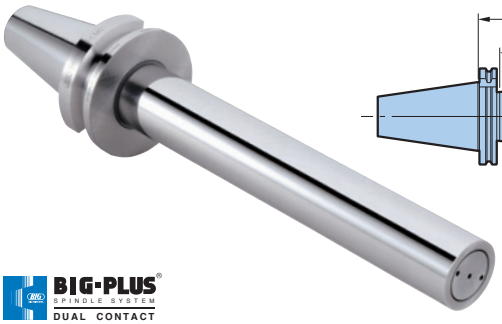
TOOL STEEL

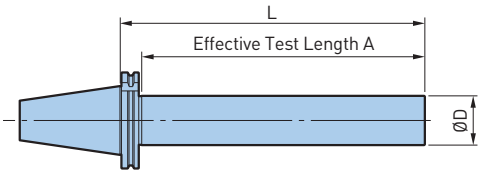
MEGA PULLSTUD BOLT

MG in the model numbers stand for MEGA PULLSTUD BOLT. Tensile strength is improved by utilizing tool steel. Especially recommended for BIG-PLUS dual contact applications.

DYNA TEST

Helps identify potential problems, and can reduce downtime and costly repairs of the machine tool spindle.



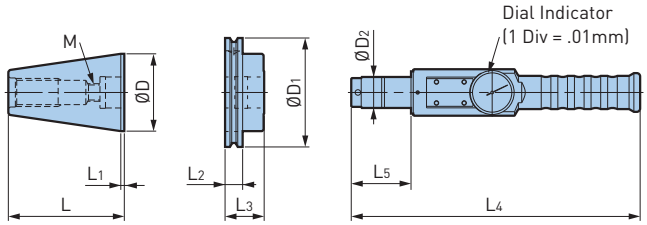


BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	L	A	ØD
BCV40-2.000-L13.5SD	13.500	12.500	2.000
BCV50-2.000-L13.5SD	13.500	12.500	2.000

ATC ALIGNMENT TOOL

For re-aligning the center between the machine tool spindle and ATC gripper. It can also be used for re-aligning the ATC gripper and tool magazine pots. More detailed information on pg. 640.

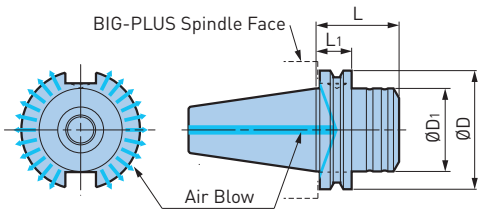


- Machine tool builders use various shapes and sizes of retention knobs
- The use of the incorrect knob may result in injury or property damage for your machining center

Catalog Number	ØD	ØD1	ØD2	L	L1	L2	L3	L4	L5	M
CV40-ATC20	1.750	2.500	.787	2.812	.125	.625	.958	9.882	1.732	1/2"-13
CV50-ATC28	2.750	3.875	1.102	4.125	.125	.625	1.391	10.276	2.126	5/8"-11

BIG-PLUS CLEANER

Blowing air cleans the BIG-PLUS machine spindle face of all debris.



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	ØD	ØD1	L	L1
SCV40-ASC-1.75T	2.480	1.750	1.750	.750
SCV50-ASC-2.5T	3.875	2.750	2.500	.750

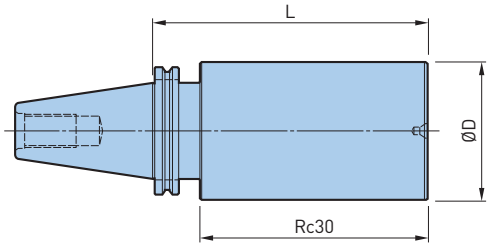
- When the cleaner is clamped into a BIG-PLUS machine spindle, faces have 1mm (.039") clearance

BLANK BAR

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	ØD	L
BCV40-BB2.500-8	2.50	8.00
BCV40-BB4.000-6	4.00	6.00
BCV50-BB4.000-8	4.00	8.00
BCV50-BB6.000-8	6.00	

- Do not heat treat after machining



DUAL CONTACT BIG-PLUS

BBT/BT SHANK

BIG-PLUS® SPINDLE SYSTEM DUAL CONTACT

A.2

COLLET CHUCKS 116-125

MEGA MICRO CHUCK 116-117
MEGA NEW BABY CHUCK 118-121
MEGA ER GRIP 122-123
MEGA E CHUCK 124-125

MILLING CHUCKS 130-131

MEGA DOUBLE POWER CHUCK 126-127
MEGA PERFECT GRIP 128-129
NEW Hi-POWER MILLING CHUCK 130-131

HYDRAULIC CHUCKS 132-139

BASIC ARBORS 140-147

SHRINK FIT HOLDER 140-141
END MILL HOLDER 142
SIDE CUTTER ARBOR 143
MORSE TAPER HOLDER 144-145
SHELL/FACE MILL HOLDER 146
SMART DAMPER MILLING 147

TAP HOLDERS 148-149

MEGA SYNCHRO TAPPING HOLDER 148-149

MODULAR HOLDERS 150-153

CKB SHANK (STANDARD & BIG-PLUS) 150-153
BIG CAPTO SHANK 153

ANGLE HEADS 154-165

AG 154-163
AGU 164-165

SPINDLE SPEEDERS 166-168

AIR POWER SPINDLE 166-167
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PULLSTUD WRENCHES 173
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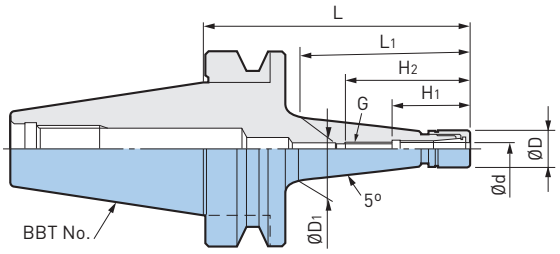
BIG-PLUS CLEANER 175

MEGA MICRO CHUCK—TYPE T

CLAMPING RANGE: Ø.018"-.317" (Ø.45-8.05mm) For Micro Drill & End Mill Applications

HIGHER RIGIDITY

MAX 40,000 RPM



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØD	D1	L	L1	H1	H2	G	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
BBT30-MEGA3S-45T	.018-.128	.394	.45	1.77	.79	.87	1.50	M4 P0.70	NBC3S-□	MGN3S	MGR10	40,000	.8
BBT30-MEGA3S-75T			.62	2.95	1.89							40,000	.9
BBT30-MEGA3S-90T			.72	3.54	2.48							35,000	1.0
BBT30-MEGA3S-105T			.83	4.13	3.07							30,000	1.1
BBT30-MEGA4S-60T	.018-.159	.472	.58	2.36	1.30	1.04	1.85	M5 P0.80	NBC4S-□	MGN4S	MGR12	40,000	.9
BBT30-MEGA4S-75T			.69	2.95	1.89							40,000	1.0
BBT30-MEGA4S-90T			.79	3.54	2.48							35,000	1.0
BBT30-MEGA4S-105T			.89	4.13	1.89							30,000	1.1
BBT30-MEGA4S-120T			1.00	4.72	3.66							25,000	1.2
BBT30-MEGA6S-60T	.018-.238	.551	.64	2.36	1.30	1.12	1.93	M7 P0.75	NBC6S-□	MGN6S	MGR14	40,000	.9
BBT30-MEGA6S-75T			.74	2.95	1.89							40,000	1.0
BBT30-MEGA6S-90T			.85	3.54	2.48							35,000	1.0
BBT30-MEGA6S-105T			.95	4.13	3.07							30,000	1.2
BBT30-MEGA6S-120T			1.06	4.72	3.66							25,000	1.3
BBT30-MEGA8S-75T	.116-.317	.709	.89	2.95	1.89	1.22	1.99	M9 P0.75	NBC8S-□	MGN8S	MGR18	40,000	1.1
BBT30-MEGA8S-105T			1.10	4.13	3.07							30,000	1.3
BBT40-MEGA3S-60T	.018-.128	.394	.48	2.36	1.10	.87	1.50	M4 P0.70	NBC3S-□	MGN3S	MGR10	35,000	2.2
BBT40-MEGA3S-90T			.69	3.54	2.28							28,000	2.3
BBT40-MEGA3S-120T			.89	4.72	3.46							22,000	2.5
BBT40-MEGA4S-60T	.018-.159	.472	.55	2.36	1.10	1.04	1.85	M5 P0.80	NBC4S-□	MGN4S	MGR12	35,000	2.2
BBT40-MEGA4S-75T			.65	2.95	1.69							32,000	2.3
BBT40-MEGA4S-90T			.75	3.54	2.28							28,000	2.3
BBT40-MEGA4S-105T			.86	4.13	2.87							25,000	2.4
BBT40-MEGA4S-120T			.96	4.72	3.46							22,000	2.5
BBT40-MEGA4S-135T			1.06	5.31	4.06							20,000	2.7
BBT40-MEGA6S-60T	.018-.238	.551	.61	2.36	1.10	1.12	1.93	M7 P0.75	NBC6S-□	MGN6S	MGR14	35,000	2.2
BBT40-MEGA6S-75T			.71	2.95	1.69							32,000	2.3
BBT40-MEGA6S-90T			.81	3.54	2.28							28,000	2.3
BBT40-MEGA6S-105T			.92	4.13	2.87							25,000	2.4
BBT40-MEGA6S-120T			1.02	4.72	3.46							22,000	2.5
BBT40-MEGA6S-135T			1.13	5.31	4.06							20,000	2.7
BBT40-MEGA8S-90T	.116-.317	.709	.96	3.54	2.28	1.22	1.99	M9 P0.75	NBC8S-□	MGN8S	MGR18	30,000	2.5
BBT40-MEGA8S-120T			1.17	4.72	3.46							22,000	2.6

- 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

ACCESSORIES

COLLET PG. 356

MEGA NUT PG. 358

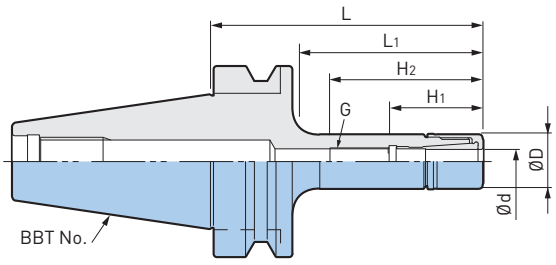
SEAL NUT PG. 358

MEGA WRENCH PG. 390

MEGA MICRO CHUCK

CLAMPING RANGE: Ø.018"-.317" For Micro Drill & End Mill Applications

MAX 40,000 RPM



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØD	L	L1	H1	H2	G	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
BBT30-MEGA4S-90	**.018-.159**	.472	3.54	2.44	1.04	1.85	M5 P.08	NBC4S-□	MGN4S	MGR12	40,000	.9
BBT30-MEGA6S-60	**.018-.238**	.551	2.36	1.26	1.12	1.93	M7 P0.75	NBC6S-□	MGN6S	MGR14	40,000	.9
BBT30-MEGA6S-90			3.54	2.44							40,000	1.0
BBT30-MEGA6S-105			4.13	2.87							40,000	1.0
BBT30-MEGA8S-90	**.116-.317**	.709	3.54	2.36	1.22	1.99	M9 P0.75	NBC8S-□	MGN8S	MGR18	35,000	1.1
BBT40-MEGA4S-90	**.018-.159**	.472	3.54	2.09	1.04	1.85	M5 P0.8	NBC4S-□	MGN4S	MGR12	35,000	2.2
BBT40-MEGA6S-90	**.018-.238**	.551	3.54	2.09	1.12	1.93	M7 P0.75	NBC6S-□	MGN6S	MGR14	35,000	2.2
BBT40-MEGA8S-90	**.116-.317**	.709	3.54	2.17	1.22	1.99	M9 P0.75	NBC8S-□	MGN8S	MGR18	30,000	2.4

- 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

ACCESSORIES

COLLET PG. 356

MEGA NUT PG. 358

SEAL NUT PG. 358

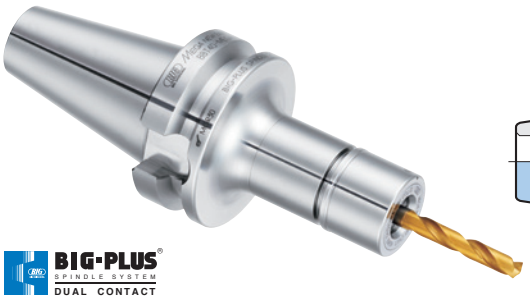
MEGA WRENCH PG. 390

MEGA NEW BABY CHUCK

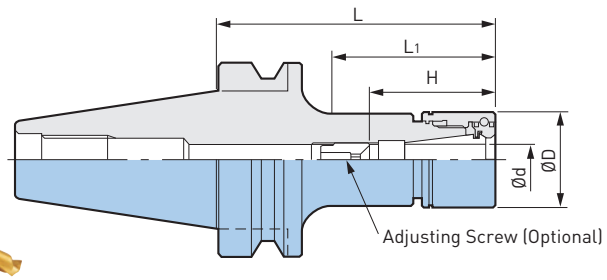
CLAMPING RANGE: Ø.010"-1.000" (Ø.25-25.4mm) For Drills, Reamers, Taps & Finishing End Mills

COOLANT THROUGH

MAX 40,000 RPM



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



Catalog Number	Ød	ØD	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
BBT30-MEGA6N-60			2.36	1.26					40,000	1.0
BBT30-MEGA6N-75			2.95	1.85					35,000	1.1
BBT30-MEGA6N-90	**.010-.236**	.787	3.54	2.44	.91-1.69	NBC6-□	MGN6	MGR20	30,000	1.2
BBT30-MEGA6N-105			4.13	3.03					20,000	1.2
BBT30-MEGA6N-120			4.72	3.54					18,000	1.3
BBT30-MEGA8N-60			2.36	1.34					40,000	1.1
BBT30-MEGA8N-75			2.95	1.93					35,000	1.2
BBT30-MEGA8N-90	**.059-.394**	.984	3.54	2.52	1.02-1.77	NBC8-□	MGN8	MGR25	30,000	1.4
BBT30-MEGA8N-105			4.13	3.11					20,000	1.5
BBT30-MEGA8N-120			4.72	3.70					18,000	1.6
BBT30-MEGA10N-60			2.36	1.34					40,000	1.2
BBT30-MEGA10N-75			2.95	1.93					30,000	1.4
BBT30-MEGA10N-90	**.059-.394**	1.181	3.54	2.52	1.50-1.89	NBC10-□	MGN10	MGR30	25,000	1.5
BBT30-MEGA10N-105			4.13	3.11					18,000	1.7
BBT30-MEGA10N-120			4.72	3.62					15,000	1.8
BBT30-MEGA13N-60			2.36	1.34					40,000	1.2
BBT30-MEGA13N-75			2.95	1.93					30,000	1.4
BBT30-MEGA13N-90	**.098-.512**	1.378	3.54	2.52	1.73-2.48	NBC13-□	MGN13	MGR35	25,000	1.6
BBT30-MEGA13N-105			4.13	3.11					18,000	1.8
BBT30-MEGA13N-120			4.72	3.70					15,000	2.0
BBT30-MEGA16N-60			2.36	1.46	1.89-2.48				35,000	1.5
BBT30-MEGA16N-75	**.098-.630**	1.654	2.95	2.05		NBC16-□	MGN16	MGR42	25,000	1.8
BBT30-MEGA16N-90			3.54	2.64	1.89-2.68				20,000	2.1
BBT30-MEGA16N-105			4.13	3.23					18,000	2.4
BBT30-MEGA20N-60❖			2.36	—	2.01				30,000	1.6
BBT30-MEGA20N-75	**.098-.787**	1.811	2.95	—		NBC20-□	MGN20	MGR46	20,000	1.9
BBT30-MEGA20N-90			3.54	—	2.01-2.68				15,000	2.2
BBT30-MEGA20N-105			4.13	—					13,000	2.5
BBT30-MEGA25N-85❖	**.610-1.000**	2.362	3.35	—	3.15	NBC25-□	MGN25	MGR60	12,000	2.5
BBT40-MEGA6N-60			2.36	1.06					35,000	2.2
BBT40-MEGA6N-75			2.95	1.50					35,000	2.3
BBT40-MEGA6N-90			3.54	2.09					35,000	2.4
BBT40-MEGA6N-105	**.010-.236**	.787	4.13	2.68	1.91-1.69	NBC6-□	MGN6	MGR20	20,000	2.5
BBT40-MEGA6N-120			4.72	3.27					20,000	2.6
BBT40-MEGA6N-135			5.31	3.86					20,000	2.7
BBT40-MEGA6N-165			6.50	5.04					14,000	2.7
BBT40-MEGA6N-200			7.87	6.42					9,000	2.9

Catalog Number	Ød	ØD	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
BBT40-MEGA8N-60	**.020-.315**	.984	2.36	1.06	1.02-1.77	NBC8-□	MGN8	MGR25	35,000	2.2
BBT40-MEGA8N-75			2.95	1.50					35,000	2.3
BBT40-MEGA8N-90			3.54	2.09					35,000	2.4
BBT40-MEGA8N-105			4.13	2.68					20,000	2.5
BBT40-MEGA8N-120			4.72	3.27					20,000	2.6
BBT40-MEGA8N-135			5.31	3.86					20,000	2.9
BBT40-MEGA8N-165			6.50	5.04					14,000	2.9
BBT40-MEGA8N-200			7.87	6.42					9,000	3.1
BBT40-MEGA10N-60	**.059-.394**	1.181	2.36	1.02	1.50-1.89	NBC10-□	MGN10	MGR30	35,000	2.4
BBT40-MEGA10N-75			2.95	1.50					35,000	2.5
BBT40-MEGA10N-90			3.54	2.09					35,000	2.7
BBT40-MEGA10N-105			4.13	2.68					20,000	2.8
BBT40-MEGA10N-120			4.72	3.27					20,000	3.0
BBT40-MEGA10N-135			5.31	3.86					20,000	3.1
BBT40-MEGA10N-165			6.50	5.04					15,000	3.3
BBT40-MEGA10N-200			7.87	6.50					10,000	3.8
BBT40-MEGA13N-60	**.098-.512**	1.378	2.36	1.22	1.73-2.48	NBC13-□	MGN13	MGR35	35,000	2.4
BBT40-MEGA13N-75			2.95	1.57					35,000	2.7
BBT40-MEGA13N-90			3.54	2.17					35,000	2.9
BBT40-MEGA13N-105			4.13	2.76					20,000	3.1
BBT40-MEGA13N-120			4.72	3.35					20,000	3.3
BBT40-MEGA13N-135			5.31	3.94					20,000	3.5
BBT40-MEGA13N-165			6.50	5.12					15,000	4.0
BBT40-MEGA13N-200			7.87	6.50					10,000	4.4
BBT40-MEGA16N-60	**.098-.630**	1.654	2.36	1.22	1.89-2.68	NBC16-□	MGN16	MGR42	30,000	2.7
BBT40-MEGA16N-75			2.95	1.57					30,000	2.9
BBT40-MEGA16N-90			3.54	2.17					30,000	3.1
BBT40-MEGA16N-105			4.13	2.76					20,000	3.5
BBT40-MEGA16N-120			4.72	3.35					20,000	3.8
BBT40-MEGA16N-135			5.31	3.94					20,000	4.0
BBT40-MEGA16N-165			6.50	5.12					15,000	4.4
BBT40-MEGA16N-200			7.87	6.50					10,000	5.1

- 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" indicates the adjustment length with an adjusting screw
- Adjusting screws cannot be used with models marked ❖

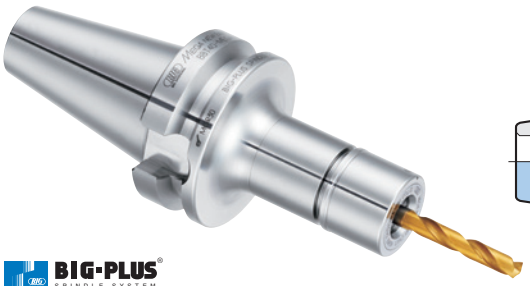
ACCESSORIES

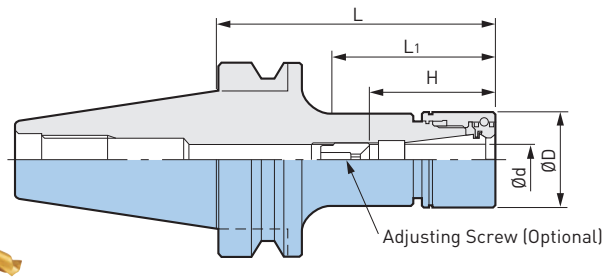
MEGA NEW BABY CHUCK

CLAMPING RANGE: Ø.010"-1.000" (Ø.25-25.4mm) For Drills, Reamers, Taps & Finishing End Mills

COOLANT THROUGH

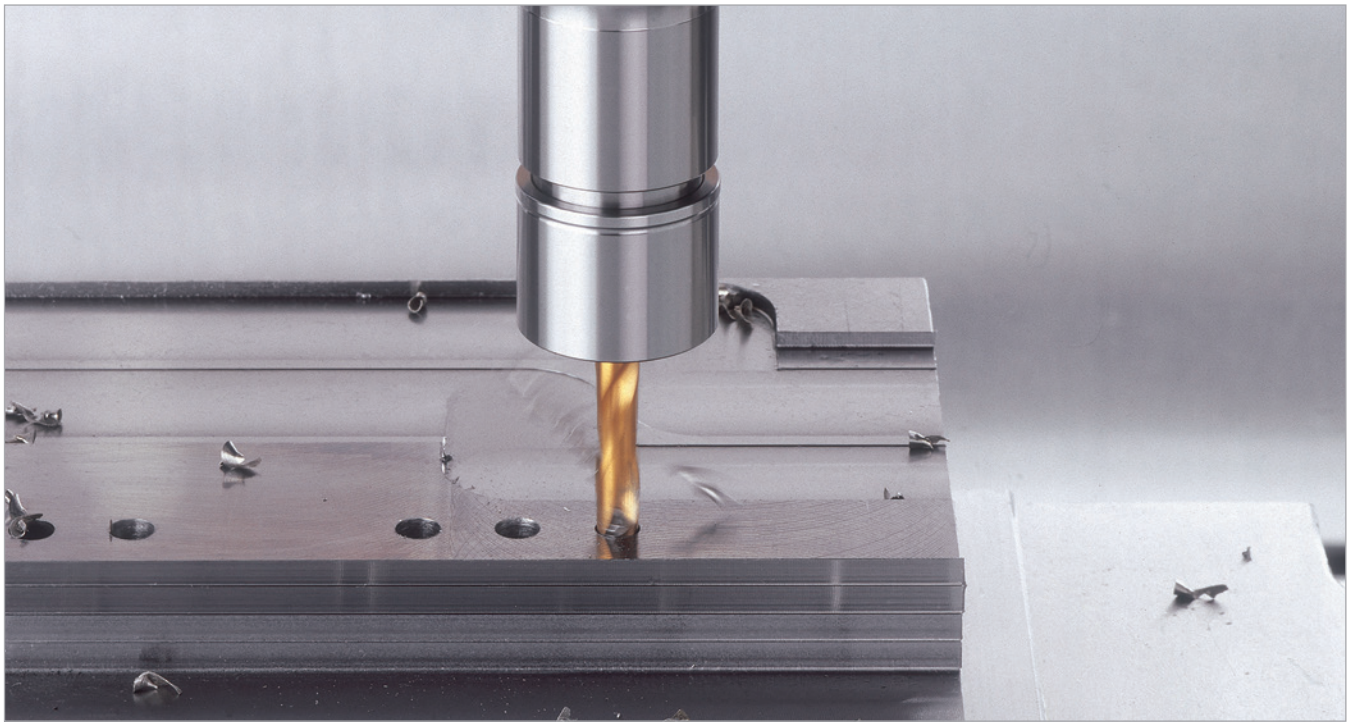
MAX 40,000 RPM





BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØD	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
BBT40-MEGA20N-60	.098-.787	1.811	2.36	1.22	2.01-2.68	NBC20-□	MGN20	MGR46	30,000	2.4
BBT40-MEGA20N-75			2.95	1.65					30,000	2.8
BBT40-MEGA20N-90			3.54	2.24					30,000	3.1
BBT40-MEGA20N-105			4.13	2.83					20,000	3.5
BBT40-MEGA20N-120			4.72	3.43					20,000	4.0
BBT40-MEGA20N-135			5.31	4.02					20,000	4.2
BBT40-MEGA20N-165			6.50	5.20					15,000	4.6
BBT40-MEGA20N-200			7.87	6.57					10,000	5.5
BBT40-MEGA25N-75	.610-1.000	2.362	2.95	1.85	2.52-2.91	NBC25-□	MGN25	MGR60L	24,000	3.5
BBT40-MEGA25N- 90			3.54	2.44					20,000	4.2
BBT40-MEGA25N-105			4.13	3.03					19,000	4.8
BBT40-MEGA25N-120			4.72	3.62					17,000	5.5



Catalog Number	Ød	ØD	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
BBT50-MEGA6N-90	.010-.236	.787	3.54	1.06	.91-1.69	NBC6-□	MGN6	MGR20	20,000	8.2
BBT50-MEGA6N-120			4.72	1.50					20,000	8.4
BBT50-MEGA6N-165			6.50	2.09					14,000	8.6
BBT50-MEGA6N-200			7.87	2.68					9,000	8.8
BBT50-MEGA8N-90	.020-.315	.984	3.54	1.06	1.02-1.77	NBC8-□	MGN8	MGR25	20,000	8.4
BBT50-MEGA8N-120			4.72	1.50					20,000	8.6
BBT50-MEGA8N-165			6.50	2.09					16,000	9.0
BBT50-MEGA8N-200			7.87	2.68					11,000	9.3
BBT50-MEGA10N-90	.059-.394	1.181	3.54	1.02	1.50-1.89	NBC10-□	MGN10	MGR30	20,000	8.6
BBT50-MEGA10N-120			4.72	1.50					20,000	8.8
BBT50-MEGA10N-165			6.50	2.09					16,000	9.5
BBT50-MEGA10N-200			7.87	2.68					13,000	10.4
BBT50-MEGA10N-250			9.84	3.27					8,000	10.4
BBT50-MEGA10N-300			11.81	3.86					5,500	10.8
BBT50-MEGA13N-90	.098-.512	1.378	3.54	1.22	1.73-2.48	NBC13-□	MGN13	MGR35	18,000	8.8
BBT50-MEGA13N-120			4.72	1.57					18,000	9.3
BBT50-MEGA13N-165			6.50	2.17					16,000	9.9
BBT50-MEGA13N-200			7.87	2.76					12,000	10.4
BBT50-MEGA13N-250			9.84	3.35					8,000	11.0
BBT50-MEGA13N-300			11.81	3.94					5,500	11.7
BBT50-MEGA16N-75	.098-.630	1.654	2.95	1.22	1.89-2.68	NBC16-□	MGN16	MGR42	17,000	8.8
BBT50-MEGA16N-90			3.54	1.57					17,000	9.3
BBT50-MEGA16N-120			4.72	2.17					17,000	9.7
BBT50-MEGA16N-165			6.50	2.76					16,000	10.6
BBT50-MEGA16N-200			7.87	3.35					13,000	11.2
BBT50-MEGA16N-250			9.84	3.94					10,000	12.1
BBT50-MEGA20N-75	.098-.787	1.811	2.95	1.22	2.01-2.68	NBC20-□	MGN20	MGR46	16,000	9.0
BBT50-MEGA20N-90			3.54	1.65					16,000	9.3
BBT50-MEGA20N-120			4.72	2.24					16,000	9.9
BBT50-MEGA20N-165			6.50	2.83					15,000	10.8
BBT50-MEGA20N-200			7.87	3.43					13,000	11.7
BBT50-MEGA20N-250			9.84	4.02					10,000	12.6
BBT50-MEGA25N-90	.610-1.000	2.362	3.54	1.81	2.52-2.91	NBC25-□	MGN25	MGR60L	19,000	9.5
BBT50-MEGA25N-120			4.72	2.83					17,000	10.8
BBT50-MEGA25N-165			6.50	4.61					15,000	12.8
BBT50-MEGA25N-200			7.87	5.98					13,000	14.1

- 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" indicates the adjustment length with an adjusting screw

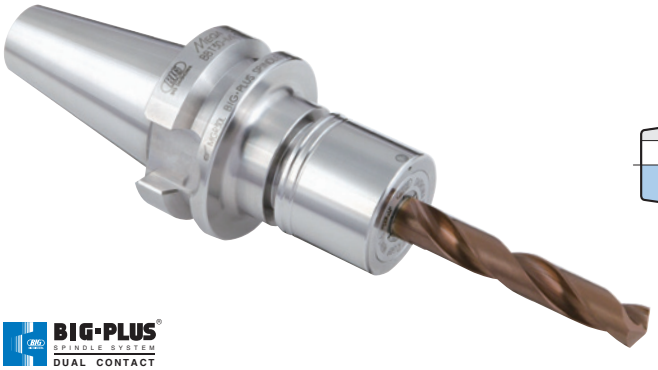
ACCESSORIES

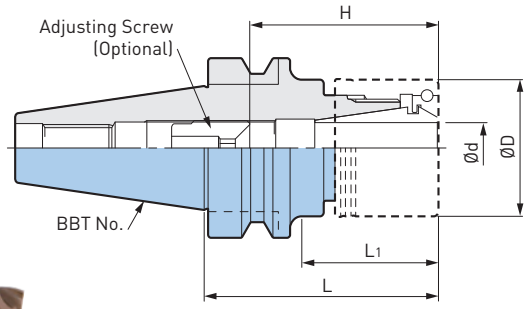
MEGA ER GRIP

CLAMPING RANGE: Ø.075"-.787" (Ø1.9-20mm)

For Drills, Reamers, Taps & Finishing End Mills

COOLANT THROUGH





BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØD	L	L1	H	Collet	Nut (NOT Included)	Wrench
BBT30-MEGAER16-60NL	.075-.394	1.181	2.36	1.38	1.38-1.85	ERC16-□	MERN16*	MGR30L
BBT30-MEGAER16-75NL			2.95	1.93				
BBT30-MEGAER16-90NL			3.54	2.52				
BBT30-MEGAER20-60NL	.108-.512	1.378	2.36	1.38	1.65-2.36	ERC20-□	MERN20*	MGR35L
BBT30-MEGAER20-75NL			2.95	1.97	1.65-2.44			
BBT30-MEGAER20-90NL			3.54	2.56				
BBT30-MEGAER25-60NL	.108-.630	1.654	2.36	1.46	1.73-2.24	ERC25-□	MERN25*	MGR42L
BBT30-MEGAER25-75NL			2.95	2.05	1.73-2.64			
BBT30-MEGAER25-90NL			3.54	2.64				
BBT30-MEGAER32-60NL	.108-.787	1.969	2.36	1.50	1.97	ERC32-□	MERN32*	MGR50L
BBT30-MEGAER32-75NL			2.95	2.09	1.97-2.68			
BBT30-MEGAER32-90NL			3.54	2.68				
BBT40-MEGAER16-60NL	.075-.394	1.181	2.36	1.18	1.38-1.85	ERC16-□	MERN16*	MGR30L
BBT40-MEGAER16-90NL			3.54	2.17				
BBT40-MEGAER16-105NL			4.13	2.76				
BBT40-MEGAER16-135NL			5.31	3.94				
BBT40-MEGAER16-165NL			6.50	5.12				
BBT40-MEGAER20-60NL	.108-.512	1.378	2.36	1.26	1.65-2.44	ERC20-□	MERN20*	MGR35L
BBT40-MEGAER20-90NL			3.54	2.20				
BBT40-MEGAER20-105NL			4.13	2.80				
BBT40-MEGAER20-135NL			5.31	3.98				
BBT40-MEGAER20-165NL			6.50	5.16				
BBT40-MEGAER25-60NL❖	.108-.630	1.654	2.36	1.26	1.73-2.64	ERC25-□	MERN25*	MGR42L
BBT40-MEGAER25-90NL			3.54	2.24				
BBT40-MEGAER25-105NL			4.13	2.83				
BBT40-MEGAER25-135NL			5.31	4.02				
BBT40-MEGAER25-165NL			6.50	5.20				
BBT40-MEGAER32-60NL	.108-.787	1.969	2.36	1.30	1.97-2.68	ERC32-□	MERN32*	MGR50L
BBT40-MEGAER32-90NL			3.54	2.36				
BBT40-MEGAER32-105NL			4.13	2.95				
BBT40-MEGAER32-135NL			5.31	4.13				
BBT40-MEGAER32-165NL			6.50	5.31				

Catalog Number	Ød	ØD	L	L1	H	Collet	Nut (NOT Included)	Wrench
BBT50-MEGAER16-105NL	.075-.394	1.181	4.13	2.32	1.38-1.85	ERC16-□	MERN16*	MGR30L
BBT50-MEGAER16-135NL			5.31	3.31				
BBT50-MEGAER16-165NL			6.50	4.49				
BBT50-MEGAER20-105NL	.108-.512	1.378	4.13	2.36	1.65-2.44	ERC20-□	MERN20*	MGR35L
BBT50-MEGAER20-135NL			5.31	3.35				
BBT50-MEGAER20-165NL			6.50	4.53				
BBT50-MEGAER25-105NL	.108-.630	1.654	4.13	2.32	1.73-2.64	ERC25-□	MERN25*	MGR42L
BBT50-MEGAER25-135NL			5.31	3.50				
BBT50-MEGAER25-165NL			6.50	4.69				
BBT50-MEGAER32-105NL	.108-.787	1.969	4.13	2.32	1.97-2.68	ERC32-□	MERN32*	MGR50L
BBT50-MEGAER32-135NL			5.31	3.50				
BBT50-MEGAER32-165NL			6.50	4.69				

***Nut, adjusting screw, collet and wrench are not included**

- Weight does not include collet
- MEGA ER GRIP is not able to use DIN6499 Form-A collets and ESX collets
- 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 ❖

CAUTION

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.

ACCESSORIES

COLLET PG. 374 | MEGA NUT* PG. 377 | PERFECT SEAL PG. 378 | SOLID NUT PG. 377 | MEGA WRENCH PG. 390 | SCREW PG. 411

***MEGA NUT is the recommended nut to achieve high accuracy and clamping force**

HIGH CONCENTRICITY

MEGA ER PERFECT SEAL

MEGA WRENCH

Capable of sealing high pressure coolant up to 7Mpa. For applications with coolant supplied through the tools. MEGA Wrench is used for tightening.

MEGA ER NUT*

MEGA WRENCH

High accuracy and clamping force are provided with thrust ball bearings. Ideal for solid carbide drills and reamers. Slot-free outer diameter increases rigidity of the nut itself. The one-way clutch of the MEGA Wrench tightens the nut securely and easily by ratchet function.

MEGA ER SOLID NUT

MEGA WRENCH

High performance solid nut with surface treatment for friction reduction. Slot-free outer diameter increases rigidity of the nut itself. The one-way clutch of the MEGA Wrench tightens the nut securely and easily by ratchet function.

ER NUT

C-SPANNER

Basic nut with surface treatment for friction reduction. C-spanner is used for tightening.

***MEGA NUT is the recommended nut to achieve high accuracy and clamping force**

MEGA E CHUCK

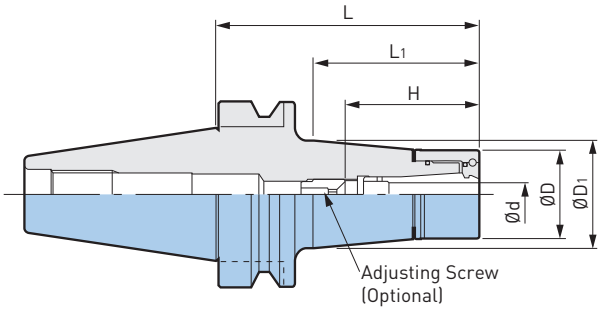
CLAMPING RANGE: Ø.125"-.500" (Ø3-12mm)

Exclusively for High Speed Finish End Milling

MAX 40,000 RPM

COOLANT THROUGH

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



Catalog Number	Ød	ØD	ØD1	L	L1	H		Collet	Nut	Wrench	Max RPM	Weight (lbs.)
						Min	Max					
BBT30-MEGA6E-50	.125-.250 (3-6mm)	.984	1.01	1.97	.98	1.46	1.77	MEC6-□	MEN6	MGR25	40,000	1.2
BBT30-MEGA6E-75			1.18	2.95	1.97						35,000	1.4
BBT30-MEGA6E-90			1.28	3.54	2.56						25,000	1.6
BBT30-MEGA6E-105			1.38	4.13	3.15						25,000	1.8
BBT30-MEGA8E-50	.125-.250 (3-8mm)	1.181	1.20	1.97	.98	1.65	2.01	MEC8-□	MEN8	MGR30	40,000	1.2
BBT30-MEGA8E-75			1.36	2.95	1.97						35,000	1.6
BBT30-MEGA8E-90			1.47	3.54	2.60						25,000	1.8
BBT30-MEGA8E-105			1.58	4.13	3.19						25,000	2.1
BBT30-MEGA10E-50	.125-.375 (3-10mm)	1.378	1.39	1.97	.98	1.89	2.28	MEC10-□	MEN10	MGR35	39,000	1.3
BBT30-MEGA10E-75			1.56	2.95	2.01						35,000	1.8
BBT30-MEGA10E-90			1.61	3.54	2.62						25,000	2.1
BBT30-MEGA10E-105			1.62	4.13	3.23						25,000	2.3
BBT30-MEGA13E-50	.125-.500 (3-12mm)	1.654	1.67	1.97	1.06	1.97	2.38	MEC13-□	MEN13	MGR42	38,000	1.4
BBT30-MEGA13E-75			1.65	2.95	2.05	1.97	2.36				34,000	2.0
BBT30-MEGA13E-90			1.65	3.54	2.64						25,000	2.3
BBT30-MEGA13E-105			1.65	4.13	3.23						25,000	2.7
BBT40-MEGA6E-60	.125-.250 (3-6mm)	.984	1.03	2.36	1.10	1.46	1.77	MEC6-□	MEN6	MGR25	30,000	2.4
BBT40-MEGA6E-75			1.13	2.95	1.69						30,000	2.5
BBT40-MEGA6E-90			1.23	3.54	2.28						30,000	2.7
BBT40-MEGA6E-105			1.33	4.13	2.87						29,000	2.9
BBT40-MEGA6E-120			1.44	4.72	3.46						29,000	3.1
BBT40-MEGA6E-135			1.54	5.31	4.06						27,000	3.4
BBT40-MEGA6E-165			1.75	6.50	5.24						20,000	4.1
BBT40-MEGA6E-200			2.00	7.87	6.65						15,000	5.1
BBT40-MEGA8E-60	.125-.250 (3-8mm)	1.181	1.22	2.36	1.10	1.65	1.89	MEC8-□	MEN8	MGR30	30,000	2.5
BBT40-MEGA8E-75			1.31	2.95	1.69	1.65	2.01				30,000	2.7
BBT40-MEGA8E-90			1.42	3.54	2.28						30,000	2.9
BBT40-MEGA8E-105			1.52	4.13	2.87						29,000	3.2
BBT40-MEGA8E-120			1.63	4.72	3.46						29,000	3.6
BBT40-MEGA8E-135			1.73	5.31	4.06						27,000	3.9
BBT40-MEGA8E-165			1.93	6.50	5.24						20,000	4.6
BBT40-MEGA8E-200			2.20	7.87	6.73						15,000	5.6

Catalog Number	Ød	ØD	ØD1	L	L1	H		Collet	Nut	Wrench	Max RPM	Weight (lbs.)
						Min	Max					
BBT40-MEGA10E-60	.125-.375 (3-10mm)	1.378	1.42	2.36	1.14	1.89	2.28	MEC10-□	MEN10	MGR35	30,000	2.7
BBT40-MEGA10E-75			1.51	2.95	1.69						30,000	3.0
BBT40-MEGA10E-90			1.61	3.54	2.28						30,000	3.2
BBT40-MEGA10E-105			1.72	4.13	2.87						29,000	3.6
BBT40-MEGA10E-120			1.82	4.72	3.46						29,000	3.9
BBT40-MEGA10E-135			1.92	5.31	4.06						27,000	4.4
BBT40-MEGA10E-165			2.14	6.50	5.31						22,000	5.2
BBT40-MEGA10E-200			2.19	7.87	6.73						16,000	6.8
BBT40-MEGA13E-60	.125-.500 (3-12mm)	1.654	1.68	2.36	1.14	1.97	2.36	MEC13-□	MEN13	MGR42	30,000	2.9
BBT40-MEGA13E-75			1.77	2.95	1.69						30,000	3.2
BBT40-MEGA13E-90			1.89	3.54	2.32						30,000	3.6
BBT40-MEGA13E-105			1.99	4.13	2.95						29,000	4.1
BBT40-MEGA13E-120			2.10	4.72	3.58						29,000	4.6
BBT40-MEGA13E-135			2.20	5.31	4.17						26,000	5.2
BBT40-MEGA13E-165			2.26	6.50	5.39						22,000	6.2
BBT40-MEGA13E-200			2.46	7.87	6.77						16,000	8.0
BBT50-MEGA6E-90	.125-.250 (3-6mm)	.984	1.20	3.54	1.85	1.46	1.77	MEC6-□	MEN6	MGR25	20,000	8.4
BBT50-MEGA6E-120			1.40	4.72	3.03						20,000	8.8
BBT50-MEGA6E-165			1.71	6.50	4.80						14,000	9.7
BBT50-MEGA6E-200			1.95	7.87	6.18						9,000	10.8
BBT50-MEGA8E-90	.125-.250 (3-8mm)	1.181	1.38	3.54	1.85	1.65	2.01	MEC8-□	MEN8	MGR30	20,000	5.6
BBT50-MEGA8E-120			1.59	4.72	3.03						20,000	9.0
BBT50-MEGA8E-165			1.90	6.50	4.80						16,000	10.1
BBT50-MEGA8E-200			2.14	7.87	6.18						11,000	11.4
BBT50-MEGA10E-90	.125-.375 (3-10mm)	1.378	1.57	3.54	1.85	1.89	2.28	MEC10-□	MEN10	MGR35	20,000	8.8
BBT50-MEGA10E-120			1.79	4.72	3.03						20,000	9.2
BBT50-MEGA10E-165			2.09	6.50	4.76						16,000	10.8
BBT50-MEGA10E-200			2.33	7.87	6.14						13,000	12.1
BBT50-MEGA13E-90	.125-.500 (3-12mm)	1.654	1.83	3.54	1.85	1.97	2.36	MEC13-□	MEN13	MGR42	18,000	8.8
BBT50-MEGA13E-120			2.05	4.72	3.03						18,000	9.7
BBT50-MEGA13E-165			2.32	6.50	4.76						16,000	11.4
BBT50-MEGA13E-200			2.55	7.87	6.14						12,000	13.2

- 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

ACCESSORIES

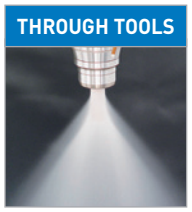
MEGA DOUBLE POWER CHUCK

CLAMPING RANGE: Ø.625"-1.500" (Ø16-50mm)

For Heavy Duty End Milling

MAX 30,000 RPM

COOLANT THROUGH



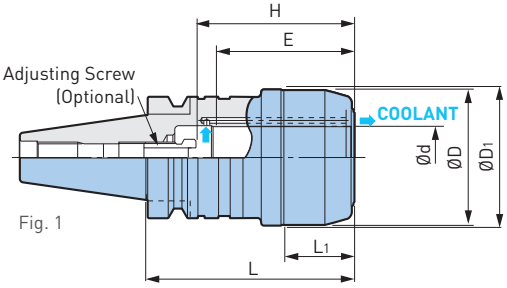


Fig. 1

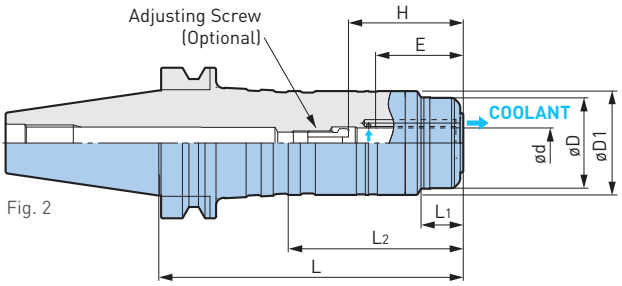


Fig. 2

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	Ød	ØD	ØD1	L	L1	L2	H	Min Clamping Length E	Wrench	Max RPM	Weight (lbs.)
BBT30-MEGA.750DS-2.5	1	**.750**	1.969	2.00	2.59	1.26	1.48	2.36	1.97	MGR50L	30,000	1.8
BBT30-MEGA16DS-60		**16mm**	1.811	1.85	2.46	1.10	—	2.52	1.89	MGR46L	30,000	1.7
BBT30-MEGA20DS-65		**20mm**	1.969	2.00	2.66	1.30		2.36	1.97	MGR50L	25,000	1.8
BBT40-MEGA.625DS-3A	2	**.625**	1.654	2.09	3.08	1.06	1.57	2.87	1.89	MGR42L	30,000	3.5
BBT40-MEGA.625DS-5A					5.08						25,000	5.6
BBT40-MEGA.750DS-3A	2	**.750**	1.969	2.17	3.08	1.42	1.81	2.80-3.19	1.97	MGR50L	30,000	3.5
BBT40-MEGA.750DS-5A					5.08						25,000	5.7
BBT40-MEGA1.000DS-3.5A	1	**1.000**	2.441	2.48	3.58	1.61	1.85	2.87-3.27	2.20	MGR62L	27,000	4.5
BBT40-MEGA1.000DS-5A					5.08						24,000	6.4
BBT40-MEGA1.250DS-3.5A	1	**1.250**	2.756	2.78	3.58	1.38	1.87	3.19-3.58	2.36	MGR70L	26,000	4.8
BBT40-MEGA1.250DS-5A					5.08						22,000	6.6
BBT40-MEGA16DS-75A	2	**16mm**	1.654	2.09	3.03	1.06	1.57	2.87	1.89	MGR42L	30,000	3.3
BBT40-MEGA16DS-105A					4.21						30,000	4.6
BBT40-MEGA16DS-135A					5.39						25,000	5.7
BBT40-MEGA16DS-165A					6.57						22,000	7.3
BBT40-MEGA16DS-200A					7.87						18,000	9.0
BBT40-MEGA20DS-75A	2	**20mm**	1.969	2.17	3.03	1.42	1.81	2.80-3.19	1.97	MGR50L	30,000	3.5
BBT40-MEGA20DS-105A					4.21						30,000	4.4
BBT40-MEGA20DS-120A					4.80						27,000	5.1
BBT40-MEGA20DS-135A					5.39						25,000	5.7
BBT40-MEGA20DS-165A					6.57						22,000	7.0
BBT40-MEGA20DS-200A					7.87						15,000	9.0
BBT40-MEGA25DS-75A	1	**25mm**	2.441	2.48	3.03	1.61	—	2.95-3.35	2.20	MGR62L	27,000	4.4
BBT40-MEGA25DS-105A					4.21			2.87-3.27			26,000	5.1
BBT40-MEGA25DS-135A					5.39						24,000	6.6
BBT40-MEGA25DS-165A					6.57						21,000	8.1
BBT40-MEGA25DS-200A					7.95						12,000	10.3

Catalog Number	Fig.	Ød	ØD	ØD1	L	L1	L2	H	Min Clamping Length E	Wrench	Max RPM	Weight (lbs.)
BBT40-MEGA32DS-90A	1	**32mm**	2.756	2.80	3.62	1.38	—	2.87-3.27	2.36	MGR70L	26,000	4.6
BBT40-MEGA32DS-105A					4.21			3.19-3.58			26,000	5.3
BBT40-MEGA32DS-135A					5.39						22,000	6.8
BBT40-MEGA32DS-165A					6.57						20,000	8.1
BBT40-MEGA32DS-200A					7.95						10,000	9.9
BBT50-MEGA.750DS-4	2	**.750**	2.362	2.72	4.09	1.10	1.50	2.80-3.19	1.97	MGR60L	20,000	10.0
BBT50-MEGA1.000DS-4		**1.000**	2.756	3.03	4.09	1.34	1.85	3.07-3.46	2.26	MGR70L	20,000	10.6
BBT50-MEGA1.250DS-4		**1.250**	3.150	3.39	4.09	1.65	2.24	3.03-3.70	2.36	MGR80L	20,000	11.3
BBT50-MEGA1.500DS-4.5	1	**1.500**	3.898	3.94	4.58	1.65	—	3.54-4.21	2.48	MGR99L	15,000	14.6
BBT50-MEGA16DS-105	2	**16mm**	1.811	2.17	4.23	1.02	1.42	2.87	1.89	MGR46L	21,000	10.1
BBT50-MEGA16DS-135					5.41						21,000	11.4
BBT50-MEGA16DS-165					6.59						19,000	12.5
BBT50-MEGA16DS-200					7.97						15,000	14.5
BBT50-MEGA16DS-250					9.94						13,000	15.4
BBT50-MEGA20DS-105	2	**20mm**	2.362	2.72	4.23	1.10	1.50	2.79-3.19	1.97	MGR60L	20,000	11.2
BBT50-MEGA20DS-135					5.41						19,000	13.2
BBT50-MEGA20DS-165					6.59						17,000	15.0
BBT50-MEGA20DS-200					7.97		4.57				14,000	16.9
BBT50-MEGA20DS-250					9.94		5.43				12,000	20.0
BBT50-MEGA25DS-105	2	**25mm**	2.756	3.03	4.23	1.34	1.80	3.07-3.46	2.20	MGR70L	20,000	11.9
BBT50-MEGA25DS-135					5.41						19,000	14.3
BBT50-MEGA25DS-165					6.59						17,000	16.7
BBT50-MEGA25DS-200					7.97		4.76				12,000	19.6
BBT50-MEGA25DS-250					9.94		5.43				10,000	23.8
BBT50-MEGA32DS-90	2	**32mm**	3.150	3.39	3.72	1.65	2.24	3.15-3.82	2.36	MGR80L	20,000	10.6
BBT50-MEGA32DS-105					4.23						20,000	11.9
BBT50-MEGA32DS-135					5.41						18,000	15.4
BBT50-MEGA32DS-165					6.59						15,000	18.7
BBT50-MEGA32DS-200					7.97		5.16				12,000	21.8
BBT50-MEGA32DS-250					9.94		6.73				10,000	26.6
BBT50-MEGA32DS-300					11.91		7.20				5,000	31.5
BBT50-MEGA42DS-105	1	**42mm**	3.898	3.93	4.21	1.65	—	3.54-4.21	2.48	MGR99L	15,000	13.2
BBT50-MEGA42DS-135					5.39						15,000	17.2
BBT50-MEGA42DS-165					6.57						14,000	21.1
BBT50-MEGA50DS-120	1	**50mm**	4.134	4.61	4.80	1.93	—	3.78-4.41	3.03	MGR105L	13,000	16.1

- Wrench must be ordered separately
- 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
- MEGA16DS/MEGA.625DS requires the hex socket head screw (M8) for axial adjustment, however, please contact us if using for center through applications
- "H" indicates the adjustment length with an adjusting screw
- DS types have jet-through coolant supply, thus tools with holes cannot be used

ACCESSORIES

MEGA PERFECT GRIP

CLAMPING RANGE: Ø16-32mm

The unique key grip locking mechanism prevents the tool from slipping or pulling out during heavy machining.

COOLANT THROUGH

JET THROUGH

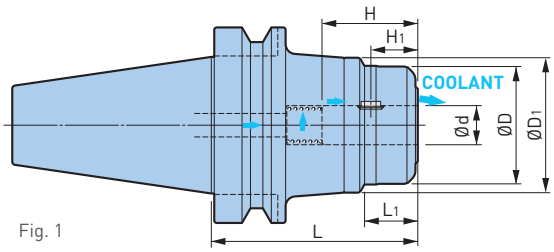


Fig. 1

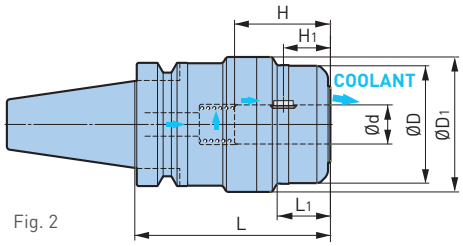


Fig. 2

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	Ød	ØD	ØD1	L	L1	H	H1	MEGA WRENCH	Weight (lbs.)
BBT40-MEGA16DPG- 75	1	**16mm**	1.811	2.165	2.95	.945	1.85	.91	MGR46L	3.7
BBT40-MEGA20DPG-100	2	**20mm**	2.362	2.717	3.94	1.063	1.93	.94	MGR60L	5.7
BBT50-MEGA16DPG-105	1	**16mm**	1.811	2.165	4.13	.945	1.85	.91	MGR46L	10.1
BBT50-MEGA16DPG-165					6.50					12.8
BBT50-MEGA20DPG-105		**20mm**	2.362	2.717	4.13	1.063	1.93	.94	MGR60L	11.2
BBT50-MEGA20DPG-165					6.50					15.2
BBT50-MEGA25DPG-105		**25mm**	2.756	3.031	4.13	1.299	2.17	.91	MGR70L	11.9
BBT50-MEGA25DPG-165					6.50					17.0
BBT50-MEGA32DPG-105		**32mm**	3.150	3.386	4.13	1.614	2.32	.91	MGR80L	12.3
BBT50-MEGA32DPG-165					6.50					18.5

- Key grip and spring are included, wrench must be ordered separately
- H1 is the dimension from the center of the Key Grip to the front end of the chuck
- When coolant supply is from the cutting edge a seal bush is necessary, use instead of the spring; seal bush must be ordered separately

CAUTION

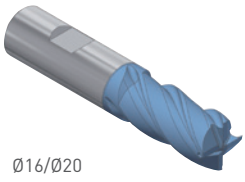
Always replace worn or damaged key grips immediately for safe operation.

Clamping Ø	Key Grip (2 pcs.)	Spring
Ø16	**PKG16-2P**	**PSP1519**
Ø20	**PKG20-2P**	**PSP1823**
Ø25	**PKG25-2P**	**PSP2420**
Ø32	**PKG32-2P**	**PSP3128**

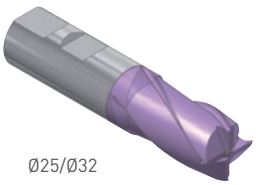
- Spare key grips are available in 2 pcs. per set

CYLINDRICAL SHANK WITH FLAT SECTION JIS B 4005 (ISO3338-2)

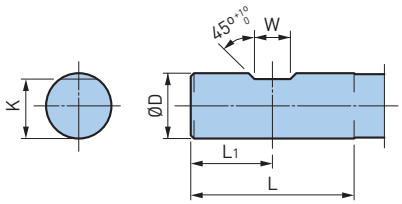
The following standard shank is required for MEGA PERFECT GRIP.



Ø16/Ø20



Ø25/Ø32

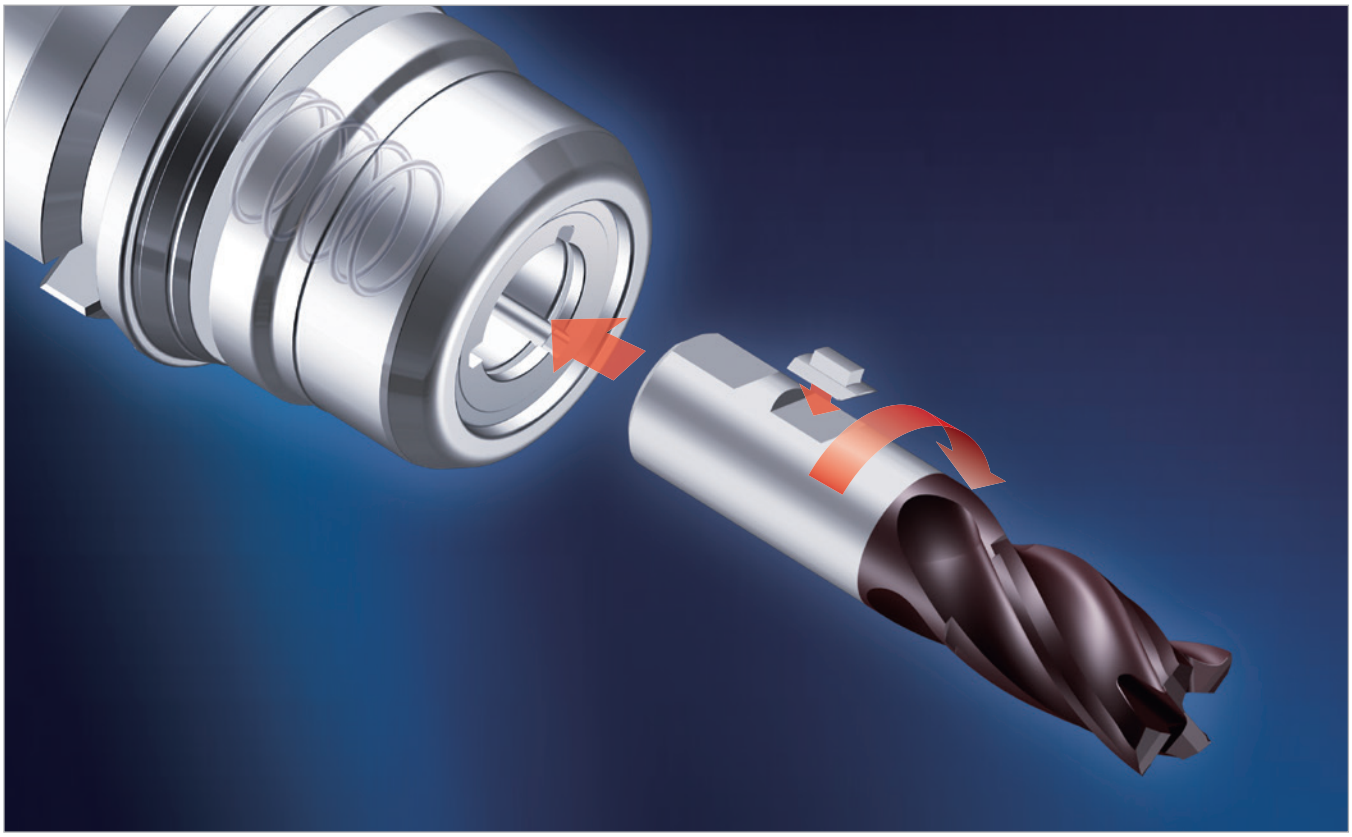


ØD		L	L_1	W		K	
Nominal	Tolerance			Nominal	Tolerance	Nominal	Tolerance
16	0 -.011	48mm	24mm	10	+.2 0	14.2	0 -.4
20	0 -.013	50mm	25mm	11		18.2	
25		56mm	32mm	12		23	
32	0 -.016	60mm	36mm	14		30	

- JIS Standards require sizes Ø25 or higher to be double-flat types. The MEGA PERFECT GRIP does not use a rear flat surface, but is capable of clamping double flat shanks
- JIS B4005 has the same dimensions as International Standard ISO3338-2 and German Standard DIN1835-1

CAUTION

If adding your own flat, the tool projection length in the MEGA PERFECT GRIP will be decided by the flat position. Refer to H_1 in the MEGA PERFECT GRIP chart, decide the flat position to add, and then cut the cutter at L_1 on cutter shank.



NEW Hi-POWER MILLING CHUCK

CLAMPING RANGE: Ø.750"-1.250" (Ø16-42mm)

For Heavy Duty End Milling

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

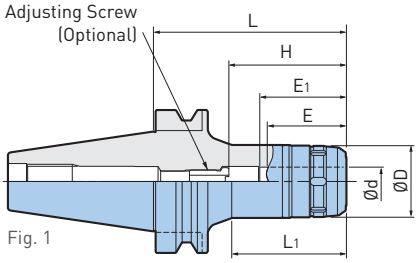


Fig. 1

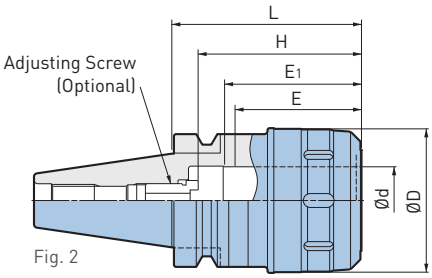


Fig. 2

COOLANT THROUGH

Catalog Number	Fig.	ød	øD	L	L1	H	Min Clamping Length		Wrench	Weight (lbs.)
							E	E1		
BBT30-HMC.750S-3	2	**.750**	1.969	3.00	—	2.16-2.55	1.97	2.21	FK45-50L	2.1
BBT30-HMC16S-70	1	**16mm**	1.693	2.76	1.85	2.80	1.89	2.17	FK45-50L	1.5
BBT30-HMC20S-75	2	**20mm**	1.969	2.95	—	2.20-2.59	1.97	2.21		2.0
BBT30-HMC25S-90		**25mm**	2.165	3.54	—	2.52-2.91	2.20	2.24	FK52-55	2.6
BBT30-HMC32S-105		**32mm**	2.441	4.13	—	2.75-3.15	2.28	2.28	FK58-62L	3.3
BBT40-HMC.750S-3.5	1	**.750**	1.969	3.50	2.31	2.71-3.11	1.97	2.21	FK45-50L	4.1
BBT40-HMC1.000S-3.5		**1.000**	2.323	3.50	2.42	2.87-3.26	2.20	2.24	FK58-62L	4.7
BBT40-HMC1.250S-4	2	**1.250**	2.677	4.00	—	3.11-3.50	2.36	2.52	FK68-75L	5.9
BBT40-HMC16S-75	1	**16mm**	1.693	2.95	1.77	2.80	1.89	2.17	FK45-50L	2.9
BBT40-HMC16S-120				4.72	3.54					4.0
BBT40-HMC20S-75	1	**20mm**	1.969	2.95	1.81	2.72-3.11	1.97	2.21		3.1
BBT40-HMC20S-105				4.13	2.95					4.2
BBT40-HMC20S-120				4.72	3.54					4.6
BBT40-HMC25S-75	1	**25mm**	2.323	2.95	1.85	2.87-3.27	2.20	2.24	FK58-62L	3.3
BBT40-HMC25S-105				4.13	303					4.6
BBT40-HMC25S-135				5.31	4.21					6.2
BBT40-HMC32S-90	2	**32mm**	2.677	3.54	—	2.80-3.19	2.36	2.52	FK68-75L	4.4
BBT40-HMC32S-105				4.13	—	3.11-3.50				5.1
BBT40-HMC32S-135				5.31	—					6.6
BBT50-HMC.750-4	1	**.750**	2.360	4.00	2.36	2.71-3.11	1.97	2.21	FK58-62	10.5
BBT50-HMC1.000-4		**1.000**	2.440	4.00	2.32	2.99-3.38	2.20	2.56	FK58-62	10.7
BBT50-HMC1.250-4		**1.250**	3.150	4.00	2.48	3.07-3.74	2.96	2.80	FK80-90	12.4
BBT50-HMC16S-105	1	**16mm**	1.693	4.13	2.24	2.80	1.89	2.17	FK45-50L	9.3
BBT50-HMC16S-135				5.31	3.15					10.1
BBT50-HMC16S-165				6.50	3.94					11.0
BBT50-HMC16S-200❖				7.87	4.72					12.8
BBT50-HMC20S-105	1	**20mm**	1.969	4.13	2.24	2.72-3.11	1.97	2.21	FK45-50L	9.5
BBT50-HMC20S-135				5.31	3.15					10.6
BBT50-HMC20S-165				6.50	3.94					11.9
BBT50-HMC20S-200				7.87	4.92					13.2
BBT50-HMC20S-300				11.81	7.87					18.3

Catalog Number	Fig.	ød	øD	L	L1	H	Min Clamping Length E	Min Clamping Length E1	Wrench	Weight (lbs.)
BBT50-HMC25S-105	1	**25mm**	2.323	4.13	2.24	2.99-3.39	2.20	2.24	FK58-62L	9.9
BBT50-HMC25S-135				5.31	3.43					11.5
BBT50-HMC25S-165				6.50	4.13					13.0
BBT50-HMC25S-200				7.87	4.92					16.5
BBT50-HMC32S-105	1	**32mm**	2.677	4.13	2.52	3.46-3.86	2.36	2.83	FK68-75L	10.1
BBT50-HMC32S-135				5.31	3.50					11.9
BBT50-HMC32S-165				6.50	4.13					14.1
BBT50-HMC32S-200				7.87	5.12					16.3
BBT50-HMC32S-300				11.81	7.87					25.4
BBT50-HMC42S-105	1	42mm	3.346	4.13	2.56	3.66-4.13	2.48	2.87	FK80-90L	11.5
BBT50-HMC42S-135				5.31	3.70					13.7
BBT50-HMC42S-165				6.50	4.84					16.3
BBT50-HMC42S-200				7.87	5.12					21.2
BBT50-HMC42S-300				11.81	7.87					31.1

- Wrench and axial adjusting screw must be ordered separately
- When using center through coolant:
  - Set screw with sealing compound applied (standard accessory) should be used to plug an air bleed hole
  - Oil hole type should be chosen when straight collet is required
- "H" indicates the adjustment length with an adjusting screw
- HMC16S requires the hex socket head screw (M8) for axial adjustment, however, please contact us if using for center through applications
- When using center through coolant, insert tool shank into E1 or more

ACCESSORIES

COLLET PG. 386 | PERFECT SEAL/ JET COLLET PG. 383 | WRENCH PG. 389 | SCREW PG. 412

CLAMPING RANGE: Ø1/2" & Ø12mm

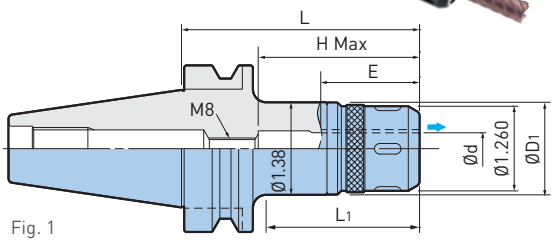


Fig. 1

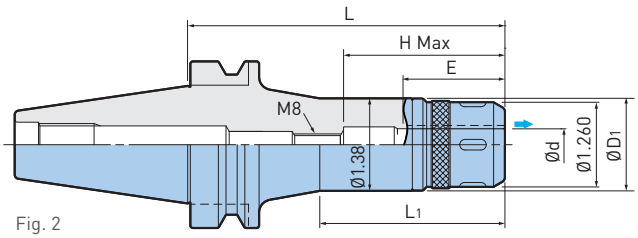
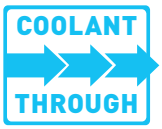


Fig. 2



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	Ød	ØD1	L	L1	H Max	Min Clamping Length E	Wrench	Weight (lbs.)
BBT30-HMC.500J-2.5	1	**.500**	1.38	2.50	1.55	2.56	1.69	FK31-33	1.3
BBT30-HMC12J-60	1	**12mm**	1.38	2.36	1.50	2.56	1.69	FK31-33	1.3
BBT40-HMC12J-90	1	**12mm**	1.38	3.54	2.48	2.56	1.69	FK31-33	3.1
BBT40-HMC12J-120	2			4.72	2.75				3.5
BBT50-HMC12J-105	1	**12mm**	1.38	4.13	2.64	2.56	1.69	FK31-33	8.8
BBT50-HMC12J-135	2			5.31	2.75				9.5
BBT50-HMC12J-165				6.50	3.54				10.3

- Wrench must be ordered separately

SUPER SLIM TYPE

CLAMPING RANGE: Ø.125" (Ø3mm-12mm)

For Drills, Reamers, Ball Mills, End Mills, Diamond Reamers & Grinding Tools

COOLANT THROUGH

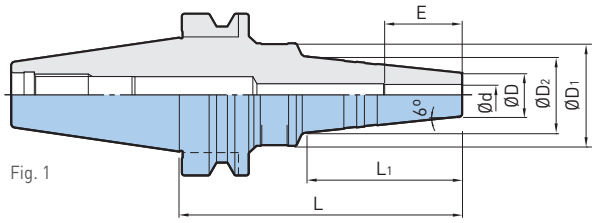


Fig. 1

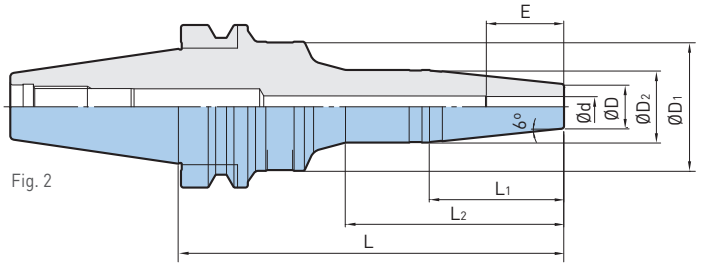


Fig. 2

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	Min Clamping Length E	Max RPM	Weight (lbs.)
BBT30-HDC3S-60❖	1	3mm	.551	1.65	.71	2.36	.75	—	.63	35,000	1.3
BBT30-HDC3S-90					.98	3.54	1.97	—		35,000	1.4
BBT30-HDC3.175S-60		.125	.551	1.63	.71	2.36	.75	—		35000	1.3
BBT30-HDC.125S-3.5				1.65	.96	3.50	1.96	—		35,000	1.4
BBT30-HDC4S-60		4mm	.551	1.81	.79	2.36	1.10	—	.75	35,000	1.1
BBT30-HDC4S-90				1.65	.98	3.54	1.97	—		35,000	1.4
BBT30-HDC5S-90		5mm	.551						.87	35,000	1.3
BBT30-HDC6S-60		6mm	.551	1.65	.75	2.36	.75	—	.98	35,000	1.3
BBT30-HDC6S-90					.98	3.54	1.97	—		35,000	1.5
BBT30-HDC8S-90		8mm	.669	1.65	1.10			—	1.18	35,000	1.5
BBT30-HDC10S-90		10mm	.748	1.73	1.18			—	1.26	35,000	1.5
BBT30-HDC12S-90		12mm	.827	1.81	1.26			—	1.38	35,000	1.8

Catalog Number	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	Min Clamping Length E	Max RPM	Weight (lbs.)
BBT40-HDC3S-90	1	3mm	.551	1.50	.94	3.54	1.73	—	.63	35,000	2.9
BBT40-HDC3S-135				1.73	1.02	5.31	2.24	84		30,000	3.1
BBT40-HDC4S-60		4mm	.551	1.50	.75	2.36	.87	—	.75	30,000	2.6
BBT40-HDC4S-90					.94	3.54	1.77	3.31		30,000	2.9
BBT40-HDC4S-135	2				1.02	5.31	2.24	3.31		30,000	3.1
BBT40-HDC5S-90		5mm	.551	1.50	.94	3.54	1.81	—	.83	30,000	2.9
BBT40-HDC6S-110	1	6mm	.551	1.50	1.06	4.33	2.36	—	.98	30,000	2.9
BBT40-HDC6S-150	2			1.89	1.02	5.91	2.24	3.35		28,000	3.5
BBT40-HDC8S-110	1	8mm	.669	1.57	1.18	4.33	2.36	—	1.18	30,000	3.1
BBT40-HDC8S-150	2			1.97	1.10	5.91	2.05	3.35		28,000	3.8
BBT40-HDC10S-110	1	10mm	.748	1.65	1.26	4.33	2.36	—	1.26	30,000	3.1
BBT40-HDC10S-150	2			1.97	1.18	5.91	2.05	3.35		25,000	3.8
BBT40-HDC12S-110	1	12mm	.827	1.73	1.34	4.33	2.36	—	1.38	30,000	3.1
BBT40-HDC12S-150	2			1.97	1.26	5.91	2.05	3.35		25,000	4.0
BBT50-HDC4S-150	2	4mm	.551	2.05	1.02	5.91	2.24	3.27	.75	20000	9.3
BBT50-HDC4S-200				2.20		7.87		3.94		15,000	10.1
BBT50-HDC6S-150		6mm	.551	2.05	1.02	5.91	2.24	3.27	.98	20,000	9.3
BBT50-HDC6S-200				2.20		7.87		3.94		15,000	10.1
BBT50-HDC8S-150		8mm	.669	2.12	1.10	5.91		3.27	1.18	20,000	9.5
BBT50-HDC8S-200				2.28		7.87		3.94		15,000	10.4
BBT50-HDC10S-150		10mm	.748	2.20	1.18	5.91	2.05	3.27	1.26	20,000	9.5
BBT50-HDC10S-200				2.36		7.87		3.94		15,000	10.6
BBT50-HDC12S-150		12mm	.827	2.28	1.26	5.91		3.27	1.38	20,000	9.7
BBT50-HDC12S-200				2.44		7.87		3.94		15,000	10.6

- Adjusting screw cannot be used
- Some coolant may leak from the inner diameter slits when center through coolant is used with models marked ❖

CAUTION

Use only cutting tools that have a shank tolerance of h6 (see table pg. 26). 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".

CLAMPING RANGE: Ø.250"-1.000" (Ø6-32mm)

For Drills, Reamers, Ball Mills, End Mills, Diamond Reamers & Grinding Tools

MAX 40,000 RPM

COOLANT THROUGH

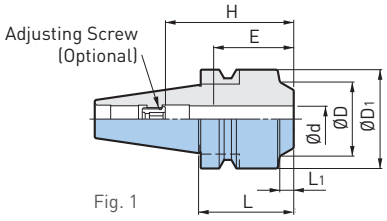


Fig. 1

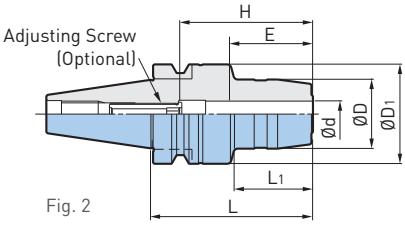


Fig. 2

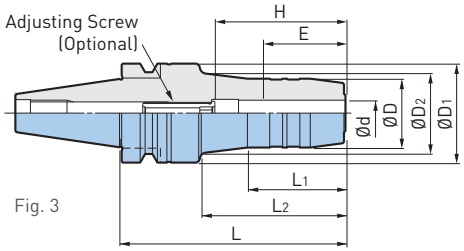


Fig. 3

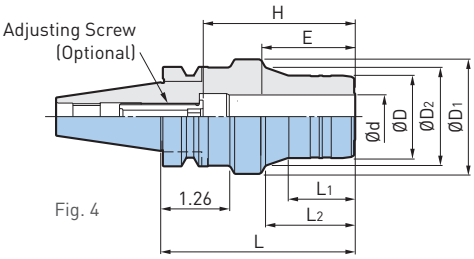


Fig. 4

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	H	Min Clamping Length E	Adjusting Screw	Weight (lbs.)
BBT30-HDC.250-2.5	1	**.250**	1.024	1.79	—	2.50	1.14	—	1.10-1.97	1.10	HDA6-05032	1.3
BBT30-HDC.250-4	2				1.18	4.00	1.69	2.70				1.8
BBT30-HDC.375-2.5	1	**.375**	1.181	1.81	—	2.50	.96	—	1.77-2.17	1.30	HDA10-08015	1.6
BBT30-HDC.375-4	2				1.34	4.00	1.77	2.48	1.30-2.17		HDA10-08032	2.0
BBT30-HDC.500-2.5	1	**.500**	1.299	1.81	—	2.50	.98	—	1.57-2.36	1.50	HDA12-10025	1.6
BBT30-HDC.500-4	2				1.46	4.00	1.77	2.52	1.50-2.36		HDA12-10032	2.0
BBT30-HDC.625-2.5❖	1	**.625**	1.496	1.81	—	2.50	.94	—	2.83	1.69	—	1.8
BBT30-HDC.625-4	2				1.81	4.00	1.85	2.52	1.69-2.76		HDA16-12037	2.4
BBT30-HDC.750-2.5	3	**.750**	1.496	2.09	—	2.50	.55	—	1.69-2.24	1.69	HDA16-12030	2.0
BBT30-HDC.750-4					1.77	4.00	1.22	2.09	1.69-2.95		HDA16-12037	2.4
BBT30-HDC1.000-4	3	**1.000**	2.165	2.48	2.48	4.00	1.61	1.73	2.05-3.15	2.05	HDA25-16039	3.8

Catalog Number	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	H	Min Clamping Length E	Adjusting Screw	Weight (lbs.)
BBT30-HDC6-45	1	**6mm**	1.181	1.81	—	1.77	.28	—	1.38-1.97	1.10	HDA6-05020	1.5
BBT30-HDC6-75	2		1.024	1.79		2.95	1.57		1.10-1.97		HDA6-05032	1.8
BBT30-HDC6-90	3				1.22	3.54	1.69	2.24				
BBT30-HDC6-105						4.13		2.83				2.0
BBT30-HDC8-45	1	**8mm**	1.260	1.81	—	1.77	.28	—	1.38-1.97	1.10	HDA8-06020	1.5
BBT30-HDC8-75	2		1.102	1.79		2.95	1.61		1.10-1.97		HDA8-06032	1.8
BBT30-HDC8-90	3				1.30	3.54	1.73	2.24				2.0
BBT30-HDC8-105						4.13		2.83				
BBT30-HDC10-45	1	**10mm**	1.339	1.81	—	1.77	.28	—	1.77-2.17	1.30	HDA10-08015	1.5
BBT30-HDC10-75	2		1.181			2.95	1.42		1.30-2.17		HDA10-08032	2.0
BBT30-HDC10-90	3				1.30	3.54		2.01				2.2
BBT30-HDC10-105					1.42	4.13		2.60				
BBT30-HDC12-45	1	**12mm**	1.417	1.81	—	1.77	.28	—	2.17-2.36	1.50	HDA12-10010●	1.5
BBT30-HDC12-75	2		1.260			2.95	1.42		1.50-2.36		HDA12-10032	1.8
BBT30-HDC12-90	3				1.38	3.54	1.77	2.01				2.0
BBT30-HDC12-105					1.50	4.13		2.64				2.2
BBT30-HDC14-90	3	**14mm**	1.339	1.81	1.46	3.54	1.81	2.05	1.50-2.36	1.50	HDA12-10032	2.0
BBT30-HDC16-45❖	1	**16mm**	1.654	1.81	—	1.77	.28	—	2.76	1.69	—	1.5
BBT30-HDC16-75	2		1.496			2.95	1.38		1.69-2.76		HDA16-12030	2.0
BBT30-HDC16-90	3					3.54	1.85				HDA16-12037	2.2
BBT30-HDC16-105						4.13						2.3
BBT30-HDC20-60◆	4	**20mm**	1.496	2.09	—	2.36	—	.55	1.69-2.13	1.69	HDA16-12030	2.0
BBT30-HDC20-75					1.81	2.95	.63	1.02	1.81-2.76			
BBT30-HDC20-90						3.54	1.22	1.61	1.69-2.76		HDA16-12037	2.4
BBT30-HDC20-105	3			1.81	—	4.13	1.57	—				2.2
BBT30-HDC25-105	4	**25mm**	2.165	2.48	—	4.13	1.73	—	2.05-3.15	2.05	HDA25-16039	3.8
BBT30-HDC32-105	4	**32mm**	2.362	2.95	—	4.13	1.54	—	2.20-3.15	2.20	HDA25-16039	4.0

- "H" indicates the adjustment length with an adjusting screw
- Adjusting screws cannot be used with models marked ❖
- Straight collets cannot be used with models marked ◆
- In case the projection length needs to be adjusted from the shank side, add the letter "W" to adjusting screw model number for hexagon sockets on both sides (ex: HDA6-05020W), adjusting screw with ● indication is not available in W type

CAUTION

Use only cutting tools that have a shank tolerance of h6 (see table pg. 26). 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".

ACCESSORIES

CLAMPING RANGE: Ø.250"-1.250" (Ø6-20mm)

For Drills, Reamers, Ball Mills, End Mills, Diamond Reamers & Grinding Tools

MAX 40,000 RPM

COOLANT THROUGH

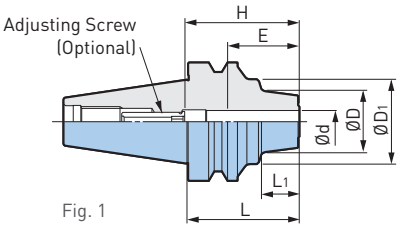


Fig. 1

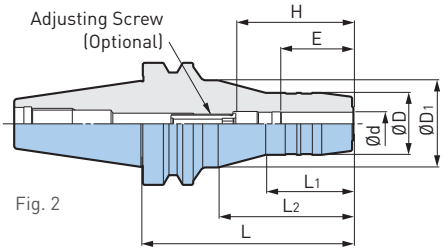


Fig. 2

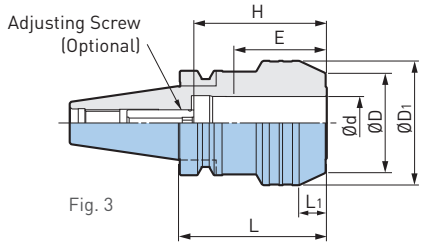


Fig. 3

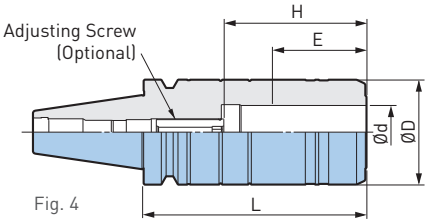


Fig. 4

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	Ød	ØD	ØD1	L	L1	L2	H	Min Clamping Length E	Adjusting Screw	Weight (lbs.)
BBT40-HDC.250-2.5	1	.250	1.024	1.77	2.50	.91	—	1.10-1.97	1.10	HDA6-05032	2.7
BBT40-HDC.250-4	2				4.00	1.73	2.44				3.3
BBT40-HDC.250-5.5					5.50		3.94				4.0
BBT40-HDC.375-2.5	1	.375	1.260	1.77	2.50	.94	—	1.30-2.17	1.30	HDA10-08032	2.9
BBT40-HDC.375-4	2		1.181		4.00	1.77	2.44				3.3
BBT40-HDC.375-5.5					5.50		3.94				4.2
BBT40-HDC.500-2.5	1	.500	1.299	1.77	2.50	.71	—	1.50-2.36	1.50	HDA12-10032	2.9
BBT40-HDC.500-4	2				4.00	1.81	2.44				3.6
BBT40-HDC.500-5.5					5.50		3.94				4.2
BBT40-HDC.625-3	1	.625	1.496	1.77	3.00	1.42	—	1.69-2.76	1.69	HDA16-12037	3.1
BBT40-HDC.625-4	2				4.00	1.85	2.40				3.6
BBT40-HDC.625-5.5					5.50		3.90				4.2
BBT40-HDC.750-3	2	.750	1.654	2.09	3.00	1.34	—	1.69-2.76	1.69	HDA16-12037	3.3
BBT40-HDC.750-4				1.97	4.00	1.85	2.44				3.8
BBT40-HDC.750-5.5					5.50		3.94				4.7
BBT40-HDC1.000-3	2	1.000	2.165	2.48	3.00	.98	1.10	2.05-3.15	2.05	HDA25-16033	4.2
BBT40-HDC1.000-5					5.00					HDA25-16039	6.4
BBT40-HDC1.250-3.5	3	1.250	2.953	—	3.50	.63	—	2.20-3.15	2.20	HDA25-16039	5.1
BBT40-HDC1.250-5	4		2.480		5.00	—					6.2

Catalog Number	Fig.	Ød	ØD	ØD1	L	L1	L2	H	Min Clamping Length E	Adjusting Screw	Weight (lbs.)
BBT40-HDC6-60	1	6mm	1.063	1.77	2.36	.75	—	1.10-1.97	1.10	HDA6-05032	2.7
BBT40-HDC6-90	2		1.024		3.54	1.73	1.97				3.0
BBT40-HDC6-110					4.33		2.76				3.3
BBT40-HDC6-135					5.31		3.74				3.6
BBT40-HDC6-165					6.50		4.69				4.2
BBT40-HDC8-60	1	8mm	1.142	1.77	2.36	.75	—	1.10-1.97	1.10	HDA8-06032	2.7
BBT40-HDC8-90	2		1.102		3.54	1.73	1.97				3.0
BBT40-HDC8-110					4.33		2.76				3.3
BBT40-HDC8-135					5.31		3.74				3.8
BBT40-HDC8-165					6.50		4.69				4.3
BBT40-HDC10-60	1	10mm	1.220	1.77	2.36	.79	—	1.30-2.17	1.30	HDA10-08032	2.7
BBT40-HDC10-90	2		1.181		3.54	1.77	1.97				3.0
BBT40-HDC10-110					4.33		2.76				3.3
BBT40-HDC10-135					5.31		3.74				3.8
BBT40-HDC10-165					6.50		4.69				4.3
BBT40-HDC12-60	1	12mm	1.299	1.77	2.36	.79	—	1.50-2.36	1.50	HDA12-10032	2.7
BBT40-HDC12-90	2		1.260		3.54	1.77	1.93				3.0
BBT40-HDC12-110					4.33		2.72				3.4
BBT40-HDC12-135					5.31		3.70				3.9
BBT40-HDC12-165					6.50		4.69				4.3
BBT40-HDC14-90	2	14mm	1.339	1.77	3.54	1.81	1.93	1.50-2.36	1.50	HDA12-10032	3.0
BBT40-HDC14-110					4.33		2.72				3.4
BBT40-HDC14-135					5.31		3.70				3.9
BBT40-HDC16-75	2	16mm	1.496	1.77	2.95	1.38	1.42	1.70-2.76	1.70	HDA16-16037	2.9
BBT40-HDC16-90					3.54	1.85	1.93				3.1
BBT40-HDC16-110					4.33		2.72				3.5
BBT40-HDC16-135					5.31		3.70				4.1
BBT40-HDC16-165				1.97	6.50		4.69				5.1
BBT40-HDC18-90	2	18mm	1.575	1.77	3.54	1.89	1.93	1.70-2.76	1.70	HDA16-12037	3.2
BBT40-HDC18-110					4.33		2.72				3.5
BBT40-HDC18-135					5.31		3.70				4.1
BBT40-HDC20-90	2	20mm	1.654	1.77	3.54	1.89	1.97	1.70-2.76	1.70	HDA16-12037	3.1
BBT40-HDC20-110				1.97	4.33		2.76				3.8
BBT40-HDC20-135					5.31		3.74				4.3
BBT40-HDC20-165					6.50		4.69				5.2

• In case the projection length needs to be adjusted from the shank side, add the letter "W" to adjusting screw model number for hexagon sockets on both sides

ACCESSORIES

PERFECT SEAL/
JET COLLET
PG. 383

CAUTION

Use only cutting tools that have a shank tolerance of h6 (see table pg. 26). 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".

HIGH RIGIDITY TYPE

CLAMPING RANGE: Ø20mm-32mm

Substantial body design to allow high-feed end milling, achieving highly reliable machining.

COOLANT THROUGH

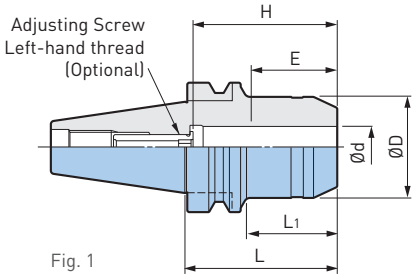


Fig. 1

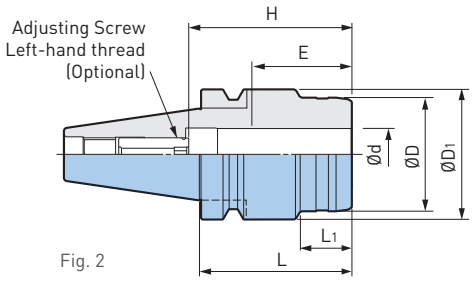


Fig. 2

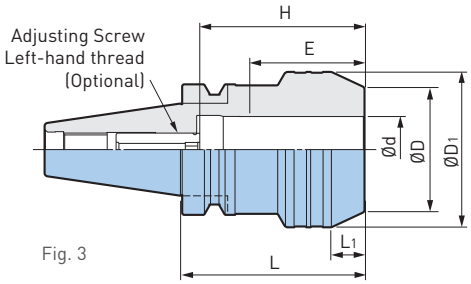


Fig. 3

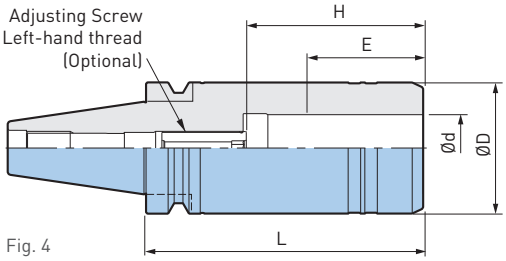


Fig. 4

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	Ød	ØD	ØD1	L	L1	H	Min Clamping Length E	Adjusting Screw	Weight (lbs.)
BBT40-HDC20E-75	1	**20mm**	1.929	—	2.95	1.77	1.70-2.76	1.70	HDA16-12037	3.1
BBT40-HDC25E-75	2	**25mm**	2.165	2.48	2.95	.98	2.05-3.15	2.05	HDA25-16033	4.0
BBT40-HDC25E-110					4.33				HDA25-16039	5.2
BBT40-HDC25E-135					5.31					6.5
BBT40-HDC25E-165					6.50					7.8
BBT40-HDC32E-90	3	**32mm**	2.362	2.95	3.54	.63	2.20-3.17	2.20	HDA25-16039	4.8
BBT40-HDC32E-110					4.33					5.6
BBT40-HDC32E-135	4		2.480	—	5.31	—	2.20-3.35			6.2
BBT40-HDC32E-165	2			2.48	6.50					7.1

- "H" indicates the adjustment length with an adjusting screw
- In case the projection length needs to be adjusted from the shank side, add the letter "W" to adjusting screw model number for hexagon sockets on both sides

ACCESSORIES

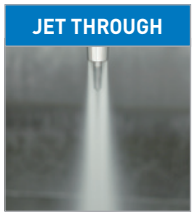
PERFECT SEAL/ JET COLLET PG. 383

CAUTION

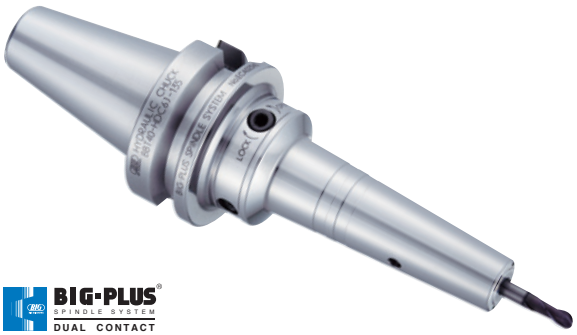
Use only cutting tools that have a shank tolerance of h6 (see table pg. 26). Do not use with cutting tools made with a flat on the shank (ie: Weldon type shank). Roughing end mills are not recommended for use with hydraulic chucks. Do not tighten the clamping screw without first inserting a cutting tool into the tool holder. Always insert the cutting tool into the hydraulic tool holder beyond min. clamping length "E".

JET COOLANT TYPE

CLAMPING RANGE: Ø.250"-.500" (Ø4mm-32mm) Coolant Holes Through Body of Holder



COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Min Clamping Length E

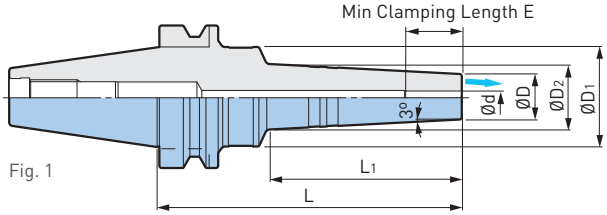


Fig. 1

Min Clamping Length E

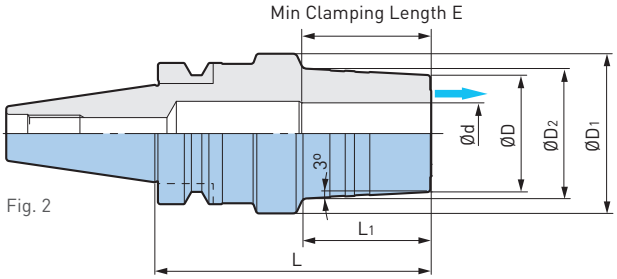


Fig. 2

Catalog Number	Fig.	Ød	ØD	ØD1	ØD2	L	L1	E	Weight (lbs.)
BBT30-HDC.250J-3.5	1	.250	.790	1.66	1.00	3.50	1.92	.99	1.5
BBT30-HDC.375J-3.5		.375	.950	1.74	1.16		1.93	1.30	1.6
BBT30-HDC.500J-3.5		.500	1.070	1.82	1.28		1.94	1.42	1.7
BBT30-HDC4J-60		4mm	.787	1.81	.91	2.36	1.10	.75	1.3
BBT30-HDC4J-90				1.65	1.02	3.54	1.97	.75	1.5
BBT30-HDC6J-90		6mm			1.02			.98	1.5
BBT30-HDC8J-90		8mm	.866		1.10			1.18	1.5
BBT30-HDC10J-90		10mm	.945	1.73	1.18			1.26	1.8
BBT30-HDC12J-90		12mm	1.024	1.81	1.26			1.38	1.8
BBT30-HDC16J-90		16mm	1.339		1.57		1.93	1.65	2.0
BBT30-HDC20J-90	2	20mm	1.496	2.05	1.69		1.57		2.4
BBT40-HDC4J-90	1	4mm	.787	1.50	.98	3.54	1.77	.75	2.9
BBT40-HDC4J-135				1.73	1.18	5.31	3.35		3.3
BBT40-HDC6J-90		6mm	.787	1.50	.98	3.54	1.77	.98	2.9
BBT40-HDC6J-135				1.73	1.14	5.31	3.35		3.3
BBT40-HDC8J-90		8mm	.866	1.57	1.06	3.54	1.77	1.18	2.9
BBT40-HDC8J-135				1.81	1.22	5.31	3.35		3.5
BBT40-HDC10J-90		10mm	.945	1.65	1.14	3.54	1.77	1.26	2.9
BBT40-HDC10J-135				1.89	1.30	5.31	3.35		3.5
BBT40-HDC12J-90		12mm	1.024	1.73	1.22	3.54	1.77	1.38	2.9
BBT40-HDC12J-135				1.97	1.38	5.31	3.35		3.7
BBT40-HDC16J-90		16mm	1.339	1.81	1.57	3.54	1.81	1.65	3.1
BBT40-HDC16J-135				1.97	1.73	5.31	3.50		4.2
BBT40-HDC20J-90		20mm	1.496	1.89	1.73	3.54	1.85	1.65	3.3
BBT40-HDC20J-135				2.09	1.89	5.31	3.54		4.4
BBT40-HDC25J-90		25mm	2.008	2.48	2.20	3.54	1.61	1.93	4.2
BBT40-HDC32J-90	2	32mm	2.322	2.95	—		.79	2.20	5.1

• Adjusting screws cannot be used

CAUTION

Use only cutting tools that have a shank tolerance of h6 (see table pg. 26). 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".

SHRINK FIT HOLDER

CLAMPING RANGE: Ø.250"-1.000" (Ø4-20mm)

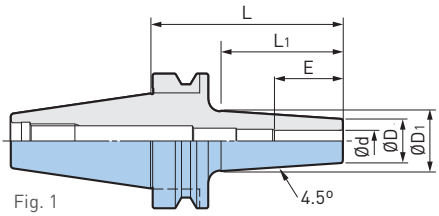


Fig. 1

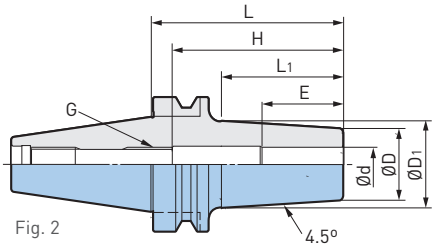


Fig. 2

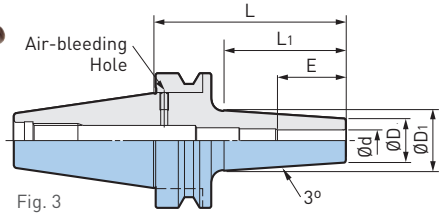


Fig. 3

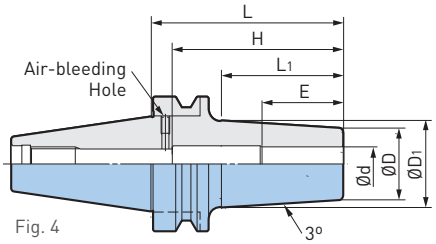


Fig. 4

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

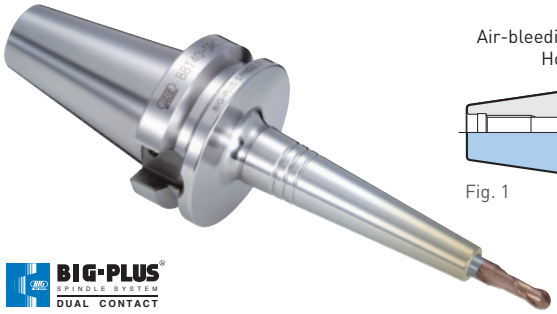
Catalog Number	Fig.	ød	øD	øD1	L	L1	H	E	G	Weight (lbs.)
BBT30-SF.250-3	1	.250	.827	1.06	3.00	2.06	—	.61	—	1.2
BBT30-SF.375-3		.375	.945	1.26				1.22		1.3
BBT30-SF.500-3	2	.500					1.81	1.42	M10 P1	1.3
BBT30-SF.625-3		.625	1.063	1.34			1.93	1.54	M12 P1	1.3
BBT30-SF.750-3		.750	1.299	1.63		2.10	2.24	1.84	M12 P1	1.6
BBT30-SRC4-75❖	3	4mm	.394	.57		1.73	—	.63	—	1.0
BBT30-SRC6-75		6mm	.551	.75		1.85		1.02		1.0
BBT30-SRC8-75		8mm	.709	.91						1.1
BBT30-SRC10-75	4	10mm	.866	1.06			2.44	1.26	—	1.2
BBT30-SRC12-75		12mm	.945	1.14			2.83	1.42		1.3
BBT30-SRC16-75		16mm	1.102	1.30		1.89	3.15	1.50		1.4
BBT40-SF.250-3.5	1	.250	.827	1.06	3.50	2.40	—	.87	—	2.6
BBT40-SF.375-3.5		.375	.945	1.26				1.22		2.7
BBT40-SF.500-3.5	2	.500	.945	1.26			1.81	1.42	M10 P1	2.7
BBT40-SF.625-3.5		.625	1.063	1.34			1.93	1.54	M12 P1	2.8
BBT40-SF.750-4		.750	1.299	1.65	4.00	2.90	2.24	1.85	M16 P1	3.2
BBT40-SF1.000-4		1.000	1.732	2.09					M16 P1	4.0
BBT40-SRC4-90❖	3	4mm	.394	.61	3.54	2.05	—	.63	—	2.3
BBT40-SRC6-90		6mm	.551	.79		2.24		1.02		2.4
BBT40-SRC6-150				1.02	3.54	4.49				2.8
BBT40-SRC8-90		8mm	.709	.94	5.91	2.24				2.5
BBT40-SRC8-150				1.18	3.54	4.49				3.0
BBT40-SRC10-90		10mm	.866	1.10	5.91	2.24		1.26		2.6
BBT40-SRC10-150				1.34	5.91	4.57				3.3
BBT40-SRC12-90		12mm	1.102	1.18	3.54	2.24		1.42		2.6
BBT40-SRC12-150				1.42	5.91	4.57				3.4
BBT40-SRC16-90	4	16mm	1.102	1.34	3.54	2.24	3.15	1.50	—	2.8
BBT40-SRC16-165				1.65	6.50	5.20				4.0
BBT40-SRC20-90		20mm	1.339	1.57	3.54	2.24	3.94	1.65		3.0
BBT40-SRC20-165				1.89	6.50	5.20				4.6

- Use a carbide shank cutter within a tolerance of h6
- Use a carbide shank cutter within a tolerance of h5 with models marked ❖
- Center through coolant supply is available with tools with oil holes
- "H" dimension is the Max tool shank length that can be inserted into the holder

CAUTION

Please refer to the operation manual of heating/cooling equipment, as some equipment may not be compatible.

SHRINK FIT HOLDER—SLIM TYPE CLAMPING RANGE: Ø6mm-12mm



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

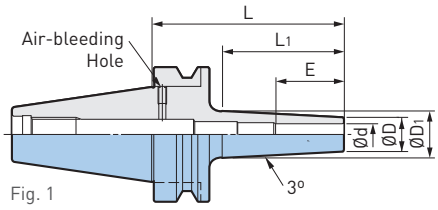


Fig. 1

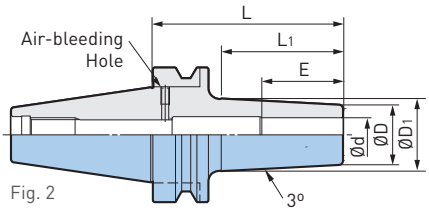


Fig. 2

Catalog Number	Fig.	Ød	ØD	ØD1	L	L1	E	Weight (lbs.)
BBT30-SRC6S-105	1	**6mm**	.394	.71	4.13	3.03	1.02	1.1
BBT30-SRC8S-105		**8mm**	.512	.83				1.1
BBT30-SRC10S-105	2	**10mm**	.630	.94			1.26	1.2
BBT30-SRC12S-105		**12mm**	.748	1.06			1.42	1.3
BBT40-SRC6S-120	1	**6mm**	.394	.75	4.72	3.39	1.02	2.4
BBT40-SRC6S-165				.93	6.50	5.00		2.7
BBT40-SRC8S-120		**8mm**	.512	.87	4.72	3.39		2.5
BBT40-SRC8S-165				1.04	6.50	5.08		2.8
BBT40-SRC10S-120		**10mm**	.630	.98	4.72	3.39	1.26	2.6
BBT40-SRC10S-165				1.16	6.50	5.08		3.0
BBT40-SRC12S-120		**12mm**	.748	1.10	4.72	3.43	1.42	2.7
BBT40-SRC12S-165				1.30	6.50	5.16		3.2

- Use a carbide shank cutter within a tolerance of h6
- Center through coolant supply is available with tools with oil holes

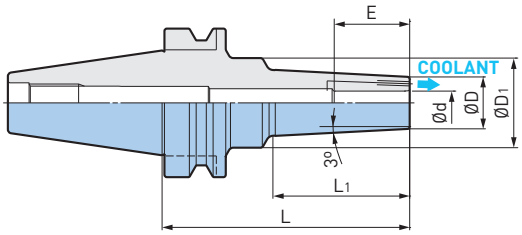
CAUTION

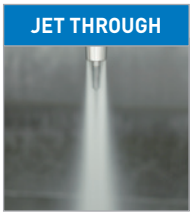
Please refer to the operation manual of heating/cooling equipment, as some equipment may not be compatible.

JET THROUGH TYPE

Coolant is securely supplied to cutting edge periphery from chuck nose.

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT





Catalog Number	Ød	ØD	ØD1	L	L1	E	Weight (lbs.)
BBT40-SRC6J-105	**.236**	.630	1.26	4.13	2.17	1.02	2.9
BBT40-SRC8J-105	**.315**	.748	1.38				2.9
BBT40-SRC10J-105	**.394**	.866	1.50		2.28	1.26	3.1
BBT40-SRC12J-105	**.472**	.945	1.57		2.48	1.42	3.1
BBT50-SRC6J-165	**.236**	.630	1.65	6.50	3.66	1.02	9.0
BBT50-SRC8J-165	**.315**	.748	1.77		3.90		9.3
BBT50-SRC10J-165	**.394**	.866	1.89		4.06	1.26	9.5
BBT50-SRC12J-165	**.472**	.945	1.97		4.25	1.42	9.5

- Use a carbide shank cutter within a tolerance of h6

CAUTION

Some shrink fit machines may not be compatible with the Shrink Chuck. Please refer to the shrink fit machine operation manual.

END MILL HOLDER

CLAMPING RANGE: Ø.250"-1.250" (Ø6-32mm)

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

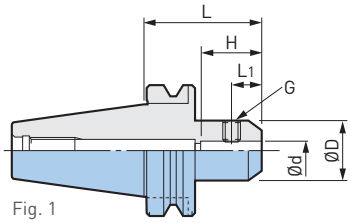


Fig. 1

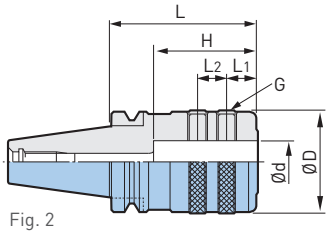


Fig. 2

Catalog Number	Fig.	Ød	ØD	L	L1	L2	H	G	Weight (lbs.)
BBT30-EM.250-2.5	1	.250	.88	2.50	.44	—	1.10	1/4"-28	1.3
BBT30-EM.375-2.5		.375	1.00		.75		1.77	3/8"-24	1.5
BBT30-EM.500-2.5		.500	1.38		.87		3.00	7/16"-20	1.8
BBT30-EM.625-2.5		.625	1.63		.94		2.69	916"-18	1.8
BBT30-EM.750-3		.750	1.75	3.00	1.00		2.75	5/8"-18	1.8
BBT30-ISL6-60	1	6mm	.98	2.36	.71	—	3.35	M6	1.3
BBT30-ISL8-60		8mm	1.10					M8	1.3
BBT30-ISL10-60		10mm	1.38		.79		1.77	M10	1.5
BBT30-ISL12-60		12mm	1.65		.89		1.89	M12	1.8
BBT30-ISL16-60		16mm	1.89		.94		2.09	M14	1.8
BBT40-EM.500-3	1	.500	1.38	3.00	.87	—	3.00	7/16"-20	2.8
BBT40-EM.625-3		.625	1.63		.94		3.50	9/16"-18	2.9
BBT40-EM.750-4		.750	1.75	4.00	1.00		3.88	5/8"-18	3.6
BBT40-EM1.000-4	2	1.000	2.25		1.13	1.00	3.13	3/4"-16	4.5
BBT40-EM1.250-4		1.250	2.75		1.13				5.6
BBT40-ISL6-75	1	6mm	.98	2.95	.71	—	3.54	M6	2.6
BBT40-ISL8-75		8mm	1.10			—		M8	2.6
BBT40-ISL10-75		10mm	1.38		.79	—		M10	2.6
BBT40-ISL12-75		12mm	1.65		.89	—	4.33	M12	3.3
BBT40-ISL16-75		16mm	1.89		.94		2.09	M14	3.3
BBT40-ISL20-75		20mm	2.05		.98		2.17	M16	3.5
BBT40-ISL25-90	2	25mm	2.50	3.54	.94	.98	2.36	M18 P2.0	4.6
BBT40-ISL32-105		32mm	2.83	4.13	.94	1.10	3.23	M20 P2.0	6.4

- For high speed applications MEGA DOUBLE POWER CHUCKS are recommended instead of end mill holders

ACCESSORIES

SET SCREW PG. 412

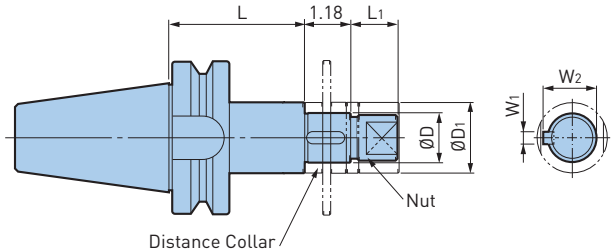
CAUTION

BIG genuine side lock screws must be used as they are made to an exclusive design and different from other screws on the market.

SIDE CUTTER ARBOR

CLAMPING RANGE: Ø1.000"-1.500"

Arbor for JIS Standard Side Cutters and Slitting Saws



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	ØD (h6)	ØD1	W2	W1	L	L1	Weight (lbs.)
BBT40-SCA25.4-75	1.000	1.575	1.094	.250	2.95	.98	4.2
BBT40-SCA25.4-120					4.72		5.1
BBT40-SCA31.75-75	1.250	1.811	1.375	.312	2.95	1.18	5.3
BBT50-SCA25.4-90	1.000	1.575	1.094	.250	3.54	.98	10.4
BBT50-SCA25.4-135					5.31		11.2
BBT50-SCA31.75-90	1.250	1.811	1.375	.312	3.54	1.18	11.2
BBT50-SCA31.75-135					5.31		12.6
BBT50-SCA38.1-90	1.500	2.165	1.656	.375	3.54	1.42	12.8
BBT50-SCA38.1-135					5.31		15.0

- Nut is included
- Distance collars of 5mm, 8mm, 10mm and 12mm are included
- The model, dimensions and accuracy conform to TMT standards

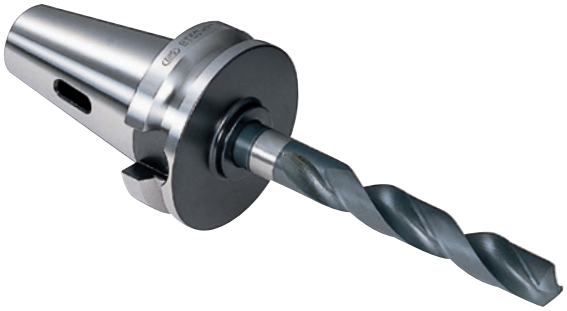
DISTANCE COLLAR

For Side Cutter Arbor

Body Model	**SCA25.4**	**SCA31.75**	**SCA38.1**
Thickness	Distance Collar Model		
.197 (5mm)	**SC254C5**	**SC3175C5**	**SC381C5**
.315 (8mm)	**SC254C8**	**SC3175C8**	**SC381C8**
.394 (10mm)	**SC254C10**	**SC3175C10**	**SC381C10**
.472 (12mm)	**SC254C12**	**SC3175C12**	**SC381C12**

MORSE TAPER HOLDER

Precise finish of the Morse taper bore provides stable runout accuracy.



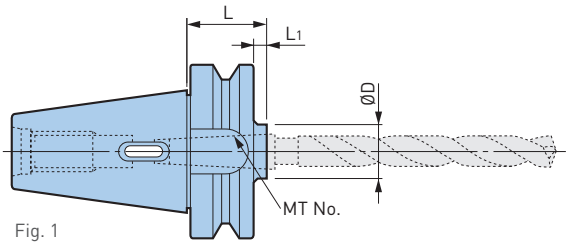


Fig. 1

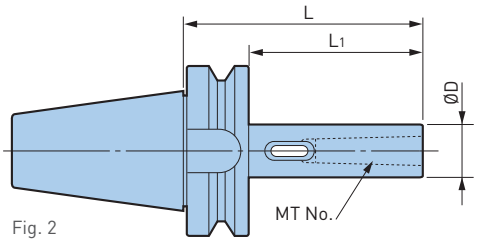


Fig. 2

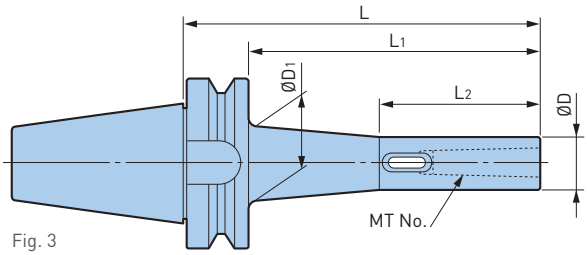


Fig. 3

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

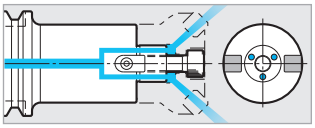
BIG-PLUS Taper Catalog Number	Standard Taper Catalog Number	Fig.	MT	ØD	ØD1	L	L1	L2	Weight (lbs.)	Reference Drill Dia. (JIS B4302 1)
BBT30-MTA1-60	**BT30-MTA1-60**	1	1	.984	—	2.36	1.50	—	1.1	.118-.551
BBT30-MTA2-60	**BT30-MTA2-60**		2	1.260		2.36	1.50		1.2	.571-.906
BBT30-MTA3-80	**BT30-MTA3-80**		3	1.575		3.15	2.28		1.6	.925-1.240
BBT40-MTA1-45	**BT40-MTA1-45**	1	1	.984	—	1.77	.71	—	2.2	.118-.551
BBT40-MTA1-120	**BT40-MTA1-120**	2				4.72	3.66		2.9	
BBT40-MTA2-45	**BT40-MTA2-45**	1	2	1.260	—	1.77	.71	—	2.2	.571-.906
BBT40-MTA2-120	**BT40-MTA2-120**	2				4.72	3.66		3.5	
BBT40-MTA3-75	**BT40-MTA3-75**	1	3	1.575	—	2.95	1.89	—	2.2	.925-1.240
BBT40-MTA3-135	**BT40-MTA3-135**	2				5.31	4.25		3.7	
BBT40-MTA4-90	**BT40-MTA4-90**	2	4	1.969	—	3.54	2.48	—	3.5	1.260-1.969
BBT50-MTA1-45	**BT50-MTA1-45**	1	1	.984	—	1.77	.28	—	8.6	.118-.551
BBT50-MTA1-120	**BT50-MTA1-120**	2				4.72	3.23		9.3	
BBT50-MTA1-180	**BT50-MTA1-180**					7.09	5.59		9.5	
BBT50-MTA1-210	—	3			1.614	8.27	6.77	3.35	9.7	
BBT50-MTA1-250					1.693	9.84	8.35		10.6	
BBT50-MTA2-45	**BT50-MTA2-45**	1	2	1.260	—	1.77	.28	—	8.6	.571-.906
BBT50-MTA2-135	**BT50-MTA2-135**	2				5.31	3.82		9.5	
BBT50-MTA2-180	**BT50-MTA2-180**					7.09	5.59		10.1	
BBT50-MTA2-210	—	3			1.791	8.27	6.77	3.74	10.6	
BBT50-MTA2-250					1.909	9.84	8.35		11.5	
BBT50-MTA2-300					1.949	11.81	10.31		12.8	

BIG-PLUS Taper Catalog Number	Standard Taper Catalog Number	Fig.	MT	ØD	ØD1	L	L1	L2	Weight (lbs.)	Reference Drill Dia. (JIS B4302 1)
BBT50-MTA3-45	**BT50-MTA3-45**	1	3	1.575	—	1.77	.28	—	8.4	.925-1.240
BBT50-MTA3-75	**—**					2.95	1.46		8.6	
BBT50-MTA3-150	**BT50-MTA3-150**	2				5.91	4.41		10.1	
BBT50-MTA3-180	**BT50-MTA3-180**					7.09	5.59		10.8	
BBT50-MTA3-210	**—**					8.27	6.77		11.2	
BBT50-MTA3-250		3			1.988	9.84	8.35	4.53	12.3	
BBT50-MTA3-300						11.81	10.31		13.9	
BBT50-MTA4-75	**BT50-MTA4-75**	1	4	1.969	—	2.95	1.46	—	8.6	1.260-1.969
BBT50-MTA4-180	**BT50-MTA4-180**	2				7.09	5.59		11.9	
BBT50-MTA4-210	**—**					8.27	6.77		12.3	
BBT50-MTA4-250						9.84	8.35		13.7	
BBT50-MTA4-300						11.81	10.31		15.4	
BBT50-MTA5-105	**BT50-MTA5-105**	1	5	2.559	—	4.13	2.64	—	9.9	2.008-2.992
BBT50-MTA5-210	**BT50-MTA5-210**	2				8.27	6.77		15.9	

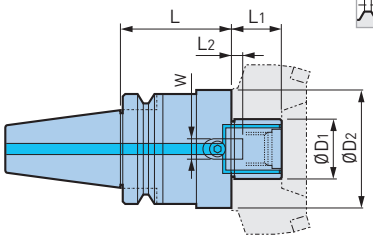
• The model, dimensions and accuracy conform to TMT standards

SHELL/FACE MILL HOLDER

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



COOLANT THROUGH



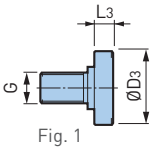


Fig. 1

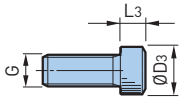


Fig. 2

Catalog Number	Fig.	ØD1	ØD2	ØD3	L	L1	L2	L3	W	G	Weight (lbs.)
BBT30-SMC.750-2	1	.750	1.689	.88	2.00	.69	.16	.16	.313	3/8"-24	1.6
BBT30-SMC1.000-2		1.000	2.189	1.12		.69	.22	.22	.375	1/2"-20	2.0
BBT30-FMH16-37-35	2	16mm	1.457	—	1.38	.63	.20	—	.315	M8	1.2
BBT30-FMH22-47-45●		22mm	1.850	—	1.77	.71	.20	.16	.394	M10	1.6
BBT30-FMH22-60-45●			2.362								
BBT30-FMH27-60-45●		27mm	2.362	—	1.77	.79	.24	.22	.472	M12	2.0
BBT40-SMC.750-2	1	.750	1.689	.88	2.00	.69	.16	.28	.313	3/8"-24	2.9
BBT40-SMC1.000-2		1.000	2.189	1.12		.69	.22	.38	.375	1/2"-20	3.3
BBT40-SMC1.250-2		1.250	2.752	1.50		.69	.28	—	.500	5/8"-18	4.0
BBT40-SMC1.500-2		1.500	3.626	1.88		.93	.38	—	.625	3/4"-16	5.3
BBT40-FMH22.225-47-60	2	22.225mm	1.850	—	2.36	.67	.14	—	.315	M10	3.3
BBT40-FMH22.225-47-90					3.54						4.2
BBT40-FMH25.4-70-60●		25.4mm	2.756	—	2.36	.87	.20	—	.374	M12	4.4
BBT40-FMH25.4-70-90					3.54						5.9
BBT40-FMH25.4-70-105					4.13						6.8
BBT40-FMH31.75-76-60●		31.75mm	2.992	—	2.36	1.18	.28	—	.500	M16	4.8
BBT40-FMH31.75-76-90					3.54						6.4
BBT40-FMH31.75-96-60●		31.75mm	3.780	—	2.36	1.18	.28	—	.500	M16	5.5
BBT40-FMH16-37-40	2	16mm	1.457	—	1.57	.63	.20	—	.315	M8	2.4
BBT40-FMH22-47-45		22mm	1.850	—	1.77	.71	.20	—	.394	M10	2.9
BBT40-FMH22-47-60					2.36						3.3
BBT40-FMH22-47-90					3.54						4.2
BBT40-FMH22-47-150					5.91						5.9
BBT40-FMH22-60-45		22mm	2.362	—	1.77	.71	.20	—	.394	M10	3.3
BBT40-FMH22-60-60					2.36						4.0
BBT40-FMH22-60-90					3.54						5.5
BBT40-FMH27-60-45		27mm	2.480	—	1.77	.79	.24	—	.472	M12	3.3
BBT40-FMH27-60-60					2.36						4.0
BBT40-FMH27-60-90					3.54						5.5
BBT40-FMH27-76-60●		27mm	2.992	—	2.36	.79	.24	—	.472	M12	4.6
BBT40-FMH27-76-90					3.54						6.2
BBT40-FMH32-96-60●		32mm	3.780	—	2.36	.87	.28	—	.551	M16	5.3

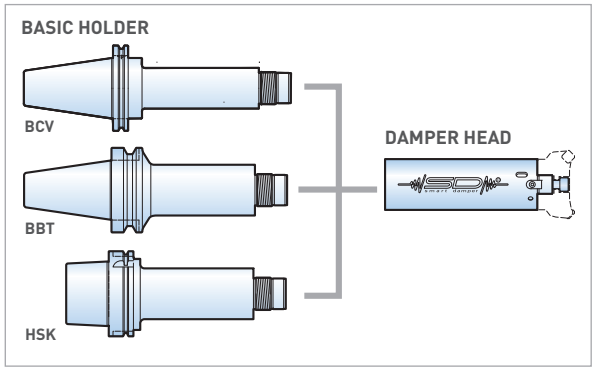
- Cutter clamping screw is included
- The weight does not include the cutter
- If the provided clamping screw is not compatible, separately select one from the clamping screw table on pg. 413
- When using a cutter without oil holes, an optional clamping screw with a through hole allows coolant supply
- The ATC arm interference zone K is 30mm for BBT30 and 45mm for BBT40 with models marked ●

ACCESSORIES

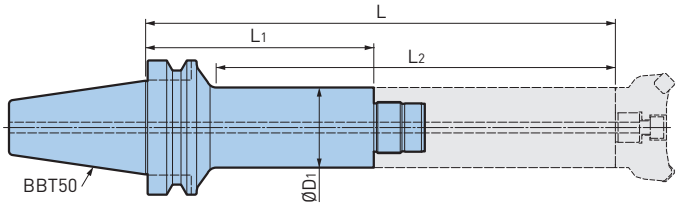
CAUTION

For high speed applications, shell mill holders should be balanced together with the cutters.

SMART DAMPER MILLING—FACE MILL ARBOR TYPE



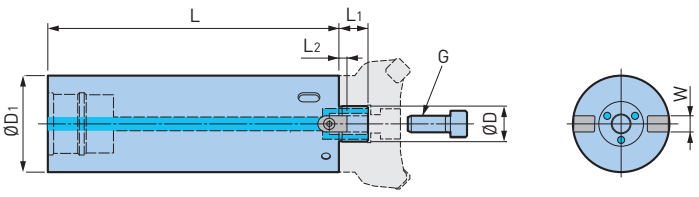
COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	ØD1	L	L1	L2	Weight (lbs.)	Damper Head Model
BBT50-SDF36-47-70	47mm	9.843	2.756	7.756	9.5	FMH□□DP-47
BBT50-SDF36-47-120		11.811	4.724	9.724	11.0	
BBT50-SDF36-47-170		13.780	6.693	11.693	12.3	
BBT50-SDF36-47-220		15.748	8.661	13.661	13.9	
BBT50-SDF36-60-70	60mm	9.843	2.756	7.756	10.1	FMH□□DP-60
BBT50-SDF36-60-120		11.811	4.724	9.724	12.6	
BBT50-SDF36-60-170		13.780	6.693	11.693	14.8	
BBT50-SDF36-60-220		15.748	8.661	13.661	17.2	
BBT50-SDF57-76-70	76mm	9.843	2.756	7.756	11.7	FMH□□DP-76
BBT50-SDF57-76-120		11.811	4.724	9.724	15.4	
BBT50-SDF57-76-170		13.780	6.693	11.693	19.4	
BBT50-SDF57-76-220		15.748	8.661	13.661	23.1	

SMART DAMPER MILLING—DAMPER HEAD



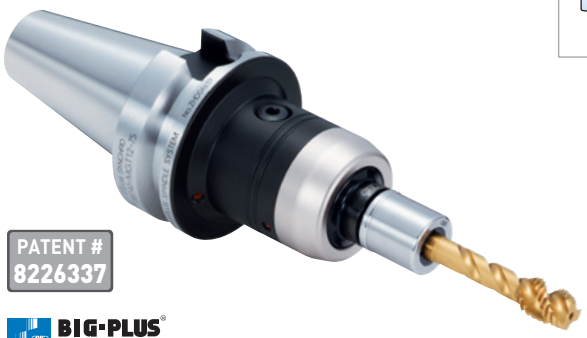
COOLANT THROUGH

Catalog Number	ØD	ØD1	L	L1	L2	W	G	Weight (lbs.)	C-Spanner Model
SDF36-FMH22DP-47-180	22mm	47mm	7.087	.709	.197	.394	M10	6.6	FK45-50L
SDF36-FMH22DP-60-180		60mm						9.9	FK58-62L
SDF36-FMH27DP-60-180	27mm	60mm		.787	.236	.472	M12	9.9	FK58-62L
SDF57-FMH27DP-76-180		76mm						17.8	FK68-75L
SDF36-SMC.750DP-47-180	.750	47mm	7.087	.689	.160	.313	3/8"-24	6.6	FK45-50L
SDF36-SMC1.000DP-60-180	1.000	60mm			.220	.375	1/2"-20	9.9	FK58-62L
SDF57-SMC1.000DP-72-180		72mm						16.3	FK68-75L

- Hook wrench and cutter clamping screw are included
- The weight does not include the cutter
- Refer to the operation manual regarding the mounting method to the basic holder
- If the provided clamping screw is not compatible, separately select one from the clamping screw table on pg. 413
- The damper head cannot be removed after the basic holder and damper head have been attached and used for processing

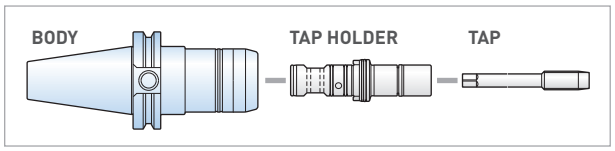
MEGA SYNCHRO TAPPING HOLDER

TAPPING RANGE: No.2-AU3/4 (M2-M20)

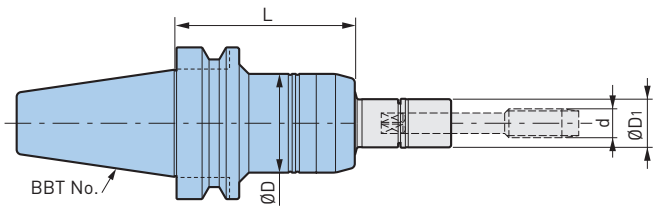


PATENT # 8226337

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



COOLANT THROUGH



Catalog Number	Tapping Range d* (Inch)	Tapping Range d* (Metric)	ØD	ØD1	L	Wrench	Weight (lbs.)
BBT30-MGT6-70	**No.2-No.12**	**M2-M6**	1.42	.63	2.76	MGR16	1.5
BBT30-MGT12-70	**AU1/4-AU7/16**	**M6-M12**	1.61	.79	2.76	MGR20L	1.8
BBT30-MGT20-110	**AU1/2-AU3/4 AP1/8-AP1/4**	**M12-M20**	2.13	1.18	4.33	MGR30L	3.3
BBT40-MGT6-75	**No.2-No.12**	**M2-M6**	1.42	.63	2.95	MGR16	2.9
BBT40-MGT12-75	**AU1/4-AU7/16**	**M6-M12**	1.61	.79	2.95	MGR20L	3.1
BBT40-MGT20-95	**AU1/2-AU3/4 AP1/8-AP1/4**	**M12-M20**	2.13	1.18	3.74	MGR30L	4.0
BBT50-MGT6-90	**No.2-No.12**	**M2-M6**	1.42	.63	3.54	MGR16	8.6
BBT50-MGT12-90	**AU1/4-AU7/16**	**M6-M12**	1.61	.79	3.54	MGR20L	8.8
BBT50-MGT20-105	**AU1/2-AU3/4 AP1/8-AP1/4**	**M12-M20**	2.13	1.18	4.13	MGR30L	9.7

***AU3/8 is included in the MGT20 series**

- MGT set screw is included; tap holder and wrench must be ordered separately

ACCESSORIES

TAP HOLDER PG. 396

MEGA NUT PG. 403

SYNCHRO ADJUSTER PG. 403

O-RING PG. 403

MEGA WRENCH PG. 390

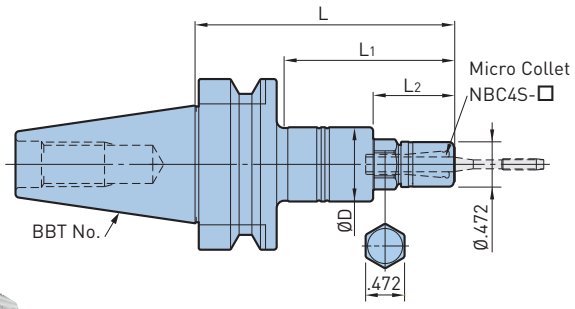
SCREW PG. 403

CAUTION

Cannot be used with machining center without synchronized tapping function.

MEGA SYNCHRO TAPPING HOLDER

TAPPING RANGE: No.0-No.6 (M1-M3)



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Tapping Range d* (Inch)	Tapping Range d* (Metric)	ØD	L	L1	L2	Wrench	Weight (lbs.)
BBT30-MGT3-70	**No.0-No.6**	**M1-M3**	.787	2.76	1.81	.87	MGR12	1.5
BBT40-MGT3-90	**No.0-No.6**	**M1-M3**	.787	3.54	2.40	.87	MGR12	2.6

- Nut is included; collet and wrench must be ordered separately
- When attaching or detaching the tap, a commercially available flat wrench (12mm width) is also required
- Not capable of supplying coolant through the holder body

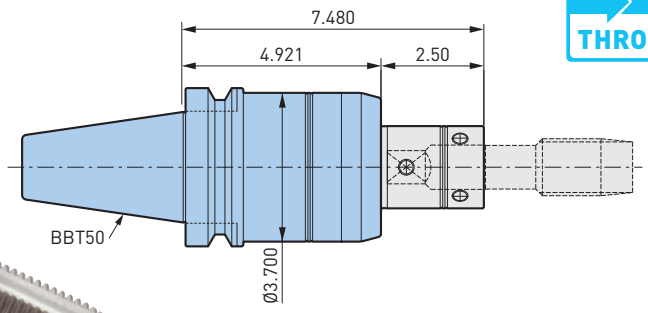
ACCESSORIES

CAUTION

Cannot be used with machining center without synchronized tapping function.

TAPPING RANGE: AU13/16-AU1-1/2 (M20-M36)

COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Tapping Range d (Inch)	Tapping Range d (Metric)	Weight (lbs.)
BBT50-MGT36-125	**AU13/16-AU1-1/2 AP3/8-AP1**	**M20-M36**	15.8

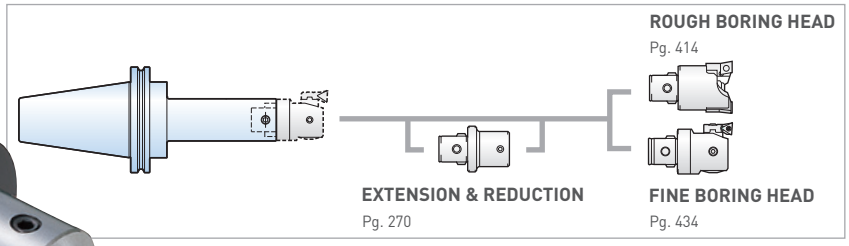
- MGT set screw is included; tap holder must be ordered separately

ACCESSORIES

CAUTION

Cannot be used with machining center without synchronized tapping function.

CKB SHANKS



COOLANT THROUGH

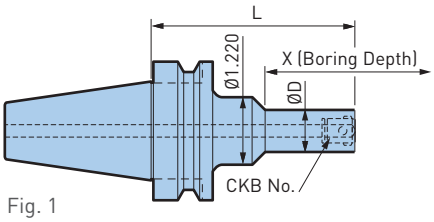


Fig. 1

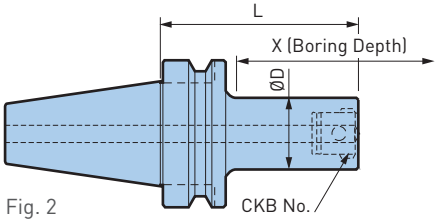


Fig. 2

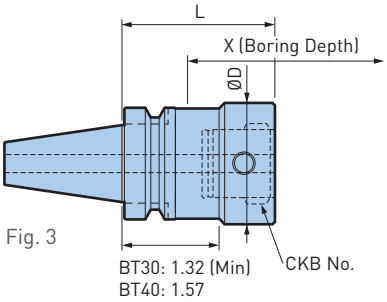


Fig. 3

Catalog Number	Reference Number	Fig.	CK	ØD	L	X	Weight (lbs.)
BT30-CKB1-72	—	1	CKB1	.748	2.835	2.874	1.1
BT30-CKB2-38	—	2	CKB2	.945	1.476	1.890	.7
BT30-CKB2-83	—				3.248	3.661	1.3
BT30-CKB3-39	—	2	CKB3	1.220	1.535	2.087	1.0
BT30-CKB3-79	—				3.110	3.661	1.5
BT30-CKB4-38	—	2	CKB4	1.535	1.496	2.283	1.0
BT30-CKB4-73	—				2.874	3.661	1.7
BT30-CKB5-38	10.329.866	3	CKB5	1.968	1.496	2.677	1.0
BT30-CKB5-63	—				2.480	3.661	1.8
BT30-CKB6-64	—	3	CKB6	2.520	2.520	3.661	2.9
BT40-CKB1-72	—	2	CKB1	.748	2.835	2.874	2.4
BT40-CKB2-43	—	2	CKB2	.945	1.673	1.890	2.2
BT40-CKB2-83	—				3.248	3.465	2.6
BT40-CKB3-44	—	2	CKB3	1.220	1.732	2.087	2.4
BT40-CKB3-94	—				3.701	4.055	2.9
BT40-CKB4-43	—	2	CKB4	1.535	1.693	2.283	2.6
BT40-CKB4-65	10.326.141	2			2.559	3.150	3.0
BT40-CKB4-88	—	2			3.465	4.055	3.3
BT40-CKB5-48	—	2	CKB5	1.968	1.890	2.874	2.6
BT40-CKB5-55	10.326.151	2			2.165	3.150	3.0
BT40-CKB5-78	—	2			3.071	4.055	3.5
BT40-CKB6-46	10.326.161	3	CKB6	2.500	1.811	3.346	2.5
BT40-CKB6-64	—	3		2.520	2.520	4.055	3.5

Catalog Number	Reference Number	Fig.	CK	ØD	L	X	Weight (lbs.)
BT50-CKB1-102	—	1	CKB1	.748	4.016	2.874	8.8
BT50-CKB2-53	—	2	CKB2	.945	2.067	1.850	8.4
BT50-CKB2-113	—				4.429	4.213	8.8
BT50-CKB3-54	—	2	CKB3	1.220	2.126	2.047	8.6
BT50-CKB3-124	—				4.882	4.803	9.5
BT50-CKB4-58	—	2	CKB4	1.535	2.283	2.441	9.5
BT50-CKB4-118	—				4.646	4.803	9.9
BT50-CKB4-178	—				7.008	7.165	10.8
BT50-CKB5-63	—	2	CKB5	1.968	2.480	3.031	8.8
BT50-CKB5-86	10.326.352				3.386	3.937	9.5
BT50-CKB5-108	—				4.252	4.803	10.3
BT50-CKB5-183	—				7.205	7.756	13.0
BT50-CKB5-228	—				8.976	9.528	14.3
BT50-CKB6-72	10.326.362	2	CKB6	2.500	2.835	3.937	9.2
BT50-CKB6-94	—				3.701	4.803	10.6
BT50-CKB6-169	—				6.654	7.756	14.7
BT50-CKB6-229	—				9.016	10.118	18.0
BT50-CKB7-86	10.326.374	2	CKB7	3.543	3.386	6.299	11.7
BT50-CKB7-93	—				3.661	6.772	12.3
BT50-CKB7-183	—				7.205	10.315	21.8
BT50-CKB7-243	—				9.567	12.677	28.0

- X dimensions on the table are reference figures when EWN/EWE head is mounted
- Cutting edge and drive key grooves are located in the same orientation

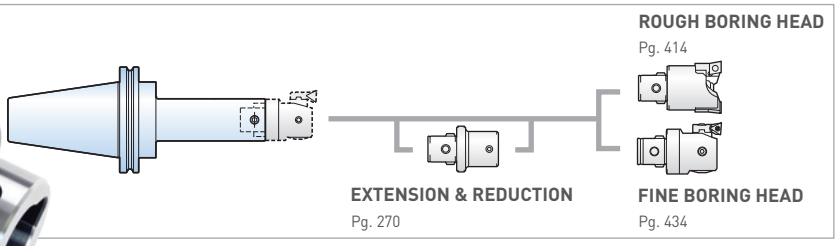
ACCESSORIES

SPARE PARTS PG. 538

CKN SHANKS

Catalog Number	Reference Number	CK	Fig.	ØD	L	X	Weight (lbs.)
BT40-CKN6-46	10.323.735N	CKN6	2	2.500	1.811	3.346	2.2
BT40-CKN6-61	10.323.736N		2	2.500	2.402	3.937	2.9
BT50-CKN6-72	10.323.775N	CKN6	1	2.500	2.835	3.937	8.6
BT50-CKN7-86	10.323.776N	CKN7	2	3.543	3.386	6.299	10.9

CKB SHANKS—BIG-PLUS



COOLANT THROUGH

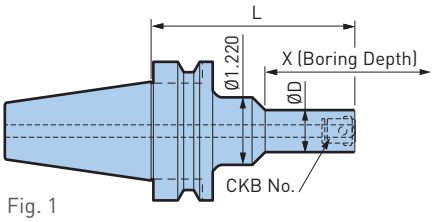


Fig. 1

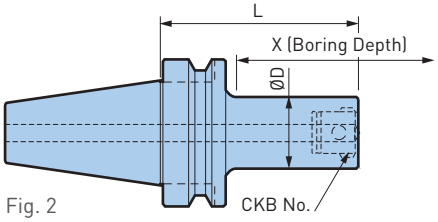


Fig. 2

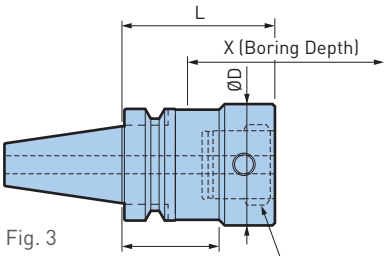


Fig. 3

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	CK	ØD	L	X	Weight (lbs.)
BBT30-CKB1-72	1	CKB1	.748	2.835	2.874	1.1
BBT30-CKB2-38	2	CKB2	.945	1.476	1.890	.7
BBT30-CKB2-83				3.248	3.661	1.3
BBT30-CKB3-39		CKB3	1.22	1.535	2.087	1.0
BBT30-CKB3-79				3.110	3.661	1.5
BBT30-CKB4-38		CKB4	1.535	1.496	2.283	1.0
BBT30-CKB4-73				2.874	3.661	1.7
BBT30-CKB5-63	3	CKB5	1.968	2.480	3.661	1.8
BBT30-CKB6-64		CKB6	2.520	2.520	3.661	2.9
BBT40-CKB1-72	2	CKB1	.748	2.835	2.874	2.4
BBT40-CKB2-43		CKB2	.945	1.673	1.890	2.2
BBT40-CKB2-83				3.248	3.465	2.6
BBT40-CKB3-44		CKB3	1.220	1.732	2.087	2.4
BBT40-CKB3-94				3.701	4.055	2.9
BBT40-CKB3-124				4.882	4.449	3.3
BBT40-CKB4-43		CKB4	1.535	1.693	2.283	2.6
BBT40-CKB4-88				3.465	4.055	3.3
BBT40-CKB4-118				4.646	5.236	4.0
BBT40-CKB4-148				5.827	6.417	4.6
BBT40-CKB5-48		CKB5	1.968	1.890	2.874	2.6
BBT40-CKB5-78				3.071	4.055	3.5
BBT40-CKB5-108				4.252	5.236	4.6
BBT40-CKB5-138				5.433	6.417	5.5
BBT40-CKB6-64	3	CKB6	2.520	2.520	4.055	3.5
BBT40-CKB6-94				3.701	5.236	5.1
BBT40-CKB6-124				4.882	6.417	6.9
BBT50-CKB1-102	1	CKB1	.748	4.016	2.874	8.8
BBT50-CKB2-53	2	CKB2	.945	2.067	1.850	8.4
BBT50-CKB2-113				4.429	4.213	8.8
BBT50-CKB3-54		CKB3	1.220	2.126	2.047	8.6
BBT50-CKB3-124				4.882	4.803	9.5
BBT50-CKB3-154				6.063	4.370	9.0

Catalog Number	Fig.	CK	ØD	L	X	Weight (lbs.)
BBT50-CKB4-58	2	CKB4	1.535	2.283	2.441	9.5
BBT50-CKB4-118				4.646	4.803	9.9
BBT50-CKB4-178				7.008	7.165	10.8
BBT50-CKB4-208				8.189	8.346	11.2
BBT50-CKB5-63		CKB5	1.968	2.480	3.031	8.8
BBT50-CKB5-108				4.252	4.803	10.3
BBT50-CKB5-183				7.205	7.756	13.0
BBT50-CKB5-228				8.976	9.528	14.3
BBT50-CKB5-263				10.354	10.906	15.4
BBT50-CKB6-94		CKB6	2.491	3.701	4.803	10.6
BBT50-CKB6-169			2.520	6.654	7.756	14.7
BBT50-CKB6-229				9.016	10.118	18.0
BBT50-CKB6-289				11.378	12.480	21.3
BBT50-CKB7-93		CKB7	3.543	3.661	6.772	12.3
BBT50-CKB7-183				7.205	10.315	21.8
BBT50-CKB7-243				9.567	12.677	28.0

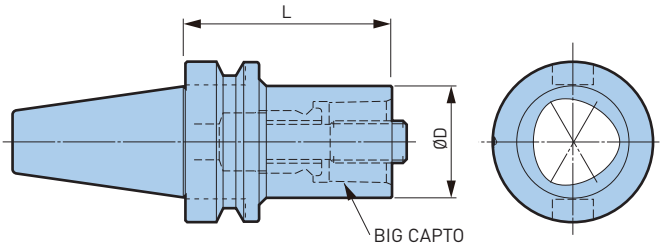
- X dimensions on the table are reference figures when EWN/EWE head is mounted
- Cutting edge and drive key grooves are located in the same orientation

ACCESSORIES

CKN SHANKS

Catalog Number	Reference Number	Fig.	CK	ØD	L	X	Weight (lbs.)
BBT40-CKN6-46	10.323.832N	2	CKN6	2.500	1.811	3.346	2.2
BBT40-CKN6-61	10.323.831N	2		2.500	2.402	3.937	2.9
BBT50-CKN6-72	10.323.874N	1	CKN6	2.500	2.835	3.937	8.7
BBT50-CKN7-86	10.323.871N	2	CKN7	3.543	3.386	6.299	10.8

BIG CAPTO SHANKS



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

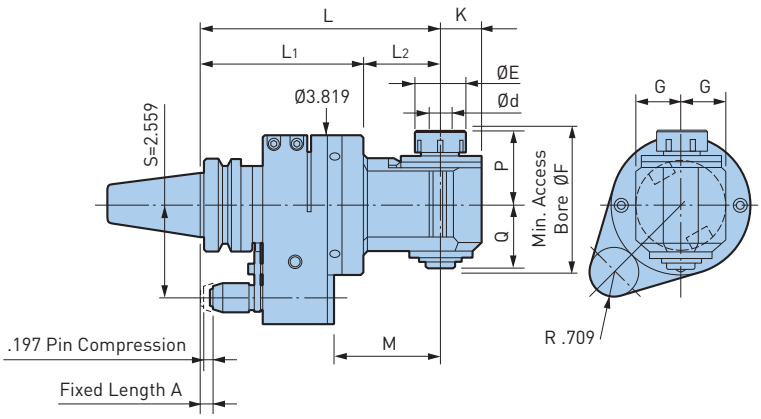
Catalog Number	BIG CAPTO	ØD	L	Weight (lbs.)
BBT40-C3-30	C3	1.260	1.181	2.2
BBT40-C4-40	C4	1.575	1.575	2.4
BBT40-C5-50	C5	1.969	1.969	4.9
BBT40-C6-75	C6	2.480	2.953	3.7
BBT50-C3-30	C3	1.260	1.575	7.9
BBT50-C4-40	C4	1.575		7.9
BBT50-C5-40	C5	1.969		7.7
BBT50-C6-50	C6	2.480	1.969	7.7
BBT50-C8-70	C8	3.150	2.756	8.8

- Clamp bolt is included

AG90 NBS TYPE

CLAMPING RANGE: Ø.010"-.787"

MAX 6,000 RPM



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØE	G	K	L	L1	L2	M	P	Q	ØF	Collet	Max RPM	Weight (lbs.)
BBT40-AG90/NBS6-170	.010-.236	.787	.827	.669	6.69	4.53	2.17	3.03	1.30	1.14	2.638	NBC6	6,000	11.2
BBT40-AG90/NBS6-200					7.87		3.35	4.21						11.7
BBT40-AG90/NBS6-230					9.06		4.53	5.39						12.1
BBT40-AG90/NBS6-260					10.24		5.71	6.58						12.5
BBT40-AG90/NBS10-170	.059-.394	1.181	1.181	.984	6.69	4.53	2.17	3.03	1.77	1.69	3.583	NBC10	6,000	12.1
BBT40-AG90/NBS10-200					7.87		3.35	4.21						13.0
BBT40-AG90/NBS10-230					9.06		4.53	5.39						13.7
BBT40-AG90/NBS13-170	.098-.512	1.378	1.220	1.102	6.69	4.53	2.17	3.03	2.05	1.77	3.976	NBC13	6,000	12.3
BBT40-AG90/NBS13-200					7.87		3.35	4.21						13.2
BBT40-AG90/NBS13-230					9.06		4.53	5.39						13.9
BBT40-AG90/NBS20S-165S	.098-.787	1.811	1.378	1.299	6.50	4.41	2.09	2.84	2.56	2.44	5.197	NBC20	3,000	17.6

- Nut and wrench are included, collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

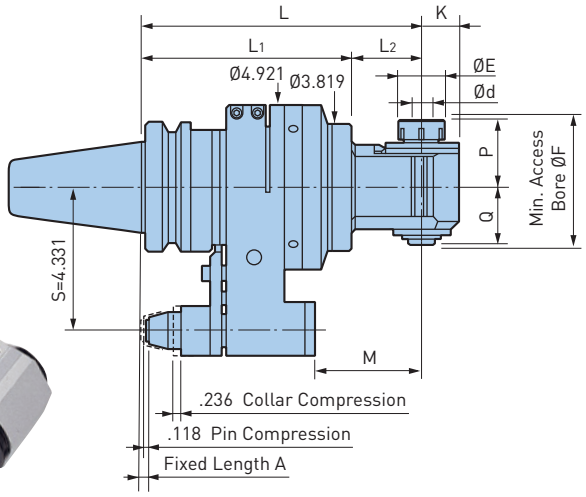
CAUTION

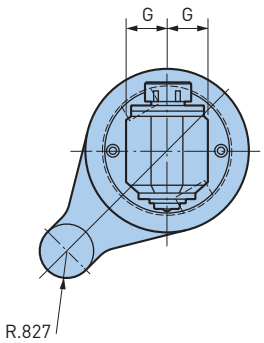
A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

AG90 NBS TYPE

CLAMPING RANGE: Ø.010"-.787"

MAX 6,000 RPM





BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØE	G	K	L	L1	L2	M	P	Q	ØF	Collet	Max RPM	Weight (lbs.)
BBT50-AG90/NBS6-215	**.010-.236**	.787	.827	.669	8.47	6.30	2.17	3.23	1.30	1.14	2.638	NBC6	6,000	27.8
BBT50-AG90/NBS6-245					9.65		3.35	4.41						28.2
BBT50-AG90/NBS6-275					10.83		4.53	5.59						28.7
BBT50-AG90/NBS6-305					12.01		5.71	6.77						29.1
BBT50-AG90/NBS10-215	**.059-.394**	1.181	1.181	.984	8.47	6.30	2.17	3.23	1.77	1.69	3.583	NBC10	6,000	28.7
BBT50-AG90/NBS10-245					9.45		3.35	4.41						29.5
BBT50-AG90/NBS10-275					10.83		4.53	5.59						30.2
BBT50-AG90/NBS13-215	**.098-.512**	1.378	1.220	1.102	8.47	6.30	2.17	3.23	2.05	1.77	3.976	NBC13	6,000	28.9
BBT50-AG90/NBS13-245					9.45		3.35	4.41						29.8
BBT50-AG90/NBS13-275					10.83		4.53	5.59						30.4
BBT50-AG90/NBS20-230	**.098-.787**	1.811	1.378	1.378	9.06	6.30	2.76	3.82	2.56	2.44	5.197	NBC20	3,000	31.3

- Nut and wrench are included, collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

CAUTION

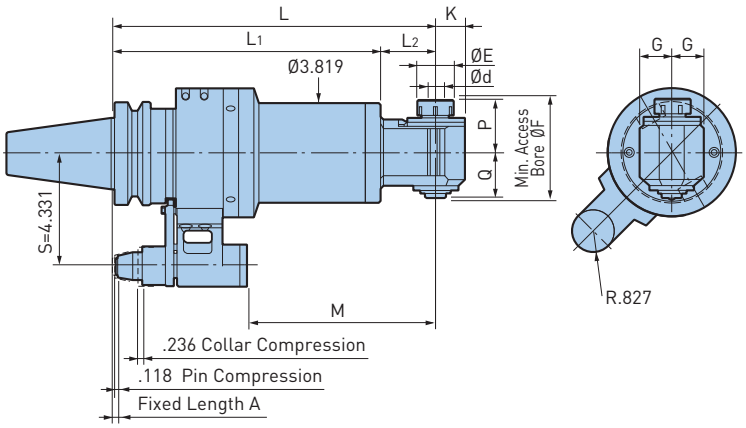
A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

AG90 NBS EXTRA LONG TYPE

CLAMPING RANGE: Ø.010"-.787"

For Drilling & Key Slotting in Deep Holes of Large Workpieces

MAX 6,000 RPM



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØE	G	K	L	L1	L2	M	P	Q	ØF	Collet	Max RPM	Weight (lbs.)
BBT50-AG90NBS6-315LS	.010-.236	.787	.827	.669	12.40	10.24	2.17	7.17	1.30	1.14	2.638	NBC6-□	6,000	41.7
BBT50-AG90NBS6-345LS					13.58		3.35	8.35						42.1
BBT50-AG90NBS6-375LS					14.76		4.53	9.53						42.5
BBT50-AG90NBS6-405LS					15.94		5.71	10.71						43.0
BBT50-AG90NBS6-415LS					16.34	14.17	2.17	11.10						51.4
BBT50-AG90NBS6-445LS					17.52		3.35	12.28						51.8
BBT50-AG90NBS6-475LS					18.70		4.53	13.46						52.2
BBT50-AG90NBS6-505LS					19.88		5.71	14.65						52.7
BBT50-AG90NBS6-515LS					20.28	18.11	2.17	15.04						61.1
BBT50-AG90NBS6-545LS					21.46		3.35	16.22						61.5
BBT50-AG90NBS6-575LS					22.64		4.53	17.40						61.9
BBT50-AG90NBS6-605LS					23.82		5.71	18.58						62.4

Catalog Number	Ød	ØE	G	K	L	L1	L2	M	P	Q	ØF	Collet	Max RPM	Weight (lbs.)
BBT50-AG90/NBS10-315LS					12.40		2.17	7.17						42.5
BBT50-AG90/NBS10-345LS					13.58	10.24	3.35	8.35						43.4
BBT50-AG90/NBS10-375LS					14.76		4.53	9.53						44.1
BBT50-AG90/NBS10-415LS					16.34		2.17	11.10						52.2
BBT50-AG90/NBS10-445LS	**.059-.394**	1.181	1.181	.984	17.52	14.17	3.35	12.28	1.77	1.69	3.583	NBC10-□	6,000	53.1
BBT50-AG90/NBS10-475LS					18.70		4.53	13.46						53.8
BBT50-AG90/NBS10-515LS					20.28		2.17	15.04						61.9
BBT50-AG90/NBS10-545LS					21.46	18.11	3.35	16.22						62.8
BBT50-AG90/NBS10-575LS					22.64		4.53	17.40						63.5
BBT50-AG90/NBS13-315LS					12.40		2.17	7.17						42.8
BBT50-AG90/NBS13-345LS					13.58	10.24	3.35	8.35						43.7
BBT50-AG90/NBS13-375LS					14.76		6.10	9.53						44.3
BBT50-AG90/NBS13-415LS					16.34		2.17	11.10						52.5
BBT50-AG90/NBS13-445LS	**.098-.512**	1.378	1.220	1.102	17.52	14.17	3.35	12.28	2.05	1.77	3.976	NBC13-□	6,000	53.4
BBT50-AG90/NBS13-475LS					18.70		6.10	13.46						54.0
BBT50-AG90/NBS13-515LS					20.28		2.17	15.04						62.2
BBT50-AG90/NBS13-545LS					21.46	18.11	3.35	16.22						63.1
BBT50-AG90/NBS13-575LS					22.64		6.10	17.40						63.7
BBT50-AG90/NBS20-330LS					12.99	10.24	2.76	7.76						45.2
BBT50-AG90/NBS20-430LS	**.098-.787**	1.811	1.378	1.378	16.93	14.17	2.76	11.69	2.56	2.44	5.197	NBC20-□	3,000	54.9
BBT50-AG90/NBS20-530LS					20.87	18.11	2.76	15.63						64.6

- Nut and wrench are included, collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

CAUTION

A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

AG90 COMPACT TYPE

CLAMPING RANGE: Ø.098"-.512"

For Drilling Only—Ideal Size for Small Machining Centers

MAX 5,000 RPM

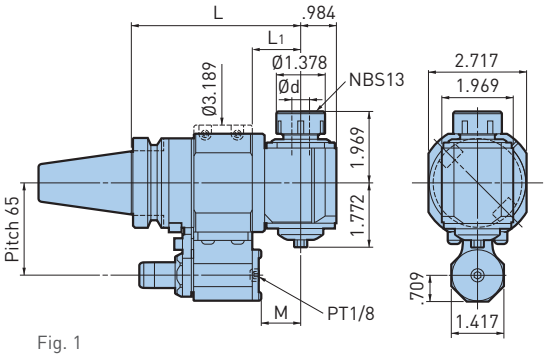


Fig. 1

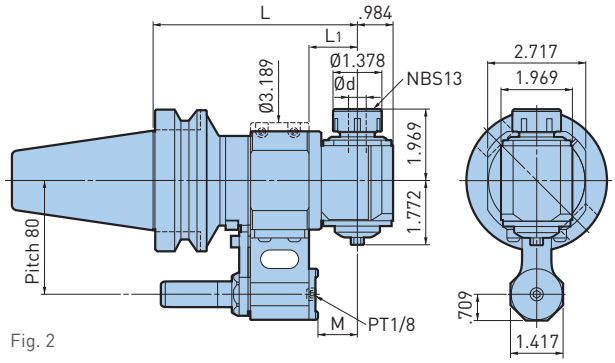


Fig. 2

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	Ød	L	L1	M	Collet	Speed Ratio	Weight (lbs.)
BBT40-AG90-13-120	1	.098-.512	4.72	3.39	1.10	NBC13	1:1	9.9
BBT40-AG90-13-170			6.70	3.31	3.06			12.1
BBT50-AG90-13-145	2	.098-.512	5.71	1.34	1.10	NBC13	1:1	16.8
BBT50-AG90-13-195			7.68	3.31	3.06			19.0

- Nut and wrench are included, collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- A tapped hole (PT1/8) is prepared at the bottom cover of the Locating Pin housing so that a pipe for coolant can be connected
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

COLLET PG. 360 | WRENCH PG. 389 | STOP BLOCK PG. 407

CAUTION

A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1). AG90 Compact Type is for drilling only.

APPLICATION EXAMPLE

Stable machining is obtained due to high rigidity and good runout.

DRILLING	
Cutter	Ø.472" (12mm) Carbide Drill
Workpiece	1050 Steel
Cutting Speed	230 SFM
Cutting Feed	14.6 IPM
	.008 IPR
Spindle Speed	1,860 RPM

AG90 TWIN HEAD

CLAMPING RANGE: Ø.059"-.394"

MAX 6,000 RPM

Compact design. Symmetrical machining can be performed using one unit.

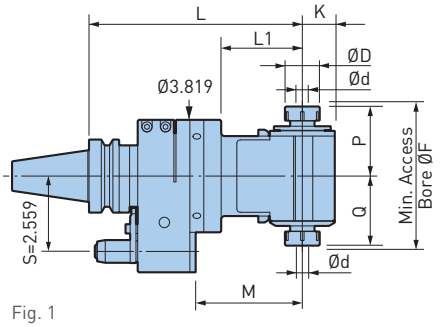
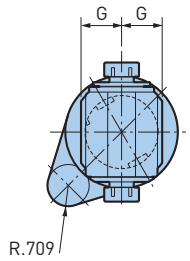


Fig. 1



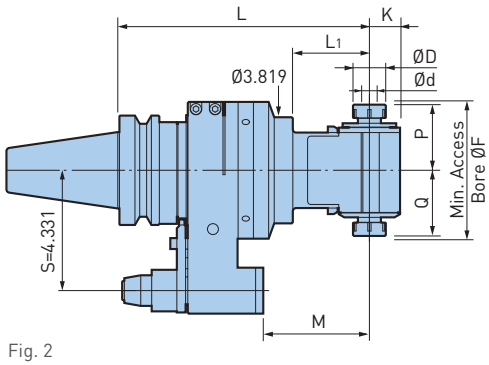
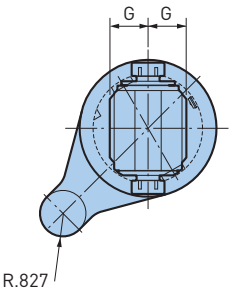


Fig. 2



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	ød	øD	G	K	L	L1	M	P	Q	øF	Collet	Weight (lbs.)
BBT40-AG90/NBS10W-185	1	**.059-.394**	1.181	1.220	1.102	7.28	2.76	3.62	2.36	2.36	4.88	NBC10	13.9
BBT50-AG90/NBS10W-230	2	**.059-.394**	1.181	1.220	1.102	9.06	2.76	3.81	2.36	2.36	4.88	NBC10	30.4

- Nut and wrench are included; collet must be ordered separately
- Output spindles do not rotate in forward direction simultaneously
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

COLLET PG. 360 | WRENCH PG. 389 | STOP BLOCK PG. 407

CAUTION

A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

AG45 NBS

CLAMPING RANGE: Ø.060"-.512"

MAX 6,000 RPM

Exclusive fixing housing allows for secure diagonal machining

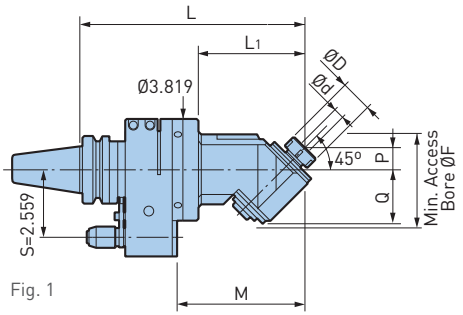


Fig. 1

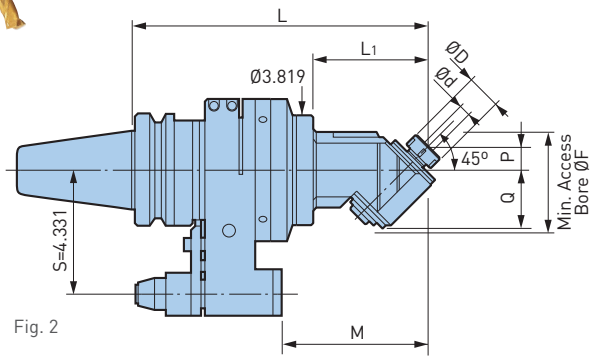
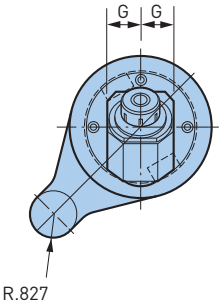


Fig. 2



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	Ød	ØD	G	L	L1	M	P	Q	øF	Collet	Weight (lbs.)
BBT40-AG45/NBS10-215	1	**.060-.394**	1.181	1.181	8.46	3.94	4.80	.79	2.03	3.54	NBC10	12.6
BBT40-AG45/NBS13-220		**.098-.512**	1.378		8.66	4.13	5.00	.98			NBC13	12.8
BBT50-AG45/NBS10-260	2	**.060-.394**	1.181	1.181	10.24	3.94	5.00	.79	2.03	3.54	NBC10	29.1
BBT50-AG45/NBS13-265		**.098-.512**	1.378		10.43	4.13	5.20	.98			NBC13	29.3

- Nut and wrench are included; collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

COLLET PG. 360

WRENCH PG. 389

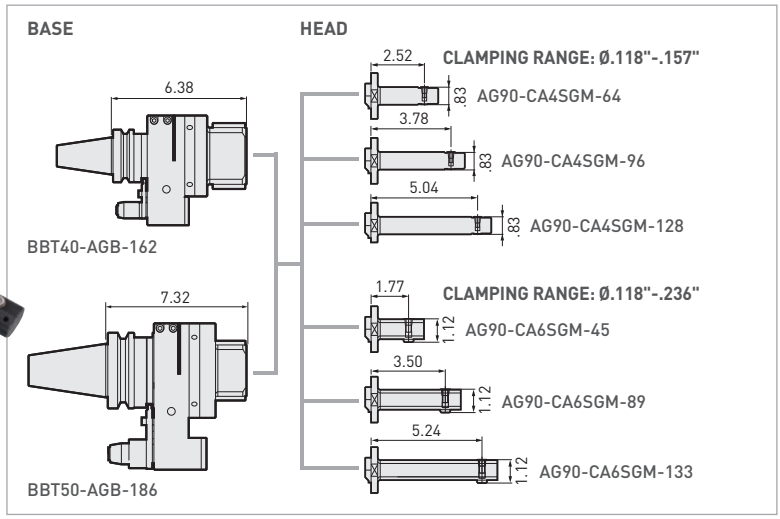
STOP BLOCK PG. 407

CAUTION

A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

AG90 SLENDER DRIVE

CLAMPING RANGE: Ø.118"-.236" For Angular Operations Within a Ø1.181 Inch Bore



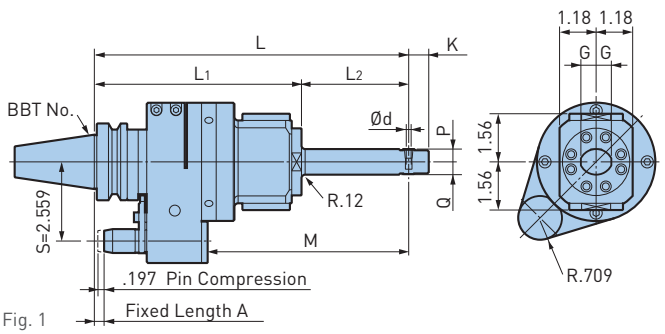


Fig. 1

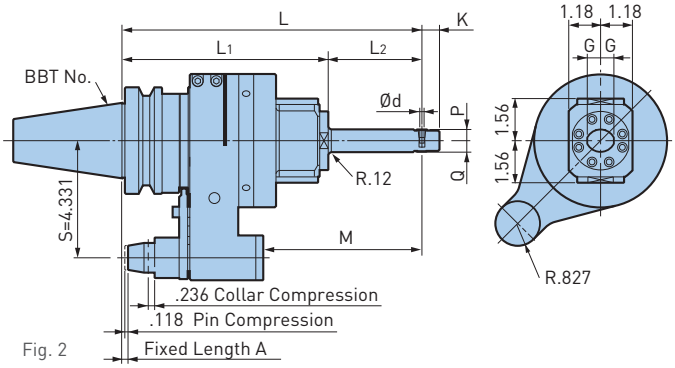


Fig. 2

Base	Head	Fig.	Ød	G	K	L	L1	L2	M	P	Q	Speed Ratio	Weight (lbs.)
BBT40-AGB-162	AG90-CA4SGM-64	1	.118-.157	.492	.650	8.90	6.69	2.21	5.24	.41	.41	1:1.06 (Increase)	12.3
	AG90-CA4SGM-96					10.16		3.47	6.50				12.6
	AG90-CA4SGM-128					11.42		4.72	7.76				12.9
	AG90-CA6SGM-45	1	.118-.236	.591	.787	8.15	6.69	1.46	4.49	.49	.63	1:0.77 (Decrease)	12.6
	AG90-CA6SGM-89					9.88		3.19	6.22				13.0
	AG90-CA6SGM-133					11.61		4.92	7.95				13.5
BBT50-AGB-186	AG90-CA4SGM-64	2	.118-.157	.492	.650	9.84	7.64	2.21	4.61	.41	.41	1:1.06 (Increase)	26.2
	AG90-CA4SGM-96					11.10		3.47	5.87				26.5
	AG90-CA4SGM-128					12.36		4.72	7.13				26.7
	AG90-CA6SGM-45	2	.118-.236	.591	.787	9.09	7.64	1.46	3.86	.49	.63	1:0.77 (Decrease)	26.5
	AG90-CA6SGM-89					10.83		3.19	5.59				26.9
	AG90-CA6SGM-133					12.56		4.92	7.32				27.3

- Collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately

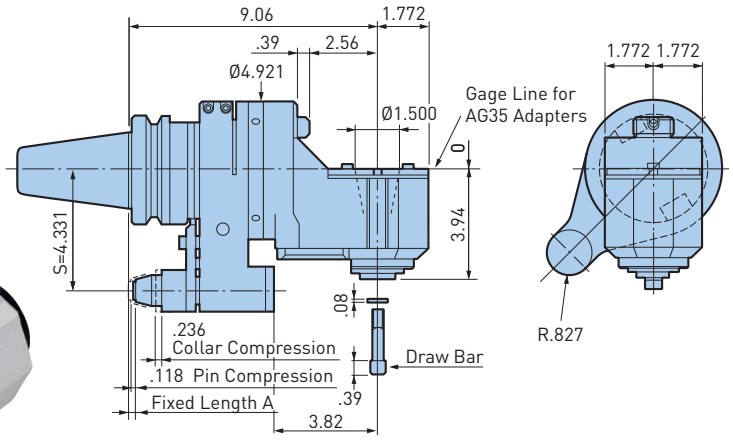
ACCESSORIES

CAUTION

A Stop Block is required. The rotation of the cutting tool is in same direction of the machine spindle.

AG90 BUILD-UP TYPE

For All Machinery Applications



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

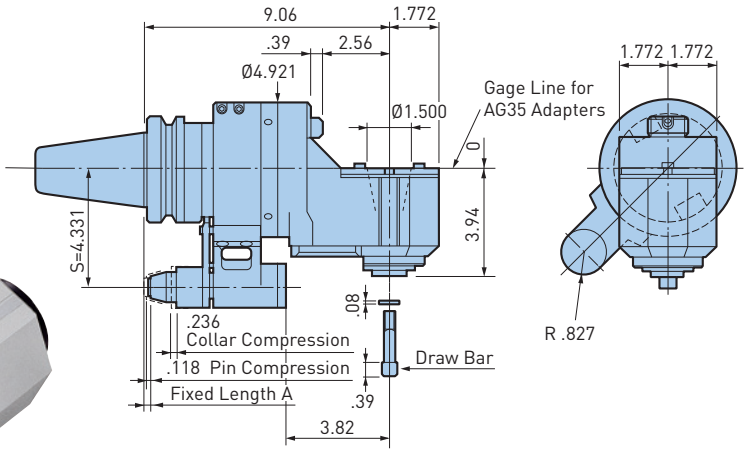
CAUTION

A Stop Block is required. The rotation of the cutting tool is in same direction of the machine spindle.

Catalog Number	Weight (lbs.)
BBT50-AG90/AGH35-230	33.1

- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines; must order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models

For Application Where Increased Rigidity is Required



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

CAUTION

A Stop Block is required. The rotation of the cutting tool is in same direction of the machine spindle.

Catalog Number	Weight (lbs.)
BBT50-AG90/AGH35-230S	35.9

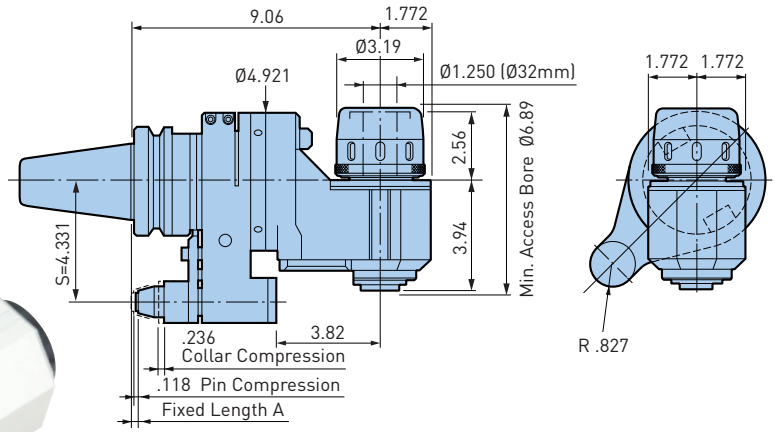
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models

ACCESSORIES

AG90 HMC TYPE

For Heavy Duty End Milling

MAX 3,000 RPM



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Weight (lbs.)
BBT50-AG90/HMC1.250-230	37.0
BBT50-AG90//HMC32-230	

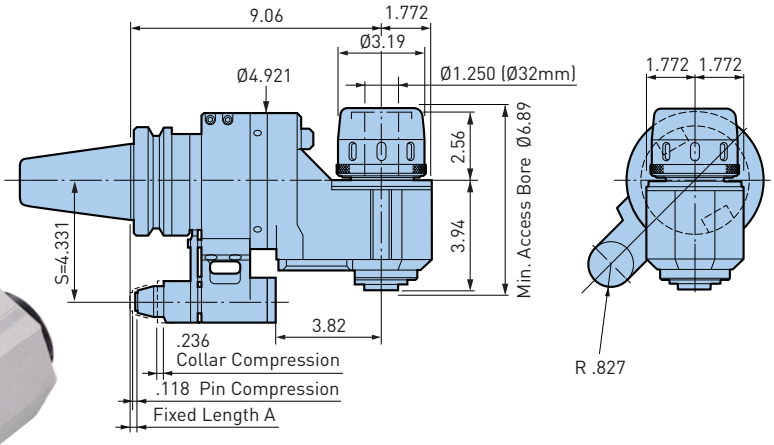
CAUTION

A Stop Block is required. The rotation of the cutting tool is in same direction of the machine spindle.

- Wrench is included
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models

For Applications Where Increased Rigidity is Required

MAX 3,000 RPM



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Weight (lbs.)
BBT50-AG90/HMC1.250-230S	39.9
BBT50-AG90//HMC32-230S	

CAUTION

A Stop Block is required. The rotation of the cutting tool is in same direction of the machine spindle.

- Wrench is included
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models

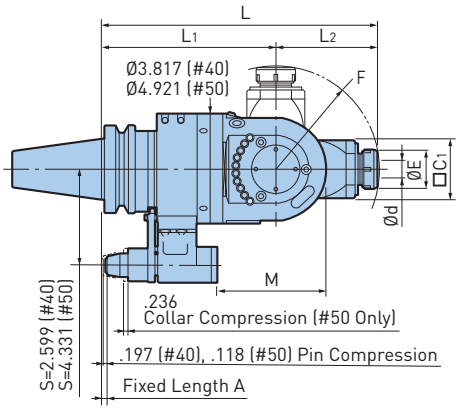
ACCESSORIES

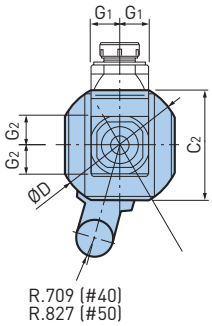
AGU UNIVERSAL TYPE

CLAMPING RANGE: Ø.098"-.787" For Angular Operations

MAX 6,000 RPM

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT





Catalog Number	Ød	ØE	ØD	C1	C2	G1	G2	L	L1	L2	M	F	S	Collet	Max RPM	Weight (lbs.)
BBT40-AGU/NBS13-270	**.098-.512**	1.378	4.53	2.00	3.82	1.024	1.014	10.63	6.70	3.94	4.88	4.02	2.559	NBC13-□	6,000	21.4
BBT50-AGU/NBS20-315	**.098-.787**	1.811	5.51	2.56	4.92	1.299	1.280	12.40	7.87	4.53	4.92	4.65	4.331	NBC20-□	4,000	44.1

- Nut and wrench are included, collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- Automatic tool change may not be available depending on machine tool models

ACCESSORIES

CAUTION

A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

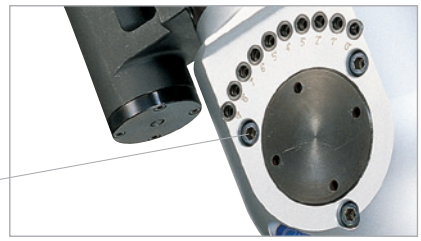
EASILY ADJUSTABLE SPINDLE ANGLE FROM 0º TO 90º

PRECISE ANGLE ADJUSTMENT

Unique setting mechanism enables the spindle angle to be precisely set at 1º increments.

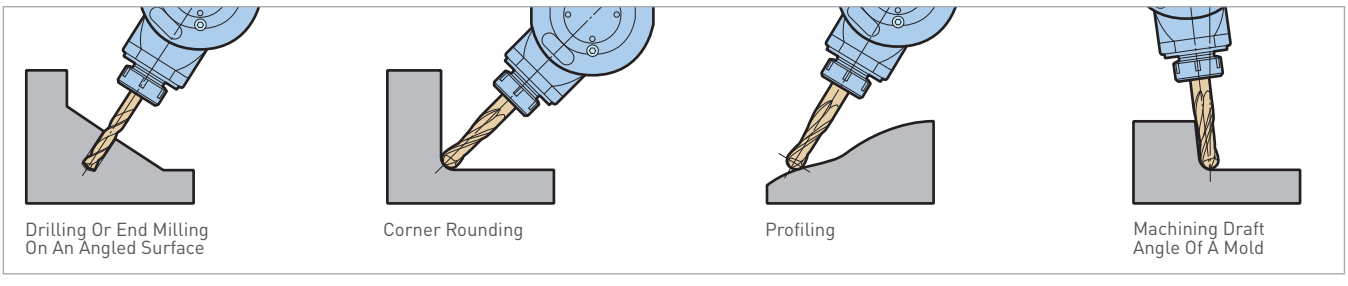
EXCLUSIVE CLAMPING BOLTS AND NUTS

Specially selected materials and special design for clamping the head guarantees rigidity even for end milling applications.



APPLICATION EXAMPLE

Adjustable AGU Universal Series expands ANGLE HEAD capabilities to accomplish various angular machining applications.



Drilling Or End Milling On An Angled Surface

Corner Rounding

Profiling

Machining Draft Angle Of A Mold

AGU30 TYPE

CLAMPING RANGE: Ø.098"-.787" For Angular Operations

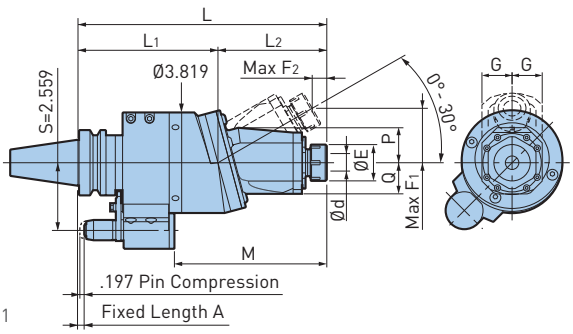
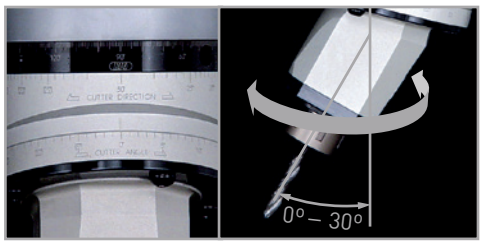


Fig. 1

MAX 6,000 RPM

ANGLE ADJUSTMENT BY ALIGNING DIVISIONS

Spindle angle is easily adjustable from 0° to 30° using the scale indication on the body.



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

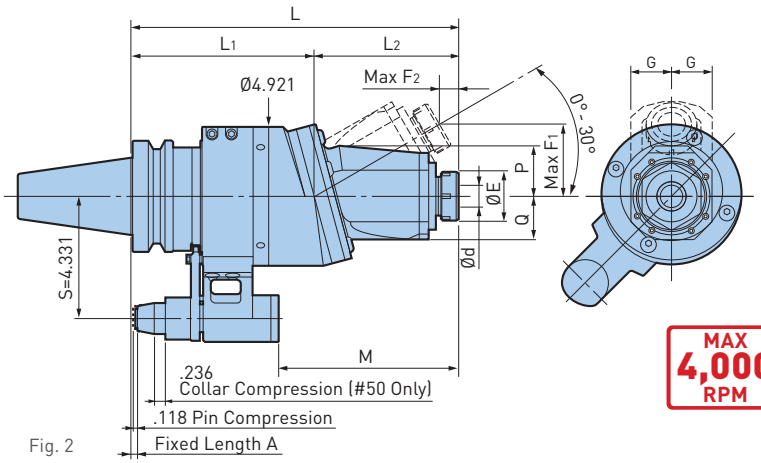


Fig. 2

MAX 4,000 RPM

Catalog Number	Fig.	Ød	ØE	G	L	L1	L2	M	P	Q	F1	F2	Collet	Max RPM	Weight (lbs.)
BBT40-AGU30/NBS13-240	1	**.098-.512**	1.378	1.142	9.45	5.32	4.12	5.79	1.34	1.18	2.07	.55	NBC13-☐	6,000	15.3
BBT50-AGU30/NBS20-295	2	**.098-.787**	1.811	1.437	11.61	6.50	5.12	6.38	1.77	1.54	2.56	.67	NBC20-☐	4,000	35.8

- Nut and wrench are included, collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- Automatic tool change may not be available depending on machine tool models
- When supplied through the stop block, coolant can be ejected from the housing

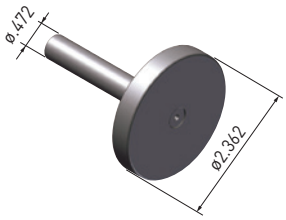
ACCESSORIES

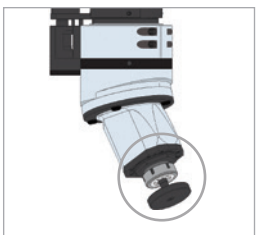
CAUTION

A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

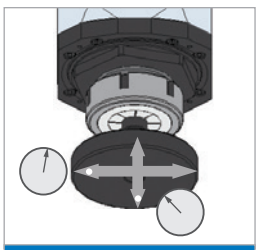
SETTING DISC (INCLUDED)

For the precise adjustment of spindle angle or direction.





Clamp the Setting Disc Into the Angled Spindle



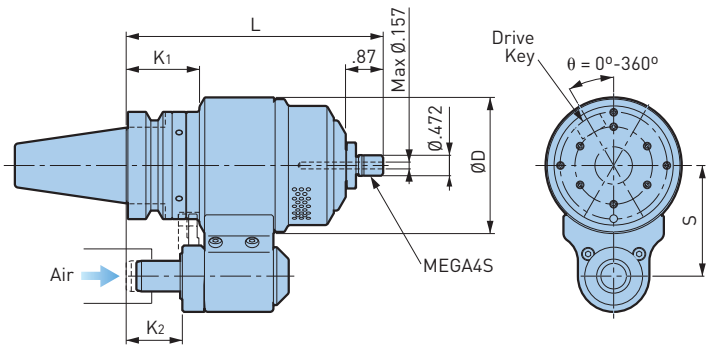
Check the Cutter Alignment and the Setting Angle

AIR POWER SPINDLE—RBX5 & RBX7

For High Speed Micro Machining with Automatic Tool Change

ZERO MACHINE SPINDLE ROTATION

MAX 80,000 RPM



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Practical Spindle Speed (RPM)	Cutting Diameter	L	ØD	K1	K2	S	Weight (lbs.)
BBT30-RBX7-4S-152-55	60,000-80,000	Ø.039 or smaller	5.98	3.150	1.10	1.30	2.165	6.0
BBT40-RBX7-4S-151-65	60,000-80,000	Ø.039 or smaller	5.95	3.150	1.69	1.30	2.559	8.8
BBT40-RBX5-4S-151-65	40,000-50,000	Ø.059 or smaller		3.780				11.0
BBT50-RBX7-4S-166-80	60,000-80,000	Ø.039 or smaller	6.54	3.937	2.28	1.89	3.150	19.2
BBT50-RBX5-4S-166-80	40,000-50,000	Ø.059 or smaller						21.4

- Nut and wrench are included, collet must be ordered separately
- XF1-NPT (Air Unit) is required; must be ordered separately

ACCESSORIES

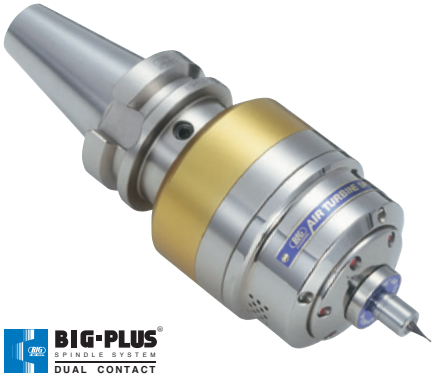
CAUTION

Compressed air to drive the AIR POWER SPINDLE must be clean. Coolant should not be supplied through the spindle on the machine that uses the AIR POWER SPINDLE.

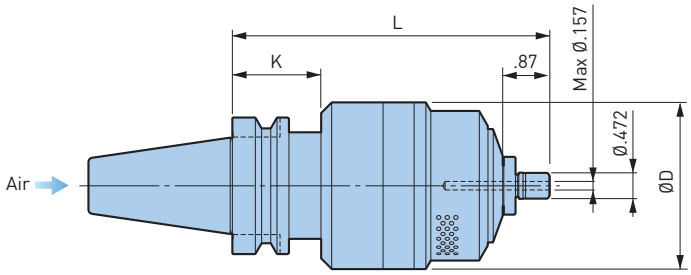
AIR POWER SPINDLE—RBX5 & RBX7

For High Speed Micro Machining with Compressed Air Through the Machine Spindle

MAX 80,000 RPM



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



Catalog Number	Practical Spindle Speed (RPM)	Cutting Diameter	L	ØD	K	Weight (lbs.)
BBT40-RBX7C-4S-150	60,000-80,000	Ø.039 or smaller	5.91	3.071	1.69	6.8
BBT40-RBX5C-4S-150	40,000-50,000	Ø.059 or smaller		3.780		9.0
BBT50-RBX7C-4S-160	60,000-80,000	Ø.039 or smaller	6.30	3.071	2.09	13.9
BBT50-RBX5C-4S-160	40,000-50,000	Ø.059 or smaller		3.780		16.1

- Nut and wrench are included, collet must be ordered separately
- XF1-NPT (Air Unit) is required; must be ordered separately

ACCESSORIES

CAUTION

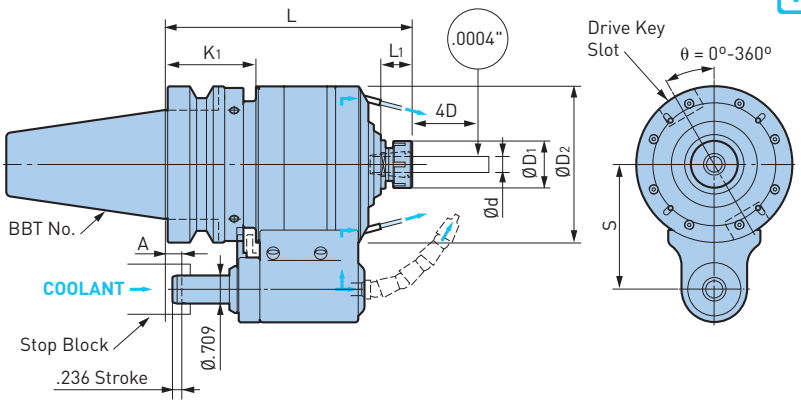
Compressed air to drive the AIR POWER SPINDLE must be clean. Coolant should not be supplied through the spindle on the machine that uses the AIR POWER SPINDLE.

HIGH SPINDLE

CLAMPING RANGE: Ø.059"-.630" For Higher Spindle Speeds

MAX 20,000 RPM

COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	L	L1	ØD1	ØD2	K1	S	A	Speed Ratio	Max RPM	Weight (lbs.)
BBT40-GTG5-10-140-65	**.059-.394**	5.51	.79	1.181	3.150	1.69	2.559	-.354 +.236	4.67	20,000	10.6
BBT50-GTG6-10-158-80	**.059-.394**	6.22	.79	1.181	3.937	2.28	3.150	-.354 +.236	5.67	20,000	19.4
BBT50-GTG4-16-177-80	**.098-.630**	6.97	1.00	1.654	4.331	2.28	3.150	-.354 +.236	3.80	15,000	23.4

- NEW BABY COLLET, nut and 2 tightening wrenches are included
- The allowable torque is a calculated value of the drive system, and not the actual torque in cutting
- The maximum diameter when using an end mill is Ø8mm (GTG5, GTG6) and Ø12 (GTG4)
- A Stop Block is required when mounting on machines
- For continuous rotation of over 30 minutes, the spindle speed should be set within 80% of the maximum speed

CAUTION

A Stop Block is required.

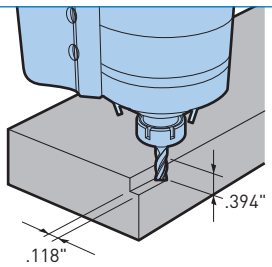
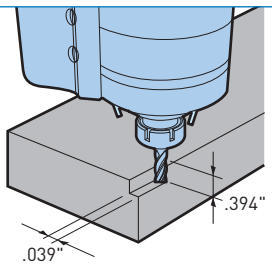
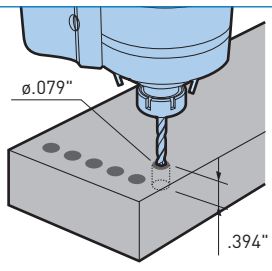
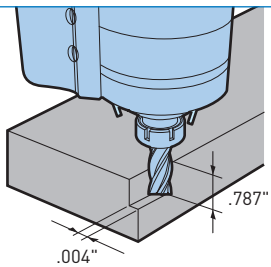
ACCESSORIES

COLLET PG. 360

WRENCH PG. 389

STOP BLOCK PG. 407

APPLICATION EXAMPLE

	GTG5	GTG6	GTG6	GTG4
Cutter	Solid carbide end mill Ø.315"/ 2 flutes	Solid carbide end mill Ø.236"/ 2 flutes	Solid carbide drill Ø.079"	Solid carbide end mill Ø.630"
Workpiece	Duralumin (A-2017)	1055	Duralumin (A-2017)	Duralumin (A-2017)
Spindle Speed	20,000 RPM	16,000 RPM	20,000 RPM	15,000 RPM
Cutting Feed	118.1 IPM	137.8 IPM	78.7 IPM	39.4 IPM
Results	High metal removal rate 5.5 cu.in./min.	High metal removal rate 2.1 cu.in./min.	Extended tool life 1,200 holes by 1 drill	Surface roughness RMS max. .00008"
				

- Results will vary depending on workpiece, cutting tool, machine model and other conditions
- The rigidity and concentricity are often affected by the projection length of a cutting tool; it is recommended to keep the projection as short as possible

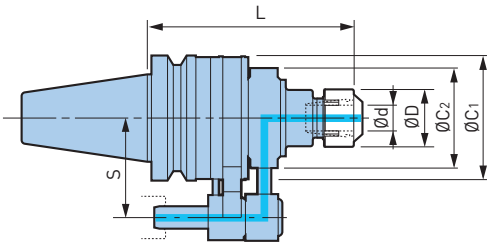
GEAR DRIVING SYSTEM
MAX.SPEED 10,000R.P.M.
SPEED RATIO

Hi-JET HOLDER—NBS TYPE

CLAMPING RANGE: Ø.118"-.787" For Small Diameter Drills, Gun Drills & End Mills

MAX 10,000 RPM

COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Ød	ØD	L	ØC1	ØC2	S	Max RPM	Merit Set (2 pcs. of Merit Ring) (2 pcs. of Merit Plate)	Perfect Seal	Weight (lbs.)
BBT40-ONBS13N-165	.118-.512	1.378	6.61	3.213	2.87	2.559	10,000	MES-40	BPS13	8.8
BBT40-ONBS20N-165	.118-.787	1.811			3.15		8,000	MES-50	BPS20	9.5
BBT50-ONBS13N-165	.118-.512	1.378	6.61	3.921	3.15	3.150	8,000	MES-50	BPS13	16.1
BBT50-ONBS20N-165	.118-.787	1.811			3.15		8,000	MES-50	BPS20	16.5

- Collet, adjusting screw, clamping nut and wrench must be ordered separately
- Max coolant pressure is 284 PSI
- Other sizes available upon request

CAUTION

A Stop Block is required.

ACCESSORIES

COLLET PG. 360

BABY PERFECT SEAL PG. 370

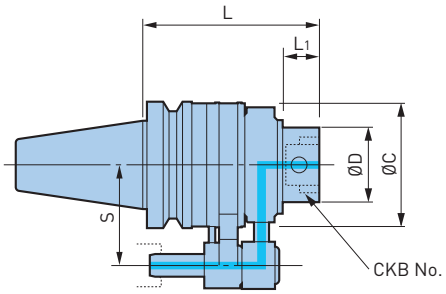
WRENCH PG. 389

STOP BLOCK PG. 407

HI-JET HOLDER—CKB TYPE

MAX 6,000 RPM

COOLANT THROUGH



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	CK	ØD	L	L1	ØC	S	Max RPM	Merit Set (2 pcs. of Merit Ring) (2 pcs. of Merit Plate)	Weight (lbs.)
BBT40-OCKB6N-149	CKB6	2.520	5.87	1.102	3.92	2.559	6,000	MES-65	13.4
BBT50-OCKB6N-139	CKB6	2.520	5.47	1.063	3.92	3.150	6,000	MES-65	15.9
BBT50-OCKB7N-165	CKB7	3.543	6.50	1.358	5.10	3.150	4,000	MES-90	27.0

- Max coolant pressure is 284 PSI

CAUTION

A Stop Block is required.

ACCESSORIES

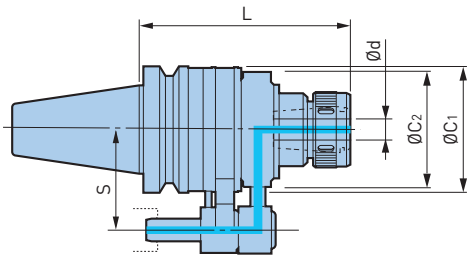
STOP BLOCK PG. 407

Hi-JET HOLDER—TG TYPE

CLAMPING RANGE: Ø.093"-1.000" For TG100 Single Angle Style Collets

MAX 8,000 RPM

COOLANT THROUGH



Catalog Number	Collet Series	Ød	L	ØC1	ØC2	S	Max RPM	Merit Set (2 pcs. of Merit Ring) (2 pcs. of Merit Plate)	Weight (lbs.)
BT40-OHC1.000N-175	.093-1.000	**TG100**	6.89	3.213	3.15	2.559	8,000	MES-50	11.1

- Max coolant pressure is 284 PSI
- Nut included; collets not available from BIG DAISHOWA

ACCESSORIES

STOP BLOCK PG. 407

CAUTION

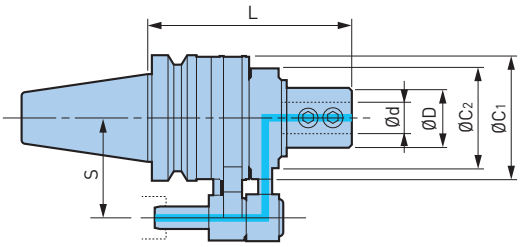
A Stop Block is required.

Hi-JET HOLDER—OSL TYPE

CLAMPING RANGE: Ø.750"-1.500" For Straight Shanks with Flat

MAX 8,000 RPM

COOLANT THROUGH



Catalog Number	Ød	ØD	L	ØC1	ØC2	S	Max RPM	Merit Set (2 pcs. of Merit Ring) (2 pcs. of Merit Plate)	Weight (lbs.)
BT40-OSL1.000N-165	**1.000**	1.890	6.50	3.213	3.15	2.559	8,000	MES-50	9.7
BT40-OSL1.250N-165	**1.250**	2.283		3.921	3.86		6,000	MES-65	12.6
BT50-OSL.750N-150	**.750**	1.890	5.91	3.921	3.15	3.150	8,000	MES-50	16.3
BT50-OSL1.000N-165	**1.000**								16.5
BT50-OSL1.250N-165	**1.250**	2.283	6.50		3.86		6,000	MES-65	17.4
BT50-OSL1.500N-165	**1.500**	2.500							17.6

- Max coolant pressure is 284 PSI

ACCESSORIES

REDUCTION COLLET PG. 388

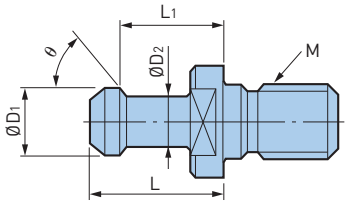
STOP BLOCK PG. 407

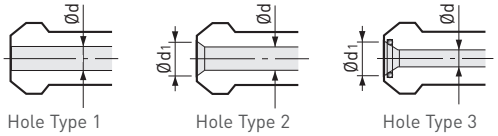
CAUTION

A Stop Block is required.

BEFORE ORDERING

Be sure to check the dimensions of the required pullstud bolt by referring to the specification sheet of the machine tool. In the case of machines with coolant-through spindle capability, provide us a copy of the pullstud bolt drawing, as the sealing method may vary even among machines with the same model number.





Spindle Type	Catalog Number	Standard	ØD1	ØD2	L	L1	θ	Ød	Ød1	Hole Type	Standard or Machine Make
30 (M12)	**30PMG**	JIS	.472	.31	.92	.724	75	**None**	—	—	JIS BT30
	30PMGH							**.16**	—	1	JIS BT30 With Hole
	30PMGH2							**.10**	.22	3	YASDA
	P30T-1MG	MAS-I	.433	.28	.91	.709	45	**None**	—	—	MAS-1 BT30
	P30T-1MGH							**.10**	—	1	MAS-1 BT30 With Hole
	P30T-2MG	MAS-II					60	**None**	—	—	MAS-2 BT30
	P30T-2MGH							**.10**	—	1	MAS-2 BT30 With Hole
	30P-1MGH	Original	.433	.31	.91	.709	45	**.10**	—	1	FANUC
	P30T-2MGH3		.433	.30	.91	.709	60	**.16**	—	1	BROTHER
	PMO30MG		.433	.28	.91	.709	45	**.10**	.26	3	DMG MORI
40 (M16)	**40PMG**	JIS	.748	.55	1.14	.906	75	**None**	—	—	JIS BT40
	40PMGH							**.28**	—	1	JIS BT40 With Hole
	40PMGH2							**.28**	—	1	MAKINO (Ground Face)
	40PMGH7							**.16**	.20	2	OKUMA (Ground Face)
	40PMGH4A							**.28**	—	1	YASDA Ø3 Side Hole
	40PMGH11								.39	3	YASDA
	40PMGH12							**.20**	—	1	MITSUI
	P40T-1MG	MAS-I	.591	.39	1.38	1.102	45	**None**	—	—	MAS-1 BT40
	P40T-1MGHA							**.12**	—	1	MAS-1 BT40 With Hole
	P40T-1MGH4							**.12**	.28	3	OKUMA
	P40T-1MGH7							**.16**	—	1	MAKINO (Ground Face)
	P40T-IMGH8A							**.12**	.28	3	JTEKT
	P40T-2MG	MAS-II	.591	.39	1.38	1.102	60	**None**	—	—	MAS-2 BT40
	P40T-2MGHA							**.12**	—	1	MAS-2 BT40 With Hole
	P40T-2MGH8							**.14**	.22	2	
	P40T-2MGH1							**.12**	.28	3	OKUMA
	MP40MG	Original	.591	.39	.98	.709	90	**None**		—	MITSUI SEIKI
	POM40MG		.591	.39	1.38	1.102	90	**None**	—	—	DMG MORI Form B
	POM40MGF										DMG MORI Form B w/O-Ring
	PMO40MG		.748	.55	1.14	.906	75	**.28**	.39	3	DMG MORI With Hole
	PYN40MG		.740	.57	.75	.552	45	**.28**	—	1	MAZAK

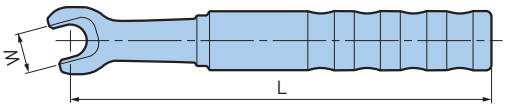
- Machine tool builders have used various shapes and sizes of retention knobs
- The use of the incorrect knob may result in injury or property damage for your machining center

TOOL STEEL

MEGA PULLSTUD BOLT

MG in the model numbers stand for MEGA PULLSTUD BOLT. Tensile strength is improved by utilizing tool steel. Especially recommended for BIG-PLUS dual contact applications.

PULLSTUD WRENCHES

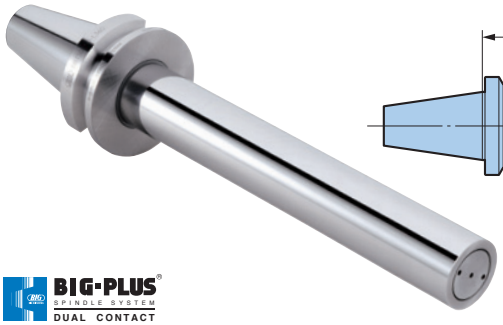


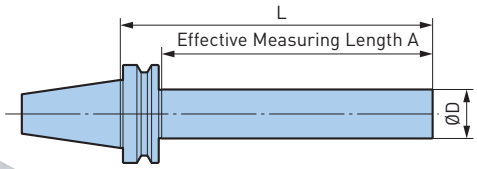
Taper Type & Size	Catalog Number	W	L	Pullstud
BBT30 BT30	**PLW30**	.512	5.51	JIS, MAS-1, MAS-2 30P-1MGH, P30T-2MGH3,PMO30MG
BBT40 BT40	**PLW-40P**	.748	7.87	JIS
	PLW-P40T			MAS-1, MAS-2,POM40MG
	PLW-MP40			MP40
	PLW-PMO40			PMO40MG
	PLW-PYN40			PYN40MG
BBT50 BT50	**PLW-P50T**	1.181	13.78	MAS-I, MAS-II POM50, POM50H, POM50H1, POM50H8
	PLW-PYN50			PYN50-5

• If appearance shape is the same, the specification other than above is also usable

DYNA TEST

Helps identify potential problems, and can reduce downtime and costly repairs of the machine tool spindle.

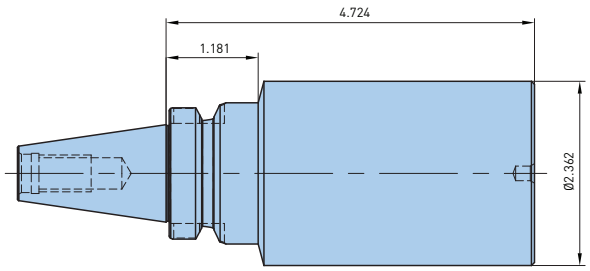




BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	L	A	ØD
BBT30-32-L150	5.906	4.921	32mm
BBT30-32-L235	9.252	8.268	
BBT40-50-L200	7.874	6.693	50mm
BBT40-50-L350	13.780	12.598	
BBT50-50-L200	7.784	6.260	50mm
BBT50-50-L360	14.173	12.559	

BLANK BAR



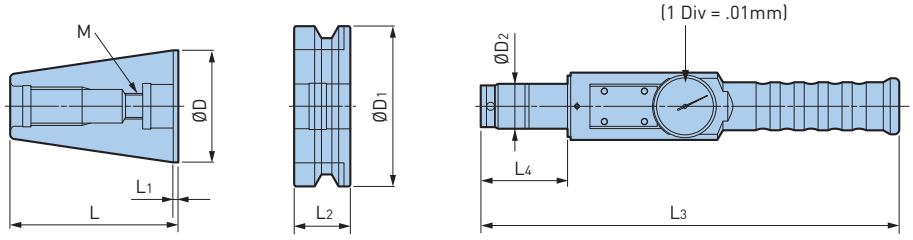
BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number
BBT30-BB60-120

- Do not heat treat after machining

ATC ALIGNMENT TOOL

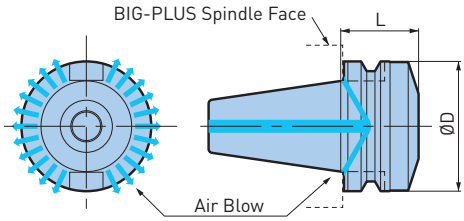
For re-aligning the center between the machine tool spindle and ATC gripper. It can also be used for re-aligning the ATC gripper and tool magazine pots. More detailed information on pg. 640.



Catalog Number	ØD	ØD1	ØD2	L	L1	L2	L3	L4	M
BT30-ATC18	31.75mm	46mm	18mm	50.4mm	2mm	20mm	251mm	44mm	12mm
BT40-ATC20	44.45mm	63mm	20mm	67.4mm	2mm	25mm	251mm	44mm	12mm
BT50-ATC28	69.85mm	100mm	28mm	104.8mm	3mm	35mm	261mm	54mm	16mm

BIG-PLUS CLEANER

Blowing air cleans the BIG-PLUS machine spindle face of all debris.



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	L	ØD
SBT30-ASC-30T	1.181	1.811
SBT40-ASC-40T	1.575	2.480
SBT50-ASC-60T	2.362	3.937

- When the cleaner is clamped into a BIG-PLUS machine spindle, faces have 1mm (.039") clearance

DUAL CONTACT A/E/F TYPES

HSK SHANK

A.3

HSK-A

COLLET CHUCKS 178-187

MEGA MICRO CHUCK 178-179
MEGA NEW BABY CHUCK 180-183
MEGA ER GRIP 184-185
MEGA E CHUCK 186-187

MILLING CHUCKS 188-191

MEGA DOUBLE POWER CHUCK 188
MEGA PERFECT GRIP 189
NEW Hi-POWER MILLING CHUCK 190-191

HYDRAULIC CHUCKS 192-195

BASIC ARBORS 196-202

SHRINK FIT HOLDERS 196-197
END MILL HOLDERS 199
SHELL/FACE MILL HOLDERS 200-201
SMART DAMPER MILLING 202

TAP HOLDERS 204-205

MEGA SYNCHRO TAPPING HOLDER 204-205

MODULAR HOLDERS 206-207

CKB SHANK 206-207

ANGLE HEADS 208-219

AG 208-217
AGU 218-219

SPINDLE SPEEDERS 220-221

AIR POWER SPINDLE 220-221

HSK-E

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MEGA MICRO CHUCK 222-223
MEGA NEW BABY CHUCK 224-225

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MEGA MICRO CHUCK 229
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MEGA E CHUCK 231
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BASIC ARBORS 234

FACE MILL ARBOR 234

MODULAR HOLDERS 235

CKB SHANK 235

ACCESSORIES 236-237

COOLANT PIPES 236
DYNA TEST 237

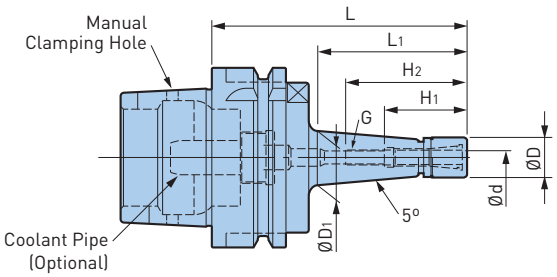
MEGA MICRO CHUCK—TAPERED BODY

CLAMPING RANGE: Ø.018"-.317" (Ø.45-8.05mm)

For Micro Drill & End Mill Applications

HIGHER RIGIDITY

MAX 45,000 RPM



Catalog Number	Ød	ØD	ØD1	L	L1	H1	H2	G	Collet	Wrench	Max RPM	Weight (lbs.)
HSK-A32-MEGA6S-50T	.018-.238	.551	.58	1.97	.87	1.12	1.30	—	NBC6S-☐	MGR14	45,000	.4
HSK-A32-MEGA6S-60T			.63	2.36	1.18		1.69	—			40,000	.4
HSK-A32-MEGA6S-105T			.87	4.13	2.99		2.48	M7 P0.75			35,000	.6
HSK-A40-MEGA3S-75T	.018-.128	.394	.57	2.95	1.57	.87	1.50	M4 P0.7	NBC3S-☐	MGR10	32,000	.6
HSK-A40-MEGA3S-90T			.68	3.54	2.20						28,000	.7
HSK-A40-MEGA4S-60T	.018-.159	.472	.55	2.36	1.02	1.04	1.73	M5 P0.8	NBC4S-☐	MGR12	35,000	.6
HSK-A40-MEGA4S-90T			.76	3.54	2.28		1.85				28,000	.7
HSK-A40-MEGA4S-105T			.87	4.13	2.87						25,000	.8
HSK-A40-MEGA6S-60T❖	.018-.238	.551	.61	2.36	1.06	1.12	(1.57)	M7 P0.75	NBC6S-☐	MGR14	35,000	.6
HSK-A40-MEGA6S-75T			.72	2.95	1.69		1.93				32,000	.7
HSK-A40-MEGA6S-90T			.83	3.54	2.32						28,000	.8
HSK-A40-MEGA6S-105T			.94	4.13	2.91						25,000	.9
HSK-A50-MEGA6S-105T	.018-.238	.551	.87	4.13	2.56	1.12	1.93	M7 P0.75	NBC6S-☐	MGR14	25,000	1.3
HSK-A63-MEGA3S-75T	.018-.128	.394	.54	2.95	1.38	.87	1.50	M4 P0.7	NBC3S-☐	MGR10	32,000	1.8
HSK-A63-MEGA3S-120T			.85	4.72	3.15						25,000	2.0
HSK-A63-MEGA4S-75T	.018-.159	.472	.61	2.95	1.38	1.04	1.85	M5 P0.8	NBC4S-☐	MGR12	32,000	1.8
HSK-A63-MEGA4S-90T			.71	3.54	1.97						28,000	1.9
HSK-A63-MEGA4S-120T			.92	4.72	3.15						22,000	2.1
HSK-A63-MEGA6S-60T	.018-.238	.551	.61	2.36	.91	1.12	1.46	M7 P0.75	NBC6S-☐	MGR14	35,000	1.8
HSK-A63-MEGA6S-75T			.67	2.95	1.38		1.89				32,000	1.8
HSK-A63-MEGA6S-90T			.77	3.54	1.97		1.93				28,000	1.9
HSK-A63-MEGA6S-105T			.87	4.13	2.56						25,000	2.0
HSK-A63-MEGA6S-120T			.98	4.72	3.15						22,000	2.1
HSK-A63-MEGA6S-135T			1.08	5.31	3.74						20,000	2.2
HSK-A63-MEGA8S-90T	.116-.317	.709	.92	3.54	2.01	1.22	1.99	M9 P0.75	NBC8S-☐	MGR18	30,000	2.0
HSK-A63-MEGA8S-120T			1.12	4.72	3.19						23,000	2.3

- MEGA MICRO NUT is included; coolant pipe, collet and wrench must be ordered separately
- Weight includes nut but does not include collet
- For models marked ❖, there is no internal thread, the dimension H2 in ( ) shows how deep a tool can be inserted
- 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

ACCESSORIES

COLLET PG. 356

MEGA NUT PG. 358

SEAL NUT PG. 358

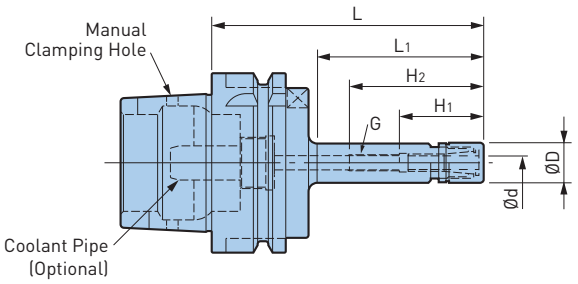
MEGA WRENCH PG. 390

MEGA MICRO CHUCK

CLAMPING RANGE: Ø.018"-.317" (Ø.45-8.05mm)

For Micro Drill & End Mill Applications

MAX 38,000 RPM



Catalog Number	Ød	ØD	L	L1	H1	H2	G	Collet	Wrench	Max RPM	Weight (lbs.)
HSK-A32-MEGA6S-60	**.018-.238**	.551	2.36	1.18	.93	1.69	—	NBC6S-□	MGR14	38,000	.4
HSK-A32-MEGA6S-105			4.13	2.99		1.93	M7 P0.75			20,000	.6
HSK-A40-MEGA3S-60	**.018-.128**	.394	2.36	1.02	.87	1.54	M4 P0.7	NBC3S-□	MGR10	30,000	.6
HSK-A40-MEGA4S-60	**.018-.159**	.472	2.36	1.06	1.04	1.73	M5 P0.8	NBC4S-□	MGR12	30,000	.6
HSK-A40-MEGA4S-90			3.54	2.24		1.85				25,000	.6
HSK-A40-MEGA6S-60❖	**.018-.238**	.551	2.36	1.50	—	(1.57)	—	NBC6S-□	MGR14	30,000	.6
HSK-A40-MEGA6S-90			3.54	2.28	1.12	1.93	M7 P0.75			25,000	.7
HSK-A50-MEGA4S-75	**.018-.159**	.472	2.95	1.42	1.04	1.85	M5 P0.8	NBC4S-□	MGR12	30,000	1.1
HSK-A50-MEGA6S-75	**.018-.238**	.551	2.95	1.42	1.12	1.93	M7 P0.75	NBC6S-□	MGR14	30,000	1.1
HSK-A63-MEGA4S-75	**.018-.159**	.472	2.95	1.42	1.04	1.89	M5 P0.8	NBC4S-□	MGR12	30,000	1.8
HSK-A63-MEGA4S-105			4.13	2.40		1.85				25,000	1.8
HSK-A63-MEGA6S-75	**.018-.238**	.551	2.95	1.42	1.12	1.89	M7 P0.75	NBC6S-□	MGR14	30,000	1.8
HSK-A63-MEGA6S-105			4.13	2.40		1.93				25,000	1.9
HSK-A63-MEGA8S-90	**.116-.317**	.709	3.54	1.89	1.22	1.99	M9 P0.75	NBC8S-□	MGR18	30,000	2.0

- MEGA MICRO NUT is included; coolant pipe, collet and wrench must be ordered separately
- Weight includes nut but does not include collet
- For models marked ❖, there is no internal thread, the dimension H2 in ( ) shows how deep a tool can be inserted
- 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

ACCESSORIES

COLLET PG. 356

MEGA NUT PG. 358

SEAL NUT PG. 358

MEGA WRENCH PG. 390

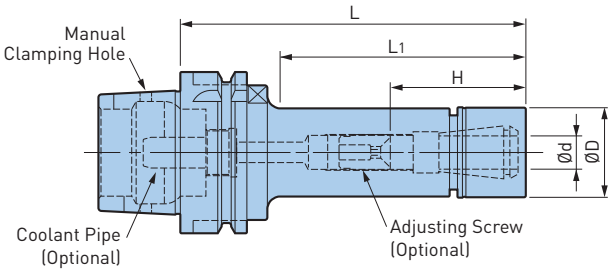
MEGA NEW BABY CHUCK

CLAMPING RANGE: Ø.010"-1.000" (Ø.25-25.4mm)

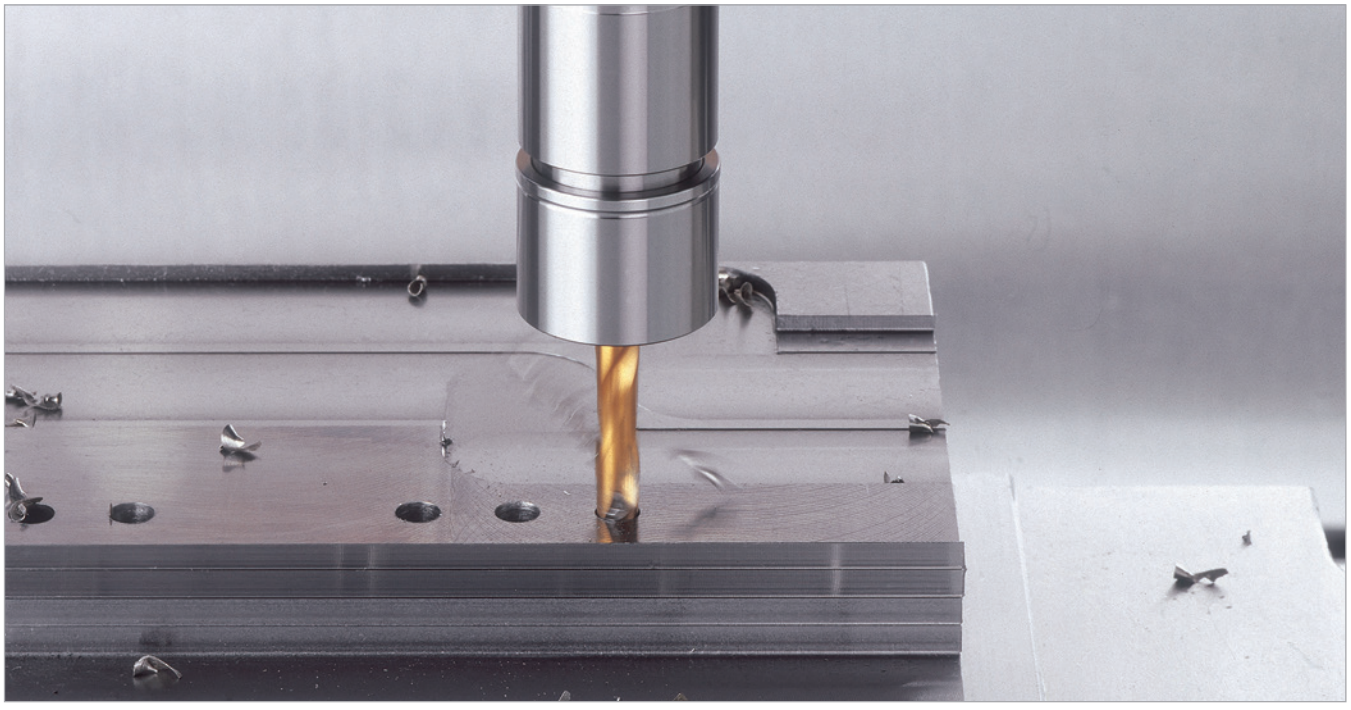
For Drills, Reamers, Taps & Finishing End Mills

MAX 35,000 RPM

COOLANT THROUGH



Catalog Number	Ød	ØD	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
HSK-A32-MEGA6N-75	**.010-.236**	.787	2.95	1.46	.91-1.69	NBC6-□	MGN6	MGR20	30,000	.6
HSK-A32-MEGA8N-50	**.020-.315**	.984	1.97	1.02	1.26	NBC8-□	MGN8	MGR25	33,000	.5
HSK-A40-MEGA6N-60❖	**.010-.236**	.787	2.36	1.18	1.30	NBC6-□	MGN6	MGR20	35,000	.7
HSK-A40-MEGA6N-75			2.95	1.77	.91-1.50				30,000	.8
HSK-A40-MEGA6N-90			3.54	2.36	.91-1.69					.8
HSK-A40-MEGA8N-60❖	**.020-.315**	.984	2.36	1.18	1.61	NBC8-□	MGN8	MGR25	35,000	.8
HSK-A40-MEGA8N-90			3.54	2.36	1.02-1.73				30,000	1.0
HSK-A40-MEGA10N-60❖	**.059-.394**	1.181	2.36	1.02	1.57	NBC10-□	MGN10	MGR30	35,000	.9
HSK-A40-MEGA10N-90			3.54	2.13	1.50-1.89				30,000	1.2
HSK-A40-MEGA13N-75❖	**.098-.512**	1.378	2.95	2.17	2.17	NBC13-□	MGN13	MGR35	25,000	1.2
HSK-A40-MEGA13N-90❖			3.54	2.76	2.52					1.4
HSK-A40-MEGA16N-75❖	**.098-.630**	1.654	2.95	2.17	2.09	NBC16-□	MGN16	MGR42	20,000	1.4
HSK-A40-MEGA16N-90❖			3.54	2.76	2.48				15,000	1.7
HSK-A40-MEGA20N-90❖	**.098-.787**	1.811	3.54	2.76	2.60	NBC20-□	MGN20	MGR46	15,000	1.9



Catalog Number	Ød	ØD	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
HSK-A50-MEGA6N-75	.010-.236	.787	2.95	1.46	.91-1.69	NBC6-□	MGN6	MGR20	30,000	1.3
HSK-A50-MEGA6N-100			3.94	2.76					25,000	1.3
HSK-A50-MEGA6N-135			5.31	3.66					20,000	1.5
HSK-A50-MEGA6N-165			6.50	4.84					14,000	1.8
HSK-A50-MEGA8N-75	.020-.315	.984	2.95	1.46	1.02-1.46	NBC8-□	MGN8	MGR25	30,000	1.3
HSK-A50-MEGA8N-100			3.94	2.44	1.02-1.77				28,000	1.5
HSK-A50-MEGA8N-135			5.31	3.78					20,000	1.8
HSK-A50-MEGA8N-165			6.50	4.92					14,000	2.0
HSK-A50-MEGA10N-75❖	.059-.394	1.181	2.95	1.50	1.81	NBC10-□	MGN10	MGR30	33,000	1.5
HSK-A50-MEGA10N-100			3.94	2.48	1.50-1.89				25,000	1.8
HSK-A50-MEGA10N-135			5.31	3.86					20,000	2.2
HSK-A50-MEGA10N-165			6.50	5.04					14,000	2.4
HSK-A50-MEGA13N-75❖	.098-.512	1.378	2.95	1.57	1.81	NBC13-□	MGN13	MGR35	28,000	1.5
HSK-A50-MEGA13N-100			3.94	2.56	1.73-2.20				25,000	2.0
HSK-A50-MEGA13N-135			5.31	3.94	1.73-2.87				18,000	2.4
HSK-A50-MEGA13N-165			6.50	5.12	1.73-2.48				12,000	2.9
HSK-A50-MEGA16N-75❖	.098-.630	1.654	2.95	1.93	1.89	NBC16-□	MGN16	MGR42	28,000	2.2
HSK-A50-MEGA16N-100			3.94	2.91	1.89-2.17				20,000	2.4
HSK-A50-MEGA16N-135			5.31	4.29	1.89 -2.68				15,000	3.1
HSK-A50-MEGA16N-165			6.50	5.47					10,000	3.7
HSK-A50-MEGA20N-75❖◆	.098-.787	1.811	2.95	1.93	1.85	NBC20-□	MGN20	MGR46	20,000	2.0
HSK-A50-MEGA20N-100			3.94	2.91	2.01-2.13				15,000	2.4
HSK-A50-MEGA20N-135			5.31	4.29	2.01-2.68				10,000	3.3
HSK-A50-MEGA20N-165			6.50	5.47					8,000	4.0
HSK-A50-MEGA25N-95❖	.610-1.000	2.326	3.74	2.72	2.56	NBC25-□	MGN25	MGR60L	12,000	2.9

- MEGA NEW BABY NUT is included; coolant pipe, collet, wrench and adjusting screw 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
- Tool adjustment amount "H" indicates the adjustment length with an adjusting screw
- Adjusting screws cannot be used with models marked ❖
- NEW BABY END MILL COLLETS cannot be used with models marked ◆

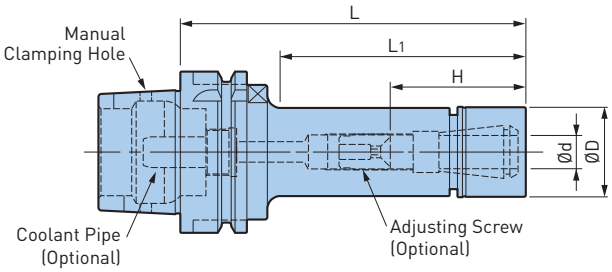
ACCESSORIES

MEGA NEW BABY CHUCK

CLAMPING RANGE: Ø.010"-1.000" (Ø.25-25.4mm) For Drills, Reamers, Taps & Finishing End Mills

COOLANT THROUGH

MAX 35,000 RPM



Catalog Number	Ød	ØD	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
HSK-A63-MEGA6N-75	.010 -.236	.787	2.95	1.38	.91-1.50	NBC6-□	MGN6	MGR20	35,000	2.0
HSK-A63-MEGA6N-90			3.54	1.89	.91-1.69				30,000	2.0
HSK-A63-MEGA6N-105			4.13	2.48						2.0
HSK-A63-MEGA6N-120			4.72	2.99					25,000	2.2
HSK-A63-MEGA6N-135			5.31	3.58					20,000	2.2
HSK-A63-MEGA6N-165			6.50	4.76					15,000	2.2
HSK-A63-MEGA8N-75	.020-.315	.984	2.95	1.38	1.02-1.50	NBC8-□	MGN8	MGR25	35,000	2.0
HSK-A63-MEGA8N-90			3.54	1.97	1.02-1.77				30,000	2.2
HSK-A63-MEGA8N-105			4.13	2.48						2.2
HSK-A63-MEGA8N-120			4.72	2.99					25,000	2.4
HSK-A63-MEGA8N-135			5.31	3.58					20,000	2.4
HSK-A63-MEGA8N-165			6.50	4.76					15,000	2.6
HSK-A63-MEGA10N-75❖	.059-.394	1.181	2.95	1.42	1.97	NBC10-□	MGN10	MGR30	33,000	2.2
HSK-A63-MEGA10N-90			3.54	1.97	1.50-1.77					2.2
HSK-A63-MEGA10N-105			4.13	2.56	1.50-1.89				25,000	2.4
HSK-A63-MEGA10N-120			4.72	3.15						2.6
HSK-A63-MEGA10N-135			5.31	3.66					20,000	2.9
HSK-A63-MEGA10N-165			6.50	4.84					15,000	3.1
HSK-A63-MEGA13N-75❖	.098-.512	1.378	2.95	1.46	1.93	NBC13-□	MGN13	MGR35	30,000	2.2
HSK-A63-MEGA13N-90❖			3.54	2.01	2.52					2.4
HSK-A63-MEGA13N-105			4.13	2.60	1.73-2.20				25,000	2.6
HSK-A63-MEGA13N-120			4.72	3.19	1.73-2.48				20,000	2.9
HSK-A63-MEGA13N-135			5.31	3.78						3.1
HSK-A63-MEGA13N-165			6.50	4.92					15,000	3.7
HSK-A63-MEGA16N-75❖	.098-.630	1.654	2.95	1.54	1.89	NBC16-□	MGN16	MGR42	30,000	2.4
HSK-A63-MEGA16N-90❖			3.54	2.13	2.48				25,000	2.9
HSK-A63-MEGA16N-105			4.13	2.72	1.89-2.13				20,000	3.1
HSK-A63-MEGA16N-120			4.72	3.31	1.89-2.68				15,000	3.3
HSK-A63-MEGA16N-135			5.31	3.90						3.7
HSK-A63-MEGA16N-165			6.50	5.08					10,000	4.4
HSK-A63-MEGA16N-200			7.87	6.46					8,000	5.3
HSK-A63-MEGA20N-75❖	.098-.787	1.811	2.95	1.54	2.01	NBC20-□	MGN20	MGR46	30,000	2.6
HSK-A63-MEGA20N-90❖			3.54	2.13	2.40				25,000	3.1
HSK-A63-MEGA20N-105			4.13	2.72	2.01-2.13				20,000	3.3
HSK-A63-MEGA20N-120			4.72	3.31	2.01-2.68				15,000	3.7
HSK-A63-MEGA20N-135			5.31	3.90						4.0
HSK-A63-MEGA20N-165			6.50	5.08					10,000	5.1
HSK-A63-MEGA20N-200			7.87	6.46					8,000	6.0
HSK-A63-MEGA25N-90❖	.610-1.000	2.362	3.54	—	2.48	NBC25-□	MGN25	MGR60L	20,000	3.5
HSK-A63-MEGA25N-120❖			4.72		3.54				12,000	4.8

Catalog Number	Ød	ØD	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
HSK-A100-MEGA6N-90	.010-.236	.787	3.54	1.69	.91-1.69	NBC6-□	MGN6	MGR20	20,000	5.5
HSK-A100-MEGA6N-105			4.13	2.28					18,000	5.5
HSK-A100-MEGA6N-120			4.72	2.87						5.5
HSK-A100-MEGA6N-135			5.31	3.46					14,000	5.5
HSK-A100-MEGA6N-165			6.50	4.45					12,000	5.7
HSK-A100-MEGA8N-90	.020-.315	.984	3.54	1.69	1.02-1.77	NBC8-□	MGN8	MGR25	20,000	5.5
HSK-A100-MEGA8N-105			4.13	2.28					18,000	5.7
HSK-A100-MEGA8N-120			4.72	2.87						5.7
HSK-A100-MEGA8N-135			5.31	3.46					14,000	6.0
HSK-A100-MEGA8N-165			6.50	4.45						6.0
HSK-A100-MEGA10N-90	.059-.394	1.181	3.54	1.69	1.50-1.77	NBC10-□	MGN10	MGR30	20,000	5.7
HSK-A100-MEGA10N-105			4.13	2.28	1.50-1.89				18,000	6.0
HSK-A100-MEGA10N-120			4.72	2.87						6.0
HSK-A100-MEGA10N-135			5.31	3.46					14,000	6.2
HSK-A100-MEGA10N-165			6.50	4.45						6.6
HSK-A100-MEGA13N-90❖	.098-.512	1.378	3.54	1.69	2.17	NBC13-□	MGN13	MGR35	18,000	6.0
HSK-A100-MEGA13N-105❖			4.13	2.28	2.76				16,000	6.2
HSK-A100-MEGA13N-120			4.72	2.87	1.73-2.48					6.4
HSK-A100-MEGA13N-135			5.31	3.46					14,000	6.6
HSK-A100-MEGA13N-165			6.50	4.65						7.1
HSK-A100-MEGA13N-200			7.87	5.83					10,000	7.7
HSK-A100-MEGA16N-90❖	.098-.630	1.654	3.54	1.85	2.17	NBC16-□	MGN16	MGR42	15,000	6.2
HSK-A100-MEGA16N-105❖			4.13	2.28	2.76				14,000	6.4
HSK-A100-MEGA16N-120			4.72	2.87	1.89-2.68					6.8
HSK-A100-MEGA16N-135			5.31	3.46					13,000	7.1
HSK-A100-MEGA16N-165			6.50	4.65						7.9
HSK-A100-MEGA16N-200			7.87	5.94					10,000	8.8
HSK-A100-MEGA20N-90❖	.098-.787	1.811	3.54	1.85	2.17	NBC20-□	MGN20	MGR46	15,000	6.4
HSK-A100-MEGA20N-105❖			4.13	2.28	2.76				14,000	6.6
HSK-A100-MEGA20N-120			4.72	2.87	2.01-2.68					7.1
HSK-A100-MEGA20N-135			5.31	3.46					13,000	7.3
HSK-A100-MEGA20N-165			6.50	4.65						8.4
HSK-A100-MEGA20N-200			7.87	6.02					10,000	9.5
HSK-A100-MEGA25N-120❖	.610-1.000	2.362	4.72	307	3.35	NBC25-□	MGN25	MGR60L	12,000	8.4
HSK-A100-MEGA25N-165			6.50	4.84	2.52-2.91				10,000	10.1
HSK-A125-MEGA20N-120	.098-.787	1.811	4.72	3.07	2.01-2.68	NBC20-□	MGN20	MGR46	12,000	10.3
HSK-A125-MEGA20N-165			6.50	4.65					10,000	11.4

- MEGA NEW BABY NUT is included; coolant pipe, 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 ❖

ACCESSORIES

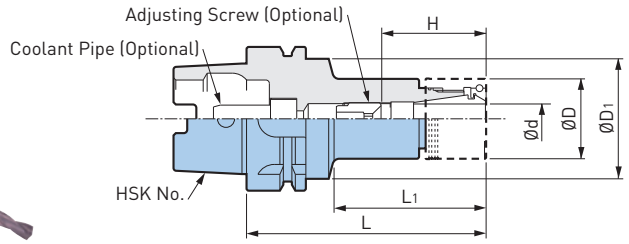
MEGA ER GRIP

CLAMPING RANGE: Ø.075"-.787" (Ø1.9-20mm)

For Drills, Reamers, Taps & Finishing End Mills

MAX 33,000 RPM

COOLANT THROUGH



Catalog Number	Ød	ØD	ØD1	L	L1	H	Collet	Nut (NOT Included)	Wrench	Max RPM	Weight (lbs.)
HSK-A63-MEGAER16-70NL❖	.075-.394	1.181	2.07	2.76	1.26	1.77	ERC16-□	MERN16*	MGR30L	33,000	2.2
HSK-A63-MEGAER16-90NL				3.54	1.93	1.38-1.85				33,000	2.4
HSK-A63-MEGAER16-105NL				4.13	2.52					25,000	2.4
HSK-A63-MEGAER16-135NL				5.32	3.70					20,000	2.9
HSK-A63-MEGAER16-165NL				6.50	4.88					15,000	3.1
HSK-A63-MEGAER20-70NL❖	.108-.512	1.378	2.07	2.76	1.26	1.77	ERC20-□	MERN20*	MGR35L	30,000	2.2
HSK-A63-MEGAER20-90NL❖				2.54	1.93	2.48				30,000	2.4
HSK-A63-MEGAER20-105NL				4.13	2.52	1.65-2.13				25,000	2.6
HSK-A63-MEGAER20-135NL				5.32	3.70	1.65-2.44				20,000	3.1
HSK-A63-MEGAER20-165NL				6.50	4.88					15,000	3.5
HSK-A63-MEGAER25-70NL❖	.108-.630	1.654	2.07	2.76	1.26	1.77	ERC25-□	MERN25*	MGR35L	30,000	2.4
HSK-A63-MEGAER25-90NL❖				3.54	1.97	2.44				25,000	2.6
HSK-A63-MEGAER25-105NL				4.13	2.56	1.73-2.17				20,000	3.1
HSK-A63-MEGAER25-135NL				5.32	3.74	1.73-2.65				15,000	3.7
HSK-A63-MEGAER25-165NL				6.50	4.92					10,000	4.2
HSK-A63-MEGAER32-75NL❖	.108-.787	1.969	2.07	2.95	1.30	1.97	ERC32-□	MERN32*	MGR50L	30,000	2.9
HSK-A63-MEGAER32-90NL❖				3.54	1.85	2.40				25,000	3.3
HSK-A63-MEGAER32-105NL				4.13	2.44	1.97-2.13				20,000	3.7
HSK-A63-MEGAER32-135NL				5.32	3.62	1.97-2.68				15,000	4.4
HSK-A63-MEGAER32-165NL				6.50	4.80					10,000	5.3
HSK-A100-MEGAER16-75NL❖	.075-.394	1.181	3.35	2.95	1.22	1.83	ERC16-□	MERN16*	MGR30L	20,000	7.3
HSK-A100-MEGAER16-105NL				4.13	2.32	1.38-1.85				18,000	7.5
HSK-A100-MEGAER16-135NL				5.32	3.50					14,000	7.9
HSK-A100-MEGAER16-165NL				6.50	4.69					14,000	8.1
HSK-A100-MEGAER20-75NL❖	.108-.512	1.378	3.35	2.95	1.22	1.77	ERC20-□	MERN20*	MGR35L	18,000	7.5
HSK-A100-MEGAER20-105NL				4.13	2.32	1.65-2.13				16,000	7.7
HSK-A100-MEGAER20-135NL				5.32	3.50	1.65-2.44				14,000	8.1
HSK-A100-MEGAER20-165NL				6.50	4.69					14,000	8.6
HSK-A100-MEGAER25-75NL❖	.108-.630	1.654	3.35	2.95	1.26	1.73	ERC25-□	MERN25*	MGR35L	15,000	7.5
HSK-A100-MEGAER25-105NL				4.13	2.32	1.73-1.97				14,000	8.1
HSK-A100-MEGAER25-135NL				5.32	3.50	1.73-2.65				13,000	8.8
HSK-A100-MEGAER25-165NL				6.50	4.69					13,000	9.2
HSK-A100-MEGAER32-80NL❖	.108-.787	1.969	3.35	3.15	1.42	1.93	ERC32-□	MERN32*	MGR50L	15,000	7.9
HSK-A100-MEGAER32-105NL❖				4.13	2.32	2.79				14,000	8.6
HSK-A100-MEGAER32-135NL				5.32	3.50	1.97-2.68				13,000	9.5
HSK-A100-MEGAER32-165NL				6.50	4.69					13,000	10.3

COLLET CHUCK

BIG DAISHOWA

Catalog Number	Ød	ØD	ØD1	L	L1	H	Collet	Nut (NOT Included)	Wrench	Max RPM	Weight (lbs.)
HSK-A125-MEGAER16-100NL	.075-.394	1.181	4.13	3.94	2.16	1.38-1.85	ERC16-☐	MERN16*	MGR30L	15,000	9.7
HSK-A125-MEGAER16-160NL				6.30	4.52					12,000	10.3
HSK-A125-MEGAER32-100NL	.108-.787	1.969		3.94	2.16	1.97-2.68	ERC32-☐	MERN32*	MGR50L	14,000	10.6
HSK-A125-MEGAER32-160NL				6.30	4.52					12,000	12.3

***Nut, adjusting screw, collet and wrench are not included**
- Weight does not include collet
- "H" indicates the adjustment length with an adjusting screw
- MEGA ER GRIP is not able to use DIN6499 Form-A collets and ESX collets
- The "max" allowable spindle speed listed in the table is directly influenced by the rigidity of the machine and balance of the cutting tool, therefore, the "max" allowable speed may not always be achievable
- Adjusting screws cannot be used with models marked ❖

CAUTION

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.

ACCESSORIES

***MEGA NUT is the recommended nut to achieve high accuracy and clamping force**

HIGH CONCENTRICITY

MEGA ER PERFECT SEAL

MEGA WRENCH

Capable of sealing high pressure coolant up to 7Mpa. For applications with coolant supplied through the tools. MEGA Wrench is used for tightening.

MEGA ER NUT*

MEGA WRENCH

High accuracy and clamping force are provided with thrust ball bearings. Ideal for solid carbide drills and reamers. Slot-free outer diameter increases rigidity of the nut itself. The one-way clutch of the MEGA Wrench tightens the nut securely and easily by ratchet function.

MEGA ER SOLID NUT

MEGA WRENCH

High performance solid nut with surface treatment for friction reduction. Slot-free outer diameter increases rigidity of the nut itself. The one-way clutch of the MEGA Wrench tightens the nut securely and easily by ratchet function.

ER NUT

C-SPANNER

Basic nut with surface treatment for friction reduction. C-spanner is used for tightening.

***MEGA NUT is the recommended nut to achieve high accuracy and clamping force**

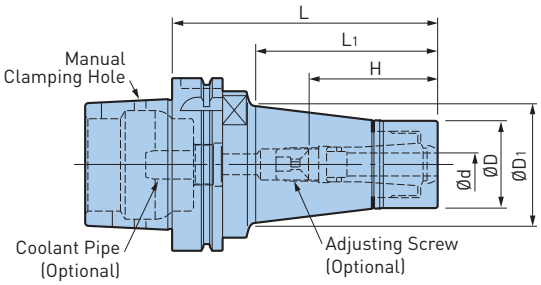
MEGA E CHUCK

CLAMPING RANGE: Ø.125"-.500" (Ø3-12mm)

Exclusively for High Speed Finish End Milling

MAX 35,000 RPM

COOLANT THROUGH



Catalog Number	Ød	ØD	ØD1	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
HSK-A40-MEGA6E-60❖	.125-.250 (3-6mm)	.984	1.02	2.36	.94	1.61	MEC6-□	MEN6	MGR25	35,000	.9
HSK-A40-MEGA6E-75❖			1.12	2.95	1.54	2.17					1.0
HSK-A40-MEGA8E-65❖	.125-.250 (3-8mm)	1.181	1.34	2.56	1.18	1.73	MEC8-□	MEN8	MGR30	35,000	1.0
HSK-A40-MEGA8E-75❖			1.34	2.95	1.57	2.13				30,000	1.1
HSK-A40-MEGA10E-70❖	.125-.375 (3-10mm)	1.378	1.38	2.76	1.38	1.89	MEC10-□	MEN10	MGR35	30,000	1.2
HSK-A40-MEGA10E-90			1.38	3.54	2.17	1.89-2.05				25,000	1.5
HSK-A40-MEGA13E-70❖	.125-.500 (3-12mm)	1.654	1.65	2.76	1.38	1.97	MEC13-□	MEN13	MGR42	30,000	1.4
HSK-A40-MEGA13E-90❖			1.65	3.54	2.17	2.64				25,000	1.8
HSK-A50-MEGA6E-75	.125-.250 (3-6mm)	.984	1.12	2.95	1.46	1.46-1.69	MEC6-□	MEN6	MGR25	30,000	1.3
HSK-A50-MEGA8E-75❖	.125-.250 (3-8mm)	1.181	1.30	2.95	1.57	1.65	MEC8-□	MEN8	MGR30	30,000	1.5
HSK-A50-MEGA10E-75❖	.125-.375 (3-10mm)	1.378	1.50	2.95	1.57	1.89	MEC10-□	MEN10	MGR35	30,000	1.8
HSK-A50-MEGA13E-75❖	.125-.500 (3-12mm)	1.654	—	2.95	1.93	1.97	MEC13-□	MEN13	MGR42	30,000	2.0
HSK-A50-MEGA13E-100			—	3.94	2.91	1.97-2.17				25,000	2.4
HSK-A63-MEGA6E-65❖	.125-.250 (3-6mm)	.984	1.04	2.56	1.10	1.77	MEC6-□	MEN6	MGR25	30,000	2.0
HSK-A63-MEGA6E-90			1.18	3.54	2.01	1.46-1.77					2.2
HSK-A63-MEGA6E-105			1.30	4.13	2.60					29,000	2.4
HSK-A63-MEGA6E-120			1.42	4.72	3.23						2.6
HSK-A63-MEGA6E-135			1.54	5.31	3.90					27,000	3.1
HSK-A63-MEGA8E-67❖	.125-.250 (3-8mm)	1.181	1.24	2.64	1.18	1.77	MEC8-□	MEN8	MGR30	30,000	2.0
HSK-A63-MEGA8E-90			1.38	3.54	2.05	1.46-1.77					2.4
HSK-A63-MEGA8E-105			1.50	4.13	2.68	1.65-2.01				29,000	2.6
HSK-A63-MEGA8E-120			1.59	4.72	3.27					28,000	3.1
HSK-A63-MEGA8E-135			1.73	5.31	3.94					27,000	3.5
HSK-A63-MEGA10E-75❖	.125-.375 (3-10mm)	1.378	1.48	2.95	1.46	1.89	MEC10-□	MEN10	MGR35	30,000	2.4
HSK-A63-MEGA10E-90❖			1.57	3.54	2.09	2.52					2.6
HSK-A63-MEGA10E-105			1.69	4.13	2.72	1.89-2.28				29,000	3.1
HSK-A63-MEGA10E-120			1.81	4.72	3.35					28,000	3.3
HSK-A63-MEGA10E-135			1.69	5.31	3.90					27,000	3.7
HSK-A63-MEGA13E-75❖	.125-.500 (3-12mm)	1.654	1.73	2.95	1.22	1.93	MEC13-□	MEN13	MGR42	30,000	2.6
HSK-A63-MEGA13E-90❖			.77	3.54	1.81	2.52					3.1
HSK-A63-MEGA13E-105			1.81	4.13	2.40	1.97-2.24				29,000	3.5
HSK-A63-MEGA13E-120			1.87	4.72	3.03					28,000	4.0
HSK-A63-MEGA13E-135			1.85	5.31	3.62					26,000	4.2

COLLET CHUCK

Catalog Number	Ød	ØD	ØD1	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
HSK-A100-MEGA6E-75❖	.125-.250 (3-6mm)	1.984	1.10	2.95	1.30	1.81	MEC6-□	MEN6	MGR25	24,000	5.5
HSK-A100-MEGA6E-90			1.16	3.54	1.89	1.46-1.77					5.7
HSK-A100-MEGA6E-105			1.28	4.13	2.48					20,000	6.0
HSK-A100-MEGA6E-120			1.38	4.72	3.07					18,000	6.2
HSK-A100-MEGA6E-135			1.48	5.31	3.66						6.4
HSK-A100-MEGA6E-165			1.69	6.50	4.84					14,000	7.1
HSK-A100-MEGA8E-75❖	.125-.250 (3-8mm)	1.181	1.30	2.95	1.30	1.81	MEC8-□	MEN8	MGR30	24,000	5.5
HSK-A100-MEGA8E-90			1.36	3.54	1.89	1.65-2.01					5.7
HSK-A100-MEGA8E-105			1.46	4.13	2.48					20,000	6.2
HSK-A100-MEGA8E-120			1.56	4.72	3.07					18,000	6.4
HSK-A100-MEGA8E-135			1.67	5.31	3.66						6.8
HSK-A100-MEGA8E-165			1.87	6.50	4.84					16,000	7.5
HSK-A100-MEGA10E-80❖	.125-.375 (3-10mm)	1.378	1.48	3.15	1.50	2.01	MEC10-□	MEN10	MGR35	22,000	5.7
HSK-A100-MEGA10E-90❖			1.56	3.54	1.89	2.40					6.0
HSK-A100-MEGA10E-105			1.65	4.13	2.48	1.89-2.28				20,000	6.4
HSK-A100-MEGA10E-120			1.75	4.72	3.07					18,000	6.8
HSK-A100-MEGA10E-135			1.85	5.31	3.66						7.3
HSK-A100-MEGA10E-165			2.07	6.50	4.84					16,000	8.2
HSK-A100-MEGA13E-90❖	.125-.500 (3-12mm)	1.654	1.81	3.54	1.89	1.97	MEC13-□	MEN13	MGR42	20,000	6.4
HSK-A100-MEGA13E-105			1.91	4.13	2.48	1.97-2.40				18,000	6.8
HSK-A100-MEGA13E-120			2.03	4.72	3.07					16,000	7.3
HSK-A100-MEGA13E-135			2.13	5.31	3.66						7.9
HSK-A100-MEGA13E-165			2.32	6.50	4.84					14,000	9.3

- MEGA E NUT is included; coolant pipe, 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 ❖

ACCESSORIES

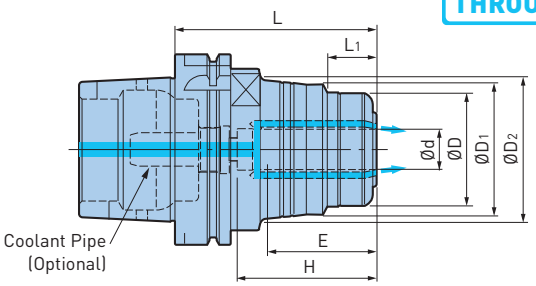
MEGA DOUBLE POWER CHUCK

CLAMPING RANGE: Ø.625"-1.250" (Ø16-42mm) For Heavy Duty End Milling

MAX 28,000 RPM

COOLANT THROUGH

JET THROUGH



Catalog Number	Ød	ØD	ØD1	ØD2	L	L1	H	Min Clamping Length E	Wrench	Max RPM	Weight (lbs.)
HSK-A40-MEGA16DS-80	16mm	1.811	—	—	3.25	1.10	2.48	1.89	MGR46L	12,000	1.7
HSK-A50-MEGA16DS-85	16mm	1.811	—	—	3.44	1.10	2.52	1.89	MGR46L	25,000	2.2
HSK-A50-MEGA20DS-85	20mm	1.969	—	—	3.48	1.30	2.56	1.97	MGR50L	20,000	2.3
HSK-A63-MEGA.625DS-3.5A	.625	1.650	2.07	—	3.58	1.06	2.59	1.89	MGR42L	28,000	3.4
HSK-A63-MEGA.750DS-3.5A	.750	2.170	2.19	—	3.59	1.40	2.61	1.97	MGR55L	28,000	3.7
HSK-A63-MEGA.750DS-5A				—	5.09		3.44			25,000	4.8
HSK-A63-MEGA1.000DS-4A	1.000	2.440	2.47	—	4.08	1.61	3.09	2.20	MGR62L	24,000	4.4
HSK-A63-MEGA1.250DS-4.5A	1.250	2.760	2.75	—	4.59	1.42	3.61	2.35	MGR70L	24,000	4.9
HSK-A63-MEGA16DS-80A	16mm	1.654	2.08	—	3.23	1.06	2.24	1.89	MGR42L	25,000	2.9
HSK-A63-MEGA20DS-90A	20mm	2.165	2.16	—	3.62	1.42	2.64	1.97	MGR50L	25,000	3.7
HSK-A63-MEGA20DS-120A●					4.80		3.43			23,000	4.8
HSK-A63-MEGA25DS-100A	25mm	2.441	—	—	4.02	1.61	3.03	2.20	MGR62L	22,000	4.4
HSK-A63-MEGA32DS-105A	32mm	2.756	—	—	4.21	1.38	3.23	2.36	MGR70L	22,000	4.8
HSK-A100-MEGA.750DS-4	.750	2.362	2.72	2.91	4.09	1.10	2.85	1.89	MGR60L	18,000	9.0
HSK-A100-MEGA1.000DS-4	1.000	2.756	3.03	3.35	4.09	1.34	2.87	2.20	MGR70L	18,000	10.0
HSK-A100-MEGA1.250DS-4.5	1.250	3.150	3.39	3.35	4.59	1.65	3.35	2.36	MGR80L	13,000	11.0
HSK-A100-MEGA16DS-105	16mm	1.811	2.17	2.48	4.23	1.02	2.87	1.89	MGR46L	18,000	7.7
HSK-A100-MEGA16DS-135●					5.41					16,000	9.0
HSK-A100-MEGA20DS-105	20mm	2.362	2.72	2.91	4.23	1.10	2.95	1.97	MGR60L	18,000	9.0
HSK-A100-MEGA20DS-135■					5.41		3.43			16,000	11.0
HSK-A100-MEGA20DS-165❖					6.59		2.80-3.19			15,000	13.0
HSK-A100-MEGA25DS-105	25mm	2.756	3.03	3.35	4.23	1.35	2.95	2.20	MGR70L	18,000	9.9
HSK-A100-MEGA25DS-135■					5.41		3.62			16,000	12.3
HSK-A100-MEGA25DS-165❖					6.59		3.07-3.46			15,000	15.0
HSK-A100-MEGA32DS-115	32mm	3.150	3.39	3.35	4.62	1.65	3.35	2.36	MGR80L	18,000	11.0
HSK-A100-MEGA32DS-135					5.41		4.13			16,000	12.8
HSK-A100-MEGA32DS-165					6.59		4.21			14,000	15.6
HSK-A100-MEGA42DS-115	42mm	3.898	3.93	3.93	4.61	1.65	3.39	2.48	MGR99L	14,000	12.1
HSK-A125-MEGA20DS-135	20mm	2.362	2.72	3.15	5.41	1.10	3.43	1.97	MGR60L	8,000	14.7
HSK-A125-MEGA20DS-165❖				3.11	6.59		2.80-3.19			7,000	16.7
HSK-A125-MEGA25DS-135	25mm	2.756	3.03	3.27	5.41	1.34	3.62	2.20	MGR70L	8,000	15.6
HSK-A125-MEGA32DS-135	32mm	3.150	3.39	3.66	5.41	1.65		2.36	MGR80L	8,000	17.2
HSK-A125-MEGA32DS-165					6.59		4.21			6,000	20
HSK-A125-MEGA42DS-120	42mm	3.898	3.93	3.93	4.82		3.35	2.76	MGR99L	7,000	17.4

ACCESSORIES

COLLET PG. 386

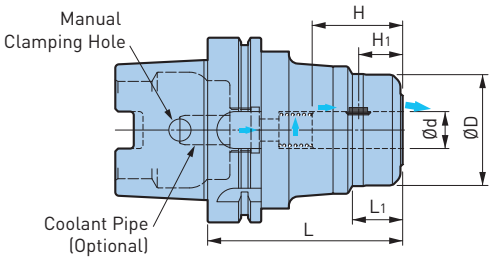
PERFECT SEAL/ JET COLLET PG. 383

MEGA WRENCH PG. 390

SCREW PG. 412

- Coolant pipe and wrench must be ordered separately
- 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
- Tools with flats should not be used in MEGA DOUBLE POWER CHUCKS
- Optional axial adjusting screw can be used with models marked ❖
- M8 hex screw is required with models marked ● please contact us if using for center through applications
- M12 hex screw is required with models marked ■

MEGA PERFECT GRIP



COOLANT THROUGH

Catalog Number	Ød	ØD	L	L1	H	H1	Wrench	Weight (lbs.)
HSK-A63-MEGA16DPG-90	**16mm**	1.811	3.543	.945	1.850	.906	MGR46L	3.5
HSK-A63-MEGA20DPG-100	**20mm**	2.362	3.543	1.063	1.929	.945	MGR60L	4.4
HSK-A100-MEGA.750DPG-4	**.750**	2.362	4.000	1.072	1.929	.913	MGR60L	9
HSK-A100-MEGA1.000DPG-4	**1.000**	2.756	4.000	1.318	2.165	1.024	MGR70L	9.9
HSK-A100-MEGA1.250DPG-4.5	**1.250**	3.150	4.500	1.622	2.244	1.102	MGR80L	11
HSK-A100-MEGA20DPG-105	**20mm**	2.362	4.134	1.063	1.929	.945	MGR60L	9
HSK-A100-MEGA25DPG-105	**25mm**	2.756	4.134	1.299	2.165	.906	MGR70L	9.9
HSK-A100-MEGA32DPG-115	**32mm**	3.150	4.528	1.614	2.322	.906	MGR80L	11
HSK-A125-MEGA1.000DPG-4.5	**1.000**	2.756	4.500	1.299	2.165	1.024	MGR70L	14
HSK-A125-MEGA1.250DPG-5	**1.250**	3.150	5.000	1.622	2.244	1.102	MGR80L	15.5
HSK-A125-MEGA16DPG-135	**16mm**	1.811	5.315	.945	1.850	.906	MGR46L	13
HSK-A125-MEGA20DPG-135	**20mm**	2.362	5.315	1.063	1.929	.945	MGR60L	14.7
HSK-A125-MEGA25DPG-135	**25mm**	2.756	5.315	1.299	2.165	.906	MGR70L	16
HSK-A125-MEGA32DPG-135	**32mm**	3.150	5.315	1.614	2.322	.906	MGR80L	17.2

- Key grip and spring are included; wrench must be ordered separately
- Cylindrical shank with flat section JIS B 4005 (ISO3338-2) is required, for inch shank refer to pg. 73, for metric shank refer to pg. 129
- H1 is the dimension from the center of the Key Grip to the front end of the chuck
- When coolant supply is from the cutting edge a seal bush is necessary, use instead of the spring; seal bush must be ordered separately

CAUTION

Always replace worn or damaged key grips immediately for safe operation.

INCH

Clamping Ø	Key Grip (2 pcs.)	Spring
.750	**PKG.750-2P**	**PSP1823**
1.000	**PKG1.000-2P**	**PSP2420**
1.250	**PKG1.250-2P**	**PSP3128**

- Spare Key Grips are available in 2 pcs. per set

METRIC

Clamping Ø	Key Grip (2 pcs.)	Spring
Ø16	**PKG16-2P**	**PSP1519**
Ø20	**PKG20-2P**	**PSP1823**
Ø25	**PKG25-2P**	**PSP2420**
Ø32	**PKG32-2P**	**PSP3128**

- Spare Key Grips are available in 2 pcs. per set

NEW Hi-POWER MILLING CHUCK

CLAMPING RANGE: Ø.750"-2.000" (Ø20-42mm) For Heavy Duty End Milling

COOLANT THROUGH

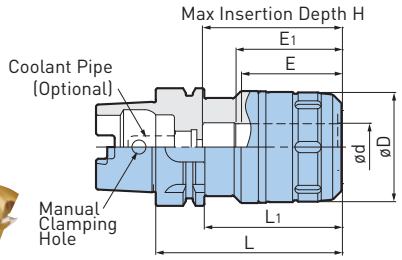


Fig. 1

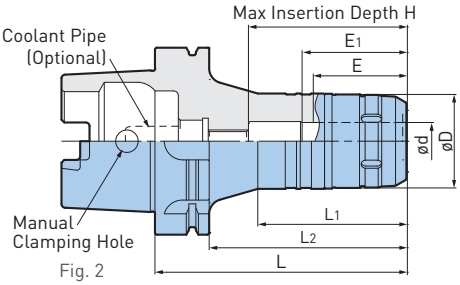


Fig. 2

Catalog Number	Fig.	ød	øD	L	L1	L2	H	Min Clamping Length		Wrench	Weight (lbs.)
								E	E1		
HSK-A40-HMC20S-85	1	**20mm**	1.969	3.35	2.56	—	2.60	2.20	1.97	FK45-50L	2.0
HSK-A50-HMC20S-90	1	**20mm**	1.969	3.54	2.20	—	2.60	2.20	1.97	FK45-50L	2.6
HSK-A50-HMC32S-115◆		**32mm**	2.44	4.53	3.50		2.72		2.28	FK58-62L	3.5
HSK-A63-HMC20S-90	1	**20mm**	1.969	3.54	2.52	—	2.56	2.20	1.97	FK45-50L	3.3
HSK-A63-HMC20S-120●				4.72	3.70		3.35				4.2
HSK-A63-HMC25S-100	1	**25mm**	2.323	3.94	2.91	—	2.95	2.24	2.20	FK58-62L	4.2
HSK-A63-HMC25S-135❖				5.31	4.29		2.60-2.99				5.5
HSK-A63-HMC32S-110	1	**32mm**	2.677	4.33	3.31	—	3.35	2.52	2.36	FK68-75L	5.1
HSK-A63-HMC32S-135●				5.31	4.29		3.54				5.7
HSK-A63-HMC32S-165❖				6.50	5.47		3.11-3.50				7.1
HSK-A100-HMC20S-105	1	**20mm**	1.969	4.13	2.99	—	2.87	2.20	1.97	FK45-50L	6.6
HSK-A100-HMC20S-135■	2			5.31	3.15	4.17	3.35				7.7
HSK-A100-HMC20S-165❖				6.50	3.94	5.35	2.72-3.11				9.0
HSK-A100-HMC25S-105	1	**25mm**	2.323	4.13	2.99	—	2.87	2.24	2.20	FK58-62L	7.3
HSK-A100-HMC25S-135■				5.31	4.17		3.54				8.6
HSK-A100-HMC25S-165❖	2			6.50	4.13	5.35	2.99-3.39				10.6
HSK-A100-HMC32S-115	1	**32mm**	2.677	4.53	3.39	—	3.27	2.83	2.36	FK68-75L	8.6
HSK-A100-HMC32S-135				5.31	4.17		4.06				9.7
HSK-A100-HMC32S-165■	2			6.50	4.13	136	4.13				11.0
HSK-A100-HMC32S-200❖				7.87	5.12	6.73	3.54-3.94				14.1
HSK-A100-HMC32S-300❖				11.81	7.87	10.67					20.5
HSK-A100-HMC42S-115	1	**42mm**	3.346	4.53	3.39	—	3.27	2.87	2.48	FK80-90L	10.8
HSK-A100-HMC42S-135				5.31	4.17		4.06				12.1
HSK-A100-HMC42S-165■				6.50	5.35		4.21				15.0
HSK-A125-HMC.750J-4	2	**.750**	2.36	4.09	2.15	2.95	2.64	2.28	1.97	FK58-62	12.1
HSK-A125-HMC1.000J-5		**1.000**	2.44	5.09	2.27	3.95	3.63	2.64	2.20		12.3
HSK-A125-HMC1.250J-5		**1.250**	3.15		2.59			2.83	2.36	FK80-90	15.0
HSK-A125-HMC1.500J-5	1	**1.500**	3.90		3.31	—		2.87	2.48	FK92-100	18.0
HSK-A125-HMC2.000J-6		**2.000**	4.13	6.09	4.94		4.54	3.50	3.50	FK110-115	20.5

- Wrench and axial adjusting screw must be ordered separately
- When using center through coolant:
  - Set screw with sealing compound applied (standard accessory) should be used to plug an air bleed hole
  - Oil hole type should be chosen when straight collet is required
- "H" dimension is the Max tool shank length that can be inserted into the holder
- Optional adjusting screw can be used with models marked ❖
- Straight collet model C32-□□ can only be used with models marked ◆
- M8 hex screw is required with models marked ● please contact us if using for center through applications
- M12 hex screw is required with models marked ■
- Through tool coolant for HSK-A125 is Jet type delivery

ACCESSORIES

COLLET PG. 386

PERFECT SEAL/ JET COLLET PG. 383

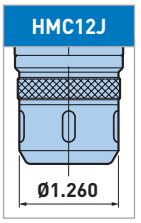
WRENCH PG. 389

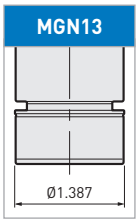
SCREW PG. 412

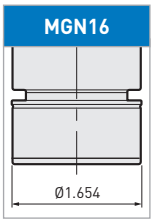
NEW Hi-POWER MILLING CHUCK

CLAMPING RANGE: Ø12mm

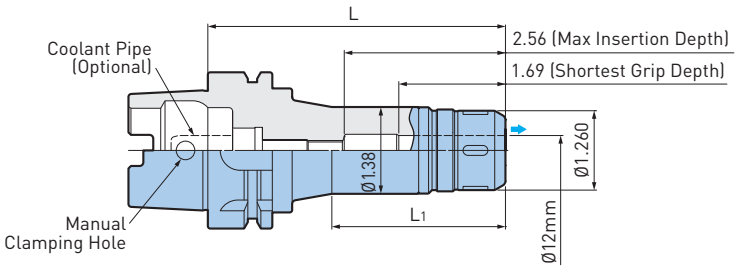
A slim yet highly rigid milling chuck with Ø32 outer diameter nut for reduced interference.





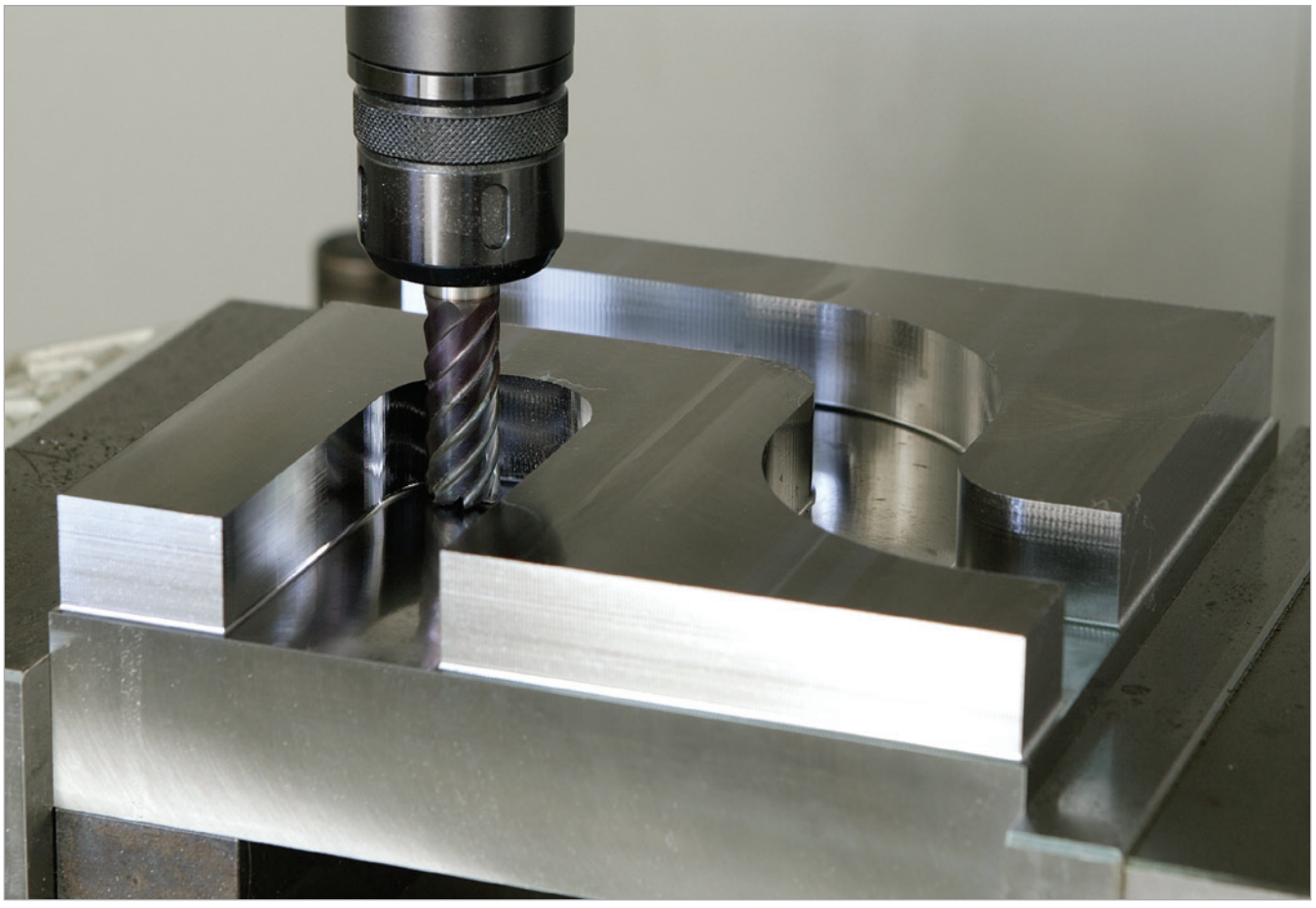


COOLANT THROUGH



Catalog Number	L	L1	Wrench	Weight (lbs.)
HSK-A63-HMC12J-90	3.54	2.08	FK31-33	2.4
HSK-A63-HMC12J-120●	4.72	2.75		3.1

- Wrench must be ordered separately
- M8 hex screw is required with models marked ● please contact us if using for center through applications



SUPER SLIM TYPE

CLAMPING RANGE: Ø3-12mm

For Drills, Reamers, Ball Mills, End Mills, Diamond Reamers & Grinding Tools

COOLANT THROUGH

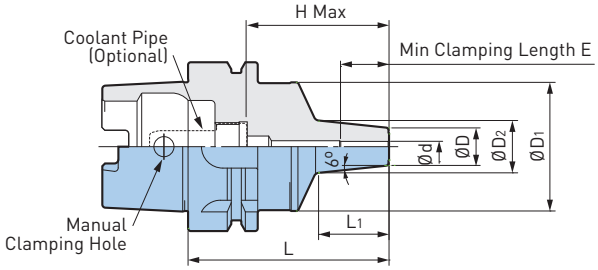


Fig. 1

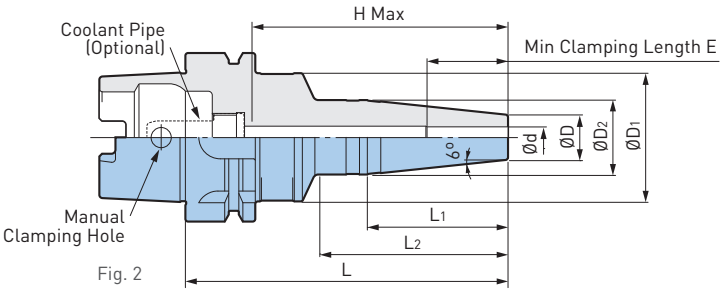


Fig. 2

Catalog Number	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	E	H Max	Max RPM	Weight (lbs.)
HSK-A40-HDC4S-65	1	4mm	.551	1.30	.83	2.559	1.10	—	.75	1.93	35,000	.73
HSK-A50-HDC4S-75	1	4mm	.551	1.57	.83	2.953	1.22	—	.75	2.17	35,000	1.8
HSK-A63-HDC3S-90	1	3mm	.551	1.89	.83	3.543	1.69	—	.63	2.68	30,000	2.4
HSK-A63-HDC3S-120	2				1.02	4.016	2.24	2.83	.63	3.86	30,000	1.1
HSK-A63-HDC4S-75	1	4mm			.79	2.953	1.02	—	.75	2.09	30,000	2.2
HSK-A63-HDC4S-90					.91	3.543	1.69	—		2.68	30,000	2.2
HSK-A63-HDC4S-120	2				1.02	4.724	2.24	2.83		3.86	30,000	2.4
HSK-A63-HDC5S-120		5mm							.83		30,000	2.4
HSK-A63-HDC6S-120		6mm						2.76	.98		30,000	2.4
HSK-A63-HDC6S-150						5.910		3.35		5.04	28,000	2.9
HSK-A63-HDC8S-120		8mm	.669		1.10	4.724	2.05	2.76	1.22	3.74	30,000	2.7
HSK-A63-HDC8S-150						5.910		3.35		4.92	28,000	2.9
HSK-A63-HDC10S-120		10mm	.748		1.18	4.724		2.76	1.30	3.70	30,000	2.7
HSK-A63-HDC10S-150						5.910		3.43		4.88	25,000	3.1
HSK-A63-HDC12S-120		12mm	.827		1.26	4.724		2.76	1.42	3.66	30,000	2.7
HSK-A63-HDC12S-150						5.910		3.43		4.84	25,000	3.1

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

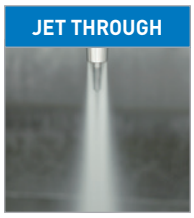
CAUTION

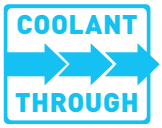
Use only cutting tools that have a shank tolerance of h6. Do not use with cutting tools made with a flat on the shank (ie: Weldon type shank). Roughing end mills are not recommended for use with hydraulic chucks. Do not tighten the clamping screw without first inserting a cutting tool into the tool holder.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

JET COOLANT TYPE

CLAMPING RANGE: Ø4-32mm

Coolant Holes Through Body of Holder





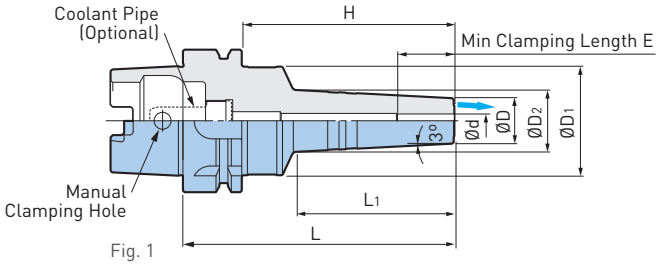


Fig. 1

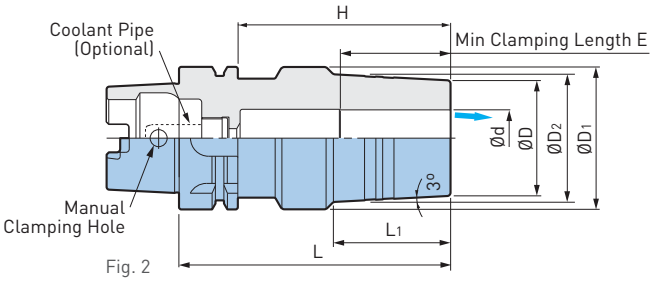


Fig. 2

Catalog Number	Fig.	Ød	ØD	ØD1	ØD2	L	L1	H	E	Weight (lbs.)
HSK-A63-HDC4J-75	1	**4mm**	.787	1.89	.91	2.95	1.14	2.09	.75	2.2
HSK-A63-HDC6J-120		**6mm**			1.10	4.72	2.76	3.86	.98	2.6
HSK-A63-HDC8J-120		**8mm**	.866		1.18			3.74	1.18	2.6
HSK-A63-HDC10J-120		**10mm**	.945		1.26			3.70	1.26	2.9
HSK-A63-HDC12J-120		**12mm**	1.024		1.34			3.66	1.38	2.9
HSK-A63-HDC16J-120		**16mm**	1.339		1.69		2.99	3.62	1.65	3.3
HSK-A63-HDC20J-120		**20mm**	1.496					6.58		3.3
HSK-A63-HDC25J-120	2	**25mm**	2.008	2.48	2.24		1.97	3.66	1.93	4.6
HSK-A63-HDC32J-120		**32mm**	2.362	2.72	—		2.09		2.20	5.1

- 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".

CLAMPING RANGE: Ø.750"-1.250" (Ø6-32mm)

For Drills, Reamers, Ball Mills, End Mills, Diamond Reamers & Grinding Tools

MAX 17,000 RPM

COOLANT THROUGH

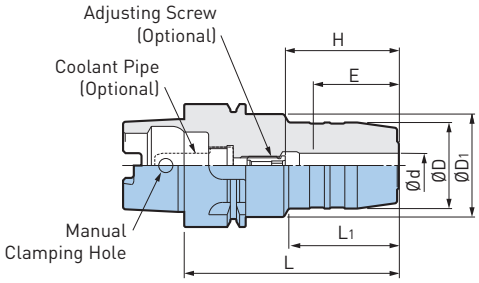


Fig. 1

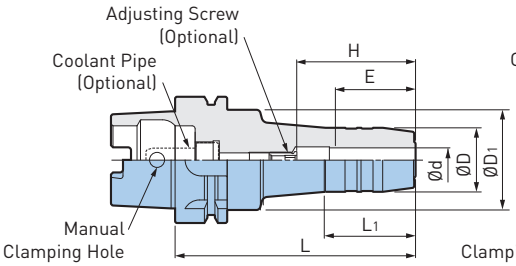


Fig. 2

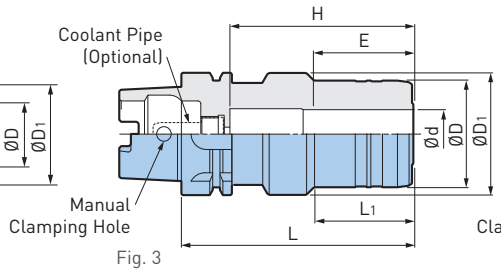


Fig. 3

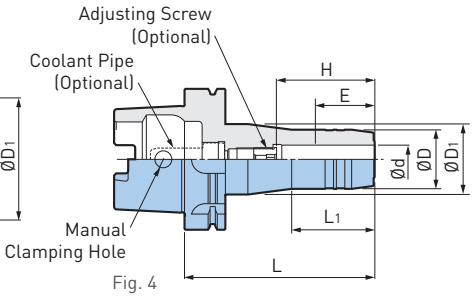


Fig. 4

Catalog Number	Fig.	Ød	ØD	ØD1	L	L1	H	Min Clamping Length E	Adjusting Screw	Max RPM	Weight (lbs.)
HSK-A40-HDC6-70	1	**6mm**	1.020	1.32	2.76	1.42	1.10-1.42	1.10	HDA6-05013	17,000	1.0
HSK-A40-HDC8-70		**8mm**	1.100						HDA8-06013	15,000	1.1
HSK-A40-HDC10-75		**10mm**	1.180		2.95	1.61	1.30-1.61	1.30			1.1
HSK-A40-HDC12-80		**12mm**	1.260		3.15	1.81	1.50-1.77	1.50			1.2
HSK-A50-HDC6-75	1	**6mm**	1.020	1.64	2.95	1.56	1.10-1.46	1.10	HDA6-05013	17,000	1.5
HSK-A50-HDC8-75		**8mm**	1.100						HDA8-06013	15,000	1.5
HSK-A50-HDC10-80		**10mm**	1.180		3.15	1.46	1.30-1.61	1.30	HDA10-08015		1.5
HSK-A50-HDC12-85		**12mm**	1.260		3.35	1.65	1.50-1.81	1.50			1.8
HSK-A50-HDC16-90◆		**16mm**	1.500		3.54	1.89	1.69-2.01	1.69		13,000	2.0
HSK-A50-HDC20-90◆		**20mm**	1.650			2.52					2.0
HSK-A50-HDC25-90❖◆	3	**25mm**	2.170	2.48		.91	2.44	2.05	—	10,000	2.9
HSK-A63-HDC.750-4	2	**.750**	1.654	1.97	4.00	2.00	1.69-2.76	1.69	HDA16-12037	13,000	3.5
HSK-A63-HDC1.000-4	3	**1.000**	2.165	2.48	4.00	1.25	2.05-3.15	2.05	HDA25-16039	13,000	4.6
HSK-A63-HDC1.250-4.5	3	**1.250**	2.677		4.00	1.25	2.20-3.15	2.20	HDA25-16039	12,000	5.3
HSK-A63-HDC6-70❖	2	**6mm**	1.020	1.97	2.76	.99	1.81	1.10	—	17,000	2.2
HSK-A63-HDC6-120					4.72	1.73	1.10-1.89		HDA6-05032		2.6
HSK-A63-HDC6-150					5.90						3.1
HSK-A63-HDC8-70❖		**8mm**	1.100		2.76	.94	1.81		—		2.2
HSK-A63-HDC8-120					4.72	1.73	1.10-1.89		HDA8-06032	15,000	2.9
HSK-A63-HDC8-150					5.90						1.1
HSK-A63-HDC10-80❖		**10mm**	1.180		3.15	1.38	2.17	1.30	—		2.4
HSK-A63-HDC10-120					4.72	1.77	1.30-2.09		HDA10-08032		2.9
HSK-A63-HDC10-150					5.90						3.5
HSK-A63-HDC12-85❖		**12mm**	1.260		3.35	1.57	2.36	1.50	—	15,000	2.4
HSK-A63-HDC12-120					4.72	1.77	1.50-2.28		HDA12-10025		3.1
HSK-A63-HDC12-150					5.90						3.5

Catalog Number	Fig.	Ød	ØD	ØD1	L	L1	H	Min Clamping Length E	Adjusting Screw	Max RPM	Weight (lbs.)
HSK-A63-HDC14-85❖	2	14mm	1.340	1.97	3.35	1.57	2.36	1.50	—	15,000	2.6
HSK-A63-HDC14-120					4.72	1.77	1.50-2.28		HDA12-10025		3.1
HSK-A63-HDC14-150					5.90						3.7
HSK-A63-HDC16-90❖		16mm	1.500		3.54	1.81	2.56	1.69	—	13,000	2.9
HSK-A63-HDC16-120					4.72		2.28-2.68		HDA16-12015		3.3
HSK-A63-HDC16-150					5.90		1.69-2.68		HDA16-12037		4.2
HSK-A63-HDC18-90❖		18mm	1.570		3.54	1.81	2.56		HDA16-12037		2.9
HSK-A63-HDC18-120					4.72		2.28-3.68		HDA20-16015		3.5
HSK-A63-HDC18-150					5.90		1.69-2.68		HDA25-16039		4.4
HSK-A63-HDC20-90❖		20mm	1.650		3.54	1.89	2.56		—		2.9
HSK-A63-HDC20-120					4.72		2.28-2.68		HDA20-16015		3.5
HSK-A63-HDC20-150					5.90		1.69-2.68		HDA25-16039		4.4
HSK-A63-HDC25-120❖	3	25mm	2.170	2.48	4.72	2.01	3.74	2.05	—		4.6
HSK-A63-HDC32-125❖		32mm	2.360	2.95	4.92	2.32	3.94	2.20		12,000	5.3
HSK-A100-HDC.750-4	2	.750	1.654	1.97	4.00	2.00	1.69-2.76	1.69	HDA16-12037	13,000	6.0
HSK-A100-HDC1.000-4		1.000	2.480	2.48	4.00	3.54	2.05-3.15	2.05	HDA25-16039	13,000	7.3
HSK-A100-HDC1.250-4.5		1.250	2.717		4.50	3.58	2.20-3.15	2.20	HDA25-16039	12,000	8.2
HSK-A100-HDC6-75❖	4	6mm	1.020	1.97	2.95	1.02	1.81	1.10	—	17,000	5.3
HSK-A100-HDC6-120					4.72	1.73	1.10-1.89		HDA6-05032		5.7
HSK-A100-HDC6-165					6.50						6.4
HSK-A100-HDC8-75❖		8mm	1.100		2.95	1.02	1.81		—	15,000	5.3
HSK-A100-HDC8-120					4.72	1.73	1.10-1.89		HDA8-06032		5.7
HSK-A100-HDC8-165					6.50						6.6
HSK-A100-HDC10-90❖		10mm	1.188		3.54	1.65	2.40	1.30	—		5.5
HSK-A100-HDC10-120					4.72	1.77	1.30-2.09		HDA10-08032		6.0
HSK-A100-HDC10-165					6.50						6.8
HSK-A100-HDC12-95❖		12mm	1.260		3.74	1.85	2.48	1.50	—	13,000	5.5
HSK-A100-HDC12-120					4.72		1.50-2.28		HDA12-10025		6.0
HSK-A100-HDC12-165					6.50				HDA12-10032		6.8
HSK-A100-HDC16-100❖		16mm	1.500		3.94	2.09	2.68	1.69	—		5.7
HSK-A100-HDC16-135					5.31		1.69-2.68		HDA16-12030		6.6
HSK-A100-HDC16-165					6.50				HDA16-12037		7.3
HSK-A100-HDC20-105❖		20mm	1.650		4.13	2.32	2.87		—		6.0
HSK-A100-HDC20-135					5.31		2.28-2.68		HDA20-16015		6.8
HSK-A100-HDC20-165					6.50		1.69-2.68		HDA25-16039		7.9
HSK-A100-HDC25-110❖		25mm	2.240	2.48	4.33	2.44	3.07	2.05	—		7.3
HSK-A100-HDC32-110❖		32mm	2.520	2.95				2.20		12,000	8.2

- Coolant pipe must be ordered separately
- "H" indicates the adjustment length with an adjusting screw
- Do not attempt to balance before first consulting BIG DAISHOWA
- In case the projection length needs to be adjusted from the shank side, add the letter "W" to adjusting screw model number for hexagon sockets on both sides (ex: HDA6-05020W)
- Adjusting screws cannot be used with models marked ❖
- Straight collet cannot be used with models marked ◆

CAUTION

Use only cutting tools that have a shank tolerance of h6 (see table pg. 26). 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".

ACCESSORIES

PERFECT SEAL/ JET COLLET PG. 383

SHRINK FIT HOLDER

CLAMPING RANGE: Ø4-20mm

COOLANT THROUGH

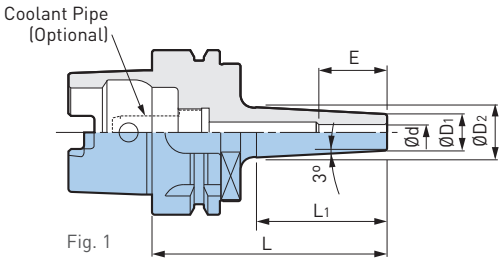


Fig. 1

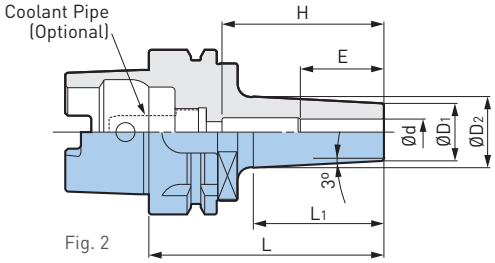


Fig. 2

Catalog Number	Fig.	Ød	ØD1	ØD2	L	L1	Min Clamping Length E	Max Insertion Length H	Weight (lbs.)
HSK-A63-SRC4-90❖	1	**4mm**	.394	.58	3.54	1.81	.63	(2.68)	1.9
HSK-A63-SRC6-90		**6mm**	.551	.75		2.01	1.02	(2.68)	2.0
HSK-A63-SRC6-150				.98	5.91	4.25		(5.04)	2.3
HSK-A63-SRC8-90	2	**8mm**	.709	.91	3.54	2.01		(2.68)	2.0
HSK-A63-SRC8-150				1.14	5.91	4.33		(5.04)	2.5
HSK-A63-SRC10-90		**10mm**	.866	1.06	3.54	2.01	1.26	2.44	2.2
HSK-A63-SRC10-150				1.32	5.91	4.37			2.8
HSK-A63-SRC12-90		**12mm**	.945	1.14	3.54	2.01	1.42	2.56	2.2
HSK-A63-SRC12-150				1.42	5.91	4.41		2.83	2.9
HSK-A63-SRC16-90		**16mm**	1.102	1.30	3.54	2.01	1.50	2.56	2.2
HSK-A63-SRC16-165				1.59	6.50	4.69		3.15	3.7
HSK-A63-SRC20-90		**20mm**	.945	1.56	3.54	2.09	1.65	2.56	2.4
HSK-A63-SRC20-165				1.83	6.50	4.80		3.94	4.2

- Coolant pipe must be ordered separately
- "H" dimensions in ( ) are reference length up to the coolant pipe
- Use carbide cutter within a tolerance of h6
- Use carbide cutter within a tolerance of h5 with models marked ❖
- Center through coolant supply is available with tools with oil holes

CAUTION

Please refer to the operation manual of heating/cooling equipment, as some equipment may not be compatible.

SHRINK FIT HOLDER—SLIM TYPE

CLAMPING RANGE: Ø6-12mm

COOLANT THROUGH

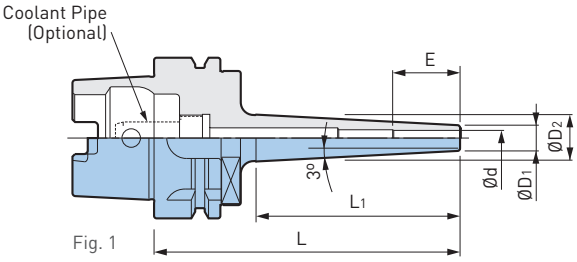


Fig. 1

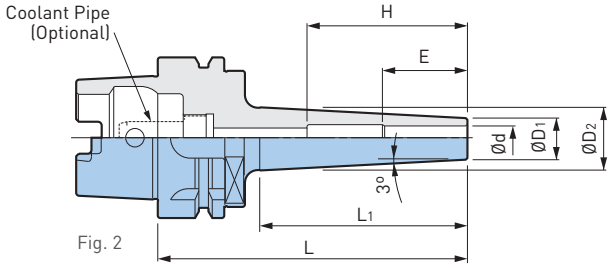


Fig. 2

Catalog Number	Fig.	Ød	ØD1	ØD2	L	L1	Min Clamping Length E	Max Insertion Length H	Weight (lbs.)
HSK-A63-SRC6S-120	1	**6mm**	.394	.73	4.72	3.19	1.02	(3.85)	2.0
HSK-A63-SRC6S-165				.89	6.50	4.76		(5.63)	2.2
HSK-A63-SRC8S-120	2	**8mm**	.512	.85	4.72	3.19		(3.85)	2.0
HSK-A63-SRC8S-165				1.02	6.50	4.84		(5.63)	2.4
HSK-A63-SRC10S-120		**10mm**	.630	.96	4.72	3.19	1.26	2.44	2.2
HSK-A63-SRC10S-165				1.14	6.50	4.84			2.4
HSK-A63-SRC12S-120		**12mm**	.748	1.08	4.72	3.19	1.42	2.83	2.2
HSK-A63-SRC12S-165				1.26	6.50	4.92			2.6

- Coolant pipe must be ordered separately
- "H" dimensions in ( ) are reference length up to the coolant pipe
- Use carbide cutter within a tolerance of h6
- Center through coolant supply is available with tools with oil holes

CAUTION

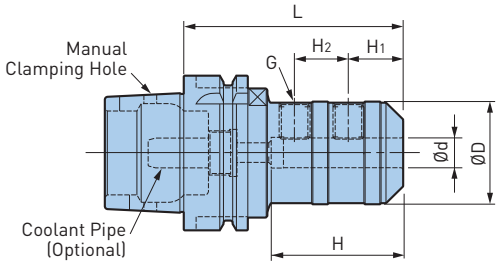
Please refer to the operation manual of heating/cooling equipment, as some equipment may not be compatible.

BIG DAISHOWA

END MILL HOLDER

CLAMPING RANGE: Ø.750"-2.000" (Ø6-50mm)

COOLANT THROUGH



Catalog Number	Ød	ØD	L	H	H1	H2	G	Weight (lbs.)
HSK-A63-ISL6-80	**6mm**	.984	3.15	2.28	.71	—	M6	2.0
HSK-A63-ISL8-80	**8mm**	1.102				—	M8	2.2
HSK-A63-ISL10-80	**10mm**	1.378		1.73	.79	—	M10	2.4
HSK-A63-ISL12-80	**12mm**	1.654		1.97	.91	—	M12	2.6
HSK-A63-ISL16-80	**16mm**	1.890		2.05	.95	—	M14	3.1
HSK-A63-ISL20-80	**20mm**	2.047		2.13	.98	—	M16	3.3
HSK-A63-ISL25-105	**25mm**	2.559	4.13	2.36	.94	.98	M18	5.1
HSK-A63-ISL32-115	**32mm**	2.835	4.53	2.52		1.10	M20	6.0
HSK-A100-ISL20-90	**20mm**	2.047	3.54	2.13	.98	—	M16	7.5
HSK-A100-ISL20-135			5.31					9.0
HSK-A100-ISL20-195			7.68					11.0
HSK-A100-ISL25-105	**25mm**	2.559	4.13	2.36	.94	.98	M18	9.5
HSK-A100-ISL25-135			5.31					11.0
HSK-A100-ISL25-195			7.68					14.1
HSK-A100-ISL32-125	**32mm**	2.835	4.92	3.54		1.10	M20	10.8
HSK-A100-ISL32-165			6.50					13.9
HSK-A100-ISL32-195			7.68					15.9
HSK-A100-ISL40-125	**40mm**	3.543	4.92		1.18	1.26		12.8
HSK-A100-ISL40-165			6.50					17.9
HSK-A100-ISL40-210			8.27					22.5
HSK-A100-ISL50-135	**50mm**	3.917	5.31		1.38	1.38	M24	14.8
HSK-A100-ISL50-165			6.50					18.7
HSK-A100-ISL50-210			8.27					24.2
HSK-A125-EM.750-4	**.750**	1.750	4.00	2.54	1.00	—	5/8"-18	10.4
HSK-A125-EM1.000-5	**1.000**	2.252	5.00	3.13	1.13	1.00	3/4"-16	12.2
HSK-A125-EM1.250-5	**1.250**	2.750						13.6
HSK-A125-EM1.500-5	**1.500**	2.750						13.1
HSK-A125-EM2.000-6	**2.000**	3.500	6.00	4.33	1.38	1.38	1"-14	17.1

- Coolant pipe must be ordered separately
- Center through coolant supply is available
- For high speed applications MEGA DOUBLE POWER CHUCKS are recommended instead of End Mill Holders

ACCESSORIES

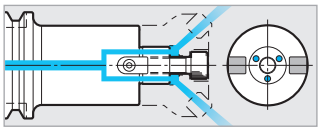
SET SCREW PG. 412

CAUTION

BIG genuine side lock screws must be used as they are made to an exclusive design and different from other screws on the market.

SHELL/FACE MILL HOLDER For Cutters that Require a Coolant Hole Through the Pilot

COOLANT THROUGH



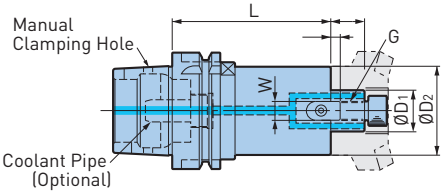


Fig. 1

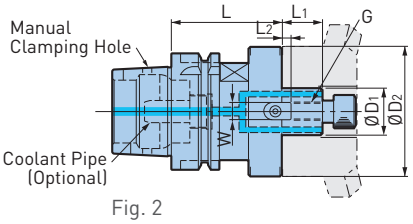


Fig. 2

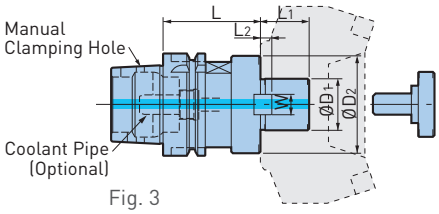


Fig. 3

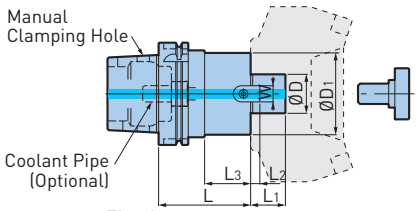


Fig. 4

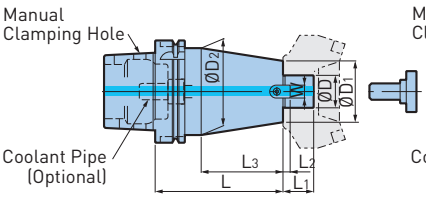


Fig. 5

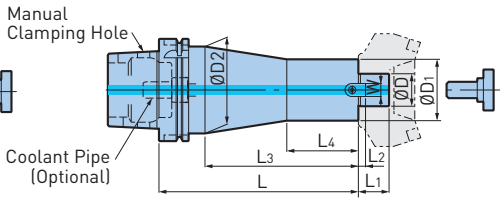


Fig. 6

Catalog Number	Fig.	ØD1	ØD2	L	L1	Drive Keys		G	Weight (lbs.)
						L2	W		
HSK-A40-FMA25.4-50	4	25.4mm	1.969	1.97	.87	.20	.37	M12	1.3
HSK-A50-FMH22-47-60	2	22mm	1.850	2.362	.709	.197	.39	M10	1.8
HSK-A50-FMH22-47-90				3.543					2.6
HSK-A50-FMH27-60-60	2	27mm	2.362	2.362	.787	.236	.47	M12	2.2
HSK-A50-FMH27-60-90				3.543					2.9
HSK-A50-FMH25.4-50-60	2	25.4mm	1.969	2.36	.87	.197	.37	M12	2.2
HSK-A50-FMH25.4-60	5								
HSK-A50-FMH25.4-90				3.54					2.9
HSK-A50-FMH31.75-60	5	31.75mm	2.362	2.36	1.18	.28	.50	M16	2.6
HSK-A63-FMH16-37-45	1	16mm	1.457	1.77	.63	.20	.31	M8	2.2
HSK-A63-FMH22-47-60	1	22mm	1.850	2.36	.71	.20	.39	M10	2.9
HSK-A63-FMH22-47-90				3.54					3.7
HSK-A63-FMH22-47-150				5.91					5.5
HSK-A63-FMH22-60-60	2	22mm	2.362	2.36	.71	.20	.39	M10	3.1
HSK-A63-FMH22-60-90				3.54					4.0
HSK-A63-FMH27-60-60	2	27mm	2.362	2.36	.79	.24	.47	M12	3.5
HSK-A63-FMH27-60-90				3.54					5.1
HSK-A63-FMH25.4-70-60	2	25.4mm	2.756	2.36	.87	.20	.37	M12	4.0
HSK-A63-FMH25.4-70-90				3.54					5.5
HSK-A63-FMH25.4-70-150				5.91					9.0
HSK-A63-FMH31.75-76-60	2	31.75mm	2.992	2.36	1.18	.28	.50	M16	4.4
HSK-A63-FMH31.75-76-90				3.54					6.0
HSK-A63-FMA25.4-60	4	25.4mm	1.969	2.36	.87	.20	.37	M12	2.9
HSK-A63-FMA25.4-90				3.54					3.7
HSK-A63-FMA31.75-60	4	31.75mm	2.362	2.36	1.18	.28	.50	M16	3.3
HSK-A63-FMA38.1-60	4	38.1mm	3.150	2.36	1.34	.35	.63	M20	5.1

Catalog Number	Fig.	ØD1	ØD2	L	L1	Drive Keys		G	Weight (lbs.)
						L	W		
HSK-A100-FMH22-47-105	1	22mm	1.850	4.13	.71	.20	.39	M10	7.5
HSK-A100-FMH22-47-150				5.91					8.8
HSK-A100-FMH22-47-200				7.87					10.4
HSK-A100-FMH22-47-250				9.84					11.9
HSK-A100-FMH22-60-60	1	22mm	2.362	2.36	.71	.20	.39	M10	6.4
HSK-A100-FMH22-60-105				4.13					8.6
HSK-A100-FMH22-60-150				5.91					11.9
HSK-A100-FMH22-60-200				7.87					13.4
HSK-A100-FMH22-60-250				9.84					15.9
HSK-A100-FMH27-60-60	1	27mm	2.362	2.36	.79	.24	.47	M12	6.4
HSK-A100-FMH27-60-90				3.54					8.2
HSK-A100-FMH27-60-150				5.91					11.0
HSK-A100-FMH27-60-200				7.87					13.0
HSK-A100-FMH27-60-250				9.84					15.4
HSK-A100-FMH27-76-60	1	27mm	2.992	2.36	.79	.24	.47	M12	7.1
HSK-A100-FMH27-76-90				3.54					9.5
HSK-A100-FMH27-76-150				5.91					14.3
HSK-A100-FMH32-96-60	2	32mm	3.780	2.36	.87	.28	.55	M16	8.4
HSK-A100-FMH32-96-90				3.54					12.1
HSK-A100-FMH32-96-150				5.91					19.6
HSK-A100-FMH40-100-75	2	40mm	3.937	2.95	1.02	.33	.63	M20 (MBA-M20)	10.8
HSK-A100-FMH40-100-105				4.13					15.0
HSK-A100-FMA25.4-105	5	25.4mm	1.969	4.13	.87	.20	.37	M12	9.9
HSK-A100-FMA25.4-135				5.31					11.7
HSK-A100-FMA25.4-195				7.68					15.6
HSK-A100-FMA31.75-105	5	31.75mm	2.362	4.13	1.18	.28	.50	M16	10.6
HSK-A100-FMA31.75-135	6			5.31					12.3
HSK-A100-FMA31.75-195				7.68					15.4
HSK-A100-FMA38.1-90	4	38.1mm	3.150	3.54	1.34	.35	.63	M20	10.8
HSK-A100-FMA50.8-75	4	50.8mm	3.937	2.95	1.42	.39	.75	M24	11.7
HSK-A125-FMH22-47-50	1	22mm	1.930	1.97	.71	.20	.39	M10	9.5
HSK-A125-FMH32-78-60	1	32mm	3.070	2.36	.87	.28	.55	M16	11.2
HSK-A125-FMH32-96-105			3.780	4.13					17.9
HSK-A125-SMC1.000-4	1	1.000	2.189	4.00	.69	.20	.37	1/2"-20	12.5
HSK-A125-SMC1.250-4	1	1.250	2.752	4.00		.28	.49	5/8"-18	13.6
HSK-A125-SMC1.500-4	1	1.500	3.626	4.00	.94	.35	.62	3/4"-16	17.3

- Lock screw is included; coolant pipe must be ordered separately
- A clamping screw with oil hole must be ordered separately for use with center through coolant/air

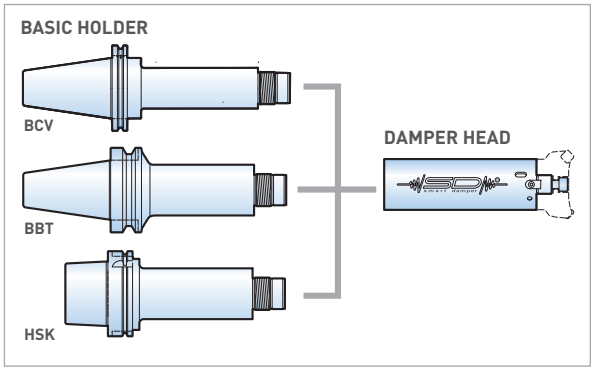
CAUTION

For high speed applications, shell mill holders should be balanced together with the cutters.

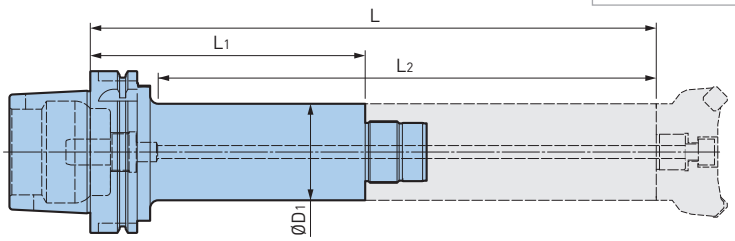
ACCESSORIES

LOCK SCREW
PG. 413

SMART DAMPER MILLING—FACE MILL ARBOR TYPE



COOLANT THROUGH

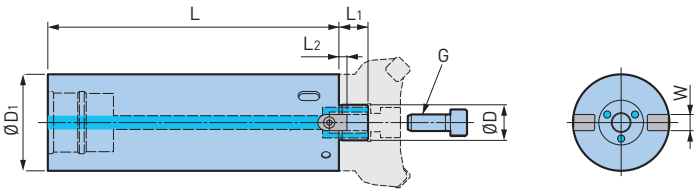


Catalog Number	ØD1	L	L1	L2	Weight (lbs.)	Damper Head Model
HSK-A100-SDF36-47-170	47mm	13.780	6.693	12.205	9.7	FMH□□DP-47
HSK-A100-SDF36-47-220		15.748	8.661	14.173	11.0	
HSK-A100-SDF36-60-170	60mm	13.780	6.693	12.205	12.1	FMH□□DP-60
HSK-A100-SDF36-60-220		15.748	8.661	14.173	14.3	
HSK-A100-SDF57-76-170	76mm	13.780	6.693	12.205	17.0	FMH□□DP-76
HSK-A100-SDF57-76-220	76mm	15.748	8.661	14.173	20.7	FMH□□DP-76
HSK-A125-SDF36-47-250	47mm	16.929	9.843	14.96	15.2	FMH□□DP-47
HSK-A125-SDF36-60-250	60mm				17.6	FMH□□DP-60

- Coolant pipe must be ordered separately

SMART DAMPER MILLING—DAMPER HEAD

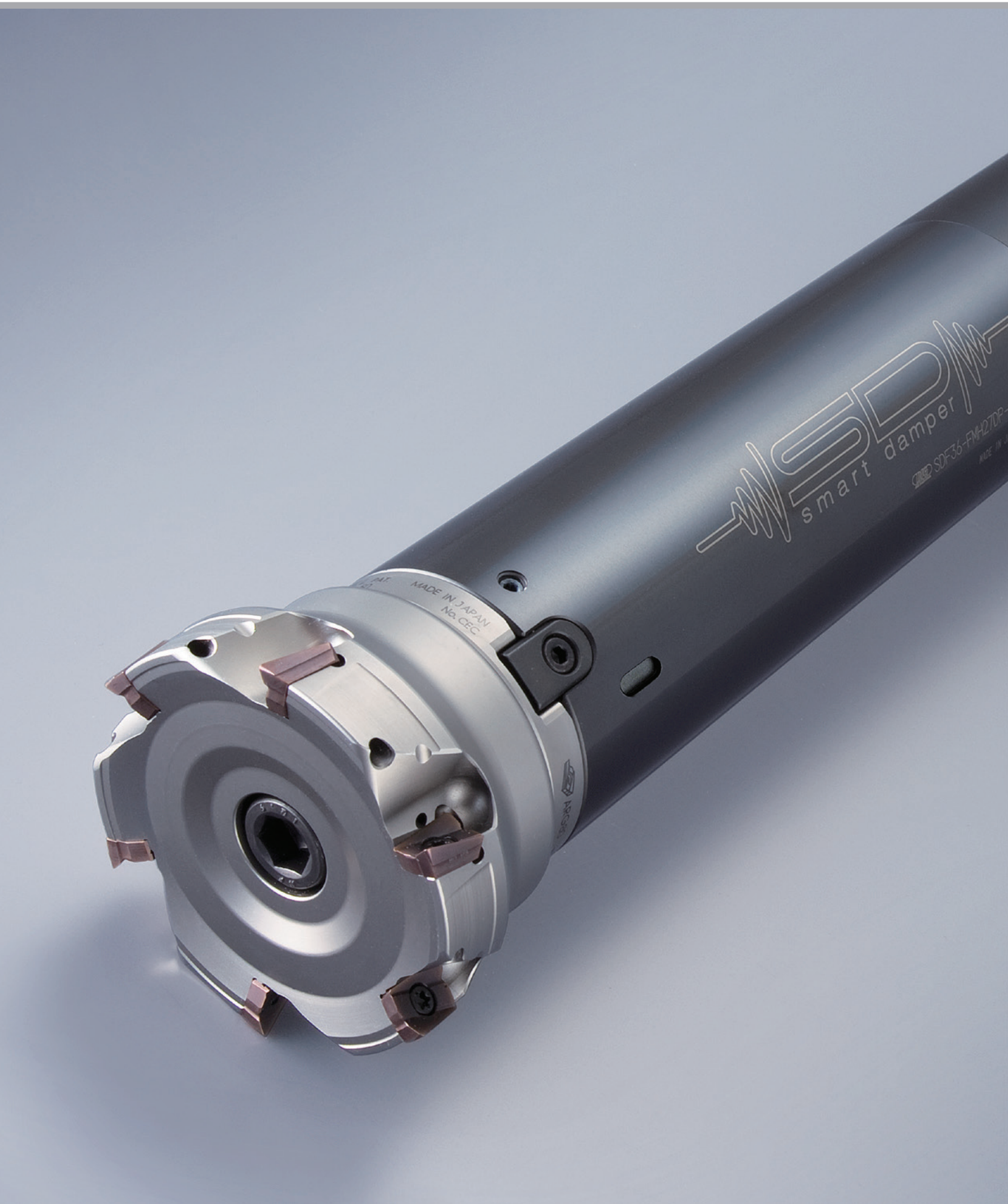
COOLANT THROUGH



Catalog Number	ØD	ØD1	L	L1	L2	W	G	Weight (lbs.)	C-Spanner Model
SDF36-FMH22DP-47-180	22mm	47mm	7.087	.709	.197	.394	M10	6.6	FK45-50L
SDF36-FMH22DP-60-180		60mm						9.9	FK58-62L
SDF36-FMH27DP-60-180	27mm			.787	.236	.472	M12	9.9	FK58-62L
SDF57-FMH27DP-76-180		76mm						17.8	FK68-75L
SDF36-SMC.750DP-47-180	.750	47mm	7.087	.689	.160	.313	3/8"-24	6.6	FK45-50L
SDF36-SMC1.000DP-60-180	1.000	60mm			.220	.375	1/2"-20	9.9	FK58-62L
SDF57-SMC1.000DP-72-180		72mm						16.3	FK68-75L

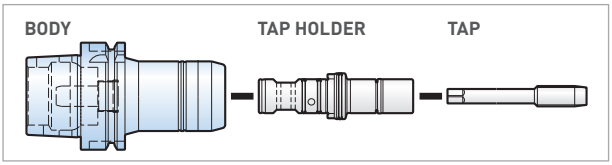
- Hook wrench and cutter clamping screw are included
- The weight does not include the cutter
- Refer to the operation manual regarding the mounting method to the basic holder
- If the provided clamping screw is not compatible, separately select one from the clamping screw table on pg. 413
- The damper head cannot be removed after the basic holder and damper head have been attached and used for processing

BIG DAISHOWA

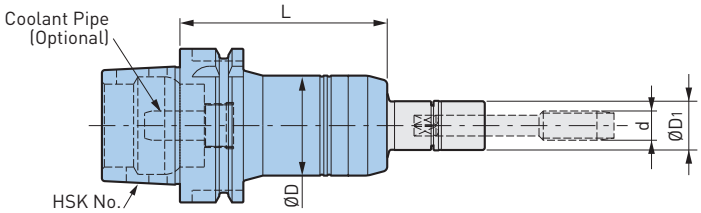


MEGA SYNCHRO TAPPING HOLDER

TAPPING RANGE: No.2-AU3/4 (M2-M20)



COOLANT THROUGH



Catalog Number	Tapping Range d* (Inch)	Tapping Range d* (Metric)	ØD	ØD1	L	Wrench	Weight (lbs.)
HSK-A40-MGT6-80	**No.2-No.12**	**M2-M6**	1.42	.63	3.15	MGR16	1.3
HSK-A40-MGT12-85	**AU1/4-AU7/16**	**M6-M12**	1.61	.79	3.35	MGR20L	1.5
HSK-A50-MGT6-85	**No.2-No.12**	**M2-M6**	1.42	.63	3.35	MGR16	1.8
HSK-A50-MGT12-85	**AU1/4-AU7/16**	**M6-M12**	1.61	.79	3.35	MGR20L	2.0
HSK-A50-MGT20-125	**AU1/2-AU3/4 AP1/8-AP1/4**	**M12-M20**	2.13	1.18	4.92	MGR30L	3.5
HSK-A63-MGT6-85	**No.2-No.12**	**M2-M6**	1.42	.63	3.35	MGR16	2.4
HSK-A63-MGT12-85	**AU1/4-AU7/16**	**M6-M12**	1.61	.79	3.35	MGR20L	2.6
HSK-A63-MGT20-110	**AU1/2-AU3/4 AP1/8-AP1/4**	**M12-M20**	2.13	1.18	4.33	MGR30L	4.0
HSK-A100-MGT6-95	**No.2-No.12**	**M2-M6**	1.42	.63	3.74	MGR16	5.7
HSK-A100-MGT12-95	**AU1/4-AU7/16**	**M6-M12**	1.61	.79	3.74	MGR20L	5.9
HSK-A100-MGT20-115	**AU1/2-AU3/4 AP1/8-AP1/4**	**M12-M20**	2.13	1.18	4.53	MGR30L	7.3
HSK-A125-MGT12-105	**AU1/4-AU7/16**	**M6-M12**	1.61	.79	3.74	MGR20L	9.4
HSK-A125-MGT20-120	**AU1/2-AU3/4 AP1/8-AP1/4**	**M12-M20**	2.13	1.18	4.53	MGR30L	10.6

***AU3/8 is included in the MGT20 series**

- Coolant pipe, tap holder and wrench must be ordered separately
- Rigid tapping function is required on the machine tool

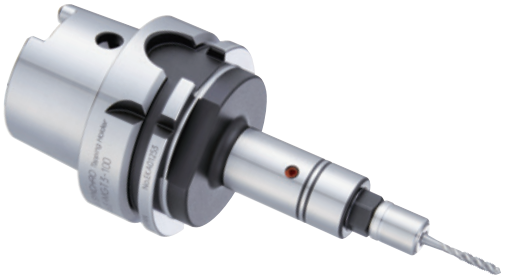
ACCESSORIES

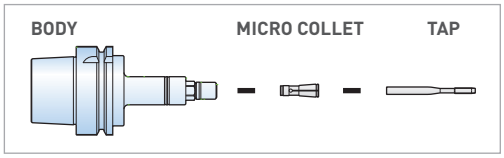
CAUTION

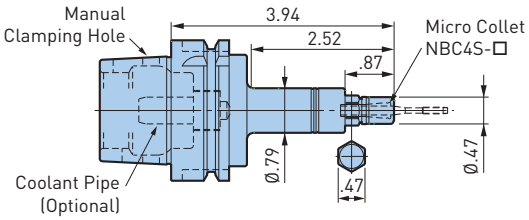
Cannot be used with machining center without synchronized tapping function.

MEGA SYNCHRO TAPPING HOLDER

TAPPING RANGE: No.0-No.6 (M1-M3)z







Catalog Number	Weight (lbs.)
HSK-A63-MGT3-100	2.2

- Nut is included; collet and wrench must be ordered separately
- When attaching or detaching the tap, a commercially available flat wrench (12mm width) is also required
- Not capable of supplying coolant through the holder body

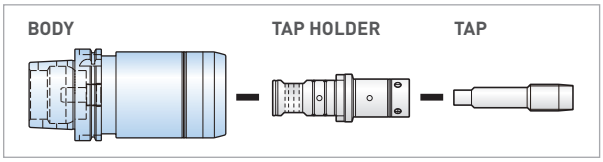
ACCESSORIES

CAUTION

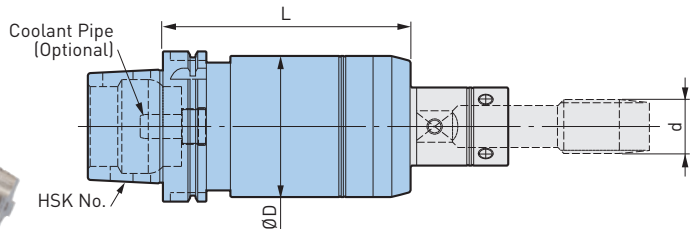
Cannot be used with machining center without synchronized tapping function.

MEGA SYNCHRO TAPPING HOLDER

TAPPING RANGE: AU13/16-AU1-3/8 (M20-M36)



COOLANT THROUGH



Catalog Number	Tapping Range d (Inch)	Tapping Range d (Metric)	ØD	L	Weight (lbs.)
HSK-A100-MGT36-165	**AU13/16-AU1-3/8 AP3/8-AP1**	**M20-M36**	3.70	6.50	18.0
HSK-A125-MGT36-170	**AU13/16-AU1-3/8 AP3/8-AP1**	**M20-M36**	3.70	6.69	22.4

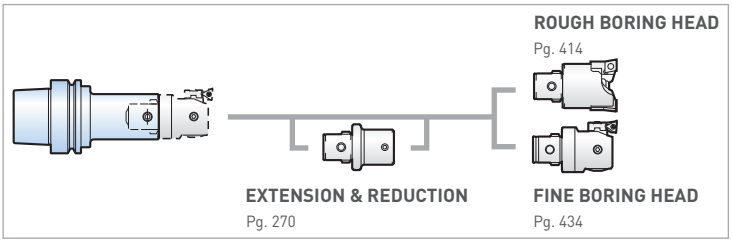
- MGT Set Screw and adjust screw are included; coolant pipe, tap holder must be ordered separately

ACCESSORIES

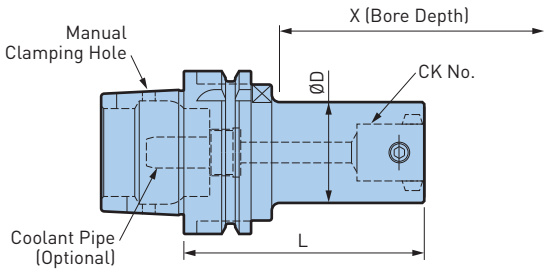
CAUTION

Cannot be used with machining center without synchronized tapping function.

CKB SHANK



COOLANT THROUGH



Catalog Number	Reference Number	CK	ØD	L	X	Weight (lbs.)
HSK-A25-CKB2-30	10.328.279F	CKB2	.945	1.181	1.968	.4
HSK-A32-CKB2-33	10.328.278F	CKB2	.945	1.299	1.693	.4
HSK-A40-CKB1-32	10.324.112F	CKB1	.748	1.240	1.575	.5
HSK-A40-CKB1-73	—			2.854	2.874	.8
HSK-A40-CKB2-35	10.328.277F	CKB2	.945	1.378	1.772	.5
HSK-A40-CKB2-85	—			3.327	3.504	.9
HSK-A40-CKB3-40	10.324.132F	CKB3	1.220	1.575	2.165	.6
HSK-A40-CKB3-80	—			3.150	3.346	1.1
HSK-A40-CKB4-50	10.324.142F	CKB4	1.535	1.968	2.835	.7
HSK-A40-CKB4-73	—	CKB5	1.969	2.874	4.528	1.3
HSK-A50-CKB1-73	—	CKB1	.748	2.854	2.598	1.1
HSK-A50-CKB2-85	—	CKB2	.945	3.327	3.189	1.3
HSK-A50-CKB3-44	10.324.232F	CKB3	1.220	1.732	2.087	1.0
HSK-A50-CKB3-80	—			3.150	3.268	1.5
HSK-A50-CKB4-48	10.324.242F	CKB4	1.535	1.890	2.520	1.1
HSK-A50-CKB4-73	—			2.874	3.071	1.8
HSK-A50-CKB5-61	10.324.252F	CKB5	1.969	2.402	3.425	1.5
HSK-A50-CKB5-83	—			3.268	5.315	2.2
HSK-A63-CKB1-79	10.324.312F	CKB1	.748	3.091	3.150	1.6
HSK-A63-CKB2-76	10.324.322F	CKB2	.945	3.760	3.937	1.8
HSK-A63-CKB3-71	10.324.331	CKB3	1.220	2.795	3.150	1.9
HSK-A63-CKB3-100	—			3.937	4.055	2.4
HSK-A63-CKB3-121	10.324.332			4.764	5.118	2.5
HSK-A63-CKB4-94	10.324.341	CKB4	1.535	3.701	4.331	2.5
HSK-A63-CKB4-114	10.324.342			4.488	5.118	2.9
HSK-A63-CKB5-59	10.324.352	CKB5	1.969	2.323	3.504	2.1
HSK-A63-CKB5-89	10.324.353			3.504	4.685	2.9
HSK-A63-CKB5-134	10.324.354			5.276	6.300	4.3
HSK-A63-CKB6-70	10.324.361	CKB6	2.500	2.756	4.331	2.8
HSK-A63-CKB6-109	—			4.291	5.866	5.1
HSK-A80-CKB6-75	10.324.461	CKB6	2.500	2.953	4.528	4.3

Catalog Number	Reference Number	CK	ØD	L	X	Weight (lbs.)
HSK-A100-CKB1-103	—	CKB1	.748	4.035	3.661	5.5
HSK-A100-CKB2-115	—	CKB2	.945	4.508	4.252	5.7
HSK-A100-CKB3-124	10.324.531	CKB3	1.220	4.882	5.118	5.4
HSK-A100-CKB4-118	—	CKB4	1.535	4.646	4.843	6.6
HSK-A100-CKB4-147	10.324.541			5.787	6.299	6.3
HSK-A100-CKB4-178	—			7.008	7.205	7.7
HSK-A100-CKB5-107	10.324.551	CKB5	1.969	4.213	5.118	6.4
HSK-A100-CKB5-177	10.324.552			6.969	7.874	8.3
HSK-A100-CKB5-228	—			8.976	9.528	11.0
HSK-A100-CKB6-78	10.324.561	CKB6	2.500	3.071	4.528	6.4
HSK-A100-CKB6-108	10.324.563			4.252	5.709	7.6
HSK-A100-CKB6-169	—			6.654	7.756	11.7
HSK-A100-CKB6-229	—			9.016	10.118	14.7
HSK-A100-CKB7-87	10.324.571	CKB7	3.543	3.425	6.850	8.9
HSK-A100-CKB7-127	10.324.572			5.000	8.425	12.8
HSK-A100-CKB7-213	—			8.386	10.669	22.4
HSK-A100-CKB7-273	—			10.748	13.031	29.0
HSK-A125-CKB6-94	—	CKB6	2.520	3.701	4.803	11.4
HSK-A125-CKB7-123	—	CKB7	3.543	4.843	7.126	16.7

- X dimensions on the table are reference figures when EWN/EWE head is mounted
- Cutting edge and drive key grooves are located in the same orientation

ACCESSORIES

SPARE PARTS PG. 538

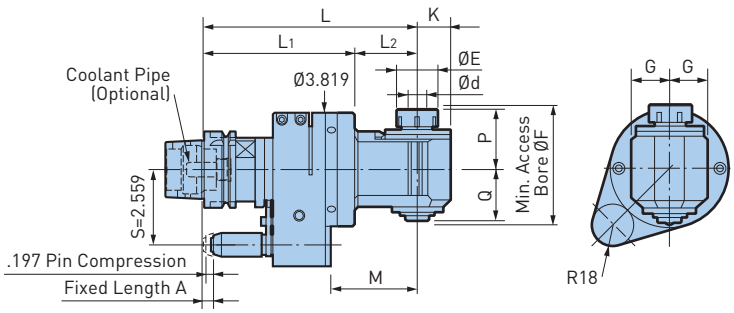
CKN SHANK

Catalog Number	Reference Number	CK	ØD	L	X	Weight (lbs.)
HSK-A63-CKN6-70	10.324.361N	CKN6	2.500	2.756	4.331	2.8
HSK-A63-CKN6-160	10.324.367N		2.500	6.300	7.874	7.0
HSK-A100-CKN6-78	10.324.561N	CKN6	2.500	3.071	4.528	6.4
HSK-A100-CKN6-108	10.324.563N		2.500	4.252	5.709	7.6
HSK-A100-CKN6-223	10.324.566N		2.500	8.780	10.236	13.2
HSK-A100-CKN7-87	10.324.571N	CKN7	3.543	3.425	6.693	8.9
HSK-A100-CKN7-127	10.324.572N		3.543	5.000	8.268	12.8
HSK-A100-CKN7-267	10.324.575N		3.543	10.512	12.598	26.2

AG90 NBS TYPE

CLAMPING RANGE: Ø.010"-.787"

MAX 6,000 RPM



Catalog Number	Ød	ØE	G	K	L	L1	L2	M	P	Q	ØF	Collet	Max RPM	Weight (lbs.)
HSK-A63-AG90/NBS6-185	.010-.236	.787	.827	.669	7.28	5.12	2.17	3.03	1.30	1.14	2.638	NBC6-□	6,000	13.0
HSK-A63-AG90/NBS6-215					8.46		3.35	4.21						13.5
HSK-A63-AG90/NBS6-245					9.65		4.53	5.39						13.9
HSK-A63-AG90/NBS6-275					10.83		5.71	6.57						14.3
HSK-A63-AG90/NBS10-185	.059-.394	1.181	1.181	.984	7.28	5.12	2.17	3.03	1.77	1.69	3.583	NBC10-□	6,000	13.9
HSK-A63-AG90/NBS10-215					8.46		3.35	4.21						14.8
HSK-A63-AG90/NBS10-245					9.65		4.53	5.39						15.4
HSK-A63-AG90/NBS13-185	.098-.472	1.378	1.220	1.102	7.28	5.12	2.17	3.03	2.05	1.77	3.976	NBC13-□	6,000	14.1
HSK-A63-AG90/NBS13-215					8.46		3.35	4.21						15.0
HSK-A63-AG90/NBS13-245					9.65		4.53	5.39						15.7
HSK-A63-AG90/NBS20-200	.098-.787	1.811	1.378	1.378	7.87	5.12	2.76	3.62	2.56	2.44	5.197	NBC20-□	3,000	16.5
HSK-A63-AG90/NBS20S-180S				1.299	7.09	5.00	2.09							17.4

- Nut and wrench are included; coolant pipe and collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

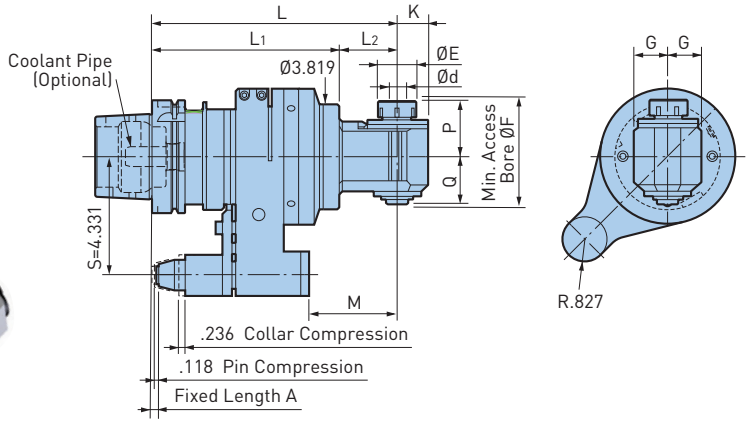
CAUTION

A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

AG90 NBS TYPE

CLAMPING RANGE: Ø.010"-.787"

MAX 6,000 RPM



Catalog Number	Ød	ØE	G	K	L	L1	L2	M	P	Q	ØF	Collet	Max RPM	Weight (lbs.)
HSK-A100-AG90/NBS6-225	**.010-.236**	.787	.827	.669	8.86	6.69	2.17	3.23	1.30	1.14	2.638	NBC6-□	6,000	26.0
HSK-A100-AG90/NBS6-255					10.04		3.35	4.41						26.5
HSK-A100-AG90/NBS6-285					11.22		4.53	5.59						27.3
HSK-A100-AG90/NBS6-315					12.40		5.71	6.77						26.9
HSK-A100-AG90/NBS10-225	**.059-.394**	1.181	1.181	.984	8.86	6.69	2.17	3.23	1.77	1.69	3.583	NBC10-□	6,000	27.8
HSK-A100-AG90/NBS10-255					10.04		3.35	4.41						28.4
HSK-A100-AG90/NBS10-285					11.22		4.53	5.59						27.1
HSK-A100-AG90/NBS13-225	**.098-.512**	1.378	1.220	1.102	8.86	6.69	2.17	3.23	2.05	1.77	3.976	NBC13-□	6,000	28.0
HSK-A100-AG90/NBS13-255					10.04		3.35	4.41						28.6
HSK-A100-AG90/NBS13-285					11.22		4.53	5.59						29.5
HSK-A100-AG90/NBS20-240	**.098-.787**	1.811	1.378	1.378	9.45	6.69	2.76	3.82	2.44	2.44	5.197	NBC20-□	3,000	30.4

- Nut and wrench are included; coolant pipe and collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

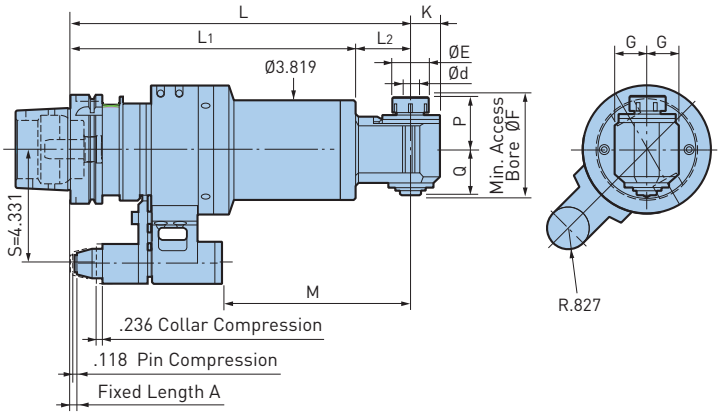
CAUTION

A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

AG90 NBS EXTRA LONG TYPE

CLAMPING RANGE: Ø.010"-.787"

MAX 6,000 RPM



Catalog Number	Ød	ØE	G	K	L	L1	L2	M	P	Q	ØF	Collet	Max RPM	Weight (lbs.)
HSK-A100-AG90/NBS6-325LS	**.010-.236**	.787	.827	.669	12.80	10.63	2.17	7.17	1.30	1.14	2.638	NBC6-□	6,000	39.9
HSK-A100-AG90/NBS6-355LS					13.98		3.35	8.35						40.3
HSK-A100-AG90/NBS6-385LS					15.16		4.53	9.53						40.8
HSK-A100-AG90/NBS6-415LS					16.34		5.71	10.71						41.2
HSK-A100-AG90/NBS6-425LS	**.010-.236**	.787	.827	.669	16.73	14.57	2.17	11.10	1.30	1.14	2.638			49.6
HSK-A100-AG90/NBS6-455LS					17.91		3.35	12.28						50.0
HSK-A100-AG90/NBS6-485LS					19.09		4.53	13.46						50.5
HSK-A100-AG90/NBS6-515LS					20.28		5.71	14.65						50.9
HSK-A100-AG90/NBS6-525LS	**.010-.236**	.787	.827	.669	20.67	18.50	2.17	15.04	1.30	1.14	2.638			59.3
HSK-A100-AG90/NBS6-555LS					21.85		3.35	16.22						59.7
HSK-A100-AG90/NBS6-585LS					23.03		4.53	17.40						60.2
HSK-A100-AG90/NBS6-615LS					20.28		5.71	18.58						60.6

Catalog Number	Ød	ØE	G	K	L	L1	L2	M	P	Q	ØF	Collet	Max RPM	Weight (lbs.)
HSK-A100-AG90/NBS10-325LS					12.80		2.17	7.17						40.8
HSK-A100-AG90/NBS10-355LS	**.059-.394**	1.181	1.181	.984	13.98	10.63	3.35	8.35	1.77	1.69	3.583			41.7
HSK-A100-AG90/NBS10-385LS					15.16		4.53	9.53						42.3
HSK-A100-AG90/NBS10-425LS					16.73		2.17	11.10						50.5
HSK-A100-AG90/NBS10-455LS	**.059-.394**	1.181	1.181	.984	17.91	14.57	3.35	12.28	1.77	1.69	3.583	NBC10-□	6,000	51.4
HSK-A100-AG90/NBS10-485LS					19.09		4.53	13.46						52.0
HSK-A100-AG90/NBS10-525LS					20.67		2.17	15.04						60.2
HSK-A100-AG90/NBS10-555LS	**.059-.394**	1.181	1.181	.984	21.85	18.50	3.35	16.22	1.77	1.69	3.583			61.1
HSK-A100-AG90/NBS10-585LS					23.03		4.53	17.40						61.7
HSK-A100-AG90/NBS13-325LS					12.80		2.17	7.17						41.0
HSK-A100-AG90/NBS13-355LS	**.098-.512**	1.378	1.220	1.102	13.98	10.63	3.35	8.35	2.05	1.77	3.976			41.9
HSK-A100-AG90/NBS13-385LS					15.16		6.10	9.53						42.5
HSK-A100-AG90/NBS13-425LS					16.73		2.17	11.10						50.7
HSK-A100-AG90/NBS13-455LS	**.098-.512**	1.378	1.220	1.102	17.91	14.57	3.35	12.28	2.05	1.77	3.976	NBC13-□	6,000	51.6
HSK-A100-AG90/NBS13-485LS					19.09		6.10	13.46						52.2
HSK-A100-AG90/NBS13-525LS					20.67		2.17	15.04						60.4
HSK-A100-AG90/NBS13-555LS	**.098-.512**	1.378	1.220	1.102	21.85	18.50	3.35	16.22	2.05	1.77	3.976			61.3
HSK-A100-AG90/NBS13-585LS					23.03		6.10	17.40						61.9
HSK-A100-AG90/NBS20-340LS	**.098-.787**	1.811	1.378	1.378	13.39	10.30	2.76	7.76	2.56	2.44	5.197			43.4
HSK-A100-AG90/NBS20-440LS	**.098-.787**	1.811	1.378	1.378	17.32	14.57	2.76	11.69	2.56	2.44	5.197	NBC20-□	3,000	53.1
HSK-A100-AG90/NBS20-540LS	**.098-.787**	1.811	1.378	1.378	21.26	18.50	2.76	15.63	2.56	2.44	5.197			62.8

- Nut and wrench are included; coolant pipe and collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

CAUTION

A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

AG90 COMPACT TYPE

CLAMPING RANGE: Ø.098"-.512"

For Drilling Only — Ideal Size for Small Machining Centers

MAX 5,000 RPM

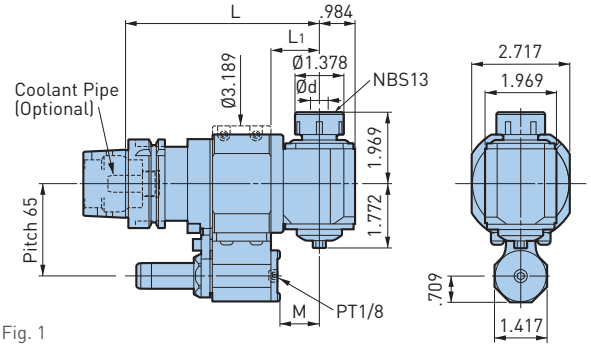


Fig. 1

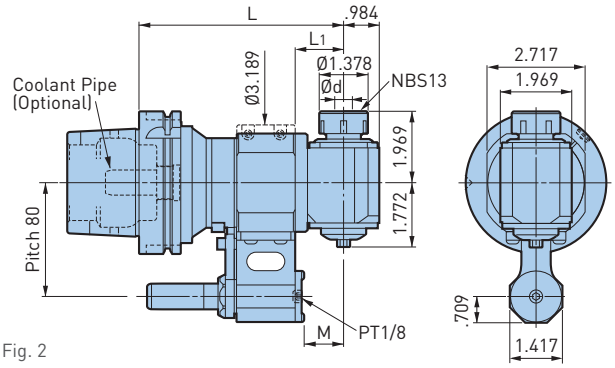


Fig. 2

Catalog Number	Fig.	Ød	L	L1	M	Collet	Speed Ratio	Weight (lbs.)
HSK-A63-AG90-13-135	1	.098-.512	5.31	1.34	1.10	NBC13	1:1	4.4
HSK-A63-AG90-13-185			7.28	3.31	3.06			5.4
HSK-A100-AG90-13-145	2	.098-.512	5.71	1.34	1.10	NBC13	1:1	6.8
HSK-A100-AG90-13-195			7.68	3.31	3.06			7.8

- Nut and wrench are included; coolant pipe and collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- A tapped hole (PT1/8) is prepared at the bottom cover of the Locating Pin housing so that a pipe for coolant can be connected
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

COLLET PG. 360 | WRENCH PG. 389 | STOP BLOCK PG. 407

CAUTION

A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1). AG90 Compact Type is for drilling only.

APPLICATION EXAMPLE

Stable machining is obtained due to high rigidity and good runout.

DRILLING	
Cutter	Ø.472" (12mm) Carbide Drill
Workpiece	1050 Steel
Cutting Speed	230 SFM
Cutting Feed	14.6 IPM
	.008 IPR
Spindle Speed	1,860 RPM

AG90 TWIN HEAD

CLAMPING RANGE: Ø.059"-.394"

MAX 6,000 RPM

Compact design. Symmetrical machining can be performed using one unit.

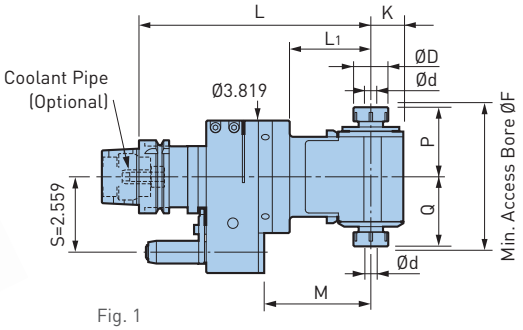


Fig. 1

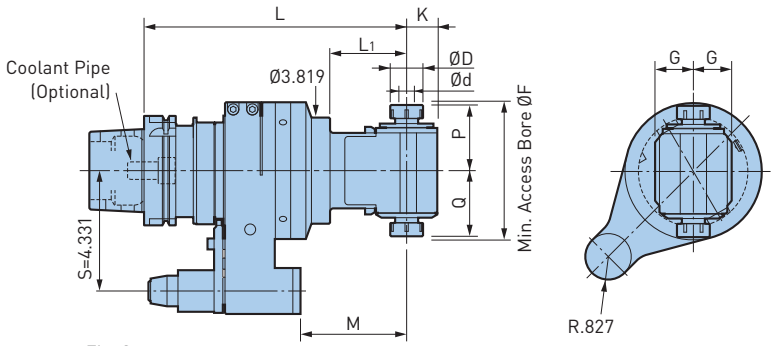


Fig. 2

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	Ød	ØD	G	K	L	L1	M	P	Q	ØF	Collet	Speed Ratio	Weight (lbs.)
HSK-A63-AG90/NBS10W-200	1	**.059-.394**	1.181	1.220	1.102	7.87	2.76	3.62	2.36	2.36	4.88	NBC10	1:1	13.7
HSK-A100-AG90/NBS10W-240	2	**.059-.394**	1.181	1.220	1.102	7.87	2.76	3.62	2.36	2.36	4.88	NBC10	1:1	28.7

- Nut and wrench are included; coolant pipe and collet must be ordered separately
- Output spindles do not rotate in forward direction simultaneously
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

ACCESSORIES

CAUTION

A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

AG45 NBS

CLAMPING RANGE: Ø.060"-.512"

MAX 6,000 RPM

Exclusive fixing housing allows for secure diagonal machining

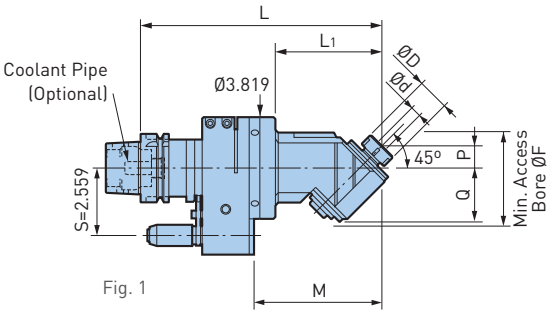


Fig. 1

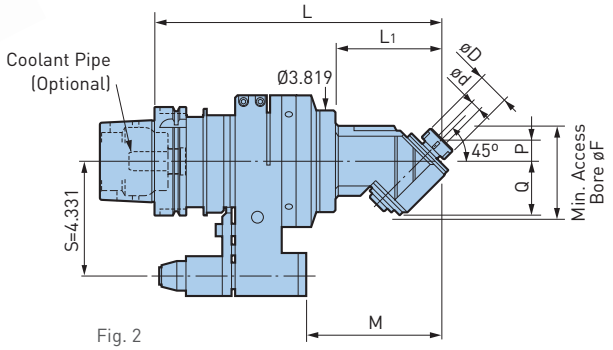
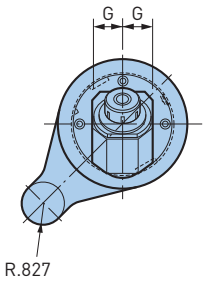


Fig. 2



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	Ød	ØD	G	L	L1	M	P	Q	ØF	Collet	Speed Ratio	Weight (lbs.)
HSK-A63-AG45/NBS10-230	1	**.060-.394**	1.181	1.181	9.06	3.94	4.80	.79	2.03	3.54	NBC10	1:1	12.3
HSK-A63-AG45/NBS13-235		**.098-.512**	1.378		9.25	4.13	5.00	.98			NBC13		12.6
HSK-A100-AG45/NBS10-270	2	**.060-.394**	1.181	1.181	10.63	3.94	5.00	.79	2.03	3.54	NBC10	1:1	27.3
HSK-A100-AG45/NBS13-275		**.098-.512**	1.378		10.83	4.13	5.20	.98			NBC13		27.6

- Nut and wrench are included; coolant pipe and collet must be ordered separately
- Output spindles do not rotate in forward direction simultaneously
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models
- NEW BABY END MILL COLLETS cannot be used

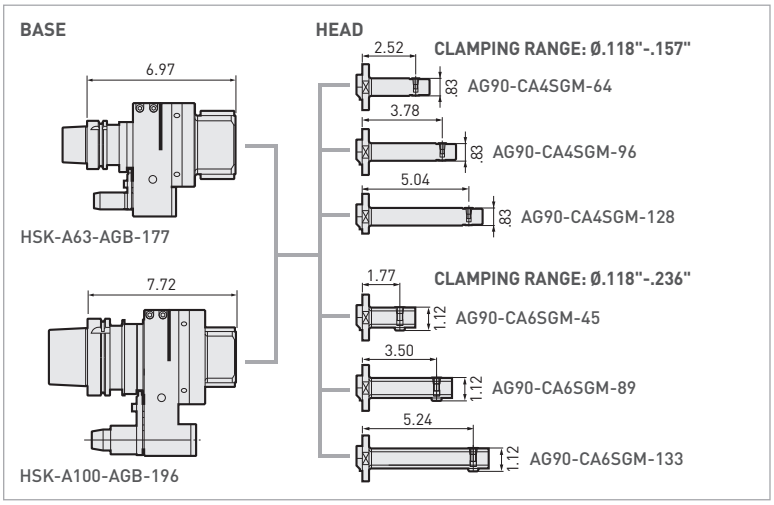
ACCESSORIES

CAUTION

A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

AG90 SLENDER DRIVE

CLAMPING RANGE: Ø.118"-.236" For Angular Operations Within a Ø1.181 Inch Bore



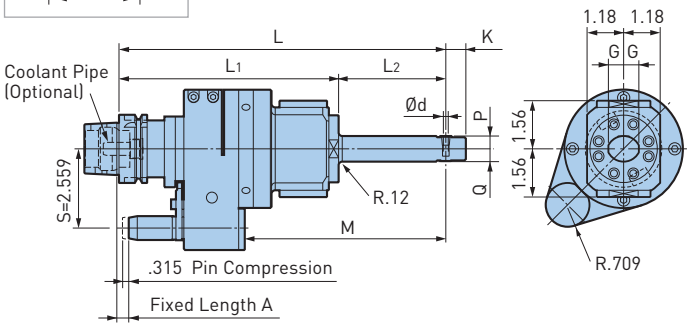


Fig. 1

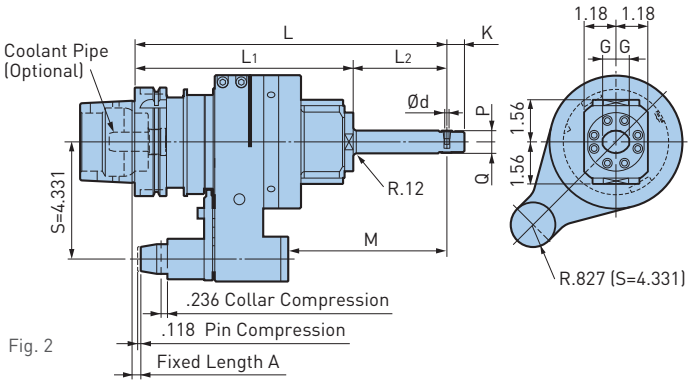


Fig. 2

Base	Head	Fig.	Ød	G	K	L	L1	L2	M	P	Q	Speed Ratio	Weight (lbs.)
HSK-A63-AGB-177	AG90-CA4SGM-64	1	.118-.157	.492	.650	9.49	7.28	2.20	5.24	.41	.41	1:1.06 (Increase)	12.1
	AG90-CA4SGM-96					10.75		3.46	6.50				12.3
	AG90-CA4SGM-128					12.01		4.72	7.76				12.6
	AG90-CA6SGM-45	1	.118-.236	.591	.787	8.74	7.28	1.46	4.49	.49	.63	1:0.77 (Decrease)	12.3
	AG90-CA6SGM-89					10.47		3.19	6.22				12.8
	AG90-CA6SGM-133					12.20		4.92	7.95				13.2
HSK-A100-AGB-196	AG90-CA4SGM-64	2	.118-.157	.492	.650	10.24	8.03	2.20	4.61	.41	.41	1:1.06 (Increase)	24.5
	AG90-CA4SGM-96					11.50		3.46	5.87				24.7
	AG90-CA4SGM-128					12.76		4.72	7.13				24.9
	AG90-CA6SGM-45	2	.118-.236	.591	.787	9.49	8.03	1.46	3.86	.49	.63	1:0.77 (Decrease)	24.7
	AG90-CA6SGM-89					11.22		3.19	5.59				25.1
	AG90-CA6SGM-133					12.95		4.92	7.32				25.6

- Nut and wrench are included; coolant pipe and collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- Automatic tool change may not be available depending on machine tool models
- Coolant cannot be supplied through the locating pin

ACCESSORIES

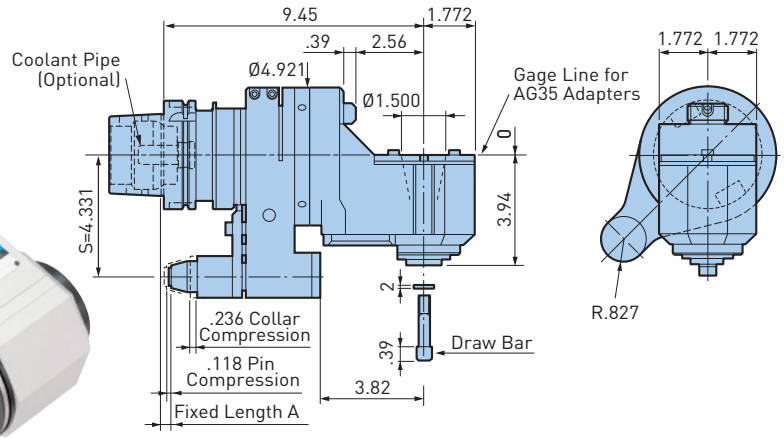
CAUTION

A Stop Block is required. The rotation of the cutting tool is in same direction of the machine spindle.

AG90 BUILD-UP TYPE

For All Machinery Applications

MAX 3,000 RPM



CAUTION

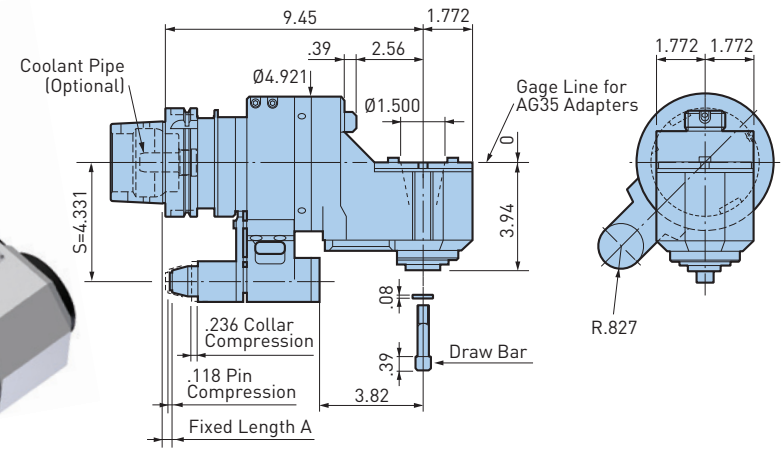
A Stop Block is required. The rotation of the cutting tool is in same direction of the machine spindle.

Catalog Number	Weight (lbs.)
HSK-A100-AG90/AGH35-240	31.2

- Wrench is included; coolant pipe must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models

For Application Where Increased Rigidity is Required

MAX 3,000 RPM



CAUTION

A Stop Block is required. The rotation of the cutting tool is in same direction of the machine spindle.

Catalog Number	Weight (lbs.)
HSK-A100-AG90/AGH35-240S	34.1

- Wrench is included; coolant pipe must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models

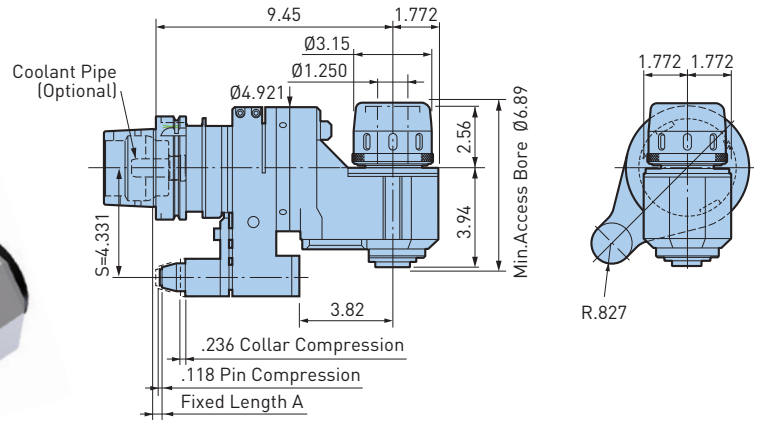
ACCESSORIES

ADAPTERS PG. 406 | WRENCH PG. 389 | STOP BLOCK PG. 407

AG90 HMC TYPE

For Heavy Duty End Milling

MAX 3,000 RPM



CAUTION

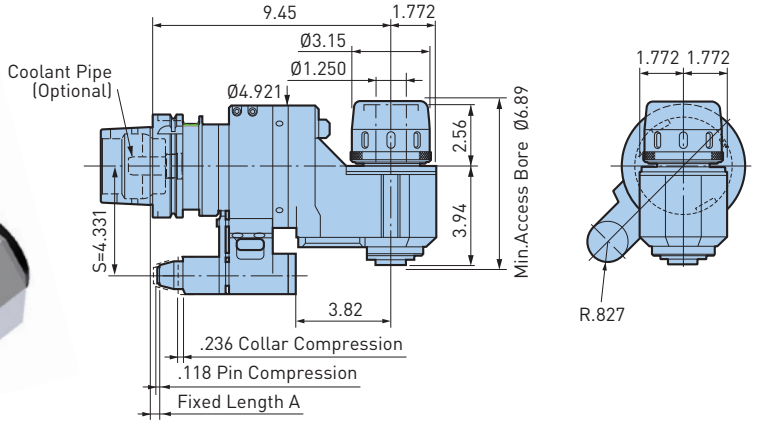
A Stop Block is required. The rotation of the cutting tool is in same direction of the machine spindle.

Catalog Number	Weight (lbs.)
HSK-A100-AG90/HMC1.250-240	35.2

- Wrench is included; coolant pipe must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models

For Applications Where Increased Rigidity is Required

MAX 3,000 RPM



CAUTION

A Stop Block is required. The rotation of the cutting tool is in same direction of the machine spindle.

Catalog Number	Weight (lbs.)
HSK-A100-AG90/HMC1.250-240S	38.1

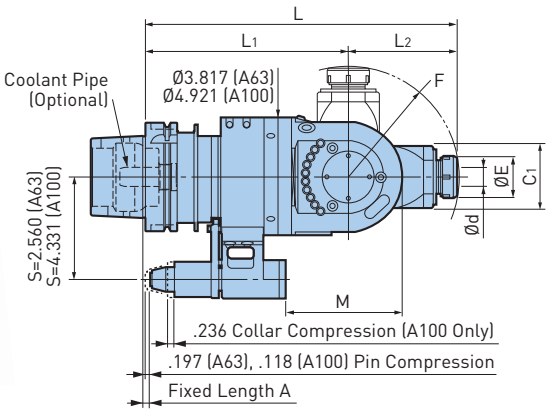
- Wrench is included; coolant pipe must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- When supplied through the stop block, coolant can be ejected from the housing
- Automatic tool change may not be available depending on machine tool models

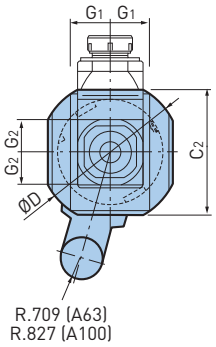
ACCESSORIES

AGU UNIVERSAL TYPE

CLAMPING RANGE: Ø.098"-.787" For Angular Operations

MAX 6,000 RPM





Catalog Number	Ød	ØE	ØD	C1	C2	G1	G2	L	L1	L2	M	F	S	Collet	Max RPM	Weight (lbs.)
HSK-A63-AGU/NBS13-285	**.098-.512**	1.378	4.53	2.00	3.82	1.024	1.014	11.22	7.28	3.94	4.88	4.02	2.56	NBC13-□	6,000	21.2
HSK-A100-AGU/NBS20-325	**.098-.787**	1.811	5.51	2.56	4.92	1.299	1.280	12.80	8.27	4.53	4.92	4.65	4.33	NBC20-□	4,000	44.1

- Nut and wrench are included; coolant pipe and collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- Automatic tool change may not be available depending on machine tool models

ACCESSORIES

CAUTION

A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

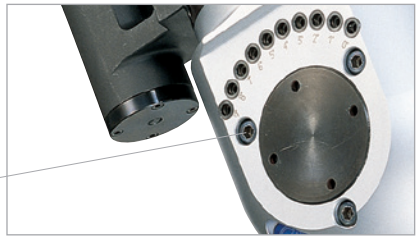
Easily Adjust Spindle Angle From 0º to 90º

Precise Angle Adjustment

Unique setting mechanism enables the spindle angle to be precisely set at 1º increments.

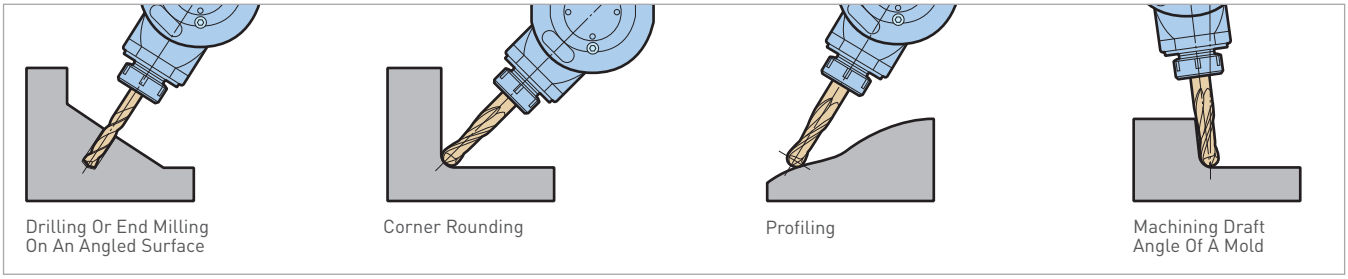
EXCLUSIVE CLAMPING BOLTS AND NUTS

Specially selected materials and special design for clamping the head guarantees rigidity even for end milling applications.



APPLICATION EXAMPLE

Adjustable AGU Universal Series expands ANGLE HEAD capabilities to accomplish various angular machining applications.



AGU30 TYPE

CLAMPING RANGE: Ø.098"-.787" For Angular Operations

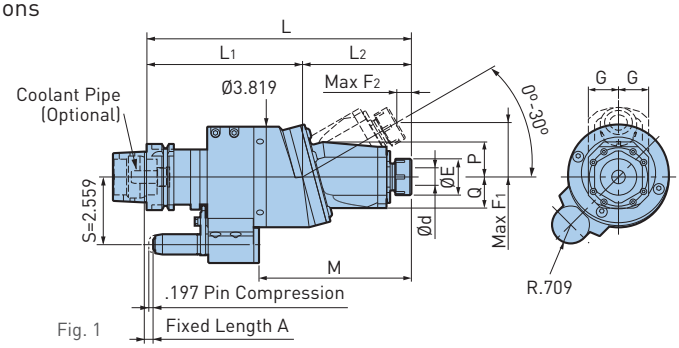
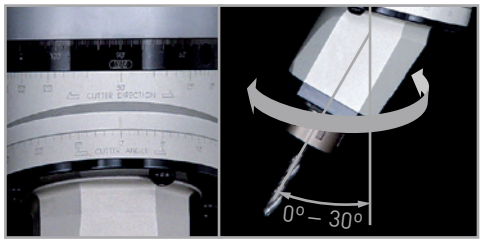


Fig. 1

MAX 6,000 RPM

ANGLE ADJUSTMENT BY ALIGNING DIVISIONS

Spindle angle is easily adjustable from 0° to 30° using the scale indication on the body.



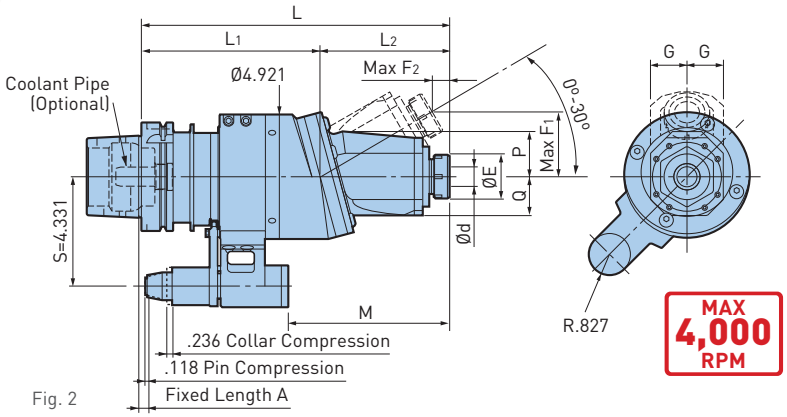


Fig. 2

MAX 4,000 RPM

Catalog Number	Fig.	Ød	ØE	G	L	L1	L2	M	P	Q	F1	F2	Collet	Max RPM	Weight (lbs.)
HSK-A63-AGU30/NBS13-255	1	**.098-.512**	1.378	1.142	10.04	5.91	4.13	5.79	1.34	1.18	2.07	.55	NBC13-☐	6,000	15.0
HSK-A100-AGU30/NBS20-305	2	**.098-.787**	1.811	1.437	12.01	6.89	5.12	6.38	1.77	1.54	2.56	.67	NBC20-☐	4,000	33.7

- Nut and wrench are included; coolant pipe and collet must be ordered separately
- The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable
- A stop block is required when mounting on machines and must be order separately
- Automatic tool change may not be available depending on machine tool models
- When supplied through the stop block, coolant can be ejected from the housing

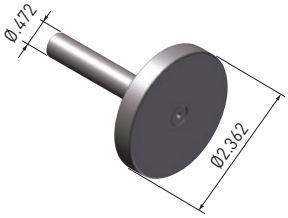
ACCESSORIES

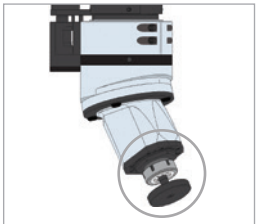
CAUTION

A Stop Block is required. The rotation of the cutting tool is in reverse direction of the machine spindle (Speed Ratio 1:1).

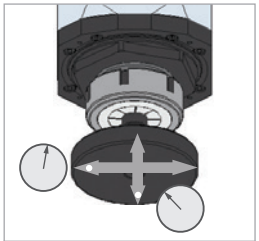
SETTING DISC (INCLUDED)

For the precise adjustment of spindle angle or direction.





Clamp the Setting Disc Into the Angled Spindle



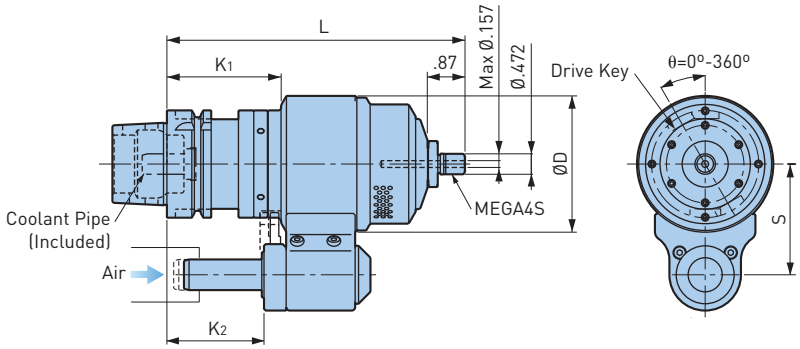
Check the Cutter Alignment and the Setting Angle

AIR POWER SPINDLE—RBX5 & RBX7

For High Speed Micro Machining with Automatic Tool Change

ZERO MACHINE SPINDLE ROTATION

MAX 80,000 RPM



Catalog Number	Operating Spindle Speed (RPM)	Cutting Tool Diameter	L	ØD	K1	K2	S	Weight (lbs.)
HSK-A63-RBX7-4S-175-65	60,000-80,000	Ø.039 or smaller	6.89	3.150	2.64	2.24	2.559	8.4
HSK-A63-RBX5-4S-175-65	40,000-50,000	Ø.059 or smaller		3.780				10.6
HSK-A100-RBX7-4S-180-80	60,000-80,000	Ø.039 or smaller	7.09	3.937	2.83	2.44	3.150	18.5
HSK-A100-RBX5-4S-180-80	40,000-50,000	Ø.059 or smaller						20.7

- Nut and wrench are included; collet must be ordered separately
- XF1-NPT (Air Unit) is required; must be ordered separately

ACCESSORIES

COLLET PG. 356

STOP BLOCK PG. 407

AIR UNIT PG. 410

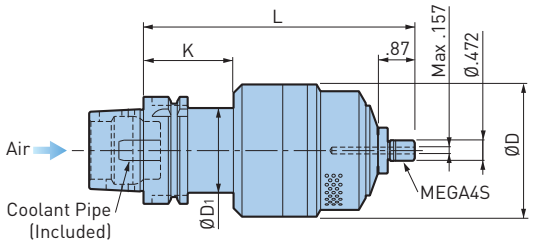
CAUTION

Compressed air to drive the AIR POWER SPINDLE must be clean. Coolant should not be supplied through the spindle on the machine that uses the AIR POWER SPINDLE.

AIR POWER SPINDLE—RBX5 & RBX7

For High Speed Micro Machining with Compressed Air Through the Machine Spindle

MAX 80,000 RPM



Catalog Number	Operating Spindle Speed (RPM)	Cutting Tool Diameter	L	ØD	ØD1	K	Weight (lbs.)
HSK-A63-RBX7C-4S-160	60,000-80,000	Ø.039 or smaller	6.30	3.071	1.97	2.09	6.4
HSK-A63-RBX5C-4S-160	40,000-50,000	Ø.059 or smaller		3.780			8.6
HSK-A100-RBX7C-4S-165	60,000-80,000	Ø.039 or smaller	6.50	3.071	2.68	2.28	10.8
HSK-A100-RBX5C-4S-165	40,000-50,000	Ø.059 or smaller		3.780			13.0

- Nut and wrench are included; collet must be ordered separately
- XF1-NPT (Air Unit) is required; must be ordered separately

ACCESSORIES

CAUTION

Compressed air to drive the AIR POWER SPINDLE must be clean. Coolant should not be supplied through the spindle on the machine that uses the AIR POWER SPINDLE.

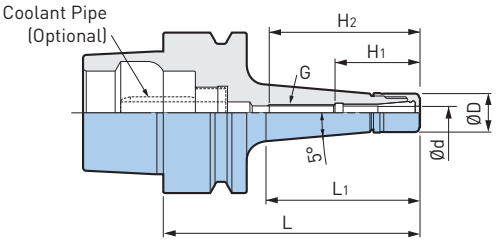
MEGA MICRO CHUCK—TAPERED BODY

CLAMPING RANGE: Ø.018"-.317" (Ø.45-8.05mm)

For Micro Drill & End Mill Applications

HIGHER RIGIDITY

MAX 50,000 RPM



Catalog Number	Ød	ØD	L	L1	H1	H2	G	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
HSK-E25-MEGA3S-45T❖	.018-.128	.394	1.77	1.26	.87	(1.26)	—	NBC3S-☐	MGN3S	MGR10	50,000	.1
HSK-E25-MEGA3S-60T			2.36	1.89		1.50	M4 P0.7				40,000	.2
HSK-E25-MEGA4S-45T❖	.018-.159	.472	1.77	1.30	1.04	(1.26)	—	NBC4S-☐	MGN4S	MGR12	50,000	.2
HSK-E25-MEGA4S-60T			2.36	1.93		1.61	M5 P0.8				40,000	.2
HSK-E25-MEGA6S-45T❖	.018-.238	.551	1.77	1.30	1.12	(1.22)	—	NBC6S-☐	MGN6S	MGR14	50,000	.2
HSK-E25-MEGA6S-60T			2.36	1.93		1.57	M7 P0.75				40,000	.2
HSK-E32-MEGA3S-60T	.018-.128	.394	2.36	1.38	.87	1.50	M4 P0.7	NBC3S-☐	MGN3S	MGR10	40,000	.3
HSK-E32-MEGA3S-75T			2.95	1.97								.4
HSK-E32-MEGA4S-45T❖	.018-.159	.472	1.77	.91	1.04	(1.02)	—	NBC4S-☐	MGN4S	MGR12	50,000	.3
HSK-E32-MEGA4S-60T			2.36	1.38		1.81	M5 P0.8				40,000	.4
HSK-E32-MEGA6S-45T❖	.018-.238	.551	1.77	.91	1.12	(1.10)	—	NBC6S-☐	MGN6S	MGR14	50,000	.3
HSK-E32-MEGA6S-60T			2.36	1.42		1.50	M7 P0.75				40,000	.4
HSK-E32-MEGA8S-60T❖	.116-.317	.709	2.36	1.50	1.22	1.69	—	NBC8S-☐	MGN8S	MGR18	30,000	.4
HSK-E40-MEGA3S-60T	.018-.128	.394	2.36	1.38	.87	1.54	M4 P0.7	NBC3S-☐	MGN3S	MGR10	40,000	.5
HSK-E40-MEGA3S-75T			2.95	1.97		1.50						.6
HSK-E40-MEGA4S-60T	.018-.159	.472	2.36	1.38	1.04	1.73	M5 P0.8	NBC4S-☐	MGN4S	MGR12	40,000	.5
HSK-E40-MEGA4S-75T			2.95	1.97		1.85						.6
HSK-E40-MEGA6S-60T❖	.018-.238	.551	2.36	1.38	1.12	(1.65)	—	NBC6S-☐	MGN6S	MGR14	40,000	.5
HSK-E40-MEGA6S-75T			2.95	1.97		1.93	M7 P0.75					.6
HSK-E40-MEGA6S-90T			3.54	2.56								.7
HSK-E50-MEGA3S-80T	.018-.128	.394	3.15	1.93	.87	1.50	M4 P0.7	NBC3S-☐	MGN3S	MGR10	40,000	1.0
HSK-E50-MEGA4S-80T	.018-.159	.472	3.15	1.89	1.04	1.85	M5 P0.8	NBC4S-☐	MGN4S	MGR12	40,000	1.0
HSK-E50-MEGA6S-80T	.018-.238	.551	3.15	1.93	1.12	1.93	M7 P0.75	NBC6S-☐	MGN6S	MGR14	40,000	1.1

- MEGA MICRO NUT is included; coolant pipe, collet and wrench must be ordered separately
- Weight includes nut but does not include 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
- For models marked ❖, there is no internal thread, the dimension H2 in ( ) shows how deep a tool can be inserted
- If HSK tool holders are used in a machine which does not recommend the center through coolant, the plug screw should be mounted to our tools

ACCESSORIES

COLLET PG. 356

MEGA NUT PG. 358

PERFECT SEAL PG. 358

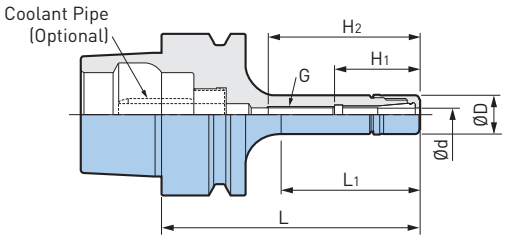
MEGA WRENCH PG. 390

MEGA MICRO CHUCK

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

MAX 50,000 RPM

For Micro Drill & End Mill Applications



Catalog Number	Ød	ØD	L	L1	H1	H2	G	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
HSK-E25-MEGA4S-45❖	**.018-.159**	.472	1.77	1.22	1.65	(1.26)	—	NBC4S-□	MGN4S	MGR12	50,000	.1
HSK-E25-MEGA4S-60			2.36	1.81		1.85	M5 P0.8				40,000	.2
HSK-E25-MEGA6S-45❖	**.018-.238**	.551	1.77	1.26	1.10	(1.22)	—	NBC6S-□	MGN6S	MGR14	50,000	.2
HSK-E25-MEGA6S-60			2.36	1.85	1.12	1.61	M7 P0.75				40,000	.2
HSK-E32-MEGA3S-45❖	**.018-.238**	.394	1.77	.91	.87	(1.22)	—	NBC3S-□	MGN3S	MGR10	50,000	.3
HSK-E32-MEGA4S-45	**.018-.159**	.472	1.77	.87	1.04	1.22	M5 P0.8	NBC4S-□	MGN4S	MGR12	50,000	.3
HSK-E32-MEGA4S-60			2.36	1.34		1.81					40,000	.3
HSK-E32-MEGA6S-45❖	**.018-.238**	.551	1.77	.87	1.12	(1.10)	—	NBC6S-□	MGN6S	MGR14	50,000	.3
HSK-E32-MEGA6S-60			2.36	1.38		1.50	M7 P0.75				40,000	.3
HSK-E40-MEGA3S-40❖	**.018-.128**	.394	1.57	.75	.87	(.94)	—	NBC3S-□	MGN3S	MGR10	50,000	.5
HSK-E40-MEGA4S-60	**.018-.159**	.472	2.36	1.34	1.04	1.73	M5 P0.8	NBC4S-□	MGN4S	MGR12	40,000	.5
HSK-E40-MEGA6S-45❖	**.018-.238**	.551	1.77	.91	1.08	(1.06)	—	NBC6S-□	MGN6S	MGR14	50,000	.5
HSK-E40-MEGA6S-60❖			2.36	1.38	1.12	1.10	—				40,000	.5
HSK-E50-MEGA3S-50❖	**.018-.128**	.394	1.97	.79	.87	(1.18)	—	NBC3S-□	MGN3S	MGR10	45,000	.9
HSK-E50-MEGA4S-50❖	**.018-.159**	.472	1.97	.83	1.04	(1.18)	—	NBC4S-□	MGN4S	MGR12	45,000	1.0
HSK-E50-MEGA4S-80			3.15	1.73		1.85	M5 P0.8				40,000	1.0
HSK-E50-MEGA6S-55❖	**.018-.238**	.551	2.17	1.02	1.12	(1.38)	—	NBC6S-□	MGN6S	MGR14	45,000	1.0
HSK-E50-MEGA6S-80			3.15	1.73		1.93	M7 P0.75				40,000	1.0

- MEGA MICRO NUT is included; coolant pipe, collet and wrench must be ordered separately
- Weight includes nut but does not include 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
- For models marked ❖, there is no internal thread, the dimension H2 in ( ) shows how deep a tool can be inserted
- If HSK tool holders are used in a machine which does not recommend the center through coolant, the plug screw should be mounted to our tools

ACCESSORIES

MEGA NEW BABY CHUCK

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

For Drills, Reamers, Taps & Finishing End Mills

MAX 40,000 RPM

COOLANT THROUGH

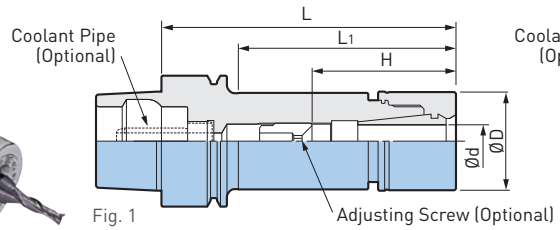


Fig. 1

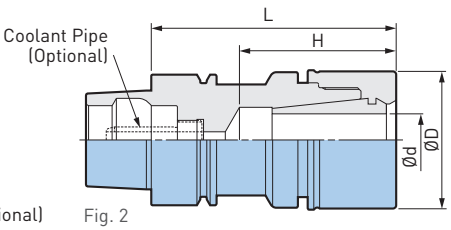


Fig. 2

Catalog Number	Fig.	Ød	ØD	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
HSK-E25-MEGA6N-40❖	1	**.010-.236**	.787	1.57	1.10	.98	NBC6-☐	MGN6	MGR20	30,000	.2
HSK-E25-MEGA8N-45❖	2	**.020-.315**	.984	1.77	—	1.18	NBC8-☐	MGN8	MGR25	25,000	.3
HSK-E25-MEGA10N-60❖		**.059-.394**	1.181	2.36		1.77	NBC10-☐	MGN10	MGR30	20,000	.4
HSK-E32-MEGA6N-45❖◆	1	**.010-.236**	.787	1.77	.94	1.10	NBC6-☐	MGN6	MGR20	40,000	.4
HSK-E32-MEGA6N-60				2.36	1.42	.91-1.06				35,000	.4
HSK-E32-MEGA8N-50❖	1	**.020-.315**	.984	1.97	1.14	1.30	NBC8-☐	MGN8	MGR25	40,000	.5
HSK-E32-MEGA8N-65				2.56	1.69	1.02-1.26				35,000	.6
HSK-E32-MEGA10N-65❖	2	**.059-.394**	1.181	2.56	1.77	1.85	NBC10-☐	MGN10	MGR30	30,000	.6
HSK-E32-MEGA13N-70❖	2	**.098-.512**	1.378	2.76	1.77	1.73	NBC13-☐	MGN13	MGR35	25,000	.7
HSK-E40-MEGA6N-50❖	1	**.010-.236**	.787	1.97	1.02	1.22	NBC6-☐	MGN6	MGR20	40,000	.6
HSK-E40-MEGA6N-60				2.36	1.30	.91-1.02				35,000	.6
HSK-E40-MEGA6N-75				2.95	1.89	.91-1.21				30,000	.7
HSK-E40-MEGA6N-90				3.54	2.48	.91-1.69				28,000	.8
HSK-E40-MEGA6N-120				4.72	3.66					25,000	.9
HSK-E40-MEGA8N-55❖	1	**.020-.315**	.984	2.17	1.22	1.42	NBC8-☐	MGN8	MGR25	40,000	.7
HSK-E40-MEGA8N-75				2.95	1.97	1.02-1.77				30,000	.8
HSK-E40-MEGA8N-90				3.54	2.56					28,000	1.0
HSK-E40-MEGA10N-60❖	1	**.059-.394**	1.181	2.36	1.42	1.57	NBC10-☐	MGN10	MGR30	35,000	.9
HSK-E40-MEGA10N-75❖				2.95	2.01	2.17				30,000	1.0
HSK-E40-MEGA10N-90				3.54	2.60	1.50-1.89				28,000	1.2
HSK-E40-MEGA13N-65❖	1	**.098-.512**	1.378	2.56	1.69	1.73	NBC13-☐	MGN13	MGR35	30,000	1.0
HSK-E40-MEGA13N-75❖				2.95	2.09	2.28				25,000	1.2
HSK-E40-MEGA13N-90				3.54	2.68	1.73-1.89					1.4
HSK-E40-MEGA13N-120				4.72	3.86	1.73-2.48				20,000	1.8
HSK-E40-MEGA13N-150				5.91	5.04					15,000	2.2
HSK-E40-MEGA16N-65❖◆	2	**.098-.630**	1.654	2.56	—	1.81	NBC16-☐	MGN16	MGR42	25,000	1.0
HSK-E40-MEGA16N-75❖				2.95		1.89				20,000	1.3

Catalog Number	Fig.	Ød	ØD	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
HSK-E50-MEGA6N-55❖	1	**.010-.236**	.787	2.17	1.06	1.38	NBC6-□	MGN6	MGR20	40,000	1.0
HSK-E50-MEGA6N-70				2.76	1.50	.91-1.54				30,000	1.1
HSK-E50-MEGA6N-100				3.94	2.52	.91-1.69				25,000	1.2
HSK-E50-MEGA8N-60❖	1	**.020-.315**	.984	2.36	1.18	1.47	NBC8-□	MGN8	MGR25	40,000	1.2
HSK-E50-MEGA8N-90				3.54	2.20	1.02-1.77				30,000	1.4
HSK-E50-MEGA10N-60❖◆	1	**.059-.394**	1.181	2.36	1.18	1.38	NBC10-□	MGN10	MGR30	35,000	1.2
HSK-E50-MEGA10N-90				3.54	2.28	1.50-1.89				30,000	1.5
HSK-E50-MEGA13N-70❖	1	**.098-.512**	1.378	2.76	1.57	1.77	NBC13-□	MGN13	MGR35	28,000	1.5
HSK-E50-MEGA13N-90				3.54	2.36	1.73-1.85				25,000	1.8
HSK-E50-MEGA13N-120				4.72	3.54	1.73-2.48				20,000	2.2
HSK-E50-MEGA13N-150				5.91	4.72					15,000	2.7
HSK-E50-MEGA16N-75❖	1	**.098-.630**	1.654	2.95	1.89	2.05	NBC16-□	MGN16	MGR42L	28,000	1.9
HSK-E50-MEGA16N-90❖				3.54	2.48	2.56				25,000	2.2
HSK-E50-MEGA20N-75❖◆	2	**.098-.787**	1.811	2.95	—	1.93	NBC20-□	MGN20	MGR46L	25,000	1.8
HSK-E50-MEGA20N-100				3.94		2.01-2.13				20,000	2.4
HSK-E50-MEGA20N-130				5.12		2.01-2.68				18,000	3.3

- MEGA NEW BABY NUT is included; coolant pipe, collet, wrench and adjusting screw 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
- "H" indicates the adjustment length with an adjusting screw
- Adjusting screws cannot be used with models marked ❖
- NEW BABY END MILL COLLET cannot be used with models marked ◆
- If HSK tool holders are used in a machine which does not recommend the center through coolant, the plug screw should be mounted to our tools

ACCESSORIES

COLLET PG. 360

MEGA NUT PG. 366

PERFECT SEAL PG. 368

MEGA WRENCH PG. 390

SCREW PG. 411

ULTRA PRECISION SUPER SLIM

CLAMPING RANGE: Ø.125" (Ø3-6mm)

Ultimate hydraulic chuck with precision. Runout accuracy of 1 micron at 4xD.

MAX 60,000 RPM

COOLANT THROUGH

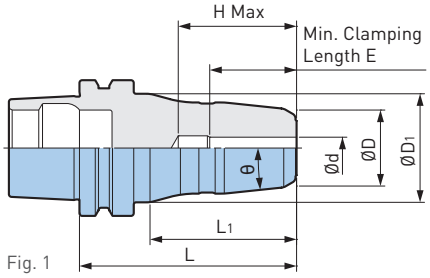


Fig. 1

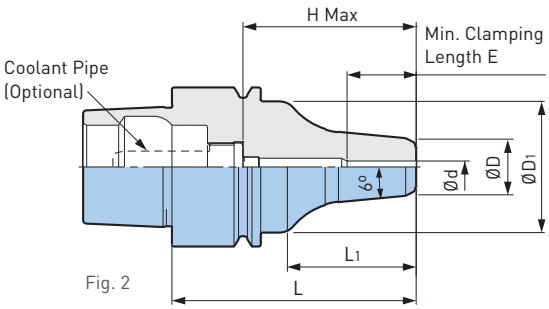


Fig. 2

Catalog Number	Fig.	Ød	ØD	ØD1	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
HSK-E25-HDC3.175S-40UP		.125									
HSK-E25-HDC4S-40UP		4mm							.83		
HSK-E25-HDC6S-45UP❖		6mm		.91	1.77	1.22	8°	.83	1.02		
HSK-E32-HDC3S-52UP	1	3mm	.551	1.02	2.05	.59	6°	.63	1.10	45,000	.4
HSK-E32-HDC3.175S-52UP		.125									
HSK-E32-HDC4S-52UP		4mm						.75			
HSK-E32-HDC6S-57UP		6mm			2.24	.87		.98	1.30		
HSK-E40-HDC3S-55UP	2	3mm	.551	1.30	2.17	1.14	6°	.63	1.54	40,000	.7
HSK-E40-HDC3.175S-55UP		.125									
HSK-E40-HDC4S-55UP		4mm						.75			
HSK-E40-HDC6S-60UP		6mm			2.36	1.34		.98	1.57		

- Coolant pipe must be ordered separately
- Adjusting screws cannot be used
- ❖ The body diameter of HSK-E25-HDC6S-45UP is 23mm (ISO standards=less than 20mm); some machines do not accept this large body diameter
- As for HSK-E40 holders, in case they are used in a machine which does not recommend the center through hole, the plug screw should be mounted to our tools

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: Ø.125" (Ø3-12mm)

Small design for micro machining.

MAX 60,000 RPM

COOLANT THROUGH

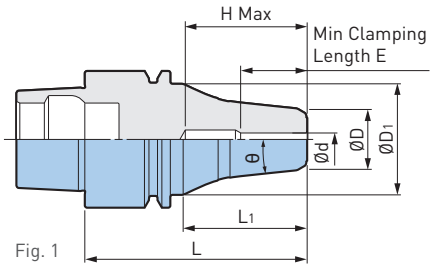


Fig. 1

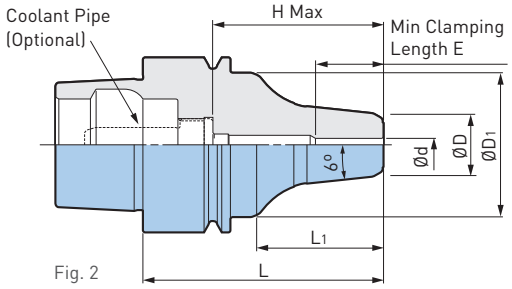


Fig. 2

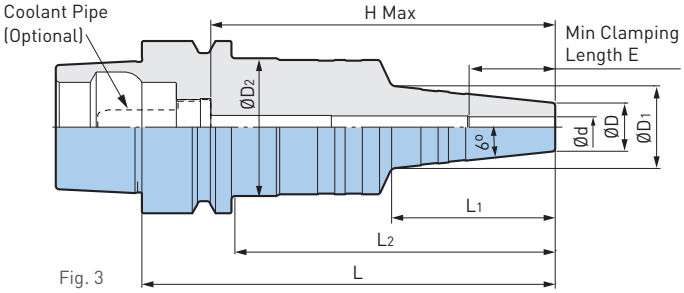


Fig. 3

CAUTION

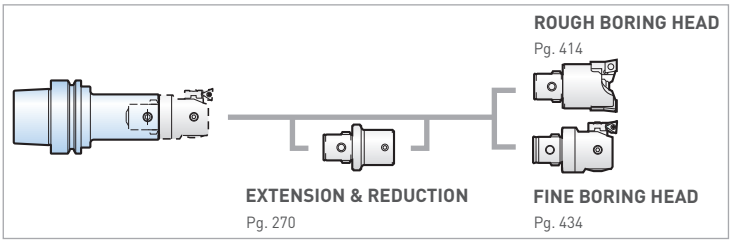
Use only cutting tools that have a shank tolerance of h6. Do not use with cutting tools made with a flat on the shank (ie: Weldon type shank). Roughing end mills are not recommended for use with hydraulic chucks. Do not tighten the clamping screw without first inserting a cutting tool into the tool holder.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

Catalog Number	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	θ	E	H Max	Max RPM	Weight (lbs.)
HSK-E25-HDC3S-40	1	3mm	.551	.79	—	1.56	1.06	—	6°	.63	.86	60,000	.2
HSK-E25-HDC3.175S-40		.125											
HSK-E25-HDC4S-40		4mm									.83		
HSK-E25-HDC6S-45❖		6mm		.91		1.77	1.22		8°	.83	1.02		
HSK-E32-HDC3S-52	1	3mm	.551	1.02	—	2.05	1.14	—	6°	.63	1.10	45,000	.4
HSK-E32-HDC3.175S-52		.125											
HSK-E32-HDC4S-52		4mm								.75			
HSK-E32-HDC6S-57		6mm				2.24	1.34			.98	1.30		
HSK-E40-HDC3S-55	2	3mm	.551	1.30	—	2.17	1.14	—	6°	.63	1.54	40,000	.7
HSK-E40-HDC3.175S-55		.125											
HSK-E40-HDC4S-55		4mm								.75			
HSK-E40-HDC6S-60		6mm				2.36	1.34			.98	1.57		
HSK-E40-HDC8S-65		8mm	.669			2.56	1.54			1.22	1.54	35,000	
HSK-E40-HDC10S-70		10mm	.748			2.76	1.57			1.30	1.65		.8
HSK-E40-HDC12S-70		12mm	.827							1.42			
HSK-E50-HDC4S-120	3	4mm	.551	.94	1.57	4.72	1.85	3.66	6°	.75	3.94	30,000	2.0
HSK-E50-HDC6S-120		6mm								.98			
HSK-E50-HDC8S-120		8mm	.669	1.10			1.89			1.22	3.35		
HSK-E50-HDC10S-120		10mm	.748	1.18						1.30			
HSK-E50-HDC12S-120		12mm	.827	1.26			1.93			1.42			

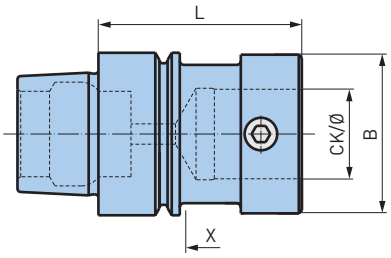
- HSK-E25/32 does not have coolant-through hole
- Coolant pipe must be ordered separately
- Adjusting screws cannot be used
- ❖ The body diameter of 6S-45 is 23mm (ISO standards=less than 20mm); some machines do not accept this large body diameter
- If HSK-E40 holders are used in a machine which does not recommend the center through hole, the plug screw should be mounted to our tools

CKB SHANK

Symmetrical Execution for
High Speed Machine Spindles



COOLANT THROUGH



Catalog Number	Refence Number	CK	ØD	L	X	Weight (lbs.)
HSK-E25-CKB1-22	10.328.249F	CKB1	.748	.866	1.575	.1
HSK-E25-CKB2-30	10.328.281F	CKB2	.945	1.181	1.969	.2
HSK-E32-CKB1-40	10.328.257F	CKB1	.748	1.575	1.969	.3
HSK-E32-CKB2-33	10.328.280F	CKB2	.945	1.299	1.693	.3
HSK-E32-CKB3-48	10.328.151F	CKB3	1.220	1.890	2.677	.4
HSK-E32-CKB4-68	10.328.218F	CKB4	1.535	2.677	3.543	.4
HSK-E40-CKB1-32	10.324.111F	CKB1	.748	1.240	1.575	.5
HSK-E40-CKB2-35	10.324.121F	CKB2	.945	1.378	1.772	.5
HSK-E40-CKB3-40	10.324.131F	CKB3	1.220	1.575	2.165	.6
HSK-E40-CKB4-50	10.324.141F	CKB4	1.535	1.969	2.835	.8
HSK-E50-CKB3-44	10.324.231F	CKB3	1.220	1.732	2.087	1.0
HSK-E50-CKB4-48	10.324.241F	CKB4	1.535	1.890	2.520	1.1
HSK-E50-CKB5-61	10.324.251F	CKB5	1.968	2.402	3.425	1.6

- Coolant pipe must be ordered separately
- X dimensions on the table are reference figures when EWN/EWE head is mounted
- All shanks are precision balanced

ACCESSORIES

SPARE PARTS
PG. 538

MEGA MICRO CHUCK

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

MAX 32,000 RPM

For Micro Drill & End Mill Applications

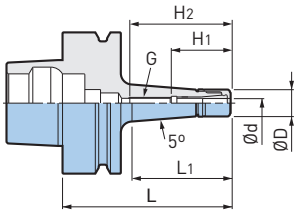


Fig. 1 (High Rigidity Type)

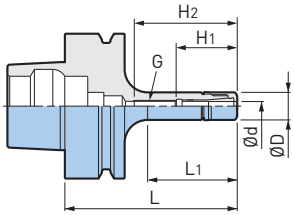


Fig. 2 (Straight Type)

Catalog Number	Fig.	Ød	ØD	L	L1	H1	H2	G	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
HSK-F63-MEGA4S-75T	1	**.018-.159**	.472	2.95	1.73	1.04	1.61	M5 P0.8	NBC4S-□	MGN4S	MGR12	32,000	1.5
HSK-F63-MEGA6S-75T		**.018-.238**	.551	2.95	1.73	1.12	1.61	M7 P0.75	NBC6S-□	MGN6S	MGR14		1.5
HSK-F63-MEGA8S-75T		**.116-.317**	.709			1.22	2.28	M9 P0.75	NBC8S-□	MGN8S	MGR25		1.5
HSK-F63-MEGA4S-75	2	**.018-.159**	.472	2.95	1.54	1.04	1.61	M5 P0.8	NBC4S-□	MGN4S	MGR12	30,000	1.5
HSK-F63-MEGA4S-105				4.13	2.99		1.85					25,000	1.5
HSK-F63-MEGA6S-75		**.018-.238**	.551	2.95	1.81	1.12	1.61	M7 P0.75	NBC6S-□	MGN6S	MGR14	30,000	1.5
HSK-F63-MEGA6S-90				3.54	2.40		1.93					27,000	1.6
HSK-F63-MEGA6-105				4.13	2.99							25,000	1.7

- MEGA MICRO NUT is included; coolant pipe, collet and wrench must be ordered searately
- 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
- Contact us for a plug screw to block a coolant through hole
- If HSK tool holders are used in a machine which does not recommend the center through coolant, the plug screw should be mounted to our tools

ACCESSORIES

COLLET PG. 356

MEGA NUT PG. 358

PERFECT SEAL PG. 358

MEGA WRENCH PG. 390

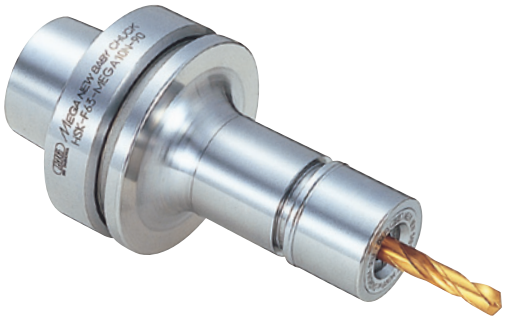
MEGA NEW BABY CHUCK

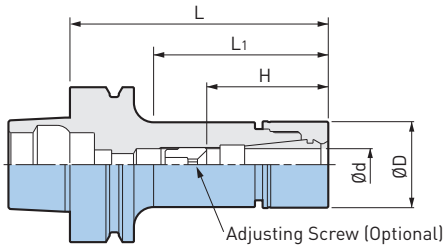
CLAMPING RANGE: Ø.010"-.787" (Ø.25-20mm)

For Drills, Reamers, Taps & Finishing End Mills

MAX 35,000 RPM

COOLANT THROUGH





Catalog Number	Ød	ØD	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
HSK-F63-MEGA6N-75	.010-.236	.787	2.95	1.65	.91-1.22	NBC6-□	MGN6	MGR20	35,000	1.5
HSK-F63-MEGA6N-90			3.54	2.09	.91-1.69				30,000	1.8
HSK-F63-MEGA6N-105			4.13	2.72					25,000	1.8
HSK-F63-MEGA6N-135			5.31	3.90					20,000	2.0
HSK-F63-MEGA8N-75	.020-.315	.984	2.95	1.69	1.02-1.50	NBC8-□	MGN8	MGR25	32,000	1.8
HSK-F63-MEGA8N-90			3.54	2.13	1.02-1.77				30,000	2.0
HSK-F63-MEGA8N-105			4.13	2.72						2.0
HSK-F63-MEGA8N-120			4.72	3.31					25,000	2.0
HSK-F63-MEGA8N-135			5.31	3.90					20,000	2.2
HSK-F63-MEGA8N-165			6.50	5.08					15,000	2.4
HSK-F63-MEGA10N-75❖	.059-.354	1.181	2.95	1.69	1.89	NBC10-□	MGN10	MGR30	32,000	2.0
HSK-F63-MEGA10N-90			3.54	2.13	1.50-1.89				30,000	2.0
HSK-F63-MEGA10N-105			4.13	2.72					25,000	2.2
HSK-F63-MEGA10N-120			4.72	3.31						2.4
HSK-F63-MEGA13N-75❖	.098-.512	1.378	2.95	1.69	1.85	NBC13-□	MGN13	MGR35	30,000	2.0
HSK-F63-MEGA13N-90❖			3.54	2.20	2.40					2.2
HSK-F63-MEGA13N-105			4.13	2.80	1.73-2.09				25,000	2.4
HSK-F63-MEGA13N-120			4.72	3.39	1.73-2.48				20,000	2.6
HSK-F63-MEGA13N-165			6.50	5.16					15,000	3.5
HSK-F63-MEGA16N-75❖	.098-.630	1.654	2.95	1.69	1.89	NBC16-□	MGN16	MGR42	30,000	2.2
HSK-F63-MEGA16N-90❖			3.54	2.28	2.40				25,000	2.6
HSK-F63-MEGA16N-105			4.13	2.87	1.89-2.20				20,000	2.9
HSK-F63-MEGA20N-75❖	.098-.787	1.811	2.95	1.77	2.01	NBC20-□	MGN20	MGR46	30,000	2.4
HSK-F63-MEGA20N-90❖			3.54	2.36	2.40				25,000	2.9
HSK-F63-MEGA20N-105			4.13	2.95	2.01-2.28				20,000	3.1

- MEGA NEW BABY NUT is included; coolant pipe, collet, wrench and adjusting screw must be ordered separately
- 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
- Contact us for a plug screw to block a coolant through hole
- Adjusting screws cannot be used with models marked ❖
- If HSK tool holders are used in a machine which does not recommend the center through coolant, the plug screw should be mounted to our tools

ACCESSORIES

COLLET PG. 360 | MEGA NUT PG. 366 | PERFECT SEAL PG. 368 | MEGA WRENCH PG. 390 | SCREW PG. 411

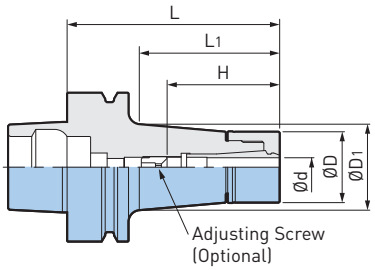
MEGA E CHUCK

CLAMPING RANGE: Ø.125"-.500" (Ø3-12mm)

Exclusively for High Speed Finish End Milling

MAX 30,000 RPM

COOLANT THROUGH



Catalog Number	Ød	ØD	ØD1	L	L1	H	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
HSK-F63-MEGA6E-65❖	.125-.250 (3-6mm)	.984	1.11	2.56	1.34	1.54	MEC6-□	MEN6	MGR25	30,000	1.8
HSK-F63-MEGA6E-90			1.23	3.54	2.28	1.46-1.77					2.0
HSK-F63-MEGA8E-65❖	.125-.250 (3-8mm)	1.181	1.29	2.56	1.34	1.61	MEC8-□	MEN8	MGR30	30,000	1.8
HSK-F63-MEGA8E-90			1.43	3.54	2.32	1.65-1.85					2.2
HSK-F63-MEGA10E-75❖	.125-.375 (3-10mm)	1.378	1.51	2.95	1.73	1.89	MEC10-□	MEN10	MGR35	30,000	2.2
HSK-F63-MEGA10E-90❖			1.62	3.54	2.32	2.64					2.6
HSK-F63-MEGA10E-105			1.73	4.13	2.95	1.89-2.28				29,000	2.9
HSK-F63-MEGA10E-120			1.84	4.72	3.58						3.5
HSK-F63-MEGA10E-135			1.93	5.31	4.21					27,000	4.0
HSK-F63-MEGA13E-75❖	.125-.500 (3-12mm)	1.654	1.80	2.95	1.85	1.97	MEC13-□	MEN13	MGR42	30,000	2.4
HSK-F63-MEGA13E-90❖			1.90	3.54	2.44	2.52					3.1
HSK-F63-MEGA13E-105			2.01	4.13	3.07	1.97-2.28				29,000	3.5
HSK-F63-MEGA13E-135			2.04	5.31	4.25	1.97-2.36				26,000	4.4

- MEGA E NUT is included; coolant pipe, collet, wrench and adjusting screw must be ordered separately
- 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
- Contact us for a plug screw to block a coolant through hole
- Adjusting screws cannot be used with models marked ❖
- If HSK tool holders are used in a machine which does not recommend the center through coolant, the plug screw should be mounted to our tools

ACCESSORIES

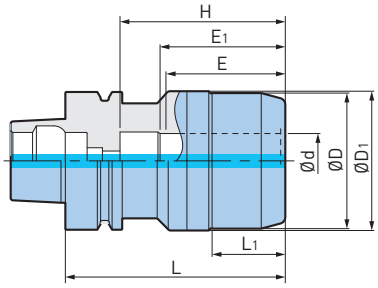
MEGA DOUBLE POWER CHUCK

CLAMPING RANGE: Ø16-32mm

For Heavy Duty End Milling

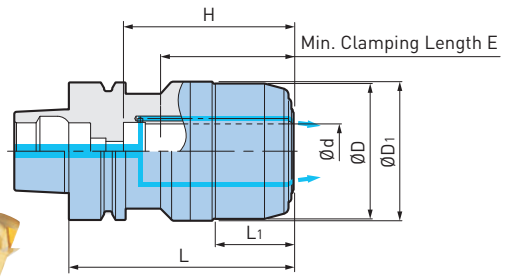
MAX 28,000 RPM

COOLANT THROUGH



Catalog Number	ød	øD	øD1	L	L1	H	Min. Clamping Length		Wrench	Weight (lbs.)
							E	E1		
HSK-F63-MEGA16D-80A	**16mm**	1.654	2.087	3.15	.98	2.17	1.89	1.97	MGR42L	2.6
HSK-F63-MEGA20D-90A	**20mm**	1.969	2.165	3.54	1.34	2.56	1.97	2.20	MGR50L	3.1
HSK-F63-MEGA25D-100A	**25mm**	2.441	2.480	3.94	1.54	2.95	2.20	2.24	MGR62L	4.0
HSK-F63-MEGA32D-105A	**32mm**	2.756	2.795	4.13	1.30	3.15	2.36	2.52	MGR70L	4.4

- Wrench must be ordered separately
- 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
- Contact us for a plug screw to block a coolant through hole
- If HSK tool holders are used in a machine which does not recommend the center through coolant, the plug screw should be mounted to our tools



COOLANT THROUGH

Catalog Number	Ød	ØD	ØD1	L	L1	H	E	Wrench	Weight (lbs.)
HSK-F63-MEGA16DS-80A	**16mm**	1.654	2.087	3.23	1.06	2.24	1.89	MGR42L	2.6
HSK-F63-MEGA20DS-90A	**20mm**	1.969	2.165	3.62	1.42	2.64	1.97	MGR50L	3.1
HSK-F63-MEGA25DS-100A	**25mm**	2.441	2.480	4.02	1.61	3.03	2.20	MGR62L	4.0
HSK-F63-MEGA32DS-105A	**32mm**	2.756	2.795	4.21	1.38	3.23	2.36	MGR70L	4.4

- Wrench must be ordered separately
- 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
- Jet-through type provides coolant form the chuck nose, thus tools with oil holes cannot be used
- "H" dimension is the Max tool shank length that can be inserted into the holder
- Contact us for a plug screw to block a coolant through hole
- If HSK tool holders are used in a machine which does not recommend the center through coolant, the plug screw should be mounted to our tools

ACCESSORIES

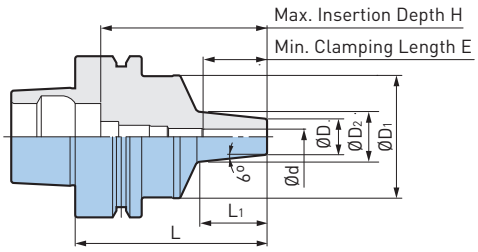
COLLET PG. 386 | PERFECT SEAL/ JET COLLET PG. 383 | MEGA WRENCH PG. 390

SUPER SLIM TYPE

CLAMPING RANGE: Ø3mm-12mm

For Drills, Reamers, Ball Mills, End Mills, Diamond Reamers & Grinding Tools

COOLANT THROUGH



Catalog Number	Ød	ØD	ØD1	ØD2	L	L1	H	E	Max RPM	Weight (lbs.)
HSK-F63-HDC3S-75	**3mm**	.551	1.890	.787	2.95	1.02	2.56	.63	30,000	2.2
HSK-F63-HDC4S-75	**4mm**							.75	30,000	2.2
HSK-F63-HDC6S-75	**6mm**							.98	30,000	2.2
HSK-F63-HDC8S-75	**8mm**	.669		.906		1.06		1.22	30,000	2.2
HSK-F63-HDC10S-75	**10mm**	.748		1.024				1.30	30,000	2.2
HSK-F63-HDC12S-75	**12mm**	.827		1.102		1.10		1.42	30,000	2.2

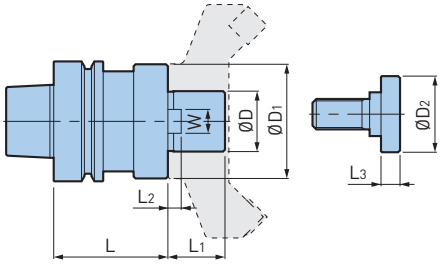
- Adjusting screws cannot be used
- If HSK tool holders are used in a machine which does not recommend the center through coolant, the plug screw should be mounted to our tools

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".

FACE MILL ARBOR—TYPE A

COOLANT THROUGH

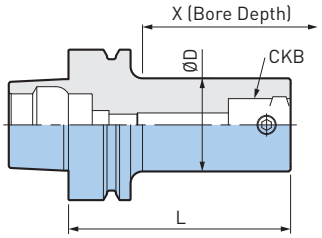


Catalog Number	ØD	ØD1	ØD2	L	L1	L2	L3	W	Clamping Screw	Weight (lbs.)
HSK-F63-FMA25.4-45	25.4mm	1.77	1.30	1.77	.866	.197	.39	.375	MBA-M12	2.2

- Clamping screw is included

CKB SHANK

COOLANT THROUGH

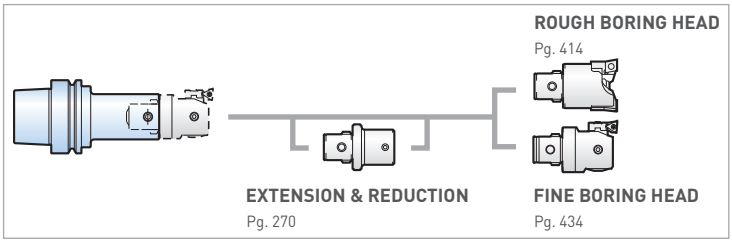


Catalog Number	CK	ØD	L	X	Weight (lbs.)
HSK-F63-CKB1-78	CKB1	.748	3.051	2.874	1.8
HSK-F63-CKB2-90	CKB2	.945	3.524	3.701	1.8
HSK-F63-CKB3-100	CKB3	1.220	3.937	4.252	2.2
HSK-F63-CKB4-93	CKB4	1.535	3.661	4.252	2.6
HSK-F63-CKB5-83	CKB5	1.968	3.268	4.488	2.9

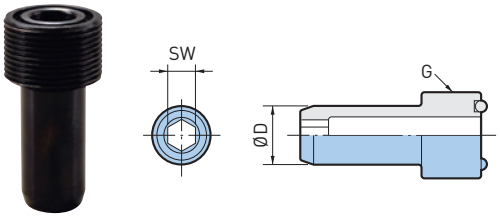
• X dimensions on the table are reference figures when EWN/EWE head is mounted

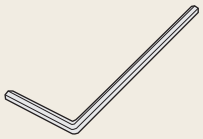
ACCESSORIES

SPARE PARTS
PG. 538



MONO BLOCK TYPE—FORM A/E

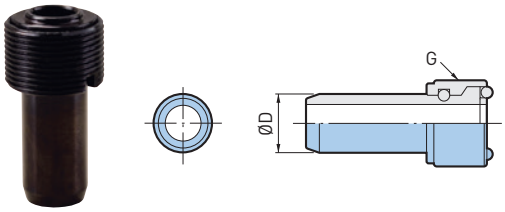


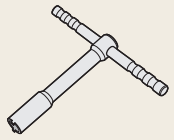
Catalog Number	ØD	G	SW (mm)	
HSK25-CP	5mm	M8 P1	2.5mm	
HSK32-CP	6mm	M10 P1	3mm	
HSK40-CP	8mm	M12 P1	4mm	
HSK50-CP	10mm	M16 P1	5mm	
HSK63-CP	12mm	M18 P1	6mm	
HSK80-CP	14mm	M20 P1.5	8mm	
HSK100-CP	16mm	M24 P1.5	8mm	
HSK125-CP	18mm	M30 P1.5	10mm	

CAUTION

Some machine tool builders may recommend the mono block type. Contact your machine builder and verify the proper style of coolant pipe to be selected. For machines capable of supplying coolant through the spindle, the coolant pipe should be fitted to all HSK holders to protect against accidental selection of coolant.

1º SWING TYPE—FORM A/E



Catalog Number	ØD	G	Wrench (Optional)	
HSK40-CPM	8mm	M12 P1	CPW-40	
HSK50-CPM	10mm	M16 P1	CPW-50	
HSK63-CPM	12mm	M18 P1	CPW-63	
HSK80-CPM	14mm	M20 P1.5	CPW-80	
HSK100-CPM	16mm	M24 P1.5	CPW-100	
HSK125-CPM	18mm	M30 P1.5	CPW-125	

CAUTION

DIN standard specifies ±1 degree of float. For proper installation, the special wrench is necessary. For machines capable of supplying coolant through the spindle, the coolant pipe should be fitted to all HSK holders to protect against accidental selection of coolant.

HSK PLUG SCREW

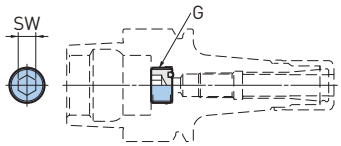


Fig. 1

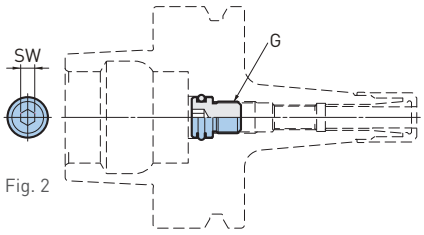


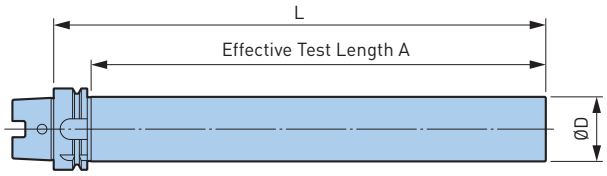
Fig. 2

Catalog Number	Fig.	Body Type	G	SW
HSK25-PG	1	HSK-A25	M8 P1	4
		HSK-E25		
HSK32-PG		HSK-A32	M10 P1	5
		HSK-E32		
HSK40-PG		HSK-A40	M12 P1	6
		HSK-E40		
HSK-F63-PG	2	HSK-F63	M9 P0.75	4

- If HSK tool holders are used in a machine which does not recommend the center through coolant, the plug screw should be mounted to our tools
- HSK-F63-PG can only be used in original BIG DAISHOWA HSK-F63 tool holders; not compatible with other manufacturers

DYNA TEST

Helps identify potential problems and can reduce downtime and costly repairs of the machine tool spindle.



HSK Form	Catalog Number	L	A	ØD
A	**HSK-A40-32-L180SD**	7.087	6.181	32mm
	HSK-A50-32-L150SD	5.905	4.764	
	HSK-A50-32-L240SD	9.449	8.307	
	HSK-A63-50-L200SD	7.874	6.732	50mm
	HSK-A63-50-L350SD	13.780	12.638	
	HSK-A100-50-L200SD	7.784	6.614	
	HSK-A100-50-L350SD	13.780	12.520	
	HSK-A125-50-L360SD	14.173	12.91	
E	**HSK-E25-20-L175**	6.890	6.417	20mm
	HSK-E32-20-L180	7.087	6.220	
	HSK-E40-32-L180		6.181	32mm
	HSK-E50-32-L240	9.449	8.307	
F	**HSK-F63-50-L200**	7.874	6.732	50mm
	HSK-F63-50-L350	13.780	12.638	

DUAL CONTACT C5/6/8

BIG CAPTO SHANK

COLLET CHUCKS 242-251

MEGA MICRO CHUCK 242-243
MEGA NEW BABY CHUCK 244-247
MEGA ER GRIP 248-249
MEGA E CHUCK 250-251

MILLING CHUCKS 252-255

MEGA DOUBLE POWER CHUCK 252-253
NEW Hi-POWER MILLING CHUCK 255

HYDRAULIC CHUCKS 256-257

BASIC ARBORS 258-263

SHRINK FIT HOLDER 258
SIDE LOCK ENDMILL HOLDER 259
SIDE CUTTER ARBOR A 259
MORSE TAPER HOLDER 260
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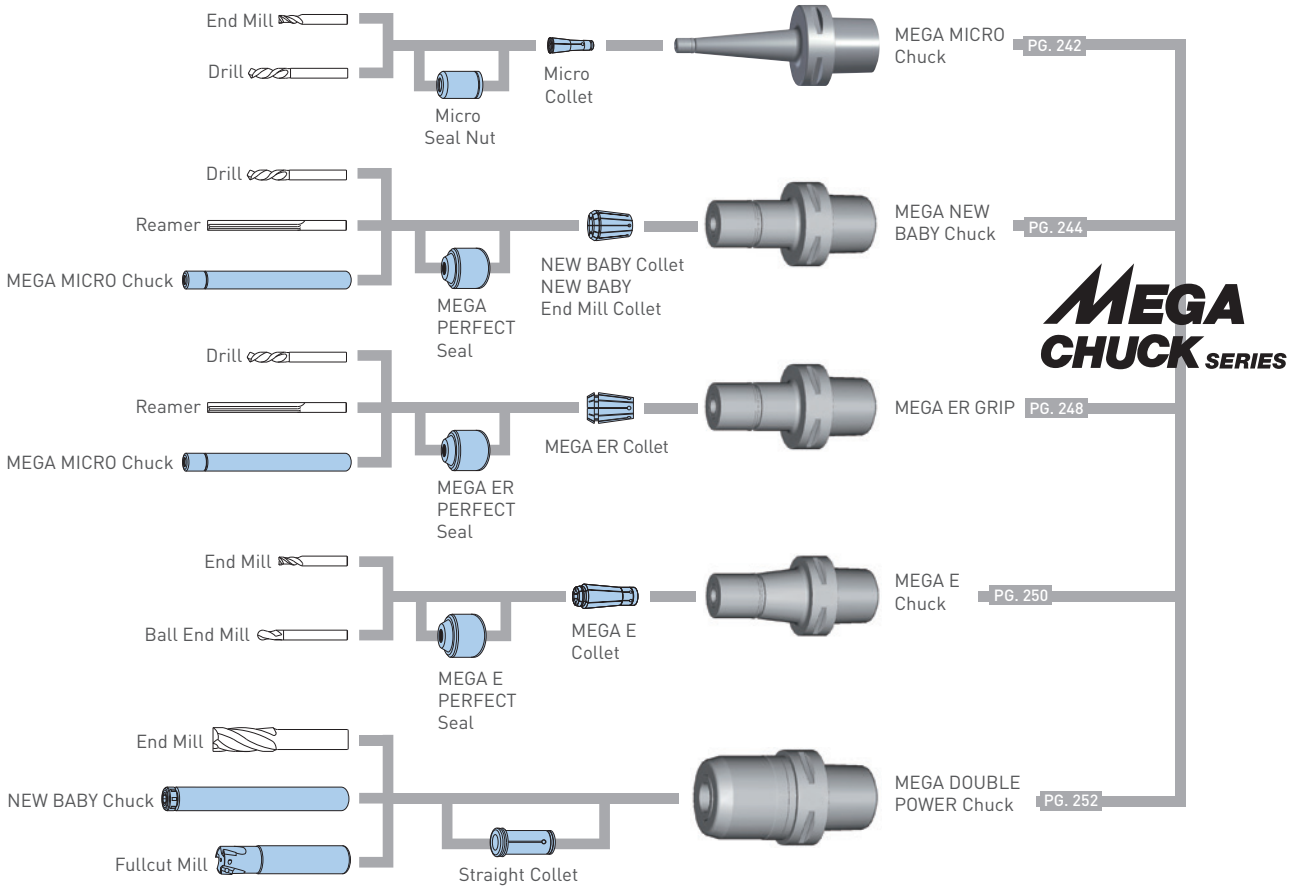
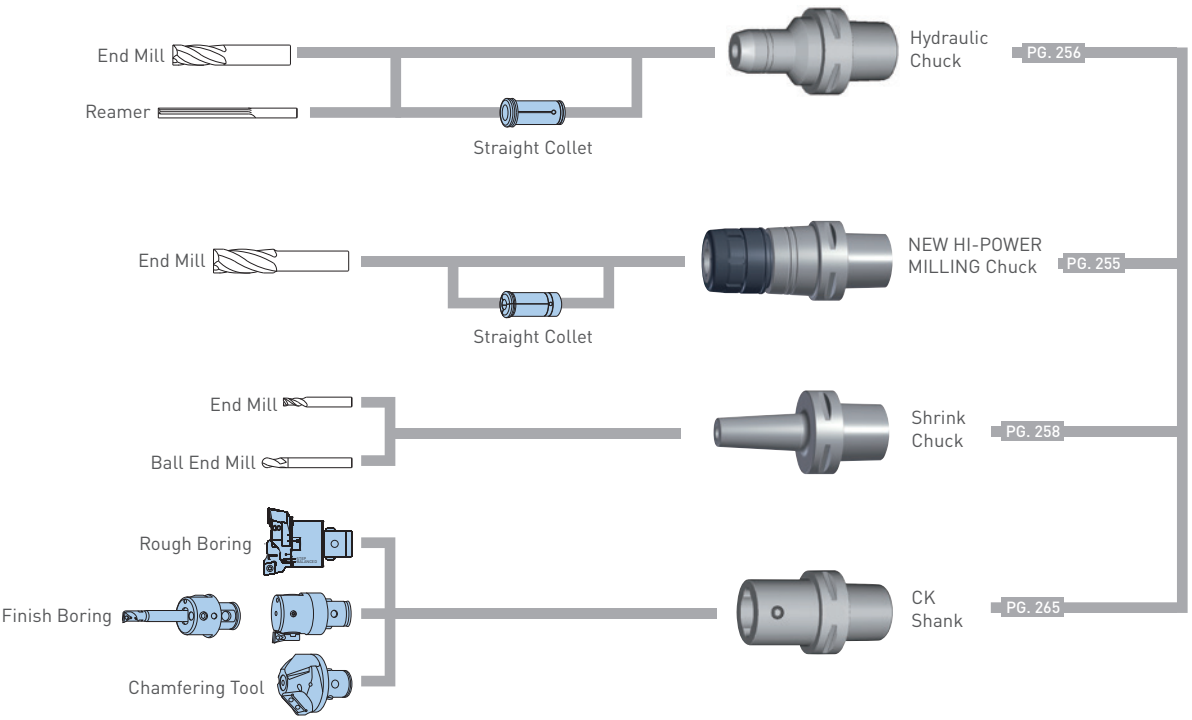
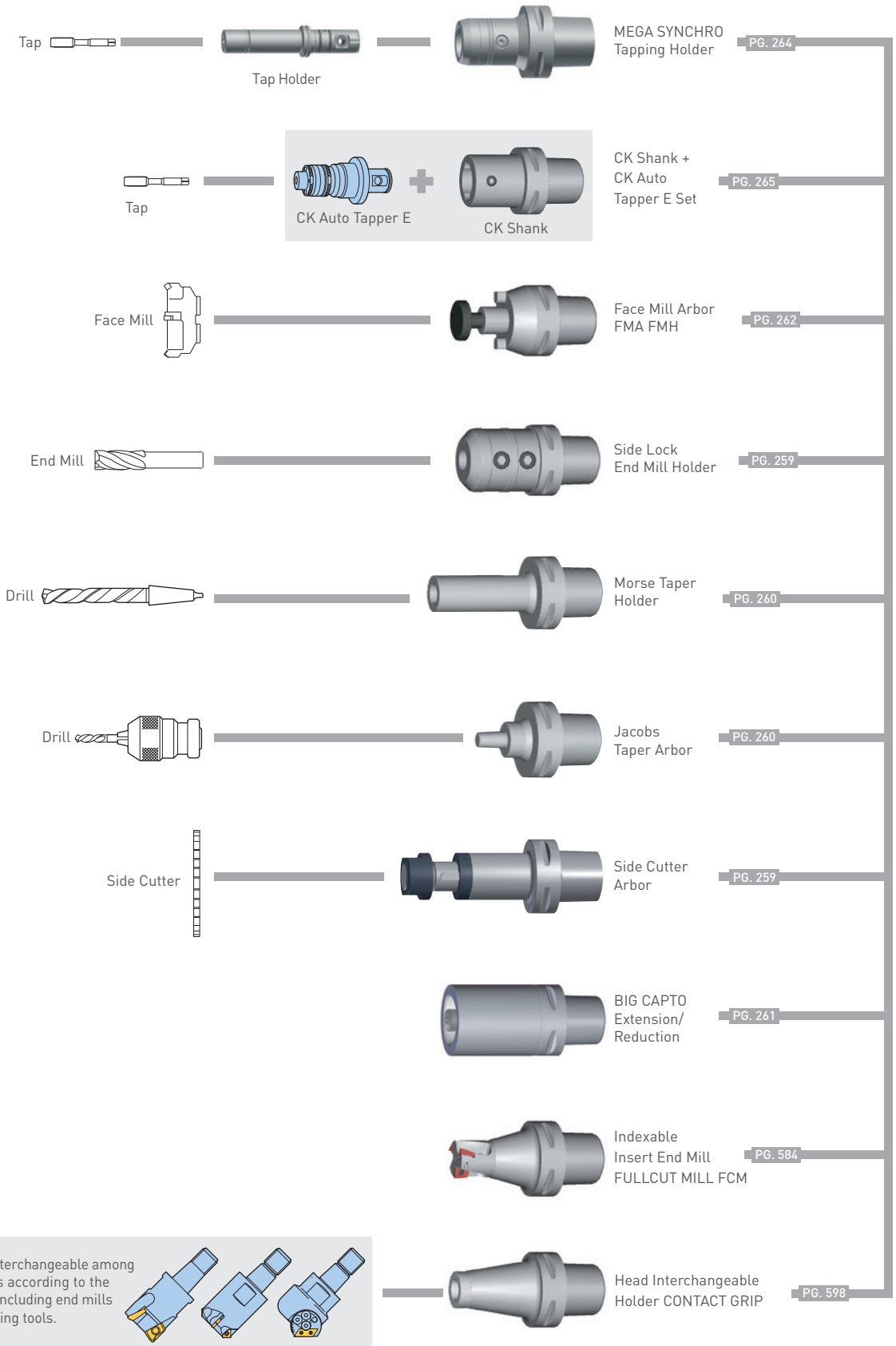
SPINDLE CLEANERS 267

ROTATING TOOL SYSTEM CHART






Tap
Tap Holder
MEGA SYNCHRO Tapping Holder
PG. 264
Tap
CK Auto Tapper E
CK Shank
CK Shank + CK Auto Tapper E Set
PG. 265
Face Mill
Face Mill Arbor FMA FMH
PG. 262
End Mill
Side Lock End Mill Holder
PG. 259
Drill
Morse Taper Holder
PG. 260
Drill
Jacobs Taper Arbor
PG. 260
Side Cutter
Side Cutter Arbor
PG. 259
BIG CAPTO Extension/ Reduction
PG. 261
Indexable Insert End Mill FULLCUT MILL FCM
PG. 584
Heads are interchangeable among various tools according to the application, including end mills and chamfering tools.
Head Interchangeable Holder CONTACT GRIP
PG. 598

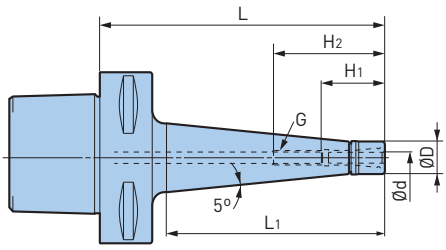
MEGA MICRO CHUCK

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

For Micro Drill & End Mill Applications

HIGHER RIGIDITY

MAX 35,000 RPM



Catalog Number	Ød	ØD	L	L1	H1	H2	G	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
C3-MEGA 6S-45T	**.018-.238**	.551	1.77	1.06	1.10	1.54	—	NBC 6S-□	MGN6S	MGR14	30,000	.3
C4-MEGA3S-60T	**.018-.125**	.394	2.36	1.38	.87	1.50	M4 P0.7	NBC3S-□	MGN3S	MGR10	35,000	.7
C4-MEGA6S-60T	**.018-.238**	.551	2.36	1.38	1.10	1.85	M7 P0.75	NBC6S-□	MGN6S	MGR14	30,000	.7
C4-MEGA6S-90T			3.54	2.56		1.89					22,000	.9
C5-MEGA3S-105T	**.018-.128**	.394	4.13	3.11	.89	1.52	M4 P0.7	NBC3S-□	MGN3S	MGR10	30,000	1.1
C5-MEGA4S-105T	**.018-.159**	.472	4.13	3.11	1.04	1.85	M5 P0.8	NBC4S-□	MGN4S	MGR12	25,000	1.1
C5-MEGA4S-120T			4.72	3.70							20,000	1.3
C5-MEGA6S-105T	**.018-.238**	.551	4.13	3.11	1.12	1.93	M7 P0.75	NBC6S-□	MGN6S	MGR14	25,000	1.3
C5-MEGA6S-120T			4.72	3.70							20,000	1.3
C6-MEGA3S-120T	**.018-.128**	.394	4.72	3.62	.89	1.52	M4 P0.7	NBC3S-□	MGN3S	MGR10	25,000	2.9
C6-MEGA4S-120T	**.018-.159**	.472	4.72	3.62	1.04	1.85	M5 P0.8	NBC4S-□	MGN4S	MGR12	22,000	2.9
C6-MEGA4S-135T			5.31	4.21							20,000	3.1
C6-MEGA6S-120T	**.018-.238**	.551	4.72	3.62	1.12	1.93	M7 P0.75	NBC 6S-□	MGN6S	MGR14	22,000	2.9
C6-MEGA6S-135T			5.31	4.21							20,000	3.1

- 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

ACCESSORIES

COLLET PG. 356

MEGA NUT PG. 358

SEAL NUT PG. 358

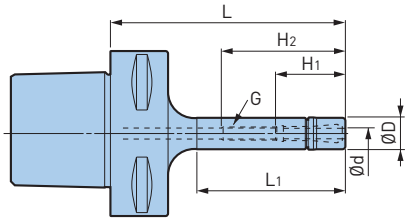
MEGA WRENCH PG. 390

MEGA MICRO CHUCK

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

For Micro Drill & End Mill Applications

MAX 25,000 RPM



Catalog Number	Ød	ØD	L	L1	H1	H2	G	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
C5-MEGA3S-75	**.018-.128**	.394	2.95	1.93	.89	1.50	M4 P0.7	NBC3S-□	MGN3S	MGR10	25,000	.9
C5-MEGA4S-75	**.018-.159**	.472		1.97	1.04	1.85	M5 P0.8	NBC4S-□	MGN4S	MGR12	25,000	.9
C5-MEGA6S-75	**.018-.238**	.551		1.97	1.12	1.93	M7 P0.75	NBC6S-□	MGN6S	MGR14	25,000	.9
C6-MEGA3S-90	**.018-.128**	.394	3.54	1.97	.89	1.50	M4 P0.7	NBC3S-□	MGN3S	MGR10	25,000	2.4
C6-MEGA4S-90	**.018-.159**	.472		2.28	1.04	1.85	M5 P0.8	NBC4S-□	MGN4S	MGR12	25,000	2.6
C6-MEGA6S-90	**.018-.238**	.551		2.28	1.12	1.93	M7 P0.75	NBC6S-□	MGN6S	MGR14	25,000	2.6

- 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

ACCESSORIES

COLLET PG. 356

MEGA NUT PG. 358

SEAL NUT PG. 358

MEGA WRENCH PG. 390

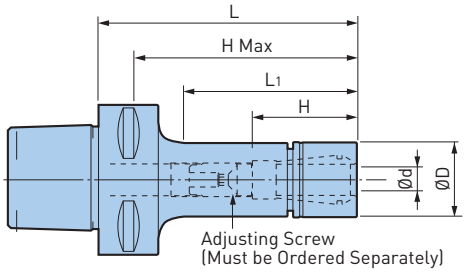
MEGA NEW BABY CHUCK

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

For Drills, Reamers, Taps & Finishing End Mills

MAX 35,000 RPM

COOLANT THROUGH



Catalog Number	Ød	ØD	L	L1	H	H Max	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
C3-MEGA6N-45	**.010-.236**	.787	1.77	1.10	.91	.91	NBC6-□	MGN6	MGR20	30,000	.4
C3-MEGA8N-45	**.020-.315**	.984	1.77	1.10	1.02	1.02	NBC8-□	MGN8	MGR25	30,000	.5
C3-MEGA10N-50	**.059-.394**	1.181	1.97	1.34	1.50	1.50	NBC 10-□	MGN10	MGR30	30,000	.5
C3-MEGA13N-50	**.098-.512**	1.378	1.97	1.38	1.73	1.73	NBC 13-□	MGN13	MGR35	30,000	.6
C3-MEGA16N-55	**.098-.630**	1.654	2.17	—	1.93	1.93	NBC 16-□	MGN16	MGR42	25,000	.7
C4-MEGA6N-75	**.010-.236**	.787	2.95	1.89	.91-1.69	2.72	NBC6-□	MGN6	MGR20	30,000	.9
C4-MEGA8N-75	**.020-.315**	.984	2.95	1.93	1.02-1.77	2.72	NBC8-□	MGN8	MGR25	30,000	1.1
C4-MEGA10N-50	**.059-.394**	1.181	1.97	1.10	1.73	1.73	NBC10-□	MGN10	MGR30	33,000	1.1
C4-MEGA10N-75			2.95	2.05	1.50-1.89	2.72				30,000	1.3
C4-MEGA13N-50❖	**.098-.512**	1.378	1.97	1.14	1.73	1.73	NBC13-□	MGN13	MGR35	30,000	1.1
C4-MEGA13N-75❖			2.95	2.13	2.52	2.52				28,000	1.5
C4-MEGA16N-55❖	**.098-.630**	1.654	2.17	—	1.89	1.89	NBC16-□	MGN16	MGR42	30,000	1.5
C4-MEGA20N-60❖	**.098-.787**	1.811	2.36	—	2.09	2.09	NBC20-□	MGN20	MGR46	25,000	1.8
C5-MEGA6N-60	**.010-.236**	.787	2.36	1.34	.91-1.42	2.09	NBC6-□	MGN6	MGR20	35,000	1.1
C5-MEGA6N-75			2.95	1.93	.91-1.69	2.68				30,000	1.1
C5-MEGA6N-90			3.54	2.44		3.27				30,000	1.1
C5-MEGA6N-105			4.13	3.03		3.86				25,000	1.3
C5-MEGA6N-120			4.72	3.54		4.45				23,000	1.3
C5-MEGA8N-60	**.020-.315**	.984	2.36	1.30	1.02-1.42	2.09	NBC8-□	MGN8	MGR25	35,000	1.1
C5-MEGA8N-75			2.95	1.93	1.02-1.77	2.68				30,000	1.3
C5-MEGA8N-90			3.54	2.52		3.27				30,000	1.3
C5-MEGA8N-105			4.13	3.03		3.86				27,000	1.5
C5-MEGA8N-120			4.72	3.62		4.45				25,000	1.5
C5-MEGA10N-55❖	**.059-.394**	1.181	2.17	1.22	1.89	1.89	NBC10-□	MGN10	MGR30	35,000	1.1
C5-MEGA10N-75			2.95	1.93	1.50-1.89	2.68				33,000	1.3
C5-MEGA10N-90			3.54	2.52		3.27				30,000	1.5
C5-MEGA10N-105			4.13	3.11		3.86				27,000	1.8
C5-MEGA10N-120			4.72	3.62		4.45				25,000	2.0
C5-MEGA13N-55❖	**.098-.512**	1.378	2.17	1.22	1.89	1.89	NBC13-□	MGN13	MGR35	30,000	1.3
C5-MEGA13N-75			2.95	1.93	1.73-1.89	2.68				28,000	1.5
C5-MEGA13N-90			3.54	2.52	1.73-2.48	3.27				25,000	1.8
C5-MEGA13N-105			4.13	3.11		3.86				22,000	2.0
C5-MEGA13N-120			4.72	3.70		4.45				20,000	2.2

Catalog Number	Ød	ØD	L	L1	H	H Max	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
C5-MEGA16N-60❖	.098-.630	1.654	2.36	1.50	2.09	2.09	NBC16-□	MGN16	MGR42	30,000	1.5
C5-MEGA16N-75❖			2.95	2.09	2.68	2.68				28,000	2.0
C5-MEGA16N-90			3.54	2.72	1.89-2.48	3.27				23,000	2.2
C5-MEGA16N-105			4.13	3.31	1.89-2.68	3.86				20,000	2.4
C5-MEGA16N-120			4.72	3.90		4.37				15,000	2.9
C5-MEGA20N-60❖	.098-.787	1.811	2.36	1.54	2.01	2.01	NBC20-□	MGN20	MGR46	23,000	1.8
C5-MEGA20N-75❖			2.95	2.13	2.60	2.60				20,000	2.2
C5-MEGA20N-90			3.54	2.72	2.01-2.36	3.27				17,000	2.4
C5-MEGA20N-105			4.13	3.31	2.01-2.68	3.86				15,000	2.9
C5-MEGA20N-120			4.72	3.90		4.37				13,000	3.1
C6-MEGA6N-60	.010-.236	.787	2.36	1.18	.91-1.30	2.01	NBC6-□	MGN6	MGR20	35,000	2.6
C6-MEGA6N-75			2.95	1.69	.91-1.69	2.60				35,000	2.6
C6-MEGA6N-90			3.54	2.28		3.19				30,000	2.6
C6-MEGA6N-105			4.13	2.87		3.78				30,000	2.9
C6-MEGA6N-120			4.72	3.46		4.37				25,000	2.9
C6-MEGA6N-135			5.31	4.06		4.96				20,000	2.9
C6-MEGA6N-165			6.50	5.04		6.14				15,000	3.1
C6-MEGA6N-200			7.87	6.42		7.52				10,000	3.3
C6-MEGA8N-60	.020-.315	.984	2.36	1.14	1.02-1.22	2.01	NBC8-□	MGN8	MGR25	35,000	2.9
C6-MEGA8N-75			2.95	1.69	1.02-1.77	2.60				35,000	2.9
C6-MEGA8N-90			3.54	2.28		3.19				30,000	2.9
C6-MEGA8N-105			4.13	2.87		3.78				30,000	3.1
C6-MEGA8N-120			4.72	3.46		4.37				25,000	3.1
C6-MEGA8N-135			5.31	4.06		4.96				20,000	3.3
C6-MEGA8N-165			6.50	5.24		6.14				15,000	3.5
C6-MEGA8N-200			7.87	6.42		7.52				10,000	3.7
C6-MEGA10N-60❖	.059-.394	1.181	2.36	1.26	2.01	2.01	NBC10-□	MGN10	MGR30	35,000	2.9
C6-MEGA10N-75			2.95	1.69	1.50-1.77	2.60				33,000	3.1
C6-MEGA10N-90			3.54	2.28	1.50-1.89	3.19				30,000	3.1
C6-MEGA10N-105			4.13	2.87		3.78				25,000	3.3
C6-MEGA10N-120			4.72	3.46		4.37				25,000	3.5
C6-MEGA10N-135			5.31	4.06		4.96				20,000	3.5
C6-MEGA10N-165			6.50	5.24		6.14				15,000	4.0
C6-MEGA10N-200			7.87	6.61		7.52				12,000	4.4

- 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" indicates the adjustment length with an adjusting screw
- Adjusting screws cannot be used with models marked ❖

ACCESSORIES

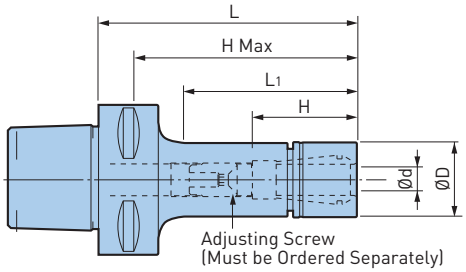
MEGA NEW BABY CHUCK

CLAMPING RANGE: Ø.098"-.787"

For Drills, Reamers, Taps & Finishing End Mills

MAX 35,000 RPM

COOLANT THROUGH



Catalog Number	Ød	ØD	L	L1	H	H Max	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
C6-MEGA13N-60❖	.098-.512	1.378	2.36	1.26	2.01	2.01	NBC13-□	MGN13	MGR35	35,000	2.9
C6-MEGA13N-75❖			2.95	1.77	2.60	2.60				32,000	3.1
C6-MEGA13N-90			3.54	2.36	1.73-2.17	3.19				30,000	3.3
C6-MEGA13N-105			4.13	2.87	1.73-2.48	3.78				25,000	3.5
C6-MEGA13N-120			4.72	3.54		4.37				20,000	3.7
C6-MEGA13N-135			5.31	4.06		4.96				20,000	4.0
C6-MEGA13N-165			6.50	5.24		6.14				15,000	4.4
C6-MEGA13N-200			7.87	6.61		7.52				12,000	4.8
C6-MEGA16N-65❖	.098-.630	1.654	2.56	1.46	2.20	2.20	NBC16-□	MGN16	MGR42	32,000	3.3
C6-MEGA16N-75❖			2.95	1.85	2.60	2.60				30,000	3.5
C6-MEGA16N-90			3.54	2.36	1.89-2.24	3.19				25,000	3.7
C6-MEGA16N-105			4.13	2.95	1.89-2.68	3.78				20,000	4.0
C6-MEGA16N-120			4.72	3.54		4.37				15,000	4.4
C6-MEGA16N-135			5.31	4.13		4.96				15,000	4.6
C6-MEGA16N-165			6.50	5.31		6.14				10,000	5.3
C6-MEGA16N-200			7.87	6.69		7.52				8,000	5.9
C6-MEGA20N-65❖	.098-.787	1.811	2.56	1.46	2.01	2.01	NBC20-□	MGN20	MGR46	32,000	3.3
C6-MEGA20N-75❖			2.95	1.85	2.56	2.56				30,000	3.5
C6-MEGA20N-90			3.54	2.44	2.01-2.20	2.99				25,000	4.0
C6-MEGA20N-105			4.13	3.03	2.01-2.68	3.58				20,000	4.4
C6-MEGA20N-120			4.72	3.62		4.09				15,000	4.6
C6-MEGA20N-135			5.31	4.21		4.37				15,000	5.1
C6-MEGA20N-165			6.50	5.39		4.37				10,000	5.7
C6-MEGA20N-200			7.87	6.77		4.37				8,000	6.4
C8-MEGA6N-90	.010-.236	.787	3.54	1.77	.91-1.69	3.54	NBC6-□	MGN6	MGR20	20,000	5.3
C8-MEGA6N-120			4.72	2.95		4.72				17,000	5.7
C8-MEGA6N-165			6.50	4.72		6.50				12,000	5.9
C8-MEGA8N-90	.020-.315	.984	3.54	1.81	1.02-1.77	3.54	NBC8-□	MGN8	MGR25	20,000	5.7
C8-MEGA8N-120			4.72	2.95		4.72				17,000	5.9
C8-MEGA8N-165			6.50	4.72		6.50				13,000	6.2

Catalog Number	Ød	ØD	L	L1	H	H Max	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
C8-MEGA10N-90	.059-.394	1.181	3.54	1.77	1.50-1.89	3.54	NBC10-□	MGN10	MGR30	20,000	5.9
C8-MEGA10N-120			4.72	2.95		4.72				17,000	6.2
C8-MEGA10N-165			6.50	4.72		6.50				13,000	6.6
C8-MEGA13N-90	.098-.512	1.378	3.54	1.97	1.73-2.48	3.54	NBC13-□	MGN13	MGR35	18,000	6.2
C8-MEGA13N-120			4.72	3.15		4.72				15,000	6.4
C8-MEGA13N-165			6.50	4.72		6.50				12,000	7.0
C8-MEGA13N-200			200	155		7.87				8,000	7.7
C8-MEGA16N-90	.098-.630	1.654	3.54	1.97	1.89-2.60	3.54	NBC16-□	MGN16	MGR42	15,000	6.4
C8-MEGA16N-120			4.72	3.15	1.89-2.68	4.72				14,000	7.0
C8-MEGA16N-165			6.50	4.92		6.50				13,000	7.9
C8-MEGA20N-90	.098-.787	1.811	3.54	1.97	2.01-2.68	3.27	NBC20-□	MGN20	MGR46	15,000	6.6
C8-MEGA20N-120			4.72	3.15		4.45				14,000	7.3
C8-MEGA20N-165			6.50	4.92		4.45				13,000	8.4
C8-MEGA20N-200			7.87	6.30		4.45				10,000	9.0

- 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" indicates the adjustment length with an adjusting screw
- Adjusting screws cannot be used with models marked ❖

ACCESSORIES

COLLET PG. 360

MEGA NUT PG. 366

PERFECT SEAL PG. 368

MEGA WRENCH PG. 390

SCREW PG. 411

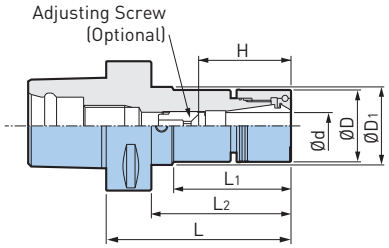
MEGA ER GRIP

CLAMPING RANGE: Ø.075"-.787"

For Drills, Reamers, Taps & Finishing End Mills

MAX 33,000 RPM

COOLANT THROUGH



Catalog Number	Ød	ØD	ØD1	L	L1	L2	H	Collet	Nut (NOT Included)	Wrench	Weight (lbs.)
C5-MEGAER16-60NL❖	.075-.394	1.181	1.378	2.36	1.10	1.58	2.09	ERC16-□	MERN16*	MGR30L	1.5
C5-MEGAER16-90NL				3.54	2.22	2.76	1.38-1.85				2.0
C5-MEGAER16-105NL				4.13	2.82	3.35					2.2
C5-MEGAER16-135NL				5.32	4.00	4.53					2.6
C5-MEGAER20-60NL❖	.108-.512	1.378	1.496	2.36	1.61	1.58	2.09	ERC20-□	MERN20*	MGR35L	1.8
C5-MEGAER20-90NL				3.54	2.28	2.76	1.65-2.44				2.0
C5-MEGAER20-105NL				4.13	2.84	3.35					2.2
C5-MEGAER20-135NL				5.32	4.02	4.53					2.9
C5-MEGAER25-65NL❖	.108-.630	1.654	—	2.56	—	1.77	2.28	ERC25-□	MERN25*	MGR42L	2.0
C5-MEGAER25-90NL				3.54		2.68	1.73-2.28				2.4
C5-MEGAER25-105NL				4.13		3.35	1.73-2.64				2.6
C5-MEGAER25-135NL				5.32		4.53					3.3
C5-MEGAER32-70NL❖	.108-.787	1.969	—	2.76	—	1.97	2.48	ERC32-□	MERN32*	MGR50L	2.2
C5-MEGAER32-90NL				3.54		2.76	1.97-2.32				2.6
C5-MEGAER32-105NL				4.13		3.35	1.97-2.68				3.1
C5-MEGAER32-135NL				5.32		4.53					4.0
C6-MEGAER16-60NL❖	.075-.394	1.181	1.378	2.36	1.10	1.50	2.01	ERC16-□	MERN16*	MGR30L	2.9
C6-MEGAER16-90NL				3.54	2.15	2.68	1.38-1.85				3.1
C6-MEGAER16-105NL				4.13	2.74	3.27					3.3
C6-MEGAER16-135NL				5.32	3.92	4.45					3.5
C6-MEGAER20-65NL❖	.108-.512	1.378	1.496	2.56	1.16	1.69	2.20	ERC20-□	MERN20*	MGR35L	2.9
C6-MEGAER20-90NL				3.54	2.17	2.68	1.65-2.28				3.3
C6-MEGAER20-105NL				4.13	2.76	3.27	1.65-2.44				3.5
C6-MEGAER20-135NL				5.32	3.94	4.45					3.7
C6-MEGAER20-165NL				6.50	5.12	5.63					4.2
C6-MEGAER25-65NL❖	.108-.630	1.654	—	2.56	—	1.69	2.20	ERC25-□	MERN25*	MGR42L	3.1
C6-MEGAER25-90NL				3.54		2.68	1.73-2.32				3.5
C6-MEGAER25-105NL				4.13		3.27	1.73-2.64				3.7
C6-MEGAER25-135NL				5.32		4.45					4.4
C6-MEGAER25-165NL				6.50		5.63					4.8

Catalog Number	Ød	ØD	ØD1	L	L1	L2	H	Collet	Nut (NOT Included)	Wrench	Weight (lbs.)
C6-MEGAER32-70NL❖	.108-.787	1.969	—	2.76	—	1.89	2.52	ERC32-□	MERN32*	MGR50L	3.3
C6-MEGAER32-90NL				3.54		2.68	1.97-2.32				4.0
C6-MEGAER32-105NL				4.13		3.27	1.97-2.68				4.2
C6-MEGAER32-135NL				5.32		4.45					5.1
C6-MEGAER32-165NL				6.50		5.63					5.7

***Nut, adjusting screw, collet and wrench are not included**
- Weight does not include collet
- MEGA ER GRIP is not able to use DIN6499 Form-A collets and ESX collets
- 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 ❖

CAUTION

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.

ACCESSORIES

***MEGA NUT is the recommended nut to achieve high accuracy and clamping force**

HIGH CONCENTRICITY

MEGA ER PERFECT SEAL

MEGA WRENCH

Capable of sealing high pressure coolant up to 7Mpa. For applications with coolant supplied through the tools. MEGA Wrench is used for tightening.

MEGA ER NUT*

MEGA WRENCH

High accuracy and clamping force are provided with thrust ball bearings. Ideal for solid carbide drills and reamers. Slot-free outer diameter increases rigidity of the nut itself. The one-way clutch of the MEGA Wrench tightens the nut securely and easily by ratchet function.

MEGA ER SOLID NUT

MEGA WRENCH

High performance solid nut with surface treatment for friction reduction. Slot-free outer diameter increases rigidity of the nut itself. The one-way clutch of the MEGA Wrench tightens the nut securely and easily by ratchet function.

ER NUT

C-SPANNER

Basic nut with surface treatment for friction reduction. C-spanner is used for tightening.

***MEGA NUT is the recommended nut to achieve high accuracy and clamping force**

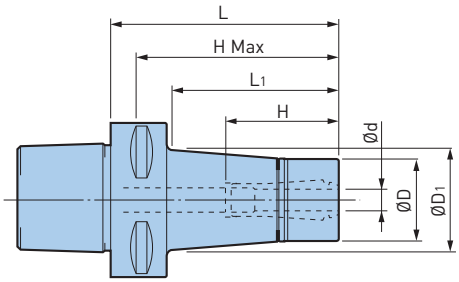
MEGA E CHUCK

CLAMPING RANGE: Ø.125"-.500" (Ø3-12mm)

Exclusively for High Speed Finish End Milling

MAX 35,000 RPM

COOLANT THROUGH



Catalog Number	Ød	ØD	ØD1	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
C4-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
C4-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
C4-MEGA13E-60❖	.125-.500 (3-12mm)	1.654	—	2.36	—	1.97	1.97	MEC13-☐	MEN13	MGR42	25,000	1.3
C5-MEGA6E-55❖	.125-.250 (3-6mm)	.984	1.04	2.17	1.14	1.89	1.89	MEC6-☐	MEN6	MGR25	35,000	1.1
C5-MEGA6E-90			1.27	3.54	2.52	1.46-1.77	3.27				25,000	1.5
C5-MEGA6E-105			1.39	4.13	3.19		3.86				22,000	1.8
C5-MEGA6E-120			1.49	4.72	3.82		4.45				20,000	2.0
C5-MEGA8E-55❖	.125-.250 (3-8mm)	1.181	1.23	2.17	1.22	1.89	1.89	MEC8-☐	MEN8	MGR30	35,000	1.3
C5-MEGA8E-90			1.47	3.54	2.64	1.65-2.01	3.27				25,000	1.8
C5-MEGA8E-105			1.58	4.13	3.23		3.86				22,000	2.2
C5-MEGA8E-120			1.69	4.72	3.86		4.45				20,000	2.4
C5-MEGA10E-60❖	.125-.375 (3-10mm)	1.378	1.47	2.36	1.46	2.09	2.09	MEC10-☐	MEN10	MGR35	30,000	1.3
C5-MEGA10E-90			1.68	3.54	2.72	1.89-2.28	3.27				25,000	2.0
C5-MEGA10E-105			1.78	4.13	3.31		3.86				20,000	2.4
C5-MEGA10E-120			1.78	4.72	3.90		4.45				18,000	2.9
C5-MEGA13E-60❖	.125-.500 (3-12mm)	1.654	1.75	2.36	1.54	1.97	1.97	MEC13-☐	MEN13	MGR42	30,000	1.8
C5-MEGA13E-75❖			1.77	2.95	2.13	2.68	2.68				25,000	2.0
C5-MEGA13E-90			1.76	3.54	2.72	1.97-2.36	3.27				25,000	2.4
C5-MEGA13E-105			1.81	4.13	3.31		3.86				20,000	2.9
C5-MEGA13E-120			1.80	4.72	3.90		4.45				16,000	3.1
C6-MEGA6E-60❖	.125-.250 (3-6mm)	.984	1.10	2.36	1.30	2.01	2.01	MEC6-☐	MEN6	MGR25	35,000	2.6
C6-MEGA6E-75			1.16	2.95	1.89	1.46-1.77	2.06				30,000	2.9
C6-MEGA6E-90			1.26	3.54	2.48		3.19				30,000	3.1
C6-MEGA6E-105			1.37	4.13	3.07		3.78				28,000	3.3
C6-MEGA6E-120			1.47	4.72	3.66		4.37				25,000	3.5
C6-MEGA6E-135			1.57	5.31	4.25		4.96				22,000	4.0
C6-MEGA6E-165			1.78	6.50	5.43		6.14				18,000	4.6

Catalog Number	Ød	ØD	ØD1	L	L1	H	H Max	Collet	Nut	Wrench	Max RPM	Weight (lbs.)
C6-MEGA8E-60❖	.125-.250 (3-8mm)	1.181	1.29	2.36	1.30	2.01	2.01	MEC8-□	MEN8	MGR30	32,000	2.9
C6-MEGA8E-75			1.35	2.95	1.89	1.65-1.81	2.60				30,000	3.1
C6-MEGA8E-90			1.44	3.54	2.48	1.65-2.01	3.19				30,000	3.3
C6-MEGA8E-105			1.56	4.13	3.07		3.78				28,000	3.7
C6-MEGA8E-120			1.66	4.72	3.66		4.37				25,000	4.0
C6-MEGA8E-135			1.76	5.31	4.25		4.96				23,000	4.2
C6-MEGA8E-165			1.98	6.50	5.51		6.14				20,000	5.3
C6-MEGA10E-65❖	.125-.375 (3-10mm)	1.339	1.51	2.56	1.50	2.20	2.20	MEC10-□	MEN10	MGR35	32,000	3.1
C6-MEGA10E-75❖			1.54	2.95	1.89	2.60	2.60				30,000	3.3
C6-MEGA10E-90			1.64	3.54	2.48	1.89-2.28	3.19				30,000	3.5
C6-MEGA10E-105			1.75	4.13	3.07		3.78				27,000	4.0
C6-MEGA10E-120			1.85	4.72	3.66		4.37				23,000	4.4
C6-MEGA10E-135			1.97	5.31	4.33		4.96				20,000	4.8
C6-MEGA10E-165			2.18	6.50	5.55		6.14				17,000	5.9
C6-MEGA13E-65❖	.125-.500 (3-12mm)	1.654	1.78	2.56	1.54	2.20	2.20	MEC13-□	MEN13	MGR42	30,000	3.3
C6-MEGA13E-75❖			1.81	2.95	1.93	2.60	2.60				30,000	3.5
C6-MEGA13E-90			1.93	3.54	2.60	1.97-2.17	3.19				28,000	4.0
C6-MEGA13E-105			2.02	4.13	3.15		3.78				25,000	4.6
C6-MEGA13E-120			2.13	4.72	3.78	1.97-2.36	4.37				22,000	5.1
C6-MEGA13E-135			2.24	5.31	4.41		4.96				18,000	5.7
C6-MEGA13E-165			2.45	6.50	5.55		6.14				15,000	7.0
C8-MEGA6E-90	.125-.250 (3-6mm)	.984	1.21	3.54	2.17	1.46-1.77	3.54	MEC6-□	MEN6	MGR25	20,000	5.7
C8-MEGA6E-135			1.52	5.31	3.94		5.31				14,000	6.6
C8-MEGA8E-90	.125-.250 (3-8mm)	1.181	1.39	3.54	2.17	1.65-2.01	3.54	MEC8-□	MEN8	MGR30	20,000	5.9
C8-MEGA8E-135			1.70	5.31	3.94		5.31				16,000	7.0
C8-MEGA10E-90	.125-.375 (3-10mm)	1.378	1.59	3.54	2.17	1.89-2.28	3.54	MEC10-□	MEN10	MGR35	20,000	6.2
C8-MEGA10E-120			1.81	4.72	3.35		4.72				20,000	7.1
C8-MEGA10E-135			1.90	5.31	3.94		5.31				16,000	7.5
C8-MEGA13E-90	.125-.500 (3-12mm)	1.654	1.85	3.54	2.17	1.94-2.36	3.54	MEC13-□	MEN13	MGR42	18,000	6.6
C8-MEGA13E-120			2.07	4.72	3.35		4.72				17,000	7.5
C8-MEGA13E-135			2.16	5.31	3.94		5.31				14,000	8.1
C8-MEGA13E-165			2.38	6.50	5.12		6.50				12,000	9.5

- 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 ❖

ACCESSORIES

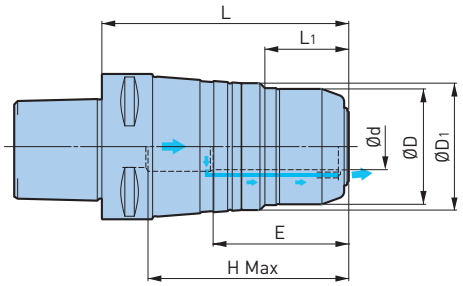
MEGA DOUBLE POWER CHUCK

CLAMPING RANGE: Ø.625"-1.250" (Ø16-32mm)

For Heavy Duty End Milling

MAX 30,000 RPM

COOLANT THROUGH



Catalog Number	Ød	ØD	ØD1	L	L1	H	Min Clamping Length E	Wrench	Max RPM	Weight (lbs.)
C5-MEGA16DS-65A	**16mm**	1.654	2.087	2.65	1.02	2.36	1.89	MGR42	30,000	2.0
C5-MEGA16DS-90A				3.64		2.87			28,000	3.1
C5-MEGA20DS-75A	**20mm**	1.969	2.165	3.05	1.42	2.76	1.97	MGR50L	30,000	2.6
C5-MEGA20DS-90A				3.64		3.35			28,000	3.3
C5-MEGA25DS-75A	**25mm**	2.441	2.480	3.05	1.42	2.76	2.20	MGR62L	25,000	3.1
C5-MEGA25DS-90A				3.64		3.35			22,000	3.7
C6-MEGA.625DS-3A	**.625**	1.654	2.087	3.09	1.02	2.48	1.89	MGR42L	30,000	3.7
C6-MEGA.750DS-3A	**.750**	1.969	2.165	3.09	1.42	2.68	1.97	MGR50L	30,000	4.4
C6-MEGA1.000DS-3A	**1.000**	2.441	2.469	3.09	1.42	2.68	2.20	MGR62L	28,000	4.6
C6-MEGA1.250DS-3.5A	**1.250**	2.756	2.783	3.59	1.46	3.27	2.36	MGR70L	25,000	5.5
C6-MEGA16DS-70A	**16mm**	1.654	2.087	2.85	1.02	2.48	1.89	MGR42L	30,000	3.7
C6-MEGA16DS-90A				3.64		3.27			28,000	4.6
C6-MEGA16DS-105A●				4.23		2.87			25,000	5.3
C6-MEGA16DS-135A●				5.41					22,000	6.6
C6-MEGA20DS-75A	**20mm**	1.969	2.165	3.05	1.42	2.68	1.97	MGR50L	30,000	4.4
C6-MEGA20DS-90A				3.64		3.27			28,000	4.8
C6-MEGA20DS-105A				4.23		3.43			25,000	5.5
C6-MEGA20DS-135A❖				5.41		2.80-3.19			22,000	6.8
C6-MEGA25DS-75A◆	**25mm**	2.441	2.480	3.05	1.42	2.68	2.20	MGR62L	28,000	4.6
C6-MEGA25DS-90A				3.64		3.27			25,000	5.3
C6-MEGA25DS-105A				4.23		3.43			23,000	6.2
C6-MEGA25DS-135A❖				5.41		2.87-3.27			20,000	7.3
C6-MEGA32DS-90A	**32mm**	2.756	2.795	3.64	1.46	3.27	2.36	MGR70L	25,000	5.5
C6-MEGA32DS-105A				4.23		3.62			22,000	6.4
C6-MEGA32DS-135A❖				5.41		3.19-3.58			18,000	7.5

Catalog Number	Ød	ØD	ØD1	L	L1	H	Min Clamping Length E	Wrench	Max RPM	Weight (lbs.)
C8-MEGA1.250DS-3.5	**1.250**	3.150	3.386	3.59	1.65	3.62	2.80	MGR80L	20,000	9.5
C8-MEGA16DS-70	**16mm**	1.811	2.193	2.85	.98	2.87	1.89	MGR46L	25,000	6.2
C8-MEGA16DS-105●				4.23					20,000	7.9
C8-MEGA16DS-135●				5.41					18,000	9.0
C8-MEGA20DS-75	**20mm**	2.362	2.717	3.05	1.10	3.03	1.97	MGR60L	25,000	7.3
C8-MEGA20DS-135❖				5.41		2.80-3.19			18,000	11.0
C8-MEGA20DS-165❖				6.59					15,000	13.0
C8-MEGA25DS-75	**25mm**	2.756	3.031	7.97	1.34	3.03	2.20	MGR70L	21,000	7.5
C8-MEGA25DS-135❖				5.41		3.07-3.46			15,000	11.9
C8-MEGA25DS-165❖				6.59					12,000	14.1
C8-MEGA32DS-90	**32mm**	3.150	3.386	3.64	1.65	3.62	2.36	MGR80L	18,000	9.5
C8-MEGA32DS-105				4.23		4.02			17,000	10.6
C8-MEGA32DS-135				5.41		4.21			15,000	13.2
C8-MEGA32DS-165❖				6.59		3.15-3.82			12,000	16.1

- Wrench must be ordered separately
- Jet-through type provides coolant form the chuck nose, thus tools with oil holes cannot be used
- Models marked ❖ can be used with optional axial adjusting screws
- M8 hex screw is required with models marked ●
- Adjusting screw can only be used with models marked ● or ❖, please contact us if using for center through applications
- Models marked ◆ can only be used with straight collet model C25-□□

ACCESSORIES

COLLET PG. 386

PERFECT SEAL/ JET COLLET PG. 383

MEGA WRENCH PG. 390

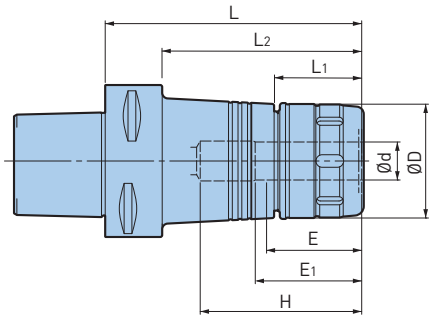
SCREW PG. 412

NEW Hi-POWER MILLING CHUCK

CLAMPING RANGE: Ø16-32mm

For Heavy Duty End Milling

COOLANT THROUGH



Catalog Number	ød	øD	L	L1	L2	H	Min Clamping Length		Wrench	Weight (lbs.)
							E	E1		
C5-HMC16S-65	**16mm**	1.693	2.56	1.73	1.77	2.28	1.89	2.17	NBK20	1.8
C5-HMC20S-75	**20mm**	1.969	2.95	1.73	—	2.68	1.97	2.20	FK45-50L	2.2
C5-HMC20-105			4.13		—	3.35				3.1
C5-HMC25S-75◆	**25mm**	2.165	2.95	1.85	—	2.68	2.20	2.24	FK52-55	2.9
C5-HMC25S-105			4.13		—	3.43				3.7
C5-HMC32S-85	**32mm**	2.441	3.35	2.20	—	3.07	2.36	2.28	FK58-62L	3.5
C6-HMC16S-70	**16mm**	1.693	2.76	1.73	1.89	2.40	1.89	2.17	FK45-50L	3.3
C6-HMC20S-75	**20mm**	1.969	2.95	1.73	2.09	2.60	1.97	2.20	FK45-50L	3.7
C6-HMC20S-105			4.13		3.27	3.35				5.1
C6-HMC20S-120❖			4.72		3.86	2.72-3.11				5.5
C6-HMC25S-75◆	**25mm**	2.323	2.95	1.77	2.09	2.60	2.20	2.24	FK58-62L	4.4
C6-HMC25S-105			4.13		3.27	3.43				5.5
C6-HMC25S-135❖			5.31		4.45	2.87-3.27				6.8
C6-HMC32S-90	**32mm**	2.677	3.54	2.13	—	3.19	2.36	2.52	FK68-75L	5.3
C6-HMC32S-105			4.13		—	3.54				6.0
C6-HMC32S-135❖			5.31		—	3.11-3.50				7.3
C8-HMC20-80	**20mm**	2.362	3.15	1.81	1.97	3.15	1.97	2.20	FK58-62	7.3
C8-HMC20-135❖			5.31		4.13	2.72-3.11				10.4
C8-HMC25-85	**25mm**	2.441	3.35	2.17	—	3.35	2.20	2.56	FK58-62	7.7
C8-HMC25-135			5.31		4.13	2.99-3.39				10.4
C8-HMC32-95	**32mm**	3.150	3.74	2.48	—	3.74	2.36	2.80	FK80-90	9.9
C8-HMC32-135			5.31		—	4.13				12.8

- Wrench must be ordered separately
- Models marked ❖ can be used with optional axial adjusting screws
- Models marked ◆ can only be used with straight collet model C25-□□
- When using center through coolant, insert a tool shank into E1 or more

ACCESSORIES

COLLET PG. 386

PERFECT SEAL/ JET COLLET PG. 383

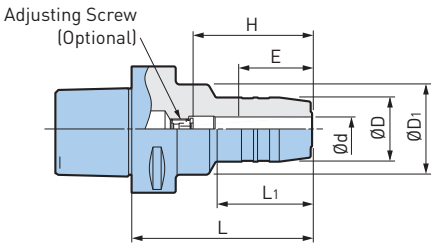
WRENCH PG. 389

SCREW PG. 412

CLAMPING RANGE: Ø6-32mm

For Drills, Reamers, Ball Mills, End Mills, Diamond Reamers & Grinding Tools

COOLANT THROUGH



Catalog Number	ød	øD	øD1	L	L1	H	Min Clamping Length E	Adjusting Screw	Weight (lbs.)
C5-HDC14-90	**14mm**	1.339	1.772	3.58	1.89	1.50	2.09-2.36	HDA12-10010 ●	2.4
C5-HDC16-75❖	**16mm**	1.496	1.969	2.95	1.38	2.68	1.69	—	2.4
C5-HDC16-90❖			1.890	3.54	1.89	3.27		—	2.7
C5-HDC18-90❖	**18mm**	1.575	1.890	3.54	1.89	1.69	3.27	—	2.7
C5-HDC20-75❖	**20mm**	1.654	2.047	2.95	1.38	2.68	1.69	—	2.4
C5-HDC20-90❖			1.969	3.54	1.89	3.27		—	2.7
C5-HDC25-90❖	**25mm**	2.165	2.480	3.54	1.89	3.27	2.05	—	3.8
C6-HDC14-90	**14mm**	1.339	1.772	3.54	1.89	1.89-2.36	1.50	HDA10-08015	3.5
C6-HDC14-120				4.72		1.50-2.36		HDA10-08032	4.2
C6-HDC16-75❖	**16mm**	1.496	1.969	2.95	1.38	2.60	1.69	—	3.5
C6-HDC16-90❖			1.850	3.54	1.89	3.19			3.8
C6-HDC16-120			1.890	4.72		1.69-2.76		HDA16-12037	4.4
C6-HDC18-90	**18mm**	1.575	1.890	3.54	1.89	1.69	2.60	—	3.7
C6-HDC18-120			1.929	4.72			1.69-2.76	HDA16-12037	4.4
C6-HDC20-75❖	**20mm**	1.654	2.087	2.95	1.30	2.60	1.69	—	3.8
C6-HDC20-90❖			1.969	3.54	1.89	2.83			4.0
C6-HDC20-120				4.72		1.69-2.76		HDA16-12037	4.6
C6-HDC25-90❖	**25mm**	2.165	2.480	3.54	1.81	3.15	2.05	—	4.9
C6-HDC25-120				4.72	2.01	2.64-3.11		HDA20-16015	6.2
C6-HDC32-90❖	**32mm**	2.953	2.480	3.54	1.69	3.19	2.20	—	6.2
C6-HDC32-120		2.480	—	4.72	—	2.60-3.07		HDA20-160315	6.6

- "H" indicates the adjustment length with an adjusting screw
- Do not attempt to balance before first consulting BIG DAISHOWA
- In case the projection length needs to be adjusted from the shank side, add the letter "W" to adjusting screw model number for hexagon sockets on both sides (ex: HDA6-05020W)
- The above type is not available for HDA12-10010 with models marked ●
- Adjusting screws cannot be used with models marked ❖

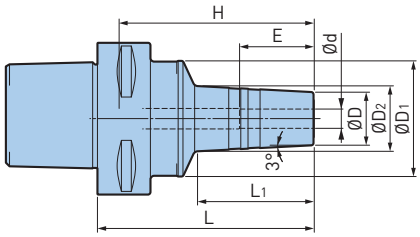
ACCESSORIES

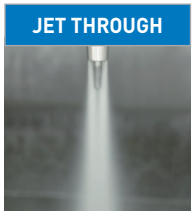
PERFECT SEAL/ JET COLLET PG. 383

JET COOLANT TYPE

CLAMPING RANGE: Ø4mm-12mm

Coolant Holes Through Body of Holder





COOLANT THROUGH

Catalog Number	Ød	ØD	ØD1	ØD2	L	L1	Min Clamping Length E	H	Weight (lbs.)
C5-HDC4J-90	**4mm**	.787	1.65	1.02	3.54	2.01	.75	3.27	1.6
C5-HDC6J-90	**6mm**						.98		1.6
C5-HDC8J-90	**8mm**	.866		1.10		2.05	1.22		1.6
C5-HDC10J-90	**10mm**	.945	1.73	1.18			1.30		1.7
C5-HDC12J-90	**12mm**	1.02	1.81	1.26			1.42		1.7
C6-HDC4J-90	**4mm**	.787	1.89	1.02	3.54	1.85	.75	3.19	2.4
C6-HDC6J-90	**6mm**						.98		2.4
C6-HDC6J-120				1.10	4.72	2.91		4.37	2.9
C6-HDC8J-90	**8mm**	.866			3.54	1.89	1.22	3.19	2.4
C6-HDC8J-120				1.18	4.72	2.95		4.37	2.9
C6-HDC10J-90	**10mm**	.945			3.54	1.89	1.30	3.19	2.4
C6-HDC10J-120				1.26	4.72	2.95		4.37	2.9
C6-HDC12J-90	**12mm**	1.02			3.54	1.93	1.42	3.19	2.6
C6-HDC12J-120				1.34	4.72	2.99		4.37	2.9

- Adjusting screws cannot be used

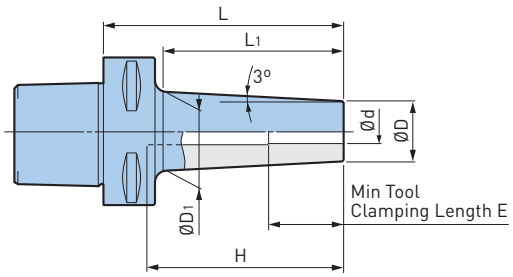
CAUTION

Use only cutting tools that have a shank tolerance of h6 (see table pg. 26). 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".

SHRINK FIT HOLDER—STANDARD TYPE

CLAMPING RANGE: Ø6-20mm

COOLANT THROUGH



Catalog Number	Ød	ØD	ØD1	L	L1	Min Clamping Length E	H	Weight (lbs.)
C6-SRC6-90	6mm	.551	.807	3.54	2.48	1.02	3.19	2.6
C6-SRC8-90	8mm	.709	.965			1.02		2.9
C6-SRC10-90	10mm	.866	1.122			1.26		2.9
C6-SRC12-90	12mm	.945	1.201			1.42		3.1
C6-SRC16-90	16mm	1.102	1.358			1.50		3.1
C6-SRC16-165		1.102	1.669	6.50	5.43		3.15	4.6
C6-SRC20-90	20mm	1.339	1.594	3.54	2.48	1.65	3.15	3.3
C6-SRC20-165		1.339	1.906	6.50	5.43		3.94	5.5

- Use carbide cutter within a tolerance of h6
- HSS tools cannot be used

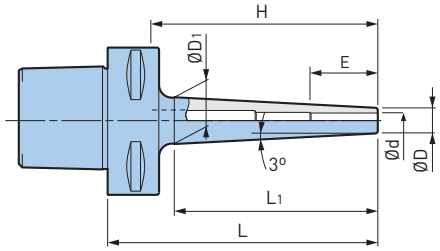
CAUTION

Please refer to the operation manual of heating/cooling equipment, as some equipment may not be compatible.

SHRINK FIT HOLDER—SLIM TYPE

CLAMPING RANGE: Ø6mm-12mm

COOLANT THROUGH



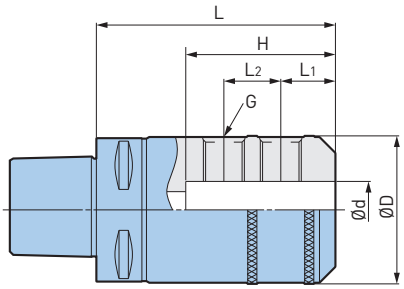
Catalog Number	Ød	ØD	ØD1	L	L1	Min Clamping Length E	H	Weight (lbs.)
C6-SRC6S-120	6mm	.394	.77	4.72	3.62	1.02	4.37	2.6
C6-SRC6S-165			.94	6.50	5.24		6.14	3.1
C6-SRC8S-120	8mm	.512	.89	4.72	3.62	1.02	4.37	2.9
C6-SRC8S-165			1.06	6.50	5.24		6.14	3.3
C6-SRC10S-120	10mm	.630	1.00	4.72	3.62	1.26	4.37	2.9
C6-SRC10S-165			1.20	6.50	5.31		6.14	3.3
C6-SRC12S-120	12mm	.748	1.12	4.72	3.62	1.42	4.37	3.1
C6-SRC12S-165			1.30	6.50	5.31		6.14	3.5

- Use carbide cutter within a tolerance of h6
- HSS tools cannot be used

CAUTION

Please refer to the operation manual of heating/cooling equipment, as some equipment may not be compatible.

SIDE LOCK ENDMILL HOLDER

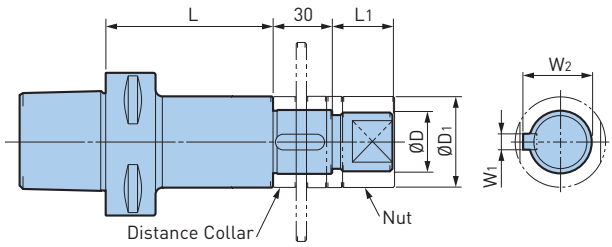


COOLANT THROUGH

Catalog Number	Ød	ØD	L	L1	L2	H	G	Weight (lbs.)
C6-ISL16-80	**16mm**	1.890	3.15	.94	—	2.05	M14	4.0
C6-ISL20-80	**20mm**	2.047	3.15	.98		2.17	M16	4.2
C6-ISL25-105	**25mm**	2.559	4.13	.94	.98	2.36	M18 P2.0	6.4
C6-ISL32-115	**32mm**	2.835	4.53	.94	1.10	3.54	M20 P2.0	7.7

- Center through coolant supply is available

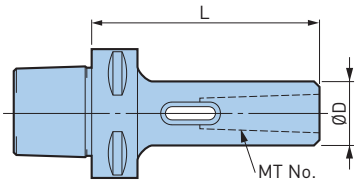
SIDE CUTTER ARBOR A



Catalog Number	ØD	ØD1	L	L1	W1	W2	Weight (lbs.)
C6-SCA25.4-75	1.000	1.575	2.95	.98	.25	1.09	4.4
C6-SCA25.4-120			4.72				5.3
C6-SCA31.75-75	1.250	1.811	2.95	1.18	.31	1.37	5.3
C8-SCA25.4-90	1.000	1.575	3.54	.98	.25	1.09	7.3
C8-SCA31.75-90	1.250	1.811	3.54	1.18	.31	1.37	8.2

- Nut and collars of thickness 5mm, 8mm, 10mm and 12mm are included
- The model, dimensions and accuracy conform to TMT standards

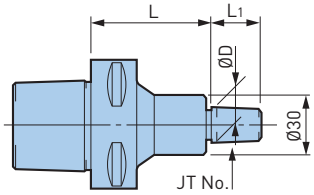
MORSE TAPER HOLDER



Catalog Number	MT No.	ØD	L	Weight (lbs.)
C5-MTA1-95	1	.984	3.74	1.3
C5-MTA2-110	2	1.260	4.33	1.8
C5-MTA3-130	3	1.575	5.12	2.6
C6-MTA1-95	1	.984	3.74	2.9
C6-MTA2-110	2	1.260	4.33	3.3
C6-MTA3-130	3	1.575	5.12	4.2
C8-MTA1-105	1	.984	4.13	5.7
C8-MTA2-120	2	1.260	4.72	6.2
C8-MTA3-140	3	1.575	5.51	7.1

• The model, dimensions and accuracy conform to TMT standards

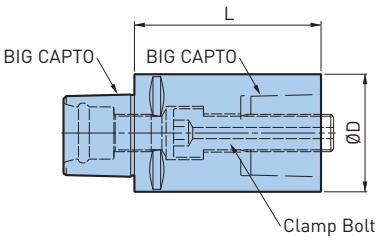
JACOBS TAPER ARBOR

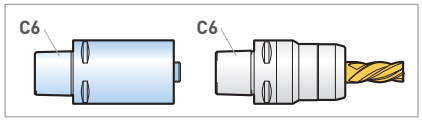


Catalog Number	JT No.	ØD	L	L_1	Weight (lbs.)
C5-JTA6-40	6	.676	1.57	.94	1.1
C6-JTA6-40	6	.676	1.57	.94	2.6
C8-JTA6-50	6	.676	1.97	.94	5.5

• The model, dimensions and accuracy conform to TMT standards

EXTENSION

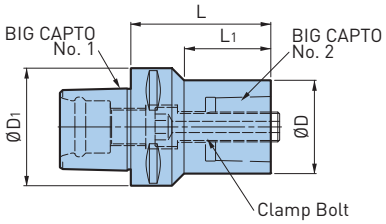


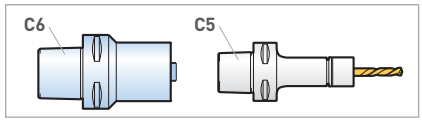


Catalog Number	BIG CAPTO	ØD	L	Clamp Bolt			Weight (lbs.)
				Thread Size	Hex.	Tightening Torque	
C6-C6-100	C6	2.480	3.94	M20 P2	14mm	125 ft-lbs.	2.6
C8-C8-100	C8	3.150	3.94	M20 P2	14mm	125 ft-lbs.	3.7

- Clamping screws are included; wrench must be ordered separately
- When used for turning tools, connect by aligning with the phase of the hole on the taper shank

REDUCTION

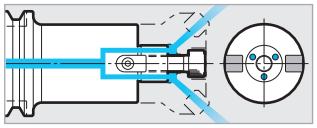




Catalog Number	BIG CAPTO No. 1	BIG CAPTO No. 2	ØD	ØD1	L	L1	Clamp Bolt			Weight (lbs.)
							Thread Size	Hex.	Tightening Torque	
C6-C5-75	C6	C5	1.969	2.48	2.95	1.81	M16 P1.5	10mm	70 ft-lbs.	2.4
C8-C6-85	C8	C6	2.480	3.15	3.35	1.97	M20 P2	14mm	125 ft-lbs.	4.0

- Clamping screws are included, wrench must be ordered separately
- When used for turning tools, connect by aligning with the phase of the hole on the taper shank

FACE MILL HOLDER



COOLANT THROUGH

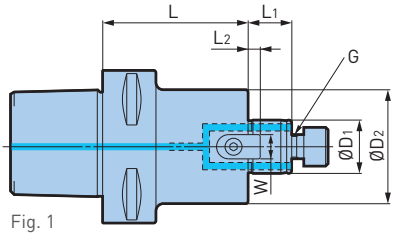


Fig. 1

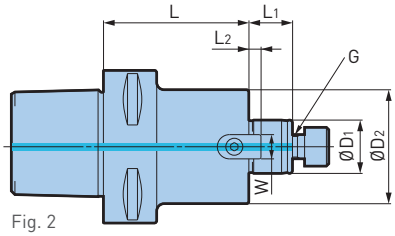


Fig. 2

Catalog Number	Fig.	ØD1	ØD2	L	L1	L2	W	G	Weight (lbs.)
C5-FMH22-47-60	1	22mm	1.850	2.36	.71	.20	.394	M10	1.3
C5-FMH22-47-90				3.54					3.1
C5-FMH22-60-60		22mm	2.362	2.36	.71	.20	.394	M10	2.4
C5-FMH27-60-60		27mm	2.362	2.36	.79	.24	.472	M12	2.4
C5-FMA25.4-40		25.4mm	1.969	1.57	.87	.20	.375	M12	2.0
C5-FMA25.4-75				2.95					2.6
C6-SMC.750-2	1	.750	1.689	2.00	.69	.16	.313	3/8"-24	3.0
C6-SMC1.000-2		1.000	2.189	2.00	.69	.22	.375	1/2"-20	4.5
C6-SMC1.250-2		1.250	2.750	2.00	.69	.28	.500	5/8"-18	4.8
C6-SMC1.500-2		1.500	3.626	2.00	.94	.38	.625	3/4"-16	5.0
C6-FMH22-47-45		22mm	1.850	1.77	.71	.20	.394	M10	3.1
C6-FMH22-47-60				2.36					3.5
C6-FMH22-47-90				3.54					4.4
C6-FMH22-47-150				5.91					6.2
C6-FMH22-60-45		22mm	2.362	1.77	.71	.20	.394	M10	3.5
C6-FMH22-60-60				2.36					4.4
C6-FMH22-60-90				3.54					5.7
C6-FMH27-60-45		27mm	2.362	1.77	.79	.24	.472	M12	3.7
C6-FMH27-60-60				2.36					4.4
C6-FMH27-60-90				3.54					6.0
C6-FMH27-60-150				5.91					8.6
C6-FMA25.4-40		25.4mm	1.969	1.57	.87	.20	.375	M12	3.1
C6-FMA25.4-60				2.36					4.0
C6-FMA25.4-90				3.54					5.3
C6-FMA31.75-40		31.75mm	2.362	1.57	1.18	.28	.500	M16	3.5
C6-FMA31.75-90				3.54					5.7
C6-FMA38.1-45		38.1mm	3.150	1.77	1.34	.35	.625	M20	4.8
C6-FMC16-40		16mm	1.260	1.57	.63	.20	.315	M8	2.9
C6-FMC22-40		22mm	1.772	1.57	.71	.20	.394	M10	3.1

Catalog Number	Fig.	ØD1	ØD2	L	L1	L2	W	G	Weight (lbs.)
C8-FMH22-47-60	1	22mm	1.850	2.36	.71	.20	.394	M10	6.2
C8-FMH22-47-105				4.13					7.5
C8-FMH22-47-150				5.91					8.8
C8-FMH22-47-200				7.87					10.4
C8-FMH22-60-60		22mm	2.362	2.36	.71	.20	.394	M10	6.8
C8-FMH22-60-105				4.13					8.8
C8-FMH22-60-150				5.91					11.0
C8-FMH27-60-60		27mm	2.362	2.36	.79	.24	.472	M12	6.8
C8-FMH27-60-105				4.13					9.0
C8-FMH27-60-150				5.91					11.0
C8-FMH27-60-200				7.87					13.4
C8-FMH32-96-75		32mm	3.780	2.95	.87	.28	.551	M16	10.1
C8-FMH32-96-105				4.13					15.0
C8-FMH32-96-150				5.91					16.5
C8-FMA25.4-40	2	25.4mm	1.969	1.57	.87	.20	.374	M12	6.0
C8-FMA25.4-75				2.95					7.1
C8-FMA25.4-105				4.13					8.4
C8-FMA31.75-40		31.75mm	2.362	1.57	1.18	.28	.500	M16	6.0
C8-FMA31.75-90				3.54					8.8
C8-FMA38.1-45		38.1mm	3.150	1.77	1.34	.35	.625	M20	7.1

- Locking Screw is included
- If clamp bolt is needed, it must be ordered separately

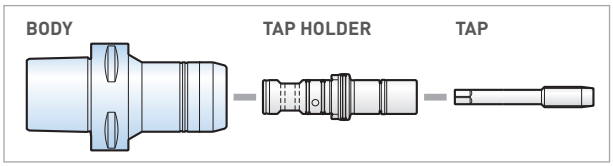
ACCESSORIES

CAUTION

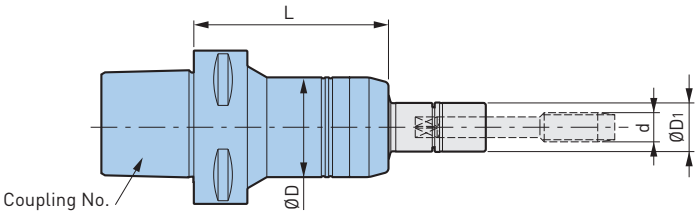
For high speed applications, shell mill holders should be balanced together with the cutters.

MEGA SYNCHRO TAPPING HOLDER

TAPPING RANGE: No.2-AU3/4 (M2-M20)



COOLANT THROUGH



Catalog Number	Tapping Range d* (Inch)	Tapping Range d* (Metric)	ØD	ØD1	L	Wrench	Weight (lbs.)
C5-MGT6-75	**No.2-No.12**	M2-M6	1.42	.63	2.95	MGR16	1.8
C5-MGT12-75	**AU1/4-AU7/16**	M6-M12	1.61	.79	2.95	MGR20L	2.0
C5-MGT20-100	**AU1/2-AU3/4 AP1/8-AP1/4**	M12-M20	2.13	1.18	3.94	MGR30L	3.1
C6-MGT6-80	**No.2-No.12**	M2-M6	1.42	.63	3.15	MGR16	2.4
C6-MGT12-80	**AU1/4-AU7/16**	M6-M12	1.61	.79	3.15	MGR20L	2.6
C6-MGT20-100	**AU1/2-AU3/4 AP1/8-AP1/4**	M12-M20	2.13	1.18	3.94	MGR30L	4.0
C8-MGT6-80	**No.2-No.12**	M2-M6	1.42	.63	3.15	MGR16	4.6
C8-MGT12-80	**AU1/4-AU7/16**	M6-M12	1.61	.79	3.15	MGR20L	4.8
C8-MGT20-95	**AU1/2-AU3/4 AP1/8-AP1/4**	M12-M20	2.13	1.18	3.74	MGR30L	5.7

***AU3/8 is included in the MGT20 series**

- Tap holder and wrench must be ordered separately

ACCESSORIES

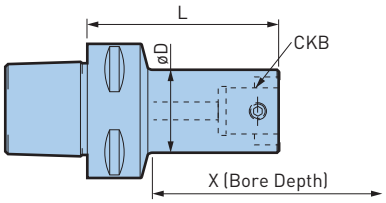
CAUTION

Cannot be used with machining center without synchronized tapping function.

BIG DAISHOWA

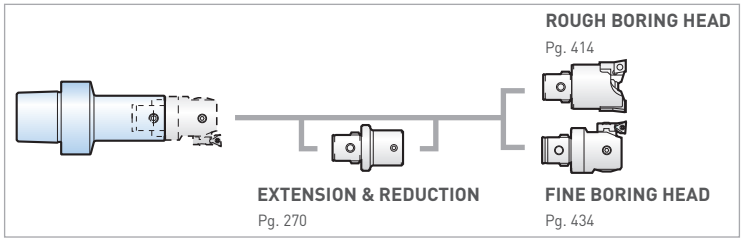
CKB SHANK

COOLANT THROUGH



Catalog Number	CK	ØD	L	X	Weight (lbs.)
C4-CKB1-48	CKB1	.748	1.870	2.165	.9
C4-CKB2-45	CKB2	.945	1.752	2.165	.9
C4-CKB3-40	CKB3	1.220	1.575	2.244	1.1
C4-CKB4-33	CKB4	1.535	1.299	2.441	1.1
C5-CKB1-73	CKB1	.748	2.854	3.150	1.1
C5-CKB2-85	CKB2	.945	3.327	3.780	1.3
C5-CKB3-55	CKB3	1.220	2.165	2.750	1.3
C5-CKB4-48	CKB4	1.535	1.870	2.750	1.3
C5-CKB5-50	CKB5	1.969	1.968	3.150	1.3
C5-CKB6-50	CKB6	2.520	1.968	3.930	2.2
C6-CKB1-78	CKB1	.748	3.051	3.268	2.6
C6-CKB2-90	CKB2	.945	3.524	3.858	2.9
C6-CKB3-65	CKB3	1.220	2.559	3.150	2.9
C6-CKB3-100			3.937	4.449	3.3
C6-CKB4-58	CKB4	1.535	2.283	3.150	2.9
C6-CKB4-93			3.661	4.449	3.7
C6-CKB5-48	CKB5	1.969	1.890	3.110	2.9
C6-CKB5-83			3.268	4.488	3.7
C6-CKB6-59	CKB6	2.520	2.323	5.000	3.5
C6-CKB6-94			3.701	6.400	5.1
C8-CKB4-118	CKB4	1.535	4.646	5.118	5.3
C8-CKB4-178			7.008	7.480	6.6
C8-CKB5-108	CKB5	1.969	4.252	5.118	5.9
C8-CKB5-183			7.205	8.071	8.4
C8-CKB6-74	CKB6	2.520	2.913	4.331	5.5
C8-CKB6-169			6.654	8.110	10.6
C8-CKB7-73	CKB7	3.543	2.874	7.480	6.8
C8-CKB7-123			4.843	9.400	12.3

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


ROUGH BORING HEAD
Pg. 414
EXTENSION & REDUCTION
Pg. 270
FINE BORING HEAD
Pg. 434

INTEGRAL VERSIONS AVAILABLE

EWN 2-50XL
FINISH BORING HEAD

Boring Range: Ø.079"-2.125"

Compact, statically balanced design permits high cutting speeds, minimal projection and optimal performance.

EWN FINISH BORING HEAD

Boring Range: Ø1.260"-8.000"

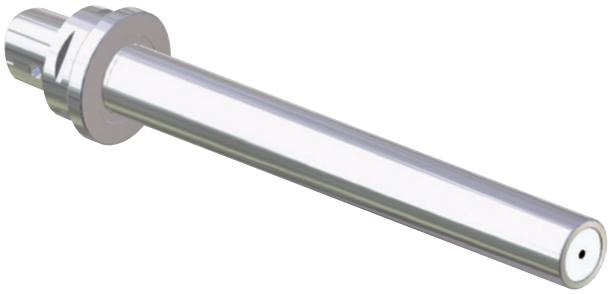
Multifunctional and balance optimized for highest efficiency.

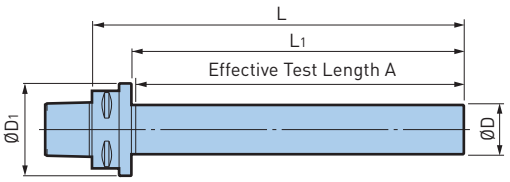
ACCESSORIES

SPARE PARTS
PG. 538

DYNA TEST

Helps identify potential problems and can reduce downtime and costly repairs of the machine tool spindle.



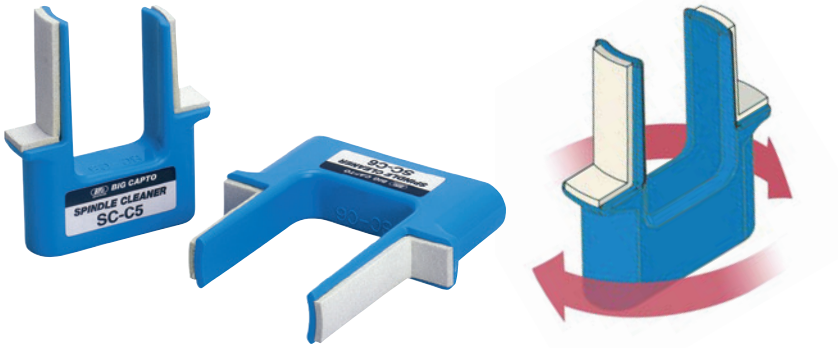


Catalog Number	L	L1	A	ØD	ØD1
C5-32-150	7.087	5.906	5.827	32mm	63mm
C5-32-215	9.646	8.465	8.386		
C5-40-L50	11.024	9.843	9.724	40mm	
C6-40-L150	7.165	5.906	5.787	40mm	75mm
C6-40-L200	9.134	7.874	7.756		
C6-40-L320	13.858	12.598	12.480		
C8-40-L200	9.449	7.874	7.756	40mm	85mm
C8-40-L320	14.173	12.598	12.480		

SPINDLE CLEANERS

Ensure absolute cleanliness of tapered spindles to maintain precision and prolong the life of your machine tools, cutting tools and tool holders.

- Robust construction with high oil and grease resistance
- Plastic injection molded core with fluted locations for cleaning strips ensures accurate sizing and cleaning efficiency
- Cleaning strips will maintain adhesion to the taper core due to inset location even under scrubbing action
- Cleaning strips positioned at well spaced intervals to remove even large residual particles
- A quality control product



POLYGON TAPER

Catalog Number	Type	
	Taper	Size
SC-C3	C	3
SC-C4		4
SC-C5		5
SC-C6		6
SC-C7		8
SC-C8		8

MODULAR TOOL HOLDERS

CK/CKB/CKN SHANK

A.5

BASIC ARBORS 270-273

EXTENSIONS & REDUCTIONS 270-273

COLLET CHUCKS 274-275

MEGA ER GRIP 274

TG STYLE ANGLE 275

MILLING CHUCKS 276

NEW Hi-POWER MILLING CHUCK 276

TAP HOLDERS 277

MEGA SYNCHRO TAPPING HOLDER 277

ADAPTERS 278-282

TAPPING ADAPTER 278

END MILL ADAPTER 279-280

UNIVERSAL DRILL CHUCKS ADAPTER 281

SHELL MILL TOOL ADAPTER 281

MILLING ADAPTER 282

ACCESSORIES 283-286

BLANK BAR 283

CHAMFER RINGS 284

CARTRIDGES 285-286

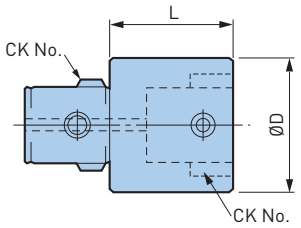
SPECIALS 287-293

SPECIAL TOOLS 287-288

SPECIAL CK SHANKS 289-293

EXTENSIONS

COOLANT THROUGH



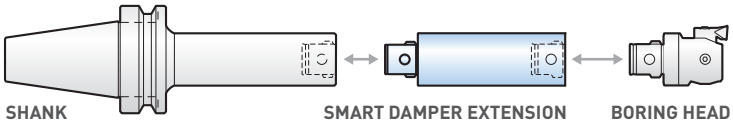
Catalog Number	Reference Number	CK	ØD	L	Weight (lbs.)
CKB1-CKB1-20	10.331.110	CKB1	.748	.787	.1
CKB1-CKB1-30	10.331.111			1.181	.2
CKB2-CKB2-30	11.331.220	CKB2	.945	1.181	.2
CKB2-CKB2-45	11.331.221			1.772	.3
CKB3-CKB3-30	11.331.330	CKB3	1.220	1.181	.4
CKB3-CKB3-45	11.331.331			1.772	.5
CKB4-CKB4-40	11.331.440	CKB4	1.535	1.575	.8
CKB4-CKB4-60	11.331.441			2.362	1.0
CKB5-CKB5-60	11.331.550	CKB5	1.968	2.362	1.9
CKB5-CKB5-90	11.331.551			3.543	2.7
CKB6-CKB6-60	11.331.660	CKB6	2.491	2.362	3.0
CKB6-CKB6-100	11.331.661			3.937	4.4
CKB7-CKB7-100	11.331.770	CKB7	3.543	3.937	9.7
CKB7-CKB7-160	11.331.771			6.299	16.0

- Center through coolant supply is available
- Using an extension to increase length my cause chatter depending on the L/D ratio

ACCESSORIES

SPARE PARTS
PG. 538

SMART DAMPER EXTENSIONS



SHANK

BCV Pg. 88 | HSK Pg. 206 | BIG CAPTO Pg. 265

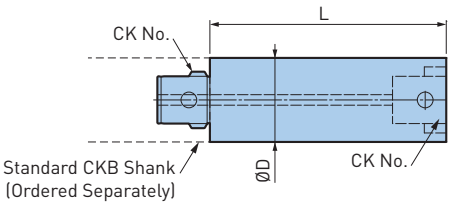
BBT Pg. 150 | Pg. 228 Pg. 235 | ST Pg. 305

SMART DAMPER EXTENSION

BORING HEAD

Pg. 414

COOLANT THROUGH



Catalog Number	CK	ØD	L	Weight (lbs.)
CKB44DP-120	CKB4	1.535	4.724	2.9
CKB55DP-150	CKB5	1.968	5.906	5.7
CKB66DP-180	CKB6	2.520	7.087	12.3

- Center through coolant supply is available
- Should not be used with a conventional extension due to possible chatter

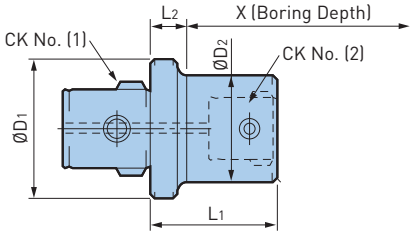
ACCESSORIES

SPARE PARTS PG. 538

CAUTION

Damping function may become less effective over time due to the breakdown of special elastomers used in the damping mechanism. If excessive vibration occurs after 1 year of continued use, it is recommended to return SMART DAMPER bars for overhaul. Please contact BIG DAISHOWA for details of repair.

REDUCTIONS



COOLANT THROUGH

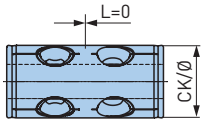
Catalog Number	Reference Number	CK (1)	ØD1	CK (2)	ØD2	L1	L2	X	Weight (lbs.)
CKB2-CKB1-36	10.332.210	CKB2	.945	CKB1	.748	1.417	.413	2.165	.2
CKB3-CKB1-41	10.332.310	CKB3	1.220	CKB1	.748	1.594	.394	2.362	.3
CKB3-CKB2-35	10.332.320			CKB2	.945	1.358			.4
CKB4-CKB1-58	10.332.410	CKB4	1.535	CKB1	.748	2.264	.472	2.953	.5
CKB4-CKB2-52	10.332.420			CKB2	.945	2.028			.6
CKB4-CKB3-47	10.332.430			CKB3	1.220	1.850			.7
CKB5-CKB1-58	10.332.511	CKB5	1.968	CKB1	.748	2.264	.669	2.756	1.0
CKB5-CKB1-88	10.332.510					3.445		3.937	1.0
CKB5-CKB2-52	11.332.521			CKB2	.945	2.028		2.756	.9
CKB5-CKB2-82	11.332.520					3.209		3.937	1.2
CKB5-CKB3-47	10.332.531			CKB3	1.220	1.850		2.756	1.0
CKB5-CKB3-77	10.332.530					3.031		3.937	1.5
CKB5-CKB4-40	11.332.541			CKB4	1.535	1.575		2.756	1.2
CKB5-CKB4-70	11.332.540					2.756		3.937	1.6
CKB6-CKB1-67	10.332.611	CKB6	2.500	CKB1	.748	2.618	1.220	2.559	1.7
CKB6-CKB1-102	11.332.610					3.996		3.937	2.0
CKB6-CKB2-61	11.332.621			CKB2	.945	2.382	.630	3.150	1.5
CKB6-CKB2-96	11.332.620					3.760		4.528	1.8
CKB6-CKB3-56	11.332.631			CKB3	1.220	2.205		3.150	1.7
CKB6-CKB3-91	11.332.630					3.583		4.528	2.1
CKB6-CKB3-136	11.332.632					5.354		6.300	2.6
CKB6-CKB4-49	11.332.641			CKB4	1.535	1.929		3.150	1.8
CKB6-CKB4-84	11.332.640					3.307		4.528	2.3
CKB6-CKB4-129	11.332.642					5.079		6.300	3.2
CKB6-CKB5-39	11.332.651			CKB5	1.968	1.535		3.150	1.9
CKB6-CKB5-74	11.332.650					2.913		4.528	2.7
CKB6-CKB5-119	11.332.652					4.685		6.300	4.3
CKB7-CKB4-70	10.332.741	CKB7	3.543	CKB4	1.535	2.756	.669	3.937	3.3
CKB7-CKB5-60	10.332.751			CKB5	1.969	2.362		3.937	3.6
CKB7-CKB5-120	10.332.750					4.724		6.300	5.3
CKB7-CKB6-76	11.332.761			CKB6	2.520	2.992		5.118	5.2
CKB7-CKB6-106	11.332.760					4.173		6.300	6.6

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

ACCESSORIES

SPARE PARTS PG. 538

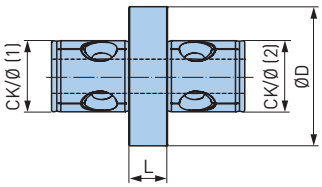
DOUBLE CONNECTOR COUPLINGS



Catalog Number	Reference Number	CK	ØD	L	Weight (lbs.)
DC-CKN6-CKN6-0	10.331.864N	CKN6	—	0	1.0
DC-CKN7-CKN7-0	10.331.874N	CKN7	—	0	2.1

- The necessary 2 pcs of CK-screws are included in the delivery of the mating CKN component with male connector

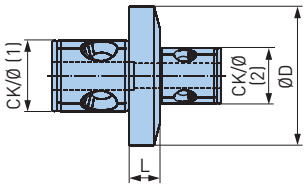
DOUBLE CONNECTOR COUPLINGS



Catalog Number	Reference Number	CK	ØD	L	Weight (lbs.)
DC-CKN6-CKN6-20	10.331.865N	CKN6	2.500	.787	2.1
DC-CKN7-CKN7-25	10.331.875N	CKN7	3.543	.984	4.4
DC-CKN7-CKN7-50	10.331.876N			1.969	6.8

- The necessary 2 pcs of CK-screws are included in the delivery of the mating CKN component with male connector

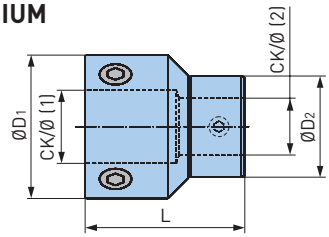
DOUBLE CONNECTOR REDUCTION



Catalog Number	Reference Number	CK (1)	CK (2)	ØD	L	Weight (lbs.)
DC-CKN7-CKN6-20	10.332.875N	CKN7	CKN6	3.543	.787	3.7

- The necessary 2 pcs of CK-screws are included in the delivery of the mating CKN component with male connector

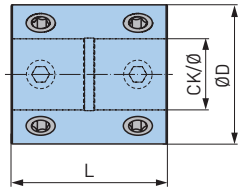
REDUCTION ALUMINIUM



Catalog Number	Reference Number	CK (1)	CK (2)	ØD1	ØD2	L	Weight (lbs.)
CKN7-CKB6-100	10.332.870N	CKN7	CKB6	3.937	2.500	3.937	2.4

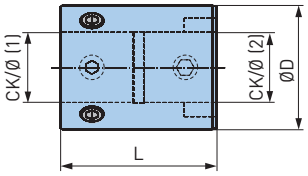
- The necessary 2 pcs of CK-screws are included in the delivery of the mating CKN component with male connector

EXTENSION TUBES ALUMINIUM



Catalog Number	Reference Number	CK	ØD	L	Weight (lbs.)
T-CKN6-CKN6-80	10.331.867N	CKN6	2.500	3.150	1.1
T-CKN6-CKN6-120	10.331.868N			4.724	1.8
T-CKN7-CKN7-100	10.331.877N	CKN7	3.543	3.937	3.4
T-CKN7-CKN7-150	10.331.879N			5.905	5.0
T-CKN7-CKN7-200	10.331.878N			7.874	6.6

ADAPTER TUBES ALUMINIUM



Catalog Number	Reference Number	CK (1)	CK (2)	ØD	L	Weight (lbs.)
T-CKN6-CKB6-80	10.331.860N	CKN6	CKB6	2.500	3.150	1.2
T-CKN6-CKB6-120	10.331.861N				4.724	1.8
T-CKN7-CKB7-100	10.331.870N	CKN7	CKB7	3.543	3.937	3.1
T-CKN7-CKB7-150	10.331.871N				5.905	4.8

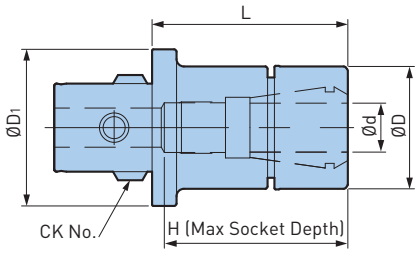
ACCESSORIES

SPARE PARTS
PG. 538

MEGA ER GRIP

CLAMPING RANGE: Ø.075"-.787" (Ø1.9-20mm) For Drills, Reamers, Taps & Finishing End Mills

COOLANT THROUGH



Catalog Number	CK	ød	øD	ØD1	L	H	Weight (lbs.)
CKB4-MEGAER16-60NL	CKB4	**.075-.394**	1.181	1.535	2.362	—	1.7
CKB4-MEGAER20-70NL		**.108-.512**	1.378		2.756	2.56	2.2
CKB5-MEGAER25-80NL	CKB5	**.108-.630**	1.654	1.969	3.150	2.91	3.8
CKB5-MEGAER32-80NL		**.108-.787**	1.969		3.150	2.87	4.7
CKB6-MEGAER32-80NL	CKB6	**.108-.787**	1.969	2.520	3.150	2.95	5.8

***Nut, adjusting screw, collet and wrench are not included**
- MEGA ER GRIP is not able to use DIN6499 Form-A collets and ESX collets
- Weight does not include collet

ACCESSORIES

COLLET PG. 374

MEGA NUT* PG. 377

PERFECT SEAL PG. 378

SOLID NUT PG. 377

MEGA WRENCH PG. 390

SCREW PG. 411

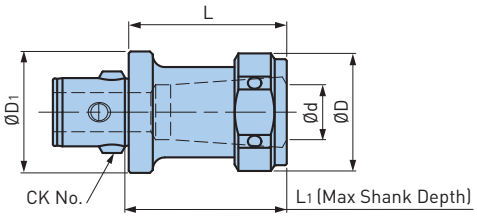
SPARE PARTS PG. 538

***MEGA NUT is the recommended nut to achieve high accuracy and clamping force**

TG STYLE ANGLE

CLAMPING RANGE: Ø.062"-1.000"

For Drills, Reamers, Taps & Finishing End Mills



Catalog Number	Reference Number	CK	Ød	ØD	ØD1	L	L1	Collet Nuts
CKB6-TG75-71	11.335.106	CKB6	**.062-.750**	2.10	2.520	2.78	2.20	11.335.185
CKB6-TG100-83	11.335.107		**.093-1.000**	2.50		3.28	2.72	11.335.186

- Wrench and collet must be ordered separately
- BIG DAISHOWA does not offer TG collets

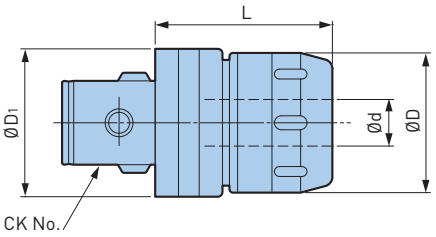
ACCESSORIES

NEW Hi-POWER MILLING CHUCK

CLAMPING RANGE: Ø.750"-1.250" (Ø20-32mm)

For Heavy Duty End Milling

COOLANT THROUGH



Catalog Number	CK	Ød	ØD	ØD1	L	Weight (lbs.)
CKB5-HMC20S	CKB5	**20mm**	1.97	1.968	2.24	1.7
CKB6-HMC.750	CKB6	**.750**	2.36	2.520	2.95	2.9
CKB6-HMC20❖		**20mm**				2.9
CKB7-HMC1.250	CKB7	**1.25**	3.15	3.543	4.13	9.2
CKB7-HMC32		**32mm**				9.2

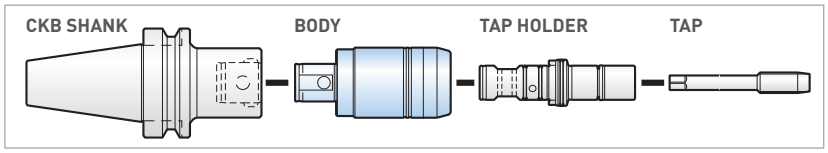
- Wrench included
- Use OCA, C straight collets with models marked ❖

ACCESSORIES

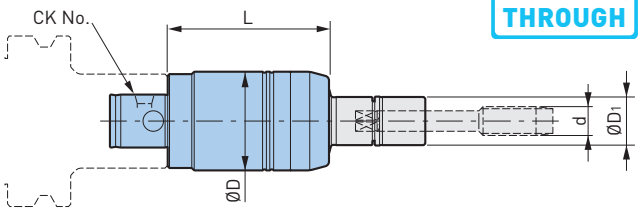
COLLET PG. 386 | PERFECT SEAL/ JET COLLET PG. 383 | WRENCH PG. 389 | SPARE PARTS PG. 538

MEGA SYNCHRO TAPPING HOLDER

TAPPING RANGE: No.2-AU3/4 (M2-M20)



COOLANT THROUGH



Catalog Number	CK	Tapping Range d* (Inch)	Tapping Range d* (Metric)	ØD	ØD1	L	Wrench	Weight (lbs.)
CKB4-MGT6-62	CKB4	**No.2-No.12**	**M2-M6**	1.417	.629	2.441	MGR16	1.1
CKB4-MGT12-67		**AU1/4-AU7/16***	**M6-M12**	1.614	.787	2.638	MGR20L	1.3
CKB5-MGT20-87	CKB5	**AU1/2-AU3/4 AP1/8-AP1/4**	**M12-M20**	2.126	1.181	3.425	MGR30L	2.6

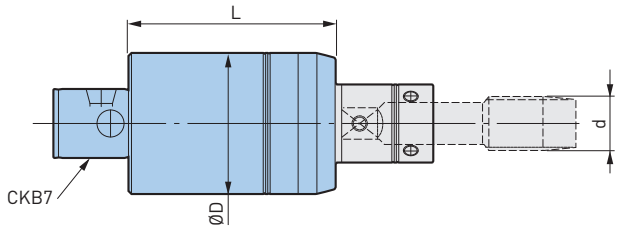
***AU3/8 is included in the MGT20 series**

- Tap holder and wrench must be ordered separately

CAUTION

Cannot be used with machining center without synchronized tapping function.

TAPPING RANGE: AU13/16-AU1-3/8 (M20-M36)



COOLANT THROUGH

Catalog Number	CK	Tapping Range d (Inch)	Tapping Range d (Metric)	ØD	L	Weight (lbs.)
CKB7-MGT36-137	CKB7	**AU13/16-AU1-3/8 AP3/8-AP1**	**M20-M36**	3.701	5.394	15.0

- MGT Set Screw and adjust screw are included, tap holder must be ordered separately

CAUTION

Cannot be used with machining center without synchronized tapping function.

ACCESSORIES

TAP HOLDER PG. 396

MEGA NUT PG. 403

SYNCHRO ADJUSTER PG. 403

O-RING PG. 403

MEGA WRENCH PG. 390

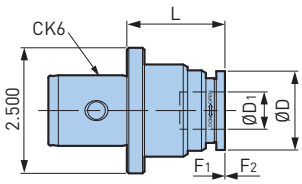
SCREW PG. 403

SPARE PARTS PG. 538

For Tension & Compression Tapping Chuck

Heavy-duty tapping attachments for high production thread cutting on machine tools and machining centers.

- Extremely short, rigid design
- Large-length compensation in response to tension and compression
- Quick-change clutch for tap holders with or without torque control
- Bilz and Tapmatic compatible

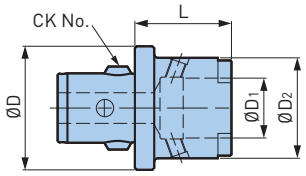


Catalog Number	Reference Number	Tapping Range	Tap Adapter Size*	ØD	ØD1	L	F1	F2	Weight (lbs.)
CK6-ATE12E	10.335.762	**0-9/16**	1	1.850	.748	1.969	.197	.394	1.9
CK6-ATE24E	10.335.763	**5/16-7/8**	2	2.520	1.220	3.150	.275	.551	3.4

*Tap collets with torque control or positive drive available upon request

For Rigid Tapping

- Extremely short and compact tapping chuck without axial float
- For tapping on machine tools with speed and feed synchronization
- For quick-change tap holders with or without torque clutch
- Bilz and Tapmatic compatible



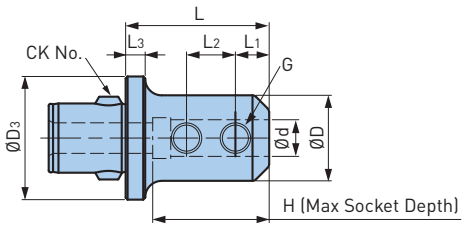
Catalog Number	Reference Number	CK	ØD	Tapping Range	Tap Adapter Size*	ØD1	ØD2	L	Clamping Screw	Weight (lbs.)
CKB5-RTE12-30	11.335.760	CKB5	1.968	**0-9/16**	1	.748	1.535	1.181	10.690.435	.9
CKB6-RTE24-52	11.335.765	CKB6	2.500	**5/16-7/8**	2	1.220	2.047	1.968	10.690.436	2.1
CKB6-RTE36-70	11.335.769			**13/16-1-3/8**	3	1.890	2.756	2.756		3.3

*Tap collets with torque control or positive drive available upon request

ACCESSORIES

SPARE PARTS
PG. 538

For End Mills

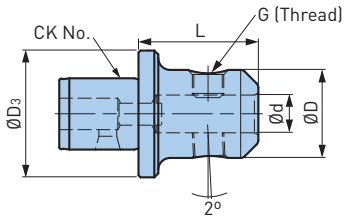


Catalog Number	Reference Number	CK	Ød	ØD	ØD3	L	L1	L2	L3	H	G	Weight (lbs.)
CKB4-SL.187-33	11.335.220	CKB4	**.1875**	.68	1.535	1.283	.44	—	.4	—	1/4"-28	.7
CKB4-SL.250-33	11.335.221		**.2500**	.88		1.283	.44	—	.4	—	1/4"-28	.6
CKB4-SL.375-45	11.335.222		**.3750**	1.00		1.784	.75	—	.4	—	3/8"-24	.8
CKB4-SL.500-48	11.335.223		**.5000**	1.25		1.904	.88	—	.4	1.70	7/16"-20	.8
CKB5-SL.187-33	11.335.226	CKB5	**.1875**	.68	1.969	1.283	.44	—	.4	—	1/4"-28	.9
CKB5-SL.250-33	11.335.227		**.2500**	.88		1.283	.44	—	.4	—	1/4"-28	1
CKB5-SL.375-45	11.335.228		**.3750**	1.00		1.784	.75	—	.4	—	3/8"-24	1.2
CKB5-SL.500-48	11.335.229		**.5000**	1.25		1.904	.88	—	.4	1.79	7/16"-20	1.1
CKB5-SL.750-77	11.335.231		**.7500**	1.75		3.031	.94	—	.4	2.75	9/16"-18	2
CKB6-SL.187-33	11.335.201	CKB6	**.1875**	.68	2.500	1.283	.44	—	.4	—	1/4"-28	1.5
CKB6-SL.250-33	11.335.202		**.2500**	.88		1.283	.44	—	.4	—	1/4"-28	1.4
CKB6-SL.375-45	11.335.203		**.3750**	1.00		1.784	.75	—	.4	—	3/8"-24	1.5
CKB6-SL.500-48	11.335.204		**.5000**	1.25		1.904	.88	—	.4	—	7/16"-20	1.7
CKB6-SL.625-77	11.335.205		**.6250**	1.50		3.031	.94	—	.4	—	9/16"-18	2.3
CKB6-SL.750-77	11.335.206		**.7500**	1.75		3.031	1.00	—	.4	2.75	5/8"-18	2.6
CKB6-SL.875-77	11.335.207		**.8750**	1.88		3.031	1.00	.81	.4	2.75	5/8"-18	2.8
CKB6-SL1.00-83	11.335.208		**1.0000**	2.00		3.280	1.12	1.00	.4	2.88	3/4"-16	3.1
CKB6-SL1.25-83	11.335.209		**1.2500**	2.49		3.280	1.12	1.00	—	3.00	3/4"-16	4.4
CKB7-SL1.25-83	11.335.216	CKB7	**1.2500**	2.50	3.543	3.250	1.12	1.00	.5	3.00	3/4"-16	5.4
CKB7-SL1.50-83	11.335.217		**1.5000**	2.62		3.250	1.12	1.00	.5	2.83	3/4"-16	5.3
CKB7-SL2.00-124	11.335.218		**2.0000**	3.75		4.880	1.41	1.50	—	3.75	1"-12	12.3

ACCESSORIES

SPARE PARTS
PG. 411/538/558

For End Mills



Catalog Number	Reference Number	CK	Ød	ØD	ØD3	L	G	Clamping Screw	Weight (lbs.)
CK4-SL6-50	10.335.230	CK4	**6mm**	24mm	39mm	50mm	M6	10.690.477	.6
CK4-SL8-50	10.335.231		**8mm**	26mm		50mm	M8	10.690.478	2.0
CK4-SL10-55	10.335.232		**10mm**	32mm		55mm	M10	10.690.479	.9
CK4-SL12-60	10.335.233		**12mm**	39mm		60mm	M12	10.690.480	1.2
CK5-SL6-50	10.335.234	CK5	**6mm**	24mm	50mm	50mm	M6	10.690.477	.9
CK5-SL8-50	10.335.235		**8mm**	26mm		50mm	M8	10.690.478	.9
CK5-SL10-55	10.335.236		**10mm**	32mm		55mm	M10	10.690.479	1.2
CK5-SL12-60	10.335.237		**12mm**	38mm		60mm	M12	10.690.480	1.5
CK5-SL14-60	10.335.238		**14mm**	40mm		60mm	M12	10.690.480	1.5
CK5-SL16-62	10.335.239		**16mm**	45mm		62mm	M14	10.690.481	1.7
CK6-SL6-45	10.335.240	CK6	**6mm**	24mm	63.5mm	45mm	M6	10.690.477	1.3
CK6-SL8-45	10.335.241		**8mm**	26mm		45mm	M8	10.690.478	1.4
CK6-SL10-45	10.335.242		**10mm**	26mm		45mm	M10	10.690.479	1.5
CK6-SL12-50	10.335.243		**12mm**	26mm		50mm	M12	10.690.480	1.8
CK6-SL14-50	10.335.244		**14mm**	26mm		50mm	M12	10.690.480	1.9
CK6-SL16-50	10.335.245		**16mm**	26mm		50mm	M14	10.690.481	2.0
CK6-SL18-50	10.335.246		**18mm**	26mm		50mm	M14	10.690.481	2.0
CK6-SL20-55	10.335.247		**20mm**	26mm		55mm	M16	10.690.482	2.3
CK6-SL25-65	10.335.248		**25mm**	26mm		65mm	M18	10.690.483	3.7
CK7-SL32-80	10.335.250	CK7	**32mm**	26mm	90mm	80mm	M20	10.690.484	6.4
CK7-SL40-90	10.335.251		**40mm**	26mm		90mm	M20	10.690.484	7.5

***Weldon System only**

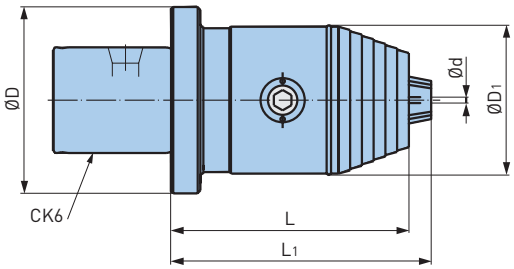
- Metric size end mill adapters according to both DIN 1835B (Weldon System) and DIN 1835E (Whistle Notch System)

ACCESSORIES

SPARE PARTS
PG. 538

For Universal Drill Chucks

With strong clamping force and high run out accuracy. Quick and simple clamping over a bevel gear.

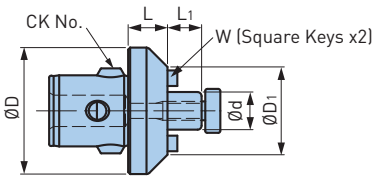


Catalog Number	Reference Number	CK	Ød	ØD	ØD1	L	L1	Weight (lbs.)
CK6-DC13-90	10.335.042	CK6	**.040-.512**	2.5	1.969	3.189	3.543	3.0
CK6-DC16-92	10.335.044		**.118-.630**		2.244	3.386	3.622	3.3

ACCESSORIES

SPARE PARTS
PG. 558

For Shell Mills

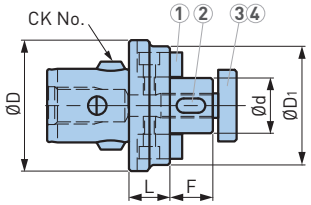


Catalog Number	Reference Number	CK	Ød	ØD	ØD1	L	L1	W	Clamping Screw
CKB4-SM.500-18	11.335.445	CKB4	**.500**	1.535	1.535	.708	.56	.25	11.690.709
CKB4-SM.750-18	11.335.446		**.750**	—	1.752	.708	.68	.31	11.690.710
CKB5-SM.500-20	11.335.454	CKB5	**.500**	1.969	1.437	.787	.56	.25	11.690.709
CKB5-SM.750-20	11.335.455		**.750**		1.969	.787	.68	.31	11.690.710
CKB5-SM1.00-20	11.335.456		**1.00**	—	2.250	.787	.68	.38	11.690.711
CKB6-SM.500-20	11.335.401	CKB6	**.500**	2.520	1.437	.787	.56	.25	11.690.709
CKB6-SM.750-20	11.335.402		**.750**		1.752	.787	.68	.31	11.690.710
CKB6-SM1.00-20	11.335.403		**1.00**		2.250	.787	.68	.38	11.690.711
CKB6-SM1.250-26	11.335.404		**1.25**		2.750	1.024	.68	.50	11.690.712
CKB6-SM1.500-39	11.335.405		**1.50**	—	3.750	1.535	.93	.62	11.690.713
CKB7-SM1.00-25	11.335.413	CKB7	**1.00**	3.54	2.250	.984	.68	.38	11.690.711
CKB7-SM1.25-25	11.335.414		**1.25**		2.750	.984	.68	.50	11.690.712
CKB7-SM1.50-25	11.335.415		**1.50**	—	3.750	.984	.93	.62	11.690.713
CKB7-SM2.00-25	11.335.416		**2.00**	—	4.882	.984	.93	.75	11.690.714

ACCESSORIES

SPARE PARTS
PG. 538

Milling Cutter Arbor



Type				
	Drive Key 1	Slotting Key 2	Mounting Screw 3	Hex Wrench 4
16	**10.691.605**	**10.691.600**	**10.690.703**	**10.690.805**
27	**10.690.607**	**10.691.602**	**10.690.705**	**10.690.807**

Catalog Number	Reference Number	CK	Ød	ØD	ØD1	L	F	Weight (lbs.)
CKB4-FMH16	10.335.420	CKB4	**16mm**	1.535	1.456	.709	.669	.6
CKB4-FMH22	10.335.421		**22mm**		1.652		.748	.8
CKB5-FMH16	10.335.423	CKB5	**16mm**	1.970	1.575	.787	.669	.9
CKB5-FMH22	10.335.424		**22mm**		1.849		.748	1.1
CKB5-FMH27	10.335.425		**27mm**		2.085		.827	1.4
CKB6-FMH16	10.335.430	CKB6	**16mm**	2.500	1.575	.787	.669	1.5
CKB6-FMH22	10.335.431		**22mm**		1.969		.748	1.7
CKB6-FMH27	10.335.432		**27mm**		2.282		.827	2.0
CKB6-FMH32	10.335.433		**32mm**		2.754	1.102	.945	2.9
CKB6-FMH40	10.335.434		**40mm**		3.147		1.063	3.9
CKB7-FMH32	10.335.435	CKB7	**32mm**	3.543	3.265	1.102	.945	4.6
CKB7-FMH40	10.335.436		**40mm**		3.659		1.063	5.5

• For milling cutters with longitudinal or transverse key ways according to DIN 841, 842, 1880 and cutter heads according to DIN 1830

ACCESSORIES

SPARE PARTS
PG. 538/558

BLANK BAR

Hardened & Ground Steel Adapter—Steel Blank Machinable RC28-32

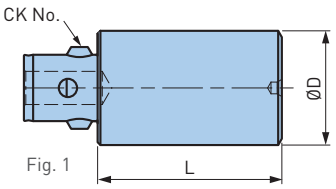


Fig. 1

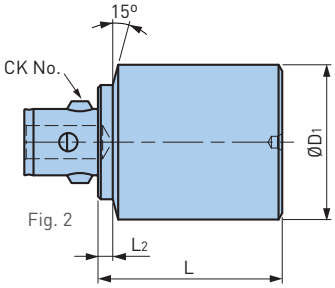


Fig. 2

Catalog Number	Reference Number	Fig.	CK	ØD	ØD1	L	L2	Weight (lbs.)
CKB3-BB31-65	10.335.531	1	CKB3	1.220	1.220	2.560	—	1.0
CKB3-BB42-50	10.335.532	2			1.654	1.968	.157	1.3
CKB4-BB39-80	10.335.541	1	CKB4	1.535	1.535	3.150	—	1.3
CKB4-BB54-50	10.335.542	2			2.125	1.968	.157	2.1
CKB5-BB50-100	11.335.551	1	CKB5	1.969	1.968	3.937	—	3.8
CKB5-BB70-60	10.335.552	2			2.756	2.360	.197	4.1
CKB5-BB76-152	11.335.553	2			3.000	6.000	.197	12.0
CKB6-BB64-120	11.335.561	1	CKB6	2.520	2.520	6.000	—	7.1
CKB6-BB64-220	11.335.563	1			2.520	8.858	—	13.5
CKB6-BB97-70	11.335.562	2			3.820	2.760	.394	8.9
CKB6-BB102-203	11.335.564	2			4.000	8.000	.394	28.4
CKB7-BB90-180	11.335.571	1	CKB7	3.543	3.543	7.087	—	21.2

ACCESSORIES

SPARE PARTS
PG. 538

CHAMFER RINGS

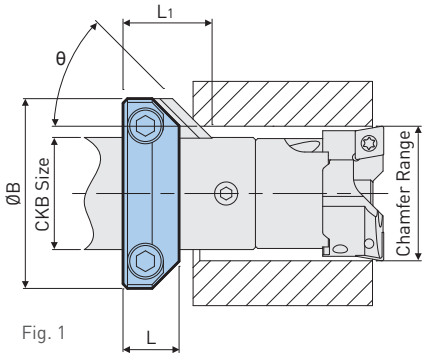


Fig. 1

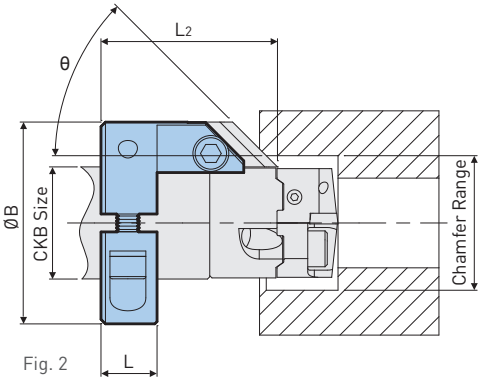
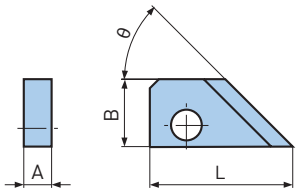


Fig. 2

Adapter Size	Chamfer Range	Fig. 1		Fig. 2		θ	L1	L2	L	ØB	Insert Size
		Catalog Number	Reference Number	Catalog Number	Reference Number						
CKB1	.79-1.38	**CR20**	10.663.110	—	—	30º	1.083	—	.511	1.378	1
						45º	.925	—			
CKB2	.98-1.57	**CR25**	10.663.120	**CR25S**	10.663.121	30º	1.083	2.146	.590	1.654	
						45º	.925	1.988			
CKB3	1.26-1.85	**CR32**	10.663.130	**CR32S**	10.663.131	30º	1.083	2.322	.590	2.008	
						45º	.925	2.165			
CKB4	1.61-2.17	**CR41**	10.663.140	**CR41S**	10.663.141	30º	1.083	2.600	.590	2.244	
						45º	.925	2.441			
CKB5	2.09-3.54	**CR53**	10.663.150	**CR53S**	10.663.151	30º	2.047	3.582	.984	3.543	2
						45º	1.693	3.228			
CKB6	2.68-4.09	**CR68**	10.663.160	**CR68S**	10.663.161	30º	2.047	4.134	.984	4.094	
						45º	1.693	3.780			

ACCESSORIES

CHAMFER RING INSERTS



Insert Size	θ	Catalog Number	Reference Number	A	B	L
1	30º	**CRP20-30**	10.663.181	.157	.354	1.083
	45º	**CRP20-45**	10.663.191			.925
2	30º	**CRP53-30**	10.663.185	.315	.787	2.047
	45º	**CRP53-45**	10.663.195			1.693

INDEXABLE INSERTS

For different work piece materials and a quick change of the insert.

Fig. 1

Fig. 2

Insert Size	θ	Catalog Number	Fig	Ring Model	Bore Range		Insert
					Min	Max	
2	45º	**CB2-45CW12A**	1	CR53	2.165	2.953	CW1206A
				CR68	2.717	3.504	
		CB2-45CW12B	2	CR53	2.756	3.543	
				CR68	3.307	4.134	

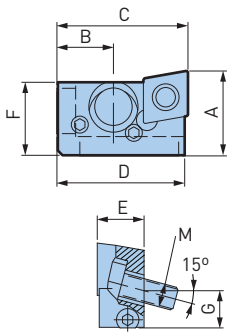
• A wrench and screw are included. Inserts to be ordered separately

ACCESSORIES

ADJUSTABLE SHELF MOUNT CARTRIDGES—TYPE ASM

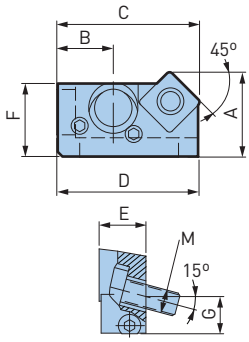
Radial and axial adjustment cartridges allow quick and easy insert adjustments for diameter and length. Especially suitable for use on special multiple diameter roughing and finish boring tools where the highest cutting capacity at high speed and feed can be realized.

The compact design features a unique pivot pin which maintains line contact to the boring bar pocket at all times through the entire range of travel. Adjustments are easily made by turning the screw conveniently located on the front face of the cartridge. Each cartridge can be adjusted in either direction (radially or axially) by up to .024".



CC..90°

Insert Size	Min. Bore	Catalog Number	A*	B	C	D	E	F	G	M	Gage Insert
CC..06 (1/4" I.C.)	1.260 (32mm)	**11.382.316**	.512 (13mm)	.335 (8.5mm)	.787 (20mm)	.768 (19.5mm)	.315 (8mm)	.457 (11.6mm)	.225 (5.7mm)	M3x.5	CC..060202
CC..09 (3/8" I.C.)	1.570 (40mm)	**11.382.326**	.709 (18mm)	.472 (12mm)	1.102 (28mm)	1.075 (27.3mm)	.394 (10mm)	.614 (15.6mm)	.323 (8.2mm)	M5x.8	CC..09T304
CC..12 (1/2" I.C.)	1.970 (50mm)	**11.382.346**	.866 (22mm)	.472 (12mm)	1.22 (31mm)	1.189 (30.2mm)	.472 (12mm)	.751 (19mm)	.422 (10.7mm)	M6x1	CC..120408
CC..16 (5/8" I.C.)	2.205 (56mm)	**11.382.356**	1.102 (28mm)	.591 (15mm)	1.496 (38mm)	1.476 (37.5mm)	.472 (12mm)	.992 (25.2mm)	.512 (13mm)	M6x1	CC..160508

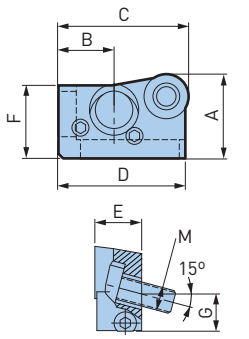


SC..45°

Insert Size	Min. Bore	Catalog Number	A*	B	C*	D	E	F	G	M	Gage Insert
SC..09 (3/8" I.C.)	1.570 (40mm)	**11.382.223**	.709 (18mm)	.472 (12mm)	1.200 (30.5mm)	1.173 (29.8mm)	.394 (10mm)	.622 (15.8mm)	.323 (8.2mm)	M5x.8	SC..09T304

SC..30°

Insert Size	Min. Bore	Catalog Number	A*	B	C*	D	E	F	G	M	Gage Insert
SC..09 (3/8" I.C.)	1.570 (40mm)	**11.382.224**	.709 (18mm)	.472 (12mm)	1.200 (30.5mm)	1.173 (29.8mm)	.394 (10mm)	.622 (15.8mm)	.323 (8.2mm)	M5x.8	SC..09T304
SC..12 (1/2" I.C.)	1.970 (50mm)	**11.382.244**	1.024 (26mm)	.472 (12mm)	1.378 (35mm)	1.366 (34.7mm)	.472 (12mm)	.835 (21.2mm)	.500 (12.7mm)	M6x1	SC..120408



RC

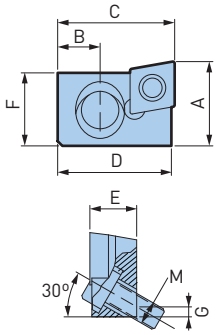
Insert Size	Min. Bore	Catalog Number	A	B	C	D	E	F	G	M	Gage Insert
RC..12 (1/2" I.C.)	1.970 (50mm)	**11.382.366**	.866 (22mm)	.472 (12mm)	1.220 (31mm)	1.189 (30.2mm)	.472 (12mm)	.751 (19mm)	.422 (10.7mm)	M6x1	RC..120400

***Dimensions based on .016" nose radius for 1/4" & 3/8" I.C. inserts; 1/2" & 5/8" I.C. insert cartridges based on .031" nose radius**

FIXED SHELF MOUNT CARTRIDGES—TYPE FSM & TSM

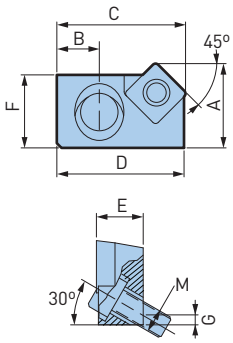
These compact and rigid insert cartridges are best utilized for special multi-diameter roughing and chamfering tools. Combined with other KAISER boring tool components, they can optimize high production boring, facing, or chamfering. Other typical applications are for dedicated core drilling/rough boring operations requiring fixed diameter and length.

TYPE "FSM"—.030" (.8mm) Adjustment with Shim



CC..90°

Insert Size	Min Bore	Catalog Number	A*	B	C	D	E	F	G	M	Gage Insert
CC..06 (1/4" I.C.)	1.260 (32mm)	**11.381.316**	.433 (11mm)	.276 (7mm)	.787 (20mm)	.768 (19.5mm)	.315 (8mm)	.377 (9.6mm)	.035 (.9mm)	M3x.5	CC..060202
CC..09 (3/8" I.C.)	1.570 (40mm)	**11.381.326**	.670 (17mm)	.295 (7.5mm)	.984 (25mm)	.961 (24.4mm)	.394 (10mm)	.583 (14.8mm)	.084 (2.1mm)	M5x.8	CC..09T304
CC..12 (1/2" I.C.)	1.89 (48mm)	**11.381.346**	.866 (22mm)	.315 (8mm)	1.181 (30mm)	1.154 (29.3mm)	.472 (12mm)	.751 (19mm)	.151 (3.8mm)	M6x1	CC..120408



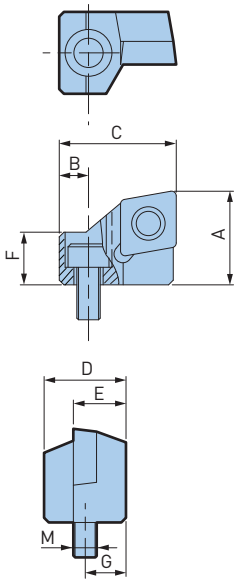
SC..45°

Insert Size	Min Bore	Catalog Number	A*	B	C*	D	E	F	G	M	Gage Insert
SC..09 (3/8" I.C)	1.570 (40mm)	**11.381.223**	.670 (17mm)	.295 (7.5mm)	1.023 (26mm)	1.000 (25.4mm)	.394 (10mm)	.583 (14.8mm)	.084 (2.1mm)	M5x.8	SC..09T304
SC..12 (1/2" I.C.)	1.890 (48mm)	**11.381.243**	.866 (22mm)	.315 (8mm)	1.260 (32mm)	1.232 (31.3mm)	.472 (12mm)	.751 (19mm)	.151 (3.8mm)	M6x1	SC..120408

SC..30°

Insert Size	Min Bore	Catalog Number	A*	B	C*	D	E	F	G	M	Gage Insert
SC..09 (3/8" I.C)	1.570 (40mm)	**11.381.224**	.670 (17mm)	.295 (7.5mm)	1.023 (26mm)	1.000 (25.4mm)	.394 (10mm)	.583 (14.8mm)	.084 (2.1mm)	M5x.8	SC..09T304
SC..12 (1/2" I.C.)	1.890 (48mm)	**11.381.244**	.866 (22mm)	.315 (8mm)	1.260 (32mm)	1.232 (31.3mm)	.472 (12mm)	.751 (19mm)	.151 (3.8mm)	M6x1	SC..120408

TYPE "TSM"—No Adjustment



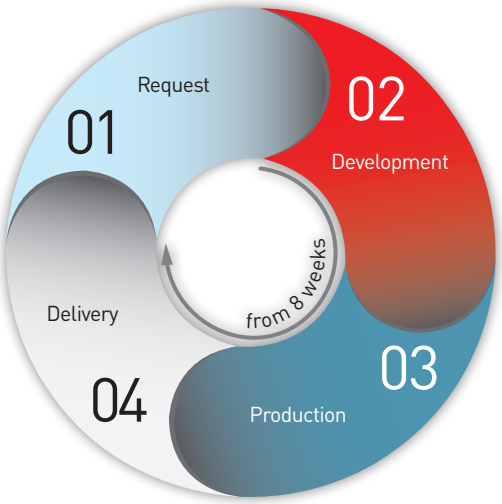
CC..90°

Insert Size	Min Bore	Catalog Number	A*	B	C	D	E	F	G	M	Gage Insert
CC..06 (1/4" I.C.)	1.181 (30mm)	**11.381.416**	.394 (10mm)	.157 (4mm)	.591 (15mm)	.394 (10mm)	.276 (7mm)	.197 (5mm)	.197 (5mm)	M3x.5	CC..060204
CC..09 (3/8" I.C.)	1.496 (38mm)	**11.381.426**	.630 (16mm)	.197 (5mm)	.787 (20mm)	.551 (14mm)	.354 (9mm)	.354 (9mm)	.276 (7mm)	M4x.7	CC..09T308
CC..12 (1/2" I.C.)	1.890 (48mm)	**11.381.446**	.787 (20mm)	.236 (6mm)	.984 (25mm)	.630 (16mm)	.394 (10mm)	.472 (12mm)	.315 (8mm)	M6x1	CC..120408

***Dimensions based on .016" nose radius for 1/4" & 3/8" I.C. inserts; 1/2" I.C. insert cartridges based on .031" nose radius**

BIG KAISER SPECIAL TOOLS

Do you need an insert holder or a shank in a special execution for your BIG KAISER boring head? No problem: BIG DAISHOWA will quickly handle your request.



01. REQUEST

Our in-house sales department will process your request immediately.

02. DEVELOPMENT

Immediately after confirming your purchase order, our developers will start on your order.

03. PRODUCTION

The professional manufacturing of your special tools is guaranteed.

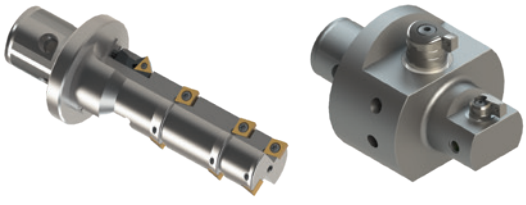
04. DELIVERY

The tools will be shipped within 8 weeks after receiving purchase order. Our in-house sales department will service you from the request to the delivery.

INSERT HOLDERS

- Roughing with free insert selection for the SW twin-cutter boring heads
- Insert holder in any shape and size for the EWN/EWD precision boring heads
- For contouring, chamfering or pin turning

TOOLS FOR SEVERAL DIAMETERS



- Roughing tool with fixed insert pockets and cartridges; thanks to CKB connection, the tool is independent of a spindle system
- Finishing tool with BIG KAISER adjustment cartridges; adjustment precision: .0005"/Ø

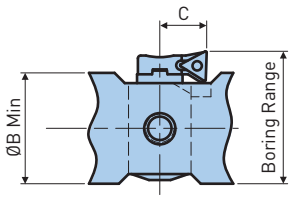
SPECIAL TOOL ACCESSORIES

CARTRIDGES WITH MICROMETER ADJUSTMENT FOR SPECIAL, MULTI-DIAMETER SOLUTIONS

Special tools with the requirement of high precision adjustment cartridges can be easily designed and manufactured. Five cartridges, offered with either inch (Ø.0005"/div.) or metric (Ø.01mm/div.) graduated dials cover the diameter work range from Ø.906"-4.216" (Ø23-107mm) by application of two different insert holders.

Cartridges are made with a highly accurate and ground micrometer spindle and tool carrier locking system which will not change diameter setting. Cartridges easily assemble into a precision bore and lock securely into place with a threaded locating screw. The locking screw for the tool carrier is an integral part of the locating screw.

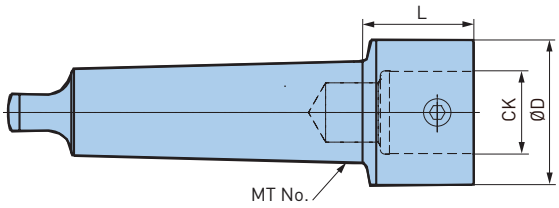
Two insert holders for each cartridge are offered and use ISO standard type inserts. Insert holders can be assembled for either forward or back boring without rotating the cartridges. A grease fitting is also provided to ensure long lasting and accurate diameter setting.



INCH CARTRIDGES, 1 Div = .0005"/Ø, Ø.906"-4.216"

Type	Catalog Number	ØB Min	C	Boring Range	Insert Holder	Insert Type
1/1	**10.456.011**	.827	.433	.906-1.142	**10.626.111**	TP..07
				1.102-1.339	**10.626.112**	TP..07
1/2	**10.456.012**	1.102	.433	1.299-1.654	**10.626.111**	TP..07
				1.496-1.811	**10.626.112**	TP..07
2/1	**10.456.013**	1.535	.650	1.772 - 2.283	**10.626.141**	TC..11
				2.126 - 2.638	**10.626.142**	TC..11
2/2	**10.456.014**	2.362	.650	2.559 - 3.071	**10.626.141**	TC..11
				2.913 - 3.425	**10.626.142**	TC..11
2/3	**10.456.015**	3.150	.650	3.346 - 3.858	**10.626.141**	TC..11
				3.701 - 4.216	**10.626.142**	TC..11

MT—CKB SHANKS

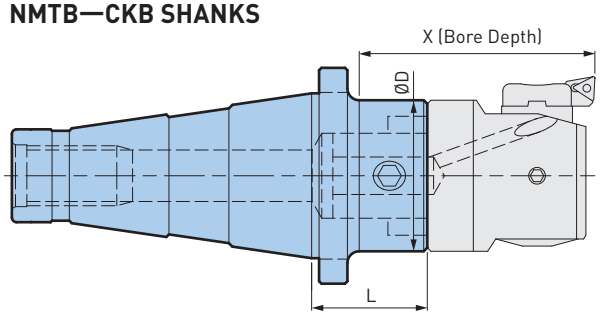


Catalog Number	CK	ØD	L	Weight (lbs.)
MT3-CKB1-47	CKB1	.748	1.850	.9
MT3-CKB2-68	CKB2	.945	2.657	1.1
MT3-CKB3-64	CKB3	1.220	2.520	1.3
MT3-CKB5-48	CKB5	1.968	1.890	1.8
MT4-CKB1-52	CKB1	.748	2.028	1.5
MT4-CKB2-74	CKB2	.945	2.913	1.8
MT4-CKB3-66	CKB3	1.220	2.579	2.0
MT4-CKB4-60	CKB4	1.535	2.343	2.2
MT4-CKB5-50	CKB5	1.968	1.949	2.4
MT4-CKB6-61	CKB6	2.520	2.382	3.5
MT5-CKB1-79	CKB1	.748	3.091	3.2
MT5-CKB2-74	CKB2	.945	2.913	3.9
MT5-CKB3-96	CKB3	1.220	3.760	4.2
MT5-CKB4-86	CKB4	1.535	3.366	4.6
MT5-CKB5-75	CKB5	1.968	2.933	7.3
MT5-CKB6-61	CKB6	2.520	2.382	9.5
MT6-CKB6-61	CKB6	2.520	2.382	11.0

ACCESSORIES

SPARE PARTS
PG. 538

NMTB—CKB SHANKS



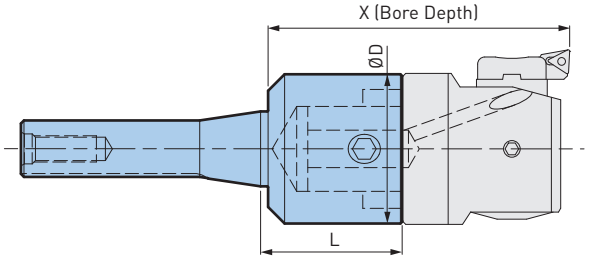
Catalog Number	Reference Number	CK	ØD	L	X	Weight (lbs.)
NT40U-CKB6-45	11.321.562	CKB6	2.500	1.772	4.134	3.0
NT50U-CKB5-63	11.321.952	CKB5	1.968	2.480	3.940	7.0
NT50U-CKB6-49	11.321.962	CKB6	2.500	1.929	3.940	7.0
NT50U-CKB7-63	11.321.974	CKB7	3.543	2.480	5.865	8.5

ACCESSORIES

SPARE PARTS PG. 538

***For CKB7, Bore Depth dimension applies for boring heads with length of 4.606"**

MANUAL TAPER—CKB SHANKS

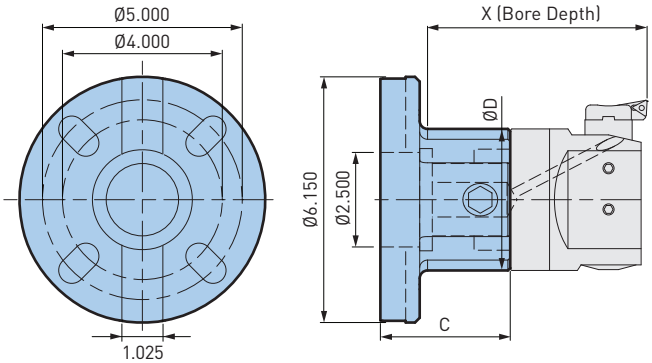


Catalog Number	Reference Number	CK	ØD	L	X	Weight (lbs.)
R8-CKB6-60	11.362.261	CKB6	2.500	2.362	5.100	2.4
MK4-CKB6-130	10.322.563			3.189	5.118	4.0

ACCESSORIES

SPARE PARTS PG. 538

BORING MILL—CKB SHANKS



Type	Adapter Size	X	Catalog Number	ØD	C
6" Flange	CKB7	6.560*	**11.366.774**	3.543	3.250

ACCESSORIES

SPARE PARTS PG. 538

***For KAB7, Bore Depth dimension applies for boring heads with length of 4.606"**

CKB ER COLLET ADAPTER—CKB

PRECISION BORING HEADS EASILY USED ON TURNING MACHINES

The new ER collet adapters, available in the sizes ER25 with CKB1 connection and ER32 with CKB1 and CKB2, enable the use of all BIG KAISER precision boring heads of the corresponding sizes on ER collet chucks in machining or turning centers. Thanks to full compatibility with the modular BIG KAISER extensions, long tool combinations can be achieved easily.

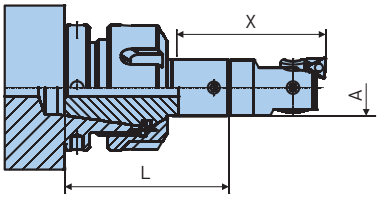


Fig. 1

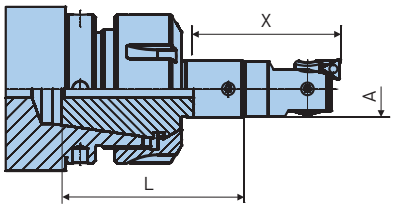


Fig. 2

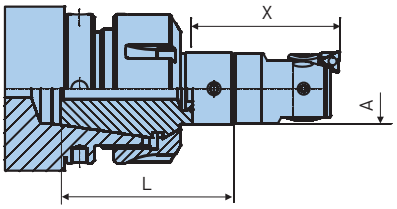
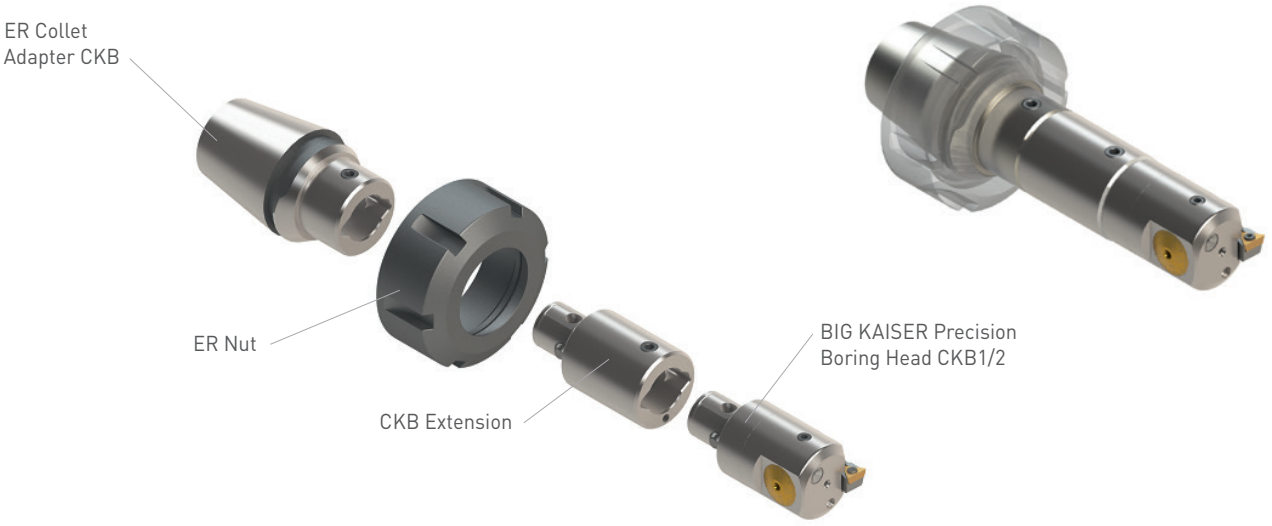


Fig. 3

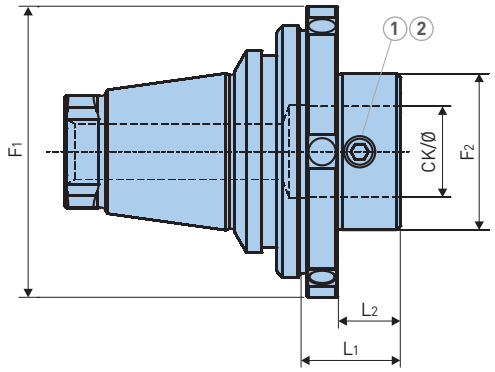
Size	Catalog Number	Fig.	CKB/Ø	L	X	A
ER25	**10.335.130**	1	CKB1/11	2.17	1.97	.75
ER32	**10.335.131**	2	CKB1/11	2.40	1.97	.75
	10.335.132	3	CKB2/14	2.28		.94



WTO QUICKFLEX® ADAPTER WITH BIG KAISER TOOL CONNECTION

The adapters for the QuickFlex® quick change tooling system are available in eight different executions and enable the use of BIG KAISER boring tools in the sizes CKB1 up to CKB4 on turning machines. This guarantees gapless and highly precise machining of cross bores on turning machines in the range from Ø.016"-2.913" (Ø.4-74mm).

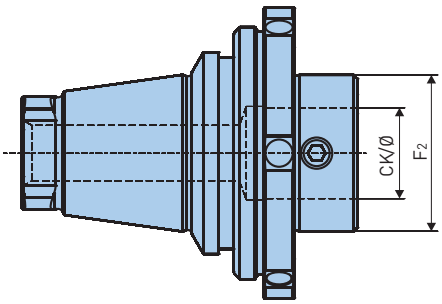
ADAPTERS FOR BIG KAISER



QuickFlex® Adapter								Spare Parts	
Size	Catalog Number	Type	CK/Ø	F1	F2	L1	L2	Screw 1	Wrench 2
ER-25QF	**10.470.721**	325125CK1	CKB1/11	1.929	.748	.610	.335	10.690.431	10.690.801
	10.470.723	325125CK3	CKB3/18	1.929	1.220	.768	.492	10.690.433	10.690.803
ER-32QF	**10.470.731**	325132CK1	CKB1/11	2.283	.748	.610	.335	10.690.431	10.690.801
	10.470.733	325132CK3	CKB3/18	2.283	1.220	.768	.492	10.690.433	10.690.803
ER-40QF	**10.470.742**	325140CK2	CKB2/14	2.795	.945	.709	.394	10.690.432	10.690.802
	10.470.744	325140CK4	CKB4/22	2.795	1.535	.906	.591	10.690.434	10.690.804
ER-50QF	**10.470.752**	325150CK2	CKB2/14	3.228	.945	.748	.394	10.690.432	10.690.802
	10.470.754	325150CK4	CKB4/22	3.228	1.535	.945	.591	10.690.434	10.690.804

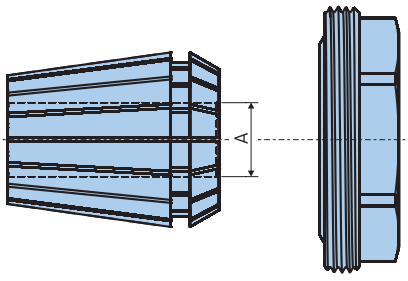
QUICKFLEX® ADAPTER

Sizes: ER-25QF, ER-32QF, ER-40QF and ER-50QF



COLLETS

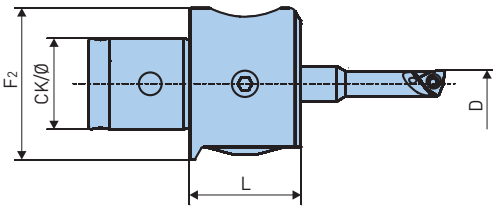
Sizes: ER25, ER32, ER40 and ER50



TOOL COMBINATIONS AND WORK RANGES

PRECISION BORING HEADS EWN, SERIES 112

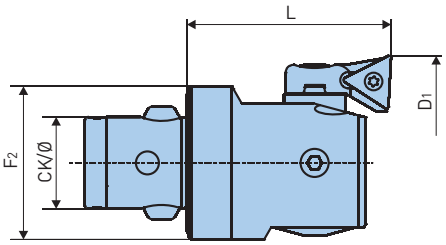
Ø.016"–.976" (Ø.4–24.8mm)

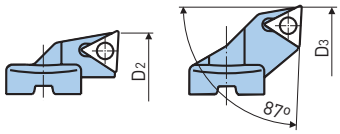


Boring Head	CK/Ø	D	A	L	F2
EWN 04-15	CK3/18	.016-.610	.276	.866	1.220
EWN 04-22	CK4/22	.016-.976	.394	1.102	1.535

PRECISION BORING HEADS EWN, SERIES 310

Ø.787"–2.913" (Ø20–74mm)

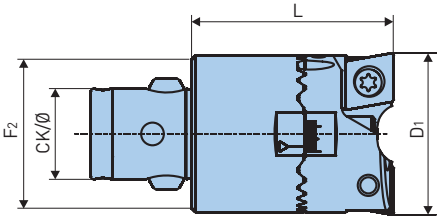


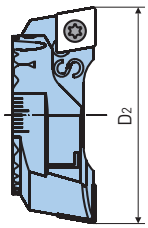


Boring Head	CK/Ø	D1	D2	D3	L	F2
EWN 20	CKB1/11	.787-1.102	.984-1.220	1.181-1.417	1.280	.748
EWN 25	CKB2/14	.984-1.299	1.260-1.575	1.535-1.850	1.398	.945
EWN 32	CKB3/18	1.260-1.654	1.614-2.008	1.970-2.362	1.575	1.220
EWN 41	CKB4/22	1.614-2.156	1.969-2.480	2.402-2.913	1.850	1.535

ROUGH BORING HEADS SW, SERIES 319

Ø.787"–2.598" (Ø20–66mm)





Boring Head	CK/Ø	D1	D2	L	F2
SW 20	CKB1/11	.787-1.102	.984-1.220	1.280	.748
SW 25	CKB2/14	.984-1.299	1.260-1.575	1.398	.945
SW 32	CKB3/18	1.260-1.654	1.614-2.008	1.575	1.220
SW 41	CKB4/22	1.614-2.156	2.087-2.598	1.850	1.535

PRECISION BORING HEADS EW, SERIES 310

Ø.591"–.866" (Ø15-22mm)

Boring Head	A	D	L
EW 15	.551	.591-.728	1.181
EW 18	.630	.709-.866	1.417

CYLINDRICAL SHANKS

A.6

N/C LATHE TOOLING

CYLINDRICAL SHANKS

COLLET CHUCKS 296-299

MEGA MICRO CHUCK 296
NEW BABY CHUCK 298-299

MILLING CHUCKS 300

NEW Hi-POWER MILLING CHUCK 300

HYDRAULIC CHUCKS 301

BASIC ARBORS 302-303

SHRINK FIT HOLDER 302-303

TAP HOLDERS 304

MEGA SYNCHRO TAPPING HOLDER 304

MODULAR HOLDERS 305

CKB SHANK 305

N/C LATHE TOOLING

COLLET CHUCKS 305-310

MEGA MICRO CHUCK 305
NEW BABY CHUCK 306-308
MEGA ER CHUCK 309-310

HYDRAULIC CHUCKS 311-313

BASIC ARBORS 314

SMART DAMPER TURNING 314

ACCESSORIES 315-317

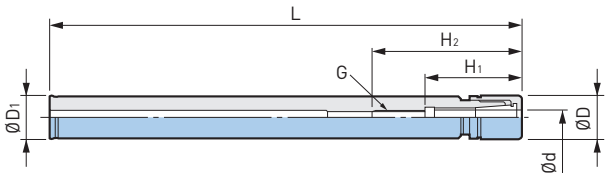
CENTERING HOLDER 315
LATHE MASTER 316
CENTERING TOOL 317

MEGA MICRO CHUCK

CLAMPING RANGE: Ø.018"-.317" (Ø.45-8.05mm)

For Micro Drill & End Mill Applications

COOLANT THROUGH



Catalog Number	ød	øD	øD1	L	H1	H2	G	Collet	Nut	Wrench	Weight (lbs.)
ST.375-MEGA3S-120	**.018-.128**	.394	.375	4.72	.87	1.50	M4 P0.7	NBC3S-□	MGN3S	MGR10	.1
ST.500-MEGA4S-130	**.018-.159**	.472	.500	5.12	1.04	1.85	M5 P0.8	NBC4S-□	MGN4S	MGR12	.2
ST.500-MEGA4S-160				6.30							.3
ST.625-MEGA6S-160	**.018-.238**	.551	.625	6.30	1.12	1.93	M7 P0.75	NBC6S-□	MGN6S	MGR14	.4
ST.625-MEGA6S-200				7.87							.5
ST10-MEGA3S-120	**.018-.128**	.394	10mm	4.72	.87	1.50	M4 P0.7	NBC3S-□	MGN3S	MGR10	.1
ST12-MEGA4S-130	**.018-.159**	.472	12mm	5.12	1.04	1.85	M5 P0.8	NBC4S-□	MGN4S	MGR12	.2
ST12-MEGA4S-160				6.30							.3
ST14-MEGA6S-160	**.018-.238**	.551	14mm	6.30	1.12	1.93	M7 P0.75	NBC6S-□	MGN6S	MGR14	.4
ST14-MEGA6S-200				7.87							.5
ST16-MEGA8S-160	**.116-.317**	.709	16mm	6.30	1.22	1.99	M9 P0.75	NBC8S-□	MGN8S	MGR18	.5
ST16-MEGA8S-200				7.87							.6

- MEGA MICRO NUT is included; collet and wrench must be ordered separately
- Weight includes nut but not collet

ACCESSORIES

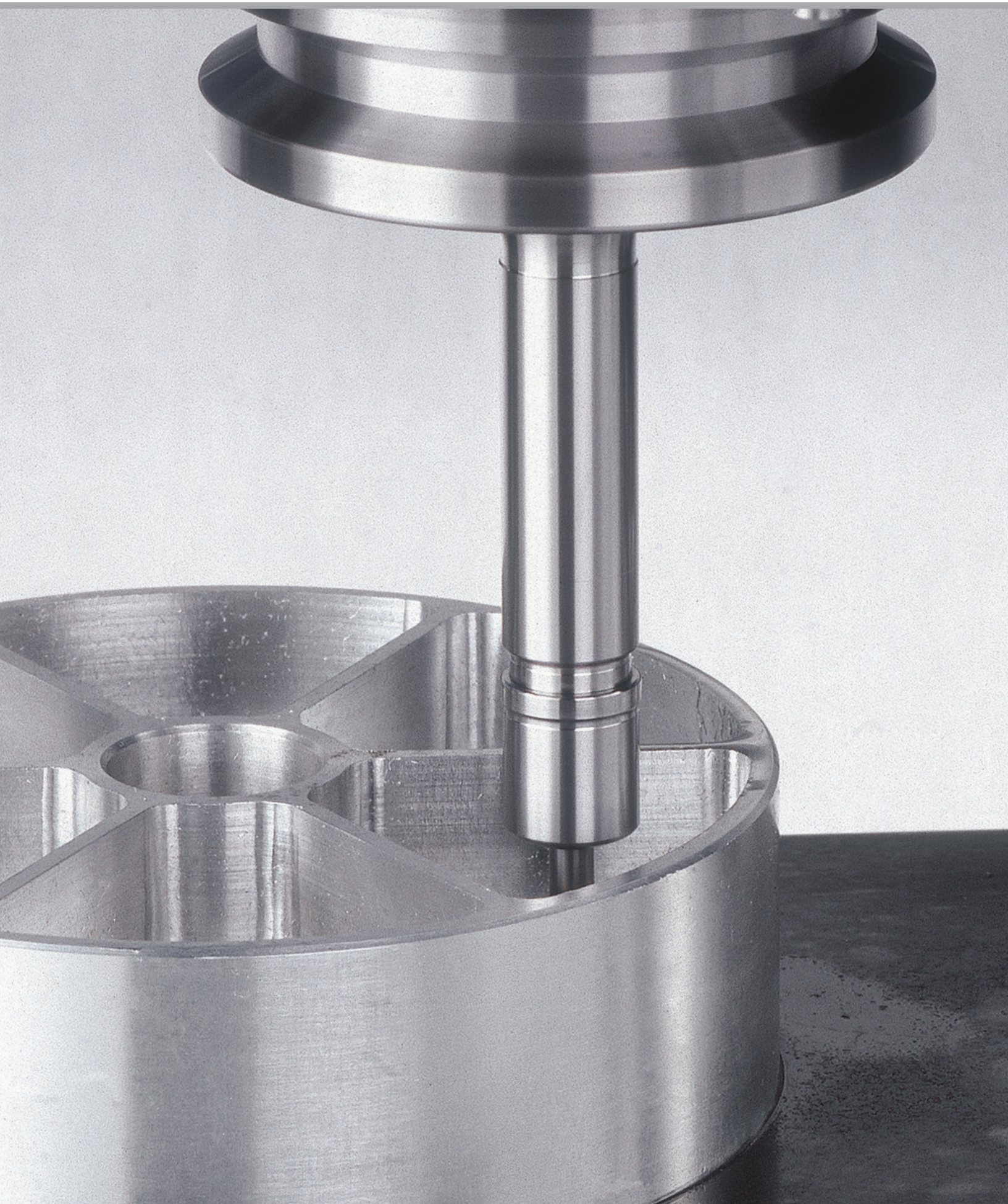
COLLET PG. 356

MEGA NUT PG. 358

SEAL NUT PG. 358

MEGA WRENCH PG. 390

BIG DAISHOWA



NEW BABY

Handles interference issues flexibly when combined with the NEW Hi-POWER MILLING CHUCK.

- Enables easy tool layout for horizontal machining center prone to interference with workpieces and jigs

COOLANT THROUGH

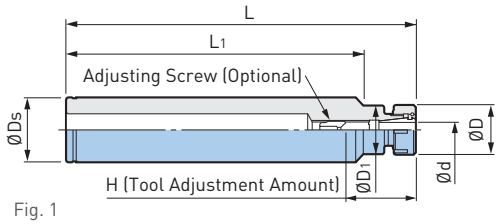


Fig. 1

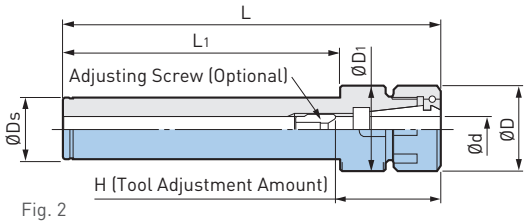


Fig. 2

Catalog Number	Fig.	Ød	ØD	ØD1	ØDs	L	L1	H	Collet	Weight (lbs.)
ST20-NBS6-100	1	**.010-.236**	.787	.768	.787	4.88	3.94	.79-1.57	NBC6-□	.60
ST20-NBS6-150						6.85	5.91			.86
ST20-NBS6-250						10.79	9.84			1.41
ST20-NBS8-100	2	**.020-.315**	.984	.965		4.96	3.94	.91-1.65	NBC8-□	.64
ST20-NBS8-150						6.93	5.91			.90
ST20-NBS8-250						10.87	9.84			1.46
ST20-NBS10-100		**.060-.394**	1.181	1.161		5.04	3.94	1.38-1.77	NBC10-□	.71
ST20-NBS10-150						7.01	5.91			.97
ST20-NBS10-250						10.94	9.84			1.52
ST20-NBS10-350						14.88	13.78			2.05
ST25-NBS6-150	1	**.010-.236**	.787	.768	.984	6.85	5.91	.79-1.57	NBC6-□	1.32
ST25-NBS6-200						8.82	7.87			1.74
ST25-NBS6-250						10.79	9.84			2.16
ST25-NBS8-150		**.020-.315**	.984	.965		6.93	5.91	.91-1.65	NBC8-□	1.37
ST25-NBS8-200						8.90	7.87			1.79
ST25-NBS8-250						10.87	9.84			2.20
ST25-NBS10-150	2	**.060-.394**	1.181	1.161		7.01	5.91	1.38-1.77	NBC10-□	1.43
ST25-NBS10-200						8.98	7.87			1.85
ST25-NBS10-250						10.94	9.84			2.27
ST25-NBS13-150		**.098-.512**	1.378	1.358		7.24	5.91	1.61-2.36	NBC13-□	1.48
ST25-NBS13-200						9.21	7.87			1.90
ST25-NBS13-250						11.18	9.84			2.31

Catalog Number	Fig.	Ød	ØD	ØD1	ØDs	L	L1	H	Collet	Weight (lbs.)
ST32-NBS6-150	1	**.010-.236**	.787	.768	1.260	6.85	5.91	.79-1.57	NBC6-□	2.12
ST32-NBS6-200						8.82	7.87			2.82
ST32-NBS8-150		**.020-.315**	.984	.965		6.93	5.91	.91-1.65	NBC8-□	2.18
ST32-NBS8-200						8.90	7.87			2.87
ST32-NBS10-150		**.060-.394**	1.181	1.161		7.01	5.91	1.38-1.77	NBC10-□	2.25
ST32-NBS10-200						8.98	7.87			2.93
ST32-NBS10-250						10.94	9.84			3.62
ST32-NBS10-350						14.88	13.78			4.30
ST32-NBS13-150	2	**.098-.512**	1.378	1.358		7.24	5.91	1.61-2.36	NBC13-□	2.29
ST32-NBS13-200						9.21	7.87			2.98
ST32-NBS13-250						11.18	9.84			3.68
ST32-NBS13-300						13.15	11.81			5.07
ST32-NBS16-150		**.098-.630**	1.654	1.634		7.24	5.91	1.77-2.56	NBC16-□	2.31
ST32-NBS16-200						9.21	7.87			3.02
ST32-NBS16-300						13.15	11.81			4.41
ST32-NBS20-150		**.098-.787**	1.811	1.791		7.24	5.91	1.89-2.56	NBC20-□	2.31
ST32-NBS20-200						9.21	7.87			3.02
ST32-NBS20-300						13.15	11.81			4.41

- NEW BABY NUT is included; collet, wrench and adjusting screw must be ordered separately
- Weight includes nut but not the collet
- "H" indicates the adjustment length with an adjusting screw
- ST LOCK is available for mounting and removing tools

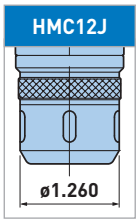
CAUTION

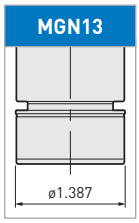
3rd digit in the model number does not correspond to the L dimension (overall length).

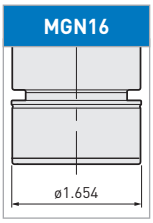
ACCESSORIES

NEW Hi-POWER MILLING CHUCK HMC12J

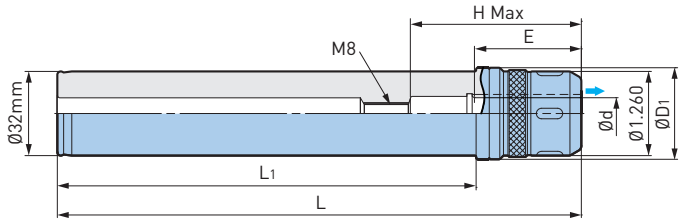
CLAMPING RANGE: Ø12mm







COOLANT THROUGH

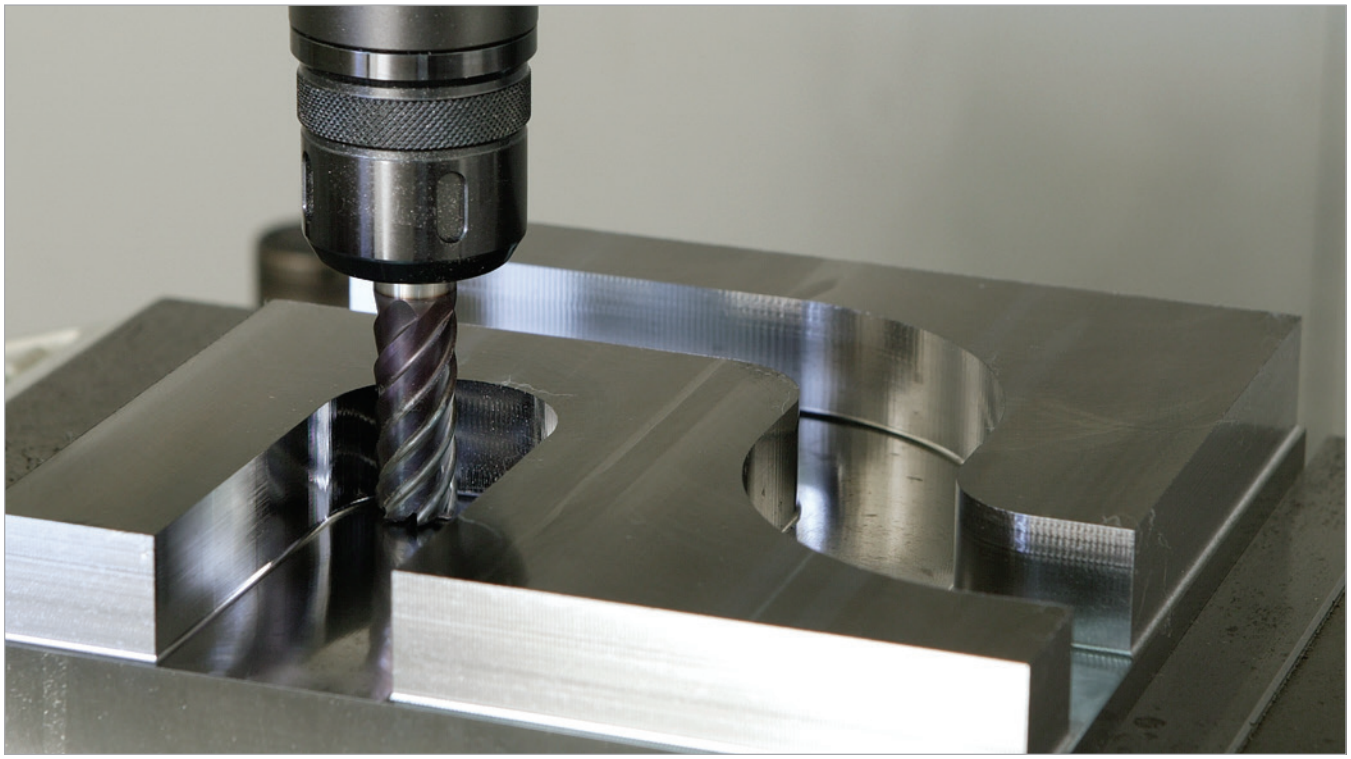


Catalog Number	Ød	ØD1	L	L1	H Max	Min Clamping Length E	Wrench	Weight (lbs.)
ST32-HMC12J-120	12mm	1.38	4.72	3.15	2.56	1.69	FK31-33	1.5
ST32-HMC12J-160			6.30	4.72				2.0
ST32-HMC12J-200			7.87	6.30				2.4

• Wrench must be ordered separately

ACCESSORIES

COLLET
PG. 383



CLAMPING RANGE: Ø4mm-20mm

High Precision Cylindrical Body Eliminates Most Interference Problems

COOLANT THROUGH

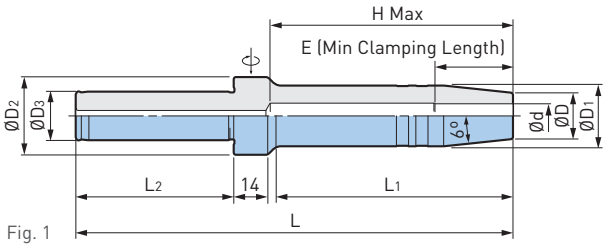


Fig. 1

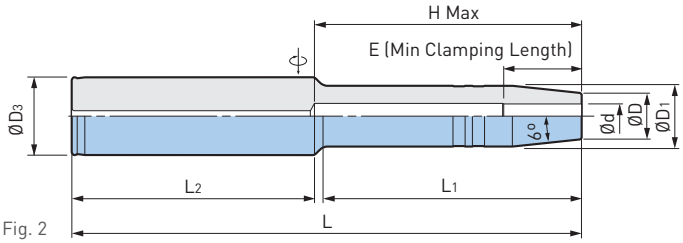


Fig. 2

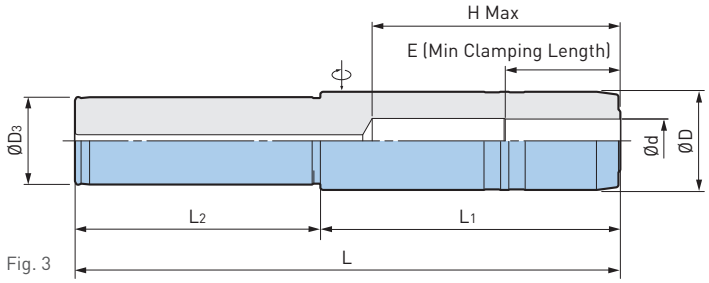


Fig. 3

Catalog Number	Fig.	Ød	ØD	ØD1	ØD2	ØD3	L	L1	L2	E	H Max	Weight (lbs.)
ST20-HDC4S-180	1	**4mm**	.551	.71	1.26	20mm	7.09	3.70	2.56	.75	—	.88
ST20-HDC6S-180		**6mm**		.79				3.74		.98	3.98	.95
ST20-HDC8S-180		**8mm**	.669	.91				3.78		1.22		1.10
ST20-HDC10S-180		**10mm**	.748	.98				3.82		1.30	3.94	1.19
ST20-HDC12S-180		**12mm**	.827	1.10				3.90		1.42		1.34
ST32-HDC10S-210	2	**10mm**	.748	.98	—	32mm	8.27	4.17	3.94	1.30	4.33	2.16
ST32-HDC12S-210		**12mm**	.827	1.10				4.25		1.42	4.29	2.33
ST32-HDC16-200	3	**16mm**	1.417	—			7.87	4.33	3.54	1.69	3.58	2.79
ST32-HDC20-200		**20mm**	1.496								3.54	2.82

• Adjusting screw cannot be used

CAUTION

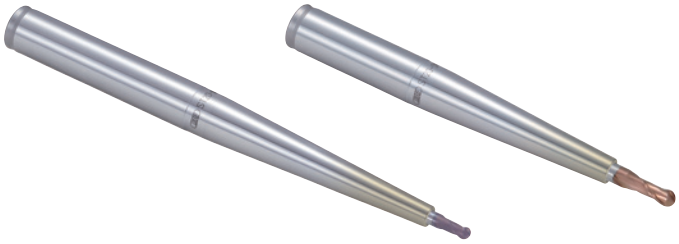
Use only cutting tools that have a shank tolerance of h6 (see table pg. 26). Do not use with cutting tools made with a flat on the shank (ie: Weldon type shank). Roughing end mills are not recommended for use with hydraulic chucks. Do not tighten the clamping screw without first inserting a cutting tool into the tool holder. Always insert the cutting tool into the hydraulic tool holder beyond min. clamping length "E".

SHRINK FIT SUPER SLIM

CLAMPING RANGE: Ø4-12mm

High Precision Cylindrical Body Eliminates Most Interference Problems

COOLANT THROUGH



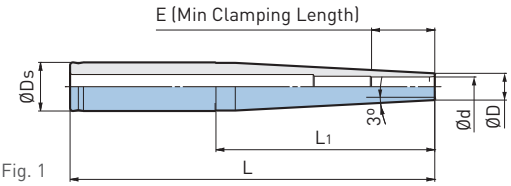


Fig. 1

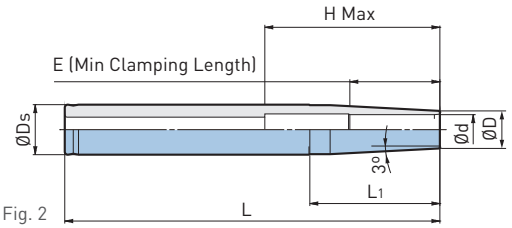


Fig. 2

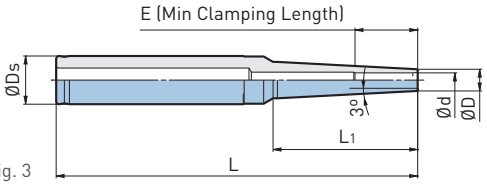


Fig. 3

Catalog Number	Fig.	Ød	ØD	ØDs	L	L1	H	E	Weight (lbs.)
ST12-SRC4SS-120❖	1	**4mm**	.276	.472	4.72	2.01	—	.63	.22
ST12-SRC6SS-120	2	**6mm**	.354		5.91	1.26	2.05	1.02	.22
ST20-SRC4SS-150-K40❖	3	**4mm**	.276	.787	5.91	1.57	—	.63	.55
ST20-SRC6SS-150-K60		**6mm**	.354	.787	7.87	2.36	—	1.02	.55
ST20-SRC6SS-200	1					4.33			.66
ST20-SRC6SS-250	1				9.84	4.33			.77
ST20-SRC8SS-150	1	**8mm**	.433	.787	5.91	3.54	—	1.02	.55
ST20-SRC8SS-200					7.87				.66
ST20-SRC8SS-250					9.84				.88
ST20-SRC10SS-150	2	**10mm**	.512	.787	5.91	2.80	2.36	1.26	.55
ST20-SRC10SS-200					7.87				.77
ST20-SRC10SS-250					9.84				.88
ST20-SRC12SS-150	2	**12mm**	.591	.787	5.91	2.05	2.76	1.42	.55
ST20-SRC12SS-200					7.87				.77
ST20-SRC12SS-250					9.84				.99

- Use a carbide shank cutter within a tolerance of h6
- Center through coolant supply is available with tools with oil holes
- Use a carbide shank cutter within a tolerance of h5 with models marked ❖

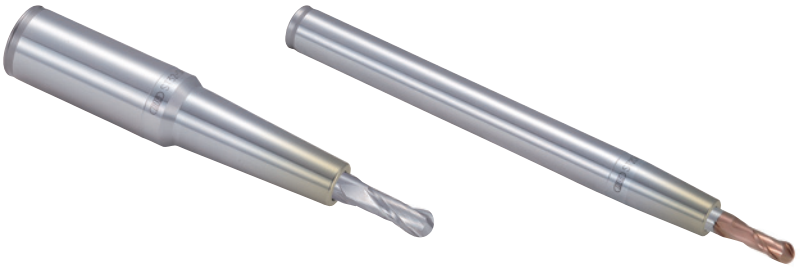
CAUTION

Some shrink fit machines may not be compatible with the Shrink Chuck. Please refer to the shrink fit machine operation manual.

SHRINK FIT SLIM

CLAMPING RANGE: Ø12-20mm

COOLANT THROUGH



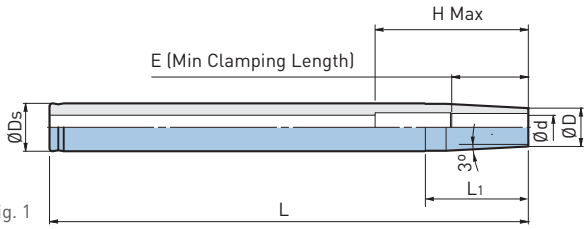


Fig. 1

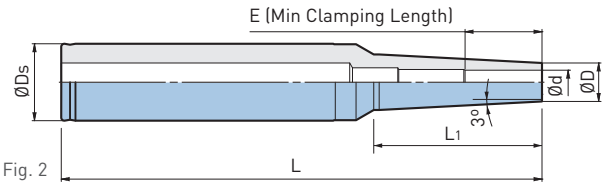


Fig. 2

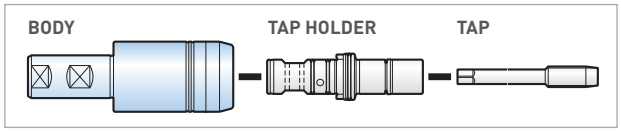
Catalog Number	Fig.	Ød	ØD	ØDs	L	L1	H	E	Weight (lbs.)
ST32-SRC12S-150-K70	2	**12mm**	.748	1.260	5.91	2.76	—	1.42	1.2
ST32-SRC12S-200-K70					7.87				1.8
ST32-SRC12S-300-K70					11.81	2.76			2.8
ST32-SRC16S-150	1	**16mm**	.945	1.260	5.91	3.27	2.76	1.50	1.3
ST32-SRC16S-200					7.87		3.15		1.9
ST32-SRC16S-300					11.81				2.9
ST32-SRC20S-150	1	**20mm**	1.102	1.260	5.91	1.97	3.15	1.50	1.3
ST32-SRC20S-200					7.87				1.9
ST32-SRC20S-300					11.81				2.9

- Use a carbide shank cutter within a tolerance of h6
- Center through coolant supply is available with tools with oil holes

CAUTION

Some shrink fit machines may not be compatible with the Shrink Chuck. Please refer to the shrink fit machine operation manual.

MEGA SYNCHRO TAPPING HOLDER



COOLANT THROUGH

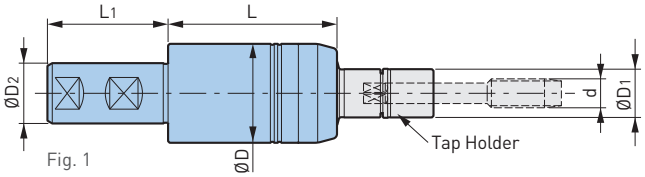


Fig. 1

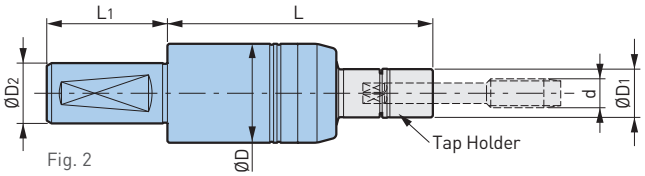


Fig. 2

Catalog Number	Fig.	Tapping Range d* (Inch)	Tapping Range d* (Metric)	ØD	ØD1	ØD2	L	L1	Wrench	Weight (lbs.)
SL1.000-MGT6-2.5	1	No.2-No.12	M2-M6	1.42	.63	1.000	2.50	2.28	MGR16	1.1
SL1.000-MGT12-2.75		AU1/4-AU7/16	M6-M12	1.61	.79	1.000	2.75	2.28	MGR20L	1.8
SL1.250-MGT20-3.5	1	AU1/2-AU3/4 AP1/8-AP1/4	M12-M20	2.13	1.18	1.250	3.50	2.28	MGR30L	3.3
ST20-MGT6-65	2	No.2-No.12	M2-M6	1.42	.63	20mm	2.56	1.57	MGR16	1.1
ST25-MGT12-70	2	AU1/4-AU7/16	M6-M12	1.61	.79	25mm	2.76	1.97	MGR20L	1.8
ST32-MGT20-90	2	AU1/2-AU3/4 AP1/8-AP1/4	M12-M20	2.13	1.18	32mm	3.54	2.17	MGR30L	3.3

***AU3/8 is included in the MGT20 series**

- MGT set screw is included; tap holder and wrench must be ordered separately

ACCESSORIES

TAP HOLDER PG. 396

MEGA NUT PG. 403

SYNCHRO ADJUSTER PG. 403

O-RING PG. 403

MEGA WRENCH PG. 390

SCREW PG. 403

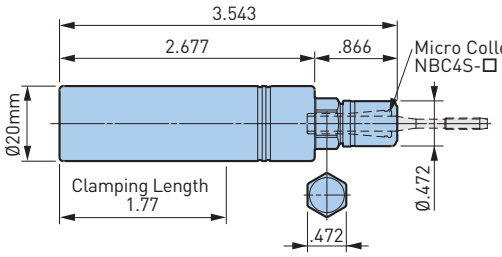
CAUTION

Cannot be used with machining center without synchronized tapping function.

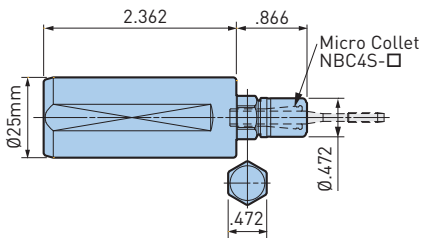
STRAIGHT SHANK

TAPPING RANGE: No.0-No.6 (M1-M3)

Catalog Number
ST20-MGT3-90



Catalog Number
SLS25-MGT3-22



- Nut is included; collet and wrench must be ordered separately
- When attaching or detaching the tap, a commercially available flat wrench (12mm width) is also required
- Not capable of supplying coolant through the holder body

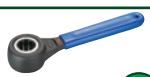
CAUTION

Cannot be used with machining center without synchronized tapping function.

ACCESSORIES

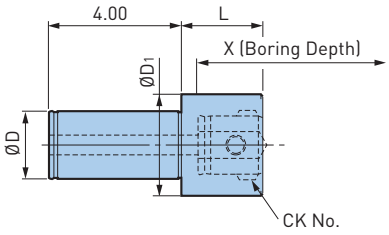
COLLET PG. 356

MEGA NUT PG. 358


MEGA WRENCH PG. 390

CKB CYLINDRICAL SHANK

COOLANT THROUGH



Catalog Number	Reference Number	ØD	CK	ØD1	L	X	Weight (lbs.)
SL1.00-CKB5-51	11.361.052	1.000	CKB5	1.968	2.000	4.244	2.0
SL1.25-CKB6-51	11.361.162	1.250	CKB6	2.500	2.000	4.800	3.5
SL1.50-CKB6-51	11.361.262	1.500	CKB6	2.500	2.000	4.800	4.0
SL2.00-CKB6-51	11.361.462	2.000	CKB6	2.500	2.000	4.800	5.0
SL2.00-CKB7-83	11.361.474	2.000	CKB7	3.543	3.268	7.875*	11.0

• Head and insert must be ordered separately

ACCESSORIES

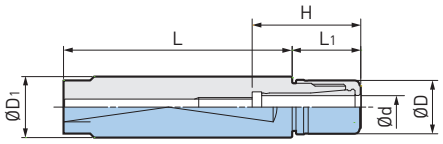
SPARE PARTS PG. 538

MEGA MICRO CHUCK

CLAMPING RANGE: Ø.018"-.317" (Ø.45-8.05mm)

For Micro Drill & End Mill Applications

COOLANT THROUGH



Catalog Number	Ød	ØD	ØD1	L	L1	H	Collet	Nut	Wrench
SL16-MEGA6S-60	.018-.238	.551	16mm	2.36	.709	1.12	NBC6S-□	MGN6S	MGR14
SL20-MEGA6S-40	.018-.238	.551	20mm	1.57	.709	1.12	NBC6S-□	MGN6S	MGR14
SL20-MEGA6S-80	.018-.238			3.15					
SL20-MEGA8S-40	.116-.317	.709		1.57	.748	1.12	NBC8S-□	MGN8S	MGR18
SL20-MEGA8S-80	.116-.317			3.15					
SL15.875-MEGA6S-60	.018-.238	.551	.625	2.36	.709	1.12	NBC6S-□	MGN6S	MGR14
SL19.05-MEGA6S-40	.018-.238	.551	.750	1.57	.709	1.12	NBC6S-□	MGN6S	MGR14
SL19.05-MEGA6S-80				3.15					
SL19.05-MEGA8S-40	.116-.317	.709	.750	1.57	.748	1.12	NBC8S-□	MGN8S	MGR18
SL19.05-MEGA8S-80	.116-.317			3.15					

• MEGA MICRO NUT is included; collet and wrench must be ordered separately
• Center through coolant supply is available

ACCESSORIES

COLLET PG. 356

MEGA NUT PG. 358

SEAL NUT PG. 358

MEGA WRENCH PG. 390

NEW BABY CHUCK

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

For Drills, Reamers, Taps & Finishing End Mills

COOLANT THROUGH

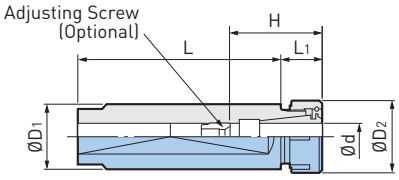


Fig. 1

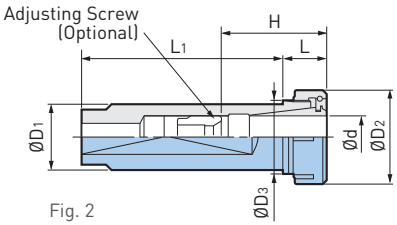


Fig. 2

Catalog Number	Fig.	Ød	ØD1	ØD2	ØD3	L	L1	H	Collet	Nut	Wrench
SL16-NBS6-40	1	**.010-.236**	16mm	.787	—	1.57	.59	.79-1.57	NBC6-□	NBN6	NBK6
SL16-NBS6-80						3.15					
SL16-NBS8-40		**.020-.315**		.987		1.57	.65	.91-1.65	NBC8-□	NBN8	NBK8
SL16-NBS8-80						3.15					
SL16-NBS10-40	2	**.059-.394**		1.181	.83	1.57	1.46	1.38-1.77	NBC10-□	NBN10	NBK10
SL16-NBS10-80						3.15					
SL20-NBS6-40	1	**.010-.236**	20mm	.787	—	1.57	.59	.79-1.57	NBC6-□	NBN6	NBK6
SL20-NBS6-80						3.15					
SL20-NBS8-40		**.020-.315**		.987		1.57	.65	.91-1.65	NBC8-□	NBN8	NBK8
SL20-NBS8-80						3.15					
SL20-NBS10-40	2	**.059-.394**		1.181	.83	1.57	.71	1.38-1.77	NBC10-□	NBN10	NBK10
SL20-NBS10-80						3.15					
SL20-NBS13-40		**.098-.512**		1.377	1.02	1.57	1.69	1.61-2.36	NBC13-□	NBN13	NBK13
SL20-NBS13-80						3.15					
SL22-NBS6-40	1	**.010-.236**	22mm	.787	—	1.57	.59	.79-1.57	NBC6-□	NBN6	NBK6
SL22-NBS6-80						3.15					
SL22-NBS8-40		**.020-.315**		.987		1.57	.65	.91-1.65	NBC8-□	NBN8	NBK8
SL22-NBS8-80						3.15					
SL22-NBS10-40		**.059-.394**		1.181		1.57	.71	1.38-1.77	NBC10-□	NBN10	NBK10
SL22-NBS10-80						3.15					
SL22-NBS13-40	2	**.098-.512**		1.377	1.02	1.57	.85	1.61-1.85	NBC13-□	NBN13	NBK13
SL22-NBS13-80						3.15		1.61-2.36			
SL25-NBS6-80	1	**.010-.236**	25mm	.787	—	3.15	.59	.79-1.57	NBC6-□	NBN6	NBK6
SL25-NBS6-120						4.72					
SL25-NBS8-80		**.020-.315**		.987		3.15	.65	.91-1.65	NBC8-□	NBN8	NBK8
SL25-NBS8-120						4.72					
SL25-NBS10-80		**.059-.394**		1.181		3.15	.71	1.38-1.77	NBC10-□	NBN10	NBK10
SL25-NBS10-120						4.72					
SL25-NBS13-80	2	**.098-.512**		1.377	1.02	3.15	.85	1.61-2.36	NBC13-□	NBN13	NBK13
SL25-NBS13-120						4.72					
SL25-NBS16-80		**.098-.630**		1.653	1.26	3.15	1.89	1.77-2.56	NBC16-□	NBN16	NBK16
SL25-NBS16-120						4.72					

Catalog Number	Fig.	Ød	ØD1	ØD2	ØD3	L	L1	H	Collet	Nut	Wrench
SL25.4-NBS6-80	1	**.010-.236**	1.000	.787	—	3.15	.59	.79-1.57	NBC6-□	NBN6	NBK6
SL25.4-NBS6-120						4.72					
SL25.4-NBS8-80		**.020-.315**		.987		3.15	.65	.91-1.65	NBC8-□	NBN8	NBK8
SL25.4-NBS8-120						4.72					
SL25.4-NBS10-80		**.059-.394**		1.181		3.15	.71	1.38-1.77	NBC10-□	NBN10	NBK10
SL25.4-NBS10-120						4.72					
SL25.4-NBS13-80	2	**.098-.512**		1.377	1.02	3.15	.85	1.61-1.97	NBC13-□	NBN13	NBK13
SL25.4-NBS13-120						4.72					
SL25.4-NBS16-80		**.098-.630**		1.653	1.26	3.15	1.89	1.77-2.56	NBC16-□	NBN16	NBK16
SL25.4-NBS16-120						4.72					
SL32-NBS13-100	1	**.098-.512**	32mm	1.377	—	3.94	.85	1.61-2.36	NBC13-□	NBN13	NBK13
SL32-NBS13-150						5.91					
SL32-NBS16-100		**.098-.630**		1.653		3.94		1.77-2.56	NBC16-□	NBN16	NBK16
SL32-NBS16-150						5.91					
SL32-NBS20-100	2	**.098-.787**		1.811	1.42	3.94		1.89-2.56	NBC20-□	NBN20	NBK20
SL32-NBS20-150						5.91					

- NEW BABY NUT is included; collet, wrench and adjusting screw must be ordered separately
- Center through coolant supply is available
- "H" indicates the adjustment length with an adjusting screw

ACCESSORIES

COLLET PG. 360

NUT PG. 372

PERFECT SEAL PG. 370

WRENCH PG. 372

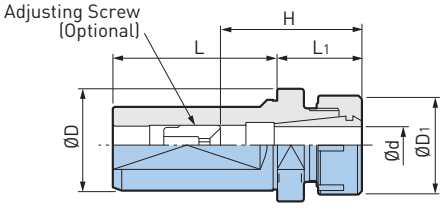
SCREW PG. 411

NEW BABY CHUCK

CLAMPING RANGE: Ø.098"-.787" (Ø2.5-20mm)

For Drills, Reamers, Taps & Finishing End Mills

COOLANT THROUGH



Stopper Type:
Flange as a stopper enables presetting of the tool away from machine and minimizes downtime.

Catalog Number	Ød	ØD	ØD1	ØD2	L	L1	H	Collet	Nut	Wrench
SLS25-NBS13-30	.098-.512	25mm	1.378	1.25	2.12	1.18	1.61-2.36	NBC13-□	NBN13	NBK13
SLS25-NBS13-60						2.36				
SLS32-NBS13-30	.098-.512	32mm	1.378	1.55	2.28	1.18	1.61-2.36	NBC13-□	NBN13	NBK13
SLS32-NBS13-60						2.36				
SLS32-NBS13-100						3.94				
SLS32-NBS20-30	.098-.787		1.811	1.79		1.18	1.88-2.55	NBC20-□	NBN20	NBK20
SLS32-NBS20-60						2.36				
SLS32-NBS20-100						3.94				
SLS40-NBS13-30	.098-.787	40mm	1.378	1.94	2.67	1.18	1.61-2.36	NBC13-□	NBN13	NBK13
SLS40-NBS13-60						2.36				
SLS40-NBS13-100						3.94				
SLS40-NBS20-30			1.811			1.18	1.88-2.55	NBC20-□	NBN20	NBK20
SLS40-NBS20-60						2.36				
SLS40-NBS20-100						3.94				

- NEW BABY NUT is included; collet, wrench and adjusting screw must be ordered separately
- Center through coolant supply is available
- "H" indicates the adjustment length with an adjusting screw

ACCESSORIES

COLLET PG. 360

NUT PG. 372

PERFECT SEAL PG. 370

WRENCH PG. 372

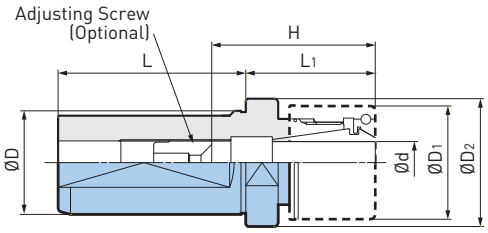
SCREW PG. 411

MEGA ER GRIP

CLAMPING RANGE: Ø.108"-.787" (Ø2.75-20mm)

For Drills, Reamers, Taps & Finishing End Mills

COOLANT THROUGH



Stopper Type:
Flange as a stopper enables presetting of the tool away from machine and minimizes downtime.

Catalog Number	Ød	ØD	ØD1	ØD2	L	L1	H	Collet	Nut (NOT Included)	Wrench
SLS25-MEGAER20-45NL	.108-.512	25mm	1.378	1.26	2.13	1.77	1.65-2.44	ERC20-☐	MERN20*	MGR35L
SLS25-MEGAER20-75NL						2.95				
SLS32-MEGAER20-45NL	.108-.512	32mm	1.378	1.56	2.28	1.77	1.65-2.44	ERC20-☐	MERN20*	MGR35L
SLS32-MEGAER20-75NL						2.95				
SLS32-MEGAER32-45NL	.108-.787		1.969	1.97		1.77	1.85-2.68	ERC32-☐	MERN32*	MGR50L
SLS32-MEGAER32-75NL						2.95	1.97-2.68			
SLS40-MEGAER20-45NL	.108-.512	40mm	1.378	1.95	2.68	1.77	1.65-2.44	ERC20-☐	MERN20*	MGR35L
SLS40-MEGAER20-75NL						2.95				
SLS40-MEGAER32-45NL	.108-.787		1.969	1.97		1.77	1.97-2.68	ERC32-☐	MERN32*	MGR50L
SLS40-MEGAER32-75NL						2.95				

***Nut, adjusting screw, collet and wrench are not included**
- MEGA ER GRIP is not able to use DIN6499 Form-A collets and ESX collets
- Center through coolant supply is available
- "H" indicates the adjustment length with an adjusting screw

ACCESSORIES

COLLET PG. 374 | MEGA NUT* PG. 377 | PERFECT SEAL PG. 378 | SOLID NUT PG. 377 | MEGA WRENCH PG. 390 | SCREW PG. 411

***MEGA NUT is the recommended nut to achieve high accuracy and clamping force**

CAUTION

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.

EXAMPLE

NUTS

MEGA ER PERFECT SEAL Model MERPS20-030035

MEGA ER NUT Model MERN20

MEGA ER SOLID NUT Model MER20SN

ER NUT Model ERN20

\+

COLLET

MEGA ER Collet ERC20-3AA

\+

BODY

MEGA ER GRIP SLS25-MEGA ER20-45/NL

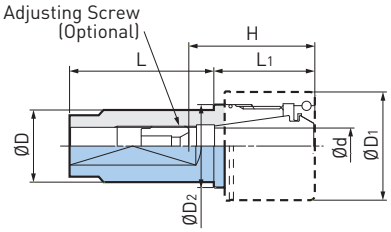
- Collet and nut must be ordered separately.

MEGA ER GRIP

CLAMPING RANGE: Ø.075"-.512" (Ø1.9-13mm)

For Drills, Reamers, Taps & Finishing End Mills

COOLANT THROUGH



Catalog Number	Ød	ØD	ØD1	ØD2	L	L1	H	Collet	Nut (NOT Included)	Wrench
SL16-MEGAER11-40NL	**.108-.236**	16mm	.750	—	1.57	.750	.906-1.57	ERC11-□	ERN11	NBK6
SL16-MEGAER11-80NL					3.15					
SL20-MEGAER11-40NL	**.108-.236**	20mm	.750	—	1.57	.750	.906-1.57	ERC11-□	ERN11	NBK6
SL20-MEGAER11-80NL					3.15					
SL20-MEGAER16-40NL	**.075-.394**		1.181	.91	1.57	1.10	1.38-1.85	ERC16-□	MERN16*	MGR30L
SL20-MEGAER16-80NL					3.15					
SL25-MEGAER11-60NL	**.108-.236**	25mm	.750	—	2.36	.750	.906-1.57	ERC11-□	ERN11	NBK6
SL25-MEGAER11-100NL					3.94					
SL25-MEGAER16-60NL	**.075-.394**		1.181	—	2.36	1.10	1.38-1.85	ERC16-□	MERN16*	MGR30L
SL25-MEGAER16-100NL					3.94					
SL25-MEGAER20-60NL	**.108-.512**		1.378	1.06	2.36	1.18	1.65-2.44	ERC20-□	MERN20*	MGR35L
SL25-MEGAER20-100NL					3.94					
SL25-MEGAER25-60NL	**.108-.630**		1.654	1.32	2.36	1.89	1.73-2.64	ERC25-□	MERN25*	MGR42L
SL25-MEGAER25-100NL					3.94					
SL19.05-MEGAER11-40NL	**.108-.236**	.750	.750	—	1.57	.750	.906-1.57	ERC11-□	ERN11	NBK6
SL19.05-MEGAER11-80NL					3.15					
SL19.05-MEGAER16-40NL	**.075-.394**		1.181	.91	1.57	1.10	1.38-1.85	ERC16-□	MERN16*	MGR30L
SL19.05-MEGAER16-80NL					3.15					

***Nut, adjusting screw, collet and wrench are not included**

- MEGA ER GRIP is not able to use DIN6499 Form-A collets and ESX collets
- Center through coolant supply is available
- "H" indicates the adjustment length with an adjusting screw

ACCESSORIES

***MEGA NUT is the recommended nut to achieve high accuracy and clamping force**

CAUTION

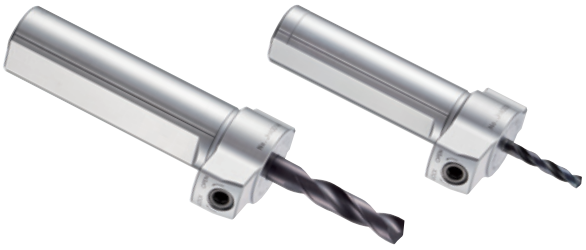
To maintain the accuracy of the tool assembly, do not use collets and nuts manufactured by another company with the chuck body of BIG's MEGA ER GRIP. We cannot guarantee the accuracy statement for our collets if they are assembled on the chuck body of another manufacturer.

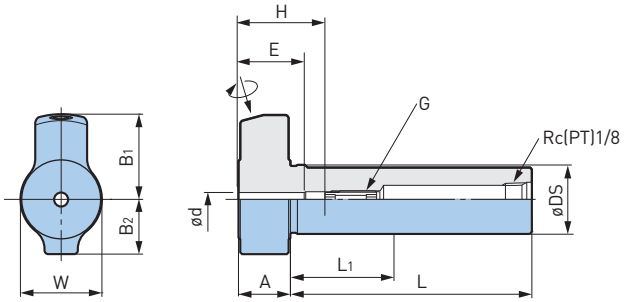
HYDRAULIC CHUCK LATHE TYPE — STANDARD TYPE

CLAMPING RANGE: Ø.125"-.250" (Ø3-12mm)

COOLANT THROUGH

High-precision cutting with hydraulic chuck is achieved on an automatic lathe.





Catalog Number	ød	øDs	L	L1	A	B1	B2	W	H	E	G
SL19.05-HDC3-60*	3mm	.750	2.36	.787	.59	.91	.62	.87	.787-1.26	.63	HDA4-05015W
SL19.05-HDC3.175-60*	.125										
SL19.05-HDC4-60	4mm								.905-1.26	.75	
SL19.05-HDC4.7625-60	.1875								1.22-1.89		NBA6B
SL19.05-HDC6-60	6mm									.98	
SL19.05-HDC6.35-60	.250										
SL19.05-HDC8-60	8mm					.95			2.56	1.22	—
SL20-HDC3-70*	3mm	.787	2.75	1.18	.59	.91	.62	.90	.787-1.26	.63	HDA4-05015W
SL20-HDC4-70	4mm								.905-1.26	.75	
SL20-HDC6-70	6mm								1.22-1.89	.98	NBA6B
SL20-HDC8-70❖	8mm					.95			2.95	1.22	—
SL22-HDC3-70*	3mm	.866	2.75	1.18	.59	.91	.62	.98	.787-1.26	.63	HDA4-05015W
SL22-HDC4-70	4mm								.905-1.26	.75	
SL22-HDC6-70	6mm								1.22-1.89	.98	NBA6B
SL22-HDC8-70❖	8mm					.95			2.95	1.22	—
SL22-HDC10-70❖	10mm					1.06	.66		2.76	1.30	
SL25-HDC3-65*	3mm	.984	2.56	1.57	.59	.91	.55	1.10	.787-1.26	.63	HDA4-05015W
SL25-HDC4-65	4mm								.905-1.26	.75	
SL25-HDC6-65	6mm					.91	.59		1.22-1.89	.98	NBA6B
SL25-HDC8-65❖	8mm					.95	.63		2.76	1.22	—
SL25-HDC10-65❖	10mm					1.06	.67		2.56	1.30	
SL25-HDC12-65❖	12mm					28	.71			1.42	
SL25.4-HDC3-80*	3mm	1.000	3.15	1.57	.59	.91	.55	1.10	.787-1.26	.63	HDA4-05015W
SL25.4-HDC4-80	4mm								.905-1.26	.75	
SL25.4-HDC6-80	6mm					.91	.59		1.22-1.89	.98	NBA6B
SL25.4-HDC8-80❖	8mm					.95	.63		3.35	1.22	—
SL25.4-HDC10-80❖	10mm					1.06	.67		3.15	1.30	
SL25.4-HDC12-80❖	12mm					1.10	.71			1.42	

***Some coolant comes out from the inner slots in the coolant-through application**

- Adjusting screws cannot be used with models marked ❖
- Adjusting screw is adjustable both from the head and shank ends
- "E" is the min. clamping length
- "G" is the adjusting screw (optional)
- "H" indicates the adjustment length with an adjusting screw
- "H" at HDC8/10/12 is the max. tool shank length can be inserted for these models
- L_1 is the minimum length, in case of shortening the shank

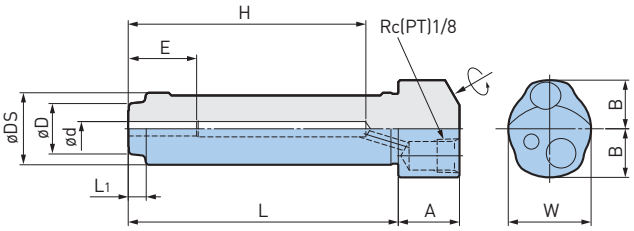
CAUTION

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."

HYDRAULIC CHUCK LATHE TYPE — F TYPE

CLAMPING RANGE: Ø.118"-6.35" (Ø3-10mm)

Single wrench enables easy cutting tool change on the tool post. User-friendly rear clamping design is ideal for front tool post.

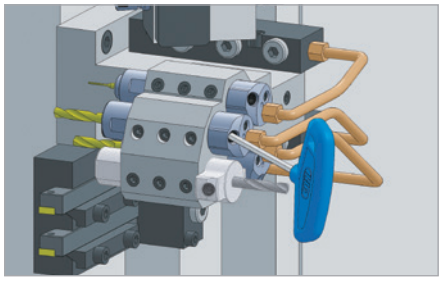


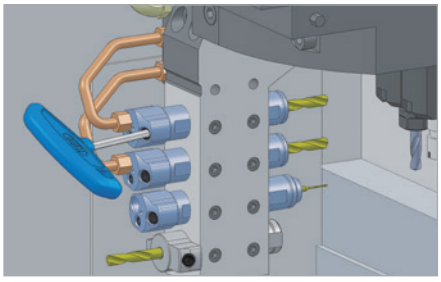
Catalog Number	ød	øD	øDS	L	L1	A	B	W	H	E
SL19.05F-HDC3-85	.118	.551	19.05mm	3.35	.20	.67	.55	.87	2.99	.63
SL19.05F-HDC4-85	.157									.75
SL19.05F-HDC6-80	.236	—		3.15	—				2.80	.98
SL19.05F-HDC8-80	.315									1.22
SL19.05F-HDC3.175-85	.125	.551		3.35	.20				2.99	.63
SL19.05F-HDC4.7625-85	.188									.86
SL19.05F-HDC6.35-80	.250	—		3.15	—				2.80	.98
SL20F-HDC3-75*	3mm	.551	20mm	2.95	.20	.67	.53	.91	2.60	.63
SL20F-HDC4-75	4mm									.75
SL20F-HDC6-70	6mm	—		2.76	—				2.40	1.00
SL20F-HDC8-70	8mm									1.22
SL22F-HDC3-75*	3mm	.551	22mm	2.95	.20	.67	.53	.98	2.60	.63
SL22F-HDC4-75	4mm									.75
SL22F-HDC6-70	6mm	—		2.76	—				2.40	1.00
SL22F-HDC8-70	8mm									1.22
SL22F-HDC10-70	10mm									1.30

***Some coolant comes out from the inner slots in coolant-through application**
- Adjusting screw cannot be used
- "E" is the min. clamping length
- "H" indicates the adjustment length with an adjusting screw

F Type

- Tighten from the opposite side of the tool
- Coolant delivery is possible with Rc(PT)1/8 screw
- Optimum overall length for easy use
- Ideal for use on a front tool post





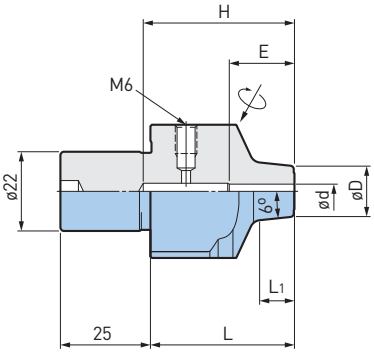
CAUTION

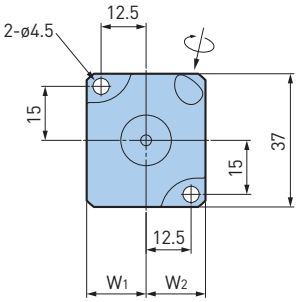
Use only cutting tools that have a shank tolerance of h6. Do not use with cutting tools made with a flat on the shank (ie: Weldon type shank). Do not tighten the clamping screw without first inserting a cutting tool into the tool holder. Always insert the cutting tool into the hydraulic tool holder beyond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

HYDRAULIC CHUCK LATHE TYPE — R TYPE

CLAMPING RANGE: ø3-10mm

Unique block design enables easy handling for both upper or lower tool post position. Oil hole drills can be used for coolant delivery with M6.



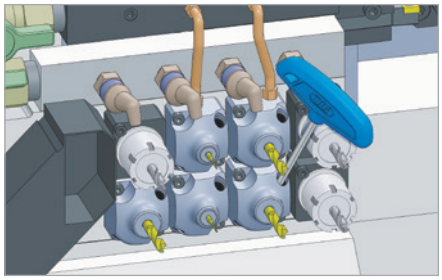


Catalog Number	ød	øD	L	L1	W1	W2	H	E
SL22R-HDC3-40*	**3mm**	.551	1.57	.28	.65	.65	1.38	.63
SL22R-HDC4-40	**4mm**			.35			1.65	.75
SL22R-HDC6-40	**6mm**	.709		.20			2.17	1.0
SL22R-HDC8-40	**8mm**	.787		.24		.69	2.13	1.2
SL22R-HDC10-40	**10mm**	.866						1.3

***Some coolant comes out from the inner slots in the coolant-through application**
- Adjusting screw cannot be used
- "E" is the min. clamping length

R Type

- Unique design for use with both upper and lower sections without interference
- Tightening at an offset position in the tool side
- Coolant delivery with M6 is possible when mounted on the upper section



CAUTION

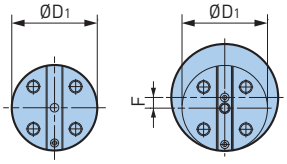
Use only cutting tools that have a shank tolerance of h6. Do not use with cutting tools made with a flat on the shank (ie: Weldon type shank). Do not tighten the clamping screw without first inserting a cutting tool into the tool holder. Always insert the cutting tool into the hydraulic tool holder beyond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

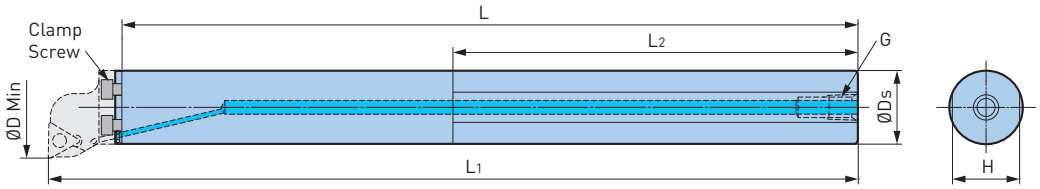
SMART DAMPER TURNING ANTI-VIBRATION BORING BAR

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

- Machining Dia.: Ø1.58 or more
- Depth: L/D Ø7xd

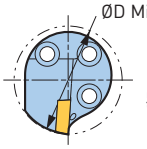
COOLANT THROUGH





Catalog Number	Fig.	Cartridge	ØD Min	ØDs	ØD1	L	L1	L2	H	G	F	Clamp Bolt (1 pc.)	O-Ring Set (2 pcs.)	Weight (lbs)
ST32-SDB40DP-320	1	B32-☐	1.57	32mm	1.26	12.60	13.86	5.67	1.18	PT1/4	—	C0510 (M5×10L)	SDB200R	5.1
ST40-SDB50DP-410	1	B40-☐	1.97	40mm	1.57	16.14	17.40	6.69	1.46	PT3/8	—	C0610 (M6×10L)	SDB200R	9.9
ST50-SDB60DP-520	2	B40-☐	2.36	60mm	1.57	20.47	21.73	12.99	1.85	PT3/8	.197	C0610(M6x10L)	SDB200R	19.6
ST1.250-SDB40DP-12.5	1	B32-☐	1.57	1.25	1.26	12.500	13.86	5.67	1.18	NPT1/4	—	C0510 (M5×10L)	SDB200R	5.1
ST1.500-SDB50DP-16	1	B40-☐	1.97	1.500	1.57	16.000	17.40	6.69	1.47	NPT1/4	—	C0610 (M6×10L)	SDB200R	9.9

- 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



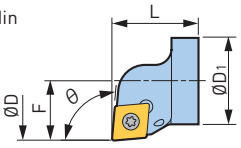


Fig. 1

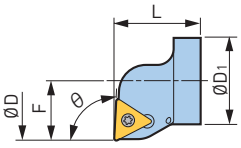


Fig. 2

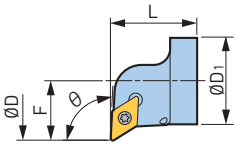


Fig. 3

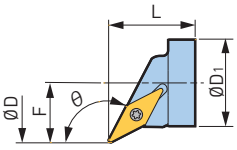
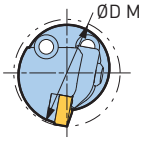


Fig. 4



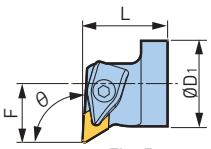


Fig. 5

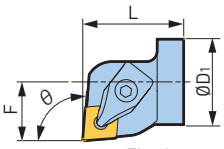


Fig. 6

ACCESSORIES

Catalog Number	Fig.	Insert	Hand	ØD Min	ØD1	F	L	θ	Set Screw
B32-SCLCR-22032-12	1	CC1204	R	1.57	1.26	.87	1.26	95°	S5S-20IP
B32-STUCR-22032-11	2	TC1102						93°	S2.5S-71P
B32-STUPR-22032-16	2	TP1604						93°	S4S-15IP
B32-SDUCR-22032-11	3	DC11T3							S4S-15IP
B32-SVPBR-22032-16	4	VB1604						117.5°	S3.5S-15IP
B32-DDUNR-22032-11	5	CN1104						93°	—
B32-DCLNR-22038-12	6	CN1204					1.5	95°	—
B40-SCLCR-27032-12	1	CC1204	R	1.97	1.57	1.06	1.26	95°	S5S-20IP
B40-STUCR-27032-11	2	TC1102						93°	S2.5S-71P
B40-STUPR-27032-16	2	TP1604							S4S-15IP
B40-SDUCR-27032-11	3	DC11T3						93°	S4S-15IP
B40-SVPBR-27032-16	4	VB1604						117.5°	S3.5S-15IP
B40-DDUNR-27032-15	5	DN1506						93°	—
B40-DCLNR-27038-12	6	CN1204					1.5	95°	—

- 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 DAISHOWA for details

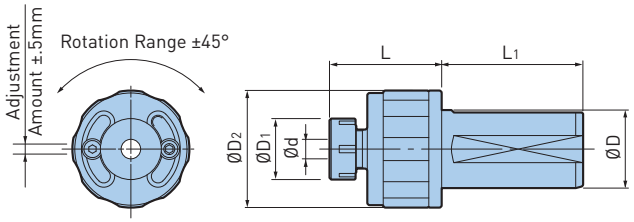
CENTERING HOLDER FOR LATHE

Easy And Reliable Centering Adjustment For Turret Lathe Sleeve Holder

CLAMPING RANGE: Ø.020"-.787" (Ø.5-20mm)

COOLANT THROUGH

The rotation center of the workpiece and the center of the turret pot may be misaligned not only in the center height direction, but also in the X-axis direction. In order to easily correct the deviation of both directions at the same time, a polar coordinate system combining rotary and linear movement is used. Single, two-way adjusting bolt completes adjustment of center height both up and down.



Catalog Number	Ød	ØD	ØD1	ØD2	L	L1	Weight (lbs)
SLS32-NBS8CH-45	**.020-.315**	1.260	.984	1.890	1.811	2.283	3.5
SLS40-NBS20CH-60	**.098-.787**	1.575	1.811	2.913	2.362	2.677	5.5

- NEW BABY NUT is included; collet and wrench must be ordered separately
- Center through coolant supply is available

ACCESSORIES

COLLET PG. 360

NUT PG. 372

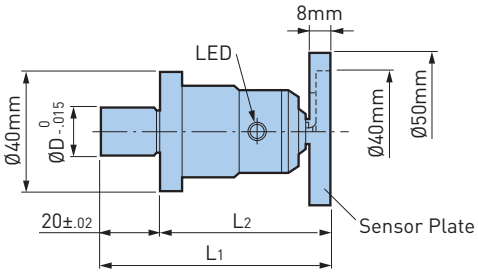
PERFECT SEAL PG. 370

WRENCH PG. 372

LATHE MASTER FOR LATHE

Setup Of Tool Offset Is Possible Without Trial Cut

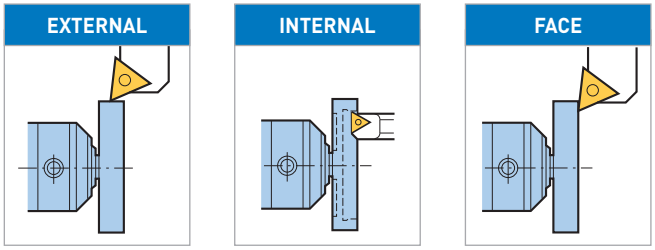
- Effective in reducing setup time for NC Lathes
- Detectable with various tool bits for external, internal and face turning



Catalog Number	ØD	L1	L2	Repeatability	Battery
LM-15	15mm	75mm	55mm	±2μ	BR425
LM-30	30mm	65mm	45mm	±2μ	SR44 x 2

CAUTION

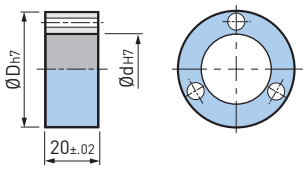
Machine and tools must be electro-conductive for measurement.



Clamp the ØD section of the LATHE MASTER with chuck jaws.
LED illuminates when the tip of the tool touches the sensor plate.

COLLAR SET (OPTIONAL)

If the chuck jaw diameter does not fit, an optional collar set is available.

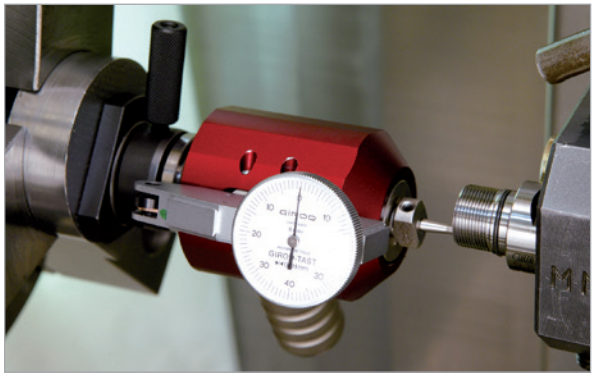


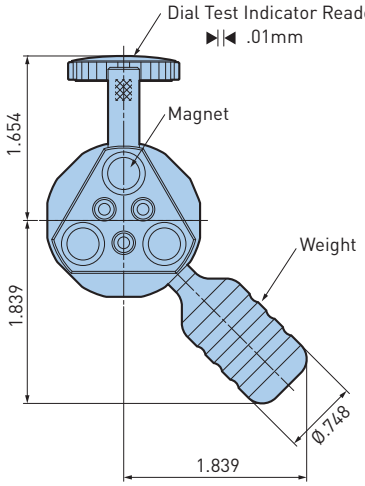
Catalog Number	Inner Diameter Ød	Outer Diameter ØD (mm)
LM15CS	**15mm**	20, 25, 30 (1 pc each)
LM30CS	**30mm**	35, 40, 45, 50 (1 pc each)

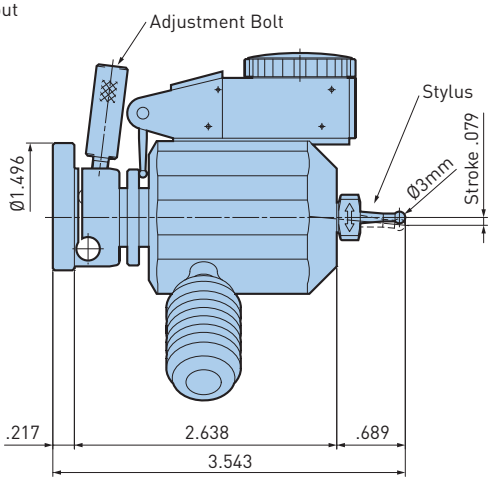
CENTERING TOOL FOR SMALL LATHE

Static Dial Gage For Easy Centering

- Centering the tool holder is simplified since the dial gage position is static and in front
- Easy setting with a fine adjustment mechanism (adjustment amount: .079")
- Magnetic base allows for flexible mounting positions

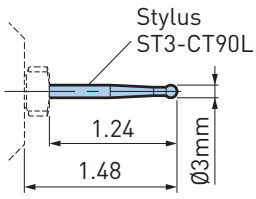






Catalog Number	Min. Scale	Max. Spindle Speed	Weight (lbs.)	Replacement Stylus
CTL-90	.01mm	50 RPM	.88 (Including Stylus)	ST3-CT90

LONG STYLUS (OPTIONAL)



Catalog Number
ST3-CT90L

- Tip: Ruby

BCV/BBT/HSK-T/BIG CAPTO SHANK

MILL-TURN TOOLING

A.7

BCV SHANKS 320-325

TURNING TOOLS BCV SYSTEM 320-321
BASIC HOLDER 322
SQUARE HOLDER 323
BORING BAR HOLDER 324
BSL SPARE PARTS 325

BBT SHANKS 326-331

TURNING TOOLS SYSTEM 326-327
BASIC HOLDER 328
SQUARE HOLDER 329
BORING BAR HOLDER 330
BSL SPARE PARTS 331

HSK-T SHANKS 332-337

TURNING TOOLS SYSTEM 332-333
BASIC HOLDER 334
SQUARE HOLDER 335
BORING BAR HOLDER 336
BSL SPARE PARTS 337

BIG CAPTO SHANKS 338-347

TURNING TOOLS SYSTEM 338-339
BASIC HOLDER 340
INTEGRAL MODEL 341-342
SQUARE HOLDER 343-345
BORING BAR HOLDER 346
BSL SPARE PARTS 347

ACCESSORIES 348-353

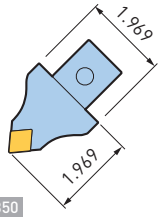
SELECTION GUIDE 348-349
MTC CARTRIDGES 350-351
SPARE PARTS 352-353

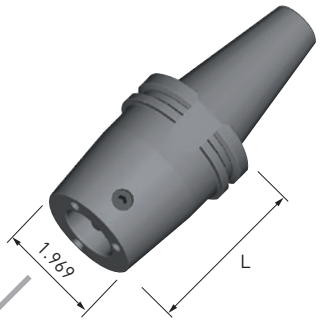
45°

*In case of DN44 insert, please replace the standard carbide shim with DNS1506 (option)

S TYPE PG. 322
BASIC HOLDER

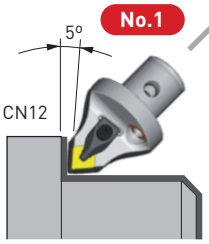
Catalog Number	L
BCV40Y-S50-3	3
BCV50Y-S50-3.5	3.5
BCV50Y-S50-4.5	4.5





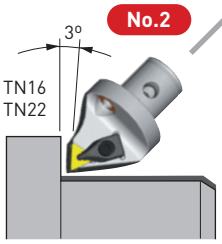
S TYPE CARTRIDGE PG. 350

No.1



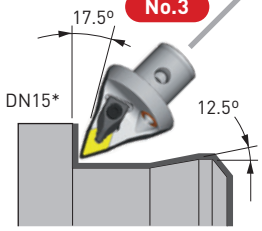
S50-DCLNN-00050-12

No.2



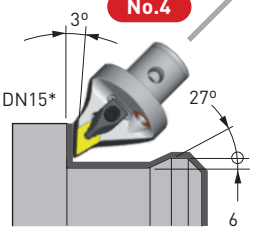
S50-DTJNR-00050-16(22)
S50-DTJNL-00050-16(22)

No.3



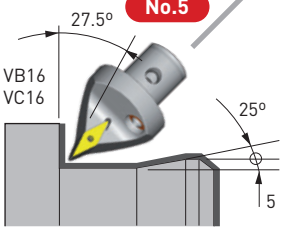
S50-DDHNN-00050-15

No.4



S50-DDJNR-00050-15
S50-DDJNL-00050-15

No.5



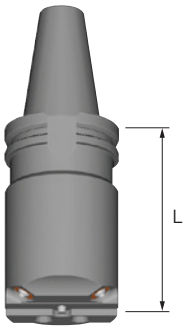
S50-SVQBN-00050-16

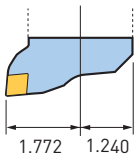
90°

*In case of DN44 insert, please replace the standard carbide shim with DNS1506 (option)

F TYPE PG. 322
BASIC HOLDER

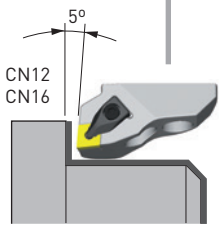
Catalog Number	L
BCV40Y-F63-4.125	4.125
BCV50Y-F63-5.125	5.125





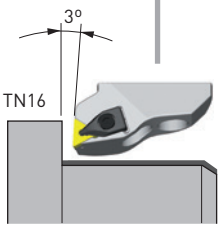
F TYPE CARTRIDGE PG. 351

No.10



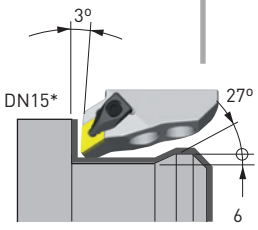
F63-DCLNR-45035-12(16)
F63-DCLNL-45035-12(16)

No.12



F63-DTJNR-45035-16
F63-DTJNL-45035-16

No.13

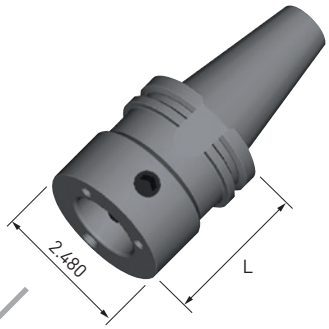


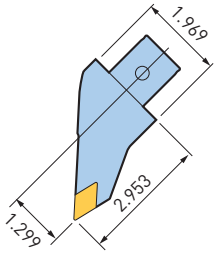
F63-DDJNR-45035-15
F63-DDJNL-45035-15

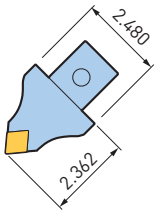
S TYPE PG. 322

BASIC HOLDER

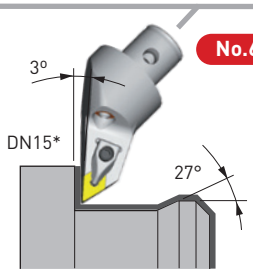
Catalog Number	L
BCV40Y-S63-2.625	2.625
BCV50Y-S63-3.125	3.125
BCV50Y-S63-4.125	4.125





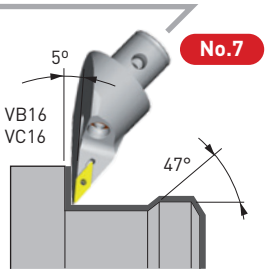


No.6



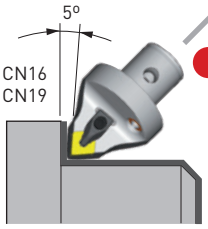
S50-DDJNR-33075-15
S50-DDJNL-33075-15

No.7

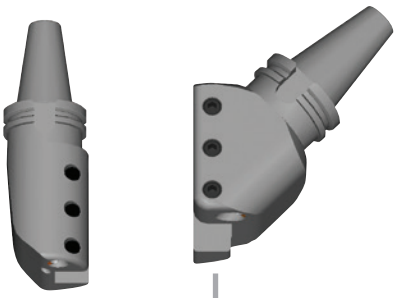


S50-SVLBR-33075-16
S50-SVLBL-33075-16

No.8



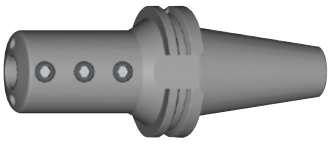
S63-DCLNN-00060-16
S63-DCLNN-00060-19



SQUARE TOOL HOLDERS PG. 323

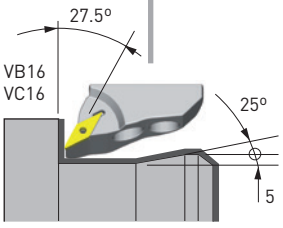
For □ Shank

Boring Bar



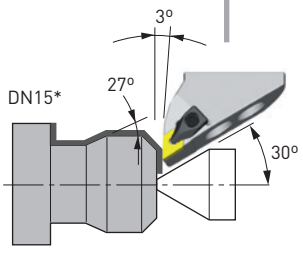
BORING BAR HOLDER PG. 324

No.15



F63-SVQBR-45035-16
F63-SVQBL-45035-16

No.18



F63-DDJNR-45055-15
F63-DDJNL-45055-15

BASIC HOLDER—BCV

Modular Tooling System for Turning Applications

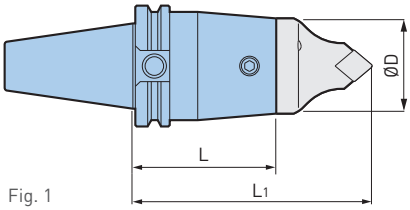


Fig. 1

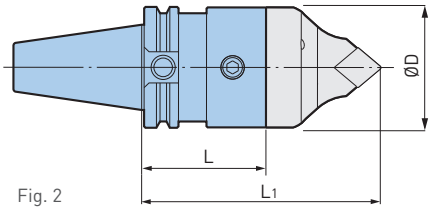


Fig. 2

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

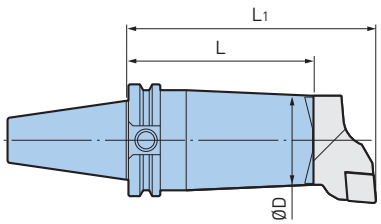
Catalog Number	Type	Fig.	ØD	L	L1	Clamp Screw (2x)
BCV40Y-S50-3	S50	1	1.969	3.000	4.97	10.690.435
BCV40Y-S63-2.625	S63	2	2.480	2.625	4.99	10.690.436
BCV50Y-S50-3.5	S50	1	1.969	3.500	5.47	10.690.435
BCV50Y-S50-4.5				4.500	6.47	
BCV50Y-S63-4.125	S63	2	2.480	4.125	6.49	10.690.436

- Clamping screw is included

ACCESSORIES

CARTRIDGES PG. 350

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



Catalog Number	Type	ØD	L	L1
BCV40Y-F63-4.125	F63	2.480	4.125	5.50
BCV50Y-F63-5.125	F63	2.480	5.125	6.50

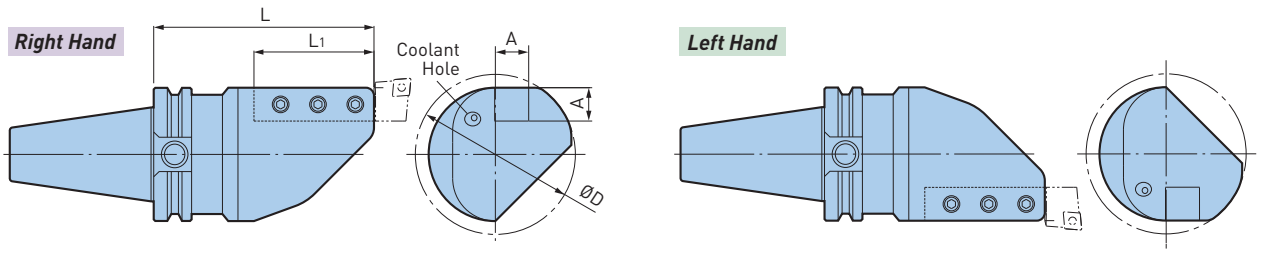
- Wrench must be ordered separately
- Basic Holders include M10x22L and M10x25L screws for clamping cartridges
- Plug one of the two coolant nozzles with a countersunk head screw (M5x12) when only one nozzle is required

ACCESSORIES

CARTRIDGES PG. 351

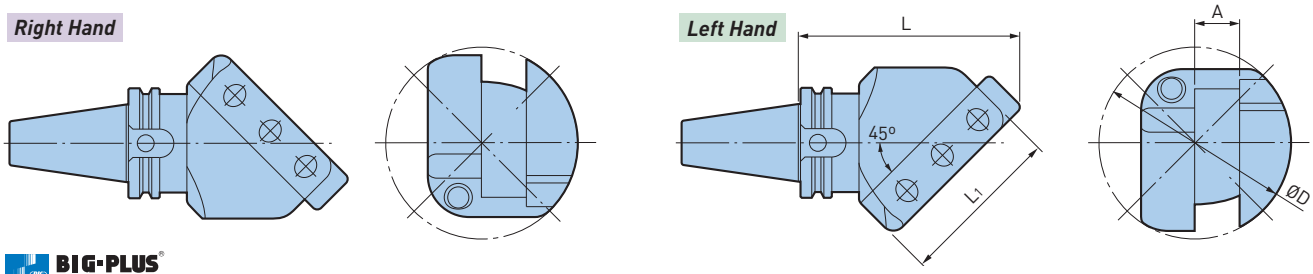
SQUARE HOLDER—BCV

For Square Holder Turning Applications



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Hand	A	L	L1	ØD
BCV40Y-180-BH1.000L-5	L	1.000	5.00	3.50	3.74
BCV40Y-180-BH1.000R-5	R				
BCV50Y-180-BH1.000L-5A	L	1.000	5.00	3.50	4.92
BCV50Y-180-BH1.000R-5A	R				
BCV50Y-180-BH1.250L-5	L	1.250		3.35	5.04
BCV50Y-180-BH1.250R-5	R				



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Hand	A	L	L1	ØD
BCV40Y-45-BH1.000L-4.75	L	1.000	4.75	3.43	4.33
BCV40Y-45-BH1.000R-4.75	R				
BCV50Y-45-BH1.000L-5.5	L	1.000	5.50	3.35	5.32
BCV50Y-45-BH1.000R-5.5	R				
BCV50Y-45-BH1.250L-5.5	L	1.250	5.50	3.35	6.69
BCV50Y-45-BH1.250R-5.5	R				

BORING BAR HOLDER—BCV

CLAMPING RANGE: Ø.625"-2.000"

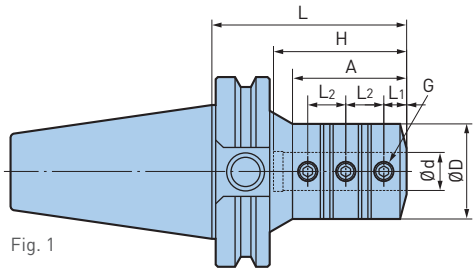


Fig. 1

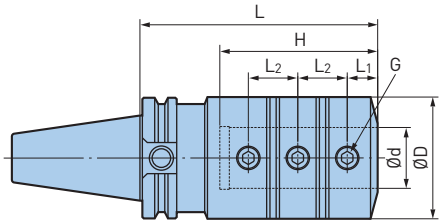


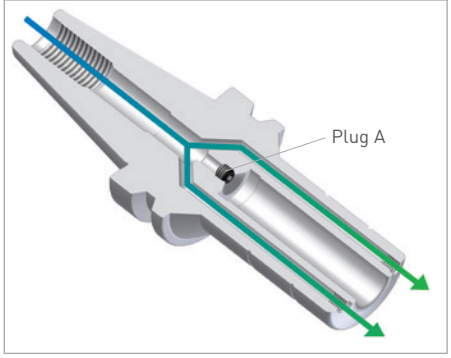
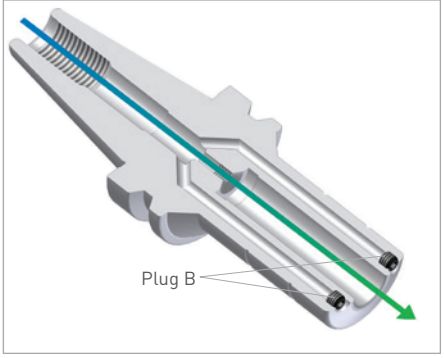
Fig. 2

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	Ød	ØD	L	L1	L2	H	A	G
BCV40Y-BSL.625-3.5	1	**.625**	1.575	3.50	.394	.787	2.68	2.48	M10P1.25
BCV40Y-BSL.750-3.5		**.750**	1.929	3.50	.472	.787	2.52	2.56	
BCV40Y-BSL1.000-4		**1.000**	2.165	4.00	.551	.906	2.91	3.25	M12P1.5
BCV40Y-BSL1.250-5	2	**1.250**	2.520	5.00	.630	1.024	3.27	—	
BCV40Y-BSL1.500-5.5		**1.500**	3.150	5.50	.709	1.260	3.86	—	M16P1.5
BCV50Y-BSL.625-3.5	1	**.625**	1.575	3.50	.394	.827	2.72	2.48	M10P1.25
BCV50Y-BSL.750-3.5		**.750**	1.969	3.50	.472	.787	2.52	2.36	
BCV50Y-BSL1.000-4		**1.000**	2.165	4.00	.551	.906	2.91	2.76	M16P1.5
BCV50Y-BSL1.250-4.5		**1.250**	2.520	4.50	.394	1.024	3.27	3.35	
BCV50Y-BSL1.500-5		**1.500**	3.150	5.00	.709	1.260	3.86	4.09	M16P1.5
BCV50Y-BSL2.000-5.25		**2.000**	3.543	5.25	.709	1.417	4.53	4.50	

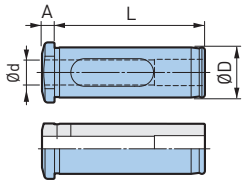
- Plug A and Plug B are included
- Interchangeable between center-through and side-through coolant supply by using plugs

BSL SPARE PARTS—BCV

SIDE-THROUGH	CENTER-THROUGH
	

Catalog Number	Plug A	Plug B
BSL.625	M6xP1.0	M6xP1.0
BSL.750		
BSL1.000		
BSL1.250		
BSL1.500		
BSL2.000		

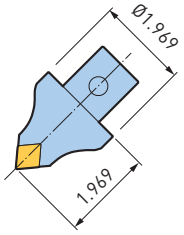
For BSL Side Lock Holder



Catalog Number	Ød	ØD	L	A
BSL1.500-.375	.375	1.500	3.40	.27
BSL1.500-.500	.500			
BSL1.500-.625	.625			
BSL1.500-.750	.750			
BSL1.500-1.000	1.000			
BSL1.500-1.250	1.250			
BSL2.000-.625	.625	2.000	4.00	.33
BSL2.000-.750	.750			
BSL2.000-1.000	1.000			
BSL2.000-1.250	1.250			
BSL2.000-1.500	1.500			
BSL2.000-1.750	1.750			

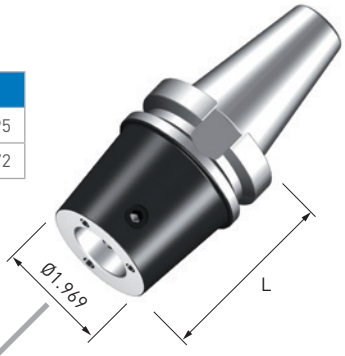
45º

*When using a DN1506 insert (thickness: 6.35mm), replace the standard carbide shim with the DNS1506 (optional)



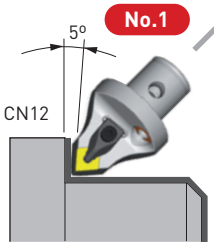
S TYPE PG. 328
BASIC HOLDER

Catalog Number	L
BBT40M-S50-75	2.95
BBT50M-S50-120	4.72



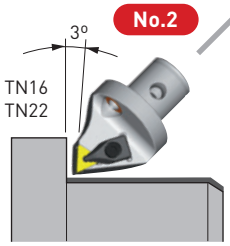
S TYPE CARTRIDGE PG. 350

No.1



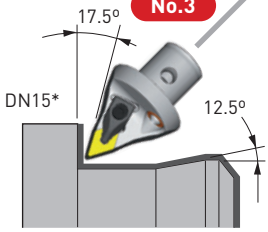
S50-DCLNN-00050-12

No.2



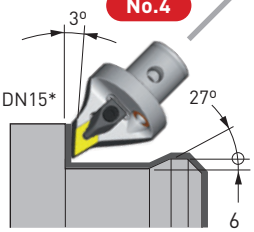
S50-DTJNR-00050-16(22)
S50-DTJNL-00050-16(22)

No.3



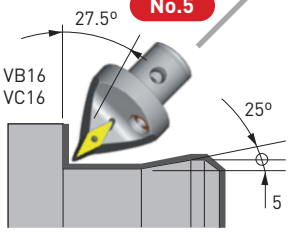
S50-DDHNN-00050-15

No.4



S50-DDJNR-00050-15
S50-DDJNL-00050-15

No.5



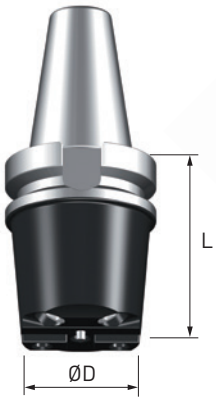
S50-SVQBN-00050-16

90º

*When using a DN1506 insert (thickness: 6.35mm), replace the standard carbide shim with the DNS1506 (optional)

F TYPE PG. 328
BASIC HOLDER

Catalog Number	L	ØD
BBT40M-F50-75	2.95	1.969
BBT40M-F50-105	4.13	
BBT50M-F63-70	2.76	2.480
BBT50M-F63-130	5.12	



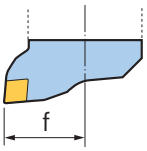
S TYPE PG. 328
BASIC HOLDER

S TYPE PG. 350
CARTRIDGE

No.1
No.3
No.5
No.8

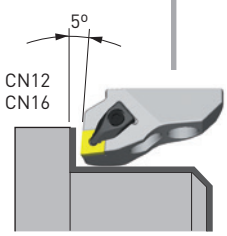
F TYPE PG. 351
CARTRIDGE

Catalog Number	f
F50	1.378
F63	1.772



F TYPE CARTRIDGE PG. 351

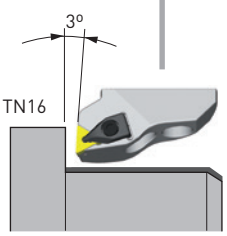
No.10



F50-DCLNR-35035-12(16)
F50-DCLNL-35035-12(16)

F63-DCLNR-45035-12(16)
F63-DCLNL-45035-12(16)

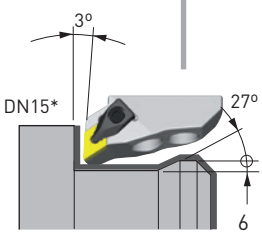
No.12



F50-DTJNR-35035-16
F50-DTJNL-35035-16

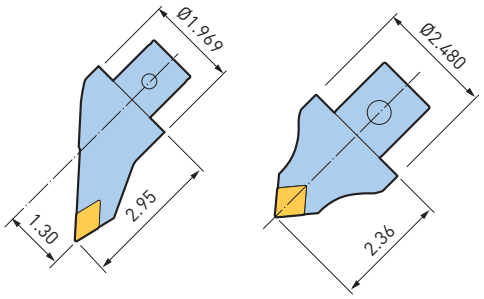
F63-DTJNR-45035-16
F63-DTJNL-45035-16

No.13



F50-DDJNR-35035-15
F50-DDJNL-35035-15

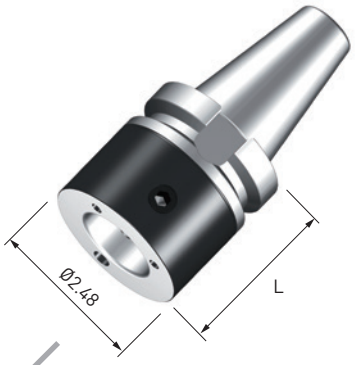
F63-DDJNR-45035-15
F63-DDJNL-45035-15

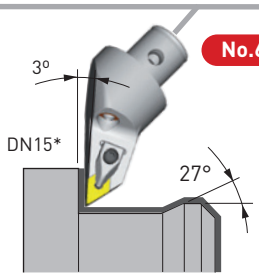


S TYPE PG. 328

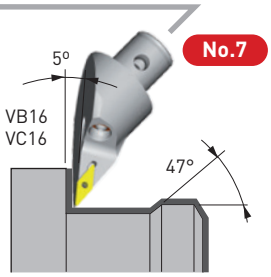
BASIC HOLDER

Catalog Number	L
BBT40M-S63-65	2.56
BBT50M-S63-110	4.33

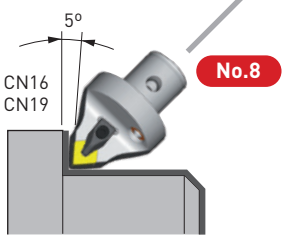




S50-DDJNR-33075-15
S50-DDJNL-33075-15



S50-SVLBR-33075-16
S50-SVLBL-33075-16



S63-DCLNN-00060-16
S63-DCLNN-00060-19

Internal Boring Bar

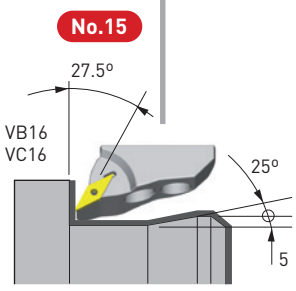
Internal Threading Tool

SIDE LOCK HOLDER PG. 330

For Boring Bar

Square Tool

SQUARE TOOL HOLDERS PG. 329



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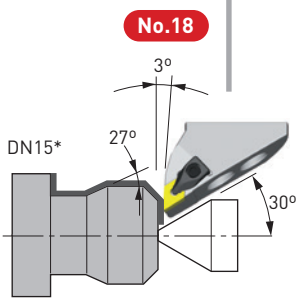
F63-SVQBL-45035-16

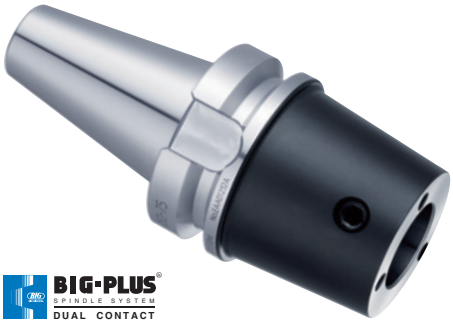


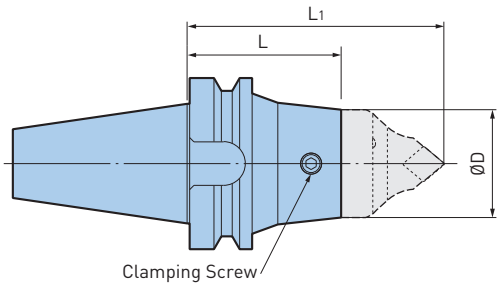
F50-DDJNR-35050-15
F50-DDJNL-35050-15

F63-DDJNR-45055-15
F63-DDJNL-45055-15

BASIC HOLDER—BBT

Modular Tooling System for Turning Applications





BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Type	ØD	L	L1	Clamping Screw
BBT40M-S50-75	S50	1.969	2.953	4.92	10.690.435
BBT40M-S63-65	S63	2.480	2.559		10.690.436
BBT50M-S50-120	S50	1.969	4.724	6.69	10.690.435
BBT50M-S63-110	S63	2.480	4.331		10.690.436

• Clamping screw is included

ACCESSORIES

CARTRIDGES PG. 350

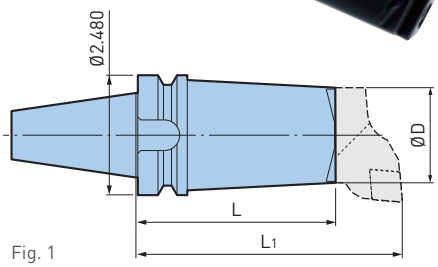


Fig. 1

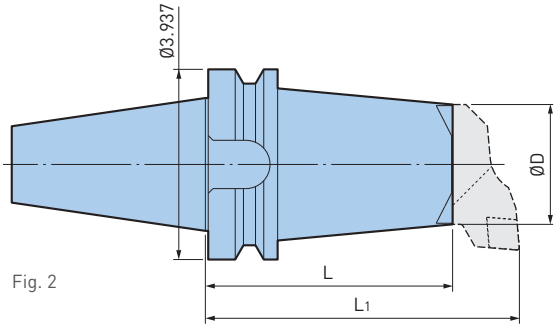


Fig. 2

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Type	Fig.	ØD	L	L1
BBT40M-F50-75	F50	1	1.969	2.953	4.33
BBT40M-F50-105				4.134	5.51
BBT50M-F63-70	F63	2	2.480	2.756	4.13
BBT50M-F63-130				5.118	6.50

ACCESSORIES

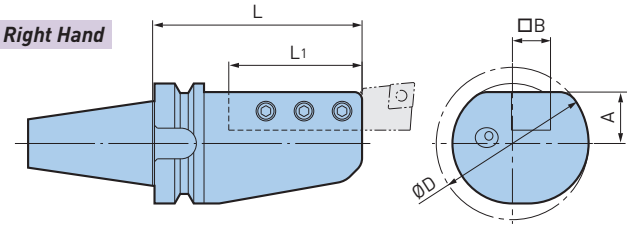
CARTRIDGES PG. 351

• Wrench must be ordered separately
• Basic Holders include M10x22L and M10x25L screws for clamping cartridges
• In case the coolant supply only from 1 of 2 coolant nozzles is required, use the flat head screw (M5 x 102)

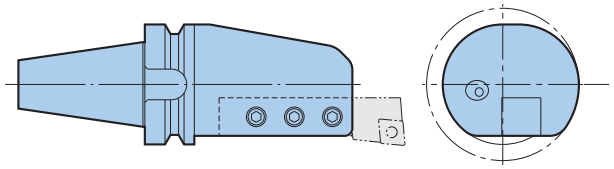
SQUARE HOLDER—BBT

For Square Holder Turning Applications

Right Hand



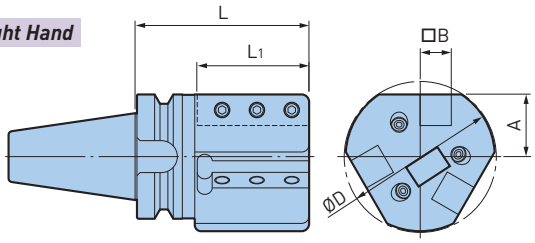
Left Hand



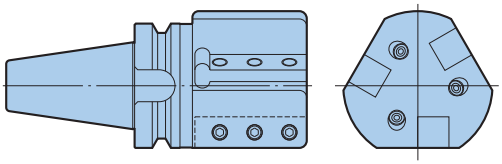
BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Hand	□B	L	L1	A	ØD
BBT40M-180-BH20R-110	R	20mm	4.33	2.76	1.06	3.15
BBT40M-180-BH20L-110	L					
BBT40M-180-BH25R-130	R	25mm	5.12	3.54	1.24	3.54
BBT40M-180-BH25L-130	L					
BBT50M-180-BH25R-140	R	25mm	5.51	3.54	1.97	4.72
BBT50M-180-BH25L-140	L					

Right Hand



Left Hand



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Hand	□B	L	L1	A	ØD
BBT40M-180-3BH20R-110	R	20mm	4.33	2.76	1.38	3.54
BBT40M-180-3BH20L-110	L	20mm	4.33	2.76	1.38	3.54

CAUTION

60 degree indexing is required to the machine tool spindle.

BORING BAR HOLDER—BBT

CLAMPING RANGE: Ø8-50mm

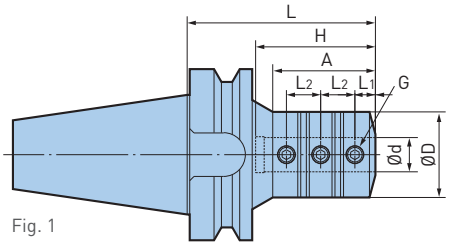


Fig. 1

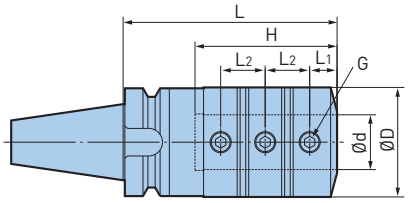


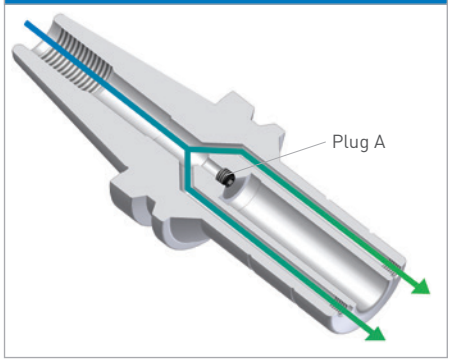
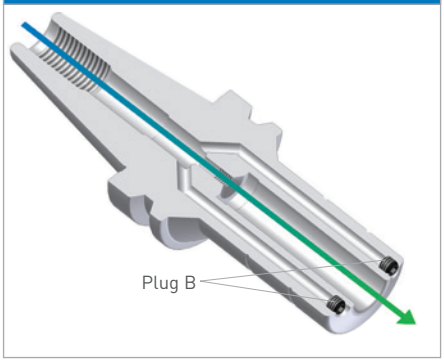
Fig. 2

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	Ød	ØD	L	L1	L2	H	A	G
BBT40M-BSL8-75	1	**8mm**	.984	2.95	.236	.394	1.57	1.57	M6 P1.0
BBT40M-BSL10-80		**10mm**	1.142	3.15	.315	.472	1.97	1.77	M8 P1.0
BBT40M-BSL12-90		**12mm**	1.339	3.54	.315	.630	2.17	2.09	M8 P1.0
BBT40M-BSL16-100		**16mm**	1.575	3.94	.394	.827	2.68	2.56	M10 P1.25
BBT40M-BSL20-100		**20mm**	1.969	3.94	.472	.787	2.76	2.64	M10 P1.25
BBT40M-BSL25-110		**25mm**	2.165	4.33	.551	.906	2.91	3.27	M12 P1.5
BBT40M-BSL32-125	2	**32mm**	2.520	4.92	.630	1.024	3.27	—	M12 P1.5
BBT40M-BSL40-150		**40mm**	3.150	5.91	.709	1.260	3.86	—	M16 P1.5
BBT50M-BSL16-105	1	**16mm**	1.575	4.13	.394	.827	2.68	2.40	M10 P1.25
BBT50M-BSL20-110		**20mm**	1.969	4.33	.472	.787	2.76	2.36	M10 P1.25
BBT50M-BSL25-120		**25mm**	2.165	4.72	.551	.906	2.91	2.76	M12 P1.5
BBT50M-BSL32-125		**32mm**	2.520	4.92	.630	1.417	3.27	3.15	M12 P1.5
BBT50M-BSL40-135		**40mm**	3.150	5.31	.709	1.260	3.86	3.58	M16 P1.5
BBT50M-BSL50-145		**50mm**	3.543	5.71	.709	1.417	4.53	4.02	M16 P1.5

- Plug A and Plug B are included
- Interchangeable between center-through and side-through coolant supply by using plugs

BSL SPARE PARTS—BBT

SIDE-THROUGH	CENTER-THROUGH
	

Right or Left Hand Adjustment is Possible

Catalog Number	Plug A	Plug B
BSL8	M6x5L	M4x4L
BSL10		M5x5L
BSL16		M6x5L
BSL20		
BSL25	M8x8L	
BSL32		
BSL40	M10x10L	
BSL50		

- Plug A and Plug B are included

For BSL Side Lock Holder

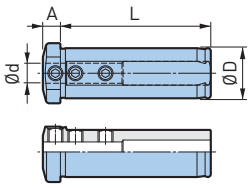


Fig. 1

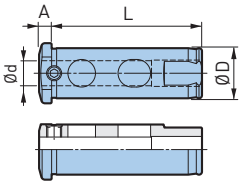


Fig. 2

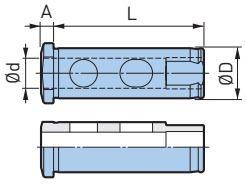
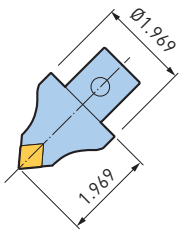


Fig. 3

Catalog Number	Fig.	Ød	ØD	L	A
BSLA20-6	1	**6mm**	20mm	2.36	.20
BSLA20-8		**8mm**			.28
BSLA20-10	2	**10mm**			.20
BSLA20-12	3	**12mm**			.20
BSLA20-16		**16mm**			.20
BSLA32-10	1	**10mm**	32mm	2.95	.35
BSLA32-12		**12mm**			.35
BSLA32-16	2	**16mm**			.24
BSLA32-20	3	**20mm**			.24

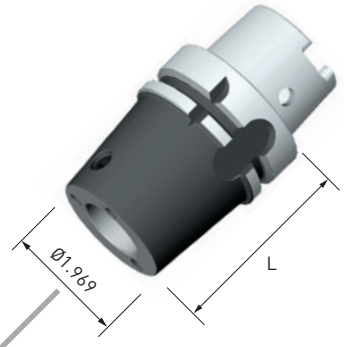
45º

*When using a DN1506 insert (thickness: 6.35mm), replace the standard carbide shim with the DNS1506 (optional)



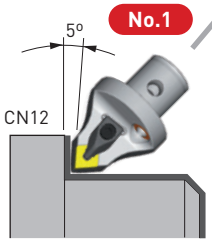
S TYPE PG. 334
BASIC HOLDER

Catalog Number	L
HSK-T50-S50-60	2.36
HSK-T63-S50-60	2.36
HSK-T63-S50-75	2.95
HSK-T63-S50-100	3.93
HSK-T100-S50-115	4.53



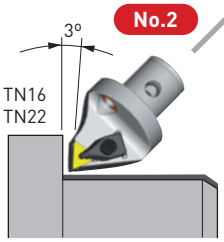
S TYPE CARTRIDGE PG. 350

No.1



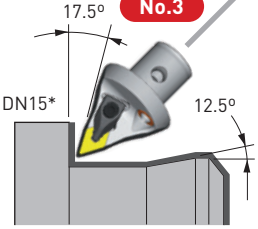
S50-DCLNN-00050-12

No.2



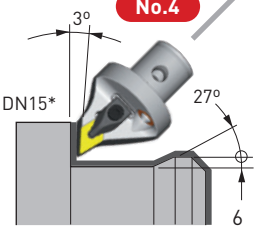
S50-DTJNR-00050-16(22)
-DTJNL-00050-16(22)

No.3



S50-DDHNN-00050-15

No.4



S50-DDJNR-00050-15
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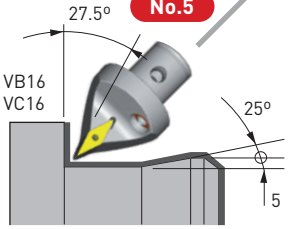
No.5



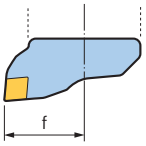
S50-SVQBN-00050-16

90º

*When using a DN1506 insert (thickness: 6.35mm), replace the standard carbide shim with the DNS1506 (optional)

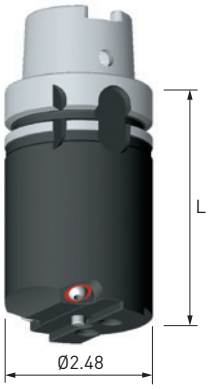
F TYPE PG. 351
CARTRIDGE

Catalog Number	F
F63	1.77



F TYPE PG. 334
BASIC HOLDER

Catalog Number	L
HSK-T63-F63-50	1.97
HSK-T63-F63-75	2.95
HSK-T63-F63-100	3.94
HSK-T63-F63-130	5.12
HSK-T63-F63-170	6.69
HSK-T100-F63-100	3.94
HSK-T100-F63-150	5.91



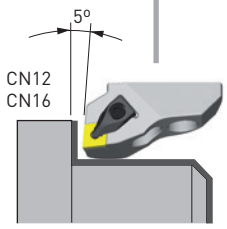
S TYPE PG. 334
BASIC HOLDER

S TYPE PG. 350
CARTRIDGE

No.1
No.3
No.5
No.8

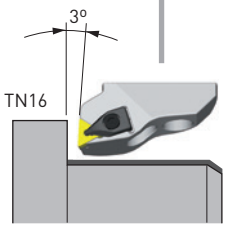
F TYPE CARTRIDGE PG. 351

No.10



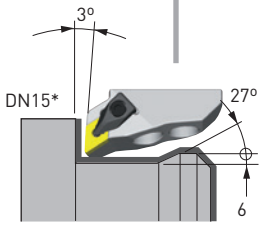
F63-DCLNR-45035-12(16)
-DCLNL-45035-12(16)

No.12



F63-DTJNR-45035-16
-DTJNL-45035-16

No.13

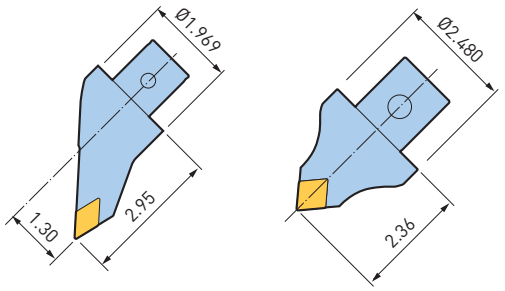


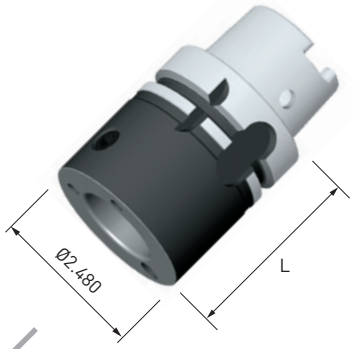
F63-DDJNR-45035-15
-DDJNL-45035-15

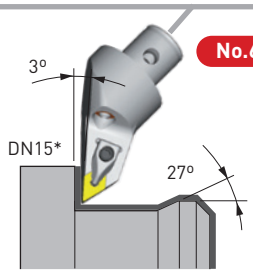
S TYPE PG. 334

BASIC HOLDER

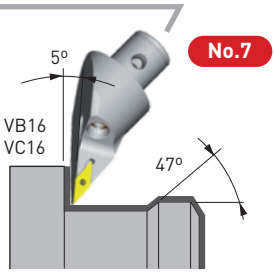
Catalog Number	L
HSK-T63-S63-70	2.76
HSK-T63-S63-90	3.94
HSK-T100-S63-105	4.13







S50-DDJNR-33075-15
-DDJNL-33075-15



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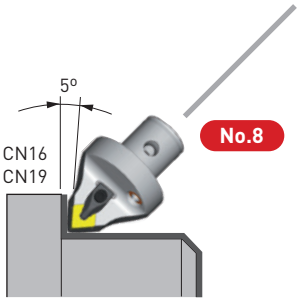
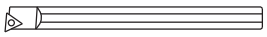
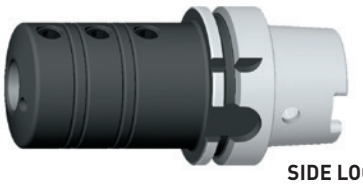


S63-DCLNN-00060-16
-DCLNN-00060-19

Internal Boring Bar

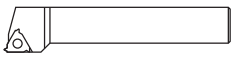


Internal Threading Tool

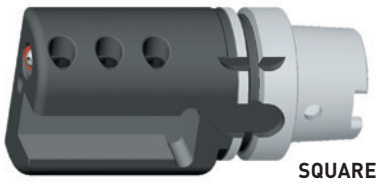


SIDE LOCK HOLDER PG. 336

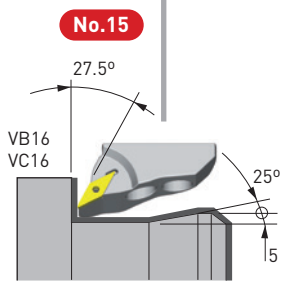
For Boring Bar



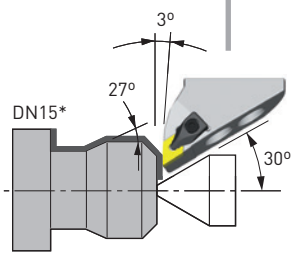
Square Tool



SQUARE TOOL HOLDERS PG. 335

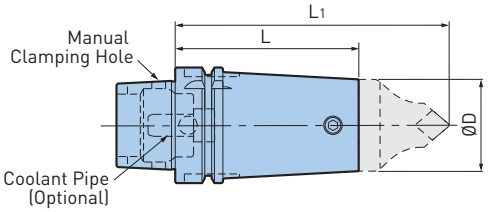


F63-SVQBR-45035-16
-SVQBL-45035-16



F63-DDJNR-45055-15
-DDJNL-45055-15

BASIC HOLDER—HSK-T Modular Tooling System for Turning Applications



Catalog Number	Type	ØD	L	L1	Locking Screw
HSK-T50-S50-60	S50	1.967	2.362	4.331	10.690.435
HSK-T63-S50-60	S50	1.969	2.362	4.331	10.690.435
HSK-T63-S50-75			2.953	4.921	
HSK-T63-S50-100			3.937	5.906	
HSK-T63-S63-70	S63	2.480	2.756	5.118	10.690.436
HSK-T63-S63-90			3.543	5.906	
HSK-T100-S50-115	S50	1.969	4.528	6.496	10.690.435
HSK-T100-S63-105	S63	2.480	4.134	6.496	10.690.436

ACCESSORIES

CARTRIDGES PG. 350

- Clamping screw is included, coolant pipe must be ordered separately

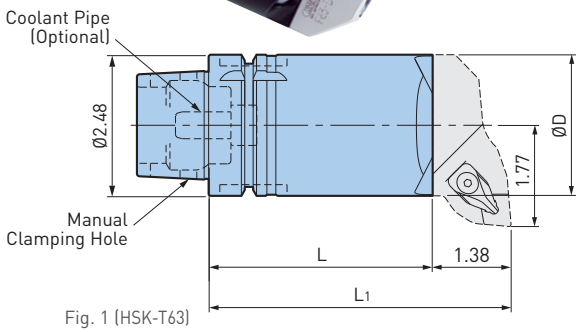


Fig. 1 (HSK-T63)

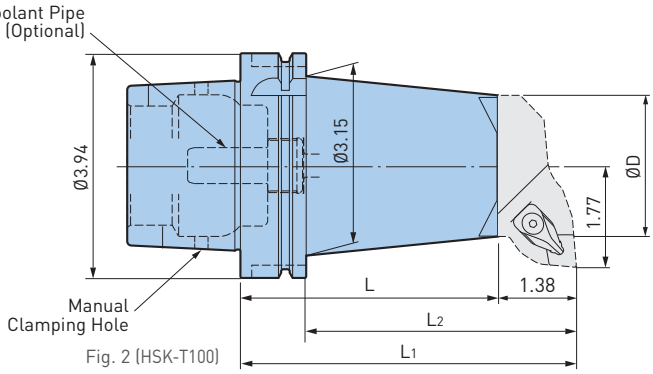


Fig. 2 (HSK-T100)

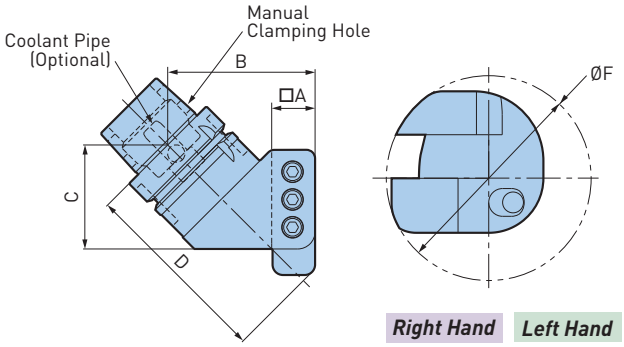
Catalog Number	Type	Fig.	ØD	L	L1	L2
HSK-T63-F63-50	F63	1	2.480	1.969	3.346	—
HSK-T63-F63-75				2.953	4.331	
HSK-T63-F63-100				3.937	5.315	
HSK-T63-F63-130				5.118	6.496	
HSK-T63-F63-170				6.693	8.071	
HSK-T100-F63-100	F63	2	2.480	3.937	5.315	4.133
HSK-T100-F63-150				5.906	7.283	6.102

ACCESSORIES

CARTRIDGES PG. 351

- Coolant pipe and wrench must be ordered separately
- Basic Holders include M10x22L and M10x25L screws for clamping cartridges
- In case the coolant supply only from 1 of 2 coolant nozzles is required, use the flat head screw (M5 x 102)

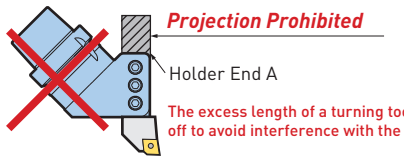
SQUARE HOLDER—HSK-T For Turning Applications



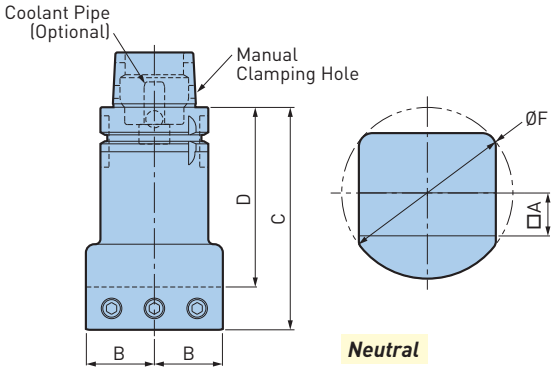
45° (ISO 12164-3)

Catalog Number	Hand	□A	B	C	D	ØF
HSK-T63-45-BH25R-110	R	25mm	3.35	2.36	4.33	4.65
HSK-T63-45-BH25L-110	L					

CAUTION

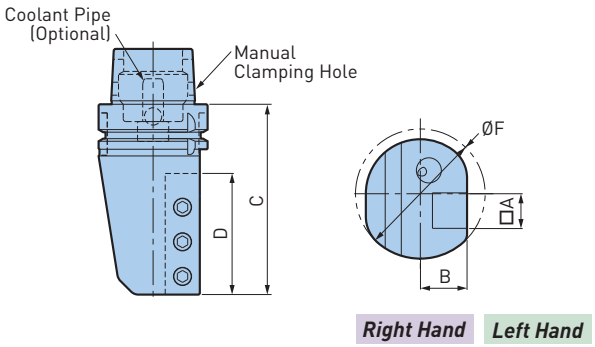


The excess length of a turning tool must be cut off to avoid interference with the an ATC arm



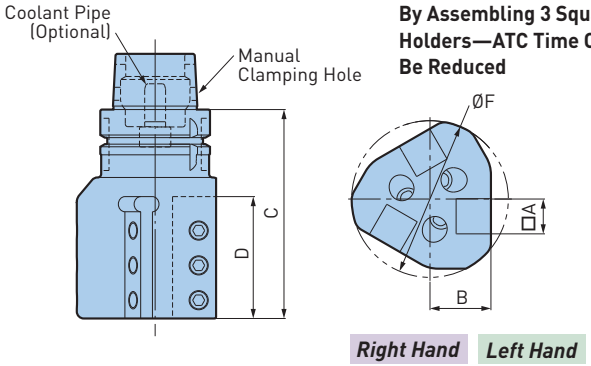
90° (ISO 12164-3)

Catalog Number	Hand	□A	B	C	D	ØF
HSK-T63-90-BH20N-85	N	20mm	1.26	3.35	2.36	3.15
HSK-T63-90-BH25N-100		25mm	1.57	3.94	2.95	3.94
HSK-T63-90-BH25N-130				5.12	4.13	
HSK-T100-90-BH25N-150	N	25mm	2.17	5.91	4.92	5.04



180°

Catalog Number	Hand	□A	B	C	D	ØF
HSK-T63-180-BH20R-120	R	20mm	1.06	4.72	2.76	2.95
HSK-T63-180-BH20L-120	L					
HSK-T63-180-BH25R-125	R	25mm	1.16	4.92	3.15	3.54
HSK-T63-180-BH25L-125	L					
HSK-T100-180-BH25R-140	R	25mm	1.97	5.51	3.54	4.72
HSK-T100-180-BH25L-140	L					
HSK-T100-180-BH25R-180	R			7.09	4.53	
HSK-T100-180-BH25L-180	L					



180° Multi Type

Catalog Number	Hand	□A	B	C	D	ØF
HSK-T63-180-3BH20R-120	R	20mm	1.38	4.72	2.76	3.54
HSK-T63-180-3BH20L-120	L					
HSK-T63-180-3BH25R-125	R	25mm	1.77	4.92	3.15	4.33
HSK-T63-180-3BH25L-125	L					

CAUTION

60° indexing capability is required for the machine spindle.

BORING BAR HOLDER—HSK-T

CLAMPING RANGE: Ø6-40mm

COOLANT THROUGH

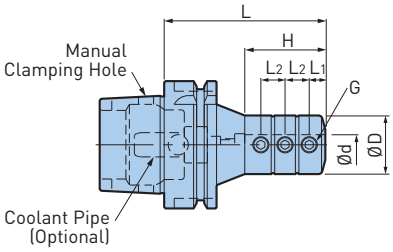


Fig. 1

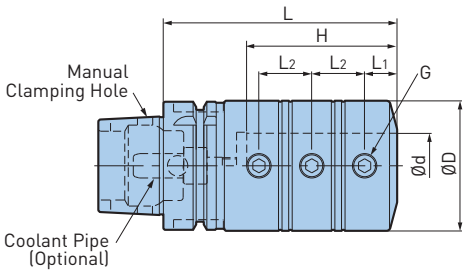


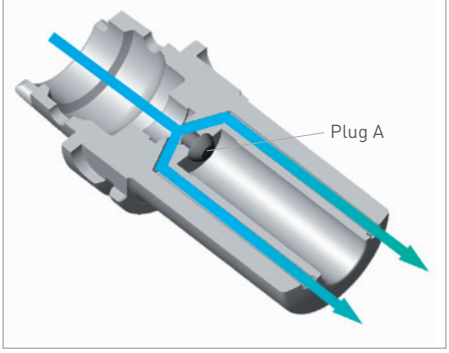
Fig. 2

Catalog Number	Fig.	Ød	ØD	L	L1	L2	H	G	Weight (lbs)
HSK-T63-BSL6-70	1	**6mm**	.906	2.76	.197	.315	.95	M5 P0.8	2.0
HSK-T63-BSL8-75		**8mm**	.984	2.95	.236	.394	1.26	M6 P1.0	2.0
HSK-T63-BSL10-80		**10mm**	1.142	3.15	.315	.472	1.58	M8 P1.0	2.0
HSK-T63-BSL12-85		**12mm**	1.339	3.35		.630	1.77		2.4
HSK-T63-BSL16-80❖		**16mm**	1.575	3.15	.394	.827	1.61	M10 P1.25	2.4
HSK-T63-BSL16-100				3.94			2.36		2.9
HSK-T63-BSL20-80❖	2	**20mm**	1.969	3.15	.472	.787	1.61		3.1
HSK-T63-BSL20-100				3.94			2.36		3.5
HSK-T63-BSL25-85❖		**25mm**	2.165	3.35	.551	.906	1.85	M12 P1.5	3.3
HSK-T63-BSL25-110				4.33			2.64		4.0
HSK-T63-BSL32-90❖		**32mm**	2.520	3.54	.630	1.024	1.93		4.2
HSK-T63-BSL32-125				4.92			2.91		5.7
HSK-T63-BSL40-105❖		**40mm**	3.150	4.13	.709	1.260	2.40	M16 P1.5	6.4
HSK-T63-BSL40-145				5.71			3.58		8.8
HSK-T63-BSL50-145		**50mm**	3.543	5.71		1.181	3.46	M16 P1.5	10.1
HSK-T100-BSL16-105	1	**16mm**	1.575	4.13	.394	.827	2.36	M10 P1.25	6.0
HSK-T100-BSL20-110		**20mm**	1.969	4.33	.472	.787			7.1
HSK-T100-BSL25-120		**25mm**	2.165	4.72	.551	.906	2.64	M12 P1.5	7.7
HSK-T100-BSL32-125		**32mm**	2.520	4.92	.630	1.024	2.91		8.8
HSK-T100-BSL40-135		**40mm**	3.150	5.32	.709	1.260	3.54	M16 P1.5	11.5
HSK-T100-BSL50-145	2	**50mm**	3.543	5.71		1.339	3.78	M16 P1.5	13.4

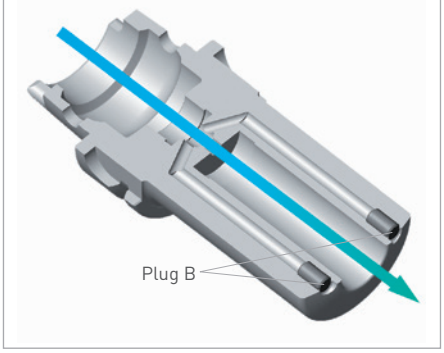
- Plug A and Plug B are included
- Interchangeable between center-through and side-through coolant supply by using plugs
- BSL sleeve cannot be used with models marked ❖

BSL SPARE PARTS—HSK-T

SIDE-THROUGH



CENTER-THROUGH



Right or Left Hand Adjustment is Possible

Catalog Number	Plug A	Plug B
BSL6	M5 P0.8	M4 P0.7
BSL8	M6 P1.0	
BSL10		M5 P0.8
BSL12		M6 P1.0
BSL16	M6 P1.0❖	
BSL20		
BSL25	T63:M6 P1.0❖, T100:M8 P1.25❖	
BSL32	M8 P1.25❖	
BSL40		

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

For BSL Side Lock Holder

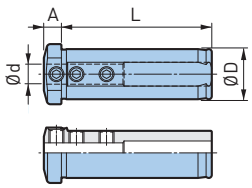


Fig. 1

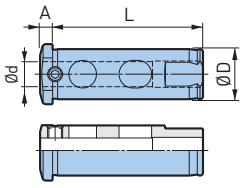


Fig. 2

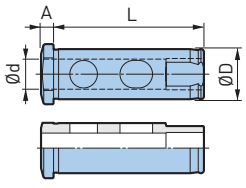
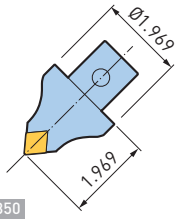


Fig. 3

Catalog Number	Fig.	Ød	ØD	L	A
BSLA20-6	1	**6mm**	20mm	2.36	.20
BSLA20-8		**8mm**			.28
BSLA20-10	2	**10mm**			.20
BSLA20-12	3	**12mm**			.20
BSLA20-16		**16mm**			.20
BSLA32-10	1	**10mm**	32mm	2.95	.35
BSLA32-12		**12mm**			.35
BSLA32-16	2	**16mm**			.24
BSLA32-20	3	**20mm**			.24

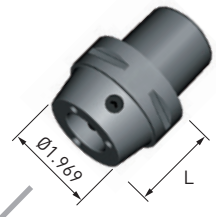
45º

*When using a DN1506 insert (thickness: 6.35mm), replace the standard carbide shim with the DNS1506 (optional)



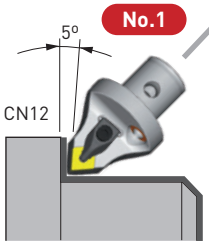
S TYPE PG. 340
BASIC HOLDER

Catalog Number	L
C5-S50-40	1.57
C5-S50-55	2.17
C5-S50-75	2.95
C6-S50-45	1.77
C6-S50-75	2.95
C6-S50-100	3.64
C8-S50-135	5.31



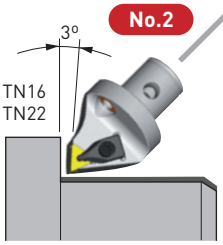
S TYPE CARTRIDGE PG. 350

No.1



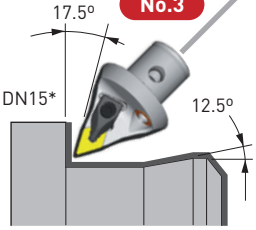
S50-DCLNN-00050-12
- Cartridge mono-block holders are also available

No.2



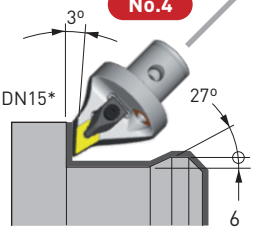
S50-DTJNR-00050-16
-DTJNL-00050-16
S50-DTJNR-00050-22
-DTJNL-00050-22

No.3



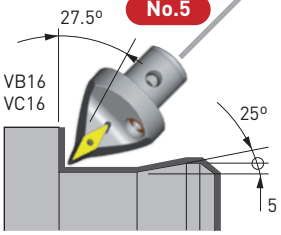
S50-DDHNN-00050-15
- Cartridge mono-block holders are also available

No.4



S50-DDJNR-00050-15
-DDJNL-00050-15

No.5



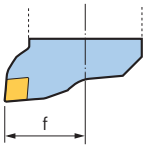
S50-SVQBN-00050-16
- Cartridge mono-block holders are also available

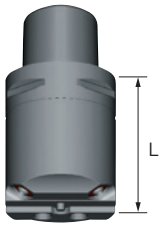
90º

*When using a DN1506 insert (thickness: 6.35mm), replace the standard carbide shim with the DNS1506 (optional)

F TYPE PG. 351
CARTRIDGE

Catalog Number	f
F50	1.38
F63	1.77





F TYPE PG. 340
BASIC HOLDER

Catalog Number	L
C5-F50-25	.98
C5-F50-50	1.97
C5-F50-85	3.35
C5-F50-125	4.92

F TYPE PG. 340
BASIC HOLDER

Catalog Number	L
C6-F63-30	1.18
C6-F63-75	2.95
C6-F63-100	3.94
C6-F63-130	5.12
C6-F63-170	6.69
C8-F63-45	1.77
C8-F63-100	3.94
C8-F63-130	5.12
C8-F63-170	6.69

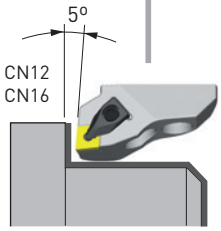
S TYPE PG. 340
BASIC HOLDER

S TYPE PG. 350
CARTRIDGE

- No.1
- No.3
- No.5
- No.8

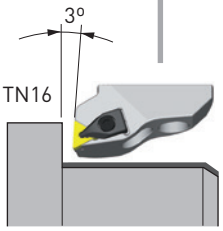
F TYPE CARTRIDGE PG. 351

No.10



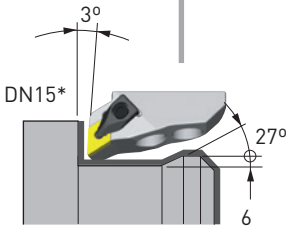
F50-DCLNR-35035-12(16)
-DCLNL-35035-12(16)
F63-DCLNR-45035-12(16)
-DCLNL-45035-12(16)

No.12



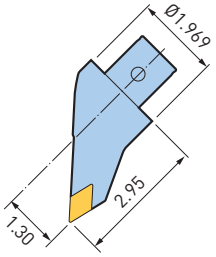
F50-DTJNR-35035-16
-DTJNL-35035-16
F63-DTJNR-45035-16
-DTJNL-45035-16

No.13



F50-DDJNR-35035-15
-DDJNL-35035-15
F63-DDJNR-45035-15
-DDJNL-45035-15

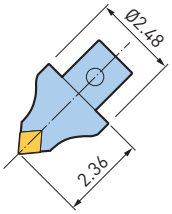
MONO BLOCK HOLDER PG. 341

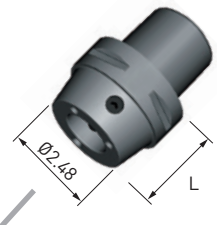


S TYPE PG. 340

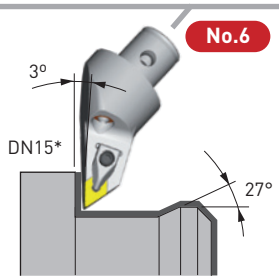
BASIC HOLDER

Catalog Number	L
C6-S63-90	3.34
C8-S63-125	4.92



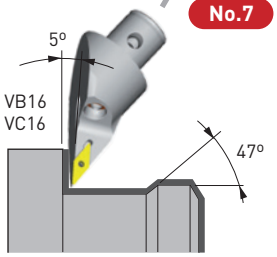


No.6



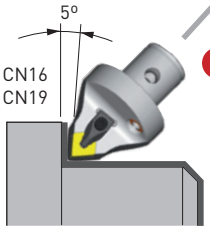
S50-DDJNR-33075-15
-DDJNL-33075-15

No.7



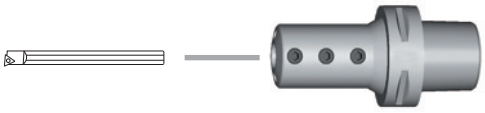
S50-SVLBR-33075-16
-SVLBL-33075-16

No.8



S63-DCLNN-00060-16
-DCLNN-00060-19

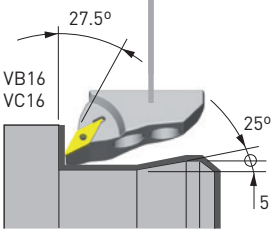
- Cartridge mono-block holders are also available



SIDE LOCK HOLDER PG. 346
For Boring Bar

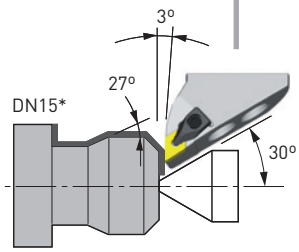
SQUARE TOOL HOLDERS PG. 343

No.15



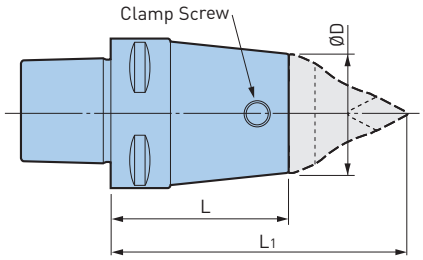
F63-SVQBR-45035-16
-SVQBL-45035-16

No.18



F50-DDJNR-35050-15
-DDJNL-35050-15
F63-DDJNR-45055-15
-DDJNL-45055-15

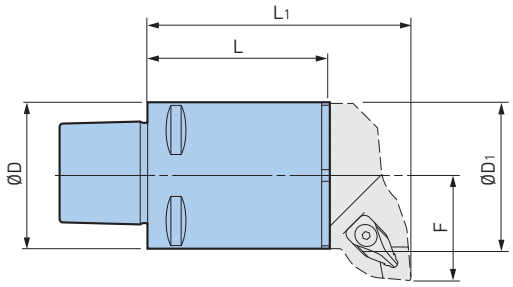
BASIC HOLDER—BIG CAPTO Modular Tooling System for Turning Applications



Catalog Number	ØD	L	L1	Clamp Screw
C5-S50-40	1.969	1.575	3.54	10.690.435
C5-S50-55		2.165	4.13	
C5-S50-75		2.953	4.92	
C6-S50-45	1.969	1.772	3.74	10.690.435
C6-S50-75		2.953	4.92	
C6-S50-100		3.937	5.91	
C6-S63-90	2.480	3.543	5.91	10.690.436
C8-S50-135	1.969	5.315	7.28	10.690.435
C8-S63-125	2.480	4.921	7.28	10.690.436

• Clamping screw is included

ACCESSORIES



Catalog Number	ØD	ØD1	L	L1	F
C5-F50-25	1.969	1.969	.984	2.36	1.378
C5-F50-50			1.969	3.35	
C5-F50-85			3.345	4.72	
C5-F50-125			4.921	6.30	
C6-F63-30	2.480	2.480	1.181	2.56	1.772
C6-F63-75			2.953	4.33	
C6-F63-100			3.937	5.31	
C6-F63-130			5.118	6.50	
C6-F63-170			6.693	8.07	
C8-F63-45	3.150	2.480	1.772	3.15	1.772
C8-F63-100			3.937	5.31	
C8-F63-130			5.118	6.50	
C8-F63-170			6.693	8.07	

ACCESSORIES

• Wrench must be ordered separately
• Basic Holders include M10 P22L and M10 P25L screws for clamping cartridges
• In case the coolant supply only from 1 of 2 coolant nozzles is required, use the flat head screw (M5 P102)

INTEGRAL MODEL—BIG CAPTO (C5/C6/C8)

CN1204
CN1606

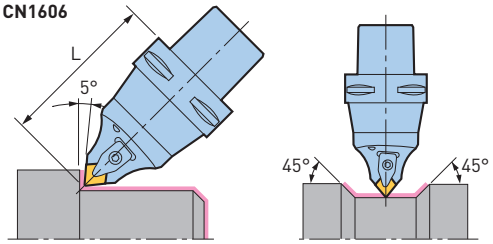


Fig. 1 ***Neutral***

DN1504
DN1506

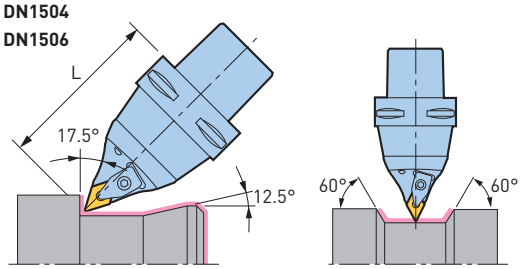


Fig. 2 ***Neutral***

VB1604
VC1604

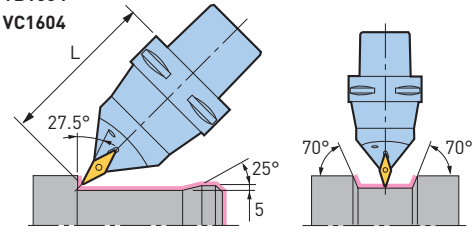


Fig. 3 ***Neutral***

Catalog Number	Entering Angle	Hand	Fig.	L	Insert	Clamp Piece
C5-DCLNN-00105-12	95°	N	1	4.134	CN1204 Rhombic 80°	CP2
C5-DCLNN-00105-16					CN1606 Rhombic 80°	CP3
C5-DDHNN-00105-15	107.5°		2		*DN1504 (DN1506) Rhombic 55°	CP2
C5-SVQBN-00105-16	117.5°		3		**VB1604 (VC1604) Rhombic 35°	***M3.5
C6-DCLNN-00115-12	95°	N	1	4.528	CN1204 Rhombic 80°	CP2
C6-DCLNN-00115-16					CN1606 Rhombic 80°	CP3
C6-DDHNN-00115-15	107.5°		2		*DN1504 (DN1506) Rhombic 55°	CP2
C6-SVQBN-00115-16	117.5°		3		**VB1604 (VC1604) Rhombic 35°	***M3.5
C8-DCLNN-00150-12	95°	N	1	5.906	CN1204 Rhombic 80°	CP2
C8-DCLNN-00150-16					CN1606 Rhombic 80°	CP3

***DN1504 (3/16" thickness) carbide shim is included as standard, in case of DN1506 insert (1/4" thickness), please replace the standard carbide shim with DNS1506 (option)**
****Either VB1604 or VC1604 insert can be mounted**
*****M3.5 is screw-on type**
- Insert must be ordered separately
- Accepts standard ISO inserts

INTEGRAL MODEL—BIG CAPTO (C3/C4)

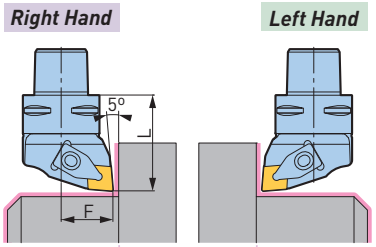


Fig. 1

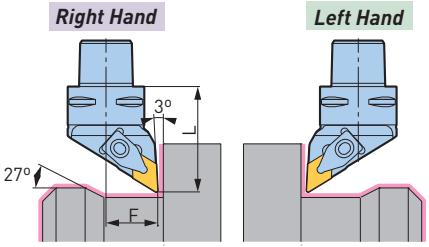


Fig. 2

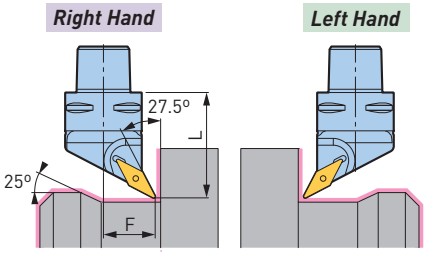
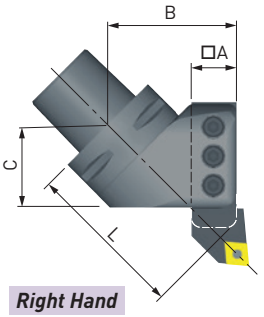


Fig. 3

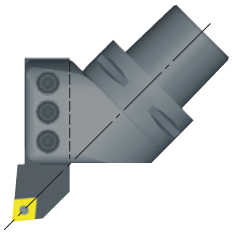
Catalog Number	Entering Angle	Hand	Fig.	L	F	Insert	Clamp Piece	Weight (lbs.)
C3-DCLNR-22038-09	95°	R	1	1.50	.866	CN0903	CP7	.4
C3-DCLNL-22038-09		L						
C3-DDJNR-22045-11	93°	R	2	1.77	.866	DN1104	CP7	.4
C3-DDJNL-22045-11		L						
C3-SVQBR-22038-11	117.5°	R	3	1.50	.866	VB1103	M2.5	.4
C3-SVQBL-22038-11		L						
C4-DCLNR-27050-12	95°	R	1	1.97	1.063	CN1204	CP2	1.0
C4-DCLNL-27050-12		L						
C4-DDJNR-27055-15	93°	R	2	2.17	1.063	DN1504	CP2	.9
C4-DDJNL-27055-15		L						
C4-SVQBR-27055-16	117.5°	R	3	2.17	1.063	VB1604	M3.5	.9
C4-SVQBL-27055-16		L						

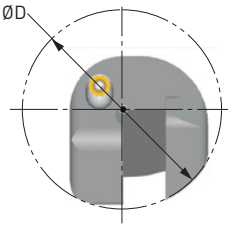
SQUARE HOLDER—BIG CAPTO

For Square Holder Turning Applications



Right Hand

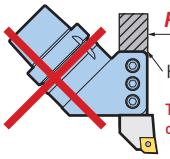




Left Hand

Catalog Number	Hand	□A	B	C	L	ØD	Weight (lbs.)
C5-45-BH20R-5838	R	20mm	2.28	1.50	2.87	3.70	2.6
C5-45-BH20L-5838	L						
C6-45-BH1.000R-3.25	R	1.000	2.80	1.81	4.33	4.65	5.5
C6-45-BH1.000L-3.25	L						
C6-45-BH25R-7752	R	25mm	3.03	2.05	3.94	4.65	5.5
C6-45-BH25L-7752	L						
C8-45-BH32R-85109	R	32mm	3.35	4.29	5.71	5.31	17.0
C8-45-BH32L-85109	L						

CAUTION



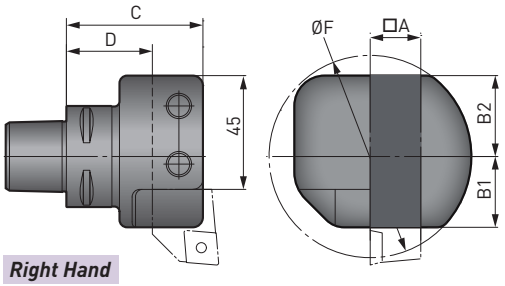
Projection Prohibited

Holder End A

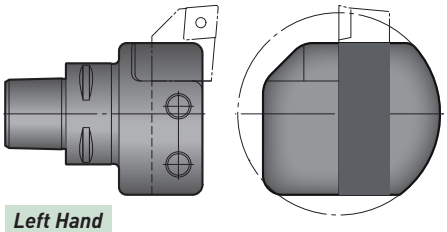
The excess length of a turning tool must be cut off to avoid interference with the an ATC arm

SQUARE HOLDER—BIG CAPTO

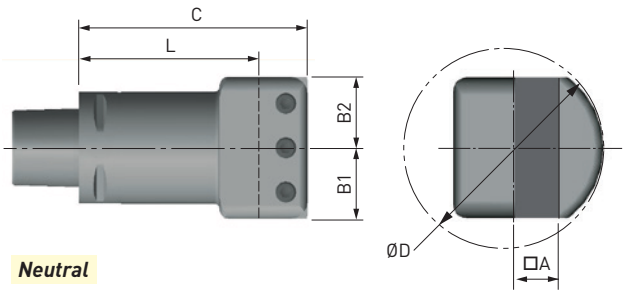
For Square Holder Turning Applications



Right Hand



Left Hand

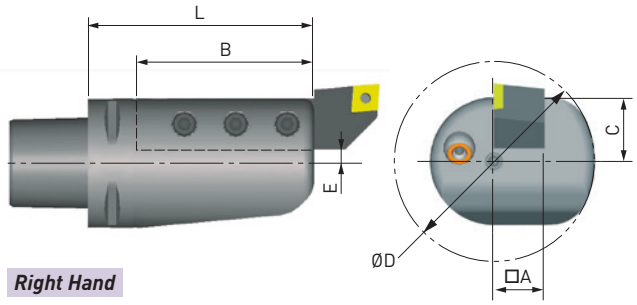


Neutral

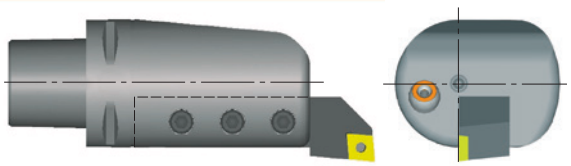
Catalog Number	Hand	□A	B_1	B_2	C	L	ØD	Weight (lbs.)
C3-90-BH16R-2547	R	16mm	1.06	.98	1.85	1.22	2.76	1.3
C3-90-BH16L-2547	L							
C4-90-BH20R-2854	R	20mm	1.26	1.10	2.13	1.34	315	2.1
C4-90-BH20L-2854	L							
C5-90-BH20N-32058	N	20mm	1.26	1.26	2.28	1.50	3.15	2.0
C5-90-BH20N-32105					4.13	2.56		4.9
C6-90-BH20N-32060	N	20mm	1.26	1.26	2.36	1.57	3.15	5.3
C6-90-BH20N-32115					4.53	3.74		7.5
C6-90-BH1.000N-5.125	N	1.000	1.58	1.58	5.12	4.12	3.94	9.3
C6-90-BH25N-40071		25mm	1.57	1.57	2.80	1.81	3.94	7.3
C6-90-BH25N-40130	N				5.12	4.13		9.3
C8-90-BH32N-51085	N	32mm	2.01	2.01	2.56	2.09	5.04	13.2
C8-90-BH32N-51165					6.50	5.24		19.2

SQUARE HOLDER—BIG CAPTO

For Turning Applications

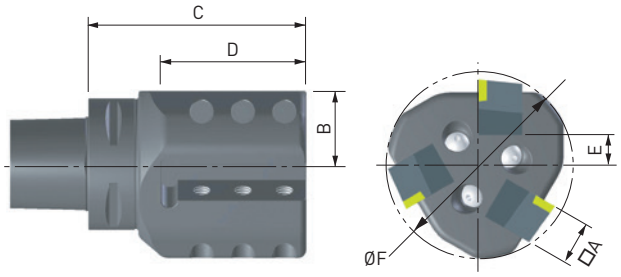


Right Hand

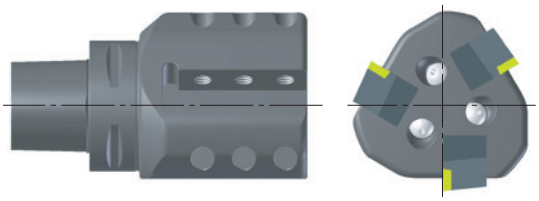


Left Hand

Catalog Number	Hand	□A	C	L	B	E	ØD	Weight (lbs.)
C3-180-BH16R-2058	R	16mm	.79	2.38	1.46	.16	2.56	1.3
C3-180-BH16L-2058	L							
C4-180-BH20R-2265	R	20mm	.87	2.56	1.57	.08	2.76	1.9
C4-180-BH20L-2265	L							
C5-180-BH20R-2590	R	20mm	.98	3.54	2.56	.20	3.15	3.5
C5-180-BH20L-2590	L							
C6-180-BH1.000R-4.375	R	1.000	1.16	4.33	3.15	.24	3.94	6.8
C6-180-BH1.000L-4.375	L							
C6-180-BH20R-32100	R	20mm	1.24	3.94	2.56	.45	3.15	5.7
C6-180-BH20L-32100	L							
C6-180-BH25R-32120S	R	25mm	1.16	4.72	3.15	.18	3.54	6.8
C6-180-BH25L-32120S	L							
C8-180-BH32R-40125	R	32mm	1.57	4.92	3.35	.24	5.04	13.2
C8-180-BH32L-40125	L							



Right Hand



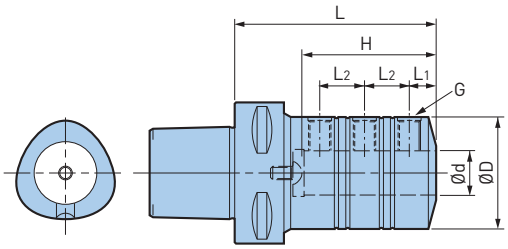
Left Hand

Catalog Number	Hand	□A	B	C	D	E	ØF	Weight (lbs.)
C5-180-3BH20R-100	R	20mm	1.38	3.94	2.76	.59	3.54	5.7
C5-180-3BH20L-100	L							
C6-180-3BH20R-110	R	20mm	1.38	4.33	2.76	.59	3.54	7.1
C6-180-3BH20L-110	L							
C6-180-3BH25R-125	R	25mm	1.77	4.91	3.15	.79	4.33	10.1
C6-180-3BH25L-125	L							
C8-180-3BH25R-130	R	25mm	1.77	5.12	3.54	.79	4.33	13.4
C8-180-3BH25L-130	L							

BORING BAR HOLDER—BIG CAPTO

CLAMPING RANGE: Ø6-40mm

COOLANT THROUGH

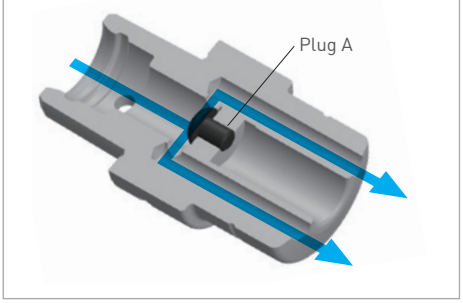


Catalog Number	Ød	ØD	L	L1	L2	Bore Depth H	G	Weight (lbs.)
C3-BSL 6-35	6mm	.906	1.38	.19	.35	.87	M5 P0.8	.4
C3-BSL 8-35	8mm	.984		.24	.39		M6 P1.0	.4
C3-BSL10-35	10mm	1.142					M6 P1.0	.2
C3-BSL12-40	12mm	1.339	1.57	.31	.47	1.06	M8 P1.0	.6
C4-BSL 6- 40	6mm	.906	1.57	.19	.35	.91	M5 P0.8	.7
C4-BSL 8- 40	8mm	.984		.24	.39		M6 P1.0	.7
C4-BSL10- 40	10mm	1.142					M6 P1.0	.7
C4-BSL12- 45	12mm	1.339	1.77	.31	.47	1.10	M8 P1.0	.8
C4-BSL16- 50	16mm	1.575	1.97	.39	.55	1.30	M10 P1.25	1.1
C4-BSL20- 60	20mm	1.969	2.36	.47	.59	1.69	M10 P1.25	1.6
C5-BSL6-70	6mm	.906	2.76	.20	.31	1.61	M5xP0.8	1.3
C5-BSL8-70	8mm	.984		.24	.39		M6xP1.0	1.3
C5-BSL10-70	10mm	1.142		.31	.47	1.65	M8xP1.0	1.3
C5-BSL12-80	12mm	1.339	3.15	.31	.63	2.09		1.8
C5-BSL16-90	16mm	1.575	3.54	.39	.83	2.56	M10xP1.25	2.2
C5-BSL20-90	20mm	1.969		.47	.79	2.36		2.9
C5-BSL25-100	25mm	2.165	3.94	.55	.91	2.76	M12xP1.5	3.5
C5-BSL32-110	32mm	2.520	4.33	.63	1.02	3.07		4.6
C5-BSL40-130	40mm	3.150	5.12	.71	1.26	3.66	M16xP1.5	8.1
C6-BSL.625-3.5	.625	1.575	3.50	.39	.83	2.56	M10xP1.25	3.7
C6-BSL.750-3.5	.750	1.969		.47	.79	2.36		4.4
C6-BSL1.000-4	1.000	2.165	4.00	.55	.91	2.76	M12xP1.5	5.1
C6-BSL1.250-4.5	1.250	2.520	4.50	.63	1.02	3.07		6.2
C6-BSL1.500-5	1.500	3.150	5.00	.71	1.26	3.66	M16xP1.5	9.5
C6-BSL6-70	6mm	.906	2.76	.20	.31	1.61	M5xP0.8	3.1
C6-BSL8-70	8mm	.984		.24	.39		M6xP1.0	2.9
C6-BSL10-70	10mm	1.142		.31	.47	1.65	M8xP1.0	2.9
C6-BSL12-80	12mm	1.339	3.15		.63	2.09		3.3
C6-BSL16-90	16mm	1.575	3.54	.39	.83	2.56	M10xP1.25	3.7
C6-BSL20-90	20mm	1.969	3.94	.47	.87	2.36		4.4
C6-BSL25-100	25mm	2.165		.55	1.02	2.76	M12xP1.5	5.1
C6-BSL32-110	32mm	2.520	4.33	.63	1.18	3.07		6.2
C6-BSL40-130	40mm	3.150	5.12	.71	1.26	3.66	M16xP1.5	9.5
C6-BSL50-135	50mm	3.543	5.31	.71	1.18	3.46	M16 P1.5	9.9
C8-BSL16-90	16mm	1.575	3.54	.39	.83	2.56	M10xP1.25	6.4
C8-BSL20-100	20mm	1.969	3.94	.47	.87	2.76		7.3
C8-BSL25-110	25mm	2.165	4.33	.55	1.02	3.15	M12xP1.5	7.9
C8-BSL32-120	32mm	2.520	4.72	.63	1.18	3.46		9.0
C8-BSL40-130	40mm	3.150	5.12	.71	1.26	3.66	M16xP1.5	12.1
C8-BSL50-140	50mm	3.543	5.51	.71	1.42	4.13	M16 P1.5	11.9

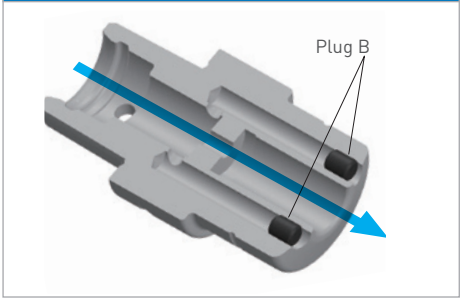
- Plug A and Plug B are included
- Interchangeable between center-through and side-through coolant supply by using plugs

BSL SPARE PARTS—BIG CAPTO

SIDE-THROUGH



CENTER-THROUGH



Catalog Number	Plug A	Plug B
BSL.625	M18xP1.5	M6xP1.0
BSL.750	M6xP1.0❖	
BSL1.000		
BSL1.250	M8xP1.25❖	
BSL1.500		
BSL6	M8xP1.25	M4xP0.7
BSL8	M10xP1.0	M4xP0.7
BSL10	M12xP1.5	M5xP0.8
BSL12	M14xP1.5	M6xP1.0
BSL16	M18xP1.5 (C5: M6xP1.0❖)	
BSL20	M6xP1.0❖	
BSL25		
BSL32	M8xP1.25❖	
BSL40		

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

For BSL Side Lock Holder

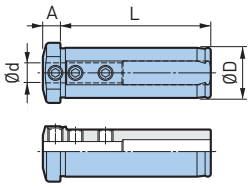


Fig. 1

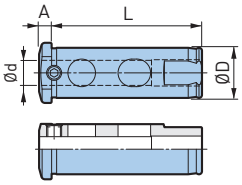


Fig. 2

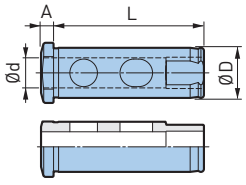
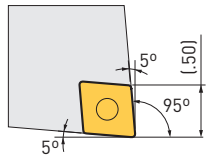
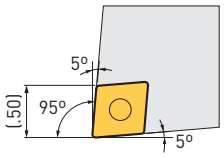
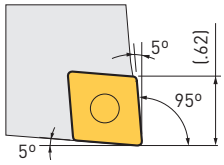
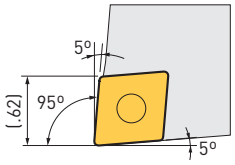
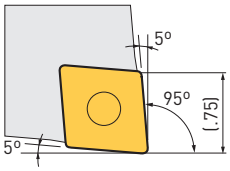
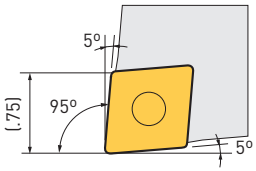
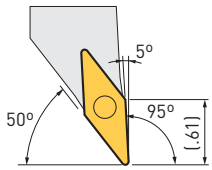
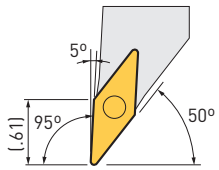
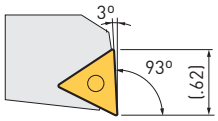
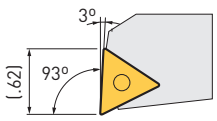
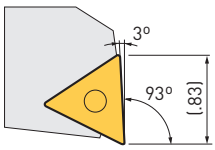
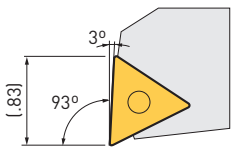


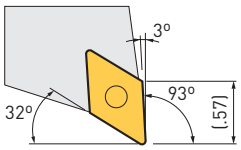
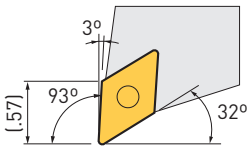
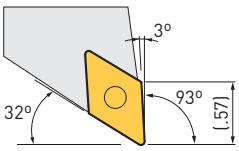
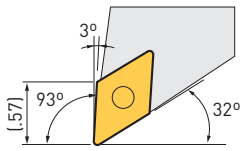
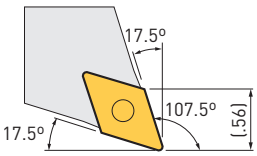
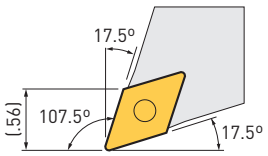
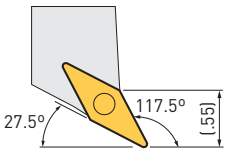
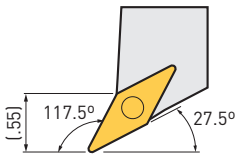
Fig. 3

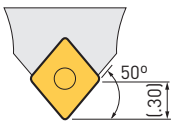
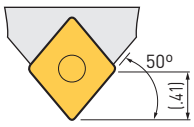
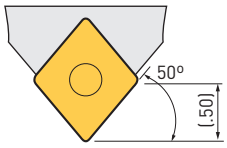
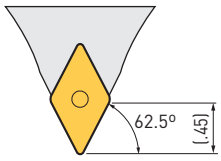
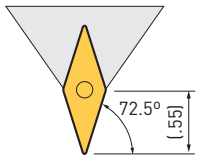
Catalog Number	Fig.	Ød	ØD	L	A
BSLA20-6	1	**6mm**	20mm	2.36	.20
BSLA20-8		**8mm**			.28
BSLA20-10	2	**10mm**			.20
BSLA20-12	3	**12mm**			.20
BSLA20-16		**16mm**			.20
BSLA32-10	1	**10mm**	32mm	2.95	.35
BSLA32-12		**12mm**			.35
BSLA32-16	2	**16mm**			.24
BSLA32-20	3	**20mm**			.24

SELECTION GUIDE

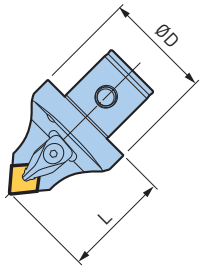
Entering Angle	Insert	Cartridge		Right hand	Left hand
		S Type	F Type		
95°	CN1204	No.1	No.10-1		
	CN1606	No.8-1	No.10-2		
	CN1906	No.8-2			
	VB1604 VC1604	No.7			
93°	TN1604	No.2-1	No.12		
	TN2204	No.2-2			

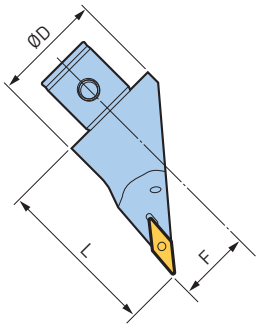
SELECTION GUIDE

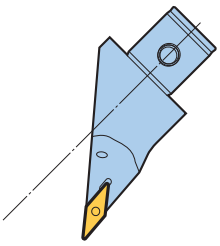
Entering Angle	Insert	Cartridge		Right hand	Left hand
		S Type	F Type		
93°	DN1504 (DN1506)	No.4	No.13		
	DN1504 (DN1506)	No.6	No.18		
107.5°	DN1504 (DN1506)	No.3			
117.5°	VB1604 VC1604	No.5	No.15		

Neutral				
CN12	CN16	CN19	DN1504 (DN1506)	VB1604 / VC1604
No.1	No.8-1	No.8-2	No.3	No.5
				

CARTRIDGES—45º TYPE S







Neutral ***Right Hand*** ***Left Hand***

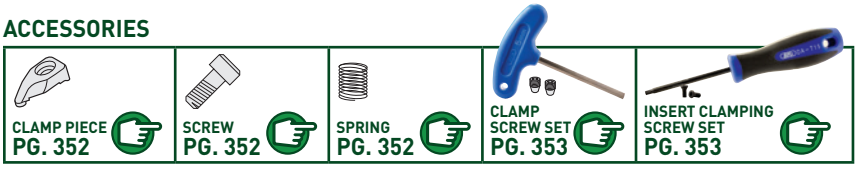
Lead Angle	Type	Catalog Number	Hand	Insert	L	F	ØD	Clamp Piece
5º	S50	**S50-DCLNN-00050-12**	N	CN1204 Rhombic 80º	1.97	0	1.97	CP2
	S63	**S63-DCLNN-00060-16**		CN1606 Rhombic 80º	2.36		2.48	CP3
		S63-DCLNN-00060-19		CN1906 Rhombic 80º				CP5
3º	S50	**S50-DTJNR-00050-16**	R	TN1604 Triangle 60º	1.97	0	1.97	CP1
		S50-DTJNL-00050-16	L					
		S50-DTJNR-00050-22	R	TN2204 Triangle 60º				CP2
		S50-DTJNL-00050-22	L					
3º	S50	**S50-DDJNR-00050-15**	R	* DN1504 DN1506 Rhombic 55º	1.97	0	1.97	CP2
		S50-DDJNL-00050-15	L					
		S50-DDJNR-33075-15	R		2.95	1.30		
		S50-DDJNL-33075-15	L					
17.5º	S50	**S50-DDHNN-00050-15**	N		1.97	0		
5º	S50	**S50-SVLBR-33075-16**	R	VB1604 VC1604 Rhombic 35º	2.95	1.30	1.97	** M3.5
		S50-SVLBL-33075-16	L					
27.5º	S50	**S50-SVQBN-00050-16**	N		1.97	0		

***DN1504 (3/16" thickness) carbide shim is included as standard, in case of DN1506 insert (1/4" thickness), please replace the standard carbide shim with DNS1506 (option)**

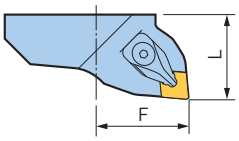
****M3.5 is screw-on type**

- Wrench and insert must be ordered separately
- Accepts standard ISO inserts

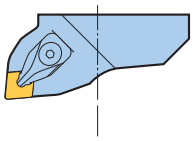
ACCESSORIES



CARTRIDGES—90º TYPE F



Right Hand



Left Hand

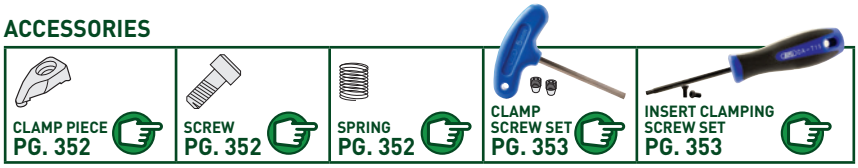
Lead Angle	Type	Catalog Number	Hand	Insert	L	F	Clamp Piece
5º	F50	**F50-DCLNR-35035-12**	R	CN1204 Rhombic 80º	1.38	1.38	CP2
	F63	**F63-DCLNR-45035-12**	R			1.77	
	F50	**F50-DCLNL-35035-12**	L			1.38	
	F63	**F63-DCLNL-45035-12**	L			1.77	
	F50	**F50-DCLNR-35035-16**	R	CN1606 Rhombic 80º	1.38	1.38	CP3
	F63	**F63-DCLNR-45035-16**	R			1.77	
	F50	**F50-DCLNL-35035-16**	L			1.38	
	F63	**F63-DCLNL-45035-16**	L			1.77	
3º	F50	**F50-DTJNR-35035-16**	R	TN1604 Triangle 60º	1.38	1.38	CP1
	F63	**F63-DTJNR-45035-16**	R			1.77	
	F50	**F50-DTJNL-35035-16**	L			1.38	
	F63	**F63-DTJNL-45035-16**	L			1.77	
3º	F50	**F50-DDJNR-35035-15**	R	* DN1504 DN1506 Rhombic 55º	1.38	1.38	CP2
	F63	**F63-DDJNR-45035-15**	R			1.77	
	F50	**F50-DDJNL-35035-15**	L			1.38	
	F63	**F63-DDJNL-45035-15**	L			1.77	
	F50	**F50-DDJNR-35050-15**	R		1.97	1.38	CP2
	F63	**F63-DDJNR-45055-15**	R		2.17	1.77	
	F50	**F50-DDJNL-35050-15**	L		1.97	1.38	
	F63	**F63-DDJNL-45055-15**	L		2.17	1.77	
	F63	**F63-DDUNR-45035-15**	R		1.38	1.77	CP2
	F63	**F63-DDUNL-45035-15**	L			1.77	
27.5º	F63	**F63-SVQBR-45035-16**	R	VB1604 VC1604 Rhombic 35º	1.38	1.77	**M3.5
	F63	**F63-SVQBL-45035-16**	L			1.77	

***DN1504 (3/16" thickness) carbide shim is included as standard, in case of DN1506 insert (1/4" thickness), please replace the standard carbide shim with DNS1506 (option)**

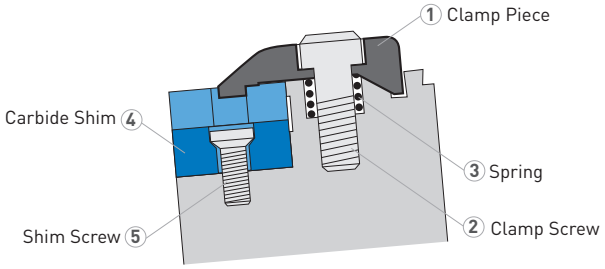
****M3.5 is screw-on type**

- Wrench and insert must be ordered separately,
- Accepts standard ISO inserts

ACCESSORIES



CARBIDE CLAMP SET



Catalog Number	1 Clamp Piece	2 Screw	3 Spring	Insert
SCP1	CP1	M5 P20	ø8x10	TN1604
SCP2	CP2			CN1204, TN2204, DN1504, DN1506
SCP3	CP3			CN1606
SCP5	CP5			CN1906
SCP7	CP7			DN1104, CN0903, CN0904

• Clamp piece, screw and spring are included; wrench must be ordered separately (Model: T-4)

CARBIDE SHIM SET

Catalog Number	4 Carbide Shim	5 Screw	Torx Size	Insert
STNS1604	TNS1604	M3 P7	T10	TN1604
STNS2204	TNS2204	M4 P8	T15	TN2204
SDNS1104C	DNS1104C	M3 P7	10IP	DN1104
SDNS1504	DNS1504	M4 P8	T15	DN1504
SDNS1504C	DNS1504C	M4 P8	15IP	DN1504
SDNS1506	DNS1506	M4 P8	T15	DN1506
SDNS1506C	DNS1506C	M4 P8	15IP	DN1506
SCNS0903C	CNS0903C	M3 P7	10IP	CN0903
SCNS0904C	CNS0904C	M3 P7	10IP	CN0904
SCNS1204	CNS1204	M4 P8	T15	CN1204
SCNS1204C	CNS1204C	M4 P8	15IP	CN1204
SCNS1606	CNS1606	M5 P12	T20	CN1606
SCNS1906	CNS1906	M5 P12	T20	CN1906

• Carbide shim and screw are included; wrench must be ordered separately (Model: DA-T10, DA-T15, DA-T20)

CLAMP SCREW SET

For Type S Basic Holder

Catalog Number	Type	Screw Size	Wrench Model
10.690.435	S50	M10 P1.0	10.690.816
10.690.436	S63	M12 P1.0	10.690.817

INSERT CLAMPING SCREW SET

For VB1604/VC1604 Inserts

Catalog Number
S3508DS

Contents

M3.5 screws: 10 pcs.

Wrench **DA-T15:** 1 pc.

TOOL HOLDER ACCESSORIES

A.8

MEGA MICRO CHUCK

MICRO COLLET
MICRO COLLET SET
MEGA MICRO COOLANT NUT
MEGA MICRO NUT
MEGA MICRO SEAL NUT
α TAPER CLEANER
MEGA WRENCH
MEGA TORQUE WRENCH

PG. 356

PG. 358

PG. 390

MEGA NEW BABY CHUCK

NBC NEW BABY COLLET
COLLET SET/COLLET CASE
NEW BABY ENDMILL COLLET
FONBC COOLANT COLLET
MEGA NEW BABY NUT

PG. 360

MEGA PERFECT SEAL

PG. 368

ADJUSTING SCREW

PG. 411

COLLET EJECTOR
COLLET REMOVER
α TAPER CLEANER

PG. 373

MEGA WRENCH
MEGA TORQUE WRENCH

PG. 390

MEGA ER GRIP

ERC COLLET
ERC END MILL COLLET
MEGA ER NUT
MEGA ER SOLID NUT
ER NUT

PG. 374

MEGA ER
PERFECT SEAL

PG. 378

ADJUSTING SCREW

PG. 411

MEGA WRENCH

PG. 390

MEGA E CHUCK

MEGA E COLLET
MEGA E NUT
α TAPER CLEANER
ADJUSTING SCREW

PG. 380

MEGA E
PERFECT SEAL

PG. 381

MEGA WRENCH
MEGA TORQUE WRENCH

PG. 390

MEGA DOUBLE POWER CHUCK

PJC STRAIGHT COLLET
PSC STRAIGHT COLLET

PG. 384

AXIAL ADJUSTING SCREW
MEGA WRENCH

PG. 390

NEW Hi-POWER MILLING CHUCK

PJC STRAIGHT COLLET
PSC STRAIGHT COLLET
C STRAIGHT COLLET
OCA STRAIGHT COLLET
AXIAL ADJUSTING SCREW

PG. 383

FACE MILL ARBOR
JACOBS TAPER ARBOR
MORSE TAPER HOLDER

PG. 388

WRENCH

PG. 389

HYDRAULIC CHUCK

PJC STRAIGHT COLLET
PSC STRAIGHT COLLET

PG. 384

GRIP BAR FOR CONFIRMING
GRIPPING FORCE

PG. 395

NEW BABY CHUCK

NBC NEW BABY COLLET
COLLET SET/COLLET CASE

PG. 360

BABY PERFECT SEAL

PG. 370

ADJUSTING SCREW

PG. 411

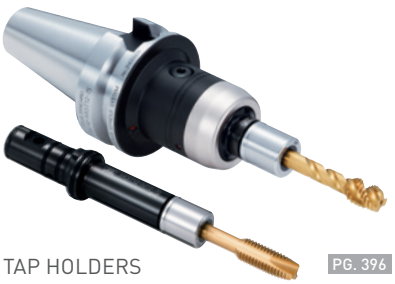
COLLET EJECTOR
COLLET REMOVER
α TAPER CLEANER

PG. 373

NEW BABY WRENCH
TORQUE WRENCH

PG. 389

MEGA SYNCHRO TAPPING HOLDERS



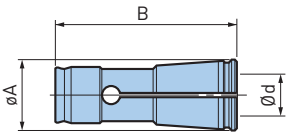
TAP HOLDERS

PG. 396

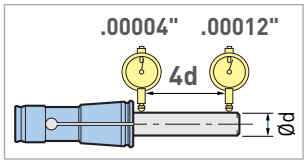
MEGA MICRO COLLET

HIGH PRECISION

Available in .004" (.1mm) diameter increments to suit all cutting tool shank sizes with maximum accuracy. Despite their compact size, high clamping force and accuracy are achieved.



GUARANTEED MAX RUNOUT



All BIG Collets are AA Grade and inspected twice for accuracy

MEGA 3S

Catalog Number	Clamping Range Ød
NBC3S-0.5AA	.018-.022
NBC3S-0.6AA	.022-.026
NBC3S-0.7AA	.026-.030
NBC3S-0.8AA	.030-.033
NBC3S-0.9AA	.033-.037
NBC3S-1AA	.037-.041
NBC3S-1.1AA	.041-.045
NBC3S-1.2AA	.045-.049
NBC3S-1.3AA	.049-.053
NBC3S-1.4AA	.053-.057
NBC3S-1.5AA	.057-.061
NBC3S-1.6AA	.061-.065
NBC3S-1.7AA	.065-.069
NBC3S-1.8AA	.069-.073
NBC3S-1.9AA	.073-.077
NBC3S-2AA	.077-.081
NBC3S-2.1AA	.081-.085
NBC3S-2.2AA	.085-.089
NBC3S-2.3AA	.089-.093
NBC3S-2.4AA	.093-.096
NBC3S-2.5AA	.096-.100
NBC3S-2.6AA	.100-.104
NBC3S-2.7AA	.104-.108
NBC3S-2.8AA	.108-.112
NBC3S-2.9AA	.112-.116
NBC3S-3AA	.116-.120
NBC3S-3.1AA	.120-.124
NBC3S-3.175AA	.123-.127
NBC3S-3.2AA	.124-.128

ØA=.24 (6.06mm) B=.75 (18.8mm)

MEGA 4S

Catalog Number	Clamping Range Ød
NBC4S-0.5AA	.018-.022
NBC4S-0.6AA	.022-.026
NBC4S-0.7AA	.026-.030
NBC4S-0.8AA	.030-.033
NBC4S-0.9AA	.033-.037
NBC4S-1AA	.037-.041
NBC4S-1.1AA	.041-.045
NBC4S-1.2AA	.045-.049
NBC4S-1.3AA	.049-.053
NBC4S-1.4AA	.053-.057
NBC4S-1.5AA	.057-.061
NBC4S-1.6AA	.061-.065
NBC4S-1.7AA	.065-.069
NBC4S-1.8AA	.069-.073
NBC4S-1.9AA	.073-.077
NBC4S-2AA	.077-.081
NBC4S-2.1AA	.081-.085
NBC4S-2.2AA	.085-.089
NBC4S-2.3AA	.089-.093
NBC4S-2.4AA	.093-.096
NBC4S-2.5AA	.096-.100
NBC4S-2.6AA	.100-.104
NBC4S-2.7AA	.104-.108
NBC4S-2.8AA	.108-.112
NBC4S-2.9AA	.112-.116
NBC4S-3AA	.116-.120
NBC4S-3.1AA	.120-.124
NBC4S-3.175AA	.123-.127
NBC4S-3.2AA	.124-.128
NBC4S-3.3AA	.128-.132
NBC4S-3.4AA	.132-.136
NBC4S-3.5AA	.136-.140
NBC4S-3.6AA	.140-.144
NBC4S-3.7AA	.144-.148
NBC4S-3.8AA	.148-.152
NBC4S-3.9AA	.152-.156
NBC4S-4AA	.156-.159

ØA=.29 (7.4mm) B=.89 (22.5mm)

MEGA 6S

Catalog Number	Clamping Range Ød
NBC6S-0.5AA	.018-.022
NBC6S-0.6AA	.022-.026
NBC6S-0.7AA	.026-.030
NBC6S-0.8AA	.030-.033
NBC6S-0.9AA	.033-.037
NBC6S-1AA	.037-.041
NBC6S-1.1AA	.041-.045
NBC6S-1.2AA	.045-.049
NBC6S-1.3AA	.049-.053
NBC6S-1.4AA	.053-.057
NBC6S-1.5AA	.057-.061
NBC6S-1.6AA	.061-.065
NBC6S-1.7AA	.065-.069
NBC6S-1.8AA	.069-.073
NBC6S-1.9AA	.073-.077
NBC6S-2AA	.077-.081
NBC6S-2.1AA	.081-.085
NBC6S-2.2AA	.085-.089
NBC6S-2.3AA	.089-.093
NBC6S-2.4AA	.093-.096
NBC6S-2.5AA	.096-.100
NBC6S-2.6AA	.100-.104
NBC6S-2.7AA	.104-.108
NBC6S-2.8AA	.108-.112
NBC6S-2.9AA	.112-.116
NBC6S-3AA	.116-.120
NBC6S-3.1AA	.120-.124
NBC6S-3.175AA	.123-.127
NBC6S-3.2AA	.124-.128
NBC6S-3.3AA	.128-.132
NBC6S-3.4AA	.132-.136
NBC6S-3.5AA	.136-.140
NBC6S-3.6AA	.140-.144
NBC6S-3.7AA	.144-.148
NBC6S-3.8AA	.148-.152
NBC6S-3.9AA	.152-.156
NBC6S-4AA	.156-.159

Catalog Number	Clamping Range Ød
NBC6S-4.1AA	.159-.163
NBC6S-4.2AA	.163-.167
NBC6S-4.3AA	.167-.171
NBC6S-4.4AA	.171-.175
NBC6S-4.5AA	.175-.179
NBC6S-4.6AA	.179-.183
NBC6S-4.7AA	.183-.187
NBC6S-4.7625AA	.186-.189
NBC6S-4.8AA	.187-.191
NBC6S-4.9AA	.191-.195
NBC6S-5AA	.195-.199
NBC6S-5.1AA	.199-.203
NBC6S-5.2AA	.203-.207
NBC6S-5.3AA	.207-.211
NBC6S-5.4AA	.211-.215
NBC6S-5.5AA	.215-.219
NBC6S-5.6AA	.219-.222
NBC6S-5.7AA	.222-.226
NBC6S-5.8AA	.226-.230
NBC6S-5.9AA	.230-.234
NBC6S-6AA	.234-.238

ØA=.37 (9.4mm) B=.96 (24.5mm)

MEGA 8S

Catalog Number	Clamping Range Ød
NBC8S-3AA	.116-.120
NBC8S-3.1AA	.120-.124
NBC8S-3.175AA	.123-.127
NBC8S-3.2AA	.124-.128
NBC8S-3.3AA	.128-.132
NBC8S-3.4AA	.132-.136
NBC8S-3.5AA	.136-.140
NBC8S-3.6AA	.140-.144
NBC8S-3.7AA	.144-.148
NBC8S-3.8AA	.148-.152
NBC8S-3.9AA	.152-.156
NBC8S-4AA	.156-.159
NBC8S-4.1AA	.159-.163
NBC8S-4.2AA	.163-.167
NBC8S-4.3AA	.167-.171
NBC8S-4.4AA	.171-.175
NBC8S-4.5AA	.175-.179
NBC8S-4.6AA	.179-.183
NBC8S-4.7AA	.183-.187
NBC8S-4.8AA	.187-.191
NBC8S-4.9AA	.191-.195
NBC8S-5AA	.195-.199
NBC8S-5.1AA	.199-.203
NBC8S-5.2AA	.203-.207
NBC8S-5.3AA	.207-.211
NBC8S-5.4AA	.211-.215
NBC8S-5.5AA	.215-.219
NBC8S-5.6AA	.219-.222
NBC8S-5.7AA	.222-.226
NBC8S-5.8AA	.226-.230
NBC8S-5.9AA	.230-.234
NBC8S-6AA	.234-.238

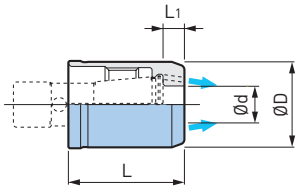
Catalog Number	Clamping Range Ød
NBC8S-6.1AA	.238-.242
NBC8S-6.2AA	.242-.246
NBC8S-6.3AA	.246-.250
NBC8S-6.4AA	.250-.254
NBC8S-6.5AA	.254-.258
NBC8S-6.6AA	.258-.262
NBC8S-6.7AA	.262-.266
NBC8S-6.8AA	.266-.270
NBC8S-6.9AA	.270-.274
NBC8S-7AA	.274-.278
NBC8S-7.1AA	.278-.281
NBC8S-7.2AA	.281-.285
NBC8S-7.3AA	.285-.289
NBC8S-7.4AA	.289-.293
NBC8S-7.5AA	.293-.297
NBC8S-7.6AA	.297-.301
NBC8S-7.7AA	.301-.305
NBC8S-7.8AA	.305-.309
NBC8S-7.9AA	.309-.313
NBC8S-8AA	.313-.317

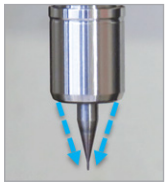
ØA=.47 (12mm) B=1.06 (27mm)

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 Ø6mm.



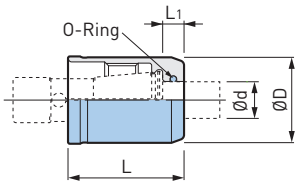


Up to 35% higher tool lifetime compared to standard nut.

MEGA 6S

Catalog Number	Ød	ØD	L	L1
MGN6S-2J	**2mm**	.55 (14mm)	.75 (19mm)	.14 (3.5mm)
MGN6S-3J	**3mm**			
MGN6S-4J	**4mm**			
MGN6S-5J	**5mm**		.67 (17mm)	.06 (1.5mm)
MGN6S-6J	**6mm**			

MEGA MICRO SEAL NUT



MEGA 6S

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

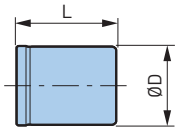
• Replacement o-ring sold in packages of 5 pcs.

MEGA 8S

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

• Replacement o-ring sold in packages of 5 pcs.

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

COLLET CASE

For MEGA MICRO CHUCK

Organizes collet management and ideal for maintaining collet precision.

Provided with a Polypropylene Case

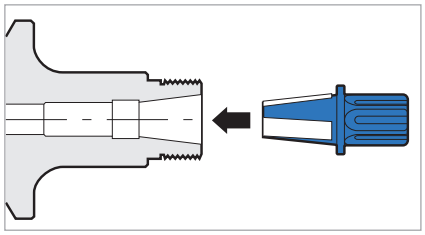
Catalog Number	Compatible Micro Collet	Number of Holes	Case Size (LxWxH)
NBB3S	NBC3S	50	7.8 x 6.7 x 1.97 (200mm x 170mm x 50mm)
NBB4S	NBC4S		
NBB6S	NBC6S	60	
NBB8S	NBC8S		

• Case size includes handle

α TAPER CLEANER

For MEGA MICRO CHUCK

Removes particles and oil from the chuck bore taper.

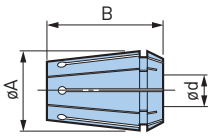


Catalog Number	Chuck Body
SC-NBC3S	MEGA3S
SC-NBC4S	MEGA4S
SC-NBC6S	MEGA6S
SC-NBC8S	MEGA8S

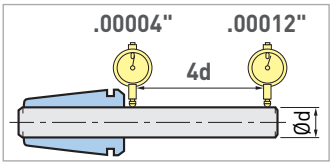
NEW BABY COLLET

HIGH PRECISION

The NEW BABY COLLET is world renowned for its unmatched accuracy and precision.
It offers runout accuracy of .00004" (.001mm) T.I.R. at the collet nose.



GUARANTEED MAX RUNOUT



All BIG Collets are AA Grade and inspected twice for accuracy

MEGA 6N/NBS6

Catalog Number	Clamping Range Ød
NBC6-0.5AA	.010-.020
NBC6-0.75AA	.020-.030
NBC6-1AA	.030-.039
NBC6-1.25AA	.039-.049
NBC6-1.5AA	.049-.059
NBC6-1.75AA	.059-.069
NBC6-2AA	.069-.079
NBC6-2.25AA	.079-.089
NBC6-2.5AA	.089-.098
NBC6-2.75AA	.098-.108
NBC6-3AA	.108-.118
NBC6-3.175AA	.115-.125
NBC6-3.25AA	.118-.128
NBC6-3.5AA	.128-.138
NBC6-3.75AA	.138-.148
NBC6-4AA	.148-.157
NBC6-4.25AA	.157-.167
NBC6-4.5AA	.167-.177
NBC6-4.75AA	.177-.187
NBC6-5AA	.187-.197
NBC6-5.25AA	.197-.207
NBC6-5.5AA	.207-.217
NBC6-5.75AA	.217-.226
NBC6-6AA	.226-.236

ØA=.37 (9.5mm) B=.55 (14mm)

MEGA 8N/NBS8

Catalog Number	Clamping Range Ød
NBC8-0.75AA	.020-.030
NBC8-1AA	.030-.039
NBC8-1.25AA	.039-.049
NBC8-1.5AA	.049-.059
NBC8-1.75AA	.059-.069
NBC8-2AA	.069-.079
NBC8-2.25AA	.079-.089
NBC8-2.5AA	.089-.098
NBC8-2.75AA	.098-.108
NBC8-3AA	.108-.118
NBC8-3.175AA	.115-.125
NBC8-3.5AA	.118-.138
NBC8-4AA	.138-.157
NBC8-4.5AA	.157-.177
NBC8-5AA	.177-.197
NBC8-5.25AA	.187-.207
NBC8-5.5AA	.197-.217
NBC8-5.75AA	.207-.226
NBC8-6AA	.217-.236
NBC8-6.5AA	.236-.256
NBC8-7AA	.256-.276
NBC8-7.5AA	.276-.295
NBC8-8AA	.295-.315

ØA=.49 (12.5mm) B=.71 (18mm)

MEGA 10N/NBS10

Catalog Number	Clamping Range Ød
NBC10-1.75AA	.059-.069
NBC10-2AA	.069-.079
NBC10-2.25AA	.079-.089
NBC10-2.5AA	.089-.098
NBC10-2.75AA	.098-.108
NBC10-3AA	.108-.118
NBC10-3.175AA	.115-.125
NBC10-3.25AA	.108-.128
NBC10-3.5AA	.118-.138
NBC10-3.75AA	.128-.147
NBC10-4AA	.138-.157
NBC10-4.5AA	.157-.177
NBC10-5AA	.177-.197
NBC10-5.25AA	.187-.207
NBC10-5.5AA	.197-.217
NBC10-5.75AA	.207-.226
NBC10-6AA	.217-.236
NBC10-6.5AA	.236-.256
NBC10-7AA	.256-.276
NBC10-7.5AA	.276-.295
NBC10-8AA	.295-.315
NBC10-8.5AA	.315-.335
NBC10-9AA	.335-.354
NBC10-9.5AA	.354-.375
NBC10-10AA	.376-.394

ØA=.65 (16.5mm) B=1.06 (27mm)

MEGA 13N/NBS13

Catalog Number	Clamping Range Ød
NBC13-3AA	.098-.118
NBC13-3.25AA	.108-.128
NBC13-3.175AA	.115-.125
NBC13-3.5AA	.118-.138
NBC13-3.75AA	.128-.147
NBC13-4AA	.138-.157
NBC13-4.25AA	.147-.167
NBC13-4.5AA	.157-.177
NBC13-4.75AA	.167-.187
NBC13-5AA	.177-.197
NBC13-5.25AA	.187-.207
NBC13-5.5AA	.197-.217
NBC13-5.75AA	.207-.226
NBC13-6AA	.217-.236
NBC13-6.5AA	.236-.256
NBC13-7AA	.256-.276
NBC13-7.5AA	.276-.295
NBC13-8AA	.295-.315
NBC13-8.5AA	.315-.335
NBC13-9AA	.335-.354
NBC13-9.5AA	.354-.375
NBC13-10AA	.376-.394
NBC13-10.5AA	.394-.413
NBC13-11AA	.413-.433
NBC13-11.5AA	.433-.453
NBC13-12AA	.453-.472
NBC13-12.5AA	.472-.492
NBC13-13AA	.492-.512

ØA=.81 (20.5mm) B=1.22 (31mm)

- Below collets not included in NEW BABY COLLET SETS;
  see pg. 363 for more information on collet sets
  NBC8-3.175AA, 5.25AA, 5.75AA
  NBC10-3.175AA, 3.25AA, 3.75AA, 4.25AA, 4.75AA, 5.25AA, 5.75AA
  NBC13-3.175AA, 3.25AA, 3.75AA, 4.25AA, 4.75AA, 5.25AA, 5.75AA
  NBC16-3.175AA, 3.25AA, 3.75AA, 4.25AA, 4.75AA, 5.25AA, 5.75AA
  NBC20-3.175AA, 3.25AA, 3.75AA, 4.25AA, 4.75AA, 5.25AA, 5.75AA

MEGA 16N/NBS16

Catalog Number	Clamping Range Ød
NBC16-3AA	.098-.118
NBC16-3.25AA	.108-.128
NBC16-3.5AA	.118-.138
NBC16-3.75AA	.128-.147
NBC16-4AA	.138-.157
NBC16-4.25AA	.147-.167
NBC16-4.5AA	.157-.177
NBC16-4.75AA	.167-.187
NBC16-5AA	.177-.197
NBC16-5.25AA	.187-.207
NBC16-5.5AA	.197-.217
NBC16-5.75AA	.207-.226
NBC16-6AA	.217-.236
NBC16-6.5AA	.236-.256
NBC16-7AA	.256-.276
NBC16-7.5AA	.276-.295
NBC16-8AA	.295-.315
NBC16-8.5AA	.315-.335
NBC16-9AA	.335-.354
NBC16-9.5AA	.354-.375
NBC16-10AA	.376-.394
NBC16-10.5AA	.394-.413
NBC16-11AA	.413-.433
NBC16-11.5AA	.433-.453
NBC16-12AA	.453-.472
NBC16-12.5AA	.472-.492
NBC16-13AA	.492-.512
NBC16-13.5AA	.512-.531
NBC16-14AA	.531-.551
NBC16-14.5AA	.551-.571
NBC16-15AA	.571-.591
NBC16-15.5AA	.591-.610
NBC16-16AA	.610-.630

ØA=1.00 (25.5mm) B=1.38 (35mm)

MEGA 20N/NBS20

Catalog Number	Clamping Range Ød
NBC20-3AA	.098-.118
NBC20-3.25AA	.108-.128
NBC20-3.5AA	.118-.138
NBC20-3.75AA	.128-.147
NBC20-4AA	.138-.157
NBC20-4.25AA	.147-.167
NBC20-4.5AA	.157-.177
NBC20-4.75AA	.167-.187
NBC20-5AA	.177-.197
NBC20-5.25AA	.187-.207
NBC20-5.5AA	.197-.217
NBC20-5.75AA	.207-.226
NBC20-6AA	.217-.236
NBC20-6.5AA	.236-.256
NBC20-7AA	.256-.276
NBC20-7.5AA	.276-.295
NBC20-8AA	.295-.315
NBC20-8.5AA	.315-.335
NBC20-9AA	.335-.354
NBC20-9.5AA	.354-.375
NBC20-10AA	.376-.394
NBC20-10.5AA	.394-.413
NBC20-11AA	.413-.433
NBC20-11.5AA	.433-.453
NBC20-12AA	.453-.472
NBC20-12.5AA	.472-.492
NBC20-13AA	.492-.512
NBC20-13.5AA	.512-.531
NBC20-14AA	.531-.551
NBC20-14.5AA	.551-.571
NBC20-15AA	.571-.591
NBC20-15.5AA	.591-.610
NBC20-16AA	.610-.630
NBC20-16.5AA	.630-.650
NBC20-17AA	.650-.669
NBC20-17.5AA	.669-.689
NBC20-18AA	.689-.709
NBC20-18.5AA	.709-.728
NBC20-19AA	.728-.750
NBC20-19.5AA	.751-.768
NBC20-20AA	.768-.787

ØA=1.12 (28.5mm) B=1.50 (38mm)

MEGA 25N

Catalog Number	Clamping Range Ød
NBC25-16AA	.610-.630
NBC25-16.5AA	.630-.650
NBC25-17AA	.650-.669
NBC25-17.5AA	.669-.689
NBC25-18AA	.689-.709
NBC25-18.5AA	.709-.728
NBC25-19AA	.728-.748
NBC25-19.5AA	.748-.768
NBC25-20AA	.768-.787
NBC25-20.5AA	.787-.807
NBC25-21AA	.807-.827
NBC25-21.5AA	.827-.846
NBC25-22AA	.846-.866
NBC25-22.5AA	.866-.886
NBC25-23AA	.886-.906
NBC25-23.5AA	.906-.925
NBC25-24AA	.925-.945
NBC25-24.5AA	.945-.964
NBC25-25AA	.964-.984
NBC25-25.4AA	.980-1.000

ØA=1.40 (35.5mm) B=2.05 (52mm)

- Below collets not included in NEW BABY COLLET SETS; see pg. 363 for more information on collet sets
  NBC8-3.175AA, 5.25AA, 5.75AA
  NBC10-3.175AA, 3.25AA, 3.75AA, 4.25AA, 4.75AA, 5.25AA, 5.75AA
  NBC13-3.175AA, 3.25AA, 3.75AA, 4.25AA, 4.75AA, 5.25AA, 5.75AA
  NBC16-3.175AA, 3.25AA, 3.75AA, 4.25AA, 4.75AA, 5.25AA, 5.75AA
  NBC20-3.175AA, 3.25AA, 3.75AA, 4.25AA, 4.75AA, 5.25AA, 5.75AA

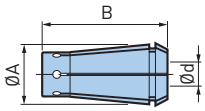
CAUTION

Collapsibility is .010 (.25mm) for NBC6 and .020 (.5mm) for NBC8-NBC20. For best performance, cutting tool shanks should be cylindrical without flats and be as long as the clamping section of the collet bore.

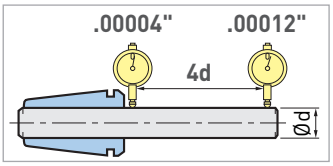
NEW BABY END MILL COLLET

HIGH PRECISION

The NEW BABY COLLET is world renowned for its unmatched accuracy and precision.
It offers runout accuracy of .00004" (.001mm) T.I.R. at the collet nose.



GUARANTEED MAX RUNOUT



All BIG Collets are AA Grade and inspected twice for accuracy

MEGA 6N/NBS6

Catalog Number	Clamping Range Ød
NBC6-1/8EAA	.125
NBC6-3/16EAA	.187
NBC6-3EAA	3.0mm
NBC6-4EAA	4.0mm
NBC6-5EAA	5.0mm
NBC6-6EAA	6.0mm

ØA=.36 (9.2mm) B=.67 (17mm)

MEGA 8N/NBS8

Catalog Number	Clamping Range Ød
NBC8-1/8EAA	.125
NBC8-3/16EAA	.187
NBC8-1/4EAA	.250
NBC8-3EAA	3.0mm
NBC8-4EAA	4.0mm
NBC8-5EAA	5.0mm
NBC8-6EAA	6.0mm
NBC8-8EAA	8.0mm

ØA=.47 (12mm) B=.79 (20mm)

MEGA 10N/NBS10

Catalog Number	Clamping Range Ød
NBC10-1/8EAA	.125
NBC10-3/16EAA	.187
NBC10-1/4EAA	.250
NBC10-3/8EAA	.375
NBC10-3EAA	3.0mm
NBC10-4EAA	4.0mm
NBC10-5EAA	5.0mm
NBC10-6EAA	6.0mm
NBC10-8EAA	8.0mm
NBC10-10EAA	10.0mm

ØA=.63 (16mm) B= 1.26 (32mm)

MEGA 13N/NBS13

Catalog Number	Clamping Range Ød
NBC13-1/8EAA	.125
NBC13-3/16EAA	.187
NBC13-1/4EAA	.250
NBC13-3/8EAA	.375
NBC13-1/2EAA	.500
NBC13-3EAA	3.0mm
NBC13-4EAA	4.0mm
NBC13-5EAA	5.0mm
NBC13-6EAA	6.0mm
NBC13-8EAA	8.0mm
NBC13-10EAA	10.0mm
NBC13-12EAA	12.0mm

ØA=.79 (20mm) B=1.50 (38mm)

MEGA 16N/NBS16

Catalog Number	Clamping Range Ød
NBC16-1/8EAA	.125
NBC16-3/16EAA	.187
NBC16-1/4EAA	.250
NBC16-3/8EAA	.375
NBC16-1/2EAA	.500
NBC16-5/8EAA	.625
NBC16-3EAA	3.0mm
NBC16-4EAA	4.0mm
NBC16-5EAA	5.0mm
NBC16-6EAA	6.0mm
NBC16-8EAA	8.0mm
NBC16-10EAA	10.0mm
NBC16-12EAA	12.0mm
NBC16-14EAA	14.0mm
NBC16-16EAA	16.0mm

ØA=.98 (25mm) B=1.65 (42mm)

MEGA 20N/NBS20

Catalog Number	Clamping Range Ød
NBC20-1/8EAA	.125
NBC20-3/16EAA	.187
NBC20-1/4EAA	.250
NBC20-3/8EAA	.375
NBC20-1/2EAA	.500
NBC20-5/8EAA	.625
NBC20-3/4EAA	.750
NBC20-3EAA	3.0mm
NBC20-4EAA	4.0mm
NBC20-5EAA	5.0mm
NBC20-6EAA	6.0mm
NBC20-8EAA	8.0mm
NBC20-10EAA	10.0mm
NBC20-12EAA	12.0mm
NBC20-14EAA	14.0mm
NBC20-16EAA	16.0mm
NBC20-20EAA	20.0mm

ØA=1.10 (28mm) B=1.77 (45mm)

CAUTION

This collet is not compatible with Profit Maker Tools.
The tolerance of the cutting tool shank must be within h7.

COLLET SET

For NEW BABY

The NEW BABY COLLET SET contains all the required collets to cover entire clamping range.

Provided with a Polypropylene Case

Catalog Number	Capacity	Number of Collet	Case Size (LxWxH)	Corresponding Chuck Model
SNBC6AA	.010-.236	22	7.87 x 6.69 x 1.97 (200 x 170 x 50)	MEGA6N / NBS6
SNBC8AA	.020-.315	20		MEGA8N / NBS8
SNBC10AA	.059-.394	20		MEGA10N / NBS10
SNBC13AA	.098-.512	21	9.65 x 8.27 x 2.36 (245 x 210 x 60)	MEGA13N / NBS13
SNBC16AA	.098-.630	27	10.83 x 9.05 x 2.56 (275 x 230 x 65)	MEGA16N / NBS16
SNBC20AA	.098-.787	35	12.20 x 10.24 x 2.95 (310 x 260 x 75)	MEGA20N / NBS20
SNBC25AA	.610-.984	19		MEGA25N

- Below collets not included in NEW BABY COLLET SETS
  NBC8-3.175AA, 5.25AA, 5.75AA
  NBC10-3.175AA, 3.25AA, 3.75AA, 4.25AA, 4.75AA, 5.25AA, 5.75AA
  NBC13-3.175AA, 3.25AA, 3.75AA, 4.25AA, 4.75AA, 5.25AA, 5.75AA
  NBC16-3.175AA, 3.25AA, 3.75AA, 4.25AA, 4.75AA, 5.25AA, 5.75AA
  NBC20-3.175AA, 3.25AA, 3.75AA, 4.25AA, 4.75AA, 5.25AA, 5.75AA
- Provided in an exclusive storage box

COLLET CASE

For NEW BABY

Exclusive case to protect and maintain the high precision collets.

Provided with a Polypropylene Case

Catalog Number	Number of Holes	Case Size (LxWxH)	Corresponding Chuck Model
NBB6	60	7.87 x 6.69 x 1.97 (200 x 170 x 50)	NBC6 / FONBC6
NBB8	50		NBC8 / FONBC8
NBB10	40		NBC10 / FONBC10
NBB13	35	9.65 x 8.27 x 2.36 (245 x 210 x 60)	NBC13 / FONBC13
NBB16	35	10.83 x 9.05 x 2.56 (275 x 230 x 65)	NBC16 / FONBC16
NBB20	45	12.20 x 10.24 x 2.95 (310 x 260 x 75)	NBC20 / FONBC20
NBB25	28		NBC25/FONBC25

- The NEW BABY COLLET CASE cannot be used for End Mill type

FONBC COOLANT COLLET

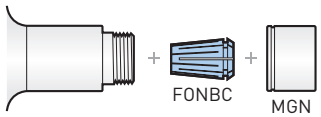
CLAMPING DIAMETER: Ø.114"-1.000"

For MEGA NEW BABY CHUCK & NEW BABY CHUCK
An ideal collet for through-tool use with tools with oil holes such as oil hole drills.

MAX COOLANT PRESSURE **1,000** PSI

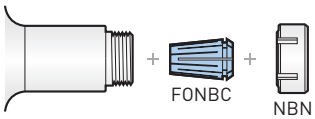
FOR TOOLS WITH OIL HOLES

FOR MEGA NEW BABY CHUCK

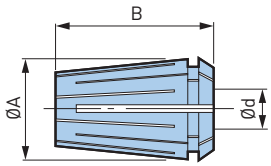


Use with the standard accessory MGN nut.

FOR NEW BABY CHUCK



Use with the standard accessory NBN nut.



MEGA 6N/NBS6

Catalog Number	Clamping Size Ød
FONBC6-3AA	.118❖
FONBC6-3.25AA	.124-.130
FONBC6-3.5AA	.134-.138
FONBC6-3.75AA	.144-.148
FONBC6-4AA	.154-.157
FONBC6-4.25AA	.163-.167
FONBC6-4.5AA	.173-.177
FONBC6-4.75AA	.183-.187
FONBC6-5AA	.193-.197
FONBC6-5.25AA	.203-.207
FONBC6-5.5AA	.213-.217
FONBC6-5.75AA	.222-.226
FONBC6-6AA	.232-.236

ØA=.36 (9.5mm) B=.55 (14mm)
❖ No collapsibility

MEGA 8N/NBS8

Catalog Number	Clamping Size Ød
FONBC8-3AA	.114-.118
FONBC8-3.5AA	.134-.138
FONBC8-4AA	.154-.157
FONBC8-4.5AA	.173-.177
FONBC8-5AA	.193-.197
FONBC8-5.5AA	.213-.217
FONBC8-6AA	.232-.236
FONBC8-6.5AA	.250-.256
FONBC8-7AA	.271-.276
FONBC8-7.5AA	.291-.295
FONBC8-8AA	.311-.315

ØA=.49 (12.5mm) B=.71 (18mm)

MEGA 10N/NBS10

Catalog Number	Clamping Size Ød
FONBC10-3AA	.114-.118
FONBC10-3.5AA	.134-.138
FONBC10-4AA	.154-.157
FONBC10-4.5AA	.173-.177
FONBC10-5AA	.193-.197
FONBC10-5.5AA	.213-.217
FONBC10-6AA	.232-.236
FONBC10-6.5AA	.250-.256
FONBC10-7AA	.271-.276
FONBC10-7.5AA	.291-.295
FONBC10-8AA	.311-.315
FONBC10-8.5AA	.331-.335
FONBC10-9AA	.350-.354
FONBC10-9.5AA	.370-.375
FONBC10-10AA	.390-.394

ØA=.65 (16.5mm) B=1.06 (27mm)

MEGA 13N/NBS13

Catalog Number	Clamping Size Ød
FONBC13-3AA	.118❖
FONBC13-3.5AA	.134-.138
FONBC13-4AA	.138-.157
FONBC13-4.5AA	.173-.177
FONBC13-5AA	.193-.197
FONBC13-5.5AA	.213-.217
FONBC13-6AA	.232-.236
FONBC13-6.5AA	.250-.256
FONBC13-7AA	.271-.276
FONBC13-7.5AA	.291-.295
FONBC13-8AA	.311-.315
FONBC13-8.5AA	.331-.335
FONBC13-9AA	.350-.354
FONBC13-9.5AA	.370-.375
FONBC13-10AA	.390-.394
FONBC13-10.5AA	.409-.413
FONBC13-11AA	.429-.433
FONBC13-11.5AA	.449-.453
FONBC13-12AA	.468-.472
FONBC13-12.5AA	.488-.492
FONBC13-13AA	.508-.512

ØA=.81 (20.5mm) B=1.22 (31mm)
❖ No collapsibility

MEGA 16N/NBS16

Catalog Number	Clamping Size Ød
FONBC16-5AA	.193-.197
FONBC16-5.5AA	.213-.217
FONBC16-6AA	.232-.236
FONBC16-6.5AA	.250-.256
FONBC16-7AA	.272-.276
FONBC16-7.5AA	.291-.295
FONBC16-8AA	.311-.315
FONBC16-8.5AA	.331-.335
FONBC16-9AA	.350-.354
FONBC16-9.5AA	.371-.375
FONBC16-10AA	.390-.394
FONBC16-10.5AA	.409-.413
FONBC16-11AA	.429-.433
FONBC16-11.5AA	.449-.453
FONBC16-12AA	.468-.472
FONBC16-12.5AA	.488-.492
FONBC16-13AA	.508-.512
FONBC16-13.5AA	.527-.531
FONBC16-14AA	.547-.551
FONBC16-14.5AA	.567-.571
FONBC16-15AA	.587-.591
FONBC16-15.5AA	.606-.610
FONBC16-16AA	.625-.630

ØA=1.00 (25.5mm) B=1.38 (35mm)

MEGA 20N/NBS20

Catalog Number	Clamping Size Ød
FONBC20-5AA	.193-.197
FONBC20-5.5AA	.213-.217
FONBC20-6AA	.232-.236
FONBC20-6.5AA	.250-.256
FONBC20-7AA	.272-.276
FONBC20-7.5AA	.291-.295
FONBC20-8AA	.311-.315
FONBC20-8.5AA	.331-.335
FONBC20-9AA	.351-.354
FONBC20-9.5AA	.371-.375
FONBC20-10AA	.390-.394
FONBC20-10.5AA	.409-.413
FONBC20-11AA	.429-.433
FONBC20-11.5AA	.449-.453
FONBC20-12AA	.468-.472
FONBC20-12.5AA	.488-.492
FONBC20-13AA	.508-.512
FONBC20-13.5AA	.527-.531
FONBC20-14AA	.547-.551
FONBC20-14.5AA	.567-.571
FONBC20-15AA	.587-.591
FONBC20-15.5AA	.606-.610
FONBC20-16AA	.625-.630
FONBC20-16.5AA	.646-.650
FONBC20-17AA	.665-.669
FONBC20-17.5AA	.685-.689
FONBC20-18AA	.705-.709
FONBC20-18.5AA	.724-.728
FONBC20-19AA	.746-.750
FONBC20-19.5AA	.764-.768
FONBC20-20AA	.783-.787

ØA=1.12 (28.5) B=1.50 (38mm)

MEGA 25N/NBS25

Catalog Number	Clamping Size Ød
FONBC25-16AA	.625-.630
FONBC25-17AA	.665-.669
FONBC25-18AA	.705-.709
FONBC25-19AA	.746-.750
FONBC25-20AA	.783-.787
FONBC25-21AA	.823-.827
FONBC25-22AA	.862-.866
FONBC25-23AA	.902-.906
FONBC25-24AA	.941-.945
FONBC25-25AA	.980-.984
FONBC25-25.4AA	.996-1.000

ØA=1.40 (35.5mm) B=2.05 (52mm)

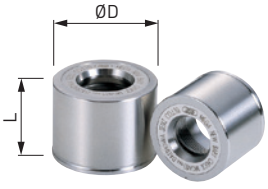
CAUTION

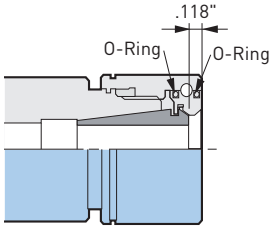
Collapsibility is .004" (.1mm) for FONBC sealed collets. For best performance, cutting tool shanks should be cylindrical without flats and be as long as the clamping section of the collet bore.

MEGA NEW BABY NUT

A high precision nut with excellent sealing properties, preventing the intrusion of coolant.

STANDARD TYPE

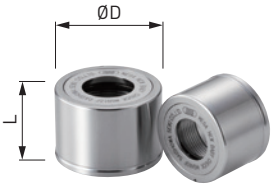


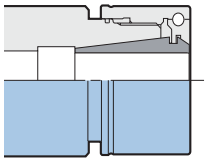


Catalog Number	ØD	L	Body Type
MGN6	.79 (20mm)	.81 (20.5mm)	MEGA6N
MGN8	.98 (25mm)	.91 (23mm)	MEGA8N
MGN10	1.18 (30mm)	.94 (24mm)	MEGA10N
MGN13	1.38 (35mm)	1.06 (27mm)	MEGA13N
MGN16	1.65 (42mm)		MEGA16N
MGN20	1.81 (46mm)		MEGA20N
MGN25	2.36 (60mm)	1.22 (31mm)	MEGA25N

FLAT TYPE

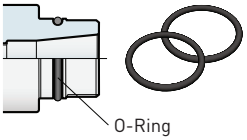
For flood coolant only





Catalog Number	ØD	L	Body Type
MGN6F	.79 (20mm)	.71 (18mm)	MEGA6N
MGN8F	.98 (25mm)	.79 (20mm)	MEGA8N
MGN10F	1.18 (30mm)	.83 (21mm)	MEGA10N
MGN13F	1.38 (35mm)	.94 (24mm)	MEGA13N
MGN16F	1.65 (42mm)	.96 (24.5mm)	MEGA16N
MGN20F	1.81 (46mm)		MEGA20N

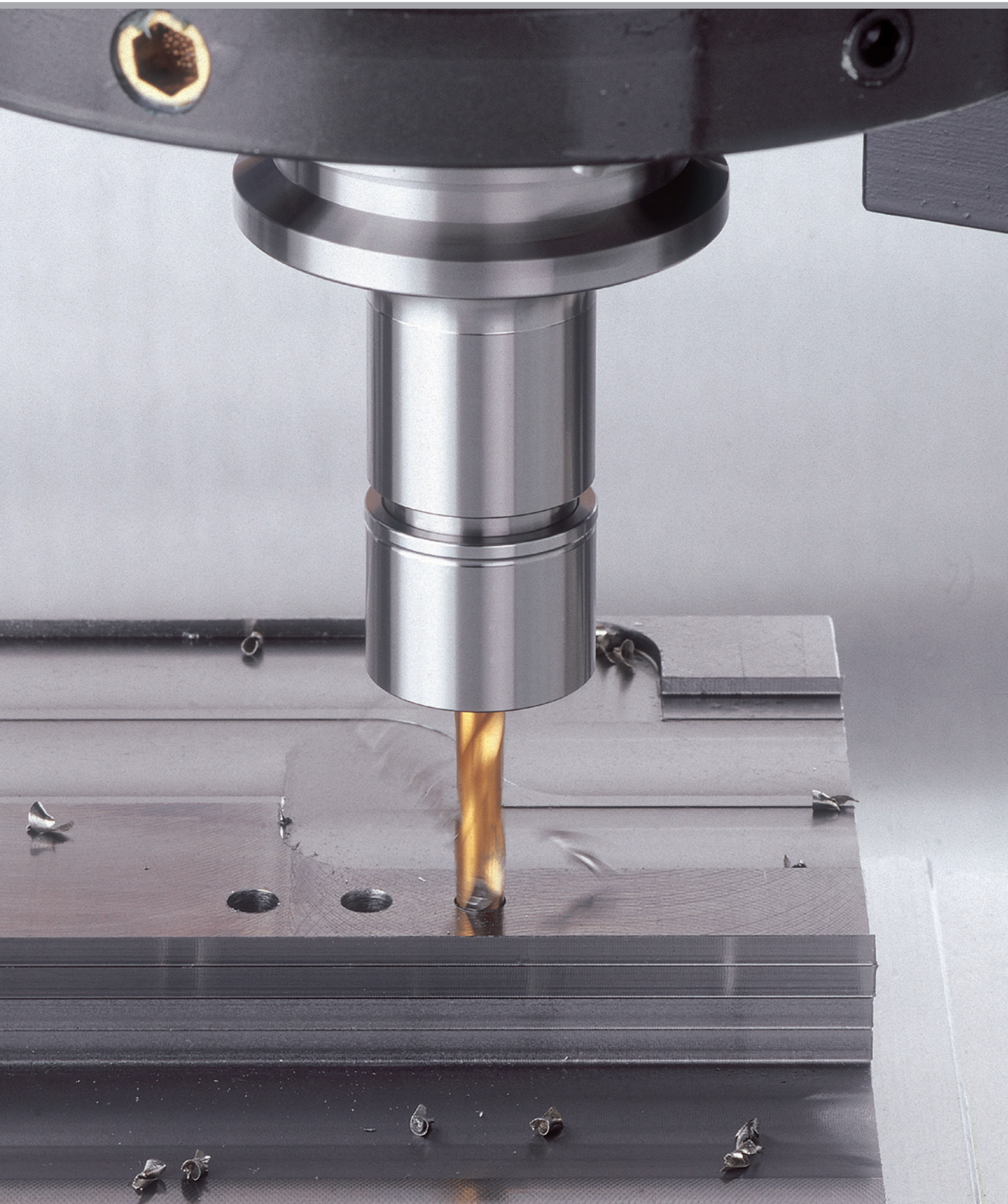
TOOL HOLDER BODY O-RING REPLACEMENT



Catalog Number	Body Type
MG6NOR-2P	MEGA6N
MG8NOR-2P	MEGA8N
MG10NOR-2P	MEGA10N
MG13NOR-2P	MEGA13N
MG16NOR-2P	MEGA16N
MG20NOR-2P	MEGA20N
MG25NOR-2P	MEGA25N

• Sold in packages of 2 pcs.

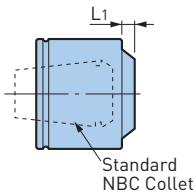
BIG DAISHOWA



MEGA PERFECT SEAL

CLAMPING RANGE: Ø.118"-Ø.787"

Unique design increases sealing performance with higher coolant pressure to create a perfect seal. Standard NBC Collet can be used.



TWO-WAY COOLANT

MAX COOLANT PRESSURE 1,000 PSI

MEGA 6N

Catalog Number	L1	Cutter Shank Ø	Collet Model
MPS6-03035	.091	.118-.138	NBC6-3-3.75
MPS6-0304		.118-.157	NBC6-3-4.25
MPS6-04045		.157-.177	NBC6-4-4.75
MPS6-0405		.157-.197	NBC6-4-5.25
MPS6-05055		.197-.217	NBC6-5-5.75
MPS6-0506		.197-.236	NBC6-5-6

• PS RING is included

MEGA 8N

Catalog Number	L1	Cutter Shank Ø	Collet Model
MPS8-03035	.154	.118-.138	NBC8-3-4
MPS8-0304		.118-.157	NBC8-3-4.5
MPS8-04045		.157-.177	NBC8-4-5
MPS8-0405		.157-.197	NBC8-4-5.5
MPS8-05055		.197-.217	NBC8-5-6
MPS8-0506		.197-.236	NBC8-5-6.5
MPS8-06065	.134	.236-.256	NBC8-6-7
MPS8-0607		.236-.276	NBC8-6-7.5
MPS8-07075		.276-.295	NBC8-7-8
MPS8-0708		.276-.315	NBC8-7-8

• PS RING is included

MEGA 10N

Catalog Number	L1	Cutter Shank Ø	Collet Model
MPS10-03035	.154	.118-.138	NBC10-3-4
MPS10-0304		.118-.157	NBC10-3-4.5
MPS10-04045		.157-.177	NBC10-4-5
MPS10-0405		.157-.197	NBC10-4-5.5
MPS10-05055		.197-.217	NBC10-5-6
MPS10-0506		.197-.236	NBC10-5-6.5
MPS10-06065	.169	.236-.256	NBC10-6-7
MPS10-0607		.236-.276	NBC10-6-7.5
MPS10-07075		.276-.295	NBC10-7- 8
MPS10-0708		.276-.315	NBC10-7-8.5
MPS10-08085	.138	.315-.335	NBC10-8-9
MPS10-0809		.315-.354	NBC10-8-9.5
MPS10-09095		.354-.375	NBC10-9-10
MPS10-0910		.354-.394	NBC10-9-10

• PS RING is included

MEGA 13N

Catalog Number	L1	Cutter Shank Ø	Collet Model
MPS13-03035	.169	.118-.138	NBC13-3-4
MPS13-0304		.118-.157	NBC13-3-4.5
MPS13-04045		.157-.177	NBC13-4-5
MPS13-0405		.157-.197	NBC13-4-5.5
MPS13-05055		.197-.217	NBC13-5-6
MPS13-0506		.197-.236	NBC13-5-6.5
MPS13-06065	.181	.236-.256	NBC13-6-7
MPS13-0607		.236-.276	NBC13-6-7.5
MPS13-07075		.276-.295	NBC13-7-8
MPS13-0708		.276-.315	NBC13-7-8.5
MPS13-08085	.193	.315-.335	NBC13-8-9
MPS13-0809		.315-.354	NBC13-8-9.5
MPS13-09095		.354-.375	NBC13-9-10
MPS13-0910		.354-.394	NBC13-9-10.5
MPS13-10105	.165	.394-.413	NBC13-10-11
MPS13-1011		.394-.433	NBC13-10-11.5
MPS13-11115		.433-.453	NBC13-11-12
MPS13-1112		.433-.472	NBC13-11-12.5
MPS13-12125		.472-.492	NBC13-12-13
MPS13-1213		.472-.512	NBC13-12-13

• PS RING is included

MEGA 16N

Catalog Number	L1	Cutter Shank Ø	Collet Model
MPS16-03035	.157	.118-.138	NBC16-3-4
MPS16-0304		.118-.157	NBC16-3-4.5
MPS16-04045		.157-.177	NBC16-4-5
MPS16-0405		.157-.197	NBC16-4-5.5
MPS16-05055		.197-.217	NBC16-5-6
MPS16-0506		.197-.236	NBC16-5-6.5
MPS16-06065	.169	.236-.256	NBC16-6-7
MPS16-0607		.236-.276	NBC16-6-7.5
MPS16-07075		.276-.295	NBC16-7-8.5
MPS16-0708		.276-.315	NBC16-7-8.5
MPS16-08085	.181	.315-.335	NBC16-8-9
MPS16-0809		.315-.354	NBC16-8-9.5
MPS16-09095		.354-.375	NBC16-9-10
MPS16-0910		.354-.394	NBC16-9-10.5
MPS16-10105	.201	.394-.413	NBC16-10-11
MPS16-1011		.394-.433	NBC16-10-11.5
MPS16-11115		.433-.453	NBC16-11-12
MPS16-1112		.433-.472	NBC16-11-12.5
MPS16-12125		.472-.492	NBC16-12-13
MPS16-1213	.161	.472-.512	NBC16-12-13.5
MPS16-1314		.512-.551	NBC16-13-14.5
MPS16-1415		.551-.591	NBC16-14-15.5
MPS16-1516		.591-.630	NBC16-15-16

• PS RING is included

MEGA 20N

Catalog Number	L1	Cutter Shank Ø	Collet Model
MPS20-03035	.157	.118-.138	NBC20-3-4
MPS20-0304		.118-.157	NBC20-3-4.5
MPS20-04045		.157-.177	NBC20-4-5
MPS20-0405		.157-.197	NBC20-4-5.5
MPS20-05055		.197-.217	NBC20-5-6
MPS20-0506		.197-.236	NBC20-5-6.5
MPS20-06065	.169	.236-.256	NBC20-6-7
MPS20-0607		.236-.276	NBC20-6-7.5
MPS20-07075		.276-.295	NBC20-7-8
MPS20-0708		.276-.315	NBC20-7-8.5
MPS20-08085	.181	.315-.335	NBC20-8-9
MPS20-0809		.315-.354	NBC20-8-9.5
MPS20-09095		.354-.375	NBC20-9-10
MPS20-0910		.354-.394	NBC20-9-10.5
MPS20-10105	.201	.394-.413	NBC20-10-11
MPS20-1011		.394-.433	NBC20-10-11.5
MPS20-11115		.433-.453	NBC20-11-12
MPS20-1112		.433-.472	NBC20-11-12.5
MPS20-12125		.472-.492	NBC20-12-13
MPS20-1213		.472-.512	NBC20-12-13.5
MPS20-1314	.205	.512-.551	NBC20-13-14.5
MPS20-1415		.551-.591	NBC20-14-15.5
MPS20-1516		.591-.630	NBC20-15-16.5
MPS20-1617	.181	.630-.669	NBC20-16-17.5
MPS20-1718		.669-.709	NBC20-17-18.5
MPS20-1819		.709-.750	NBC20-18-19.5
MPS20-1920		.751-.787	NBC20-19-20

• PS RING is included

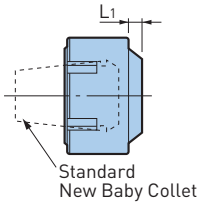
CAUTION

For Jet Through application by removing the PS RING, it is recommended to use the largest clamping range of the nut corresponding to the tool shank diameter.

BABY PERFECT SEAL

CLAMPING RANGE: Ø.118"-.787"

Unique design increases sealing performance with higher coolant pressure to create a perfect seal and reliable coolant supply to the tool tip.



TWO-WAY COOLANT

MAX COOLANT PRESSURE 1,000 PSI

NBS6

Catalog Number	L1	Cutter Shank Ø	Collet Model
BPS6-03035	.091	.118-.138	NBC6-3-3.75
BPS6-0304		.118-.157	NBC6-3-4.25
BPS6-04045		.157-.177	NBC6-4-4.75
BPS6-0405		.157-.197	NBC6-4-5.25
BPS6-05055		.197-.217	NBC6-5-5.75
BPS6-0506		.197-.236	NBC6-5-6

• PS RING is included

NBS8

Catalog Number	L1	Cutter Shank Ø	Collet Model
BPS8-03035	.154	.118-.138	NBC8-3-4
BPS8-0304		.118-.157	NBC8-3-4.5
BPS8-04045		.157-.177	NBC8-4-5
BPS8-0405		.157-.197	NBC8-4-5.5
BPS8-05055		.197-.217	NBC8-5-6
BPS8-0506		.197-.236	NBC8-5-6.5
BPS8-06065	.134	.236-.256	NBC8-6-7
BPS8-0607		.236-.276	NBC8-6-7.5
BPS8-07075		.276-.295	NBC8-7-8
BPS8-0708		.276-.315	NBC8-7-8

• PS RING is included

NBS10

Catalog Number	L1	Cutter Shank Ø	Collet Model
BPS10-03035	.154	.118-.138	NBC10-3-4
BPS10-0304		.118-.157	NBC10-3-4.5
BPS10-04045		.157-.177	NBC10-4-5
BPS10-0405		.157-.197	NBC10-4-5.5
BPS10-05055		.197-.217	NBC10-5-6
BPS10-0506		.197-.236	NBC10-5-6.5
BPS10-06065	.169	.236-.256	NBC10-6-7
BPS10-0607		.236-.276	NBC10-6-7.5
BPS10-07075		.276-.295	NBC10-7-8
BPS10-0708		.276-.315	NBC10-7-8.5
BPS10-08085		.315-.335	NBC10-8-9
BPS10-0809	.138	.315-.354	NBC10-8-9.5
BPS10-09095		.354-.375	NBC10-9-10
BPS10-0910		.354-.394	NBC10-9-10

• PS RING is included

NBS13

Catalog Number	L1	Cutter Shank Ø	Collet Model
BPS13-03035	.169	.118-.138	NBC13-3-4
BPS13-0304		.118-.157	NBC13-3-4.5
BPS13-04045		.157-.177	NBC13-4-5
BPS13-0405		.157-.197	NBC13-4-5.5
BPS13-05055		.197-.217	NBC13-5-6
BPS13-0506		.197-.236	NBC13-5-6.5
BPS13-06065	.181	.236-.256	NBC13-6-7
BPS13-0607		.236-.276	NBC13-6-7.5
BPS13-07075		.276-.295	NBC13-7-8
BPS13-0708		.276-.315	NBC13-7-8.5
BPS13-08085		.315-.335	NBC13-8-9
BPS13-0809		.315-.354	NBC13-8-9.5
BPS13-09095	.193	.354-.375	NBC13-9-10
BPS13-0910		.354-.394	NBC13-9-10.5
BPS13-10105	.165	.394-.413	NBC13-10-11
BPS13-1011		.394-.433	NBC13-10-11.5
BPS13-11115		.433-.453	NBC13-11-12
BPS13-1112		.433-.472	NBC13-11-12.5
BPS13-12125		.472-.492	NBC13-12-13
BPS13-1213		.472-.512	NBC13-12-13

• PS RING is included

NBS16

Catalog Number	L_1	Cutter Shank Ø	Collet Model
BPS16-03035	.157	.118-.138	NBC16-3-4
BPS16-0304		.118-.157	NBC16-3-4.5
BPS16-04045		.157-.177	NBC16-4-5
BPS16-0405		.157-.197	NBC16-4-5.5
BPS16-05055		.197-.217	NBC16-5-6
BPS16-0506		.197-.236	NBC16-5-6.5
BPS16-06065	.169	.236-.256	NBC16-6-7
BPS16-0607		.236-.276	NBC16-6-7.5
BPS16-07075		.276-.295	NBC16-7-8
BPS16-0708		.276-.315	NBC16-7-8.5
BPS16-08085	.181	.315-.335	NBC16-8-9
BPS16-0809		.315-.354	NBC16-8-9.5
BPS16-09095		.354-.375	NBC16-9-10
BPS16-0910		.354-.394	NBC16-9-10.5
BPS16-10105	.201	.394-.413	NBC16-10-11
BPS16-1011		.394-.433	NBC16-10-11.5
BPS16-11115		.433-.453	NBC16-11-12
BPS16-1112		.433-.472	NBC16-11-12.5
BPS16-12125	.161	.472-.492	NBC16-12-13
BPS16-1213		.472-.512	NBC16-12-13.5
BPS16-1314		.512-.551	NBC16-13-14.5
BPS16-1415		.551-.591	NBC16-14-15.5
BPS16-1516		.591-.630	NBC16-15-16

• PS RING is included

NBS20

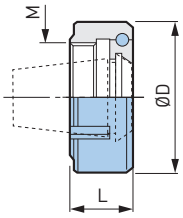
Catalog Number	L_1	Cutter Shank Ø	Collet Model
BPS20-03035	.157	.118-.138	NBC20-3-4
BPS20-0304		.118-.157	NBC20-3-4.5
BPS20-04045		.157-.177	NBC20-4-5
BPS20-0405		.157-.197	NBC20-4-5.5
BPS20-05055		.197-.217	NBC20-5-6
BPS20-0506		.197-.236	NBC20-5-6.5
BPS20-06065	.169	.236-.256	NBC20-6-7
BPS20-0607		.236-.276	NBC20-6-7.5
BPS20-07075		.276-.295	NBC20-7-8
BPS20-0708		.276-.315	NBC20-7-8.5
BPS20-08085	.181	.315-.335	NBC20-8-9
BPS20-0809		.315-.354	NBC20-8-9.5
BPS20-09095		.354-.375	NBC20-9-10
BPS20-0910		.354-.394	NBC20-9-10.5
BPS20-10105	.201	.394-.413	NBC20-10-11
BPS20-1011		.394-.433	NBC20-10-11.5
BPS20-11115		.433-.453	NBC20-11-12
BPS20-1112		.433-.472	NBC20-11-12.5
BPS20-12125		.472-.492	NBC20-12-13
BPS20-1213		.472-.512	NBC20-12-13.5
BPS20-1314	.205	.512-.551	NBC20-13-14.5
BPS20-1415		.551-.591	NBC20-14-15.5
BPS20-1516		.591-.630	NBC20-15-16.5
BPS20-1617	.181	.630-.669	NBC20-16-17.5
BPS20-1718		.669-.709	NBC20-17-18.5
BPS20-1819		.709-.750	NBC20-18-19.5
BPS20-1920		.751-.787	NBC20-19-20

• PS RING is included

CAUTION

For Jet Through application by removing the PS RING, it is recommended to use the largest clamping range of the nut corresponding to the tool shank diameter.

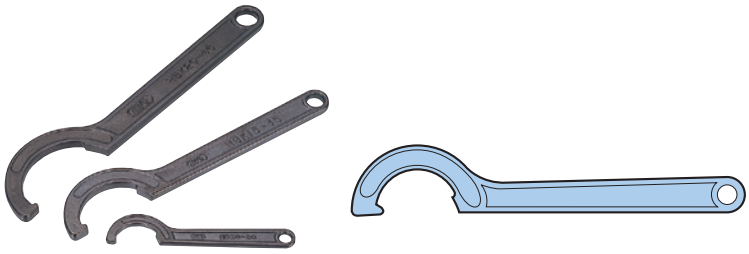
NEW BABY NUT



Catalog Number	ØD	L	M	Body Type
NBN6	.79 (20mm)	.37 (9.5mm)	M12 P1	NBS6
NBN8	.98 (25mm)	.43 (11mm)	M16 P1	NBS8
NBN10	1.18 (30mm)	.49 (12.5mm)	M21 P1	NBS10
NBN13	1.38 (35mm)	.63 (16mm)	M26 P1	NBS13
NBN16	1.65 (42mm)		M32 P1	NBS16
NBN20	1.81 (46mm)		M36 P1	NBS20

SPANNER WRENCH

For NEW BABY CHUCKS & MEGA ER GRIP



Catalog Number	Nut Diameter	NBS Nut	BPS Sealed Nut
NBK6	.79 (20mm)	NBS6	BPS6
NBK8	.98 (25mm)	NBS8	BPS8
NBK10	1.18 (30mm)	NBS10	BPS10
NBK13	1.38 (35mm)	NBS13	BPS13
NBK16	1.65 (42mm)	NBS16	BPS16
NBK20	1.81 (46mm)	NBS20	BPS20

TORQUE WRENCH

For NEW BABY CHUCKS

Wrench with torque limiter.

Catalog Number		Nut Model
NBK6TL	**NBK6TLS❖**	NBN6/BPS6
NBK8TL	**NBK8TLS❖**	NBN8/BPS8
NBK10TL	**NBK10TLS❖**	NBN10/BPS10
NBK13TL	—	NBN13/BPS13
NBK16TL	—	NBN16/BPS16
NBK20TL	—	NBN20/BPS20

❖ For Ø3mm or smaller shank tools use TLS models

COLLET EJECTOR

Easily and quickly insert/remove small sizes of NEW BABY COLLETS from MEGA NUTS & NEW BABY NUTS.

For NEW BABY COLLET

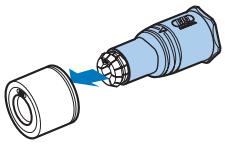
Catalog Number	Nut	Collet
NBC6-CE	MGN6, NBN6	NBC6
NBC8-CE	MGN8, NBN8	NBC8
NBC10-CE	MGN10, NBN10	NBC10
NBC13-CE	MGN13, NBN13	NBC13

For NEW BABY END MILL COLLET

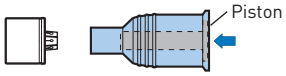
Catalog Number	Nut	Collet
NBC6E-CE	MGN6, NBN6	NBC6E
NBC8E-CE	MGN8, NBN8	NBC8E
NBC10E-CE	MGN10, NBN10	NBC10E
NBC13E-CE	MGN13, NBN13	NBC13E

How to Insert a Collet

1. Insert the collet into the Collet Ejector. Then insert it into the nut.

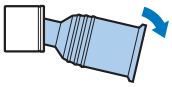


2. Depress the piston and remove the Collet Ejector.

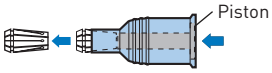


How to Remove a Collet

1. Tilt the Collet Ejector as shown in the picture to remove the collet from the nut.



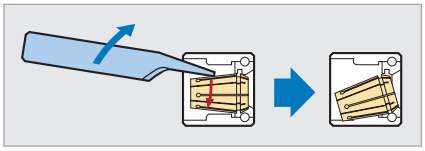
2. Depress the piston and the collet will be removed.



COLLET REMOVER

Eases removal of the collet from the nut. Especially helpful for small collet series (MEGA6N to 13N).

How to Use

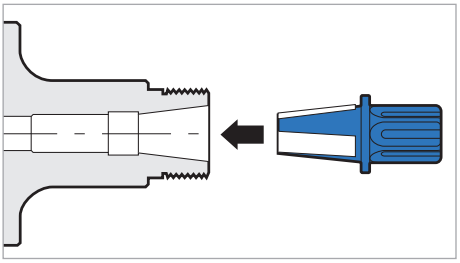


Catalog Number
NBJ

α TAPER CLEANER

For MEGA NEW BABY CHUCKS & NEW BABY CHUCKS

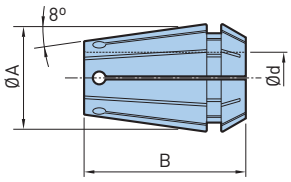
To maintain the accuracy of high precision collet chucks by cleaning the internal collet taper.



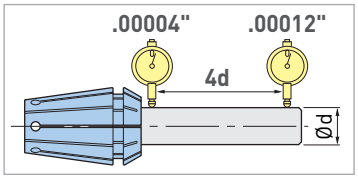
Catalog Number	Chuck Body
SC-NBC6	MEGA6N, NBS6
SC-NBC8	MEGA8N, NBS8
SC-NBC10	MEGA10N, NBS10
SC-NBC13	MEGA13N, NBS13
SC-NBC16	MEGA16N, NBS16
SC-NBC20	MEGA20N, NBS20

ERC COLLET

Each ERC collet is inspected twice (0º and 180º) 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.



GUARANTEED MAX RUNOUT



All BIG Collets are AA Grade and inspected twice for accuracy

MEGA ER11

Catalog Number	Clamping Range Ød
ERC11-3AA	.108-.118
ERC11-3.25AA	.118-.128
ERC11-3.5AA	.128-.138
ERC11-3.75AA	.138-.148
ERC11-4AA	.148-.157
ERC11-4.25AA	.157-.167
ERC11-4.5AA	.167-.177
ERC11-4.75AA	.177-.187
ERC11-5AA	.187-.197
ERC11-5.25AA	.197-.207
ERC11-5.5AA	.207-.217
ERC11-5.75AA	.217-.226
ERC11-6AA	.217-.236

ØA=.43 (11mm) B=.71 (18mm)

MEGA ER16

Catalog Number	Clamping Range Ød
ERC16-2AA	.075-.079
ERC16-2.1AA	.079-.083
ERC16-2.2AA	.083-.087
ERC16-2.3AA	.087-.091
ERC16-2.4AA	.091-.094
ERC16-2.5AA	.094-.098
ERC16-2.6AA	.098-.102
ERC16-2.7AA	.102-.106
ERC16-2.8AA	.106-.110
ERC16-2.9AA	.110-.114
ERC16-3AA	.108-.118
ERC16-3.25AA	.118-.128
ERC16-3.5AA	.128-.138
ERC16-3.75AA	.138-.148
ERC16-4AA	.148-.157
ERC16-4.25AA	.157-.167
ERC16-4.5AA	.167-.177
ERC16-4.75AA	.177-.187
ERC16-5AA	.187-.197
ERC16-5.25AA	.197-.207
ERC16-5.5AA	.207-.217
ERC16-5.75AA	.217-.226
ERC16-6AA	.217-.236
ERC16-6.5AA	.236-.256
ERC16-7AA	.256-.276
ERC16-7.5AA	.276-.295
ERC16-8AA	.295-.315
ERC16-8.5AA	.315-.335
ERC16-9AA	.335-.354
ERC16-9.5AA	.354-.375
ERC16-10AA	.376-.394

ØA=.63 (16mm) B=1.08 (27.5mm)

MEGA ER20

Catalog Number	Clamping Range Ød
ERC20-3AA	.108-.118
ERC20-3.25AA	.118-.128
ERC20-3.5AA	.128-.138
ERC20-3.75AA	.138-.148
ERC20-4AA	.148-.157
ERC20-4.25AA	.157-.167
ERC20-4.5AA	.167-.177
ERC20-4.75AA	.177-.187
ERC20-5AA	.187-.197
ERC20-5.25AA	.197-.207
ERC20-5.5AA	.207-.217
ERC20-5.75AA	.217-.226
ERC20-6AA	.217-.236
ERC20-6.5AA	.236-.256
ERC20-7AA	.256-.276
ERC20-7.5AA	.276-.295
ERC20-8AA	.295-.315
ERC20-8.5AA	.315-.335
ERC20-9AA	.335-.354
ERC20-9.5AA	.354-.375
ERC20-10AA	.376-.394
ERC20-10.5AA	.394-.413
ERC20-11AA	.413-.433
ERC20-11.5AA	.433-.453
ERC20-12AA	.453-.472
ERC20-12.5AA	.472-.492
ERC20-13AA	.492-.512

ØA=.79 (20mm) B=1.24 (31.5mm)

MEGA ER25

Catalog Number	Clamping Range Ød
ERC25-3AA	.108-.118
ERC25-3.25AA	.118-.128
ERC25-3.5AA	.128-.138
ERC25-3.75AA	.138-.148
ERC25-4AA	.148-.157
ERC25-4.25AA	.157-.167
ERC25-4.5AA	.167-.177
ERC25-4.75AA	.177-.187
ERC25-5AA	.187-.197
ERC25-5.25AA	.197-.207
ERC25-5.5AA	.207-.217
ERC25-5.75AA	.217-.226
ERC25-6AA	.217-.236
ERC25-6.5AA	.236-.256
ERC25-7AA	.256-.276
ERC25-7.5AA	.276-.295
ERC25-8AA	.295-.315
ERC25-8.5AA	.315-.335
ERC25-9AA	.335-.354
ERC25-9.5AA	.354-.375
ERC25-10AA	.376-.394
ERC25-10.5AA	.394-.413
ERC25-11AA	.413-.433
ERC25-11.5AA	.433-.453
ERC25-12AA	.453-.472
ERC25-12.5AA	.472-.492
ERC25-13AA	.492-.512
ERC25-13.5AA	.512-.531
ERC25-14AA	.531-.551
ERC25-14.5AA	.551-.571
ERC25-15AA	.571-.591
ERC25-15.5AA	.591-.610
ERC25-16AA	.610-.630

ØA=.98 (25mm) B=1.34 (24mm)

MEGA ER32

Catalog Number	Clamping Range Ød
ERC32-3AA	.108-.118
ERC32-3.25AA	.118-.128
ERC32-3.5AA	.128-.138
ERC32-3.75AA	.138-.148
ERC32-4AA	.148-.157
ERC32-4.25AA	.157-.167
ERC32-4.5AA	.167-.177
ERC32-4.75AA	.177-.187
ERC32-5AA	.187-.197
ERC32-5.25AA	.197-.207
ERC32-5.5AA	.207-.217
ERC32-5.75AA	.217-.226
ERC32-6AA	.217-.236
ERC32-6.5AA	.236-.256
ERC32-7AA	.256-.276
ERC32-7.5AA	.276-.295
ERC32-8AA	.295-.315
ERC32-8.5AA	.315-.335
ERC32-9AA	.335-.354
ERC32-9.5AA	.354-.375
ERC32-10AA	.376-.394
ERC32-10.5AA	.394-.413

Catalog Number	Clamping Range Ød
ERC32-11AA	.413-.433
ERC32-11.5AA	.433-.453
ERC32-12AA	.453-.472
ERC32-12.5AA	.472-.492
ERC32-13AA	.492-.512
ERC32-13.5AA	.512-.531
ERC32-14AA	.531-.551
ERC32-14.5AA	.551-.571
ERC32-15AA	.571-.591
ERC32-15.5AA	.591-.610
ERC32-16AA	.610-.630
ERC32-16.5AA	.630-.650
ERC32-17AA	.650-.670
ERC32-17.5AA	.670-.690
ERC32-18AA	.690-.709
ERC32-18.5AA	.709-.728
ERC32-19AA	.728-.749
ERC32-19.5AA	.750-.768
ERC32-20AA	.768-.787

ØA=1.26 (32mm) B=1.58 (40mm)

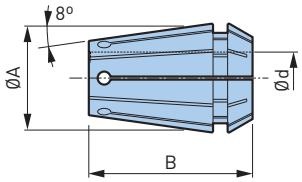
- BIG's ERC collets have a maximum clamping capacity of .020/Ø (.5mm/Ø)
- To obtain the best runout accuracy and rigidity, ERC collets for smaller tools have a reduced clamping range
- For best results, users should avoid clamping tools with shank diameters less than the recommended clamping range

CAUTION

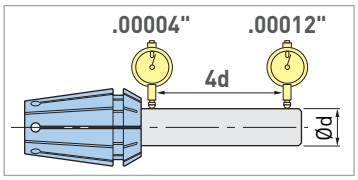
Conventional DIN collets have a clamping range of 1mm/Ø. Never use ERC collets for more than .020/Ø (.5mm/Ø) below nominal size. To maintain the accuracy of the tool assembly, do not use collets and nuts manufactured by another company with the chuck body of BIG's MEGA ER GRIP. We cannot guarantee the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

ERC END MILL COLLET

"Just fit" collet for end mills. Nominal sizes of collets for the most popular end mill shank reduces the unsupported overhang of the collet when clamped into the chuck body. This increases the rigidity of the tool assembly in the horizontal direction which is very important to end milling operations. Available in both metric and inch sizes.



GUARANTEED MAX RUNOUT



All BIG Collets are AA Grade and inspected twice for accuracy

MEGA ER16

Catalog Number	Clamping Range Ød
ERC16-1/8EAA	.125
ERC16-3/16EAA	.188
ERC16-1/4EAA	.250
ERC16-5/16EAA	.312
ERC16-3/8EAA	.375
ERC16-3EAA	3.0mm
ERC16-4EAA	4.0mm
ERC16-5EAA	5.0mm
ERC16-6EAA	6.0mm
ERC16-7EAA	7.0mm
ERC16-8EAA	8.0mm
ERC16-9EAA	9.0mm
ERC16-10EAA	10.0mm

ØA=.63 (16mm) B=1.08 (27.5mm)

MEGA ER20

Catalog Number	Clamping Range Ød
ERC20-1/8EAA	.125
ERC20-3/16EAA	.188
ERC20-1/4EAA	.250
ERC20-5/16EAA	.312
ERC20-3/8EAA	.375
ERC20-7/16EAA	.438
ERC20-1/2EAA	.500
ERC20-3EAA	3.0mm
ERC20-4EAA	4.0mm
ERC20-5EAA	5.0mm
ERC20-6EAA	6.0mm
ERC20-7EAA	7.0mm
ERC20-8EAA	8.0mm
ERC20-9EAA	9.0mm
ERC20-10EAA	10.0mm
ERC20-11EAA	11.0mm
ERC20-12EAA	12.0mm

ØA=.79 (20mm) B=1.24 (31.5mm)

MEGA ER25

Catalog Number	Clamping Range Ød
ERC25-1/8EAA	.125
ERC25-3/16EAA	.188
ERC25-1/4EAA	.250
ERC25-5/16EAA	.312
ERC25-3/8EAA	.375
ERC25-7/16EAA	.438
ERC25-1/2EAA	.500
ERC25-9/16EAA	.563
ERC25-5/8EAA	.625
ERC25-3EAA	3.0mm
ERC25-4EAA	4.0mm
ERC25-5EAA	5.0mm
ERC25-6EAA	6.0mm
ERC25-7EAA	7.0mm
ERC25-8EAA	8.0mm
ERC25-9EAA	9.0mm
ERC25-10EAA	10.0mm
ERC25-11EAA	11.0mm
ERC25-12EAA	12.0mm
ERC25-13EAA	13.0mm
ERC25-14EAA	14.0mm
ERC25-15EAA	15.0mm
ERC25-16EAA	16.0mm

ØA=.98 (25mm) B=1.34 (34mm)

MEGA ER32

Catalog Number	Clamping Range Ød
ERC32-1/8EAA	.125
ERC32-3/16EAA	.188
ERC32-1/4EAA	.250
ERC32-5/16EAA	.312
ERC32-3/8EAA	.375
ERC32-7/16EAA	.438
ERC32-1/2EAA	.500
ERC32-9/16EAA	.563
ERC32-5/8EAA	.625
ERC32-3/4EAA	.750
ERC32-3EAA	3.0mm
ERC32-4EAA	4.0mm
ERC32-5EAA	5.0mm
ERC32-6EAA	6.0mm
ERC32-7EAA	7.0mm
ERC32-8EAA	8.0mm
ERC32-9EAA	9.0mm
ERC32-10EAA	10.0mm
ERC32-11EAA	11.0mm
ERC32-12EAA	12.0mm
ERC32-13EAA	13.0mm
ERC32-14EAA	14.0mm
ERC32-15EAA	15.0mm
ERC32-16EAA	16.0mm
ERC32-18EAA	18.0mm
ERC32-20EAA	20.0mm

ØA=1.26 (32mm) B=1.58 (40mm)

A Variety of Nuts are Available For MEGA ER CHUCKS

MEGA ER PERFECT SEAL

MEGA WRENCH

Capable of sealing high pressure coolant up to 1000 PSI. For applications with coolant supplied through the tools. Mega Wrench is used for tightening.

MEGA ER NUT

MEGA WRENCH

High accuracy and clamping force are provided with thrust ball bearings. Ideal for solid carbide drills and reamers. Slot-free outer diameter increases rigidity of the nut itself. The one-way clutch of the Mega Wrench tightens the nut securely and easily by ratchet function.

MEGA ER SOLID NUT

MEGA WRENCH

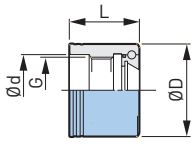
High performance solid nut with surface treatment for friction reduction. Slot-free outer diameter increases rigidity of the nut itself. The one-way clutch of the Mega Wrench tightens the nut securely and easily by ratchet function.

ER NUT

SPANNER WRENCH

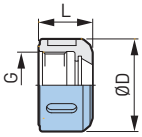
Basic nut with surface treatment for friction reduction. Spanner wrench is used for tightening.

MEGA ER NUT



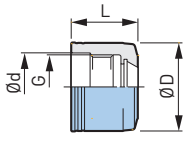
Catalog Number	ØD	L	G	Ød	Wrench Type	Body Type
MERN16	1.181	.984	M22×P1.5	**.906**	MGR30L	MEGAER16
MERN20	1.378	1.043	M25×P1.5	**1.063**	MGR35L	MEGAER20
MERN25	1.654	1.083	M32×P1.5	**1.319**	MGR42L	MEGAER25
MERN32	1.969	1.189	M40×P1.5	**1.614**	MGR50L	MEGAER32

ER NUT



Catalog Number	ØD	L	G	Spanner Type	Body Type
ERN11	.748	.484	M14×P0.75	NBK6	ER11
ERN16	1.181	.748	M22×P1.5	NBK10	ER16
ERN20	1.378	.807	M25×P1.5	NBK13	ER20
ERN25	1.654	.846	M32×P1.5	NBK16	ER25
ERN32	1.969	.945	M40×P1.5	FK45-50L	ER32

MEGA ER SOLID NUT



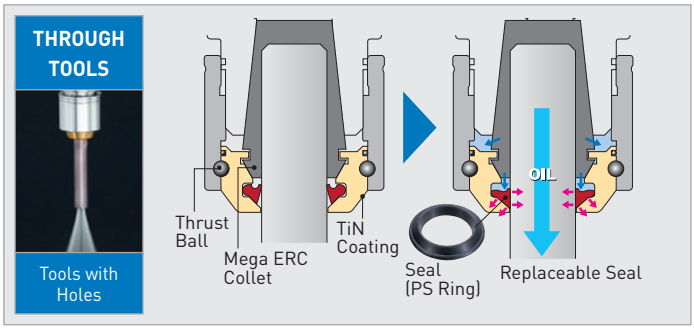
Catalog Number	ØD	L	G	Ød	Wrench Type	Body Type
MER16SN	1.181	.984	M22×P1.5	**.906**	MGR30L	MEGAER16
MER20SN	1.378	1.043	M25×P1.5	**1.063**	MGR35L	MEGAER20
MER25SN	1.654	1.083	M32×P1.5	**1.319**	MGR42L	MEGAER25
MER32SN	1.969	1.189	M40×P1.5	**1.614**	MGR50L	MEGAER32

MEGA ER PERFECT SEAL

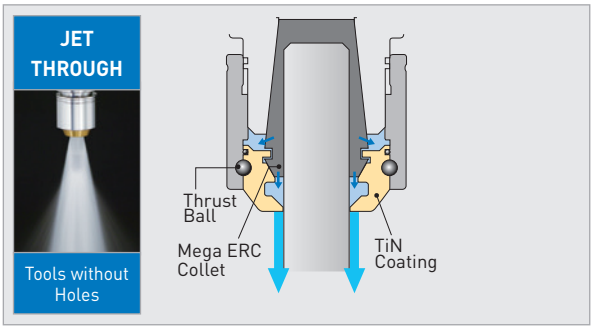
Sealed collet nut for coolant-through tools.

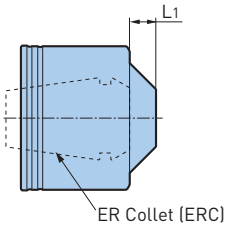
MAX COOLANT PRESSURE 1,000 PSI

WITH PS RING



WITHOUT PS RING





MEGA ER16

Catalog Number	L1	Cutter Shank Ø	Collet Model (Inch)	Collet Model (Metric)
MERPS16-030035	.252	.118-.138	ERC16-1/8E	ERC16-3-3.75
MERPS16-035040		.138-.157	—	ERC16-3.5-4.25
MERPS16-040045		.157-.177	—	ERC16-4-4.75
MERPS16-045050		.177-.197	ERC16-3/16E	ERC16-4.5-5.25
MERPS16-050055		.197-.217	—	ERC16-5-6
MERPS16-055060		.217-.236	—	ERC16-5.5-6.5
MERPS16-060065	.268	.236-.256	ERC16-1/4E	ERC16-6-7
MERPS16-065070		.256-.276	—	ERC16-6.5-7.5
MERPS16-070075		.276-.295	—	ERC16-7-8
MERPS16-075080		.295-.315	ERC16-5/16E	ERC16-7.5-8.5
MERPS16-080085	.240	.315-.335	—	ERC16-8-9
MERPS16-085090		.335-.354	—	ERC16-8.5-9.5
MERPS16-090095		.354-.375	ERC16-3/8E	ERC16-9-10
MERPS16-095100		.374-.394	—	ERC16-9.5-10

MEGA ER20

Catalog Number	L1	Cutter Shank Ø	Collet Model (Inch)	Collet Model (Metric)
MERPS20-030035	.252	.118-.138	ERC20-1/8E	ERC20-3-3.75
MERPS20-035040		.138-.157	—	ERC20-3.5-4.25
MERPS20-040045		.157-.177	—	ERC20-4-4.75
MERPS20-045050		.177-.197	ERC20-3/16E	ERC20-4.5-5.25
MERPS20-050055		.197-.217	—	ERC20-5-6
MERPS20-055060		.217-.236	—	ERC20-5.5-6.5
MERPS20-060065	.268	.236-.256	ERC20-1/4E	ERC20-6-7
MERPS20-065070		.256-.276	—	ERC20-6.5-7.5
MERPS20-070075		.276-.295	—	ERC20-7-8
MERPS20-075080		.295-.315	ERC20-5/16E	ERC20-7.5-8.5
MERPS20-080085	.272	.315-.335	—	ERC20-8-9
MERPS20-085090		.335-.354	—	ERC20-8.5-9.5
MERPS20-090095		.354-.375	ERC20-3/8E	ERC20-9-10
MERPS20-095100		.374-.394	—	ERC20-9.5-10.5
MERPS20-100105	.260	.394-.413	—	ERC20-10-11
MERPS20-105110		.413-.433	—	ERC20-10.5-11.5
MERPS20-110115		.433-.453	ERC20-7/16E	ERC20-11-12
MERPS20-115120		.453-.472	—	ERC20-11.5-12.5
MERPS20-120125		.472-.492	—	ERC20-12-13
MERPS20-125130		.492-.512	ERC20-1/2E	ERC20-12.5-13

MEGA ER25

Catalog Number	L1	Cutter Shank Ø	Collet Model (Inch)	Collet Model (Metric)
MERPS25-030035	.248	.118-.138	ERC25-1/8E	ERC25-3-3.75
MERPS25-035040		.138-.157	—	ERC25-3.5-4.25
MERPS25-040045		.157-.177	—	ERC25-4-4.75
MERPS25-045050		.177-.197	ERC25-3/16E	ERC25-3-4.5-5.25
MERPS25-050055		.197-.217	—	ERC25-5-6
MERPS25-055060		.217-.236	—	ERC25-5.5-6.5
MERPS25-060065	.264	.236-.256	ERC25-1/4E	ERC25-6-7
MERPS25-065070		.256-.276	—	ERC25-6.5-7.5
MERPS25-070075		.276-.295	—	ERC25-7-8
MERPS25-075080		.295-.315	ERC25-5/16E	ERC25-7.5-8.5
MERPS25-080085	.268	.315-.335	—	ERC25-8-9
MERPS25-085090		.335-.354	—	ERC25-8.5-9.5
MERPS25-090095		.354-.375	ERC25-3/8E	ERC25-9-10
MERPS25-095100		.374-.394	—	ERC25-9.5-10.5
MERPS25-100105	.287	.394-.413	—	ERC25-10-11
MERPS25-105110		.413-.433	—	ERC25-10.5-11.5
MERPS25-110115		.433-.453	ERC25-7/16E	ERC25-11-12
MERPS25-115120		.453-.472	—	ERC25-11.5-12.5
MERPS25-120125		.472-.492	—	ERC25-12-13
MERPS25-125130		.492-.512	ERC25-1/2E	ERC25-12.5-13
MERPS25-130140	.260	.512-.551	—	ERC25-13-14.5
MERPS25-140150		.551-.591	ERC25-9/16E	ERC25-14-15.5
MERPS25-150160		.591-.630	ERC25-5/8E	ERC25-15-16

MEGA ER32

Catalog Number	L1	Cutter Shank Ø	Collet Model (Inch)	Collet Model (Metric)
MERPS32-030035	.244	.118-.138	ERC32-1/8E	ERC32-3-3.75
MERPS32-035040		.138-.157	—	ERC32-3.5-4.25
MERPS32-040045		.157-.177	—	ERC32-4-4.75
MERPS32-045050		.177-.197	ERC32-3/16E	ERC32-4.5-5.25
MERPS32-050055		.197-.217	—	ERC32-5-6
MERPS32-055060		.217-.236	—	ERC32-5.5-6.5
MERPS32-060065	.260	.236-.256	ERC32-1/4E	ERC32-6-7
MERPS32-065070		.256-.276	—	ERC32-6.5-7.5
MERPS32-070075		.276-.295	—	ERC32-7-8
MERPS32-075080		.295-.315	ERC32-5/16E	ERC32-7.5-8.5
MERPS32-080085	.264	.315-.335	—	ERC32-8-9
MERPS32-085090		.335-.354	—	ERC32-8.5-9.5
MERPS32-090095		.354-.375	ERC32-3/8E	ERC32-9-10
MERPS32-095100		.374-.394	—	ERC32-9.5-10.5
MERPS32-100105	.283	.394-.413	—	ERC32-10-11
MERPS32-105110		.413-.433	—	ERC32-10.5-11.5
MERPS32-110115		.433-.453	ERC32-7/16E	ERC32-11-12
MERPS32-115120		.453-.472	—	ERC32-11.5-12.5
MERPS32-120125		.472-.492	—	ERC32-12-13
MERPS32-125130		.492-.512	ERC32-1/2E	ERC32-12.5-13.5
MERPS32-130140	.287	.512-.551	—	ERC32-13-14.5
MERPS32-140150		.551-.591	ERC32-9/16E	ERC32-14-15.5
MERPS32-150160		.591-.630	ERC32-5/8E	ERC32-15-16.5
MERPS32-160170	.307	.630-.669	—	ERC32-16-17.5
MERPS32-170180		.669-.709	—	ERC32-17-18.5
MERPS32-180190		.709-.748	—	ERC32-18-19.5
MERPS32-190200		.748-.787	ERC32-3/4E	ERC32-19-20

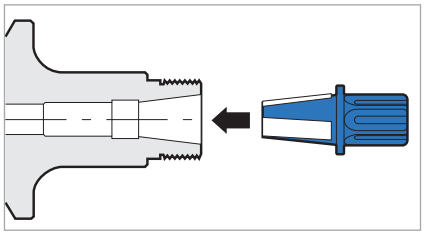
• PS RING is included

ACCESSORIES

α TAPER CLEANER

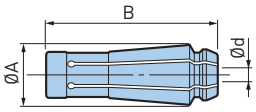
For ER COLLET CHUCKS

To maintain the accuracy of high precision collet chucks by cleaning the internal collet taper.

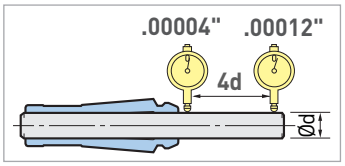


Catalog Number	Chuck Body
SC-MER11	ER11
SC-MER16	ER16
SC-MER20	ER20
SC-MER25	ER25
SC-MER32	ER32

MEGA E COLLET



GUARANTEED MAX RUNOUT



1µm AT COLLET NOSE
3µm at end of test bar

All BIG Collets are AA Grade and inspected twice for accuracy

MEGA 6E

Catalog Number	Clamping Range Ød
MEC6-1/8AA	.125
MEC6-3/16AA	.187
MEC6-1/4AA	.250
MEC6-3AA	3.0mm
MEC6-4AA	4.0mm
MEC6-5AA	5.0mm
MEC6-6AA	6.0mm

ØA=.44 (11.3mm) B=1.37 (34.9mm)

MEGA 8E

Catalog Number	Clamping Range Ød
MEC8-1/8AA	.125
MEC8-3/16AA	.187
MEC8-1/4AA	.250
MEC8-3AA	3.0mm
MEC8-4AA	4.0mm
MEC8-5AA	5.0mm
MEC8-6AA	6.0mm
MEC8-7AA	7.0mm
MEC8-8AA	8.0mm

ØA=.56 (14.1mm) B=1.55 (39.4mm)

MEGA 10E

Catalog Number	Clamping Range Ød
MEC10-1/8AA	.125
MEC10-3/16AA	.187
MEC10-1/4AA	.250
MEC10-5/16AA	.312
MEC10-3/8AA	.375
MEC10-3AA	3.0mm
MEC10-4AA	4.0mm
MEC10-5AA	5.0mm
MEC10-6AA	6.0mm
MEC10-7AA	7.0mm
MEC10-8AA	8.0mm
MEC10-9AA	9.0mm
MEC10-10AA	10.0mm

ØA=.67 (17.1mm) B=1.80 (45.7mm)

MEGA 13E

Catalog Number	Clamping Range Ød
MEC13-1/8AA	.125
MEC13-3/16AA	.187
MEC13-1/4AA	.250
MEC13-5/16AA	.312
MEC13-3/8AA	.375
MEC13-7/16AA	.437
MEC13-1/2AA	.500
MEC13-3AA	3.0mm
MEC13-4AA	4.0mm
MEC13-5AA	5.0mm
MEC13-6AA	6.0mm
MEC13-7AA	7.0mm
MEC13-8AA	8.0mm
MEC13-9AA	9.0mm
MEC13-10AA	10.0mm
MEC13-12AA	12.0mm

ØA=.81 (20.6mm) B=1.89 (47.9mm)

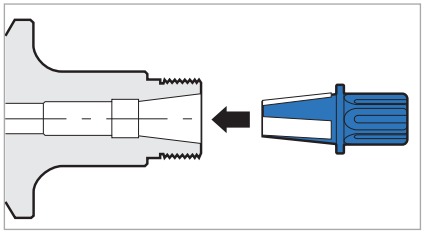
CAUTION

Use only a cutting tool shank with exactly the same diameter as collet bore diameter. The tolerance of the cutting tool shank must be within h7.

α TAPER CLEANER

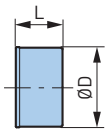
For MEGA E CHUCKS

To maintain the accuracy of high precision collet chucks by cleaning the internal collet taper.



Catalog Number	Chuck Body
SC-MEC6	MEGA6E
SC-MEC8	MEGA8E
SC-MEC10	MEGA10E
SC-MEC13	MEGA13E

MEGA E NUT

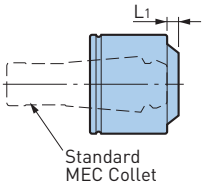


Catalog Number	ØD	L	Body Type
MEN6	.98 (25mm)	.81 (20.5mm)	MEGA6E
MEN8	1.18 (30mm)	.87 (22mm)	MEGA8E
MEN10	1.38 (35mm)	.89 (22.5mm)	MEGA10E
MEN13	1.65 (42mm)	.96 (24.5mm)	MEGA13E

MEGA E PERFECT SEAL

CLAMPING RANGE: Ø.118"-.500"

Unique design increases sealing performance with higher coolant pressure to create a perfect seal.



TWO-WAY COOLANT

MAX COOLANT PRESSURE 1,000 PSI

MEGA6E

Catalog Number	L1	Cutter Shank Ø	Collet Model
EPS6-03	.220	.118	MEC6-3
EPS6-04	.205	4mm (1/8)	MEC6-4
EPS6-05		5mm (3/16)	MEC6-5
EPS6-06		.236	MEC6-6

• PS RING is included

MEGA8E

Catalog Number	L1	Cutter Shank Ø	Collet Model
EPS8-03	.252	.118	MEC8-3
EPS8-04	.236	4mm (1/8)	MEC8-4
EPS8-05		5mm (3/16)	MEC8-5
EPS8-06		.236	MEC8-6
EPS8-07	.220	7mm (1/4)	MEC8-7
EPS8-08		.315	MEC8-8

• PS RING is included

MEGA10E

Catalog Number	L1	Cutter Shank Ø	Collet Model
EPS10-03	.252	.118	MEC10-3
EPS10-04	.236	4mm (1/8)	MEC10-4
EPS10-05		5mm (3/16)	MEC10-5
EPS10-06		.236	MEC10-6
EPS10-07	.248	7mm (1/4)	MEC10-7
EPS10-08		8mm (5/16)	MEC10-8
EPS10-09	.224	.354	MEC10-9
EPS10-10		10mm (3/8)	MEC10-10

• PS RING is included

MEGA13E

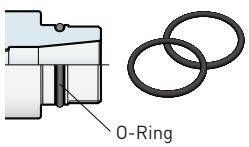
Catalog Number	L1	Cutter Shank Ø	Collet Model
EPS13-03	.252	.118	MEC13-3
EPS13-04	.236	4mm (1/8)	MEC13-4
EPS13-05		5mm (3/16)	MEC13-5
EPS13-06		.236	MEC13-6
EPS13-07	.248	7mm (1/4)	MEC13-7
EPS13-08		8mm (5/16)	MEC13-8
EPS13-09	.256	.354	MEC13-9
EPS13-10		10mm (3/8)	MEC13-10
EPS13-11	.244	.433	MEC13-11
EPS13-12		12mm (7/16)	MEC13-12
EPS13-13		13mm (1/2)	MEC13-1/2

• PS RING is included

CAUTION

For Jet Through application by removing the PS RING, it is recommended to use the largest clamping range of the nut corresponding to the tool shank diameter.

TOOL HOLDER BODY O-RING REPLACEMENT



Catalog Number	Body Type
MG6EOR	MEGA6E
MG8EOR	MEGA8E

Catalog Number	Body Type
MG10EOR	MEGA10E
MG13EOR	MEGA13E

• Sold in packages of 2 pcs.

PS RING Perfect Seal replacement seals

For MEGA PERFECT SEAL

Catalog Number	MPS Model
PS-0304	MPS□-03035, 0304
PS-0405	MPS□-04045, 0405
PS-0506	MPS□-05055, 0506
PS-0607	MPS□-06065, 0607
PS-0708	MPS□-07075, 0708

Catalog Number	MPS Model
PS-0809	MPS□-08085, 0809
PS-0910	MPS□-09095, 0910
PS-1011	MPS□-10105, 1011
PS-1112	MPS□-11115, 1112
PS-1213	MPS□-12125, 1213

Catalog Number	MPS Model
PS-1314	MPS□-1314
PS-1415	MPS□-1415
PS-1516	MPS□-1516
PS-1617	MPS□-1617
PS-1718	MPS□-1718
PS-1819	MPS□-1819
PS-1920	MPS□-1920

• 1 package contains 5 pcs. (1 size)

For MEGA ER PERFECT SEAL

Catalog Number	MERPS Model
PS-0304	MERPS□-030035, 035040
PS-0405	MERPS□-040045, 045050
PS-0506	MERPS□-050055, 055060
PS-0607	MERPS□-060065, 065070
PS-0708	MERPS□-070075, 075080

Catalog Number	MERPS Model
PS-0809	MERPS□-080085, 085090
PS-0910	MERPS□-090095, 095100
PS-1011	MERPS□-100105, 105110
PS-1112	MERPS□-110115, 115120
PS-1213	MERPS□-120125, 125130

Catalog Number	MERPS Model
PS-1314	MERPS□-130140
PS-1415	MERPS□-140150
PS-1516	MERPS□-150160
PS-1617	MERPS□-160170
PS-1718	MERPS□-170180
PS-1819	MERPS□-180190
PS-1920	MERPS□-190200

• 1 package contains 5 pcs. (1 size)

For MEGA E PERFECT SEAL

Catalog Number	EPS Model
PS-0304	EPS□-03
	EPS□-04
PS-0405	EPS□-05
PS-0506	EPS□-06
PS-0607	EPS□-07
PS-0708	EPS□-08

Catalog Number	EPS Model
PS-0809	EPS□-09
PS-0910	EPS□-10
PS-1011	EPS□-11
PS-1112	EPS□-12
PS-1213	EPS□-13

• 1 package contains 5 pcs. (1 size)

For NEW BABY PERFECT SEAL

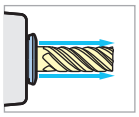
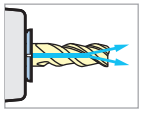
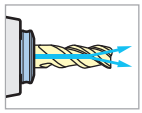
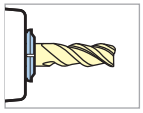
Catalog Number	BPS Model
PS-0304	BPS□-03035, 0304
PS-0405	BPS□-04045, 0405
PS-0506	BPS□-05055, 0506
PS-0607	BPS□-06065, 0607
PS-0708	BPS□-07075, 0708

Catalog Number	BPS Model
PS-0809	BPS□-08085, 0809
PS-0910	BPS□-09095, 0910
PS-1011	BPS□-10105, 1011
PS-1112	BPS□-11115, 1112
PS-1213	BPS□-12125, 1213

Catalog Number	BPS Model
PS-1314	BPS□-1314
PS-1415	BPS□-1415
PS-1516	BPS□-1516
PS-1617	BPS□-1617
PS-1718	BPS□-1718
PS-1819	BPS□-1819
PS-1920	BPS□-1920

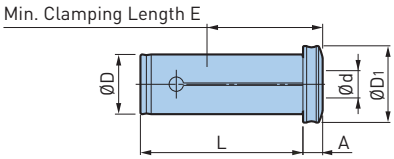
• 1 package contains 5 pcs. (1 size)

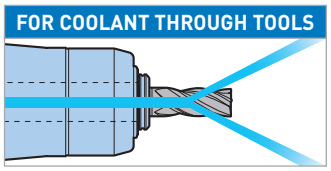
STRAIGHT COLLET SELECTION GUIDE

	PJC COLLET	OCA COLLET	PSC COLLET	C COLLET
	 Peripheral Coolant Supply	 Coolant Through Tool Supply	 Coolant Through Tool Supply	 W/O Center Coolant
MEGA-D MEGA DOUBLE POWER CHUCK	○	○	○	○
MEGA-DS MEGA DOUBLE POWER CHUCK	○		○	○
HMC NEW Hi-POWER MILLING CHUCK	○	○	○	○
HDC HYDRAULIC CHUCK	○		○	

PSC STRAIGHT COLLET

Reduction sleeve for small diameter cutters used in NEW Hi-POWER MILLING CHUCKS, MEGA DOUBLE POWER CHUCKS and HYDRAULIC CHUCKS.





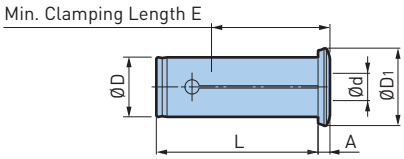
Catalog Number	Clamping Range Ød	ØD	L	A	D1	E
PSC.750-1/4	.250	.750	2.40	.32	1.06	1.58
PSC.750-3/8	.375					1.78
PSC.750-1/2	.500			.34		1.97
PSC.750-5/8	.625				1.10	
PSC1.250-1/2	.500	1.250	2.91	.34	1.50	1.97
PSC1.250-5/8	.625					2.09
PSC1.250-3/4	.750			.36		2.21
PSC1.250-7/8	.875			.37		2.33
PSC1.250-1	1.000					2.41
PSC20-3	3mm	20mm	61mm	7.7mm	27mm	31mm
PSC20-4	4mm			7.5mm		
PSC20-5	5mm					
PSC20-6	6mm					39mm
PSC20-7	7mm			8.2mm		40mm
PSC20-8	8mm					
PSC20-9	9mm					
PSC20-10	10mm					45mm
PSC20-11	11mm			8.7mm		
PSC20-12	12mm					50mm
PSC20-13	13mm					
PSC20-14	14mm				28mm	
PSC20-15	15mm					
PSC20-16	16mm					

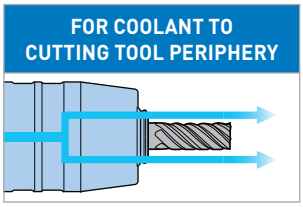
Catalog Number	Clamping Range Ød	ØD	L	A	D1	E
PSC32-6	6mm	32mm	74mm	7.5mm	38mm	39mm
PSC32-7	7mm			8.2mm		40mm
PSC32-8	8mm					
PSC32-9	9mm					
PSC32-10	10mm					45mm
PSC32-11	11mm			8.7mm		
PSC32-12	12mm					50mm
PSC32-13	13mm					
PSC32-14	14mm					
PSC32-15	15mm					51mm
PSC32-16	16mm					53mm
PSC32-18	18mm			9.2mm		56mm
PSC32-19	19mm					
PSC32-20	20mm					
PSC32-21	21mm					
PSC32-22	22mm			9.5mm		59mm
PSC32-23	23mm					
PSC32-24	24mm					60mm
PSC32-25	25mm					61mm

- MEGA D/DS, HMC and HDC chucks allow through tool coolant when PSC collet is used
- The maximum tool insertion depth from the flange of PSC20-16 collet is 59mm

PJC STRAIGHT COLLET

Reduction sleeve for small diameter cutters used in NEW Hi-POWER MILLING CHUCKS, MEGA DOUBLE POWER CHUCKS and HYDRAULIC CHUCKS.





Catalog Number	Clamping Range Ød	ØD	L	A	D1	E
PJC.500-1/4	.250	.500	1.59	.21	.80	1.38
PJC.500-3/8	.375			.22		1.54
PJC.750-1/4	.250	.750	2.40	.21	1.06	1.54
PJC.750-3/8	.375			.22		1.78
PJC.750-1/2	.500			.27		1.97
PJC.750-5/8	.625			.29		
PJC1.000-1/4	.250	1.000	2.68	.20	1.28	1.54
PJC1.000-3/8	.375					1.78
PJC1.000-1/2	.500					1.97
PJC1.000-5/8	.625			.21		2.09
PJC1.000-3/4	.750			.24		2.21
PJC1.250-1/2	.500	1.250	2.91	.20	1.54	1.97
PJC1.250-5/8	.625					2.09
PJC1.250-3/4	.750					2.21
PJC1.250-7/8	.875					2.25
PJC1.250-1	1.000			.21		2.41
PJC12-6❖	6mm	12mm	40mm	5.4mm	20.4mm	35mm
PJC12-8❖	8mm					37mm
PJC12-10❖	10mm			5.6mm		39mm
PJC16-6	6mm	16mm	54mm	6.0mm	23mm	39mm
PJC16-8	8mm			6.3mm		40mm
PJC16-10	10mm					45mm
PJC16-12	12mm					48mm
PJC20-3	3mm	20mm	61mm	5.2mm	27mm	31mm
PJC20-4	4mm					
PJC20-5	5mm					
PJC20-6	6mm					39mm
PJC20-7	7mm			5.7mm		40mm
PJC20-8	8mm					
PJC20-9	9mm					
PJC20-10	10mm					45mm
PJC20-11	11mm			6.4mm		
PJC20-12	12mm					50mm
PJC20-13	13mm			6.8mm		
PJC20-14	14mm			7.3mm		
PJC20-15	15mm					
PJC20-16	16mm					

Catalog Number	Clamping Range Ød	ØD	L	A	D1	E
PJC25-6	6mm	25mm	68mm	5.0mm	32.5mm	39mm
PJC25-8	8mm					40mm
PJC25-10	10mm					45mm
PJC25-12	12mm					50mm
PJC25-16	16mm			5.4mm		53mm
PJC25-18	18mm			5.8mm		55mm
PJC25-20	20mm			6.5mm		56mm
PJC32-6	6mm	32mm	74mm	5.0mm	39mm	39mm
PJC32-8	8mm					40mm
PJC32-10	10mm					45mm
PJC32-12	12mm					50mm
PJC32-14	16mm					
PJC32-16	18mm					53mm
PJC32-20	20mm					56mm
PJC32-25	25mm			5.4mm		61mm
PJC42-16	16mm	42mm	83mm	5.0mm	50.5mm	53mm
PJC42-20	20mm					56mm
PJC42-25	25mm					61mm
PJC42-32	32mm					66mm

- MEGA D/DS and HMC chucks allow jet through coolant when PJC collet is used
- The maximum tool insertion depth from the flange of PJC20-16 collet is 58mm
- ❖ PJC12 collets are dedicated for HMC12J and cannot be used with hydraulic chucks

CAUTION

PJC.500 & PJC12 can be used only for HMC12J. Never use with HDC.

PS RING

For coolant through tools. Specially designed sealant is used inside the PSC Straight Collet.

Catalog Number	PSC Collet Model	
	Metric	Inch
PS-0304	PSC□-3,4	—
PS-0405	PSC□-5	—
PS-0506	PSC□-6	—
PS-0607	PSC□-7	PSC□-.250
PS-0708	PSC□-8	—
PS-0809	PSC□-9	—
PS-0910	PSC□-10	PSC□-.C2375
PS-1011	PSC□-11	—
PS-1112	PSC□-12	—
PS-1213	PSC□-13	PSC□-.500
PS-1314	PSC□-14	—
PS-1415	PSC□-15	—
PS-1516	PSC□-16	PSC□-.625
PS-1718	PSC□-18	—
PS-1819	PSC□-19	PSC□-.750
PS-1920	PSC□-20	—
PS-2021	PSC□-21	—
PS-2223	PSC□-22,23	—
PS-2324	PSC□-24	—
PS-2526	PSC□-25	PSC□-1.000

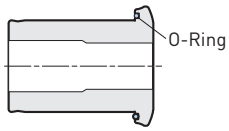
• 1 package contains 5 pcs. (1 size)

CAUTION

The PS RING must be replaced if damage is causing coolant to leak.

O-RING

For maintenance, common for PJC, PSC.



Catalog Number	Collet Model
PJC160R-2P	PJC16
PJC200R-2P	PJC20, PSC20, .750
PJC250R-2P	PJC25, 1.000
PJC320R-2P	PJC32, PSC32, 1.250
PJC420R-2P	PJC42

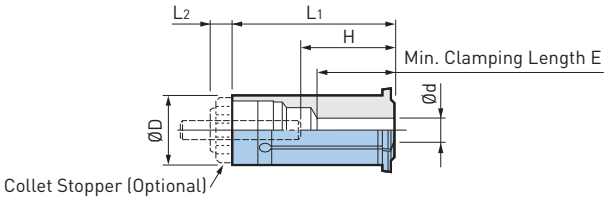
• 2-piece set

CAUTION

Replace if the o-ring is damaged.

C COLLETS

Reduction sleeve for smaller diameter cutters used in Hi-POWER MILLING CHUCKS and MEGA DOUBLE POWER CHUCKS.



REDUCTION COLLETS

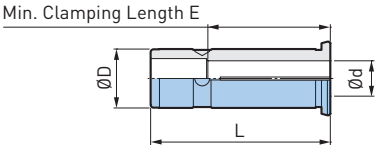
Catalog Number	Clamping Range Ød	ØD	L1	L2	H Max	H Min	E	Collet Stopper (Optional)
C.750-1/4	.250	.750	2.37	.32	1.19	1.89	1.19	AC20CS
C.750-5/16	.312				1.26		1.26	
C.750-3/8	.375				1.46		1.46	
C.750-7/16	.437							
C.750-1/2	.500							
C.750-9/16	.562				1.58		1.58	
C.750-5/8	.625		2.05	—	2.05	—	2.05	❖
C.750-6	6mm		60mm	8mm	30mm	48mm	30mm	AC25CS
C.750-8	8mm				32mm		32mm	
C.750-10	10mm				37mm		37mm	
C.750-12	12mm							
C.750-14	14mm				40mm		40mm	
C.750-16	16mm			—	46mm		46mm	❖
C1.000-1/4	.250	1.000	2.70	.32	1.19	2.29	1.19	AC25CS
C1.000-3/8	.375				1.46		1.46	
C1.000-1/2	.500							
C1.000-5/8	.625				1.82		1.82	
C1.000-3/4	.750				2.05		2.05	
C1.250-1/4	.250	1.250	2.92	.40	1.19	2.44	1.19	AC32CS
C1.250-5/16	.312				1.26		1.26	
C1.250-3/8	.375				1.46		1.46	
C1.250-7/16	.437							
C1.250-1/2	.500							
C1.250-9/16	.562				1.58		1.58	
C1.250-5/8	.625				1.82		1.82	
C1.250-11/16	.687							
C1.250-3/4	.750				1.97		1.97	
C1.250-13/16	.812				2.05		2.05	
C1.250-7/8	.875							
C1.250-15/16	.937				2.17		2.17	
C1.250-1	1.000							
C1.250-12	12mm		74mm	10mm	37mm	62mm	37mm	
C1.250-14	14mm				40mm		40mm	
C1.250-16	16mm				46mm		46mm	
C1.250-20	20mm				52mm		52mm	
C1.250-25	25mm				55mm		55mm	
C16-6	6mm	16mm	52	6	30	47	30	AC16CS
C16-8	8mm				32		32	
C16-10	10mm				37		37	
C16-12	12mm							
C20-1/4	.250	20mm	2.37	.32	1.19	1.89	1.19	AC20CS
C20-3/8	.375				1.46		1.46	
C20-1/2	.500							
C20-5/8	.625			—	1.82		1.82	❖

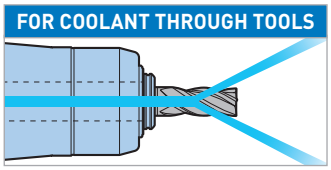
Catalog Number	Clamping Range Ød	ØD	L1	L2	H Max	H Min	E	Collet Stopper (Optional)
C20-6	6mm	20mm	60	8mm	30mm	48mm	30mm	AC20CS
C20-8	8mm				32mm		32mm	
C20-10	10mm				37mm		37mm	
C20-12	12mm							
C20-14	14mm				40mm		40mm	
C20-16	16mm			—	46mm	—	46mm	❖
C20-18	18mm		52		50mm		50mm	
C25-6	6mm	25mm	68.5	8mm	30mm	58mm	30mm	AC25CS
C25-8	8mm				62mm		62mm	
C25-10	10mm				37mm		37mm	
C25-12	12mm							
C25-14	14mm				45mm		45mm	
C25-16	16mm				46mm		46mm	
C25-18	18mm				48mm		48mm	
C25-20	20mm				52mm		52mm	
C32-1/4	.250	32mm	2.92	.40	1.19	2.44	1.19	AC32CS
C32-3/8	.375				1.46		1.46	
C32-1/2	.500							
C32-5/8	.625				1.82		1.82	
C32-3/4	.750				1.97		1.97	
C32-1	1.000			—	2.17		2.17	❖
C32-6	6mm	32mm	74mm	10mm	30mm	62mm	30mm	AC32CS
C32-8	8mm				32mm		32mm	
C32-10	10mm				37mm		37mm	
C32-12	12mm							
C32-14	14mm				40mm		40mm	
C32-16	16mm				46mm		46mm	
C32-18	18mm				50mm		50mm	
C32-19	19mm							
C32-20	20mm				52mm		52mm	
C32-22	22mm							
C32-24	24mm				55mm		55mm	
C32-25	25mm							
C32-30	30mm						65mm	
C42-6	6mm	42mm	89mm	10mm	30mm	77mm	30mm	AC4CS
C42-8	8mm				34mm		34mm	
C42-10	10mm				40mm		40mm	
C42-12	12mm							
C42-16	16mm				46mm		46mm	
C42-20	20mm				52mm		52mm	
C42-25	25mm				57mm		57mm	
C42-31	31mm				62mm		62mm	
C42-32	32mm							
C42-40	40mm						79mm	❖

• Collet stopper cannot be used with models marked ❖

OCA COLLETS

Reduction sleeve for smaller diameter cutters used in Hi-POWER MILLING CHUCKS and MEGA DOUBLE POWER CHUCKS.





• Recommended Only for HMC(S) Type Holders

METALLIC SEALED COOLANT COLLETS

Catalog Number	Clamping Range ød	øD	L	E
OCA16-6	**6mm**	16mm	58mm	36mm
OCA16-8	**8mm**			37mm
OCA16-10	**10mm**			38mm
OCA16-12	**12mm**			42mm
OCA20-6	**6mm**	20mm	62mm	36mm
OCA20-8	**8mm**			37mm
OCA20-10	**10mm**			38mm
OCA20-12	**12mm**		61mm	42mm
OCA20-14	**14mm**			
OCA20-16	**16mm**			52mm
OCA25-6	**6mm**	25mm	72.5mm	36mm
OCA25-8	**8mm**			37mm
OCA25-10	**10mm**			38mm
OCA25-12	**12mm**			44mm
OCA25-14	**14mm**		71.5mm	44mm
OCA25-16	**16mm**			52mm
OCA25-18	**18mm**			
OCA25-20	**20mm**			
OCA32-6	**6mm**	32mm	79.5mm	36mm
OCA32-8	**8mm**			37mm
OCA32-10	**10mm**			38mm
OCA32-12	**12mm**			44mm
OCA32-13	**13mm**			46mm
OCA32-14	**14mm**			48mm
OCA32-15	**15mm**			50mm
OCA32-16	**16mm**			52mm
OCA32-17	**17mm**		78.5mm	52mm
OCA32-18	**18mm**			
OCA32-19	**19mm**			
OCA32-20	**20mm**			
OCA32-21	**21mm**			
OCA32-22	**22mm**			
OCA32-23	**23mm**			
OCA32-24	**24mm**			
OCA32-25	**25mm**			
OCA32-27	**27mm**			
OCA32-28	**28mm**			
OCA32-29	**29mm**			

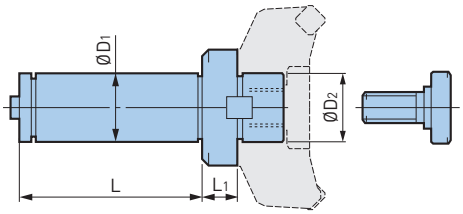
Catalog Number	Clamping Range ød	øD	L	E
OCA42-6	**6mm**	42mm	79.5mm	36mm
OCA42-8	**8mm**			37mm
OCA42-10	**10mm**			38mm
OCA42-12	**12mm**			44mm
OCA42-16	**16mm**			52mm
OCA42-19	**19mm**			
OCA42-20	**20mm**			
OCA42-24	**24mm**		78.5mm	55mm
OCA42-25	**25mm**			
OCA42-31	**31mm**			58mm
OCA42-32	**32mm**			

- Capable of supplying coolant through tool
- Use with cutting tools with oil holes
- For the MEGA DS chuck use the PSC Collet

ADJUSTABLE FACE MILL ARBOR

For NEW Hi-POWER MILLING CHUCK

An arbor for mounting JIS Standard B4114 face milling cutters.



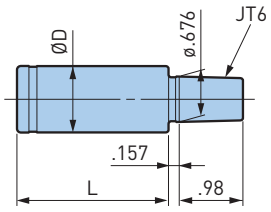
Catalog Number	ØD1	ØD2	L	L1	Cutter Diameter
AC32-F3	32mm	25.4mm	3.35	.61	3 (80mm)
AC32-F4		31.75mm		.69	4 (100mm)
AC42-F3	42mm	25.4mm	4.13	.63	3 (80mm)
AC42-F4		31.75mm		.71	4 (100mm)

- Axial Adjusting Screw is required for axial adjustment
- Use JIS B4114 face milling cutters

JACOBS TAPER ARBOR

For NEW Hi-POWER MILLING CHUCK

An arbor for mounting Jacobs taper holders such as keyless chucks.

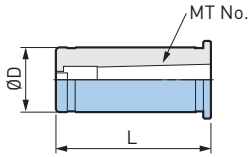


Catalog Number	ØD	L
C20-JT6	20mm	3.15
C25-JT6	25mm	3.35
C32-JT6	32mm	3.66
C42-JT6	42mm	4.21

MORSE TAPER HOLDER

For NEW Hi-POWER MILLING CHUCK

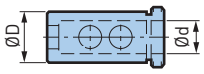
A holder for mounting Morse taper shank drills or reamers.



Catalog Number	ØD	L
C20-MT1	20mm	2.36
C20-MT2		2.83
C25-MT1	25mm	2.36
C25-MT2		2.83
C32-MT1	32mm	2.34
C32-MT2		2.83
C32-MT3		3.54
C42-MT1	42mm	2.34
C42-MT2		2.83
C42-MT3		3.54
C42-MT4		4.49

OSL REDUCTION COLLET

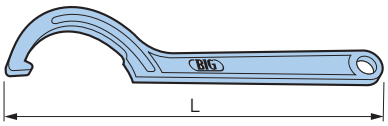
Exclusive Collet for Hi-JET HOLDER



Catalog Number	Ød	ØD
OSL1.250-.750	.750	1.250
OSL1.250-1.000	1.000	1.250
OSL1.500-1.000	1.000	1.500
OSL1.500-1.250	1.250	1.500

SPANNER WRENCH

For NEW HI-POWER MILLING CHUCK



Catalog Number	Nut Diameter	L	Holder Type	
			Metric	Inch
FK31-33	1.22-1.30 (31-33mm)	6.0	HMC12J	HMC.500J
FK45-50L	1.69-1.97 (43-50mm)	9.5	HMC16S	HMC.750S
			HMC20S	
FK52-55	2.05-2.17 (52-55mm)	8.7	HMC25S(BT/BBT30)	—
FK58-62	2.28-2.44 (58-62mm)	9.4	HMC20	HMC.750
			HMC25	HMC1.000
FK58-62L		11.5	HMC25S	HMC1.000S
			HMC32S(BT/BBT30)	
FK68-75L	2.68-2.95 (68-75mm)	12.5	HMC32S	HMC1.250S
FK80-90	3.15-3.54 (80-90mm)	11.0	HMC32	HMC1.250
FK80-90L		15.4	HMC42S	
FK92-100	3.62-3.94 (92-100mm)	11.0	HMC42	HMC1.500
			HMC50.8	
FK110-115	4.33-4.53 (110-115mm)	13.2	—	HMC2.000

MEGA WRENCH

For MEGA CHUCK Series

One-way clutch system applies tightening force to entire nut periphery evenly. Prevents wrench slippage for a safe and secure tightening operation.

Catalog Number	Ød	Body Model				
		MEGA MICRO CHUCK	MEGA NEW BABY CHUCK	MEGA E CHUCK	MEGA ER GRIP	MEGA SYNCHRO
MGR10	**.39 (10mm)**	MEGA3S	—	—	—	—
MGR12	**.47 (12mm)**	MEGA4S	—	—	—	—
MGR14	**.55 (14mm)**	MEGA6S	—	—	—	—
MGR16	**.63 (16mm)**	—	—	—	—	MGT6
MGR18	**.71 (18mm)**	MEGA8S	—	—	—	—
MGR20	**.79 (20mm)**	—	MEGA6N	—	—	—
MGR20L	**.79 (20mm)**	—	—	—	—	MGT12
MGR25	**.98 (25mm)**	—	MEGA8N	MEGA6E	—	—
MGR30	**1.18 (30mm)**	—	MEGA10N	MEGA8E	—	MGT20
MGR35	**1.38 (35mm)**	—	MEGA13N	MEGA10E	—	—
MGR42	**1.65 (42mm)**	—	MEGA16N	MEGA13E	—	—
MGR46	**1.81 (46mm)**	—	MEGA20N	—	—	—

Catalog Number	Ød	Body Model				
		MEGA NEW BABY CHUCK	MEGA DOUBLE POWER CHUCK	NEW Hi- POWER MILLING CHUCK	MEGA PERFECT GRIP	MEGA ER GRIP
MGR30L	**1.18 (30mm)**	—	—	—	—	MEGAER16
MGR35L	**1.38 (35mm)**	—	—	—	—	MEGAER20
MGR42L	**1.65 (42mm)**	—	MEGA16(5/8")DS-□A (BCV40,BBT40, HSK-A63/F63)	—	—	MEGAER25
MGR43L	**1.69 (43mm)**	—	—	HMC16S	—	—
MGR46L	**1.81 (46mm)**	—	MEGA16DS (BBT30/50, HSK-A40/A50/A100/A125)	—	MEGA16DPG	—
MGR50L	**1.97 (50mm)**	—	MEGA20(3/4")DS-□A (BCV40,BBT40, HSK-A63/F63) MEGA20(3/4")DS (BBT30, HSK-A50)	HMC20(3/4")S	—	MEGAER32
MGR55L	**2.17 (55mm)**	—	—	HMC25S (BT/BBT30)	—	—
MGR59L	**2.32 (59mm)**	—	—	HMC25(1")S	—	—
MGR60L	**2.36 (60mm)**	MEGA25N	MEGA20(3/4")DS (BCV50,BBT50, HSK-A100/A125)	HMC20	MEGA20(3/4")DPG	—
MGR62L	**2.44 (62mm)**	—	MEGA25(1")DS-□A (BCV40,BBT40, HSK-A63/F63)	HMC25 HMC32S (BT/BBT30)	—	—
MGR68L	**2.68 (68mm)**	—	—	HMC32(1 1/4")S	—	—
MGR70L	**2.76 (70mm)**	—	MEGA25(1")DS (BCV50,BBT50, HSK-A100/A125) MEGA32(1 1/4")DS-□A (BCV40,BBT40, HSK-A63/F63)	—	MEGA25(1")DPG	—
MGR80L	**3.15 (80mm)**	—	MEGA32(1 1/4")DS (BCV50, BBT50, HSK-A100/A125)	HMC32(1 1/4")S	MEGA32(1 1/4")DPG	—
MGR85L	**3.35 (85mm)**	—	—	HMC42S	—	—
MGR99L	**3.90 (99mm)**	—	MEGA42DS	HMC42	—	—
MGR105L	**4.13 (105mm)**	—	MEGA50DS	—	—	—

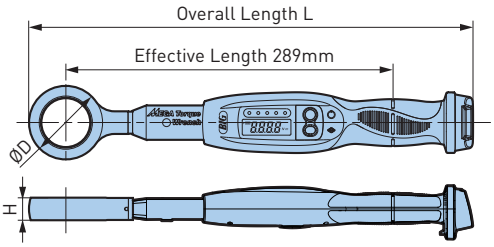
MEGA TORQUE WRENCH

For MEGA CHUCK Series
MEGA WRENCH with torque limiter.

Catalog Number	Ød	Body Model		
		MEGA MICRO	MEGA NEW BABY CHUCK	MEGA E CHUCK
MGR10TL	**.39 (10mm)**	MEGA3S	—	—
MGR12TL	**.47 (12mm)**	MEGA4S	—	—
MGR12TLS❖			—	—
MGR14TL	**.55 (14mm)**	MEGA6S	—	—
MGR14TLS❖			—	—
MGR18TL	**.71 (18mm)**	MEGA8S	—	—
MGR20TL	**.79 (20mm)**	—	MEGA 6N	—
MGR20TLS❖		—		—
MGR25TL	**.98 (25mm)**	—	MEGA 8N	MEGA 6E
MGR25TLS❖		—		—
MGR30TL	**1.18 (30mm)**	—	MEGA10N	MEGA 8E
MGR30TLS❖				—
MGR35TL	**1.38 (35mm)**	—	MEGA13N	MEGA10E
MGR42TL	**1.65 (42mm)**	—	MEGA16N	MEGA13E
MGR46TL	**1.81 (46mm)**	—	MEGA20N	—

❖ For Ø3mm or smaller shank tools use TLS models

MEGA TORQUE WRENCH BODY



Catalog Number	MGR-TL/P
Torque Range	5-50 Nm
Minimum Read (Digit)	.01 Nm
Display	7 LCD segments 4 digits, numerical display
	High precision LED indicator five-level display
Basic Function	Battery level display (three levels)
	Peak hold function
	Auto power-off (1 hour)
	Tightening completion alarm > beep sound emission and vibrations
Power Supply	Two AA batteries
Battery life	Approx. 70 hours (100 times/h)
Operating Temperature	32° F - 104° F (recommended: 59° F - 86° °F) without dew condensing
Weight	1.19 lbs (excluding MEGA Wrench Adapter)

MEGA TORQUE WRENCH ADAPTER (OPTIONAL)

Catalog Number	Overall Length L	ØD	H	Weight (lbs.)	Suitable Collet Chuck	
					MEGA NEW BABY CHUCK	MEGA E CHUCK
MGR20A-N	13.976	1.417	.630	.29	MEGA6N	—
MGR25A-N	14.134	1.732	.787	.40	MEGA8N	MEGA6E
MGR30A-N	14.252	1.969	.787	.49	MEGA10N	MEGA8E
MGR35A-N	13.350	2.165	.787	.51	MEGA13N	MEGA10E
MGR42A-N	14.488	2.441	.787	.55	MEGA16N	MEGA13E
MGR46A-N	14.567	2.598	.787	.60	MEGA20N	—

MEGA TORQUE WRENCH SET

Catalog Number	Set Contents
SMGR-TL /P	1x Body 6x Mega Wrench Adapters (MGR20A-N through MGR46A-N)

EXCLUSIVE STORAGE CASE

Easy to carry and safely store the equipment. Molds for (1) Body and (6) Mega Wrench Adapters. Standard accessory for the body (MGR-TL/P) and set (SMGR-TL/P) models.

α WIPER CLEANER

Perfect for HYDRAULIC CHUCKS and SHRINK FIT HOLDERS
Easy cleaning of smaller cylindrical bores by simply inserting and removing before cutting tool insertion.

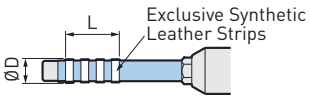


Fig. 1

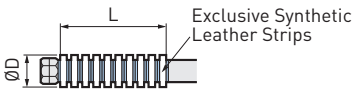


Fig. 2

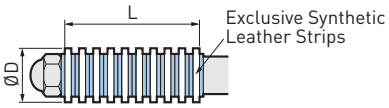
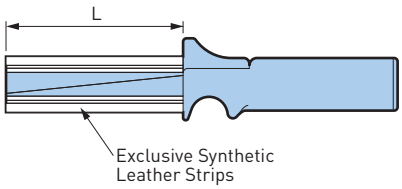


Fig. 3

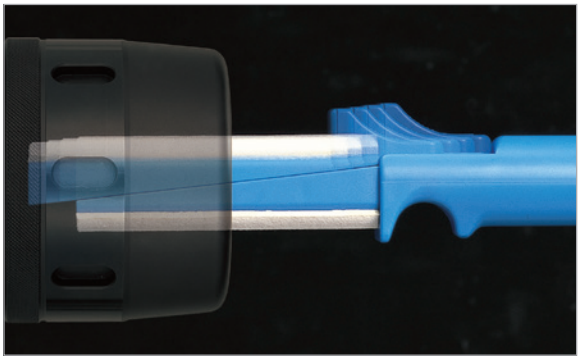
Catalog Number	Fig.	ØD	L
AWC1/4	1	.250	.79
AWC5/16	2	.312	.79
AWC3/8		.375	1.02
AWC7/16		.437	1.22
AWC1/2		.500	1.22
AWC9/16		.562	1.22
AWC3	1	3mm	.28
AWC4		4mm	
AWC5	2	5mm	.79
AWC6		6mm	
AWC7	3	7mm	
AWC8		8mm	
AWC9		9mm	1.02
AWC10		10mm	
AWC11		11mm	1.22
AWC12		12mm	

TK CLEANER

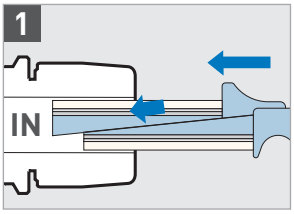
Perfect for HYDRAULIC CHUCKS, MILLING CHUCKS and SHRINK FIT HOLDERS
It is very difficult to remove oil and chips stuck to clamping bores, even with a wiping cloth or air spray. TK Cleaner cleans the clamping bore of a tool holder to maintain the high performance of tool holders.



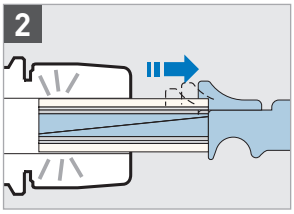
Catalog Number	Bore Ø (metric)	Bore Ø (inch)	Cleaning Length L	Leather Strip Qty.
TKC13	13mm	.500	2.36	2
TKC14	14mm	—		
TKC15	15mm	—		
TKC16	16mm	.625	2.76	
TKC18	18mm	—		
TKC20	20mm	.750		
TKC25	25mm	1.000	3.15	3
TKC32	32mm	1.250	3.94	4
TKC40	40mm	—	4.13	
TKC42	42mm	—		



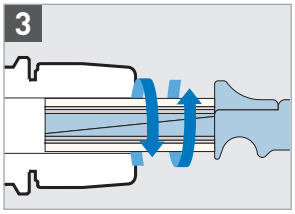
HOW TO USE



Slide the upper section forward to reduce diameter and insert in the clamping bore.



Spring action draws back the sliding section when released so the cleaning strips contact the bore surface.



Rotate and remove the TK Cleaner to clear oil and particles.

GRIP BAR

For HYDRAULIC CHUCK
For confirming gripping force.

Catalog Number	Chuck Bore
TSB3.175	.125
TSB.250	.250
TSB.375	.375
TSB.500	.500
TSB.625	.625
TSB.750	.750
TSB1.000	1.000
TSB1.250	1.250
TSB3	3mm
TSB4	4mm
TSB5	5mm

Catalog Number	Chuck Bore
TSB6	6mm
TSB7	7mm
TSB8	8mm
TSB9	9mm
TSB10	10mm
TSB11	11mm
TSB12	12mm
TSB13	13mm
TSB14	14mm
TSB15	15mm
TSB16	16mm

Catalog Number	Chuck Bore
TSB18	18mm
TSB19	19mm
TSB20	20mm
TSB22	22mm
TSB24	24mm
TSB25	25mm
TSB28	28mm
TSB31	31mm
TSB32	32mm
TSB42	42mm

- For details of usage, refer to the hydraulic chuck operation manual

SCREWS

For HYDRAULIC CHUCK

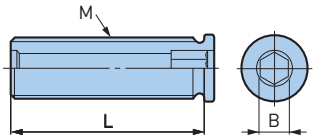


Fig. 1

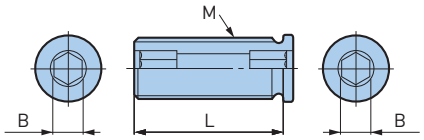
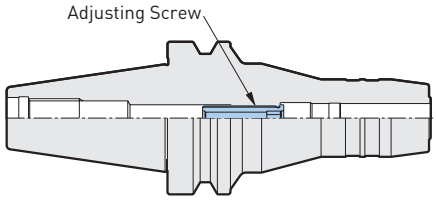


Fig. 2

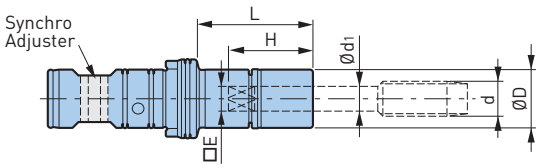


Catalog Number	Fig.	M (Left Hand Thread)	L	B
HDA6-05013	1	M5x.8	.51	2.5mm
HDA6-05020			.79	
HDA6-05032			1.26	
HDA8-06013		M6x1	.51	3mm
HDA8-06020			.79	
HDA8-06032			1.26	
HDA10-08015		M8x1	.59	4mm
HDA10-08032			1.26	
HDA12-10010		M10x1	.39	5mm
HDA12-10025			.98	
HDA12-10032			1.26	
HDA16-12015		M12x1	.59	6mm
HDA16-12030			1.18	
HDA16-12037			1.46	
HDA20-16015		M16x1	.59	6mm
HDA25-16033			1.30	
HDA25-16039			1.54	

Catalog Number	Fig.	M (Left Hand Thread)	L	B
HDA6-05013W	2	M5x.8	.51	2.5mm
HDA6-05020W			.79	
HDA6-05032W			1.26	
HDA8-06013W		M6x1	.51	3mm
HDA8-06020W			.79	
HDA8-06032W			1.26	
HDA10-08015W		M8x1	.59	4mm
HDA10-08032W			1.26	
HDA12-10025W		M10x1	.98	5mm
HDA12-10032W			1.26	
HDA16-12015W		M12x1	.59	4mm
HDA16-12030W			1.18	
HDA16-12037W			1.46	
HDA20-16015W		M16x1	.59	4mm
HDA25-16033W			1.18	
HDA25-16039W			1.46	

ANSI STANDARD

AVAILABLE IN
SHORT - EXTRA LONG
1.25", 3", 4", 6" & 8"



MGT6—INCH STYLE (ØD=.63, 16mm)

Catalog Number	Tapping Range d	Ød1	□E	L
MGT6-No.6-1.25	No.2-6	.141	.110	1.25
MGT6-No.6-3				3.00
MGT6-No.6-4				4.00
MGT6-No.6-6				6.00
MGT6-No.8-1.25	No.8	.168	.131	1.25
MGT6-No.8-3				3.00
MGT6-No.8-4				4.00
MGT6-No.8-6				6.00
MGT6-No.10-1.25	No.10	.194	.152	1.25
MGT6-No.10-3				3.00
MGT6-No.10-4				4.00
MGT6-No.10-6				6.00
MGT6-No.10-8				8.00
MGT6-No.12-1.25	No.12	.220	.165	1.25
MGT6-No.12-3				3.00
MGT6-No.12-4				4.00
MGT6-No.12-6				6.00
MGT6-No.12-8				8.00

• Nut is included; wrench must be ordered separately

MGT12—INCH STYLE (ØD=.79, 20mm)

Catalog Number	Tapping Range d	Ød1	□E	L
MGT12-AU1/4-1.25	AU1/4	.255	.191	1.25
MGT12-AU1/4-3				3.00
MGT12-AU1/4-4				4.00
MGT12-AU1/4-6				6.00
MGT12-AU1/4-8				8.00
MGT12-AU5/16-1.25	AU5/16	.318	.238	1.25
MGT12-AU5/16-3				3.00
MGT12-AU5/16-4				4.00
MGT12-AU5/16-6				6.00
MGT12-AU5/16-8				8.00
MGT12-AU7/16-1.25	AU7/16	.323	.242	1.25
MGT12-AU7/16-3				3.00
MGT12-AU7/16-4				4.00
MGT12-AU7/16-6				6.00
MGT12-AU7/16-8				8.00

• Nut is included; wrench must be ordered separately

ACCESSORIES

MGT 20—INCH STYLE (ØD=1.18, 30mm))

Catalog Number	Tapping Range d	Ød1	□E	L
MGT20-AU1/2-1.5	AU1/2	.367	.275	1.50
MGT20-AU1/2-3.5				3.50
MGT20-AU1/2-4.5				4.50
MGT20-AU1/2-6				6.00
MGT20-AU3/8-1.5	AU3/8	.381	.286	1.50
MGT20-AU3/8-3.5				3.50
MGT20-AU3/8-4.5				4.50
MGT20-AU3/8-6				6.00
MGT20-AU9/16-1.5	AU9/16	.429	.322	1.50
MGT20-AU9/16-3.5				3.50
MGT20-AU9/16-4.5				4.50
MGT20-AU9/16-6				6.00
MGT20-AU5/8-1.5	AU5/8	.480	.360	1.50
MGT20-AU5/8-3.5				3.50
MGT20-AU5/8-4.5				4.50
MGT20-AU5/8-6				6.00
MGT20-AU11/16-1.5	AU11/16	.542	.406	1.50
MGT20-AU11/16-3.5				3.50
MGT20-AU11/16-4.5				4.50
MGT20-AU11/16-6				6.00
MGT20-AU3/4-1.5	AU3/4	.590	.442	1.50
MGT20-AU3/4-3.5				3.50
MGT20-AU3/4-4.5				4.50
MGT20-AU3/4-6				6.00
MGT20-AP1/8-1.5	AP1/8	.4375	.328	1.50
MGT20-AP1/8-3.5				3.50
MGT20-AP1/8-4.5				4.50
MGT20-AP1/8-6				6.00
MGT20-AP1/4-1.5	AP1/4	.5625	.421	1.50
MGT20-AP1/4-3.5				3.50
MGT20-AP1/4-4.5				4.50
MGT20-AP1/4-6				6.00

• Nut is included; wrench must be ordered separately

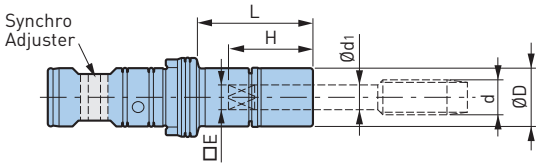
ACCESSORIES

MEGA NUT PG. 403

MEGA WRENCH PG. 390

JIS STANDARD

AVAILABLE IN
SHORT - EXTRA LONG
30mm, 70mm, 100mm, 150mm & 200mm



MGT6—METRIC STYLE (ØD=16mm)

Catalog Number	Tapping Range d			Ød1	□E	L
	Metric	Pipe	Unify			
MGT6-M2-30	M2	—	JIS No.3 JIS No.4	3.0	2.5	30
MGT6-M2-70						70
MGT6-M2-100						100
MGT6-M2-150						150
MGT6-M3-30	M3	—	JIS No.5 JIS No.6	4.0	3.2	30
MGT6-M3-70						70
MGT6-M3-100						100
MGT6-M3-150						150
MGT6-M4-30	M4	—	JIS No.8	5.0	4.0	30
MGT6-M4-70						70
MGT6-M4-100						100
MGT6-M4-150						150
MGT6-M4-200						200
MGT6-M5-30	M5	—	JIS No.10 JIS No.12	5.5	4.5	30
MGT6-M5-70						70
MGT6-M5-100						100
MGT6-M5-150						150
MGT6-M5-200						200
MGT6-M6U1/4-30	M6	—	JIS U1/4	6.0	4.5	30
MGT6-M6U1/4-70						70
MGT6-M6U1/4-100						100
MGT6-M6U1/4-150						150
MGT6-M6U1/4-200						200

- Nut is included, wrench must be ordered separately
- All dimensions shown in millimeters

MGT12—METRIC STYLE (ØD=20mm)

Catalog Number	Tapping Range d			Ød1	□E	L
	Metric	Pipe	Unify			
MGT12-M6U1/4-30	M6	—	JIS U1/4	6.0	4.5	30
MGT12-M6U1/4-70						70
MGT12-M6U1/4-100						100
MGT12-M6U1/4-150						150
MGT12-M6U1/4-200						200
MGT12-U5/16-30	—	—	JIS U5/16	6.1	5.0	30
MGT12-U5/16-70						70
MGT12-U5/16-100						100
MGT12-U5/16-150						150
MGT12-U5/16-200						200
MGT12-M8-30	M7 M8	—	—	6.2	5.0	30
MGT12-M8-70						70
MGT12-M8-100						100
MGT12-M8-150						150
MGT12-M8-200						200
MGT12-M10U3/8-30	M9 M10	—	JIS U3/8	7.0	5.5	30
MGT12-M10U3/8-70						70
MGT12-M10U3/8-100						100
MGT12-M10U3/8-150						150
MGT12-M10U3/8-200						200
MGT12-U7/16P1/8-30	—	JIS P1/8	JIS U7/16	8.0	6.0	30
MGT12-U7/16P1/8-70						70
MGT12-U7/16P1/8-100						100
MGT12-U7/16P1/8-150						150
MGT12-U7/16P1/8-200						200
MGT12-M12-30	M12	—	—	8.5	6.5	30
MGT12-M12-70						70
MGT12-M12-100						100
MGT12-M12-150						150
MGT12-M12-200						200

- Nut is included, wrench must be ordered separately
- All dimensions shown in millimeters

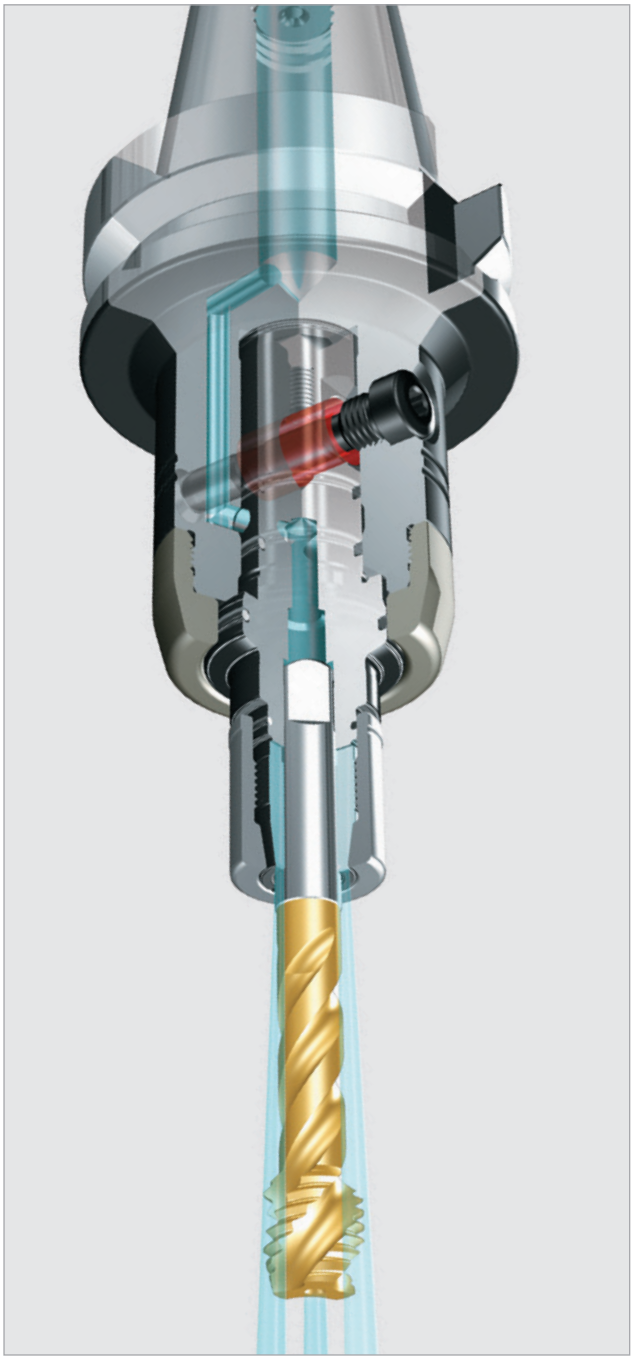
ACCESSORIES

MEGA NUT
PG. 403

MEGA WRENCH
PG. 390

MGT20—METRIC STYLE (ØD=30mm)

Catalog Number	Tapping Range d			Ød1	□E	L
	Metric	Pipe	Unify			
MGT20-M12-35	M12	—	—	8.5	6.5	35
MGT20-M12-85						85
MGT20-M12-115						115
MGT20-M12-150						150
MGT20-U1/2-35	—	—	JIS U1/2	9.0	7.0	35
MGT20-U1/2-85						85
MGT20-U1/2-115						115
MGT20-U1/2-150						150
MGT20-M14U9/16-35	M14	—	JIS U9/16	10.5	8.0	35
MGT20-M14U9/16-85						85
MGT20-M14U9/16-115						115
MGT20-M14U9/16-150						150
MGT20-P1/4-35	—	JIS P1/4	—	11.0	9.0	35
MGT20-P1/4-85						85
MGT20-P1/4-115						115
MGT20-P1/4-150						150
MGT20-U5/8-35	—	—	JIS U5/8	12.0	9.0	35
MGT20-U5/8-85						85
MGT20-U5/8-115						115
MGT20-U5/8-150						150
MGT20-M16-35	M16	—	—	12.5	10.0	35
MGT20-M16-85						85
MGT20-M16-115						115
MGT20-M16-150						150
MGT20-M18U3/4-35	M18	—	JIS U3/4	14.0	11.0	35
MGT20-M18U3/4-85						85
MGT20-M18U3/4-115						115
MGT20-M18U3/4-150						150
MGT20-P3/8-35	M20	JIS P3/8	—	14.0	11.0	35
MGT20-P3/8-85						85
MGT20-P3/8-115						115
MGT20-P3/8-150						150
MGT20-M20-35		—	—	15.0	12.0	35
MGT20-M20-85						85
MGT20-M20-115						115
MGT20-M20-150						150



- Nut is included, wrench must be ordered separately
- All dimensions shown in millimeters

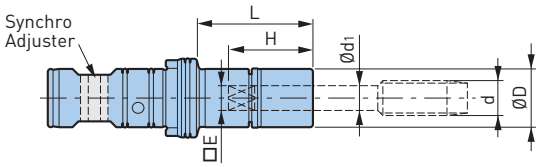
ACCESSORIES

MEGA NUT PG. 403

MEGA WRENCH PG. 390

DIN & ISO STANDARD

AVAILABLE IN
SHORT - EXTRA LONG
30mm, 70mm, 100mm, 150mm & 200mm



MGT6—METRIC STYLE (ØD=16mm)

Catalog Number	Tapping Range d					Ød1	□E	H	L
	DIN371	DIN376	DIN353	ISO529	ISO2284				
MGT6-031025-30	—	—	—	M3	—	3.15	2.5	.79	30
MGT6-031025-70									70
MGT6-031025-100									100
MGT6-031025-150									150
MGT6-035027-30	M3	M5	—	—	—	3.5	2.7	.83	30
MGT6-035027-70									70
MGT6-035027-100									100
MGT6-035027-150									150
MGT6-040032-30	—	—	—	M4	—	4.0	3.15	.83	30
MGT6-040032-70									70
MGT6-040032-100									100
MGT6-040032-150									150
MGT6-045034-30	M4	M6	—	—	—	4.5	3.4	.83	30
MGT6-045034-70									70
MGT6-045034-100									100
MGT6-045034-150									150
MGT6-050040-30	—	—	—	M5	—	5.0	4.0	.98	30
MGT6-050040-70									70
MGT6-050040-10									100
MGT6-050040-150									150
MGT6-050040-200									200
MGT6-060049-30	M5 M6	M8	—	—	—	6.0	4.9	1.02	30
MGT6-060049-70									70
MGT6-060049-100									100
MGT6-060049-150									150
MGT6-060049-200									200

- Nut is included, wrench must be ordered separately
- All dimensions shown in millimeters

ACCESSORIES

MEGA NUT
PG. 403

MEGA WRENCH
PG. 390

MGT12—METRIC STYLE (ØD=20mm)

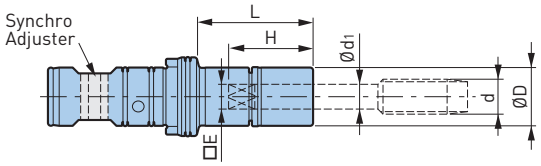
Catalog Number	Tapping Range d					Ød1	□E	H	L
	DIN371	DIN376	DIN353	ISO529	ISO2284				
MGT12-060049-30	M5 M6	M8	—	—	—	6.0	4.9	1.10	30
MGT12-060049-70									70
MGT12-060049-100									100
MGT12-060049-150									150
MGT12-060049-200									200
MGT12-063050-30	—	—	—	M6	—	6.3	5.0	1.10	30
MGT12-063050-70									70
MGT12-063050-100									100
MGT12-063050-150									150
MGT12-063050-200									200
MGT12-070055-30	—	M10	1/8	—	—	7.0	5.5	1.10	30
MGT12-070055-70									70
MGT12-070055-100									100
MGT12-070055-150									150
MGT12-070055-200									200
MGT12-080063-30	M8	—	—	M8	1/8	8.0	6.3	1.14	30
MGT12-080063-70									70
MGT12-080063-100									100
MGT12-080063-150									150
MGT12-080063-200									200
MGT12-090071-30	—	M12	—	M12	—	9.0	7.1	1.18	30
MGT12-090071-70									70
MGT12-090071-100									100
MGT12-090071-150									150
MGT12-090071-200									200
MGT12-100080-35	M10	—	—	M10	1/4	10.0	8.0	1.30	35
MGT12-100080-85									85
MGT12-100080-115									115
MGT12-100080-150									150

- Nut is included, wrench must be ordered separately
- The nut diameter of MGT12-100080-35/85/115/150 is Ø30mm
- All dimensions shown in millimeters

ACCESSORIES

DIN & ISO STANDARD

AVAILABLE IN
SHORT 4", LONG 6" & EXTRA LONG 8"



MGT20—METRIC STYLE (ØD=30mm)

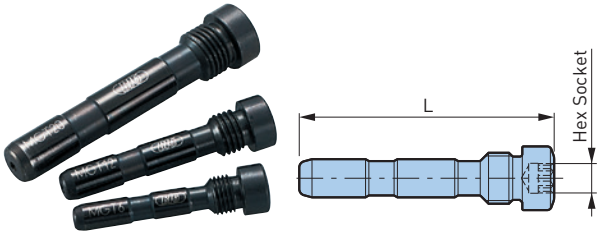
Catalog Number	Tapping Range d					Ød1	□E	H	L
	DIN371	DIN376	DIN353	ISO529	ISO2284				
MGT20-090071-35	—	M12	—	M12	—	9.0	7.1	1.18	35
MGT20-090071-85									85
MGT20-090071-115									115
MGT20-090071-150									150
MGT20-100080-35	M10	—	—	M10	1/4	10.0	8.0	1.30	35
MGT20-100080-85									85
MGT20-100080-115									115
MGT20-100080-150									150
MGT20-110090-35	—	M14	1/4	—	—	11.0	9.0	1.34	35
MGT20-110090-85									85
MGT20-110090-115									115
MGT20-110090-150									150
MGT20-112090-35	—	—	—	M14	—	11.2	9.0	1.34	35
MGT20-112090-85									85
MGT20-112090-115									115
MGT20-112090-150									150
MGT20-120090-35	—	M16	3/8	—	—	12.0	9.0	1.34	35
MGT20-120090-85									85
MGT20-120090-115									115
MGT20-120090-150									150
MGT20-125100-35	—	—	—	M16	3/8	12.5	10.0	1.38	35
MGT20-125100-85									85
MGT20-125100-115									115
MGT20-125100-150									150
MGT20-140110-35	—	M18	—	—	—	14.0	11.0	1.38	35
MGT20-140110-85									85
MGT20-140110-115									115
MGT20-140110-150									150
MGT20-140112-35	—	—	—	M18 M20	—	14.0	11.2	1.42	35
MGT20-140112-85									85
MGT20-140112-115									115
MGT20-140112-150									150
MGT20-160120-35	—	M20	1/2	—	—	16.0	12.0	1.46	35
MGT20-160120-150									150

- Nut is included, wrench must be ordered separately
- All dimensions shown in millimeters

ACCESSORIES

MGT SET SCREW

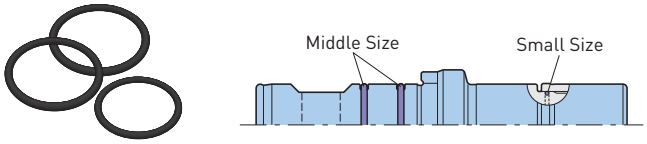
Secures the Tap Holder Into the Body



Catalog Number	Hex Socket Size	L	Body
MGT6SS	4mm	1.38	MGT6
MGT12SS	4mm	1.57	MGT12
MGT20SS	5mm	2.09	MGT20

O-RING

For MEGA SYNCHRO Tapping Holder

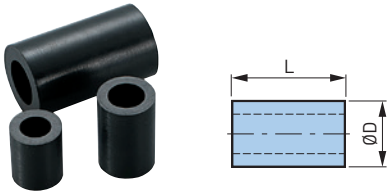


Catalog Number	Tap Holder
MGT6OR	MGT6-d-□
MGT12OR	MGT12-d-□
MGT20OR	MGT20-d-□

- Set includes 1 small & 2 middle sizes

SYNCHRO ADJUSTER—SOFT TYPE

Replaceable Bushing in the Tap Holder

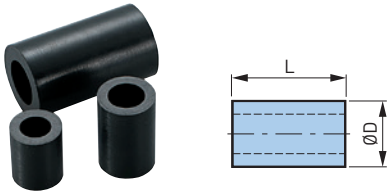


Catalog Number	ØD	L	Body
MGT6SA-5P	.35	.43	MGT6
MGT12SA-5P	.39	.59	MGT12
MGT20SA-5P	.55	.94	MGT20

- Sold in packages of 5 pcs.
- Soft type is included in our standard MEGA SYNCHRO tapping holders

SYNCHRO ADJUSTER—MEDIUM TYPE

Replaceable Bushing in the Tap Holder

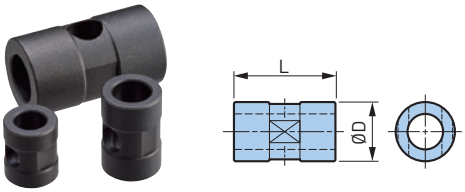


Catalog Number	ØD	L	Body
MGT6SAM	.35	.43	MGT6
MGT12SAM	39	.59	MGT12
MGT20SAM	.55	.94	MGT20

- Sold in packages of 1 pcs.

SYNCHRO ADJUSTER—HARD TYPE

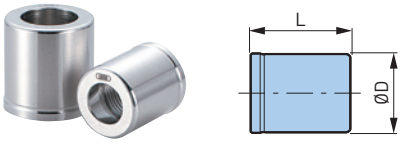
Replaceable Bushing in the Tap Holder for Eccentric Relief Taps



Catalog Number	ØD	L	Body
MGT6SAH	.35	.43	MGT6
MGT12SAH	.39	.59	MGT12
MGT20SAH	.55	.94	MGT20

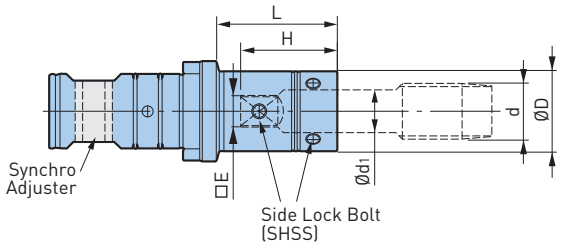
- Sold in packages of 1 pcs.

NUT



Catalog Number	ØD	L	Tap Holder
MGN6T	.63 (16mm)	.75	MGT6
MGN12T	.79 (20mm)	.83	MGT12
MGN20T	1.18 (30mm)	.94	MGT20

DIN, ISO, ANSI & JIS STANDARD



MGT36

Inch Style ANSI Standard

Catalog Number	Tapping Range d	Ød1	□E	ØD	H	L
MGT36-AU13/16-2.5	AU13/16	.652	.489	1.24	1.79	2.50
MGT36-AU7/8-2.5	AU7/8	.697	.523	1.34	1.85	
MGT36-AU15/16-2.5	AU15/16	.760	.570	1.57	1.93	
MGT36-AU1-2.5	AU1	.800	.600	1.62	2.07	
MGT36-AU1.1/8-2.5	AU1-1/8	.896	.672	1.69	2.13	
MGT36-AU1.1/4-2.5	AU1-1/4	1.021	.766	1.97	2.38	
MGT36-AU1.3/8-2.5	AU1-3/8	1.108	.831	2.09	2.44	
MGT36-AU1.1/2-3	AU1-1/2	1.233	.925	2.20	2.50	3.00
MGT36-AP3/8-2.5	AP3/8	.700	.531	1.34	1.37	2.50
MGT36-AP1/2-2.5	AP1/2	.688	.515	1.34	1.61	
MGT36-AP3/4-2.5	AP3/4	.906	.679	1.69	1.75	
MGT36-AP1-2.5	AP1	1.125	.843	2.09	1.87	

Metric Style JIS Standard

Catalog Number	Tapping Range d	Ød1	□E	ØD	H	L
MGT36-M20-65	M20	15mm	12mm	32mm	1.57	65mm
MGT36-M20-150						150mm
MGT36-M22-65	M22	17mm	13mm	34mm	1.73	65mm
MGT36-M22-150						150mm
MGT36-M24-65	M24	19mm	15mm	39mm	1.81	65mm
MGT36-M24-150						150mm
MGT36-M27-65	M27	20mm	15mm	40mm	1.97	65mm
MGT36-M27-150						150mm
MGT36-M30-65	M30	23mm	17mm	43mm	2.05	65mm
MGT36-M30-150						150mm

Catalog Number	Tapping Range d	Ød1	□E	ØD	H	L
MGT36-M33-65	M33	25mm	19mm	49mm	2.25	65mm
MGT36-M33-150						150mm
MGT36-M36-65	M36	28mm	21mm	52mm	2.40	65mm
MGT36-M36-150						150mm
MGT36-P1/2-65	P1/2	18mm	14mm	35mm	1.65	65mm
MGT36-P1/2-150						150mm
MGT36-P3/4-65	P3/4	23mm	17mm	43mm	1.85	65mm
MGT36-P3/4-150						150mm
MGT36-P1-65	P1	26mm	21mm	50mm	1.81	65mm
MGT36-P1-150						150mm

Metric Style DIN & ISO Standard

Catalog Number	Tapping Range d				Ød1	□E	ØD	H	L
	DIN376	DIN353	ISO529	ISO2284					
MGT36-180145-65	M22,M24	5/8	—	—	18mm	14.5mm	35mm	1.77	65mm
MGT36-200160-65	M27	3/4	M27,M30	3/4	20mm	16mm	40mm	2.01	
MGT36-220180-65	M30	7/8	—	—	22mm	18mm	42mm	2.09	
MGT36-250200-65	M33	1	M36	1	25mm	20mm	49mm	2.28	
MGT36-280220-65	M36	—	—	—	28mm	22mm	52mm	2.44	

• Adjusting screw is included

CAUTION

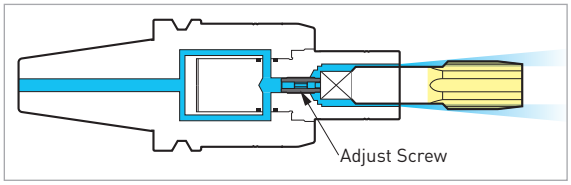
Tap with eccentric thread relief, having no margin on tap periphery may cause oversize threads. In such case, tap with con-ecentric thread relief is recommended.

ADJUST SCREW

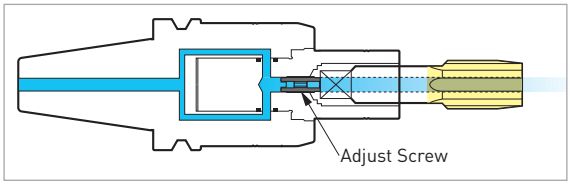
Aids Easy Adjustment of Tap Projection Length.

- Adjustment of tap projection length (adjustable amount: 3mm)
- Coolant supply adjustable in 2 ways by reversing the Adjust Screw

TAP WITHOUT HOLE



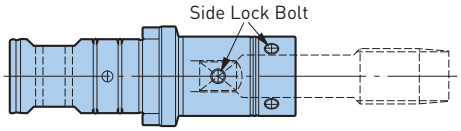
TAP WITH HOLE



Catalog Number	Tap Holder
MGT36AJ	MGT36

SIDE LOCK BOLT SET

Spare Locking Screw to Clamp a Tap.



Catalog Number	ANSI Tap Holder Model	JIS Tap Holder Model	Bolt Size
MGT36SL6	MGT36-AU7/8-2.5	MGT36-M20-☐	M6x8L (x4) + M6x10L (x2)
	MGT36-AP3/8-2.5	MGT36-M22U7/8-☐	
	MGT36-AP1/2-2.5	MGT36-P1/2-☐	
MGT36SL8	MGT36-AU1-2.5	MGT36-M24-☐	M8x10L (x4) + M8x12L (x2)
	MGT36-AU1.1/8-2.5	MGT36-M27U1-☐	
	MGT36-AP3/4-2.5	MGT36-M30-☐	
MGT36SL10	MGT36-AU1.1/4-2.5	MGT36-P3/4-☐	M10x12L (x4) + M10x14L (x2)
	MGT36-AU1.3/8-2.5	MGT36-M33-☐	
	MGT36-AP1-2.5	MGT36-M36-☐	
	—	MGT36-P1-☐	

SET SCREW

Catalog Number	Tap Holder
MGT36SS	MGT36

SYNCHRO ADJUSTER

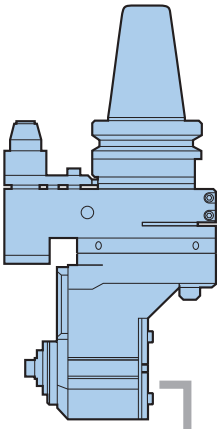
Catalog Number	Tap Holder
MGT36SA-5P	MGT36

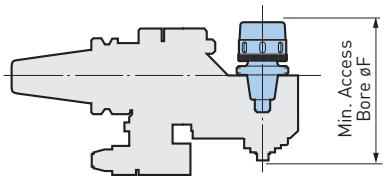
• Sold in packages of 5 pcs.

O-RING SET

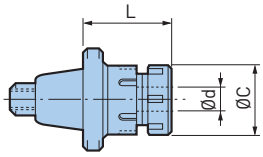
Catalog Number	Tap Holder
MGT360R	MGT36

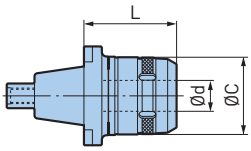
AG35 ADAPTERS

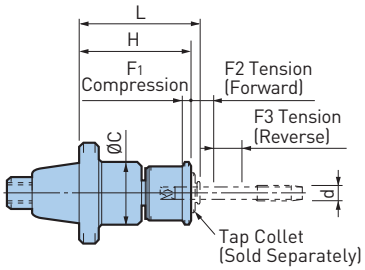


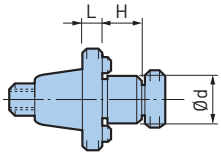


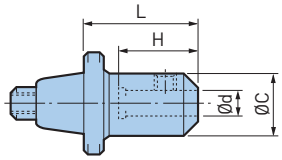
ØF=Minimum Bore Size that an AG35 Adapter Can Fit Into, Excluding the Cutting Tool

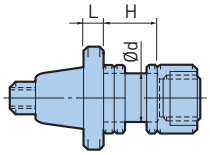












NEW BABY CHUCK

Catalog Number	Ød	L	ØC	ØF	Weight (lbs.)
AG35-NBS10	**.059-.394**	1.850	1.181	6.378	1.3
AG35-NBS13	**.098-.512**	2.126	1.378	6.614	1.5
AG35-NBS16	**.098-.630**		1.654	6.693	1.8
AG35-NBS20	**.098-.787**		1.811		2.0

ACCESSORIES

COLLET PG. 360

WRENCH PG. 372

NEW HI-POWER MILLING CHUCK

Catalog Number	Ød	L	ØC	ØF	Wrench	Weight (lbs.)
AG35-HMC.750S	**.750**	2.362	1.970	7.008	FK45-50L	3.3
AG35-HMC20S	**20mm**					3.3

ACCESSORIES

COLLET PG. 386

WRENCH PG. 372

AUTO TAPPER TYPE B

Catalog Number	Ød	L	ØC	H	F1	F2	F3	Weight (lbs.)
AG35-ATB12E	**No.6-U1/2**	3.150	1.594	2.835	.020	.197	.157	2.2
AG35-ATB20E	**U3/8-U3/4**	4.528	2.264	4.035		.256	.197	3.7

• Tap collets with torque control or positive drive available upon request

SHELL MILL/FACE MILL ADAPTER

Catalog Number	Ød	L	H	Weight (lbs.)
AG35-SM1.000-20	**1.000**	.787	.689	2.2
AG35-FMH22-30	**22mm**	1.181	.708	2.2
AG35-FMH27-20	**27mm**	.787	.787	2.2

END MILL ADAPTER

Catalog Number	Ød	L	ØC	H	ØF	Weight (lbs.)
AG35-EM.750	**.750**	3.248	1.750	3.880	7.756	3.0

STUB ARBOR

Catalog Number	Ød	L	H	Weight (lbs.)
AG35-SA1.000	**1.000**	.394	1.181	2.8

SET UP INFORMATION

Preparing the Stop Block

For ANGLE HEADS. The ANGLE HEAD utilizes a locating pin that engages with the stop block, which is mounted to the machine spindle to prevent radial movement of the ANGLE HEAD during operation. Therefore, it is necessary to use a stop block with the proper dimensions to match the locating pin of the ANGLE HEAD. Please contact a BIG DAISHOWA agent if using an existing stop block.

STANDARD SETUP OF THE LOCATING PIN

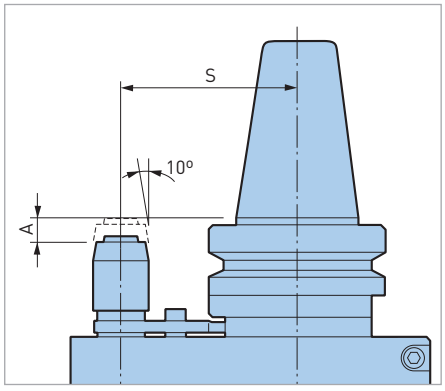
Please note that the "S" dimension and Fixed Length "A" are not adjustable by the user. If the standard dimensional values shown below are not suitable for your machine, please contact a BIG DAISHOWA agent.

"S" Dimension

The distance from the centerline of the ANGLE HEAD spindle to the centerline of the locating pin.

Fixed Length "A"

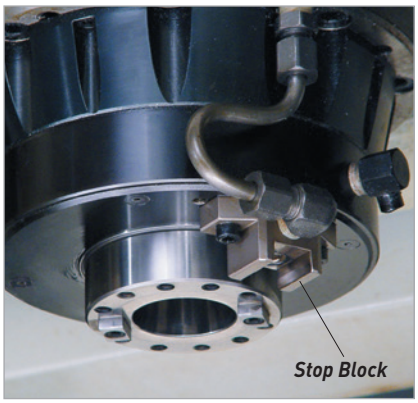
The axial distance from the gage line to the top of the locating pin, when the locating pin is properly engaged in the stop block.

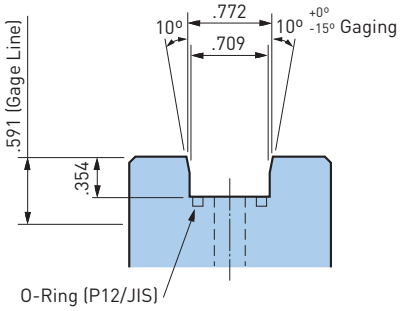


Catalog Number	Dimension S	Fixed Length A
BCV/BDV/BBT40 HSK-A63	2.559	.315
BCV/BDV/BBT50 HSK-A100	4.331	.236

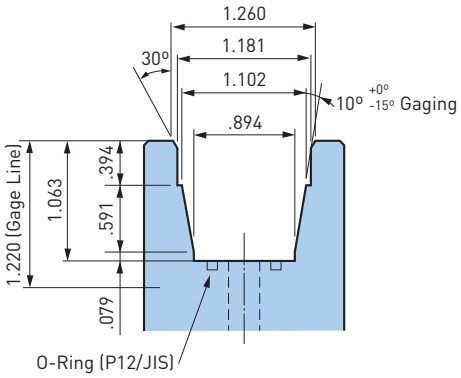
STOP BLOCK DIMENSIONS

Please order a stop block from the machine tool builder. Refer to the following diagrams for the proper stop block groove dimensions and configurations for use with a ANGLE HEAD.





S=2.559" (65mm) / S=3.150" (80mm)



S=4.331" (110mm)

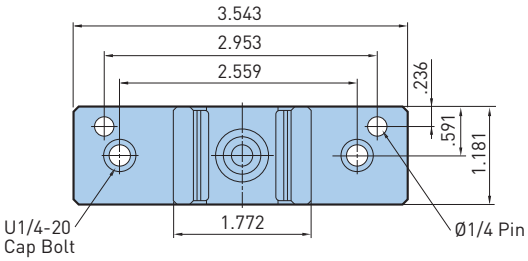
CAUTION

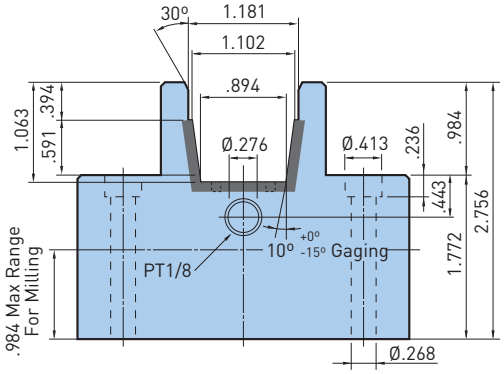
For a BCV50/BBT50 unit with an 3.150" "S" dimension, please use the stop block dimensions for BCV40/BBT40, as the locating pin dimension differs from that of a standard unit with a 4.331" "S" dimension.

SEMI-FINISHED STOP BLOCK

A semi-finished stop block has the proper groove form for use with AIR POWER SPINDLE, HIGH SPINDLE and Hi-JET HOLDER, as well as additional material to allow the customer to machine the block to the correct height.

If a pre-made stop block is unobtainable from the machine tool builder, a semi-finished stop block can be used. Please consult with the machine tool builder for selection, machining, and mounting of the semi-finished stop block.

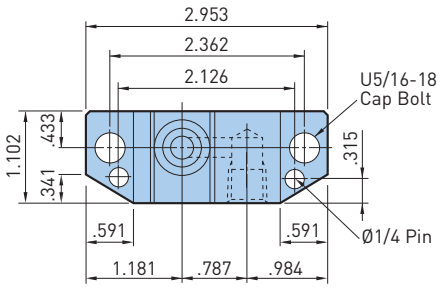


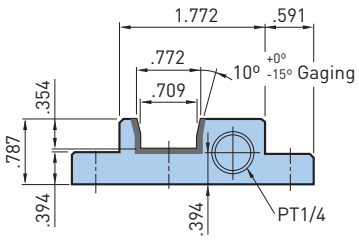


ANGLE HEADS (S=4.331)

Catalog Number
SB-G/E

- Area marked ■ indicates heat treatment (HRC45-50), all other surfaces can be milled
- Adjustment to the required height by milling the base
- Fix the stop block by inserting two dowel pins (Ø1/4)

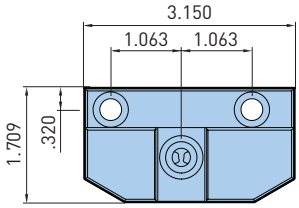


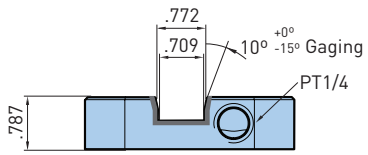


PROFIT MAKER (S=2.559, 3.150)

Catalog Number
SB-F

- Area marked ■ indicates heat treatment (HRC45-50), all other surfaces can be milled
- Fix the stop block by inserting two dowel pins (Ø1/4)
- Stop block SB-F is not height-adjustable





PROFIT MAKER

Catalog Number
SB-H40

- Area marked ■ indicates heat treatment (HRC45-50), all other surfaces can be milled
- For use with most Haas 40 taper machines

SET UP INFORMATION

Preparing the Locating Pin and Stop Block

For AIR POWER SPINDLE, HIGH SPINDLE & Hi-JET HOLDER. The AIR POWER SPINDLE, HIGH SPINDLE and Hi-JET HOLDER utilize a locating pin that engages with the stop block, which is mounted to the machine spindle. Please refer to the following instructions to select/adjust the locating pin, and to prepare it for the stop block.

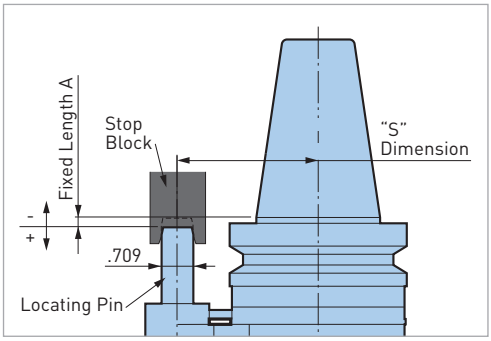
STANDARD SETUP OF THE LOCATING PIN

"S" Dimension

The distance from the centerline of the holder to the centerline of the locating pin. Please note that this dimension is not adjustable by the user.

Fixed Length "A"

The axial distance from the gage line of the spindle to the bottom of the groove on the stop block. This dimension is adjustable by the user. Three (3) locating pin models are available: LP-A, LP-B, and LP-C. Each locating pin is adjustable to provide a different range of Fixed Length "A", as shown in the tables below. Please specify the required Fixed Length "A" when ordering. Otherwise, it will be delivered set at the standard, .236".



Catalog Number	"S" Dimension
BCV/CV/BBT40	2.559
BCV/CV/BBT50	3.150

For HIGH SPINDLE

Catalog Number	BCV40	BCV50	BBT40	BBT50
LP-A	-.354 / +.236	-.157 / +.433	-.945 / -.354	-.354 / +.236
LP-B	+.236 / +.827	+.433 / +.1.024	-.354 / +.236	+.236 / +.827
LP-C	+.827 / +1.417	+1.024 / +1.614	+.236 / +.827	+.827 / +1.417

• Models marked ■ indicates adjustable range of the standard setup

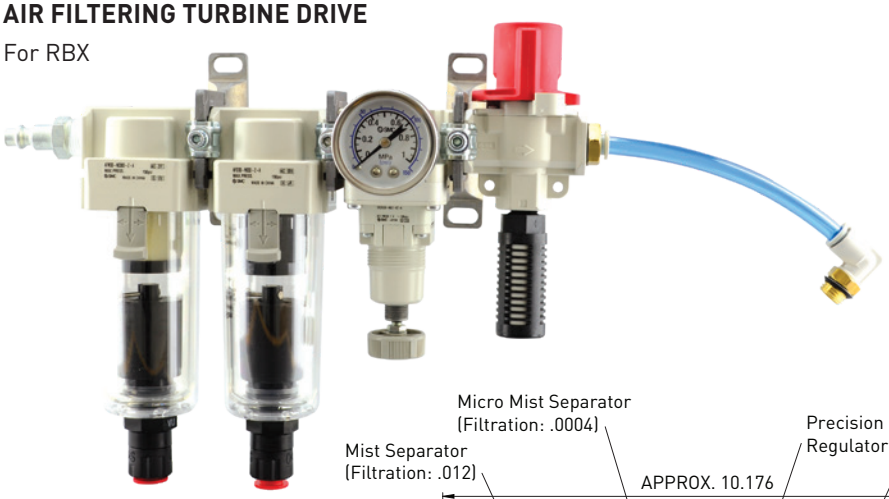
For Hi-JET HOLDER

Catalog Number	CV/BT40	CV/BT50	CV40-OSL1.250	CV50-OSL2.000	BT50-OSL2.000
LP-A	-.236 / +.354	-.354 / +.236	-.197 / +.394	-.079 / +.512	+.118 / +.709
LP-B	+.354 / +.945	+.236 / +.827	+.394 / +.984	+.512 / +1.102	+.709 / +.1.299
LP-C	+.945 / +1.535	+.827 / +1.417	+.984 / +1.575	+1.102 / +1.535	+1.299 / +1.535

• Models marked ■ indicates adjustable range of the standard setup

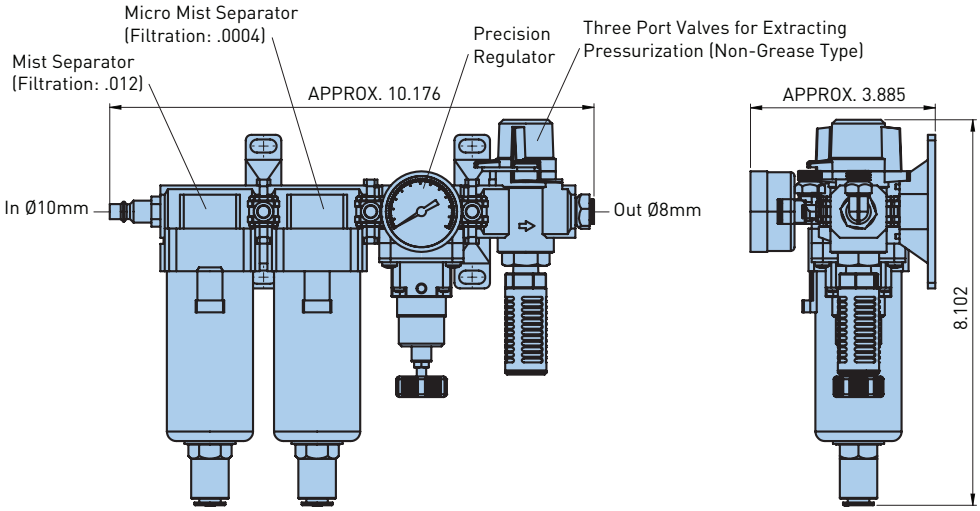
AIR FILTERING TURBINE DRIVE

For RBX

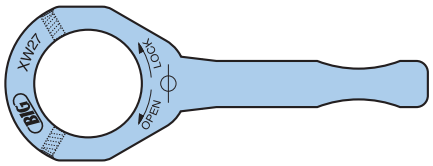


Catalog Number
XF1-NPT

- Tubing and PT 1/4 Loose fitting included



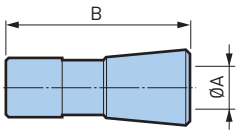
AIR POWER SPINDLE WRENCH



Catalog Number
XW27

SLENDER DRIVE COLLET

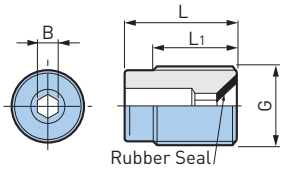
Exclusive Collet for ANGLE HEAD AG90 Slender Drive



Catalog Number	ØA	B
CA4-3	3.0mm	16.5mm
CA4-3.5	3.5mm	
CA4-4	4.0mm	
CA6-3	3.0mm	22mm
CA6-4	4.0mm	
CA6-5	5.0mm	
CA6-6	6.0mm	

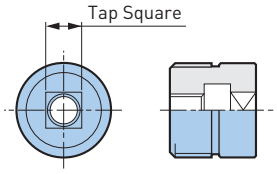
- Use only a cutting tool shank with exactly the same diameter as the collet bore diameter
- Tolerance of the cutting tool shank must be within h7

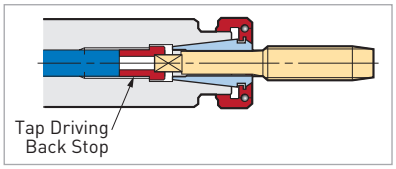
ADJUSTING SCREW



Catalog Number	G	L	L1	B	Body Model
NBA6B	M7	.47 (12mm)	.39 (10mm)	.08 (2mm)	MEGA6N/MEGA6E/NBS6/MEGAER11
NBA8B	M9	.51 (13mm)		.10 (2.5mm)	MEGA8N/MEGA8E/NBS8
NBA10B	M11	.63 (16mm)	.47 (12mm)	.12 (3mm)	MEGA10N/MEGAER16/MEGA10E/NBS10
NBA13B	M14	.79 (20mm)	.59 (15mm)	.16 (4mm)	MEGA13N/MEGAER20/MEGA13E/NBS13
NBA16B	M18				MEGA16N/MEGAER25/NBS16
NBA20B	M21				MEGA20N/MEGAER32/NBS20
NBA25B	M27				MEGA25N

TAP DRIVING BACK STOP





The Square of the Tap is Positively Located by Fitting the Tap Driving Back Stop

Tap Size	Standard	Tap Square	Catalog Number			
			NBS10	NBS13	NBS16	NBS20
M8	DIN 371	6.2mm	—	**NBA13-M8DD**	—	—
	JIS	5.0mm	**NBA10-M8**	**NBA13-M8**	—	—
M10	DIN 371	8.0mm	—	**NBA13-M14M10DD**	**NBA16-M14M10DD**	—
	JIS	5.5mm	**NBA10-M10**	**NBA13-M10**	**NBA16-M10**	—
M12	DIN 376	7.0mm	—	**NBA13-M12D**	**NBA16-M12D**	**NBA20-M12D**
	JIS	6.5mm	—	**NBA13-M12**	**NBA16-M12**	**NBA20-M12**
M14	DIN 376	9.0mm	—	—	**NBA16-M14DM16D**	**NBA20-M14DM16D**
	JIS	8.0mm	—	**NBA13-M14M10DD**	**NBA16-M14M10DD**	**NBA20-M14**
M16	DIN 376	9.0mm	—	—	**NBA16-M14DM16D**	**NBA20-M14DM16D**
	JIS	10.0mm	—	—	**NBA16-M16**	**NBA20-M16**
M18	DIN 376	11.0mm	—	—	—	**NBA20-M18❖**
	JIS	11.0mm	—	—	—	
M20	DIN 376	12.0mm	—	—	—	**NBA20-M20❖**
	JIS	12.0mm	—	—	—	

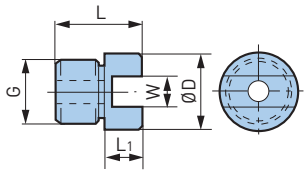
- Rigid tapping function is required on the machine tool
- Only exact size collet can be used with models marked ❖

SET SCREW

Catalog Number	Holder	Thread Size
11.690.517	EM.250	1/4"-28
11.690.518	EM.375	3/8"-24
11.690.519	EM.500	7/16"-20
11.690.520	EM.625	9/16"-18
11.690.521	EM.750	5/8"-18

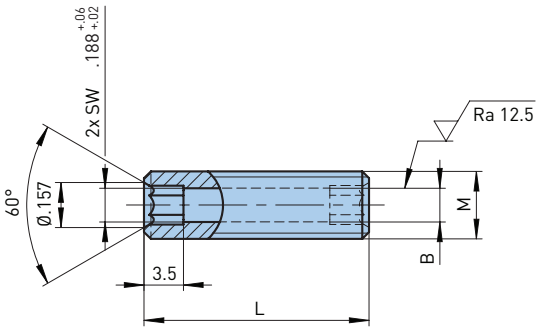
Catalog Number	Holder	Thread Size
11.690.522	EM1.000	3/4"-16
11.690.522	EM1.250	3/4"-16
11.690.522	EM1.500	3/4"-16
11.690.524	EM2.000	1"-14

ADJUSTING SCREW



Catalog Number	ØD	L	L1	G	W	MEGA DS	HMC
HMA-M16S	.71	1.06	.24	M16 P1.5	.39	MEGA.750DS	HMC.750S
						MEGA1.000DS	HMC1.000S
						MEGA20D(DS)	HMC20(S)
						MEGA25D(DS)	HMC25(S)
						MEGA1.250DS (BCV40)	HMC32S
						MEGA32D(DS) (BBT30/40)	
HMA-M24	1.185	1.42	.37	M24 P1.5	.39	MEGA1.250DS	HMC32
						MEGA1.500DS	
						MEGA32D(DS)	HMC42(S)
						MEGA42D(DS)	
						MEGA50D(DS)	

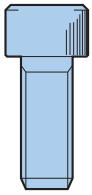
SHRINK FIT ADJUSTING SCREW



Catalog Number	M (Thread)	L	B (Hex)
10.690.928	M5 P.8	.709	2.5mm
10.690.929	M6 P1	.787	3mm
10.690.930	M8 P1	.866	4mm
10.690.931	M10 P1	1.024	5mm
10.690.932	M12 P1	1.102	6mm
10.690.933	M16 P1	1.181	8mm

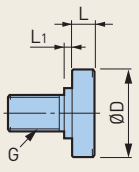
LOCK SCREW

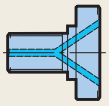
Catalog Number	Adapter	Thread Size
11.690.710	SMC.750	3/8"-24
11.690.711	SMC1.000	1/2"-20
11.690.712	SMC1.250	5/8"-18
11.690.713	SMC1.500	3/4"-16
11.690.714	SMC2.000	1"-14
11.690.715	SMC2.500	1"-14



Catalog Number	Adapter	Thread Size
11.690.704	FMH16	M8 P1.25
11.690.705	FMH22	M10 P1.5
11.690.706	FMH27	M12 P1.75
11.690.707	FMH32	M16 P2
11.690.708	FMH40	M20 P2.5

CLAMP BOLT





Catalog Number	Catalog Number (Coolant Hole)	ØD	L	L1	G
MBA-M12	**TMBA-M12**	33mm	.394	.079	12mm
MBA-M12H	**—**			—	
MBA-M16	**TMBA-M16**	40mm	.394	.236	16mm
MBA-M16H	**—**			—	
MBA-M20	**TMBA-M20**	50mm	.551	.236	20mm
MBA-M20H	**—**			—	
MBA-M24	**TMBA-M24**	65mm		.394	24mm

ROUGH BORING

B.1

ROUGH BORING HEADS 416-433

ROUGH BORING HEADS OVERVIEW 416
MW ROUGH BORING HEAD 417
SERIES 319 SW 418-420
SMART DAMPER BORING SW 421
SW INSERT HOLDERS 422-425
FACE GROOVING HOLDERS FOR SW 426
TWN ROUGH BORING HEADS 427
OD TURNING WITH SW 428
CKB HEAVY METAL BARS 429
INSERT SELECTION & CUTTING DATA 430-431
GUIDELINES & TROUBLESHOOTING 432-433

MW

Small and powerful rough boring head: The MW comes with cylindrical shank and permits extremely fast roughing of small holes.

Ø.630"-.827"
ST20 (steel)
ST14/16 (carbide)

PG. 417

SW

Super-versatile rough boring head for highest cutting performance: Thanks to its clever design, the SW can be used for stepped and balanced roughing by simply switching the insert holders. Various accessories are available for chamfering, back boring and face grooving.

Ø.797"-8.000"
CKB1-CKB7

PG. 419

SW-AL

The fastest solution for deep roughing: SW-AL, built of high quality aluminum, fits perfectly on CKN components. Long tool combinations are therefore up to 50% lighter than similar tools built of steel which enhances the productivity drastically.

Ø2.677"-8.000"
CKN6-CKN7

PG. 420

SW SMART DAMPER

The solution for vibration-free rough boring. Its built-in patented Smart Damper technology is located close to the cutting edge and lifts the performance of rough boring on a new level.

Ø1.614"-4.331"
CKB4-CKB6

PG. 421

TWN

The TWN rough boring heads have been developed for economical rough boring.

Ø.787"-6.024"
CKB1-CKB7

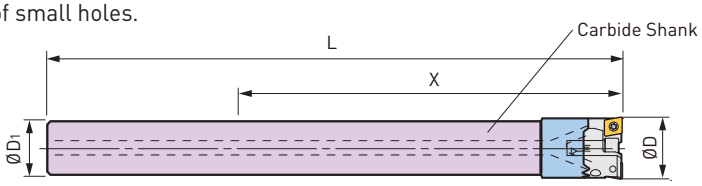
PG. 427

MW ROUGH BORING HEAD

RANGE: Ø.630"-.827"

The MW rough boring head permits extremely fast roughing of small holes.

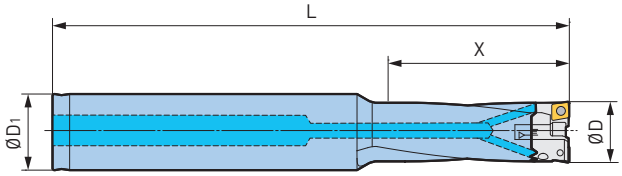
LONG TYPE WITH CARBIDE SHANK



Catalog Number	ØD	Insert Holder	ØD1	L	X	Clamp Bolt Set	Clamp Shim Set	Weight (lbs)
ST14W-MW16-110	.630-.748	MW1619E	.551	5.945	4.331	MW16SS	MW16BS	.79
ST16W-MW18-115	.709-.827	MW1821E	.630	6.772	4.530			1.19

- Insert holders must be ordered separately
- Weight includes the body and insert holder
- Designed exclusively for through hole; it cannot be used for blind hole

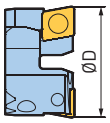
STANDARD TYPE



Catalog Number	ØD	Insert Holder	ØD1	L	X	Weight (lbs)
ST20-MW1619-45	.630-.748	MW1619E	20mm	5.354	1.772	.53
ST20-MW1619-60				5.945	2.362	.57
ST20-MW1821-50	.709-.827	MW1821E		5.551	1.969	.57
ST20-MW1821-65				6.142	2.559	.62

- Clamping screw and wrench are included; insert holders must be ordered separately

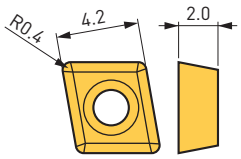
INSERT HOLDERS



Catalog Number	ØD	Insert
MW16-19-SET	.630-.748	MW 04
MW18-21-SET	.709-.827	

- Consisting of two insert holders
- Insert holders balanced cutting only

INDEXABLE INSERTS



Material	Insert	Explanation of Grade
Steel, Stainless Steel	**MW0404F(Z30P)**	Substrate similar to P30 TiAlN+AlCrN coating
Cast Iron, Ductile Iron	**MW0404S(Z30K)**	Substrate similar to K20 TiAlN+AlCrN coating
Nonferrous, Aluminum	**MW0404E(D15N)**	Substrate similar to K15 DLC coating

- Inserts are sold in packages of 10 pieces
- Order example: MW0404F Z30P----10 pieces in a package

INSERT CLAMPING SCREW SET

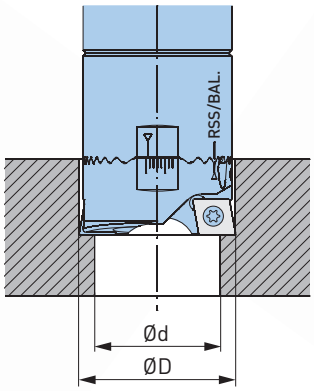
Set Model	Screw Caps	Wrench
S1.6S-T6	M1.6×4.2	FA-T6

- 10 screws and 1 wrench are included in a set

SERIES 319 SW APPLICATION EXAMPLES

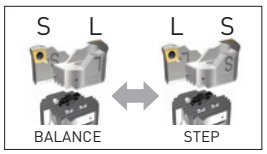
ROUGH BORING BALANCE

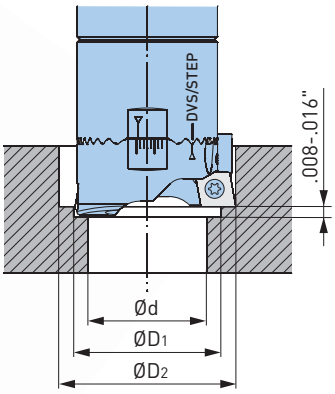
Insert Holders: Type CC/SP/SC
Ø.787-8.000"
High feed rates



ROUGH BORING STEP

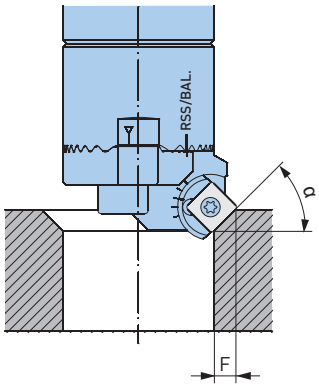
Insert Holders: Type CC
Ø.787-8.000"
Double stock removal,
half the feed rate





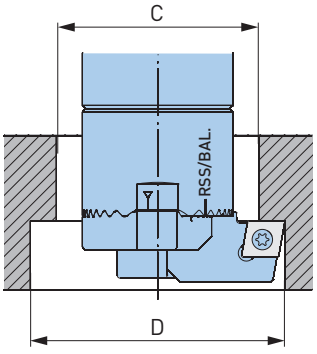
CHAMFERING

Ø1.181-8.268"
Adjustable chamfer angle 15º-75º



BACK BORING

Ø1.732-8.307"
Lead angle 90º

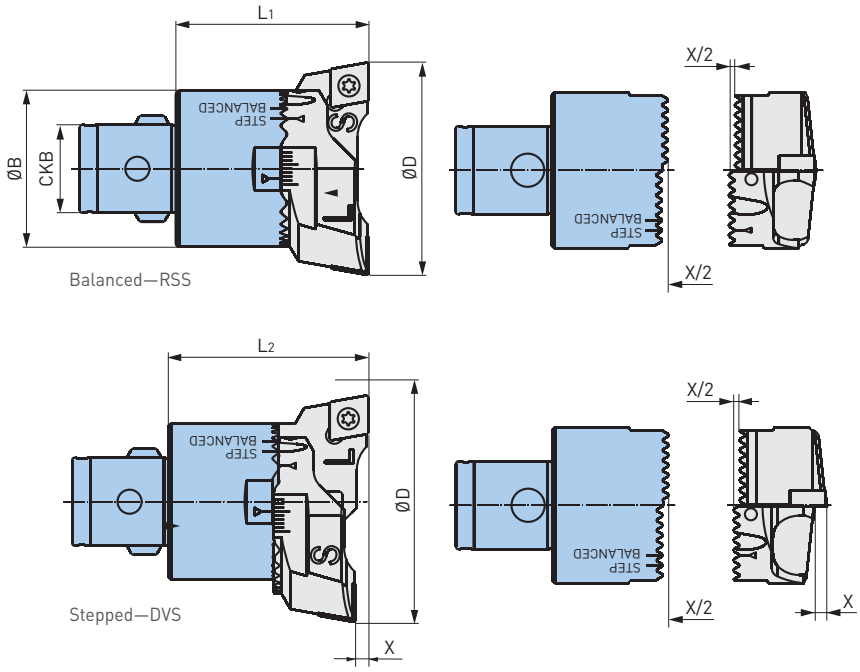


SERIES 319 SW

RANGE: Ø.787"-8.000"

US PATENT # 8,747,034

The short and compact design of the components combined with a positive and friction locked connection between the tool body and insert holders provide maximum rigidity and highest cutting performance.

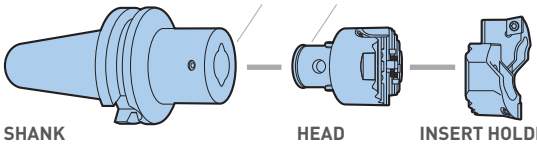


Catalog Number	Reference Number	CKB	ØD	ØB	L1	L2	X (Step)	Weight (lbs.)
SW20-31CKB1	10.319.101	CKB1	.787-1.220	.748	1.280	1.284	.008	.1
SW25-40CKB2	10.319.201	CKB2	.984-1.575	.945	1.398	1.402		.2
SW32-51CKB3	10.319.301	CKB3	1.260-2.008	1.220	1.575	1.579		.4
SW41-66CKB4	10.319.401	CKB4	1.614-2.598	1.535	1.850	1.858	.016	.8
SW53-86CKB5	10.319.501	CKB5	2.087-3.386	1.969	2.244	2.252	.016	1.5
SW68-110CKB6	10.319.601	CKB6	2.677-4.331	2.500	2.795	2.803	.016	2.6
SW98-153CKB6	10.319.602		3.858-6.024	3.543				4.2
SW148-203CKB6	10.319.603		5.827-8.000	5.512				5.0
SW98-153CKB7-87	10.319.701	CKB7	3.858-6.024	3.543	3.425	3.433	.016	6.3
SW98-153CKB7-117	10.319.702		3.858-6.024		4.606	4.614		9.1
SW148-203CKB7	10.319.703		5.827-8.000	5.512				11.3

ACCESSORIES

EXTENSIONS & REDUCTIONS PG. 270
SPARE PARTS PG. 541
INSERTS PG. 514
APPLICATION ADVICE PG. 430

Select the same CK No.



SHANK

BCV Pg. 88
HSK Pg. 206
BIG CAPTO Pg. 265
BBT Pg. 150
Pg. 228
ST Pg. 235 Pg. 305

HEAD

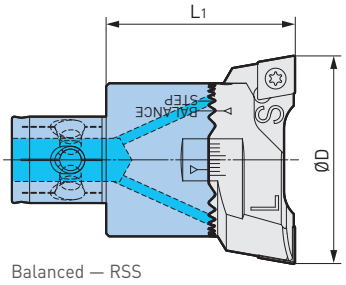
INSERT HOLDER

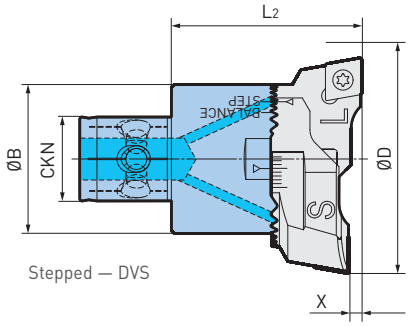
Pg. 422

SERIES 319 SW ALUMINUM

RANGE: Ø2.677"-8.000"

Tool body made of high strength aluminium with CKN connection.



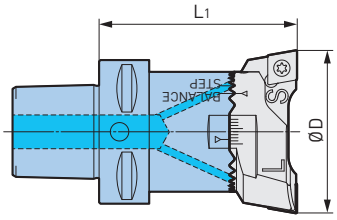


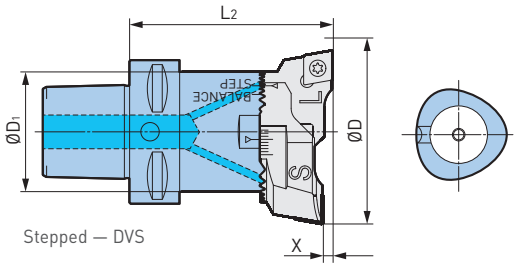
Catalog Number	Reference Number	CKN	ØD	ØB	L1	L2	X (Step)	Weight (lbs.)
SW68-110CKN6AL	10.319.604N	CKN6	2.677-4.331	2.500	2.795	2.803	.016	1.1
SW98-153CKN6AL	10.319.605N		3.858-6.024	3.543				2.0
SW148-203CKN6AL	10.319.607N		5.827-8.000	5.512				2.4
SW98-153CKN7-87AL	10.319.705N	CKN7	3.858-6.024	3.543	3.425	3.433		2.9
SW148-203CKN7AL	10.319.707N		5.827-8.000	5.512	4.606	4.614		4.6

SW BIG CAPTO Rough Boring Heads

RANGE: Ø.984"-8.000"

Monobloc execution provides highest rigidity.





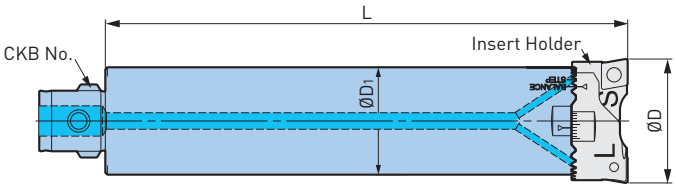
Catalog Number	Reference Number	BIG CAPTO	ØD	ØD1	L1	L2	X (Step)	Weight (lbs.)
SW25-40C3	10.472.201	C3	.984-1.575	.945	3.150	3.154	.008	.5
SW32-51C3	10.472.301		1.260-2.008	1.220	2.165	2.169		.6
SW41-66C4	10.472.401	C4	1.614-2.598	1.535	2.638	2.646	.016	1.2
SW53-86C5	10.472.501	C5	2.087-3.386	1.969	3.032	3.039		2.3
SW68-110C6	10.472.601	C6	2.677-4.331	2.500	3.622	3.630		4.4
SW98-153C8	10.472.701	C8	3.858-6.024	3.543	4.606	4.614		10.9
SW148-203C8	10.472.703		5.827-8.000	5.512	4.606	4.614		13.2

ACCESSORIES

SPARE PARTS
PG. 541

SMART DAMPER BORING SW

The Well Established Dynamic Damper Eliminates Chatter in Heavy Work Loads

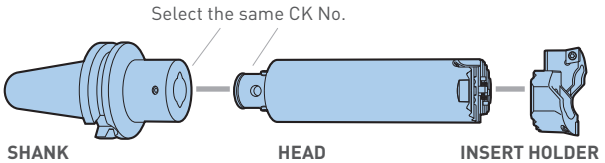


Catalog Number	CK	ØD	ØD1	L	Weight (lbs.)
CKB4-SW41DP-190	CKB4	1.614-2.598	1.535	7.480	5.3
CKB5-SW53DP-220	CKB5	2.087-3.386	1.969	8.661	9.9
CKB6-SW68DP-245	CKB6	2.677-4.331	2.520	9.646	18.3

ACCESSORIES

SPARE PARTS
PG. 541

- Clamp bolts and belleville springs are included, cartridge and insert must be ordered separately
- Designed to be capable of supplying coolant through body



SHANK

BCV Pg. 88 | HSK Pg. 206 | BIG CAPTO Pg. 265

BBT Pg. 150 | Pg. 228 | Pg. 235 | ST Pg. 305

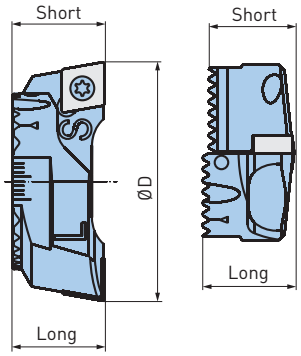
HEAD

INSERT HOLDER

Pg. 422

SERIES 319 SW INSERT HOLDERS

CC (SOLD IN PAIRS)



Head Type	Catalog Number	Reference Number	ØD	Insert
SW20	**IH1SW20C**	10.639.413	.787-1.024	CC..06
	IH2SW20C	10.639.417	.984-1.220	
SW25	**IH1SW25C**	10.639.423	.984-1.299	CC..06
	IH2SW25C	10.639.427	1.260-1.575	
SW32	**IH1SW32C**	10.639.433	1.260-1.654	CC..09
	IH2SW32C	10.639.437	1.614-2.008	
SW41	**IH1SW41C**	10.639.443	1.614-2.126	CC..09
	IH2SW41C	10.639.447	2.087-2.598	
SW53	**IH1SW53C**	10.639.453	2.087-2.756	CC..12
	IH2SW53C	10.639.457	2.717-3.386	
SW68	**IH1SW68C**	10.639.463	2.677-3.543	CC..12
	IH2SW68C	10.639.467	3.465-4.331	
SW98	**IH1SW98C**	10.639.473	3.858-4.961	CC..12
	IH2SW98C	10.639.477	4.921-6.024	
SW148	**IH1SW148C**	10.639.483	5.827-6.929	CC..12
	IH2SW148C	10.639.487	6.890-8.000	

ADDITIONAL INSERT HOLDERS — CC..16

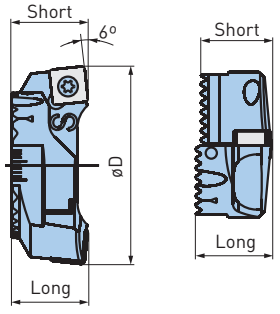
SW68	**IH1SW68C**	10.639.563	2.677-3.543	CC..16
	IH2SW68C	10.639.567	3.465-4.331	
SW98	**IH1SW98C**	10.639.573	3.858-4.961	CC..16
	IH2SW98C	10.639.577	4.921-6.024	
SW148	**IH1SW148C**	10.639.583	5.827-6.929	CC..16
	IH2SW148C	10.639.587	6.890-8.000	

- Consisting of two insert holders with different lengths, type S (short) and L (long)
- Insert holders are also available by the piece; see pg. 542

ACCESSORIES

SPARE PARTS PG. 542

SP & SC (SOLD IN PAIRS)



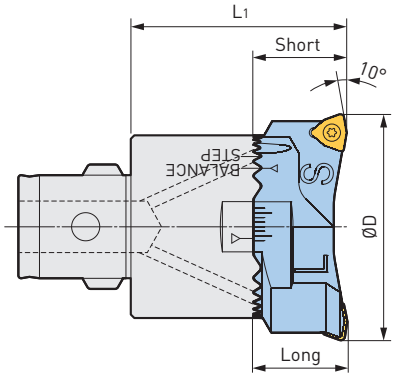
Head Type	Catalog Number	Reference Number	ØD	Insert
SW20	**IH1SW20S**	10.639.113	.787-1.024	SP..06
SW25	**IH1SW25S**	10.639.123	.984-1.299	SP..06
SW32	**IH1SW32S**	10.639.133	1.260-1.654	SC..09
	IH2SW32S	10.639.137	1.614-2.008	
SW41	**IH1SW41S**	10.639.143	1.614-2.126	SC..09
	IH2SW41S	10.639.147	2.087-2.598	
SW53	**IH1SW53S**	10.639.153	2.087-2.756	SC..12
	IH2SW53S	10.639.157	2.717-3.386	
SW68	**IH1SW68S**	10.639.163	2.677-3.543	SC..12
	IH2SW68S	10.639.167	3.465-4.331	
SW98	**IH1SW98S**	10.639.173	3.858-4.961	SC..12
	IH2SW98S	10.639.177	4.921-6.024	
SW148	**IH1SW148S**	10.639.183	5.827-6.929	SC..12
	IH2SW148S	10.639.187	6.890-8.000	

- Consisting of two insert holders with different lengths, type S (short) and L (long)
- Insert holders are also available by the piece; see pg. 542

ACCESSORIES

SPARE PARTS PG. 542

WC (SOLD IN PAIRS)



Head Type	Catalog Number	Reference Number	ØD	L1	Inserts
SW41	**IH1SW41W**	10.639.243	1.929-2.441	1.850	WC 04
SW53	**IH1SW53W**	10.639.253	2.323-2.992	2.244	WC 05
	IH2SW53W	10.639.257*	2.717-3.386	2.244	
SW68	**IH1SW68W**	10.639.263	2.874-3.740	2.795	WC 06
	IH2SW68W	10.639.267	3.543-4.409	2.795	
SW98	**IH1SW98W**	10.639.273	4.173-5.276	2.795/3.425/4.606**	
	IH2SW98W	10.639.277	5.157-6.260	2.795/3.425/4.606**	
SW148	**IH1SW148W**	10.639.283	6.142-7.244	2.795/4.606**	
	IH2SW148W	10.639.287	7.520-8.228	2.795/4.606**	

***Set consisting of two insert holders with different lengths, Type S (short) and L (long) and for different boring ranges (10.639.255: Ø69-86 mm, 10.639.252: Ø 59-76 mm)**

****L1 depends on the length of the boring head**

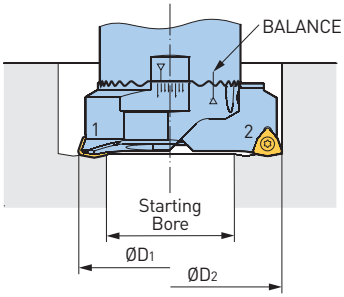
- Consisting of two insert holders with different lengths, type S (short) and L (long)
- For full-profile-roughing only
- Insert holders are also available by the piece; see pg. 542

ADJUSTMENT INSTRUCTIONS

Mount the insert holders on mark «RSS/BALANCE»

Set cutting edge 2 to the final bore diameter (ØD2)

Set cutting edge 1 corresponding to the starting bore diameter, according to the table (column ØD1).



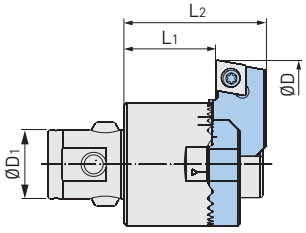
ACCESSORIES

SPARE PARTS PG. 542

Head Type	Catalog Number	Starting Bore Ø	ØD1	ØD2
SW41	**10.639.243**	1.378-1.492	1.929	2.008-2.441
		1.496-1.614	2.047	2.126-2.441
SW53	**10.639.253**	1.614-1.768	2.323	2.402-2.992
		1.772-1.969	2.480	2.560-2.992
	10.639.257	2.008-2.161	2.717	2.992-3.386
		2.165-2.362	2.874	3.189-3.386
SW68	**10.639.263**	1.969-2.201	2.874	2.953-3.661
		2.205-2.437	3.110	3.189-3.661
		2.441-2.638	3.346	3.425-3.661
	10.639.267	2.638-2.870	3.543	3.662-4.331
		2.874-3.106	3.780	3.858-4.331
		3.110-3.346	4.016	4.094-4.331
SW98	**10.639.273**	3.307-3.539	4.213	4.291-5.079
		3.543-3.776	4.449	4.528-5.236
		3.780-4.051	4.685	4.764 -5.236
		4.055-4.291	4.961	5.039-5.236
	10.639.277	4.252-4.523	5.157	5.236-6.063
		4.528-4.799	5.433	5.512-6.260
		4.803-5.075	5.709	5.787-6.260
		5.079-5.315	5.984	6.063-6.260
SW148	**10.639.283**	5.276-5.508	6.181	6.260- 179
		5.512-5.744	6.417	6.496-7.205
		5.748-6.020	6.654	6.732 -7.205
		6.024-6.260	6.929	7.008-7.205
	10.639.287	6.220-6.492	7.126	7.205-8.032
		6.496-6.768	7.402	7.480-8.228
		6.772-7.043	7.677	7.756-8.228
		7.047-7.283	7.953	8.032-8.228

SERIES 319 SW BACK BORING INSERT HOLDERS

These insert holders are made for back boring with the twin cutter rough boring heads Series 319 SW32-SW148 and cover the diameter range from Ø1.732"-8.307".The set contains one insert holder and one blank piece.



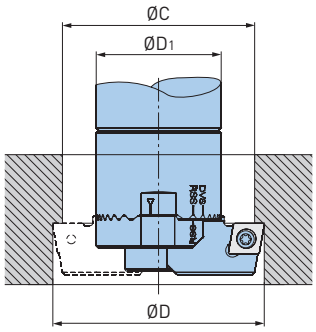
Boring Head	Catalog Number	Reference Number	Insert	ØD	ØD1	L1*	L2*
SW32	**IH1SW32BB**	10.639.403	CC..09	1.732-2.126	1.220	.945	1.496
SW41	**IH1SW41BB**	10.639.404		2.087-2.598	1.535	1.142	1.732
SW53	**IH1SW53BB**	10.639.405	CC..12	2.559-3.228	1.969	1.339	2.165
SW68	**IH1SW68BB**	10.639.406		3.189-4.055	2.500	1.614	2.598
SW98 (CKB6/CKN6)	**IH1SW98BB**	10.639.407		4.016-5.118	3.543	1.496	2.717
	IH2SW98BB	10.639.408		5.079-6.181			
SW148 (CKB6/CKN6)	**IH1SW148BB**	10.639.409		6.142-7.244	5.512		
	IH2SW148BB	10.639.410		7.205-8.307			
SW98 (CKB7/CKN7)	**IH1SW98BB**	10.639.407		4.016-5.118	3.543	1.850/3.031	3.071/4.252
	IH2SW98BB	10.639.408		5.079-6.181			
SW148 (CKB7/CKN7)	**IH1SW148BB**	10.639.409		6.142-7.244	5.512	3.031	4.252
	IH2SW148BB	10.639.410		7.205-8.307			

***With SW98L x CKB7/CKN7**

- Insert holder must be mounted on RSS/BALANCED side of boring head

ACCESSORIES

SPARE PARTS PG. 543

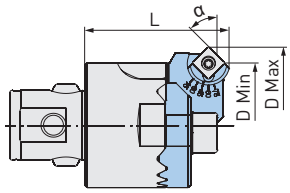


BACK BORE & ENTRY BORE DIAMETERS

Maximum Back Bore Diameter "D"	D Max = (2xC)-D1
Maximum Body Diameter "D1"	D1 Max = (2xC)-D
Minimum Entry Bore Diameter "C"	C Min = (D+D1)/2

SERIES 319 SW CHAMFERING INSERT HOLDERS

These insert holders are made for front and back chamfering on the twin cutter roughing heads Series 319 SW41-SW148 and cover the diameter range Ø1.299"-8.268". The desired chamfering angle is adjustable from 15º-75º. The set contains one insert holder and one blank piece.



Boring Head	Catalog Number	Reference Number	Insert	15º	30º	45º	60º	75º	L*
SW41	**IH1SW41CF**	10.639.104	SC..09	1.850-2.362	1.929-2.441	1.968-2.480	1.968-2.480	1.929-2.441	2.01
SW53	**IH1SW53CF**	10.639.105		2.323-2.992	2.402-3.071	2.441-3.110	2.441-3.110	2.402-3.071	2.28
SW68	**IH1SW68CF**	10.639.106		2.953-3.819	3.032-3.898	3.071-3.937	3.071-3.937	3.032-3.898	2.68
SW98	**IH1SW98CF**	10.639.107	SC..12	3.858-4.961	3.936-5.039	3.976-5.079	3.936-5.039	3.897-5.000	4.69
	IH2SW98CF	10.639.108		4.921-6.024	4.999-6.102	5.039-6.142	4.999-6.102	4.960-6.063	
SW148	**IH1SW148CF**	10.639.109		5.984-7.087	6.062-7.165	6.102-7.205	6.062-7.165	6.023-7.126	4.69
	IH2SW148CF	10.639.110		7.047-8.150	7.125-8.228	7.165-8.268	7.125-8.228	7.086-8.189	

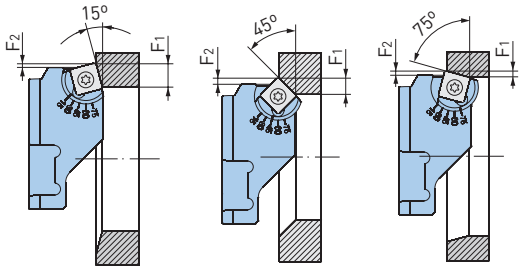
***L dimension applies for boring head with length of 4.606**

- Insert holder must be mounted on RSS/BALANCED side of boring head

ACCESSORIES

RADIAL CHAMFER LENGTH FOR FRONT (F1) AND BACK (F2) CHAMFERING

Applicable for inserts with .016" nose radius.

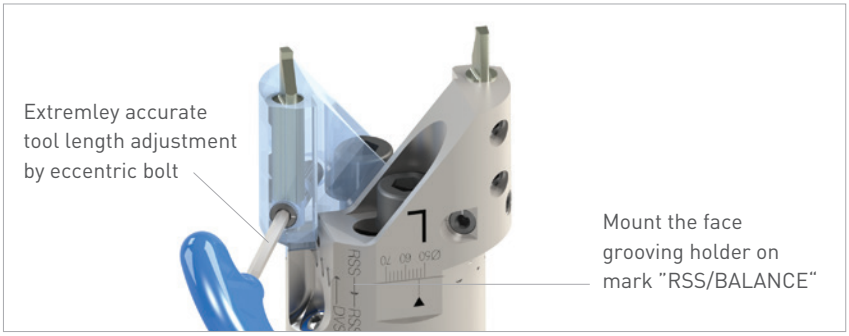


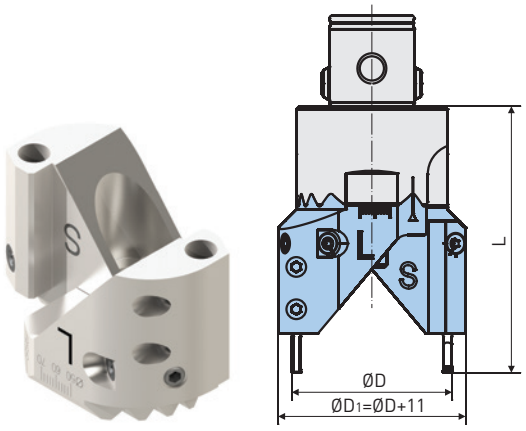
Head Type	Insert	15º		30º		45º		60º		75º	
		F1	F2	F1	F2	F1	F2	F1	F2	F1	F2
SW41	SC..09	.303	.028	.272	.055	.224	.071	.157	.067	.083	.047
SW53											
SW68											
SW98	SC..12	.417	.047	.374	.087	.307	.102	.217	.098	.110	.071
SW148											

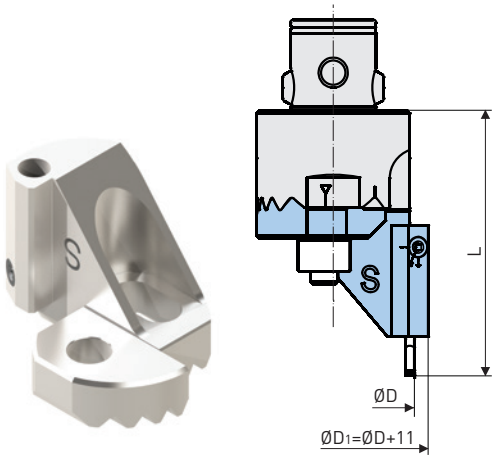
ACCESSORIES

FACE GROOVING HOLDERS FOR SW

Upgrade your existing rough boring heads SW: the face grooving holder provide the possiblity to manufacture grooves in the diameter range from Ø2.087"-8.000".







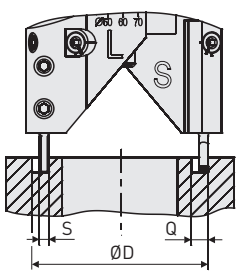
TWIN CUTTER SET

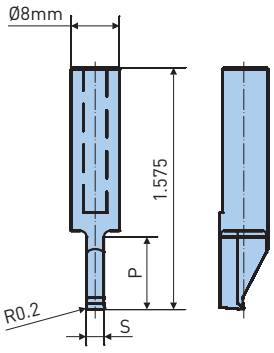
Head Type	Catalog Number	Reference Number	ØD	L
SW53	**IH1SW53FG**	10.639.653	2.087-2.756	3.465
SW68	**IH1SW68FG**	10.639.663	2.677-3.543	3.740
	IH2SW68FG	10.639.667	3.465-4.331	
SW98	**IH1SW98FG**	10.639.673	3.858-4.961	4.449
	IH2SW98FG	10.639.677	4.921-6.024	
SW148	**IH1SW148FG**	10.639.683	5.827-6.929	5.630
	IH2SW148FG	10.639.687	6.890-8.000	

SINGLE CUTTER SET

Head Type	Catalog Number	Reference Number	ØD	L
SW53	**IH1SW53FG-S**	10.639.654	2.087-2.756	3.465
SW68	**IH1SW68FG-S**	10.639.664	2.677-3.543	3.740
	IH2SW68FG-S	10.639.668	3.465-4.331	
SW98	**IH1SW98FG-S**	10.639.674	3.858-4.961	4.449
	IH2SW98FG-S	10.639.678	4.921-6.024	
SW148	**IH1SW148FG-S**	10.639.684	5.827-6.929	5.630
	IH2SW148FG-S	10.639.688	6.890-8.000	

CUTTERS



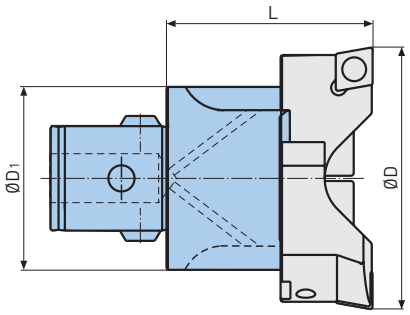


Catalog Number	Reference Number	S	Q Max	Insert Grade	P Max
FG2-ST8-40K40	10.958.601	2mm	.138	Uncoated K40	.472
FG3-ST8-40K40	10.958.602	3mm	.217		
FG4-ST8-40K40	10.958.603	4mm	.295		
FG5-ST8-40K40	10.958.604	5mm	.375		
FG2-ST8-40K40C	10.958.611	2mm	.138	Coated P40C	
FG3-ST8-40K40C	10.958.612	3mm	.217		
FG4-ST8-40K40C	10.958.613	4mm	.295		
FG5-ST8-40K40C	10.958.614	5mm	.375		

TWN ROUGH BORING HEADS

RANGE: Ø.787"-6.024"

The heads of the TWN series have been developed for economical heavy duty rough boring.



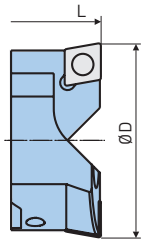
Catalog Number	Reference Number	CK	ØD	ØD1	L	Weight (lbs.)
TWN20-31CKB1	10.315.101	CKB1	.787-1.220	.728	1.280	.1
TWN25-40CKB2	10.315.201	CKB2	.984-1.575	.921	1.398	.2
TWN32-51CKB3	10.315.301	CKB3	1.260-2.008	1.181	1.575	.4
TWN41-66CKB4	10.315.401	CKB4	1.614-2.598	1.535	1.850	.8
TWN53-86CKB5	10.315.501	CKB5	2.087-3.386	1.929	2.244	1.4
TWN68-110CKB6	10.315.601	CKB6	2.677-4.331	2.480	2.795	2.9
TWN98-153CKB6	10.315.602		3.858-6.024	3.543		4.1
TWN98-153-CKB7	10.315.701	CKB7	3.858-6.024	3.543	3.425	6.8

ACCESSORIES

SPARE PARTS PG. 544

INSERT HOLDERS—TYPE CC (SOLD IN PAIRS)

Standard insert holders for CC- type inserts with 90° lead angle. For through- and blind holes. Symmetrical and double offset cutting edge arrangement possible.



Head Type	Catalog Number	Reference Number	ØD	Insert
TW20	**IH1TW20C**	10.638.411	.787-1.024	CC..06
	IH2TW20C	10.638.412	.984-1.220	
TW25	**IH1TW25C**	10.638.421	.984-1.300	
	IH2TW25C	10.638.422	1.260-1.575	
TW32	**IH1TW32C**	10.638.431	1.260-1.654	CC..09
	IH2TW32C	10.638.432	1.614-2.008	
TW41	**IH1TW41C**	10.638.441	1.614-2.126	
	IH2TW41C	10.638.442	2.087-2.598	
TW53	**IH1TW53C**	10.638.451	2.087-2.756	CC..12
	IH2TW53C	10.638.452	2.717-3.386	
TW68	**IH1TW68C**	10.638.461	2.677-3.543	
	IH2TW68C	10.638.462	3.465-4.331	
TW98	**IH1TW98C**	10.638.471	3.858-4.961	
	IH2TW98C	10.638.472	4.921-6.024	

ACCESSORIES

SPARE PARTS PG. 544

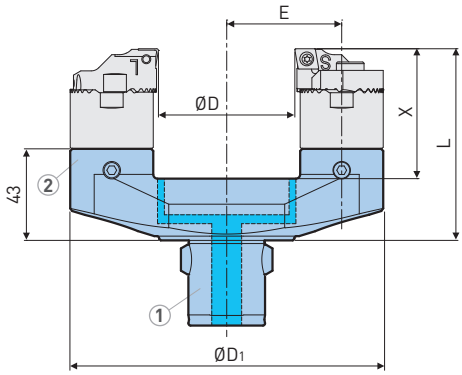
INSERTS PG. 514

APPLICATION ADVICE PG. 430

OD TURNING WITH SW

RANGE: Ø16-120mm

This program consists of tool holders with CKB5 and CKB6 connectors, made for different turning ranges and with tool connections in the sizes CKB3, CKB4 and CKB5. The corresponding precision finish or rough boring heads and counterweights can be mounted on the tool holder either directly or by means of an extension. With this program, outer diameters in the range from Ø16-120mm can be machined.



Catalog Number	Reference Number	CK ①	CK ②	ØD1	E	L*	X*	Weight (lbs.)
OD16-44CKB5-CKB3	10.335.906	CKB5	CKB3	4.213	1.496	3.268 (4.449) (5.039)	2.008 (3.189) (3.780)	5.9
OD16-44CKB6-CKB3	10.335.905	CKB6	CKB3	4.213	1.496	3.268 (4.449) (5.039)	2.008 (3.189) (3.780)	3.2
OD34-67CKB6-CKB4	10.335.904		CKB4	5.787	2.126	3.543 (5.118) (5.906)	2.283 (3.858) (4.646)	3.9
OD57-90CKB6-CKB4	10.335.903			6.693	2.579	3.543 (5.118) (5.906)	2.283 (3.858) (4.646)	4.6
OD78-120CKB6-CKB5	10.335.902		CKB5	8.740	3.406	3.937 (6.299) (7.480)	2.677 (5.039) (6.220)	6.1

***The numbers in brackets indicate the tool length (L) and the Max pin length (X) with the use of the corresponding extensions.**

ACCESSORIES

EXTENSIONS & REDUCTIONS
PG. 270

CAUTION

Counter-clockwise rotation of spindle!
Vc max 1,500 SFM

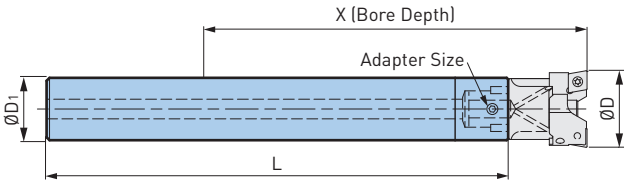
INSERT HOLDERS—ROUGH BORING

Turning Adapter		Boring Head (x2)		Insert Holders (1 pair)		ØD
Catalog Number	Reference Number	Catalog Number	Reference Number	Catalog Number	Reference Number	
OD16-44CKB5-CKB3	10.335.906	**SW32-51CKB3**	10.319.301	**IH2SW32C**	10.639.437	.984-1.378
				IH1SW32C	10.639.433	1.339-1.732
OD16-44CKB6-CKB3	10.335.905	**SW32-51CKB3**	10.319.301	**IH2SW32C**	10.639.437	.984-1.378
				IH1SW32C	10.639.433	1.339-1.732
OD34-67CKB6-CKB4	10.335.904	**SW41-66CKB4**	10.319.401	**IH2SW41C**	10.639.447	1.654-2.165
				IH1SW41C	10.639.443	2.126-2.638
OD57-90CKB6-CKB4	10.335.903	**SW41-66CKB4**	10.319.401	**IH2SW41C**	10.639.447	2.559-3.071
				IH1SW41C	10.639.443	3.031-3.543
OD78-120CKB6-CKB5	10.335.902	**SW53-86CKB5**	10.319.501	**IH2SW53C**	10.639.457	3.425-4.094
				IH1SW53C	10.639.453	4.055-4.724

CKB HEAVY METAL BARS

For Roughing

Tool combinations with heavy metal boring bars give higher rigidity and damping of vibration over conventional steel shank tools when roughing long bores over 5:1. Their dense structure and machinability gives higher toughness over carbide.



Catalog Number	Reference Number	Size	ØD1	L	X	ØD		Weight (lbs.)
						Min	Max	
ST.750-CKB1-190TM	11.370.321	CKB1	.750	7.480	6.889	.787	1.220	1.6
ST.750-CKB1-240TM	11.370.322			9.450	8.559	.787	1.220	2.1
ST24-CKB2-218TM	11.370.324	CKB2	24mm	8.580	7.793	.984	1.575	2.4
ST24-CKB2-290TM	11.370.325			11.420	10.633	.984	1.575	4.0
ST1.250-CKB3-235TM	11.370.328	CKB3	1.250	9.250	8.266	1.260	2.008	5.8
ST1.250-CKB3-350TM	11.370.327			13.780	12.796	1.260	2.008	8.0
ST1.500-CKB4-254TM	11.370.330	CKB4	1.500	10.000	8.622	1.614	2.598	8.8
ST1.500-CKB4-375TM	11.370.101			14.750	13.372	1.614	2.598	13.3

ACCESSORIES

SPARE PARTS
PG. 538

Use HMC Chucks for Optimal Holding

INSERT SELECTION & CUTTING DATA

Recommended Inserts & Cutting Data for Rough Boring Under Optimal Conditions

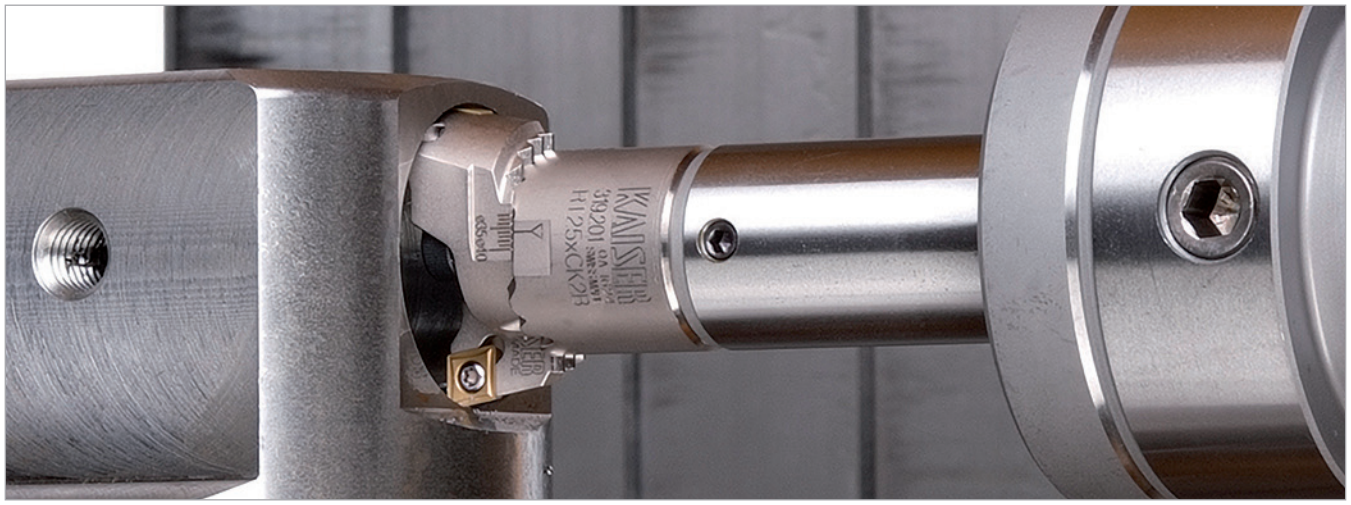
- Rigid fixturing and workpiece
- Good machine spindle with adequate hp and thrust
- Setup not chatter prone

Material	Nose Radius	CC..06 (1/4" I.C.)					CC..09 (3/8" I.C.)					CC..12 (1/2" I.C.)				
		Catalog Number	Balanced Cutting		Step Cutting		Catalog Number	Balanced Cutting		Step Cutting		Catalog Number	Balanced Cutting		Step Cutting	
			Feed (IPR)	Max ø D.O.C.	Feed (IPR)	Max ø D.O.C.		Feed (IPR)	Max ø D.O.C.	Feed (IPR)	Max ø D.O.C.		Feed (IPR)	Max ø D.O.C.	Feed (IPR)	Max ø D.O.C.
Mild Steels 10XX-15XX 1018, 1020, 1551	.016	**CCMP060204-TNP12**	.012	.200	.006	.300	**CCMT09T304-TNP12**	.014	.300	.008	.500	**CCMM120404-TNP11**	.014	.350	.008	.600
	.031	**11.654.869**	.014	.200	.007	.300	**CCMT09T308-TNP12**	.018	.300	.010	.500	**CCMM120408-TNP12**	.020	.400	.012	.800
High Carbon Alloy Steels 23XX-92XX 4130, 4340, 8620	.016	**CCMP060204-TNP11**	.010	.200	.005	.300	**CCMT09T304-TNP11**	.012	.300	.006	.500	**CCMM120404-TNP11**	.012	.350	.008	.600
	.031	**CCMT060208-TNP11**	.012	.200	.006	.300	**CCMT09T308-TNP11**	.016	.300	.008	.500	**CCMM120408-TNP11**	.018	.400	.012	.800
300 Series Stainless Steel 304, 316, 17-4ph	.016	**10.654.837**	.010	.170	.005	.250	**10.654.947**	.012	.250	.006	.450	**10.654.968**	.012	.275	.007	.500
	.031	**10.654.847**	.012	.170	.006	.250	**10.654.957**	.016	.250	.008	.450	**10.654.969**	.018	.325	.010	.600
400 Series Stainless Steel Martensitic	.016	**CCMP060204-TNP12**	.010	.200	.005	.300	**CCMT09T304-TNP12**	.012	.300	.006	.500	**10.654.968**	.012	.350	.008	.600
	.031	**11.654.869**	.012	.200	.006	.300	**CCMT09T308-TNP12**	.016	.300	.008	.500	**10.654.969**	.018	.400	.012	.800
Grey Cast Iron Class 30	.016	**CCMP060204-TNP11**	.012	.250	.006	.400	**CCMT09T304-TNP11**	.014	.400	.008	.750	**CCMM120404-TNP11**	.014	.500	.008	.800
	.031	**CCMT060208-TNP11**	.014	.250	.007	.400	**CCMT09T308-TNP11**	.018	.400	.010	.750	**CCMM120408-TNP11**	.020	.600	.012	1.00
Cast Iron Ductile/Nodular	.016	**CCMP060204-TNP11**	.010	.225	.005	.350	**CCMT09T304-TNP11**	.012	.350	.006	.625	**CCMM120404-TNP11**	.012	.450	.008	.700
	.031	**CCMT060208-TNP11**	.012	.225	.006	.350	**CCMT09T308-TNP11**	.016	.350	.008	.625	**CCMM120408-TNP11**	.018	.500	.012	.900
High Temp. Alloys Titanium, Inconel, Monel, etc.	.016	**10.654.837**	.008	.140	.004	.200	**10.654.947**	.010	.180	.005	.350	**10.654.968**	.012	.220	.005	.400
	.031	**10.654.847**	.012	.180	.006	.350	**10.654.957**	.012	.200	.006	.400	**10.654.969**	.014	.280	.007	.500
Copper Alloys Brass & Bronze	.016	**11.654.858**	.012	.250	.006	.400	**11.654.957**	.014	.400	.008	.750	**CCMT120404-C2P**	.014	.500	.008	.800
	.031	**11.654.864**	.014	.250	.007	.400	**CCMT09T308-C2P**	.018	.400	.010	.750	**11.654.991**	.020	.600	.012	1.000
Aluminum and Non-Ferrous	.016	**10.654.888**	.012	.300	.006	.500	**10.654.977**	.014	.500	.008	.900	**10.654.995**	.016	.550	.010	1.000
	.031	**11.654.864**	.014	.300	.008	.500	**10.654.987**	.018	.500	.010	.900	**10.654.992**	.022	.650	.012	1.250

CAUTION

Maximum cutting speed: 4,000 SFM. All cutting data without guarantee.

$$RPM = \frac{SFM \times 3.82}{Bore\ Ø}$$



	CC..16 (5/8" I.C.)					SP..06 (5/16" I.C.)			SC..09 (3/8" I.C.)			SC..12/SD..12 (1/2" I.C.)			Speed (SFM)
	Catalog Number	Balanced Cutting		Step Cutting		Catalog Number	Balanced Cutting		Catalog Number	Balanced Cutting		Catalog Number	Balanced Cutting		
		Feed (IPR)	Max ø D.O.C.	Feed (IPR)	Max ø D.O.C.		Feed (IPR)	Max ø D.O.C.		Feed (IPR)	Max ø D.O.C.		Feed (IPR)	Max ø D.O.C.	
	—	—	—	—	—	**10.654.150**	.014	**.175**	**11.654.247**	.016	.280	**11.654.340**	.016	.350	850-1200
	10.654.996	.024	.600	.014	1.120	**—**	—	**—**	**SCMT09T308-TNP12**	.020	.280	**SCMM120408-TNP12**	.022	.380	
	—	—	—	—	—	**10.654.150**	.012	**.175**	**SCMT09T304-TNP11**	.014	.280	**11.654.340**	.014	.350	700-1000
	CCMM160508-TNP11	.022	.600	.012	1.120	**—**	—	**—**	**11.654.250**	.018	.280	**SCMM120408-TNP11**	.020	.380	
	—	—	—	—	—	**10.654.150**	.012	**.125**	**11.654.247**	.014	.230	**11.654.340**	.014	.300	375-600
	10.654.996	.022	.400	.012	.800	**—**	—	**—**	**SCMT09T308-TNP12**	.018	.230	**SCMM120408-TNP12**	.020	.300	
	—	—	—	—	—	**10.654.150**	.012	**.175**	**11.654.247**	.014	.280	**11.654.340**	.014	.350	500-750
	10.654.996	.022	.600	.012	1.120	**—**	—	**—**	**SCMT09T308-TNP12**	.018	.280	**SCMM120408-TNP12**	.020	.380	
	—	—	—	—	—	**10.654.152**	.014	**.200**	**SCMT09T304-TNP11**	.016	.380	**11.654.340**	.016	.480	450-750
	CCMM160508-TNP11	.024	.750	.014	1.400	**—**	—	**—**	**11.654.250**	.020	.380	**SCMM120408-TNP11**	.022	.580	
	—	—	—	—	—	**10.654.152**	.012	**.175**	**SCMT09T304-TNP11**	.014	.330	**11.654.340**	.014	.420	300-425
	CCMM160508-TNP11	.022	.675	.012	1.250	**—**	—	**—**	**11.654.250**	.018	.330	**SCMM120408-TNP11**	.020	.480	
	—	—	—	—	—	**10.654.152**	.012	**.125**	**11.654.249**	.010	.160	**—**	—	—	100-225
	10.654.996	.016	.380	.008	.700	**—**	—	**—**	**SCMT09T308-C2P**	.012	.180	**SCMM120408-TNP12**	.014	.250	
	—	—	—	—	—	**10.654.152**	.014	**.200**	**11.654.249**	.016	.380	**—**	—	—	750-1000
	10.654.997	.024	.750	.014	1.400	**—**	—	**—**	**SCMT09T308-C2P**	.020	.380	**SCMM120408-C2P**	.022	.580	
	—	—	—	—	—	**10.654.168**	.014	**.200**	**10.654.277**	.016	.500	**—**	—	—	1100-1600
	10.654.998	.030	.900	.015	1.625	**—**	—	**—**	**10.654.287**	.020	.500	**10.654.387**	.022	.650	

ROUGH BORING GUIDELINES

Insert Selection & Stock Allowance

BIG KAISER indexable inserts outlined in the Insert Selection & Cutting Data tables have been selected to give optimum results. Grades and geometry do not have to be specified at time of order.

Insert radius is based on 2 major factors:

1. Length/Diameter ratio of tool
2. Depth of cut or material allowance
   - Select the largest nose radius available for cutting edge strength & higher feeds
   - Use small nose radius for light depth of cut & extreme L/D ratio

Insert Radius	Minimum D.O.C.	Maximum D.O.C.	L/D Ratio
.008 (0)	.010	.060	>6:1
.016 (1)	.020	.120	≤5:1
.031 (2)	.040	.200	≤4:1
.047 (3)	.060	.325	≤4:1

- D.O.C. is stock allowance/side (radius)

Feed

1. Feed: Based on effective number of inserts, depending on roughing method
   - Balanced Cutting: 2 effective inserts
   - Stepped Cutting: 1 effective insert
   - Full Profile Cutting: 1 effective insert
2. Under normal rough boring operations, the effective feed rate is about 50% of nose radius

Nose Radius	Feed/IPR	
	Balanced Cutting	Stepped Cutting
.008 (0)	.008-.012	.004-.006
.016 (1)	.014-.016	.006-.008
.031 (2)	.020-.026	.012-.016
.047 (3)	.020-.030	.012-.020

Power Consumption

The power curve of the machine should be consulted and cutting data values adjusted accordingly.

- HP Requirements = MRR x K
- MRR = d x SFM x IPR x 12
- MRR = metal removal rate, cubic inches
- d = radial depth of cut, inches
- SFM = surface feet/minute
- IPR = inches/rev

Material	K Factor*
Steel	.750
Alloy Steel	1.000
Cast Iron	.650
Aluminum	.430
High Temp Alloys	2.000

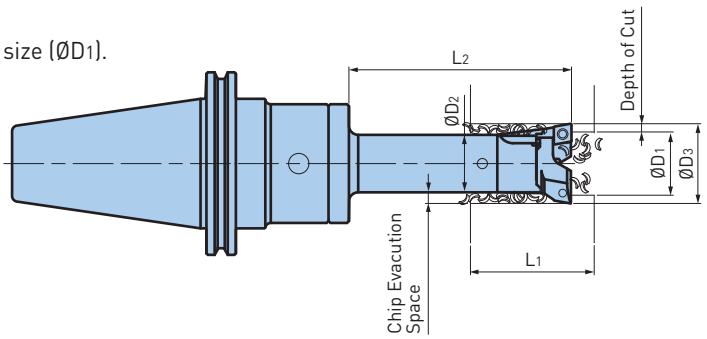
***With positive cutting geometry only**

General Rule:

Boring bar (ØD2) should always be smaller than original hole size (ØD1).

CAUTION

It is very important to allow for clearance between boring bar and rough bore diameter.



ROUGH BORING TROUBLESHOOTING

Under certain conditions, it may be necessary to modify or adapt recommended cutting data and/or tooling configurations of the application. Below are general solutions to common problems.

Problem	Possible Cause	Remedy
Poor Chip Control	Feed rate too low	Increase feed rate
	Excessive height variation of inserts	Preset tool to max. .0002" variation of both inserts
	Width of chip excessive (D.O.C.)	Preset tool for stepped cutting method
	Excessive stock allowance	Consult cutting data tables
Chatter & Vibration	Excessive speed	Reduce SFM, check cutting data tables
	Extreme length/diameter ratio	Shorten tool to increase stiffness
		Increase boring bar diameter to larger size
		Change boring bar to carbide or heavy metal
	Insert radius too large	Reduce nose radius of insert
	Unstable workpiece	Improve fixture and clamping support
	Lead angle on insert holders	Change to 90 degree insert holders (type CC)
Inserts Chipping or Breaking	Wrong insert	Change to tougher grade of carbide insert
		Use larger radius if available
	Severe interruption	Increase 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
	Inserts chipping	Check stock allowance and feed rate
	Coolant pressure too low	Increase through tool coolant pressure
		Adjust coolant ports of head if available
Chips Not Evacuating	Boring bar diameter too large	Reduce to smaller head and extended range holder
	Excessive stock allowance	Re-set tool for stepped cutting
	Inadequate space below bore	Elevate workpiece from table more
	Poor chip control	See above problem
Insufficient Machine Power	Excessive feed rate	Reduce feed; minimum 25% of insert radius
	Stock allowance excessive	Reset tool for stepped cutting method
	Low machine torque	RPM in area of low spindle torque; increase speed
		RPM in area of gear change; adjust RPM
		Change insert to higher rake angle
		Reduce depth of cut
Excessive Exit Burr	Excessive feed rate	Reduce feed rate
	CC type insert holders	Use square insert holders with 6 degree lead
	Cutting forces too high	Reduce depth of cut
		Reduce insert radius

CENTRIC CUTTING EDGE

FINE BORING

B.2

FINE BORING HEADS 436-471

FINE BORING HEADS OVERVIEW 436
EWE 2-152E DIGITAL FINE BORING HEAD 438
EWN 2-152E FINE BORING HEAD 439
ACCESSORIES FOR EWE/EWN 2-152 & EWB 2-50 440-447
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FACE GROOVING HOLDERS FOR EWN/EWE 449
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SERIES 112 BORING KIT 451
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EWN 2-32E & 04-22E FINE BORING HEAD 453
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BORING BAR 6MM SHANK 466
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EWE 2-152E DIGITAL

MAX 10,000 RPM

Wireless communication for easy readout with the BIG KAISER app: EWE fine boring head revolutionizes fine boring process. Less operator mistakes, easier setup and a large diameter range. Accessories for EWE and EWN are fully compatible.

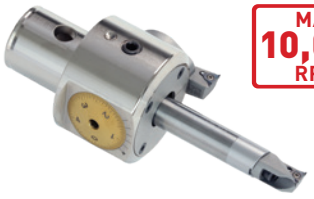
Ø.079"-6.000"
CK6

Display resolution:
.00005"/Ø (.001mm/Ø)

Wireless

PG. 438

EWN 2-152E



MAX 10,000 RPM

Fine boring head with centric boring bars in modular and integral execution for accurate, high performance operations. The head comes with variable length adjustment of the boring bar and large dial disc for parallax-free readout.

Ø.079"-6.000"
CK6/CV40/BT40/HSK-63/C6

Resolution:
.0002"/Ø Dial, .00005"/Ø Vernier

PG. 439

EWE 2-32E DIGITAL

MAX 14,000 RPM

Smallest digital fine boring head with wireless communication to the BIG KAISER app and centric boring bar. Especially manufactured for the use on small machine tools. Accessories for EWN and EWE are fully compatible.

Ø.079"-1.260"
CK5

Display resolution:
.00005"/Ø (.001mm/Ø)

Wireless

PG. 452

EWN 2-32E

MAX 14,000 RPM

Fine boring head with centric boring bar in integral, modular and screw-on execution for precise machining. Developed for 30 taper, HSK-A50 and bigger, as well as on lathe machines with driven tools.

Ø.079"-1.260"
CK5/ER32

Resolution:
.0002"/Ø Dial, .00005"/Ø Vernier

PG. 453

EWN 04-22E

MAX 20,000 RPM

Short and compact boring head with an extremely rigid construction.

Ø.079" - .866"
CK4

Resolution:
.0005"/Ø Dial, .0001"/Ø Vernier

PG. 453

EWN 04-15E

MAX 30,000 RPM

Machining of small bores with high speeds on machine tools with spindles HSK-E32 and bigger.

Ø.016"-.590"
CK3/ST16

Resolution:
.0005"/Ø Dial, .0001"/Ø Vernier

PG. 464

EWN 04-7E

MAX 30,000 RPM

World's smallest fine boring head: body diameter of only Ø.73", the EWN 04-7E is the perfect solution for micro machining applications.

Ø.016"-.276"
CK1/ST6/ST10

Resolution:
.0005"/Ø Dial, .0001"/Ø Vernier

PG. 465

CAUTION

Max through-tool coolant pressure is 300 psi.

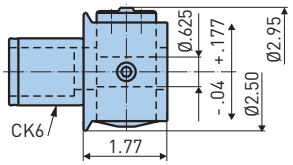
EWE 2-152 XH1...
0.001
ΔØ
19.801
New Ø (mm)
20.007
Target Ø (mm) incl. Tolerance
BATTERY
CR1025
BIG KAISER APP
Download on the App Store
GET IT ON Google Play

EWE 2-152E DIGITAL FINE BORING HEAD

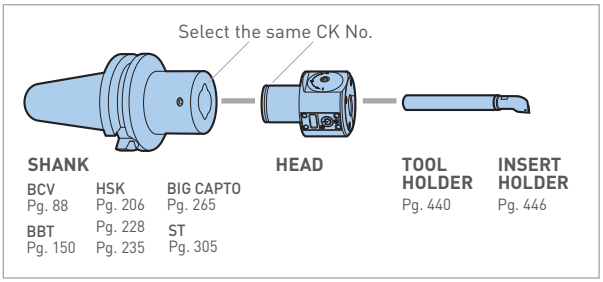
RANGE: Ø.079"-6.000"

Digital fine boring head in modular and integral execution for accurate, high performance boring operations.
With wireless communication to the BIG KAISER app.

Wireless

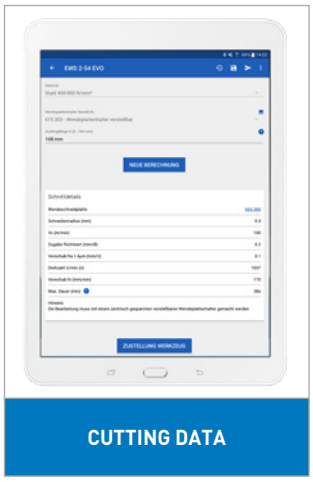


Catalog Number	Reference Number
EWE2-152ECK6	10.112.120

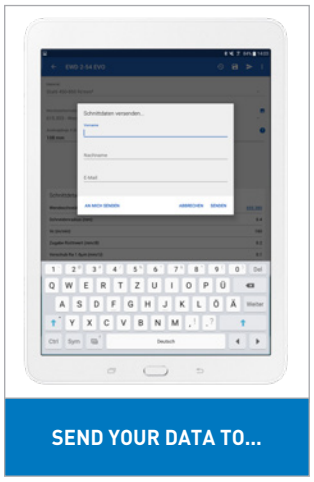


BIG KAISER APP

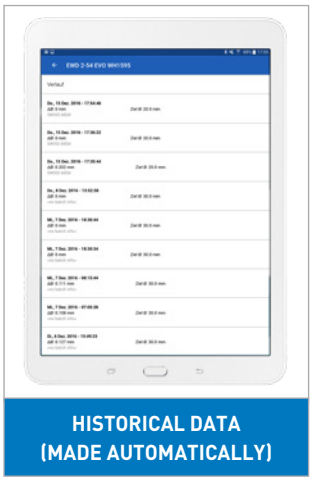
While assembling and running BIG KAISER boring tools, the app helps operators determine optimal cutting parameters, access manuals and provides a history of all adjustments made with an EWE boring head.



CUTTING DATA



SEND YOUR DATA TO...



HISTORICAL DATA (MADE AUTOMATICALLY)

Ways the App Will Support Your Daily Challenges

- Choose your tool
- Type in your application values
- Calculate cutting data
- Adjust machine and make a measuring bore
- Infeed tool with the diameter of the measuring bore
- Make the bore

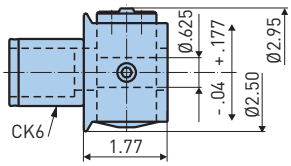
Download on the App Store

GET IT ON Google Play

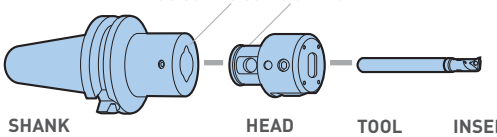
EWN 2-152 FINE BORING HEAD

RANGE: Ø.079"-6.000"

Fine boring heads in modular and integral execution for accurate, high performance boring operations on machine tools with spindles ISO 40, HSK-A63, BIG CAPTO C6 and bigger.



Catalog Number	Reference Number
EWN2-152ECK6	10.112.118



SHANK

BCV Pg. 88
HSK Pg. 206 Pg. 228 Pg. 235
BIG CAPTO Pg. 265
BBT Pg. 150
ST Pg. 305

HEAD

TOOL HOLDER Pg. 440

INSERT HOLDER Pg. 446

OTHER APPLICATIONS

EWN2-152ECV40
10.112.134

EWN2-152EBT40
10.112.132

EWB2-50ECK6
10.112.117

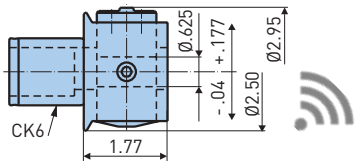
Balanceable
Max Bore Diameter: 1.970"

EWN2-152EHSK-A63
10.112.133

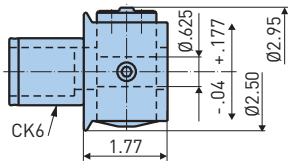
EWN2-152EC6
10.470.118

BORING HEAD CATALOG NUMBER | **REFERENCE NUMBER**

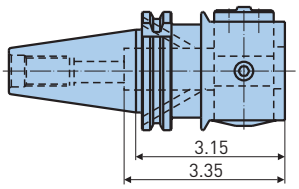
EWE2-152CK6 — 10.112.120



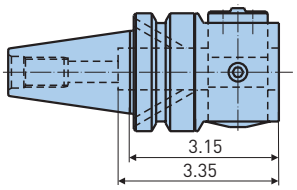
EWN2-152ECK6 — 10.112.118



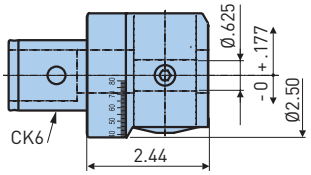
EWN2-152ECV40 — 10.112.134



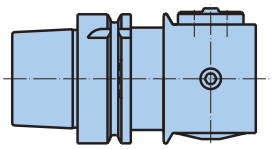
EWN2-152EBT40 — 10.112.132



EWB2-50ECK6 — 10.112.117



BALANCED



- Additional integral types with HSK and C6 available upon request; consult BIG DAISHOWA engineering for information & technical specification
- ØD = full range +.35"/Ø

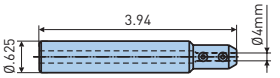
Carbide tool holders

- Items marked ❖ are recommended for EWB 2-50E

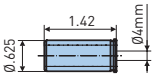
ACCESSORIES

SPARE PARTS PG. 547 | INSERTS PG. 514 | APPLICATION ADVICE PG. 468

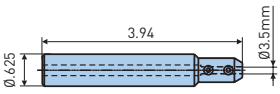
RB5/8"-4-100 — 10.613.524❖



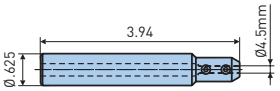
RB5/8"-4 — 10.613.504



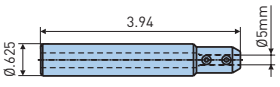
RB5/8"-3.5-100 — 10.613.522❖



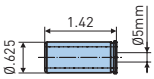
RB5/8"-4.5-100 — 10.613.523❖



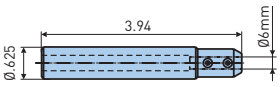
RB5/8"-5-100 — 10.613.525❖



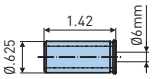
RB5/8"-5 — 10.613.505



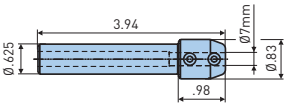
RB5/8"-6-100 — 10.613.526❖



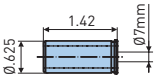
RB5/8"-6 — 10.613.506



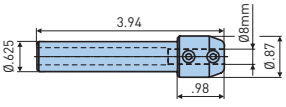
RB5/8"-7-100 — 10.613.527❖



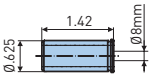
RB5/8"-7 — 10.613.507



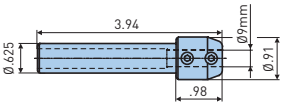
RB5/8"-8-100 — 10.613.528❖



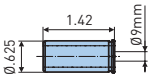
RB5/8"-8 — 10.613.508



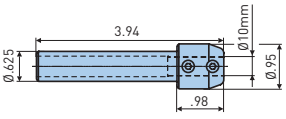
RB5/8"-9-100 — 10.613.529❖



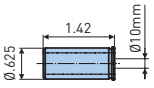
RB5/8"-9 — 10.613.509

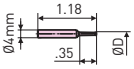


RB5/8"-10-100 — 10.613.530❖

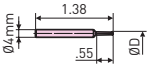


RB5/8"-10 — 10.613.510

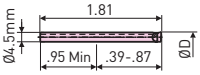




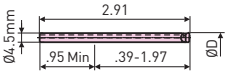
E2-4K10 10.611.155❖
ØD .079-.138



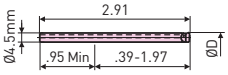
E3-4K10 10.611.156❖
ØD .118-.177



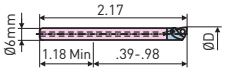
E5-ST4.5-46K10 10.615.081
ØD .193-.232



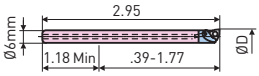
E5-ST4.5-74K10 10.615.204❖ (Uncoated)
ØD .193-.232



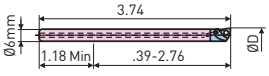
E5-ST4.5-74K10C 10.615.204A❖ (AlCRN Coated)
ØD .193-.232



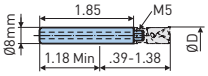
E7.5-ST6-WC02-55HM 10.615.084
ØD .287-.346



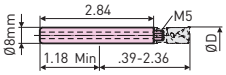
E7.5-ST6-WC02-75HM 10.615.085
ØD .287-.346



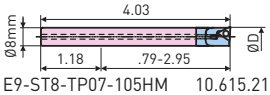
E7.5-ST6-WC02-95HM 10.615.202❖
ØD .287-.346



ST8-47 10.615.211
ØD .346-.492

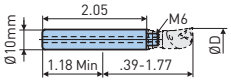


ST8-72HM 10.615.212❖
ØD .346-.492

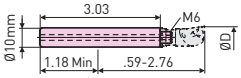


E9-ST8-TP07-105HM 10.615.213❖
ØD .346-.492

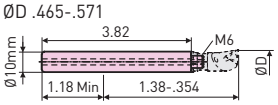
E9T
10.615.271❖
ØD .346-.492



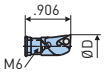
ST10-52 10.615.214
ØD .465-.571



ST10-77HM 10.615.215❖
ØD .465-.571



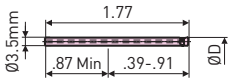
ST10-11.8-13.8-M6-97 10.615.223❖
ØD .465-.571



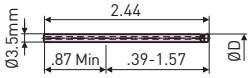
E12T
10.615.272❖
ØD .465-.571

FIXED TOOL HOLDER

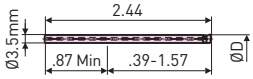
COOLANT THROUGH
FROM Ø.153



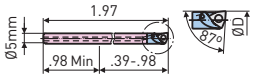
E4-ST3.5-45K10 10.615.080
ØD .154-.193



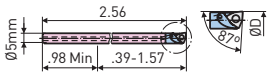
E4-ST3.5-62K10 10.615.203❖ (Uncoated)
ØD .154-.193



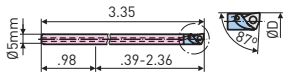
E4-ST3.5-62K10C 10.615.203A❖ (AlCRN Coated)
ØD .154-.193



E6-ST5-WC02-50HM 10.615.082
ØD .228-.287



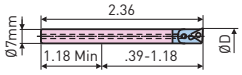
E6-ST5-WC02-65HM 10.615.083
ØD .228-.287



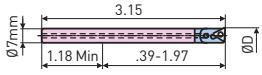
E6-ST5-WC02-85HM 10.615.201❖
ØD .228-.287

WC 02

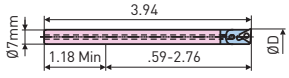
WC 02



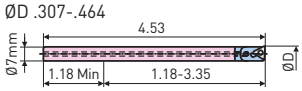
E8-ST7-TP07-60HM 10.615.086
ØD .307-.464



E8-ST7-TP07-80HM 10.615.207❖
ØD .307-.464



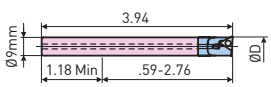
E8-ST7-TP07-100HM 10.615.087❖
ØD .307-.464



E8-ST7-TP07-115HM 10.615.205
ØD .307-.464

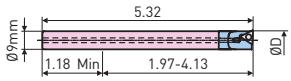
TP 07

TP 07



E10-ST9-TP07-100HM 10.615.208❖
ØD .386-.531

TP 07

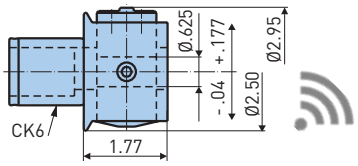


E10-ST9-TP07-135HM 10.615.206❖
ØD .386-.531

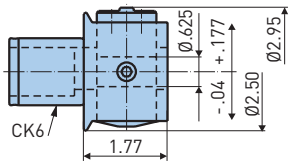
TP 07

BORING HEAD CATALOG NUMBER | **REFERENCE NUMBER**

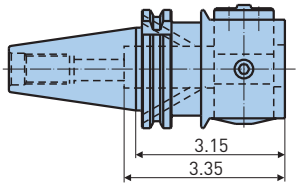
EWE2-152CK6 — 10.112.120



EWN2-152ECK6 — 10.112.118



EWN2-152ECV40 — 10.112.134



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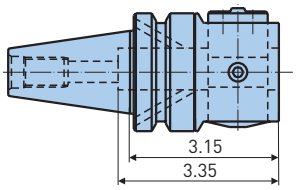
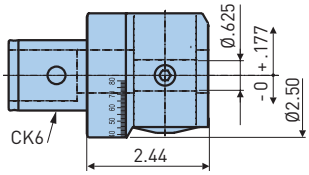
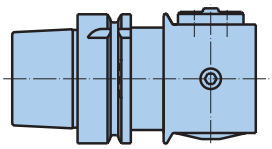


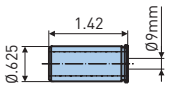
EWB2-50ECK6 — 10.112.117



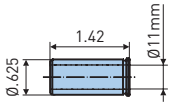


- Additional integral types with HSK and C6 available upon request; consult BIG DAISHOWA engineering for information & technical specification
- ØD = full range +.35"/Ø

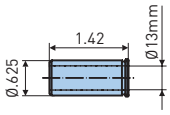
RB5/8"-9
10.613.509



RB5/8"-11
10.613.511



RB5/8"-13
10.613.513



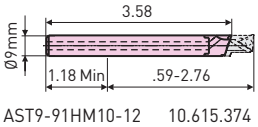
Carbide tool holders

ACCESSORIES

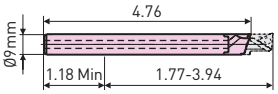
SPARE PARTS PG. 547 | INSERTS PG. 514 | APPLICATION ADVICE PG. 468

ADJUSTABLE TOOL HOLDER

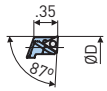
The adjustable tool holder allows the coarse diameter setting on the insert holder. This leads to the possibility to machine bores from Ø.386"-2.130" with the tool holder in the center position and as a result, with the best possible balancing of the tool combination.



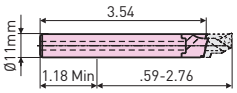
AST9-91HM10-12 10.615.374



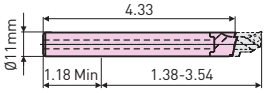
AST9-121HM10-12 10.615.369



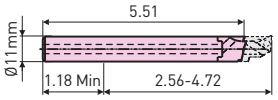
E10-12T
10.615.365
ØD .386-.472



AST11-90HM12-14 10.615.375



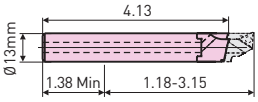
AST11-110HM12-14 10.615.376



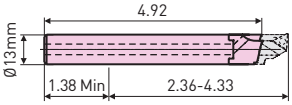
AST11-140HM12-14 10.615.371

E12-14T
10.615.366
ØD .465-.551

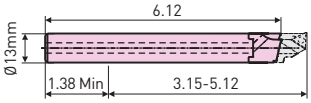
TP 07



AST13-105HM14-18 10.615.377

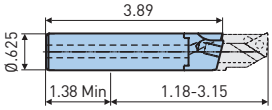


AST13-135HM14-18 10.615.378

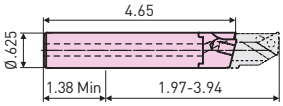


AST13-155HM14-18 10.615.373

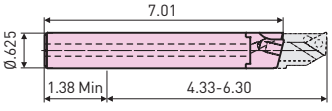
E14-17T
10.615.367
ØD .543-.669



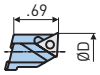
AST5/8"-98HM 10.615.261



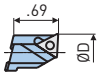
AST5/8"-118HM17-33 10.615.254



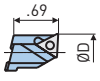
AST5/8"-178HM17-33 10.615.255



E17-22T
10.615.301
ØD .661-.866



E22-27T
10.615.302
ØD .858-1.063



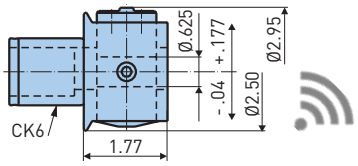
E27-33T
10.615.303
ØD 1.055-1.299

TC 11

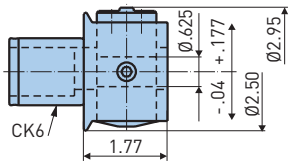
BORING HEAD CATALOG NUMBER

REFERENCE NUMBER

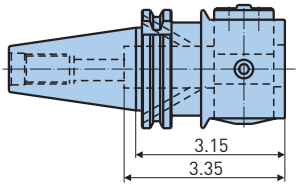
EWE2-152CK6 — 10.112.120



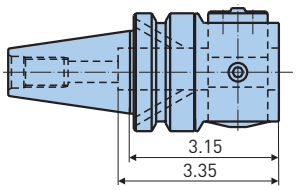
EWN2-152ECK6 — 10.112.118



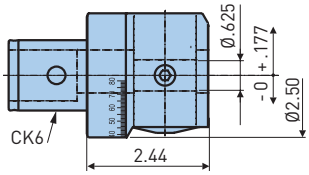
EWN2-152ECV40 — 10.112.134

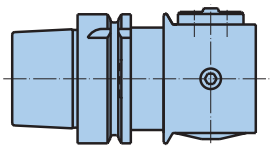


EWN2-152EBT40 — 10.112.132



EWB2-50ECK6 — 10.112.117



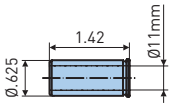


- Additional integral types with HSK and C6 available upon request; consult BIG DAISHOWA engineering for information & technical specification
- ØD = full range +.35"/Ø

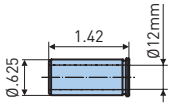
Carbide tool holders

- Items marked ❖ are recommended for EWB 2-50E

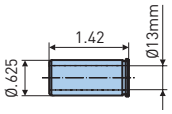
RB5/8"-11
10.613.511❖



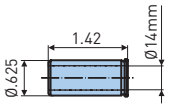
RB5/8"-12
10.613.512❖



RB5/8"-13
10.613.513❖

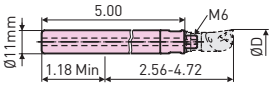


RB5/8"-14
10.613.514❖

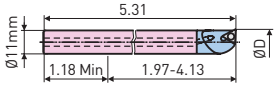


ACCESSORIES

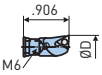
SPARE PARTS PG. 547 | INSERTS PG. 514 | APPLICATION ADVICE PG. 468



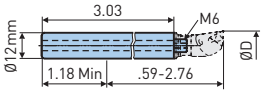
ST11-127HM 10.615.250❖
ØD .465-.571



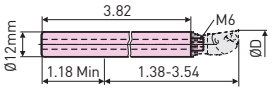
E12-ST11-TP07-135HM 10.615.209❖
ØD .465-.571



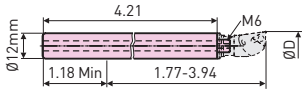
E12T
10.615.272❖
ØD .465-.571



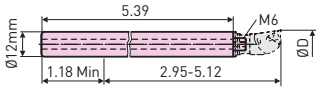
ST12-77 10.615.218
ØD .543-.650



ST12-97HM 10.615.225
ØD .543-.650



ST12-107HM 10.615.219❖
ØD .543-.650



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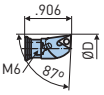
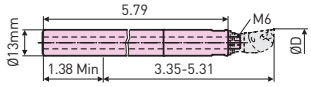
ØD .543-.650

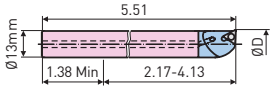


E14T
10.615.273❖
ØD .543-.650

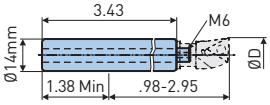
TP 07



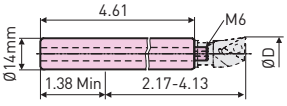
ST13-147HM 10.615.251❖
ØD .543-.650



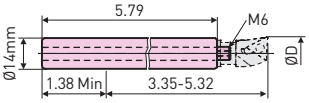
E14-ST13-TP07-140HM 10.615.210❖
ØD .543-.650



ST14-87 10.615.232
ØD .582-.701



ST14-117HM 10.615.233❖
ØD .582-.701



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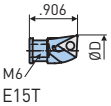
ØD .582-.701



E15T
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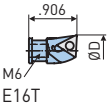
ØD .582-.689



E16T
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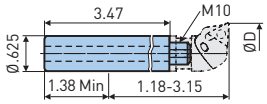
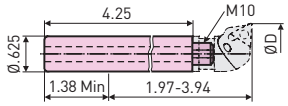
ØD .622-.701

TC 11



ST5/8"-88 10.615.236
ØD .701-1.97



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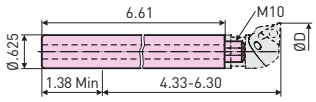
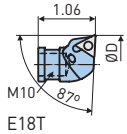


ST5/8"-168HM 10.615.238❖
ØD .701-1.97



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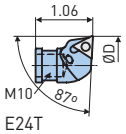
ØD .701-.780



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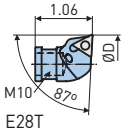
ØD .937-.976



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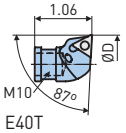
ØD 1.094-1.252



E40T
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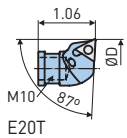
ØD 1.567-1.764



E20T
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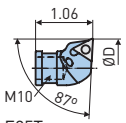
ØD .780-.858



E25T
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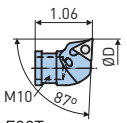
ØD .976-1.016



E32T
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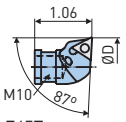
ØD 1.252-1.409



E45T
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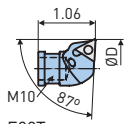
ØD 1.764-2.126



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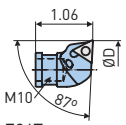
ØD .858-.937



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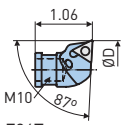
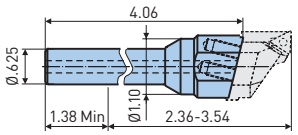
ØD 1.016-1.094

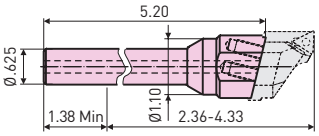


E36T
10.615.286❖
ØD 1.409-1.567

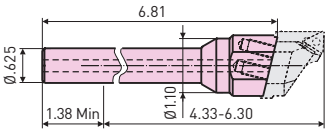
AST5/8"-103 10.615.263
ØD 1.252-2.125



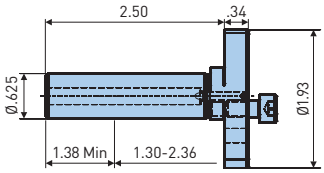
AST5/8"-123HM40-54 10.615.259
ØD 1.252-2.125

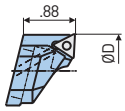


AST5/8"-173HM40-54 10.615.260
ØD 1.252-2.125

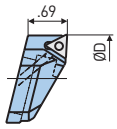


AST5/8"-72 10.615.389
ØD 2.125-3.150

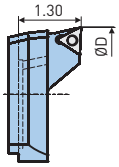




E32-40T
10.615.304
ØD 1.252-1.575

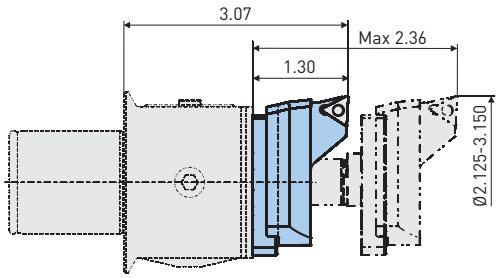


E40-54T
10.615.305
ØD 1.567-2.125



E54-80T
10.615.306
ØD 2.125-3.150

TC 11

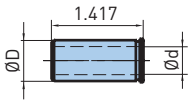


Carbide tool holders

ACCESSORIES

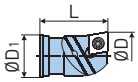
SPARE PARTS PG. 549 | INSERTS PG. 514 | APPLICATION ADVICE PG. 468

INCH REDUCTION SLEEVES



ØD	Ød	Catalog Number
.625	.125	11.613.543
.625	.156	11.613.544
.625	.187	11.613.545
.625	.250	11.613.546
.625	.312	11.613.548
.625	.375	11.613.550
.625	.438	11.613.551
.625	.500	11.613.552

90º INSERT HOLDERS, CC TYPE



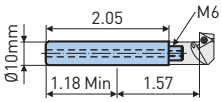
Catalog Number	Reference Number	ØD1	L	ØD	
E12C	11.689.810	10mm	.906	.465-.571	CC 06
E14C	11.689.811	12mm	.906	.543-.650	
E16C	11.689.812	14mm	.906	.622-.728	
E18C	11.689.813	.625	1.06	.701-.807	CC 09
E20C	11.689.814	.625	1.06	.780-.886	
E22C	11.689.815	.625	1.06	.858-.965	
E24C	11.689.816	.625	1.06	.937-1.043	
E26C	11.689.818	.625	1.06	1.016-1.122	
E28C	11.689.819	.625	1.06	1.094-1.280	
E30C	11.689.820	.625	1.06	1.173-1.358	
E32C	11.689.821	.625	1.06	1.252-1.437	
E36C	11.689.822	.625	1.06	1.409-1.594	
E40C	11.689.823	.625	1.06	1.567-1.772	
E45C	11.689.824	.625	1.06	1.764-2.126	

ACCESSORIES

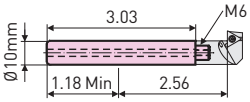
SPARE PARTS PG. 548 | INSERTS PG. 514 | APPLICATION ADVICE PG. 468

BACK BORING
CATALOG NUMBER

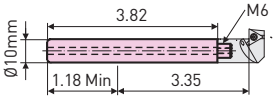
ST10-52 10.615.214
ØD .622-.807



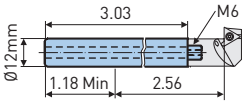
ST10-77HM 10.615.215
ØD .622-.807



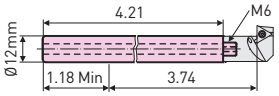
ST10-97HM 10.615.223
ØD .622-.807



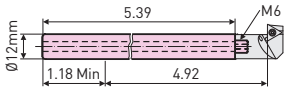
ST12-77HM 10.615.218
ØD .780-1.016



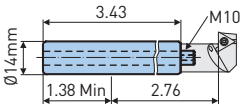
ST12-107HM 10.615.219
ØD .780-1.016



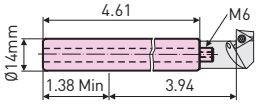
ST12-137HM 10.615.224
ØD .780-1.016



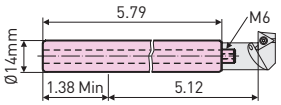
ST14-87HM 10.615.232
ØD 1.016-1.134



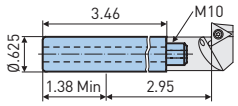
ST14-117HM 10.615.233
ØD 1.016-1.134



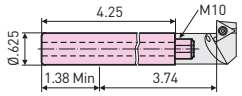
ST14-147HM 10.615.221
ØD 1.016-1.134



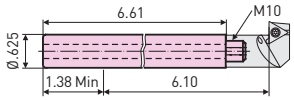
ST5/8"-88 10.615.236
ØD 1.134-1.752



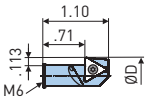
ST5/8"-108HM 10.615.237
ØD 1.134-1.752



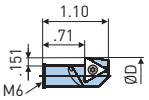
ST5/8"-168HM 10.615.238
ØD 1.134-1.752



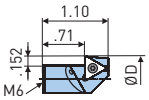
ACCESSORIES



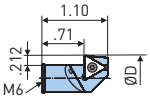
E16T-BB
11.689.801
ØD .622-.728
Min Entry Dia. .512



E18T-BB
11.689.802
ØD .701-.807
Min Entry Dia. .547



E20T-BB
11.689.803
ØD .780-.898
Min Entry Dia. .626



E20T-BB
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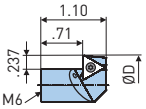
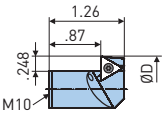
ØD .898-1.016
Min Entry Dia. .685

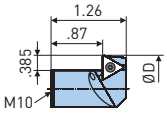
TC 11



E26T-BB
11.689.805
ØD 1.016-1.134
Min Entry Dia. .783



E29T-BB
11.689.806
ØD 1.134-1.319
Min Entry Dia. .882



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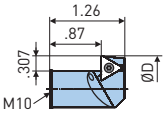
ØD 1.409-1.594
Min Entry Dia. 1.020



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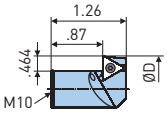
11.689.807
ØD 1.252-1.437
Min Entry Dia. .941

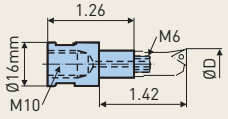


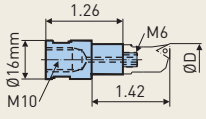
E40T-BB
11.689.809
ØD 1.567-1.752
Min Entry Dia. 1.098

ACCESSORIES

REDUCTIONS

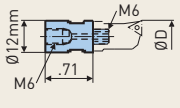
Catalog Number	Reference Number	ØD	Catalog Number	Reference Number	ØD
ST16-10-32	10.615.230	.465-.571	**ST16-12-32**	10.615.231	.543-.728

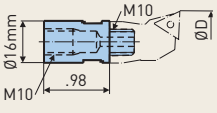




EXTENSIONS

Catalog Number	Reference Number	ØD	Catalog Number	Reference Number	ØD
ST12-18	10.615.220	.543-.650	**ST16-25**	10.615.228	.701-1.969

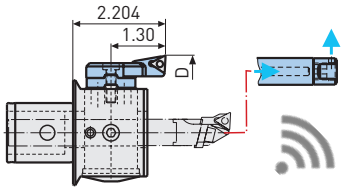




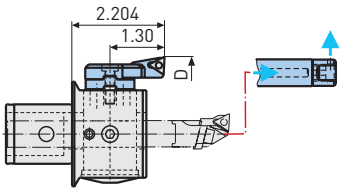
INSERT HOLDERS FOR EWN/EWE

RANGE: Ø3.150"-6.000"

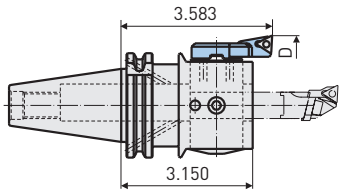
EWE2-152ECK6



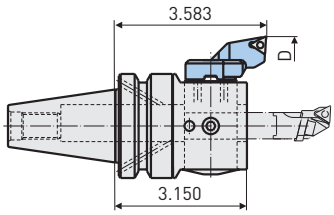
EWN2-152ECK6

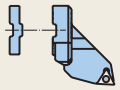


EWN2-152ECV40



EWN2-152EBT40



	Parts	Catalog Number	Reference Number	Insert	ØD
	Insert Holder	**EK80-104T**	10.626.908	TC 11	3.150-3.622
	Spacer	**DD30-6**	10.626.907		3.622-4.094
	Insert Holder	**EK80-104T**	10.626.908		
	Insert Holder*	**EK104-128T**	10.626.909		4.094-4.567
	Spacer*	**DD30-6**	10.626.907		4.567-5.039
	Insert Holder	**EK104-128T**	10.626.909		
	Insert Holder*	**EK128-152T**	10.626.910		5.039-5.512
	Spacer*	**DD30-6**	10.626.907		5.512-6.000
	Insert Holder	**EK128-152T**	10.626.910		
	Tool Holder	**ST5/8"-88**	10.615.236		
	Coolant Nozzle	**CN2-50**	10.615.392		

***Also suitable for back boring**

ACCESSORIES

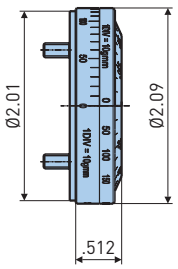
INSERTS PG. 514

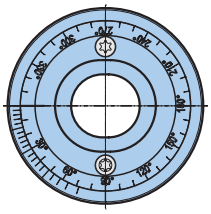
APPLICATION ADVICE PG. 468

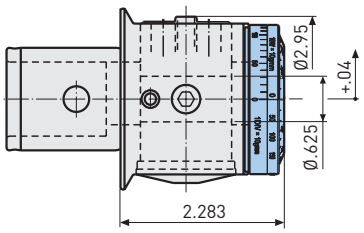
BALANCING RINGS

After removing the front cover plate, the balancing rings can be mounted on to the boring heads. The imbalance has to be measured on a balancing machine. The correction of the imbalance is done by moving the scale rings.

Catalog Number	Reference Number
BR2-152	10.112.806



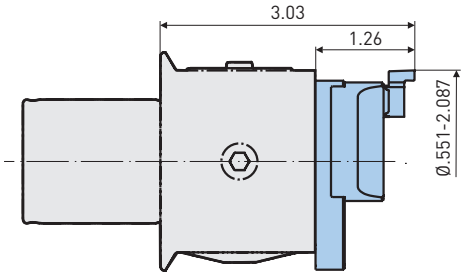




FACE GROOVING HOLDERS FOR EWN/EWE

RANGE: Ø.551"-2.087"

Tool holder, insert holder, and grooving insert are made for face grooving with the fine boring head EWN/EWE 2-152.



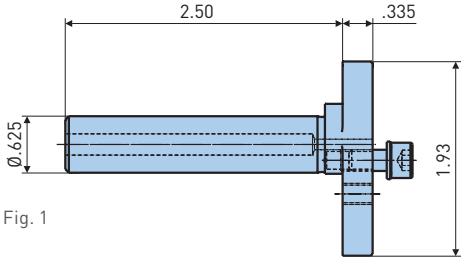


Fig. 1

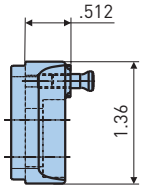


Fig. 2

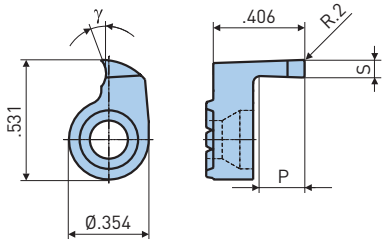
Catalog Number	Reference Number	Fig.	ØD
AST5/8"-72	10.615.389	1	.551-2.087
FGH14-54	10.615.388	2	

ACCESSORIES

SPARE PARTS PG. 557

GROOVING INSERTS

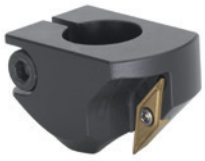
For all materials

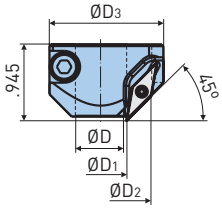


Catalog Number	Reference Number	S	P	γ
RD1420P30C	10.958.501	.079	.197	20°
RD1425P30C	10.958.502	.098		
RD1430P30C	10.958.503	.118		

CHAMFERING RINGS

Chamfering rings for tool holders made of steel and carbide Ø12mm and Ø.625, for 45° chamfering after boring, without tool change.





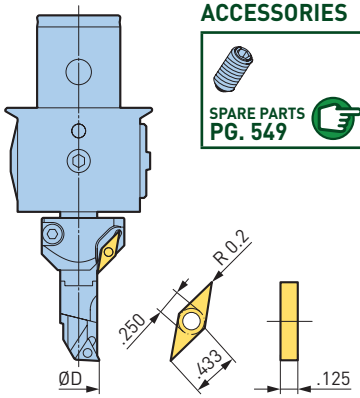
Catalog Number	Reference Number	Dimensions				
		ØD	ØD1	ØD2	ØD3	
CR13-27ST12V	10.615.394	12mm	.496	1.090	1.38	VC 11
CR17-31ST5/8"	10.615.393	.625	.654	1.250	1.56	

INSERTS FOR CHAMFERING RINGS 45

Diameter Range: Ø.496"-1.555" (Ø12.6-39.5 mm)

Insert						Workpiece Material		
Insert Shape	Catalog Number	Reference Number	Grade	Capacity ØD	Rake Angle γ	Cast Iron	Steel	Aluminium
	VCMT 110302	10.655.821	P20C	.496-1.555	15°	++	++	
	VCGT 110302	10.655.822	K20		23°			++

• Inserts are available in packages of 10 pcs.



ACCESSORIES

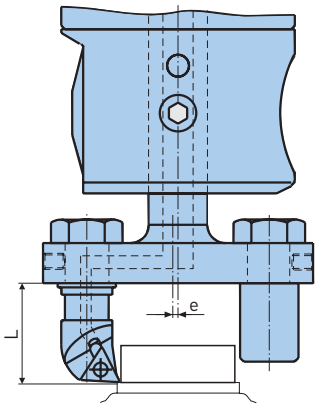
SPARE PARTS PG. 549

APPLICATION ADVICE PG. 468

OD TURNING HOLDERS FOR EWN/EWE

RANGE: Ø.040"-1.260"

By using an eccentric bar on the fine boring heads EWN/EWE 2-152, it is possible to turn outside diameters up to 1.260" with lengths up to 2". The counterweight is moveable on the eccentric bar. By moving the counterweight, the imbalance can be compensated to a minimum.



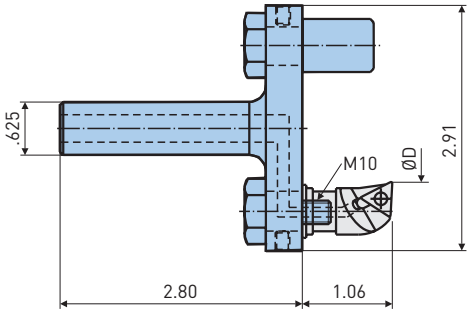
Max Spindle Speeds		
e	L = 1.06 (RPM)	L = 2.05 (RPM)
0	8000	6000
.020	6000	4500
.098	4000	3500
.177	3000	2500

- Adjustment of the scale in clockwise direction and eccentric bar with cutting edge positioned as shown on the drawing, results in a smaller pin diameter.

CAUTION

Counter-clockwise rotation of spindle.

ECCENTRIC BAR

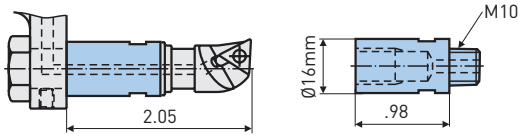


Catalog Number	Reference Number	ØD
ST5/8"-OD-32	10.615.391	.039-1.260

ACCESSORIES

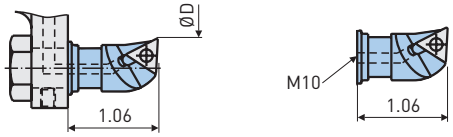
SPARE PARTS PG. 557

EXTENSION



Catalog Number	Reference Number
ST16-25	10.615.228

INSERT HOLDERS



ACCESSORIES

INSERTS PG. 514

APPLICATION ADVICE PG. 468

Catalog Number	Reference Number	ØD	Insert
E45T	10.615.292	.039-.197	TC 11
E40T	10.615.287	.197-.394	
E36T	10.615.286	.394-.551	
E32T	10.615.285	.551-.709	
E28T	10.615.284	.709-.866	
E24T	10.615.290	.866-1.024	
E20T	10.615.289	1.024-1.181	
E18T	10.615.282	1.102-1.260	

SERIES 112 BORING KIT

DIAMETER RANGE: Ø.350"-1.000"

Series 112 high-precision boring head kit contains all components needed for small diameter bores from Ø.350"-Ø1.000", including inserts and wrenches. The entire kit, including molded plastic carrying case with foam inlay to protect the precision instruments, provides considerable savings over what the boring head, reduction bushings, shanks and other components cost when ordered separately.

Adapter Size	Catalog Number	Reference Number	Boring Head	
			Analog Dial	Digital Display
CK6	**EWN2-152ECK6-9-26SET**	11.112.911*	10.112.118	—
	EWE2-152ECK6-9-26SET	11.112.919**	—	10.112.120
BT40	**EWN2-152EBT40-9-26SET**	11.112.914	10.112.132	—
CAT40	**EWN2-152ECV40-9-26SET**	11.112.913	10.112.134	—
HSK-A63	**EWN2-152EHSKA63-9-26SET**	11.112.912	10.112.133	—

***Order shank separately for this kit**
****Digital option**

CONTENTS

REDUCTION BUSHING

Catalog Number	Reference Number
RB5/8"-8	10.613.508
RB5/8"-10	10.613.510
RB5/8"-12	10.613.512
RB5/8"-14	10.613.514

STEEL BORING BARS

Catalog Number	Reference Number
ST8-47	10.615.211
ST10-52	10.615.214
ST12-77	10.615.218
ST14-87	10.615.232
ST5/8"-88	10.615.236

INSERT HOLDERS

Catalog Number	Reference Number
E9T	10.615.271
E12T	10.615.272
E14T	10.615.273
E16T	10.615.281
E18T	10.615.282
E22T	10.615.283

INSERTS (5 PIECES)

Catalog Number	Reference Number
TPGT070202-P10CT	10.651.802
TCMT110202-P10CT	11.655.322

SERIES 112 BORING KIT

DIAMETER RANGE: Ø.700"-6.000"

Large boring range with a single boring head. Thanks to a carefully selected accessories the tool kit enables precise boring in the diameter range of Ø.700"-6.000".

Catalog Number	Reference Number	Boring Head
EWN2-152E-18-152SET	10.112.937A	Analog Head
EWE2-152E-18-152SET	10.112.937E	Digital Head

CONTENTS

BORING HEAD

Catalog Number	Reference Number
EWN2-152E-18-152SET	10.112.118
EWE2-152E-18-152SET	10.112.120

STEEL BORING BARS

Catalog Number	Reference Number
ST5/8"-88	10.615.389
AST5/8"-72	10.615.236

INSERT HOLDERS

Catalog Number	Reference Number
E18T	10.615.282
E25T	10.615.288
E32T	10.615.285
E40T	10.615.287
E45T	10.615.292
E54-80T	10.615.306

OUTBOARD HOLDERS & ACCESSORIES

Catalog Number	Reference Number
DD30-6	10.626.907
EK80-104T	10.626.908
EK104-128T	10.626.909
EK128-152T	10.626.910
CN2-50	10.615.392

INSERTS (10 PIECES)

Catalog Number	Reference Number
TCGT110204-M10C	10.655.389

CASE

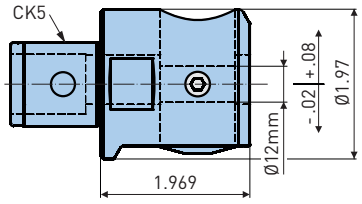
Catalog Number	Reference Number
CASE-EWN2-150CK6	10.671.150

EWE 2-32E DIGITAL FINE BORING HEAD

RANGE: Ø.079"-1.260"

Wireless

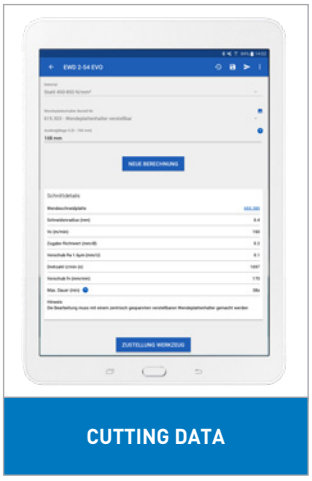
The EWE 2-32 is the smallest digital fine boring head with a center insert holder. It is especially suitable for use on small machines.



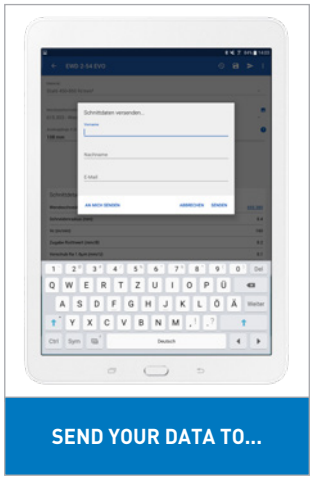
Catalog Number	Reference Number
EWE2-32ECK5	10.112.310

BIG KAISER APP

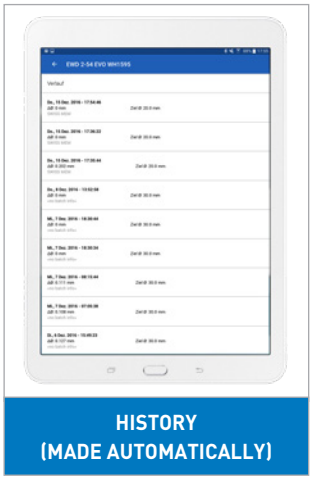
While assembling and running BIG KAISER boring tools, the app helps operators determine optimal cutting parameters, access manuals and provides a history of all adjustments made with an EWE boring head.



CUTTING DATA



SEND YOUR DATA TO...



HISTORY (MADE AUTOMATICALLY)

Ways the App Will Support Your Daily Challenges

- Choose your tool
- Type in your application values
- Calculate cutting data
- Adjust machine and make a measuring bore
- Infeed tool with the diameter of the measuring bore
- Make the bore

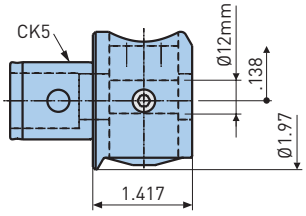
Download on the App Store

GET IT ON Google Play

EWN 2-32E FINE BORING HEAD

RANGE: Ø.079"-1.260"

Fine boring head in integral, modular, and screw-on execution for the precise machining of bores.



Catalog Number	Reference Number
EWN2-32ECK5	10.112.313

OTHER APPLICATIONS

EWB2-32E-CK5
10.112.315

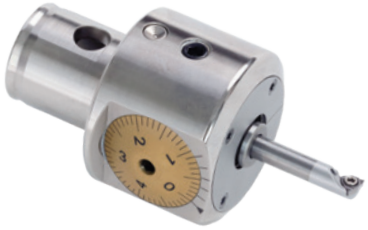
Balanceable

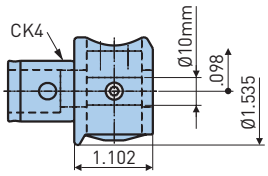
EWN2-32E-ES32
10.112.317

ER32

EWN 04-22E FINE BORING HEAD

RANGE: Ø.016"-.866"





Catalog Number	Reference Number
EWN04-22ECK4	10.112.216

OTHER APPLICATIONS

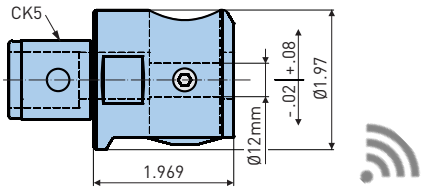
EWN04-22HSK-E40
10.112.207

EWN04-22E-ES25
10.112.215

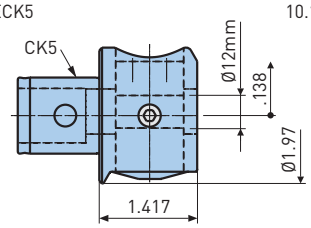
ER25

BORING HEAD CATALOG NUMBER | **REFERENCE NUMBER**

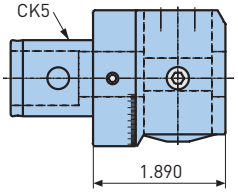
EWE2-32ECK5 — 10.112.310



EWN2-32ECK5 — 10.112.313

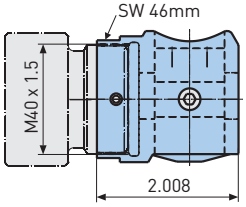


EWB2-32ECK5 — 10.112.315

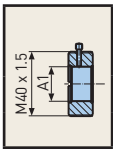


BALANCED

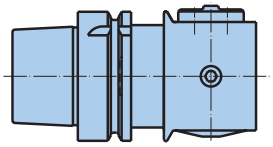
EWN2-32EES32 (ER32) — 10.112.317



SLEEVE FOR ER TOOL HOLDER



Catalog Number	Reference Number	A1	ER
TB-ES32-ES25	10.112.353	M25 x 1.5	ER25
TB-ES32-ES16	10.112.385	M22 x 1.5	ER16

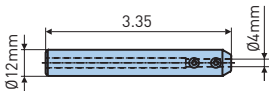


- Additional integral types with HSK and C6 available upon request; consult BIG DAISHOWA engineering for information & technical specification
- EWN2-32E: ØD = full range +.276/Ø
- EWE2-32E: ØD = full range +.157/Ø

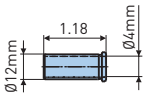
Carbide tool holders

- For EWB2-32E only use items marked ❖

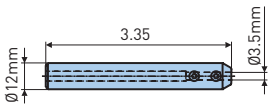
RB12-4-84
10.613.324❖



RB12-4
10.613.304❖



RB12-3.5-85
10.613.323❖



RB12-4.5-85
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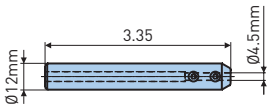
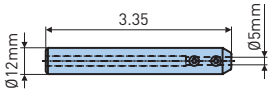
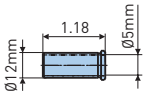


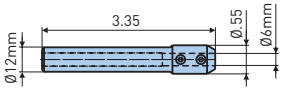
RB12-5-85
10.613.325❖



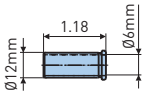
RB12-5
10.613.305❖



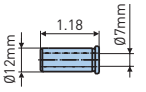
RB12-6-85
10.613.327❖



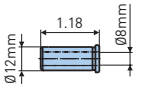
RB12-6
10.613.306❖



RB12-7
10.613.307❖

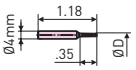


RB12-8
10.613.308❖

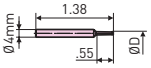


ACCESSORIES

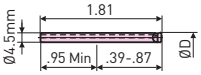
SPARE PARTS PG. 547 | INSERTS PG. 514 | APPLICATION ADVICE PG. 468



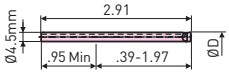
E2-4K10 10.611.155❖
ØD .079-.138



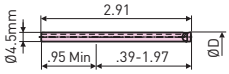
E3-4K10 10.611.156❖
ØD .118-.177



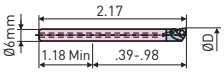
E5-ST4.5-46K10 10.615.081
ØD .192-.232



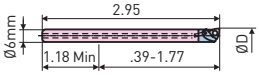
E5-ST4.5-74K10 10.615.204❖ (Uncoated)
ØD .192-.232



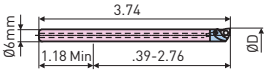
E5-ST4.5-74K10C 10.615.204A❖ (AlCRN Coated)
ØD .192-.232



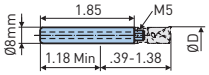
E7.5-ST6-WC02-55HM 10.615.084
ØD .287-.346



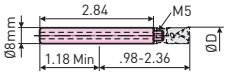
E7.5-ST6-WC02-75HM 10.615.085
ØD .287-.346



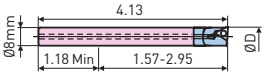
E7.5-ST6-WC02-95HM 10.615.202❖
ØD .287-.346



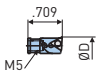
ST8-47 10.615.211
ØD .346-.492



ST8-72HM 10.615.212❖
ØD .346-.492

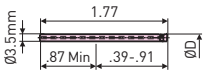


E9-ST8-TP07-105HM 10.615.213❖
ØD .346-.492

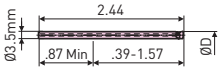


E9T
10.615.271❖
ØD .346-.492

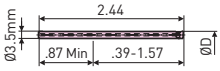
FIXED TOOL HOLDER



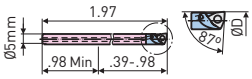
E4-ST3.5-45K10 10.615.080
ØD .154-.193



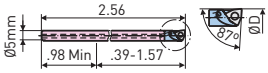
E4-ST3.5-62K10 10.615.203❖ (Uncoated)
ØD .154-.193



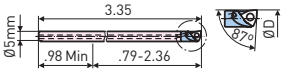
E4-ST3.5-62K10C 10.615.203A❖ (AlCrN Coated)
ØD .154-.193



E6-ST5-WC02-50HM 10.615.082
ØD .228-.287



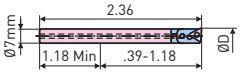
E6-ST5-WC02-65HM 10.615.083
ØD .228-.287



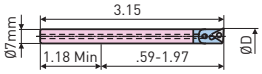
E6-ST5-WC02-85HM 10.615.201❖
ØD .228-.287

WC 02

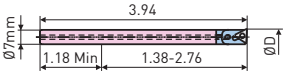
WC 02



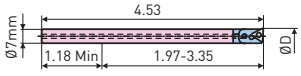
E8-ST7-TP07-60HM 10.615.086
ØD .307-.464



E8-ST7-TP07-80HM 10.615.207❖
ØD .307-.464



E8-ST7-TP07-80HM 10.615.087
ØD .307-.464



E8-ST7-TP07-100HM 10.615.205❖
ØD .307-.464

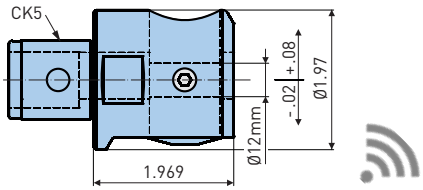
TP 07

TP 07

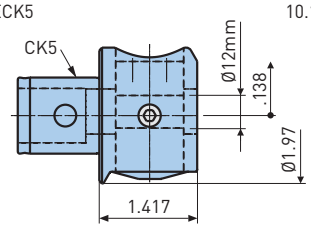
BORING HEAD CATALOG NUMBER

REFERENCE NUMBER

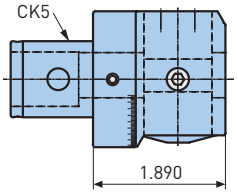
EWE2-32ECK5 — 10.112.310



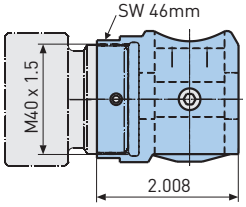
EWN2-32ECK5 — 10.112.313



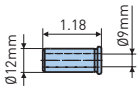
EWB2-32ECK5 — 10.112.315



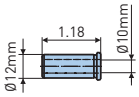
EWN2-32EES32 (ER32) — 10.112.317



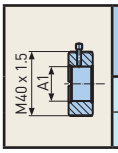
RB12-9
10.613.309



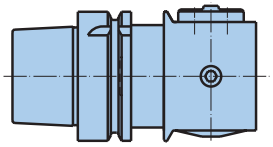
RB12-10
10.613.310



SLEEVE FOR ER TOOL HOLDER



Catalog Number	Reference Number	A1	ER
TB-ES32-ES25	10.112.353	M25 x 1.5	ER25
TB-ES32-ES16	10.112.385	M22 x 1.5	ER16

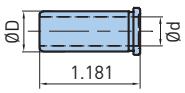


- Additional integral types with HSK and C6 available upon request; consult BIG DAISHOWA engineering for information & technical specification
- EWN2-32E: ØD = full range +.276/Ø
- EWE2-32E: ØD = full range +.157/Ø

Carbide tool holders

OPTIONAL REDUCTION SLEEVES

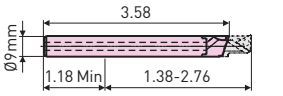
Catalog Number	ØD	Ød
10.613.304	12mm	**4mm**
10.613.305	12mm	**5mm**
11.613.313	12mm	**.125**
11.613.314	12mm	**.156**
11.613.315	12mm	**.187**
11.613.316	12mm	**.250**
11.613.318	12mm	**.312**



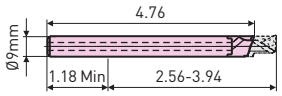
ACCESSORIES

SPARE PARTS PG. 547 | INSERTS PG. 514 | APPLICATION ADVICE PG. 468

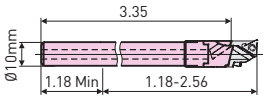
ADJUSTABLE TOOL HOLDER



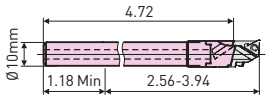
AST9-91HM10-12 10.615.374
ØD .386-.472



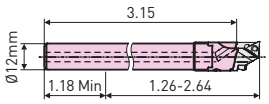
AST9-121HM10-12 10.615.369
ØD .386-.472



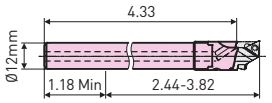
AST10-85HM12-14 10.615.354
ØD .465-.551



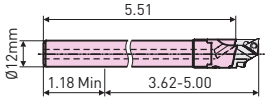
AST10-120HM12-14 10.615.370
ØD .465-.551



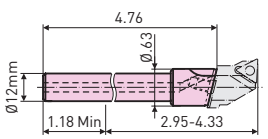
AST12-80HM15-18 10.615.355
ØD .583-.709



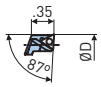
AST12-110HM15-18 10.615.356
ØD .583-.709



AST12-140HM15-18 10.615.372
ØD .583-.709



AST12-121HM17-33 10.615.256
ØD .661-1.300



E10-12T
10.615.365
ØD .386-.472

E12-14T
10.615.366
ØD .465-.551

E14-17T
10.615.367
ØD .543-.669

E15-18T
10.615.300
ØD .583-.709

E17-22T
10.615.301
ØD .661-.866

E22-27T
10.615.302
ØD .858-1.063

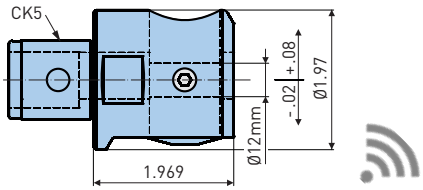
E27-33T
10.615.303
ØD 1.055-1.300

TP 07

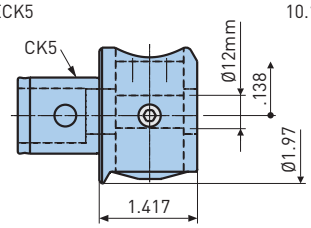
TC 11

BORING HEAD CATALOG NUMBER | **REFERENCE NUMBER**

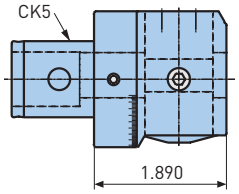
EWE2-32ECK5 — 10.112.310



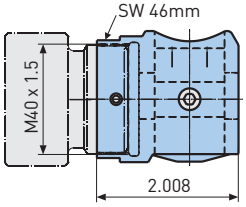
EWN2-32ECK5 — 10.112.313



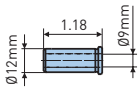
EWB2-32ECK5 — 10.112.315



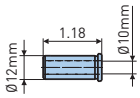
EWN2-32EES32 (ER32) — 10.112.317



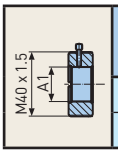
RB12-9
10.613.309



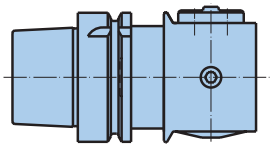
RB12-10
10.613.310



SLEEVE FOR ER TOOL HOLDER



Catalog Number	Reference Number	A1	ER
TB-ES32-ES25	10.112.353	M25 x 1.5	ER25
TB-ES32-ES16	10.112.385	M22 x 1.5	ER16



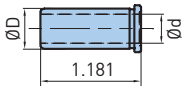
- Additional integral types with HSK and C6 available upon request; consult BIG DAISHOWA engineering for information & technical specification
- EWN2-32E: ØD = full range +.276/Ø
- EWE2-32E: ØD = full range +.157/Ø

Carbide tool holders

- For EWB2-32E only use items marked ❖

OPTIONAL REDUCTION SLEEVES

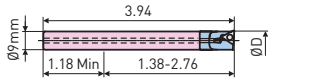
Catalog Number	ØD	Ød
10.613.304	12mm	**4mm**
10.613.305	12mm	**5mm**
11.613.313	12mm	**.125**
11.613.314	12mm	**.156**
11.613.315	12mm	**.187**
11.613.316	12mm	**.250**
11.613.318	12mm	**.312**



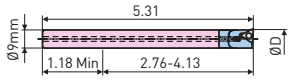
ACCESSORIES

SPARE PARTS PG. 547 | INSERTS PG. 514 | APPLICATION ADVICE PG. 468

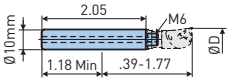
FIXED TOOL HOLDER



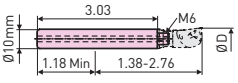
E10-ST9-TP07-100HM 10.615.208❖
ØD .394-.465



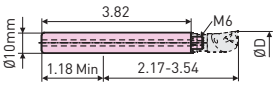
E10-ST9-TP07-135HM 10.615.206❖
ØD .394-.465



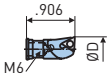
ST10-52 10.615.214
ØD .465-.543



ST10-77HM 10.615.215❖
ØD .465-.543

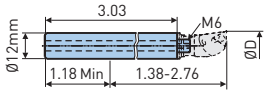


ST10-97HM 10.615.223❖
ØD .465-.543

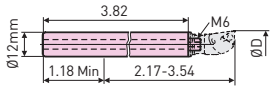


E12T
10.615.272❖
ØD .465-.543

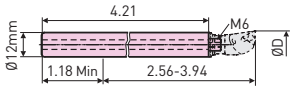
TP 07



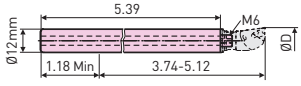
ST12-77 10.615.218
ØD .465-.622



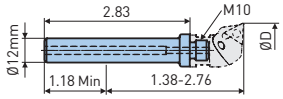
ST12-97HM 10.615.225❖
ØD .465-.622



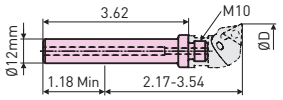
ST12-107HM 10.615.219
ØD .583-.701



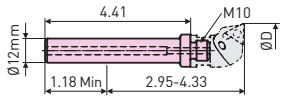
ST12-137HM 10.615.224❖
ØD .583-.701



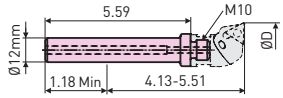
ST12-16-72 10.615.234
ØD .701-1.260



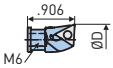
ST12-16-92HM 10.615.243❖
ØD .701-1.260



ST12-16-112HM 10.615.239❖
ØD .701-1.260

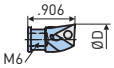


ST12-16-142HM 10.615.240❖
ØD .701-1.260

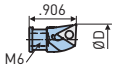


E14T
10.615.273❖
ØD .543-.622

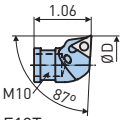
TP 07



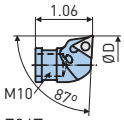
E15T
10.615.280❖
ØD .583-.661



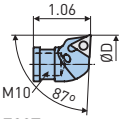
E16T
10.615.281❖
ØD .622-.701



E18T
10.615.282❖
ØD .701-.780

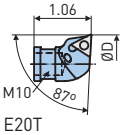


E24T
10.615.290❖
ØD .937-.976

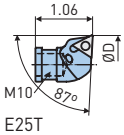


E28T
10.615.284❖
ØD 1.094-1.260

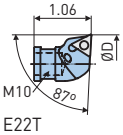
TC 11



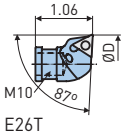
E20T
10.615.289❖
ØD .780-.858



E25T
10.615.288❖
ØD .976-1.016



E22T
10.615.283❖
ØD .858-.937

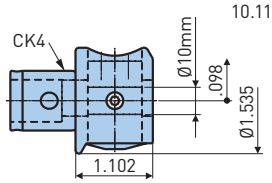


E26T
10.615.291❖
ØD 1.016-1.094

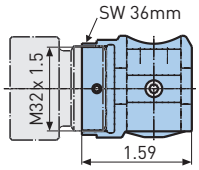
BORING HEAD CATALOG NUMBER

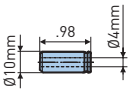
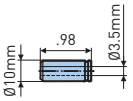
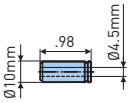
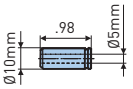
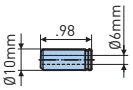
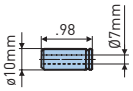
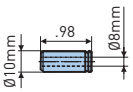
REFERENCE NUMBER

EWN04-22ECK4 — 10.112.216



EWN04-22EES25 (ER25) — 10.112.215



- RB10-4 — 10.613.204 
- RB10-3.5 — 10.613.202 
- RB10-4.5 — 10.613.203 
- RB10-5 — 10.613.205 
- RB10-6 — 10.613.206 
- RB10-7 — 10.613.207 
- RB10-8 — 10.613.208 

SLEEVE FOR ER TOOL HOLDER

Catalog Number	Reference Number	A1	ER
TB-ES25-ES20	10.112.271	M25 x 1.5	ER20
TB-ES25-ES16	10.112.272	M22 x 1.5	ER16

Carbide tool holders

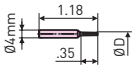
• For EWB2-32E only use items marked ❖

ACCESSORIES

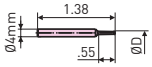
SPARE PARTS PG. 547

INSERTS PG. 514

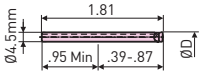
APPLICATION ADVICE PG. 468



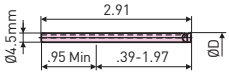
E2-4K10 10.611.155
ØD .079-.138



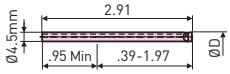
E3-4K10 10.611.156
ØD .118-.177



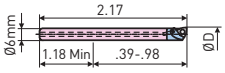
E5-ST4.5-46K10 10.615.081
ØD .193-.232



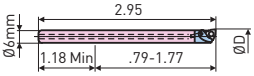
E5-ST4.5-74K10 10.615.204 (Uncoated)
ØD .193-.232



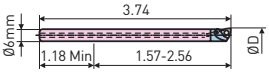
E5-ST4.5-74K10C 10.615.204A (AlCRN Coated)
ØD .193-.232



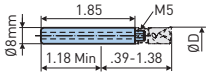
E7.5-ST6-WC02-55HM 10.615.084
ØD .287-.346



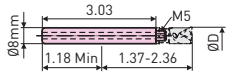
E7.5-ST6-WC02-75HM 10.615.085
ØD .287-.346



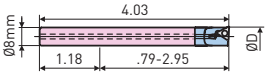
E7.5-ST6-WC02-95HM 10.615.202
ØD .287-.346



ST8-47 10.615.211
ØD .346-.492

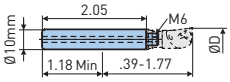


ST8-72HM 10.615.212
ØD .346-.492

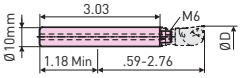


E9-ST8-TP07-105HM 10.615.213❖
ØD .346-.492

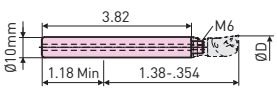
E9T
10.615.271
ØD .346-.492



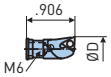
ST10-52 10.615.214
ØD .465-.571



ST10-77HM 10.615.215❖
ØD .465-.571

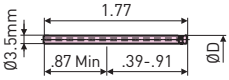


ST10-11.8-13.8-M6-97 10.615.223❖
ØD .465-.571

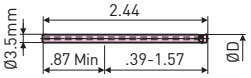


E12T
10.615.272
ØD .465-.571

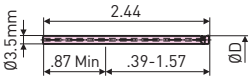
FIXED TOOL HOLDER



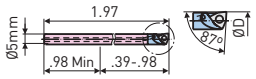
E4-ST3.5-45K10 10.615.080
ØD .154-.236



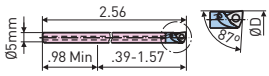
E4-ST3.5-62K10 10.615.203 (Uncoated)
ØD .154-.236



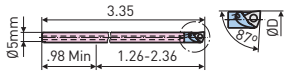
E4-ST3.5-62K10C 10.615.203A (AlCRN Coated)
ØD .154-.236



E6-ST5-WC02-50HM 10.615.082
ØD .228-.287



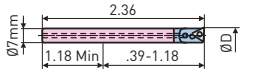
E6-ST5-WC02-65HM 10.615.083
ØD .228-.287



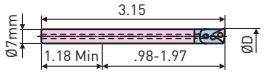
E6-ST5-WC02-85HM 10.615.201
ØD .228-.287

WC 02

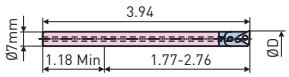
WC 02



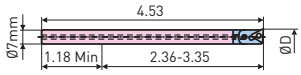
E8-ST7-TP07-60HM 10.615.086
ØD .307-.375



E8-ST7-TP07-80HM 10.615.207
ØD .307-.375



E8-ST7-TP07-100HM 10.615.287
ØD .307-.375



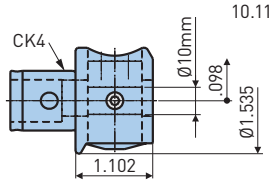
E8-ST7-TP07-115HM 10.615.205
ØD .307-.375

TP 07

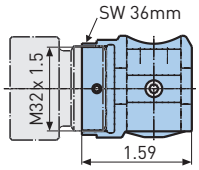
TP 07

TP 07

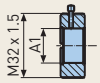
BORING HEAD CATALOG NUMBER	REFERENCE NUMBER
EWN04-22ECK4	10.112.216



EWN04-22EES25 (ER25)	10.112.215



SLEEVE FOR ER TOOL HOLDER



Catalog Number	Reference Number	A1	ER
TB-ES25-ES20	10.112.271	M25 x 1.5	ER20
TB-ES32-ES16	10.112.272	M22 x 1.5	ER16

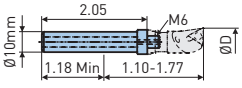
ACCESSORIES

SPARE PARTS PG. 547

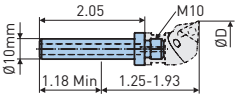
INSERTS PG. 514

APPLICATION ADVICE PG. 468

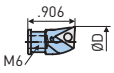
FIXED TOOL HOLDER



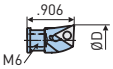
ST10-12-52 10.615.216
ØD .543-.728



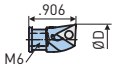
ST10-16-52 10.615.217
ØD .701-.886



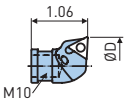
E14T
10.615.273
ØD .543-.622



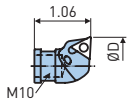
E15T
10.615.280
ØD .583-.661



E16T
10.615.281
ØD .622-.728



E18T
10.615.282
ØD .701-.807



E20T
10.615.289
ØD .779-.886

TP 07

TC 11

EWN 04-15E FINE BORING HEAD

RANGE: Ø.016"-.590"

Fine boring heads for the machining of smallest bores with highest spindle speeds on small machine tools. The boring heads are available with both modular CK3 connection and cylindrical shanks Ø16mm.

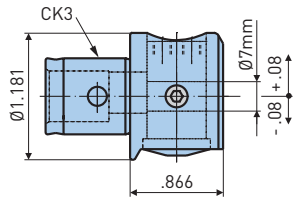
Catalog Number	Reference Number
EWN04-15ECK3	10.112.515

OTHER APPLICATIONS

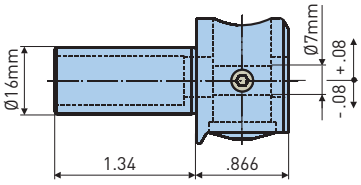
EWN04-15EST16
10.112.516

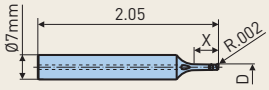
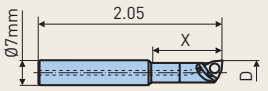
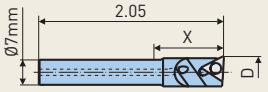
BORING HEAD CATALOG NUMBER — **REFERENCE NUMBER**

EWN04-15ECK3 — 10.112.515



EWN04-15EST16 — 10.112.516

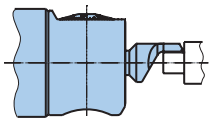


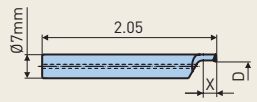
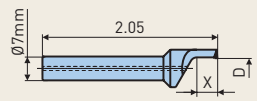
Boring Cutter	Catalog Number	Reference Number	X	Grade	ØD
	**E0.4-ST7-52K10C**	10.615.522	.098	C3 Coated Carbide AlCRN	.016-.039
	E0.9-ST7-52K10C	10.615.524	.157		.035-.059
	E1.4-ST7-52K10C	10.615.525	.236		.055-.079
	E2-ST7-52K10C	10.615.501	.275		.075-.118
	E3-ST7-52K10C	10.615.502	.394		.114-.157
	E4-ST7-52K10C	10.615.503	.512		.154-.197
	E5-ST7-52K10C	10.615.504	.630		.193-.236
	**E6-ST7-WC02-52HM**	10.615.505	.787	WC02	.228-.276
	E7-ST7-WC02-52HM	10.615.506			.268-.315
	**E8-ST7-TP07-52HM**	10.615.507	1.181	TP07	.307-.354
	E9-ST7-TP07-52HM	10.615.508			.346-.394
	E10-ST7-TP07-52HM	10.615.509			.386-.472
	E12-ST7-TP07-52HM	10.615.511			.465-.590

ACCESSORIES

SPARE PARTS PG. 547 | INSERTS PG. 514 | APPLICATION ADVICE PG. 468

OD TURNING



OD Turning Cutter	Catalog Number	Reference Number	X	Grade	ØD
	**OD-0-3-ST7-52K10C**	10.615.530	.098	C3 Coated Carbide AlCrN	.008-.118
	**OD-2-6-ST7-52K10C**	10.615.531	.236		.079-.236

EWN 04-7E FINE BORING HEAD

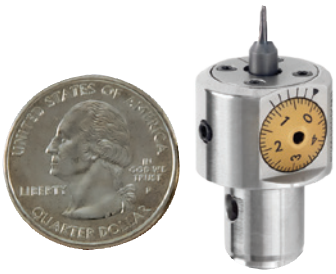
RANGE: Ø.016"-.236" World's smallest fine boring head: Thanks to its body diameter of only Ø.728", the EWN 04-7E is the perfect solution for micro machining applications.

OTHER APPLICATIONS

EWN04-7EST10
10.112.514

EWN04-7EST6
10.112.518

WORLD'S SMALLEST PRECISION BORING HEAD



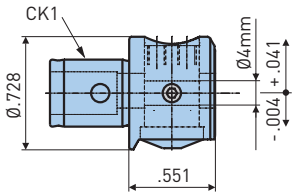
Catalog Number	Reference Number
EWN04-7ECK1	10.112.513

ACCESSORIES

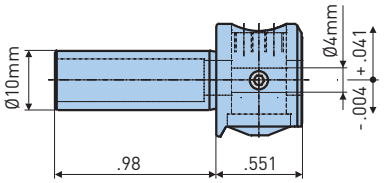
SPARE PARTS PG. 547

BORING HEAD CATALOG NUMBER **REFERENCE NUMBER**

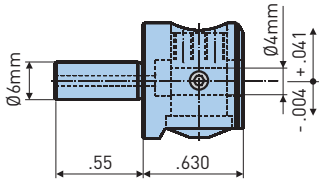
EWN04-7ECK1 10.112.513



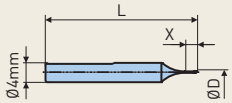
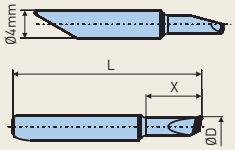
EWN04-7EST10 10.112.514



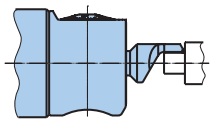
EWN04-7EST6 10.112.518

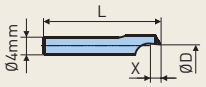


- The boring cutters are made with flat for cutting edge orientation.
- Other lengths and geometries available upon request.

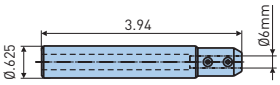
Boring Cutter	Catalog Number	Reference Number	L	X	Nose Radius	Grade	ØD
	**E0.4-ST4-30K10C**	10.615.541	1.181	.060	.002	C3 Coated Carbide AlCRN	.016-.035
	E0.9-ST4-30K10C	10.615.542		.120			.035-.055
	E1.4-ST4-30K10C	10.615.543		.197			.055-.078
	E2-ST4-30K10C	10.615.544		.236			.075-.118
	E3-ST4-30K10C	10.615.545		.394			.114-.157
	E4-ST4-30K10C	10.615.546		.512			.154-.197
	E5-ST4-30K10C	10.615.547		.630			.193-.275
	E0.4-ST4-25K10C	10.615.561	.984	.043	.004	C3 Coated Carbide AlCRN	.016-.024
	E0.6-ST4-25K10C	10.615.562		.059			.024-.031
	E0.8-ST4-25K10C	10.615.563		.079			.031-.047
	E1.2-ST4-25K10C	10.615.564		.098			.047-.059
	E1.5-ST4-25K10C	10.615.565		.138	.008		.059-.075
	E1.9-ST4-25K10C	10.615.566		.177			.075-.118
	E0.4-ST4-25K10	10.615.551	.984	.043	.004	C3 Uncoated Carbide	.016-.024
	E0.6-ST4-25K10	10.615.552		.059			.024-.031
	E0.8-ST4-25K10	10.615.553		.079			.031-.047
	E1.2-ST4-25K10	10.615.554		.098			.047-.059
	E1.5-ST4-25K10	10.615.555		.138	.008		.059-.075
	**E1.4-ST4-24CBN20**	10.615.571	.921	.138	.004	CBN-20	.055-.078
	E1.9-ST4-24CBN20	10.615.572	.949	.177			.075-.118
	E2.9-ST4-27CBN20	10.615.573	1.071	.315			.114-.157
	E3.9-ST4-30CBN20	10.615.574	1.169	.433			.154-.197
	E4.9-ST4-30CBN20	10.615.575	1.193	.630			.193-.236

OD TURNING

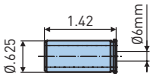


OD Turning Cutter	Catalog Number	Reference Number	L	X	Grade	ØD
	**OD-0.2-2.3-ST4-25K10C**	10.615.590	.984	.087	C3 Coated Carbide AlCrN	.008-.091

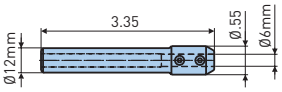
BORING BAR—6MM SHANK



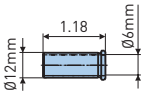
RB5/8"-6-100
10.613.526❖



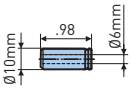
RB5/8"-6
10.613.506



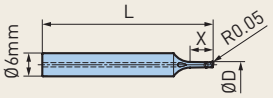
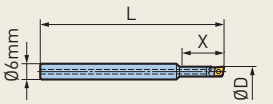
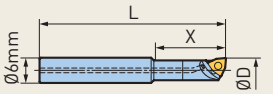
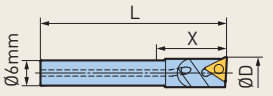
RB12-6-85
10.613.327❖



RB12-6
10.613.306❖



RB10-6
10.613.206

Boring Cutter	Catalog Number	Reference Number	L	X	Cutting Edge	ØD
	**E0.4-ST6-52K10C**	10.615.580	2.05	.059	K10C	.016-.039
	E0.9-ST6-52K10C	10.615.581		.118		.035-.059
	E1.4-ST6-52K10C	10.615.582		.197		.055-.079
	E2-ST6-52K10C	10.615.583		.236		.075-.118
	E3-ST6-52K10C	10.615.584		.394		.114-.157
	**ST06W-EB4-16**	—	2.76	.630	EC03	.154-.197
	ST06W-EB5-20	—	2.95	.787		.193-.236
	**E6-ST6-WC02-52HM**	10.615.585	2.05	.787	WC 02	.228-.276
	E7-ST6-WC02-52HM	10.615.586		.787		.268-.315
	**E8-ST6-TP07-52HM**	10.615.587		1.181	TP 07	.307-.354
	E9-ST6-TP07-52HM	10.615.588		1.181		.346-.394
	E10-ST6-TP07-52HM	10.615.589		1.181		.386-.472

• For EWB2-32E only use items marked ❖

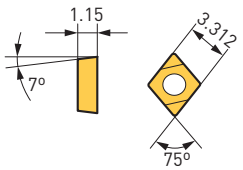
ACCESSORIES

SPARE PARTS PG. 547

INSERTS PG. 514

APPLICATION ADVICE PG. 468

EC..03 INSERTS



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

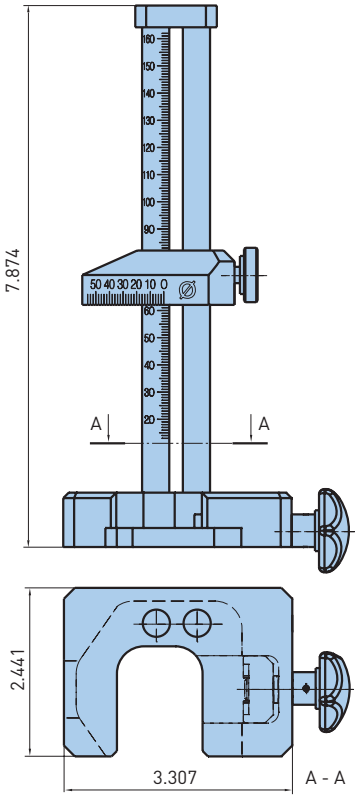
• Inserts are available in packages of 10 pcs.

SETTING JIG

The setting jig can be easily assembled on the front face of the boring heads EWN/EWB 2-50.

Set the measuring slide to the required projection length. Pull the tool holder until the cutting edge touches the lower end of the measuring slide. Align the cutting edge with the edge of the measuring slide.

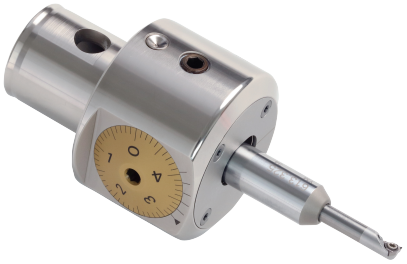
The scale on the measuring slide provides a coarse diameter setting.



Catalog Number	Description
10.112.817	Setting Jig EWN2-50
10.112.819	Setting Jig EWN2-50 Inch

SERIES 112
INSERT SELECTION & CUTTING DATA

BORING RANGE: Ø.228"-.650"



OPTIMAL CONDITIONS:

- Length to diameter ratio less than 4:1
- Rigid fixture and workpiece
- Good machine spindle

CRITICAL CONDITIONS:

- Length to diameter ratio over 4:1
- Unstable fixture and/or workpiece
- Worn machine spindle/poor runout

Material	Insert Radius	Stock Allow "/Dia.	Inserts & Cutting Speeds						Feed (IPR)
			Optimal Conditions			Critical Conditions			
			WC..02	TP..07	Speed (SFM)	WC..02	TP..07	Speed (SFM)	
Mild, Low-Carbon Steels 10xx-15xx 1018,1020, 1551, A36	.004	.004-.008	**10.655.606**	**10.651.824**	500-800	**10.655.604**	**10.651.840**	300-450	.0015-.0020
	.008	.008-.012	**10.655.602**	**10.651.837**		**10.655.601**	**10.651.835**		.0020-.0030
	.016	.012-.016	**11.655.606**	**10.651.713**		—	**10.651.843**		.0025-.0030
High Carbon Alloy Steels 23xx-92xx, Tool Steel 4140, 4340, 8620	.004	.004-.008	**10.655.605**	**10.651.840**	400-650	**10.655.604**	**10.651.824**	250-400	.0015-.0020
	.008	.008-.012	**10.655.603**	**10.651.802**		**10.655.601**	**10.651.835**		.0020-.0030
	.016	.012-.016	**11.655.606**	**10.651.702**		—	**10.651.843**		.0025-.0030
300 Stainless Steels Austenitic 303, 304, 316, 17-4ph	.004	.004-.008	**10.655.606**	**10.651.840**	250-500	**10.655.605**	**10.651.840**	200-300	.0010-.0015
	.008	.008-.012	**10.655.602**	**10.651.837**		**10.655.603**	**10.651.837**		.0015-.0020
	.012	.012-.016	—	**10.651.737**		—	**10.651.737**		.0020-.0250
400 Stainless Steels Martensitic 403, 410, 416, 430	.004	.004-.008	**10.655.606**	**10.651.840**	500-750	**10.655.605**	**10.651.840**	250-400	.0015-.0020
	.008	.008-.012	**10.655.602**	**10.651.837**		**10.655.603**	**10.651.834**		.0020-.0030
	.016	.012-.016	**11.655.606**	**10.651.843**		—	**10.651.843**		.0025-.0030
Grey Cast Iron Malleable Class 20, 30	.004	.004-.008	**10.655.605**	**10.651.840**	500-750	**10.655.606**	**10.651.824**	300-450	.0015-.0020
	.008	.008-.012	**10.655.603**	**10.651.841**		**10.655.602**	**10.651.833**		.0020-.0030
	.012	.012-.016	—	**10.651.632**		—	**10.651.735**		.0025-.0030
CBN-CH, CBN-CHN	—	.008-.012	**11.938.863**	**11.938.872**	750-1000	—	—	—	.0020-.0030
Cast Iron Ductile/Nodular/Chilled	.004	.004-.008	**10.655.605**	**10.651.840**	375-650	**10.655.606**	**10.651.824**	250-400	.0015-.0020
	.008	.008-.012	**11.655.603**	**10.651.841**		**10.655.602**	—		.0020-.0030
	.012	.012-.016	—	**10.651.632**		—	**10.651.842**		.0025-.0030
High Temp. Alloys Titanium, Inconel, Monel	.004	.003-.006	**10.655.606**	**10.651.840**	200-325	**10.655.606**	—	150-225	.0010-.0015
	.008	.006-.010	**10.655.602**	**10.651.837**		**10.655.602**	**10.651.837**		.0010-.0020
	.012	.008-.012	—	**10.651.737**		—	**10.651.842**		.0015-.0025
Copper Alloys Brass, Bronze	.004	.004-.008	**10.655.606**	**10.651.840**	600-1000	**10.655.605**	—	350-500	.0015
	.008	.008-.012	**10.655.602**	**10.651.825**		**10.655.603**	—		.0020
	.012	.012-.016	—	**10.651.623**		—	**10.651.623**		.0030
Aluminum/Magnesium 6061, 7075 Carbide Inserts	.004	.004-.008	**10.655.605**	**10.651.823**	600-1000	**10.655.605**	**10.651.823**	350-600	.0015-.0025
	.008	.008-.012	**10.655.603**	**10.651.825**		**10.655.603**	**10.651.825**		.0020-.0030
	.012	.012-.016	—	**10.651.723**		—	**10.651.723**		.0030-.0040
	.016	.016-.020	—	**10.651.725**		—	**10.651.725**		.0035-.0045
Aluminum/Magnesium 6061, 7075 PCD Inserts	.008	.010-.014	**11.938.845**	—	800-1350	—	—	—	.0020-.0030
	.012	.016-.020	—	**10.938.840**		—	—		.0030-.0040
Tool Steel (Min 50 Rc) CBN Inserts	.008	.004-.008	**11.938.846**	—	150-225	—	—	—	.0008-.0012
	.012	.004-.008	—	**10.938.837**		—	—		.0010-.0015

All Cutting Data Without Guarantee

Cutting Speed:

$$RPM = \frac{SFM \times 3.82}{Bore\ Ø}$$

Feed Rate:

$$IPM = RPM \times IPR$$

SERIES 112
INSERT SELECTION & CUTTING DATA

BORING RANGE: Ø.583"-2.125"

OPTIMAL CONDITIONS:

- Length to diameter ratio less than 4:1
- Rigid fixture and workpiece
- Good machine spindle

CRITICAL CONDITIONS:

- Length to diameter ratio over 4:1
- Unstable fixture and/or workpiece
- Worn machine spindle/poor runout

Material	Insert Radius	Stock Allow "/Dia.	Inserts & Cutting Speeds								Feed (IPR)
			Optimal Conditions				Critical Conditions				
			TC..11	CC..06	CC..09	Speed (SFM)	TC..11	CC..06	CC..09	Speed (SFM)	
Mild, Low-Carbon Steels 10xx-15xx 1018,1020, 1551, A36	.008	.008-.012	**11.655.311**	**CCMT060202-TNP11**	—	1000-1450	**10.655.379**	**10.654.837**	**10.654.937**	525-675	.0015-.0025
	.016	.016-.020	**TCMT110204-TNP12**	**CCMP060204-TNP12**	**CCMT09T304-TNP12**		**10.655.389**	**10.654.847**	**10.654.947**		.0030-.0040
	.031	.024-.040	**11.655.336**	**CCMT060208-TNP11**	**CCMT09T308-TNP12**		—	—	—		.0050-.0060
High Carbon Alloy Steels 23xx-92xx, Tool Steel 4140, 4340, 8620	.008	.008-.012	**TCMT110202-CTP51**	**CCMT060202-CTP51**	—	800-1100	**10.655.373**	**10.654.837**	—	400-550	.0015-.0025
	.016	.016-.020	**TCMT110204-CTP51**	**CCMT060204-CTP51**	**CCMT09T304-CTP51**		**10.655.383**	**10.654.847**	**CCMT09T304-TNP11**		.0030-.0040
	.031	.024-.040	**TCMT110208-CTP51**	**CCMT060208-CTP51**	**CCMT09T308-CTP51**		—	—	—		.0050-.0060
300 Stainless Steels Austenitic 303, 304, 316, 17-4ph	.008	.008-.012	**10.655.301B**	**10.654.837**	—	550-800	**10.655.379**	**10.654.879**	**10.654.937**	350-525	.0015-.0025
	.016	.016-.020	**10.655.302B**	**10.654.847**	**CCMT09T304-TNP12**		**10.655.389**	**10.654.889**	**10.654.947**		.0030-.0040
	.031	.024-.040	**10.655.303B**	**CCMT060208-TNP11**	**CCMT09T308-TNP12**		—	—	—		.0050-.0060
400 Stainless Steels Martensitic 403, 410, 416, 430	.008	.008-.012	**10.655.301B**	**10.654.837**	—	650-875	**10.655.379**	**10.654.879**	**10.654.937**	425-550	.0015-.0025
	.016	.016-.020	**10.655.354**	**10.654.847**	**CCMT09T304-TNP12**		**10.655.389**	**10.654.889**	**10.654.947**		.0030-.0040
	.031	.024-.040	**10.655.364**	**CCMT060208-TNP11**	**CCMT09T308-TNP12**		—	—	—		.0050-.0060
Grey Cast Iron Malleable Class 20, 30	.008	.008-.012	**11.655.311**	**CCMT060202-TNP11**	—	650-1000	**10.655.370**	**10.654.879**	—	350-500	.0015-.0025
	.016	.016-.020	**TCMT110204-TNP11**	**CCMP060204-TNP11**	**CCMT09T304-TNP11**		**10.655.380**	**10.654.889**	**10.654.949**		.0030-.0040
	.031	.024-.050	**TCMT110208-TNP11**	**CCMT060208-TNP11**	**CCMT09T308-TNP11**		—	—	—		.0050-.0060
CBN-CH, CBN-CHN	—	.016-.030	**11.938.833**	**11.938.835**	**11.938.838**	1500-2000	—	—	—	—	.0020-.0030
Cast Iron Ductile/Nodular/Chilled	.008	.008-.012	**10.655.301A**	**CCMT060202-TNP11**	—	375-625	**10.655.370**	**10.654.879**	—	250-350	.0015-.0025
	.016	.016-.020	**10.655.302A**	**CCMP060204-TNP11**	**CCMT09T304-TNP11**		**10.655.380**	**10.654.889**	**10.654.949**		.0030-.0040
	.031	.024-.040	**10.655.303A**	**CCMT060208-TNP11**	**CCMT09T308-TNP11**		—	—	—		.0050-.0060
High Temp. Alloys Titanium, Inconel, Monel	.008	.008-.012	**10.655.316**	**10.938.837**	**10.654.937**	200-325	**10.655.319**	**10.654.837**	—	125-250	.0010-.0020
	.016	.016-.020	**10.655.354**	**10.938.847**	**10.654.947**		**10.655.318**	**10.654.847**	**10.654.949**		.0020-.0030
	.031	.024-.040	**10.655.364**	—	**10.654.957**		—	—	—		.0030-.0040
Copper Alloys Brass, Bronze	.008	.008-.012	**11.655.315**	—	—	1100-1800	**10.655.378**	**10.654.879**	—	400-700	.0015-.0025
	.016	.016-.020	**TCMT110204-C2P**	**11.654.858**	**11.654.957**		**10.655.388**	**10.654.889**	**10.654.977**		.0030-.0040
	.031	.024-.040	**TCMT110208-C2P**	**11.654.864**	**CCMT09T308-C2P**		—	—	—		.0050-.0060
Aluminum/Magnesium 6061, 7075 Carbide Inserts	.008	.008-.012	**10.655.378**	**10.654.877**	—	1200-1600	**10.655.378**	**10.654.877**	—	600-1100	.0015-.0025
	.016	.016-.020	**10.655.388**	**10.654.888**	**10.654.977**		**10.655.388**	**10.654.888**	**10.654.977**		.0030-.0040
	.031	.024-.040	**10.655.398**	**10.654.898**	**10.654.987**		—	—	—		.0050-.0060
Aluminum/Magnesium 6061, 7075 PCD Inserts	.008	.016-.020	**11.938.861**	**11.938.847**	—	2000-4000	—	—	—	—	.0015-.0025
	.016	.016-.020	**10.938.841**	**11.938.842**	**11.938.843**		—	—	—		.0030-.0040
	.031	.024-.050	**11.938.860**	—	**11.938.851**		—	—	—		.0050-.0060
Tool Steel (Min 50 Rc) CBN Inserts	.016	.004-.008	**10.938.834**	**11.938.835**	**11.938.838**	200-300	—	—	—	—	.0015-.0020
	.031	.004-.008	**10.938.865**	—	—		—	—	—		.0020-.0025

All Cutting Data Without Guarantee

Cutting Speed:

$$RPM = \frac{SFM \times 3.82}{Bore\ Ø}$$

Feed Rate:

$$IPM = RPM \times IPR$$

SERIES 112 EWN 2-50XL —INSERT SELECTION & CUTTING DATA

BORING RANGE: Ø3.150"-6.000"

Material	Insert Radius	Inserts & Cutting Speeds			
		Inserts	Stock Allow "/Dia.	Speed (SFM)	Feed (IPR)
Mild, Low-Carbon Steels 10xx-15xx 1018,1020, 1551, A36	.008	**11.655.311**	.008-.012	450-800	.0020
	.016	**TCMT110204-TNP11**	.016-.020		.0040
	.031	**TCMT110208-TNP11**	.024-.040		.0060
High Carbon Alloy Steels 23xx-92xx, Tool Steel 4140, 4340, 8620	.008	**TCMT110202-CTP51**	.008-.012	400-700	.0020
	.016	**TCMT110204-CTP51**	.016-.020		.0040
	.031	**TCMT110208-CTP51**	.024-.040		.0060
300 Stainless Steels Austenitic 303, 304, 316, 17-4ph	.008	**10.655.379**	.008-.012	350-550	.0020
	.016	**10.655.389**	.016-.020		.0040
	.031	**10.655.399**	.024-.040		.0060
400 Stainless Steels Martensitic 403, 410, 416, 430	.008	**10.655.301B**	.008-.012	400-650	.0020
	.016	**10.655.302B**	.016-.020		.0040
	.031	**10.655.303B**	.024-.040		.0060
Grey Cast Iron Malleable Class 20, 30	.008	**11.655.311**	.008-.012	450-750	.0020
	.016	**TCMT110204-TNP11**	.016-.020		.0040
	.031	**TCMT110208-TNP11**	.024-.050		.0060
Cast Iron Ductile/Nodular/Chilled	.008	**10.655.301A**	.008-.012	300-550	.0020
	.016	**10.655.302A**	.016-.020		.0040
	.031	**10.655.303A**	.024-.040		.0060
High Temp. Alloys Titanium, Inconel, Monel	.008	**10.655.379**	.008-.012	150-300	.0015
	.016	**10.655.389**	.016-.020		.0020
	.031	**10.655.399**	.024-.040		.0030
Copper Alloys Brass, Bronze	.008	**11.655.315**	.008-.012	550-800	.0020
	.016	**TCMT110204-C2P**	.016-.020		.0040
	.031	**TCMT110208-C2P**	.024-.040		.0060
Aluminum/Magnesium 6061, 7075 Carbide Inserts	.008	**10.655.378**	.008-.012	650-1000	.0020
	.016	**10.655.388**	.016-.020		.0040
	.031	**10.655.398**	.024-.040		.0060
Tool Steel (Min 50 Rc) CBN Inserts	.016	**10.938.834**	.016-.020	200-300	.0015
	.031	**10.938.865**	.024-.040		.0020

All Cutting Data Without Guarantee

Cutting Speed:

$$RPM = \frac{SFM \times 3.82}{Bore\ Ø}$$

Feed Rate:

IPM = RPM x IPR

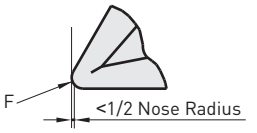
FINE BORING GUIDELINES

Major Influences of Fine Boring

- The amount of stock to be removed (D.O.C.)
- Feed rate
- Cutting speed

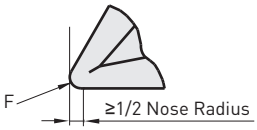
For all of these influences, a balance must be obtained for optimal machining. Too much stock or too heavy of a feed rate will generate excessive cutting forces that can result in inconsistent bore size. When stock or feed rates are too light, the possibility of chatter increases due to deflection.

D.O.C



High Possibility for Deflection & Chatter:

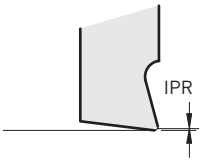
When D.O.C. is less than half the insert nose radius, the resulting forces (F) are almost 100% radial.



Good Stable Cut:

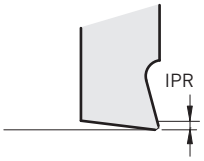
When D.O.C. is greater than or equal to half the insert nose radius, the resulting forces (F) are almost 100% axial.

FEED RATE



High Possibility for Deflection & Chatter:

When the feed rate is less than the hone on the insert tip, the risk of vibration increases.



Good Stable Cut:

When the feed rate is larger than the hone on the insert tip, full use of the chip breaker is allowed. This results in lower cutting forces.

CUTTING SPEED

Higher Speeds:

- Better surface finish
- Shorter machining times
- Better chip evacuation

As a general rule, the tool's length/diameter ratio and insert radius will determine optimum cutting speed. For smaller diameter bores, carbide or heavy metal bars may be required to eliminate vibration & chatter

Lower Speeds:

- Poorer surface finish
- Low chance for chatter
- Longer machining times
- High chance for built-up edge, results in shorter insert life

L/D Ratio	Max Insert Radius	Speed Reduction
≤4:1	.031	100% of optimum
≤5:1	.016	75% of optimum
≤6:1	.008	60% of optimum
≥7:1	.008	50% of optimum

PERIPHERICAL CUTTING EDGE

FINE BORING

B.3

FINE BORING HEADS 474-493

OVERVIEW 474
EWE DIGITAL FINE BORING HEADS 475
EWN FINE BORING HEADS 476
EWN BIG CAPTO FINE BORING HEADS 477
SMART DAMPER BORING 478-479
SERIES 310 INSERT HOLDERS 480-483
OD TURNING FOR EWN/EWE 484
SERIES 309 EWB-UP 485
EWB BALANCED FINE BORING HEADS 486-487
CKB BORING BAR 488
HYDRAULIC CHUCKS CLAMPING SYSTEM 489
STRAIGHT COLLET 489
EW FINE BORING HEAD 490
TROUBLESHOOTING 491
INSERT SELECTION & CUTTING DATA 492-493

EWE DIGITAL

Wireless

Wireless communication for easy readout with the BIG KAISER app: EWE fine boring heads revolutionize fine boring.

Ø.984-8.000"
CKB2-CKB7

PG. 475

EWN SMART DAMPER

Anti-Vibration

The combination of the most advanced technologies to a powerful and highly productive tool: an integral fine boring head with an innovative and patented damping technology.

Ø.787-8.000"
CKB1-CKB6

PG. 479

EWN

The EWN single cutter boring tool program for fine boring requires only 7 precision boring heads to cover the entire range. Due to optimized balance over the whole adjustment range, cutting speeds up to 3900 SFM are permitted.

Ø.787-8.000" CKB1-CKB7
Ø1.260-8.000" BIG CAPTO C3-C6

PG. 476

EWB BALANCED

Balanced

Even at max. speeds the balanced EWB fine boring heads guarantee vibration-free boring, resulting in increased productivity and highest precision.

Ø1.260"-4.134"
CK3-CK6

PG. 486

EWB-AL BALANCED

Balanced

The fine boring heads EWB AL are made of high strength aluminium with hard coating. Together with reductions and extensions made in the same way, the weight for long and large diameter tool combinations is reduced by more than 50%.

Ø3.937"-8.000"
CK6-CK7

PG. 487

EWB-UP BALANCEABLE

Balanced

The ultra-precision EWB-UP series sets higher standards for boring heads concerning adjustment accuracy and balance quality.

Ø.984"-3.937"
CK2-CK6

PG. 485

EW

These heads are designed to be used in combination with the steel or carbide-boring bars Ø14mm and Ø16mm out of the accessory program. In conjunction with the long carbide bar, the tool is well suited for vibration-free finishing operations in bores with unfavorable Ø/L-ratios.

Ø.591"-.866"
ES15/ES18

PG. 490

Resolution:

EWE, EWB-UP
.00005"/Ø

EWN, EWB, EWB-AL, EW
.0005"/Ø Dial, .0001"/Ø Vernier

EWE DIGITAL FINE BORING HEADS

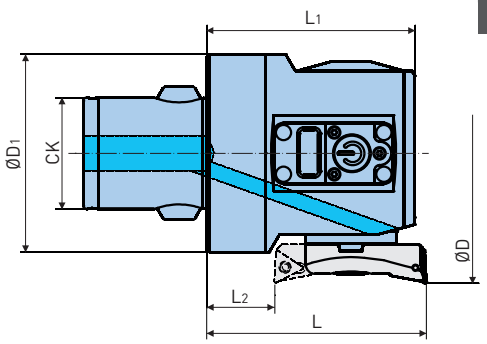
RANGE: Ø.984-8.000" (Ø25-203mm)

Thanks to wireless communication with the BIG KAISER app, manufacturing precise bores has become very easy.

Resolution: .00005"/Ø (.001mm/Ø)

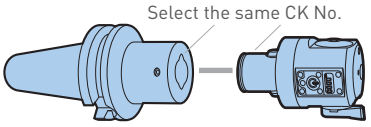
Wireless

EWE25-47CKB2
EWE32-60CKB3



Catalog Number	Reference Number	CK	Front Boring ØD	Back Boring ØD	ØD1	L	L1	L2	Weight (lbs.)
EWE25-47CKB2	10.310.820	CKB2	.984-1.850	1.417-1.850	.921	1.398	1.280	.453	.3
EWE41-74CKB4	10.310.840	CKB4	1.614-2.913	2.087-2.913	1.496	1.850	1.693	.551	.7
EWE53-95CKB5	10.310.850	CKB5	2.087-3.740	2.441-3.740	1.929	2.244	2.087	.748	1.7
EWE68-150CKB6	10.310.860	CKB6	2.677-5.906	3.150-5.906	2.520	2.795	2.646	.866	3.7
EWE100-203CKB6	10.310.865		3.937-8.000	4.409-8.000	3.543	2.795	2.646	.866	5.5
EWE100-203CKB7	10.310.870	CKB7	3.937-8.000	4.409-8.000	3.543	3.425	3.276	1.496	8.8

- Insert holder must be ordered separately; see pg. 480
- EWE32 and smaller do not have a built-in display, EWE reader or mobile device with BK App are required to use these heads



SHANK
BCV Pg. 88
HSK Pg. 206
BIG CAPTO Pg. 265
BBT Pg. 150
Pg. 228 Pg. 235
ST Pg. 305

HEAD

INSERT HOLDER
Pg. 480

ACCESSORIES

SPARE PARTS PG. 550

INSERTS PG. 514

APPLICATION ADVICE PG. 491

EWE READER

If no smart phone or BIG KAISER App is available, the EWE Reader is the perfect alternative for making settings on the digital fine boring heads. The EWE Reader shows the adjustment on the fine boring head quickly and easily.

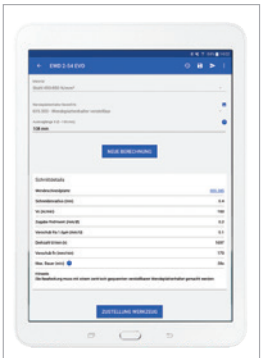
Catalog Number	Description
10.719.000	EWE Reader

BIG KAISER APP

Enhances user friendliness while assembling and running our boring tools. The app helps operators to determine optimal cutting parameters, manuals and provides a history of all adjustments made with an EWE boring head.

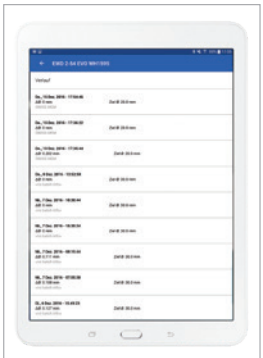
Download on the App Store

GET IT ON Google Play



CUTTING DATA

SEND YOUR DATA TO...

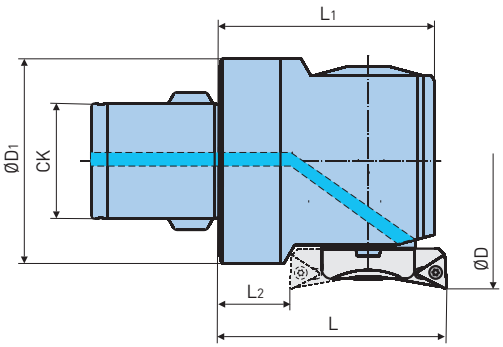


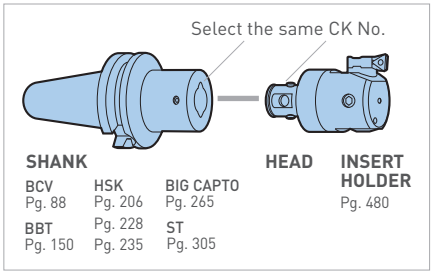
HISTORY (MADE AUTOMATICALLY)

EWN FINE BORING HEADS

RANGE: Ø.787"-8.000" (Ø20-203mm)

The EWN single cutter boring tool program for fine boring covers a range of Ø.787"-8.000" with only seven fine boring heads. Due to the optimized balance over the whole adjustment range, cutting speeds up to 1200 m/min are permitted.





Catalog Number	Reference Number	CK	Front Boring ØD*	Back Boring ØD	ØD1	L	L1	L2	Weight (lbs.)
EWN20-36E-CKB1	10.310.111	CKB1	.787-1.417	1.102-1.417	.728	1.280	1.161	.413	0.2
EWN25-47E-CKB2	10.310.211	CKB2	.984-1.850	1.417-1.850	.921	1.398	1.280	.453	0.3
EWN32-60E-CKB3	10.310.311	CKB3	1.260-2.362	1.811-2.362	1.181	1.575	1.378	.394	0.5
EWN41-74E-CKB4	10.310.411	CKB4	1.614-2.913	2.087-2.913	1.496	1.850	1.693	.551	0.9
EWN53-95E-CKB5	10.310.511	CKB5	2.087-3.740	2.441-3.740	1.929	2.244	2.087	.748	1.8
EWN68-150E-CKB6	10.310.611	CKB6	2.677-5.906	3.150-5.906	2.520	2.795	2.646	.866	3.7
EWN100-203E-CKB6	10.310.612	CKB6	3.937-8.000	4.409-8.000	3.543	2.795	2.646	.866	5.3
EWN100-203E-CKB7-87	10.310.711	CKB7	3.937-8.000	4.409-8.000	3.543	3.425	3.276	1.496	8.6
EWN100-203E-CKB7-117	10.310.718	CKB7	3.937-8.000	4.409-8.000	3.543	4.606	4.457	2.677	11.9

***Front Boring ØD depends on insert holder**

- Insert holder must be ordered separately; see pg. 480

ACCESSORIES

SPARE PARTS PG. 550

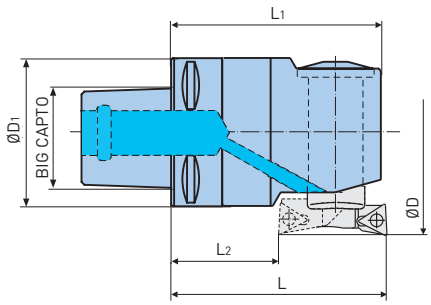
INSERTS PG. 514

APPLICATION ADVICE PG. 491

EWN BIG CAPTO FINE BORING HEADS

RANGE: Ø1.260"-8.000" (Ø32-203mm)

With only five fine boring heads, the diameter range from Ø1.260"-8.000" is completely covered. The boring heads can be clamped in BIG CAPTO shanks and other polygonal basic holders, or directly in BIG CAPTO machine spindles.



Catalog Number	Reference Number	CK	Front Boring ØD	Back Boring ØD	ØD1	L	L1	L2	Weight (lbs.)
EWN32-60E-C3	10.470.311	C3	1.260-2.362	1.811-2.362	1.260	2.165	1.969	.984	.7
EWN41-74E-C4	10.470.411	C4	1.614-2.913	2.087-2.913	1.575	2.638	2.480	1.339	1.3
EWN53-95E-C5	10.470.511	C5	2.087-3.740	2.441-3.740	1.969	3.031	2.874	1.535	2.4
EWN68-150E-C6	10.470.611	C6	2.677-5.906	3.150-5.906	2.520	3.622	3.465	1.693	4.8
EWN100-203E-C6	10.470.612	C6	3.937-8.000	4.409-8.000	3.543	3.622	3.465	1.693	6.4

• Insert holder must be ordered separately; see pg. 480

ACCESSORIES

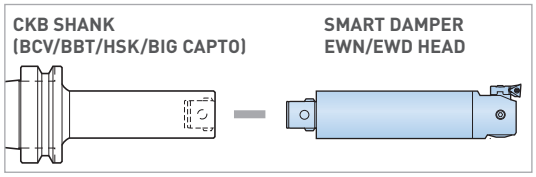
SPARE PARTS PG. 550 | INSERTS PG. 514 | APPLICATION ADVICE PG. 491

SMART DAMPER BORING

BORING RANGE: Ø.787"-8.000" (Ø20-203mm)

Integrated Damping System in EWN/EWD Fine Boring Head

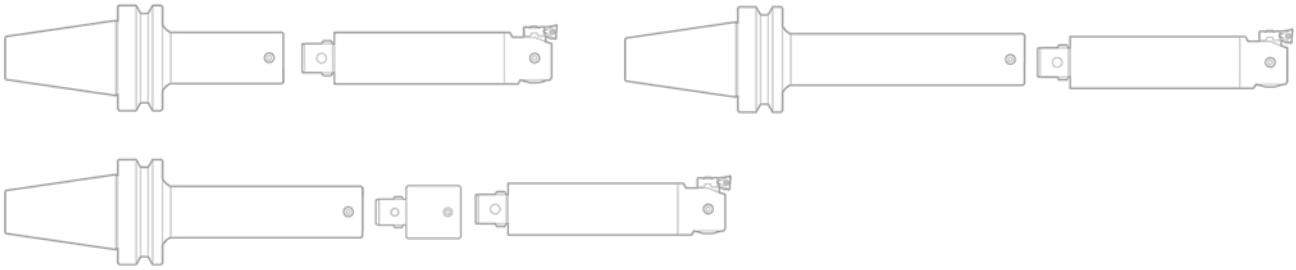
The integrated design of the Smart Damper system and EWN/EWD fine boring head shortens the distance from the damper and the cutting edge which is the source of vibration, so higher damping effects minimize the chatter or vibration.



COOLANT THROUGH

SD smart damper

Optimal Tool Configuration can be Achieved by Assembling Numerous Standard Shanks



Fine Boring of Ductile Nodular Cast Iron

Tool Layout	Total Length	L/D	Cutting Speed (SFM)						
			330	500	650	825	1000	1150	1300
CK SHANK **BBT50-CKB4-178** + *SMART DAMPER EWN HEAD* **EWN41DP**	14.29	7.8	◎	◎	◎	◎	◎	◎	◎
CK SHANK **BBT50-CKB4-178** + EXTENSION **CKB44-45** + *SMART DAMPER EWN HEAD* **EWN41DP**	16.06	8.9	◎	◎	◎	◎	◎	○	○

○ = Acceptable ◎ = Excellent Surface Finish

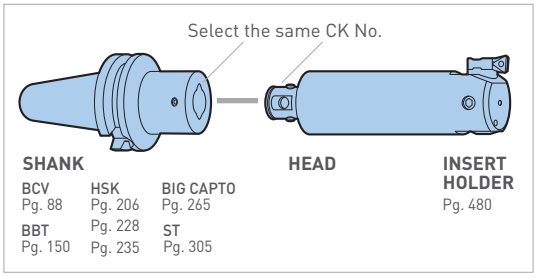
Cutting Conditions

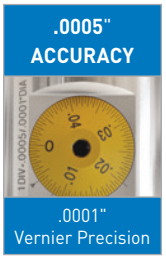
Vertical Machining Center
Depth of Cut: .008"/Ø
Feed Rate: .004"/rev.

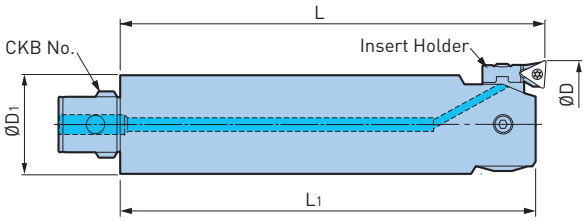
Workpiece Material: High Carbon Steel
Insert: TCMT110204EFM (T2000Z)
Diameter: Ø1.750"

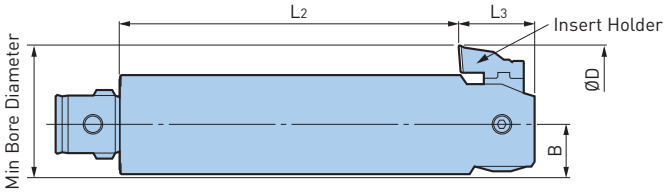
SMART DAMPER BORING

EWN Fine Head—Dial Readout









Catalog Number	CK	Insert Holder	Boring			Back Boring			B	ØD1	Weight (lbs.)	Insert
			ØD	L	L1	ØD	L2	L3				
CK1-EWN20EDP-100	CK1	10.626.111	.787-1.024	3.937	3.819	—	3.071	.866	.394	.748	.9	TP..07
		10.626.112	.984-1.220			1.102-1.220						
		10.626.113	1.181-1.417			1.181-1.417						
CK2-EWN25EDP-125	CK2	10.626.121	.984-1.299	4.921	4.803	—	3.976	.945	.472	.945	1.5	
		10.626.122	1.260-1.575			1.417-1.575						
		10.626.123	1.535-1.850			1.535-1.850						
CKB3-EWN32EDP-160	CKB3	10.626.131	1.260-1.654	6.299	6.102	—	5.115	.984	.630	1.220	2.6	TC..11
		10.626.132	1.614-2.008			—						
		10.626.133	1.970-2.362			2.244-2.362						
CKB4-EWN41EDP-185	CKB4	10.626.141	1.614-2.162	7.283	7.126	—	5.984	1.142	.787	1.535	5.1	
		10.626.142	1.969-2.480			2.402-2.480						
		10.626.143	2.402-2.913			2.638-2.913						
CKB5-EWN53EDP-210	CKB5	10.626.151	2.087-2.756	8.268	8.110	—	6.772	1.339	.984	1.969	9.7	
		10.626.152	2.559-3.228			2.913-3.228						
		10.626.153	3.070-3.740			3.071-3.740						
CKB6-EWN68EDP-240	CKB6	10.626.161	2.677-3.937	9.449	9.291	3.543-3.937	7.520	1.772	1.299	2.520	18.3	
		10.626.162	3.700-4.960			3.701-4.961						
		10.626.162	4.646-5.906			4.646-5.906						
CKB6-EWN100EDP-240	CKB6	10.626.161	3.937-6.024	9.449	9.291	4.213-6.024	7.520	1.772	1.772	2.520	19.4	
		10.626.162	4.961-7.047			4.961-7.047						
		10.626.163	5.906-8.000			5.906-8.000						
CKB7-EWN100EDP-240	CKB7	10.626.161	3.937-6.024	9.449	9.291	4.213-6.024	7.520	1.772	1.772	3.543	36.1	
		10.626.162	4.961-7.047			4.961-7.047						
		10.626.163	5.906-8.000			5.906-8.000						

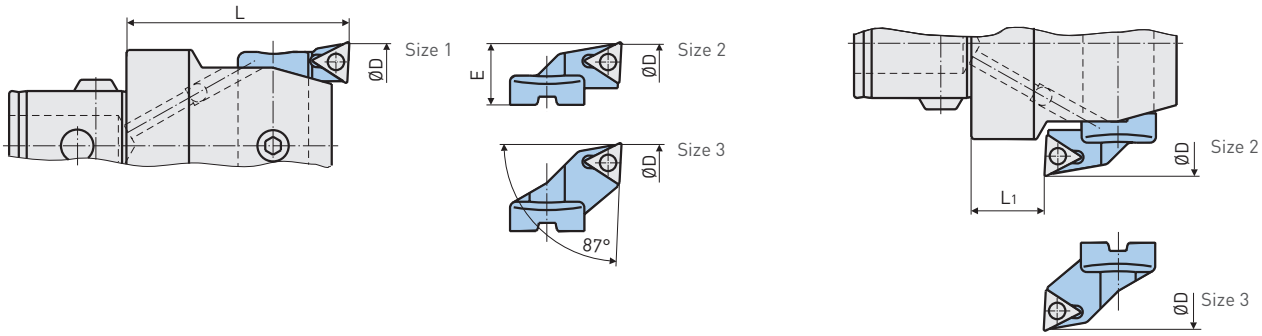
- The minimum boring range represents the range when insert with .016" nose radius is used
- Insert holder must be ordered separately; see pg. 480
- Insert must be ordered separately, the suitable size is TC11
- Designed to be capable of supplying coolant through body

ACCESSORIES

SPARE PARTS
PG. 550

SERIES 310—INSERT HOLDERS TYPE TC

Standard holder with 87º entering angle, suitable for fine boring in through and blind holes. Three different insert holders for the extension of the diameter range and for back boring applications.



Head Type	Catalog Number	Reference Number	Front Boring ØD	Back Boring ØD	E	Insert
EWN20	**ENH1-1T**	10.626.111	.787-1.024	—	.183	TP07
	ENH1-2T	10.626.112	.984-1.220	1.102-1.220	.281	
	ENH1-3T	10.626.113	1.181-1.417	1.181-1.417	.380	
EWN25	**ENH2-1T**	10.626.121	.984-1.299	—	.215	
	ENH2-2T	10.626.122	1.260-1.575	1.417-1.575	.352	
	ENH2-3T	10.626.123	1.535-1.850	1.535-1.850	.490	
EWN32	**ENH3-1T**	10.626.131	1.260-1.654	—	.291	TC11
	ENH3-2T	10.626.132	1.614-2.008	1.811-2.008	.469	
	ENH3-3T	10.626.133	1.969-2.362	1.969-2.362	.646	
EWE41 EWD41 EWN41	**ENH4-1T**	10.626.141	1.614-2.126	—	.319	
	ENH4-2T	10.626.142	1.969-2.480	2.087-2.480	.496	
	ENH4-3T	10.626.143	2.402-2.913	2.402-2.913	.713	
EWE53 EWD53 EWN53	**ENH5-1T**	10.626.151	2.087-2.756	2.441-2.756	.394	
	ENH5-2T	10.626.152	2.559-3.228	2.717-3.228	.630	
	ENH5-3T	10.626.153	3.070-3.740	3.070-3.740	.886	
EWE68 EWD68 EWN68	**ENH6-1T**	10.626.161	2.677-3.937	3.151-3.937	.492	
	ENH6-2T	10.626.162	3.700-4.960	3.700-4.960	1.004	
	ENH6-3T	10.626.163	4.646-5.906	4.646-5.906	1.476	
EWE100 EWN100	**ENH6-1T**	10.626.161	3.937-6.024	4.409-6.024	.492	
	ENH6-2T	10.626.162	4.960-7.047	4.960-7.047	1.004	
	ENH6-3T	10.626.163	5.906-8.000	5.906-8.000	1.476	

ACCESSORIES

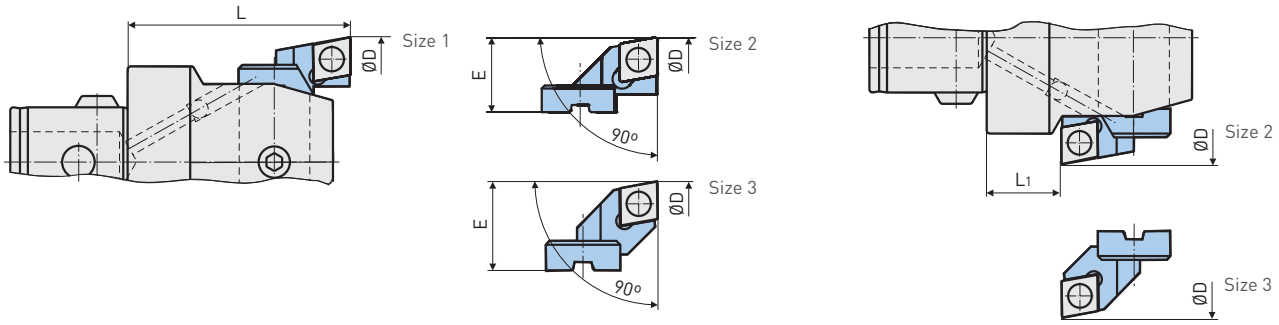
SPARE PARTS PG. 551

INSERTS PG. 514

APPLICATION ADVICE PG. 491

SERIES 310—INSERT HOLDER TYPE CC

With 90º approach angle, suitable for semi-finish and fine boring and for stepped bores. For each boring head, insert holders with different projections are available for the extension of the boring range and for back boring.



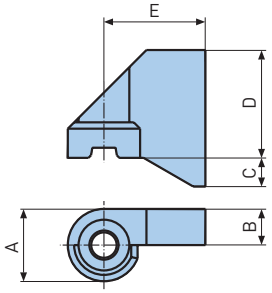
Head Type	Catalog Number	Reference Number	Front Boring ØD	Back Boring ØD	E	Insert
EWN25	**ENH2-2C**	10.626.322	1.299-1.614	1.417-1.614	.352	CC06
	ENH2-3C	10.626.323	1.535-1.850	1.535-1.850	.490	
EWN32	**ENH3-1C**	11.626.331	1.260-1.654	—	.291	
	ENH3-2C	10.626.332	1.614-2.008	1.811-2.008	.469	
	ENH3-3C	10.626.333	1.969-2.362	1.969-2.362	.646	
EWE41 EWD41 EWN41	**ENH4-1C**	11.626.341	1.614-2.126	—	.319	
	ENH4-2C	10.626.342	1.969-2.480	2.087-2.480	.496	
	ENH4-3C	10.626.343	2.402-2.913	2.402-2.913	.713	
EWE53 EWD53 EWN53	**ENH5-1C**	11.626.351	2.087-2.756	2.441-2.756	.394	
	ENH5-2C	10.626.352	2.441-3.110	2.756-3.110	.630	CC09
	ENH5-3C	10.626.353	3.070-3.740	3.070-3.740	.886	
EWE68 EWD68 EWN68	**ENH6-1C**	11.626.361	2.677-3.937	3.151-3.937	.492	
	ENH6-2C	10.626.364	3.700-4.960	3.700-4.960	1.004	
	ENH6-3C	10.626.363	4.252-5.512	4.252-5.512	1.280	
EWE100 EWN100	**ENH6-1C**	11.626.361	3.937-6.024	4.409-6.024	.492	
	ENH6-2C	10.626.364	4.960-7.047	4.960-7.047	1.004	
	ENH6-3C	10.626.363	5.512-7.600	5.512-7.600	1.280	

ACCESSORIES

SPARE PARTS PG. 551 | INSERTS PG. 514 | APPLICATION ADVICE PG. 491

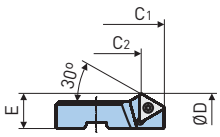
SERIES 310—BLANK INSERT HOLDER TYPE ENH

If required, the blanks can be hardened. (H11 Tool Steel)



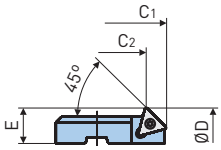
Head Type	Catalog Number	Reference Number	A	B	C	D	E
EWN20	**ENH1-B**	10.626.901	.331	.165	.103	.433	.465
EWN25	**ENH2-B**	10.626.902	.409	.205	.124	.394	.677
EWN32	**ENH3-B**	10.626.903	.449	.224	.177	.669	.630
EWN41	**ENH4-B**	10.626.904	.606	.303	.197	.787	.787
EWN53	**ENH5-B**	10.626.905	.748	.374	—	.984	.787
EWN68 EWN100	**ENH6-1B**	10.626.906	1.142	.571	—	1.575	1.024
	ENH6-2B	10.626.916					1.969

SERIES 310—INSERT HOLDERS 30º



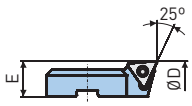
Head Type	Catalog Number	Reference Number	ØD	E	C1	C2	Insert
EWN25	**ENH2-1T30**	11.380.321	1.102-1.417	.274	1.398	1.173	TP07
EWN32	**ENH3-1T30**	11.380.322	1.417-1.811	.370	1.654	1.311	TC11
EWE41/EWD41/EWN41	**ENH4-1T30**	11.380.323	1.772-2.283	.398	1.929	1.587	
EWE53/EWD53/EWN53	**ENH5-1T30**	11.380.324	2.205-2.874	.453	2.244	1.906	
EWE68/EWD68/EWN68	**ENH6-1T30**	11.380.325	2.677-3.937	.492	2.795	2.453	
EWE100/EWN100	**ENH6-1T30**	11.380.325	3.937-6.024	.492	3.425	3.093	

SERIES 310—INSERT HOLDERS 45º



Head Type	Catalog Number	Reference Number	ØD	E	C1	C2	Insert
EWN25	**ENH2-1T45**	11.380.326	1.102-1.417	.274	1.398	1.213	TP07
EWN32	**ENH3-1T45**	11.380.327	1.417-1.811	.370	1.654	1.370	TC11
EWE41/EWD41/EWN41	**ENH4-1T45**	11.380.328	1.772-2.283	.398	1.929	1.646	
EWE53/EWD53/EWN53	**ENH5-1T45**	11.380.329	2.205-2.874	.453	2.244	1.961	
EWE68/EWD68/EWN68	**ENH6-1T45**	11.380.330	2.677-3.937	.492	2.795	2.512	
EWE100/EWN100	**ENH6-1T45**	11.380.330	3.937-6.024	.492	3.425	3.142	

SERIES 310—INSERT HOLDERS 25º



Head Type	Catalog Number	Reference Number	ØD	E	Insert
EWN32	**ENH3-1T25**	10.689.197	1.260-1.654	.291	TC11
EWE41/EWD41/EWN41	**ENH4-1T25**	11.380.306	1.614-2.126	.319	
EWE53/EWD53/EWN53	**ENH5-1T25**	11.380.341	2.087-2.756	.394	
EWE68/EWD68/EWN68	**ENH6-1T25**	11.380.587	2.677-3.937	.492	
EWE100/EWN100	**ENH6-1T25**	11.380.587	3.937-6.024	.492	

ACCESSORIES

SPARE PARTS PG. 551

INSERTS PG. 514

BACK BORING INSTRUCTIONS

For back boring, it is required to enter into the bore off center, with a tool adjusted to the back bore diameter. In this respect, the back bore diameter «D» as well as the diameters of the entry bore «C» and the tool body «A», are related to each other. In order to check the feasibility of the back boring operation and to select the best possible tool combination, these values can be calculated as follows:

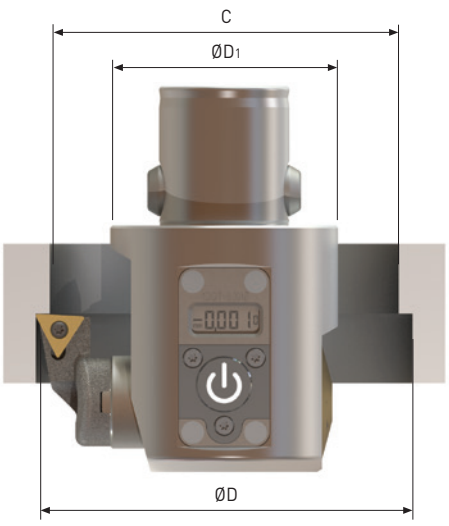
Example:
Calculation of the minimum entry bore diameter «C».

Given:
Back Bore Diameter ØD=93mm
Tool Combination EWN53, with Insert Holder No. 3, ØD1=50 mm

$$C = \frac{ØD + ØD1}{2} = \frac{93 + 50}{2} = 71.5\text{mm}$$

CAUTION

Counter clockwise spindle rotation is required for back boring operations. The cutting edge is at a shorter length than the boring head. Consider total length of tool. Check the space at the back side of the workpiece.



Min Entry Bore Diameter «C»

$$C = \frac{ØD + ØD_1}{2}$$

Max Back Bore Diameter «ØD»

$$ØD = 2C - ØD_1$$

Max Tool Body Diameter «ØD1»

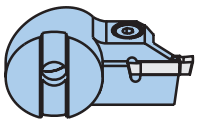
$$ØD_1 = 2C - ØD$$

SERIES 310—FACE GROOVING INSERT HOLDERS

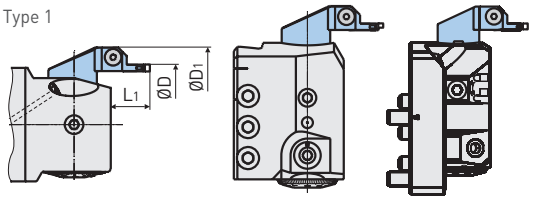
RANGE: Ø2.087"-119.700"

The insert holders and inserts are made for face grooving with the fine boring heads EWN and EWE Series 310 and with the large diameter boring tools Series 317 and 318.

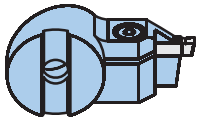
Type 1



Type 1



Type 2



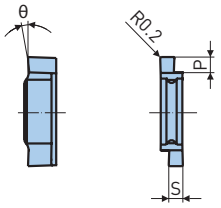
Type 2

Head Type	L1	Type 1				Type 2			
		Catalog Number	Reference Number	ØD	ØD1	Catalog Number	Reference Number	ØD	ØD2
EWE53/EWD53/EWN53	.787	**ENH5-1FG4**	10.626.935	2.087-2.756	ØD+.866	**ENH5-2FG4R**	10.626.945	2.874-3.543	ØD-1.181
EWE68/EWD68/EWN68	.827	**ENH6-1FG4**	10.626.936	2.677-3.937	ØD+.945	**ENH6-2FG4R**	10.626.946	3.465-4.724	ØD+1.102
		ENH6-2FG4	10.626.937	3.701-4.961		**ENH6-3FG4R**	10.626.947	4.488-5.748	
EWE100/EWN100		**ENH6-1FG4**	10.626.936	3.937-6.024		**ENH6-2FG4R**	10.626.946	4.724-6.811	
		ENH6-2FG4	10.626.937	4.961-7.047		**ENH6-3FG4R**	10.626.947	5.748-7.835	
EWE200/EWN200		**ENH7-1FG4**	10.626.938	7.874-118.100	ØD+.827	**ENH7-2FG4R**	10.626.948	8.661-119.700	

ACCESSORIES

SPARE PARTS
PG. 557

INSERTS

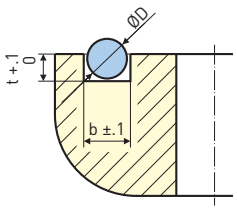


Inserts for Steel and Cast Iron			
S	P	θ	Catalog Number
.098	.106	5°	**10.958.425**
.118	.130	5°	**10.958.430**
.130	.142	5°	**10.958.433**
.138	.150	5°	**10.958.435**
.157	.169	5°	**10.958.440**

Inserts for Aluminum			
S	P	θ	Catalog Number
.098	.106	5°	**10.958.475**
.118	.130	5°	**10.958.480**
.130	.142	5°	**10.958.483**
.138	.150	5°	**10.958.485**
.157	.169	5°	**10.958.490**

GROOVE DIMENSIONS

Recommended groove dimensions for given cross section diameters of O-rings, for static sealing.



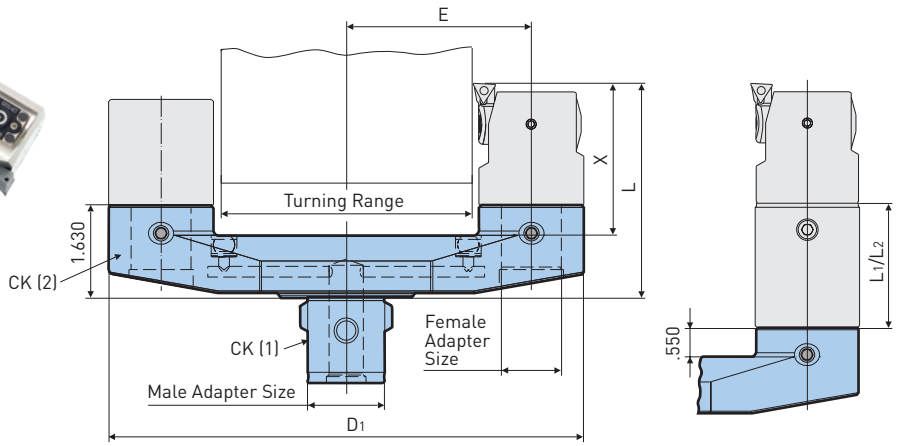
ØD	Groove Width b	Groove Depth t
.070	.098	.051
.079	.098	.063
.098	.130	.075
.103	.138	.081
.118	.157	.094

Workpiece Material	Speed (SFM)	Feed (IPR)
Construction-Heat Treatable Steels	400-600	.0004-.0012
Stainless Steels	200-400	.0004-.0008
Cast Iron	260-530	.0008-.0016
Aluminum	660-1320	.0008-.0016
Non-Ferrous Metals		

OD TURNING WITH EWN/EWE

RANGE: Ø.630"-4.724"

This program consists of tool holders with CKB5 and CKB6 connectors, made for different turning ranges and with tool connections in the sizes CKB3, CKB4 and CKB5. The corresponding precision fine or rough boring heads and counterweights can be mounted on the tool holder either directly or by means of an extension. With this program, outer diameters in the range from Ø.630"-4.724" can be machined.



Catalog Number	Reference Number	CK (1)	CK (2)	ØD1	E	L (L1) (L2)*	X*	Weight (lbs.)
OD16-44CKB5-CKB3	10.335.906	CKB5	CKB3	4.213	1.496	3.268 (4.449) (5.039)	2.008 (3.189) (3.780)	5.9
OD16-44CKB6-CKB3	10.335.905	CKB6	CKB3	4.213	1.496	3.268 (4.449) (5.039)	2.008 (3.189) (3.780)	3.2
OD34-67CKB6-CKB4	10.335.904		CKB4	5.787	2.126	3.543 (5.118) (5.906)	2.283 (3.858) (4.646)	3.9
OD57-90CKB6-CKB4	10.335.903			6.693	2.579	3.543 (5.118) (5.906)	2.283 (3.858) (4.646)	4.6
OD78-120CKB6-CKB5	10.335.902		CKB5	8.740	3.406	3.937 (6.299) (7.480)	2.677 (5.039) (6.220)	6.1

***The numbers in brackets indicate the tool length (L) and the max pin length (X) with the use of the corresponding extensions**

ACCESSORIES

SPARE PARTS PG. 538

EXTENSIONS & REDUCTIONS PG. 270

CAUTION

Counter-clockwise rotation of spindle. Vc max 1,500 SFM.

Turning Adapter		Counterweight		Boring Head		Insert Holder		Turning Range
Catalog Number	Reference Number	Catalog Number	Reference Number	Catalog Number	Reference Number	Catalog Number	Reference Number	
OD16-44CKB5-CKB3	10.335.906	**CW-CK3**	10.335.915	**EWN32-60E-CKB3**	10.310.311	**ENH3-3T**	10.626.133	.630-1.024
						ENH3-2T	10.626.132	.984-1.378
						ENH3-1T	10.626.131	1.339-1.732
OD16-44CKB6-CKB3	10.335.905	**CW-CK3**	10.335.915	**EWN32-60E-CKB3**	10.310.311	**ENH3-3T**	10.626.133	.630-1.024
						ENH3-2T	10.626.132	.984-1.378
						ENH3-1T	10.626.131	1.339-1.732
OD34-67CKB6-CKB4	10.335.904	**CW-CK4**	10.335.913	**EWN41-74E-CKB4**	10.310.411	**ENH4-3T**	10.626.143	1.339-1.850
						ENH4-2T	10.626.142	1.772-2.283
						ENH4-1T	10.626.141	2.126-2.638
OD57-90CKB6-CKB4	10.335.903	**CW-CK4**	10.335.913	**EWN41-74E-CKB4**	10.310.411	**ENH4-3T**	10.626.143	2.244-2.756
						ENH4-2T	10.626.142	2.677-3.189
						ENH4-1T	10.626.141	3.031-3.543
OD78-120CKB6-CKB5	10.335.902	**CW-CK5**	10.335.912	**EWN53-95E-CKB5**	10.310.511	**ENH5-3T**	10.626.153	3.071-3.740
						ENH5-2T	10.626.152	3.583-4.252
						ENH5-1T	10.626.151	4.055-4.724

SERIES 309 EWB-UP

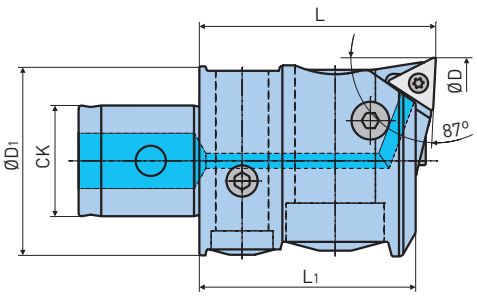
Combining Peak Performance and Precision

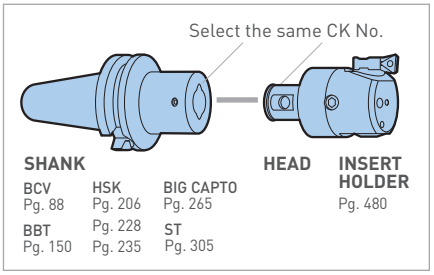
GRADUATED HEADS, 1 DIV = .00005"/Ø, Ø.984"-3.937" (1 Div = .001mm/Ø, Ø25mm-100mm)

US PATENT # 7,585,139

MAX 20,000 RPM

Diameter adjustments in the sub-micron range and balance qualities of G6.3 are requirements for tight tolerance bores with maximum RPMs.





Catalog Number	Reference Number	CK	ØD	ØD1	L	L1	Weight (lbs.)	Insert
EWB25-33E-UP-CK2	10.309.211	CK2	.984-1.299	.921	1.398	1.280	.3	TP07
EWB32-42E-UP-CK3	10.309.311	CK3	1.260-1.654	1.181	1.575	1.457	.5	TC11
EWB41-54E-UP-CK4	10.309.411	CK4	1.614-2.126	1.496	1.850	1.693	.9	TC11
EWB53-70E-UP-CK5	10.309.511	CK5	2.087-2.756	1.929	2.244	2.087	1.9	TC11
EWB68-100E-UP-CK6	10.309.611	CK6	2.677-3.937	2.520	2.795	2.646	4.0	TC11

• Insert holders are included with EWB-UP boring heads

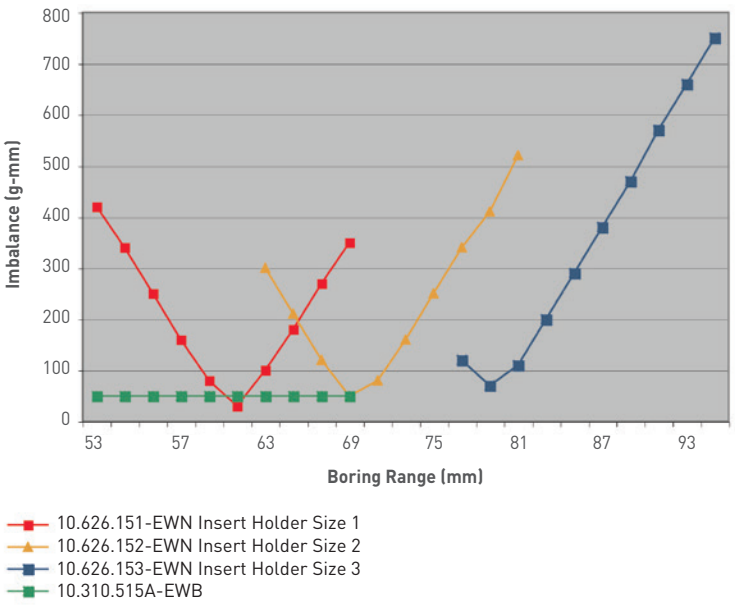
ACCESSORIES

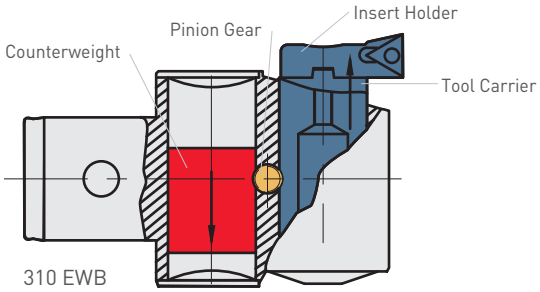
SPARE PARTS PG. 551

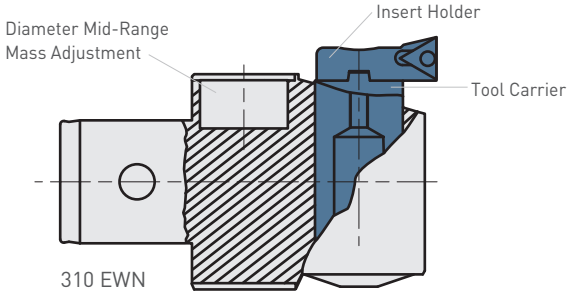
SERIES 310 EWN/EWB APPLICATION INFORMATION

Autobalance boring heads, Series 310 EWB, maintain perfect balance throughout the work range due to the integrated counter-balance mechanism. The counterweight can only compensate for one size insert holder, so the work range is similar to EWN heads with a Size 1 insert holder.

Series 310 EWN boring heads are pre-balanced at one position only; the mid-range of the tool carrier travel with a Size 1 insert holder. Adjustment of the bore diameter from this position and/or use of Size 2 and 3 insert holders will require reduction of cutting speed values due to increased unbalance forces.



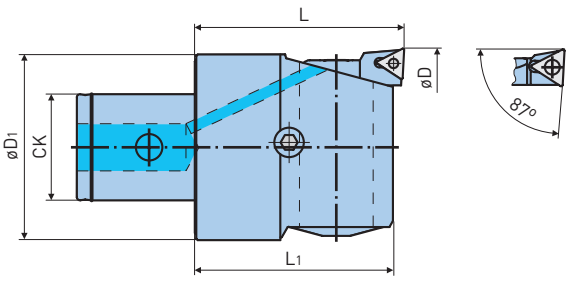




EWB BALANCED FINE BORING HEAD

RANGE: Ø1.260"-4.134" (Ø32-105mm)

Even at max speeds balanced tools guarantee vibration-free boring, resulting in increased productivity and highest precision.



Catalog Number	Reference Number	CK	ØD	ØD1	L	L1	Weight (lbs.)	Insert
EWB32-42E-CK3	10.310.315A	CK3	1.260-1.654	1.181	1.575	1.457	.5	TP07
EWB41-54E-CK4	10.310.415A	CK4	1.614-2.126	1.496	1.850	1.693	.9	TC11
EWB53-70E-CK5	10.310.515A	CK5	2.087-2.756	1.929	2.244	2.087	1.8	TC11
EWB68-88E-CK6	10.310.615A	CK6	2.677-3.465	2.480	2.795	2.646	3.7	TC11
EWB85-105E-CK6	10.310.616A		3.346-4.134	2.480	2.795	2.646		

• EWB boring heads will be delivered with assembled insert holder

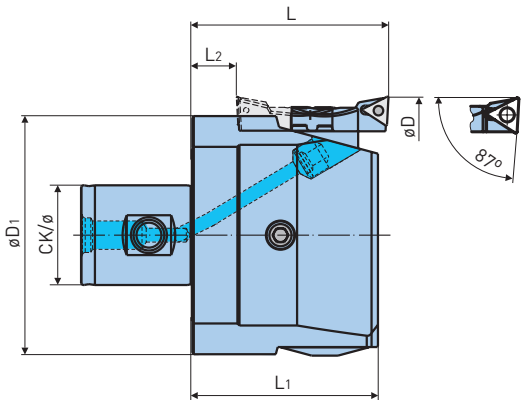
ACCESSORIES

SPARE PARTS PG. 551
INSERTS PG. 514
APPLICATION ADVICE PG. 491

EWB-AL BALANCED FINE BORING HEAD

RANGE: Ø3.937"-8.000" (Ø100-203mm)

The EWB-AL fine boring heads are made of high strength aluminium with hard coating. Together with reductions and extensions made in the same way, the weight for long and large diameter tool combinations is reduced by more than 50%.



Catalog Number	Reference Number	CK	ØD	ØD1	L	L2	L1	Weight (lbs.)	Insert
EWB100-153E-CK6AL	10.310.617A	CK6	3.937-6.024	3.543	2.795	.984	2.638	1.3	TC11
EWB150-203E-CK6AL	10.310.618A			4.961				1.8	
EWB100-153E-CK7AL	10.310.715A	CK7	3.937-6.024	3.543	3.425	1.614	3.268	2.0	TC11
EWB150-203E-CK7AL	10.310.716A			4.961				2.6	

• EWB-AL boring heads will be delivered with assembled insert holder

ACCESSORIES

SPARE PARTS PG. 551

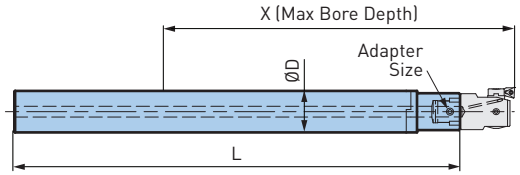
INSERTS PG. 514

APPLICATION ADVICE PG. 491

CKB CARBIDE BORING BAR

For Finishing

Tool combinations with carbide boring bars provide optimum rigidity when machining extremely long bores.



Catalog Number	Reference Number	CK	ØD	L	X	Bore Diameter		Weight (lbs.)
						Min	Max	
ST19-CKB1-140HM	10.335.320	CKB1	19mm	5.512	4.921	.787	1.417	1.0
ST19-CKB1-190HM	10.335.321			7.480	6.890	.787	1.417	1.6
ST19-CKB1-240HM	10.335.322			9.449	8.858	.787	1.417	2.1
ST21-CKB1-140HM	10.335.380	CKB1	21mm	5.512	4.921	.866	1.417	1.3
ST21-CKB1-190HM	10.335.381			7.480	6.890	.866	1.417	1.8
ST21-CKB1-240HM	10.335.382			9.449	8.858	.866	1.417	2.2
ST23-CKB1-140HM	10.335.383	CKB1	23mm	5.512	4.921	.945	1.417	1.5
ST23-CKB1-190HM	10.335.384			7.480	6.890	.945	1.417	2.1
ST23-CKB1-240HM	10.335.385			9.449	8.858	.945	1.417	2.9
ST24-CKB2-160HM	10.335.323	CKB2	24mm	6.299	5.512	.984	1.850	1.9
ST24-CKB2-220HM	10.335.324			8.661	7.874	.984	1.850	2.4
ST24-CKB2-290HM	10.335.325			11.417	10.630	.984	1.850	3.9
ST27-CKB2-160HM	10.335.386	CKB2	27mm	6.299	5.512	1.102	1.850	2.3
ST27-CKB2-220HM	10.335.387			8.661	7.874	1.102	1.850	3.4
ST27-CKB2-290HM	10.335.388			11.417	10.630	1.102	1.850	4.5
ST31-CKB3-200HM	10.335.326	CKB3	31mm	7.874	6.890	1.260	2.362	4.0
ST31-CKB3-260HM	10.335.331			10.236	9.252	1.260	2.362	5.5
ST31-CKB3-350HM	10.335.327			13.780	12.795	1.260	2.362	8.0

CAUTION

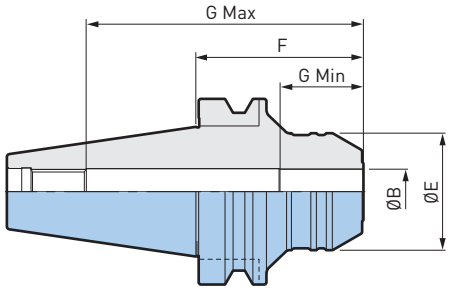
These bars should not be used for heavy roughing.

ACCESSORIES

SPARE PARTS
PG. 551

HYDRAULIC CHUCK CLAMPING SYSTEM

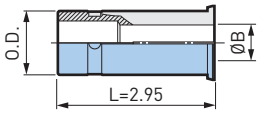
For CKB Carbide Bars



Taper	ØB	Catalog Number	ØE	F	G Min	G Max
CAT40	19mm	**BCV40-HDC19-75**	2.087	2.950	1.693	4.370
	24mm	**BCV40-HDC24-75**	2.480	2.950	1.772	4.094
	31mm	**BCV40H-HDC31-80**	2.913	3.150	2.205	2.992
CAT50	19mm	**BCV50-HDC19L-90**	1.937	3.543	1.693	5.866
	24mm	**BCV50-HDC24L-90**	2.480	3.543	1.772	5.866
	31mm	**BCV50-HDC31L-90**	2.913	3.543	2.205	5.787
BT40	19mm	**BBT40-HDC19-75**	1.937	2.950	1.693	4.370
	24mm	**BBT40-HDC24-75**	2.480	2.950	1.772	4.094
	31mm	**BBT40-HDC31-75**	2.913	2.950	2.205	2.992
BT50	19mm	**BBT50-HDC19L-90**	1.937	3.543	1.693	5.866
	24mm	**BBT50-HDC24L-90**	2.480	3.543	1.772	5.866
	31mm	**BBT50-HDC31L-90**	2.835	3.543	2.205	5.787
HSK-A63	31mm	**HSK-A63-HDC31-95**	2.480	3.740	2.205	2.750

STRAIGHT COLLET

Reduction sleeve for smaller diameter carbide bars.

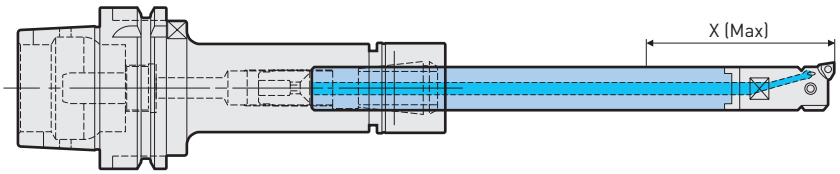


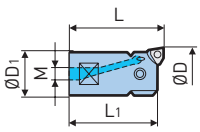
O.D.	ØB	Catalog Number
31mm	21mm	**OCA31-21**
	23mm	**OCA31-23**
	27mm	**OCA31-27**

EW FINE BORING HEAD

RANGE: Ø.590"-.866" (Ø15-22mm)

These heads are designed to be used in combination with the steel or carbide-boring bars Ø.511" and .625" out of the accessory program. In conjunction with the long carbide bar, the tool is well suited for vibration-free finishing operations in bores with unfavorable Ø/L-ratios.



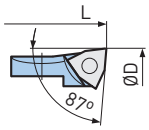


Catalog Number	Reference Number	ØD	ØD1	M	L	L1	Weight (lbs.)
EW15E-M6	10.310.021	.590-.728	.551	M6	1.181	1.083	.1
EW18E-M10	10.310.031	.708-.866	.623	M10	1.417	1.299	.1

ACCESSORIES

SPARE PARTS PG. 551

INSERT HOLDERS



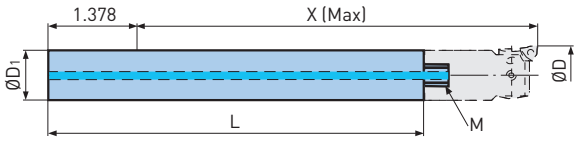
Head Type	Catalog Number	Reference Number	ØD	L	Insert
EW15	**15EKWC02**	10.625.020	.590-.728	1.181	WC02
EW18			.708-.866	1.417	

ACCESSORIES

INSERTS PG. 514

APPLICATION ADVICE PG. 491

BORING BARS



Boring Head		Catalog Number	Reference Number	Boring Bar				Weight (lbs.)
Type	ØD			ØD1	M	L	X (Max)	
EW15	.591-.728	**ST14-87**	10.615.232	.551	M6	3.425	3.228	.2
		ST14-117HM	10.615.233			4.606	4.409	.6
		ST14-147HM	10.615.221			5.787	5.591	.7
EW18	.709-.866	**ST5/8"-88**	10.615.236	.625	M10	3.465	3.504	.3
		ST5/8"-108HM	10.615.237			4.252	4.291	.6
		ST5/8"-168HM	10.615.238			6.614	6.654	.9

FINE BORING TROUBLESHOOTING

Under certain conditions, it may be necessary to modify or adapt recommended cutting data and/or tooling configurations of the application. Below are general solutions to common problems.

Problem	Possible Cause	Remedy
Poor Tool Life	Wrong insert grade	Change to higher wear resistant grade
	Excessive speed	Reduce SFM
	Poor cooling of insert	Apply through-tool coolant
	Excessive stock allowance	Decrease depth of cut
Chatter & Vibration	Excessive speed	Reduce SFM, check cutting data tables
	Extreme length/diameter ratio	Shorten tool to increase stiffness
		Increase boring bar diameter to larger size
		Change boring bar to carbide or SMART DAMPER
	Wrong insert	Reduce nose radius of insert
		Use ground geometry inserts (ie: TAN18 grade)
	Incorrect stock allowance	Check cutting data tables
Poor Size Repeatability	Inaccurate tool changes	Worn and/or damaged tool shank; replace
		Clean spindle and tool shank
	Variation of stock allowance	Semi-finish with twin insert boring head
	Excessive spindle looseness	Use ground geometry inserts (ie: TAN18 grade)
Unacceptable Roundness	Excessive boring tool imbalance	Change to auto-balance or balanceable head
		Balance tool assembly
		Reduce speed
	Excessive cutting forces	Check stock allowance and feed rate
	Insufficient workpiece clamping	Check for uniform workpiece clamping
	Workpiece non-symmetrical	Reduce cutting forces; change to ground insert
		Increase cutting speed, reduce feed
Unacceptable Position	Original bore off position	Semi-finish with twin insert boring head
	Excessive stock allowance	Decrease depth of cut
		Decrease insert radius
		Reduce cutting forces; change to ground insert
Poor Surface Finish	Wrong insert radius	Use larger insert radius
	Excessive feed rate	Reduce feed; maximum 25% of insert radius
	Poor chip evacuation	Increase bore to boring bar clearances
		Apply through-tool coolant; adjust nozzles
		Change insert to higher rake angle
		Check depth of cut
Taper	Premature insert wear	Change to higher wear resistance insert grade
		Increase insert radius
		Change from ground to pressed geometry insert
		Increase coolant flow

FINE BORING INSERT SELECTION & CUTTING DATA

Recommended Under Optimal Conditions

- Length to diameter ratio less than 4:1
- Rigid fixture and workpiece
- Good machine spindle
- Setup not chatter prone
- Insert holder Size 1 (EWN)

Material	Insert Radius	Insert Type & Size				Stock Allow. On Dia.	Feed (IPR)	Speed (SFM)
		TP..07	TC..11	CC..06	CC..09			
Mild, Low-Carbon Steel 10xx-15xx 1018,1020,1551, A36	.008	**10.651.837**	**11.655.311**	**CCMT060202-TNP11**	—	.008-.012	.0020	1000-1450
	.016	**10.651.713**	**TCMT110204-TNP12**	**CCMP060204-TNP12**	**CCMT09T304-TNP12**	.016-.020	.0040	
	.031	—	**11.655.336**	**11.654.869**	**CCMT09T304-TNP12**	.024-.040	.0060	
High Carbon Alloy Steel 23xx-92xx, Tool Steel 4140, 4340, 8620	.008	**10.651.802**	**TCMT110202-CTP51**	**CCMT060202-CTP51**	—	.008-.012	.0020	800-1100
	.016	**10.651.702**	**TCMT110204-CTP51**	**CCMT060204-CTP51**	**CCMT09T304-CTP51**	.016-.020	.0040	
	.031	—	**TCMT110208-CTP51**	**CCMT060208-CTP51**	**CCMT09T308-CTP51**	.024-.040	.0060	
300 Stainless Steel Austenitic 303, 304, 316, 17-4ph	.008	**10.651.837**	**10.655.301B**	**10.654.837**	—	.008-.012	.0020	550-800
	.016	**10.651.734**	**10.655.302B**	**10.654.847**	**CCMT09T304-TNP12**	.016-.020	.0040	
	.031	—	**10.655.303B**	**11.654.869**	**CCMT09T304-TNP12**	.024-.040	.0060	
400 Stainless Steel Martensitic 403, 410, 416, 430	.008	**10.651.837**	**10.655.301B**	**10.654.837**	—	.008-.012	.0020	650-875
	.016	**10.651.843**	**10.655.354**	**10.654.847**	**CCMT09T304-TNP12**	.016-.020	.0040	
	.031	—	**10.655.364**	**11.654.869**	**CCMT09T304-TNP12**	.024-.040	.0060	
Grey Cast Iron Malleable Class 20, 30	.008	**10.651.841**	**11.655.311**	**CCMT060202-TNP11**	—	.008-.012	.0020	650-1000
	.012	**10.651.632**	—	—	—	.010-.014	.0030	
	.016	**10.651.734**	**TCMT110204-TNP11**	**CCMP060204-TNP11**	**CCMT09T304-TNP11**	.016-.020	.0040	
	.031	—	**TCMT110208-TNP11**	**CCMT060208-TNP11**	**CCMT09T308-TNP11**	.024-.050	.0060	
CBN-CH, CBN-CHN	—	**11.938.872**	**11.938.833**	**11.938.835**	**11.938.838**	.008-.016	.0030	1500-2000
Cast Iron Ductile/Nodular/Chilled	.008	**10.651.841**	**10.655.301A**	**CCMT060202-TNP11**	—	.008-.012	.0020	375-625
	.012	**10.651.632**	—	—	—	.010-.014	.0030	
	.016	**10.651.734**	**10.655.302A**	**CCMP060204-TNP11**	**CCMT09T304-TNP11**	.016-.020	.0040	
	.031	—	**10.655.303A**	**CCMT060208-TNP11**	**CCMT09T308-TNP11**	.024-.040	.0060	
High Temp. Alloys Titanium, Inconel, Monel	.008	**10.651.837**	**10.655.319**	**10.654.837**	**10.654.937**	.006-.010	.0015	200-325
	.012	**10.651.737**	**10.655.327**	—	—	.008-.012	.0020	
	.016	**10.651.843**	**10.655.354**	**10.654.847**	**10.654.947**	.012-.016	.0020	
	.031	—	**10.655.364**	**11.654.869**	**10.654.957**	.018-.032	.0030	
Copper Alloys Brass, Bronze	.008	**10.651.825**	**11.655.315**	—	—	.008-.012	.0020	1100-1800
	.012	**10.651.623**	—	—	—	.010-.014	.0030	
	.016	**10.651.725**	**TCMT110204-C2P**	**11.654.858**	**11.654.957**	.016-.020	.0040	
	.031	—	**TCMT110208-C2P**	**11.654.864**	**CCMT09T308-C2P**	.024-.050	.0060	
Aluminum/Magnesium 6061, 7075	.008	**10.651.825**	**10.655.378**	**10.654.877**	—	.008-.012	.0020	1200-1600
	.016	**10.651.725**	**10.655.388**	**10.654.888**	**10.654.977**	.016-.020	.0040	
	.031	—	**10.655.398**	**10.654.898**	**10.654.987**	.024-.040	.0060	
Aluminum/Magnesium 6061, 7075 PCD Inserts	.008	—	**11.938.861**	**11.938.847**	—	.008-.012	.0020	2000-4000
	.012	**10.938.840**	—	—	—	.010-.014	.0030	
	.016	—	**10.938.841**	**11.938.842**	**11.938.843**	.016-.020	.0040	
	.031	**11.938.830**	**11.938.860**	—	**11.938.851**	.024-.050	.0060	
Hardened Steel Min. 50HRc CBN Inserts	.008	—	—	—	—	.004-.008	.0010	200-300
	.012	**10.938.837**	—	—	—	.004-.008	.0010	
	.016	—	**10.938.834**	**11.938.835**	**11.938.838**	.005-.010	.0015	
	.031	—	**10.938.865**	—	—	.006-.012	.0020	

All Cutting Data Without Guarantee

Cutting Speed:

$$RPM = \frac{SFM \times 3.82}{Bore\ Ø}$$

Feed Rate:

$$IPM = RPM \times IPR$$

FINE BORING INSERT SELECTION & CUTTING DATA

Recommended Under Critical Conditions

- Length to diameter ratio over 5:1
- Unstable fixture and/or workpiece
- Excessive spindle looseness
- Setup chatter prone
- Insert holder Size 2 and 3 (EWN)

Materials	Insert Radius	Insert Type & Size				Stock Allow on Dia.	Feed (IPR)	Speed (SFM)
		TP..07	TC..11	CC..06	CC..09			
Mild, Low-Carbon Steel 10xx-15xx 1018,1020,1551, A36	.004	**10.651.840**	**10.655.369**	—	—	.003-.006	.0010	525-675
	.008	**10.651.835**	**10.655.379**	**10.654.837**	**10.654.937**	.006-.010	.0015	
	.012	**10.651.842**	**10.655.327**	—	—	.010-.014	.0020	
	.016	**10.651.843**	**10.655.389**	**10.654.847**	**10.654.947**	.014-.020	.0020	
High Carbon Alloy Steel 23xx-92xx, Tool Steel 4140, 4340, 8620	.004	**10.651.824**	**10.655.363**	—	—	.003-.006	.0010	400-550
	.008	**10.651.835**	**10.655.372**	**10.654.877**	**10.654.937**	.006-.010	.0015	
	.012	**10.651.842**	**10.655.327**	—	—	.010-.014	.0020	
	.016	**10.651.843**	**10.655.383**	**10.654.888**	**CCMT09T304-TNP11**	.014-.020	.0020	
300 Stainless Steel Austenitic 303, 304, 316, 17-4ph	.004	**10.651.840**	**10.655.369**	—	—	.003-.006	.0010	350-525
	.008	**10.651.837**	**10.655.379**	**10.654.837**	**10.654.937**	.006-.010	.0015	
	.012	**10.651.737**	**10.655.327**	—	—	.010-.014	.0020	
	.016	**10.651.843**	**10.655.389**	**10.654.847**	**10.654.947**	.014-.020	.0020	
400 Stainless Steel Martensitic 403, 410, 416, 430	.004	**10.651.840**	**10.655.369**	—	—	.003-.006	.0010	425-550
	.008	**10.651.837**	**10.655.379**	**10.654.837**	**10.654.937**	.006-.010	.0015	
	.012	**10.651.737**	**10.655.327**	—	—	.010-.014	.0020	
	.016	**10.651.843**	**10.655.389**	**10.654.847**	**10.654.947**	.014-.020	.0020	
Grey Cast Iron Malleable Class 20, 30	.004	**10.651.840**	**10.655.363**	—	—	.003-.006	.0010	350-500
	.008	**10.651.833**	**10.655.373**	**10.654.879**	—	.006-.010	.0020	
	.012	**10.651.735**	**10.655.327**	—	—	.010-.014	.0020	
	.016	**10.651.843**	**10.655.383**	**10.654.889**	**10.654.949**	.014-.020	.0030	
Cast Iron Ductile/Nodular/Chilled	.004	**10.651.840**	**10.655.363**	—	—	.003-.006	.0010	250-350
	.008	**10.651.834**	**10.655.373**	**10.654.879**	—	.006-.010	.0020	
	.012	**10.651.623**	**10.655.327**	—	—	.010-.014	.0020	
	.016	**10.651.843**	**10.655.383**	**10.654.889**	**10.654.949**	.014-.020	.0030	
High Temp. Alloys Titanium, Inconel, Monel	.008	**10.651.837**	**10.655.379**	**10.654.837**	**10.654.937**	.006-.010	.0020	125-250
	.012	**10.651.737**	**10.655.327**	—	—	.010-.014	.0020	
	.016	**10.651.843**	**10.655.389**	**10.654.847**	**10.654.947**	.014-.020	.0030	
Copper Alloys Brass, Bronze	.008	**10.651.837**	**11.655.315**	**10.654.879**	—	.006-.010	.0015	400-700
	.012	**10.651.623**	**10.655.327**	—	—	.010-.014	.0020	
	.016	**10.651.725**	**TCMT110204-C2P**	**10.654.889**	**11.654.957**	.014-.020	.0020	
Aluminum/Magnesium 6061, 7075	.004	**10.651.823**	**10.655.369**	—	—	.003-.006	.0010	600-1100
	.008	**10.651.825**	**10.655.378**	**10.654.877**	—	.006-.010	.0020	
	.012	**10.651.723**	**10.655.327**	—	—	.010-.014	.0020	
	.016	**10.651.725**	**10.655.388**	**10.654.888**	**10.654.977**	.014-.020	.0030	

All Cutting Data Without Guarantee

Cutting Speed:

$$RPM = \frac{SFM \times 3.82}{Bore\ Ø}$$

Feed Rate:

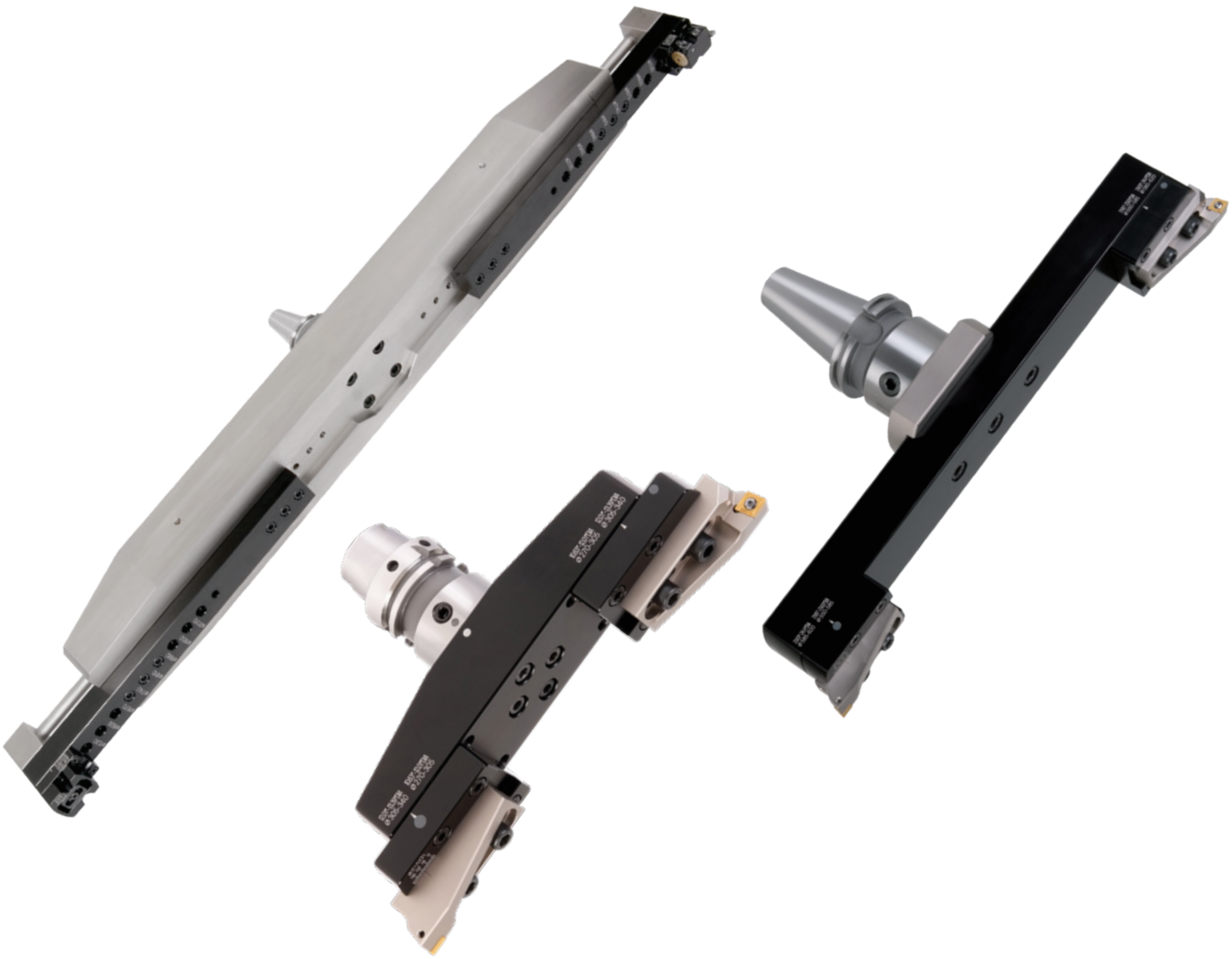
IPM = RPM x IPR

CAUTION

Maximum speed of 310 EWB: 6,600 SFM, Maximum speed of 310 EWN: 4,000 SFM

LARGE DIAMETER BORING

B.4



LARGE DIAMETER BORING HEADS 496-513

LARGE DIAMETER BORING HEADS OVERVIEW 496-497
ACCESSORIES 498-500
SERIES 318 501-507
BRIDGE TOOL HOLDER 508-509
SHANKS FOR SERIES 318 510
SAFETY INSTRUCTIONS & APPLICATION NOTES 511
INSERT SELECTION & CUTTING DATA 512-513

The system is based on aluminum extension slides of different lengths, which support a variety of aluminum and steel components for roughing and finishing tool assemblies. The mounting components are pinned to fit onto specific locations on the slides, and secured with steel bolts. The precise positioning of the components on the slide along with incremental adjustment scales for insert holders permit diameter and length setting without a tool presetter.

SERIES 318 WITH FLANGE ONLY

Execution with flange only. Specifically built to fit on machine tools with 40 taper spindle. For rough and fine boring, OD turning, chamfering and face grooving.

Ø7.87"-13.39" (Ø200-340mm)
CKB6/CKN6

PG. 499

SERIES 318 WITH FLANGE AND EXTENSION SLIDE

Edition with flange and extension slides. For rough and fine boring, OD turning, chamfering and face grooving.

Ø7.87"-24.41" (Ø200-620mm)
CKB7/CKN7

PG. 503

SERIES 318 WITH BRIDGE AND EXTENSION SLIDES

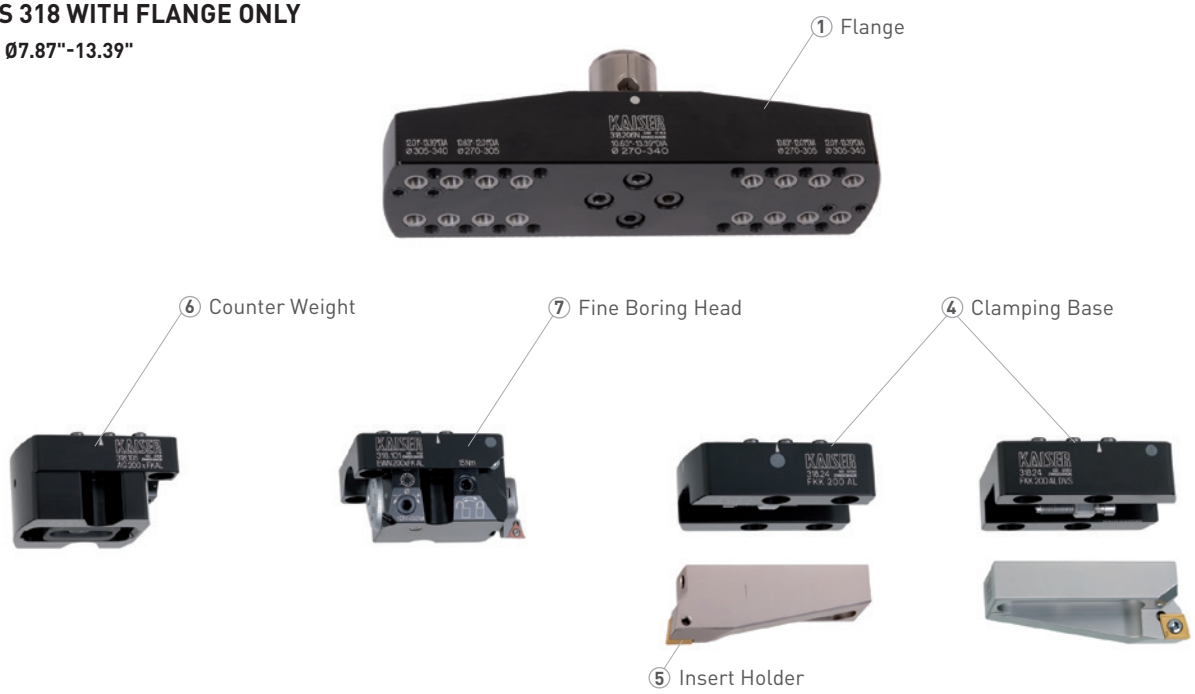
Edition with shanks, large bridges and extension slides. For rough and fine boring, OD turning and face grooving.

Ø24.41"-118.11" (Ø620-3000mm)
CV50/BT50/HSK-A100

PG. 506

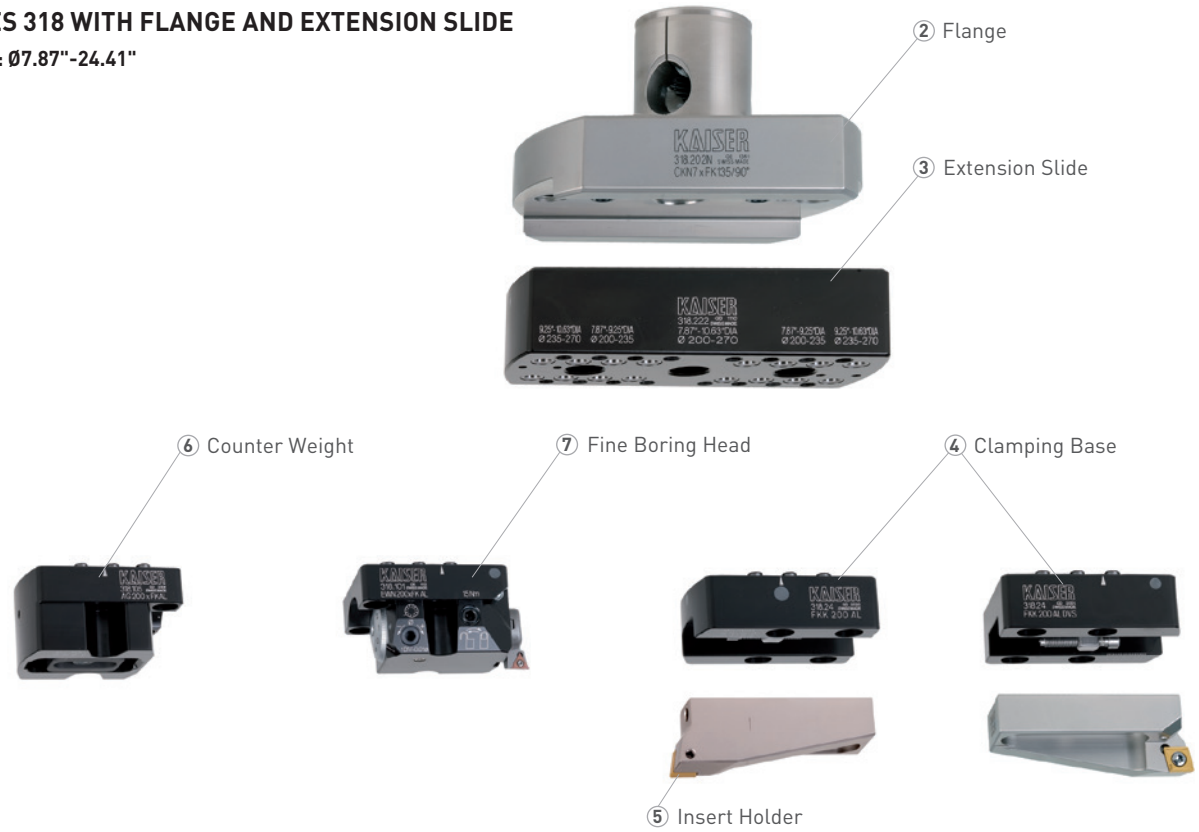
SERIES 318 WITH FLANGE ONLY

RANGE: Ø7.87"-13.39"



SERIES 318 WITH FLANGE AND EXTENSION SLIDE

RANGE: Ø7.87"-24.41"



FLANGES

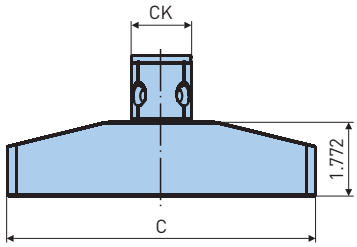


Fig. 1

CKB6/CKN6 FOR USE WITH ISO40 AND HSK-A63 TAPERS

Catalog Number	Reference Number	CK	Fig.	Boring Range	C	Max RPM	Weight (lbs.)
CKB6-FL200-270	10.318.205	CKB6	1	7.87-10.63	7.283	3200	4.0
CKN6-FL200-270	10.318.205N	CKN6				3200	
CKB6-FL270-340	10.318.206	CKB6		10.63-13.39	10.039	2400	5.1
CKN6-FL270-340	10.318.206N	CKN6				2400	

STANDARD EXECUTION

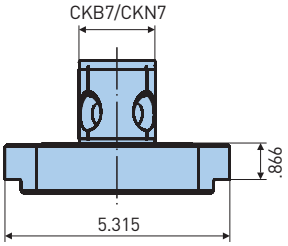


Fig. 2

FLANGE WITH CUTTER POSITION ROTATED 90º

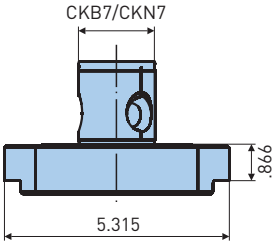
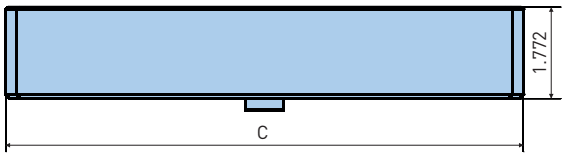


Fig. 3

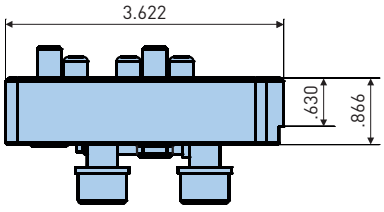
Catalog Number	Reference Number	CK	Fig.	Weight (lbs.)
CKB7-FL135	10.318.201	CKB7	2	6.2
CKN7-FL135	10.318.201N	CKN7		6.1
CKB7-FL135-90	10.318.202	CKB7	3	6.0
CKN7-FL135-90	10.318.202N	CKN7		6.0

EXTENSION SLIDES



Catalog Number	Reference Number	C	Boring Range	Max RPM	Weight (lbs.)
SLN200-270AL	10.318.222	7.283	7.87-10.63	3200	3.3
SLN270-340AL	10.318.223	10.039	10.63-13.39	2400	4.5
SLN340-410AL	10.318.224	12.795	13.39-16.14	1900	5.8
SLN410-480AL	10.318.225	15.551	16.14-18.90	1600	7.1
SLN480-550AL	10.318.226	18.307	18.90-21.65	1300	8.6
SLN550-620AL	10.318.227	21.063	21.65-24.41	1200	9.7

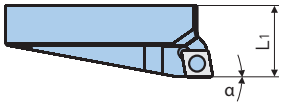
CLAMP BASES



Catalog Number	Reference Number	Type	Weight (lbs.)
CB200E	10.318.250	Inch	3.3
CB200	10.318.240	Metric	

- Clamp bases are sold in pairs

INSERT HOLDERS



Catalog Number	Reference Number	L_1	Angle α	Insert	Weight (lbs.)
IHTW200C	10.637.940	1.339	0º	CC12	1.6
IHTW200C16	10.637.941			CC16	
IHTW200S	10.637.942		6º	SC12	1.7
IHTW200C-DVS	10.637.951	1.354	0º	CC12	.8
IHTW200C16-DVS	10.637.953			CC16	

- DVS insert holders sold individually

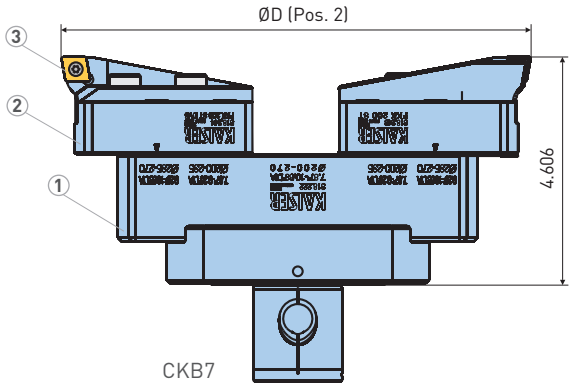
ACCESSORIES

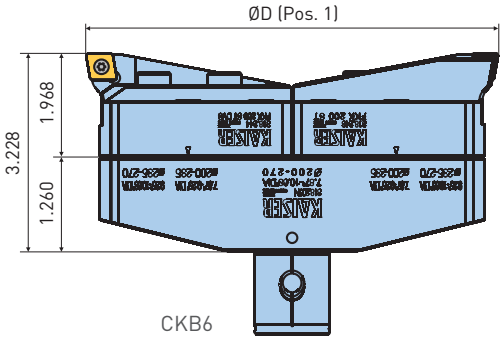
SPARE PARTS PG. 552

INSERTS PG. 514

ROUGH BORING COMPONENT SELECTION

The table below determines the components such as extension slide (1), clamp bases (2) and insert holders (3) for each diameter range (ØD) and shows in which position (1 or 2) the clamp bases (2) have to be mounted on the extension slide (1). Further, this table also serves for the coarse diameter setting of the cutting edges by means of the scale on the clamp base (2) and the marking (4) on the insert holder (3). The required scale value is calculated by the difference between bore diameter and correction value (α). The insert holder has to be adjusted to the scale value. See example below.





ØD	Position	Scale Factor α	Extension Slides ①	Clamp Bases ②	Insert Holders ③
7.756-9.252	1	7.874	**10.318.222** **10.318.205***	**10.318.250 (Inch)** **10.318.240 (Metric)**	**10.637.9xx** **(See Pg. 498)**
9.134-10.630	2	9.252			
10.512-12.008	1	10.630	**10.318.223** **10.318.206***		
11.890-13.386	2	12.008			
13.268-14.764	1	13.386	**10.318.224**		
14.646-16.142	2	14.764			
16.024-17.520	1	16.142	**10.318.225**		
17.402-18.898	2	17.520			
18.780-20.276	1	18.898	**10.318.226**		
20.157-21.654	2	20.276			
21.535-23.031	1	21.654	**10.318.227**		
22.913-24.409	2	23.031			

*For use with ISO40 and HSK-A63 tapers

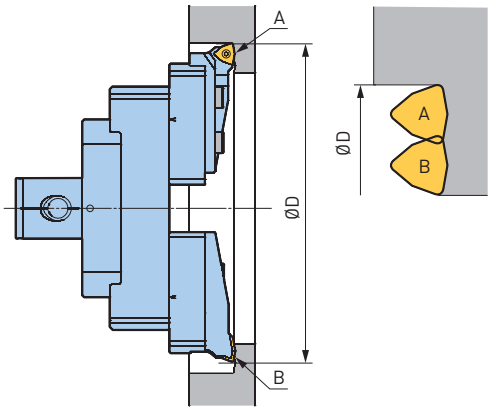
Example: Diameter Setting According to Scale
ØD: 18.020
Extension Slide: 10.318.225

Position: 1
Correction Value α: 17.520

Scale Value: ØD-α=18.020-17.520=.500

FULL PROFILE ROUGHING

The VPS boring process enables large material additions (up to 60 mm in diameter) to be bored in one operation with a relatively low drive power. Set cutting edge A to the drilling diameter and cutting edge B according to the material allowance according to the table.



Material Allowance (in Ø)	Cutting Edge A (in Ø)	Cutting Edge B (in Ø)
.866-1.177	ØD	D-.079
1.181-1.413		D-.236
1.417-1.650		D-.472
1.654-1.886		D-.709
1.890-2.122		D-.945
2.126-2.362		D-1.181

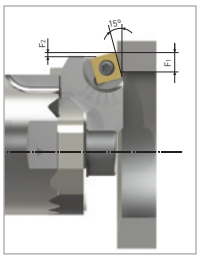
Cutting Data Vc (SFM)	fn (IPR)
330-594	.004-.008

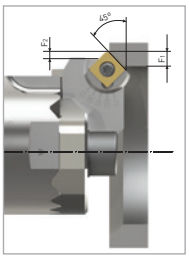
INSERT HOLDERS FOR CHAMFERING

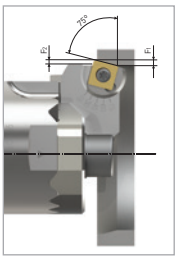
The insert holder with step-less adjustable chamfer angle from 15-75° is made for front chamfering and with limitations also for back chamfering.

Catalog Number	Reference Number
CFTW200S	10.637.959

Extension Slide	15°	30°	45°	60°	75°
SLN200-270AL	7.165-10.866	7.323-10.945	7.480-10.984	7.677-10.945	7.835-10.906
SLN270-340AL	9.921-13.622	10.079-13.701	10.236-13.740	10.433-13.701	10.591-13.661
SLN340-410AL	12.677-16.378	12.835-16.457	12.992-16.496	13.189-16.457	13.346-16.417
SLN410-480AL	15.433-19.134	15.591-19.213	15.748-19.252	15.945-19.213	16.102-19.173
SLN480-550AL	18.189-21.890	18.346-21.969	18.504-22.008	18.701-21.969	18.858-21.929
SLN550-620AL	20.945-24.646	21.102-24.724	21.260-24.764	21.457-24.724	21.614-24.685







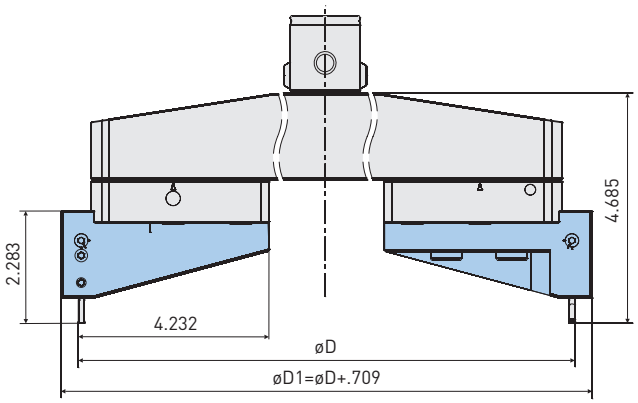
Radial Chamfer Length									
15°		30°		45°		60°		75°	
F1	F2	F1	F2	F1	F2	F1	F2	F1	F2
.449	.118	.406	.157	.331	.165	.232	.154	.118	.118

FACE GROOVING HOLDERS

Catalog Number	Reference Number	ØD
FGHTW200	10.637.961	7.795-118

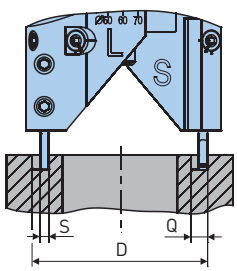
ACCESSORIES

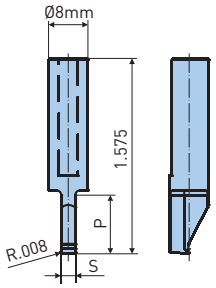
SPARE PARTS PG. 556



• For ØD see pg. 501

CUTTERS





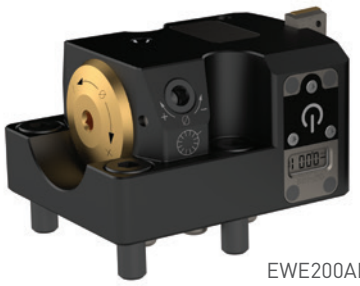
Application
AL = Aluminium

ST = Steel
GG = Cast iron

Catalog Number	Reference Number	Cutter	Cutter Width S	Max. Groove Width Q	Max. Groove Depth P
FG2-ST8-40K40	10.958.601	Uncoated K40/AL	.079	.138	.472
FG3-ST8-40K40	10.958.602		.118	.217	
FG4-ST8-40K40	10.958.603		.157	.295	
FG5-ST8-40K40	10.958.604		.197	.374	
FG2-ST8-40K40C	10.958.611	Coated P40C/ST, CI	.079	.138	
FG3-ST8-40K40C	10.958.612		.118	.217	
FG4-ST8-40K40C	10.958.613		.157	.295	
FG5-ST8-40K40C	10.958.614		.197	.374	

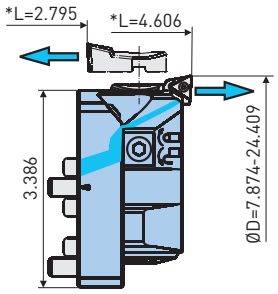
• For ØD see pg. 501

EWN/EWE FINE BORING HEADS RANGE: Ø7.87"-118.1"



EWE200AL

EWN200AL



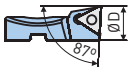
Catalog Number	Reference Number	Units	Resolution	Weight (lbs.)
EWE200AL	10.318.104	Inch/Metric	.00005"/Ø, .001mm/Ø	1.8
EWN200E-AL	10.318.111	Inch	.0005"/Ø	

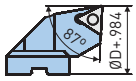
ACCESSORIES

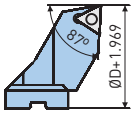
SPARE PARTS PG. 552

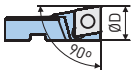
• For ØD see pg. 503

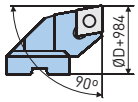
INSERT HOLDERS











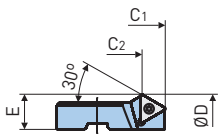
Catalog Number	ENH7-1TC11	ENH7-2TC11	ENH7-3TC11	ENH7-1CC09	ENH7-2CC09
Reference Number	10.626.271	10.626.272	10.626.273	10.626.371	10.626.372
Insert	TC11			CC09	

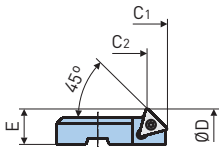
ACCESSORIES

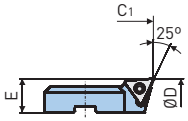
INSERTS PG. 514

• For ØD see pg. 503

INSERT HOLDERS FOR CHAMFERING AND UNDERCUTS







Catalog Number	ENH7-1T30	ENH7-1T45	ENH7-1T25
Reference Number	10.626.472	10.626.473	10.689.189
C_1	4.606	4.606	4.606
C_2	4.264	4.323	—
E	.492		
Insert	TC11		

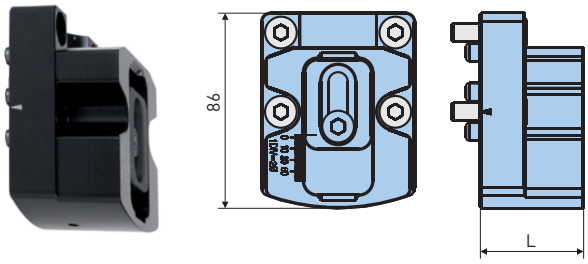
ACCESSORIES

INSERTS PG. 514

• Min. diameter for back boring/back chamfering=ØD Min. (of the respective boring range) +.472
• Example for the lowest range: Min. diameter=7.835+.472=8.307
• For ØD see pg. 503

COUNTER WEIGHTS

There are two different counter weights available. Type 1 is made of steel and is used for coarse balancing. Type 2 is made of aluminum and contains a slide with a graduated scale for fine balancing of the tool assembly.

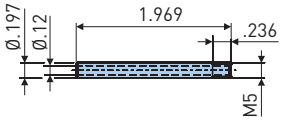


Catalog Number	Reference Number	Type	Weight (lbs.)
CW200E-AL	10.318.115 (Inch)	2	1.9
CW200	10.318.107 (Fixed)	1	1.8

ACCESSORIES

SPARE PARTS
PG. 552

COOLANT PIPE

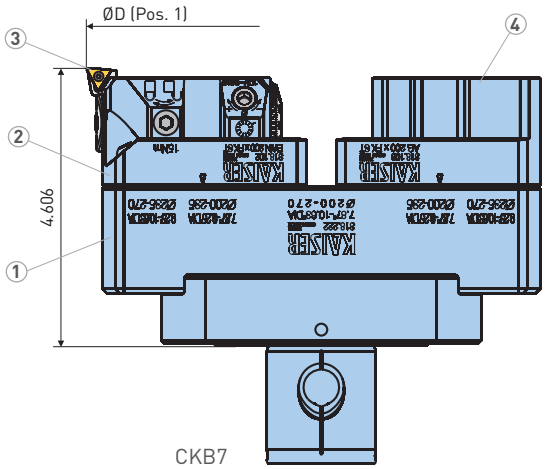


Catalog Number	Reference Number
CP-DM5-50-M5	10.692.415

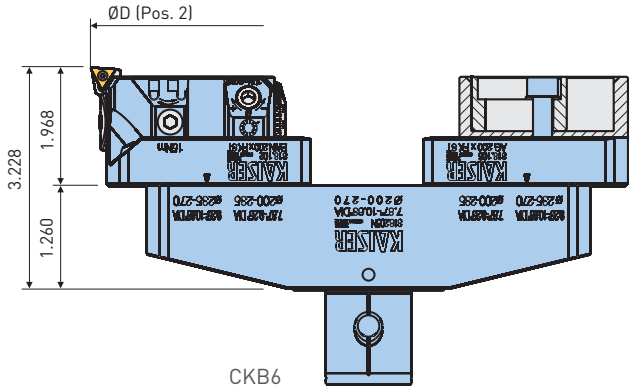
FINE BORING COMPONENT SELECTION

The table below determines the components such as extension slide (1), boring head (2), insert holder (3) and counter weight (4) for each diameter range and shows in which position the boring head and the counter weight have to be mounted on the extension slide.

Balancing of the tool combination takes place by adjusting the slide (5) on the counter weight according to the scale. The correction value (α) is shown on the table. See example below.



CKB7



CKB6

ØD	Position	Balance Factor	Extension Slides ①	Boring Head ②	Insert Holders ③	Counterweights ④
7.795-9.331	1	7.874	**10.318.222** **10.318.205***	**10.318.111** **(see also pg. 501)**	**10.626.271 (TC11)** **or** **10.626.371 (CC09)**	**10.318.107 (Fixed)** **10.318.115 (Inch)**
9.173-10.709	2	9.252				
10.551-12.087	1	10.630	**10.318.223** **10.318.206***			
11.929-13.465	2	12.008				
13.307-14.843	1	13.386	**10.318.224**			
14.685-16.220	2	14.764				
16.063-17.598	1	16.142	**10.318.225**			
17.441-18.976	2	17.520				
18.819-20.354	1	18.898	**10.318.226**			
20.197-21.732	2	20.276				
21.575-23.110	1	21.654	**10.318.227**			
22.953-24.488	2	23.031				

***For use with ISO40 and HSK-A63 tapers**

Example: Diameter Setting According to Scale
ØD: 18.880
Extension Slide: 10.318.223

Position: 1
Correction Value α: 10.630

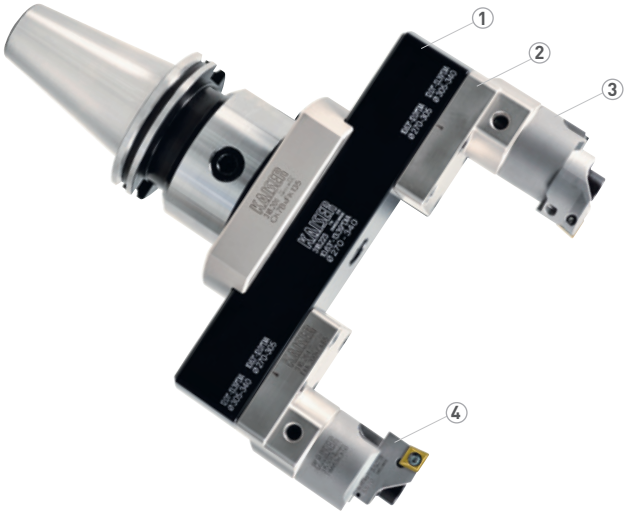
Scale Value: ØD-α=10.880-10.630=.250

O.D. TURNING MODULAR SLIDES & ADAPTERS FOR ROUGH PIN TURNING LARGE DIAMETERS

RANGE: Ø2.283"-18.740"

The turning adapter with CK5 connection can be mounted on a variety of extension slides to create your diameter. For rough pin turning, it is required to connect two TWN 315 x KA5 either directly to the turning adapter or by means of an extension to the adapter.

The tool holder with CKB5 connection can be mounted on any extension slide. For OD turning it is required to connect the fine boring head EWN53-95CKB5 either directly or by means of an extension to the holder. To compensate the imbalance, a second tool holder and a special counter weight have to be mounted on the opposite side of the extension slide.



Insert Holder & Ranges ④		Assembly Position	Extension Slide ①	Turning Adapter ②	Boring Head ③
10.638.452	**10.638.451**				
2.283-2.953	2.913-3.583	1	**10.318.222**	**CB200CK5 (10.318.261) 2 Req'd**	**TWN53-86CKB5 (10.315.501) 2 Req'd**
3.661-4.331	4.291-4.961	2			
5.039-5.709	5.669-6.339	1	**10.318.223**		
6.417-7.087	7.047-7.717	2			
7.795-8.465	8.425-9.094	1	**10.318.224**		
9.173-9.843	9.803-10.472	2			
10.551-11.220	11.181-11.850	1	**10.318.225**		
11.929-12.598	12.559-13.228	2			
13.307-13.976	13.937-14.606	1	**10.318.226**		
14.685-15.354	15.315-15.984	2			
16.063-16.732	16.693-17.362	1	**10.318.227**		
17.441-18.110	18.071-18.740	2			

CAUTION

Counter-clockwise spindle rotation required.

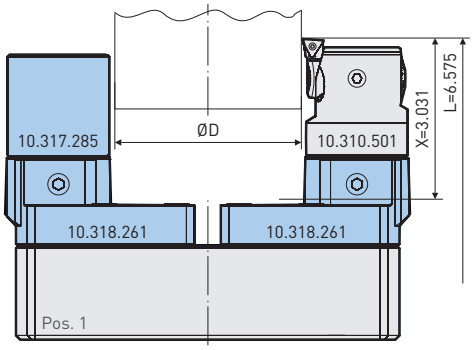
ACCESSORIES

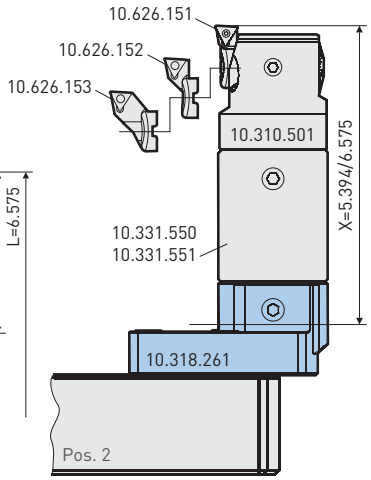
FLANGE ADAPTERS PG. 498

EXTENSION SLIDES PG. 498

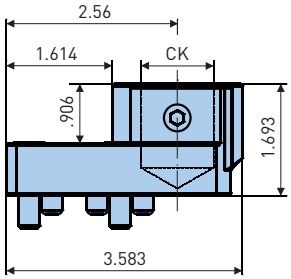
O.D. TURNING MODULAR SLIDES & ADAPTERS FOR FINISH PIN TURNING LARGE DIAMETERS

RANGE: Ø1.929"-18.740"





TOOL HOLDER

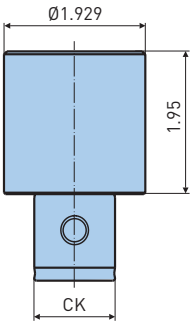


ACCESSORIES

SPARE PARTS
PG. 538/552

Catalog Number	Reference Number	CK	Weight (lbs.)
CB200CKB5	10.318.261	CKB5	2.7

COUNTER WEIGHT



ACCESSORIES

SPARE PARTS
PG. 538

Catalog Number	Reference Number	CK	Weight (lbs.)
CW-CK5-DM49-50	10.317.285	CK5	1.9

ADJUSTING TABLE

TC..11 Insert Holders & Ranges			Position	Extension Slides	Turning Adapter	Counterweight	Boring Head
10.626.153	**10.626.152**	**10.626.151**					
1.929-2.598	2.441-3.110	2.913-3.583	1	**SLN200-270AL (10.318.222)**	**CB200CKB5 (10.318.261) 2 Req'd**	**CW-CK5-DM49-50 (10.317.285)**	**EWN53E-CKB5 (10.310.511)**
3.307-3.976	3.819-4.488	4.291-4.961	2				
4.685-5.354	5.197-5.866	5.669-6.339	1	**SLN270-340AL (10.318.223)**			
6.063-6.732	6.575-7.244	7.047-7.717	2				
7.441-8.110	7.953-8.622	8.425-9.094	1	**SLN340-410AL (10.318.224)**			
8.819-9.488	9.331-10.000	9.803-10.472	2				
10.197-10.866	10.709-11.378	11.181-11.850	1	**SLN410-480AL (10.318.225)**			
11.575-12.244	12.087-12.756	12.559-13.228	2				
12.953-13.622	13.465-14.134	13.937-14.606	1	**SLN480-550AL (10.318.226)**			
14.331-15.000	14.843-15.512	15.315-15.984	2				
15.709-16.378	16.220-16.890	16.693-17.362	1	**SLN550-620AL (10.318.227)**			
17.087-17.756	17.598-18.268	18.071-18.740	2				

CAUTION

Counter-clockwise spindle rotation required.

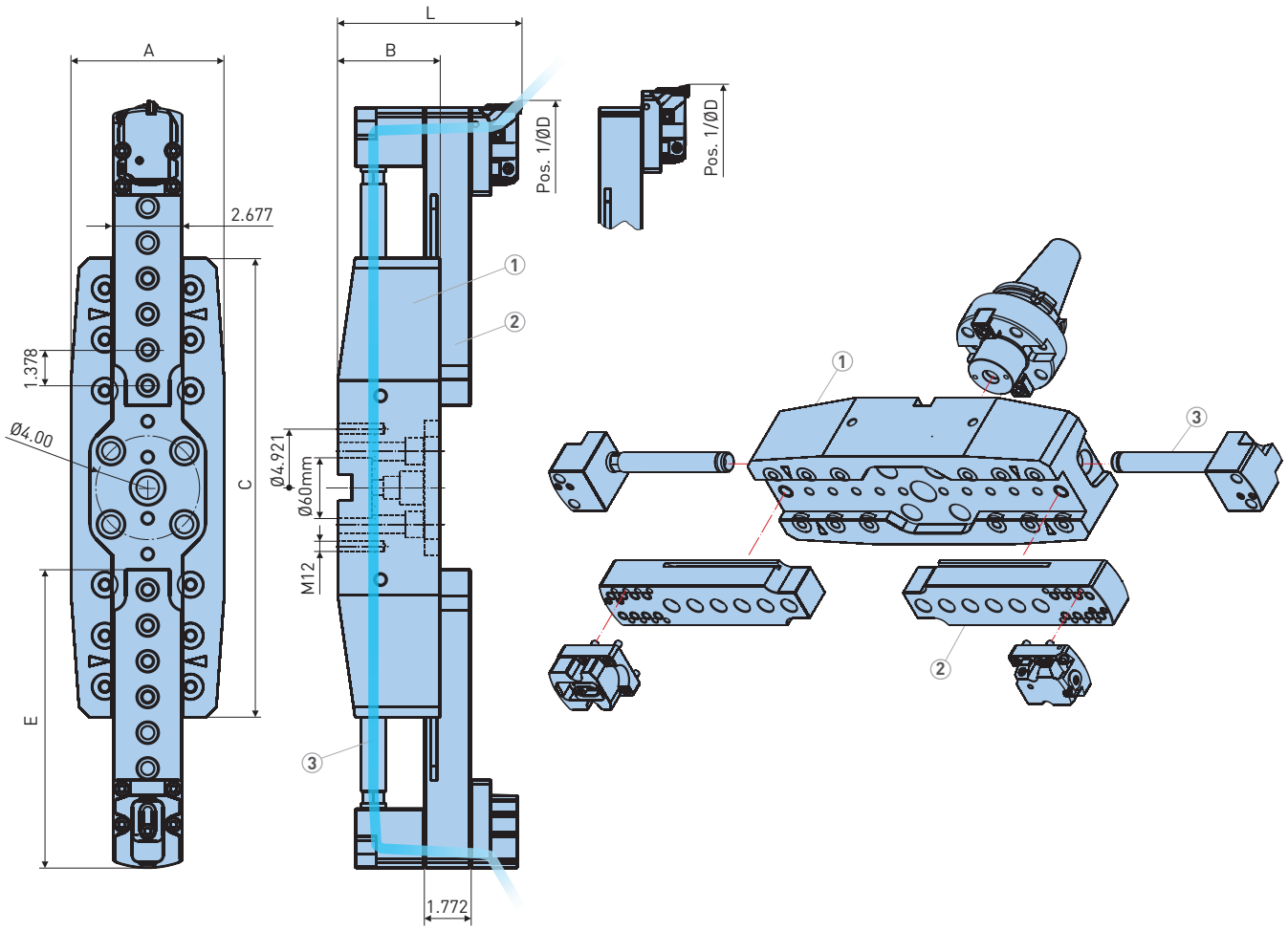
ACCESSORIES

FLANGE ADAPTERS
PG. 498

EXTENSION SLIDES
PG. 498

SERIES 318 WITH BRIDGE AND EXTENSION SLIDES

The boring range from Ø24.41"-118.10" is covered with only five aluminium bridges and five pairs of extension slides. All other components such as boring head, clamp bases and insert holders are the same as for the existing lightweight boring tool system Ø7.87"-24.41".



ØD	Bridge ①	Reference Number	L	A	B	C	E	Weight (lbs.)
24.409-32.677	**BR620-830**	10.318.421	7.087	5.906	3.937	17.717	11.516	32.0
32.677-43.701	**BR830-1110**	10.318.422	7.087	5.906	3.937	25.984	15.650	47.0
43.701-60.236	**BR1110-1530**	10.318.423				37.008	21.161	73.0
60.236-79.528	**BR1530-2020**	10.318.424	7.874	6.693	4.724	53.543	25.295	121.0
79.528-98.819	**BR2020-3000**	10.318.425	8.268	7.480	5.118	72.835	25.295	198.0
98.819-118.11		10.318.425					45.965	

Extension Slide ②	Reference Number	Wight (lbs.)
SL620-830	10.318.431	4.6
SL830-1110	10.318.432	6.4
SL1110-1530	10.318.433	6.6
SL1530-2020	10.318.434	7.5
SL2510-3000	10.318.435	8.8

Coolant Pipe ③	Reference Number	Wight (lbs.)
CS620-830	10.318.441	2.8
CS1110-1530	10.318.442	3.3
CS2020-2510	10.318.443	3.3
CS2510-3000	10.318.444	3.3

ACCESSORIES

SPARE PARTS PG. 553

ADAPTERS PG. 510

ROUGH AND FINE BORING COMPONENT SELECTION

The table below refers to the drawings on pg. 506. It determines the components such as bridge (1), extension slide (2) and coolant supply (3) for each diameter range (ØD) and shows in which position (1 or 2) the roughing or finishing tools have to be mounted.

Boring Range ØD		Bridge		Extension Slide*		Coolant Pipe*	
Postion 1	Position 2	Catalog Number	Reference Number	Catalog Number	Reference Number	Catalog Number	Reference Number
24.37-25.83	25.75-27.20	**BR620-830**	10.318.421	**SL620-830**	10.318.431	**CS620-830**	10.318.441
27.13-28.58	28.50-29.96						
29.8 -31.34	31.26-32.72						
32.64-34.09	34.02-35.47	**BR830-1110**	10.318.422	**SL830-1110**	10.318.432	**CS620-830**	10.318.441
35.39-36.85	36.77-38.23						
38.15-39.61	39.53-40.98						
40.91-42.36	42.28-43.74						
43.66-45.12	45.04-46.50	**BR1110-1530**	10.318.423	**SL1110-1530**	10.318.433	**CS1110-1530**	10.318.442
46.42-47.87	47.80-49.25						
49.17-50.63	50.55 -52.01						
51.93-53.39	53.31-54.76						
54.69-56.14	56.06-57.52						
57.44-58.90	58.82-60.28						
60.20-61.65	51.57-63.03	**BR1530-2020**	10.318.424	**SL1530-2020**	10.318.434	**CS2020-2510**	10.318.443
62.95-64.41	64.33-65.79						
65.71-67.17	67.09-68.54						
68.46-69.92	69.84-71.30						
71.22-72.68	72.60-74.06						
73.98-75.43	75.35-76.81						
76.73-78.19	78.11-79.57						
79.49-80.94	80.87-82.32	**BR2020-2510**	10.318.425	**SL1530-2020**	10.318.434	**CS2020-2510**	10.318.443
82.24-83.70	83.62-85.08						
85.00-86.46	86.38-87.83						
87.76-89.21	89.13-90.59						
90.51-91.97	91.89-93.35						
93.27-94.72	94.65-96.10						
96.02-97.48	97.40-98.86						
98.78-100.24	100.16-101.61	**BR2510-3000**	10.318.425	**SL2510-3000**	10.318.435	**CS2510-3000**	10.318.444
101.54-102.99	102.91-104.37						
104.29-105.75	105.67-107.13						
107.05-108.50	108.43-109.88						
109.80-111.26	111.18-112.64						
112.56-114.02	113.94-115.39						
115.31-116.77	116.69-118.15						

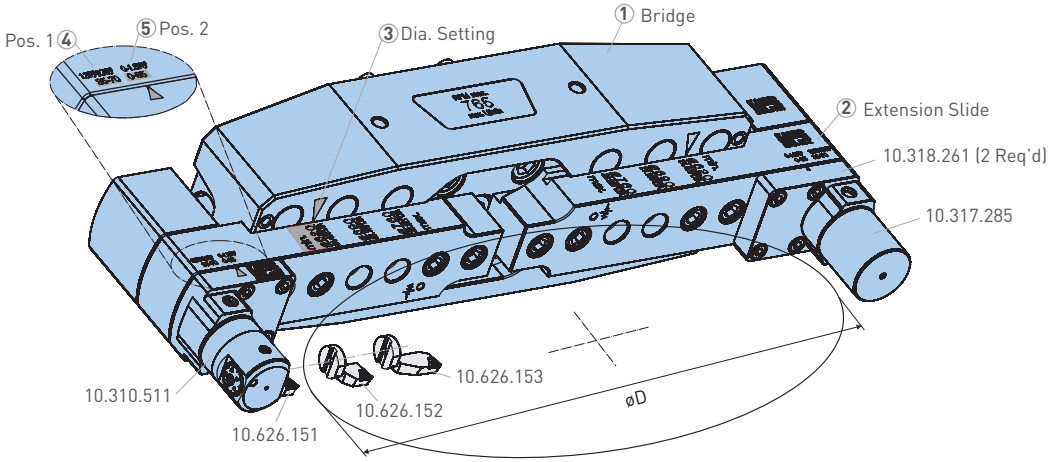
***Single pieces**

ACCESSORIES

SPARE PARTS
PG. 553

BRIDGE TOOL HOLDER

For X-Large Diameter Pin Turning



Insert Holder & Turning Range (Position 1) ④			Insert Holder & Turning Range (Position 2) ⑤			Diameter Setting Position ③	Bridge ①	Extension Slide ②
10.626.153	**10.626.152**	**10.626.151**	**10.626.153**	**10.626.152**	**10.626.151**			
18.465-19.134	18.976-19.646	19.449-20.118	19.843-20.512	20.354-21.024	20.827-21.496	620	**BR620-830 (10.318.421)**	**SL620-830 (10.318.431)**
21.220-21.890	21.732-22.402	22.205-22.874	22.598-23.268	23.110-23.780	23.583-24.252	690		
23.976-24.646	24.488-25.157	24.961-25.630	25.354-26.024	25.866-26.535	26.339-27.008	760		
26.732-27.402	27.244-27.913	27.717-28.386	28.110-28.780	28.622-29.291	29.094-29.764	830	**BR830-1110 (10.318.422)**	**SL830-1110 (10.318.432)**
29.488-30.157	30.000-30.669	30.472-31.142	30.866-31.535	31.378-32.047	31.850-32.520	900		
32.244-32.913	32.756-33.425	33.228-33.898	33.622-34.291	34.134-34.803	34.606-35.276	970		
35.000-35.669	35.512-36.181	35.984-36.654	36.378-37.047	36.890-37.559	37.362-38.031	1040		
37.756-38.425	38.268-38.937	38.740-39.409	39.134-39.803	39.646-40.315	40.118-40.787	1110	**BR1110-1530 (10.318.423)**	**SL1110-1530 (10.318.433)**
40.512-41.181	41.024-41.693	41.496-42.165	41.890-42.559	42.402-43.071	42.874-43.543	1180		
43.268-43.937	43.780-44.449	44.252-44.921	44.646-45.315	45.157-45.827	45.630-46.299	1250		
46.024-46.693	46.535-47.205	47.008-47.677	47.402-48.071	47.913-48.583	48.386-49.055	1320		
48.780-49.449	49.291-49.961	49.764-50.433	50.157-50.827	50.669-51.339	51.142-51.811	1390		
51.535-52.205	52.047-52.717	52.520-53.189	52.913-53.583	53.42554.094	53.898-54.567	1460		
54.291-54.961	54.803-55.472	55.276-55.945	55.669-56.339	56.181-56.850	56.654-57.323	1530	**BR1530-2020 (10.318.424)**	**SL1530-2510 (10.318.434)**
57.047-57.717	57.559-58.228	58.031-58.701	58.425-59.094	58.937-59.606	59.409-60.079	1600		
59.803-60.472	60.315-60.984	60.787-61.457	61.181-61.850	61.693-62.362	62.165-62.835	1670		
62.559-63.228	63.071-63.740	63.543-64.213	63.937-64.606	64.449-65.118	64.921-65.591	1740		
65.315-65.984	65.827-66.496	66.299-66.969	66.693-67.362	67.205-67.874	67.677-68.346	1810		
68.071-68.740	68.583-69.252	69.055-69.724	69.449-70.118	69.961-70.630	70.433-71.102	1880		
70.827-71.496	71.339-72.008	71.811-72.480	72.205-72.874	72.717-73.386	73.189-73.858	1950		

Insert Holder & Turning Range (Position 1) ④			Insert Holder & Turning Range (Position 2) ⑤			Diameter Setting Position ③	Bridge ①	Extension Slide ②
10.626.153	**10.626.152**	**10.626.151**	**10.626.153**	**10.626.152**	**10.626.151**			
73.583-74.252	74.094-74.764	74.567-75.236	74.961-75.630	75.472-76.142	75.945-76.614	2020	**BR2020-3000 (10.318.425)**	**SL1530-2510 (10.318.434)**
76.339-77.008	76.850-77.520	77.323-77.992	77.717-78.386	78.228-78.898	78.701-79.370	2090		
79.094-79.764	79.606-80.276	80.079-80.748	80.472-81.142	80.984-81.654	81.457-82.126	2160		
81.850-82.520	82.362-83.031	82.835-83.504	83.228-83.898	83.740-84.409	84.213-84.882	2230		
84.606-85.276	85.118-85.787	85.591-86.260	85.984-86.654	86.496-87.165	86.969-87.638	2300		
87.362-88.031	87.874-88.543	88.346-89.016	88.740-89.409	89.252-89.921	89.724-90.394	2370		
90.118-90.787	90.630-91.299	91.102-91.772	91.496-92.165	92.008-92.677	92.480-93.150	2440		
92.874-93.543	93.386-94.055	93.858-94.528	94.252-94.921	94.764-95.433	95.236-95.906	2510	**BR2020-3000 (10.318.425)**	**SL2510-3000 (10.318.435)**
95.630-96.299	96.142-96.811	96.614-97.283	97.008-97.677	97.520-98.189	97.992-98.661	2580		
98.386-99.055	98.898-99.567	99.370-100.039	99.764-100.433	100.276-100.945	100.748-101.417	2650		
101.142-101.811	101.654-102.323	102.126-102.795	102.520-103.189	103.031-103.701	103.504-104.173	2720		
103.898-104.567	104.409-105.079	104.882-105.551	105.276-105.945	105.787-106.457	106.260-106.929	2790		
106.654-107.323	107.165-107.835	107.638-108.307	108.031-108.701	108.543-109.213	109.016-109.685	2860		
109.409-110.079	109.921-110.591	110.394-111.063	110.787-111.457	111.299-111-.969	111.772-112.441	2930		

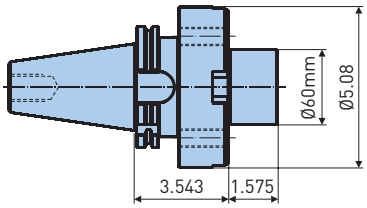
CAUTION

Counter-clockwise spindle rotation required.

SHANKS FOR SERIES 318

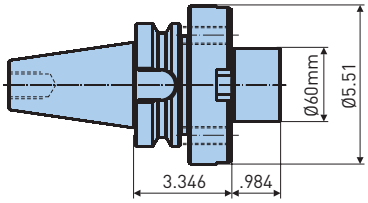
RANGE: Ø24.37-118.2

CAT50 BIG-PLUS



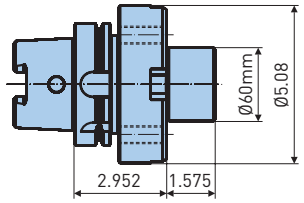
Catalog Number	Weight (lbs.)
BCV50H-FMH60-90	20.9

BT50 BIG-PLUS



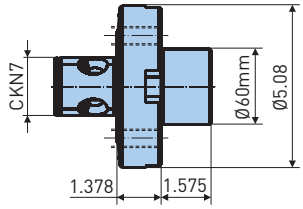
Catalog Number	Weight (lbs.)
BBT50-FMB60-75	16.5

HSK-A100



Catalog Number	Reference Number	Weight (lbs.)
HSK-A100-F60-75	10.328.214	14.5

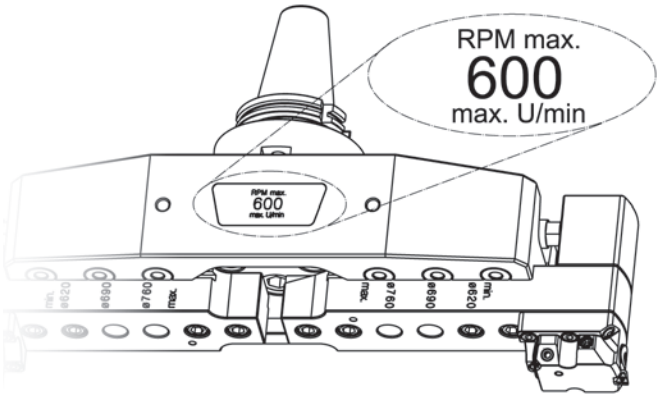
BIG KAISER CKN



Catalog Number	Reference Number	Weight (lbs.)
CKN7-F60	10.328.217N	10.4

SAFETY INSTRUCTIONS

The max. speed allowed for series 318 boring tools is in relation to the boring diameter and the extension slide used. All extension slides are marked with max speed allowed [n max].



ØD	Max Speed (RPM)	Bridge Aluminum	
		Catalog Number	Reference Number
24.37-32.72	600	**BR620-830**	10.318.421
32.64-43.74	450	**BR830-1110**	10.318.422
43.66-60.28	350	**BR1110-1530**	10.318.423
60.20-79.57	250	**BR1530-2020**	10.318.424
79.49-98.86	190	**BR2020-2510**	10.318.425
98.78-118.15	150	**BR2510-3000**	10.318.425

APPLICATION NOTES

ROUGHING

Ø24.37"-43.70"

Up to Ø32.68 the bridge tool can be connected to the machine spindle over a tool shank, but only on a machine with good spindle taper, good spindle bearings and with the normal retention force available. For the range between Ø32.68-43.70, roughing is possible with the bridge bolted on to the machine spindle. If vibration occurs use just one cutting edge.

Ø>43.70"

Roughing is not recommended

FINISHING

Ø24.37"-43.70"

Finishing is possible with the bridge tool connected to the machine spindle over a tool shank, providing that the machine spindle is in good condition.

Ø>43.70"

The bridge tool must be bolted on to the machine spindle, either directly or if required over a special flange.

CONNECTING THE BRIDGE TO THE MACHINE SPINDLE

The bridge tool can be connected to the machine spindle over a tool shank (Fig. 1) or it can be bolted on to the spindle face (Fig. 2). A bolted connection is recommended for bore sizes Ø43.70 and larger.

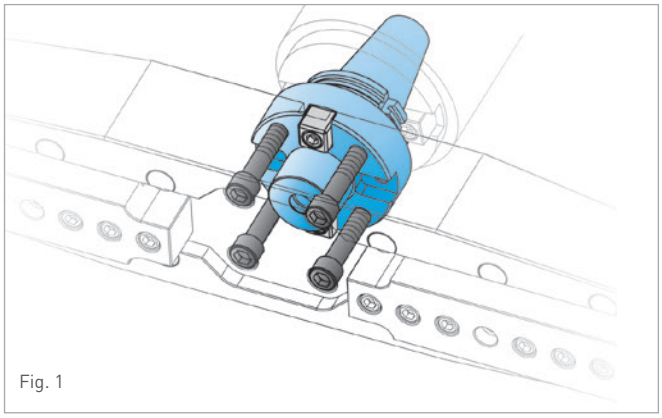


Fig. 1

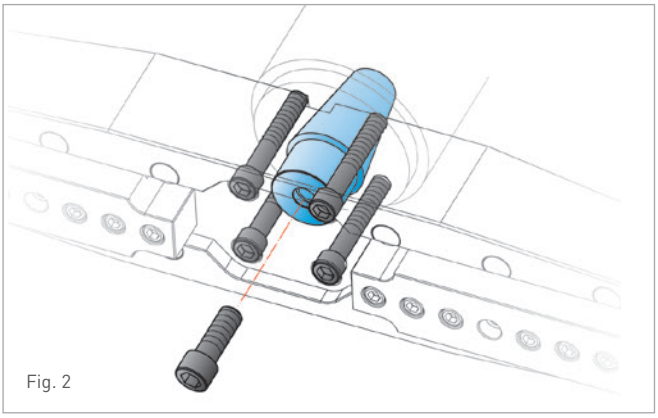


Fig. 2

SERIES 318 ROUGH BORING INSERT SELECTION & CUTTING DATA

RANGE: Ø7.76"-24.41"

Material	Insert Radius	CC..12 (1/2" I.C.)					CC..16 (5/8" I.C.)					SC..12 /SD..12 (1/2" I.C.)			Speed (SFM)
		Catalog Number	Balanced Cutting		Stepped Cutting		Catalog Number	Balanced Cutting		Stepped Cutting		Catalog Number	Balanced Cutting		
			Feed (IPR)	Max ø D.O.C.	Feed (IPR)	Max ø D.O.C.		Feed (IPR)	Max ø D.O.C.	Feed (IPR)	Max ø D.O.C.		Feed (IPR)	Max ø D.O.C.	
Mild Steels 10XX-15XX 1018, 1020, 1551	.016	**CCMM120404-TNP11**	.014	.350	.008	.600	—	—	—	—	—	**11.654.340**	.016	.350	400-825
	.031	**CCMM120408-TNP12**	.020	.400	.012	.800	**10.645.996**	.024	.600	.014	1.120	**SCMM120408-TNP12**	.022	.380	
High Carbon Alloy Steels 23XX-92XX 4130, 4340, 8620	.016	**CCMM120404-TNP11**	.012	.350	.008	.600	—	—	—	—	—	**11.654.340**	.014	.350	350-750
	.031	**CCMM120408-TNP11**	.018	.400	.012	.800	**CCMM160508-TNP11**	.022	.600	.012	1.120	**SCMM120408-TNP11**	.020	.380	
300 Series Stainless Steel 304, 316, 17-4ph	.016	**10.654.968**	.012	.280	.008	.450	—	—	—	—	—	**11.654.340**	.014	.250	200-450
	.031	**10.654.969**	.018	.325	.010	.600	**10.654.996**	.022	.400	.012	.800	**SCMM120408-TNP12**	.020	.300	
400 Series Stainless Steel Martensitic	.016	**10.654.968**	.012	.350	.008	.600	—	—	—	—	—	**11.654.340**	.014	.350	250-550
	.031	**10.654.969**	.018	.400	.012	.800	**10.654.996**	.022	.600	.012	1.120	**SCMM120408-TNP12**	.020	.380	
Grey Cast Iron Class 30	.016	**CCMM120404-TNP11**	.014	.500	.008	.800	—	—	—	—	—	**11.654.340**	.016	.480	300-600
	.031	**CCMM120408-TNP11**	.020	.600	.012	1.000	**CCMM160508-TNP11**	.024	.750	.014	1.400	**SCMM120408-TNP11**	.022	.580	
Cast Iron Ductile/Nodular	.016	**CCMM120404-TNP11**	.012	.450	.008	.700	—	—	—	—	—	**11.654.340**	.014	.420	250-550
	.031	**CCMM120408-TNP11**	.018	.500	.010	.900	**CCMM160508-TNP11**	.022	.675	.012	1.250	**SCMM120408-TNP11**	.020	.480	
High Temp. Alloys Titanium, Inconel, Monel, etc.	.016	**10.654.968**	.010	.240	.005	.400	—	—	—	—	—	—	—	—	100-225
	.031	**10.654.969**	.014	.280	.007	.500	**10.654.996**	.016	.380	.008	.700	**SCMM120408-TNP12**	.014	.250	
Copper Alloys Brass and Bronze	.016	**CCMT120404-C2P**	.014	.500	.008	.800	—	—	—	—	—	—	—	—	550-800
	.031	**11.654.991**	.020	.600	.012	1.000	**10.654.997**	.024	.750	.014	1.400	**SCMM120408-C2P**	.022	.580	
Aluminum & Non-Ferrous	.016	**10.654.995**	.016	.550	.010	1.000	—	—	—	—	—	—	—	—	825-1300
	.031	**10.654.992**	.022	.650	.012	1.250	**10.654.998**	.030	.900	.015	1.625	**10.654.387**	.022	.650	

All Cutting Data Without Guarantee

Cutting Speed:

$$RPM = \frac{SFM \times 3.82}{Bore\ Ø}$$

Feed Rate:

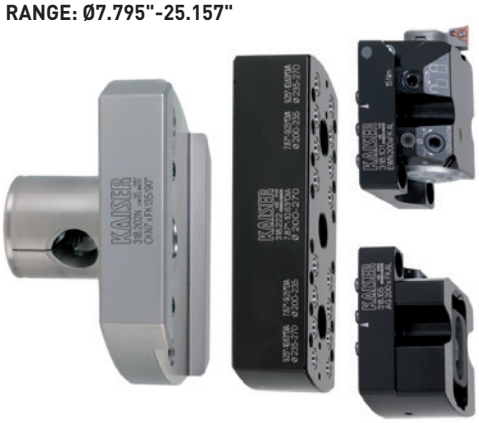
$$IPM = RPM \times IPR$$

CAUTION

Do not exceed maximum RPM as marked on the extension slide!

SERIES 318 FINISH BORING INSERT SELECTION & CUTTING DATA

RANGE: Ø7.795"-25.157"



Material	Insert Radius	Insert Type & Size		Stock Allowance on Dia.	Feed (IPR)	Speed (SFM)
		TC..11	CC..09			
Mild, Low-Carbon Steel 10XX-15XX 1018,1020,1551, A36	.016	**TCMT110204-TNP12**	**CCMT09T304-TNP12**	.016-.020	.0040	600-1100
	.031	**11.655.336**	**CCMT09T308-TNP12**	.024-.040	.0060	
High Carbon Alloy Steels 23XX-92XX Tool Steel 4140, 4340, 8620	.016	**TCMT110204-CTP51**	**CCMT09T304-CTP51**	.016-.020	.0040	500-900
	.031	**TCMT110208-CTP51**	**CCMT09T308-CTP51**	.024-.040	.0060	
300 Series Stainless Steel Austenitic 303, 304, 316, 17-4ph	.016	**10.655.389**	**CCMT09T304-TNP12**	.016-.020	.0040	400-750
	.031	**10.655.399**	**CCMT09T308-TNP12**	.024-.040	.0060	
400 Series Stainless Steel Martensitic 403, 410, 416, 430	.016	**10.655.302B**	**CCMT09T304-TNP12**	.016-.020	.0040	450-800
	.031	**10.655.303B**	**CCMT09T308-TNP12**	.024-.040	.0060	
Grey Cast Iron Malleable Class 20, 30	.016	**TCMT110204-TNP11**	**CCMT09T304-TNP11**	.016-.020	.0040	500-1000
	.031	**TCMT110208-TNP11**	**CCMT09T308-TNP11**	.024-.050	.0060	
CBN-CH, CBN-CHN	—	**11.938.833**	**11.938.838**	.008-.016	.0030	1300-1650
Cast Iron Ductile/Nodular/Chilled	.016	**10.655.302A**	**CCMT09T304-TNP11**	.016-.020	.0040	350-600
	.031	**10.655.303A**	**CCMT09T308-TNP11**	.024-.040	.0060	
High Temp. Alloys Titanium, Inconel, Monel, etc.	.016	**10.655.354**	**11.654.968**	.012-.016	.0020	200-325
	.031	**10.655.364**	**11.654.969**	.018-.032	.0030	
Copper Alloys Brass & Bronze	.016	**TCMT110204-C2P**	**11.654.957**	.016-.020	.0040	900-1400
	.031	**TCMT110208-C2P**	**CCMT09T308-C2P**	.024-.050	.0060	
Aluminum/Magnesium 6061, 7075	.016	**10.655.388**	**10.654.977**	.016-.020	.0040	1000-1600
	.031	**10.655.398**	**10.654.987**	.024-.040	.0060	
Aluminum/Magnesium 6061, 7075 PCD Inserts	.016	**10.938.841**	**11.938.843**	.016-.020	.0040	1500-3000
	.031	**11.938.860**	**11.938.851**	.024-.050	.0060	
Hardened Steel Min. 50HRc CBN Inserts	.016	**10.938.834**	**11.938.838**	.005-.010	.0015	200-300
	.031	**10.938.865**	**—**	.006-.012	.0020	

All Cutting Data Without Guarantee

CAUTION

Do not exceed maximum RPM as marked on the extension slide!

Cutting Speed:

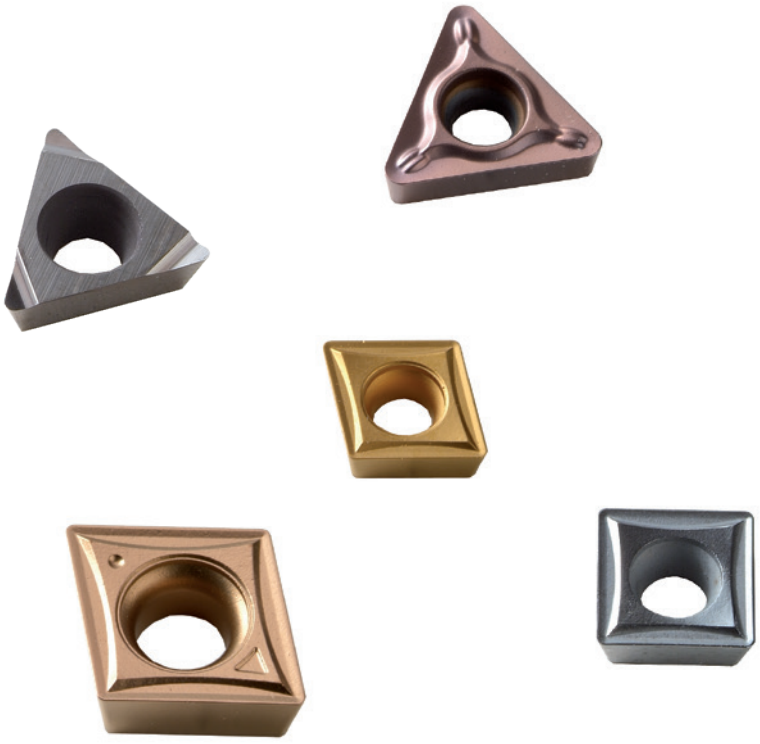
$$RPM = \frac{SFM \times 3.82}{Bore\ Ø}$$

Feed Rate:

IPM = RPM x IPR

INDEXABLE INSERTS

B.5



INDEXABLE INSERTS 516-534

APPLICATION ADVICE 516-517
WC-INSERTS FOR FINE BORING HEADS 518-519
TP/TC-INSERTS FOR FINE BORING HEADS 520-526
CC-INSERTS FOR FINE AND ROUGH BORING HEADS 527-531
SP/SC-INSERTS FOR ROUGH BORING HEADS 532-534

APPLICATION ADVICE

This section contains a wide range of indexable inserts selected for fine boring or rough boring tools which have been tested under the most diverse working conditions.

For individual tool combinations comprehensive cutting data tables with detailed information are available on request.

CUTTING MATERIALS

ISO Main Groups	Work Piece Materials	ISO Application Groups				
P	Carbon Steels Cast Steel	P10	P20	P30	P40	P50
M	Stainless Steels	M10	M20	M30	M40	
K	Cast Iron	K10	K20	K30		
N	Aluminium Non-Ferrous Metals Synthetic Materials	N10				
S	Titanium NiCo Alloys High Temperature Alloys	S10	S20			

Increasing Fracture Strength / Toughness

Increasing Abrasion & Thermal Resistance

CARBIDE — Tungsten Carbide with the addition of titanium carbide, tantalum carbide and cobalt as binding agents. Depending on the ISO Group, these are suitable for rough- and finish-boring of ferrous and non-ferrous materials.

CERMET (CT) — A combination of titanium carbide and titanium nitride. They have high thermal and abrasion resistance and are suitable for finish-boring and light rough-boring of steel and cast iron at high cutting speeds.

CUBIC BORON NITRIDE (CBN) — This CBN grade feature an extremely high wear resistance and is suitable for finish-boring hardened steels up to 70 HRC and hard nickel alloys.

CUBIC BORON NITRIDE (CBN-CH) — Suitable for high-speed finishing gray cast iron in optimal conditions, this type features a T-land edge prep for superior wear resistance.

CUBIC BORON NITRIDE (CBN-CHN) — Cast iron grade with radius honed cutting edge for suitable for high-speed finishing of gray cast iron in less-stable conditions.

POLYCRYSTALLINE DIAMOND (PCD) — Extremely hard and abrasion-resistant cutting edge for high-speed finish boring of non-ferrous materials and composites.

COATING	REMARKS
TNP11	TiCN, Al2O3, TiN—Superb general purpose roughing &_finishing grade
TNP12	TiN, TiC, TiN—Extremely tough grade for heavy interruption and stainless steel
TNP16	TiC, Al2O3—Optimal tool life in cast iron
TAN18	TiAlN—Excellent wear resistance in steel/cast iron combined w/ideal edge prep in optimal/critical conditions
ALCR10	ALCrN (Alcrona)—Excellent wear resistance in stainless steel/high nickel alloys combined w/ideal edge prep in critical conditions
ALCR20	ALCrN (Alcrona)—Excellent toughness combined with substrate for interrupted cuts
AL10	Aluminum Oxide–General purpose for steel/cast iron

SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

ISO CODE for Inserts for Boring and Turning

T	C	G	T	11	02	04	F	N
1	2	3	4	5	6	7	8	9

1 Insert Shape

C

S

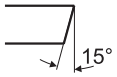
T

W

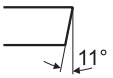
2 Clearance Angle

C

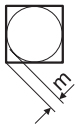
D



P



3 Tolerance Class



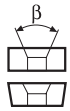
Class	IC	m	s
C	±.001	±.0005	±.001
G	±.001	±.001	±.005
M	±.002-.004[1)]	±.003-.008[1)]	±.005

1) Dependent upon insert size

4 Chip Breaker/Mounting Criteria

A

W



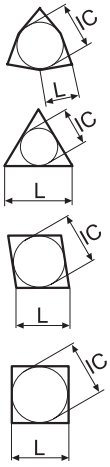
β = 40°-60°

T

β = 40°-60°

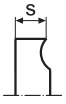
X = Special execution

5 Insert Size



Size	02	03	04	05	06	07	08	09	10	11	12	16
L	.08	.12	.16	.20	.24		.31		.39			
IC	.156	.219	.250	.312	.375		.500		.625			
L						7mm				11mm		
IC						.165				.250		
L					.250			.375			.500	.625
IC					.250			.375			.500	.625
L					.250			.375			.500	
IC					.250			.375			.500	

6 Insert Thickness



01	s=.063
02	s=.094 (.098*)
03	s=.125
T3	s=.156
04	s=.187
05	s=.219

*Special Size

7 Corner Radius

01	R=.004
02	R=.008
03	R=.012
04	R=.016
06	R=.024
08	R=.031
12	R=.047

8 Cutting Edge

F

E

T

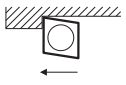
S

(W)

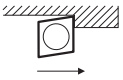
For wiper geometry see page 515

9 Cutting Direction

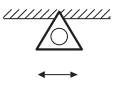
R



L

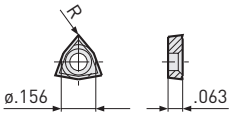


N



INSERTS FOR FINE BORING HEADS

Insert						Workpiece Material								Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Coating	Construction Steels	Heat Treatable Steels	Stainless Steels	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC



WCGT 0201 — **CIRCUMFERENCE GROUND, CHIP-BREAKERS PRESSED & POLISHED**

	WCGT-020102FN-MP10CT	**10.655.600**	.008	15°	—	+	++			+				+				
	WCGT-020104FN-MP10CT	**11.655.606**	.016	15°	—	+	++			+				+				
	WCGT-020102FN-MP20C	**11.655.607**	.008	15°	Al_2O_3-TiN	+	+	+	+									
	WCGT-020102FN-MP30H	**11.655.605**	.008	15°	—	+	+									++	+	

CIRCUMFERENCE AND CHIP-BREAKERS GROUND

	WCGT-020101FL-FK10CT	**10.655.604**	.004	23°	—						+				++	+		
	WCGT-020102FL-FK10CT	**10.655.601**	.008	23°	—						+			++		+		
	WCGT-020101FL-FK10C	**10.655.605**	.004	23°	TiAlN	+	++	+	++	++	++	+	+		++			
	WCGT-020102FL-FK10C	**10.655.603**	.008	23°	TiAlN	+	++	+	++	++	++	+	+	++	+	+		
	WCGT-020101FL-FM10C	**10.655.606**	.004	23°	AlCrN	++	+	++	+	+	+	+	+	+	++			
	WCGT-020102FL-FM10C	**10.655.602**	.008	23°	AlCrN	++	+	++	+	+	+	++	++	++	+	+		

Torx Plus T6 IP M2x3.6 10.694.101

Torx Plus T6 IP 11.694.188

SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

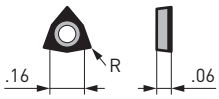
INSERTS FOR FINE BORING HEADS

Insert						Workpiece Material						Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Grade	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	Carbon Fiber	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC

WCGT 0201

ONE CUTTING EDGE MADE WITH CBN OR PCD

	WCGW-020101FN-FN10PKD	**11.938.844**	.004	0°	PCD			++			++	++	+			++
	WCGW-020102FN-FN10PKD	**11.938.845**	.008	0°	PCD			++			++	++		+		++
	WCGW-020102EN-FH10CBN	**11.938.846**	.008	0°	CBN-30				++			++		+	+	
	WCGW-020102TN-FH10CBN	**11.938.863**	.008	0°	CBN-15	++	++					++	+	+		



THREE CUTTING EDGES MADE WITH CBN OR PCD

	WCGW-020102FN-FN10PKD-X3	**10.938.883**	.008	0°	PCD			++			++	++		+		+
	WCGW-020102FN-FK10CBN-X3	**10.938.884**	.008	0°	CBN-10		++					++	+	+		
	WCGW-020102FN-FH10CBN-X3	**10.938.885**	.008	0°	CBN-25				++	+		++				

Torx Plus T6 IP M2x3.6 10.694.101

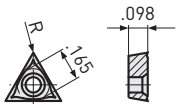
Torx Plus T6 IP 11.694.188

SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

INSERTS FOR FINE BORING HEADS

Insert						Workpiece Material								Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Coating	Construction Steels	Heat Treatable Steels	Stainless Steels	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC
	TPGT-070202FN-MP10CT	**10.651.802**	.008	15°	—	+	++			+				++				
	TPGT-070204FN-MP10CT	**10.651.702**	.016	15°	—	+	++			+				++				
	TPGT-070202FL-FP10CT	**10.651.835**	.008	18°	—	+	++			+	+				++			
	TPGT-070201FL-FK10C	**10.651.824**	.004	25°	TiAlN	+	+	+	+	+	+		+		++			
	TPGT-070203FL-FK10C	**10.651.735**	.012	25°	TiAlN	++	++	+	++	++	+	++	+	++		+		
	TPGT-070201FL-FK10H	**10.651.823**	.004	25°	—						++				++			
	TPGT-070203FL-FK10H	**10.651.723**	.012	25°	—						++			++		++	+	



TPGT 0702 — **CIRCUMFERENCE GROUND, CHIP-BREAKERS PRESSED & POLISHED**

TPMT 0702 — **CHIP-BREAKERS PRESSED**

	TPMT-070202FN-MP10CT	**10.651.813**	.008	15°	ALCrN	+	++	+	+	+	+			++		+		
	TPMT-070204FN-MP10CT	**10.651.713**	.016	15°	ALCrN	+	++	+	+	+	+			++		+		

TPGT 0702 — **CIRCUMFERENCE AND CHIP-BREAKERS GROUND**

	TPGT-070202FL-FP10C	**10.651.833**	.008	15°	TiAlN	+	+	+	+	+		+	+	+	++	+		
	TPGT-070202FL-FP10CTC	**10.651.838**	.008	18°	TiAlN	+	++	+	+	+	+	+		+	++			
	TPGT-070203FL-FP10CTC	**10.651.738**	.012	18°	TiAlN	+	++	+	+	+	+	+		++		+		
	TPGT-070202FL-FS10C	**10.651.839**	.008	15°	TiAlN			+					++	++	+	++	+	
	TPGT-070203FL-FP10CT	**10.651.736**	.012	18°	—	+	++			+	+			++				
	TPGT-070202FL-MP10C	**10.651.834**	.008	20°	TiAlN	+	+	+	+	+		++	+	+	++	+		
	TPGT-070204FL-MP10C	**10.651.734**	.016	20°	TiAlN	++	++	+	++	++		++	+	++		+		
	TPGT-070202FL-FM10C	**10.651.837**	.008	25°	ALCrN	++	+	++	+	+	+	++	++	+	++			
	TPGT-070203FL-FM10C	**10.651.737**	.012	25°	ALCrN	++	+	++	+	+	+	++	++	++		+		
	TPGT-070202FL-FK10H	**10.651.825**	.008	25°	—						++			++	++			++
	TPGT-070204FL-FK10H	**10.651.725**	.016	25°	—						++			++				++

Torx Plus T6 IP M2x4.8 10.694.103
Torx Plus T6 IP M2x4.1 10.694.102[1)]

γ Rake angle with insert on tool
Clamping screw (10 screws and 1 wrench)
1) For insert holders 10.615.205/10.615.207/10.615.507/ 10.615.508/10.615.271 Inserts are sold in packages of 10 pieces

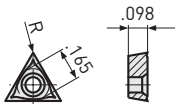
Torx Plus T6 IP 10.694.188

SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

INSERTS FOR FINE BORING HEADS

Insert						Workpiece Material								Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Coating	Construction Steels	Heat Treatable Steels	Stainless Steels	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC



TPGT 0702 — **CIRCUMFERENCE GROUND, CHIP-BREAKERS PRESSED & POLISHED**

	TPGT-070201FL-FM20C	**10.651.840**	.004	23°	ALCrN	+	++	+	++	++	+	++	++	++	+	+	+	
	TPGT-070202FL-FM20C	**10.651.841**	.008	23°	ALCrN	+	++	+	++	++	+	++	++	++	+	+	+	
	TPGT-070203FL-FM20C	**10.651.842**	.012	23°	ALCrN	+	++	+	++	++	+	++	++	++	+	+	+	
	TPGT-070204FL-FM20C	**10.651.843**	.016	23°	ALCrN	+	++	+	++	++	+	++	++	++	+	+	+	

TPGW 0702 — **CIRCUMFERENCE GROUND WITHOUT CHIP-BREAKERS**

	TPGW-070203FN-MK10C	**10.651.632**	.012	5°	TiAlN	+	+	+	++	+		++		++			+	
	TPGW-070203FN-MK10H	**10.651.623**	.012	5°	—				+			+					+	

Torx Plus T6 IP M2x4.8 10.694.103
Torx Plus T6 IP M2x4.1 10.694.102[1)]

γ Rake angle with insert on tool
Clamping screw (10 screws and 1 wrench)
1) For insert holders 10.615.205/10.615.207/10.615.507/ 10.615.508/10.615.271 Inserts are sold in packages of 10 pieces

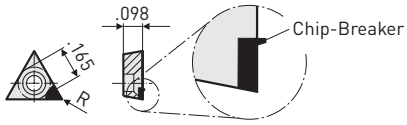
Torx Plus T6 IP 10.694.188

SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

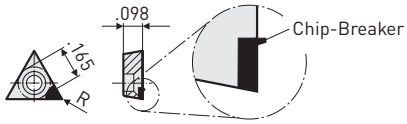
CBN/PCD INSERTS FOR FINE BORING HEADS

Insert						Workpiece Material						Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Grade	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	Carbon Fiber	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC



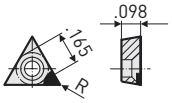
TPGW 07 — **ONE CUTTING EDGE MADE WITH PCD**

	TPGT-070203FL-FN10PKD	**11.938.831**	.012	25°	PCD			+			++	++		+		++



TPGW 07 — **ONE CUTTING EDGE MADE WITH PCD**

	TPGW-070203FN-FN10PKD	**10.938.840**	.012	5°	PCD			++			++	++			+	+
	TPGW-070208FN-FN10PKD	**11.938.830**	.031	5°	PCD			++			++	++			+	+



TPGW 07 — **ONE CUTTING EDGE MADE WITH PCD/CBN**

	TPGW-070202FN-FK10CBN	**10.948.210**	.008	5°	CBN-15	++	++			+		+	+			
	TPGW-070203TN-FK10CBN	**10.938.836**	.012	5°	CBN-10	++	+					++		++		
	TPGW-070204TN-FK10CBN	**10.948.231**	.016	5°	CBN-15	++	++					++		++	+	
	TPGW-070201TN-FH10CBN	**10.948.270**	.004	5°	CBN-30				++			++	+	+		
	TPGW-070203EN-FK10CBN	**10.938.837**	.012	5°	CBN-20	++	++		++	+		++		++	+	

TPGW 07 — **THREE CUTTING EDGES MADE WITH CBN**

	TPGW-070202FN-FH10CBN-X3	**10.948.252**	.008	0°	CBN-30				++	++		+	+			
	TPGW-070203FN-FH10CBN-X3	**10.948.251A**	.012	0°	CBN-30				++	++		+				
	TPGW-070204FN-FH10CBN-X3	**10.948.253**	.016	0°	CBN-30				++	++		+				

Torx Plus T6 IP M2x4.8 10.694.103
Torx Plus T6 IP M2x4.1 10.694.102[1)]

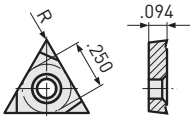
Torx Plus T6 IP 10.694.188

SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

INSERTS FOR FINE BORING HEADS

Insert						Workpiece Material								Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Coating	Construction Steels	Heat Treatable Steels	Stainless Steels	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC



TCMT 1102

CHIP-BREAKERS PRESSED & POLISHED

	—	**TCMT110202-CTP51**	.008	15°	—	+	++			+				++		+		
	—	**TCMT110204-CTP51**	.016	15°	—	+	++			+				++		+		
	—	**TCMT110208-CTP51**	.031	15°	—	+	++			+				++		+		
	TCMT-110204FN-MP10CTC	**10.655.324**	.016	15°	TiAlN	+	++	+	+	+	+			++		+		
	TCMT-110208FN-MP10CTC	**10.655.334**	.031	15°	TiAlN	+	++	+	+	+	+			++		+		
	—	**TCMT110204-TNP12**	.016	15°	Al_2O_3-TiN	++	+	+							+	++	++	
	TCMT-110208FN-FS10C	**11.655.336**	.031	15°	Al_2O_3-TiN	++	+	+							+	++	++	
	TCMT-110202FN-FP20C	**11.655.311**	.008	15°	Al_2O_3-TiN	++	+		++	+				+	+	++		
	—	**TCMT110204-TNP11**	.016	15°	Al_2O_3-TiN	++	+		++	+				+		++	+	
	—	**TCMT110208-TNP11**	.031	15°	Al_2O_3-TiN	++	+		++	+				++		++	+	
	TCMT-110204FN-MM30C	**10.655.354**	.016	20°	TiAlN-Al_2O_3	++	+	++	+	+			++	++	++	++	++	
	TCMT-110208FN-MM30C	**10.655.364**	.031	20°	TiAlN-Al_2O_3	++	+	++	+	+			++	++	+	++	++	
	TCMT-110202FN-MK10H	**11.655.315**	.008	15°	—				+		+				+	+		
	—	**TCMT110204-C2P**	.016	15°	—				+		+				+	+		
	—	**TCMT110208-C2P**	.031	15°	—				+		+				+	+		

TCGT 1102

CIRCUMFERENCE GROUND WITH CHIP-BREAKERS PRESSED

	TCGT-110202FN-MK10C	**10.655.301B**	.008	12°	TiAlN-Al_2O_3	+	+	+	+	+		++		+	+	+		
	TCGT-110204FN-MK10C	**10.655.302B**	.016	12°	TiAlN-Al_2O_3	++	++	++	+	+		++		+		+	+	
	TCGT-110208FN-MK10C	**10.655.303B**	.031	12°	TiAlN-Al_2O_3	++	++	++	+	+		++		+		+	++	
	TCGT-110202FL-FS20C	**10.689.517**	.008	30°	TiN-AL_2O_3-SN_2			++					++					
	TCGT-110204FL-FS20C	**10.689.516**	.016	30°	TiN-AL_2O_3-SN_2			++					++					
	TCGT-110208FL-FS20C	**10.689.518**	.031	30°	TiN-AL_2O_3-SN_2			++					++					
	TCGT-110202FN-MP10CT	**10.655.313**	.008	15°	—	++	++								++			
	TCGT-110208FN-MM30C	**10.655.314**	.031	15°	TiCN-Al_2O_3-TiN	+	+	++	+	+		+		++		++	++	

TCGW 1102

CIRCUMFERENCE GROUND WITHOUT CHIP-BREAKERS

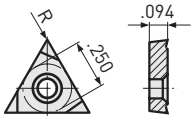
	TCGW-110202FN-MK10C	**10.655.301A**	.008	0°	TiCN-Al_2O_3-TiN				++	++				++	+	+		
	TCGW-110204FN-MK10C	**10.655.302A**	.016	0°	TiCN-Al_2O_3-TiN	+	+	+	++	++				++		+	+	
	TCGW-110208FN-MK10C	**10.655.303A**	.031	0°	TiCN-Al_2O_3-TiN	+	+	+	++	++				++		+	++	
	TCGW-110204FN-MK10H	**10.655.305**	.016	0°	—				+								++	
	TCGW-110208FN-MK10H	**10.655.306**	.031	0°	—				+								++	

SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

INSERTS FOR FINE BORING HEADS

Insert						Workpiece Material								Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Coating	Construction Steels	Heat Treatable Steels	Stainless Steels	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC



TCGT 1102 — CIRCUMFERENCE GROUND, CHIP-BREAKERS PRESSED & POLISHED

	TCGT-110201FL-FM10C	**10.655.369**	.004	23°	AlCrN	++	+	++	+	+	+	++	+	+	++			
	TCGT-110202FL-FM10C	**10.655.379**	.008	23°	AlCrN	++	+	++	+	+	+	++	+	+	++			
	TCGT-110204FL-FM10C	**10.655.389**	.016	23°	AlCrN	++	+	++	+	+	+	++	+	++	+	+		
	TCGT-110208FL-FM10C	**10.655.399**	.031	23°	AlCrN	++	+	++	+	+	+	++	+	++		++	+	
	TCGT-110201FL-FK10C	**10.655.363**	.004	23°	TiAlN	+	+	+	+	+	+				++			
	TCGT-110202FL-FK10C	**10.655.373**	.008	23°	TiAlN	+	+	+	+	+	+				+			
	TCGT-110204FL-FK10C	**10.655.383**	.016	23°	TiAlN	+	++	+	++	++	+	++	+	++		+		
	TCGT-110208FL-FK10C	**10.655.393**	.031	23°	TiAlN	+	++	+	++	++	+	++	+	++		+		
	TCGT-110202FL-FK10H	**10.655.378**	.008	23°	—						++			+	++			
	TCGT-110204FL-FK10H	**10.655.388**	.016	23°	—						++			++	+	+		
	TCGT-110208FL-FK10H	**10.655.398**	.031	23°	—						++			++		+		
	TCGT-110202FL-FP10C	**10.655.371**	.008	15°	TiAlN	+	+		+	+		+			++			
	TCGT-110204FL-FP10C	**10.655.381**	.016	18°	TiAlN	+	+	+	+	+	+	+	+			+		

TCGT 1102 — CIRCUMFERENCE AND CHIP-BREAKERS GROUND

	TCGT-110202FL-FK20C	**10.655.370**	.008	10°	TiAlN	+	+	+	++	++	+	+		+	++	++	+	
	TCGT-110204FL-FK20C	**10.655.380**	.016	10°	TiAlN	+	+	+	++	++	+	+		++		++	++	
	TCGT-110208FL-FK20C	**10.655.390**	.031	10°	TiAlN	+	+	+	++	++	+	+		++		++	++	
	TCGT-110202FN-FP10CT	**10.655.372**	.008	20°	—	+	+								++			
	TCGT-110204FL-FP10CT	**10.655.386**	.016	18°	—	++	++			+	+			++				
	TCGT-110202FL-FP10CTC	**10.655.375**	.008	15°	TiAlN	++	++	+	+	+	+	+		+	++			
	TCGT-110204FL-FP10CTC	**10.655.385**	.016	18°	TiAlN	++	++	+	+	+	+	+		++	+			
	TCGT-110208FL-FP10CTC	**10.655.395**	.031	18°	TiAlN	++	++	+	+	+	+	+		++				
	TCGT-110204FL-FK20H	**10.655.387**	.016	20°	—						++			++	+			++
	TCGT-110208FL-FK20H	**10.655.397**	.031	20°	—						++			++				++
	TCGT-110202FL-FM20C	**10.655.319**	.008	23°	AlCrN	++	+	++	+	+	+	+	++	+	+	++	+	
	TCGT-110203FL-FM20C	**10.655.327**	.012	23°	AlCrN	++	+	++	+	+	+	+	++	+	+	++	+	
	TCGT-110204FL-FM20C	**10.655.318**	.016	23°	AlCrN	++	+	++	+	+	+	+	++	+	+	++	+	
	TCGT-110206FL-FM20C	**10.655.328**	.024	23°	AlCrN	++	+	++	+	+	+	+	++	+	+	++	+	
	TCGT-110208FL-FM20C	**10.655.320**	.031	23°	AlCrN	++	+	++	+	+	+	+	++	+	+	++	+	

Torx Plus T7 IP M2.5x6.5 10.694.122

Torx Plus T7 IP 10.694.189

γ Rake angle with insert on tool

Clamping screw (10 screws and 1 wrench)

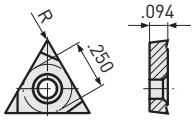
Inserts are sold in packages of 10 pieces

SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

INSERTS FOR FINE BORING HEADS

Insert						Workpiece Material								Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Coating	Construction Steels	Heat Treatable Steels	Stainless Steels	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC



WIPER TCGX 1102

CIRCUMFERENCE AND CHIP-BREAKERS GROUND

	TCGX-110204WL-FK10H	**10.655.317**	.016	20°	—						++		++	++		+	+	++
	TCGX-110204WL-FK10C	**10.655.310**	.016	20°	ALCR10	+	++	+	++	+	+	+	+	++		+	+	++

WIPER TCGX 1102

CIRCUMFERENCE GROUND, CHIP-BREAKERS PRESSED

	TCGX-110204WL-FK20C	**10.655.374**	.016	15°	Al_2O_3	++	+	+	+	+				++			++	
	TCGX-110204WL-FP10CT	**11.655.327**	.016	15°	—	+	++			+	+			++				

Torx Plus T7 IP M2.5x6.5 10.694.122

Torx Plus T7 IP 10.694.189

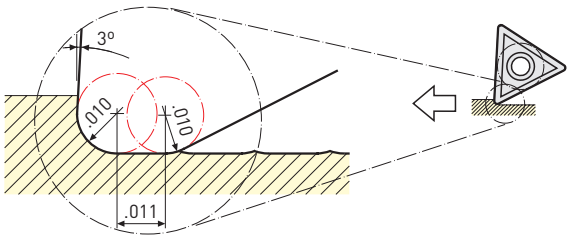
SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

WIPER GEOMETRY

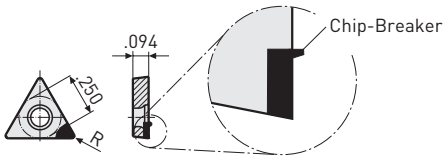
Comparison with standard nose radius .016

Wiper:
Two times the feed rate → Same surface finish
Same feed rate → Two times better surface finish



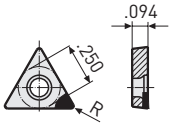
CBN/PCD INSERTS FOR FINE BORING HEADS

Insert						Workpiece Material						Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Grade	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	Carbon Fiber	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC



TCMW 11 — **ONE CUTTING EDGE MADE WITH PCD**

	TCMW-110204FL-FN10PKD	**11.938.832**	.016	25°	PCD			+			++	++		+		++
	—	**TCGT110202FLM (DA1000)**	.008	25°	PCD			+			++	++		+		++
	—	**TCGT110204FLM (DA1000)**	.016	25°	PCD			+			++	++		+		++



TCMW 11 — **ONE CUTTING EDGE MADE WITH PCD/CBN**

	TCMW-110202FN-FN10PKD	**11.938.861**	.008	0°	PCD			++			+	++		+		+
	TCMW-110204FN-FN10PKD	**10.938.841**	.016	0°	PCD			++			+	++		+		+
	TCMW-110208FN-FN10PKD	**11.938.860**	.031	0°	PCD			++			+	++		+		+
	TCGX-110208WL-FN10PKD	**11.938.873***	.031	0°	PCD			++								
	TCMW-110202FN-FK10CBN	**10.948.310**	.008	0°	CBN-15	++	++			+		++	++			
	TCMW-110204EN-FK10CBN	**11.938.864**	.016	0°	CBN-15	++	++					++		+		
	TCMW-110202TN-FK10CBN	**10.948.330**	.008	0°	CBN-15	++	++					++		+		
	TCMW-110204TN-FK10CBN	**11.938.833**	.016	0°	CBN-15	++	++			+		++	+	+		
	TCMW-110208TN-FK10CBN	**11.938.849**	.031	0°	CBN-15	++	++			+		++		+		
	TCMW-110204FN-NK10CBN	**10.938.834**	.016	0°	CBN-30				++	+		++	+	+		
	TCMW-110208EN-NK10CBN	**11.938.865**	.031	0°	CBN-30				++	+		++		++	+	

TCMW 11 — **THREE CUTTING EDGES MADE WITH CBN**

	TCMW-110202FN-FH10CBN-X3	**10.948.350A**	.008	0°	CBN-30				++	++		+	+			
	TCMW-110204FN-FH10CBN-X3	**10.948.351A**	.016	0°	CBN-30				++	++		+				
	TCMW-110208FN-FH10CBN-X3	**10.948.352A**	.031	0°	CBN-30				++	++		++		+		

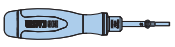
Torx Plus T7 IP M2.5x6.5 10.694.122

* .031"R with wiper

γ Rake angle with insert on tool (see pg. 525)

Clamping screw (10 screws and 1 wrench)

1) For insert holders 10.615.205/10.615.207/10.615.507/ 10.615.508/10.615.271 CBN/PCD inserts are sold individually



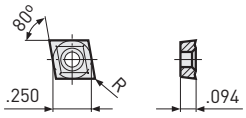
Torx Plus T7 IP 10.694.122

SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

INSERTS FOR FINE & ROUGH BORING HEADS

Insert						Workpiece Material								Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Coating	Construction Steels	Heat Treatable Steels	Stainless Steels	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC



CCMT 0602

CHIP-BREAKERS PRESSED & POLISHED

	CCMT-060204FN-MK20H	**11.654.858**	.016	15°	—				+	+	+						+	
	CCMT-060208FN-RK20H	**11.654.864**	.031	15°	—				+	+	+						+	
	—	**CCMT060202-TNP11**	.008	15°	Al_2O_3-TiN	+	+	+	+	+			+		+			
	—	**CCMP060204-TNP11**	.016	15°	Al_2O_3-TiN	+	++	+	+	+		+	+	++		+		
	—	**CCMT060208-TNP11**	.031	15°	Al_2O_3-TiN	+	++	+	++	++		+	+	++	+	+	+	
	—	**CCMP060204-TNP12**	.016	15°	Al_2O_3-TiN	++	++	+	+	+		+	+	++		++	++	
	CCMT-060208FN-RP35C	**11.654.869**	.031	15°	Al_2O_3-TiN	++	++	+	++	+		+	+	++		++	++	
	—	**CCMT060202-CTP51**	.008	15°	—	+	+	+	+	+		+	+	++				
	—	**CCMT060204-CTP51**	.016	15°	—	+	+	+	+	+		+	+	++				
	—	**CCMT060208-CTP51**	.031	15°	—	+	+	+	+	+		+	+	++				

CCGT 0602

CIRCUMFERENCE GROUND, CHIP-BREAKERS PRESSED & POLISHED

	CCGT-060202FN-RS10C	**10.654.837**	.008	8°	TiAlN	++	+	++					++	++	++	+		
	CCGT-060204FN-RS10C	**10.654.847**	.016	8°	TiAlN	++	+	++					++	++	+	+		

CCGT 0602

CHIP-BREAKERS GROUND

	CCGT-060202FL-RK10H	**10.654.877**	.008	23°	—						++			++	+	+		
	CCGT-060204FL-RK10H	**10.654.888**	.016	23°	—						++		+	++		+		
	CCGT-060208FL-RK10H	**11.654.898**	.031	23°	—						++		+	++	+	+		
	CCGT-060202FL-RN10C	**10.654.879**	.008	23°	AlCrN	+		+	+	+	++		+	++	+	+		
	CCGT-060204FL-RN10C	**10.654.889**	.016	23°	AlCrN	+		+	+	+	++		+	++		+		

Torx Plus T7 IP M2.5x6.5 10.694.122

Torx Plus T7 IP 10.694.189

γ Rake angle with insert on tool

Clamping screw (10 screws and 1 wrench)

Inserts are sold in packages of 10 pieces

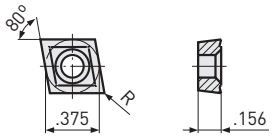
SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

• See pg. 519 for PCD/CBN inserts

INSERTS FOR FINE & ROUGH BORING HEADS

Insert						Workpiece Material								Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Coating	Construction Steels	Heat Treatable Steels	Stainless Steels	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC



CCMT 09T3

CHIP-BREAKERS PRESSED & POLISHED

	CCMT-09T304FN-RK20H	**11.654.957**	.016	15°	—				+	+	+		+	++		+		
	—	**CCMT09T308-C2P**	.031	15°	—				+	+			+	++		+		
	—	**CCMT09T304-TNP11**	.016	15°	Al_2O_3-TiN	+	++	+	++	++	+	+	+	++		++	+	
	—	**CCMT09T308-TNP11**	.031	15°	Al_2O_3-TiN	+	++	+	++	++	+	+	+	+	++	++	+	
	—	**CCMT09T304-TNP12**	.016	15°	Al_2O_3-TiN	++	+	++	+	+		+	+	++		++	++	
	—	**CCMT09T308-TNP12**	.031	15°	Al_2O_3-TiN	++	+	++	+	+		+	+	++		++	++	
	—	**CCMT09T304-CTP51**	.016	15°	—	+	+	+						++				
	—	**CCMT09T308-CTP51**	.031	15°	—	+	+	+						++				

CCGT 09T3

CIRCUMFERENCE GROUND, CHIP-BREAKERS PRESSED & POLISHED

	CCGT-09T302FN-RS10C	**10.654.937**	.008	8°	TiAlN	++	+	++					++	++	++	+		
	CCGT-09T304FN-RS10C	**10.654.947**	.016	8°	TiAlN	++	+	++					++	++	+	+		
	CCGT-09T304FN-RS10C	**10.654.957**	.031	8°	TiAlN	++	+	++					++	++		+		

CCMT 09T3

CHIP-BREAKERS GROUND

	CCMT-09T304FL-MK10H	**10.654.977**	.016	23°	—		+				++			++	+	+		
	CCMT-09T308FL-MK10H	**10.654.987**	.031	23°	—		+				++			++		+		
	CCMT-09T304FL-MN10C	**10.654.949**	.016	23°	AlCrN	+		+	+	+	++		+	++	+	+		
	CCMT-09T308FL-MN10C	**10.654.959**	.031	23°	AlCrN	+		+	+	+	++		+	++		+		

Torx Plus T15 IP M4x9.2 10.694.141

Torx Plus T15 IP 10.694.193

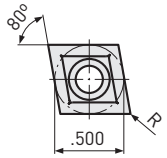
SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

• See pg. 519 for PCD/CBN inserts

INSERTS FOR FINE & ROUGH BORING HEADS

Insert						Workpiece Material								Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Coating	Construction Steels	Heat Treatable Steels	Stainless Steels	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC



CCMT 1204

CHIP-BREAKERS PRESSED & POLISHED

	—	**CCMT120404-C2P**	.016	15°	—				+	+			+	++		+		
	CCMT-120408FN-RK20H	**11.654.991**	.031	15°	—				+	+			+	++		+		
	—	**CCMM120404-TNP11**	.016	15°	Al_2O_3-TiN	+	++	+	++	++		+	+	++	++	++	++	
	—	**CCMM120408-TNP-11**	.031	15°	Al_2O_3-TiN	+	++	+	++	++		+	+	++	++	++	++	
	CCMT-120408FN-MP10CT	**11.654.984**	.031	15°	—	+	+	+						+				
	—	**CCMM120408-TNP12**	.031	15°	Al_2O_3-TiN	++		+				+	+	++		++	+	
	CCMT-120404FN-RS10C	**10.654.968**	.016	8°	TiAlN			++					++	++		+		
	CCMT-120408FN-RS10C	**10.654.969**	.031	8°	TiAlN			++					++	++		+		

CCMT 1204

CHIP-BREAKERS GROUND

	CCMT-120404FL-MK10H	**10.654.995**	.016	23°	—						++			++	+	+		
	CCMT-120408FL-MK10H	**10.654.992**	.031	23°	—						++			++		+		
	CCMT-120404FL-MN10C	**10.654.978**	.016	23°	AlCrN	+		+	+	+	++		++	++	+	+	+	
	CCMT-120408FL-MN10C	**10.654.979**	.031	23°	AlCrN	+		+	+	+	++		++	++		+	+	

Torx Plus T20 IP M5x13.3 10.694.150

Torx Plus T20 IP 10.694.194

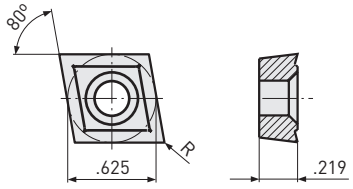
SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

• See pg. 519 for PCD/CBN inserts

INSERTS FOR ROUGH BORING HEADS

Insert						Workpiece Material								Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Coating	Construction Steels	Heat Treatable Steels	Stainless Steels	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC



CCMT 1605 — **CHIP-BREAKERS PRESSED & POLISHED**

	CCMT-160508FN-RK10H	**10.654.997**	.031	15°	—				+	+			+			+		
	—	**CCMM160508-TNP11**	.031	15°	Al_2O_3-TiN	+	++	+	++	++		+	+	++				
	CCMT-160508FN-RP30C	**10.654.996**	.031	15°	Al_2O_3-TiN	++	+	++	+	+		+	++	++		++	+	
	—	**CCMM160508-TNP16**	.031	15°	Al_2O_3-TiN	++	++	+	+	+		+	+	++		++	++	

CCMT 1605 — **CHIP-BREAKERS GROUND**

	CCMT-160508FL-MK10H	**10.654.998**	.031	23°	—						++		+	++			+	

Torx Plus T20 IP M5x13.3 10.694.150

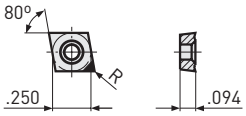
Torx Plus T20 IP 10.694.194

SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

CBN/PCD INSERTS FOR FINE & ROUGH BORING HEADS

Insert						Workpiece Material						Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Grade	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	Carbon Fiber	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC

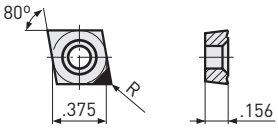


CCMW 06 — **ONE CUTTING EDGE MADE WITH PCD/CBN**

	CCGW-060202FL-FN10PKD	**11.938.847**	.008	5°	PCD			++			++	++		+		
	CCGW-060202FL-FN10PKD	**11.938.842**	.016	5°	PCD			++			++	++		+		
	CCGW-060204TN-FK10CBN	**11.938.835**	.016	0°	CBN-10	++	+					++				

Torx Plus T7 IP M2.5x6.5 10.694.122

Torx Plus T7 IP 10.694.189

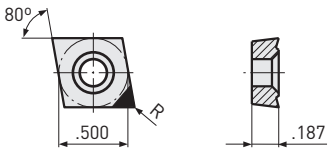


CCMW 09 — **ONE CUTTING EDGE MADE WITH PCD/CBN**

	CCGW-09T304FL-FN10PKD	**11.938.843**	.016	5°	PCD			++			++	++		+		
	CCGW-09T308FL-FN10PKD	**11.938.851**	.031	5°	PCD			++			++	++		+		
	CCGW-09T304TN-FK10CBN	**11.938.838**	.016	0°	CBN-10	++	+					++		+		

Torx Plus T15 IP M4x9.2 10.694.141

Torx Plus T15 IP 10.694.193



CCMW 12 — **ONE CUTTING EDGE MADE WITH PCD/CBN**

	CCGT-120404FL-FN10PKD	**10.938.870**	.016	5°	PCD			++			++	++	+	+		
	CCGT-120408FL-FN10PKD	**10.938.871**	.031	5°	PCD			++			++	++		+		
	CCMW-120408FN-FK10CBN	**10.938.862**	.031	0°	CBN-10	++	+					++		+		

Torx Plus T20 IP M5x13.3 10.694.150

Torx Plus T20 IP 10.694.194

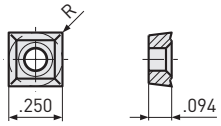
• PCD/CBN inserts are sold individually

SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

INSERTS FOR ROUGH BORING HEADS

Insert						Workpiece Material								Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Coating	Construction Steels	Heat Treatable Steels	Stainless Steels	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC



SPMT 0602 — **CHIP-BREAKERS PRESSED & POLISHED**

	SPMT-060204FN-RP20C	**10.654.150**	.016	15°	Al_2O_3-TiN	++	++	++	+	+		+	+	+			+	
	SPMT-060204FN-RK20H	**10.654.158**	.016	15°	—				+								++	
	SPMT-060204FN-RK20C	**10.654.152**	.016	15°	Al_2O_3-TiN				++	++		+	+	+			+	

SPMT 0602 — **CHIP-BREAKERS GROUND**

	SPMT-060204FL-MK10H	**10.654.168**	.016	23°	—						++		+	+			+	

Torx Plus T7 IP M2.5x6.5 10.694.122

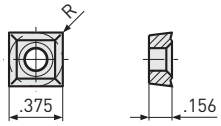
Torx Plus T7 IP 10.694.189

SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

INSERTS FOR ROUGH BORING HEADS

Insert						Workpiece Material								Machining				
Insert Shape	Reference Number	Catalog Number	Radius	Rake Angle γ	Coating	Construction Steels	Heat Treatable Steels	Stainless Steels	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC



SCMT 09T3

CHIP-BREAKERS PRESSED

	SCMT-09T304FN-MK30H	**11.654.249**	.016	15°	—				+	+			+				+	
	—	**SCMT09T308-C2P**	.031	15°	—				+	+			+				+	
	—	**SCMT09T304-TNP11**	.016	15°	Al_2O_3-TiN	+	++	+	++	++		+		+	+	+		
	SCMT-09T308FN-RP20C	**11.654.250**	.031	15°	Al_2O_3-TiN	+	++	+	++	++		+		+		+		
	SCMT-09T304FN-RP30C	**11.654.247**	.016	15°	Al_2O_3-TiN	++	+	++	+	+		+	+	++		++	++	
	—	**SCMT09T308-TNP12**	.031	15°	Al_2O_3-TiN	++	+	++	+	+		+	+	++		++	++	

SCMT 09T3

CHIP-BREAKERS GROUND

	SCMT-09T304FL-MK10H	**10.654.277**	.016	23°	—						++			+	+	+		
	SCMT-09T308FL-MK10H	**10.654.287**	.031	23°	—						++			+			+	

 Torx Plus T15 IP M4x9.2 10.694.141

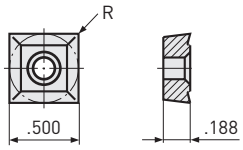
Torx Plus T15 IP 10.694.193

SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

INSERTS FOR ROUGH BORING HEADS

Insert								Workpiece Material								Machining				
Insert Shape	Reference Number	Catalog Number	Radius			Rake Angle γ	Coating	Construction Steels	Heat Treatable Steels	Stainless Steels	Cast Iron GG	Cast Iron GGG	AL/Non-Ferrous Metals	Hardened Steel ≤ 56 HRC	NiCo Alloys/Titanium	High Volume Machining	Unfavorable Conditions	Slightly Interrupted Cut	Heavily Interrupted Cut	HSC



SCMT 1204 — **CHIP-BREAKERS PRESSED & POLISHED**

	SCMT-120404FN-RP20C	**11.654.340**	.016	FN	15°	P20	Al_2O_3-TiN	+	++	+	++	++		+			+	+		
	—	**SCMM120408-TNP11**	.031	FN	15°	P20	Al_2O_3-TiN	+	++	+	++	++		+		+			+	
	SCMT-120412FN-RP20C	**11.654.360**	.047	FN	15°	P20	Al_2O_3-TiN	+	++	+	++	++		+		+			+	
	—	**SCMM120408-TNP12**	.031	FN	15°	P30	Al_2O_3-TiN	++	+	++		+			+			++	++	
	—	**SCMM120408-C2P**	.031	FN	15°	K20	—				+	+		+	+	+		++	++	

SCMT 1204 — **CHIP-BREAKERS GROUND**

	SCMT-120408FL-MK10H	**10.654.387**	.031	FL	23°	K10	—						++			+			+	

Torx Plus T20 IP M4 x 11.6 10.694.142
For insert holder RW53

Torx Plus T20 IP M4x15 10.694.144
For insert holder RW 68/RW100

Torx Plus T20 IP M5 x 13.3 10.694.150
For insert holder «TW» and «SW»

γ Rake angle with insert on tool
Clamping screw (10 screws and 1 wrench)
Inserts are sold in packages of 10 pieces

Torx Plus T20 IP 10.694.194

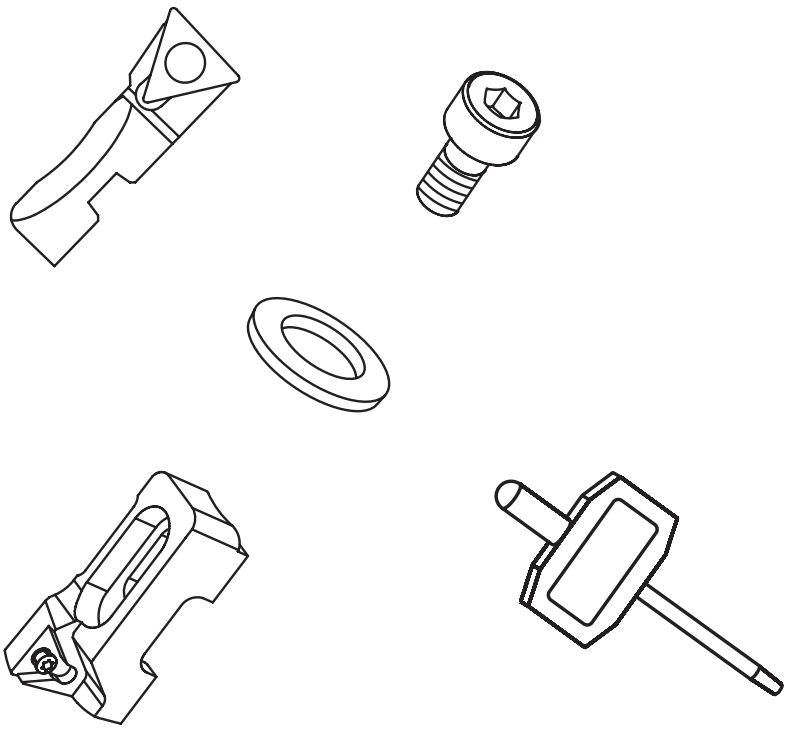
SYMBOLS

	= Less Suitable
+	= Suitable
++	= First Choice

KAISER
RC 2444
SWISS MADE
SW32xCK3B
RSS
DVS
ø30
ø40

BORING TOOLS SPARE PARTS

B.6

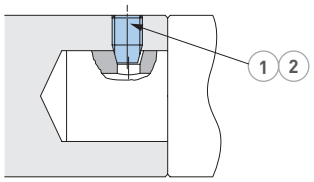


BORING TOOLS SPARE PARTS 538-560

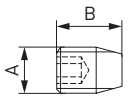
MODULAR COMPONENTS SHANKS SPARE PARTS 538-540
INDEXABLE INSERT DRILLS 541
ROUGH BORING HEADS SPARE PARTS 541-546
FINE BORING HEADS SPARE PARTS 547-551
LARGE DIAMETER SPARE PARTS 552-555
FACE GROOVING, MILLING, CHAMFERING, OD TURNING SPARE PARTS 556-557
TOOL HOLDERS SPARE PARTS 558
SCREWS AND WRENCHES 559-560

CKB CONNECTION

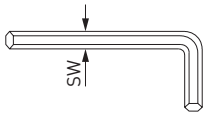
CK- SCREWS AND ALLEN WRENCHES



Clamping Screw



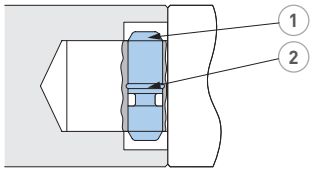
Allen Wrench



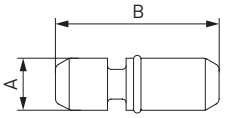
CK	A	B	①	ft-lbs*	CK	SW (Hex Size)	②
CK1	M4 x .5	.197	**10.690.431**	1.1	CK1	2	**10.690.801**
CK2	M5 x .5	.256	**10.690.432**	2.2	CK2	2.5	**10.690.802**
CK3	M6 x .75	.335	**10.690.433**	3.3	CK3	3	**10.690.803**
CK4	M8 x .75	.433	**10.690.434**	5.2	CK4	4	**10.690.804**
CK5	M10 x 1	.551	**10.690.435**	10.3	CK5	5	**10.690.805**
CK5	M10 x 1	.472	**10.690.594****	10.3	CK5	5	**10.690.805**
CK6	M12 x 1	.709	**10.690.436**	17.7	CK6	6	**10.690.806**
CK7	M20 x 1.5	1.142	**10.690.437**	33.2	CK7	10	**10.690.808**

***Recommended torque for tightening the screws**
****Shanks 10.326.005 / 10.329.866**

CROSS BOLTS AND LOCKING RINGS



Cross Bolts



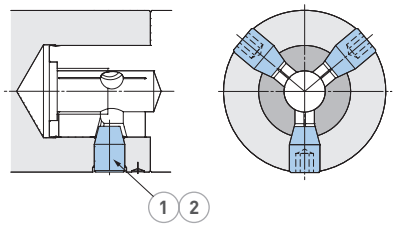
O-Ring

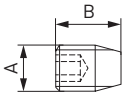
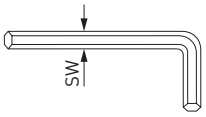
Snap Ring

CKB	A	B	①	②	②
CKB1	.157	.531	**10.691.501**	**10.692.270**	—
CKB2	.197	.669	**10.691.502**	**10.692.271**	—
CKB3	.276	.866	**10.691.503**	**10.692.272**	—
CKB4	.335	1.043	**10.691.504**	**10.692.286**	—
CKB5	.433	1.299	**10.691.505**	—	**10.693.304**
CKB6	.551	1.693	**10.691.506**	—	**10.693.305**
CKB7	.709	2.205	**10.691.507**	—	**10.693.306**

CKN CONNECTION

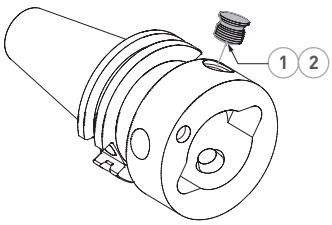
CK- SCREWS AND ALLEN WRENCHES

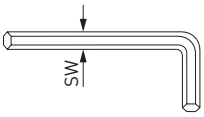


	Clamping Screws				Allen Wrenches	
						
CKN	A	B	①	ft-lbs*	SW (Hex Size)	②
CKN6	M12 x 1	.709	**10.690.436**	17.7	6	**10.690.806**
CKN7	M20 x 1.5	1.142	**10.690.437**	33.2	10	**10.690.808**

***Recommended torque for tightening the screws**

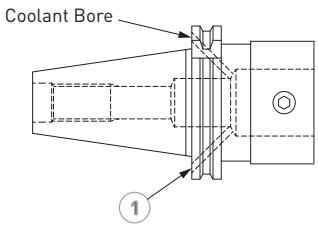
BLIND SCREWS



Blind Screws		Allen Wrenches	
			
CKN	①	SW (Hex Size)	②
CKN6	**10.690.666**	6	**10.690.806**
CKN7	**10.690.667**	10	**10.690.810**

SHANKS

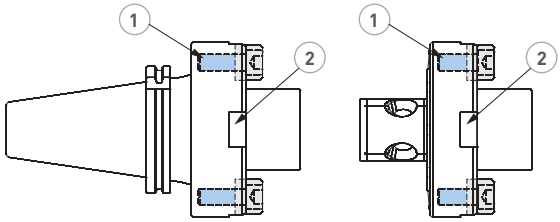
Set screws for coolant bores



ISO	①	Remarks
30	**10.690.451**	—
40	**10.690.451**	—
	10.690.576	Only for shanks 10.323.826, 10.326.041
	10.690.419	Only for shank 10.326.163
50	**10.690.576**	—

SHANKS AND TOOL HOLDERS FOR BRIDGE TOOLS, SERIES 318

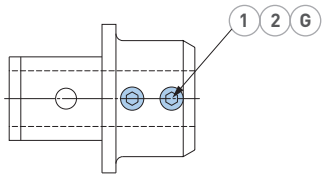
Ø24.41"-118.11" (Ø620-3000mm)



Type	①	②
10.328.215	**10.690.131**	**10.691.637**
10.328.213	**10.690.131**	
10.328.214	**10.690.131**	
10.328.217N	**10.690.172**	

TOOL HOLDERS AND SHANKS FOR CARBIDE BORING BARS

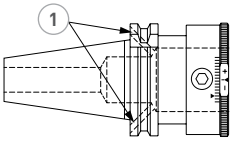
Clamp screws and allen wrenches for tool holders with CK connection



Type	①	ft-lbs*	G	②
10.335.301	**10.690.460**	5.9	M8	**10.690.804**
10.335.302	**10.690.452**	11.1	M10	**10.690.805**
10.335.312	**10.690.469**	11.1	M10	**10.690.805**
10.335.313	**10.690.484**	55.3	M20	**10.690.810**

ADJUSTABLE DRILL HOLDER

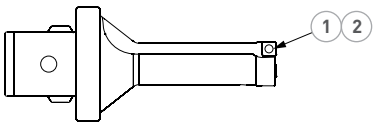
Set screws for coolant bores



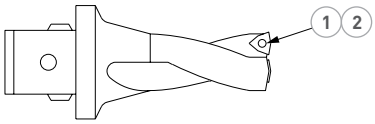
Type	①
10.336.301	**10.690.451**
10.336.302	**10.690.419**
10.336.303	**10.690.419**
10.336.304	**10.690.573**

INDEXABLE INSERT DRILLS, SERIES 336/337

Clamp screws for inserts



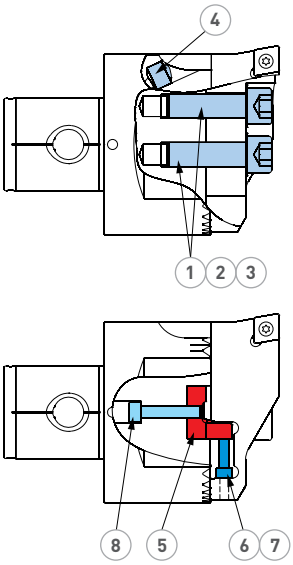
Type	① **	ft-lbs*	②
WP 337-1	**10.694.123**	.5	**10.694.807**
WP 337-2	**10.694.130**	.5	**10.694.807**
WP 337-3	**10.694.136**	1.3	**10.694.810**



Type	① **	ft-lbs*	②
WC 03	**10.694.110**	.5	**10.694.807**
WC 04	**10.694.124**	.5	**10.694.807**
WC 05	**10.694.131**	.4	**10.694.809**
WC 06	**10.694.137**	1.3	**10.694.810**
WC 08	**10.694.143**	2.2	**10.694.815**
WC 10	**10.694.150**	4.4	**10.694.820**

***Recommended torque for tightening the screws**
****Per package: 10 screws and 1 wrench**

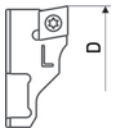
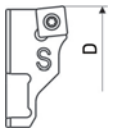
BORING HEADS FOR ROUGHING SW, SERIES 319



Type	①	②	ft-lbs*	③	④	⑤	⑥	⑦	⑧
SW20	**10.690.188**	**10.693.175**	3.0	**10.690.803**	—	**10.319.150**	**10.690.191**	**10.690.819**	**10.690.184**
SW25	**10.690.157**	**10.693.176**	5.2	**10.690.804**	—	**10.319.250**	**10.690.192**	**10.690.819**	**10.690.186**
SW32	**10.690.108**	**10.693.177**	8.9	**10.690.805**	—	**10.319.350**	**10.690.193**	**10.690.811**	**10.690.189**
SW41	**10.690.163**	**10.693.178**	14.8	**10.690.806**	—	**10.319.450**	**10.690.194**	**10.690.812**	**10.690.189**
SW53	**10.690.105**	**10.693.179**	25.8	**10.690.807**	**10.692.409**	**10.319.550**	**10.690.195**	**10.690.812**	**10.690.189**
SW68	**10.690.106**	**10.693.179**	25.8	**10.690.807**	**10.692.406**	**10.319.650**	**10.690.196**	**10.690.813**	**10.690.101**
SW98 x CKB6	**10.690.970**	**10.693.187**	29.5	**10.690.810**	**10.692.406**	**10.319.750**	**10.690.197**	**10.690.814**	**10.690.108**
SW98 x CKB7	**10.690.970**	**10.693.187**	29.5	**10.690.810**	**10.692.406**	**10.319.750**	**10.690.197**	**10.690.814**	**10.690.173**
SW148 x CKB6	**10.690.970**	**10.693.187**	29.5	**10.690.810**	**10.692.406**	**10.319.750**	**10.690.197**	**10.690.814**	**10.690.108**
SW148 x CK7	**10.690.970**	**10.693.187**	29.5	**10.690.810**	**10.692.406**	**10.319.750**	**10.690.197**	**10.690.814**	**10.690.173**

***Recommended torque for tightening the screws**

INSERT HOLDERS SW

	Type CC			Type SC/SP			Type WC		
Type	D			D			D		
PREFERENTIAL LINE									
SW20	.787-1.024	**10.639.411**	**10.639.412**	.787-1.024	**10.639.111**	**10.639.112**	—	—	—
	.984-1.220	**10.639.415**	**10.639.416**	—	—	—	—	—	—
SW25	.984-1.299	**10.639.421**	**10.639.422**	.984-1.299	**10.639.121**	**10.639.122**	—	—	—
	1.260-1.575	**10.639.425**	**10.639.426**	—	—	—	—	—	—
SW32	1.260-1.654	**10.639.431**	**10.639.432**	1.260-1.654	**10.639.131**	**10.639.132**	—	—	—
	1.614-2.008	**10.639.435**	**10.639.436**	1.614-2.008	**10.639.135**	**10.639.136**	—	—	—
SW41	1.614-2.126	**10.639.441**	**10.639.442**	1.614-2.126	**10.639.141**	**10.639.142**	1.929-2.441	**10.639.241**	**10.639.242**
	2.087-2.598	**10.639.445**	**10.639.446**	2.087-2.598	**10.639.145**	**10.639.146**	—	—	—
SW53	2.087-2.756	**10.639.451**	**10.639.452**	2.087-2.756	**10.639.151**	**10.639.152**	2.323-2.992	**10.639.251**	**10.639.252**
	2.717-3.386	**10.639.455**	**10.639.456**	2.717-3.386	**10.639.155**	**10.639.156**	2.717-3.386	**10.639.255**	**10.639.252**
SW68	2.677-3.543	**10.639.461**	**10.639.462**	2.677-3.543	**10.639.161**	**10.639.162**	2.874-3.740	**10.639.261**	**10.639.262**
	3.464-4.331	**10.639.465**	**10.639.466**	3.464-4.331	**10.639.165**	**10.639.166**	3.543-4.409	**10.639.265**	**10.639.266**
SW98	3.858-4.961	**10.639.471**	**10.639.472**	3.858-4.961	**10.639.171**	**10.639.172**	4.173-5.276	**10.639.271**	**10.639.272**
	4.921-6.024	**10.639.475**	**10.639.476**	4.921-6.024	**10.639.175**	**10.639.176**	5.157-6.260	**10.639.275**	**10.639.276**
SW148	5.827-6.929	**10.639.481**	**10.639.482**	5.827-6.929	**10.639.181**	**10.639.182**	6.142-7.244	**10.639.281**	**10.639.282**
	6.890-7.992	**10.639.485**	**10.639.486**	6.890-7.992	**10.639.185**	**10.639.186**	7.126-8.228	**10.639.285**	**10.639.286**

ADDITIONAL LINE

SW68	2.677-3.543	**10.639.561**	**10.639.562**
	3.464-4.331	**10.639.565**	**10.639.566**
SW98	3.858-4.961	**10.639.571**	**10.639.572**
	4.921-6.024	**10.639.575**	**10.639.576**
SW148	5.827-6.929	**10.639.581**	**10.639.582**
	6.890-7.992	**10.639.585**	**10.639.586**

CLAMP SCREWS FOR INSERTS

Type	**	ft-lbs*	
CC 06	**10.694.122**	.5	**10.694.807**
CC 09	**10.694.141**	2.2	**10.694.815**
CC 12	**10.694.150**	4.4	**10.694.820**
CC 16	**10.694.150**	4.4	**10.694.820**

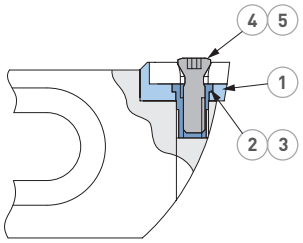
Type	**	ft-lbs*	
SP 06	**10.694.122**	.5	**10.694.807**
SC 09	**10.694.141**	2.2	**10.694.815**
SC 12	**10.694.150**	4.4	**10.694.820**

Type	**	ft-lbs*	
WC 04	**10.694.124**	.5	**10.694.807**
WC 05	**10.694.131**	1.1	**10.694.809**
WC 06	**10.694.137**	1.1	**10.694.810**

***Recommended torque for tightening the screws**
****Per package: 10 screws and 1 wrench**

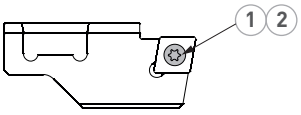
CLAMP SCREWS FOR INSERTS

SW, FOR CHAMFERING



Type	①	②	③		④ **	ft-lbs*	⑤
10.639.191	10.695.101	10.691.756	10.690.899	SC 09	10.694.138	2.2	10.694.815
10.639.192	10.695.101	10.691.756	10.690.899		10.694.138		10.694.815
10.639.193	10.695.101	10.691.755	10.690.899		10.694.138		10.694.815
10.639.194	10.695.102	10.691.757	10.690.804	SC 12	10.694.145	2.2	10.694.815
10.639.195	10.695.102	10.691.757	10.690.804		10.694.145		10.694.815
10.639.196	10.695.102	10.691.757	10.690.804		10.694.145		10.694.815
10.639.197	10.695.102	10.691.757	10.690.804		10.694.145		10.694.815

SW, BACK BORING



Type	① **	ft-lbs*	②
10.639.490	10.694.141	2.2	10.694.815
10.639.491	10.694.141		10.694.815
10.639.492	10.694.150	2.2	10.694.820
10.639.493	10.694.150		10.694.820

Type	① **	ft-lbs*	②
10.639.494	10.694.150	2.2	10.694.820
10.639.495	10.694.150		10.694.820
10.639.496	10.694.150		10.694.820
10.639.497	10.694.150		10.694.820

***Recommended torque for tightening the screws**
****Per package: 10 screws and 1 wrench**

INSERT HOLDERS

Fig. 1

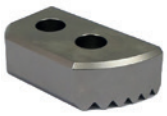


Fig. 2

FOR CHAMFERING

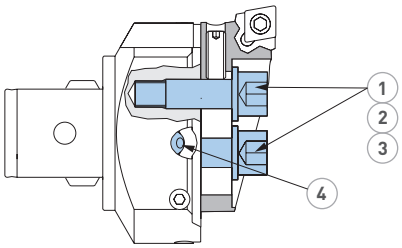
Catalog Number	Fig. 1	Catalog Number	Fig. 2		Diameter Range					
					15º Min-Max	30º Min-Max	45º Min-Max	60º Min-Max	75º Min-Max	L ***
CHF-SW41SC09	10.639.191	DP-SW41	10.639.914	SC 09	1.299-2.362	1.417-2.441	1.535-2.480	1.693-2.480	1.772-2.441	2.009
CHF-SW53SC09	10.639.192	DP-SW53	10.639.915		1.772-2.992	1.890-3.071	2.008-3.110	2.165-3.071	2.244-3.071	2.283
CHF-SW68SC09	10.639.193	DP-SW68	10.639.916		2.402-3.819	2.520-3.898	2.638-3.937	2.795-3.937	2.874-3.898	2.677
CHF1-SW98SC12	10.639.194	DP-SW98	10.639.917	SC 12	3.032-4.961	3.189-5.040	3.386-5.079	3.543-5.039	3.701-5.000	2.874/3.504 4.685
CHF2-SW98SC12	10.639.195				4.094-6.024	4.252-6.102	4.449-6.142	4.606-6.102	4.764-6.063	
CHF1-SW148SC12	10.639.196	DP-SW148	10.639.918		5.157-7.087	5.315-7.165	5.512-7.205	5.670-7.165	5.827-7.126	2.874/4.685
CHF2-SW148SC12	10.639.197				6.220-8.150	6.378-8.228	6.575-8.268	6.732-8.229	6.890-8.190	

***Adjustment RSS**

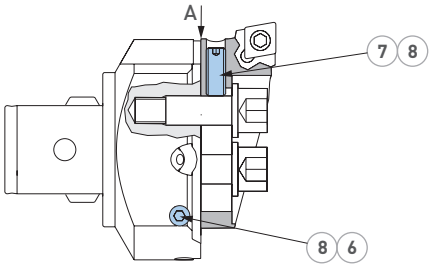
SW FOR BACK BORING

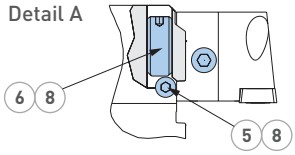
Catalog Number	Fig. 1	Catalog Number	Fig. 2		ØD	A	B	L_1	L_2
BB44-54SW32CC09	10.639.490	DP-SW32	10.639.913	CC 09	1.732-2.126	1.220	D-.669/Min 1.220	.945	1.496
BB53-66SW41CC09	10.639.491	DP-SW41	10.639.914		2.087-2.598	1.535	D-.827/Min 1.535	1.142	1.732
BB65-82SW53CC12	10.639.492	DP-SW53	10.639.915	CC 12	2.560-3.228	1.969	D-1.102/Min 1.969	1.339	2.165
BB81-103SW68CC12	10.639.493	DP-SW68	10.639.916		3.189-4.055	2.500	D-1.063/Min 2.500	1.614	2.598
BB102-130SW98CC12	10.639.494	DP-SW98	10.639.917		4.016-5.118	3.543	3.543	1.496	2.717/3.071 7.087
BB129-157SW98CC12	10.639.495				5.079-6.181				
BB156-184SW148CC12	10.639.496	DP-SW148	10.639.918		6.142-7.244	5.512	5.512	1.496	2.717/7.087
BB183-211SW148CC12	10.639.497				7.205-8.307				

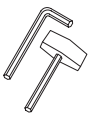
BORING HEADS FOR ROUGHING TW, SERIES 315



Type	①	②	ft-lbs*	③	④
TW20	**10.315.160**	**10.693.180**	3.0	**10.690.803**	
TW25	**10.315.250**	**10.693.181**	5.2	**10.690.804**	
TW32	**10.315.350**	**10.693.182**	8.9	**10.690.805**	
TW41	**10.315.450**	**10.693.183**	14.8	**10.690.806**	
TW53	**10.315.550**	**10.693.184**	25.8	**10.690.807**	**10.692.409**
TW68	**10.315.650**	**10.693.184**	25.8	**10.690.807**	**10.692.406**
TW98	**10.315.750**	**10.693.185**	29.5	**10.690.810**	**10.692.406**
TW148	**10.315.750**	**10.693.185**	29.5	**10.690.810**	**10.692.406**





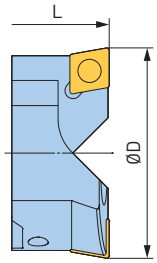
						
Type	⑤	⑥	ft-lbs*	⑦	ft-lbs*	⑧
TW20	**10.315.161**	**10.690.529**	.2	**10.690.900**	.2	**10.690.800**
TW25	**10.315.251**	**10.690.538**	.2	**10.690.901**	.2	**10.690.800**
TW32	**10.315.351**	**10.690.451**	.6	**10.690.902**	.6	**10.690.811**
TW41	**10.315.451**	**10.690.541**	1.1	**10.690.903**	1.1	**10.690.812**
TW53	**10.315.551**	**10.690.583**	1.8	**10.690.904**	1.8	**10.690.813**
TW68	**10.315.651**	**10.690.586**	1.8	**10.690.906**	1.8	**10.690.813**
TW98	**10.315.751**	**10.690.585**	1.8	**10.690.908**	1.8	**10.690.814**
TW148	**10.315.751**	**10.690.585**	1.8	**10.690.908**	1.8	**10.690.814**

***Recommended torque for tightening the screws**

- Item 5 and 6 are for TWV head types

INSERT HOLDERS TW

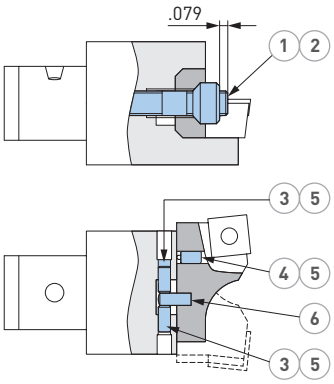
TYPE CC FOR RSS

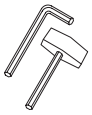
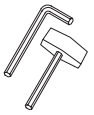


Insert Holder Type	ØD	L	Catalog Number	
TW68	2.677-3.543	2.795	**10.638.561**	CC 16
	3.465-4.331	2.795	**10.638.562**	
TW98	3.858-4.961	2.795	**10.638.571**	
	4.921-6.024	2.795	**10.638.572**	
TW98	3.859- 4.961	3.425	**10.638.571**	
	4.921-6.024	3.425	**10.638.572**	
TW98 L	3.858-4.961	4.606	**10.638.571**	
	4.921-6.024	4.606	**10.638.572**	
TW148	5.827-6.929	2.795	**10.638.571**	
	6.890-7.992	2.795	**10.638.572**	
TW148	5.827-6.929	4.606	**10.638.571**	
	6.890-7.992	4.606	**10.638.572**	

- The insert holders are sold in pairs

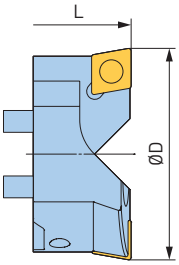
BORING HEADS FOR ROUGHING RW, SERIES 314



								
Type	①	ft-lbs*	②	③	ft-lbs*	④	⑤	⑥
RW25	**10.690.603**	1.5	**10.690.811**	**10.690.467**	.1	**10.690.467**	**10.690.833**	**10.691.371**
RW32	**10.690.604**	2.6	**10.690.812**	**10.690.462**	.2	**10.690.462**	**10.690.800**	**10.691.370**
RW41	**10.690.605**	7.4	**10.690.814**	**10.690.425**	.6	**10.690.425**	**10.690.811**	**10.691.369**
RW53	**10.690.606**	13.3	**10.690.805**	**10.690.464**	1.1	**10.690.466**	**10.690.812**	**10.691.372**
RW68	**10.690.607**	18.4	**10.690.806**	**10.690.464**	1.5	**10.690.466**	**10.690.812**	**10.691.372**
RW100	**10.690.607**	18.4	**10.690.806**	**10.690.465**	1.5	**10.690.466**	**10.690.812**	**10.691.372**

INSERT HOLDERS RW

TYPE CC



Insert Holder Type	ØD	Catalog Number
PREFERENTIAL LINE		
RW25	.984-1.299	**10.637.421 *** **
	1.181-1.457	**10.637.422 *** **
RW32	1.260-1.654	**10.637.431 *** **
	1.575-1.890	**10.637.432 *** **
RW41	1.614-2.126	**10.637.441 *** **
	2.008-2.441	**10.637.442 *** **
RW53	2.086-2.756	**10.637.451 *** **
	2.598-3.190	**10.637.452 *** **
RW68	2.678-3.465	**10.637.461 *** **
	3.386-4.173	**10.637.462 *** **
RW100	3.937-4.921	**10.637.463 *** **
	4.921-5.906	**10.637.464 *** **
ADDITIONAL LINE		
RW68	2.678-3.465	**10.637.561 *** **
	3.386-4.173	**10.637.562 *** **
RW100	3.937-4.921	**10.637.563 *** **
	4.921-5.906	**10.637.564 *** **

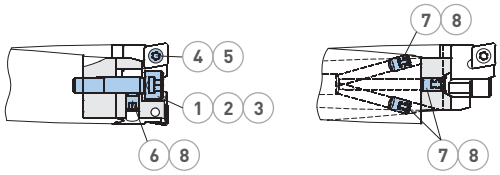
- The insert holders are sold in pairs

CLAMP SCREWS FOR INSERTS

Type	**	ft-lbs*	
CC 06	**10.694.122**	.5	**10.694.807**
CC 09	**10.694.141**	2.2	**10.694.815**
CC 12	**10.694.150**	4.4	**10.694.820**
CC 16	**10.694.150**	4.4	**10.694.820**

***Recommended torque for tightening the screws**
****Per package: 10 screws and 1 wrench**
***** As long as stock lasts**

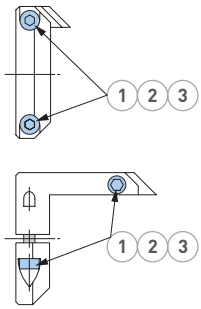
ROUGH BORING HEADS MW



Type	①	②	ft-lbs*	③	④ **	ft-lbs*	⑤	⑥ **	⑦ **	⑧
MW1619	**MW16SS**	**MW16BS**	.7	**10.690.802**	**S1.6S-T6**	2.2	**10.694.806**	**H02503-5P**	**10.690.668**	**10.690.833**
MW1821	**MW16SS**	**MW16BS**	.7	**10.680.802**	**S1.6S-T6**	2.2	**10.694.806**	**H02504-5P**	**10.690.668**	**10.690.833**

***Recommended torque for tightening the screws**
****Per package: 10 screws and 1 wrench**

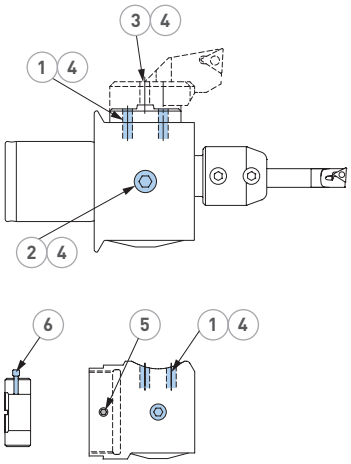
CLAMP SCREWS FOR CHAMFERING RINGS



Type	①	②	ft-lbs*	③
20	**10.690.101**	**10.693.175**	3.0	**10.690.803**
25	**10.690.102**	**10.693.176**	5.2	**10.690.804**
32	**10.690.103**	**10.693.176**	5.2	**10.690.804**
41	**10.690.104**	**10.693.176**	5.2	**10.690.804**
53	**10.690.105**	**10.693.131**	18.4	**10.690.807**
68	**10.690.106**	**10.693.131**	18.4	**10.690.807**
90	**10.690.106**	**10.693.131**	18.4	**10.690.807**

***Recommended torque for tightening the screws**

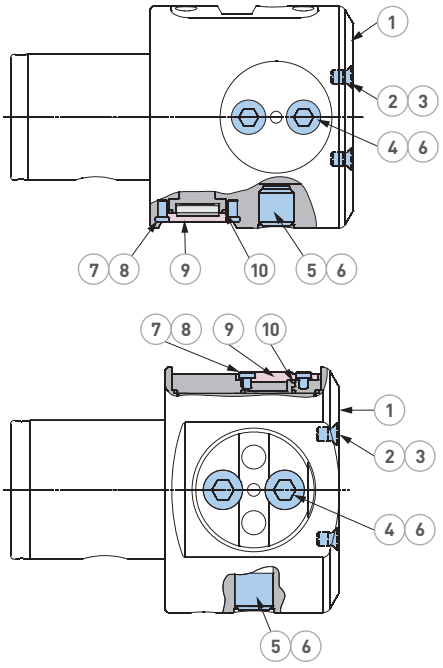
FINE BORING HEADS EWN, SERIES 112



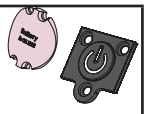
Type	①	ft-lbs*	②	ft-lbs*	③	ft-lbs*	④
EWN 04-7	**10.690.538**	.5	**10.690.978**	.5	—	—	**10.690.800**
EWN 04-12	**10.690.417**	.9	**10.690.417**	.9	—	—	**10.690.811**
EWN 04-15	**10.690.440**	1.1	**10.690.418**	1.1	—	—	**10.690.812**
EWN 04-22	**10.690.421**	1.8	**10.690.489**	1.8	—	—	**10.690.813**
EWN 2-32	**10.690.460**	3.7	**10.690.449**	3.7	—	—	**10.690.814**
EWN 2-152	**10.690.595**	7.4	**10.690.452**	7.4	**10.690.156**	8.9	**10.690.816**

Type	⑤	Type	⑥
EWN 04-22 x ES	**10.690.417**	**10.112.271**	**10.195.003**
		10.112.272	**10.195.001**
EWN 2-32 x ES	**10.690.582**	**10.112.353**	**10.195.001**
		10.112.385	**10.195.007**

FINE BORING HEADS EWD/EWE, SERIES 112

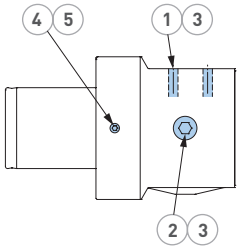


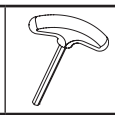
Type	①	②	③	④	ft-lbs	⑤	ft-lbs
EWD 2-54	**10.195.081**[1]	**10.690.981**[1]	**10.690.843**	**10.690.457**	7.4	**10.690.469**[1]	7.4
	10.195.127[2]	**10.690.614**[2]				**10.690.995**[2]	
EWD 2-32	**10.112.371**	**10.690.611**	**10.690.836**	**10.690.460**	3.7	**10.690.996**	3.7
EWE 2-152	**10.112.804**	**10.690.614**	**10.690.843**	**10.690.457**	7.4	**10.690.995**	7.4
EWE 2-32	**10.112.371**	**10.690.611**	**10.690.836**	**10.690.460**	3.7	**10.690.996**	3.7

						
Type	⑥	⑦	ft-lbs	⑧	⑨	⑩
EWD 2-54	**10.690.816**	**10.690.320**[1]	3.0	**10.690.843**	**10.112.080**[1]	**10.692.296**[1]
		10.690.994[2]	.7	**10.694.808**	**10.310.905**[2]	**10.692.381**[2]
EWD 2-32	**10.690.814**	**10.690.994**	.7	**10.694.808**	**10.310.905**	**10.692.381**
EWE 2-152	**10.690.816**	**10.690.326**	.7	**10.694.808**	**10.395.170**	**10.395.161**
EWE 2-32	**10.690.814**	**10.690.326**	.7	**10.694.808**	**10.395.170**	**10.395.161**

- [1]Spare parts for boring heads with catalog number **10.112.109A**
- [2]Spare parts for boring heads with catalog number **10.112.109B**

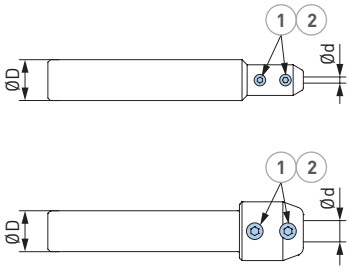
FINE BORING HEADS EWB, SERIES 112



								
Type	①	ft-lbs*	②	ft-lbs*	③	④	ft-lbs*	⑤
EWB 2-32	**10.690.460**	3.0	**10.690.449**	3.0	**10.690.814**	**10.112.381**	.4	**10.690.811**
EWB 2-50	**10.690.457**	6.0	**10.690.452**	6.0	**10.690.816**	**10.690.208**	1.1	**10.690.812**

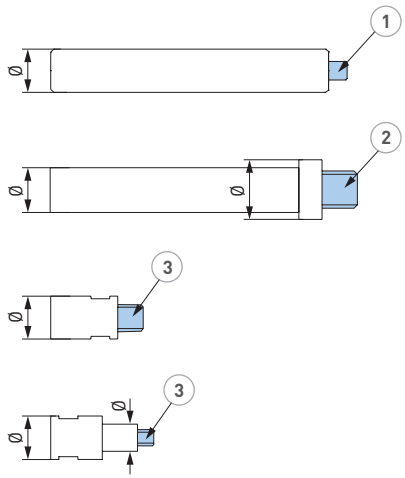
***Recommended torque for tightening the screws**

REDUCERS, SERIES 112



Type	Type			
ØD-d	ØD-d	①	ft-lbs*	②
.472-.138	.630-.138	**10.690.459**	.4	**10.690.801**
.472-.157	.630-.157			
.472-.177	.630-.177			
.472-.197	.630-.197			
.472-.236	.630-.236			
—	.630-.276	**10.690.489**	1.8	**10.690.803**
—	.630-.315			
—	.630-.354			
—	.630-.394			

TOOL HOLDERS, SERIES 112



Ø	Type	G	①
.315	**10.615.088**	M5	**10.690.486**
	10.615.211		**10.690.486**
	10.615.212		**10.690.486**
	10.615.222		**10.690.486**
.394	**10.615.089**	M6	**10.690.487A**
	10.615.214		**10.690.487A**
	10.615.215		**10.690.487A**
	10.615.223		**10.690.487A**

Ø	Type	G	①
.433	**10.615.250**	M6	**10.690.487A**
.472	**10.615.218**	M6	**10.690.487A**
	10.615.219		**10.690.487A**
	10.615.224		**10.690.487A**
	10.615.225		**10.690.487A**
.512	**10.615.251**	M6	**10.690.487A**
.552	**10.615.232**	M6	**10.690.487A**
.630	**10.615.226**	M10	**10.690.488**

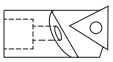
Type	Ø	G	②
10.615.216	.394/.472	M6	**10.690.487A**
10.615.239	.472/.630	M10	**10.690.488**
10.615.240	.472/.630	M10	**10.690.488**
10.615.243	.472/.630	M10	**10.690.488**

Type	Ø	G	③
615.220	.472	M6	**10.690.487A**
615.230	.630/.394	M6	**10.690.487A**
615.231	.630/.472	M6	**10.690.487A**

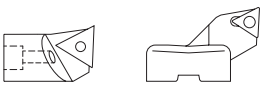
• Screws glued in with Locite 270 or Ergo 4101

CLAMP SCREWS FOR INSERTS, SERIES 112

Type	**	ft-lbs*	
WC 02	**10.694.101**	.4	**10.694.806**



Type	**	ft-lbs*	
TP 07	**10.694.102**[1]	.4	**10.694.806**
TP 07	**10.694.103**	.4	**10.694.806**

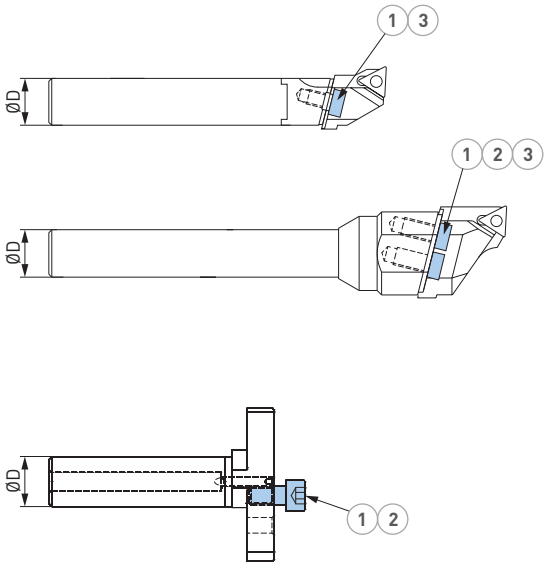


Type	**	ft-lbs*	
TC 11	**10.694.122**	.5	**10.694.807**

Type	**	ft-lbs*	
CC 06	**10.694.122**	.5	**10.694.807**
CC 09	**10.694.141**	2.2	**10.694.815**

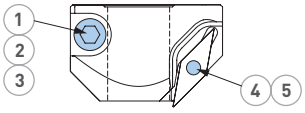
***Recommended torque for tightening the screws**
****Per package: 10 screws and 1 wrench**
• [1] For insert holder 10.615.086/10.615.207/10.615.087/10.615.205/10.615.271/10.615.507/10.615.508

ADJUSTABLE TOOL HOLDER, SERIES 112



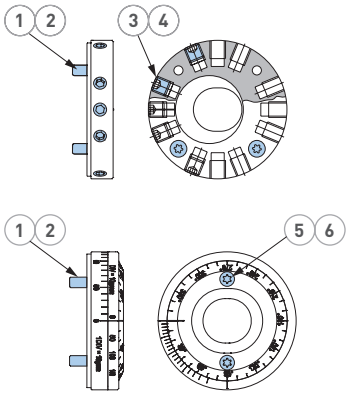
ØD	Type	①	②	ft-lbs*	③
.354	**10.615.369**	**10.690.323**	—	.7	**10.690.837**
	10.615.374	**10.690.323**	—	.7	**10.690.837**
.433	**10.615.371**	**10.690.324**	—	1.5	**10.690.838**
	10.615.375	**10.690.324**	—	1.5	**10.690.838**
	10.615.376	**10.690.324**	—	1.5	**10.690.838**
.512	**10.615.373**	**10.690.183**	—	3.0	**10.690.803**
	10.615.377	**10.690.183**	—	3.0	**10.690.803**
	10.615.378	**10.690.183**	—	3.0	**10.690.803**
.630	**10.615.252**	**10.690.113**	—	7.4	**10.690.804**
	10.615.253	**10.690.113**	—	7.4	**10.690.804**
	10.615.262	**10.690.113**	—	7.4	**10.690.804**
	10.615.265	**10.690.113**	—	7.4	**10.690.804**
	10.615.266	**10.690.113**	—	7.4	**10.690.804**
.630	**10.615.257**	**10.690.150**	**10.615.904**	12.5	**10.690.805**
	10.615.258	**10.690.150**	**10.615.904**	12.5	**10.690.805**
	10.615.264	**10.690.150**	**10.615.904**	12.5	**10.690.805**
	10.615.267	**10.690.150**	**10.615.904**	12.5	**10.690.805**
.630	**10.615.387B**	**10.690.107**	**10.693.182**	12.5	**10.690.805**

CHAMFERING RINGS, SERIES 112



Type	①	②	ft-lbs*	③		④	ft-lbs*	⑤
10.615.394	**10.690.157**	**10.693.181**	7.4	**10.690.814**	VC 11	**10.694.125**	.6	**10.694.808**
10.615.395								

BALANCING RINGS, SERIES 112

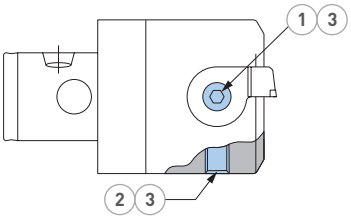


Type	①	②	③ **	④	⑤	⑥
10.112.387	**10.690.611**	**10.690.836**	**10.690.541**	**10.690.812**	—	—
10.112.805	**10.690.614**	**10.690.843**	**10.690.964**	**10.690.813**	—	—
10.112.806	**10.690.614**	**10.690.843**	—	—	**10.694.141**	**10.690.965**

****Per package: 10 screws and 1 wrench**

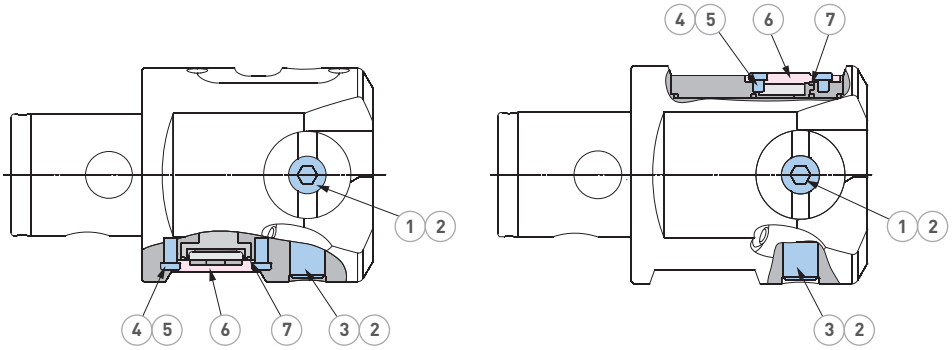
***Recommended torque for tightening the screws**

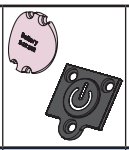
FINE BORING HEADS EWN, SERIES 310



Type	①	ft-lbs*	②	ft-lbs*	③
EWN 20	**10.690.135**	.7	**10.690.410**	.4	**10.690.811**
EWN 25	**10.690.136**	.7	**10.690.549**	.4	**10.690.811**
EWN 32	**10.690.137**	1.8	**10.690.550**	1.1	**10.690.812**
EWN 41	**10.690.138**	2.2	**10.690.551**	1.8	**10.690.813**
EWN 53	**10.690.139**	4.4	**10.690.552**	4.4	**10.690.814**
EWN 68	**10.690.141**	8.9	**10.690.553**	7.4	**10.690.816**
EWN 100	**10.690.141**	8.9	**10.690.553**	7.4	**10.690.816**

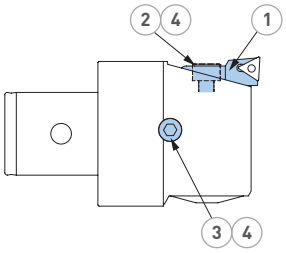
FINE BORING HEADS EWD/EWE, SERIES 310/318/BIG CAPTO



										
Type	①	ft-lbs*	③	ft-lbs*	②	④	ft-lbs*	⑤	⑥	⑦
EWD 41	**10.690.138**	2.2	**10.690.997**	1.8	**10.690.813**	**10.690.994**	.7	**10.694.808**	**10.310.905**	**10.692.381**
EWD 53	**10.690.139**	4.4	**10.690.996**	4.4	**10.690.814**					
EWD 68	**10.690.141**	8.8	**10.690.469**	7.4	**10.690.816**					
EWD 100			**10.690.553**							
EWD 200	**10.690.140**		**10.690.469**							
EWBD 68			**10.690.580**	8.8						
EWBD 100 AL										
EWE 41	**10.690.138**	2.2	**10.690.997**	1.8	**10.690.813**	**10.690.326**	.7	**10.694.808**	**10.395.170**	**10.395.161**
EWE 53	**10.690.139**	4.4	**10.690.996**	4.4	**10.690.814**					
EWE 68	**10.690.141**	8.9	**10.690.469**	7.4	**10.690.816**					
EWE 100	**10.690.141**		**10.690.553**		**10.690.816**					
EWE 200	**10.690.140**		**10.690.469**		**10.690.816**					

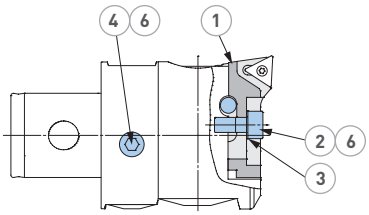
***Recommended torque for tightening the screws**

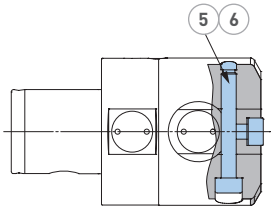
FINE BORING HEADS EWB, SERIES 310



Type	①	②	ft-lbs*	③	ft-lbs*	④
EWB 32	**10.626.231**	**10.690.137**	1.8	**10.690.577**	1.8	**10.690.812**
EWB 41	**10.626.241**	**10.690.138**	2.2	**10.690.578**	2.2	**10.690.813**
EWB 53	**10.626.251**	**10.690.139**	4.4	**10.690.579**	4.4	**10.690.814**
EWB 68	**10.626.261**	**10.690.140**	8.9	**10.690.580**	8.9	**10.690.816**
EWB 85	**10.626.261**	**10.690.140**	8.9	**10.690.580**	8.9	**10.690.816**
EWB 100 AL	**10.626.261**	**10.690.140**	8.9	**10.690.580**	8.9	**10.690.816**
EWB 150 AL	**10.626.261**	**10.690.140**	8.9	**10.690.580**	8.9	**10.690.816**

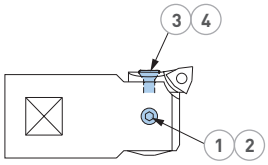
FINE BORING HEADS EWB-UP, SERIES 309





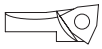
Type	①	②	③	ft-lbs*	④	ft-lbs*	⑤	ft-lbs*	⑥
EWB 25 UP	**10.627.121**	**10.690.182**	**10.693.289**	.7	—	.7	**10.690.940**	.7	**10.690.811**
EWB 32 UP	**10.627.131**	**10.690.179**	**10.693.186**	1.1	**10.690.550**	1.1	**10.690.180**	1.1	**10.690.812**
EWB 41 UP	**10.627.141**	**10.690.176**	**10.693.175**	1.8	**10.690.943**	1.8	**10.690.115**	1.8	**10.690.813**
EWB 53 UP	**10.627.151**	**10.690.177**	**10.693.176**	3.0	**10.690.658**	3.0	**10.690.178**	3.0	**10.690.814**
EWB 68 UP	**10.627.161**	**10.690.953**	**10.693.177**	3.7	**10.690.591**	3.7	**10.690.954**	4.8	**10.690.816**

BORING HEADS WITH THREAD CONNECTION EW 15/EW 18, SERIES 310

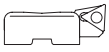


Type	①	ft-lbs*	②	③ **	ft-lbs*	④
EW 15	**10.690.414**	.4	**10.690.819**	**10.694.120**	.9	**10.694.807**
EW 18	**10.690.416**	.4	**10.690.819**	**10.694.120**	.9	**10.694.807**

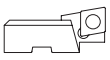
CLAMP SCREWS FOR INSERTS



Type	**	ft-lbs*	
WC 02	**10.694.101**	.4	**10.694.806**



Type	**	ft-lbs*	
TP 07	**10.694.103**	.4	**10.694.806**
TC 11	**10.694.122**	.5	**10.694.807**

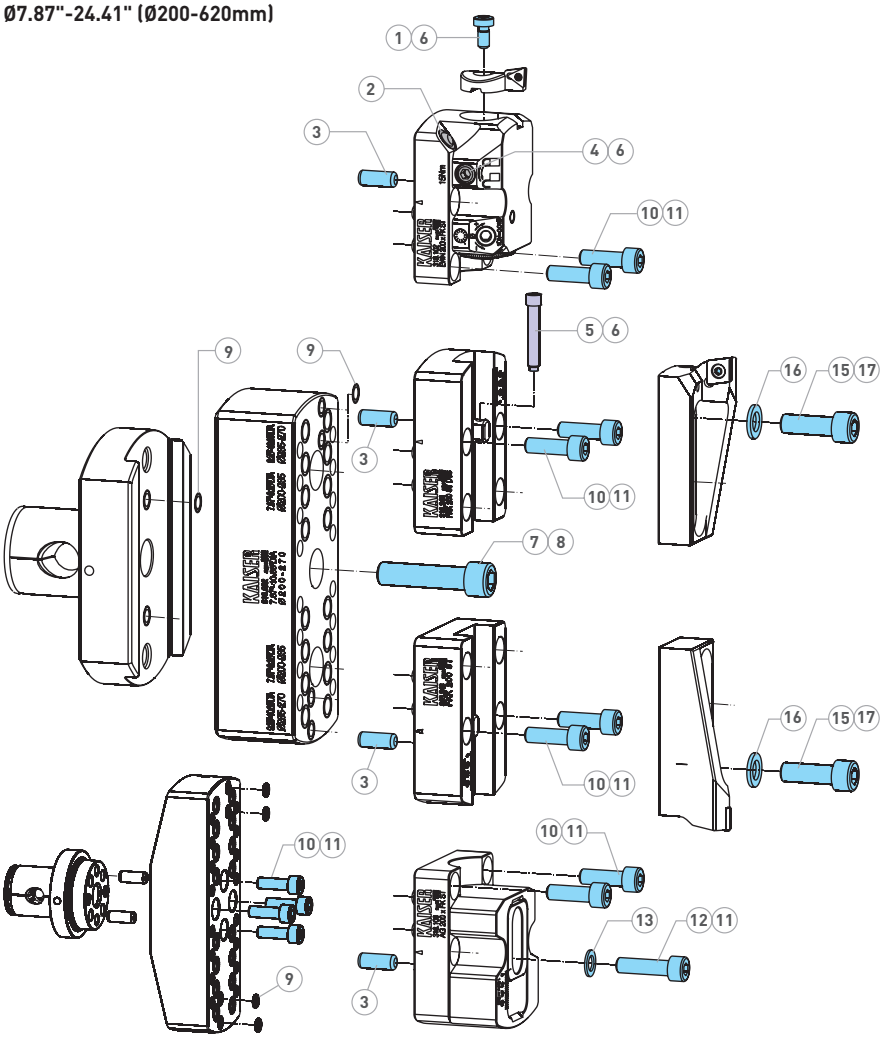


Type	**	ft-lbs*	
CC 06	**10.694.122**	.5	**10.694.807**
CC 09	**10.694.141**	2.2	**10.694.815**

***Recommended torque for tightening the screws**
****Per package: 10 screws and 1 wrench**

LIGHTWEIGHT BORING TOOLS, SERIES 318

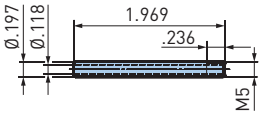
Ø7.87"-24.41" (Ø200-620mm)



①	ft-lbs*	②	③
10.690.140	8.9	**10.692.406**	**10.691.390**
④	ft-lbs*	⑤	⑥
10.690.553	7.4	**10.317.193**	**10.690.816**
⑦	ft-lbs*	⑧	⑨
10.690.121	33.2	**10.690.808**	**10.692.295**
⑩	ft-lbs*	⑪	
10.690.163	14.8	**10.690.806**	
⑫	⑬	ft-lbs*	⑪
10.690.124	**10.693.183**	11.1	**10.690.806**
⑮	⑯	ft-lbs*	⑰
10.690.105	**10.693.184**	22.1	**10.690.807**

COOLANT PIPE, SERIES 318

Catalog Number	Reference Number
CP-DM5-50-M5	**692.415**



CLAMP SCREWS FOR INSERTS

Type	**	ft-lbs*	
CC 12	**10.694.150**	3.7	**10.694.820**
CC 16	**10.694.150**	3.7	**10.694.820**

Type	**	ft-lbs*	
SC 12	**10.694.144**	3.7	**10.694.820**

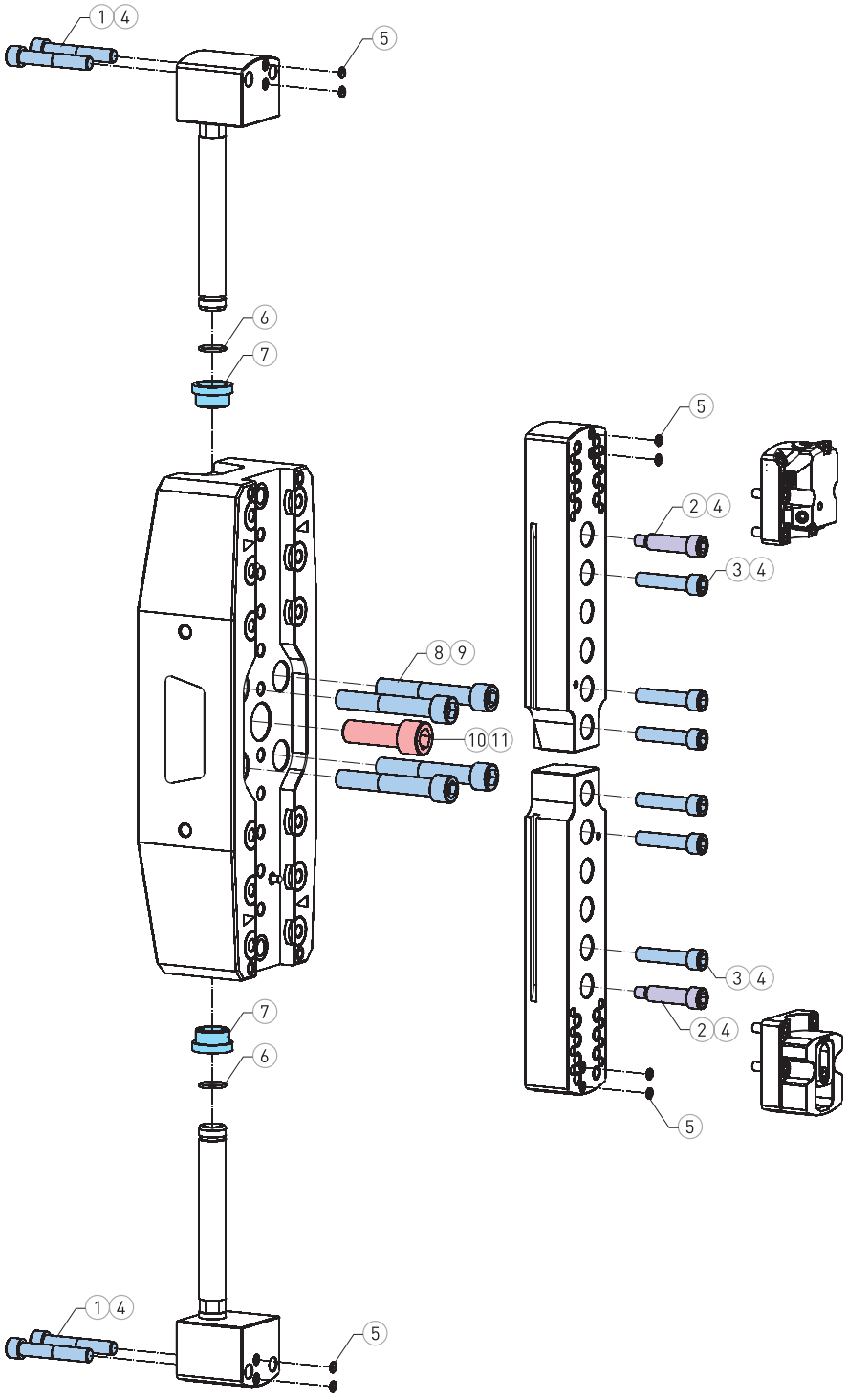
Type	**	ft-lbs*	
WC 08	**10.694.143**	2.2	**10.694.815**

Type	**	ft-lbs*	
TC 11	**10.694.122**	.5	**10.694.807**

***Recommended torque for tightening the screws**
****Per package: 10 screws and 1 wrench**

LIGHTWEIGHT BORING TOOLS, SERIES 318

Ø24.41"-118.11" (Ø620-3000mm)

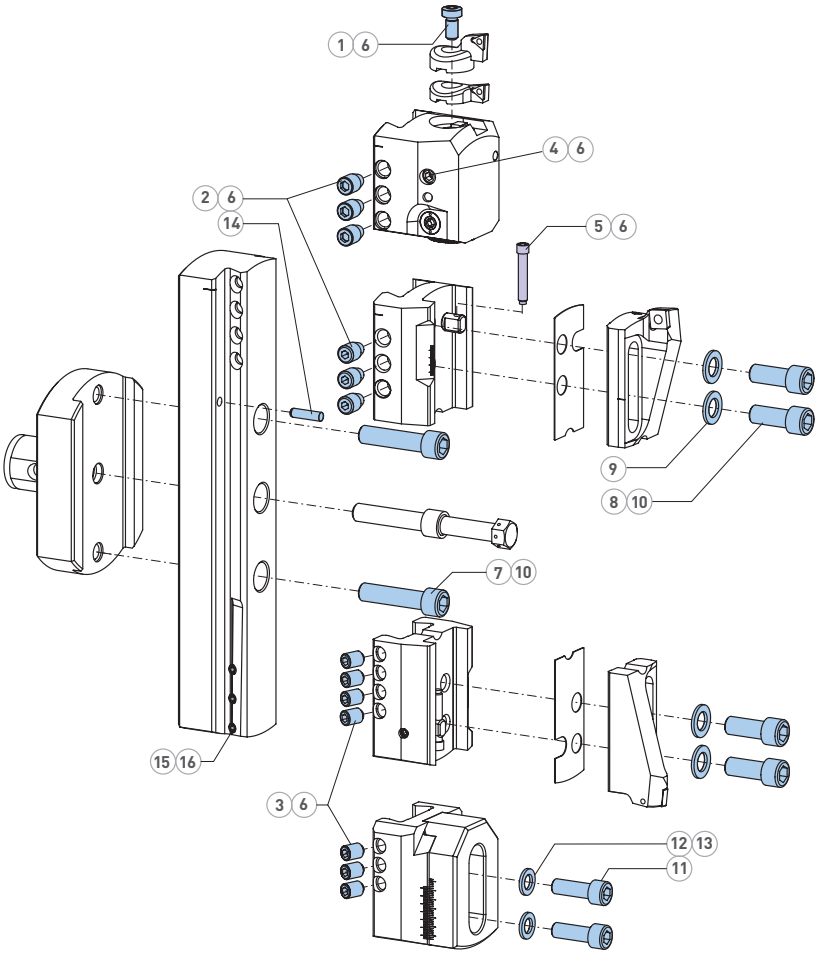


①	ft-lbs*	
10.690.991	36.9	
②	ft-lbs*	
10.690.989	22.1	
③	ft-lbs*	④
10.690.132	36.9	10.690.810
⑤	⑥	⑦
10.692.295	10.692.298	10.690.990
⑧	ft-lbs*	⑨
10.690.984[1]	92.2	10.690.832
10.690.985[2]		
10.690.986[3]		
⑩	ft-lbs*	⑪
10.690.987	184.4	10.690.861

- [1]For bridges **10.318.421/10.318.422/10.318.424**
- [2]For bridge **10.318.423**
- [3]For bridge **10.318.425**

***Recommended torque for tightening the screws**

LARGE DIAMETER BORING TOOLS, SERIES 317



①	ft-lbs*	②	ft-lbs*
10.690.141	11.1	**10.690.596**	7.4
③	ft-lbs*	④	ft-lbs*
10.690.469	—	**10.690.553**	11.1
⑤	⑥	⑦	ft-lbs*
10.317.193	**10.690.816**	**10.690.121**	88.5
⑧	⑨	ft-lbs*	⑩
10.690.172	**10.693.185**	73.8	**10.690.808**
⑪	⑫	ft-lbs*	⑬
10.690.105	**10.693.184**	51.6	**10.690.807**
⑭	⑮	⑯	
10.691.373	**10.317.274**	**10.690.845**	—

CLAMP SCREWS FOR INSERTS, SERIES 317

Type	**	ft-lbs*	
CC 12	**10.694.150**	4.4	**10.694.820**
CC 16	**10.694.150**	4.4	**10.694.820**

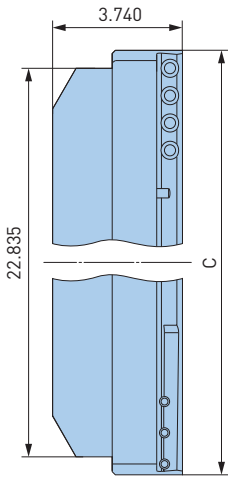
Type	**	ft-lbs*	
SC 12	**10.694.144**	3.7	**10.694.820**
SD 12	**10.694.144**	3.7	**10.694.820**

Type	**	ft-lbs*	
WC 08	**10.694.143**	2.2	**10.694.815**

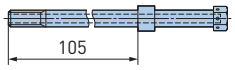
Type	**	ft-lbs*	
TC 11	**10.694.122**	.5	**10.694.807**

***Recommended torque for tightening the screws**
****Per package: 10 screws and 1 wrench**

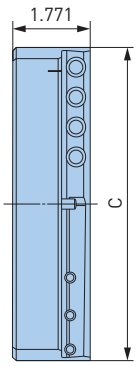
EXTENSION SLIDES STEEL, SERIES 317



C	Boring Range	Catalog Number
29.2	29.9-32.7	**10.317.233***
32.0	32.7-35.4	**10.317.234***
37.5	38.2-41.0	**10.317.236***
40.3	41.0-43.7	**10.317.237***

Coolant Nozzle	Catalog Number
	**10.389.221**

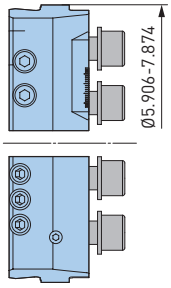
EXTENSION SLIDES ALUMINIUM, SERIES 317



C	Boring Range	Catalog Number
7.2	7.874-10.630	**10.317.252***
12.7	13.386-16.142	**10.317.254***
15.5	16.142-18.898	**10.317.255***
18.2	18.898-21.654	**10.317.256***
21.0	21.654-24.409	**10.317.257***

CLAMPING BASES, SERIES 317

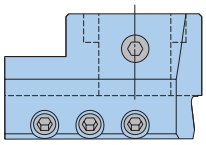
Ø5.906"-7.874"



Catalog Number
10.317.288*

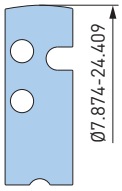
***As long as stock lasts**

TOOL HOLDERS FOR OD TURNING, SERIES 317



Type	Catalog Number
CKB5/28	**10.317.284**

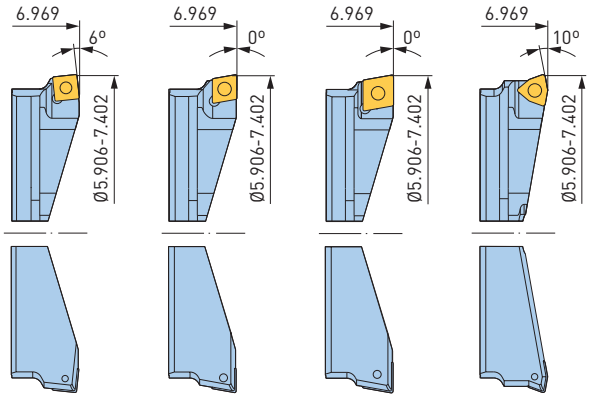
SPACERS, SERIES 317



Spacer .020	Catalog Number
Ø5.906-7.874	**10.317.286**

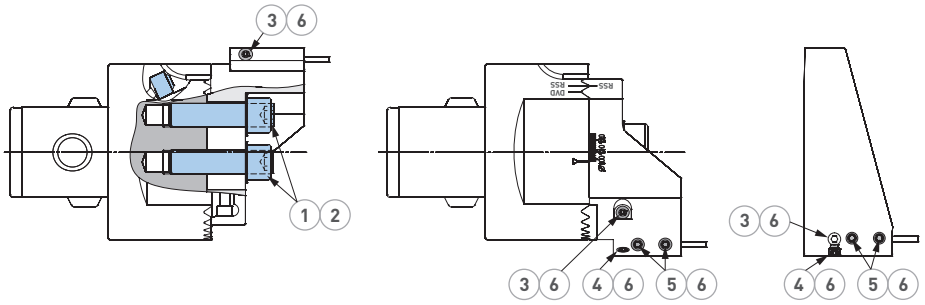
INSERT HOLDERS, SERIES 317

Ø5.906"-7.402"



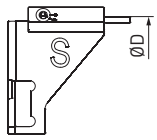
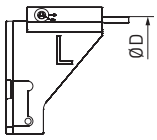
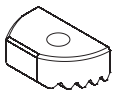
Catalog Number	**10.637.813**	**10.637.829**	**10.637.833**	**10.637.845**
Type	SC 12	CC 12	CC 16	WC 08

FACE GROOVING HOLDER SW, SERIES 318



Type	①	ft-lbs*	②	③	④	⑤	ft-lbs*	⑥
SW53	**10.639.691**	11.8	**10.690.805**	**10.639.690**	**10.690.400**	**10.690.511**	1.8	**10.690.813**
SW68	**10.639.691**	11.8	**10.690.805**	**10.639.690**	**10.690.400**	**10.690.622**	1.8	**10.690.813**
SW98xCKN6	**10.639.693**	14.8	**10.690.806**	**10.639.690**	**10.690.400**	**10.690.912**	1.8	**10.690.813**
SW98xCKN7	**10.639.693**	14.8	**10.690.806**	**10.639.690**	**10.690.400**	**10.690.912**	1.8	**10.690.813**
SW148xCKN6	**10.639.693**	14.8	**10.690.806**	**10.639.690**	**10.690.400**	**10.690.913**	1.8	**10.690.813**
SW148xCKN7	**10.639.693**	14.8	**10.690.806**	**10.639.690**	**10.690.400**	**10.690.913**	1.8	**10.690.813**
FKW200 (Series 318)	—	—	—	**10.637.962**	**10.690.400**	**10.690.511**	1.8	**10.690.813**

FACE GROOVING HOLDER / BLIND PIECE

				
Type	ØD			
SW53	2.087-2.756	**10.639.651**	**10.639.652**	**10.639.915**
SW68	2.677-3.543	**10.639.661**	**10.639.662**	**10.639.916**
	3.465-4.331	**10.639.665**	**10.639.666**	
SW98	3.858-4.961	**10.639.671**	**10.639.672**	**10.639.917**
	4.921-6.024	**10.639.675**	**10.639.676**	
SW148	5.827-6.929	**10.639.681**	**10.639.682**	**10.639.918**
	6.890-7.992	**10.639.685**	**10.639.686**	

***Recommended torque for tightening the screws**

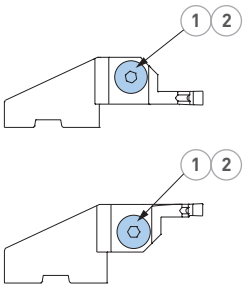
CUTTING DATA — FACE GROOVING HOLDERS FOR SW

Workpiece Material	Vc (SFM)	fn (IPR)
Construction — Heat Treatable Steels	462-528	.001
Stainless Steels	330-396	.001
Cast Iron	396-462	.001
Aluminium	825-990	.001
Non-ferrous Metals	825-990	.001

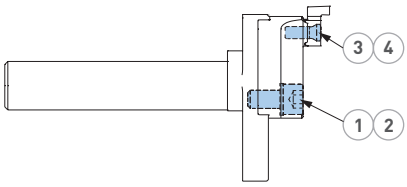
APPLICATION ADVICE

When programming the machine, add some stops (feed) to help break the chips.

INSERT HOLDERS FOR FACE GROOVING



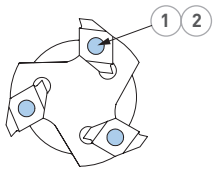
Type	Type	①	ft-lbs*	②
10.626.935	**10.626.945**	**10.690.183**	3.0	**10.690.813**
10.626.936	**10.626.946**			
10.626.937	**10.626.947**			
10.626.938	**10.626.948**			



Type	①	②	ft-lbs*	③ **	ft-lbs*	④
10.615.387	**10.690.107**	**10.693.182**	8.9	**10.694.143**	2.2	**10.694.815**
10.615.388						

SLOT MILLING CUTTERS

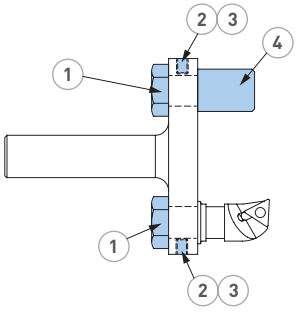
CLAMP SCREWS FOR INSERTS



Type	① **	ft-lbs*	②
0	**10.958.048**	.6	**10.690.836**
1	**10.958.048**	.6	**10.690.836**
2	**10.958.049**	4.4	**10.690.838**

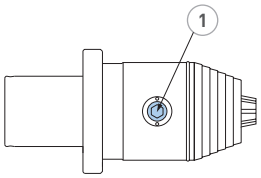
***Recommended torque for tightening the screws**
****Per package: 10 screws and 1 wrench**

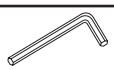
OD TURNING / ECCENTRIC BAR



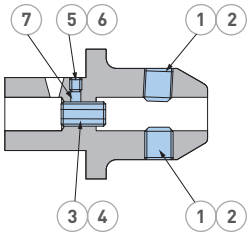
Type	①	②	③	④
10.615.390	**10.690.716**	**10.690.573**	**10.690.813**	**10.615.903**

DRILL CHUCK



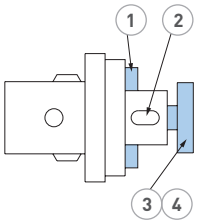
		
Type	①	ft-lbs*
10.335.042	**10.690.817**	14.8
10.335.044	**10.690.817**	14.8

END MILL HOLDERS



Type	①	ft-lbs*	②	③	④	⑤	⑥	⑦
6	**10.690.477**	3.7	**10.690.803**	**10.690.512**	**10.690.802**	**10.690.419**	**10.690.802**	**10.691.318**
8	**10.690.478**	7.4	**10.690.804**	**10.690.513**	**10.690.803**	**10.690.489**	**10.690.803**	**10.691.316**
10	**10.690.479**	11.8	**10.690.805**	**10.690.514**	**10.690.804**	**10.690.489**	**10.690.803**	**10.691.316**
12	**10.690.480**	20.7	**10.690.806**	**10.690.515**	**10.690.805**	**10.690.489**	**10.690.803**	**10.691.315**
14	**10.690.480**	20.7	**10.690.806**	**10.690.515**	**10.690.805**	**10.690.489**	**10.690.803**	**10.691.315**
16	**10.690.481**	20.7	**10.690.806**	**10.690.510**	**10.690.806**	**10.690.489**	**10.690.803**	**10.691.315**
18	**10.690.481**	20.7	**10.690.806**	**10.690.510**	**10.690.806**	**10.690.489**	**10.690.803**	**10.691.315**
20	**10.690.482**	31.0	**10.690.807**	**10.690.510**	**10.690.806**	**10.690.489**	**10.690.803**	**10.691.315**
25	**10.690.483**	36.9	**10.690.810**	**10.690.510**	**10.690.806**	**10.690.489**	**10.690.803**	**10.691.315**
32	**10.690.484**	53.1	**10.690.810**	—	—	—	—	—
40	**10.690.484**	53.1	**10.690.810**	—	—	—	—	—

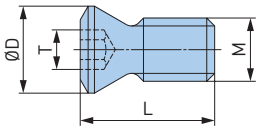
UNIVERSAL MILLING CUTTER HOLDERS

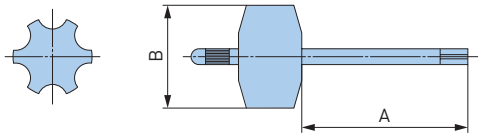


Type	①	②	③	ft-lbs*	④
16	**10.691.605**	**10.691.600**	**10.690.703**	13.3	**10.690.805**
22	**10.691.606**	**10.691.601**	**10.690.704**	25.8	**10.690.806**
27	**10.691.607**	**10.691.602**	**10.690.705**	51.6	**10.690.807**
32	**10.691.608**	**10.691.604**	**10.690.706**	59.0	**10.690.810**
40	**10.691.609**	**10.691.603**	**10.690.707**	59.0	**10.690.809**

***Recommended torque for tightening the screws**

CLAMP SCREWS AND WRENCHES FOR INSERTS





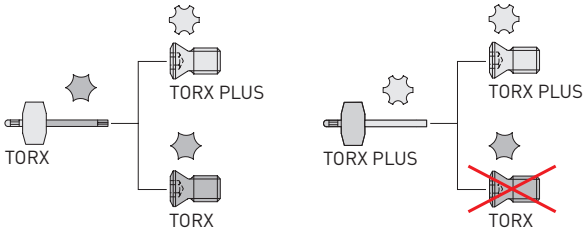
SCREWS

Dimensions				ft-lbs*	Torx	Torx Plus
Torx/Torx Plus	Thread M	ØD	L		Catalog Number	Catalog Number
T6 IP	M2	.106	.142	.4	—	**10.694.101**
T6 IP	M2	.106	.161		—	**10.694.102**
T6 IP	M2	.106	.189		—	**10.694.103**
T7 IP	M2.2	.138	.236	.5	—	**10.694.110**
T7 IP	M2.5	.138	.256		—	**10.694.122**
T7 IP	M2.5	.138	.228		—	**10.694.123**
T7 IP	M2.5	.138	.248		—	**10.694.124**
T7 IP	M2.5	.169	.217		—	**10.694.121**
T7 IP	M3	.181	.236		—	**10.694.130**
T8	M3	.173	.354	.6	**10.958.048**	—
T8 IP	M2.5	.138	.343		—	**10.694.125**
T9 IP	M3	.173	.323	1.1	—	**10.694.131**
T10 IP	M3.5	.189	.362	1.3	—	**10.694.137**
T10 IP	M3.5	.217	.323		—	**10.694.136**
T15	M4	.224	.323	2.2	**10.336.905**	—
T15 IP	M4	.213	.362		—	**10.694.141**
T15 IP	M4	.217	.465		—	**10.694.143**
T20	M5	.260	.650	4.4	**10.658.049**	—
T20 IP	M4	.252	.591		—	**10.694.144**
T20 IP	M4	.256	.457		—	**10.694.142**
T20 IP	M5	.276	.524		—	**10.694.150**

WRENCH

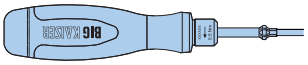
Dimensions			Torx	Torx Plus
Torx/Torx Plus	A	B	Catalog Number	Catalog Number
T6	1.654	1.024	**10.690.834**	—
T6 IP			—	**10.694.806**
T7 IP			—	**10.694.807**
T8			**10.690.836**	—
T8 IP			—	**10.694.808**
T9 IP			—	**10.694.809**
T10	1.969	1.339	**10.690.837**	—
T10 IP			—	**10.694.810**
T15			**10.690.843**	—
T15 IP			—	**10.694.815**
T20			**10.690.838**	—
T20 IP			—	**10.694.820**

COMPATIBILITY TORX - TORX PLUS



Size	Torque (ft-lbs)	Set		Catalog Number
		Torque Wrench	Torx Blade	
Torx 6	.4	**10.694.160**	**10.694.167**	**10.694.181**
Torx 7	.5	**10.694.161**	**10.694.168**	**10.694.182**
Torx 8	.6	**10.694.162**	**10.694.169**	**10.694.183**
Torx 9	1.1	**10.694.163**	**10.694.170**	**10.694.184**
Torx 10	1.3	**10.694.164**	**10.694.171**	**10.694.185**
Torx 15	2.2	**10.694.165**	**10.694.172**	**10.694.186**
Torx 20	3.7	**10.694.166**	**10.694.173**	**10.694.187**

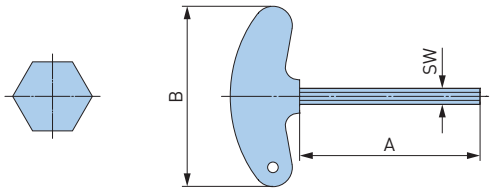
Size	Torque (ft-lbs)	Set		Catalog Number
		Torque Wrench	Torx Plus Blade	
Torx 6	.4	**10.694.160**	**10.694.174**	**10.694.188**
Torx 7	.5	**10.694.161**	**10.694.175**	**10.694.189**
Torx 8	.6	**10.694.162**	**10.694.176**	**10.694.190**
Torx 9	1.1	**10.694.163**	**10.694.177**	**10.694.191**
Torx 10	1.3	**10.694.164**	**10.694.178**	**10.694.192**
Torx 15	2.2	**10.694.165**	**10.694.179**	**10.694.193**
Torx 20	3.7	**10.694.166**	**10.694.180**	**10.694.194**



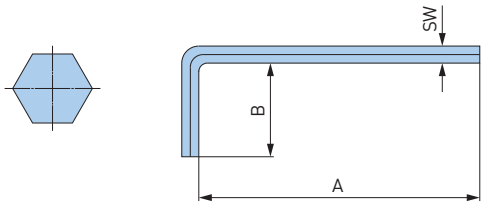
***Maximum tightening torque**

- The clamping screws for the inserts are supplied in packages of 10 pieces with a corresponding wrench

WRENCHES

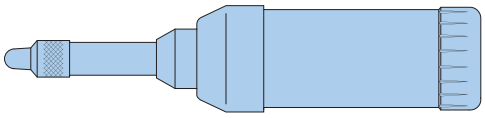


A	B	SW (Hex Size)	Catalog Number
1.969	1.772	1.5	**10.690.819**
		2	**10.690.811**
		2.5	**10.690.812**
		3	**10.690.813**
		4	**10.690.814**
2.756	2.560	5	**10.690.816**
		6	**10.690.817**



A	B	SW (Hex Size)	Catalog Number
1.654	.551	1.3	**10.690.833**
1.969		1.5	**10.690.800**
1.969	.630	2	**10.690.801**
2.205	.709	2.5	**10.690.802**
2.480	.787	3	**10.690.803**
2.638	.945	3.5	**10.690.899**
2.795	.984	4	**10.690.804**
3.150	1.102	5	**10.690.805**
3.543	1.260	6	**10.690.806**
3.937	1.417	8	**10.690.807**
4.409	1.575	10	**10.690.810**
7.874			**10.690.808**
4.921	1.772	12	**10.690.809**
5.512	2.205	14	**10.690.832**
5.512	2.480	17	**10.690.861**

LUBRICATION GUN



Catalog Number
10.692.404A

Lubricant

For lubricating the fine boring heads type AW, EW, EWN, EWD, EWB, EWB-UP a light machine oil of the following types is recommended:

Mobil Vactra Oil No. 2
BP Energol HLP-32

The lubricating instructions are shown in the operating instructions that are included with each head.

CUTTING TOOLS

C.1

DRILLS 564-575

INDEXABLE INSERT DRILLS OVERVIEW 564-565
INDEXABLE INSERT DRILLS 566-573
SPADE DRILLS 574-575

INDEXABLE END MILLS 576-593

FULLCUT MILL 576-593

EXCHANGEABLE HEAD MILLING TOOLS 594-599

CONTACT GRIP 594-599

INDEXABLE FACE MILLS 600-605

FULLCUT MILL ARBOR TYPE 600-601
SPEED FINISHER 602-603
SURFACE MILL 604-605

CHAMFER MILLS 606-620

C-CUTTER MINI 606-612
C-CUTTER 613-615
C-CUTTER MICRO 616
C-CENTERING CUTTER 617-618
CENTER BOY 619
C-CUTTER BOY 620

RADIUS MILLS 621-623

R-CUTTER 621-623

BACK COUNTERBORING TOOLS 624-625

BF-CUTTER 624-625

GROOVE MILLING TOOLS 626-627

GROOVE MILLING TOOLS 626-627

SERIES 336 INSERT DRILL

- Large, helical flutes reinforced at the edges provide highest strength and chip space
- Through the tool coolant, directed on both sides at the cutting edges to guarantee optimum cooling and chip evacuation
- Case hardened steel construction for maximum rigidity and toughness

CKB6 AND CKB7 CONNECTION PROVIDES:

- Highest stability by clamping the drill to the shank both axially and radially at the largest seating diameter
- Lowest amount of drill runout
- Minimum gage lengths
- Versatile CKB6 connection for all diameters 3/4" to 2-1/2" allows more flexibility on smaller machines
- Widest range of shanks and coolant inducers

CARBIDE INSERTS:

- ISO standard WCMX inserts for both inside and outside cutting edges provide 3 indexes
- Positive cutting geometry for reduced cutting forces
- Different grades optimize cutting conditions

INSERT DRILL SIZES:

- CKB6 connection, Ø3/4" to Ø2-1/2" and Ø31mm to Ø61mm
- CKB7 connection, Ø2-5/8" to Ø2-7/8"

INSERT DRILL LENGTHS:

- 2xD and 3xD for all sizes

APPLICATION ADVICE
PG. 571

SERIES 337 INSERT DRILL

- Straight flute design guarantees a short distance for chip evacuation, high radial and torsional rigidity, and very high cutting performance
- Clockwise cutting, with 4-edge inserts, also suitable to enlarge pre-drilled holes
- Through tool coolant supply to the cutting edge
- Suitable for use as rotating or stationary
- With adjustable drill holder for hole diameters with fractional sizes such as core bores or rough bores before finishing (adjustment range according to table)

CKB6 CONNECTION PROVIDES:

- Very high clamping force, a short gage length and a large seating diameter
- Suitable for drilling under extreme conditions such as inclined surfaces, semi-circle bores and transverse bores

CARBIDE INSERTS:

- Same insert type for inner and outer insert
- Indexable inserts for all kinds of workpiece materials, with 4 true cutting edges

INSERT DRILL SIZES:

- CKB6 connection, Ø16mm to Ø30mm

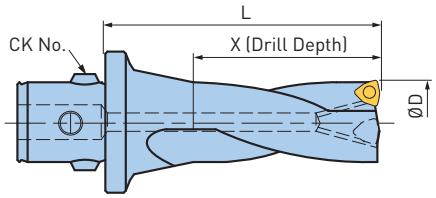
INSERT DRILL LENGTHS:

- 3xD and 4xD for all sizes

APPLICATION ADVICE
PG. 571

INDEXABLE INSERT DRILL—SERIES 336

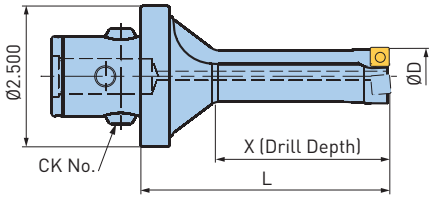
INCH



Drill ØD	CK	Indexable Drills 2x Dia.			Indexable Drills 3x Dia.			Inside Insert	Outside Insert
		Catalog Number	X	L	Catalog Number	X	L		
.781	CKB6	**10.336.002**	1.562	2.952	**10.336.051**	2.343	3.543	WC..04	WC..03
.812		**10.336.003**	1.625		**10.336.052**	2.436			
.845		**10.336.004**	1.690	3.150	**10.336.053**	2.535	3.937	WC..05	WC..04
.875		**10.336.005**	1.750		**10.336.054**	2.625			
.906		**10.336.006**	1.812		**10.336.055**	2.718			
.938		**10.336.007**	1.875	3.543	**10.336.056**	2.815	4.331		
.968		**10.336.008**	1.938		**10.336.057**	2.907			
1.000		—	2.000		**10.336.058**	3.000			
1.031		**10.336.010**	2.062		**10.336.059**	3.093	4.528	WC..05	
1.063		**10.336.011**	2.125		—	3.189			
1.094		**10.336.012**	2.188	3.937	**10.336.061**	3.282	4.921		
1.125		**10.336.013**	2.250		—	3.375			
1.156		**10.336.014**	2.312		**10.336.063**	3.468			
1.188		**10.336.015**	2.375		**10.336.064**	3.564	5.118		
1.219		**10.336.016**	2.438		**10.336.065**	3.657		WC..06	
1.250		**10.336.017**	2.500		—	3.750			
1.312		**10.336.018**	2.625	4.331	**10.336.067**	3.938	5.512		
1.375		**10.336.019**	2.750		**10.336.068**	4.125	5.906		
1.438		**10.336.020**	2.875		**10.336.069**	4.314			
1.500		**10.336.021**	3.000	4.921	**10.336.070**	4.500	6.299		
1.563		**10.336.022**	3.125		**10.336.071**	4.688	6.496		
1.625		**10.336.023**	3.250		**10.336.072**	4.875			
1.688		**10.336.024**	3.375	5.512	**10.336.073**	5.064	7.087		
1.750		**10.336.025**	3.500		**10.336.074**	5.250		WC..08	
1.812		**10.336.026**	3.625		**10.336.075**	5.436			
1.875		**10.336.027**	3.750		**10.336.076**	5.625	7.480		
1.938		**10.336.028**	3.875	5.906	**10.336.077**	5.814	7.874		
2.000		**10.336.029**	4.000		**10.336.078**	6.000			
2.063		**10.336.030**	4.125		**10.336.079**	6.188			
2.125		**10.336.031**	4.250	6.299	—	6.375	8.465		
2.188		**10.336.032**	4.375		**10.336.081**	6.564			
2.250		**10.336.033**	4.500	6.496	**10.336.082**	6.750	8.661		
2.312		**10.336.034**	4.625		**10.336.083**	6.936			
2.375		**10.336.035**	4.750		**10.336.084**	7.125			
2.438		**10.336.036**	4.875		**10.336.085**	7.314	9.252	WC..10	
2.500		**10.336.037**	5.000		**10.336.086**	7.500			
2.625	CKB7	**10.336.038**	5.250	7.480	**10.336.087**	7.875	10.039		
2.750		—	—	—	**10.336.088**	8.250	10.236		
2.875		**10.336.040**	5.750	8.268	**10.336.089**	8.625	11.024		

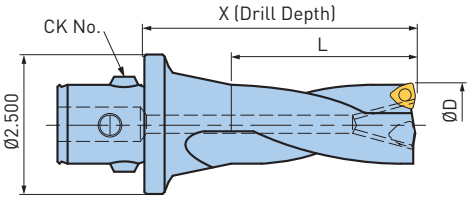
• Available as long as stock lasts

INDEXABLE INSERT DRILL—SERIES 337



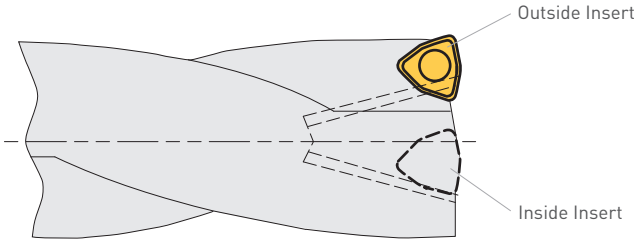
INDEXABLE INSERT DRILL—SERIES 336

METRIC



Drill ØD	Indexable Drills 3xD				Indexable Drills 4xD				Inserts
	Catalog Number	Reference Number	X	L	Catalog Number	Reference Number	X	L	
16	**ID16-48CKB6**	10.337.316	48	85	**ID16-64CKB6**	10.337.416	64	101	WP 337-1
17	**ID17-51CKB6**	10.337.317	51	88	**ID17-68CKB6**	10.337.417	68	105	
18	**ID18-54CKB6**	10.337.318	54	91	**ID18-72CKB6**	10.337.418	72	109	
19	**ID19-57CKB6**	10.337.319	57	94	**ID19-76CKB6**	10.337.419	76	113	
20	**ID20-60CKB6**	10.337.320	60	97	**ID20-80CKB6**	10.337.420	80	117	
21	**ID21-63CKB6**	10.337.321	63	100	**ID21-84CKB6**	10.337.421	84	121	WP 337-2
22	**ID22-66CKB6**	10.337.322	66	103	**ID22-88CKB6**	10.337.422	88	125	
23	**ID23-69CKB6**	10.337.323	69	106	**ID23-92CKB6**	10.337.423	92	129	
24	**ID24-72CKB6**	10.337.324	72	109	**ID24-96CKB6**	10.337.424	96	133	
25	**ID25-75CKB6**	10.337.325	75	112	**ID25-100CKB6**	10.337.425	100	137	
26	**ID26-78CKB6**	10.337.326	78	118	**ID26-104CKB6**	10.337.426	104	146	WP 337-3
27	**ID27-81CKB6**	10.337.327	81	121	**ID27-108CKB6**	10.337.427	108	150	
28	**ID28-84CKB6**	10.337.328	84	124	**ID28-112CKB6**	10.337.428	112	154	
29	**ID29-87CKB6**	10.337.329	87	127	**ID29-116CKB6**	10.337.429	116	158	
30	**ID30-90CKB6**	10.337.330	90	130	**ID30-120CKB6**	10.337.430	120	162	
	Indexable Drills 2xD				Indexable Drills 3xD				
31	**ID31-62CKB6**	10.336.631	62	100	**ID31-93CKB6**	10.336.731	93	130	WC..06
32	**ID32-64CKB6**	10.336.632	64		**ID32-96CKB6**	10.336.732	96		
33	**ID33-66CKB6**	10.336.633	66	110	**ID33-99CKB6**	10.336.733	99	140	
34	**ID34-68CKB6**	10.336.634	68		**ID34-102CKB6**	10.336.734	102		
35	**ID35-70CKB6**	10.336.635	70		**ID35-105CKB6**	10.336.735	105	150	
36	**ID36-72CKB6**	10.336.636	72		**ID36-108CKB6**	10.336.736	108		
37	**ID37-74CKB6**	10.336.637	74		**ID37-111CKB6**	10.336.737	111		
38	**ID38-76CKB6**	10.336.638	76	125	**ID38-114CKB6**	10.336.738	114	160	
39	**ID39-78CKB6**	10.336.639	78		**ID39-117CKB6**	10.336.739	117		
40	**ID40-80CKB6**	10.336.640	80		**ID40-120CKB6**	10.336.740	120	165	
41	**ID41-82CKB6**	10.336.641	82		**ID41-123CKB6**	10.336.741	123		
42	**ID42-84CKB6**	10.336.642	84		**ID42-126CKB6**	10.336.742	126		
43	**ID43-86CKB6**	10.336.643	86	140	**ID43-129CKB6**	10.336.743	129	180	
44	**ID44-88CKB6**	10.336.644	88		**ID44-132CKB6**	10.336.744	132		
45	**ID45-90CKB6**	10.336.645	90		**ID45-135CKB6**	10.336.745	135		WC..08
47	**ID47-94CKB6**	10.336.647	94		**ID47-141CKB6**	10.336.747	141	190	
49	**ID49-98CKB6**	10.336.649	98	150	**ID49-147CKB6**	10.336.749	147	200	
51	**ID51-102CKB6**	10.336.651	102		**ID51-153CKB6**	10.336.751	153		
53	**ID53-106CKB6**	10.336.653	106	160	**ID53-159CKB6**	10.336.753	159	215	
55	**ID55-110CKB6**	10.336.655	110		**ID55-165CKB6**	10.336.755	165		
57	**ID57-114CKB6**	10.336.657	114	165	**ID57-171CKB6**	10.336.757	171	220	
59	**ID59-118CKB6**	10.336.659	118		**ID59-177CKB6**	10.336.759	177		
61	**ID61-122CKB6**	10.336.661	122		**ID61-183CKB6**	10.336.761	183		WC..10

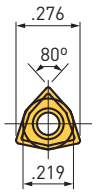
INDEXABLE INSERT DRILL—CARBIDE SELECTION CHART

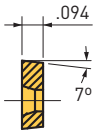


Material	Inside/Outside Insert-Series 336						Inside/Outside Insert-Series 337		
	WC..03	WC..04	WC..05	WC..06	WC..08	WC..10	337-1	337-2	337-3
Carbon Steels 10XX-15XX 1018, 1212, 1551	**11.658.620**	**11.658.630**	**11.658.640**	**11.658.650**	**11.658.660**	**10.655.670**	**10.655.910**	**10.655.920**	**10.655.930**
Alloy Steels 21XX-92XX 4130, 4340, 8620	**11.658.620**	**11.658.630**	**11.658.640**	**11.658.650**	**11.658.660**	**10.655.670**	**10.655.910**	**10.655.920**	**10.655.930**
300 Series Stainless Steels 304, 316, 17-4Ph	**11.658.620**	**11.658.634/ 11.658.630**	**11.658.644/ 11.658.640**	**11.658.654/ 11.658.650**	**11.658.664/ 11.658.660**	**10.655.671**	**10.655.911**	**10.655.921**	**10.655.931**
400 Series Stainless Steels Martensitic	**11.658.620**	**11.658.634/ 11.658.630**	**11.658.644/ 11.658.640**	**11.658.654/ 11.658.650**	**11.658.664/ 11.658.660**	**10.655.671**	**10.655.912**	**10.655.922**	**10.655.932**
Cast Iron Grey	**11.658.624**	**11.658.634**	**11.658.644**	**11.658.654**	**11.658.664**	**10.655.671/ 10.655.670**	**10.655.912**	**10.655.922**	**10.655.932**
Cast Iron Ductile/Nodular	**11.658.624**	**11.658.634**	**11.658.644**	**11.658.654**	**11.658.664**	**10.655.671/ 10.655.670**	**10.655.911**	**10.655.921**	**10.655.931**
Exotics Titanium, Inconel, etc.	**11.658.620**	**11.658.634/ 11.658.630**	**11.658.644/ 11.658.640**	**11.658.654/ 11.658.650**	**11.658.664/ 11.658.660**	**10.655.671**	**10.655.913**	**10.655.923**	**10.655.933**
Brass and Bronze	**11.658.624**	**11.658.634**	**11.658.644**	**11.658.654**	**11.658.664**	**10.655.671**	**10.655.913**	**10.655.923**	**10.655.933**
Aluminum and Non-Ferrous	**11.658.624**	**11.658.634**	**11.658.644**	**11.658.654**	**11.658.664**	**10.655.671**	**10.655.913**	**10.655.923**	**10.655.933**

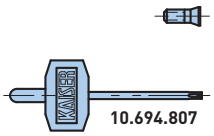
INDEXABLE INSERT DRILL—SERIES 336 INSERTS

WC..03





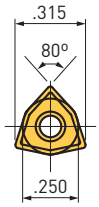
10.694.110

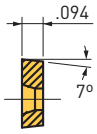


10.694.807

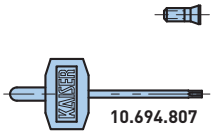
Catalog Number	Designation	Rake Angle	Radius	Grade
11.658.620	WC033115C6TNP15	15°	0.031	TN15
11.658.624	WC033115C2P	15°	0.031	C2

WC..04





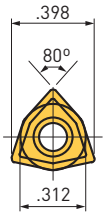
10.694.124

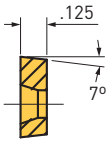


10.694.807

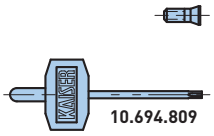
Catalog Number	Designation	Rake Angle	Radius	Grade
11.658.630	WC043115C6TNP15	15°	0.031	TN15
11.658.634	WC043115C2P	15°	0.031	C2

WC..05





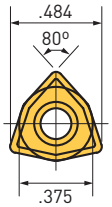
10.694.131

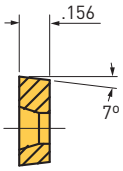


10.694.809

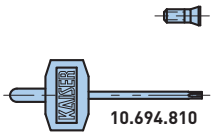
Catalog Number	Designation	Rake Angle	Radius	Grade
11.658.640	WC053115C6TNP15	15°	0.031	TN15
11.658.644	WC053115C2P	15°	0.031	C2

WC..06





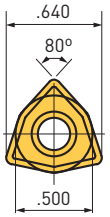
10.694.137

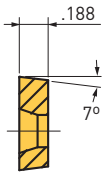


10.694.810

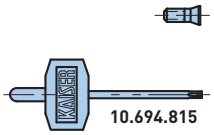
Catalog Number	Designation	Rake Angle	Radius	Grade
11.658.650	WC063115C6TNP15	15°	0.031	TN15
11.658.654	WC063115C2P	15°	0.031	C2

WC..08





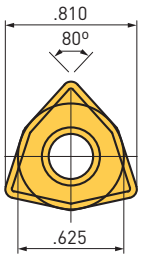
10.694.143

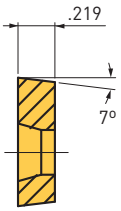


10.694.815

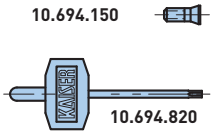
Catalog Number	Designation	Rake Angle	Radius	Grade
11.658.660	WC084715C6TNP15	15°	0.047	TN15
11.658.664	WC084715C2P	15°	0.047	C2

WC..10





10.694.150

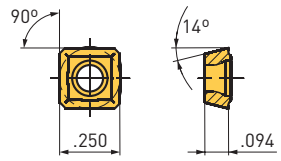


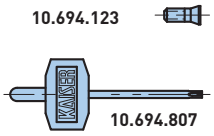
10.694.820

Catalog Number	Designation	Rake Angle	Radius	Grade
10.655.670	WC104715C6TNP15	15°	0.047	TN15
10.655.671	WC104715C2P	15°	0.047	C2

INDEXABLE INSERT DRILL—SERIES 337 INSERTS

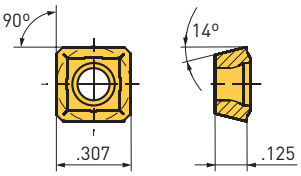
WP 337-1

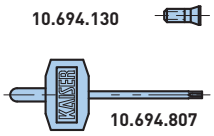




Catalog Number	Designation	Rake Angle	Grade
10.655.910	WP 337-1 16/20	15°	TNP11
10.655.911	WP 337-1 16/20	15°	TNP12
10.655.912	WP 337-1 16/20	15°	TNP16
10.655.913	WP 337-1 16/20	15°	C2P

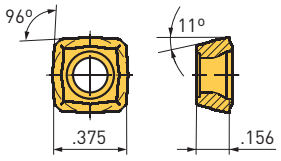
WP 337-2

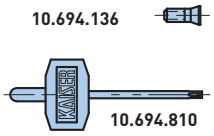




Catalog Number	Designation	Rake Angle	Grade
10.655.920	WP 337-2 21/25	15°	TNP11
10.655.921	WP 337-2 21/25	15°	TNP12
10.655.922	WP 337-2 21/25	15°	TNP16
10.655.923	WP 337-2 21/25	15°	C2P

WP 337-3





Catalog Number	Designation	Rake Angle	Grade
10.655.930	WP 337-3 26/30	15°	TNP11
10.655.931	WP 337-3 26/30	15°	TNP12
10.655.932	WP 337-3 26/30	15°	TNP16
10.655.933	WP 337-3 26/30	15°	C2P

INDEXABLE INSERT DRILL—CUTTING DATA

Material	Cutting Speed SFM		Feed IPR				
	Coolant Delivery		Drill Diameter				
	Flood	Through Tool	≤Ø.812	Ø.845-1.000	Ø1.031-1.188	Ø1.219-1.688	Ø1.750 & Over
Carbon Steel 10XX-15XX, 1018, 1212, 1551	250-400	575-800	.0020	.0040	.0050	.006	.0080
Alloy Steel 21XX-92XX, 4130, 4340, 8620	230-350	550-700	.0020	.0040	.0050	.006	.0080
300 Series Stainless Steel 304, 316, 17-4Ph	230-350	450-580	.0025	.0030	.0035	.004	.0045
400 Series Stainless Steel 410, 430	230-350	490-620	.0025	.0030	.0035	.004	.0045
Grey Cast Iron	250-360	600-750	.0040	.0055	.0060	.007	.0080
Ductile/Nodular Cast Iron	230-270	460-590	.0040	.0055	.0060	.007	.0080
Aluminum & Non-Ferrous	325-400	650-1150	.0060	.0085	.0085	.010	.0120

Cutting Speed:

$$RPM = \frac{SFM \times 3.82}{Drill\ Ø}$$

Feed Rate:

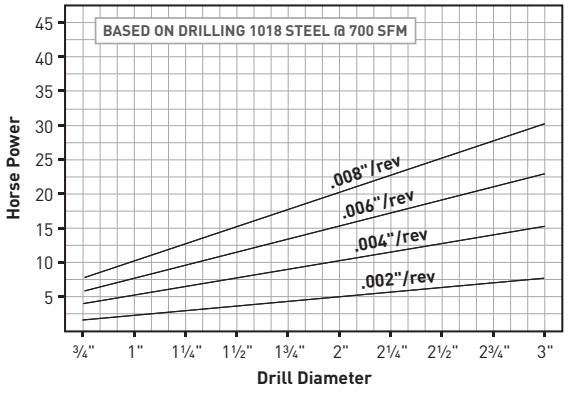
$$IPM = RPM \times IPR$$

K VALUES

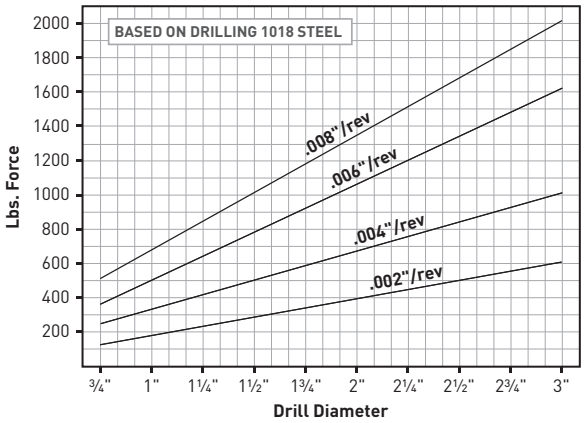
Carbon Steel	Alloy Steel	Stainless Steel	Grey Cast Iron	Ductile/Nodular Cast Iron	Aluminum & Non-Ferrous
1.6	1.3	1	1.7	1.5	3.4

$$hP = \frac{(.785)(D^2)(RPM)(IPR)}{K}$$

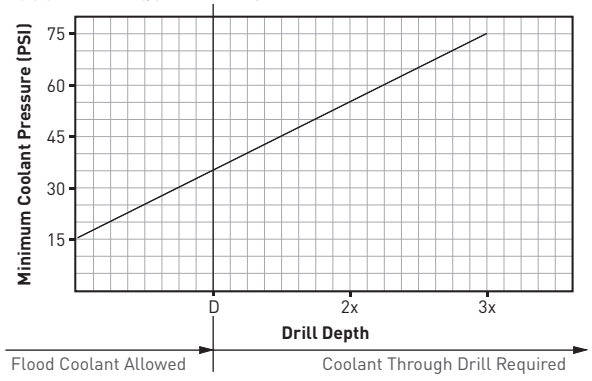
HORSEPOWER REQUIREMENTS



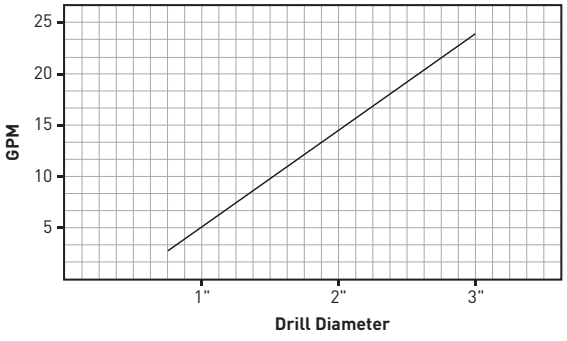
THRUST REQUIREMENTS



COOLANT REQUIREMENTS*



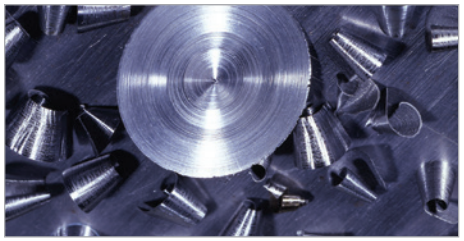
COOLANT VOLUME*



*For coolant requirements and coolant volume, add 10-20% for vertical drilling operations

CAUTION

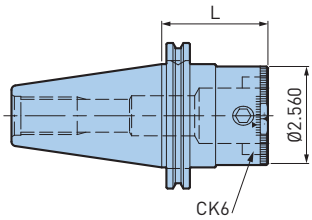
A disc is generated during through-boring operations. In case of rotating workpieces, there is an accident hazard due to the development of centrifugal force. Therefore, always work with safety guards.



ADJUSTABLE DRILL HOLDERS— CAT40/50 CKB HOLDER (ASME B5.50)

For Diameter Adjustment of Indexable Insert Drills

- Accurate, easy-to-read adjusting collar gives Ø.004"/div. adjusting precision which can be split for Ø.002"/div. or better
- Extremely compact and rigid design for drilling under all conditions
- One holder suitable for Ø.748"-2.500"
- Wide adjustment range: Nominal drill +Ø.040", -Ø.008"

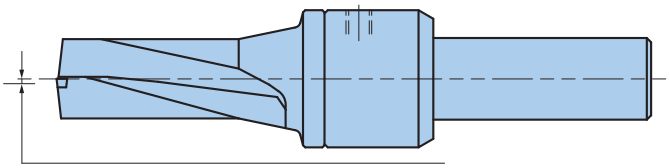


Catalog Number	Reference Number	L
CV40-ADH-CKB6	11.336.311	3.189
CV50-ADH-CKB6	11.336.313	2.716
BT40-ADH-CKB6	10.336.302	2.008
BT50-ADH-CKB6	10.336.304	2.835
HSK-A63-ADH-CKB6	10.336.309	2.756
HSK-A100-ADH-CKB6	10.336.310	3.268

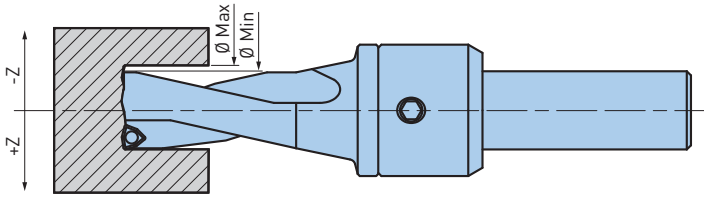
ACCESSORIES

SPARE PARTS
PG. 539

STATIONARY DRILLING



Max .0015" to the Middle Axis of the Spindle



CAUTION

Indexable Insert Drills rotate clockwise.
Check direction of rotation.

OFF-AXIS USE OF INDEXABLE INSERT DRILLS

SERIES 337

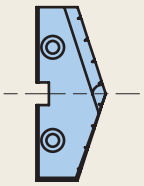
Insert Size	Drill ØD	Adjustable Range		Bore Diameter	
		–Z	+Z	Min	Max
WP 337-1	16mm	N/A	1.7mm	16mm	19.4mm
	17mm		1.5mm	17mm	20mm
	18mm		1.3mm	18mm	20.6mm
	19mm		1mm	19mm	21mm
	20mm		.8mm	20mm	21.6mm
WP 337-2	21mm		2mm	21mm	25mm
	22mm		1.7mm	22mm	25.4mm
	23mm		1.5mm	23mm	26mm
	24mm		1.2mm	24mm	26.4mm
	25mm		1mm	25mm	27mm
WP 337-3	26mm		1.7mm	26mm	29.4mm
	27mm		1.4mm	27mm	29.8mm
	28mm		1.2mm	28mm	30.4mm
	29mm		.9mm	29mm	30.8mm
	30mm		.7mm	30mm	31.4mm

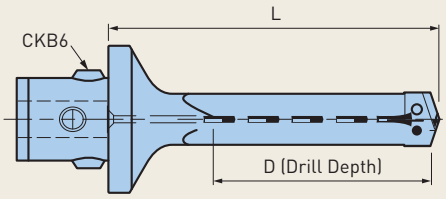
OFF-AXIS USE OF INDEXABLE INSERT DRILLS

SERIES 336

Insert Size	Drill ØD	Adjustable Range		Bore Diameter	
		–Z	+Z	Min	Max
WC..03	.750	.010	.060	.730	.870
	.781	.010	.050	.761	.881
	.812	.010	.040	.792	.892
WC..04	.845	.010	.080	.825	1.005
	.875	.010	.070	.855	1.015
	.906	.010	.060	.886	1.026
	.938	.010	.050	.918	1.038
	.968	.010	.040	.948	1.048
	1.000	.010	.030	.980	1.060
WC..05	1.031	.010	.100	1.011	1.231
	1.063	.010	.090	1.043	1.243
	1.094	.010	.080	1.074	1.254
	1.125	.010	.070	1.105	1.265
	1.156	.010	.060	1.136	1.276
	1.188	.010	.050	1.168	1.288
WC..06	1.219	.010	.140	1.199	1.499
	1.250	.010	.130	1.230	1.510
	1.312	.010	.120	1.292	1.552
	1.375	.010	.100	1.355	1.575
	1.438	.010	.080	1.418	1.598
	1.500	.010	.070	1.480	1.640
	1.563	.010	.050	1.543	1.663
	1.625	.010	.040	1.605	1.705
	1.688	.010	.020	1.668	1.728
WC..08	1.750	.020	.150	1.710	2.050
	1.812	.020	.140	1.772	2.092
	1.875	.020	.130	1.835	2.135
	1.938	.020	.120	1.898	2.178
	2.000	.020	.100	1.960	2.200
	2.063	.020	.080	2.023	2.223
	2.125	.020	.070	2.085	2.265
	2.188	.020	.050	2.148	2.288
	2.250	.020	.040	2.210	2.330
	2.312	.020	.020	2.272	2.352
	2.375	.020	.010	2.335	2.395
WC..10	2.438	.020	.160	2.398	2.758
	2.500	.020	.150	2.460	2.800
	2.625	.020	.120	2.585	2.865
	2.750	.020	.090	2.710	2.930
	2.875	.020	.060	2.835	2.995
	3.000	.020	.030	2.960	3.060

SPADE DRILL—HOLDERS & BLADES





Drill Diameter +.005 -.000	HSS Grade	SC Grade	4 x Diameter	L	D Max
.531	—	11.341.025	11.340.604 Designation KSD 0x13-17/62xCK6 Insert Screws 11.341.901	4.790	2.438
.562	—	11.341.026			
.594	—	11.341.027			
.625	—	11.341.028	11.340.614 Designation KSD 0.5x15-17/62xCK6 Insert Screws 11.341.902	4.790	2.438
.656	—	11.341.029			
.688	—	11.341.030			
.719	11.341.101	11.341.125	11.340.624 Designation KSD 1x18-24/84xCK6 Insert Screws 11.341.902	5.800	3.312
.750	11.341.102	11.341.126			
.781	11.341.103	11.341.127			
.812	11.341.104	11.341.128			
.844	11.341.105	11.341.129			
.875	11.341.106	11.341.130	11.340.634 Designation KSD 1.5x22-24/84xCK6 Insert Screws 11.341.904	5.800	3.312
.906	11.341.107	11.341.131			
.934	11.341.108	11.341.132			
1.000	11.341.202	11.341.226	11.340.644 Designation KSD 2x25-35/119xCK6 Insert Screws 11.341.905	7.180	4.688
1.062	11.341.204	11.341.228			
1.125	11.341.206	11.341.230			
1.188	11.341.208	11.341.232	11.340.654 Designation KSD 2.5x30-35/119xCK6 Insert Screws 11.341.905	7.180	4.688
1.250	11.341.210	11.341.234			
1.312	11.341.212	11.341.236			
1.375	11.341.214	11.341.238			
1.438	11.341.302	11.341.326	11.340.664 Designation KSD 3x36-47/167xCK6 Insert Screws 11.341.906	9.650	6.562
1.500	11.341.304	11.341.328			
1.562	11.341.306	11.341.330			
1.625	11.341.308	11.341.332			
1.688	11.341.310	11.341.334			
1.750	11.341.312	11.341.336			
1.812	11.341.314	11.341.338			
1.875	11.341.316	11.341.340			
2.000	11.341.404	11.341.428	11.340.674 Designation KSD 4x48-65/227xCK6 Insert Screws 11.341.906	12.060	8.938
2.125	11.341.408	11.341.432			
2.250	11.341.412	11.341.436			
2.375	11.341.416	11.341.440			
2.500	11.341.420	11.341.444			

SPADE DRILL—APPLICATION GUIDELINES

Material	Material Hardness (BHN)	SFM	Feed (IPR)				
			.531"-.688"	.688"-1.000"	1.000"-1.250"	1.250"-2.000"	2.000"-2.500"
Free Machining Steel 1118, 1215, 12L14, etc.	100-150	200	.010	.013	.016	.020	.025
	150-200	180	.010	.013	.016	.020	.025
	200-250	160	.010	.013	.016	.020	.025
Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85-125	170	.009	.012	.015	.020	.025
	125-175	160	.009	.012	.015	.020	.025
	175-225	150	.008	.010	.014	.018	.022
	225-275	140	.008	.010	.014	.018	.022
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125-175	160	.009	.012	.015	.020	.025
	175-225	150	.008	.010	.014	.018	.022
	225-275	140	.008	.010	.014	.018	.022
	275-325*	130	.007	.009	.012	.016	.020
Alloy Steel 4140, 5140, 8640, etc.	125-175	150	.008	.010	.014	.017	.020
	175-225	140	.008	.010	.014	.017	.020
	225-275	130	.007	.010	.014	.017	.020
	275-325*	120	.006	.009	.012	.015	.018
	325-375*	110	.006	.009	.012	.015	.018
High Strength Alloy 4340, 4330V, 300M, etc.	225-300*	80	.007	.009	.010	.014	.018
	300-350*	60	.007	.009	.010	.014	.018
	350-400*	50	.006	.008	.009	.012	.016
Structural Steel A36, A285, A516, etc.	100-150	140	.010	.012	.014	.018	.022
	150-250	120	.009	.010	.012	.016	.020
	250-350*	100	.008	.009	.010	.014	.017
High Temp. Alloy Hastelloy B, Inconel 600, etc.	140-220*	30	.007	.008	.010	.012	.015
	220-310*	25	.006	.007	.080	.010	.012
Stainless Steel 310, 316, 330, 17-4 PH, etc.	135-185	75	.008	.009	.011	.014	.016
	185-275	60	.007	.008	.010	.012	.014
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	150-200	80	.006	.008	.010	.012	.015
	200-250	60	.006	.008	.010	.012	.015
Aluminum	30	600	.013	.016	.022	.030	.035
	180	300	.013	.016	.022	.030	.035
Cast Iron (TiN Coated HSS Tools)	120-150	170	.012	.016	.020	.024	.028
	150-200	150	.011	.014	.018	.022	.026
	200-220	130	.009	.012	.016	.018	.022
	220-260*	110	.007	.009	.012	.014	.017
	260-320*	90	.006	.007	.009	.011	.014

***SC grade recommended**
- Reductions in speed may be required due to excessive tool wear
- Always use an ample supply of coolant through the tool

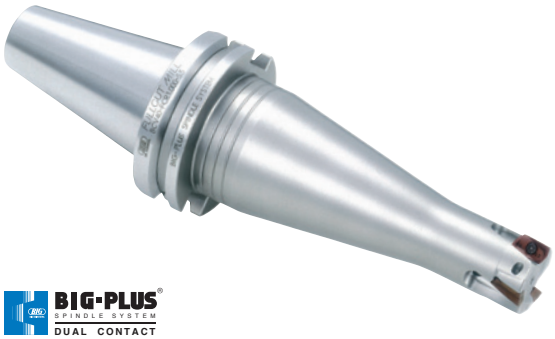
Formulas: IPM = RPM x IPR SFM = $\frac{\text{RPM x Drill Ø}}{3.82}$ RPM = $\frac{\text{SFM x 3.82}}{\text{Drill Ø}}$

The speeds and feeds listed above are only a starting point. Contact our engineering department if you require assistance. Please have item number, hole diameter, depth, material grade, BHN hardness and coolant pressure information available when you call. Additional information such as part and machine rigidity, horsepower and thrust limits, vertical or horizontal spindle, revolving or stationary tool, flood or through holder coolant are also very helpful to our Application Engineers when you require their best recommendation.

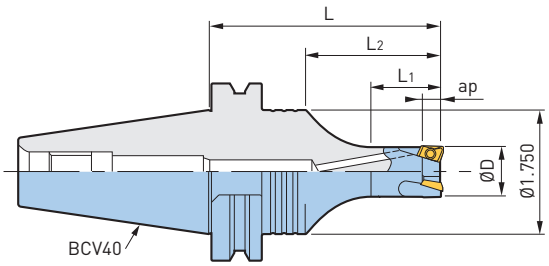
The above recommendations are based on adequate coolant flow, machine rigidity, horsepower and thrust capability.

Wear protective eye glasses and use machine protective shields.

FULLCUT MILL—TYPE FCR, INCH STYLE (ASME B5.50-1994)



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



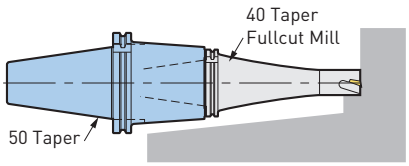
Catalog Number	ØD	ap	L	L1	L2	No. of Inserts	Insert Model	Weight (lbs.)
BCV40-FCR.750-5.5	.750	.315	5.500	1.250	4.120	3	BRG200808	3.8
BCV40-FCR1.000-5.5	1.000	.315	5.500	1.500	4.120	3	BRG250808	4.0
BCV40-FCR1.250-5.5	1.250	.394	5.500	1.500	4.120	3	BRG3210□□	4.2

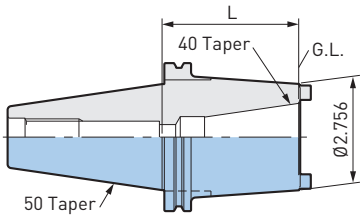
- ap = length of effective cutting edge
- Inserts must be ordered separately

ACCESSORIES

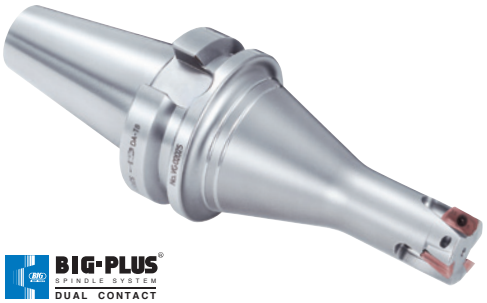
50 TAPER SHANK ADAPTER

Catalog Number	L
BCV50-BCV40-2	2.000

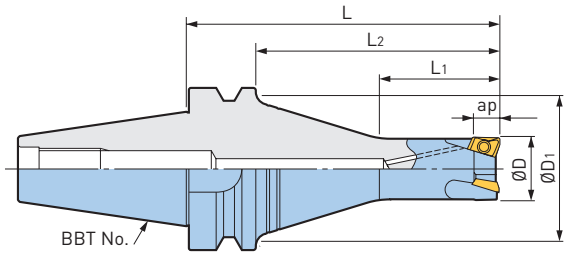




FULLCUT MILL—TYPE FCR, METRIC STYLE (MAS 403)



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



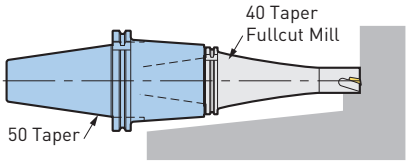
Catalog Number	ØD	ØD1	ap	L	L1	L2	No. of Inserts	Insert Model	Weight (lbs.)
BBT30-FCR16082-65	16mm (.630)	1.575	.315	2.559	1.102	1.693	2	BRG160808	1.1
BBT30-FCR20083-65	20mm (.787)			2.559	1.102	1.693	3	BRG200808	1.1
BBT30-FCR25083-65	25mm (.984)			2.559	1.299	1.693		BRG250808	1.2
BBT30-FCR32103-65	32mm (1.260)		.394	2.559	1.575	1.693		BRG3210□□	1.3
BBT40-FCR16082-85	16mm (.630)	2.362	.315	3.346	.984	2.283	2	BRG160808	2.9
BBT40-FCR16082-120				4.724	1.181	3.661			3.3
BBT40-FCR16082-135				5.315	.984	4.252			3.5
BBT40-FCR20083-85	20mm (.787)	2.362	.315	3.346	1.378	2.283	3	BRG200808	2.7
BBT40-FCR20083-120				4.724	1.181	3.661			3.5
BBT40-FCR20083-135				5.315	1.181	4.252			3.8
BBT40-FCR25083-85	25mm (.984)	2.362	.315	3.346	1.575	2.283	3	BRG250808	2.9
BBT40-FCR25083-120				4.724	1.772	3.661			3.5
BBT40-FCR25083-135				5.315	1.378	4.252			4.0
BBT40-FCR32103-85	32mm (1.260)	2.362	.394	3.346	1.772	2.283	3	BRG3210□□	3.1
BBT40-FCR32103-120				4.724	1.969	3.661			3.8
BBT40-FCR32103-135				5.315	1.575	4.252			4.2

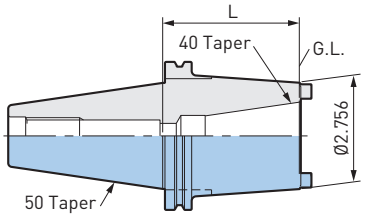
- ap = length of effective cutting edge
- Inserts must be ordered separately

ACCESSORIES

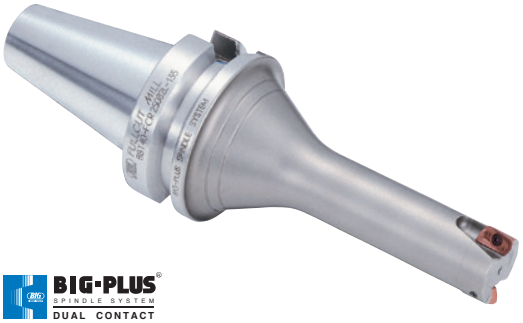
50 TAPER SHANK ADAPTER

Catalog Number	L
BBT50-BBT40-50	1.969
BBT50-BBT40-90	3.543

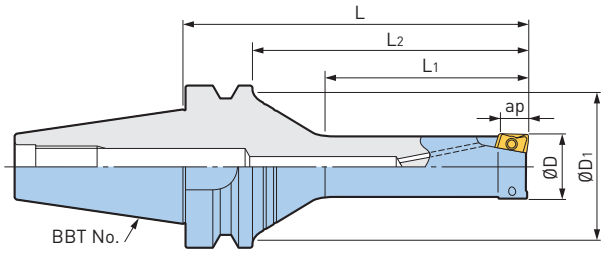




FULLCUT MILL—TYPE FCR LONG NOSE, METRIC STYLE (MAS 403)



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



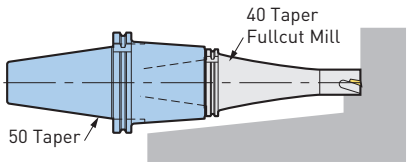
Catalog Number	ØD	ØD1	ap	L	L1	L2	No. of Inserts	Insert Model	Weight (lbs.)
BBT30-FCR16082L-85	16mm (.630)	1.575	.315	3.346	1.772	2.480	2	BRG160808	.2
BBT30-FCR20082L-85	20mm (.787)			3.346	1.969	2.480		BRG200808	.2
BBT30-FCR25082L-85	25mm (.984)			3.346	1.969	2.480		BRG250808	.3
BBT30-FCR32102L-85	32mm (1.260)		.394	3.346	2.362	2.480		BRG3210□□	.3
BBT40-FCR16082L-105	16mm (.630)	2.362	.315	4.134	1.772	3.071	2	BRG160808	.6
BBT40-FCR16082L-120				4.724	1.772	3.661			.6
BBT40-FCR20082L-120	20mm (.787)	2.362	.315	4.724	2.362	3.661	2	BRG200808	.6
BBT40-FCR20082L-135				5.315	2.362	4.252			.7
BBT40-FCR25082L-135	25mm (.984)	2.362	.315	5.315	2.953	4.252	2	BRG250808	.7
BBT40-FCR25082L-150				5.906	2.953	4.843			.8
BBT40-FCR32102L-135	32mm (1.260)	2.362	.394	5.315	3.150	4.252	2	BRG3210□□	.8
BBT40-FCR32102L-150				5.906	3.543	4.843			.9

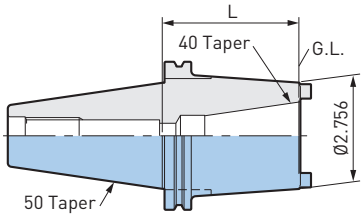
- ap = length of effective cutting edge
- Inserts must be ordered separately

ACCESSORIES

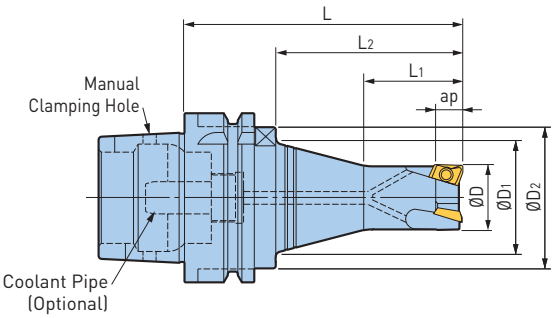
50 TAPER SHANK ADAPTER

Catalog Number	L
BBT50-BBT40-50	1.969
BBT50-BBT40-90	3.543





FULLCUT MILL—TYPE FCR, METRIC STYLE (HSK)

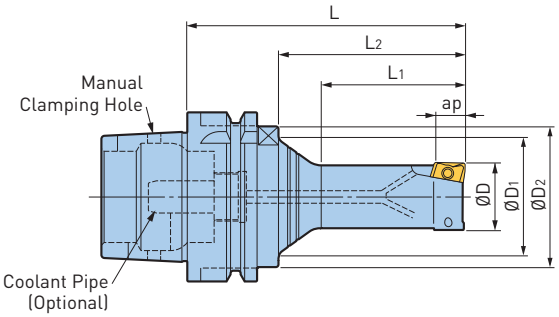


Catalog Number	ØD	ØD1	ØD2	ap	L	L1	L2	No. of Inserts	Insert Model	Weight (lbs.)
HSK-A50-FCR16082-75	16mm (.630)	1.260	1.654	.315	2.953	1.063	1.614	2	BRG160808	1.1
HSK-A50-FCS20083-75	20mm (.787)				2.953	1.102	1.614	3	BRG200808	1.3
HSK-A50-FCS25083-75	25mm (.984)				2.953	1.299	1.614		BRG250808	1.3
HSK-A50-FCS32103-75	32mm (1.260)	1.319		.394	2.953	1.535	1.614		BRG3210□□	1.5
HSK-A63-FCR16082-85	16mm (.630)	1.772	2.087	.315	3.346	.984	2.008	2	BRG160808	2.0
HSK-A63-FCR16082-120					4.724	1.181	3.386			2.4
HSK-A63-FCR16082-135					5.315	.984	3.976			2.6
HSK-A63-FCR20083-85	20mm (.787)	1.772	2.087	.315	3.346	1.260	2.008	3	BRG200808	2.2
HSK-A63-FCR20083-120					4.724	1.181	3.386			2.6
HSK-A63-FCR20083-135					5.315	1.181	3.976			2.9
HSK-A63-FCR25083-85	25mm (.984)	1.772	2.087	.315	3.346	1.378	2.008	3	BRG250808	2.2
HSK-A63-FCR25083-120					4.724	1.772	3.386			2.6
HSK-A63-FCR25083-135					5.315	1.378	3.976			3.1
HSK-A63-FCR32103-85	32mm (1.260)	1.772	2.087	.394	3.346	1.575	2.008	3	BRG3210□□	2.4
HSK-A63-FCR32103-120					4.724	1.969	3.386			3.1
HSK-A63-FCR32103-135					5.315	1.575	3.976			3.3

- ap = length of effective cutting edge
- Coolant pipe and inserts must be ordered separately

ACCESSORIES

FULLCUT MILL—TYPE FCR LONG NOSE, METRIC STYLE (HSK)

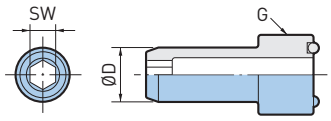


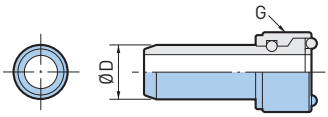
Catalog Number	ØD	ØD1	ØD2	ap	L	L1	L2	No. of Inserts	Insert Model	Weight (lbs.)
HSK-A63-FCR16082L-85	16mm (.630)	1.772	2.087	.315	3.346	1.575	2.008	2	BRG160808	2.0
HSK-A63-FCR16082L-120					4.724	1.771	3.386			2.2
HSK-A63-FCR20082L-105	20mm (.787)	1.772	2.087	.315	4.134	1.969	2.795	2	BRG200808	2.4
HSK-A63-FCR20082L-120					4.724	2.362	3.386			2.6
HSK-A63-FCR25082L-105	25mm (.984)	1.772	2.087	.315	4.134	2.165	2.795	2	BRG250808	2.4
HSK-A63-FCR25082L-120					4.724	2.559	3.386			2.4
HSK-A63-FCR32102L-120	32mm (1.260)	1.772	2.087	.394	4.724	2.756	3.386	2	BRG3210□□	3.1
HSK-A63-FCR32102L-135					5.315	3.150	3.976			3.1

- ap = length of effective cutting edge
- Coolant pipe and inserts must be ordered separately

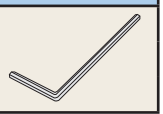
ACCESSORIES

COOLANT PIPE

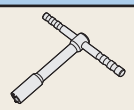




MONO BLOCK TYPE

Catalog Number	ØD	G	SW	
HSK40-CP	.315	M12 P1	4mm	
HSK50-CP	.394	M16 P1	5mm	
HSK63-CP	.472	M18 P1	6mm	

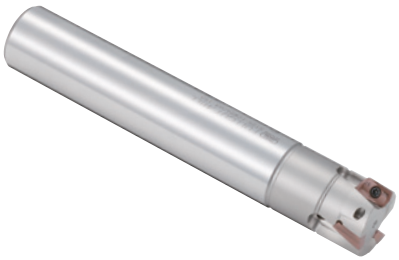
1º SWING TYPE

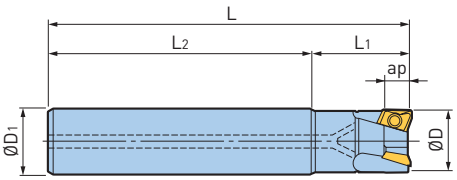
Catalog Number	ØD	G	Wrench	
HSK40-CPM	.315	M12 P1	CPW40	
HSK50-CPM	.394	M16 P1	CPW50	
HSK63-CPM	.472	M18 P1	CPW63	

CAUTION

DIN standard specifies ±1 degree of float. For proper installation, the special wrench is necessary. For machines capable of supplying coolant through the spindle, the coolant pipe should be fitted to all HSK holders to protect against accidental selection of coolant.

FULLCUT MILL—TYPE FCR STRAIGHT SHANK, INCH STYLE





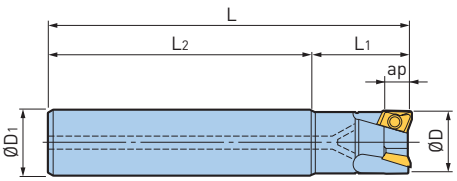
Catalog Number	ØD	ØD1	ap	L	L1	L2	No. of Inserts	Insert Model	Weight (lbs.)
ST.750-FCR.750-4	.750	.750	.315	4.000	1.250	2.750	3	BRG200808	.5
ST1.000-FCR1.000-5	1.000	1.000	.315	5.000	1.500	3.500	3	BRG250808	1.1
ST1.250-FCR1.250-5	1.250	1.250	.394	5.000	1.500	3.500	3	BRG3210□□	1.7

- ap = length of effective cutting edge
- Inserts must be ordered separately

ACCESSORIES

FULLCUT MILL—TYPE FCR OVERSIZE, METRIC STYLE

Cutter diameter is Ø1mm larger than the shank diameter to avoid any interference with the workpiece.



CUTTER DIAMETER

ØD=ØD1+1mm

Catalog Number	ØD	ØD1	ap	L	L1	L2	No. of Inserts	Insert Model	Weight (lbs.)
ST15-FCR16082-120	16mm (.630)	15mm (.591)	.315	4.724	.984	3.740	2	BRG160808	.4
ST16-FCR17082-120	17mm (.670)	16mm (.630)	.315	4.724	.984	3.740	2	BRG160808	.4
ST19-FCR20082-165	20mm (.787)	19mm (.748)	.315	6.496	1.181	5.315	2	BRG200808	.9
ST19-FCR20083-135				5.315		4.134	3		.7
ST20-FCR21082-165	21mm (.827)	20mm (.787)	.315	6.496	1.181	5.315	2	BRG200808	.9
ST20-FCR21083-135				5.315		4.134	3		.7
ST24-FCR25082-180	25mm (.984)	24mm (.945)	.315	7.087	1.378	5.709	2	BRG250808	1.5
ST24-FCR25083-150				5.906		4.528	3		1.3
ST25-FCR26082-165	26mm (1.024)	25mm (.984)	.315	6.496	1.496	5.000	2	BRG250808	1.3
ST25-FCR26083-150				5.906		4.409	3		1.3
ST28-FCR32102-180	32mm (1.260)	28mm (1.102)	.394	7.087	1.890	5.197	2	BRG3210□□	2.4
ST28-FCR32103-180				7.087		5.197	3		2.2
ST32-FCR33102-180	33mm (1.299)	32mm (1.260)	.394	7.087	1.890	5.197	2	BRG3210□□	2.4
ST32-FCR33103-180				7.087		5.197	3		2.2

- ap = length of effective cutting edge
- Inserts must be ordered separately

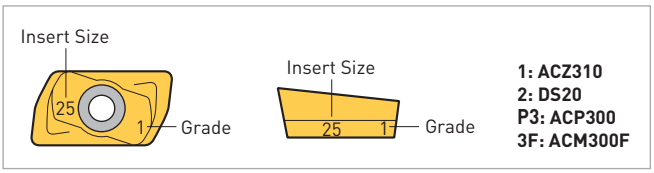
ACCESSORIES

FULLCUT MILL—TYPE FCR INDEXABLE INSERTS

INSERT CLASSIFICATIONS

ISO Material	Grade	Material	Coating
P30	ACP300	General Steel	TiAlN / TiCN
M30	ACM300F	Stainless Steel	
K10	ACZ310	Cast Iron	
N20	DS20	Aluminum	DLC

MARKING DESCRIPTION



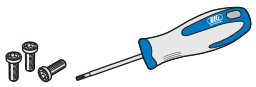
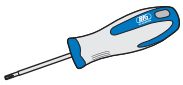
Cutter Dia.		Insert Model	Effective Cutting Length (ap)	Nose Radius	P	M	K	N
					ACP300	ACM300F	ACZ310	DS20
in	mm				General Steel	Stainless Steel	Cast Iron	Aluminum
.625	16-17	**BRG160808**	.315	.031	○	○	○	○
.750	20-21	**BRG200808**			○	○	○	○
1.000	25-26	**BRG250808**			○	○	○	○
1.250	32-33	**BRG321008**	.394	.031	○	○	○	○
		BRG321032		.125	—	—	—	○

- Inserts are available in packages of 10 pcs.
- Please clarify the insert model and grade when ordering (ex: BRG160808ACZ350S)

CAUTION

FULLCUT MILL uses a different insert for each cutter diameter and if an incorrect insert is used, a problem will result. There is no compatibility with those of Type FCM.

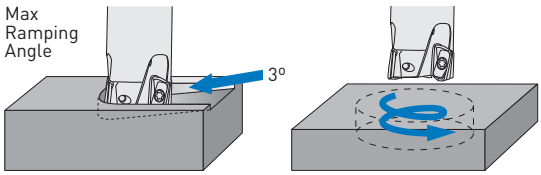
FULLCUT MILL—TYPE FCR SPARE PARTS

			Insert Clamping Screw Set (10 Screws & 1 Wrench)	**Wrench**
				
Cutter Dia.		Insert Model	Catalog Number	Catalog Number
in	mm			
.625	16-17	BRG160808	**S2506DS**	**DA-T8**
.750	20-21	BRG200808		
1.000	25-26	BRG250808		
1.250	32-33	BRG3210□□	**S3508DS**	**DA-T15**

- It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained

CUTTING DATA FULLCUT MILL—TYPE FCR

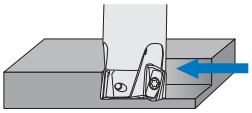
RAMPING AND HELICAL INTERPOLATION



ØD	Flat Bottom		Through Hole
	Max Hole Ø	Min Hole Ø	Min Hole Ø
.625 (16mm)	1.181	1.063	.866
.750 (20mm)	1.496	1.417	1.142
1.000 (25mm)	1.890	1.772	1.535
1.250 (32mm)	2.441	2.323	1.890

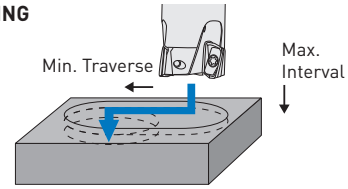
ØD	Work Material	Carbon Steel Alloy Steel	Unalloyed Steel	Prehardened Steel <HRC40	Stainless Steel	Die Steel	Cast Iron	Aluminum
	Insert Grade	ACP300		ACM300F			ACZ310	DS20
	Cutting Fluid	Dry		Dry	Dry	Dry		Dry/Wet
.630 (16mm) .669 (17mm)	Speed (SFM)	330-655	490-720	195-260	330-490	195-260	330-590	655-3280
	Feed (IPT)	.002-.005	.002-.005	.002-.003	.003-.006	.002-.004	.003-.007	.002-.009
.750 (20mm) 1.024 (26mm)	Speed (SFM)	330-655	490-655	195-330	395-490	195-330	330-590	655-3280
	Feed (IPT)	.003-080	.003-.008	.002-.004	.005-.008	.002-.004	.001-.007	.004-.014
1.250 (32mm) 1.299 (33mm)	Speed (SFM)	330-655	490-655	195-330	395-490	195-395	330-590	655-3280
	Feed (IPT)	.003-.0080	.003-.008	.002-.004	.005-.008	.003-.005	.002-.008	.004-.014

SHOULDERING AND SLOTTING



ØD	Work Material	Carbon Steel Alloy Steel	Unalloyed Steel	Prehardened Steel <HRC40	Stainless Steel	Die Steel	Cast Iron	Aluminum
	Insert Grade	ACP300		ACM300F			ACZ310	DS20
	Cutting Fluid	Dry		Dry	Dry	Dry		Dry/Wet
.625 (16mm) .827 (21mm)	Speed (SFM)	330-655	330-655	195-260	395-590	260-395	330-590	655-3280
	Feed (IPT)	.003-.007	.003-.007	.002-.004	.005-.007	.003-.005	.003-.007	.004-.012
1.000 (25mm) 1.299 (33mm)	Speed (SFM)	330-655	330-655	195-330	395-590	260-395	330-590	655-4920
	Feed (IPT)	.003-.008	.003-.008	.002-.004	.005-.008	.003-.005	.003-.008	.004-.014

PLUNGE MILLING



ØD	Max Interval	Min Traverse
.625 (16mm)	.020	.551
.750 (20mm)	.040	.709
1.000 (25mm)	.040	.906
1.250 (32mm)	.079	1.181

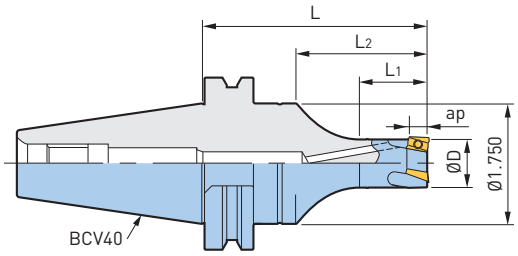
ØD	Work Material	Carbon Steel Alloy Steel	Unalloyed Steel	Prehardened Steel <HRC40	Stainless Steel	Die Steel	Cast Iron	Aluminum
	Insert Grade	ACP300		ACM300F			ACZ310	DS20
	Cutting Fluid	Dry/Air Blow		Dry/Air Blow	Dry/Air Blow	Dry/Air Blow		Air/Wet
.630 (16mm) .669 (17mm)	Speed (SFM)	260-395	260-395	197	260-395	197-262	260-525	655-1150
	Feed (IPR)	.002-.004	.002-.004	.001-.002	.002-.003	.002-.003	.002-.004	.002-.004
.750 (20mm) 1.024 (26mm)	Speed (SFM)	330-525	330-525	197-328	330-525	197-328	260-590	655-1640
	Feed (IPR)	.004-.001	.004-.001	.004-.001	.005-.001	.004-.008	.003-.012	.004-.012
1.250 (32mm) 1.299 (33mm)	Speed (SFM)	330-525	330-525	197-328	330-525	197-328	260-590	655-1970
	Feed (IPR)	.004-.012	.004-.012	.001-.012	.0047-.0118	.004-.008	.003-.016	.004-.012

CAUTION

This table is a guideline for selecting cutting parameters. Adjust them as needed according to the machine and workpiece conditions. Be sure to use safety enclosures, as chips may scatter. Do not use oil-based cutting fluid, as there is a risk of fire. Dry cutting is recommended for stainless steel as well; however, wet cutting may extend insert life in case severe built-up edge occurs.

FULLCUT MILL—TYPE FCM, INCH STYLE (ASME B5.50-1994)

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



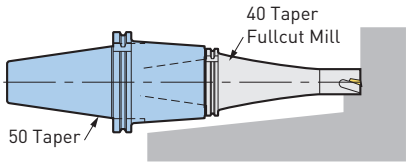
Catalog Number	ØD	ap	L	L1	L2	No. of Inserts	Insert Model	Weight (lbs.)
BCV40-FCM.750-3	.750	.354	3.000	1.000	1.620	3	ARG2009□□	2.6
BCV40-FCM.750-5			5.000	1.000	3.620			3.1
BCV40-FCM1.000-3	1.000	.354	3.000	1.000	1.620	3	ARG2509□□	2.6
BCV40-FCM1.000-5			5.000	1.750	3.620			3.5
BCV40-FCM1.250-3	1.250	.433	3.000	1.250	1.620	3	ARG3211□□	2.9
BCV40-FCM1.250-5			5.000	2.250	3.620			3.7
BCV40-FCM1.500-3	1.500	.433	3.000	1.500	1.620	4	ARG4011□□	3.1
BCV40-FCM1.500-5			5.000	2.500	3.620			4.4
BCV40-FCM2.000-3	2.000	.433	3.000	2.250	—	5		3.5

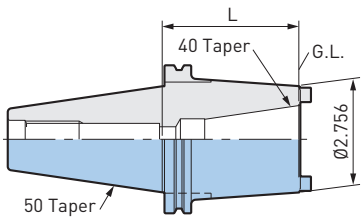
- ap = length of effective cutting edge
- Inserts must be ordered separately

ACCESSORIES

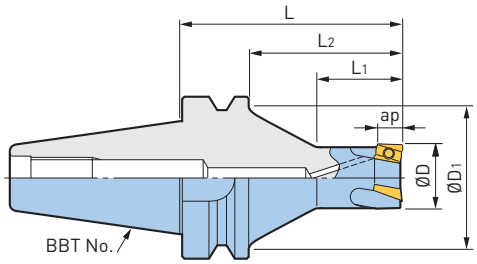
50 TAPER SHANK ADAPTER

Catalog Number	L
BCV50-BCV40-2	2.000





FULLCUT MILL—TYPE FCM, INCH & METRIC STYLE (MAS 403)



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	ØD	ØD1	ap	L	L1	L2	No. of Inserts	Insert Model	Weight (lbs.)
BBT30-FCM.625-2.5	.625	1.575	.354	2.500	1.000	1.634	2	ARG1609□□	1.1
BBT30-FCM.750-2.5	.750			2.500	1.250	1.634	3	ARG2009□□	1.1
BBT30-FCM1.000-2.5	1.000			2.500	1.250	1.634		ARG2509□□	1.2
BBT30-FCM1.250-2.5	1.250		.433	2.500	1.500	1.634		ARG3211□□	1.3
BBT30-FCM1.500-2	1.500	1.445		2.000	1.000	1.110	4	ARG4011□□	1.3
BBT30-FCM2.000-2	2.000	1.800		2.000	1.000	1.110	5		1.6
BBT30-FCM16092-65	16mm (.630)	1.525	.354	2.559	.906	1.693	2	ARG1609□□	1.1
BBT30-FCM20093-65	20mm (.787)			2.559	1.102	1.693		ARG2009□□	1.1
BBT30-FCM25093-65	25mm (.984)			2.559	1.299	1.693	3	ARG2509□□	1.2
BBT30-FCM32113-65	32mm (1.260)	1.614	.433	2.559	1.496	1.693		ARG3211□□	1.3
BBT30-FCM40114-50	40mm (1.575)	1.811		1.969	.984	1.102	4	ARG4011□□	1.3
BBT30-FCM50115-50	50mm (1.969)			1.969	1.102	1.102	5		1.6
BBT40-FCM16092-85	16mm (.630)	2.165	.354	3.346	.906	2.283	2	ARG1609□□	2.6
BBT40-FCM16092-105		2.283		4.134	1.181	3.071			2.9
BBT40-FCM16092-120		2.362		4.724	.984	3.661			3.1
BBT40-FCM16092-150				5.906	.984	4.843			3.7
BBT40-FCM20093-85	20mm (.787)	2.165	.354	3.346	1.102	2.283	3	ARG2009□□	2.6
BBT40-FCM20093-105		2.283		4.134	1.378	3.071			2.9
BBT40-FCM20093-120		2.362		4.724	1.181	3.661			3.1
BBT40-FCM20093-150				5.906	1.181	4.843			3.7
BBT40-FCM25093-85	25mm (.984)	2.165	.354	3.346	1.299	2.283	3	ARG2509□□	2.6
BBT40-FCM25093-120		2.283		4.724	1.772	3.661			3.1
BBT40-FCM25093-135		2.362		5.315	1.575	4.252			3.5
BBT40-FCM25093-165				6.496	1.575	5.433			4.2
BBT40-FCM32113-85	32mm (1.260)	2.165	.433	3.346	1.496	2.283	3	ARG3211□□	2.9
BBT40-FCM32113-120		2.283		4.724	2.362	3.661			3.3
BBT40-FCM32113-135		2.362		5.315	1.969	4.252			3.7
BBT40-FCM32113-165				6.496	1.575	5.433			4.6
BBT40-FCM40114-85	40mm (1.575)	2.126	.433	3.346	1.693	2.283	4	ARG4011□□	3.1
BBT40-FCM40114-120				4.724	2.559	3.661			3.7
BBT40-FCM40114-135				5.315	2.362	4.252			4.4
BBT40-FCM40114-165				6.496	1.969	5.433			5.3
BBT40-FCM50115-70	50mm (1.969)	2.362	.433	2.756	1.496	1.693	5	ARG4011□□	3.3
BBT40-FCM50115-120				4.724	2.559	3.661			4.8
BBT40-FCM50115-135				5.315	2.362	4.252			5.3
BBT40-FCM50115-165				6.496	1.969	5.433			6.6

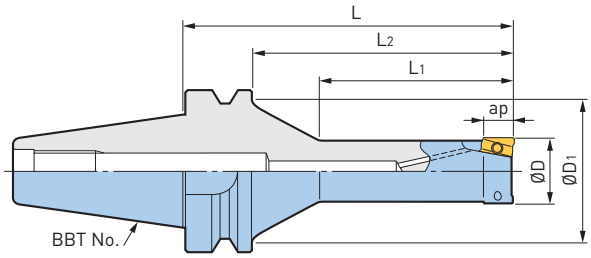
- ap = length of effective cutting edge
- Inserts must be ordered separately

CAUTION

The integral version of the FULLCUT MILL provides increased rigidity as a result of the reduced gage length. It is particularly recommended for use in machines having a small spindle taper. Additionally, there is a cost savings as no tool holder is necessary.

ACCESSORIES

FULLCUT MILL—TYPE FCM LONG NOSE, METRIC STYLE (MAS 403)



BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	ØD	ØD1	ap	L	L1	L2	No. of Inserts	Insert Model	Weight (lbs.)
BBT30-FCM16092L-85	16mm (.630)	1.575	.354	3.346	1.772	2.480	2	ARG1609□□	1.1
BBT30-FCM20092L-85	20mm (.787)			3.346	1.969	2.480		ARG2009□□	1.2
BBT30-FCM25092L-85	25mm (.984)			3.346	1.969	2.480		ARG2509□□	1.4
BBT30-FCM32112L-85	32mm (1.260)		.433	3.346	2.362	2.480		ARG3211□□	1.6
BBT40-FCM16092L-105	16mm (.630)	2.362	.354	4.134	1.772	3.071	2	ARG1609□□	2.9
BBT40-FCM16092L-120				4.724	1.772	3.661			3.1
BBT40-FCM20092L-120	20mm (.787)	2.362	.354	4.724	2.362	3.661	2	ARG2009□□	3.1
BBT40-FCM20092L-135				5.315	2.362	4.252			3.3
BBT40-FCM25092L-135	25mm (.984)	2.362	.354	5.315	2.953	4.252	2	ARG2509□□	3.3
BBT40-FCM25092L-150				5.906	2.953	4.843			3.7
BBT40-FCM32112L-135	32mm (1.260)	2.362	.433	5.315	3.150	3.661	2	ARG3211□□	3.7
BBT40-FCM32112L-150				5.906	3.543	4.843			4.2

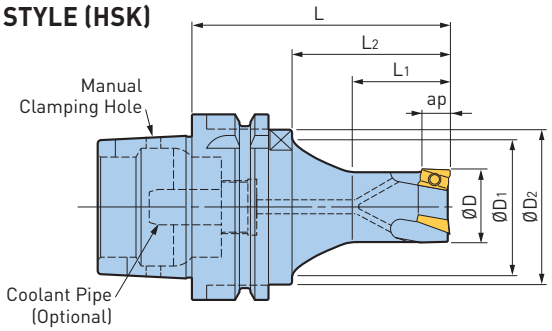
- ap = length of effective cutting edge
- Inserts must be ordered separately

ACCESSORIES

CAUTION

The integral version of the FULLCUT MILL provides increased rigidity as a result of the reduced gage length. It is particularly recommended for use in machines having a small spindle taper. Additionally, there is a cost savings as no tool holder is necessary.

FULLCUT MILL—TYPE FCM, METRIC STYLE (HSK)

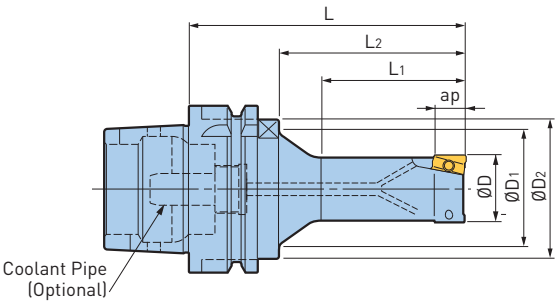


Catalog Number	ØD	ØD1	ØD2	ap	L	L1	L2	No. of Inserts	Insert Model	Weight (lbs.)
HSK-A40-FCM16092-65	16mm (.630)	.984	1.339	.354	2.560	.906	1.457	2	ARG1609□□	.7
HSK-A40-FCM20093-65	20mm (.787)					1.102		3	ARG2009□□	.7
HSK-A40-FCM25093-65	25mm (.984)					1.378			ARG2509□□	.9
HSK-A40-FCM32113-65	32mm (1.260)	1.213		.433					ARG3211□□	1.1
HSK-A40-FCM40114-65	40mm (1.575)	—	—			1.772	—	4	ARG4011□□	1.3
HSK-A40-FCM50115-65	50mm (1.969)							5		1.5
HSK-A50-FCM16092-75	16mm (.630)	1.260	1.654	.354	2.953	.906	1.614	2	ARG1609□□	1.3
HSK-A50-FCM20093-75	20mm (.787)					1.102		3	ARG2009□□	1.3
HSK-A50-FCM25093-75	25mm (.984)					1.299			ARG2509□□	1.3
HSK-A50-FCM32113-75	32mm (1.260)	1.331		.433		1.535			ARG3211□□	1.5
HSK-A50-FCM40114-75	40mm (1.575)	—	—			1.890	—	4	ARG4011□□	2.0
HSK-A50-FCM50115-75	50mm (1.969)							5		2.2
HSK-A63-FCM16092-85	16mm (.630)	1.811	2.087	.354	3.346	.906	2.008	2	ARG1609□□	2.0
HSK-A63-FCM16092-105					4.134	1.181	2.795			2.2
HSK-A63-FCM16092-120					4.720	.984	3.386			2.4
HSK-A63-FCM16092-150					5.906	.984	4.567			2.9
HSK-A63-FCM20093-85	20mm (.787)	1.811	2.087	.354	3.346	1.102	2.008	3	ARG2009□□	2.2
HSK-A63-FCM20093-105					4.134	1.378	2.795			2.4
HSK-A63-FCM20093-120					4.724	1.181	3.386			2.6
HSK-A63-FCM20093-150					5.906	1.181	4.567			3.1
HSK-A63-FCM25093-85	25mm (.984)	1.811	2.087	.354	3.346	1.299	2.008	3	ARG2509□□	2.2
HSK-A63-FCM25093-120					4.724	1.772	3.386			2.6
HSK-A63-FCM25093-135					5.315	1.575	3.976			2.9
HSK-A63-FCM25093-165					6.496	1.575	5.157			3.3
HSK-A63-FCM32113-85	32mm (1.260)	1.811	2.087	.433	3.346	1.496	2.008	3	ARG3211□□	2.4
HSK-A63-FCM32113-120					4.724	2.362	3.386			2.9
HSK-A63-FCM32113-135					5.315	1.969	3.976			3.1
HSK-A63-FCM32113-165					6.496	1.575	5.157			3.7
HSK-A63-FCM40114-85	40mm (1.575)	1.811	2.087	.433	3.346	1.693	2.008	4	ARG4011□□	2.9
HSK-A63-FCM40114-120					4.724	2.559	3.386			3.3
HSK-A63-FCM40114-135					5.315	2.362	3.976			3.7
HSK-A63-FCM40114-165					6.496	1.969	5.157			4.6
HSK-A63-FCM50115-70	50mm (1.969)	—	2.087	.433	2.756	1.575	1.102	5	ARG4011□□	2.9
HSK-A63-FCM50115-120					4.724	3.071	3.071			4.2
HSK-A63-FCM50115-135					5.315	3.661	3.661			4.8
HSK-A63-FCM50115-165					6.496	4.843	4.843			6.2

- ap = length of effective cutting edge
- Coolant pipe and inserts must be ordered separately

ACCESSORIES

FULLCUT MILL—TYPE FCM LONG NOSE, METRIC STYLE (HSK)



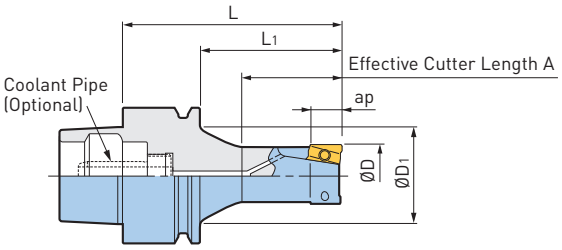
Catalog Number	ØD	ØD1	ØD2	ap	L	L1	L2	No. of Inserts	Insert Model	Weight (lbs.)
HSK-A63-FCM16092L-85	16mm (.630)	1.772	1.969	.354	3.346	1.575	2.008	2	ARG1609□□	2.0
HSK-A63-FCM16092L-120					4.724	1.772	3.386			2.2
HSK-A63-FCM20092L-105	20mm (.787)	1.772	1.969	.354	4.134	1.969	2.795	2	ARG2009□□	2.4
HSK-A63-FCM20092L-120					4.724	2.362	3.386			2.6
HSK-A63-FCM25092L-105	25mm (.984)	1.772	1.969	.354	4.134	2.165	2.795	2	ARG2509□□	2.4
HSK-A63-FCM25092L-120					4.724	2.559	3.386			2.6
HSK-A63-FCM32112L-120	32mm (1.260)	1.772	1.969	.433	4.724	2.756	3.386	2	ARG3211□□	2.9
HSK-A63-FCM32112L-135					5.315	3.150	3.976			3.1

- ap = length of effective cutting edge
- Coolant pipe and inserts must be ordered separately

ACCESSORIES

INSERTS PG. 592

FULLCUT MILL—TYPE FCM (HSK)



Catalog Number	ØD	Effective Cutting Edge Length ap	ØD1	L	L1	A	Number of Inserts	Insert Model	Weight (lbs.)
HSK-E25-FCM16092-45	16mm (.630)	.354	.748	1.77	1.38	.906	2	ARG1609□□	.4
HSK-E32-FCM16091-55	16mm (.630)	.354	1.02	2.17	1.38	.906	2	ARG1609□□	.4
HSK-E40-FCM16091-65	16mm (.630)	.354	1.34	2.56	1.77	1.102	2	ARG1609□□	1.0

• Wrench included; coolant pipe and inserts must be ordered separately

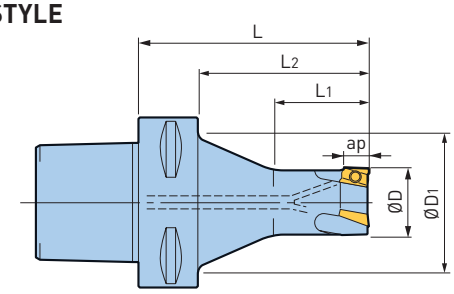
CAUTION

As the HSK-E type interface does not have drive key grooves, there is a risk that it may slip in the machine spindle and damage it if cutting load exceeds clamping force of the machine tool. Starting from the lowest possible conditions, increase them gradually while observing the cutting status, and find the optimum with sufficient safety margin.

ACCESSORIES

INSERTS PG. 592

FULLCUT MILL—TYPE FCM, INCH STYLE



Catalog Number	ØD	ØD1	ap	L	L1	L2	No. of Inserts	Insert Model
C5-FCM16092-65	.630	1.575	.354	2.560	.906	1.772	2	ARG1609□□
C5-FCM16092-90		1.732		3.543	1.181	2.756		
C5-FCM20093-65	.787	1.575	.354	2.560	1.102	1.772	3	ARG2009□□
C5-FCM20093-90		1.732		3.543	1.378	2.756		
C5-FCM25093-65	.984	1.575	.354	2.560	1.299	1.772	3	ARG2509□□
C5-FCM25093-90		1.732		3.543	1.575	2.756		
C5-FCM32113-65	1.26	1.575	.433	2.560	1.496	1.772	3	ARG3211□□
C5-FCM32113-90		1.732		3.543	1.772	2.756		
C5-FCM40114-50	1.575	—	.433	1.969	.984	1.181	4	ARG4011□□
C5-FCM40114-90		1.811		3.543	2.362	2.756		
C5-FCM50115-50	1.969	—	.433	1.969	.984	1.181	5	
C5-FCM50115-90				3.543	2.559	2.756		

• ap = length of effective cutting edge
• Coolant pipe and inserts must be ordered separately
• Metric sizes are available upon request
• C6 is available upon request (metric only)

ACCESSORIES

INSERTS PG. 592

FULLCUT MILL—TYPE FCM STRAIGHT SHANK, INCH & METRIC STYLE

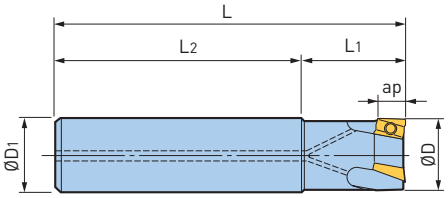


Fig. 1

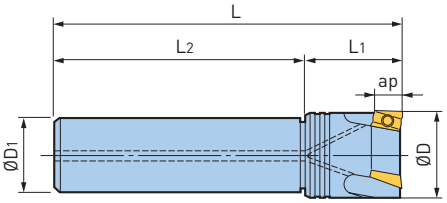


Fig. 2

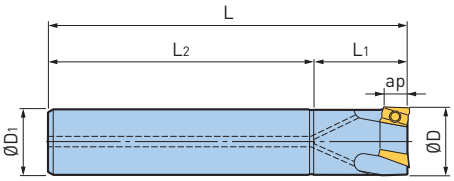
Catalog Number	Fig.	ØD	ØD1	ap	L	L1	L2	No. of Inserts	Insert Model	Weight (lbs.)
ST.750-FCM.750-4	1	.750	.750	.354	4.000	1.250	2.750	3	ARG2009□□	.4
ST1.000-FCM1.000-5	1	1.000	1.000	.354	5.000	1.500	3.500	3	ARG2509□□	.9
ST1.250-FCM1.250-5	1	1.250	1.250	.433	5.000	1.500	3.500	3	ARG3211□□	1.5
ST1.250-FCM1.500-5	2	1.500				1.500	3.500	4	ARG4011□□	1.8
ST1.250-FCM2.000-5		2.000				1.500	3.500	5		2.1
ST16-FCM12091-90	1	12mm (.472)	16mm (.630)	.354	3.543	.591	2.756	1	ARG1609□□	.2
ST16-FCM14091-90		14mm (.551)			3.543	.669	2.756			.2
ST16-FCM16092-90		16mm (.630)			3.543	.984	2.559	2		.2
ST20-FCM20093-110	1	20mm (.787)	20mm (.787)	.354	4.331	1.181	3.150	3	ARG2009□□	.4
ST25-FCM25093-120	1	25mm (.984)	25mm (.984)	.354	4.724	1.378	3.346	3	ARG2509□□	.9
ST32-FCM32113-130	1	32mm (1.260)	32mm (1.260)	.433	5.118	1.378	3.740	3	ARG3211□□	1.5
ST32-FCM40114-130	2	40mm (1.575)				1.575	3.543	4	ARG4011□□	1.8
ST32-FCM40114-180		40mm (1.575)				7.087	5.512			2.6
ST32-FCM50115-130		50mm (1.969)				1.575	3.543	5		2.2

- ap = length of effective cutting edge
- Inserts must be ordered separately

ACCESSORIES

FULLCUT MILL—TYPE FCM STRAIGHT SHANK OVERSIZE, METRIC STYLE

Cutter diameter is Ø1mm larger than the shank diameter to avoid any interference with the workpiece.



CUTTER DIAMETER

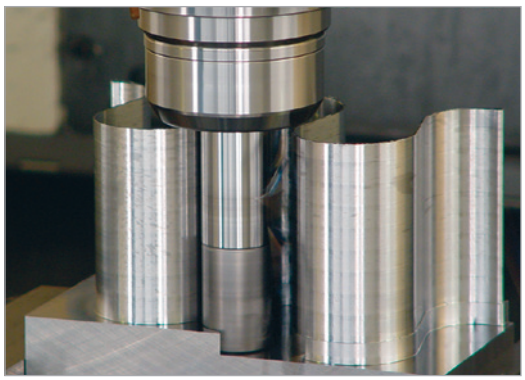
ØD=ØD1+1mm

Catalog Number	ØD	ØD1	ap	L	L1	L2	No. of Inserts	Insert Model	Weight (lbs.)
ST15-FCM16092-120	16mm (.630)	15mm (.591)	.354	4.724	.984	3.740	2	ARG1609□□	.4
ST16-FCM17092-120	17mm (.669)	16mm (.630)	.354	4.724	.984	3.740	2	ARG1609□□	.4
ST19 -FCM20092-165	20mm (.787)	19mm (.748)	.354	6.496	1.181	5.315	2	ARG2009□□	.9
ST19 -FCM20093-135				5.315		4.134	3		.7
ST20-FCM21092-165	21mm (.827)	20mm (.787)	.354	6.496	1.181	5.315	2	ARG2009□□	.9
ST20-FCL21093-135				5.315		4.134	3		.7
ST24 -FCM25092-180	25mm (.984)	24mm (.945)	.354	7.087	1.496	145	2	ARG2509□□	1.5
ST24 -FCM25093-150				5.905		115	3		1.3
ST25-FCM26092-165	26mm (1.024)	25mm (.984)	.354	6.496	1.496	5.000	2	ARG2509□□	1.3
ST25-FCL26093-150				5.906		4.409	3		1.3
ST28-FCM32112-180	32mm (1.260)	28mm (1.102)	.354	7.087	1.890	5.197	2	ARG3211□□	2.4
ST28-FCM32113-180				7.087			3		2.2
ST32-FCM33112-180	33mm (1.299)	32mm (1.260)	.433	7.087	1.890	5.197	2	ARG3211□□	2.4
ST32-FCM33113-180				7.087			3		2.2

- ap = length of effective cutting edge
- Inserts must be ordered separately
- For long projection lengths and cutters with 3 inserts, please reduce the cutting parameters

ACCESSORIES

APPLICATION EXAMPLE— MATERIAL: 1055 CARBON STEEL



FULLCUT MILL Model ST32-FCM33112-180	
Cutting Speed	394 SFM
Feed Rate	.004 IPT
Axial DOC	.394 x 10 steps
Radial DOC	Max. 1.299

RESULTS

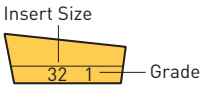
Deep shoulder end milling is achieved with 4.331" projection length and .394" axial depth.

FULLCUT MILL—TYPE FCM INSERTS

INSERT CLASSIFICATIONS

ISO Material	Grade	Material	Coating
P20	ACP200	Prehardened Steel	TiAlN/AlCrN
P30	ACP300	General Steel	
M30	ACM300F	Stainless Steel	TiAlN/TiCN
K10	ACZ310	Cast Iron	
N20	DS20	Aluminum	DLC

MARKING DESCRIPTION



1: ACZ310
2: DS20
P2: ACP200
P3: ACP300
3F: ACM300F

SELECTION BETWEEN ACP200 & ACP300 FOR STEEL

ACP200 is superior in anti-wear resistance, while ACP300 is superior in its anti-chipping property. ACP300 is the first recommendation for cutting steel. Choose ACP200 over ACP300 in cases where further speed or wear-resistance is needed. ACP200 is not, however, recommended for either heavily-interrupted or heavy-duty cutting.

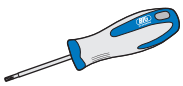
Cutter Dia.		Insert Model	ap	Nose Radius	P		M	K	N
in	mm				ACP200	ACP300	ACM300F	ACZ310	DS20
					Prehardened Steel	General Steel	Stainless Steel	Cast Iron	Aluminum
.500-.625	12-17	**ARG160902**	.354	.008	—	○	○	○	○
		ARG160904		.016	○	○	○	○	○
.750	20-21	**ARG200902**	.354	.008	—	○	○	○	○
		ARG200904		.016	○	○	○	○	○
1.000	25-26	**ARG250902**	.354	.008	—	○	○	○	○
		ARG250904		.016	○	○	○	○	○
1.250	32-33	**ARG321102**	.433	.008	—	○	○	○	○
		ARG321104		.016	○	○	○	○	○
1.500-2.000	40-50	**ARG401102**	.433	.008	—	○	○	○	○
		ARG401104		.016	○	○	○	○	○

- Inserts are available in packages of 10 pcs.
- Please clarify the insert type and model when ordering (ex: ARG160902ACP200)

CAUTION

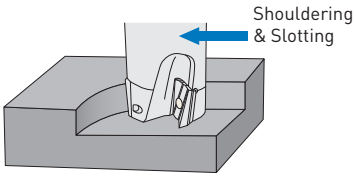
FULLCUT MILL uses a different insert for each cutter diameter (except for Ø.500"-.625" & Ø1.500"-2.000") and if an incorrect insert is used, a problem will result. There is no compatibility with those of Type FCR. Inserts with .008" nose radius are suitable for light cutting.

FULLCUT MILL—TYPE FCM SPARE PARTS

			Insert Clamping Screw Set (10 Screws & 1 Wrench)	**Wrench** 
Cutter Dia.		Insert Model	Catalog Number	Catalog Number
in	mm			
.500	12	ARG1609□□	**S2505DS**	**DA-T8**
.563-.625	14-17		**S2506DS**	
.750	20-21	ARG2009□□		
1.000	25-26	ARG2509□□		
1.250	32-33	ARG3211□□	**S3508DS**	**DA-T15**
1.500	40	ARG4011□□		
2.000	50			

- It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained

FULLCUT MILL—TYPE FCM CUTTING DATA



FINISH-LIGHT CUTTING

ØD	Work Material	Carbon Steel Alloy Steel	Unalloyed Steel	Prehardened Steel <HRC40	Stainless Steel	Cast Iron	Aluminum
	Insert Grade	ACP300		ACP200	ACM300F	ACZ310	DS20
	Cutting Fluid	Dry			Dry	Dry	Dry/Wet
.500-.563 (12-14mm)	Speed (SFM)	490-820	590-820	260-455	455-590	325-655	655-2460
	Feed (IPT)	.004-.008	.004-.008	.003-.005	.005-.007	.004-.008	.004-.012
.625-.750 (16-21mm)	Speed (SFM)	490-820	590-820	260-455	455-590	325-655	655-3280
	Feed (IPT)	.004-.008	.004-.008	.003-.005	.005-.007	.004-.008	.004-.012
1.000-1.250 (25-33mm)	Speed (SFM)	590-915	655-915	260-455	455-655	325-655	655-4920
	Feed (IPT)	.004-.009	.004-.009	.003-.006	.005-.008	.004-.008	.004-.014
1.500-2.000 (40-50mm)	Speed (SFM)	590-915	655-915	260-455	455-655	260-655	655-4920
	Feed (IPT)	.004-.009	.004-.009	.003-.006	.005-.008	.004-.008	.004-.014

CAUTION

FULLCUT MILL Type FCM cannot be used for feeding in Z-axis such as for ramping, plunging and boring.

MEDIUM-HEAVY CUTTING

ØD	Work Material	Carbon Steel Alloy Steel	Unalloyed Steel	Stainless Steel	Cast Iron	Aluminum
	Insert Grade	ACP300		ACM300F	ACZ310	DS20
	Cutting Fluid	Dry		Dry	Dry	Dry/Wet
.500-.563 (12-14mm)	Speed (SFM)	325-655	490-655	390-590	325-590	655-2460
	Feed (IPT)	.003-.006	.003-.006	.005-.006	.003-.007	.003-.008
.625-.750 (16-21mm)	Speed (SFM)	325-655	490-655	390-590	325-590	655-3280
	Feed (IPT)	.003-.006	.003-.006	.005-.006	.003-.007	.003-.008
1.000-1.250 (25-33mm)	Speed (SFM)	325-655	525-720	390-590	325-655	655-4920
	Feed (IPT)	.003-.006	.003-.006	.005-.006	.003-.008	.003-.012
1.500-2.000 (40-50mm)	Speed (SFM)	325-655	525-720	390-590	325-720	655-4920
	Feed (IPT)	.003-.006	.003-.006	.005-.006	.003-.008	.003-.012

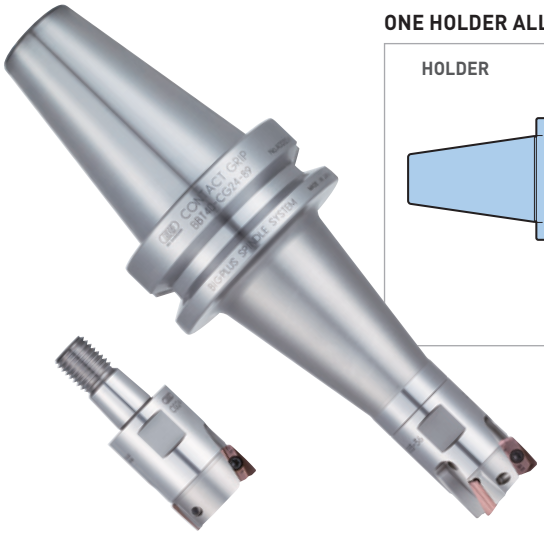
- Inserts with .008 nose radius are suitable for light cutting, however, care should be taken in the selection of both axial & radial depth of cut as well as the feed rate
- This table is a general guideline for cutting data so please adjust according to machine and workpiece conditions, as well as width of cutting

CAUTION

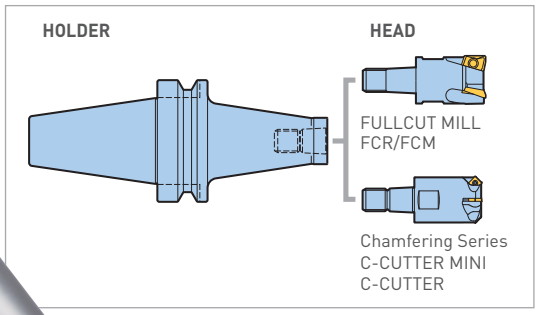
When a long projection model is used, it is necessary to lower the feed rate. Dry cutting (including air blow) is recommended when cutting steel, except for finishing. Dry cutting is recommended for stainless steel, however, use soluble oil in cases where severe edge build-up occurs.

CONTACT GRIP

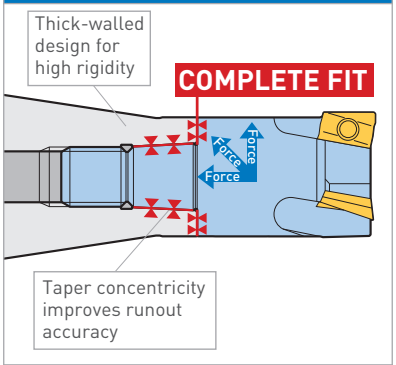
With the unique dual contact contact grip, this threaded coupling system achieves machining capacity close to that of integrated types.



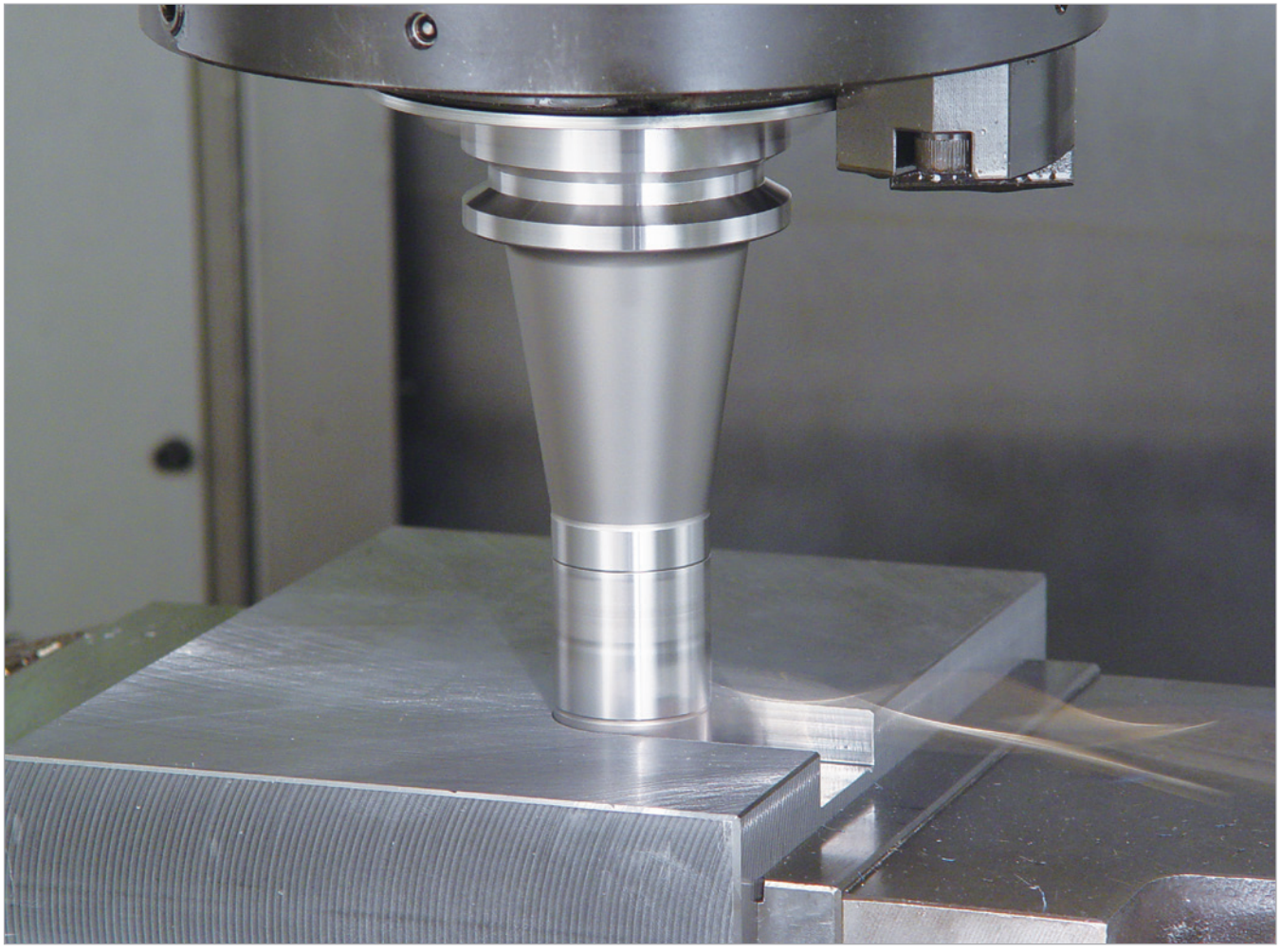
ONE HOLDER ALLOWS SELECTION FROM MULTIPLE HEADS



TAPER AND FLANGE FACE MAKE CLOSE CONTACT FOR SOLID CONNECTION



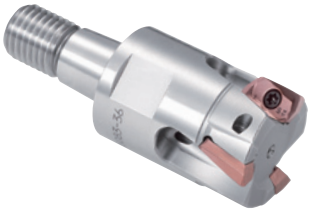
Dual contact with wide retaining surface area and fine-pitch threads enable strong retention force in any direction.

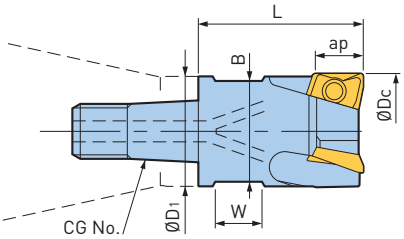


CONTACT GRIP FULLCUT MILL—TYPE FCR HEAD

Shoulder Milling | Ramping | Helical Milling | Peck Drilling | Slotting

Realizing both heavy and stable ramping.





Cutter Diameter ØDc	Catalog Number	CG	ØD1	Effective Cutting Edge Length ap	L	Number of Inserts	Flat for Wrench B	Flat for Wrench W	Insert Model	Weight (lbs.)
16mm	**CG15-FCR16082-25**	CG15	.590	.315	.984	2	.472	.244	BRG1608□□	.1
20mm	**CG19-FCR20082-32**	CG19	.748	.315	1.260	2	.669	.323	BRG2008□□	.2
	CG19-FCR20083-32					3				
25mm	**CG24-FCR25082-36**	CG24	.945	.315	1.417	2	.866	.402	BRG2508□□	.3
	CG24-FCR25083-36					3				
32mm	**CG31-FCR32102-43**	CG31	1.220	.394	1.693	2	1.063	.480	BRG3210□□	.6
	CG31-FCR32103-43					3				

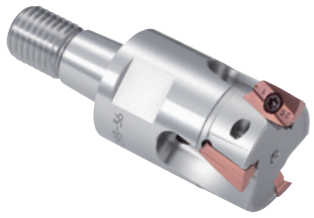
- Insert clamping screws and wrench are included; inserts and single-ended wrench must be ordered separately
- When used with a body of L=100mm or longer, 2-flute model is recommended for medium/heavy slotting or ramping

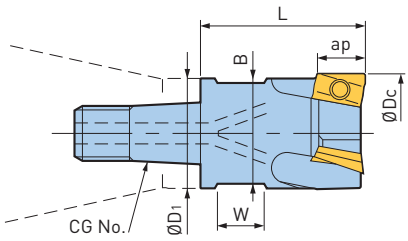
ACCESSORIES

CONTACT GRIP FULLCUT MILL—TYPE FCM HEAD

Shoulder Milling | Slotting

Low resistance, high efficiency cutter especially for cross-feed machining.





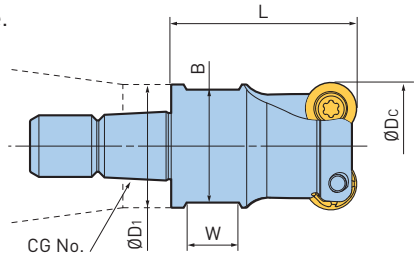
Cutter Diameter ØDc	Catalog Number	CG	ØD1	Effective Cutting Edge Length ap	L	Number of Inserts	Flat for Wrench B	Flat for Wrench W	Insert Model	Weight (lbs.)
16mm	**CG15-FCM16092-25**	CG15	.590	.354	.984	2	.472	.244	ARG1609□□	.1
20mm	**CG19-FCM20092-32**	CG19	.748	.354	1.260	2	.669	.322	ARG2009□□	.2
	CG19-FCM20093-32					3				
25mm	**CG24-FCM25092-36**	CG24	.945	.354	1.417	2	.866	.402	ARG2509□□	.3
	CG24-FCM25093-36					3				
32mm	**CG31-FCM32112-43**	CG31	1.220	.433	1.693	2	1.063	.480	ARG3211□□	.6
	CG31-FCM32113-43					3				

- Insert clamping screws and wrench are included; inserts and single-ended wrench must be ordered separately
- When used with a body of L=100mm or longer, 2-flute model is recommended for medium/ heavy slotting or ramping

ACCESSORIES

FULLCUT RADIUS MILL FRM TYPE

High-rake design radius cutter makes low cutting resistance possible.

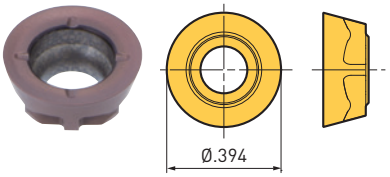


Catalog Number	CG	øD1	øDc	L	Number of Inserts	Flat for Wrench		Insert Model	Weight (lbs)
						B	W		
CG24-FRM251002-36	CG24	.945	.984	1.417	2	.866	.402	FRM10T3-G	.2
CG31-FRM321003-43	CG31	1.220	1.260	1.693	3	1.063	.480	FRM10T3-G	.5

ACCESSORIES

- Driver-type wrench for insert clamping is included; inserts must be ordered separately
- Single-ended wrench for head tightening is not included; use a commercial product

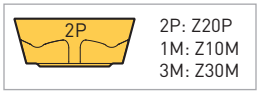
INSERT



Insert Model	Workpiece Material
FRM10T3-G(Z20P)	Carbon Steel/Alloy Steel
FRM10T3-G(Z10M)	Pre-hardened Steel (HRC40 or less)
FRM10T3-G(Z30M)	Stainless Steel

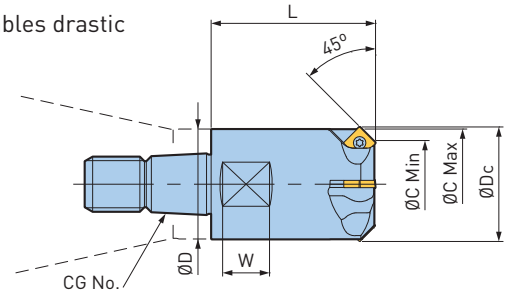
- Inserts are available in packages of 10 pcs.

MARKING DESCRIPTION



CONTACT GRIP C-CUTTER MINI

Ultra-high feed machining enables drastic reduction of machining time.



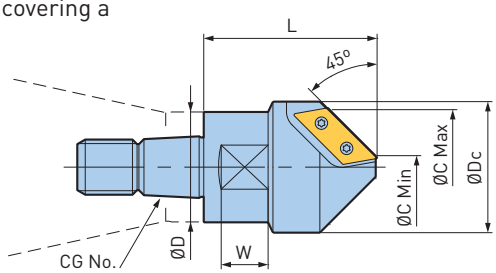
Catalog Number	CG	ØD	Min. Hole ØC Min	Max. Chamfer Diameter ØC Max	ØDc	L	Number of Inserts	Flat for Wrench		Insert Model	Weight (lbs.)
								Wrench Width	W		
CG19-C1419-45-32	CG19	.748	.557	.748	.783	1.260	4	.669	.323	CM05...	.2
CG24-C1924-45-36	CG24	.945	.748	.948	.980	1.417	4	.866	.402	CM05...	.3
CG31-C2131-45-43	CG31	1.220	.827	1.220	1.252	1.693	4	1.063	.480	CM10...	.6

- Insert clamping screws and wrench are included; inserts and single-ended wrench must be ordered separately

ACCESSORIES

CONTACT GRIP C-CUTTER—45° TYPE

Reduces the number of tools, covering a wide range of chamfering.



ACCESSORIES

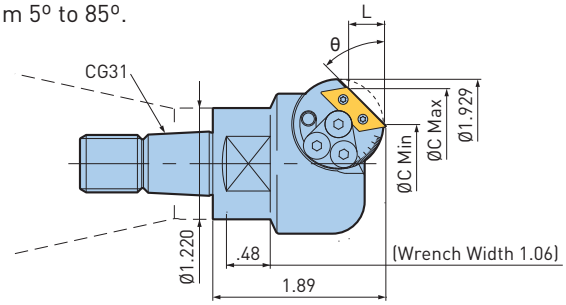
INSERTS PG. 614
HOLDERS PG. 598

Catalog Number	CG	ØD	Min. Hole ØC Min	Max. Chamfer Diameter ØC Max	ØDc	L	Number of Inserts	Flat for Wrench		Insert Model	Weight (lbs.)
								Wrench Width	W		
CG24-C0525	CG24	.945	.197	.984	1.122	1.417	1	.866	.402	CW1206A	.3
CG31-C1040	CG31	1.220	.394	1.575	1.772	2.047	2	1.063	.480	CW1909A	.7

- Insert clamping screws and wrench are included; inserts and single-ended wrench must be ordered separately

CONTACT GRIP C-CUTTER—UNIVERSAL TYPE

Covers chamfering angles from 5° to 85°.



Catalog Number	CG
CG31-C5/85A-48	CG31

- Compatible insert: CW1206A

ACCESSORIES

INSERTS PG. 614
HOLDERS PG. 598

CHAMFERING RANGE

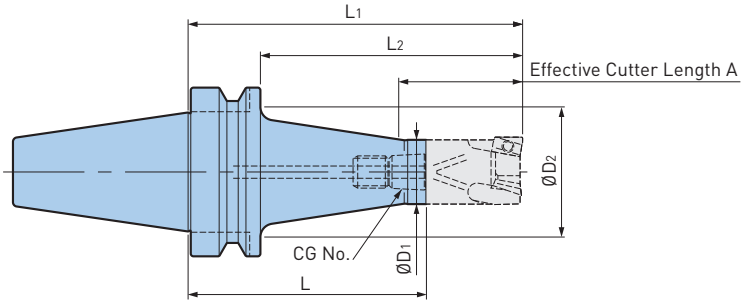
Chamfering Angle θ	Min. Hole ØC Min	Max Chamfer Diameter ØC Max	L
5°	.217	1.319	.047
10°	.287	1.366	.094
15°	.354	1.425	.142
20°	.441	1.472	.185
25°	.512	1.520	.232
30°	.598	1.559	.276
35°	.685	1.594	.315
40°	.772	1.622	.354
45°	.858	1.646	.394

Chamfering Angle θ	Min. Hole ØC Min	Max Chamfer Diameter ØC Max	L
50°	.945	1.661	.425
55°	1.039	1.669	.449
60°	1.122	1.673	.476
65°	1.209	1.669	.492
70°	1.295	1.657	.496
75°	1.374	1.642	.500
80°	1.452	1.618	.469
85°	1.528	1.587	.339

- Chamfering range and L are reference only
- Measure accurate values such as with a presetter

CONTACT GRIP BIG-PLUS HOLDER

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



COOLANT THROUGH

Catalog Number	CG	ØD1	ØD2	L	L1	L2	A	Weight (lbs.)
BBT30-CG15-50	CG15	.590	1.575	1.969	2.953	2.087	1.220	1.1
BBT30-CG15-80			1.575	3.150	4.134	3.268	1.260	1.3
BBT30-CG19-43	CG19	.748	1.575	1.693	2.953	2.087	1.535	1.0
BBT30-CG19-73			1.654	2.874	4.134	3.268	1.575	1.3
BBT30-CG24-39	CG24	.945	1.614	1.535	2.953	2.087	1.772	1.0
BBT30-CG24-69			1.654	2.717	4.134	3.268	1.772	1.4
BBT30-CG31-32	CG31	1.220	1.614	1.260	2.953	2.087	1.929	.9
BBT30-CG31-62			1.575	2.441	4.134	3.268	2.087	1.3
BBT40-CG15-50	CG15	.590	1.811	1.969	2.953	1.890	1.181	2.4
BBT40-CG15-80			1.890	3.150	4.134	3.071	1.260	2.6
BBT40-CG15-100			1.929	3.937	4.921	3.858	1.260	2.9
BBT40-CG19-43	CG19	.748	1.772	1.693	2.953	1.890	1.417	2.4
BBT40-CG19-73			1.890	2.574	4.134	3.071	1.575	2.6
BBT40-CG19-93			1.929	3.661	4.921	3.858	1.575	2.9
BBT40-CG24-39	CG24	.945	1.535	1.535	2.953	1.890	1.614	2.2
BBT40-CG24-69			1.890	2.717	4.134	3.071	1.772	2.6
BBT40-CG24-89			1.929	3.504	4.921	3.858	1.772	2.9
BBT40-CG31-37	CG31	1.220	1.693	1.457	3.150	2.087	1.890	2.2
BBT40-CG31-77			2.244	3.031	4.724	3.661	2.087	3.1
BBT40-CG31-92			2.244	3.622	5.315	4.252	2.087	3.3
BBT50-CG15-115	CG15	.590	3.543	4.528	5.512	4.016	1.181	9.7
BBT50-CG15-145			3.150	5.709	6.693	5.197	1.772	9.7
BBT50-CG19-108	CG19	.748	3.543	4.252	5.512	4.016	1.496	9.7
BBT50-CG19-153			3.150	6.024	7.283	5.787	2.362	9.9
BBT50-CG24-114	CG24	.945	3.543	4.489	5.906	4.409	1.654	9.9
BBT50-CG24-164				6.459	7.874	6.378	2.953	10.8
BBT50-CG31-107	CG31	1.220	3.740	4.213	5.906	4.409	1.969	10.3
BBT50-CG31-157			3.543	6.181	7.874	6.378	3.543	11.0

- Single-ended wrench for head tightening is not included
- L_1, L_2, and A above are values with a FULLCUT MILL type head mounted

ACCESSORIES

HEADS PG. 595

APPLICATION EXAMPLES

RAMPING

CUTTING CONDITIONS

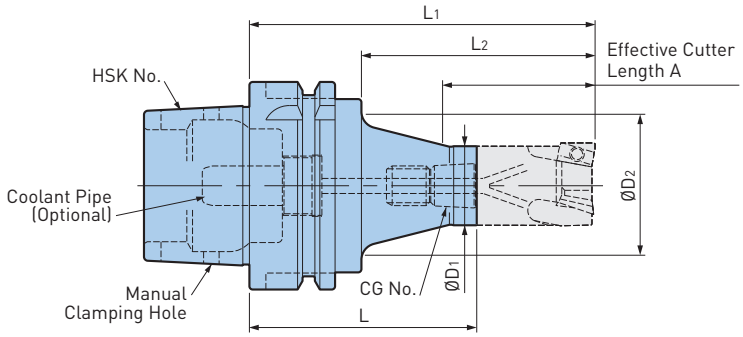
Machine: BBT40 Vertical Machining Center
Head Type: FCR32 (3-inserts)
Holder: BBT40-CG31-37
Work Material: 1040
Cutting Speed: 500 SFM
Feed Rate: .004"/Tooth
Axial Depth of Cut: Max. .394" (3° ramping)
*Example is dry cutting

SLOTTING

CUTTING CONDITIONS

Machine: BBT40 Vertical Machining Center
Head Type: FCM32 (2-inserts)
Holder: BBT40-CG31-92
Work Material: 1040
Cutting Speed: 500 SFM
Feed Rate: .004"/Tooth
Axial Depth of Cut: .433"
*Example is dry cutting

CONTACT GRIP HSK HOLDER—A TYPE (DIN69893-1) (ISO12164)



COOLANT THROUGH

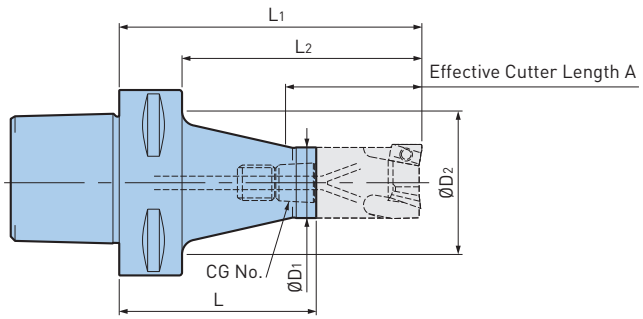
ACCESSORIES

HEADS PG. 595

Catalog Number	CG	ØD1	ØD2	L	L1	L2	A	Weight (lbs.)
HSK-A63-CG15-50	CG15	.590	1.417	1.969	2.953	1.614	1.181	1.8
HSK-A63-CG15-80			1.772	3.150	4.134	2.795	1.220	2.2
HSK-A63-CG15-100			1.772	3.937	4.921	3.583	1.260	2.2
HSK-A63-CG19-73	CG19	.748	1.772	2.874	4.134	2.795	1.535	2.2
HSK-A63-CG19-93			1.772	3.661	4.921	3.583	1.575	2.2
HSK-A63-CG24-69	CG24	.945	1.772	2.707	4.134	2.795	1.732	2.2
HSK-A63-CG24-89			1.772	3.504	4.921	3.583	1.772	2.4
HSK-A63-CG31-77	CG31	1.220	1.772	3.031	4.724	3.386	2.087	2.2
HSK-A63-CG31-92			1.772	3.622	5.315	3.976	2.087	2.4

- Coolant pipe & single-ended wrench for head tightening is not included
- L1, L2, and A above are values with a FULLCUT MILL type head mounted

CONTACT GRIP BIG CAPTO HOLDER—C6 (ISO26623-1)



COOLANT THROUGH

ACCESSORIES

HEADS PG. 595

Catalog Number	CG	ØD1	ØD2	L	L1	L2	A	Weight (lbs.)
C6-CG15-50	CG15	.590	1.811	1.969	2.953	2.087	1.220	2.0
C6-CG15-80			1.890	3.150	4.134	3.268	1.220	2.2
C6-CG15-100			1.929	3.937	4.921	4.055	1.260	2.4
C6-CG19-43	CG19	.748	1.772	1.693	2.953	2.087	1.535	2.0
C6-CG19-73			1.890	2.574	4.134	3.268	1.535	2.2
C6-CG19-93			1.929	3.661	4.921	4.055	1.575	2.4
C6-CG24-69	CG24	.945	1.929	2.717	4.134	3.268	1.732	2.2
C6-CG24-89			1.929	3.054	4.921	4.055	1.772	2.4
C6-CG31-77	CG31	1.220	2.244	3.031	4.724	3.858	2.087	2.7
C6-CG31-92			2.244	3.622	5.315	4.449	2.087	2.9

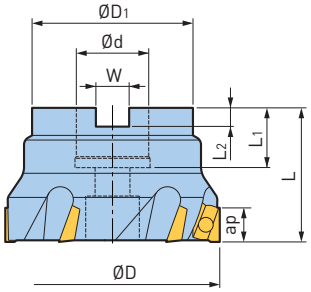
- Single-ended wrench for head tightening is not included
- L1, L2, and A above are values with a FULLCUT MILL type head mounted

FULLCUT MILL—ARBOR TYPE FORM FMH

Arbor Type for Square Shoulder & Face Milling

CUTTER DIAMETER: Ø50mm, Ø63mm, Ø80mm & Ø100mm

Conforms to Form FMH of the new standard face milling adapters.



Cutter Dia. ØD	Catalog Number	ap	Ød	ØD1	L	L1	L2	W	No. of Inserts	Insert Size	Weight (lbs.)
50mm	**FMH22-FCM50115-40**	.433	**22mm**	1.850	1.575	.787	.236	.409	5	ARG40	1.1
63mm	**FMH22-FCM63116-40**								6	ARG63	1.5
80mm	**FMH27-FCM80116-50**	.433	**27mm**	2.362	1.969	.866	.276	.488	6	ARG80	2.7
100mm	**FMH27-FCM100116-50**			2.992					6	ARG80	4.4

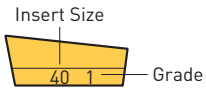
- All dimensions shown in millimeters
- Wrench and screws are included; inserts must be ordered separately

FULLCUT MILL—FCM ARBOR TYPE INDEXABLE INSERTS

INSERT CLASSIFICATIONS

ISO Material	Grade	Material	Coating
P20	ACP200	Prehardened Steel	TiAlN/AlCrN
P30	ACP300	General Steel	
M30	ACM300F	Stainless Steel	TiAlN/TiCN
K10	ACZ310	Cast Iron	
N20	DS20	Aluminum	DLC

MARKING DESCRIPTION



1: ACZ310
2: DS20
P2: ACP200
P3: ACP300
3F: ACM300F

SELECTION BETWEEN ACP200 & ACP300 FOR STEEL

ACP200 is superior in anti-wear resistance, while ACP300 is superior in its anti-chipping property. ACP300 is the first recommendation for cutting steel. Choose ACP200 over ACP300 in cases where further speed or wear-resistance is needed. ACP200 is not, however, recommended for either heavily-interrupted or heavy-duty cutting.

Cutter Dia.	Insert Model	ap	Nose Radius	P		M	K	N
				ACP200	ACP300	ACM300F	ACZ310	DS20
50mm	**ARG401102**	.433	.008	—	○	○	○	○
	ARG401104		.016	○	○	○	○	○
63mm	**ARG631104**		.016	—	○	○	—	○
	ARG631108		.031	○	○	○	○	○
80mm, 100mm	**ARG801104**		.016	—	○	○	—	○
	ARG801108		.031	○	○	○	○	○

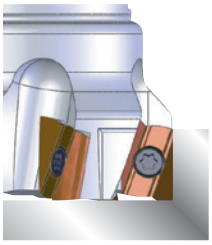
- Inserts are available in packages of 10 pcs.
- Please clarify the insert model and grade when ordering (ex: ARG401104ACP300)

CAUTION

It is important to use the correct insert for the specific diameter of FULLCUT MILL. Failure to use the correct insert will result in incorrect cutting conditions and poor results.

PERPENDICULARITY AND SURFACE FINISH UNMATCHED IN INDEXABLE INSERT CUTTERS

Machined by FULLCUT MILL Model: FMH22-FCM63116-40
Arbor Model: BBT40-FMH22-27-45



Squareness	
Cutting Speed (SFM)	500
Feed Rate (IPT)	.004"
Axial DOC (Ad)	.200"
Radial DOC (Rd)	.004"

BIG DAISHOWA	.0004"
Other Manufacturer	.0016"

Surface Roughness	
Cutting Speed (SFM)	825
Feed Rate (IPT)	.008"
Axial DOC (Ad)	.004"
Radial DOC (Rd)	2"

	Ra
BIG DAISHOWA	.51µm
Other Manufacturer	1.56µm

- The perpendicularity & surface roughness will vary depending on the cutting conditions, material, machine tool & workpiece rigidity.

FULLCUT MILL—FCM ARBOR TYPE CUTTING CONDITIONS

Medium-Heavy Cutting						
Cutter Dia.	Work Material	Carbon Steel Alloy Steel	Unalloyed Steel	Stainless Steel	Cast Iron	Aluminum
	Insert Grade	ACP300		ACM300F	ACZ310	DS20
	Cutting Fluid	Dry		Dry	Dry	Dry/Wet
Ø50/Ø63/Ø80/Ø100mm	Speed (SFM)	330-725	500-800	400-600	330-650	650-5000
	Feed (IPT)	.003-.007	.003-.006	.005-.006	.004-.008	.004-.012

CAUTION

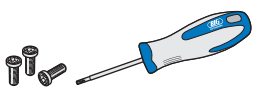
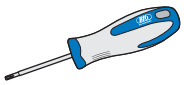
FULLCUT MILL FCM Arbor Type cannot be used for feeding Z-axis such as ramping, plunging and boring.

Finish-Light Cutting							
Cutter Dia.	Work Material	Carbon Steel Alloy Steel	Unalloyed Steel	Prehardened Steel <HRC40	Stainless Steel	Cast Iron	Aluminum
	Insert Grade	ACP300		ACP200	ACM300F	ACZ310	DS20
	Cutting Fluid	Dry			Dry	Dry	Dry/Wet
Ø50/Ø63/Ø80/ Ø100mm	Speed (SFM)	330-725	500-800	250-400	400-600	330-650	650-5000
	Feed (IPT)	.004-.010	.004-.009	.003-.006	.005-.008	.004-.010	.004-.014

CAUTION

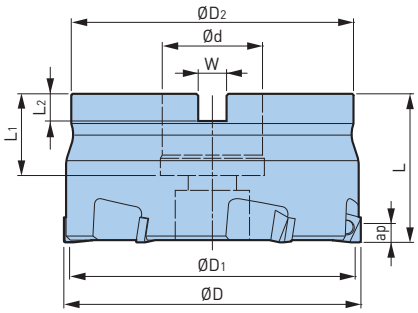
This table is a general guideline for cutting data. Please adjust according to machine and workpiece conditions, as well as width of cutting. Dry cutting (including air blow) is recommended when cutting steel, except for finishing. Dry cutting is recommended for stainless steel. However, use soluble oil in a case where severe built-up edge occurs.

FULLCUT MILL—FCM ARBOR TYPE SPARE PARTS

		Insert Clamping Screw Set (10 Screws & 1 Wrench)	Wrench
			
Cutter Dia.	Insert Model	Catalog Number	Catalog Number
50mm	ARG4011□□	**S3508DS**	**DA-T15**
63mm	ARG6311□□		
80mm, 100mm	ARG8011□□		

- It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained

SPEED FINISHER

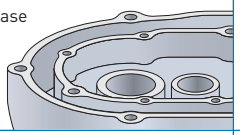
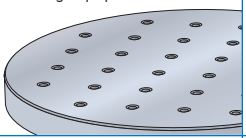
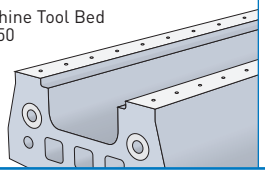


Catalog Number	ØD	ØD1		ØD2	Ød	L	L1	L2	W	No. of Inserts	Max RPM	Weight (lbs.)
		DA2200	CBN									
FM22-PLS505-35	50mm	1.846	1.768	1.850	**22mm**	1.378	.748	.236	.409	5	20,000	.9
FM22-PLS636-35	63mm	2.358	2.280	2.362						6		1.5
FM27-PLS806-40	80mm	3.028	2.949	2.992	**27mm**	1.575	.866	.276	.488	6	16,000	2.6
FM27-PLS1006-35●	100mm	2.752	3.736	2.362	**27mm**	1.378	.157	.276	.488		12,800	2.9
FM27-PLS1256-35●	125mm	121.9	119.9	2.362							10,200	4.2
FM32-PLS1006-42	100mm	3.815	3.736	3.780	**32mm**	1.654	.945	.315	.567	6	12,800	4.4
FM40-PLS1258-50	125mm	4.799	4.720	3.780	**40mm**	1.969	1.102	.394	.646	8	10,000	7.3
FM40-PLS16010-50	160mm	6.177	6.098	3.780						10	8,000	9.0

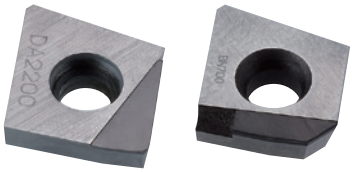
- Wrench and screws are included
- Inserts must be ordered separately
- When using at 12,000 RPM or higher, contact BIG DAISHOWA agent for balancing of the cutter and arbor assembly
- Effective cutting edge length ap varies depending on insert models—refer to the table for insert shown below
- Adjusting amount of cutting edge is .004"—note this when using reground insert
- Models marked ● are designed for BT30 holders

ACCESSORIES

APPLICATION EXAMPLES (CUTTER DIAMETER: Ø80MM)

Workpiece	Conditions	Surface Roughness	Height Difference	No. of Workpieces	Result
Crank Case ADC12 	Cutting Speed: 13,123 SFM Spindle Speed: 15,900 RPM Feed Rate: 376 IPM D.O.C.: .098"	**Ra=.08µm** **Rz=.55µm**	Within 1µm	24,000	Rough & Fine Processes are Combined in a Single Operation
Parts of Semiconductor Manufacturing Equipment A5052 	Cutting Speed: 13,123 SFM Spindle Speed: 15,900 RPM Feed Rate: 376 IPM D.O.C.: .079"	**Ra=.07µm** **Rz=.32µm**	Within 1µm	320	Mirror Finish is Achieved
Machine Tool Bed FC250 	Cutting Speed: 4,921 SFM Spindle Speed: 6,000 RPM Feed Rate: 142 IPM D.O.C.: .020"	**Ra=.12µm** **Rz=.67µm**	Within 2µm	20	1-2µm Flatness is Obtained

SPEED FINISHER INSERTS



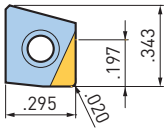


Fig. 1

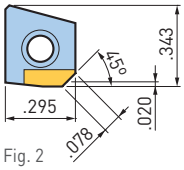


Fig. 2

Catalog Number	Workpiece	Fig.	Material	Cutting Edge Length (ap)
PL0705-DA2200	Aluminum & Nonferrous	1	Diamond	.197
PL0705-CBN	Cast Iron	2	CBN	.020

- All dimensions shown in millimeters
- Each insert is packed in a case (order example: PL0705 DA2200 5 pcs.)
- Regrinding of the insert is possible only once (grinding amount .008")
- Early regrinding is recommended, since regrinding becomes unavailable after excessive wear or once chipping occurs

INSERT CLASSIFICATIONS

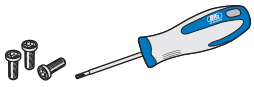
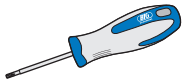
DA2200	CBN
High density sintered material made of ultra-micro diamond particles. Superior wear resistance and hardness comparable to carbide alloy.	Newly designed CBN sintered body with high content rate of CBN improves toughness and thermal conductivity.

SPEED FINISHER CUTTING CONDITIONS

Workpiece Material		Insert Material	Cutting Speed (SFM)	Feed Rate (IPT)	Coolant
Aluminum Alloy	Si Content 13%≥	DA2200	6,600-13,000	.002-.008	Wet
	Si Content 13%<		1,300-2,600		
Copper Alloy		DA2200	1,600-8,200	.002-.008	Wet
Gray Cast Iron		CBN	2,600-6,600	.004-.012	Dry

- The table is a reference to determine cutting conditions and it should be adjusted according to cutting width and conditions of the machine tool and workpiece

SPEED FINISHER SPARE PARTS

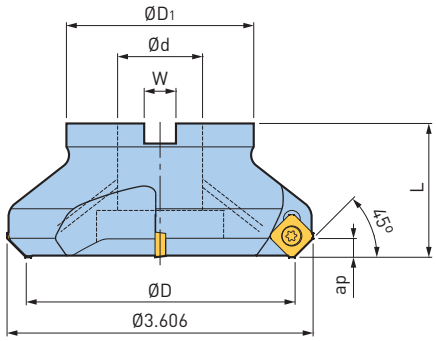
Lifting Screw Set (1 Lifting Screw & 1 Lifting Nut)	**Insert Clamping Screw Set (10 Screws & 1 Wrench)**	**Wrench**
		
Catalog Number	Catalog Number	Catalog Number
LSN35	**S2506DS**	**DA-T8**

- Insert clamping screws and wrenches are consumables, therefore regular replacement and extra stock are recommended

SURFACE MILL

CUTTER DIAMETER: Ø80mm

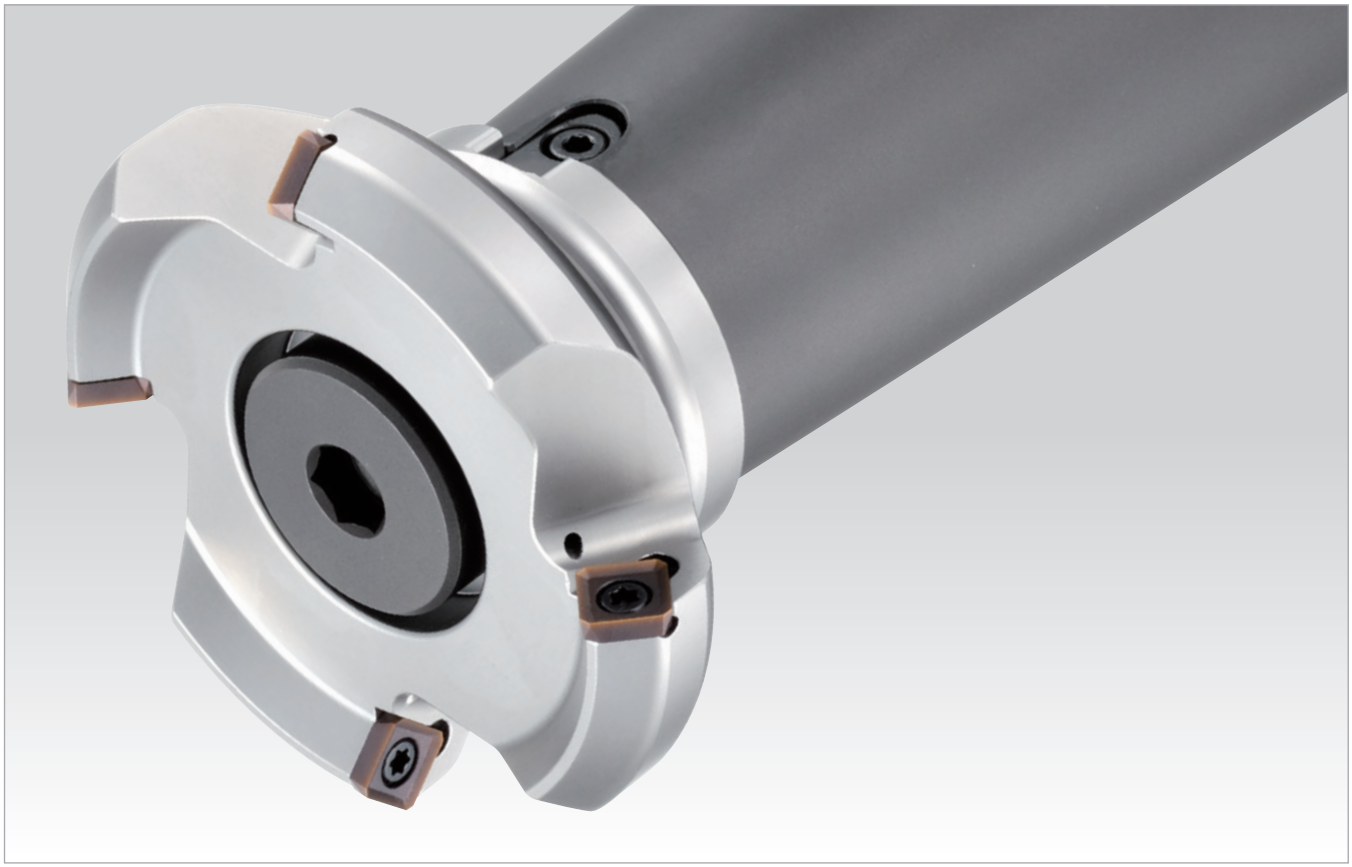
45º Approach Face Milling Cutter



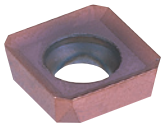
Cutter Dia. ØD	Catalog Number	ap	Ød	ØD1	L	W	No. of Inserts	Insert Size	Weight (lbs.)
80mm	**FM25.4-SFM804-40**	1.970	**1.000**	2.205	1.575	.374	4	CM10	2.0
80mm	**FM27-SFM804-40**	1.970	**27mm**	2.362	1.575	.488	4	CM10	2.0

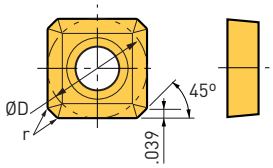
- Wrench and screws are included
- Inserts must be ordered separately

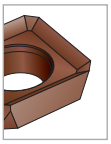
ACCESSORIES



SURFACE MILL INSERTS







SE (SHARP EDGE) TYPE

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

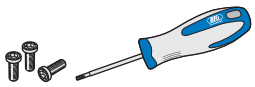
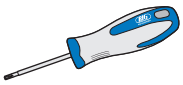
INSERT CLASSIFICATIONS

ACP200/ACP300	ACM250F	DS20	NF15KA
For all steel & stainless steel materials.	For stainless steel	For aluminum & /non-ferrous materials.	For cast iron
Multi-layer PVD coating on carbide base with nanoscale TiAlN & AlCrN. Excellent performance and wear resistance.	PVD-coated carbide with excellent smoothness and resistance to welding and chipping, due to the ultra-multilayered thin film structure made of AlTiN and TiAlCrN	DLC coating on carbide base with very smooth surface for a low coefficient of friction. Excellent performance against built-up edge.	Adopts K15-equivalent carbide material with hardness & toughness for cast iron.

Insert Model	ØD	Nose Radius	Insert Grade					Insert Clamping Screw Set
			ACP200	ACP300	ACM250F	DS20	NF15KA	
CM10C1	.394	.008	○	—	○	○	○	S4S-T15

- Inserts are available in packages of 10 pcs.
- Please clarify the insert model and grade when ordering (ex: CM10C1ACP200)
- 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

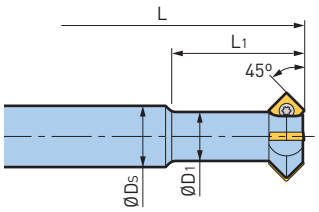
SPEED FINISHER SPARE PARTS

Insert Clamping Screw Set (10 Screws & 1 Wrench)	**Wrench**
	
Catalog Number	Catalog Number
S4S-T15DS	**DA-T15**

- Insert clamping screws and wrenches are consumables, therefore regular replacement and extra stock are recommended

C-CUTTER MINI—MULTI-INSERT TYPE

CUTTING EDGE DETAILS



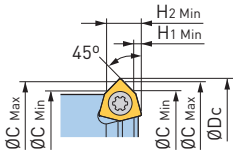


Fig. 1

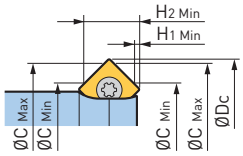


Fig. 2

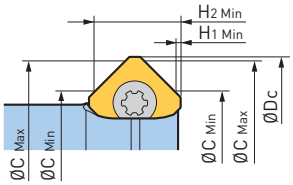


Fig. 3

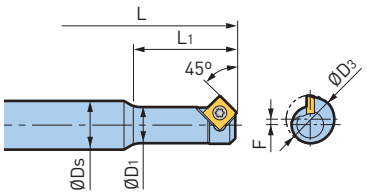
Catalog Number	Face Milling	Fig.	ØDc	ØDs	ØD1	L	L1	ØC Min	ØC Max	H1 Min	H2 Min	Insert Model	No. of Inserts
ST10-C0810-45B-15	–	1	.413	.394	.291	3.071	.591	.315	.394	.028	.126	CM03...	3
ST10-C0810-45B-27						3.543	1.063						
ST12-C1012-45B-20	–	1	.500	.472	.354	3.661	.787	.394	.472	.039	.146	CM0402	3
ST12-C1012-45B-35●						4.252	1.378						
ST12-C1116-45B-25	–	2	.673	.472	.378	3.858	.984	.433	.630	.016	.256	CM0502	4
ST12-C1116-45B-40●						4.449	1.575						
ST16-C1520-45B-50	–	2	.815	.630	.520	4.843	1.969	.591	.787	.024	.248	CM0502	4
ST20-C1924-45B-60	–	2	.972	.787	.677	5.630	2.362	.748	.945	.024	.248	CM0502	4
ST20-C2232-45B-50	○	3	1.287	.787	.756	5.118	1.969	.866	1.260	.016	.488	CM10C1	
ST20-C2232-45B-80●						6.299	3.150						
ST32-C3242-45B-65	○	3	1.681	1.260	1.205	6.890	2.559	1.260	1.654	.016	.488	CM10C1	4
ST32-C3242-45B-100●						8.307	3.937						

- Wrench and screws are included; inserts must be ordered separately
- In case of chamfering, chatter may occur due to increasing cutting force when plunge cutting, so please try a different model with less inserts
- Items marked ● indicates Long Type

ACCESSORIES

C-CUTTER MINI—SINGLE INSERT TYPE

WORLD'S SMALLEST INSERTS



CUTTING EDGE DETAILS

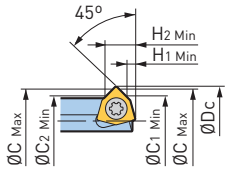


Fig. 1

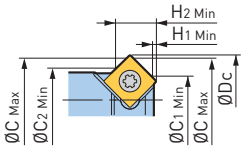


Fig. 2

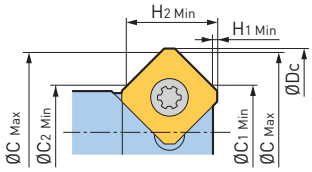


Fig. 3

Catalog Number	Fig.	ØDc	ØDs	ØD1	ØD3	L	L1	ØC1 Min	ØC2 Min	ØC Max	H1 Min	H2 Min	Offset F	Insert Model
ST10-C0608-45B-16	1	.346	.394	.224	.224	3.071	.630	.236	.236	.315	.039	.150	.061	CM0402
ST10-C0409-45B-20	2	.386	.394	.213	.303	3.386	.787	.157	.236	.354	.020	.213	.043	CM0502
ST10-C0611-45B-20	2	.472	.394	.291	.386	3.189	.787	.236	.315	.433	.016	.217	.043	CM0502
ST10-C0611-45B-35●						3.780	1.378							CM0502
ST16-C1222-45B-40	3	.890	.630	.433	.665	4.606	1.575	.472	.472	.866	.012	.488	.114	CM10C1

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

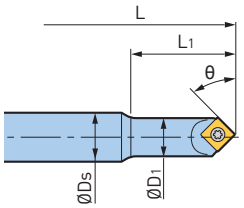
ACCESSORIES

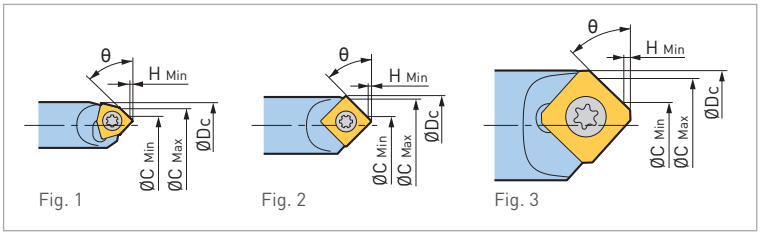
INSERTS PG. 612

C-CUTTER MINI—FRONT CHAMFER TYPE

WORLD'S SMALLEST INSERTS

CUTTING EDGE DETAILS





ACCESSORIES

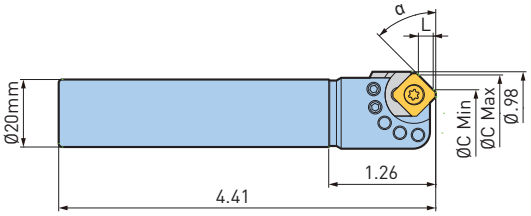
INSERTS PG. 612

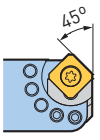
Catalog Number	Fig.	θ	ØDc	ØDs	ØD1	L	L1	ØC Min	ØC Max	H Min	Insert Model
ST8-C0103-45-16	1	45°	.193	.315	.185	2.677	.630	.039	.118	.004	CM03...
ST10-C0204-45-15	1	45°	.248	.394	.236	3.071	.591	.079	.157	.016	CM0402
ST10-C0204-45-25●						3.465	.984				
ST10-C0207-45-20	2	45°	.319	.394	.307	3.189	.787	.079	.276	.016	CM0502
ST10-C0207-45-35●						3.780	1.378				
ST16-C0515-45-50	3	45°	.622	.630	.598	4.803	1.969	.197	.591	.016	CM10C1
ST16-C0214-30-40	3	30°	.626	.630	.606	4.134	1.575	.079	.551	.008	
ST16-C0916-60-40	3	60°	.650	.630	.614	4.134	1.575	.354	.630	.031	

- Wrench and screws are included; inserts must be ordered separately
- Centering is not possible
- Items marked ● indicates Long Type

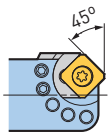
C-CUTTER MINI—UNIVERSAL TYPE

Chamfering angle adjustment from 5° to 85° with a hex key.





45° (A)



45° (B)

Catalog Number	Inserts
ST20-CM5/85A-30	CM10C1-ACP200
	CM10C1-DS20

ACCESSORIES

INSERTS PG. 612

CHAMFERING RANGE

Angle α	Smallest Hole ØC Min	Largest Hole ØC Max	L
5°	.224	.740	.024
10°	.264	.776	.047
15°	.299	.807	.067
20°	.335	.835	.091
25°	.378	.858	.114
30°	.417	.878	.134
35°	.457	.894	.154
40°	.500	.906	.173
45° [A]	.539	.917	.189
45° [B]	.528	.906	.189

Angle α	Smallest Hole ØC Min	Largest Hole ØC Max	L
50°	.567	.913	.205
55°	.610	.917	.220
60°	.646	.917	.232
65°	.685	.913	.244
70°	.720	.906	.252
75°	.752	.894	.260
80°	.783	.878	.264
85°	.815	.862	.268

C-CUTTER MINI—BOLT AND TAPPED HOLE TYPE

WORLD'S SMALLEST INSERTS

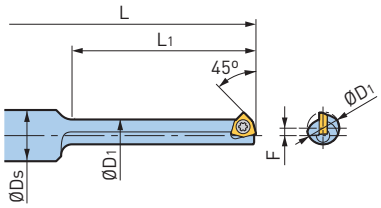
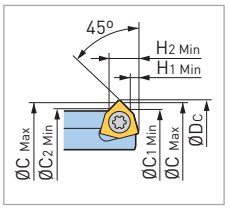


Fig. 1

CUTTING EDGE DETAILS



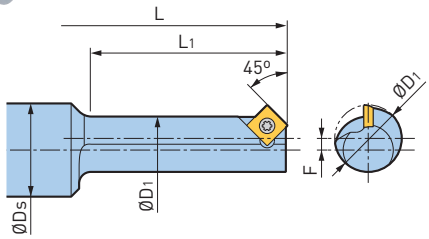
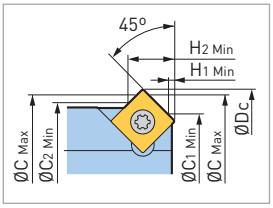


Fig. 2

CUTTING EDGE DETAILS

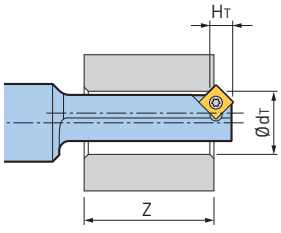


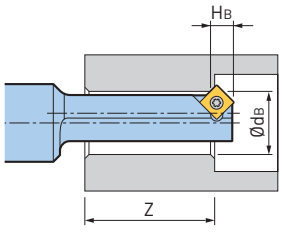
Catalog Number	Fig.	ØDc	ØDs	ØD1	L	L1	ØC1 Min	ØC2 Min	ØC Max	H1 Min	H2 Min	Offset F	Insert Model
ST8-CM06-45B-14	1	.276	.315	.181	2.598	.551	.193	.193	.248	.035	.122	.047	CM03...
ST8-CM06-45B-26●					3.071	1.024							
ST10-CM08-45B-19	1	.362	.394	.248	3.189	.748	.252	.260	.331	.039	.146	.057	CM0402
ST10-CM08-45B-35●					3.819	1.378							
ST12-CM10-45B-25	2	.445	.472	.315	3.898	.984	.217	.327	.413	.020	.197	.065	CM0502
ST12-CM10-45B-45●					4.685	1.772							
ST12-CM12-45B-29	2	.528	.472	.382	4.016	1.142	.299	.394	.496	.020	.205	.073	
ST12-CM12-45B-53●					4.961	2.087							
ST16-CM14-45B-33	2	.610	.630	.453	4.213	1.299	.382	.465	.579	.020	.209	.078	CM0502
ST16-CM14-45B-61●					5.315	2.402							
ST16-CM16-45B-37	2	.693	.630	.531	4.331	1.457	.465	.543	.661	.020	.213	.081	
ST16-CM16-45B-69●					5.591	2.717							
ST20-CM18-45B-42	2	.776	.787	.587	4.961	1.654	.547	.598	.744	.020	.224	.094	CM0502
ST20-CM18-45B-78●					6.378	3.071							
ST20-CM20-45B-46	2	.858	.787	.665	5.079	1.811	.630	.677	.827	.020	.228	.096	
ST20-CM20-45B-86●					6.654	3.386							

- Wrench and screws are included; inserts must be ordered separately
- For Long Type, standard inserts are recommended rather than "SE" (Sharp Edge) inserts to avoid chatter
- Items marked ● indicates Long Type

ACCESSORIES

INSERTS PG. 612





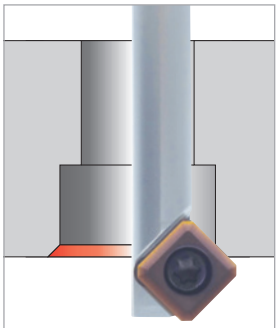
Body	Tap Hole		Bolt Hole		Z	
	ØdT	HT	ØdB	HB	Standard	Long
CM06	.197 (M6)	.118	.217 (M5)	.110	.394	.866
CM08	.268 (M8)	.142	.260 (M6)	.146	.512	1.142
CM10	.335 (M10)	.193	.354 (M8)	.181	.669	1.457
CM12	.406 (M12)	.197	.433 (M10)	.185	.827	1.772
CM14	.472 (M14)	.205	—	—	.984	2.087
CM16	.551 (M16)	.209	.551 (M12)	.209	1.142	2.402
CM18	.610 (M18)	.220	.630 (M14)	.209	1.299	2.717
CM20	.689 (M20)	.220	.709 (M16)	.213	1.457	3.031

C-CUTTER MINI—SINGLE INSERT

LOWER HOLE DIAMETER: ø10-20mm

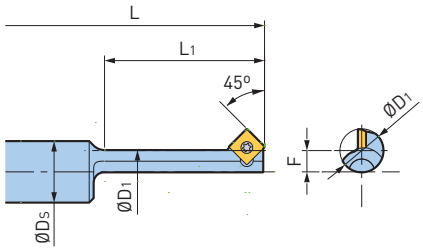
For Counterbore Hole

Available with front & back chamfering.



Chamfering at the counterbore is achieved by utilizing the larger insert offset.

CUTTING EDGE DETAILS



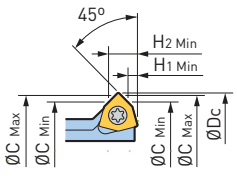


Fig. 1

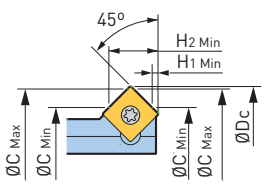


Fig. 2

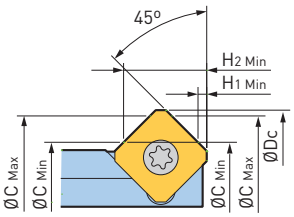


Fig. 3

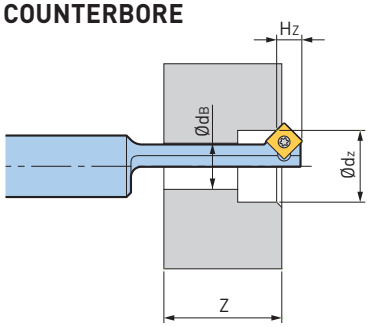
Catalog Number	Fig.	ØDc	ØDs	ØD1	L	L1	ØC Min	ØC Max	H1 Min	H2 Min	Offset Amount F	Insert
ST10-CZ06-45B-23	1	.504	.394	.240	3.346	.906	.394	.472	.039	.150	.132	CM04...
ST12-CZ08-45B-31	2	.661	.472	.335	4.094	1.220	.433	.630	.020	.248	.163	CM05...
ST16-CZ10-45B-37	2	.799	.630	.413	4.370	1.457	.571	.768	.020	.248	.193	CM05...
ST16-CZ12-45B-50	3	.976		.531	4.882	1.969	.551	.945	.012	.472	.222	CM10...
ST20-CZ14-45B-56	3	1.094	.787	.610	5.472	2.205	.669	1.063	.012	.472	.242	CM10...

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

ACCESSORIES

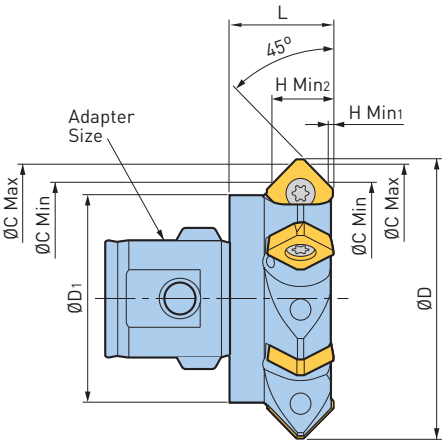
INSERTS PG. 612

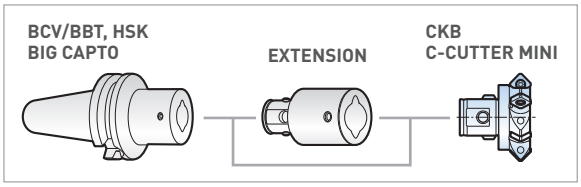
COUNTERBORE

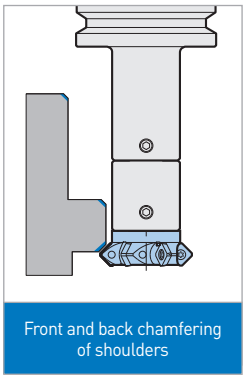


Cutter Size	ØdB	Counterbore		Z
		Ødz	Hz	
CZ06	6.6mm (M6)	11mm (M6)	.130	.669
CZ08	9mm (M8)	14mm (M8)	.193	.906
CZ10	11mm (M10)	17.5mm (M10)	.193	1.142
CZ12	14mm (M12)	20mm (M12)	.370	1.457
CZ14	16mm (M14)	23mm (M14)	.370	1.693

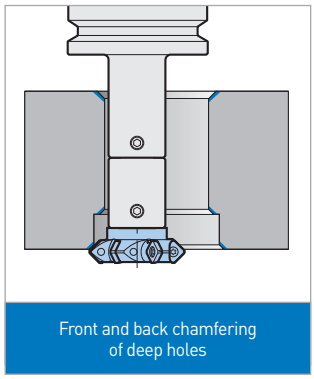
C-CUTTER MINI—CKB TYPE







Front and back chamfering of shoulders



Front and back chamfering of deep holes

Catalog Number	Adapter Size	Face Milling	ØD	ØD1	L	Chamfering Dia.		H Min1	H Min2	No. of Inserts	Insert Model
						ØC Min	ØC Max				
CKB1-C2232-45B-20	CKB1	○	1.287	.748	.787	.866	1.260	.012	.488	4	CM10C1
CKB3-C3242-45B-20	CKB3	○	1.681	1.220	.787	1.260	1.654	.012	.488	4	CM10C1
CKB3-C5262-45B-20			2.469	1.220		2.047	2.441			6	
CKB4-C4252-45B-20	CKB4	○	2.075	1.535	.787	1.654	2.047	.012	.488	6	CM10C1
CKB5-C5262-45B-20	CKB5	○	2.469	2.008	.787	2.047	2.441	.012	.488	6	CM10C1

- Wrench and screws are included; inserts must be ordered separately
- When plunge cutting, chatter may occur due to increased cutting force, so please reduce the number of inserts to 1 or 2

ACCESSORIES

C-CUTTER MINI INSERTS

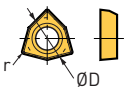


Fig. 1

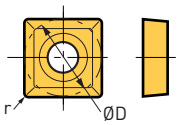


Fig. 2

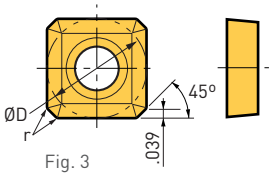
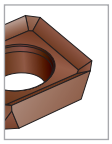


Fig. 3



SE (SHARP EDGE) TYPE

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

INSERT CLASSIFICATIONS

ACP200/ACP300	ACM250F	DS20	NF15KA
For all steel & stainless steel materials.	For stainless steel	For aluminum & /non-ferrous materials.	For cast iron
Multi-layer PVD coating on carbide base with nanoscale TiAlN & AlCrN. Excellent performance and wear resistance.	PVD-coated carbide with excellent smoothness and resistance to welding and chipping, due to the ultra-multilayered thin film structure made of AlTiN and TiAlCrN	DLC coating on carbide base with very smooth surface for a low coefficient of friction. Excellent performance against built-up edge.	Adopts K15-equivalent carbide material with hardness & toughness for cast iron.

Insert Model	Fig.	ØD	Nose Radius	Insert Grade					Insert Clamping Screw Set
				ACP200	ACP300	ACM250F	DS20	NF15KA	
CM0302	1	.130	.008	—	O	O	O	—	S1.6S-T3
CM0402	1	.156	.008	—	O	O	O	—	S2SS-T6
CM0502	2	.197	.008	O	—	O	O	O	S2TS-T6
CM0502SE				O	O	—	—	—	
CM10C1	3	.394	.008	O	—	O	O	O	S4S-T15
CM10C1SE				O	—	—	—	—	

- 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

C-CUTTER MINI CUTTING DATA

STANDARD MODELS

Material	Insert Grade	Cutting Speed (SFM)	Feed (IPT)		Coolant
			Chamfering	Face Milling	
Carbon Steel	ACP200, ACP300	330-1155	.002-.016	.002-.008	Dry
Pre-hardened Steel <HRC40		198-330	.002-.004	.002-.004	Wet
Stainless Steel	ACM250F	330-825	.003-.012	.003-.008	Dry/Wet
Cast Iron	NF15KA	330-1155	.004-.020	.002-.010	Dry
Aluminum/Non-Ferrous	DS20, ACP300	330-2640	.004-.020	.002-.012	Dry/Wet

- The table is just a reference to determine cutting conditions and it should be adjusted according to the condition of the machine tool and workpiece
- Wet cutting is recommended to obtain a good surface finish
- In case built-up edge occurs cutting aluminum and stainless steel, use soluble oil

BOLT HOLE & TAP HOLE LONG TYPE

Material	Insert Grade	Cutting Speed (SFM)	Feed (IPT)	Coolant
Carbon Steel	ACP200 ACP300	66-330	.001-.005	Wet
Cast Iron		165-528	.002-.008	Dry
Aluminum/Unalloyed Steel		99-330	.001-.005	Wet

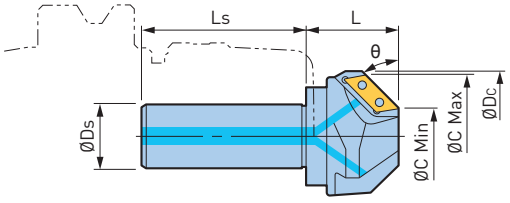
- The table is just a reference to determine cutting conditions and it should be adjusted according to the condition of the machine tool and workpiece
- For stainless and pre-hardened steels, standard model, not Long Type, is recommended

C-CUTTER

Covers a Wide Range of Chamfering Diameters and Reduces the Number of Tools and ATC Required

COOLANT THROUGH

Designed exclusively for chamfering, the insert has a large rake angle and produces a clean chamfering surface. A wide machining range reduces the number of tools in the magazine and is especially effective for reducing ATC time loss.



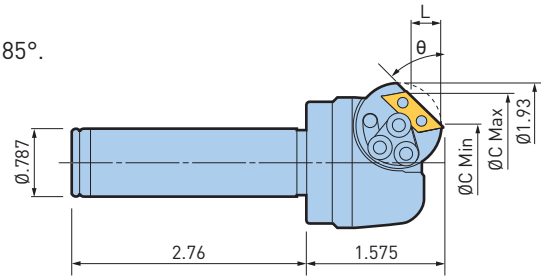
Chamfering Angle θ	Catalog Number	ØDs	Min Hole ØC Min	Max Chamfer Diameter ØC Max	Outer Diameter ØDC	L	Ls	Number of Inserts	Applicable Insert
30°	**ST32-C1652C-30**	32mm	.63	2.05	2.677	1.890	3.15	2	CW1909A
	ST42-C5085C-30	42mm	1.97	3.35	3.780	2.047		3	
45°	**ST20-C0525C**	20mm	.20	.98	1.299	.985	2.36	1	CW1206A
	ST25-C1040C	25mm	.39	1.57	1.772	1.378	2.76	2	CW1909A
	ST32-C3060C	32mm	1.18	2.36	2.559	1.772	3.15	3	
	ST42-C50100C	42mm	1.97	3.94	4.173	2.756		3	CW3115A
60°	**ST25-C1434C-60**	25mm	.55	1.34	1.535	1.457	2.76	2	CW1909A
	ST32-C3050C-60	32mm	1.18	1.97	2.126	1.772	3.15	3	
	ST32-C4565C-60		1.77	2.56	2.717	1.969		3	

• Insert clamping screws and wrench are included; inserts must be ordered separately

ACCESSORIES

C-CUTTER—UNIVERSAL TYPE

Handles chamfering angles from 5° to 85°.



Catalog Number	Insert
ST20-C5/85A-40	CW1206A

ACCESSORIES

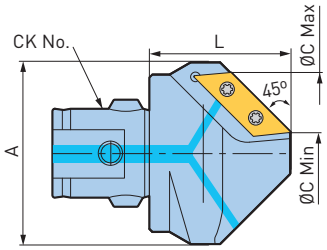
CHAMFERING RANGE

Angle α	Smallest Hole ØC Min	Largest Hole ØC Max	L
5°	.217	1.319	.047
10°	.287	1.366	.094
15°	.354	1.425	.142
20°	.441	1.472	.185
25°	.512	1.520	.232
30°	.598	1.559	.276
35°	.685	1.594	.315
40°	.772	1.622	.354
45°	.858	1.646	.394

Angle α	Smallest Hole ØC Min	Largest Hole ØC Max	L
50°	.945	1.661	.433
55°	1.04	1.669	.433
60°	1.12	1.673	.472
65°	1.21	1.669	.512
70°	1.30	1.657	.512
75°	1.37	1.642	.512
80°	1.45	1.618	.472
85°	1.53	1.586	.339

• Chamfering range and L are reference only, measure accurate values with a presetter

C-CUTTER—CKB TYPE



COOLANT THROUGH

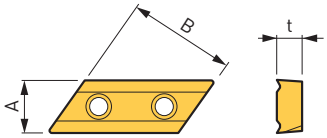
Catalog Number	Type	CK	ØC Min	ØC Max	L	A	No. of Inserts	Insert	Weight (lbs.)
CKB2-C0525C	C0525	CKB2	.197	.984	.984	1.122	1	CW1206A	.2
CKB4-C1040C	C1040	CKB4	.394	1.575	1.378	1.772	2	CW1909A	.6
CKB5-C3060C	C3060	CKB5	1.181	2.362	1.575	2.559	3	CW1909A	1.6
CKB6-C50100C	C50100	CKB6	1.969	3.937	2.559	4.173	3	CW3115A	6.0

• Insert clamping screws and wrench are included; inserts must be ordered separately

ACCESSORIES

SPARE PARTS PG. 538

C-CUTTER INSERTS



Non-Coating	Adopts P30-equivalent carbide material with emphasis on toughness for versatile use with materials from steel to aluminum.
ZX Coating	TiN and AlN multilayer coating increases speeds and extends insert life in chamfering of steel or cast iron.
DLC Coating	The exclusive substrate is treated with a thin DLC coating to prevent welding during aluminum machining. It retains sharpness and achieves a clean surface finish.

• DLC coating types do not come in 10 pcs. sets

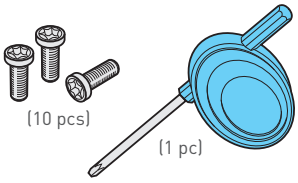
1 PC.

Catalog Number			A	B	t
Non-Coating	ZX Coating	DLC Coating			
CW1206A	**CW1206A(ZX)**	**CW1206A(DLC)**	.250	.500	.106
CW1909A	**CW1909A(ZX)**	**CW1909A(DLC)**	.375	.750	.177
CW3115A	**CW3115A(ZX)**	**CW3115A(DLC)**	.625	1.250	.276

10 PCS.

Catalog Number		A	B	t
Non-Coating	ZX Coating			
CW1206A-10P	**CW1206A(ZX)-10P**	.250	.500	.106
CW1909A-10P	**CW1909A(ZX)-10P**	.375	.750	.177
CW3115A-10P	**CW3115A(ZX)-10P**	.625	1.250	.276

C-CUTTER INSERT CLAMPING SCREW SET



Insert	Set Model	Wrench
CW1206A	**S2S-B**	FLR-13S
CW1909A	**S3S**	FLR-20S
CW3115A	**S5S**	FLR-28S

• The set contains 10 screws and 1 wrench
• Wrenches are also available separately

C-CUTTER CUTTING DATA

Vc: Cutting speed (SFM), f = Feed per revolution (in/rev)

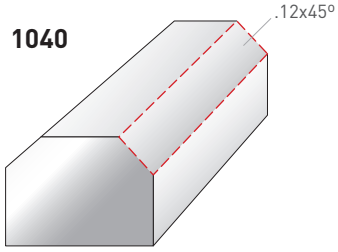
Catalog Number	Max Chamfering Amount	Chamfering Mode	General Steels		Stainless Steel		Cast Iron		Aluminum	
			Vc	f	Vc	f	Vc	f	Vc	f
ST20-C5/85A-40	.08❖	Plunge	165	.004	100	.003	130	.004	265	.004
		Side	265	.006	200	.004	165	.006	330	.008
ST20-C0525C	.08	Plunge	165	.004	100	.003	130	.004	265	.004
		Side	265	.006	200	.004	165	.006	330	.006
ST25-C1040C	.12	Plunge	300	.006	130	.005	200	.006	330	.008
ST25-C1434C-60 ST32-C1652C-30	.12❖	Side	400	.012	200	.008	300	.012	500	.012
ST32-C3060C	.16	Plunge	400	.012	200	.007	300	.010	500	.012
ST32-C3050C-60 ST32-C4565C-60 ST42-C5085C-30	.16❖	Side	500	.018	200	.012	400	.024	650	.022
ST42-C50100C	.16	Plunge	500	.016	265	.010	400	.014	600	.016
		Side	500	.018	200	.014	400	.024	800	.022

- Cutting conditions are the same for coated and non-coated inserts.
- The use of coated inserts enables better surface finish and extended insert life
- Lower the cutting speed if the maximum chamfering amount is exceeded
- If plunge cutting produces long chips, use step feed
- We recommend the use of a high-rigidity holder for chucking (HMC, MEGA-D etc.)
- Max. chamfering amount for the 30°, 60° and Universal Types marked with ❖ is the chamfering length of the longer side

C-CUTTER APPLICATION EXAMPLE

C3 Traverse Chamfering

A clean surface with no chatter was achieved even in traverse chamfering, under high cutting conditions.



C-Cutter Model	ST25-C1040C
Insert Model	CW1909A
Spindle Speed n	3,000 RPM
Feed Vf	70"/min

C-CUTTER MICRO

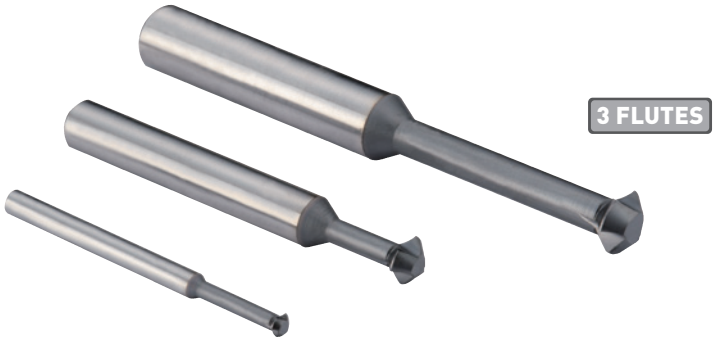
Ultra-Fine Diameter Allows Both Front and Back Chamfering Even on Workpieces with Complex Shapes

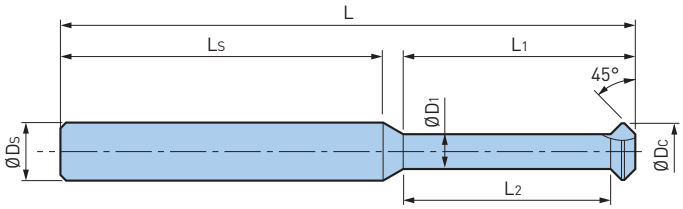
CUTTER DIAMETER: Ø.114"-.311"

The long-neck size is convenient for deep workpiece edges, or back chamfering of drilled holes. Uses a chromium nitride coating for high resistance to build up edge.

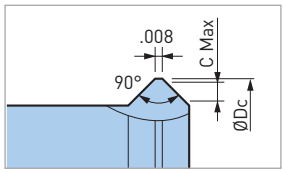
EFFECTIVE TWISTED EDGES

CrN Coating





CUTTING EDGE DETAILS



Catalog Number	ØDc	ØD1	ØDs	L	Ls	L1	L2	C Max
ST3W-CS3-45B-06	.114	.067	3mm	1.575	1.30	.236	.177	.020
ST3W-CS3-45B-12		.075			1.06	.472	.413	.016
ST4W-CS4-45B-08	.154	.083	4mm	1.772	1.40	.315	.236	.031
ST4W-CS4-45B-16		.094			1.08	.630	.551	.026
ST5W-CS5-45B-10	.193	.098	5mm	1.969	1.48	.394	.276	.043
ST5W-CS5-45B-20		.110			1.10	.787	.689	.037
ST6W-CS6-45B-12	.232	.118	6mm	1.969	1.40	.472	.335	.053
ST6W-CS6-45B-24		.134		2.362	1.32	.945	.827	.045
ST8W-CS8-45B-16	.311	.157	8mm	2.362	1.59	.630	.453	.073
ST8W-CS8-45B-32		.177		2.756	1.38	1.260	1.102	.063

- Cutting edge material is CrN coated carbide
- Number of inserts is 3 for all models.

C-CUTTER MICRO CUTTING DATA

Workpiece Material	Cutting Speed Vc (SFM)	Feed per Tooth fz (IN/flute)
Unalloyed Steel, Carbon Steel, Alloy Steel	230-330	.002-.004
Stainless Steel	200-265	.001-.003
Cast Iron/Ductile Cast Iron	130-265	.002-.004
Aluminum/Non-ferrous	265-500	.002-.005

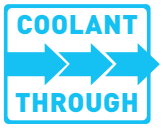
This table is a guideline for selecting cutting parameters. Adjust them as needed according to the machine and workpiece conditions. Generally, wet cutting provides a better surface finish.
Back chamfering may require lower cutting conditions than front. Lower the feed if secondary burrs appear.

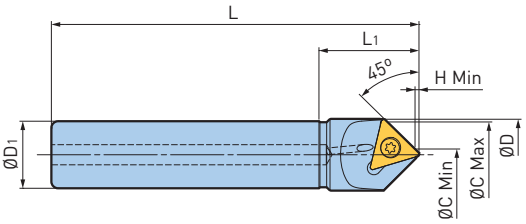
CAUTION

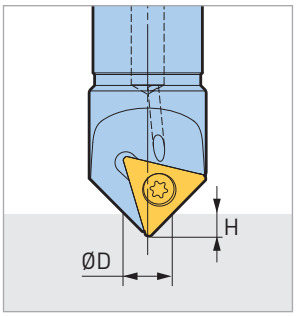
Keep the tool projection length as short as possible. Stop using the tool if it receives strong impact such as collision. The tool becomes hot during cutting. There is a risk of burn if touched immediately after use. Use protective equipment such as safety enclosures and glasses against scattering chips or tool breakage caused by accidents.

C-CENTERING CUTTER

A multifunction cutter capable of both spot drilling and chamfering.





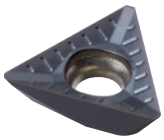


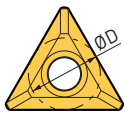
H = D/2 - 0.7 mm

Catalog Number	ØD1	ØD	L	L1	ØC Min	ØC Max	H Min	Insert
ST8-CN0209-45-65	8mm	.393	2.56	.590	.079	.354	.024	CN0406
ST12-CN0213-45-90	12mm	.551	3.54	.787	.079	.512	.024	CN0606
ST20-CN0220-45-110	20mm	.866	4.33	1.181	.079	.787	.012	CN0906

- Wrench and screw is included; inserts must be ordered separately
- As the insert has a nose radius, spot drilled tip is not acute
- Use with hand feed is not recommended

INSERTS FOR C-CENTERING CUTTER





Catalog Number	ØD	Insert Grade			Screw Set Catalog Number
		ACM250F (For Steel/Cast Iron/Stainless Steel)	DS20 (For Aluminum)	ACZ150 (For Steel/Cast Iron/Stainless Steel)	
CN0406	.187	O	O	O	S2TS-6IP
CN0606	.250	O	O	O	S2.5S-8IP
CN0906	.375	O	O	O	S4S-15IP

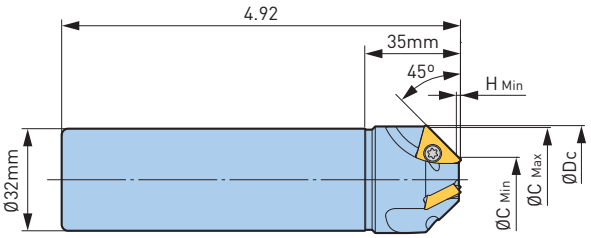
- Inserts are available in a packet of 10 pcs.; please specify the insert model number and grade when ordering Example: CN0906 ACM250F.....10 Pcs
- The insert clamping screw set contains 10 screws and 1 wrench
- Insert clamping screws and tightening wrench are consumables; order periodically for replacement or spares.

RECOMMENDED CUTTING CONDITION

Workpiece Material	Cutting Speed Vc (SFM)	Feed (IPT)	
		Spot Drilling	Traverse Chamfering
Carbon Steel, Alloy Steel	165-500	.001-.003	.002-.008
Stainless Steel	165-400	.001-.002	
Cast Iron	230-650	.001-.003	
Aluminium, Non-ferrous Metals	330-1000		

- The table is just a reference to determine cutting conditions, it should be adjusted according to the condition of the machine tool and workpiece
- Be sure to use water-soluble cutting fluid during spot drilling
- For traverse chamfering, dry cutting (including air blowing) is recommended; however, if severe built-up edge occurs in aluminum machining, use water-soluble cutting fluid

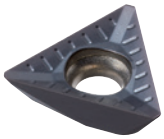
C-CENTERING CUTTER—3 INSERT

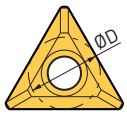


Catalog Number	ØDc	ØC Min	ØC Max	H Min	Insert
ST32-CN1433-45-125	1.339	.551	1.299	.024	CN0906

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

INSERTS FOR C-CENTERING CUTTER





Catalog Number	ØD	Insert Grade			Screw Set Catalog Number
		ACM250F (For Steel/Cast Iron/Stainless Steel)	DS20 (For Aluminum)	ACZ150 (For Steel/Cast Iron/Stainless Steel)	
CN0406	.187	○	○	○	S2TS-6IP
CN0606	.250	○	○	○	S2.5S-8IP
CN0906	.375	○	○	○	S4S-15IP

- Inserts are available in a packet of 10 pcs.; please specify the insert model number and grade when ordering Example: CN0906 ACM250F.....10 Pcs
- The insert clamping screw set contains 10 screws and 1 wrench
- Insert clamping screws and tightening wrench are consumables; order periodically for replacement or spares.

RECOMMENDED CUTTING CONDITION

Workpiece Material	Cutting Speed Vc (SFM)	Feed (IPT)	
		Spot Drilling	Traverse Chamfering
Carbon Steel, Alloy Steel	165-500	.001-.003	.002-.008
Stainless Steel	165-400	.001-.002	
Cast Iron	230-650	.001-.003	
Aluminium, Non-ferrous Metals	330-1000		

- The table is just a reference to determine cutting conditions, it should be adjusted according to the condition of the machine tool and workpiece
- Be sure to use water-soluble cutting fluid during spot drilling
- For traverse chamfering, dry cutting (including air blowing) is recommended; however, if severe built-up edge occurs in aluminum machining, use water-soluble cutting fluid

CENTER BOY

Accurate Positioning of Drill Holes and Chamfering Can be Performed Simultaneously

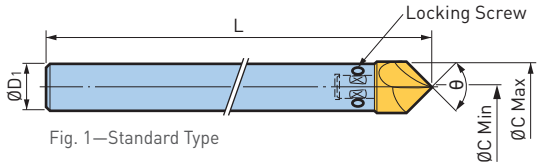


Fig. 1—Standard Type

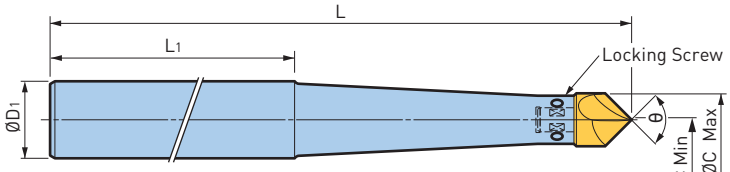


Fig. 2—Long Type

Point Angle	Fig.	Catalog Number	Chamfer Dia. ØCmin	Chamfer Dia. ØCmax	ØD1	L	L1	Insert Model	Spare Locking Screw
90°	1	**ST10-CBY09010**	.035	.394	10mm (.394)	5.906	—	CBY09010-5P	H0403-5P
	1	**ST12-CBY09013**	.035	.512	12mm (.472)	5.906		CBY09013-5P	H0504-5P
	1	**ST16-CBY09016**	.039	.630	16mm (.630)	7.087		CBY09016-5P	H0504-5P
	1	**ST20-CBY09022**	.059	.866	20mm (.787)	7.087		CBY09022-5P	H0505-5P
	2	**ST20-CBY09013-220**	.035	.512	20mm (.787)	8.661	4.724	CBY09013-5P	H0403-5P
		ST20-CBY09013-260				10.236			
	2	**ST32-CBY09022-260**	.059	.866	32mm (1.260)	10.236	4.724	CBY09022-5P	H0505-5P
		ST32-CBY09022-300				11.811			
120°	1	**ST12-CBY12013**	.035	.512	12mm (.472)	5.906	—	CBY12013-5P	H0403-5P

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

CAUTION

Hand feeding is not recommended.

CENTER BOY THROWAWAY BIT

Precision-Finished Cutting Edge with Superb Sharpness

Since the bit can be replaced, there is no need for regrinding and the performance remains stable at all times.

Point Angle	Catalog Number	Body Model
90°	**CBY09010-5P**	ST10-CBY09010
	CBY09013-5P	ST12-CBY09013/ST20-CBY09013
	CBY09016-5P	ST16-CBY09016
	CBY09022-5P	ST20-CBY09022/ST32-CBY09022
120°	**CBY12013-5P**	ST12-CBY12013

• Bits are available in 5 pcs.
• High-speed steel/TiN coating (Bit material)

CENTER BOY CUTTING DATA

Vc: Cutting speed (SFM), f = Feed per revolution (in/rev)

Catalog Number	Chamfering						Centering					
	Steel		Cast Iron		Aluminum		Steel		Cast Iron		Aluminum	
	Vc	f	Vc	f	Vc	f	Vc	f	Vc	f	Vc	f
CBY09010...	65	.004	65	.005	150	.006	80	.003	100	.004	165	.006
CBY09013...	80		80		165		100		115		180	
CBY12013...												
CBY09016...	100		115		180		150		130		200	
CBY09022...	115		130		200		165		150		215	

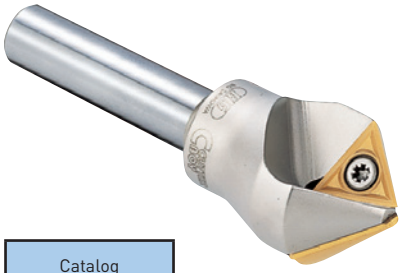
• The values in this table are only for reference and should be adjusted based on workpiece hardness, rigidity, and chamfering amount
• Lower the cutting speed Vc if chatter occurs
• Keep the projection length as short as possible

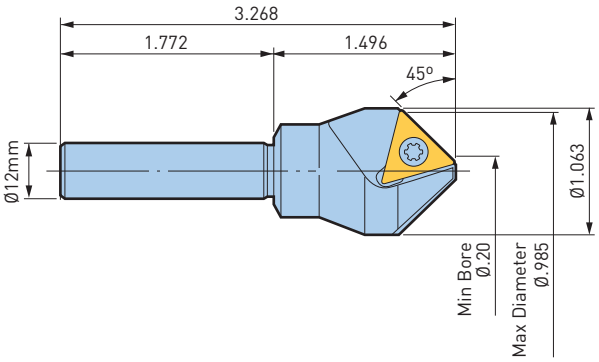
C-CUTTER BOY

Ideal for Chamfering with a Bench Drill

- Carbide insert achieves excellent chamfering
- Carbide guide prevents chatter, enabling easy operation
- Ø12 shank diameter—no chatter with a bench drill

CARBIDE GUIDE PREVENTS CHATTER

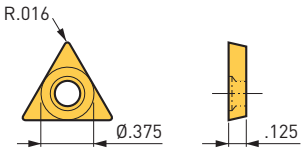




Catalog Number
ST12B-C0525

- One insert is included

C-CUTTER BOY INSERT



(Insert Material: Coated Carbide)

Catalog Number
C1603B

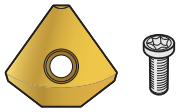
- Inserts sold in packs of 10 pcs.

INSERT CLAMPING SCREW SET

Catalog Number	Thread size	Wrench
S4S	M4 x 8	FLR-20S

- The set contains 10 screws and 1 wrench
- Wrench is also available separately

CARBIDE GUIDE SET

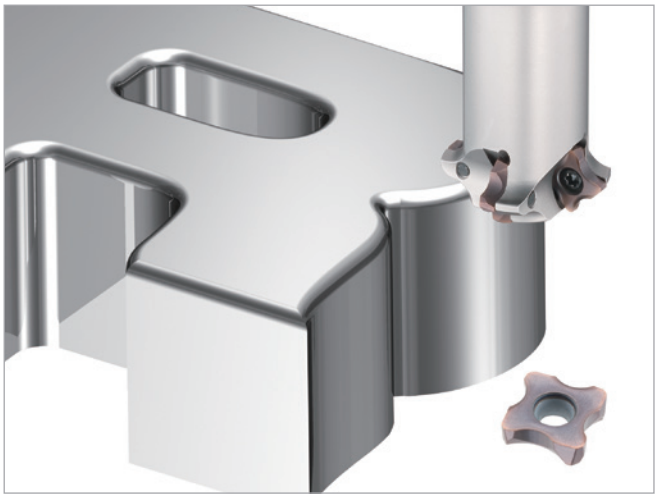


Catalog Number	Carbide Guide	Thread Size
CG0525S	CG0525	M4 x 7

- The set contains 1 carbide guide and 1 screw
- The screw compatible wrench is FLR-20S

Hole Diameter	Spindle Speed (RPM)		
	Steel	Cast Iron	Aluminum
Ø.20	600	800	1,000
Ø.40	500	600	800
Ø.60	400	500	600
Ø.75	300	400	500

- The values in this table are only for reference and should be adjusted based on workpiece hardness, rigidity and chamfering amount
- Keep runout as low as possible while machining
- We recommend the use of cutting fluid



R-CUTTER

Ultra High Feed Radius Chamfer Mill

Automated R-Chamfering available with front & back chamfering. Four insert design multiplies the feed rate.

R-CUTTER—FRONT CHAMFER TYPE

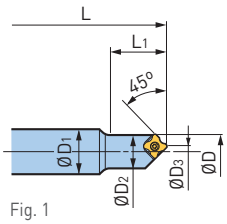


Fig. 1

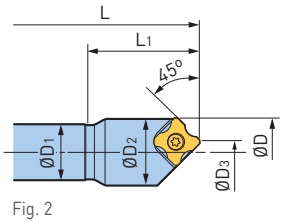
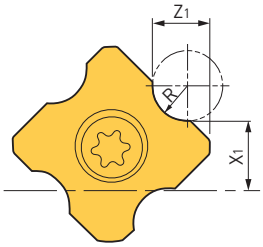


Fig. 2



Catalog Number	Fig.	ØD	ØD1	ØD2	ØD3	L	L1	No. of Inserts	R	X1	Z1	Insert Model
ST16-RC061-20	1	.484	16mm (.630)	.469	.177	3.701	.787	1	.02	.142	.076	RC06....
									.04	.132	.086	
									.06	.122	.096	
									.08	.111	.106	
ST20-RC121-40	2	.961	20mm (.787)	.937	.350	4.764	1.575	1	.04	.282	.149	RC12....
									.08	.262	.169	
									.12	.241	.189	
									.16	.220	.208	

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

ACCESSORIES

R-CUTTER—FRONT & BACK CHAMFER TYPE

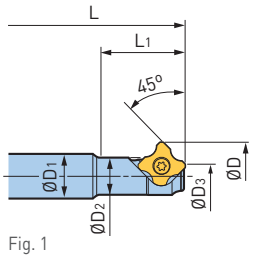


Fig. 1

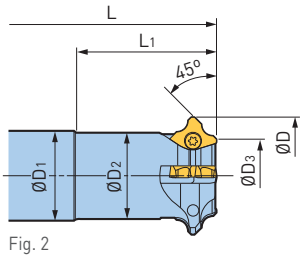
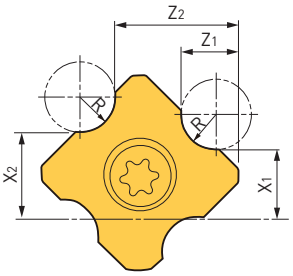


Fig. 2

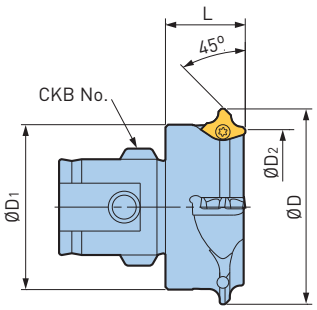


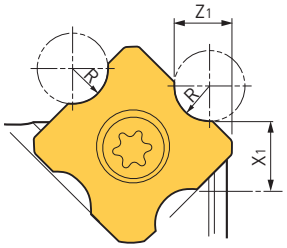
Catalog Number	Fig.	ØD	ØD1	ØD2	ØD3	L	L1	R	X1	Z1	X2	Z2	No. of Inserts	Insert Model
ST10-RC061B-15	1	.484	10mm (.394)	.260	.173	3.071	.591	.02	.142	.076	.169	.228	1	RC06....
								.04	.132	.086	.159	.218		
								.06	.122	.096	.149	.208		
								.08	.111	.106	.139	.198		
ST16-RC121B-30	1	.961	16mm (.630)	.524	.339	4.055	1.181	.04	.282	.149	.337	.442	1	RC12....
								.08	.262	.169	.316	.422		
								.12	.241	.189	.296	.402		
								.16	.220	.208	.275	.383		
ST16-RC064B-30	2	.827	16mm (.630)	.598	.520	3.976	1.181	.02	.311	.076	.338	.228	4	RC06....
								.04	.301	.086	.328	.218		
								.06	.291	.096	.319	.208		
								.08	.281	.106	.309	.198		
ST32-RC124B-50	2	1.654	32mm (1.260)	1.213	1.035	5.551	1.969	.04	.624	.149	.680	.458	4	RC12....
								.08	.604	.169	.659	.438		
								.12	.584	.189	.639	.419		
								.16	.563	.208	.619	.399		

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

ACCESSORIES

R-CUTTER—CKB TYPE





ACCESSORIES

SPARE PARTS PG. 538

Catalog Number	CK	ØD	ØD1	ØD2	L	No. of Inserts	R	X1	Z1	Insert Model
CKB3-RC064B-15	CKB3	1.457	1.220	1.150	.591	4	.02	.624	.076	RC06....
							.04	.615	.086	
							.06	.605	.096	
							.08	.595	.106	
CKB5-RC124B-25	CKB5	2.441	1.969	1.823	.984	4	.04	1.016	.149	RC12....
							.08	.996	.169	
							.12	.976	.189	
							.16	.957	.208	

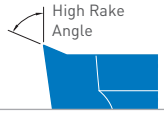
- Wrench and screws are included; inserts must be ordered separately

R-CUTTER INSERTS

Type	Catalog Number	Radius R	Insert Clamping Screw Set
RC06	**RC06050-ACP300**	.02	S2TS-T6
	RC06100-ACP300	.04	
	RC06150-ACP300	.06	
	RC06200-ACP300	.08	
RC12	**RC12100-ACP300**	.04	S4S-T15
	RC12200-ACP300	.08	
	RC12300-ACP300	.12	
	RC12400-ACP300	.16	

- Wrench and screws are included
- Inserts are available in packages of 10 pcs.
- Material is coated carbide
- It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained

EXCELLENT SHARPNESS



UNIQUE INSERT GEOMETRY

High rake angle reduces cutting resistance and minimizes the generation of burrs.

RECOMMENDED CUTTING CONDITIONS

Workpiece Material	Cutting Speed (SFM)	Feed Rate (IPT)	Coolant
Structural, Carbon or Alloy Steel	330-1150	.002-008	Dry
Prehardened Steel <HRC40	195-260	.002-.004	Wet
Stainless Steel	330-820	.003-.008	Dry/Wet
Cast Iron	330-1150	.002-.010	Dry
Aluminum	330-2625	.002-.010	Dry/Wet

- The table is just a reference to determine cutting conditions and it should be adjusted according to the condition of the machine tool and workpiece
- Wet cutting is recommended to obtain a good surface finish
- In case built-up edge occurs cutting aluminum and stainless steel, use soluble oil

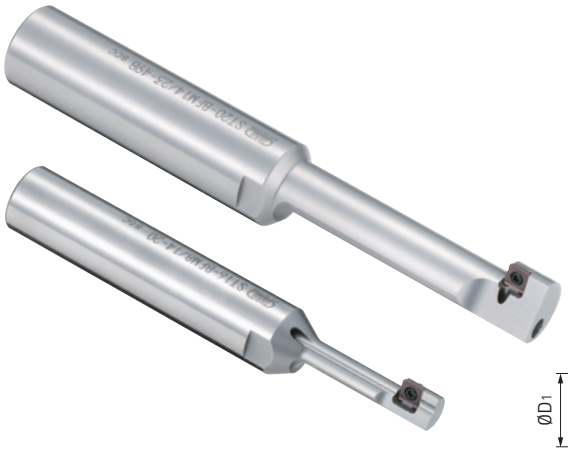
BF-CUTTER

Exclusively Designed for Back Spot Facing of Cap Bolt Holes

HOLE DIAMETER: Ø.256"-1.299" (Ø6.5-33mm)

Cap bolt size M6-M16, for Ø1/4"-5/8"

COOLANT THROUGH



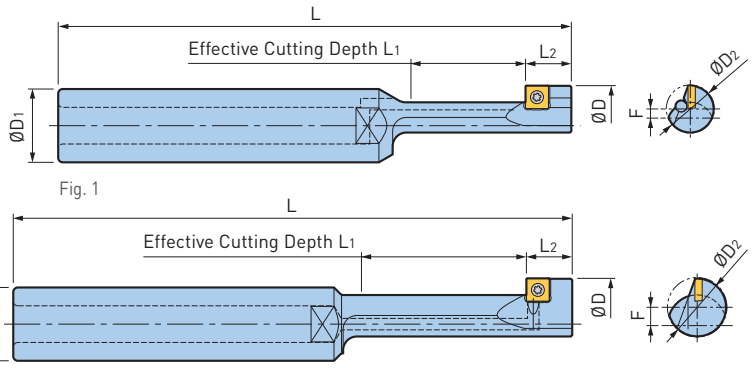


Fig. 1

Fig. 2

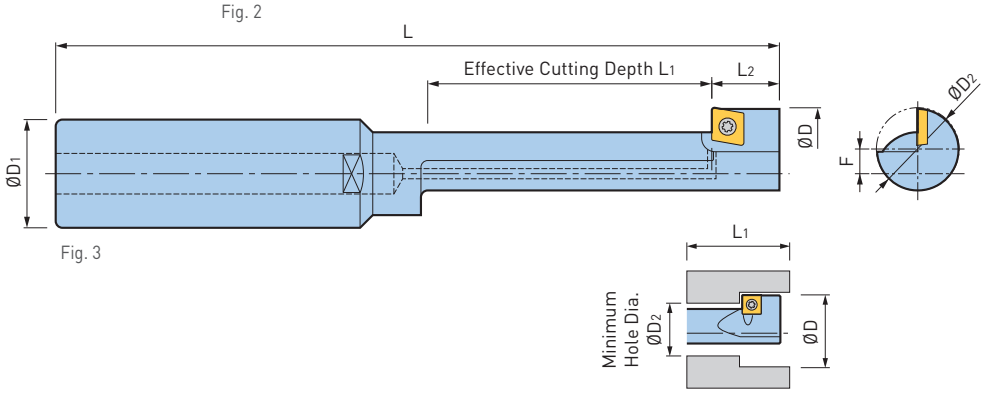


Fig. 3

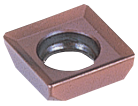
Catalog Number	Fig.	Facing ØD	ØD1	Min Hole Dia. ØD2	L	L1	L2	Offset F	Insert Model
ST16-BFM6/11-12	1	.433	16mm	.256	4.016	.472	.354	.094	CM0502
ST16-BFM8/14-20		.551		.335	4.252	.787		.114	
ST16-BFM10/17.5-25		.689		.413	4.409	.984	.394	.144	
ST16-BFM12/20-36	2	.787		.512	4.803	1.417		.144	
ST20-BFM14/23-49	2	.906	20mm	.591	5.354	1.929	.394	.163	CM0502
ST20-BFM16/26-56		1.024		.669	5.591	2.205		.183	
ST32-BFM18/29-63	3	1.142	32mm	.748	7.402	2.480	.590	.205	CC□□07..
ST32-BFM20/32-70		1.260		.827	7.677	2.756		.224	
ST32-BFM22/35-77		1.378		.906	7.953	3.031		.244	
ST32-BFM24/39-84		1.535		.984	8.425	3.307	.787	.287	CC□□09..
ST32-BFM27/43-95		1.693		1.181	8.858	3.740		.268	
ST32-BFM30/48-105		1.890		1.299	9.252	4.134		.307	

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

ACCESSORIES

INSERTS PG. 625

BF-CUTTER—INDEXABLE INSERTS



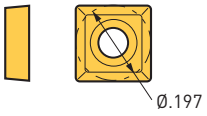


Fig. 1

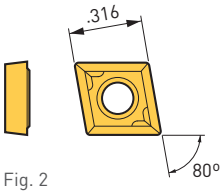


Fig. 2

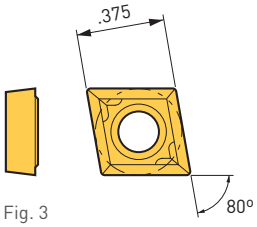


Fig. 3

- Inserts are available in packages of 10 pcs.
- Please clarify the insert model and grade when ordering (ex: CM0502ACP200)

Insert Model	Fig.	Nose Radius	Material	Insert Grade
CM0502	1	.008	General Steel	ACP200
			Stainless Steel	ACM250F
			Aluminum/Non-Ferrous	DS20
CCGP070204EFM	2	.016	General Steel	T1500A
CCMP070204EFM				AC820P
CCMP070204EFM				AC830P
CCMP070204ESM			Stainless Steel	AC630M
CCMP070204EFM			Cast Iron	AC700G
CCMP070204EFM			Cast iron/Aluminum/ Non-Ferrous	AC410K
CCGA070204FN				H1
CCGM090308EFM	3	.031	General Steel	T1500A
CCMM090308EFM				AC820P
CCMM090308EFM				AC830P
CCMM090308ESM			Stainless Steel	AC630M
CCMM090308EFM			Cast Iron	AC700G
CCMM090308EFM			Cast iron/Aluminum/Non-Ferrous	AC410K

INSERT CLASSIFICATIONS

ACP200	ACM250F	DS20	T1500A	AC820P	AC830P
For general steel	For stainless steel	For aluminum/non-ferrous	For general steel	For general steel	For general steel
PVD-coated carbide with superior wear resistance due to its nanometer-level thickness ultra-multilayered TiAlN and AlCrN film.	PVD-coated carbide with excellent smoothness and resistance to welding and chipping, due to the ultra-multilayered thin film structure made of AlTiN and TiAlCrN.	DLC-coated carbide exclusive for aluminum and non-ferrous metals, ultra-smooth with a low wear coefficient and superior welding resistance.	General purpose cermet for applications in regions from finishing to roughing. Special technology improves the material's resistance to thermal shock, allowing safe use even for wet machining.	The newly developed CVD method allows for a dense yet smooth coating that achieves outstanding versatility and consistency as the main material for steel.	The tough substrate and the peel-resistant, dense and smooth coating deliver high reliability for interrupted cutting of steel.

AC630M	AC700G	AC410K	H1
For stainless steel	For cast iron	For cast iron/aluminum/non-ferrous	For cast iron/aluminum/non-ferrous
The extremely smooth thin film coating gives this material great sharpness. Ideal for stainless steel or other materials that are easily work hardened.	Heat resistant carbide alloy is coated with multiple layers of mainly tough alumina, with additional surface smoothing treatment, to produce a highly reliable material for machining cast iron.	The hardest material for cast iron. Use if not satisfied with the wear resistance of AC700G. Note that this type is not suitable for heavy duty interrupted cutting.	With slightly higher wear resistance than K10 material, this material is a best selling type of carbide that can be used across a wide range from roughing to finishing.

SPARE PARTS

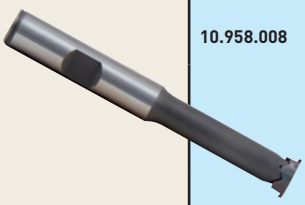
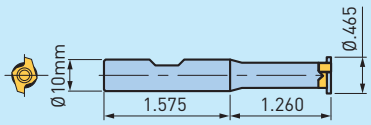
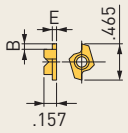
Cutter Type	Insert Clamping Screw Set
BFM6/11	S2SS-T6
BFM8/14	
BFM10/17.5	
BFM12/20	S2TS-T6
BFM14/23	
BFM16/26	
BFM18/29	S3S
BFM20/32	
BFM22/35	
BFM24/39	S4S-T15
BFM27/43	
BFM30/48	

RECOMMENDED CUTTING CONDITIONS

Material	Cutting Speed (SFM)	Feed (IPT)
Carbon/Alloy Steel	100	.001
Cast Iron		
Aluminum/Non-Ferrous Material	100-165	

GROOVE MILLING CUTTERS WITH CARBIDE INSERTS

Designed for circular milling of internal or external grooves.

	Catalog Number	Insert Type	E	B	Boring Range	Application Code	Catalog Number
	**10.958.008** 	Type 0 	.045	.027	.472-.945	ST	**10.958.051**
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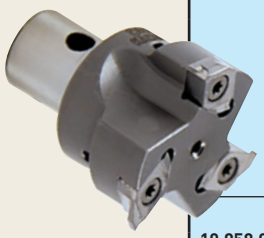
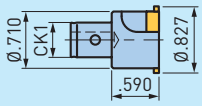
						AL	**10.958.053**
			.053	.039	.472-.945	ST	**10.958.055**
						CI	**10.958.056**
						AL	**10.958.057**
			—	—	—		**10.958.048**
	**10.958.010** 		.045	.027	.866-1.340	ST	**10.958.061**
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						AL	**10.958.063**
			.053	.039	.866-1.340	ST	**10.958.065**
						CI	**10.958.066**
						AL	**10.958.067**
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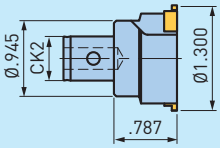
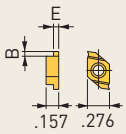
	10.958.021 	Type 1 	.065	.043	1.340-1.970	ST	**10.958.071**
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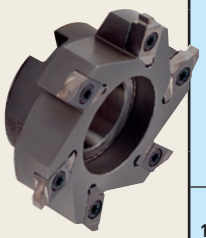
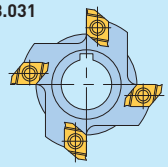
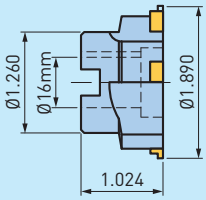
	**10.958.031**  		.087	.063	1.970-3.350	ST	**10.958.081**
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						AL	**10.958.087**
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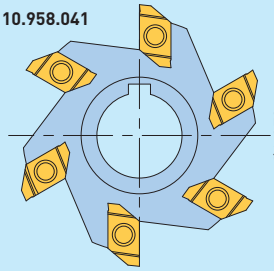
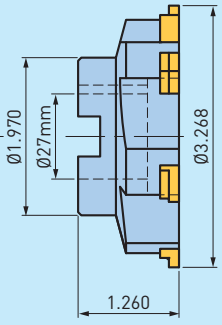
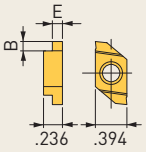
	10.958.041  	Type 2 	.126	.082	3.350-8.270	ST	**10.958.091**
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						AL	**10.958.093**
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						CI	**10.958.096**
						AL	**10.958.097**
			—	—	—		**10.958.049**

APPLICATION CODES

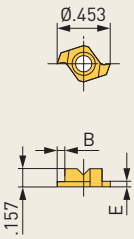
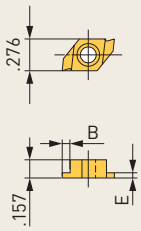
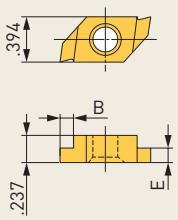
CI ..... Cast Iron
ST ..... Steel
AL ..... Aluminum
..... Clamping Screw (10 screws & 1 wrench)

ACCESSORIES

SPARE PARTS
PG. 538/557

BLANK INSERTS

Periphery ground without rake angle and chip breakers.

Type 0	Grade	Catalog Number	Type 1	Grade	Catalog Number	Type 2	Grade	Catalog Number
E Max .157 B Max .039 	C3	**10.958.313**	E Max .157 B Max .075 	C3	**10.958.157**	E Max .236 B Max .098 	C3	**10.958.155**
	C5	**10.958.314**		C5	**10.958.158**		C5	**10.958.156**

TECHNICAL INFORMATION:

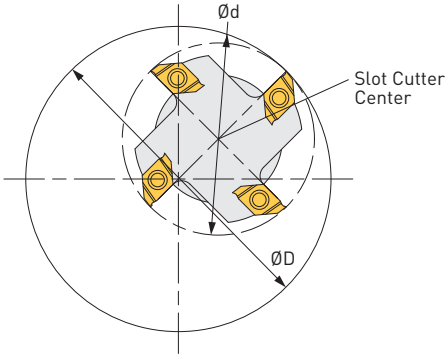
In all circular milling operations the programmed feed rate S applies to the center of the milling cutter.
This may be computed as follows:

$$S = S1 \times \frac{D-d}{D}$$

Where:
S = Feed rate for cutter center to be programmed in in/min
S1 = Circumferential feed in in/min from table
D = Bore diameter

SPEEDS & FEEDS

Cutter Dia.		Cutter Speed & Feed		
		Steel: 328 SFM	Cast Iron: 427 SFM	Alum.: 591 SFM
.827	Speed	1500 RPM	2000 RPM	2700 RPM
	S1	11.8 IPM	15.7 IPM	21.3 IPM
1.299	Speed	1000 RPM	1300 RPM	1800 RPM
	S1	11.8 IPM	15.4 IPM	21.3 IPM
1.890	Speed	650 RPM	850 RPM	1200 RPM
	S1	10.2 IPM	13.4 IPM	18.9 IPM
3.268	Speed	380 RPM	500 RPM	700 RPM
	S1	9.0 IPM	11.8 IPM	16.5 IPM



These values relate to the milling cutter circumference and apply under normal working conditions. Climb-cut milling is recommended with helical or tangential plunging to groove depth assuming a continuous program cycle without feed interruption.

MEASURING TOOLS & ACCESSORIES

D.1

MEASURING INSTRUMENTS 630-650

POINT MASTER PRO 630-634
BASE MASTER 635-638
TOOL MASTER 638
3D MASTER RED 639
ACCU CENTER 639
ATC ALIGNMENT TOOL 640
DYNA FORCE 641
DYNA LINE 642-643
DYNA CONTACT 644
DYNA TEST 644
LEVEL MASTER 645
DIAL INDICATOR STANDS 646-650

TOOL ASSEMBLY DEVICES 651-655

TOOL PRO 651
KOMBI GRIP 652
ST LOCK 652
TOOLING MATE 653-654
TORQUE FIT 655

CLEANERS 656-661

TOOLING CLEANER 656
HSK EXTERNAL TAPER CLEANER 656
SPINDLE CLEANERS 657
CHIP BLOWER 658-659
CHIPFAN 660
T-SLOT CLEAN 661

POINT MASTER PRO—PMPC SERIES

Touch Probe & Edge Finder

Instantaneously detects reference points even on non-conductive workpieces and machines. Notification of touchpoint with LED and beep.

All Supported — For All Workpieces and Machine Tools

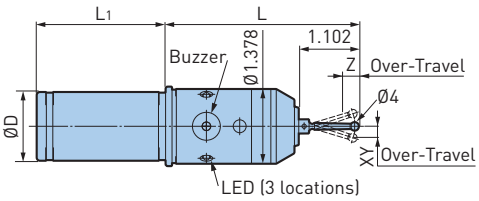
Battery Alarm — LED flashes to indicate that battery life is low

Buzzer — Notifies via buzzer

LED — Notifies via LED

CYLINDRICAL SHANK TYPE

Catalog Number	ØDh7	L	L1	Weight (lbs.)
PMPC-20	20mm	3.937	1.969	1.1
PMPC-32	32mm	3.543	2.362	1.5



ACCESSORIES
STYLUS PG. 634

- **ST28-4R** stylus is included

BBT SHANK TYPE

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Fig.	L	L1	Weight (lbs.)
BBT30-PMPC-115	1	4.528	2.480	1.76
BBT40-PMPC-120	2	4.724	3.661	2.86

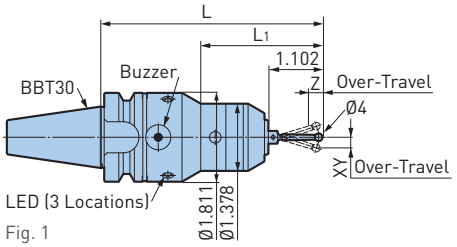


Fig. 1

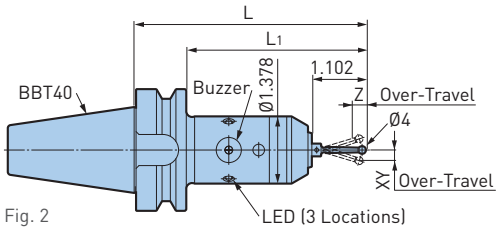


Fig. 2

ACCESSORIES
STYLUS PG. 634

- **ST28-4R** stylus is included

SPECIFICATIONS

Repeatability	±1µm (.00004")	
Over-Travel	XY ±12mm Z 5mm (XY±.472" Z.197")	
Measuring pressure	XY 0.4N Z 1.5N	
Battery	PMPC-20, 32	LR1 x 2P
	BBT40-PMPC-120	
	BBT30-PMPC-115	CR2 x 1
Battery Life	PMPC-20, 32	280 Continuous Hours
	BBT40-PMPC-120	
	BBT30-PMPC-115	260 Continuous Hours

- The specifications above are values when ST28-4R stylus is used
- Repeatability is affected by stylus length
- There is a delay of approx. 5µm in XY direction and 2µm in Z direction when the stylus contacts the workpiece measuring surface to illuminate the LED

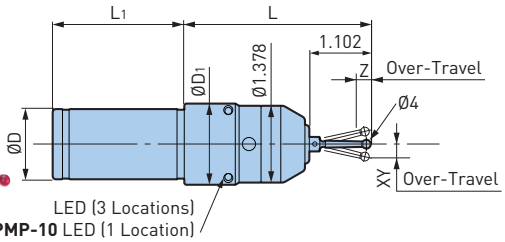
POINT MASTER PRO—PMP SERIES

Ideal for high-speed machining centers with ceramic bearings.

All Supported — For All Workpieces and Machine Tools

LED — Notifies via LED

CYLINDRICAL SHANK TYPE



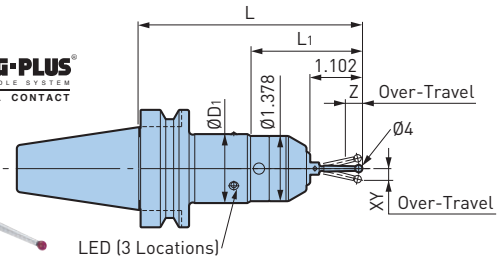
Catalog Number	ØDh7	ØD1	L	L1	Weight (lbs.)
PMP-10	10mm	1.378	2.953	1.929	.9
PMP-20	20mm	1.457	3.543	1.969	1.1
PMP-32	32mm		3.150	2.362	1.3

• **ST28-4R** stylus is included

ACCESSORIES

STYLUS PG. 634

BBT SHANK TYPE



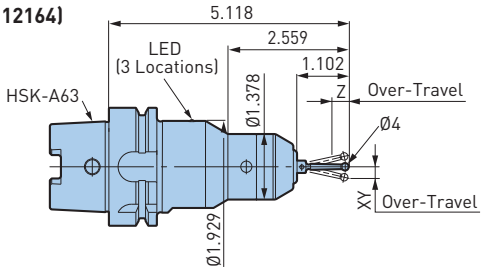
Catalog Number	ØD1	L	L1	Weight (lbs.)
BBT30-PMP-115	1.811	4.528	2.480	1.8
BBT40-PMP-120	1.457	4.724	2.362	2.9
BBT50-PMP-150	1.457	5.906	2.362	8.4

• **ST28-4R** stylus is included

ACCESSORIES

STYLUS PG. 634

HSK-A63 SHANK TYPE (DIN 69893-1 & ISO 12164)



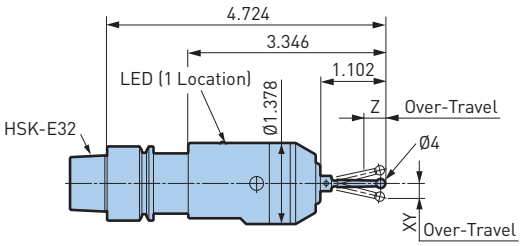
Catalog Number	Weight (lbs.)
HSK-A63-PMP-130	2.9

• **ST28-4R** stylus is included

ACCESSORIES

STYLUS PG. 634

HSK-E32 SHANK TYPE (DIN 69893-5)



Catalog Number	Weight (lbs.)
HSK-E32-PMP-120	1.1

• **ST28-4R** stylus is included

ACCESSORIES

STYLUS PG. 634

SPECIFICATIONS

Repeatability	±1µm (.00004")	
Over-Travel	XY ±12mm Z 5mm (XY ±.472" Z.197")	
Measuring Pressure	XY .4N Z 1.5N	
Battery	PMP-10	Panasonic Lithium Battery BR435 x 1P
	PMP-20, 32 BBT40-PMP-120	LR1 x 2P
	HSK-A63-PMP-130 BBT30-PMP-115	CR2 x 1
	HSK-E32-PMP-120	SR44 x 2P
	BBT50-PMP-150	LR03 x 2P

Battery life	PMP-10	180 continuous hours
	PMP-20, 32 BBT40-PMP-120	500 continuous hours
	HSK-A63-PMP-130 BBT30-PMP-115	900 continuous hours
	HSK-E32-PMP-120	90 continuous hours
	BBT50-PMP-150	600 continuous hours

- The specifications above are values when ST28-4R stylus is used.
- Repeatability is affected by stylus length.
- There is a delay of approx. 5µm in XY direction and 2µm in Z direction when the stylus contacts the workpiece measuring surface to illuminate the LED.

POINT MASTER PRO—PMC SERIES

Instantaneous detection with LED and beep. LED flashes to notify low battery life while measuring workpieces.

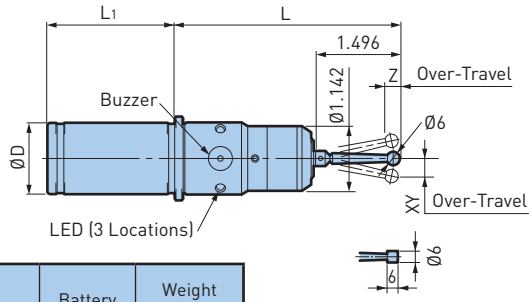
For use with conductive workpieces and machine tools

LED flashes to indicate that battery life is low

Notifies via buzzer

Notifies via LED

CYLINDRICAL SHANK TYPE



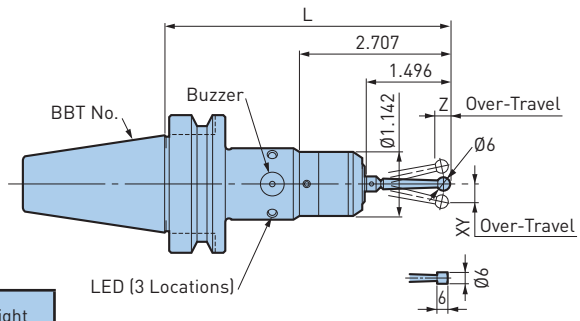
Catalog Number	ØDh7	L	L1	Battery	Weight (lbs.)
PMC-20	20mm	4.331	1.969	LR1x2	.88
PMC-20S					
PMC-32	32mm	4.016	2.283	LR1x2	1.32
PMC-32S					

ACCESSORIES

- **ST38-6P** stylus is included; models with an S at the end of the model number include Ø6 cylindrical **ST38-6X6** stylus
- Cannot be used with non-conductive workpieces and machines with ceramic bearings, use POINT MASTER PRO

BBT SHANK TYPE

BIG-PLUS SPINDLE SYSTEM DUAL CONTACT



Catalog Number	L	Battery	Weight (lbs.)
BBT40-PMC-130	5.118	LR1x2	2.64
BBT40-PMC-130S			
BBT50-PMC-160	6.300	LR03x2	8.8
BBT50-PMC-160S			

ACCESSORIES

- **ST38-6P** stylus is included; models with an S at the end of the model number include Ø6 cylindrical **ST38-6X6** stylus
- Cannot be used with non-conductive workpieces and machines with ceramic bearings. Use POINT MASTER PRO

SPECIFICATIONS

Probe Repeatability	±1µm (.00004")	
Over-Travel	XY ±12mm Z 5mm (XY ±.472" Z .197")	
Measuring Pressure	XY 0.6N	Z 2.7N
Battery Life	PMC-20, 20S, 32, 32S	300 continuous hours
	BBT40-PMC-130, 130S	
	BBT50-PMC-160, 160S	380 continuous hours

- The specifications above are values when the standard accessory stylus is used

CAUTION

Pullstud bolts with a center through hole cannot be used. In the case of machines that require a hole on the pullstud bolts due to the coolant nozzle, please contact BIG DAISHOWA.

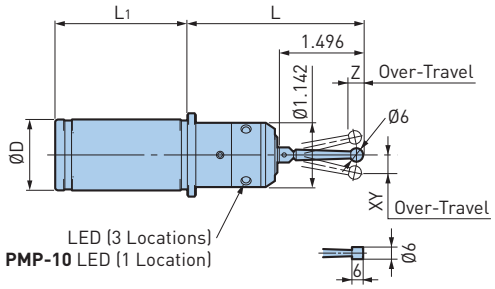
POINT MASTER PRO—PMG SERIES

Instantaneous detection with LED.

For use with conductive workpieces and machine tools

Notifies via LED

CYLINDRICAL SHANK TYPE

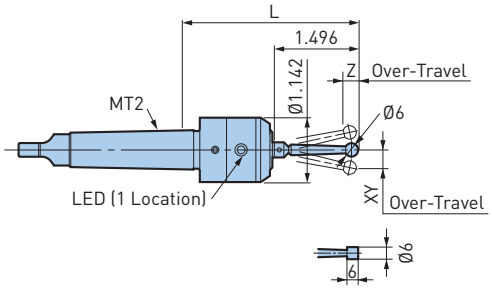


Catalog Number	ØDh7	L	L1	Battery	Weight (lbs.)
PMG-10	10mm	2.953	1.969	Panasonic Lithium BR435 x 1	.44
PMG-10S					
PMG-20	20mm	3.543	1.969	LR1x2	.66
PMG-20S					
PMG-.750	.750				
PMG-32	32mm	3.150	2.362	LR1x2	1.1
PMG-32S					

ACCESSORIES

- **ST38-6P** stylus is included, except for PMG-.750, **ST38-.25P** (1/4")
- Models with an S at the end of the model number include Ø6 cylindrical ST38-6X6 stylus

MORSE TAPER TYPE



Catalog Number	MT	L	Battery	Weight (lbs.)
PMG-MT2	MT2	3.150	Panasonic Lithium BR435 x 1	.44
PMG-MT2S				

ACCESSORIES

- **ST38-6P** stylus is included; models with an S at the end of the model number include Ø6 cylindrical **ST38-6X6** stylus
- LED in 1 location only

SPECIFICATIONS

Probe Repeatability	±1µm (.00004")	
Over-Travel	XY ±12mm Z 5mm (XY ±.472" Z .197")	
Measuring Pressure	XY 0.6N	Z 2.7N
Battery Life	PMG-20, 20S, .750, 32, 32S	80 continuous hours
	PMG-10, 10S, MT2, MT2S	150 continuous hours

- The specifications above are values when the standard accessory stylus is used

REPLACEABLE STYLUS (OPTIONAL PRODUCT)

For PMPC, PMP, PMC, PMG Series

M3 thread is used to make the stylus replaceable, allowing replacement if it is damaged or according to the workpiece shape.

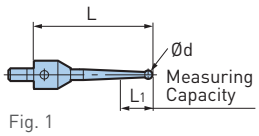


Fig. 1

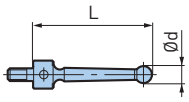


Fig. 2

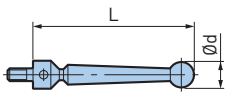


Fig. 3

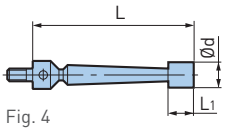
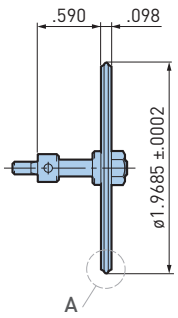


Fig. 4

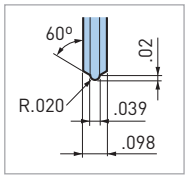
Catalog Number	Fig.	L	L1	Ød	Weight (g)	Stylus Tip	Point Master Model
ST28-1P	1	1.102	.078	**1mm**	2.0	Carbide	PMG/PMC PMP/PMPC
ST28-2P			.315	**2mm**	2.0		
ST28-3P	2		—	**3mm**	2.5		
ST28-4P				**4mm**	2.9		
ST28-4R				**4mm**	2.6	Ruby	PMP/PMPC
ST38-6P	3	1.496	—	**6mm**	4.8	Stainless Steel	PMG/PMC
ST38-.25P				**.250"**			
ST38-6x6	4		.236	**6mm**	4.8		PMG□□S/PMC□□S

- **ST38-6** x 6 stylus is exclusive for PMG□□S/PMC□□S models, mounting on other models will negatively affect the runout accuracy
- Runout adjusting screw sets (10x with wrench)
- Point Master (Chime) - PMBS
- Point Master Pro - PMPBS

Ideal for measuring the taper of irregularly shaped workpieces or plastic molds.



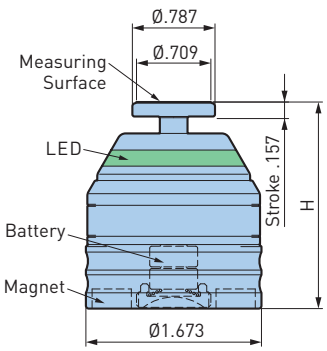
DETAIL A



Catalog Number
ST15-50K

BASE MASTER

Electronic detection of the cutting edge position. Repeatability ±1µm (.00004").



Catalog Number	H
BM-50H	50mm
BM-2H	2.000

- Model without magnets is available; if required, add /N at the end of the model number when ordering (Example: BM-50/N)

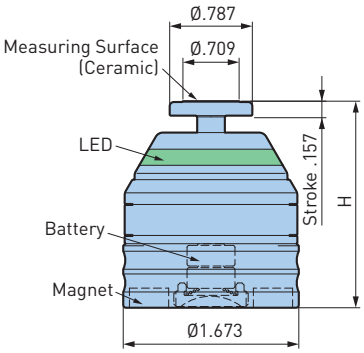
LIVE Conductivity — For use with conductive cutting tools, workpieces and machine tools

LED — Notifies via LED

Height Accuracy	+0.005mm, 0 (.0002")
Repeatability	±1µm (.00004")
Min. Tool Diameter	Ø1mm (.04")
Measuring Pressure	2N
Stroke	4mm (.157")
Touch Signal	LED Illuminates (Green)
Battery	SR44 x 2
Battery Life	8 Continuous Hours
Weight	.5 lbs.

BASE MASTER

Electronic detection of the cutting edge position. Repeatability ±1µm (.00004").



Catalog Number	H
BM-50GH	50mm
BM-2GH	2.000

- Model without magnets is available; if required, add /N at the end of the model number when ordering (Example: BM-50G/N)

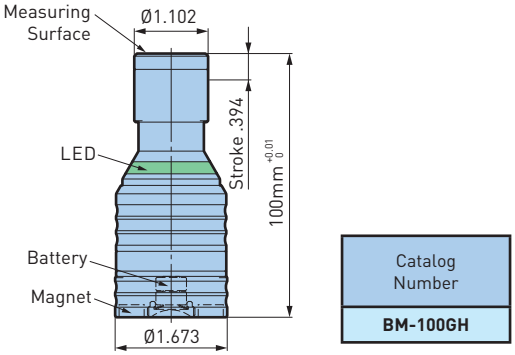
All Supported — For all cutting tools, workpieces and machine tools

LED — Notifies via LED

Height Accuracy	+0.005mm, 0 (+.00004", -0)
Repeatability	±1µm (.00004")
Min. Tool Diameter	Ø1mm (.040")
Measuring Pressure	2N
Stroke	4mm (.157")
Touch Signal	LED Illuminates (Green)
Battery	SR44 x 2
Battery Life	8 Continuous Hours
Weight	.5 lbs.

Easily Visible Measuring Surface, Even With Large Machines

Cutting edge detection position of 100mm from machining object top surface.



Catalog Number
BM-100GH

- Model without magnets is available; if required, add /N at the end of the model number when ordering (Example: BM-100G/N)

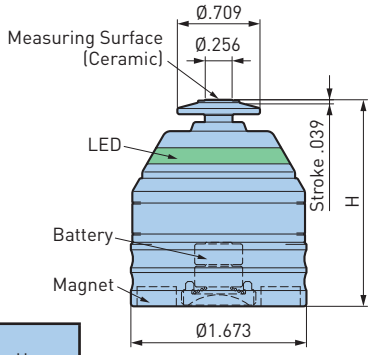
All Supported — For all cutting tools, workpieces and machine tools

LED — Notifies via LED

Height Accuracy	100 +0.01mm 0
Repeatability	±1µm (.00004")
Min. Tool Diameter	Ø1mm (.04")
Measuring Pressure	2N
Stroke	10mm (.394")
Touch Signal	LED Illuminates (Green)
Battery	SR44 x 2
Battery Life	10 Continuous Hours
Weight	.80 lbs.

BASE MASTER

Cutting edge position detection of Ø.05mm (Ø.002") tool. Low-contact pressure cushion mechanism realizes measurement of ultra-small tools.



SMALL-DIAMETER TOOLS SUPPORTED

Min. Measurable Tool Diameter Ø.05mm

All Supported — For all cutting tools, workpieces and machine tools

LED — Notifies via LED

Height Accuracy	+0.005mm, 0 (+.0002", -0)
Repeatability	±1µm (.00004")
Min. Tool Diameter	Ø.05mm (.002")
Measuring Pressure	.3N
Stroke	1mm (.040")
Touch Signal	LED Illuminates (Green)
Battery	SR44 x 2
Battery Life	10 Continuous Hours
Weight	.53 lbs.

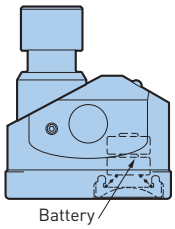
Catalog Number	H
BM-50MH	50mm
BM-2MH	2.000

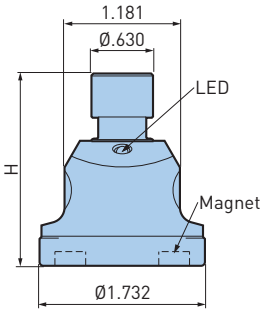
- Model without magnets is available; if required, add /N at the end of the model number when ordering (Example: BM-50MH/N)

BASE MASTER

Independent body and measurement part. DLC coated Sensor Plate. Safe stroke amount of 5mm.

BODY SET





All Supported — For all cutting tools, workpieces and machine tools

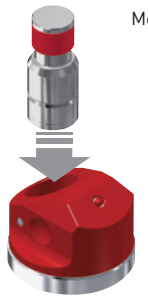
LED — Notifies via LED

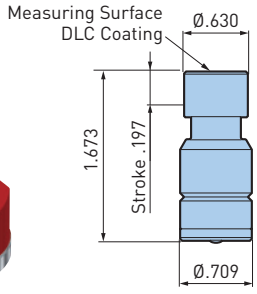
Height Accuracy	+0.01mm, 0 (+.0004", 0)
Repeatability	±1µm (.00004")
Min. Tool Diameter	Ø1mm (.04")
Measuring Pressure	2N
Stroke	5mm (.197")
Touch Signal	LED Illuminates (Red)
Battery	SR44 x 2
Battery Life	10 Continuous Hours
Weight	.44 lbs.

Catalog Number	H
BM-50R	50mm
BM-2R	2.000

- Measurement part (BM-MEG) is included

MEASUREMENT PART ONLY





Catalog Number
BM-MEG

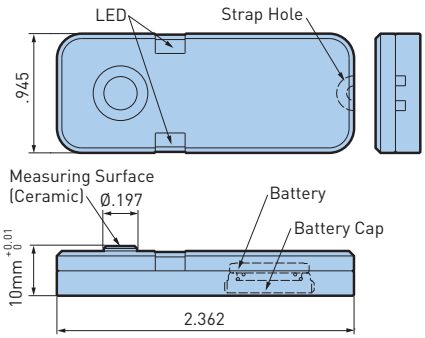
- Measurement part is also available separately

BASE MASTER MINI—ULTRA-THIN TYPE

- Cutting edge position measuring device with a reference height of 10mm
- Ultra-compact design considering tool interference prevention
- High brightness LED (green) lights to instantly detect the reference point

All Supported — For all cutting tools, workpieces and machine tools

LED — Notifies via LED



Catalog Number
BMM-10H

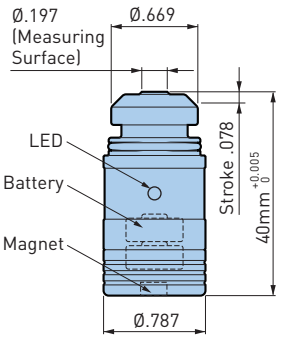
Height Accuracy	+.01mm 0 (+.0003" 0)
Repeatability	±1μm (.00004")
Min. Tool Diameter	ø0.1mm (.004")
Measuring Pressure	1.0N
Stroke	1mm (.039")
Touch Signal	LED Illuminates (Green)
Battery	CR1620x1
Battery Life	10 Continuous Hours
Weight	.12 lbs.

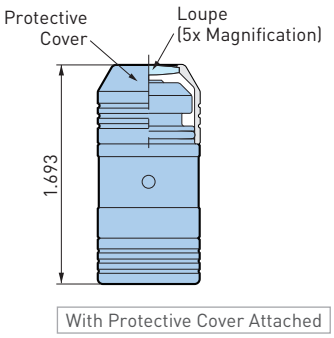
BASE MASTER MINI

Electronic detection of the cutting edge position. Repeatability ±1μm (.00004").

All Supported — For all cutting tools, workpieces and machine tools

LED — Notifies via LED





With Protective Cover Attached

Catalog Number
BMM-20D

Height Accuracy	+.005mm 0 (+.0002" 0)
Repeatability	±1μm (.00004")
Min. Tool Diameter	ø.1mm (.004")
Measuring Pressure	1.8N
Stroke	2mm (.078")
Touch Signal	LED Illuminates (Green)
Battery	LR43×2
Battery Life	40 Continuous Hours
Weight	.12 lbs.

- Wrench for battery cap is included
- Model without magnets is available; if required, add /N at the end of the model number when ordering (Example: BMM-20D/N)

BASE MASTER MINI

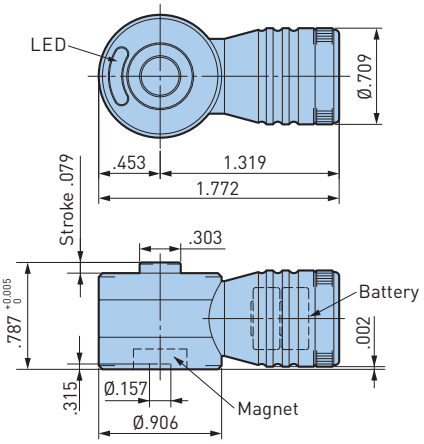
For Lathe or Mill

- Standard height of .787" (20mm)
- LED light for easy confirmation
- Low measurement pressure corresponding to the blade diameter of Ø.1mm
- Achieves measurement of the cutting edge position of small lathes

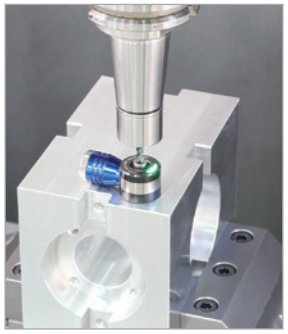
All Supported — For all cutting tools, workpieces and machine tools

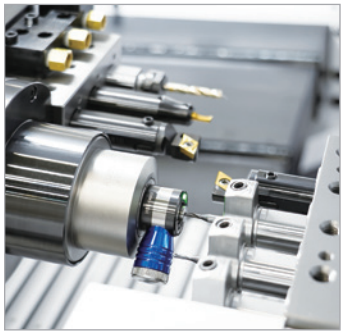
LED — Notifies via LED

Height Accuracy	+0.005mm 0 (+.0002" 0)
Repeatability	±1µm (.00004")
Min. Tool Diameter	ø.1mm (.004")
Measuring Pressure	1N
Stroke	2mm (.078")
Touch Signal	LED Illuminates (Green)
Battery	SR44 x 2
Battery Life	10 Continuous Hours
Weight	.15 lbs.



Catalog Number
BMM-20H





TOOL MASTER

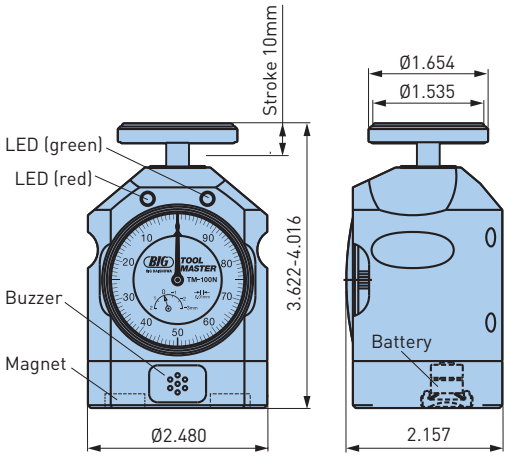
Non-Conductive Workpieces and Tools can Also be Measured

Uses a large, easily read dial (with buzzer and LED), one-touch height adjustment mechanism and a firmly fixed powerful magnet.

All Supported — For all cutting tools, workpieces and machine tools

LED — Notifies via LED

Buzzer — Notifies via Buzzer



Catalog Number
TM-100N

- Dial gage accuracy conforms to JIS B7503:2011.
- Model without magnets is available; if required, add /N at the end of the model number when ordering (Example: TM-100/N)

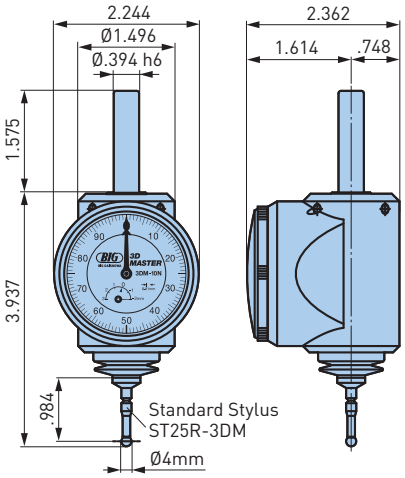
Height Accuracy		100 +.02/0mm	
Min. Tool Diameter		Ø1mm	
Measuring Pressure		3N (at 100mm)	
Stroke		10mm	
Stroke Range		97-102mm	
Notification Signal	Around 100.5mm	LED	Lit (Green)
		Buzzer	"Beep"
	Around 99.5mm	LED	Flashing (Green/Red)
		Buzzer	"Beep Beep Beep"
Battery		SR44 x 2	
Weight		2.2 lbs.	
Standard Accessory		Setting Gage x 1P	
Dial Gage Accuracy	Min. Scale	.01mm	
	Indicator Error	±15µm	
	Repeatability	5µm	
	Return Error	5µm	

3D MASTER RED

Dial-Type Reference Position Measuring Instrument

- Available for non-conductive workpieces
- Measure X, Y & Z directions
- Calculation of the stylus ball radius not required

All Supported — For all cutting tools, workpieces and machine tools



Min. Scale	.01mm
Repeatability	Within .01mm
XY Stroke	±4mm
Z Stroke	4mm
Protection Rating	IP67
Weight	1.3 lbs.
Accessory	Stylus ST25R-3DM

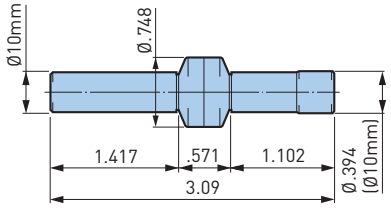
Catalog Number
3DM-10N

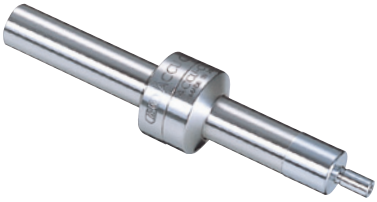
ACCU CENTER

Simple Mechanical Design for High-Precision Positioning

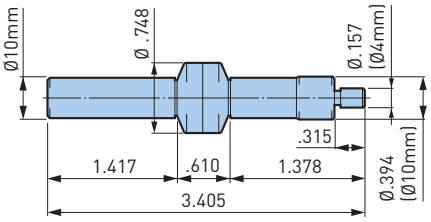
- Just touch the stylus to the workpiece surface to complete measurement
- Repeatability within 3μm (when used on vertical machines)
- Hard chrome plated stylus for superior durability

Catalog Number
ACCU-C10





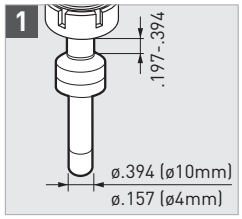
Catalog Number
ACCU-C104



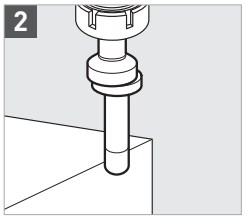
CAUTION

Not suitable for horizontal type machines.

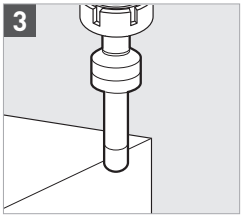
OPERATION INSTRUCTIONS



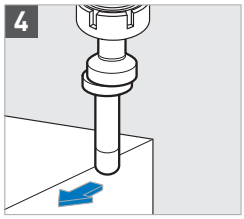
Mount the ø10 straight part to a Milling Chuck or New Baby Chuck.



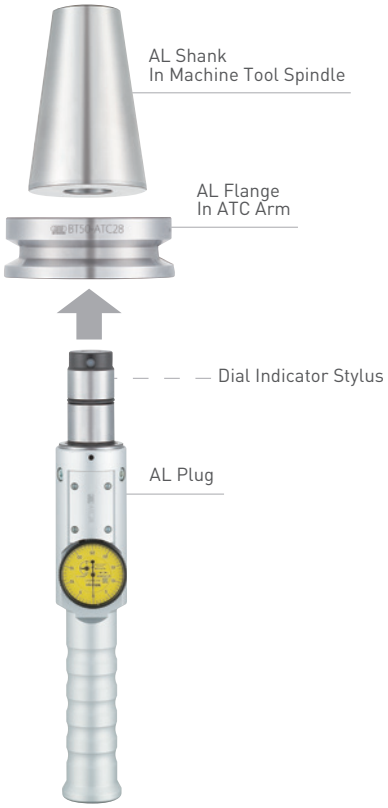
Press the stylus lightly with fingers to move off center and rotate at 400-600 RPM.



Touch the stylus to the workpiece; its runout will gradually decrease and it will seem to come to a stop.



Apply finer feed and keep the stylus in contact; it will begin to slide in one direction. Where it begins to slide, compensate the position by radius of the stylus 5mm (2mm) to detect the reference position.



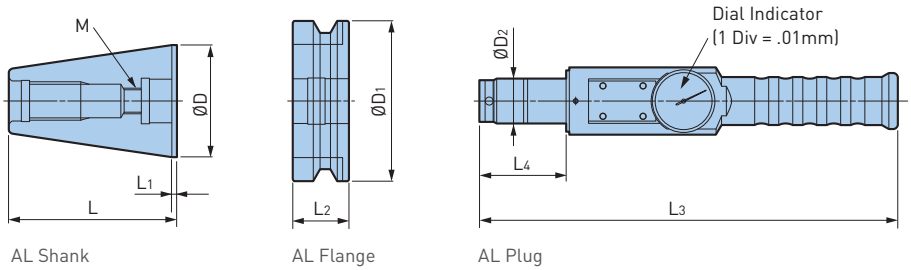
ATC ALIGNMENT TOOL

Misalignment of the center between the machine tool spindle and ATC gripper may cause damage to the spindle taper when a tool holder is loaded into the spindle. A clamped tool holder under misalignment leads to increased runout, resulting in shorter life of machine tools and tool holders, as well as cutting tools. The ATC Alignment Tool can also be used for re-aligning the ATC gripper and tool magazine pots. Overall cost reduction is achieved by using equipment in good condition.

How To Use

1. Load the AL Shank in the machine spindle and mount the AL Flange on the ATC arm.
2. Insert the AL Plug into the AL Flange.
3. Rotate the AL Plug and read the highest and lowest values of the dial indicator. This direction is the eccentric direction. Half of the gap of the values is the eccentric amount.
4. Adjust the position of the ATC arm so that the front end of the AL Plug will be inserted into the AL Flange fully.

Provided with ATC Alignment Tool & Plastic Storage Case



CV TAPER

Catalog Number	ØD	D1	D2	L	L1	L2	L3	L4	M
CV40-ATC20	1.75	2.500	.787	2.812	.123	.958	9.882	1.732	1/2"-13
CV50-ATC28	2.75	3.875	1.102	4.125	.123	1.301	10.276	2.126	5/8"-11

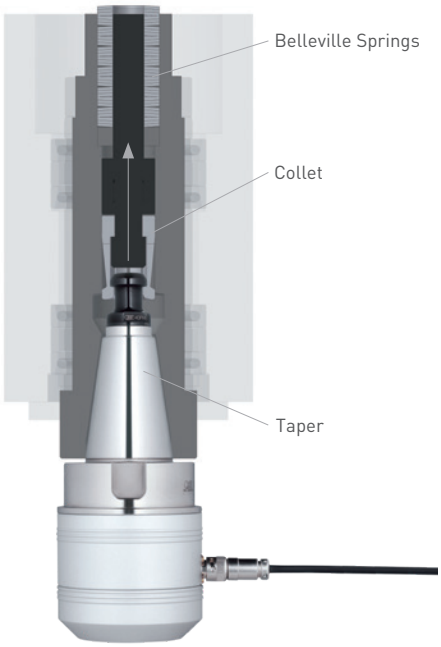
• DIN 7/24 taper spindle models available

BT TAPER

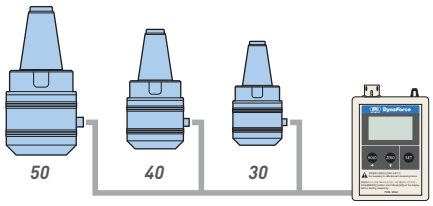
Catalog Number	ØD	D1	D2	L	L1	L2	L3	L4	M
BT30-ATC18	31.75mm	46mm	18mm	50.4mm	2mm	20mm	251mm	44mm	12mm
BT40-ATC20	44.45mm	63mm	20mm	67.4mm	2mm	25mm	251mm	44mm	12mm
BT50-ATC28	69.85mm	100mm	28mm	104.8mm	3mm	35mm	261mm	54mm	16mm

DYNA FORCE

Machine tool maintenance is a necessity. Periodical measurement of the spindle retention force avoids unknown reduced rigidity, which leads to vibrations, loss of machining quality and shortened tool life. A full length taper stabilizes the value of measurements.



Provided with DYNA FORCE, Plastic Storage Case, Display & Cable



Only One Display for All Taper Sizes

One common display can be used for all taper sizes.

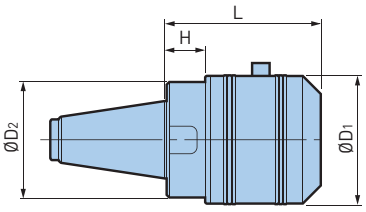


Fig. 1

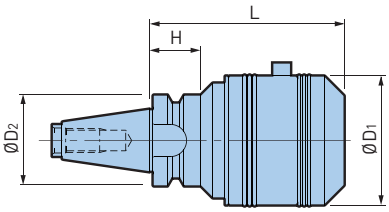
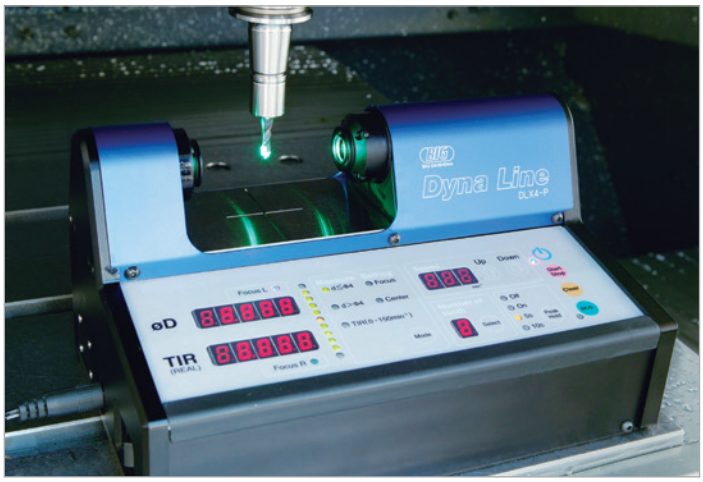


Fig. 2

Catalog Number	Contents of Set				Taper No.	Rated Capacity	ØD1	ØD2	L	H	Weight (lbs.)
	Measuring Device	Fig.	Display	Cable							
SNT30-DF10	NT30-DF10	1	DFA-1 (AA battery x2)	DFC-1 (2m)	30	10 kN (980 kgf)	2.559	2.283	3.150	.787	3.3
SBT30-DF10	BT30-DF10	2						1.811	2.858	1.024	3.5
SNT40-DF30	NT40-DF30	1			40	30 kN (2,940 kgf)	2.874	2.958	3.543	.945	5.5
SNT50-DF50	NT50-DF50	1			50	50 kN (4,900 kgf)	3.780	3.543	4.331	1.299	13.2
SNT50-DF30●	NT50-DF30	1				30 kN (2,940 kgf)	2.874	2.756	3.386	.787	8.6

- Each component is also available separately
- **SBT30-DF10** is designed exclusively for machines not capable of automatic tool change
- **SBT30-DF10** is suitable for BT/BBT30 machines only
- Pull stud bolt must be ordered separately, and for DIN, ISO, ANSI & CAT standard machines, an exclusive pull stud bolt for DYNA FORCE is required
- **SNT50-DF30** marked ● indicates light-weight model
- Certificate of calibration and diagram of traceability system are available for a charge in order to maintain the reliability of the device

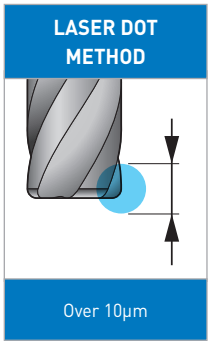


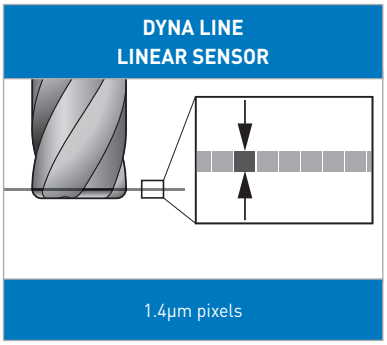
DYNA LINE

Precision Measuring of Tool Diameter and Runout Accuracy

Non-contact tool measuring equipment which uses a CMOS linear image sensor. It eliminates machining defects by measuring total runout accuracy at high rotation speeds. Also usable as a maintenance/evaluation tool for runout accuracy of a machine spindle.

- Non-contact measuring with CMOS linear image sensor
- In-machine measuring
- Portable (usable with 6 C-Cell batteries)





The Innovative Linear Image Measuring Method

CMOS sensors are often found in hi-tech equipment such as fax machines and banknote counters. With pixels measuring 1.4µm, DYNA LINE uses the latest CMOS sensors for quick and precise measuring.

Provided with a protective case

Measurement at High Rotation Speeds up to 1,300 sfm

- No potential of damage to delicate tools
- Measurement range: Ø.004"-2.000" (Ø.1-50mm)
- Indicated resolution: 1µm
- Can run on 6 C-Cell batteries
- Able to measure tools with an odd number of teeth

THREE MEASUREMENT MODES DEPENDING ON TYPE OF TOOL

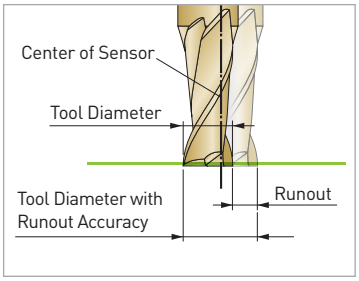
d ≤ Ø4

Cutting tool with less than Ø4mm

MODE

MAX. 1,300 SFM

Simultaneously measures the tool diameter and runout accuracy of even-numbered flutes at processing rotation speed. Please refer to pg. 643 for tools with an odd number of flutes.



d > Ø4

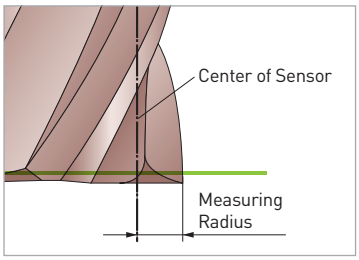
Cutting tool with more than Ø4mm

MODE

MAX. 1,300 SFM

The machine spindle is offset the radius amount for tools lager than the detection range (4.2mm), and the edge of the tool is measured from the center of the sensor. Please refer to pg. 643 for tools with an odd number of flutes.

Ex. — Ø6mm End Mill
Spindle Offset: 3mm
Displayed Measurement Result: +.002mm
Diameter Includes the Runout of the Rotation:
(3 + .002mm) x 2 = 6.004mm



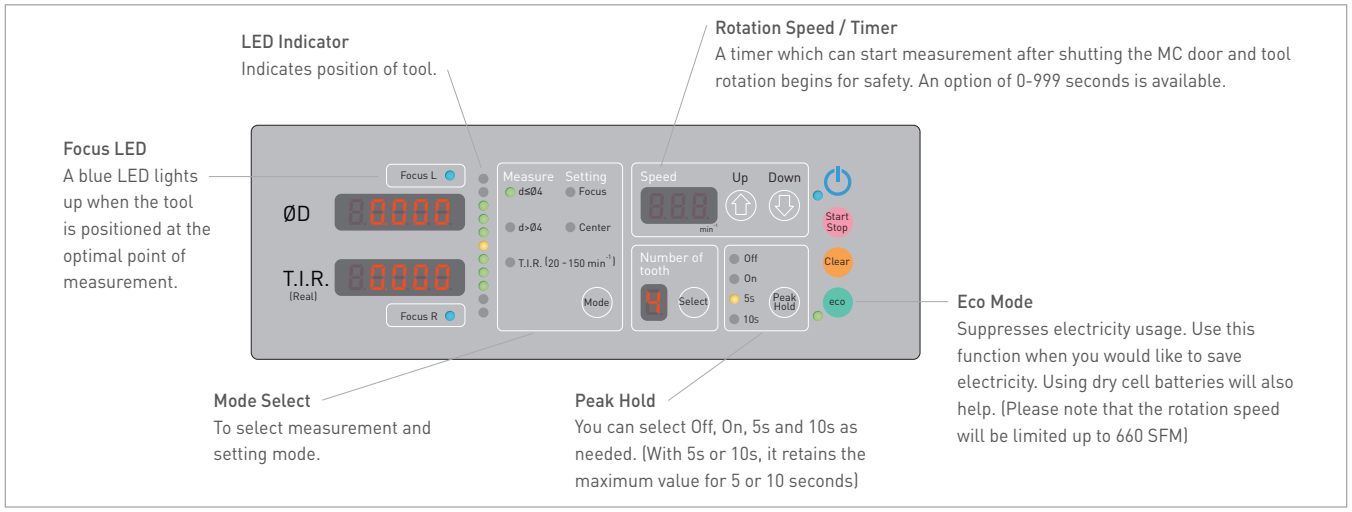
MEASUREMENT MODE SELECTION

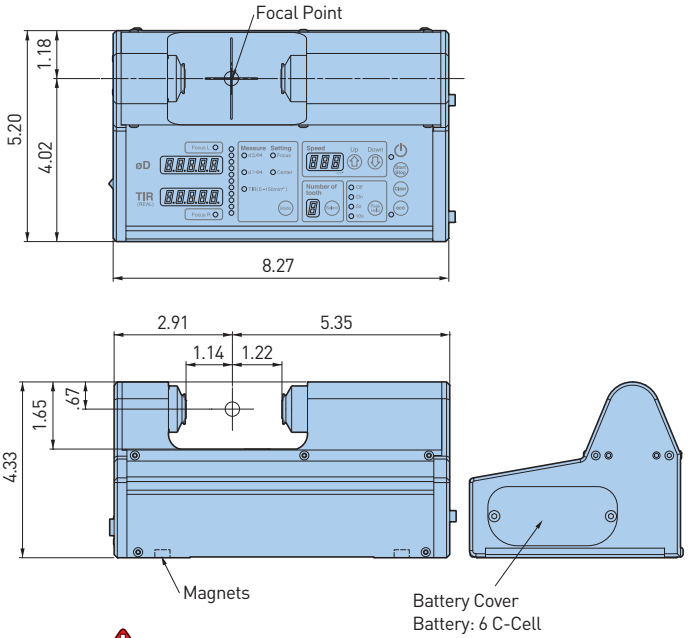
Tool Diameter	Tool Type	Measurement Types	Mode	Rotation Speed
Ø.004-Ø.157 (Ø.1mm-Ø4mm)	Even Number of Flutes, Test Bar	Diameter, Runout	d ≤ Ø4	Max. 1,300 SFM
	Odd Number of Flutes	Diameter		
		Runout	T.I.R.	20-150 RPM
Ø.157-Ø2.000 (Ø4mm-Ø50mm)	Tool	Diameter	d > Ø4	Max. 1,300 SFM
		Runout	T.I.R.	20-150 RPM
	Test Bar	Diameter, Runout		Max. 1,300 SFM

• It may not measure with unequal spacing

CONTROL PANEL

Results will be displayed on the control panel. Easy setting with simple use of buttons before measuring.





CAUTION

DYNA LINE is not completely waterproof. Please do not splash with coolant.

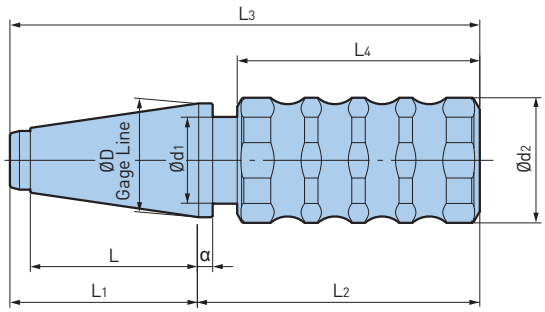
Catalog Number
DLX4-P

Detection Method		CMOS Linear Image Sensor
Light Source		LED
Indicated Resolution		1 µm
Repeatability		1 µm
Measurement Range		.004-2.000 (Ø.1-50mm)
Detection Range		(Ø.165 or More Must be Offset)
Ambient Temperature		32°-104°
Ambient Humidity		30-75% RH (No Condensation)
Power		AC100 ~ AC240V
Source	AC Adapter	6 C-Cell Batteries
	Dry Battery	5W
Power Consumption		Normal Mode: 3 Hours
Battery Life		Eco Mode: 5 Hours
Weight		6.6 lbs. (Without Batteries)
Accessories		Setting Tool (Model: DCT-300) Protective Case, Edge Cleaner (Model: 32.400.049)

DYNA CONTACT

A ceramic taper gage allowing inspection of machine spindle tapers at a glance.

- Made of ceramic
- Clearly shows Prussian blue



Taper Angle: 8º 17' 50" ±1"

Provided with an Aluminum Case

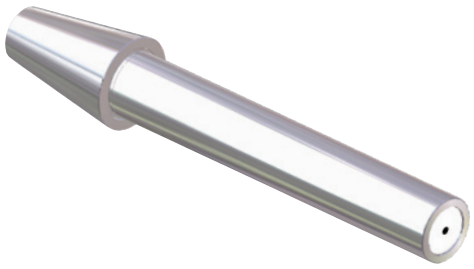
Catalog Number	Taper Number	ØD	Ød1	Ød2	L	L1	L2	L3	L4	α	Weight (lbs.)
DC-30P	30	1.250	.91	1.42	1.906	2.22	4.2	6.4	3.69	.236	1.14
DC-40P	40	1.750	1.34	1.93	2.575	2.89	4.4	7.2	3.74	.236	2.64
DC-50P	50	2.750	1.93	1.93	4.008	4.40	4.5	8.9	3.74	.315	5.76

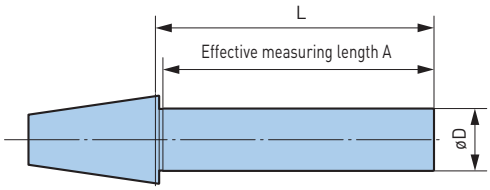
• It can be used for BBT (BT=JISB6339), BDV (DV=DIN69871) and BCV (CV = ANSI)

DYAN TEST

Basic Type

Can also be used as a setting gauge for tool presetters.





Catalog Number	L	A	ØD
NT30-32-L150	5.906	5.591	1.260
NT30-32-L225	8.858	8.543	
NT40-50-L200	7.874	7.244	1.970
NT40-50-L335	13.189	12.559	
NT50-50-L200	7.874	7.520	1.970
NT50-50-L335	13.189	12.835	

LEVEL MASTER

Two-axis simultaneous detection leveler. LED displays level conditions for both axis simultaneously. LED and buzzer indicate when leveling is completed.

Wireless

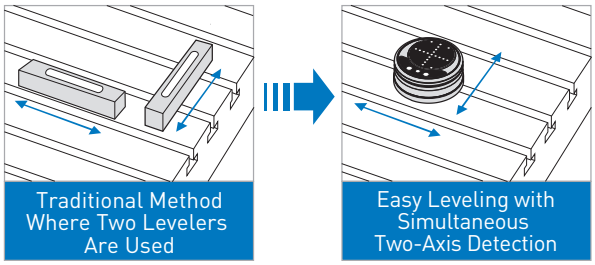
STANDARD TYPE

Catalog Number
LVM-01

WIRELESS TYPE

Catalog Number
LVM-WL

Simultaneous 2-Axis Detection Saves The Extra Time & Cost Of Using Two Levelers



Traditional Method Where Two Levelers Are Used

Easy Leveling with Simultaneous Two-Axis Detection

LED and Buzzer Indicate Leveling Completion

HIGH MODE

When the required level condition is **within .01mm/m**

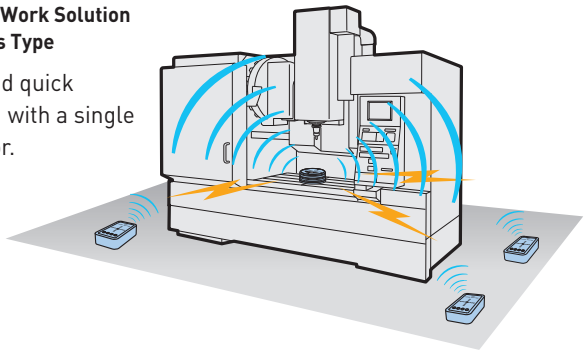
LOW MODE

When the required level condition is **within .1mm/m**

LED (Blue) & Buzzer are Simultaneously Activated

Remote Work Solution Wireless Type

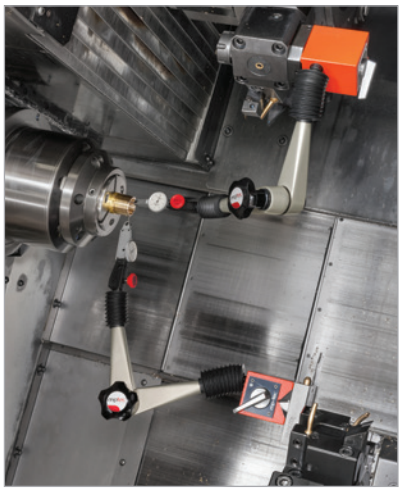
Easy and quick leveling with a single operator.



Provided with LEVEL MASTER, Aluminum Storage Case, Alkaline Batteries (AAA x 4 pcs.), Manual & Inspection Sheet

	LVM-01	LVM-WL	
		Body	Receiver
Minimum Read Value	.01mm Inclination/m	.01mm Inclination/m	
Power Source	Alkaline batteries (AAA x 4 pcs)	Alkaline batteries (AAA x 4 pcs)	
Auto Power Off	30 minutes after power is turned on	30 minutes after power is turned on	
Operational Temperature	32-104° F (Recommended 66° F ±9°)	32-104° F (Recommended 66° F ±9°)	
Battery Life	50 hours	50 hours	
Dimensions	Ø4.3" x 2.2" H	Ø4.3" x 1.7" H	Ø5.5" H x 3.2" W x 1.7" D
Weight	2.2 lbs.	2.2 lbs.	.62 lbs.

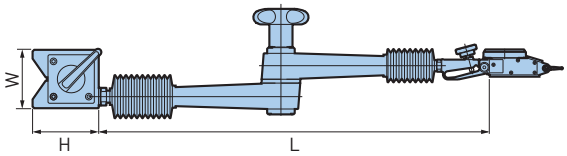
- Batteries must be ordered separately
- In the case of high precision leveling, we recommend that you check the LEVEL MASTER in advance on a reference level, such as a level block



DIAL INDICATOR STANDS

Articulated stands for the demanding user, offering the highest positioning precision and exact measurements in the µm range.

- High clamping force thanks to a strong internal cam structure of steel components.
- Extremely flexible with 360 degrees freedom of positioning controlled by one progressive clamping star grip
- Ideal design for use in measurement, inspection (quality control) and machining
- Ultra strong magnet holds stand firmly in place
- Each stand is equipped standard with (1) magnet, (2) extension arms, (1) DGH dove-tail adapter and (1) cylindrical gage adapter (Ø.375")

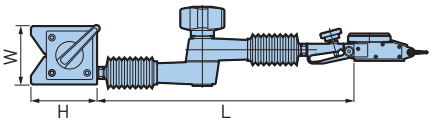


TYPE MU/F

Catalog Number	Adapter	Arm Extension Capacity L (From Magnet Top)	Magnet Dimensions W x H x D	Load Capacity Approx.
20.510.102	DGH2	13.937 (354mm)	2.087 x 2.362 x 2.677 (53mm x 60mm x 68mm)	200 lbs (90 kg)
20.510.103	DGH3			
20.510.104	DGH4			

ACCESSORIES

ADAPTERS PG. 649



TYPE SU/F

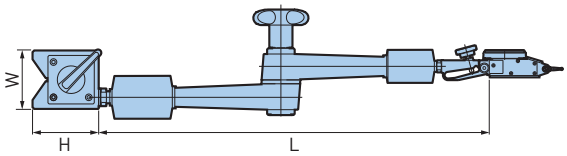
Catalog Number	Adapter	Arm Extension Capacity L (From Magnet Top)	Magnet Dimensions W x H x D	Load Capacity Approx.
20.520.102	DGH2	9.173 (233mm)	2.087 x 2.362 x 1.417 (53mm x 60mm x 36mm)	110 lbs (50 kg)
20.520.103	DGH3			
20.520.104	DGH4			

ACCESSORIES

ADAPTERS PG. 649

DIAL INDICATOR STANDS HEAVY DUTY

Small and strong for highest quality standards

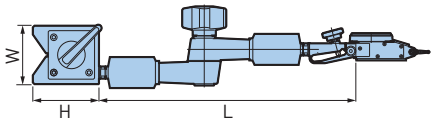


TYPE MUVZ/F

Catalog Number	Adapter	Arm Extension Capacity L (From Magnet Top)	Magnet Dimensions W x H x D	Load Capacity Approx.
20.510.203	DGH3	13.937 (354mm)	2.087 x 2.362 x 2.677 (53mm x 60mm x 68mm)	220 lbs (100 kgs)
20.510.204	DGH4			

ACCESSORIES

ADAPTERS PG. 649



TYPE SUVZ/F

Catalog Number	Adapter	Arm Extension Capacity L (From Magnet Top)	Magnet Dimensions W x H x D	Load Capacity Approx.
20.520.213	DGH3	9.173 (223 mm)	2.087 x 2.362 x 2.677 (53mm x 60mm x 68mm)	220 lbs (100 kgs)
20.520.214	DGH4			

ACCESSORIES

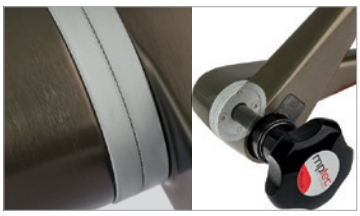
ADAPTERS PG. 649

ARTICULATED ARMS

Maximum clamping force at highest agility and indestructible construction for daily use

The three-dimensional articulated arm can easily be attached to machines or other devices via a thread (M6/M8/M10).

Cameras, sensors, readers and much more can be held and quickly positioned. Our articulated arms are available with progressive or synchronous tightening, consult BIG DAISHOWA engineering for information and technical specification.



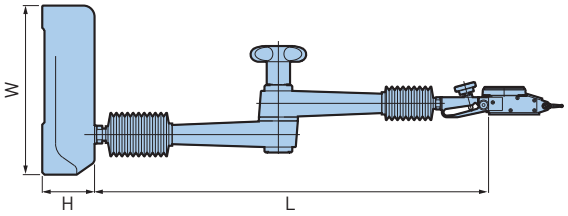
For applications with heavy loads or vibrations, all articulated arms can be equipped with central toothed disks. This form-fitting connection makes any radial displacement of the central joint impossible.

DIAL INDICATOR STANDS

- 100mm extension arm available to increase work radius (Catalog Number **20.580.513**)

TYPE MU/FS

Base with 3-point sliding contact and one flat side for parallel measurement.



Catalog Number	Adapter	Arm Extension Capacity L (From Magnet Top)	Base Size W x H x D	Weight (Not Including Arm)
20.530.102	DGH2	13.937 (354mm)	5.984 x 1.850 x 5.984 (152mm x 47mm x 152mm)	6.6 lbs. (3 kg)
20.530.103	DGH3			
20.530.104	DGH4			

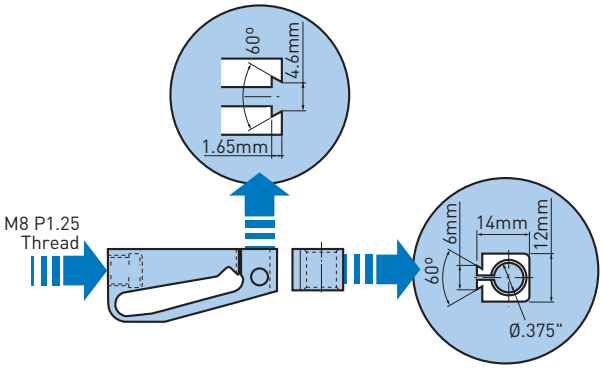
TYPE SG

Articulated clamping arm for gluing, welding or soldering, quickly solves all tricky angling problems.

Catalog Number	Description	Extension Number	Extension Length
20.540.001	Type SG 3/4 Arm with One Tension Clamps	No. 3	2.953 (75mm)
		No. 4	3.937 (100mm)
20.540.002	Type SG 4/4 Arm with Two Tension Clamps	No. 4	3.937 (100mm)

DIAL GAGE ADAPTERS

This part forms two opposing legs whose relative position can be fine-adjusted by means of a tensioning screw (DGH3). A special micro model (DGH4) with a fine-adjustment rocker is also available for measurement precision in the µm range. All adapters include a Ø.375" cylindrical gage adapter.



DGH2

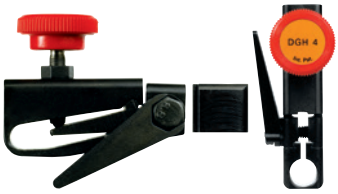
Catalog Number
20.580.402

- Basic model (without fine-tuning screw)

DGH3

Catalog Number
20.580.403

- Standard adapter for MU and SU stands



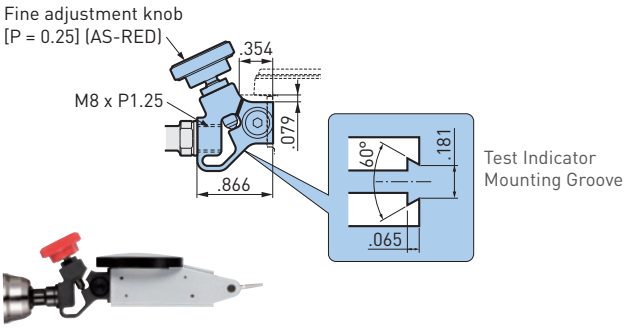
DGH4

Catalog Number
20.580.404

- Precision micro model

CYLINDRICAL GAGE ADAPTER

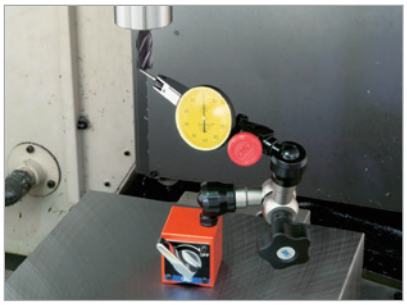
Catalog Number	Clamping Ø
20.580.501	.250
20.580.502	.375
20.580.511	4mm
20.580.512	8mm



MINI-MINI TYPE

Catalog Number
DGH-MM

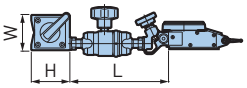
- Set Contents: Gage Support/ Fine Adjustment Knob



DIAL INDICATOR STANDS—ACCU MINI MINI

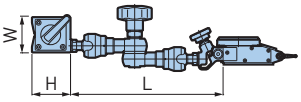
- Very rigid, short and sturdy stand with internal steel cam action components
- Clamping of articulating arms by one progressive clamping star grip
- Ultra strong magnet holds stand firmly in place
- Optional models can be supplied with straight shank (Ø12 or 20mm) or HSK shank (E25, E32) instead of the magnet to go directly into a machine tool spindle
- Each stand is equipped standard with a dove-tail adapter; cylindrical gage adapters are optional items

MAGNET TYPE



Catalog Number	Magnet Dimensions W x H x D	L
AMM-M	1.260 x 1.378 x 1.378 (32mm x 35mm x 35mm)	3.543

ACCESSORIES
ADAPTERS PG. 649

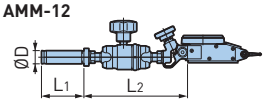


Catalog Number	Magnet Dimensions W x H x D	L
AML-M	1.260 x 1.378 x 1.378 (32mm x 35mm x 35mm)	5.433

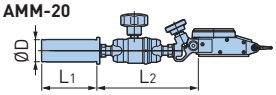
ACCESSORIES
ADAPTERS PG. 649

STRAIGHT SHANK TYPE

AMM-12



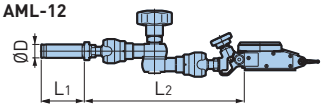
AMM-20



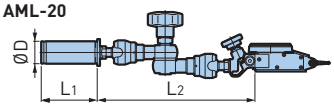
Catalog Number	ØD	L1	L2
AMM-12	12mm	1.535	3.701
AMM-20	20mm	1.969	3.622

ACCESSORIES
ADAPTERS PG. 649

AML-12



AML-20

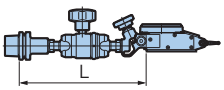


Catalog Number	ØD	L1	L2
AML-12	12mm	1.535	5.630
AML-20	20mm	1.969	5.551

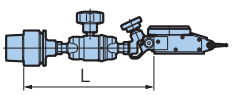
ACCESSORIES
ADAPTERS PG. 649

HSK SHANK TYPE

HSK-E25-AMM



HSK-E32-AMM



Catalog Number	L
HSK-E25-AMM	4.567
HSK-E32-AMM	4.685

ACCESSORIES
ADAPTERS PG. 649

TOOL PRO Tool holding device for the assembly and disassembly of tooling systems.

STEEP TAPER

Catalog Number	Type	
	Taper	Size
31.300.001	ISO	30
31.300.000		35
31.300.002		40
31.300.003		45
31.300.004		50
31.300.020		60

HSK TAPER

Catalog Number	Type	
	Taper	Size
31.300.017	HSK	A32
31.300.015		A40
31.300.008		A50
31.300.006		A63
31.300.005		A100
31.300.029		A125

POLYGON TAPER

Catalog Number	Type	
	Taper	Size
31.300.063	C	3
31.300.064		4
31.300.065		5
31.300.066		6
31.300.067		8

- HSK Type E/F and VDI also available
- For full 360º rotation, remove safety pin from rear of base; consult BIG DAISHOWA engineering for additional details

TOOL PRO VARIO

Quick-change system uses one permanently mounted base unit and multiple adapters for different types and sizes of tool shanks.

Catalog Number	Description
31.300.100	Base Unit

STEEP TAPER ADAPTERS

Catalog Number	Description	Type	
		Taper	Size
31.300.110	Fixed	ISO	30
31.300.111			35
31.300.112			40
31.300.113			45
31.300.114			50
31.300.271	Spin	ISO	30
31.300.272			40
31.300.273			50
31.300.274			60

HSK TAPER ADAPTERS

Catalog Number	Description	Type	
		Taper	Size
31.300.130	Fixed	HSK	A32
31.300.131			A40
31.300.132			A50
31.300.133			A63
31.300.134			A80
31.300.135			A100
31.300.279	Spin	HSK	A40
31.300.281			A50
31.300.283			A63
31.300.284			A80
31.300.287			A100
31.300.288			A125

POLYGON TAPER ADAPTERS

Catalog Number	Description	Type	
		Taper	Size
31.300.153	Fixed	C	3
31.300.154			4
31.300.155			5
31.300.156			6
31.300.158			8
31.300.290	Spin	C	4
31.300.291			5
31.300.292			6
31.300.293			8

- HSK Type E/F and VDI also available

TOOL PRO SPIN

Tools can be locked at increments of 30º by engaging an index pin. The adapter can also be rotated 360° and locked into any position in increments of 45º.

STEEP TAPER

Catalog Number	Type	
	Taper	Size
31.300.201	ISO	30
31.300.202		40
31.300.204		50
31.300.206		60

HSK TAPER

Catalog Number	Type	
	Taper	Size
31.300.212	HSK	A40
31.300.213		A50
31.300.214		A63
31.300.215		A80
31.300.216		A100
31.300.217		A125

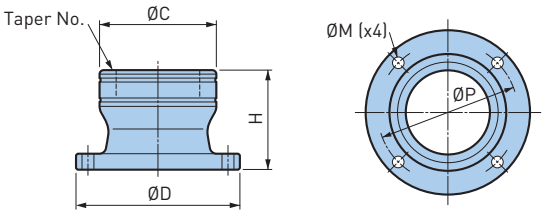
POLYGON TAPER

Catalog Number	Type	
	Taper	Size
31.300.220	C	3
31.300.221		4
31.300.222		5
31.300.223		6
31.300.224		8

- For full 360º rotation, remove safety pin from rear of base; consult BIG DAISHOWA engineering for additional details

KOMBI GRIP

Innovative two way clutch and needle roller clamping system ensures secure clamping at the tool flange periphery. Safe design eliminates any possibility of damage to the shank taper during the tightening process.



Catalog Number	HSK (Form A/E/F)	BIG CAPTO	ØC	ØD	H	ØP	ØM
KG25R	25	—	1.890	3.110	2.559	2.441	.276 (For M6) or UNC 1/4
KG32R	32	C3	2.165	3.346		2.717	
KG40R	40	C4	2.480	3.661	2.756	3.031	
KG50R	50	C5	2.953	4.134		3.504	
KG63R	63	C6	3.465	4.862	2.953	4.154	.354 (For M8) or UNC 5/16
KG80R	80	C8	4.213	5.591	3.543	4.882	
KG100R	100	—	5.000	6.378	3.937	5.669	

- Mounting bolts (4 pcs.) must be ordered separately
- KOMBI GRIP can be used for BIG CAPTO, polygon taper made by others cannot be used

CAUTION

KOMBI GRIP must be securely fixed to a bench with 4 mounting bolts.

ST LOCK

Ideal fixture for the setup of cylindrical shank tool holders. Clamps Ø20, 25 & 32mm shanks by replacing the sleeve.

Catalog Number
STL40

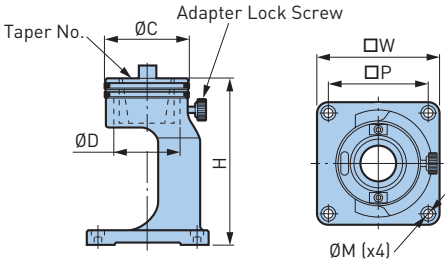
- 1 pc. each of Ø20mm, 25mm and 32mm sleeves are included
- Mounting bolts (4 pcs.) must be ordered separately

CAUTION

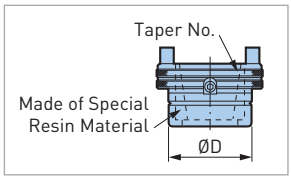
ST LOCK must be securely fixed to a bench with 4 mounting bolts.

TOOLING MATE

For mounting and removal of pullstud bolts and tools.



REPLACEABLE ADAPTER

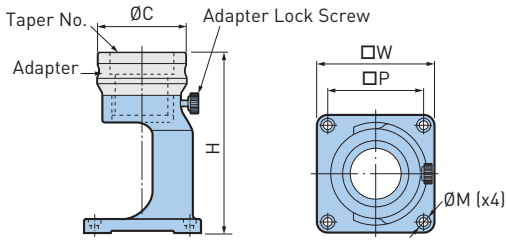


Catalog Number	CV/BT	ØC	ØD	H	□W	□P	ØM	Adapter Model
TMS40-30	30	2.992	2.362	5.906	4.331	3.543	.276 (for M6)	**TMA40-30**
TMS40-40	40							**TMA40-40**
TMS50-40	40	4.134	3.465	7.48	6.299	5.118	.354 (for M8)	**TMA50-40**
TMS50-50	50							**TMA50-50**

- 1 adapter is included
- Adapters can be ordered individually
- Adapter lock screw is available as a spare part (Model: RTM0615)
- Mounting bolts (4 pcs.) must be ordered separately

CAUTION

TOOLING MATE must be securely fixed to a bench with 4 mounting bolts.



Catalog Number	HSK	BIG CAPTO	ØC	H	□W	□P	ØM	Adapter Model
TMS40-32R	32	—	2.992	6.496	4.331	3.543	.276 (for M6) or UNC 1/4	**TMA40-32R**
TMS40-40R	40	C4						**TMA40-40R**
TMS40-50R	50	C5						**TMA40-50R**
TMS40-63R	63	C6	3.425	6.772				**TMA40-63R**
TMS50-80R	80	C8	4.488	8.465	6.299	5.118	.354 (for M8) or UNC 5/16	**TMA50-80R**
TMS50-100R	100	—	4.882	8.622				**TMA50-100R**

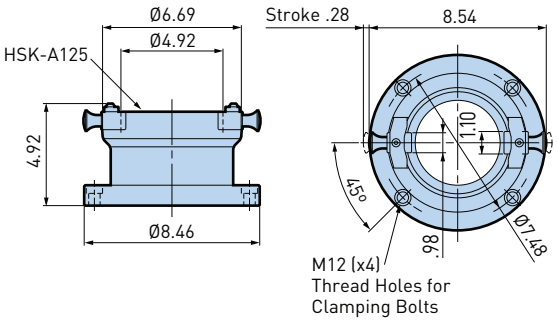
- 1 adapter is included
- Adapters can be ordered individually
- Adapter lock screw is available as a spare part (Model: RTM0615)
- Mounting bolts (4 pcs.) must be ordered separately
- Tooling Mate can be used with BIG CAPTO; polygon taper made by other manufacturers cannot be used

CAUTION

TOOLING MATE must be securely fixed to a bench with 4 mounting bolts.

TOOLING MATE

For assembling and disassembling cutting tools.



Catalog Number
TMS-HSK-A125

- Dedicated for HSK-A125 interface
- Mounting bolts (4 pcs.) must be ordered separately

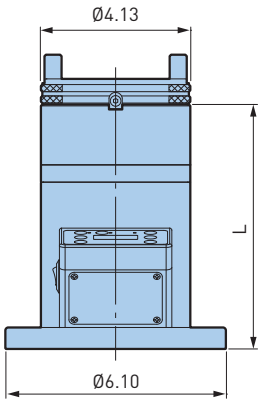
CAUTION

TOOLING MATE must be securely fixed to a bench with 4 mounting bolts.

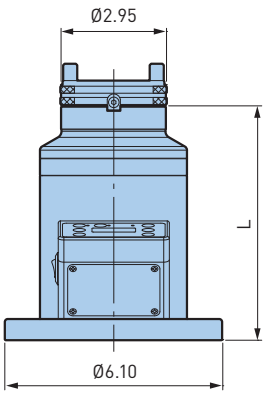
TORQUE FIT

Tooling Fixture with Tightening Torque Indication Function

- Torque values of all BIG DAISHOWA collet chucks are preset
- Notification by buzzer near the correct torque
- USER-Mode allows setting of desired torque value



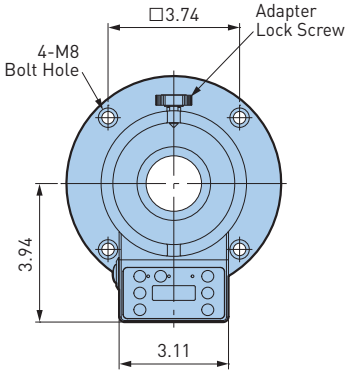
TF-50



TF-40

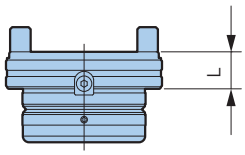
Catalog Number	Torque Setting Range	L	Adapter	Input Voltage	Weight (lbs.)
TF-40	4-80 Nm	6.57	TMA40-☐	100-240V	17.6
TF-50		6.77	TMA50-☐		

• Adapter must be ordered separately



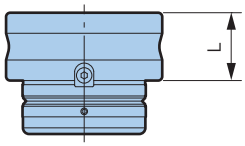
ADAPTERS (OPTIONAL)

For CV/BT



Catalog Number	Body Model	Taper	L	Weight (lbs.)
TMA40-20	TF-40	ISO20	.709	1.8
TMA40-30		BT30		1.8
TMA40-40		CV/BT40		1.3
TMA50-40	TF-50	CV/BT40		5.1
TMA50-50		CV/BT50		2.9

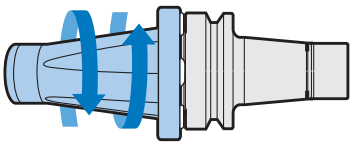
For HSK/BIG CAPTO



Catalog Number	Body Model	HSK	BIG CAPTO	L	Weight (lbs.)
TMA40-32R	TF-40	32	—	1.30	3.1
TMA40-40R		40	C4		2.7
TMA40-50R		50	C5		2.0
TMA40-63R		63	C6	1.57	2.0
TMA50-80R	TF-50	80	C8	1.69	5.5
TMA50-100R		100	—	1.85	4.0

α TOOLING CLEANER

For the cleaning of both mating surfaces of BIG-PLUS tool holders, which require absolute cleanliness for optimum performance. Oil and particles on both the taper and flange of 7/24 taper shanks are easily removed.

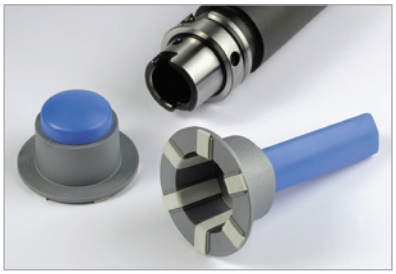


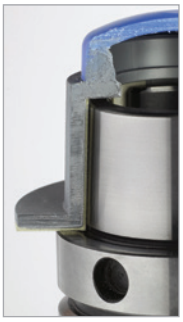
BIG-PLUS® SPINDLE SYSTEM DUAL CONTACT

Catalog Number	Shank Size
SCE-30	No. 30
SCE-40	No. 40

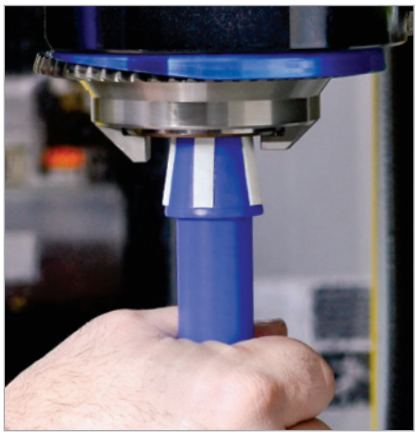
HSK EXTERNAL TAPER CLEANER

Reliable taper cleaners for the efficient cleaning of HSK tool holder shanks. Cleaning strips positioned at well spaced intervals will remove even large residual particles. Sturdy construction with high oil and grease resistance.





Catalog Number	Description	Taper Size
20.580.041	Taper Cleaner w/ Handy Cap	HSK40
20.580.042	Taper Cleaner w/ Cylindrical Handle	HSK40
20.580.051	Taper Cleaner w/ Handy Cap	HSK50
20.580.052	Taper Cleaner w/ Cylindrical Handle	HSK50
20.580.064	Taper Cleaner w/ Handy Cap	HSK63
20.580.065	Taper Cleaner w/ Cylindrical Handle	HSK63
20.580.081	Taper Cleaner w/ Handy Cap	HSK80
20.580.082	Taper Cleaner w/ Cylindrical Handle	HSK80
20.580.101	Taper Cleaner w/ Handy Cap	HSK100
20.580.102	Taper Cleaner w/ Cylindrical Handle	HSK100



SPINDLE CLEANERS

Clean tapered spindles maintain precision and prolong the life of machine tools, cutting tools and tool holders.

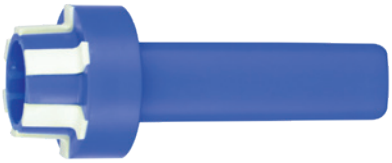
- High oil- and grease-resistance
- Plastic injection molded core with fluted locations for cleaning strips ensures accurate sizing and cleaning efficiency
- Cleaning strips maintain adhesion to the taper core due to inset location even under scrubbing action
- Cleaning strips positioned at well spaced intervals to remove large residual particles
- A quality control product

STEEP TAPER (WITH PULL STUD RECESS)

Catalog Number	Type	
	Taper	Size
20.580.220	ISO	20
20.580.230		30
20.580.240		40
20.580.245		45
20.580.250		50

MORSE TAPER

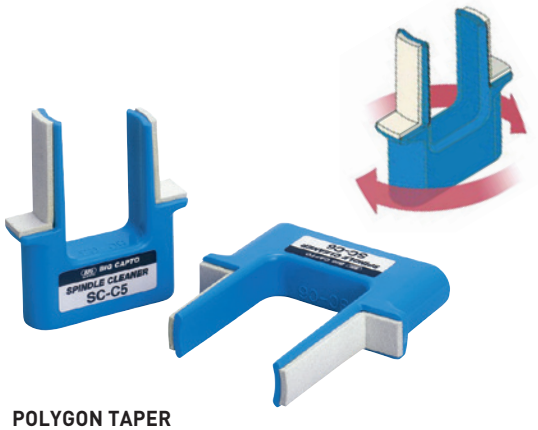
Catalog Number	Type	
	Taper	Size
20.580.001	MT	1
20.580.002		2
20.580.003		3
20.580.004		4
20.580.005		5
20.580.006		6



HSK TAPER

Catalog Number	Type	
	Taper	Size
20.580.020	HSK-E	20
20.580.025	HSK-A	25
20.580.026	HSK-E	
20.580.032	HSK-A	32
20.580.033	HSK-E	
20.580.040	HSK-A	40
20.580.043	HSK-E	
20.580.045	HSK-F	
20.580.050	HSK-A	50
20.580.053	HSK-E	

Catalog Number	Type	
	Taper	Size
20.580.063	HSK-A	63
20.580.067	HSK-E	
20.580.066	HSK-F	
20.580.080	HSK-A	80
20.580.083	HSK-F	
20.580.100	HSK-A	100
20.580.101	HSK-E	
20.580.125	HSK-A	125



POLYGON TAPER

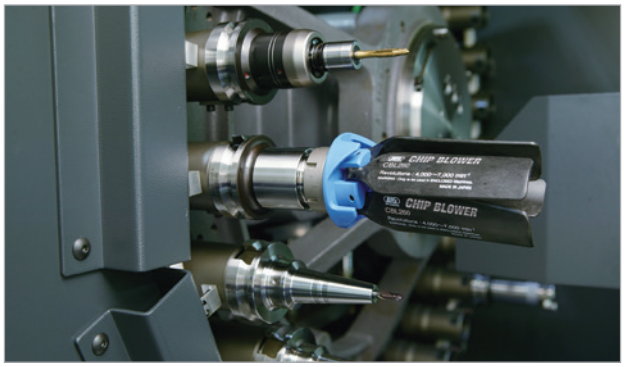
Catalog Number	Type	
	Taper	Size
SC-C3	C	3
SC-C4		4
SC-C5		5
SC-C6		6
SC-C8		8

CHIP BLOWER

Air Pressure Removes Cutting Chips and Coolant

COOLANT THROUGH

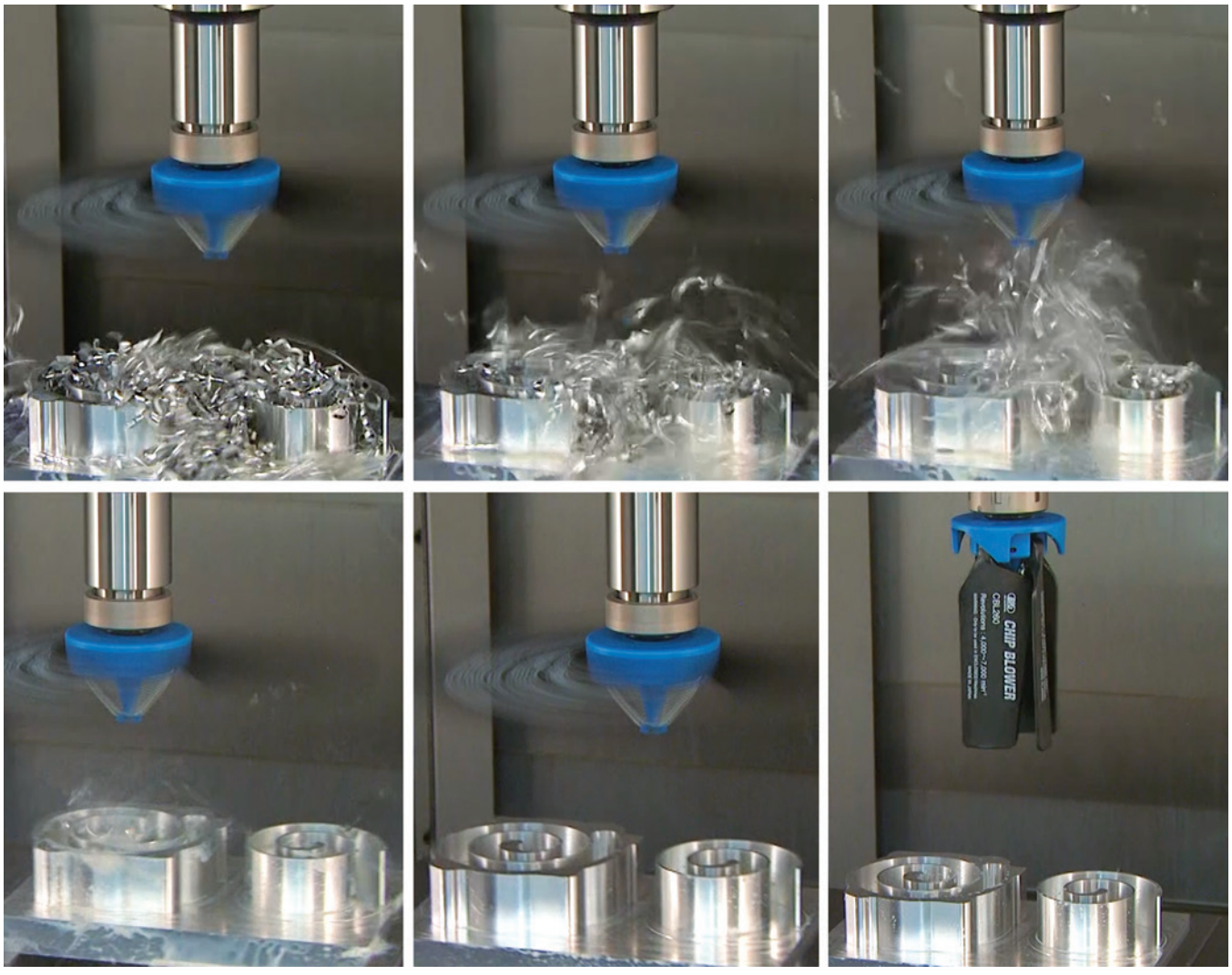
- Reduce environmental impact
- Improved machine utilization rate
- Increased productivity
- Can be used with vertical and horizontal machining centers



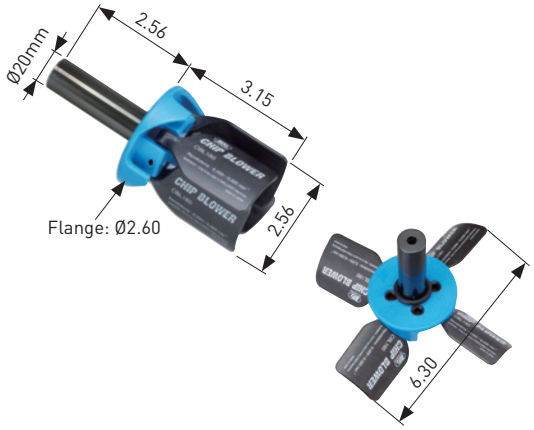
High-pressure washing with center-through coolant

Blows away cutting chips with powerful air pressure

ST20-CBL260 — 7,000RPM



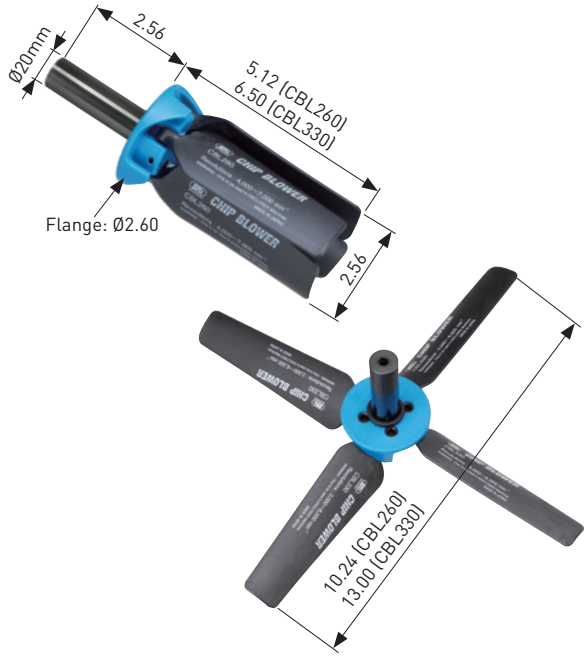
Ø160 STEEL SHANK TYPE



Catalog Number	ST20S-CBL160
Startup Spindle Speed*	500 rpm (.5 sec) → 1,000 rpm (.5 sec) → 2,000 rpm (.5 sec)
Recommended Spindle Speed	Min. 6,000 Max. 9,000 rpm
Rotation Direction	Forward
Distance to the Workpiece Surface to be Cleaned (with wing opened to maximum)	3.94"-5.91"
Recommended Movement Feed	118-394 ipm

***The wing may open during ATC when it is used with an ultra-high speed ATC machining center**

Ø260 & Ø330 STEEL SHANK TYPE



Catalog Number	ST20S-CBL260	ST20S-CBL330
Startup Spindle Speed*	500 rpm (.5 sec) → 1,000 rpm (.5 sec) → 2,000 rpm (.5 sec)	
Recommended Spindle Speed	Min. 4,000 Max. 7,000 rpm	Min. 3,000 Max. 6,000 rpm
Rotation Direction	Forward	
Distance to the Workpiece Surface to be Cleaned (with wing opened to maximum)	3.94"-5.91"	
Recommended Movement Feed	118-394 ipm	

***The wing may open during ATC when it is used with an ultra-high speed ATC machining center**

Repair Kit

Catalog Number
RK-CBL160
RK-CBL260
RK-CBL330

- Repair kit contains 4x replacement blades, 4x springs and 4x pins
- Additional springs are available in sets of 10x (CBL-SP-10P)

CAUTION

- **Startup Spindle Speed — In newer high-speed machining centers, the machine spindle rotation rise has become faster. A sudden command for spindle speed may create a strong impact on the wing as it opens; therefore, be sure to rotate it at the startup speed in the table above before raising it to the designated spindle speed.**
- **The spindle speed and the distance to the workpiece surface in the above table differ depending on the weight of the cutting chips. Be sure to confirm before use.**
- **The wing may open during ATC when it is used with an ultra-high speed ATC machining center.**
- **When supplying coolant with center through, be sure to stop the spindle rotation first.**
- **This product must be used only with a machine with a full cover.**
- **Never modify this product in any way.**
- **The dedicated spring must be replaced after about 20,000 use cycles. Send back the unit for replacement through your supplier.**
- **Although the wing is made of high-strength carbon fiber reinforced resin, it may be worn out or damaged due to the collision of cutting chips or impact when opening/closing. If wear and damage progress, the wing may snap and fly out during use. Be sure to periodically check the damage of the wing visually and replace it as needed. Send back the unit for replacement through your supplier. Individual wings are not available for sale.**
- **The cylindrical shank outer diameter of the chip blower is Ø20. Use a BIG NEW BABY CHUCK for the holder. Grasping with a holder with low inner diameter collapsibility is dangerous and must be avoided.**

CHIPFAN

Chip & Coolant Fan

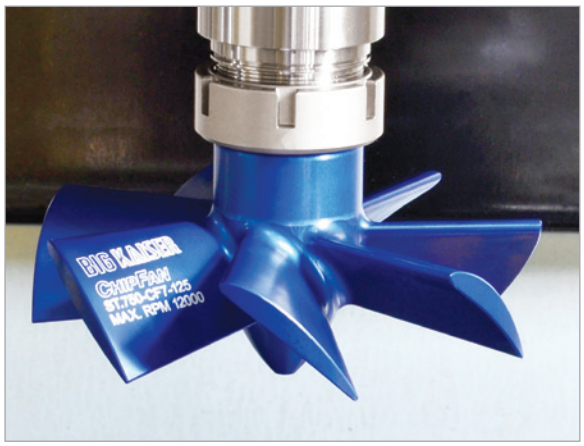
Fast, safe chip and coolant cleaning without stopping production. Your machine spindle spins the ChipFan to provide high-volume air cleaning power.

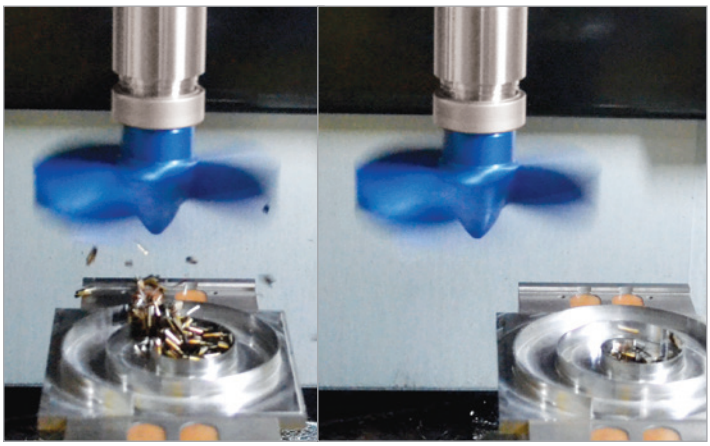
- Coolant through
- 12,000 RPM Max
- Safe, fast method of removing chips and coolant
- Balanced integral design for high speed
- Made from high-strength aluminum with anodized coating for long life and durability
- Quieter work environment

MAX 12,000 RPM

COOLANT THROUGH

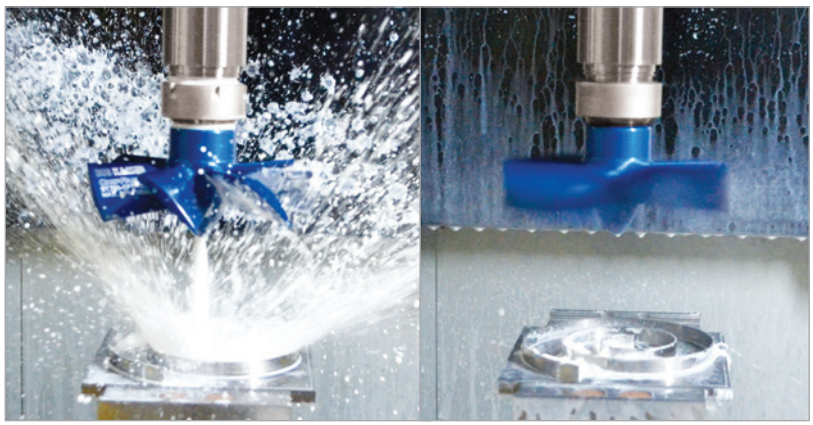
Catalog Number	Shank	Blade	Length
ST.750-CF125	.750	4.92	2.36
ST20-CF125	20mm		





OPERATING INSTRUCTIONS

- Use in enclosed machine centers
- Install into a collet chuck
- Rotation is clockwise
- Optimum feed rate is 120-390 in/min



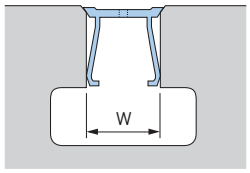
T-SLOT CLEAN

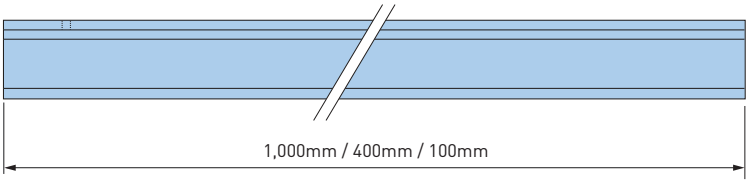
Improve your work safety environment and efficiency of table cleaning. Save the time required to clean T-Slots packed with chips. Coolant quickly removes heated swarf and helps to prevent thermal displacement of the machine.

- Quick removal of chips from a machine
- Faster table cleaning—a reduction of clean-up time
- Volume control of heated chips—better machining precision
- Three sizes of T-Slot widths are available to fit your machine table

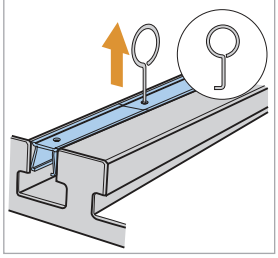
T-Slots Packed with Difficult to Remove Chips

T-Slots Protected & Clear by T-Slot Clean





REMOVAL PIN FOR EASY REMOVAL



STANDARD SET

Type	Catalog Number	Width W	Width Tol. (H12)	Contents
Metric	**TS14-S**	14mm	+0.18 0	400mm x 4 pcs.
	TS18-S	18mm		100mm x 4 pcs.
	TS22-S	22mm	+0.21 0	

- If necessary, cut to the length that you need
- Removal pin is included

COST SAVING SET

Type	Catalog Number	Width W	Width Tol. (H12)	Contents
Metric	**TS14-10S**	14mm	+0.18 0	TS14-S x 10 sets
	TS18-10S	18mm		TS18-S x 10 sets
	TS22-10S	22mm	+0.21 0	TS22-S x 10 sets

- Contains 10 Standard Sets for cost savings

LONG SET

Type	Catalog Number	Width W	Width Tol. (H12)	Contents
Metric	**TS14-400L-100P**	14mm	+0.18 0	400mm x 100 pcs.
	TS18-400L-100P	18mm		
	TS22-400L-100P	22mm	+0.21 0	

EXTRA LONG SET

Type	Catalog Number	Width W	Width Tol. (H12)	Contents
Metric	**TS18-1000L-10P**	18mm	+0.18 0	1,000mm x 10 pcs.
	TS22-1000L-10P	22mm	+0.21 0	

BIG DAISHOWA designs, manufactures and markets premium high-precision tooling systems and solutions for the automotive, military, aerospace, energy, and micro-technology industries. Our product portfolio comprises of more than 20,000 precision tools, which adhere to the highest quality standards. Our products are of the utmost quality—manufactured with materials and craftsmanship that enable superior performance. BIG DAISHOWA has grown into a well-recognized global manufacturer, with facilities in Japan, Switzerland, Germany and the USA.

We have exceptionally high standards for the products we represent. Not every shop requires extreme accuracy or total efficiency. But for those that do, there is no better partner than BIG DAISHOWA. If your challenge is to manufacture with greater responsibility and accuracy, and to find products and processes to improve the efficiency of your applications, we want to partner with you.

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