



BIG

BIG DAISHOWA



HIGH PRECISION TOOLHOLDERS

Reduce Costs by maximizing tool life with High Precision toolholders



BIG DAISHOWA SEIKI CO LTD

Tooling system of highest quality

Based on superior technologies and state-of-the-art production facilities, we guarantee to offer "high precision" and "high quality" tooling to your satisfaction.

Through our activities as a specialized manufacturer of tooling since 1967, BIG Daishowa has the distinction of having the highest market share in Japan and we continue to increase the number of our customers in the world-wide market and gain their trust. We devote ourselves to the development of new products and continuously improve quality "to comply with the latest trends".

We are confident that BIG Daishowa's quality and tooling variety will lead you to the best result.



Awaji Factory No.2



Awaji Factory No.1



Awaji Factory No.3



MEGA TECHNICAL CENTER



Awaji Factory No.4



Awaji Factory No.5



Osaka Factory



Accurate inspection under strictly controlled quality standards.



Total Tooling System

INDEX *High Precision, High Rigidity & High Quality Performance*

For High Speed **MEGA MICRO CHUCK**



Ultra slim design eliminates any interference

Clamping Range :
ø0.45 - ø8.05

Features : P5

BBT SHANK A1
BDV SHANK B1
HSK SHANK C1,C40,C45
CYLINDRICAL SHANK D1
BIG CAPTO SHANK E30
 For **N/C LATHE** F4

For High Speed **MEGA NEW BABY CHUCK**



Most reliable high precision collet chuck in the world

Clamping Range :
ø0.25 - ø20

Features : P6

BBT SHANK A3
BDV SHANK B2
HSK SHANK C3,C42,C46
CYLINDRICAL SHANK D2
BIG CAPTO SHANK E31

For High Speed **MEGA E CHUCK**



Original and exclusive design for small endmilling

Clamping Range :
ø3 - ø12

Features : P7

BBT SHANK A6
BDV SHANK B4
HSK SHANK C7,C47
BIG CAPTO SHANK E34

MEGA *For High Speed* **DOUBLE POWER CHUCK**



Specialist for heavy-duty cutting

Clamping Range :
ø16 - ø50

Features : P8

BBT SHANK A9
BDV SHANK B5
HSK SHANK C9,C48
BIG CAPTO SHANK E37

NEW BABY CHUCK



Most reliable high precision collet chuck in the world

Clamping Range :
ø0.25 - ø20

Features : P9

BT SHANK A13
DV SHANK B6
HSK SHANK C11
CYLINDRICAL SHANK D3
BIG CAPTO SHANK E41
 For **N/C LATHE** F1

NEW Hi-POWER MILLING CHUCK



High precision design for heavy cutting

Clamping Range :
ø16 - ø42

Features : P10

BBT/BT SHANK A16
DV SHANK B8
HSK SHANK C15
BIG CAPTO SHANK E45

MEGA ER® GRIP

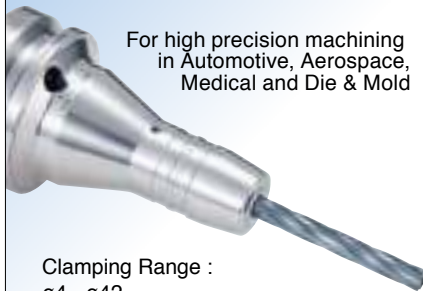


Clamping Range :
ø1.9 - ø20

Features : P11

BDV SHANK B9
HSK SHANK C13
 For **N/C LATHE** F3

HYDRAULIC CHUCK



For high precision machining in Automotive, Aerospace, Medical and Die & Mold

Clamping Range :
ø4 - ø42

Features : P12

BBT SHANK A21
HSK SHANK C16
BIG CAPTO SHANK E43

MOLD CHUCK



Side lock holder for Mold Making

Clamping Range :
ø3 - ø20

BBT SHANK A28
HSK SHANK C21
BIG CAPTO SHANK E47


SHRINK CHUCK



Clamping Range :
 $\varnothing 4 - \varnothing 32$

BBT SHANK A29
HSK SHANK C19, C44
CYLINDRICAL SHANK D5
BIG CAPTO SHANK E46

MEGA SYNCHRO[®] Tapping holder



Tapping Range :
M1 - M36

Features : P13

BBT SHANK A31
BDV SHANK B10
HSK SHANK C25
CYLINDRICAL SHANK D8
BIG CAPTO SHANK E48
For **N/C LATHE** F4

SIDE LOCK HOLDER



Clamping Range :
 $\varnothing 6 - \varnothing 50$

BBT SHANK A38
BIG CAPTO SHANK E51

SIDE CUTTER ARBOR




BBT SHANK A40
BIG CAPTO SHANK E52

MORSE TAPER HOLDER



BBT SHANK A41
BIG CAPTO SHANK E52


FACE MILL ARBOR



Eliminates chatter
for smoother finish

BBT SHANK A43
BDV SHANK B11
HSK SHANK C22
BIG CAPTO SHANK E49


ANGLE HEAD



Features : P15

BBT SHANK A49
BDV SHANK B12
HSK SHANK C27


HIGH SPINDLE



Features : P16

BBT SHANK A62
BDV SHANK B19


AIR TURBINE SPINDLE



Features : P17

BBT SHANK A63
BDV SHANK B18
HSK SHANK C38

Hi-JET HOLDER



Features : P18

BBT SHANK A67
BDV SHANK B20


CLEANER




Blowing air cleans
the BIG-PLUS
machine spindle face

BBT SHANK A71

OTHERS



**PULL STUD
BOLT** G23



**COOLANT
PIPE** C51

For HSK form A & E

INDEX

MILLTURN TOOLING

The modular tooling system for turning and rotating tool holder applications



BBT(BIG-PLUS) SERIES

HSK-T SERIES



BBT SHANK..... E1

HSK SHANK..... E11

Polygon-tapered dual contact system

BIG CAPTO

..... E19

The trademark CAPTO is licensed from Sandvik Coromant



Rotating Tools E30



N/C LATHE TOOLING



For improved efficiency and reliability of production on NC lathe

..... F1

OTHER TOOLS

TOOLING MATE

Ideal for mounting or removing cutting tools and retention knobs

..... G17



HOLDER LOCK

Horizontal type to enable to clamp in either right or left side

..... G17



KOMBI GRIP

2-way clutch holds HSK and BIG CAPTO toolholders securely from rotating

..... G18



ST LOCK

For tightening clamping nuts of cylindrical shank toolholders

..... G18



α WIPER CLEANER

Easy cleaning by simply inserting and removing

..... G19



TK CLEANER

Absolute cleaning of clamping bore by unique "slide" feature

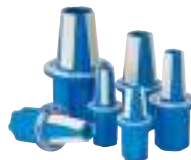
..... G19



α TAPER CLEANER

Maintain accuracy of high precision collet chucks

..... G19



α TOOLING CLEANER

Particles and oil on both taper and flange of 7/24 taper holder are easily removed

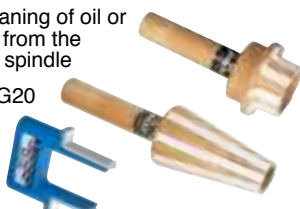
..... G20



SPINDLE CLEANER

Easy cleaning of oil or particles from the machine spindle

..... G20



CLEAN TEC

Full automation of swarf and coolant removal by means of wind pressure

..... G21



T-SLOT CLEAN

Keeps T-slots of a table free from chips

..... G22



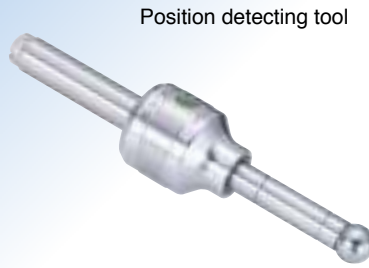
POINT MASTER SERIES



Touch probe & edge finder

- PMP SERIES** H 1
- PMC SERIES** H 3
- STYLUS** H 2

POINT CENTER



Position detecting tool

..... H 3

BASE MASTER SERIES

Tool offset sensors



- BM-50** H 4
- BM-50G** H 4
- BM-50M** H 4

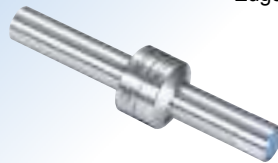
TOOL MASTER



Tool offset sensor

..... H 5

ACCU CENTER



Edge finder

..... H 5

ALIGNMENT TOOL for ATC arm



For maintenance of machine tool spindle

..... H 6

DYNA TEST



Precision measuring tools of the highest quality for machine tool maintenance

Features : P23

- BBT SHANK** A71
- BDV SHANK** B21
- HSK SHANK** C50

DYNA FORCE



..... H 7

TOOL PRESETTER



..... H 8

LEVEL MASTER

2-axis simultaneous detection leveler



..... H 9

INDEX

FULLCUT MILL Features : P19

FCR Type

Endmill with low cutting resistance for ramping and helical interpolation



BBT, BDV, HSK, CYLINDRICAL SHANK
..... I 1



FCM Type

Shoulder and slot milling cutter with both high radial and axial rake angle

BBT, BDV, HSK, CYLINDRICAL SHANK
ARBOR TYPE I10

CONTACT GRIP

Threaded coupling with taper face contact



Body
BBT, HSK, BIG CAPTO SHANK I 5
Head
FCR I 4 **FCM** I17

SPEED FINISER



High speed cutter for aluminum and cast iron

Features : P21
..... I23



C-CUTTER MINI

Ultra High Feed Chamfer Mill



Features : P22
..... I25

C-CUTTER

Extensive chamfering range



..... I31

R-CUTTER

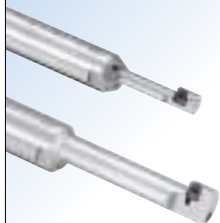
Automated R-chamfering



..... I33

BF-CUTTER

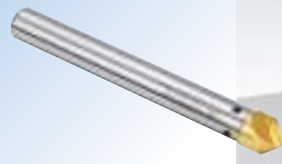
Back spot facing tool for cap screw hole



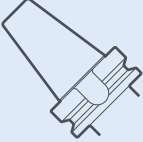
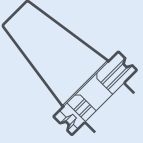
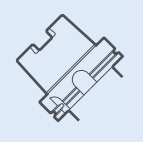
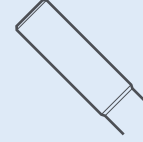
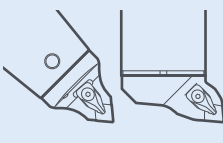
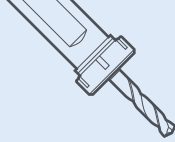
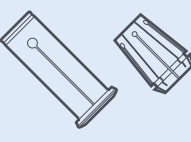
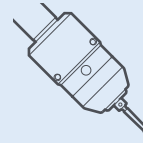
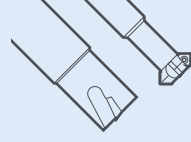
..... I35

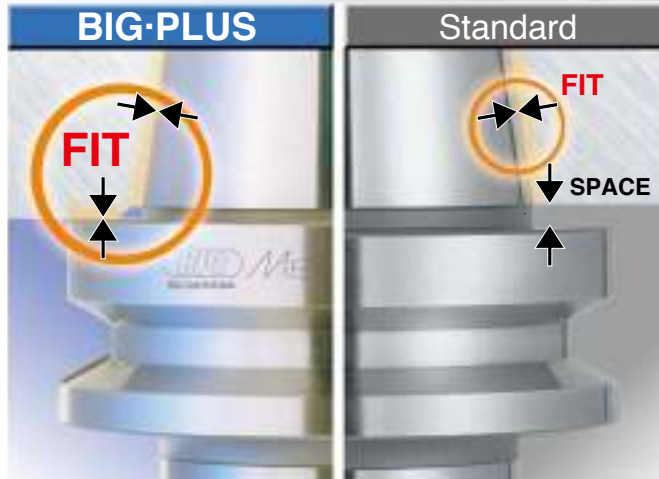
CENTER BOY

Center and Chamfer in one



..... I36

	<p>BBT/BT SHANK</p> <p>JIS B 6339(BIG-PLUS) JIS B 6339</p>	<p><i>A1-A71</i></p>	<p>A</p>
	<p>BDV/DV SHANK</p> <p>DIN 69871 A/B(BIG-PLUS) DIN 69871 A/B</p>	<p><i>B1-B21</i></p>	<p>B</p>
	<p>HSK SHANK</p> <p>Form A DIN 69893-1 Form E DIN 69893-5 Form F DIN V 69893-6</p>	<p><i>c1-c51</i></p>	<p>C</p>
	<p>CYLINDRICAL SHANK</p>	<p><i>D1-D9</i></p>	<p>D</p>
	<p>MILLTURN TOOLING</p>	<p><i>E1-E53</i></p>	<p>E</p>
	<p>N/C LATHE TOOLING</p>	<p><i>F1-F5</i></p>	<p>F</p>
	<p>ACCESSORIES</p>	<p><i>G1-G27</i></p>	<p>G</p>
	<p>MEASURING TOOLS</p>	<p><i>H1-H9</i></p>	<p>H</p>
	<p>CUTTING TOOLS</p>	<p><i>I1-I36</i></p>	<p>I</p>



**SIMULTANEOUS
TAPER & FLANGE FIT**

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

BBT Shank **A1**

BDV Shank **B1**



- 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 operation

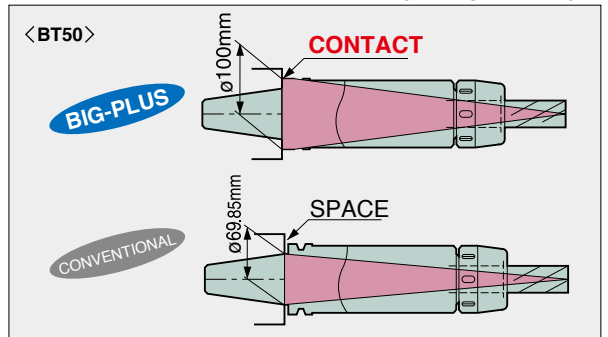
Basic Concept

The BIG-PLUS Spindle System is based on the most current available standards in JIS B6339 and DIN 69871.

A conventional step taper toolholder is supported on a reference diameter called the gauge face. On the contrary, a BIG-PLUS toolholder is supported on the flange face, which brings remarkable improvement to rigidity.

	CONVENTIONAL	BIG-PLUS
BT50	ø69.85	ø100
BT40	ø44.45	ø 63
BT30	ø31.75	ø 46

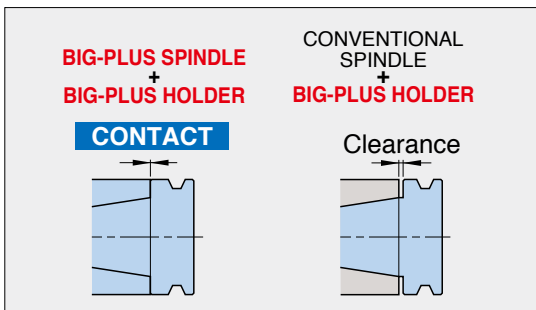
INCREASED CONTACT DIAMETER (Example of BT)



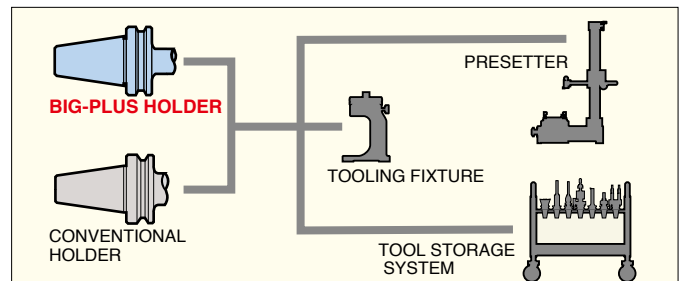
Perfect Interchangeability

BIG-PLUS toolholders can be used on existing standard machine spindles. Existing standard toolholders can also be used on BIG-PLUS spindles. In this case, simultaneous contact cannot be attained.

Although other simultaneous contact systems require exclusive new accessories, the BIG-PLUS Spindle uses existing accessories such as a presetter and toolholder fixture as it is based on a conventional step taper shank. Further, it is not necessary to modify tool magazines and ATC devices of existing machines.

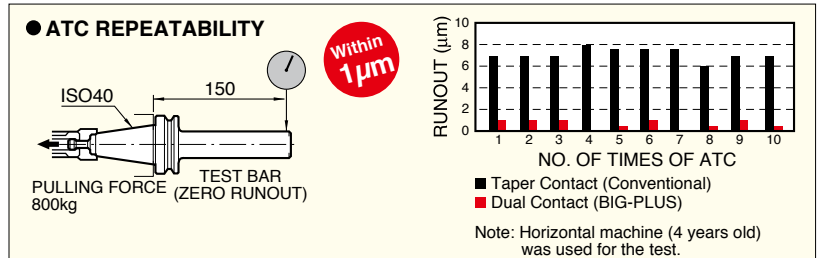


EXISTING ACCESSORIES UTILIZED



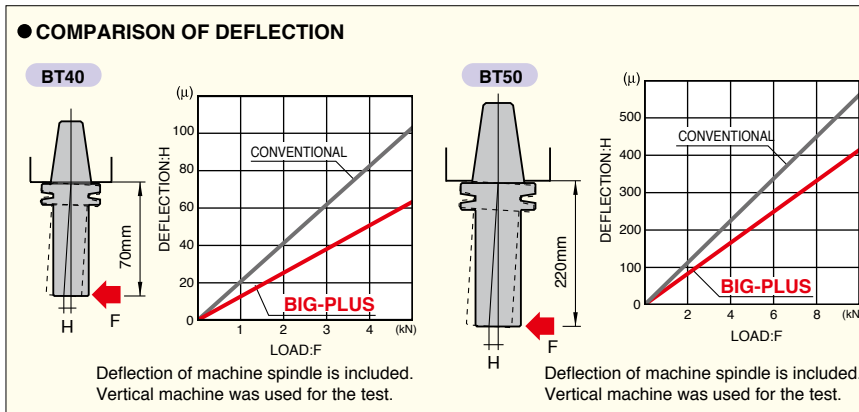
Improvement of ATC Repeatability

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

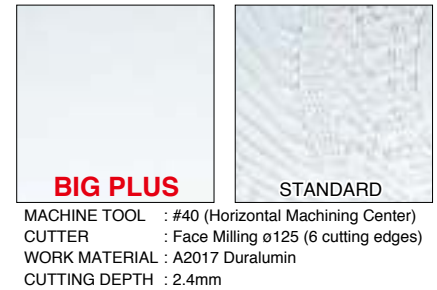


Minimized Deflection For Maximum Machining Accuracy & Superior Finish

With BIG-PLUS simultaneous contact, machining rigidity is greatly enhanced due to the larger contact diameter of the toolholder 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.



FACE MILLING Application



※ Please be aware that simultaneous contact toolholders other than BIG-PLUS toolholders may damage BIG-PLUS spindles.

Strict Gauge Control

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

[GAUGES FOR MACHINE SPINDLE]

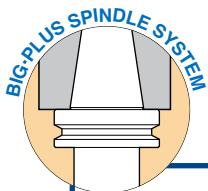
MASTER GAUGE

MEASURING EQUIPMENT

MASTER ARBOR

AI CODE CHIP

ID chip is embedded in the Master Gauge and records the calibration data



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, Asa Tech, AWEA, BERG Spanntechnik, BOST, brother, CHEVALIER, CHUO-SEIKI, CITIZEN, COLGAR, Cross Hüller Ex-Cell-O Lamb, D.S.TECHNOLOGIE, DAH LIH, DAIYA SEIKI, DIXI, DMC, DMG MORI SEIKI AD, DMG MORI SEIKI CO.,LTD., DOOSAN, DYNAMAX, EGURO, ENSHU, FANUC, FEMCO, First, FIRST, FISCHER, FOREST-LINÉ, FPT, FRANZ KESSLER, FUJI SEIKI, Giddings & Lewis, GTI, HARDINGE, HNK, HOMMA, HORKOS, HOWA, HST, HWACHEON, IBAG, IBARMIA INNOVATEK, IKEGAI, INOUE KOSOKU KIKAI, JOHNFORD, JTEKT, JUNGWOO M.S., KARATS, KASHIFUJI, KASWIN, KENTURN, KITAMURA, KIWA, KMT, KOMATSU NTC, KONDIA, KOYO, Kptec, KURAKI, LAZZATI, MAGNIX, MAKINO, MAKINO SEIKI, MANDELLI, MATSUJURA, MAZAK, MECTRON, MILLTRONICS, MITSUBISHI, MITSUBOSHI KOGYO, MITSUI SEIKI, MOTOKUBO, N.S.S, NACHI, NAKAMURA, NEO, Nicolàs Correa, NIIGATA, NIPPON BEARING, NISHIJIMAX, NISSIN-mfg, NOMURA, Northland Tool, NSK, O-M, OBATAKE, OHTORI, OKK, OKUMA, OMLAT, PAMA, PIETRO CARNAGHI, PMC, QUASER, REIDEN, ROKU ROKU, ROYAL, SAJO, SEMPUCO, SETCO, SHAN RONG, SHODA, SHW, SKG, SKODA, SMEC, SNK, SODICK, SORALUCE, SPINDER, SPINTEC, SPS, StarragHeckert, STUDER, SUGINO, Sunwoo, SUPERIOR SPINDLE SERVICE, TAJMAC-ZPS, TAKAMAZ KIKAI KOUGYOU, TAKISAWA, TANABE, THETA, Tongtai, TOS VARNSDORF, TOSHIBA, TOYO SEIKI, TSUDAKOMA, TSUGAMI, Ugint, UTSUNOMIYA, VICTOR Taichung, VTEC, VYU CHENG, WALDRICH COBURG, WELE, WIA, YAMASAKI GIKEN, YAMASHINA, YASDA, Yasunaga, YCM, YU HUNG, ZAYER

[As of January, 2014]

HSK TOOLING SYSTEM

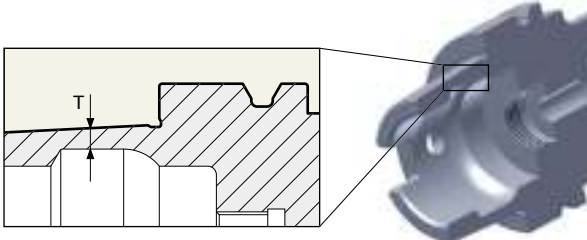


Selected materials and strict control of dimensional accuracy for the optimum quality. Wide range of standard holders to meet all production requirements.

- HSK form A C1
- HSK form E C40
- HSK form F C45

Premium Material Selection

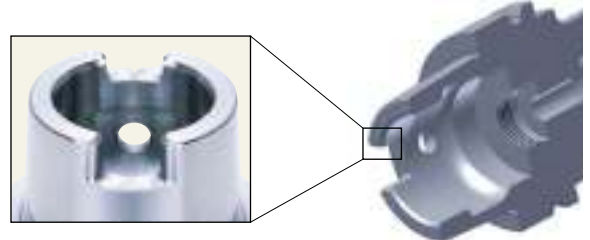
Since HSK is a hollow taper shank, the material has a critical role for optimum performance. BIG uses carefully selected high grade alloy steels. Particularly, BIG uses die steel materials for HSK 40 and smaller where the cross section of shank taper is very thin.



HSK Size	25	32	40	50	63	100
T	1.09	1.25	1.92	2.60	3.47	5.17

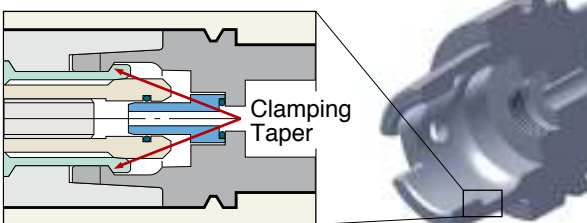
Drive Key Form

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.



HSK Turning tools HSK-T63 / T100 (ISO 12164-3) HSK form T





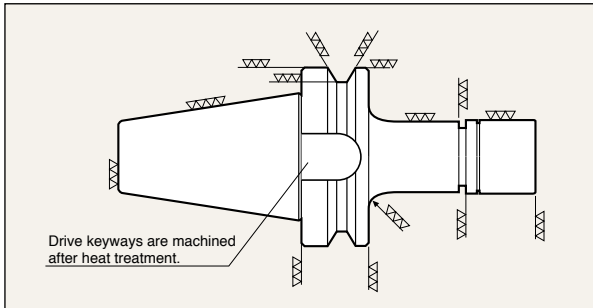
Wide variety of collets and chuck bodies to cover all high speed ultra precision machining applications.



- BBT Shank **A1**
- BDV Shank **B1**
- HSK Shank **C1**
- CYLINDRICAL Shank **D1**
- BIG CAPTO Shank **E30**

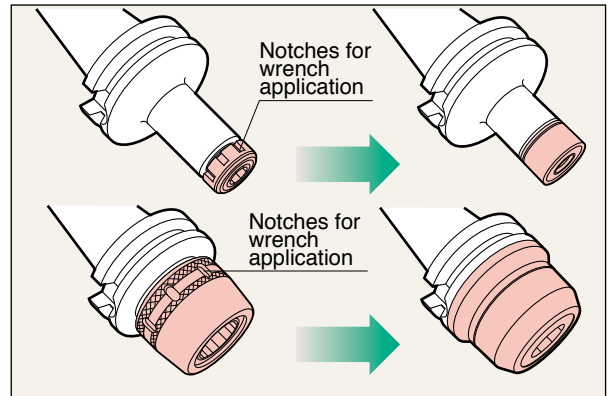
Precision ground and balanced for high speed machining

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



Notch-free design MEGA NUT prevents vibration and reduces noise

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



4 chuck types for different high speed machining requirements

To suit micro drills and end mills
Clamping range
ø0.45 - ø8.05mm



MEGA MICRO CHUCK

MAX.
50,000
min⁻¹

(JIS B6339)

To suit carbide drills,
reamers and end mills
Clamping range
ø0.25 - ø20mm



MEGA NEW BABY CHUCK

MAX.
40,000
min⁻¹

(JIS B6339)

To suit end mills
Clamping range
ø3 - ø12mm



MEGA E CHUCK

MAX.
40,000
min⁻¹

(JIS B6339)

To suit end mills
Clamping range
ø16 - ø50mm



MEGA DOUBLE POWER CHUCK

MAX.
30,000
min⁻¹

(JIS B6339)

Easy and 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.

MEGA MICRO CHUCK®

0.1mm increments for higher precision
Clamping Range: $\varnothing 0.45 - \varnothing 8.05$



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

- BBT Shank **A1**
- BDV Shank **B1**
- HSK Shank **C1**
- CYLINDRICAL Shank **D1**
- BIG CAPTO Shank **E30**
- For N/C LATHE **F4**



MAX.
50,000
min⁻¹



Nut diameter 10, 12, 14 & 18mm Extremely slim design

Slim design avoids interference. Ideal for small mold making combining high speed and high precision capability.

$\varnothing 10\text{mm}$
Full scale
3S_{type}



High concentricity

At nose within **1 μm**
At 4d within **3 μm**

100% concentricity inspection. Within 1 μm at nose is guaranteed.

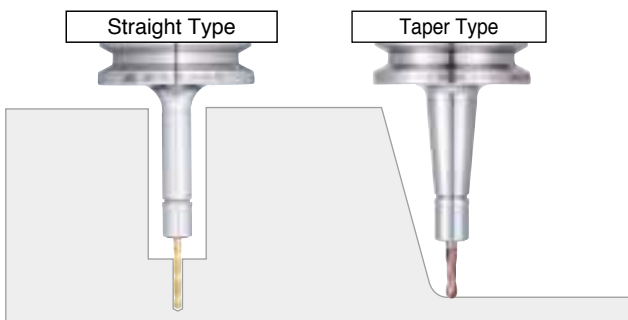


Collet concentricity

Collet class	Max. runout	
	At nose	At end of test bar
AA	Within 1μm	Within 3μm

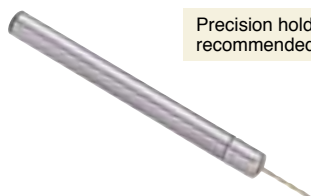
Three versions are available

- Straight Type:** where access is restricted
- Taper Type:** for increased rigidity
- Cylindrical Shank Type:** for increased versatility

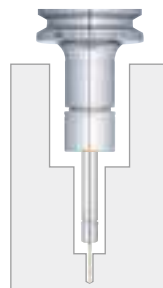


Cylindrical Shank Type

Flexible tool layout
For tighter and deeper area



Precision holder is recommended for chucking.



0.1mm increments for higher precision

Collet 175 models

Available in 0.1mm increments. Reduced shrinkage optimizes precision.

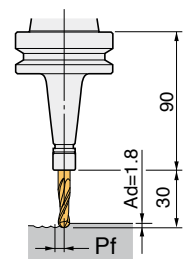
Maximum performance!

Setup

Machine	BBT40 vertical machining center
Holder	BBT40-MEGA6S-90T
Endmill	$\varnothing 6$ 2-flute carbide ball nose
Workpiece	S50C (JIS)

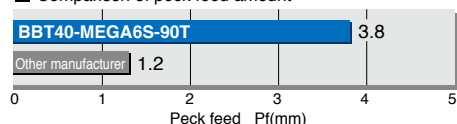
Cutting conditions

Spindle speed	12,000 (min ⁻¹)
Cutting speed	226 (m/min.)
Feed rate	720 (mm/min.)
	0.03 (mm/cutter)
Axial depth of cut	1.8 (mm)



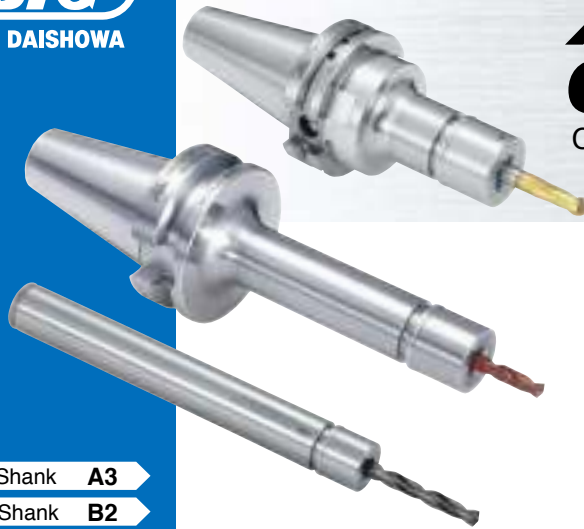
Rigid taper design avoids chatter even with high peck feed milling leading to dramatically reduced machining time.

Comparison of peck feed amount



MEGA NEW BABY CHUCK®

Clamping Range: $\varnothing 0.25 - \varnothing 20$



- BBT Shank **A3**
- BDV Shank **B2**
- HSK Shank **C3**
- CYLINDRICAL Shank **D2**
- BIG CAPTO Shank **E31**



MAX.
40,000
min⁻¹



High precision collet, close to submicron



High precision
NBC Collet

100% inspection to guarantee accuracy. Material, production, heat treatment... everything is selected for precision.

Collet concentricity

Collet class	Max. runout	
	At nose	At end of test bar
AA	Within 1μm	Within 3μm

2 way coolant supply

MAX. COOLANT PRESSURE
7MPa

Sealed collet nut
MEGA PERFECT SEAL

- Standard NBC Collet is used.
- High dust resistance



Through Tools

Tools with holes



Jet Through

Tools without holes

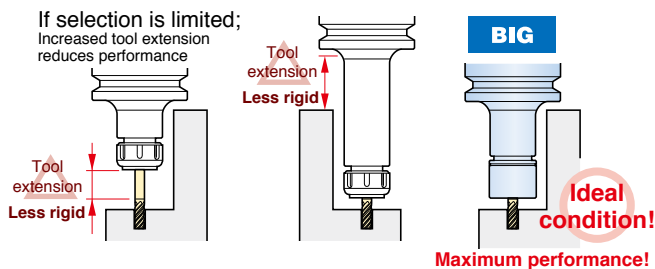


MPS
G 9

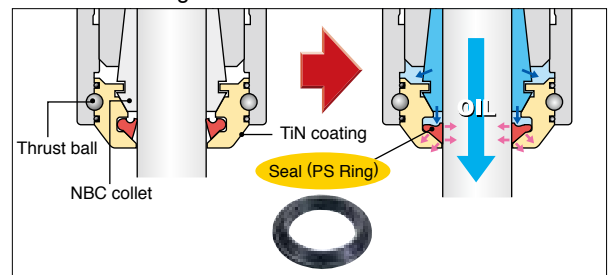
Unique sealed collet nut for coolant-through tools. The sealing performance increases with higher coolant pressure. Remove the sealing ring to supply coolant to the periphery of the cutting tool.

353 versions are available as standard (BBT, BDV, HSK)

Ideal length and diameter of holder is the key to precision machining. Select the optimum from the wide range.

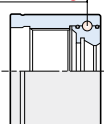


Coolant through tools



Precision nut to optimize performance of collet

Thrust ball bearings



Thrust ball bearings to eliminate distortion of the collet during tightening. Patented design prevents ball bearings from moving at high speed. Threads are finished after heat treatment.

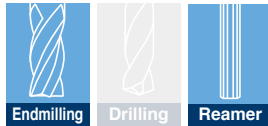
MEGA E CHUCK®

Clamping range: $\varnothing 3.0 - \varnothing 12$



Collet chuck designed exclusively for endmilling up to $\varnothing 12\text{mm}$ with high concentricity & rigidity.

- BBT Shank **A6**
- BDV Shank **B4**
- HSK Shank **C7**
- BIG CAPTO Shank **E34**



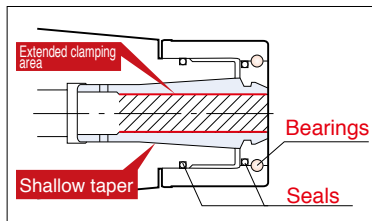
MAX.
40,000
min⁻¹



High grip collet

Gripping force is an important element for endmilling 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.



● Clamping nut with thrust ball bearings

Eliminates distortion of the collet during tightening for higher gripping force and improved concentricity.

Ultimate performance in both chip volume and surface finish!



BBT40-MEGA6E-90

Other manufacturer



Cutter	Model	Radial DOC (mm)	Axial DOC (mm)	Removal (CC/min)	Power (kw)	Roughness (μm)
$\varnothing 6$	MEGA 6E	3.0	9	45.9	3.4	5.05
	Other manufacturer	0.5	9	7.6	1.1	10.25
$\varnothing 12$	MEGA13E	12.0	18	91.8	3.0	3.49
	Other manufacturer	3.0	18	23.0	1.2	9.67

High concentricity

At nose within **1 μm** At 4d within **3 μm**

100% inspection to guarantee accuracy within 1 μm runout at collet nose.

High precision

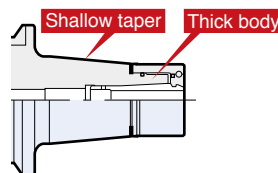
MEGA E COLLET



■ Collet concentricity

Collet class	Max. runout	
	At nose	At end of test bar
AA	Within 1μm	Within 3μm

Substantial and tapered body design



Thick body eliminates chatter and deflection.

Tapered extension provides the rigidity to prevent vibration.

Slit-through coolant

MAX. COOLANT PRESSURE
7MPa

Coolant is reliably directed to cutting surface through slits in the collet. Tool life is extended together with improved surface finish as a result of smooth chip evacuation.



● For coolant-through tools

Sealed collet nut to supply coolant reliably through cutting tool.



Ideal for burnishing drills and reamers due to extended gripping length of MEGA E CHUCK.

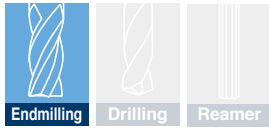
MEGA DOUBLE POWER CHUCK®

Clamping range: $\varnothing 16 - \varnothing 50$

Ideal for solid machines



- BBT Shank **A9**
- BDV Shank **B5**
- HSK Shank **C9**
- BIG CAPTO Shank **E37**

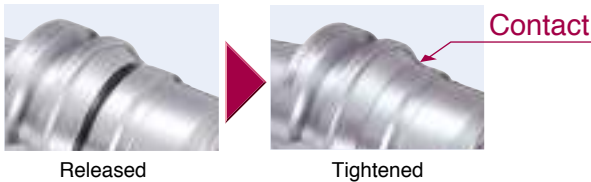


MAX.
30,000
min⁻¹

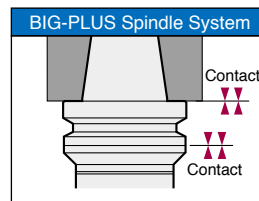


Stabilizing contact between flange & nut provides exceptional rigidity

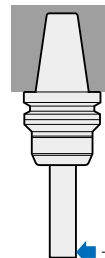
The expanded contact diameter of the nut of the MEGA DOUBLE POWER CHUCK to the flange provides the highest rigidity as if the chuck and nut were one solid piece. This superior rigidity assures heavier duty machining without chatter.



Flange contacting nut together with BIG-PLUS

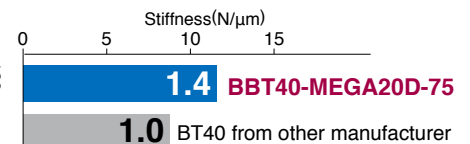


Stabilizing contact of nut to the flange provides exceptional rigidity in addition to the BIG-PLUS effect.



1.4 times increased rigidity

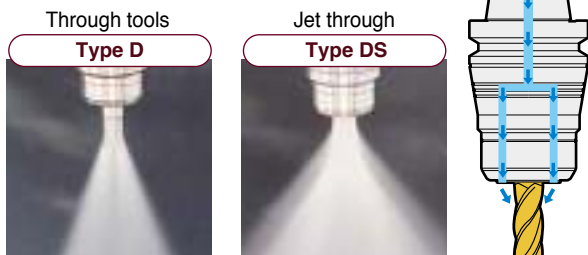
Comparison test proves increased stiffness compared to others.



Secure coolant supply

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

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



Coolant is reliably directed to cutting tool periphery from chuck nose.

- Straight Collets are available.



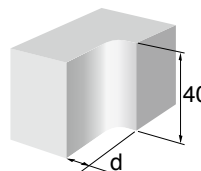
For JET Through
PJC Collet

For Through Tools
OCA Collet

Please choose suitable models according to the applications.



High rigidity achieves higher level of stability



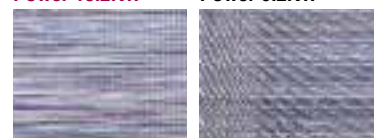
Cutting conditions

Coated carbide endmill $\varnothing 32$, 4-flutes
Workpiece: SS400 (JIS)

V282m/min
S2,800min⁻¹
F1,120mm/min

BBT50-MEGA32D-105
Radial d = 14mm
Power 15.2KW

Other manufacturer (L = 90)
Radial d = 9.5mm
Power 9.2KW



NEW BABY CHUCK

Clamping Range: $\varnothing 0.25 - \varnothing 20$



- BT Shank **A13**
- DV Shank **B6**
- HSK Shank **C11**
- CYLINDRICAL Shank **D3**
- BIG CAPTO Shank **E41**
- For N/C LATHE **F1**



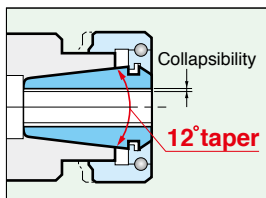
NEW BABY CHUCK is capable of achieving high spindle speeds as required for drilling and end milling with smaller diameter cutting tools.



Ideal combination of taper angle and collet projection length

NEW BABY CHUCK SYSTEM

BIG NEW BABY CHUCK satisfies all requirements for accuracy, clamping force and clamping range, by utilizing the ideal 12° taper angle.



High concentricity

At nose **within 1 μ m** At 4d **within 3 μ m**

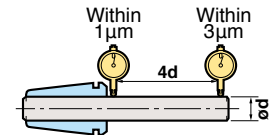


High precision
New Baby Collet

Each collet is inspected and double checked to meet maximum runout tolerance permitted, i.e., 100% check & re-check.

Collet concentricity

Collet class	Max. runout	
	At nose	At end of test bar
AA	Within 1μm	Within 3μm



The nut is a key to achieve the highest precision of a collet

● Since the threads greatly influences accuracy, they are finished after heat treatment. Therefore, bad influence from clamping action is eliminated, which enhance clamping performance.



● A nut incorporates a thrust bearing with steel balls that prevents stress to a collet and allows a smooth clamping force to a collet.

For high pressure coolant supply



BPS
G10

Sealed collet nut **BABY PERFECT SEAL**

- Standard NBC Collet is used.
- High dust resistance

Through Tools

Tools with holes



Jet Through

Tools without holes



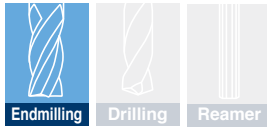
NEW Hi-POWER MILLING CHUCK

Clamping Range : $\varnothing 16 - \varnothing 50.8$

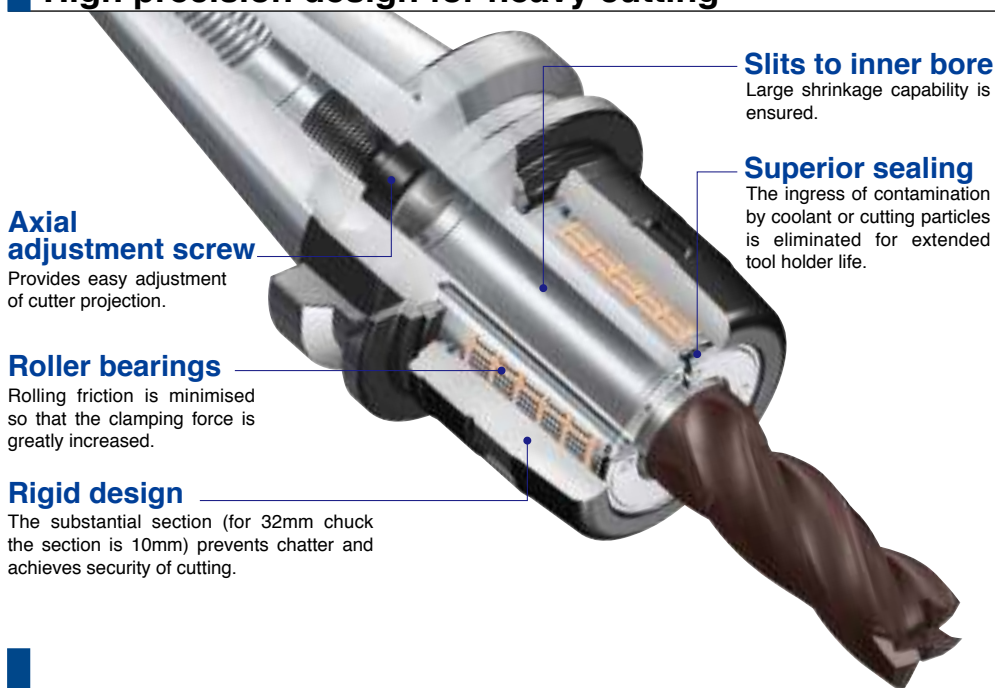


NEW Hi-POWER MILLING CHUCK combines the high accuracy with high torque capability and rigidity.

- BBT/BT Shank **A16**
- BDV/DV Shank **B8**
- HSK Shank **C15**
- BIG CAPTO Shank **E45**



High precision design for heavy cutting



Axial adjustment screw
Provides easy adjustment of cutter projection.

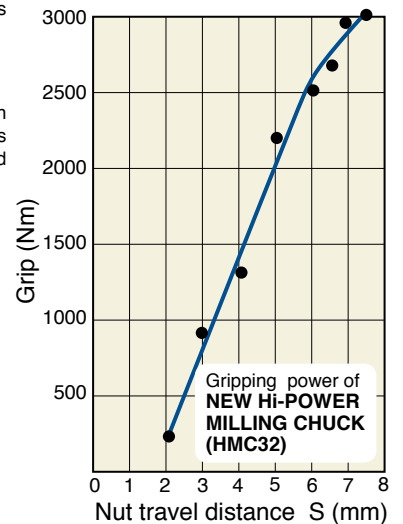
Roller bearings
Rolling friction is minimised so that the clamping force is greatly increased.

Rigid design
The substantial section (for 32mm chuck the section is 10mm) prevents chatter and achieves security of cutting.

Slits to inner bore
Large shrinkage capability is ensured.

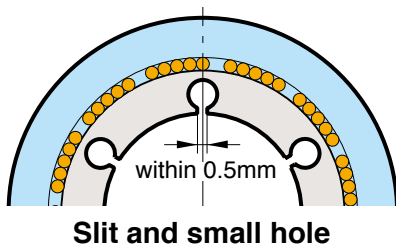
Superior sealing
The ingress of contamination by coolant or cutting particles is eliminated for extended tool holder life.

High gripping force



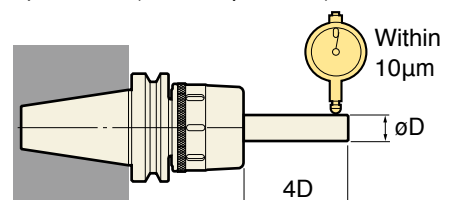
Secure and reliable slit design

The annular section needs to be substantial in order to provide rigidity but retain the ability to collapse in order to provide sufficient grip. The section of the Hi-Power Milling Chuck has combined holes and slits at regular intervals in order to combine both requirements.



Precise concentricity

Concentricity is assured by the integral design and clamping by mechanical compression of the annular section by the rolling bearing system. All models are inspected and double checked to meet maximum runout tolerance permitted. (within $10\mu\text{m}$ at $4D$).



High precision collet chuck system

MEGA ER GRIP®

Clamping Range: $\varnothing 1.9 - \varnothing 20$



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

- BDV Shank **B9**
- HSK Shank **C13**
- For N/C LATHE **F3**



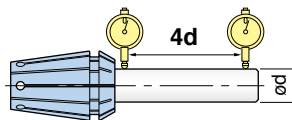
ER collet

MAX.
35,000
min⁻¹



The ERC collet with the best runout accuracy in the world

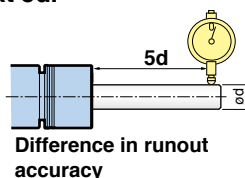
Measurement standards:
In accordance with
DIN6499 and ISO15488



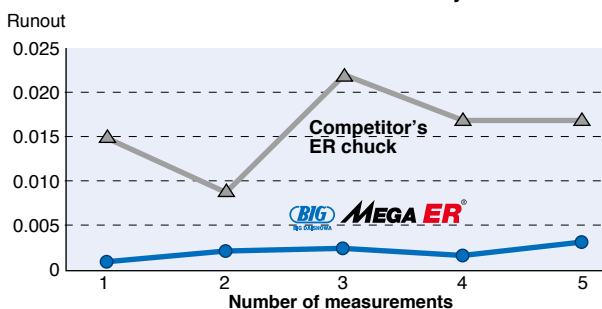
Clamping Range	DIN / ISO		BIG BIG DAISHOWA MEGA ER® Within 0.003
	Class 1	Class 2	
$\varnothing 2 - \varnothing 10$	0.010	0.015	
$\varnothing 10 - \varnothing 20$	0.015	0.020	

The test bar clamped by MEGA ER Grip is measured at 5d.

BIG's MEGA ER Grip can provide repeatable performance by assembling the precision ERC collets with its chuck body and clamping nut, resulting in complete harmony of the tool holder assembly.

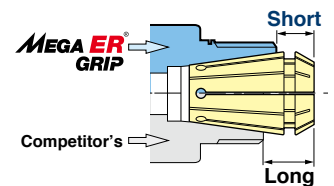


Difference in runout accuracy



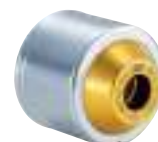
High rigidity body that increases the contact area of the collet

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.)

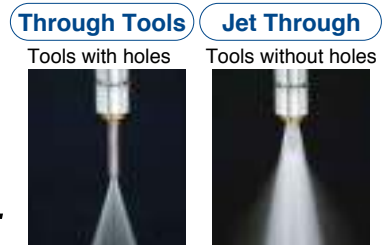


2 way coolant supply

MAX. COOLANT PRESSURE
7MPa



Sealed collet nut
MEGA ER PERFECT SEAL
G14



With "Through Tools", coolant is supplied from the coolant holes of the cutter (such as drills) and "Jet Through" directs the coolant around the cutter periphery (such as end mills). Both methods can be adapted with the same Perfect Seal nut according to the desired use.

The runout accuracy greatly affects the tool life

The runout accuracy has a great influence on the tool life. The tool life achieved with Mega ER Grip is about 3 times the tool life obtained with conventional collet chucks.

Competitor's



Runout of 15 μ m



Runout within 2 μ m

800 holes

$\varnothing 3$ mm carbide drill
CK45
12mm depth of cut

2,300 holes

Number of holes
improved by
2.9
times

HYDRAULIC CHUCK

Clamping Range: $\varnothing 4 - \varnothing 42$



For high precision machining in Automotive, Aerospace, Medical and Die & Mold

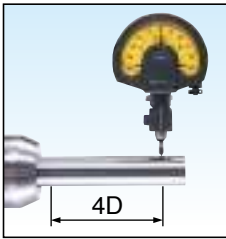
BBT Shank **A21**
HSK Shank **C16**
BIG CAPTO Shank **E43**



BIG PLUS
STANDARD

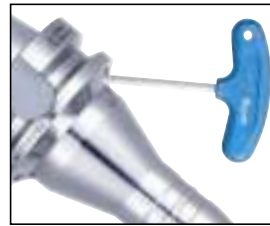


Runout accuracy less than $3\mu\text{m}$



High precision runout accuracy less than $3\mu\text{m}$ at 4d improves the workpiece surface finish and extends tool life.

Easy clamping with 1 wrench

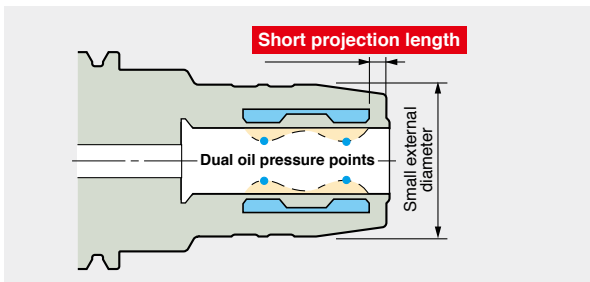


The cutting tool can be clamped or unclamped easily and securely with just 1 wrench.

High runout accuracy
Less than $3\mu\text{m}$

Integral sleeve construction

Compared with the traditional two-part construction sealed with O-rings, BIG Hydraulic Chucks are long lasting and maintenance free. Also the rigidity is greatly improved by the short projection length and dual pressure points.



Secure coolant supply



JET-THROUGH Type

NEW

Coolant is directed to tool periphery.

MAX. $35,000\text{min}^{-1}$

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

Balanced for high speed machining

Pre-balanced to less than $15\text{g} \cdot \text{mm}$. Vibration free machining at high speed.

Precision drills & reamers Ball endmills

Endmills Diamond reamers Grinding tools

SUPER SLIM Type



Further evolution of high precision Hydraulic Chuck

Slim+ High Speed

MAX. $35,000\text{min}^{-1}$
Nose diameter min. $\varnothing 14\text{mm}$





BIG DAISHOWA

Tool holder for rigid tapping

License **EMUGE**

MEGA SYNCHRO[®] Tapping Holder

Tapping Range: M1 – M36
No.0 – U3/4
P1/8 – P1

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

BBT Shank **A31**

BDV Shank **B10**

HSK Shank **C25**

CYLINDRICAL Shank **D8**

BIG CAPTO Shank **E48**

For N/C LATHE **F4**



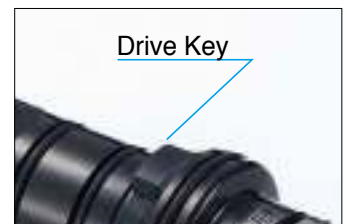
48 body models and 182 Tap Holder models are available.

NEW large tap series achieves the max. M36.
An extensive variety of bodies suitable for many spindle types.
Short, middle & long Tap Holders are standardized to cover between M2 and M36.
The slim design avoids interference.



Secure drive

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



Tool periphery



Coolant is supplied through slits of the Tap Holder.

Through tool



Coolant is supplied through both the tool and the slits of Tap Holder.

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.

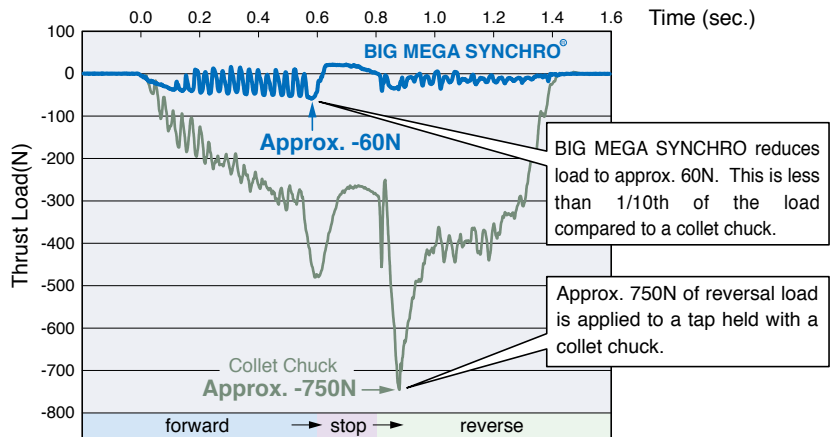
Load to tap

Spiral Tap

M6 P1
V : 20m/min(1,060min⁻¹)

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

※ Measured by Kistler dynamometer



Comparison of surface finish

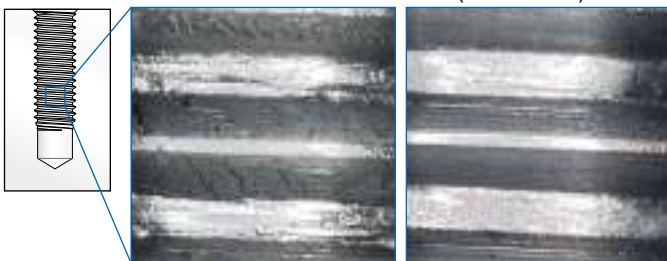
Tapping of exotic materials tends to cause a compressed burr on the thread surface.

BIG MEGA SYNCHRO compensates for synchronization errors and minimizes cutting load.

Fine surface finish of threads is achieved.

Spiral Tap

M5 P0.8 Material : SNCM420(41CrNiMo2)



Collet Chuck

BIG MEGA SYNCHRO®

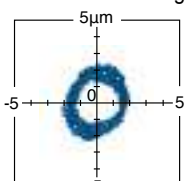
For small tap MGT3

Tapping Range
M1-M3 No.0-6

Eliminated synchronization errors and minimized dynamic runout at high speed provide stable thread quality and extended tool life.



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



Dynamic runout accuracy within 5μm even at 5,000min⁻¹

Plotted position of a test bar (at 16mm distance on 4mm diameter)

ANGLE HEAD

Multiple operations on one setup save time, speed production and guarantee accuracy.



- BBT Shank **A49**
- BDV Shank **B12**
- HSK Shank **C27**



Wide range of compact and rigid heads Suitable for all kinds of machining applications

AG90 SERIES



High precision collet chuck system
NBS TYPE



For drilling - tapping
COMPACT TYPE

Interchangeable adapter system
BUILD-UP TYPE



ø32 high power design
HMC32 TYPE



For face milling
FACE MILL TYPE



Built-in tapping depth control system
TAPPER TYPE



Coolant through tool
OAG TYPE

AG45 SERIES



45° series
NBS TYPE

AGU SERIES



Angle adjustment by 1° increments
UNIVERSAL TYPE



30° limited version
AGU30 TYPE

ULTRA SMALL HEAD



Min. ø30mm bore
SMALL BORE TYPE

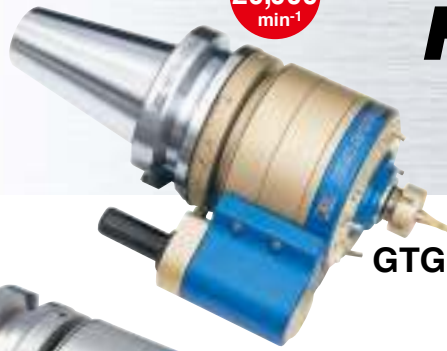
SPECIAL DESIGNS

We are able to design and manufacture special Angle Heads such as special angle or long type models to answer to every machining condition.

Speed Inserter

HIGH SPINDLE

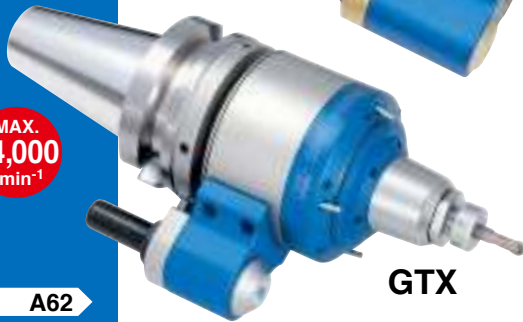
MAX.
20,000
min⁻¹



GTG

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

MAX.
24,000
min⁻¹



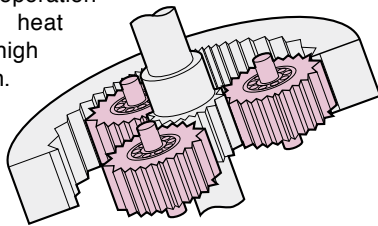
GTX

BBT Shank **A62**
BDV Shank **B19**



Reinforced gear driving system

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

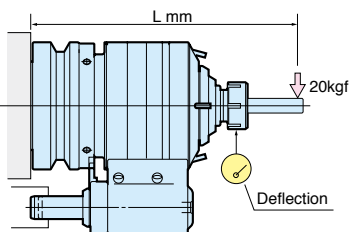


Reduce load to machine spindle

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.

Rigidity increased 1.7 times

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



Model	L	Deflection	Comparison
BBT40-GTG5-10-140-65	200	36μm	58% less
BBT50-GTG6-10-158-80	220	25μm	78% less
BBT50-GTG4-16-177-80	240	11μm	93% less

Comparison against previous model.

Multi-directional coolant supply

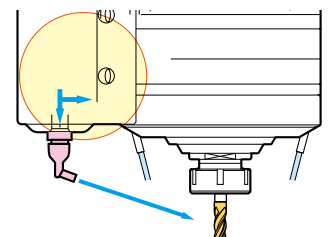
Universal Coolant Nozzles are capable of being adjusted to suit the length of cutting tool. Thus, the maximum coolant delivery to the cutting edge is assured.



Note:
HIGH SPINDLE can be operated without coolant running through the housing.

Pinpoint coolant jet for shorter cutting tools

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



AIR TURBINE SPINDLE



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

- BBT Shank **A63**
- BDV Shank **B18**
- HSK Shank **C38**



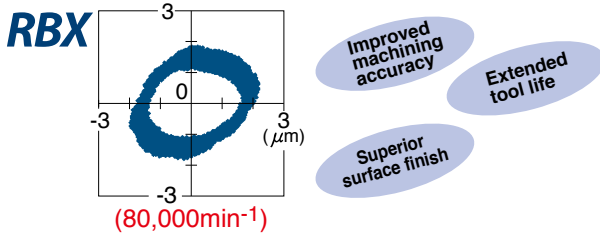
MAX.
80,000
min⁻¹



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.

Plotted position of a test bar at the max. spindle speed. (reference value)

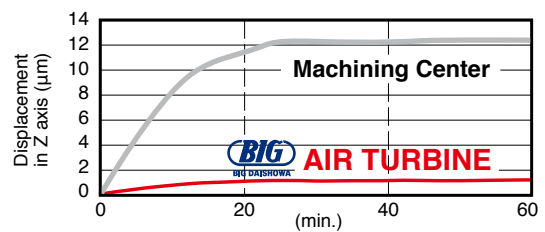


Minimal thermal displacement

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



Application examples

Aluminum A2017

Outstanding runout accuracy permits super thin wall cutting.

RBX7	Cutter	ø0.5mm Rib-endmill
	Spindle speed	70,000min ⁻¹
	Feed	1,500mm/min
	D.O.C	Ad=0.02mm

Stainless Steel SUS303

Tool life is doubled with over 1,200 holes and cutting time is reduced to 1/3.

RBX5	Cutter	ø0.5mm Solid drill
	Spindle speed	40,000min ⁻¹
	Feed	20mm/min
	Peck	0.01mm

Automatic Tool Change

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



2 types of Air Turbine Spindle

- ... Optimum △ ... Dependent upon cutting conditions
- ... Acceptable × ... Not recommended for use

		RBX7	RBX5
Drill	ø0.1-0.3mm	○	○
	ø0.3-0.5mm	○	○
	ø0.5-1.0mm	○	◎
	ø1.0-1.5mm	×	△
Endmill	ø0.1-1.0mm	◎	◎
	ø1.0-1.5mm	△	◎
Jig grinding		◎	◎

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

Hi-JET HOLDER

for water-soluble coolant only



BBT Shank **A67**
BDV Shank **B20**

Bearings in a separate housing from the coolant for extended life.

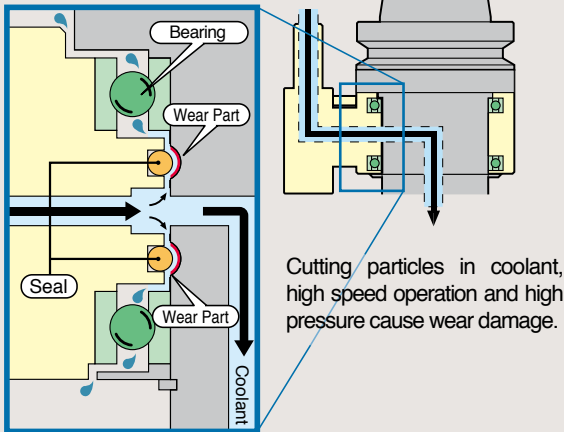
MAX.
10,000
min⁻¹

BIG PLUS
BIG
STANDARD

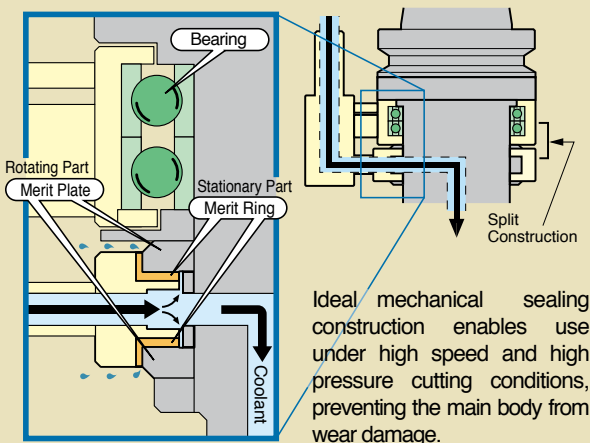


Non-contact seal design eliminates wear damage to body

Competitor Design



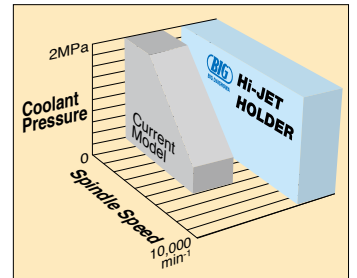
BIG Hi-JET HOLDER



Suitable for small dia. cutters due to high speed and pressure

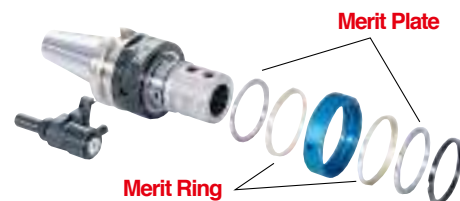
Small diameter cutters require high spindle speeds to maintain high cutting speed and high coolant pressure due to their small dia. coolant holes.

The Hi-JET HOLDER accepts even smaller diameter shanks, providing high spindle speeds (Max. 10,000 min⁻¹) and high coolant pressures (Max. 2MPa).

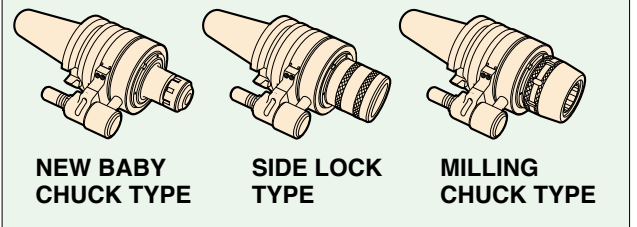


Easy maintenance by replacement of wear parts

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



Hi-JET HOLDER SERIES



FULLCUT MILL

Type **FCR / FCM**
Cutter Dia. : $\phi 12 - \phi 80$



Type **FCR I 1**

Type **FCM I 10**

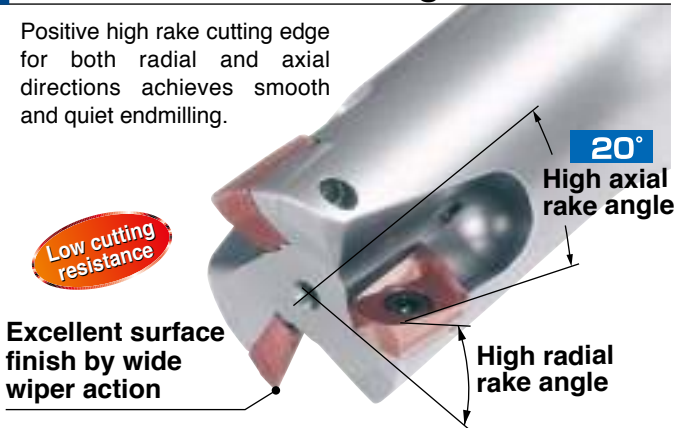


Indexable insert endmills with both excellent sharpness and toughness, achieving the performance of solid endmills.



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 endmilling.



Amazing cutting performance, brought by integral & face contact body

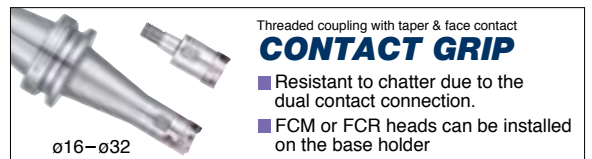
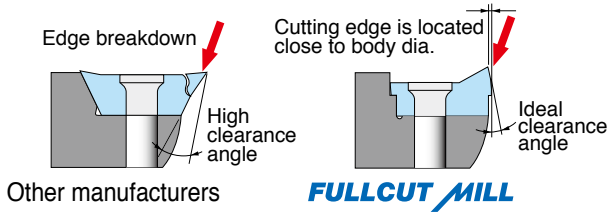
Integral style with taper shank and flange contact with the machine spindle provides higher precision and rigidity thus achieving cutting conditions only otherwise available on larger machines.



BBT and BDV type
BIG-PLUS
SPINDLE SYSTEM
DUAL CONTACT

HSK type

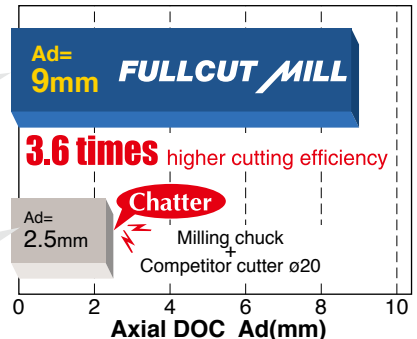
Strong cutting edge reduces edge chipping.



Amazing cutting performance even on #40 taper machine

Comparison of axial DOC between integral type with face contact and straight shank type. 3.6 times higher cutting performance than other manufacturer.

Cutting condition
Machine : BBT40(BIG PLUS)
Slot milling : 20mm
Work material : C50(S50C)
Spindle speed : 2,400min⁻¹
Speed : V=150m/min
Feed : 0.12mm/tooth



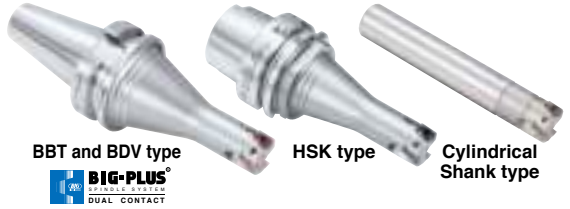
Ramping & Helical milling cutter

FULLCUT MILL Type **FCR** Cutter Dia. $\phi 16 - \phi 33$



Unique inserts designed for ramping make multi-functional cutting possible.

Higher rigidity with integral body with dual contact system.



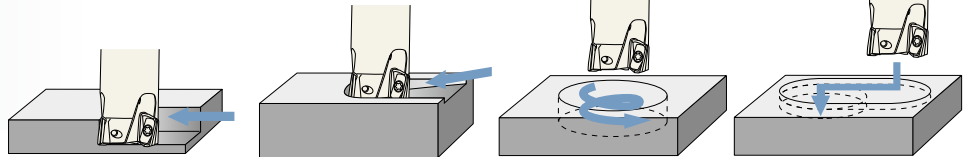
Shoulder milling

Ramping

Helical milling

Peck-drilling

For multi-functional cutting



Square Shoulder and slot milling cutter

FULLCUT MILL Type **FCM** Cutter Dia. $\phi 12 - \phi 80$



The indexable endmill that combines sharpness and rigidity has no match.

A variety of shanks including simultaneous fit with integral body.



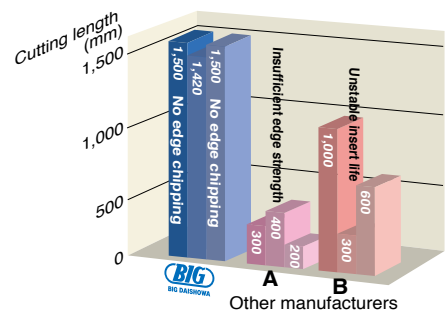
Evaluation of resistance to breakdown of cutting edge

Tough cutting edge of FULLCUT MILL is proven.

An evaluation of cutting length/life as measured when machining the most arduous workpiece by milling over a continuous series of holes. This is the condition most likely to cause edge chipping.



Arbor type
For Facemill Arbor Type FMH
Cutter Dia $\phi 50, \phi 63, \phi 80$

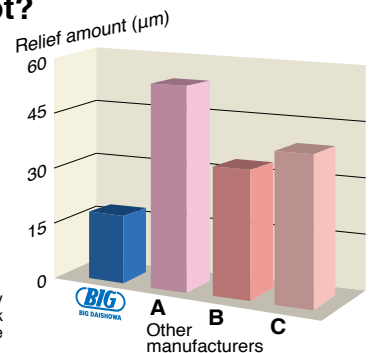
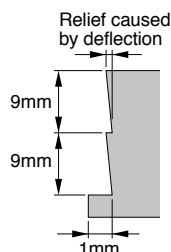


Nose radius 0.2mm

Finishing with indexable endmill - Why not?

Insert with the minimum nose radius of 0.2mm and superb squareness to achieve high precision end milling comparable with solid carbide tools.

Work material: SUS304 stainless steel
Vertical M/C, #40 taper
Cutter dia: 25mm
f = 0.12mm/tooth



High speed cutter for aluminum and cast iron

SPEED Finisher

Diameter: $\phi 50$, $\phi 63$, $\phi 80$, $\phi 100$



Amazing improvement of surface finish at high speed cutting

Aluminum die casting ADC12 $Rz=0.55\mu m$

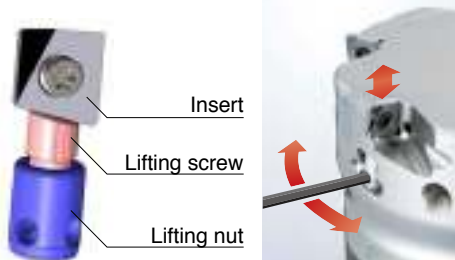
Gray cast iron FC250 $Rz=0.67\mu m$



I 23

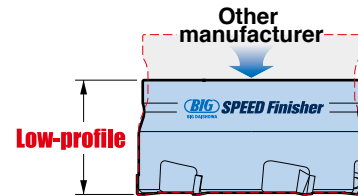
Quick adjustment of cutting edge height

After clamping the insert, lifting screw lifts up the insert directly by revolving the lifting nut from its side. Simple construction aids easy adjusting operation. Fine pitch thread of the lifting screw ensures precise adjustment.



Lightweight & high rigidity

Low-profile cutter body enhances rigidity, minimizes vibration and distortion, leading to the minimized height difference of the machined surface. Lighter weight resulted from reduced mass aids performance on small machine tools such as BT30 spindle.



PL Presetter

Exclusive PL Presetter shortens the setup time further up to 15 sec./insert while avoiding chipping of the cutting edge.

Necessity of cutting edge presetting

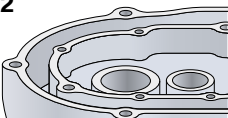


Secure coolant supply to the cutting edges

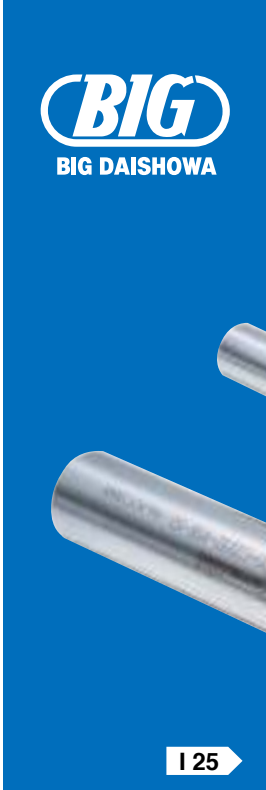
Coolant is supplied to the cutting edge directly in combination with the Face Mill Arbor Type FMH. Especially effective to avoid built-up edges when cutting aluminum and possible re-cutting of the swarf.



Application example (Cutter diameter : $\phi 80$)

Workpiece	Conditions	Surface roughness	Height difference	No. of workpiece	Result
Crankcase ADC12 	Cutting speed : 4,000m/min Spindle speed : 15,900min ⁻¹ Feed rate : 9,550mm/min Depth of cut : 2.5mm	$Ra=0.08\mu m$ $Rz=0.55\mu m$	Within $1\mu m$	24,000	Rough & finish processes are combined in a single operation.

C-CUTTER mini



I 25

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

For multi-functional cutting

- Chamfering
- Back chamfering
- Face milling



4 Inserts, small diameter and new coating achieve Triple effect

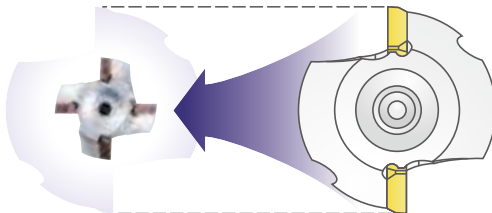
Effect 1 Superb design.
Ultra high feed by 4 Inserts.
Compared with 1 or 2 inserts per cutter, a 4 insert cutter multiplies feed rate.

Effect 2 Increased Spindle speed by ultra compact diameter.
A smaller tool diameter means faster spindle speeds.

Effect 3 Latest coating [ACP200] increases the cutting speed.
Wear resistant multi layer PVD coating increases the cutting speed.

C-cutter mini

Competitor's cutter



Small cutting diameter and 4 Inserts

Large cutting diameter with only 1 or 2 Inserts

$$\text{Feed rate} = \text{Spindle speed} \times \text{Feed per tooth} \times \text{Number of teeth}$$

↑ Considerably Improved Feed rate

$$\text{Spindle speed} = \frac{\text{Cutting speed}}{\pi \times \text{Cutting diameter}}$$

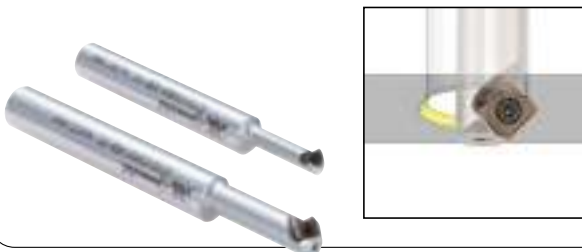
↑ UP Spindle speed, ↑ UP Cutting speed, ↓ Small dia.

World smallest hex insert

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



New series for starting hole for tapping are available from M8 to M20 range.

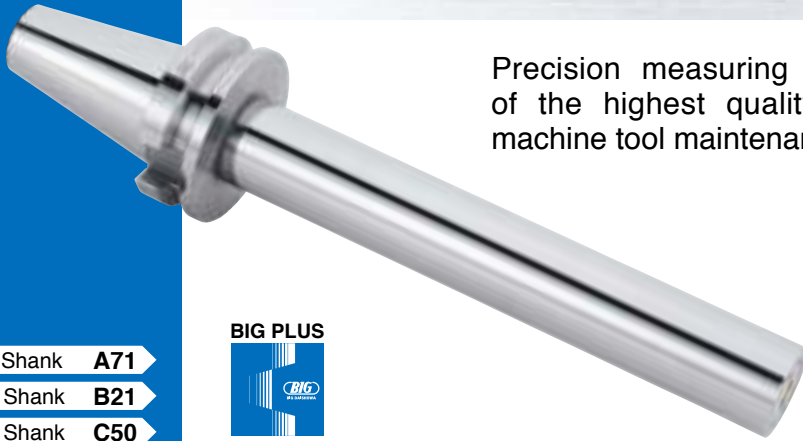


Cutting efficiency is improved by 8 times.

Work material : C55(S55C)
Chamfering : 1mm x 45° amount
Feed per tooth : 0.1mm



	Competitor's Tool	C-cutter mini (ST12-C1116-45B-25)
Chamfering dia.	ø29	ø13.5 <small>Small dia.</small>
Number of teeth	2	4 <small>UP</small>
Cutting speed (m/min)	150	300 <small>UP</small>
Spindle speed (min ⁻¹)	1,646	7,040 <small>UP</small>
Feed (mm/min)	329	2,820 <small>8.5x Higher!</small>



Precision measuring tools of the highest quality for machine tool maintenance.

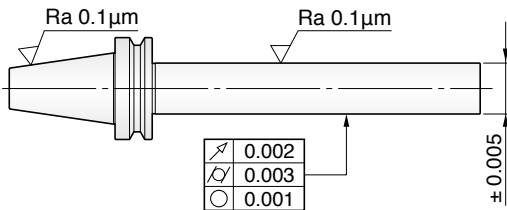


- BBT Shank **A71**
- BDV Shank **B21**
- HSK Shank **C50**



Precision standard of BIG Daishowa Test Arbors

BIG Daishowa provides high quality test bars, produced under a strict quality control system.



Runout	0.002mm
Roundness	0.001mm
Cylindricity	0.003mm
Roughness	Ra : 0.1µm
Diameter tol.	± 0.005mm

Aluminum case

An aluminum case is provided to protect and store the test bars. (Some models are provided in a wooden box.)



Calibration certificate and traceability system

BIG Daishowa can offer a Calibration Certificate with traceability on request as per ISO9000 requirements.

For machine tool maintenance

Runout of spindle taper



Parallelism to Z-axis movement



BBT/BT SHANK

MEGA MICRO CHUCK	A1
MEGA NEW BABY CHUCK	A3
MEGA E CHUCK	A6
MEGA DOUBLE POWER CHUCK	A9
NEW BABY CHUCK	A13
NEW Hi-POWER MILLING CHUCK	A16
HYDRAULIC CHUCK	A21
MOLD CHUCK	A28
SHRINK CHUCK	A29
MEGA SYNCHRO Tapping Holder	A31
SIDE LOCK HOLDER	A38 · A42
SIDE CUTTER ARBOR	A40
MORSE TAPER HOLDER	A41
FACE MILL ARBOR	A43
ANGLE HEAD	A49
HIGH SPINDLE	A62
AIR TURBINE SPINDLE	A63
Hi-JET HOLDER	A67
DYNA TEST	A71
CLEANER	A71



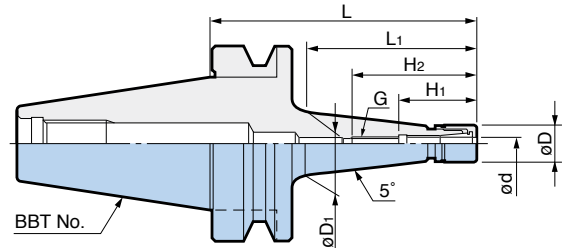
MEGA MICRO CHUCK®

Clamping Range : $\varnothing 0.45 - \varnothing 8.05$

Type T

Taper-off design minimizes interference and maximizes rigidity.

MAX.
40,000
min⁻¹



BIG-PLUS tools can be used in machining centers with conventional spindles.

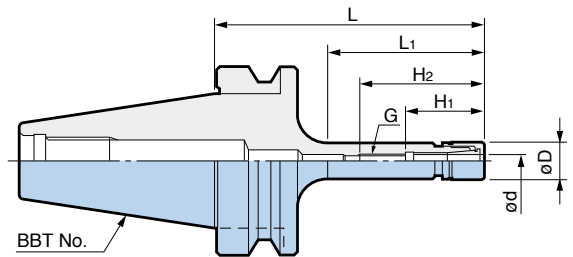
Model	Clamping Range $\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	H ₁	H ₂	G	MAX. min ⁻¹	Collet Model	Nut Model	Weight (kg)
BBT30-MEGA3S- 45T	0.45 – 3.25	10	11.5	45	20	22	38	M4 P0.7	40,000	NBC3S-□	MGN3S	0.38
- 75T			15.7	75	48				40,000			0.42
- 90T			18.3	90	63				35,000			0.45
-105T			21.0	105	78				30,000			0.49
-MEGA4S- 60T	0.45 – 4.05	12	14.8	60	33	26.5	47	M5 P0.8	40,000	NBC4S-□	MGN4S	0.40
- 75T			17.4	75	48				40,000			0.43
- 90T			20.0	90	63				35,000			0.46
-105T			22.6	105	78				30,000			0.50
-120T			25.3	120	93				25,000			0.55
-MEGA6S- 60T	0.45 – 6.05	14	16.3	60	33	28.5	49	M7 P0.75	40,000	NBC6S-□	MGN6S	0.41
- 75T			18.9	75	48				40,000			0.44
- 90T			21.6	90	63				35,000			0.47
-105T			24.2	105	78				30,000			0.52
-120T			26.8	120	93				25,000			0.58
-MEGA8S- 75T	2.95 – 8.05	18	22.7	75	48	31	50.5	M9 P0.75	40,000	NBC8S-□	MGN8S	0.50
-105T			28.0	105	78				30,000			0.61
BBT40-MEGA3S- 60T	0.45 – 3.25	10	12.2	60	28	22	38	M4 P0.7	35,000	NBC3S-□	MGN3S	0.99
- 90T			17.5	90	58				28,000			1.04
-120T			22.7	120	88				22,000			1.12
-MEGA4S- 60T	0.45 – 4.05	12	13.9	60	28	26.5	47	M5 P0.8	35,000	NBC4S-□	MGN4S	1.00
- 75T			16.5	75	43				32,000			1.02
- 90T			19.1	90	58				28,000			1.05
-105T			21.8	105	73				25,000			1.08
-120T			24.4	120	88				22,000			1.13
-135T			27.0	135	103				20,000			1.20
-MEGA6S- 60T	0.45 – 6.05	14	15.4	60	28	28.5	49	M7 P0.75	35,000	NBC6S-□	MGN6S	1.01
- 75T			18.0	75	43				32,000			1.03
- 90T			20.7	90	58				28,000			1.06
-105T			23.3	105	73				25,000			1.10
-120T			25.9	120	88				22,000			1.15
-135T			28.6	135	103				20,000			1.22
-MEGA8S- 90T	2.95 – 8.05	18	24.5	90	58	31	50.5	M9 P0.75	30,000	NBC8S-□	MGN8S	1.11
-120T			29.7	120	88				22,000			1.19

1. MEGA NUT is included.

Type S

Micro diameter design is ideal for high speed applications in tight areas with small diameter cutting tools.

MAX. 40,000 min⁻¹



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Clamping Range ød	øD	L	L1	H1	H2	G	MAX. min ⁻¹	Collet Model	Nut Model	Weight (kg)	
BBT30-MEGA4S- 60	0.45 – 4.05	12	60	32	26.5	47	M5 P0.8	40,000	NBC4S-□	MGN4S	0.40	
- 90			90	62							0.43	
-MEGA6S- 60	0.45 – 6.05	14	60	32	28.5	49	M7 P0.75		NBC6S-□	MGN6S	0.42	
- 90			90	62							0.45	
-105			105	73							0.47	
-MEGA8S- 90	2.95 – 8.05	18	90	60	31	50.5	M9 P0.75		35,000	NBC8S-□	MGN8S	0.50
BBT40-MEGA4S- 60	0.45 – 4.05	12	60	27	26.5	47	M5 P0.8	35,000	NBC4S-□	MGN4S	1.0	
- 90			90	53							1.0	
-MEGA6S- 60	0.45 – 6.05	14	60	27	28.5	49	M7 P0.75		NBC6S-□	MGN6S	1.0	
- 90			90	53							1.0	
-MEGA8S- 90	2.95 – 8.05	18	90	55	31	50.5	M9 P0.75		30,000	NBC8S-□	MGN8S	1.1

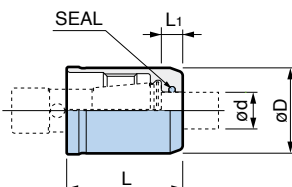
1. MEGA NUT is included.

	Spare Parts	Accessories			
	MEGA NUT 	MEGA WRENCH 	MICRO COLLET 	MICRO COLLET PROTECTIVE CASE 	α TAPER CLEANER
MEGA MICRO CHUCK	Model	Model	Model	Model	Model
MEGA3S	MGN3S	MGR10	NBC3S-□	NBB3S	SC-NBC3S
MEGA4S	MGN4S	MGR12	NBC4S-□	NBB4S	SC-NBC4S
MEGA6S	MGN6S	MGR14	NBC6S-□	NBB6S	SC-NBC6S
MEGA8S	MGN8S	MGR18	NBC8S-□	—	—

Accessories

MICRO SEAL NUT

● Sealed nut for coolant-through tools.



MEGA6S

Model	ød	øD	L	L1
MGN6S-PS3	3.0	14	19	3.5
-PS4	4.0			
-PS5	5.0			
-PS6	6.0			

MEGA8S

Model	ød	øD	L	L1
MGN8S-PS3	3.0	18	20.2	3.5
-PS4	4.0			
-PS5	5.0			
-PS6	6.0			
-PS7	7.0			
-PS8	8.0			

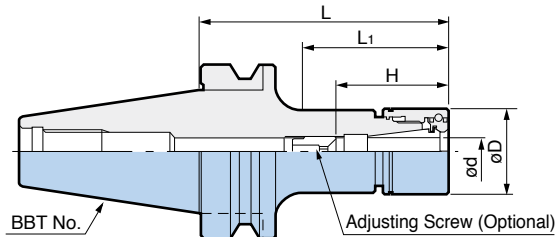
MEGA NEW BABY CHUCK®

Coolant-through hole
Clamping Range : $\phi 0.25 - \phi 20$



Ideal ultra precision holders for high speed machining with carbide drills, reamers and endmills. Wide range of lengths and a variety of collet series sizes covers all machining applications.

MAX.
40,000
min⁻¹



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Clamping Range ϕD	ϕD	L	L ₁	H	MAX. min ⁻¹	Collet Model	Nut Model	Weight (kg)
BBT30-MEGA 6N- 60	0.25 - 6	20	60	32	23 - 43	40,000	NBC 6-□	MGN 6	0.47
- 75			75	47		35,000			0.5
- 90			90	62		30,000			0.53
-105			105	77		20,000			0.56
-120			120	90		18,000			0.59
-MEGA 8N- 60	0.5 - 8	25	60	34	26 - 45	40,000	NBC 8-□	MGN 8	0.51
- 75			75	49		35,000			0.56
- 90			90	64		30,000			0.61
-105			105	79		20,000			0.67
-120			120	92		18,000			0.72
-MEGA10N- 60	1.5 - 10	30	60	34	38 - 48	40,000	NBC10-□	MGN10	0.54
- 75			75	49		30,000			0.61
- 90			90	64		25,000			0.68
-105			105	79		18,000			0.75
-120			120	94		15,000			0.82
-MEGA13N- 60	2.5 - 13	35	60	34	44 - 63	40,000	NBC13-□	MGN13	0.54
- 75			75	49		30,000			0.63
- 90			90	64		25,000			0.72
-105			105	79		18,000			0.82
-120			120	94		15,000			0.91
-MEGA16N- 60	2.5 - 16	42	60	37	48 - 63	35,000	NBC16-□	MGN16	0.66
- 75			75	52		25,000			0.81
- 90			90	67		20,000			0.95
-105			105	82		18,000			1.1
-MEGA20N- 60 ※			2.5 - 20	46		60			-
- 75	75	-			20,000	0.86			
- 90	90	-			15,000	1.0			
-105	105	-					13,000	1.15	

1. MEGA NUT is included.

2. "H" indicates the adjustment length with an Adjusting Screw.

※ Adjusting screw cannot be used with BBT30-MEGA20N-60. "H" is the max. tool shank length that can be inserted into the holder.

Spare Parts		Accessories						
MEGA NUT 		MEGA WRENCH 	NBC COLLET FOR ENDMILL COLLET 	SEALING NUT MEGA PERFECT SEAL 	ADJUSTING SCREW Rubber 			
MEGA NEW BABY CHUCK	Model	Model	Model	Model	Model	G	L	B
MEGA 6N	MGN 6	MGR20	NBC 6-□	MPS 6-□	NBA 6B	M 7	12	2
MEGA 8N	MGN 8	MGR25	NBC 8-□	MPS 8-□	NBA 8B	M 9	13	2.5
MEGA10N	MGN10	MGR30	NBC10-□	MPS10-□	NBA10B	M11	16	3
MEGA13N	MGN13	MGR35	NBC13-□	MPS13-□	NBA13B	M14	20	4
MEGA16N	MGN16	MGR42	NBC16-□	MPS16-□	NBA16B	M18	20	4
MEGA20N	MGN20	MGR46	NBC20-□	MPS20-□	NBA20B	M21	20	4

BIG-PLUS tools can be used in machining centers with conventional spindles.

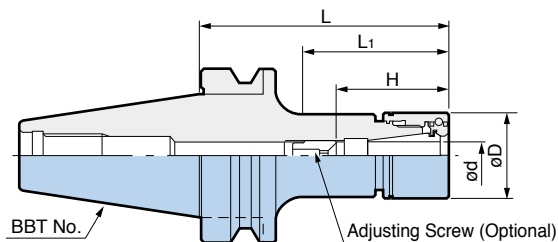
 For BBT50, refer to the following page.

Model	Clamping Range ød	øD	L	L ₁	H	MAX. min ⁻¹	Collet Model	Nut Model	Weight (kg)					
BBT40-MEGA 6N- 60	0.25 – 6	20	60	27	23 – 43	35,000	NBC 6-□	MGN 6	1.0					
- 75			75	38		35,000			1.05					
- 90			90	53		35,000			1.1					
-105			105	68		20,000			1.14					
-120			120	83		20,000			1.18					
-135			135	98		20,000			1.2					
-165			165	128		14,000			1.2					
-200			200	163		9,000			1.3					
-MEGA 8N- 60			0.5 – 8	25		60			27	26 – 45	35,000	NBC 8-□	MGN 8	1.0
- 75						75			38		35,000			1.05
- 90	90	53			35,000	1.1								
-105	105	68			20,000	1.14								
-120	120	83			20,000	1.18								
-135	135	98			20,000	1.3								
-165	165	128			14,000	1.3								
-200	200	163			9,000	1.4								
-MEGA10N- 60	1.5 – 10	30			60	27	38 – 48	35,000	NBC10-□		MGN10			1.1
- 75					75	38		35,000						1.15
- 90			90	53	35,000	1.2								
-105			105	68	20,000	1.27								
-120			120	83	20,000	1.34								
-135			135	98	20,000	1.4								
-165			165	128	15,000	1.5								
-200			200	163	10,000	1.7								
-MEGA13N- 60			2.5 – 13	35	60	31		44 – 63		35,000		NBC13-□	MGN13	1.1
- 75					75	40				35,000				1.2
- 90	90	55			35,000	1.3								
-105	105	70			20,000	1.4								
-120	120	85			20,000	1.5								
-135	135	100			20,000	1.6								
-165	165	130			15,000	1.8								
-200	200	165			10,000	2.0								
-MEGA16N- 60	2.5 – 16	42			60	31	48 – 68		30,000	NBC16-□	MGN16			1.2
- 75					75	40			30,000					1.3
- 90			90	55	30,000	1.4								
-105			105	70	20,000	1.6								
-120			120	85	20,000	1.7								
-135			135	100	20,000	1.8								
-165			165	130	15,000	2.0								
-200			200	165	10,000	2.3								
-MEGA20N- 60			2.5 – 20	46	60	31		51 – 68	30,000			NBC20-□	MGN20	1.1
- 75					75	42			30,000					1.25
- 90	90	57			30,000	1.4								
-105	105	72			20,000	1.6								
-120	120	87			20,000	1.8								
-135	135	102			20,000	1.9								
-165	165	132			15,000	2.1								
-200	200	167			10,000	2.5								

1. MEGA NUT is included.
2. "H" indicates the adjustment length with an Adjusting Screw.

MEGA NEW BABY CHUCK®





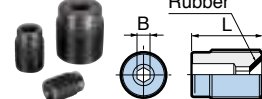
Coolant-through hole
Clamping Range : $\varnothing 0.25 - \varnothing 20$



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Clamping Range $\varnothing D$	$\varnothing D$	L	L ₁	H	MAX. min ⁻¹	Collet Model	Nut Model	Weight (kg)
BBT50-MEGA 6N- 90	0.25- 6	20	90	37	23 - 43	20,000	NBC 6-□	MGN 6	3.7
-120			120	67		20,000			3.8
-165			165	112		14,000			3.9
-200			200	147		9,000			4.0
-MEGA 8N- 90	0.5 - 8	25	90	42	26 - 45	20,000	NBC 8-□	MGN 8	3.8
-120			120	67		20,000			3.9
-165			165	112		16,000			4.1
-200			200	147		11,000			4.2
-MEGA10N- 90	1.5 - 10	30	90	42	38 - 48	20,000	NBC10-□	MGN10	3.9
-120			120	67		20,000			4.0
-165			165	112		16,000			4.3
-200			200	147		13,000			4.7
-250			250	197		8,000			4.7
-MEGA13N- 90	2.5 - 13	35	90	42	44 - 63	18,000	NBC13-□	MGN13	4.0
-120			120	67		18,000			4.2
-165			165	112		16,000			4.5
-200			200	147		12,000			4.7
-250			250	197		8,000			5.0
-MEGA16N- 75	2.5 - 16	42	75	31	48 - 68	17,000	NBC16-□	MGN16	4.0
- 90			90	42		17,000			4.2
-120			120	72		17,000			4.4
-165			165	117		16,000			4.8
-200			200	152		13,000			5.1
-MEGA20N- 75	2.5 - 20	46	75	31	51 - 68	16,000	NBC20-□	MGN20	4.1
- 90			90	42		16,000			4.2
-120			120	72		16,000			4.5
-165			165	117		15,000			4.9
-200			200	152		13,000			5.3
-250	250	202	10,000	5.7					

1. MEGA NUT is included.
2. "H" indicates the adjustment length with an Adjusting Screw.

Spare Parts		Accessories						
MEGA NUT 		MEGA WRENCH 	NBC COLLET FOR ENDMILL COLLET 	SEALING NUT MEGA PERFECT SEAL 	ADJUSTING SCREW Rubber 			
MEGA NEW BABY CHUCK	Model	Model	Model	Model	Model	G	L	B
MEGA 6N	MGN 6	MGR20	NBC 6-□	MPS 6-□	NBA 6B	M 7	12	2
MEGA 8N	MGN 8	MGR25	NBC 8-□	MPS 8-□	NBA 8B	M 9	13	2.5
MEGA10N	MGN10	MGR30	NBC10-□	MPS10-□	NBA10B	M11	16	3
MEGA13N	MGN13	MGR35	NBC13-□	MPS13-□	NBA13B	M14	20	4
MEGA16N	MGN16	MGR42	NBC16-□	MPS16-□	NBA16B	M18	20	4
MEGA20N	MGN20	MGR46	NBC20-□	MPS20-□	NBA20B	M21	20	4

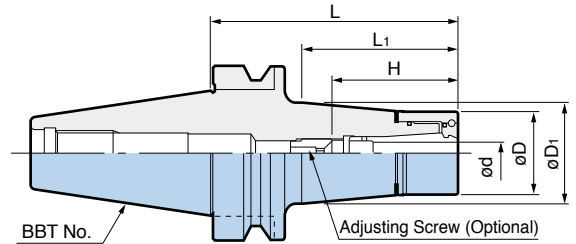
MEGA E CHUCK®

Coolant-through hole
Clamping Range : $\phi 3.0 - \phi 12$



MAX.
40,000
min⁻¹

Exclusively designed with the advanced technology for high speed endmilling. The long gripping length of the collet provides a powerful gripping force.



BIG-PLUS tools can be used in machining centers with conventional spindles.

For BBT40 & BBT50, refer to the following pages.

Model	Clamping Range ϕd	ϕD	ϕD_1	L	L ₁	H	MAX. min ⁻¹	Collet Model	Nut Model	Weight (kg)
BBT30-MEGA 6E- 50	3 - 6	25	25.7	50	25	37 - 45	40,000	MEC 6-□	MEN 6	0.53
- 75			29.9	75	50		35,000			0.64
- 90			32.5	90	65		25,000			0.72
-105			35.1	105	80		25,000			0.82
-MEGA 8E- 50	3 - 8	30	30.4	50	25	42 - 51	40,000	MEC 8-□	MEN 8	0.56
- 75			34.6	75	50		35,000			0.71
- 90			37.4	90	66		25,000			0.83
-105			40.1	105	81		25,000			0.96
-MEGA 10E- 50	3 - 10	35	35.3	50	25	48 - 58	39,000	MEC10-□	MEN10	0.60
- 75			39.7	75	51		35,000			0.80
- 90			41	90	66		25,000			0.93
-105			41.1	105	82		25,000			1.06
-MEGA 13E- 50	3 - 12	42	42.5	50	27	50 - 58	38,000	MEC13-□	MEN13	0.65
- 75			42	75	52		34,000			0.90
- 90			42	90	67	50 - 60	25,000			1.05
-105			42	105	82		25,000			1.20

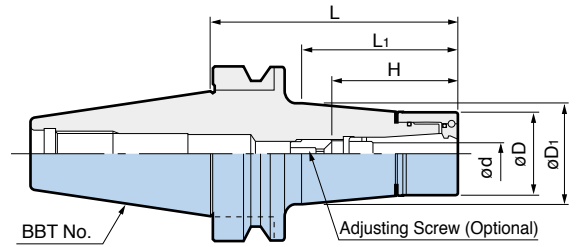
1. MEGA E NUT is included.
2. "H" indicates the adjustment length with an Adjusting Screw.

MEGA E CHUCK	Spare Parts	Accessories						
	MEGA E NUT	MEGA WRENCH	MEGA E COLLET	SEALING NUT MEGA E PERFECT SEAL	ADJUSTING SCREW			
Model	Model	Model	Model	Model	Model	G	L	B
MEGA 6E	MEN 6	MGR25	MEC 6-□	EPS 6-□	NBA 6B	M 7	12	2
MEGA 8E	MEN 8	MGR30	MEC 8-□	EPS 8-□	NBA 8B	M 9	13	2.5
MEGA10E	MEN10	MGR35	MEC10-□	EPS10-□	NBA10B	M11	16	3
MEGA13E	MEN13	MGR42	MEC13-□	EPS13-□	NBA13B	M14	20	4

MEGA E CHUCK®

Coolant-through hole
Clamping Range : $\varnothing 3.0 - \varnothing 12$

MAX.
30,000
min⁻¹



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Clamping Range $\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	H	MAX. min ⁻¹	Collet Model	Nut Model	Weight (kg)	
BBT40-MEGA 6E- 60	3 - 6	25	26.2	60	28	37 - 45	30,000	MEC 6-□	MEN 6	1.08	
- 75			28.7	75	43		30,000			1.14	
- 90			31.3	90	58		30,000			1.21	
-105			33.9	105	73		29,000			1.29	
-120			36.5	120	88		29,000			1.41	
-135			39	135	103		27,000			1.53	
-165			44.4	165	133		20,000			1.85	
-200			50.7	200	169		15,000			2.32	
-MEGA 8E- 60			3 - 8	30	31		60			28	42 - 48
- 75	33.4	75			43	42 - 51	30,000	1.21			
- 90	36	90			58		30,000	1.30			
-105	38.7	105			73		29,000	1.46			
-120	41.3	120			88		29,000	1.61			
-135	43.9	135			103		27,000	1.76			
-165	49.1	165			133		20,000	2.10			
-200	55.8	200			171		15,000	2.53			
-MEGA 10E- 60	3 - 10	35			36		60	29	48 - 58	30,000	MEC10-□
- 75			38.3	75	43		30,000	1.34			
- 90			40.9	90	58	30,000	1.46				
-105			43.6	105	73	29,000	1.61				
-120			46.2	120	88	29,000	1.78				
-135			48.8	135	103	27,000	1.98				
-165			54.4	165	135	22,000	2.37				
-200			55.5	200	171	16,000	3.07				
-MEGA 13E- 60			3 - 12	42	42.7	60	29	50 - 60		30,000	
- 75	45	75			43	30,000	1.45				
- 90	48	90			59	30,000	1.63				
-105	50.6	105			75	29,000	1.84				
-120	53.4	120			91	29,000	2.07				
-135	56	135			106	26,000	2.34				
-165	57.5	165			137	22,000	2.80				
-200	62.4	200			173	16,000	3.61				

1. MEGA E NUT is included.
2. "H" indicates the adjustment length with an Adjusting Screw.

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Clamping Range ød	øD	øD1	L	L1	H	MAX. min ⁻¹	Collet Model	Nut Model	Weight (kg)
BBT50-MEGA 6E- 90	3 - 6	25	30.4	90	47	37 - 45	20,000	MEC 6-□	MEN 6	3.8
-120			35.6	120	77		20,000			4.0
-165			43.5	165	122		14,000			4.4
-200			49.6	200	157		9,000			4.9
-MEGA 8E- 90			3 - 8	30	35.1		90			47
-120	40.4	120			77	20,000	4.1			
-165	48.2	165			122	16,000	4.6			
-200	54.4	200			157	11,000	5.2			
-MEGA 10E- 90	3 - 10	35			40.0	90	47	48 - 58	20,000	MEC10-□
-120			45.4	120	77	20,000	4.2			
-165			53.0	165	121	16,000	4.9			
-200			59.3	200	156	13,000	5.5			
-MEGA 13E- 90			3 - 12	42	46.5	90	47		50 - 60	
-120	52.0	120			77	18,000	4.4			
-165	59.0	165			121	16,000	5.2			
-200	64.7	200			156	12,000	6.0			

1. MEGA E NUT is included.
2. "H" indicates the adjustment length with an Adjusting Screw.

Spare Parts		Accessories						
MEGA E CHUCK	MEGA E NUT	MEGA WRENCH	MEGA E COLLET	SEALING NUT MEGA E PERFECT SEAL	ADJUSTING SCREW			
Model	Model	Model	Model	Model	Model	G	L	B
MEGA 6E	MEN 6	MGR25	MEC 6-□	EPS 6-□	NBA 6B	M 7	12	2
MEGA 8E	MEN 8	MGR30	MEC 8-□	EPS 8-□	NBA 8B	M 9	13	2.5
MEGA10E	MEN10	MGR35	MEC10-□	EPS10-□	NBA10B	M11	16	3
MEGA13E	MEN13	MGR42	MEC13-□	EPS13-□	NBA13B	M14	20	4

Coolant-through hole

MEGA DOUBLE POWER CHUCK®

Clamping Range : $\varnothing 16 - \varnothing 50$

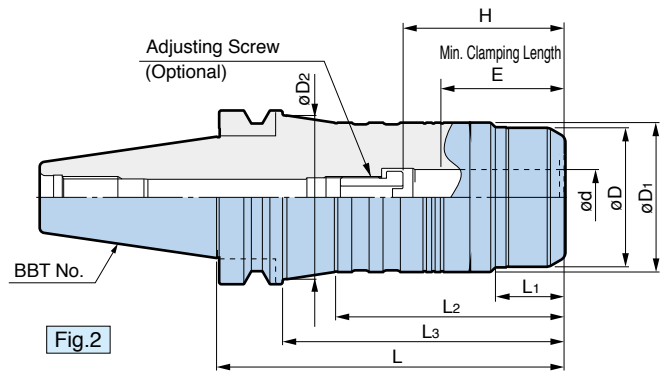
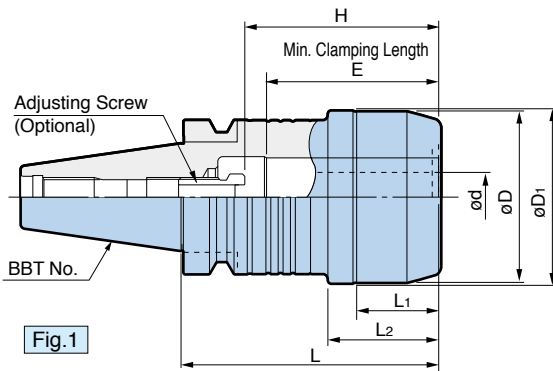
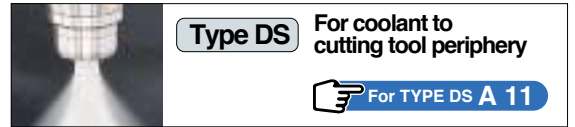
Type D

MAX.
30,000
min⁻¹



Close to integral rigidity and precision of a solid toolholder. Advanced technology for high speed and heavy duty endmilling.

Two types are available, Type D for use with/without coolant through the tool and Type DS to feed coolant to cutting tool periphery.



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	$\varnothing d$	$\varnothing D$	$\varnothing D_1$	$\varnothing D_2$	L	L ₁	L ₂	L ₃	H	E	MAX. min ⁻¹	Weight (kg)		
BBT30-MEGA16D- 60	1	16	46	46.7	—	60	25.5	30	—	62	50	30,000	0.8		
-MEGA20D- 65		20	50	50.7	—	65	30.5	35	—	60		25,000	0.9		
BBT40-MEGA16D- 75A	2	16	42	52.6	61	75	25	38.5	—	71	55	30,000	1.5		
-105A													105	78	2.1
-135A													135	108	2.7
-165A													165	138	3.3
-200A													200	173	4.1
-MEGA20D- 75													60	48	1.7
-105	105	78	2.1												
-120	2	20	55	55.7	61	75	33	44.5	—	69 – 79	56	27,000	2.4		
-135												120	93	2.7	
-165												135	108	3.3	
-165												165	138	3.3	
-200												200	173	4.2	
-MEGA25D- 75A	1	25	62	62.7	—	75	39	—	—	73 – 83	57	27,000	2.0		
-105A												105	78	2.3	
-135A												135	108	3.0	
-165A												165	138	3.7	
-200A	1	32	70	70.7	—	90	33.5	45.5	—	71 – 81	64	18,000	4.7		
-MEGA32D- 90A												90	78	2.1	
-105A												105	78	2.4	
-135A												135	108	3.1	
-165A												165	138	3.7	
-200A	200	173	4.5												

1. Wrench is ordered separately.
2. "H" indicates the adjustment length with an Adjusting Screw.

※ As a back stop for cutting tools for the MEGA16D models, a commercially available hex socket head screw can be used.


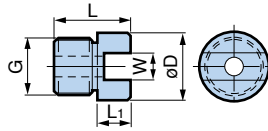
BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	ød	øD	øD1	øD2	L	L1	L2	L3	H	E	MAX. min ⁻¹	Weight (kg)	
BBT50-MEGA16D-105	2	16	46	55	63	105	23.5	33.5	67	71	50	21,000	4.6	
-135						135			97				5.2	
-165						165			127				5.7	
-200						200			162				6.6	
-250						250			212				7.0	
-MEGA20D-105	2	20	60	69	74	105	25.5	36	67	69 - 79	56	19,000	5.1	
-135						135			97				6.0	
-165						165			127				6.8	
-200						200		114	162				7.7	
-250						77		250	136				212	12,000
-MEGA25D-105	2	25	70	77	85	32	32	45	67	76 - 86	65	19,000	5.4	
-135					135				97				6.5	
-165					165				127				7.6	
-200					200			119	162				8.9	
-250					85			250	136				212	10,000
-MEGA32D-90	2	32	80	86	—	95	39.5	54.5	—	78 - 95	71	20,000	4.8	
-105					105				67				5.4	
-135					135				97				7.0	
-165					165				127				8.5	
-200					200				130				162	9.9
-250					250				181.5				212	12.1
-300	300	182	262	14.3										
-MEGA42D-105	1	42	99	99.7	—	40	—	—	—	88 - 105	71	15,000	6.0	
-135					135								7.8	
-165					165								9.6	
-MEGA50D-120	1	50	105	117	—	120	47	70	—	94 - 110	75	13,000	7.3	

1. Wrench is ordered separately.
2. "H" indicates the adjustment length with an Adjusting Screw.



※ As a back stop for cutting tools for the MEGA16D models, a commercially available hex socket head screw can be used.

Accessories							
MEGA DOUBLE POWER CHUCK	MEGA WRENCH	ADJUSTING SCREW					
							
Model	Model	Model	øD	L	L1	G	W
BBT30-MEGA16D	MGR46L	—	—	—	—	—	—
-MEGA20D	MGR50L	HMA-M16	19	27	6	M16P1.5	8
BBT40-MEGA16D	MGR42L	—	—	—	—	—	—
-MEGA20D	MGR55L	HMA-M16	19	27	6	M16P1.5	8
-MEGA25D	MGR62L						
-MEGA32D	MGR70L	HMA-M16S	—	—	—	—	10
BBT50-MEGA16D,16D	MGR46L	—	—	—	—	—	—
-MEGA20D,20D	MGR60L	HMA-M16	19	27	6	M16P1.5	8
-MEGA25D,25D	MGR70L						
-MEGA32D,32D	MGR80L	HMA-M24	30	36	9.5	M24P1.5	10
-MEGA42D,42D	MGR99L						
-MEGA50D,50D	MGR105L						

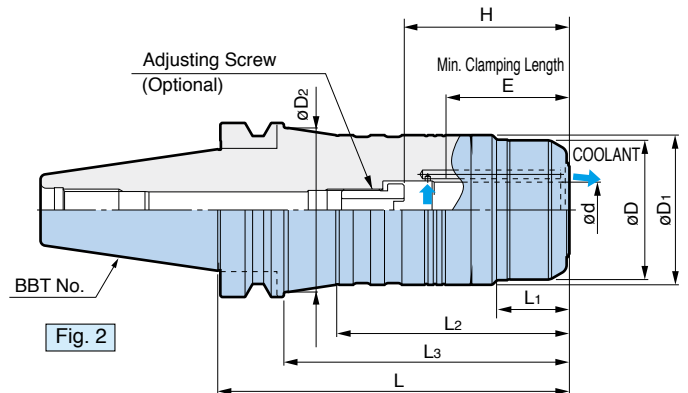
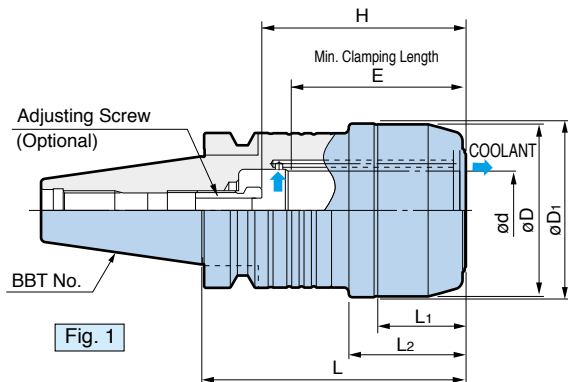
Coolant-through hole

MEGA DOUBLE POWER CHUCK®

Clamping Range : $\phi 16 - \phi 50$

Type DS For coolant to cutting tool periphery

MAX
30,000
min⁻¹



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	ϕd	ϕD	$\phi D1$	$\phi D2$	L	L1	L2	L3	H	E	MAX. min ⁻¹	Weight (kg)
BBT30-MEGA16DS- 60	1	16	46	46.7	—	62.5	28	32.5	—	64	52	30,000	0.8
-MEGA20DS- 65		20	50	50.7	—	67.5	33	37.5	—	62		25,000	0.9
BBT40-MEGA16DS- 75A	2	16	42	52.6	60	77	27	40.5	50	73	57	30,000	1.5
-105A					107	80			2.1				
-135A					137	110			2.7				
-165A					167	140			3.3				
-200A					202	175			4.1				
-MEGA20DS- 75					60	77.5			50.5			30,000	1.7
-105	107.5	80.5	2.1										
-120	122.5	95.5	2.4										
-135	137.5	110.5	2.7										
-165	167.5	140.5	3.3										
-200	202.5	175.5	4.2										
-MEGA25DS- 75A	1	25	62	62.7	—	77	41	—	—	75 – 85	59	27,000	2.0
-105A						107				26,000		2.3	
-135A						137				73 – 83		24,000	3.0
-165A						167				21,000		3.7	
-200A						202				18,000		4.7	
-MEGA32DS- 90	1	32	70	70.7	—	92.5	36	47.5	—	73 – 83	67	26,000	2.1
-105						107.5				2.4			
-135						137.5				81 – 91		22,000	3.1
-165						167.5				20,000		3.7	
-200						202.5				16,000		4.5	

1. Wrench is ordered separately.
2. "H" indicates the adjustment length with an Adjusting Screw.

※ As a back stop for cutting tools for the MEGA16DS models, a commercially available hex socket head screw can be used.

BIG-PLUS tools can be used in machining centers with conventional spindles.


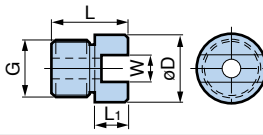
Model	Fig	ød	øD	øD1	øD2	L	L1	L2	L3	H	E	MAX. min ⁻¹	Weight (kg)	
BBT50-MEGA16DS-105	2	16	46	55	63	107.5	26	36	69.5	73	52	21,000	4.6	
-135						137.5			99.5				5.2	
-165						167.5			129.5				5.7	
-200						202.5			164.5				6.6	
-250						252.5			214.5				7.0	
-MEGA20DS-105	2	20	60	69	74	107.5	28	38.5	69.5	71 - 81	58	20,000	5.1	
-135						137.5			99.5				6.0	
-165						167.5			129.5				6.8	
-200						202.5			116.5				164.5	7.7
-250					77	252.5	138.5	214.5	12,000				9.1	
-MEGA25DS-105	2	25	70	77	85	107.5	34.5	47.5	69.5	78 - 88	67	20,000	5.4	
-135						137.5			99.5				6.5	
-165					82	167.5			129.5				7.6	
-200						202.5			121.5				164.5	8.9
-250						85			252.5				138.5	214.5
-MEGA32DS- 90	2	32	80	86	—	42	57	—	80 - 97	73	20,000	4.8		
-105					107.5			69.5				5.4		
-135					137.5			99.5				7.0		
-165					167.5			129.5				8.5		
-200					202.5			131.5				164.5	9.9	
-250					252.5			171.5				214.5	12.1	
-300					302.5			183.5				264.5	14.3	
-MEGA42DS-105	1	42	99	99.7	—	42	—	—	90 - 107	73	15,000	6.0		
-135					137							7.8		
-165					167							9.6		
-MEGA50DS-120	1	50	105	117	—	122	49	72	—	96 - 112	77	13,000	7.3	

1. Wrench is ordered separately.

2. "H" indicates the adjustment length with an Adjusting Screw.



※ As a back stop for cutting tools for the MEGA16DS models, a commercially available hex socket head screw can be used.

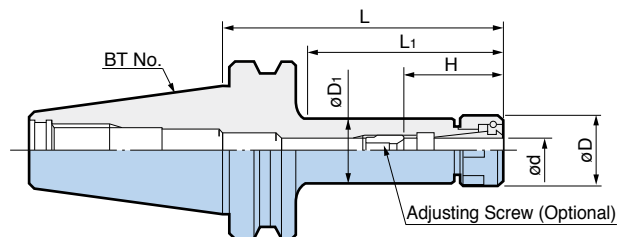
Accessories									
MEGA DOUBLE POWER CHUCK	MEGA WRENCH	ADJUSTING SCREW							
			Model	Model	øD	L	L1	G	W
BBT30-MEGA16DS	MGR46L	—	—	—	—	—	—	—	—
-MEGA20DS	MGR50L	HMA-M16	19	27	6	M16P1.5	8		
BBT40-MEGA16DS	MGR42L	—	—	—	—	—	—	—	—
-MEGA20DS	MGR55L	HMA-M16	19	27	6	M16P1.5	8		
-MEGA25DS	MGR62L								
-MEGA32DS	MGR70L	HMA-M16S					10		
BBT50-MEGA16DS,16DS	MGR46L	—	—	—	—	—	—	—	—
-MEGA20DS,20DS	MGR60L	HMA-M16	19	27	6	M16P1.5	8		
-MEGA25DS,25DS	MGR70L								
-MEGA32DS,32DS	MGR80L	HMA-M24	30	36	9.5	M24P1.5	10		
-MEGA42DS,42DS	MGR99L								
-MEGA50DS,50DS	MGR105L								

NEW BABY CHUCK

Coolant-through hole

Clamping Range : $\phi 0.25 - \phi 20$

Great variety in length in order to support high precision machining.



Model	Clamping Range ϕd	ϕD	ϕD_1	L	L ₁	H	Collet Model	Nut Model	Weight (kg)
BT30-NBS 6- 45	0.25 - 6	20	19.5	45	20	20 - 40	NBC 6-□	NBN 6	0.41
- 60				60	32				0.44
- 75				75	47				0.47
- 90				90	62				0.51
-105				105	77				0.54
-120				120	90				0.57
-135				135	105				0.60
-NBS 8- 45				0.5 - 8	25				24.5
- 60	60	33	0.46						
- 75	75	48	0.5						
- 90	90	63	0.55						
-105	105	78	0.61						
-120	120	92	0.66						
-NBS10- 45	1.5 - 10	30	29.5	45	20	35 - 45	NBC10-□	NBN10	0.44
- 60				60	34				0.51
- 75				75	49				0.58
- 90				90	64				0.66
-105				105	79				0.74
-120				120	94				0.81
-NBS13- 45	2.5 - 13	35	34.5	45	21	41 - 53	NBC13-□	NBN13	0.39
- 60				60	34	41 - 60			0.5
- 75				75	49				0.61
- 90				90	64				0.72
-105				105	79				0.83
-120				120	94				0.93
-NBS16- 45	2.5 - 16	42	41.5	45	21		45 - 53	NBC16-□	NBN16
- 60				60	37	45 - 65	0.53		
- 75				75	52		0.67		
- 90				90	67		0.81		
-105				105	82		0.95		
-120				120	97		1.10		
-NBS20- 60	2.5 - 20	46	45.5	60	38		48 - 58	NBC20-□	NBN20
- 75				75	53	48 - 65	0.73		
- 90				90	68		0.9		
-105				105	83		1.08		
-120				120	98		1.26		
-135				135	113		1.45		

1. NEW BABY NUT is included.
 2. Max. 20,000 min⁻¹ is valid for BT30 with L = 45, 60 or 75mm and BT40 with L = 60, 75 or 90mm.
 3. "H" indicates the adjustment length with an Adjusting Screw.

 For BT50, refer to the following page.

Model	Clamping Range ød	øD	øD ₁	L	L ₁	H	Collet Model	Nut Model	Weight (kg)
BT40-NBS 6- 60	0.25 – 6	20	19.5	60	23	20 – 40	NBC 6-□	NBN 6	1.1
- 75				75	38				1.15
- 90				90	53				1.2
-105				105	68				1.24
-120				120	83				1.28
-135				135	98				1.3
-165				165	128				1.4
-200				200	158				1.5
-NBS 8- 60				0.5 – 8	25				24.5
- 75	75	38	1.15						
- 90	90	53	1.2						
-105	105	68	1.24						
-120	120	83	1.28						
-135	135	98	1.3						
-165	165	128	1.4						
-200	200	158	1.5						
-NBS10- 60	1.5 – 10	30	29.5			60	23	35 – 45	
- 75				75	38	1.15			
- 90				90	53	1.2			
-105				105	68	1.3			
-120				120	83	1.4			
-135				135	98	1.5			
-165				165	128	1.7			
-200				200	163	1.9			
-NBS13- 60				2.5 – 13	35	34.5	60		28
- 75	75	40	1.3						
- 90	90	55	1.4						
-105	105	70	1.5						
-120	120	85	1.6						
-135	135	100	1.7						
-165	165	128	1.9						
-200	200	163	2.2						
-NBS16- 60	2.5 – 16	42	41.5				60	27	45 – 65
- 75				75	40	1.35			
- 90				90	55	1.5			
-105				105	70	1.65			
-120				120	85	1.8			
-135				135	100	1.9			
-165				165	130	2.2			
-200				200	165	2.6			
-NBS20- 60				2.5 – 20	46	45.5	60	28	
- 75	75	42	1.35						
- 90	90	57	1.5						
-105	105	72	1.7						
-120	120	87	1.9						
-135	135	102	2.1						
-165	165	132	2.5						
-200	200	167	3.0						

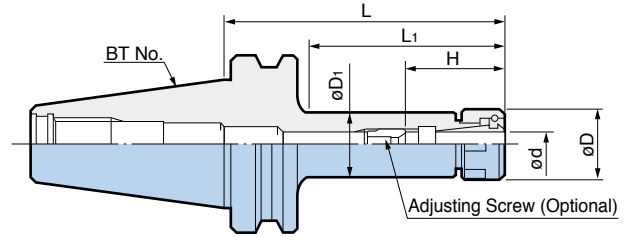
1. NEW BABY NUT is included.
2. Max. 20,000 min⁻¹ is valid for BT40 with L = 60, 75 or 90mm.
3. "H" indicates the adjustment length with an Adjusting Screw.

-  For NEW BABY COLLET **G 3**
-  For NEW BABY COLLET for ENDMILL **G 7**
-  For WRENCH **A 15**
-  For ADJUSTING SCREW **A 15**
-  For TAP DRIVING BACK STOP **G 8**

NEW BABY CHUCK

Coolant-through hole

Clamping Range : $\phi 0.25 - \phi 20$



Model	Clamping Range ϕd	ϕD	ϕD_1	L	L ₁	H	Collet Model	Nut Model	Weight (kg)
BT50-NBS 6- 90 -120 -165 -200	0.25 - 6	20	19.5	90	42	20 - 40	NBC 6-□	NBN 6	3.9
				120	67				4.0
				165	112				4.1
				200	147				4.2
-NBS 8- 90 -120 -165 -200	0.5 - 8	25	24.5	90	42	23 - 42	NBC 8-□	NBN 8	4.0
				120	67				4.1
				165	112				4.2
				200	147				4.3
-NBS10- 90 -120 -165 -200 -250 ※ -300 ※	1.5 - 10	30	29.5	90	42	35 - 45	NBC10-□	NBN10	4.0
				120	67				4.1
				165	112				4.4
				200	147				4.6
				250	197				4.9
-NBS13- 90 -120 -165 -200 -250 ※ -300 ※	2.5 - 13	35	34.5	90	42	41 - 60	NBC13-□	NBN13	4.2
				120	67				4.4
				165	112				4.7
				200	147				5.0
				250	197				5.4
-NBS16- 75 - 90 -120 -165 -200 -250 ※	2.5 - 16	42	41.5	75	29	45 - 65	NBC16-□	NBN16	4.0
				90	44				4.1
				120	72				4.4
				165	117				4.8
				200	152				5.2
				250	202				5.7
-NBS20- 75 - 90 -120 -165 -200 -250 ※	2.5 - 20	46	45.5	75	31	48 - 65	NBC20-□	NBN20	4.0
				90	42				4.2
				120	72				4.5
				165	117				4.9
				200	152				5.3
250	202	5.9							

1. NEW BABY NUT is included.

2. Models of L longer than 200mm(※) do not have the coolant-through hole as standard.

3. "H" indicates the adjustment length with an Adjusting Screw.

Spare Parts		Accessories									
NEW BABY CHUCK	NEW BABY NUT	WRENCH	NBC COLLET		BABY PERFECT SEAL	ADJUSTING SCREW					
				FOR ENDMILL COLLET							
	Model		Model	Model		Model	G	L	B		
	NBS 6		NBN 6	NBK 6		NBC 6-□	BPS 6-□	NBA 6B	M 7	12	2
	NBS 8		NBN 8	NBK 8		NBC 8-□	BPS 8-□	NBA 8B	M 9	13	2.5
NBS10	NBN10	NBK10	NBC10-□	BPS10-□	NBA10B	M11	16	3			
NBS13	NBN13	NBK13	NBC13-□	BPS13-□	NBA13B	M14	20	4			
NBS16	NBN16	NBK16	NBC16-□	BPS16-□	NBA16B	M18	20	4			
NBS20	NBN20	NBK20	NBC20-□	BPS20-□	NBA20B	M21	20	4			

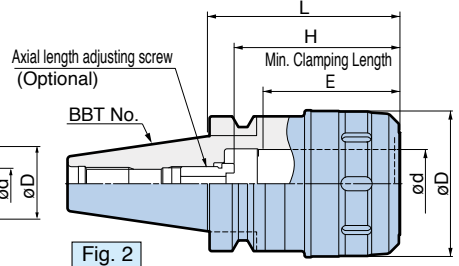
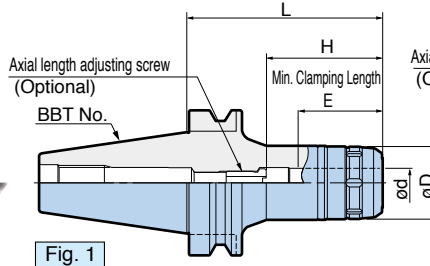
NEW Hi-POWER MILLING CHUCK

Coolant-through hole

Clamping Range : $\phi 16 - \phi 32$

S Type

BIG's original design of slit structure supports heavy and finish end milling with high power and precision.



BBT Shank Type

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	ϕd	ϕD	L	H	E	C-Spanner Model	Weight (kg)
BBT30-HMC16S- 70 ※	1	16	43	70	71	55	FK45-50L	0.7
-HMC20S- 75	2	20	50	75	56 - 66	56		0.9
-HMC25S- 90		25	55	90	64 - 74	57		1.2
-HMC32S-105	1	32	62	105	70 - 80	58	FK58-62L	1.5
BBT40-HMC16S- 75 ※		16	43	75	71	55	FK45-50L	1.3
-120 ※	1	20	50	120	69 - 79	56		1.8
-HMC20S- 75				75				1.4
-105	105	1.9						
-120	120	2.1						
-HMC25S- 75	1	25	59	75	73 - 83	57	FK58-62L	1.5
-105				105			2.1	
-135				135			2.8	
-HMC32S- 90	2	32	68	90	71 - 81	64	FK68-75L	2.0
-105				105				2.3
-135				135				3.0

- Wrench and axial adjusting screw is ordered separately if required.
- "H" indicates the adjustment length with an Adjusting Screw.
- ※ As a back stop for cutting tools for the HMC16S models, a commercially available hex socket head screw can be used. "H" is the max. tool shank length that can be inserted into the holder.

For STRAIGHT COLLET G 15

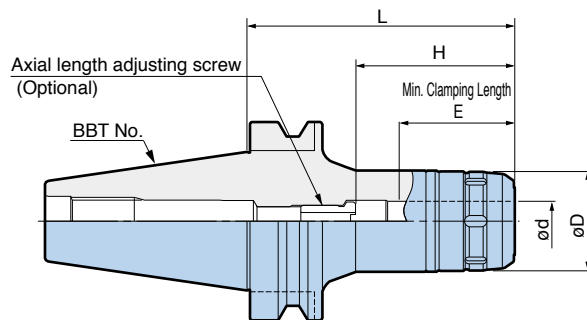
Accessories

NEW Hi-POWER MILLING CHUCK	C-SPANNER		ADJUSTING SCREW				
	Model	Model	ϕD	L	L ₁	G	W
BBT/BT30-HMC16S	FK45- 50L	—	—	—	—	—	—
-HMC20S		HMA-M16	19	27	6	M16P1.5	8
-HMC25S							10
-HMC32S		FK58- 62L	HMA-M16S	—	—	—	—
BBT/BT40-HMC16S	FK45- 50L	—	—	—	—	—	—
-HMC20S		HMA-M16	19	27	6	M16P1.5	8
-HMC25S							10
-HMC32S		FK68- 75L	HMA-M16S	—	—	—	—
BBT50-HMC16S	FK45- 50L	—	—	—	—	—	—
-HMC20S		HMA-M16	19	27	6	M16P1.5	8
-HMC25S							10
-HMC32S		FK68- 75L	HMA-M16S	—	—	—	—
-HMC42S	FK80- 90L	HMA-M24	30	36	9.5	M24P1.5	10
BBT/BT50-HMC20	FK58- 62	—	—	—	—	—	—
-HMC25		HMA-M16	19	27	6	M16P1.5	8
-HMC32							10
-HMC42		FK80- 90	HMA-M24	30	36	9.5	M24P1.5
-HMC50.8	FK92-100	—	—	—	—	—	—

NEW Hi-POWER MILLING CHUCK

Coolant-through hole
Clamping Range : $\phi 16 - \phi 42$

S Type



BBT Shank Type

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	ϕd	ϕD	L	H	E	C-Spanner Model	Weight (kg)
BBT50-HMC16S-105 ※	16	43	105	71	55	FK45-50L	4.2
-135 ※			135				4.6
-165 ※			165				5.0
-200 ※			200				5.8
-HMC20S-105	20	50	105	69 – 79	56	FK45-50L	4.3
-135			135				4.8
-165			165				5.4
-200			200				6.0
-300			300				8.3
-HMC25S-105	25	59	105	76 – 86	57	FK58-62L	4.5
-135			135				5.2
-165			165				5.9
-200			200				7.5
-HMC32S-105	32	68	105	88 – 98	72	FK68-75L	4.6
-135			135				5.4
-165			165				6.4
-200			200				7.4
-300			300				11.5
-HMC42S-105	42	85	105	93 – 105	73	FK80-90L	5.2
-135			135				6.2
-165			165				7.4
-200			200				9.6
-300			300				14.1

1. Wrench and axial adjusting screw is ordered separately if required.
2. "H" indicates the adjustment length with an Adjusting Screw.
3. ※ As a back stop for cutting tools for the HMC16S models, a commercially available hex socket head screw can be used.
"H" is the max. tool shank length that can be inserted into the holder.

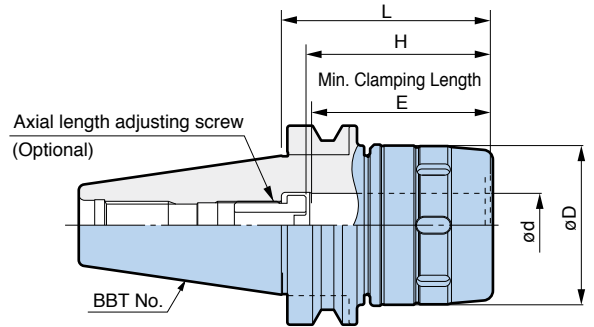
For STRAIGHT COLLET G 15

For ADJUSTING SCREW A 16

NEW Hi-POWER MILLING CHUCK

Coolant-through hole

STANDARD Type Clamping Range : $\phi 20 - \phi 42$



A
BBT/BT SHANK

BBT Shank Type

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	ϕd	ϕD	L	H	E	C-Spanner Model	Weight (kg)
BBT50-HMC20-105	20	60	105	69 - 79	56	FK58- 62	4.7
-135			135				5.4
-165			165				6.1
-HMC25-105	25	62	105	74 - 84	65	FK58- 62	4.6
-135			135				5.3
-165			165				5.9
-HMC32-105▲	32	80	105	78 - 95	71	FK80- 90	5.2
-135▲			135				6.3
-165▲			165				7.5
-200			200				9.2
-300			300				14.6
-HMC42-105▲	42	99	105	93 - 105	73	FK92-100	6.0
-135▲			135				7.5
-165▲			165				8.8
-200			200				10.7
-300			300				15.5

1. Wrench and axial adjusting screw is ordered separately if required.
2. ▲mark indicates the vibration reduction screw is included.
3. "H" indicates the adjustment length with an Adjusting Screw.

For STRAIGHT COLLET G 15

For ADJUSTING SCREW A 16

Chuck types with vibration prevention screw	Minimum shank insertion length "H"
BBT50-HMC32-□□□▲	88
-HMC42-□□□▲	91

For 50.8mm large diameter endmill

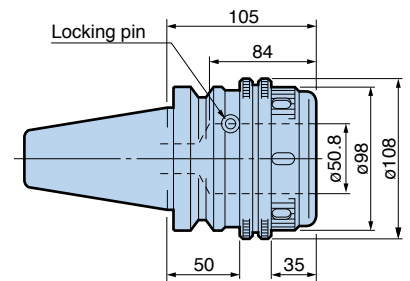
Positive pin locking mechanism eliminates slip of cutter.

- Additional rear body nut provides greater rigidity.
- Roll rock clamping mechanism outperforms side lock holders in runout accuracy.



Model	Weight (kg)
BBT50-HMC50.8-105	5.9

BIG-PLUS tools can be used in machining centers with conventional spindles.



NEW Hi-POWER MILLING CHUCK

Coolant-through hole

Clamping Range : $\phi 16 - \phi 32$

S Type

BIG's original design of slit structure supports heavy and finish end milling with high power and precision.

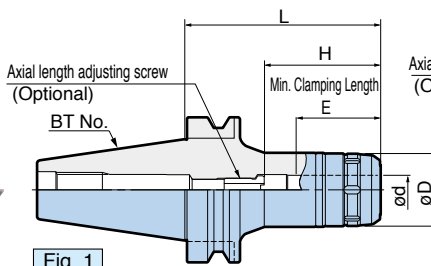


Fig. 1

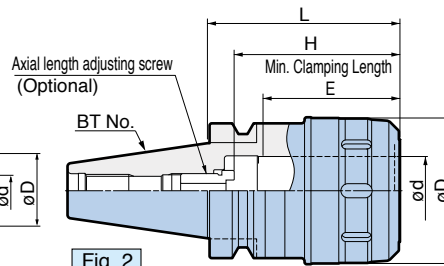


Fig. 2

BT Shank Type

Model	Fig.	ϕd	ϕD	L	H	E	C-Spanner Model	Weight (kg)
BT30-HMC16S- 70 ※	1	16	43	70	71	55	FK45-50L	0.7
-HMC20S- 75	2	20	50	75	56 – 66	56		0.9
-HMC25S- 90		25	55	90	64 – 74	57		1.2
-HMC32S-105		32	62	105	70 – 80	58		1.5
BT40-HMC16S- 75 ※	1	16	43	75	71	55	FK45-50L	1.3
-120 ※				120				1.8
-HMC20S- 75	1	20	50	75	69 – 79	56		1.4
-105				105				1.9
-120				120			2.1	
-HMC25S- 75	1	25	59	75	73 – 83	57	FK58-62L	1.5
-105				105				2.1
-135				135				2.8
-HMC32S- 90	2	32	68	90	71 – 81	64		FK68-75L
-105				105			2.3	
-135				135			3.0	

1. Wrench and axial adjusting screw is ordered separately if required.
 2. "H" indicates the adjustment length with an Adjusting Screw.

3. ※ As a back stop for cutting tools for the HMC16S models, a commercially available hex socket head screw can be used.
 "H" is the max. tool shank length that can be inserted into the holder.

For STRAIGHT COLLET G 15
 For ADJUSTING SCREW A 16

NEW Hi-POWER MILLING CHUCK

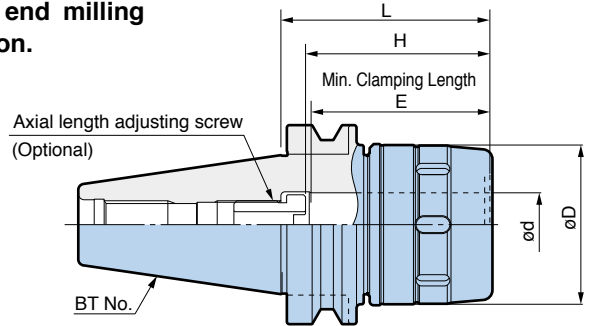
Coolant-through hole

Clamping Range : $\phi 20 - \phi 42$

STANDARD Type



BIG's original design of slit structure supports heavy and finish end milling with high power and precision.



BT Shank Type

Model	ϕd	ϕD	L	H	E	C-Spanner Model	Weight (kg)
BT50-HMC20-105	20	60	105	69 - 79	56	FK58- 62	4.7
-135			135				5.4
-165			165				6.1
-HMC25-105	25	62	105	74 - 84	65	FK58- 62	4.6
-135			135				5.3
-165			165				5.9
-HMC32-105 ▲	32	80	105	78 - 95	71	FK80- 90	5.2
-135 ▲			135				6.3
-165 ▲			165				7.5
-HMC42-105 ▲	42	99	105	93 - 105	73	FK92-100	6.0
-135 ▲			135				7.5
-165 ▲			165				8.8

1. Wrench and axial adjusting screw is ordered separately if required.
2. ▲ mark indicates the vibration reduction screw is included.
3. "H" indicates the adjustment length with an Adjusting Screw.

For STRAIGHT COLLET G 15
For ADJUSTING SCREW A 16

Chuck types with vibration prevention screw	Minimum shank insertion length "H"
BT50-HMC32-□□□▲	88
-HMC42-□□□▲	91

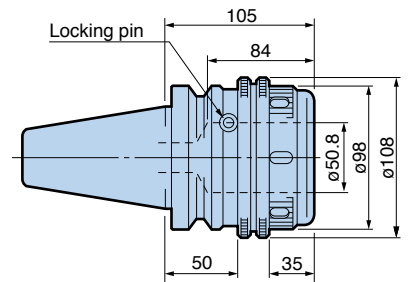
For 50.8mm large diameter endmill

Positive pin locking mechanism eliminates slip of cutter.

- Additional rear body nut provides greater rigidity.
- Roll rock clamping mechanism outperforms side lock holders in runout accuracy.



Model	Weight (kg)
BT50-HMC50.8-105	5.9



HYDRAULIC CHUCK

For high precision machining in Automotive, Aerospace, Medical and Die & Mold

A
BBT/BT SHANK

Coolant-through hole

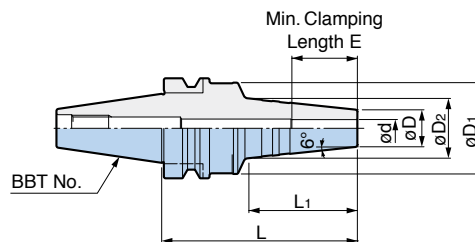
SUPER SLIM Type

Clamping Range : $\phi 4 - \phi 12$

MAX.
35,000
min⁻¹



SUPER SLIM



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	ϕd	ϕD	ϕD_1	ϕD_2	L	L ₁	E	Weight (kg)
BBT30-HDC 4S- 60	4	14	46	20	90	28	19	0.6
-HDC 6S- 90	6		42	25			25	0.7
-HDC 8S- 90	8	42	28	30			0.7	
-HDC10S- 90	10	44	30	32			0.7	
-HDC12S- 90	12	46	32	35			0.8	

1. Adjusting Screw cannot be used.

Caution

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

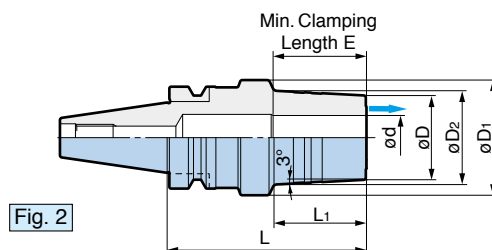
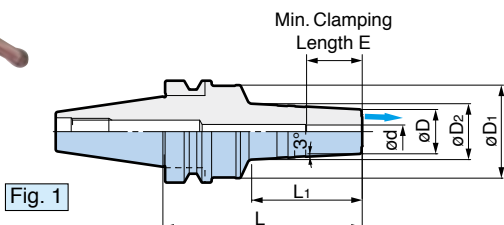
Coolant-through hole

JET THROUGH Type

Clamping Range : $\phi 4 - \phi 20$



NEW



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	ϕd	ϕD	ϕD_1	ϕD_2	L	L ₁	E	Weight (kg)
BBT30-HDC 4J- 60	1	4	20	46	23	90	28	19	0.6
-HDC 6J- 90		6		42	26			25	0.7
-HDC 8J- 90		8	42	28	30			0.7	
-HDC10J- 90		10	44	30	32			0.8	
-HDC12J- 90		12	46	32	35			0.8	
-HDC16J- 90		16	40	40	42			0.9	
-HDC20J- 90	2	20	38	52	43	40	42	1.1	

1. Adjusting Screw cannot be used.

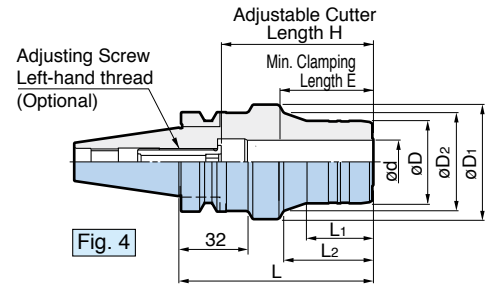
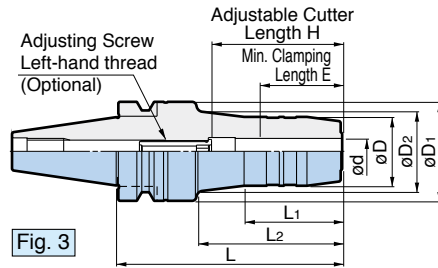
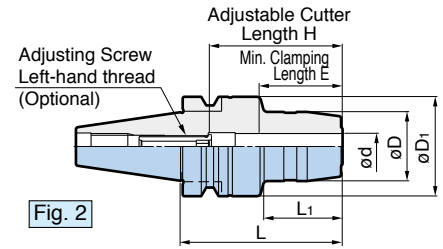
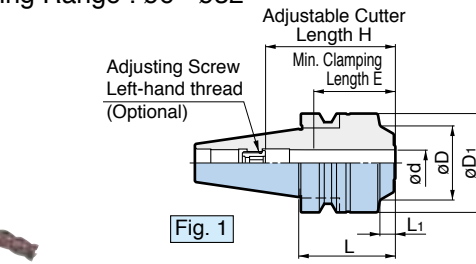
Caution

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

Coolant-through hole

STANDARD Type

Clamping Range : $\phi 6 - \phi 32$



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	ϕd	ϕD	ϕD_1	ϕD_2	L	L ₁	L ₂	H	E	Adjusting Screw (Optional)	Weight (kg)
BBT30-HDC 6- 45	1	6	30	46	—	45	7	—	35-50	28	HDA 6-05020	0.7
- 75	2		26	45.4	31	75	40	—	28-50		HDA 6-05032	0.8
- 90	3					90	43	57				
-105	3		105	43	72							
-HDC 7- 75	2	7	27	45.4	—	75	41	—	28-50	28	HDA 6-05032	0.8
-HDC 8- 45	1	8	32	46	—	45	7	—	35-50	28	HDA 8-06020	0.7
- 75	2		28	45.4	33	75	41	—	28-50		HDA 8-06032	0.8
- 90	3					90	44	57				
-105	3		105	44	72							
-HDC 9- 75	2	9	29	45.4	—	75	41	—	28-50	28	HDA 8-06032	0.8
-HDC10- 45	1	10	34	46	—	45	7	—	45-55	33	HDA10-08015	0.7
- 75	2		30		33	75	36	—	33-55		HDA10-08032	0.9
- 90	3			90		45	51					
-105	3		105	45	66							
-HDC11- 90	3	11	31	46	34	90	51	45	33-55	33	HDA10-08032	0.9
-HDC12- 45	1	12	36	46	—	45	7	—	55-60	38	HDA12-10010 ●	0.7
- 75	2		32		35	75	36	—	38-60		HDA12-10032	0.8
- 90	3			90		45	51					
-105	3		105	45	67							
-HDC13- 90	3	13	33	46	36	90	45	51	38-60	38	HDA12-10032	0.9
-HDC14- 90	3	14	34	46	37	90	46	52	38-60	38	HDA12-10032	0.9
-HDC15- 90	2	15	37	46	—	90	47	—	43-70	43	HDA16-12037	1.0
-HDC16- 45▲	1	16	42	46	—	45	7	—	70	43	—	0.7
- 75	2		38		—	75	35	—	43-70		HDA16-12030	0.9
- 90	3			90		47	—					
-105	3		105	47	—							
-HDC18- 90	4	18	36	51	44	90	31	41	43-70	43	HDA16-12037	1.0
-HDC20- 60※	4	20	38	53	—	60	—	14	43-54	43	HDA16-12030	0.9
- 75					75	16	26	46-70				
- 90			90	31	41	43-70						
-105			105	40	—	—						
-HDC25-105	4	25	55	63	—	105	44	—	52-80	52	HDA25-16039	1.7
-HDC32-105	4	32	60	75	—	105	39	—	56-80	56	HDA25-16039	1.8



- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank (i.e.: Weldon type shank)
- Roughing endmills are not recommended for use with Hydraulic Chucks.
- Do not tighten the clamping screw without first inserting a cutting tool into the toolholder.
- Always insert the cutting tool into the Hydraulic Chuck beyond min. clamping length E.

1. "H" indicates the adjustment length with an Adjusting Screw.
2. If a specific model number does not have a value for H, the inner bore is larger than the clamping diameter and use of Adjusting Screw is not available.
3. Model with ▲ indication cannot use an Adjusting Screw. Model with ※ indication cannot use a Straight Collet.
4. Add the letter "W" to Adjusting Screw model number for hexagon sockets on both sides. (e.g. HDA6-05020W) Adjusting Screw with ● indication is not available in W type.

For STRAIGHT COLLET G 16

For INNER BORE CLEANER G 19

HYDRAULIC CHUCK

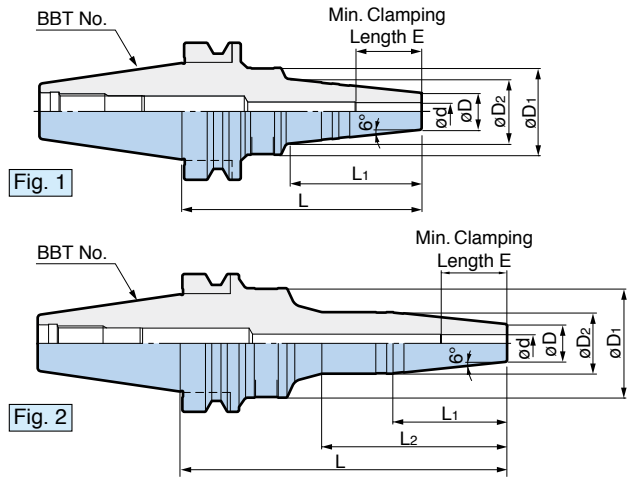
Coolant-through hole

SUPER SLIM Type

Clamping Range : $\phi 4$ - $\phi 12$



SUPER SLIM



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	ϕd	ϕD	ϕD_1	ϕD_2	L	L ₁	L ₂	E	Weight (kg)
BBT40-HDC 4S- 60	1	4	14	38	19	60	22	—	19	1.2
- 90					24	90	45			1.3
-HDC 6S-110	1	6	17	48	27	110	60	85	25	1.3
-150	2				30	110	57			1.6
-HDC 8S-110	1	8	19	50	40	110	60	85	30	1.4
-150	2				32	110	52			1.7
-HDC10S-110	1	10	21	52	42	110	60	85	32	1.4
-150	2				30	150	52			1.7
-HDC12S-110	1	12	21	50	44	110	60	85	35	1.4
-150	2				32	150	52			1.8

1. Adjusting Screw cannot be used.



- Use only cutting tools that have a shank tolerance within h6.
- Roughing endmills are not recommended for use with Hydraulic Chucks.

- 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 Hydraulic Chuck.
- Always insert the cutting tool into the Hydraulic Chuck beyond min. clamping length E.

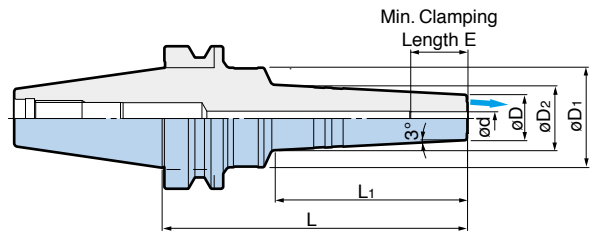
Coolant-through hole

JET THROUGH Type

Clamping Range : $\phi 4$ - $\phi 20$



NEW



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	ϕd	ϕD	ϕD_1	ϕD_2	L	L ₁	E	Weight (kg)
BBT40-HDC 4J- 90	4	20	38	25	90	45	19	1.3
-HDC 6J- 90	6	20	38	25	90	45	25	1.3
-135			44	29	135	85		1.5
-HDC 8J- 90	8	22	40	27	90	45	30	1.3
-135			46	31	135	85		1.6
-HDC10J- 90	10	24	42	29	90	45	32	1.3
-135			48	33	135	85		1.6
-HDC12J- 90	12	26	44	31	90	45	35	1.3
-135			50	35	135	85		1.7
-HDC16J- 90	16	34	46	40	90	46	42	1.4
-135			50	44	135	89		1.9
-HDC20J- 90	20	38	48	44	90	47	42	1.5
-135			53	48	135	90		2.0

1. Adjusting Screw cannot be used.



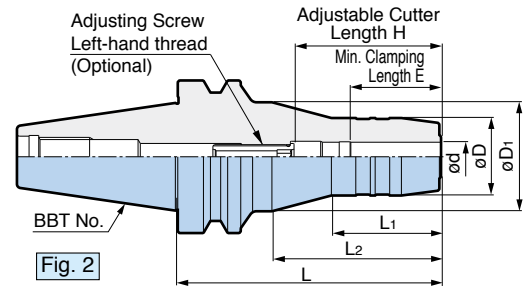
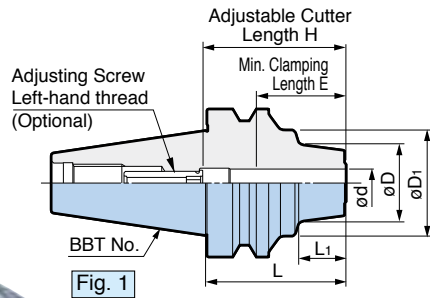
- Use only cutting tools that have a shank tolerance within h6.
- Roughing endmills are not recommended for use with Hydraulic Chucks.

- 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 Hydraulic Chuck.
- Always insert the cutting tool into the Hydraulic Chuck beyond min. clamping length E.

Coolant-through hole

STANDARD Type

Clamping Range : $\phi 6 - \phi 20$



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	ϕd	ϕD	ϕD_1	L	L1	L2	H	E	Adjusting Screw (Optional)	Weight (kg)
BBT40-HDC 6- 60	1	6	27	45	60	19	—	28-50	28	HDA 6-05032	1.2
- 90	2		26		90	44	50				1.4
-110					110		70				1.5
-135					135		95				1.7
-165					165		119				1.9
-HDC 7- 90	2	7	27	45	90	44	50	28-50	28	HDA 6-05032	1.3
-HDC 8- 60	1	8	29	45	60	19	—	28-50	28	HDA 8-06032	1.2
- 90	2		28		90	44	50				1.4
-110					110		70				1.5
-135					135		95				1.7
-165					165		119				2.0
-HDC 9- 90	2	9	29	45	90	45	50	28-50	28	HDA 8-06032	1.4
-HDC10- 60	1	10	31	45	60	20	—	33-55	33	HDA10-08032	1.2
- 90	2		30		90	45	50				1.4
-110					110		70				1.5
-135					135		95				1.7
-165					165		119				2.0
-HDC11- 90	2	11	31	45	90	45	50	33-55	33	HDA10-08032	1.4
-HDC12- 60	1	12	33	45	60	20	—	38-60	38	HDA12-10032	1.2
- 90	2		32		90	45	49				1.4
-110					110		69				1.6
-135					135		94				1.8
-165					165		119				2.0
-HDC13- 90	2	13	33	45	90	45	49	38-60	38	HDA12-10032	1.4
-HDC14- 90	2	14	34	45	90	46	49	38-60	38	HDA12-10032	1.4
-110					110		69				1.6
-135					135		94				1.8
-HDC15- 90	2	15	37	45	90	47	49	43-70	43	HDA16-12037	1.4
-HDC16- 75	2	16	38	45	75	47	36	43-70	43	HDA16-12037	1.3
- 90					90		49				1.4
-110					110		69				1.6
-135					135		94				1.9
-165					165		119				2.3
-HDC18- 90	2	18	40	45	90	48	49	43-70	43	HDA16-12037	1.5
-110					110		69				1.6
-135					135		94				1.9
-HDC20- 90	2	20	42	45	48	50	43-70	43	HDA16-12037	1.4	
-110				110		70				1.7	
-135				135		95				2.0	
-165				165		119				2.4	

1. If a specific model number does not have a value for H, the inner bore is larger than the clamping diameter and use of Adjusting Screw is not available.
2. Add the letter "W" to Adjusting Screw model number for hexagon sockets on both sides. (e.g. HDA6-05032W)
3. "H" indicates the adjustment length with an Adjusting Screw.

Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank (i.e.: Weldon type shank)
- Roughing endmills are not recommended for use with Hydraulic Chucks.
- Do not tighten the clamping screw without first inserting a cutting tool into the toolholder.
- Always insert the cutting tool into the Hydraulic Chuck beyond min. clamping length E.

HYDRAULIC CHUCK

Substantial body design eliminates chatter and deflection when endmilling.

Coolant-through hole

High Rigidity Type

Clamping Range : $\varnothing 20 - \varnothing 32$

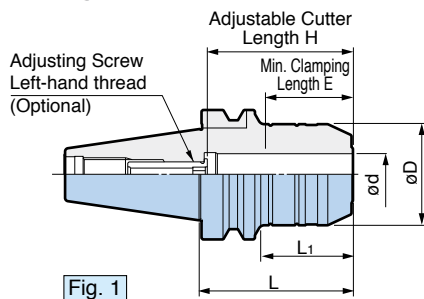


Fig. 1

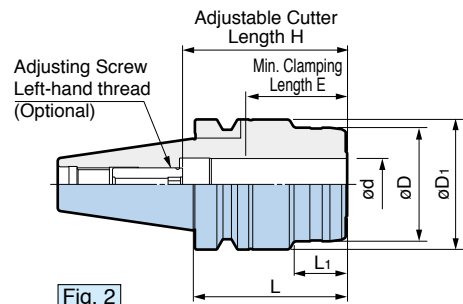


Fig. 2

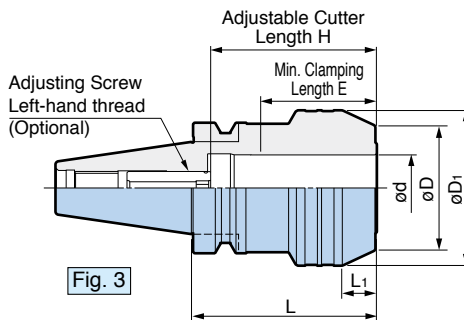


Fig. 3

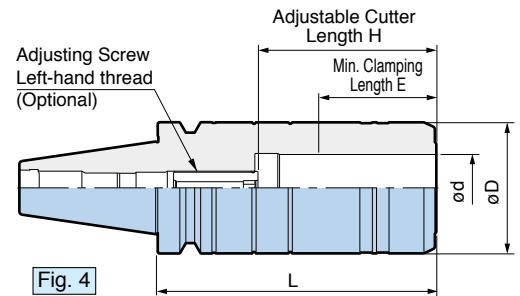


Fig. 4

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	$\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L_1	H	E	Adjusting Screw (Optional)	Weight (kg)
BBT40-HDC20E- 75	1	20	49.2	—	75	45	43-70	43	HDA16-12037	1.4
-HDC25E- 75	2	25	55	62.9	75	25	52-80	52	HDA25-16033	1.8
-110					110					2.4
-135					135					3.0
-165					165					3.6
-HDC32E- 90	3	32	60	75	90	16	56-80.5	56	HDA25-16039	2.2
-110	63		110		34					2.6
-135	4		62.9	—	135	—	56-85			2.8
-165					165					3.4

- "H" indicates the adjustment length with an Adjusting Screw.
- Add the letter "W" to Adjusting Screw model number for hexagon sockets on both sides.
(e.g. HDA16-12037W)

For STRAIGHT COLLET G 16

For INNER BORE CLEANER G 19

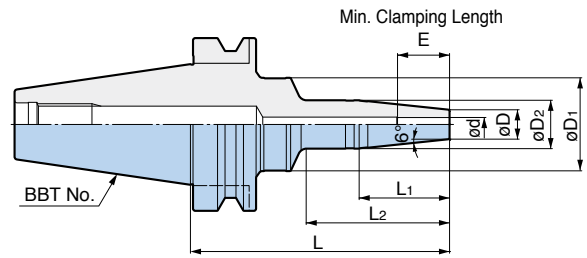
Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank (i.e.: Weldon type shank)
- Roughing endmills are not recommended for use with Hydraulic Chucks.
- Do not tighten the clamping screw without first inserting a cutting tool into the toolholder.
- Always insert the cutting tool into the Hydraulic Chuck beyond min. clamping length E.

Coolant-through hole

SUPER SLIM Type

Clamping Range : $\phi 6 - \phi 12$



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	ϕd	ϕD	$\phi D1$	$\phi D2$	L	L1	L2	E	Weight (kg)
BBT50-HDC 6S-150	6	14	52	26	150	57	83	25	4.2
-HDC 8S-150	8	17	54	28		30		4.3	
-HDC10S-150	10	19	56	30		32		4.3	
-HDC12S-150	12	21	58	32		35		4.4	

1. Adjusting Screw cannot be used.

Caution

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

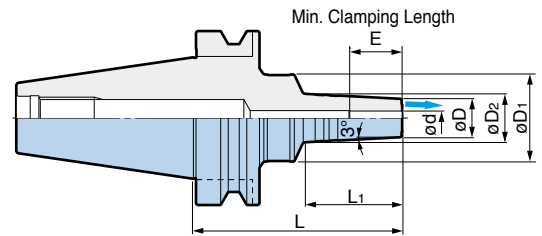
Coolant-through hole

JET THROUGH Type

Clamping Range : $\phi 6 - \phi 20$



NEW



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	ϕd	ϕD	$\phi D1$	$\phi D2$	L	L1	E	Weight (kg)
BBT50-HDC 6J-120	6	20	48	26	120	55	25	4.1
-HDC 8J-120	8	22	50	28			30	4.1
-HDC10J-120	10	24	52	30			32	4.2
-HDC12J-120	12	26	54	32			35	4.2
-HDC16J-120	16	34	58	41		56	42	4.4
-HDC20J-120	20	38	62	45				4.5

1. Adjusting Screw cannot be used.

Caution

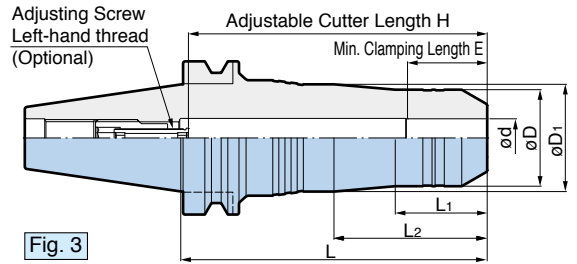
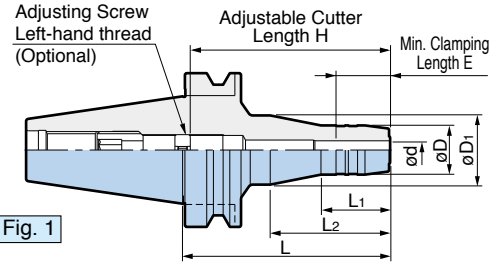
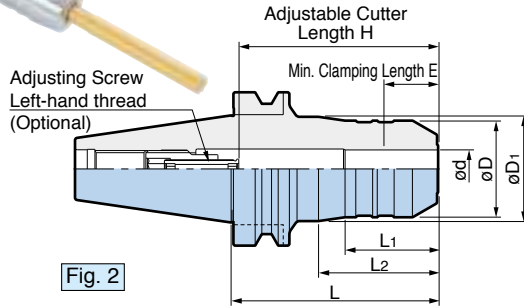
- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)
- Roughing endmills are not recommended for use with Hydraulic Chucks.
- Do not tighten the clamping screw without first inserting a cutting tool into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

Coolant-through hole

HYDRAULIC CHUCK

Clamping Range : $\phi 6$ - $\phi 42$

STANDARD Type



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	ϕd	ϕD	ϕD_1	L	L ₁	L ₂	H	E	Max. insertion length	Adjusting Screw (Optional)	Weight (kg)					
BBT50-HDC 6L-105	1	6	26	45	105	44	48	80-120	28	165	HDA6-20010	4.2					
-135					135		78	110-150		195		4.3					
-150					150		93	125-165		210		4.4					
-165					165		108	140-180		225		4.5					
-HDC 8L-105	1	8	28	45	105	45	48	80-120	28	165	HDA6-20010	4.2					
-135					135		78	110-150		195		4.4					
-150					150		93	125-165		210		4.5					
-165					165		108	140-180		225		4.6					
-HDC10L-105	1	10	30	45	105	45	48	80-120	33	165	HDA6-20010	4.2					
-135					135		78	110-150		195		4.4					
-150					150		93	125-165		210		4.5					
-165					165		108	140-180		225		4.7					
-HDC12L-105	1	12	32	45	105	45	48.5	80-120	38	165	HDA6-20010	4.2					
-135					135		78	110-150		195		4.4					
-150					150		93	125-165		210		4.6					
-165					165		108	140-180		225		4.7					
-HDC16L- 90	1	16	38	47	90	40	43.5	56- 96	43	150	HDA20-12047	4.1					
-105					105	47	48.5	80-120		165	4.3						
-135					135	48	78	110-150		195	HDA6-20010	4.6					
-150					150	93	125-165	210		4.7							
-HDC20L- 90	2	20	42	50	90	45	—	56- 96	43	150	HDA20-12047	4.2					
-105					105	47	48.5	71-111		165		4.4					
-135	135				48	78	101-141	195		4.7							
-150	150				93	116-156	210	4.8									
-200	3	20	42	50	200	48	102	166-206	52	260	HDA20-12047	5.5					
-250					250			216-256		310		6.0					
-HDC25L- 90	2				25	63	68	90		45.7		—	56- 96	52	113	HDA20-12047	4.7
-105								105		—		71-111	128		5.0		
-135	135	60.7	78	101-141				158	5.7								
-150	150	92	116-156	173				6.1									
-200	3	25	63	70	200	60	100	166-200	56	200	HDA20-12047	7.5					
-250					250			—		—		200	9.1				
-HDC32L- 90	2				32	72	78	90		47		—	56- 96	56	112	HDA20-12047	4.7
-105								105		62		—	71-111		127		5.1
-135	135	60.7	78	101-141				157	6.0								
-165	165	108	131-171	187				6.9									
-200	3	32	72	80	200	60	100	166-200	56	200	HDA20-12047	8.4					
-250					250			—		—		200	10.8				
-HDC42L-110	2				42	96	—	110		72		—	76-116	65	132	HDA20-12047	6.1

1. In the use of the Adjusting Screw in BBT50 series, please contact BIG agent because a guide screw needs to be set separately.
 ※ Adjusting Screw cannot be used.

2. "H" indicates the adjustment length with an Adjusting Screw.
 3. Max. insertion length is the length when Adjusting Screw is not used.

Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank (i.e.: Weldon type shank)
- Roughing endmills are not recommended for use with Hydraulic Chucks.
- Do not tighten the clamping screw without first inserting a cutting tool into the toolholder.
- Always insert the cutting tool into the Hydraulic Chuck beyond min. clamping length E.

➡ For STRAIGHT COLLET G 16

➡ For INNER BORE CLEANER G 19

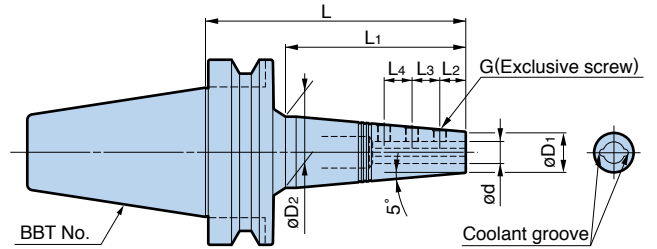
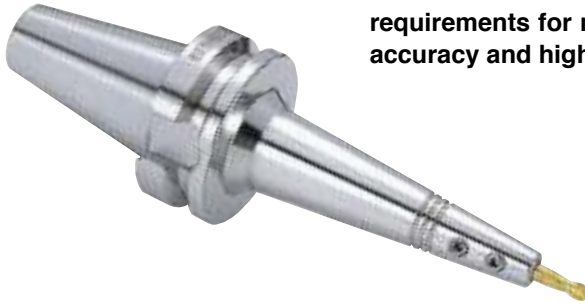
MOLD CHUCK

Coolant-through hole

Clamping Range : $\phi 3 - \phi 20$

Precision side lock holder to satisfy the requirements for minimum interference, accuracy and high speed.

MAX.
20,000
min⁻¹



Coolant is supplied through 2-grooves in the bore.

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	ϕd	ϕD_1	ϕD_2	L	L ₁	L ₂	L ₃	L ₄	G	Max. min ⁻¹	Weight (kg)
BBT40-SSL 3-135	3	10	27.3	135	100	6	6	-	M3	20,000	1.2
-SSL 4-135	4	11	28.2								
-SSL 6-135	6	13	30.0								
-SSL 8-135	8	15	31.8								
-SSL10-150	10	17	36.3	150	115	15	20	-	M6	17,000	1.5
-SSL12-150	12	22	41.1								
BBT50-SSL 6-150	6	13	30.7	150	104	12	13	-	M6	15,000	3.9
-200			39.5	200	154					12,000	4.4
-SSL 8-150	8	15	32.5	150	104	13.5	18	-	M6	15,000	3.9
-200			41.3	200	154					12,000	4.4
-SSL10-150	10	17	34.4	150	104	15	20	-	M6	15,000	4.0
-200			43.1	200	154					12,000	4.4
-SSL12-150	12	22	39.2	150	104	15	16	16	M8	15,000	4.2
-200			47.9	200	154					12,000	4.9
-SSL16-150	16	26	42.8	150	104	15	20	22	M8	15,000	4.5
-200			51.6	200	154					12,000	5.0
-SSL20-150	20	30	46.8	150	104	15	20	25	M8	15,000	4.6
-200			55.6	200	154					12,000	5.2

● 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 LOCK SCREWS

Model	Screw size	Screw Length / Quantity	Chuck Model
H0304FS	M3 P0.5	4mm / 2pcs.	SSL3
H0404FS	M4 P0.5	4mm / 2pcs.	SSL4
H06FSA	M6 P0.75	4.5, 5mm / 1pce. each	SSL6
H06FSB		4.5, 6mm / 1pce. each	SSL8,10
H08FSA	M8 P0.75	6mm / 2pcs. 8mm / 1pce.	SSL12
H08FSB		6, 8, 10mm / 1pce. each	SSL16,20

1. Each model consists of 1 set of screws required for 1 Mold Chuck.

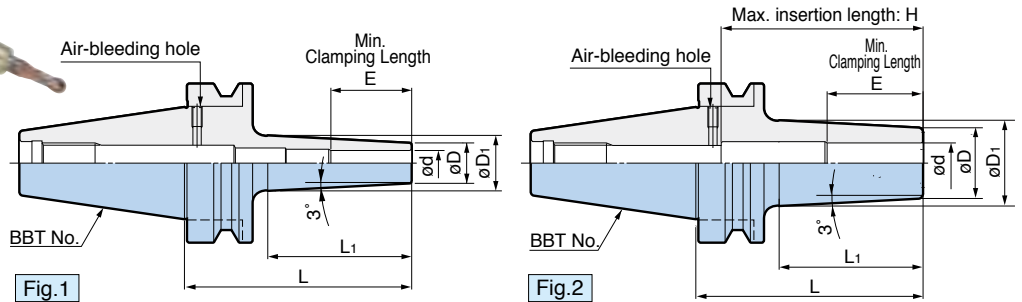
SHRINK CHUCK

Coolant-through hole

SLIM Type Clamping Range : $\phi 6 - \phi 12$



Slim design avoids interference with the side wall and draft of the mold.



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	ϕd	ϕD	ϕD_1	L	L ₁	E	H	Weight (kg)	
BBT30-SRC 6S -105	1	6	10	18.0	105	77	26	-	0.48	
-SRC 8S -105		8	13	21.0				-	0.51	
-SRC10S -105	2	10	16	24.0			32	62	0.55	
-SRC12S -105		12	19	27.0			36	72	0.60	
BBT40-SRC 6S -120	1	6	10	19.0	120	86	26	-	1.08	
-165				23.5	165	127			1.21	
-SRC 8S -120		8	13	22.0	120	86			1.12	
-165				26.5	165	129			1.29	
-SRC10S -120		10	16	25.0	120	86			32	1.17
-165				29.5	165	129			1.36	
-SRC12S -120		12	19	28.0	120	87	36		1.22	
-165				33.0	165	131			1.44	

1. Use carbide cutter within a tolerance of h6.

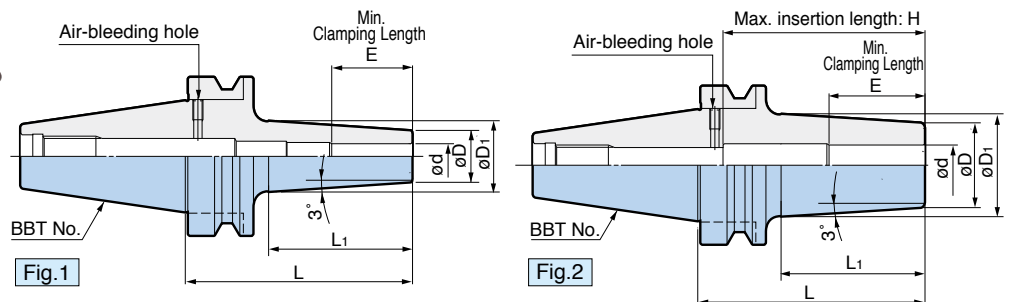
Please refer to the operation manual of heating / cooling equipment, as some equipments may not be compatible.

Wiper Cleaner is recommended to clean the clamping bore. **G 19**

STANDARD Type Clamping Range : $\phi 4 - \phi 20$



Substantial body provides higher rigidity. Available from 4mm clamping diameter.



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	ϕd	ϕD	ϕD_1	L	L ₁	E	H	Weight (kg)
BBT30-SRC 4 - 75※	2	4	10	14.6	75	44	16	-	0.45
-SRC 6 - 75	1	6	14	19.0		47	26		0.47
-SRC 8 - 75		8	18	23.0			32	62	0.51
-SRC10 - 75	2	10	22	27.0		36		72	0.56
-SRC12 - 75		12	24	29.0		48	38	80	0.58
-SRC16 - 75	16	28	33.0	0.62					


A BBT/BT SHANK

BIG-PLUS tools can be used in machining centers with conventional spindles.

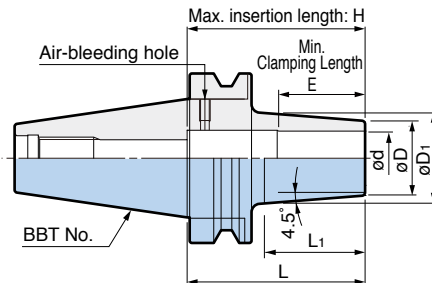
Model	Fig.	ød	øD	øD1	L	L1	E	H	Weight (kg)	
BBT40-SRC 4 - 90 ※	2	4	10	15.5	90	52	16	-	1.05	
-SRC 6 - 90	1	6	14	20.0					57	1.07
-150				26.0	114	1.25				
-SRC 8 - 90		8	18	24.0	90	57	1.12			
-150				30.0	114	1.36				
-SRC10 - 90		10	22	28.0	90	57	32		1.18	
-150				34.0	116	1.49				
-SRC12 - 90		12	24	30.0	90	57	36		1.20	
-150				36.0	116	1.54				
-SRC16 - 90		2	16	28	34.0	90	57		38	80
-165					42.0	165	132	1.82		
-SRC20 - 90	20	34	34	40.0	90	57	42	100	1.35	
-165				48.0	165	132		2.08		
BBT50-SRC 6 -105	1	6	14	20.5	105	61	26	-	3.7	
-165				26.0	165	116			3.9	
-SRC 8 -105		8	18	24.5	105	61	3.8			
-165				30.0	165	116	4.0			
-SRC10 -105		10	22	28.5	105	61	32		3.8	
-165				34.0	165	116	4.2			
-SRC12 -105		12	24	30.5	105	61	36		3.9	
-165				36.0	165	116			4.2	
-SRC16 -105		16	28	34.5	105	61	38		3.9	
-165				40.0	165	116			4.3	
-SRC20 -105	20	34	40.5	105	61	42	4.0			
-165			46.0	165	116		4.6			

1. Use carbide cutter within a tolerance of h6.
2. ※ Use carbide cutter within a tolerance of h5.

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

α Wiper Cleaner or TK Cleaner is recommended to clean the clamping bore. 

For ø32mm Straight Shank




ø32mm Straight Shank Type



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	ød	øD	øD1	L	L1	E	H	Weight (kg)
BBT40-SRC32D- 95	32	44	54	95	65	51	88	1.6
BBT50-SRC32D-105				105	61		105	4.1

1. For assembling and disassembling of the straight shank type, a BIG-HAIMER Power Clamp device is necessary.
2. Designed for center through coolant application when used with coolant through cutting tools.

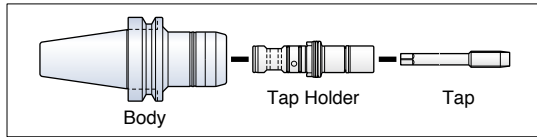
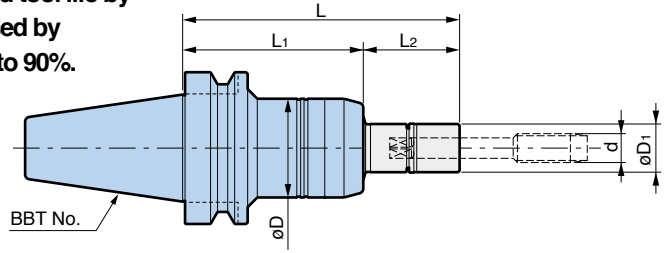
TK Cleaner is recommended to clean the clamping bore. 

MEGA SYNCHRO[®] Tapping Holder

Tapping Range : M1 - M20

Coolant-through hole

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



BIG-PLUS tools can be used in machining centers with conventional spindles.

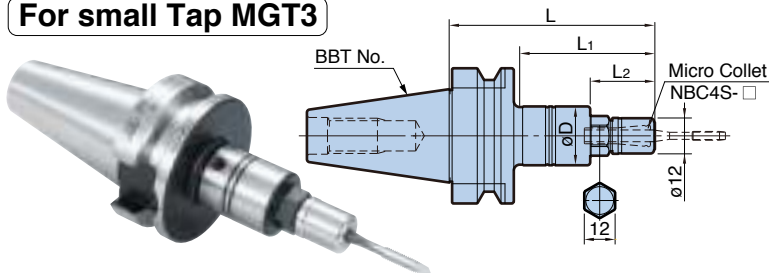
Model	Tap Holder Model	Tapping Range d	øD	øD1	L	L1	L2	Weight (kg)
BBT30-MGT 6- 70	MGT 6-d- 30	M2 – M6	36	16	100	70	30	0.7
	- 70	No.3 – U1/4			140		70	
	-100				170		100	
-MGT12- 70	MGT12-d- 30	M6 – M12	41	20	100	70	30	0.8
	- 70	U1/4 – U7/16			140		70	
	-100	P1/8			170		100	
-MGT20-110	MGT20-d- 35	M12 – M20	54	30	145	110	35	1.5
	- 85	U1/2 – U3/4			195		85	
	-115	P1/4 – P3/8			225		115	
BBT40-MGT 6- 75	MGT 6-d- 30	M2 – M6	36	16	105	75	30	1.3
	- 70	No.3 – U1/4			145		70	
	-100				175		100	
-MGT12- 75	MGT12-d- 30	M6 – M12	41	20	105	75	30	1.4
	- 70	U1/4 – U7/16			145		70	
	-100	P1/8			175		100	
-MGT20- 95	MGT20-d- 35	M12 – M20	54	30	130	95	35	1.8
	- 85	U1/2 – U3/4			180		85	
	-115	P1/4 – P3/8			210		115	
BBT50-MGT 6- 90	MGT 6-d- 30	M2 – M6	36	16	120	90	30	3.9
	- 70	No.3 – U1/4			160		70	
	-100				190		100	
-MGT12- 90	MGT12-d- 30	M6 – M12	41	20	120	90	30	4.0
	- 70	U1/4 – U7/16			160		70	
	-100	P1/8			190		100	
-MGT20-105	MGT20-d- 35	M12 – M20	54	30	140	105	35	4.4
	- 85	U1/2 – U3/4			190		85	
	-115	P1/4 – P3/8			220		115	

1. Tap Holder and wrench are ordered separately.

Rigid tapping function is required on the machine tool.

For TAP HOLDER A33-A36

For small Tap MGT3



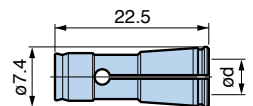
MEGA Wrench For MGT3



Model	MGR12
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1. 12mm common spanner is also required to clamp/unclamp the tap.

MICRO COLLET For MGT3



Model	Tapping Range d	øD	L	L1	L2	Weight (kg)
BBT30-MGT3-70	M1 – M3	20	70	46	22	0.5
BBT40-MGT3-90			90	61		1.2

1. Nut is included. Wrench and collet are ordered separately.

2. 12mm common spanner is also required to hold the hex portion of the body when clamping/unclamping the tap.

- Rigid tapping function is required on the machine tool.
- Not capable of supplying coolant through the holder body.

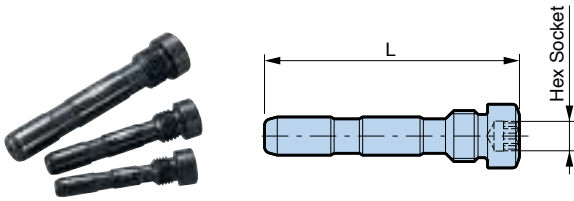
Model	Tapping Range		Tap Shank ød
	DIN371	ISO529	
NBC4S - 2.5AA	M1 – M1.8	M2	2.5
NBC4S - 2.8AA	M2 – M2.6	M2.2, M2.5	2.8
NBC4S - 3.1AA		M3	3.15
NBC4S - 3.5AA	M3		3.5

BBT/BT SHANK

■ **MGT Set Screw** For (MGT6, MGT12, MGT20)

(Made of high-strength material)

Secures the Tap Holder into body.

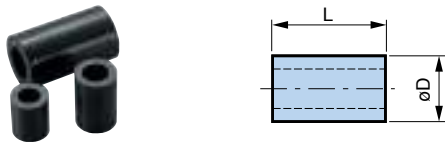


Model	Hex Socket size	L	Body
MGT 6SS	4	35	MGT 6
MGT12SS	4	40	MGT12
MGT20SS	5	53	MGT20

■ **Synchro Adjuster** For (MGT6, MGT12, MGT20)

(Made of special material)

Replaceable bushing in Tap Holder

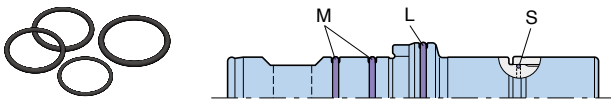


Model	øD	L	Tap Holder
MGT 6SA	9	11	MGT 6-d-□
MGT12SA	10	15	MGT12-d-□
MGT20SA	14	24	MGT20-d-□

1. Sold in a packages of 5pcs.

■ **O Ring Set** For (MGT6, MGT12, MGT20)

Set includes 1 each of small & large size, 2 middle size.



Set Model	Nut Dia.	Tap Holder
MGT 6OR	ø16	MGT 6-d-□
MGT12OR	ø20	MGT12-d-□
MGT20OR	ø30	MGT20-d-□

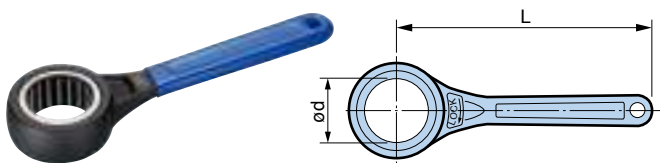
■ **MGT Nut** For (MGT6, MGT12, MGT20)

(Spare Part)



Model	øD	L	Tap Holder
MGN 6T	16	19	MGT 6-d-□
MGN12T	20	21	MGT12-d-□
MGN20T	30	24	MGT20-d-□

■ **MEGA Wrench** For (MGT6, MGT12, MGT20)

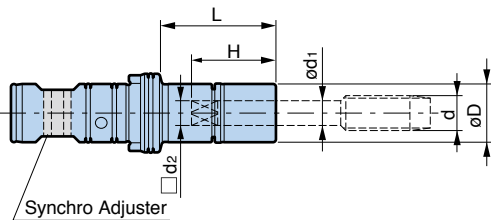


Model	ød	L	Nut
MGR16	16	90	MGN 6T
MGR20L	20	160	MGN12T
MGR30L	30	220	MGN20T

MEGA SYNCHRO[®] Tapping Holder

Available in short, long and extra long length (150mm, 200mm) to meet all production requirements.

■ Tap Holder For JIS Standard



MGT6 (Tap size : M2 – M6)

Tap Holder Model	Tap size d			ød ₁	□d ₂	H	L	øD	Weight (kg)				
	Metric	Pipe	Unify										
MGT6-M 2 - 30	M2		No.3 No.4	3	2.5	19	30	16	0.12				
							70		0.18				
							100		0.23				
							150		0.31				
-M 3 - 30	M3		No.5 No.6	4	3.2	21	30	0.12					
							70	0.18					
							100	0.23					
							150	0.31					
-M 4 - 30	M4		No.8	5	4	25	30	0.12					
							70	0.18					
							100	0.22					
							150	0.3					
-200							200	0.37					
							M5	No.10 No.12	5.5	4.5	25	30	0.12
												70	0.18
												100	0.22
150	0.3												
-200							200	0.37					
							M6	U1/4	6	4.5	25	30	0.12
												70	0.17
												100	0.22
150	0.3												
-200							200	0.37					

1. Nut is included. Wrench is ordered separately.

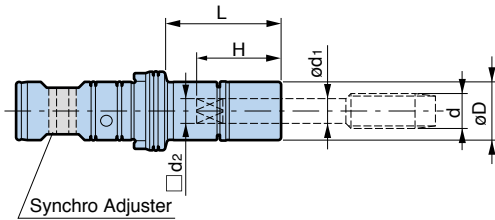
For MEGA WRENCH A 32

MGT12 (Tap size : M6 – M12)

Tap Holder Model	Tap size d			ød ₁	□d ₂	H	L	øD	Weight (kg)					
	Metric	Pipe	Unify											
MGT12-M 6,U1/4 - 30	M6	U1/4		6	4.5	27	30	20	0.19					
							70		0.29					
							100		0.36					
							150		0.48					
-200							200	0.6						
							M8	U5/16	6.1	5	28	30	0.19	
												70	0.29	
												100	0.36	
150	0.48													
-200							200	0.6						
							M10	U3/8	7	5.5	28	30	0.19	
												70	0.28	
												100	0.35	
150	0.47													
-200							200	0.59						
							M12	P1/8	U7/16	8	6	29	30	0.18
													70	0.28
													100	0.35
150	0.46													
-200							200	0.58						
							M12			8.5	6.5	29	30	0.18
													70	0.27
													100	0.34
150	0.46													
-200							200	0.58						

1. Nut is included. Wrench is ordered separately.

For MEGA WRENCH A 32



MGT20 (Tap size : M12 – M20)

Tap Holder Model	Tap size d			ød1	□d2	H	L	øD	Weight (kg)
	Metric	Pipe	Unify						
MGT20-M12 - 35	M12			8.5	6.5	29	35	30	0.55
- 85							85		0.82
-115							115		0.98
-150							150		1.17
-U1/2 - 35		U1/2		9	7	30	35	30	0.55
- 85							85		0.82
-115							115		0.98
-150							150		1.17
-M14,U9/16- 35	M14		U9/16	10.5	8	33	35	30	0.53
- 85							85		0.79
-115							115		0.95
-150							150		1.14
-P1/4 - 35		P1/4		11	9	31	35	30	0.53
- 85							85		0.79
-115							115		0.95
-150							150		1.14
-U5/8 - 35		U5/8		12	9	34	35	30	0.52
- 85							85		0.78
-115							115		0.94
-150							150		1.13
-M16 - 35	M16			12.5	10	35	35	30	0.52
- 85							85		0.77
-115							115		0.93
-150							150		1.11
-M18,U3/4- 35	M18	U3/4		14	11	36	35	30	0.51
- 85							85		0.76
-115							115		0.92
-150							150		1.1
-P3/8 - 35		P3/8		14	11	33	35	30	0.51
- 85							85		0.76
-115							115		0.92
-150							150		1.1
-M20 - 35	M20			15	12	37	35	30	0.49
- 85							85		0.74
-115							115		0.89
-150							150		1.06

1. Nut is included. Wrench is ordered separately.



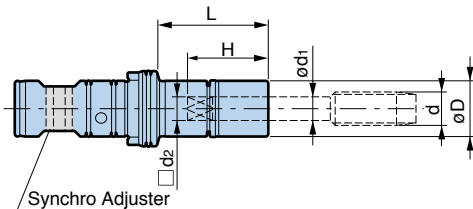
CAUTION

Tap with eccentric thread relief, which no margin exists on tap periphery, may result in oversize threads. In such case, tap with con-eccentric thread relief is recommended.

MEGA SYNCHRO® Tapping Holder

Available in short, long and extra long length (150mm, 200mm) to meet all production requirements.

■ Tap Holder For DIN & ISO standard



MGT6 (Tap size DIN:M3 – M8 ISO:M3 – M5)

Tap Holder Model	Tap size d (DIN)			Tap size d (ISO)		ød1	□d2	H	L	øD	Weight (kg)
	DIN371	DIN376	DIN353	ISO529	ISO2284						
MGT6-031025- 30						3.15	2.5	20	30	16	0.12
- 70					70				0.18		
-100				M3	100				0.23		
-150					150				0.31		
-035027- 30						3.5	2.7	21	30	16	0.12
- 70	M3	M5			70				0.18		
-100					100				0.23		
-150					150				0.31		
-040032- 30						4.0	3.15	21	30	16	0.12
- 70				M4	70				0.18		
-100					100				0.23		
-150					150				0.31		
-045034- 30						4.5	3.4	21	30	16	0.12
- 70	M4	M6			70				0.18		
-100					100				0.22		
-150					150				0.30		
-050040- 30						5.0	4.0	25	30	16	0.12
- 70					70				0.18		
-100				M5	100				0.22		
-150					150				0.30		
-200								200			0.37
-060049- 30						6.0	4.9	26	30	16	0.12
- 70	M5,M6	M8			70				0.17		
-100					100				0.22		
-150					150				0.30		
-200								200			0.37

1. Nut is included. Wrench is ordered separately.



MGT12 (Tap size DIN:M5 – M12 ISO:M6 – M12)

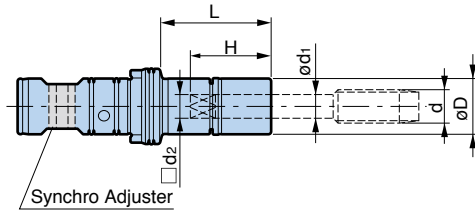
Tap Holder Model	Tap size d (DIN)			Tap size d (ISO)		ød1	□d2	H	L	øD	Weight (kg)
	DIN371	DIN376	DIN353	ISO529	ISO2284						
MGT12-060049- 30						6.0	4.9	28	30	20	0.19
- 70					70				0.29		
-100	M5,M6	M8			100				0.36		
-150					150				0.48		
-200								200			0.60
-063050- 30						6.3	5.0	28	30	20	0.19
- 70					70				0.29		
-100				M6	100				0.36		
-150					150				0.48		
-200								200			0.60
-070055- 30						7.0	5.5	28	30	20	0.19
- 70					70				0.28		
-100		M10	1/8		100				0.35		
-150					150				0.47		
-200								200			0.59
-080063- 30						8.0	6.3	29	30	20	0.18
- 70					70				0.28		
-100	M8			M8	100				0.35		
-150				1/8	150				0.46		
-200								200			0.58
-090071- 30						9.0	7.1	30	30	20	0.18
- 70					70				0.27		
-100		M12		M12	100				0.34		
-150					150				0.46		
-200								200			0.58

1. Nut is included. Wrench is ordered separately.



A

BBT/BT SHANK



MGT20 (Tap size DIN:M10 – M20 ISO:M10 – M20)

Tap Holder Model	Tap size d (DIN)			Tap size d (ISO)		ød1	□d2	H	L	øD	Weight (kg)
	DIN371	DIN376	DIN353	ISO529	ISO2284						
MGT20-090071- 35									35	30	0.55
- 85									85		0.82
-115		M12		M12		9.0	7.1	30	115		0.98
-150									150		1.17
-100080- 35									35		0.54
- 85				M10	1/4	10.0	8.0	33	85		0.80
-115									115		0.96
-150									150		1.15
-110090- 35									35		0.53
- 85		M14	1/4			11.0	9.0	34	85		0.79
-115									115		0.95
-150									150		1.14
-112090- 35									35		0.53
- 85				M14		11.2	9.0	34	85		0.79
-115									115		0.95
-150									150		1.14
-120090- 35									35	0.52	
- 85		M16	3/8			12.0	9.0	34	85	0.78	
-115									115	0.94	
-150									150	1.13	
-125100- 35									35	0.52	
- 85				M16	3/8	12.5	10.0	35	85	0.77	
-115									115	0.93	
-150									150	1.11	
-140110- 35									35	0.51	
- 85		M18				14.0	11.0	36	85	0.76	
-115									115	0.92	
-150									150	1.10	
-140112- 35									35	0.51	
- 85				M18,M20		14.0	11.2	36	85	0.76	
-115									115	0.92	
-150									150	1.10	
-160120- 35		M20	1/2			16.0	12.0	37	35	0.51	

1. Nut is included. Wrench is ordered separately.

For MEGA WRENCH A 32

Tap Shank of DIN Standard

DIN 371 Machine Tap with Reinforced Shank

DIN 376 Machine Tap with Reduced Shank



CAUTION

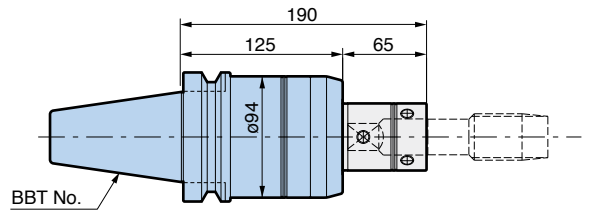
Tap with eccentric thread relief, which no margin exists on tap periphery, may result in oversize threads. In such case, tap with con-eccentric thread relief is recommended.

MEGA SYNCHRO[®] Tapping Holder

Coolant-through hole

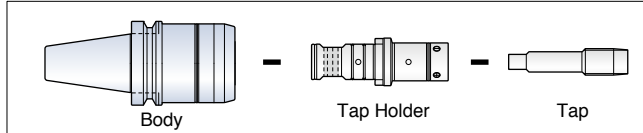
For Large Tap MGT36 Tapping Range : M20 - M36

Compensation for synchronization error eliminates heavy thrust load of large diameter tapping.

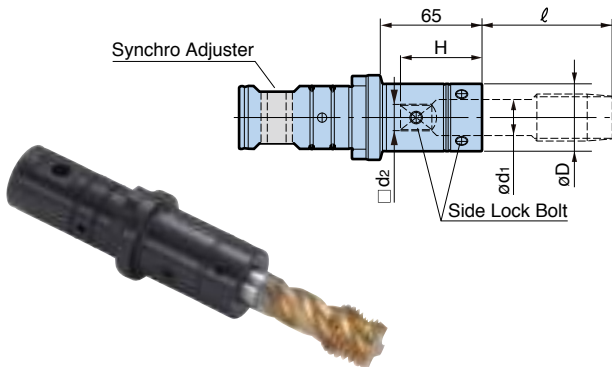


Model **BBT50-MGT36-125** Weight : 7.2kg

BIG-PLUS tools can be used in machining centers with conventional spindles.



Tap Holder For (MGT36)
JIS standard (M20-M36, P1/2, P3/4, P1)



Tap Holder Model	Tap		ϕd_1	$\square d_2$	H	ϕD	Weight (kg)
	Size	ℓ					
MGT36-M20-65	M20	65 - 68	15	12	40	32	1.2
-M22-65	M22	71 - 74	17	13	44	34	1.3
-M24-65	M24	74 - 77	19	15	46	39	1.4
-M27-65	M27	80 - 83	20	15	50	40	1.4
-M30-65	M30	83 - 86	23	17	52	43	1.5
-M33-65	M33	88 - 91	25	19	57	49	1.6
-M36-65	M36	94 - 97	28	21	61	52	1.6
-P1/2-65	P1/2	38 - 41	18	14	42	35	1.3
-P3/4-65	P3/4	38 - 41	23	17	47	43	1.5
-P1 -65	P1	49 - 52	26	21	46	50	1.7

1. Tap projection length " ℓ " is in accordance to JIS standard.

For DIN TAP HOLDER B 10

MGT Set Screw For (MGT36)
(Made of high-strength material)
Secures the Tap Holder into body.

Model **MGT36SS**

Synchro Adjuster For (MGT36)
(Made of special material)
Replaceable bushing in Tap Holder.

Model **MGT36SA**

O Ring Set For (MGT36)
Set O Ring for Tap Holder.

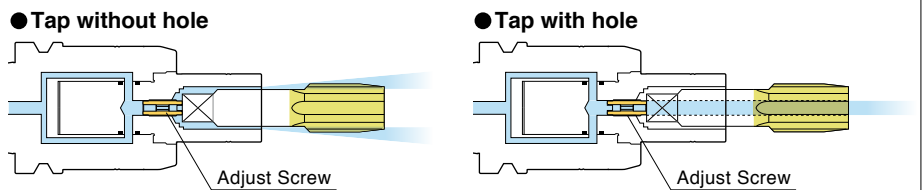
Model **MGT36OR**

Adjust Screw For (MGT36)
Aids easy adjustment of tap projection length.

Model **MGT36AJ**

Provides 2-functions.

- Adjustment of tap projection length (Adjustable amount : 3mm).
- Coolant supply adjustable in 2 ways by reversing the Adjust Screw.

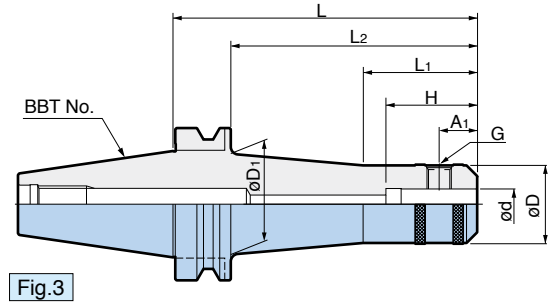
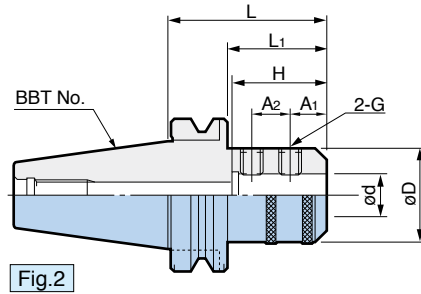
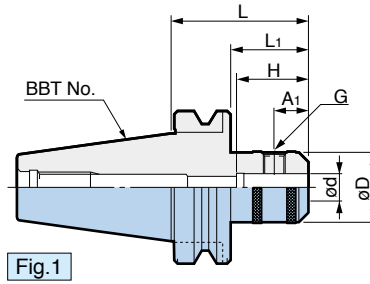


Side Lock Bolt Set For (MGT36)
Spare locking screw to clamp a tap.

Set Model	Tap Holder Model	Bolt size	Set Model	Tap Holder Model	Bolt size
MGT36SL 6	MGT36-M20-65	M6× 8L (x4) + M6×10L (x2)	MGT36SL10	MGT36-M33-65	M10×12L (x4) + M10×14L (x2)
	-M22-65			-M36-65	
	-P1/2-65	-P1 -65			
MGT36SL 8	-M24-65	M8×10L (x4) + M8×12L (x2)			
	-M27-65				
	-M30-65				
	-P3/4-65				

SIDE LOCK HOLDER

Coolant-through hole
Clamping Range : $\phi 6 - \phi 50$



For ENDMILL

BIG-PLUS tools can be used in machining centers with conventional spindles.

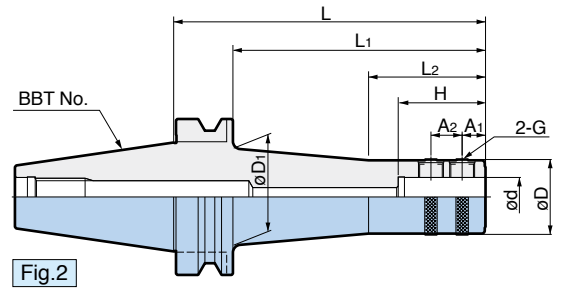
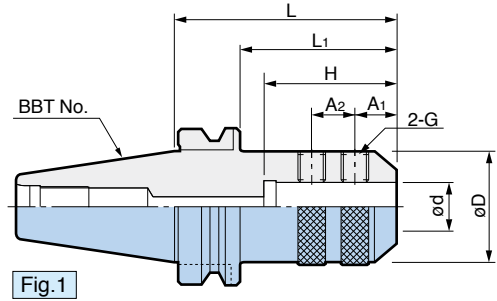
Model	Fig.	ϕd (H5)	ϕD	ϕD_1	L	L1	L2	A1	A2	H	G	Weight (kg)
BBT30-ISL 6- 60	1	6	25	-	60	38	-	18	-	85※	M 6	0.6
-ISL 8- 60		8	28								M 8	
-ISL10- 60		10	35								M10	
-ISL12- 60		12	42								M12	
-ISL16- 60		16	48								M14	
BBT40-ISL12- 75	1	12	42	-	75	48	-	22.5	-	110※	M12	1.5
-ISL16- 75		16	48								M14	
-ISL20- 75		20	52								M16	
-ISL25- 90	2	25	63.5	-	90	63	-	24	25	60	M18xP2	2.1
-ISL32-105		32	72		105	-		24	28	82	M20xP2	2.9
BBT50-ISL16- 90	1	16	48	-	90	52	-	24	-	145※	M14	4.4
-150	3			56.1	150	60	112			205※		5.0
-200	3			62.2	200	75	162			255※		5.9
-ISL20- 90	1	20	52	-	90	52	-	25	-	145※	M16	4.5
-150	3			60.1	150	60	112			60		5.3
-200	3			66.2	200	75	162			60		5.9
-ISL25-105	2	25	65	-	105	67	-	24	25	60	M18xP2	4.6
-150				150	112	60						5.3
-200				200	162	60						6.2
-ISL32-105	2	32	72	-	105	67	-	24	28	90	M20xP2	5.3
-150				150	112	90						6.1
-200				200	162	90						7.3
-ISL40-120	2	40	90	-	120	82	-	30	32	90	M20xP2	6.5
-150				150	112	90						8.1
-200				200	162	90						10.5
-ISL42-120	2	42	90	-	120	82	-	30	32	90	M20xP2	6.5
-150				150	112	90						8.0
-200				200	162	90						10.4
-ISL50-121	2	50	99.5	-	121	83	-	35	35	90	M24xP2	7.2

1. H dimension marked with ※ indicates this dimension to the back end of the retention knob.

Coolant-through hole

SIDE LOCK HOLDER

Clamping Range : $\phi 16 - \phi 50$



For DRILL

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	ϕd	ϕD	ϕD_1	L	L ₁	L ₂	A ₁	A ₂	H	G	Weight (kg)
BBT30-TSL16- 75	1	16	48	-	75	-	-	14	14	48	M10	1.0
-TSL20- 75		20			75			14	14	50	M10	1.0
-TSL25- 80		25			80			20	15	56	M16	1.0
BBT40-TSL16- 90	1	16	48	-	90	63	-	14	14	48	M10	1.7
-105					105	78						1.9
-TSL20- 90					20	90						63
-105		105	78	1.9								
-TSL25- 90		25	48	-	90	63	-	15	20	56	M16	1.6
-105					105	78						1.8
-TSL32-105		32	63	-	105	78	-	15	20	60	M16	2.4
-135					135	108						3.0
-TSL40-105					40	105						-
BBT50-TSL16- 90	1	16	48	-	90	52	-	14	14	48	M10	4.2
-135					135	97						4.8
-165					165	127						5.2
-200	2			62.2	200	162	75					6.1
-TSL20- 90	1	20	48	-	90	52	-	14	14	50	M10	4.2
-135					135	97						4.8
-165					165	127						5.2
-200	2			62.2	200	162	75					6.0
-250		64	250	212	90	6.8						
-TSL25-105	1	25	48	-	105	67	-	15	20	56	M16	4.3
-135					135	97						4.7
-165					165	127						5.1
-200	2			62.2	200	162	75					5.9
-250		64	250	212	90	6.7						
-TSL32-105	1	32	63	-	105	67	-	15	20	60	M16	4.8
-135					135	97						5.5
-165					165	127						6.2
-200					200	162						6.9
-250					250	212						8.0
-TSL40-105	1	40	68	-	105	67	-	15	25	70	M16	4.8
-135					135	97						5.6
-165					165	127						6.4
-200					200	162						7.3
-250				250	212							8.6
-TSL50-105	1	50	84	-	105	67	-	15	25	70	M16	5.4
-150					150	112						7.2

Coolant-through hole

SIDE LOCK HOLDER Type SLE

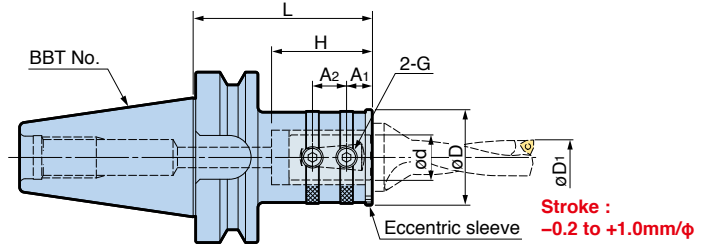
Clamping Range : $\phi 20 - \phi 40$

Single operation with an indexable insert drill achieves $\pm 0.1\text{mm}$ tolerance.



Drilling diameter is adjustable by revolving the eccentric sleeve.

Stroke
-0.2 to +1.0mm/φ



BIG-PLUS tools can be used in machining centers with conventional spindles.

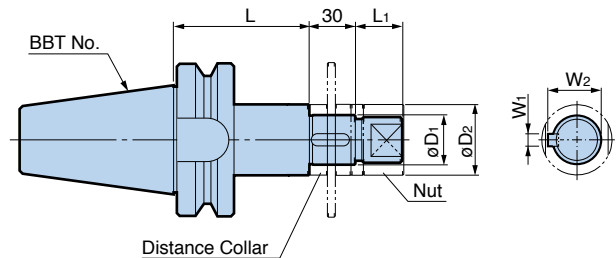
Model	ϕd	ϕD	L	A ₁	A ₂	H	G	Weight (kg)	Drill dia. (ϕD_1)
BBT40-TSLE20- 90	20	50	90	14	14	53	M10	1.7	12 – 19.8
-TSLE25- 90	25	56		15	20	59	M12	1.8	20 – 24.5
-TSLE32-105	32	66		16	20	63	M12	2.5	25 – 29.5
BBT50-TSLE20-105	20	50	105	14	14	53	M10	4.5	12 – 19.8
-TSLE25-105	25	56		15	20	59	M12	4.6	20 – 24.5
-TSLE32-105	32	66		16	20	63	M12	4.9	25 – 29.5
-TSLE40-105	40	80		18	25	73	M16	5.4	30 – 36



Caution

External insert and flat on the shank of the drill should be aligned each other. Drills without this alignment cannot be used.

SIDE CUTTER ARBOR



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	ϕD_1 (h6)	W ₁	W ₂	ϕD_2	L	L ₁	Weight (kg)
BBT40-SCA25.4 - 75	25.4	6.35	27.78	40	75	25	1.9
-120					120		2.3
-SCA31.75- 75	31.75	7.92	34.92	46	75	30	2.4
BBT50-SCA25.4 - 90	25.4	6.35	27.78	40	90	25	4.7
-135					135		5.1
-SCA31.75- 90	31.75	7.92	34.92	46	90	30	5.1
-135					135		5.7
-SCA38.1 - 90	38.1	9.52	42.06	55	90	36	5.8
-135					135		6.8

1. Nut is included.
2. Distance collars of 5mm, 8mm, 10mm, and 12mm are included.

MORSE TAPER HOLDER



Precise finish of inner taper guarantees high concentricity.

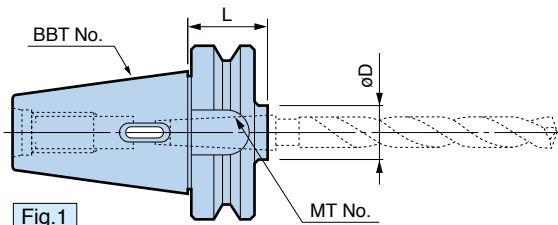


Fig.1

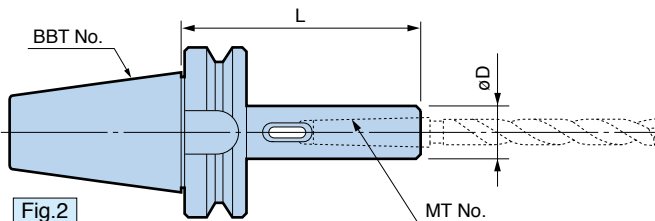


Fig.2

BIG-PLUS tools can be used in machining centers with conventional spindles.

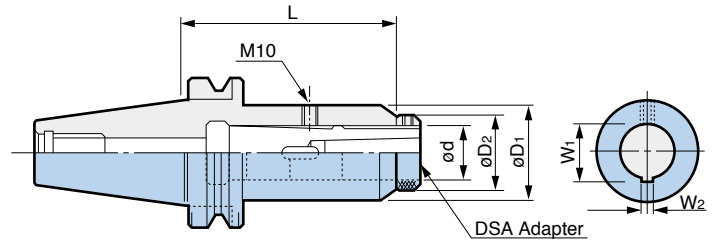
Model	Fig.	MT No.	øD	L	Weight (kg)
BBT30-MTA1- 60	1	1	25	60	0.5
-MTA2- 60		2	32	60	
-MTA3- 80		3	40	80	
BBT40-MTA1- 45	1	1	25	45	1.0
-120	2			120	1.3
-MTA2- 45	1	2	32	45	1.0
-120	2			120	1.6
-MTA3- 75	1	3	40	75	1.0
-135	2			135	1.7
-MTA4- 90	2	4	50	90	1.6
BBT50-MTA1- 45	1	1	25	45	3.9
-120	2			120	4.2
-180				180	4.3
-MTA2- 45	1	2	32	45	3.9
-135	2			135	4.3
-180				180	4.6
-MTA3- 45	1	3	40	45	3.8
-150	2			150	4.6
-180				180	4.9
-MTA4- 75	1	4	50	75	3.9
-180	2			180	5.4
-MTA5-105	1	5	65	105	4.5
-210	2			210	7.2

Morse taper size and corresponding drill diameter

MT No.	Drill diameter ※
1	ø 3 – ø14
2	ø14.5 – ø23
3	ø23.5 – ø31.5
4	ø32 – ø50
5	ø51 – ø76

※ Drill diameter JIS B4302 1 Standard

SIDE LOCK HOLDER TYPE B



BIG-PLUS tools can be used in machining centers with conventional spindles.

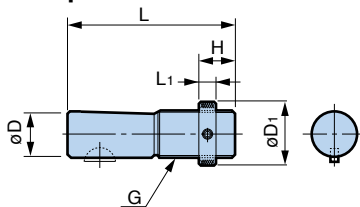
Model	ød	øD1	øD2	L	W1	W2	DSA Adapter	Weight (kg)
BBT40-SLB26-105	26	50	39	105	28.2	5	DSA26	1.6
-SLB35-135	35	60	48	135	37.6	6	DSA35	2.2
BBT50-SLB26-105	26	50	39	105	28.2	5	DSA26	4.7
-SLB35-135	35	60	48	135	37.6	6	DSA35	5.6

1. Use with the DSA Adapter shown below.

For SIDE LOCK HOLDER TYPE B

DSA ADAPTER

DSA Adapter dimensions



Model	øD	L	L1	øD1	H	G
DSA26-□□	26	92	12	39	26	TM26×P2
DSA35-□□	35	117	12	48	32	TM35×P2

■ DSA Drill Socket

- For morse taper drills with tang.



Model	MT No.	Weight (kg)
DSA26-MT1	1	0.4
-MT2	2	0.3
DSA35-MT1	1	0.9
-MT2	2	0.8
-MT3	3	0.7

■ DSA Jacobs Taper Insert

- Holder for keyless chuck, rubber chuck, etc.



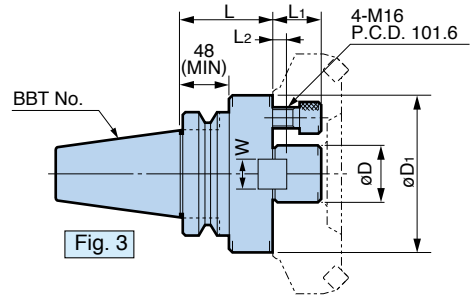
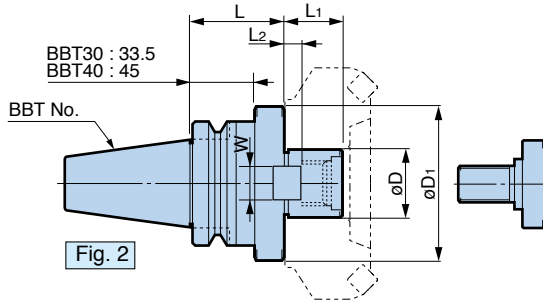
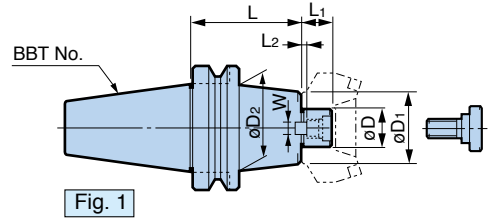
Model	JT No.	Weight (kg)
DSA26-JT1	1	0.4
DSA26-JT2	2	0.4
DSA26-JT6	6	0.5
DSA35-JT6		1.0

FACE MILL ARBOR Type FMA



A

BBT/BT SHANK



BIG-PLUS tools can be used in machining centers with conventional spindles.

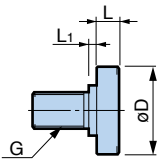
Model	Fig.	øD (h6)	øD1	øD2	L	L1	Driver keys		Clamp Bolt	Weight (kg)
							L2	W		
BBT30-FMA22.225- 45	1	22.225	42	—	45	18	4	8.3	M10-40L	0.9
-FMA25.4 - 45	2	25.4	50	—	45	22	5	9.5	MBA-M12	1.0
BBT40-FMA25.4 - 45	1	25.4	50	—	45	22	5	9.5	MBA-M12	1.5
- 90				90	2.3					
-150 ※				150	3.4					
-FMA31.75 - 45		31.75	60	—	45	30	7	12.7	MBA-M16	1.7
- 75				75	2.4					
-105 ※	105			3.0						
-150 ※	150			4.0						
-FMA38.1 - 60	2	38.1	80	—	60	34	9	15.9	MBA-M20	2.5

Models marked with ※ are not equipped with a hole through for coolant.

1. Standard Clamp Bolt (MBA-M□□) is included.

2. To supply coolant through the arbor, Clamping Bolt with a hole through (TMBA-M□□) is required.

CLAMP BOLT



Standard Clamp Bolt (accessory)	Clamp Bolt with a hole through (option)	øD	L	L1	G
Model	Model				
MBA-M12	TMBA-M12	33	10	2	12
-M12H	—			—	
-M16	-M16	40	10	6	16
-M16H	—			—	
-M20	-M20	50	14	6	20
-M20H	—			—	
-M24	-M24	65	14	10	24

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	øD (h6)	øD ₁	øD ₂	L	L ₁	Driver keys		Clamp Bolt	Weight (kg)							
							L ₂	W									
BBT50-FMA25.4 - 45	1	25.4	50	70	45	22	5	9.5	MBA-M12	4.1							
- 90					90					5.0							
-150*					150					6.4							
-200*					200					7.7							
-250*					250					8.8							
-300*					300					9.9							
-350*					350					11.0							
-FMA31.75 - 45					1					31.75	60	70	45	30	7	12.7	MBA-M16
- 75	75	5.1															
-105	105	5.6															
-150*	150	6.7															
-200*	200	8.3															
-250*	250	9.6															
-300*	300	10.9															
-350*	350	12.2															
-FMA38.1 - 45	1	38.1	80	-		45	34	9	15.9			MBA-M20	4.6				
- 75						75							5.4				
-105					105	6.7											
-150*					150	8.5											
-200*					200	10.4											
-250*					250	12.4											
-300*					300	14.3											
-350*					350	16.3											
-FMA47.625- 75*	3	47.625	128.57	-	75	38	12.5	25.3	4-M16	8.1							
-100*					100					9.6							
-150*					150					12.7							
-FMA50.8 - 45	1	50.8	100	-	45	36	10	19.05	MBA-M24	4.8							
- 75					75					6.6							
-105					105					8.5							
-150*					150					11.2							
-200*					200					14.3							
-250*					250					17.4							
-300*					300					20.4							
-350*					350					23.5							

Models marked with * are not equipped with a hole through for coolant.

1. Standard Clamp Bolt (MBA-M□□) is included.

2. To supply coolant through the arbor, Clamping Bolt with a hole through (TMBA-M□□) is required.

FACE MILL ARBOR Type FMC

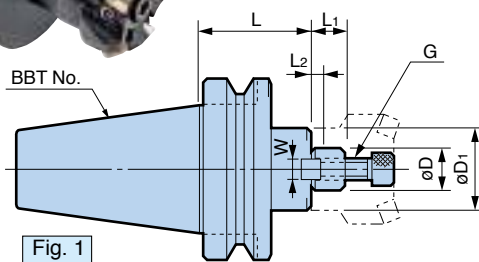


Fig. 1

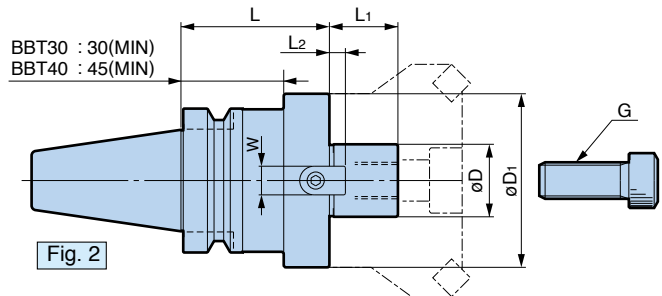


Fig. 2

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	øD (h6)	øD1	L	L1	Driver keys		G	Weight (kg)
						L2	W		
BBT30-FMC16 - 45	2	16	34	45	16	5	8	M8	0.6
-FMC22 - 45	1	22	45		18	5	10	M10	0.8
-FMC27 - 45	1	27	70		20	6	12	M12	1.0
-FMC25.4- 45	2	25.4	70	45	20	5	9.5	M12	1.0
BBT40-FMC22 - 45	1	22	45	45	18	5	10	M10	1.3
- 90				90					1.7
-150 ※				150					2.5
-FMC27 - 60	2	27	70	60	20	6	12	M12	2.0
- 90				90					2.6
-150 ※				150					4.1
-FMC32 - 60	2	32	85	60	22	7	14	M16	2.1
- 75				75					2.5
-105				105					3.3
-FMC25.4- 60	2	25.4	70	60	20	5	9.5	M12	2.0
- 90				90					2.7
-150 ※				150					4.2
-FMC38.1- 60	2	38.1	85	60	22	7	15.9	M16	2.3
- 75				75					2.7
BBT50-FMC22 - 60	1	22	45	60	18	5	10	M10	4.1
-105				105					4.6
-150 ※				150					4.9
-200 ※				200					6.5
-250 ※				250					7.3
-FMC27 - 45	1	27	70	45	20	6	12	M12	4.1
- 90				90					5.1
-150 ※				150					6.9
-200 ※				200					8.5
-250 ※				250					10.0
-FMC32 - 45	1	32	85	45	22	7	14	M16	4.3
- 75				75					5.6
-105				105					7.0
-150 ※				150					8.7
-200 ※				200					10.9
-250 ※	250	13.1							
-FMC25.4- 45	1	25.4	70	45	20	5	9.5	M12	3.7
- 90				90					5.1
-150 ※				150					6.9
-200 ※				200					8.5
-250 ※				250					10.0
-FMC38.1- 45	1	38.1	85	45	22	7	15.9	M16	4.2
- 75				75					5.5
-105 ※				105					6.7

1. Models marked with ※ do not have a through coolant hole.
 2. Clamp Bolt (Cap Screw) is included.
 3. By utilizing a clamping bolt with a hole through, coolant is supplied through the bolt.

FACE MILL ARBOR Type FMH



For cutters that require a coolant hole through the pilot.

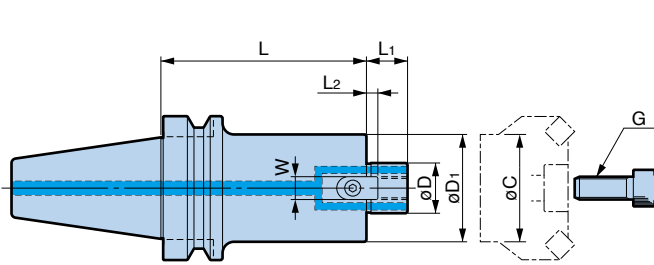
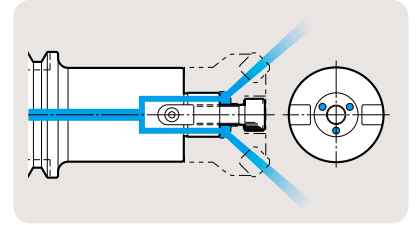


Fig.1

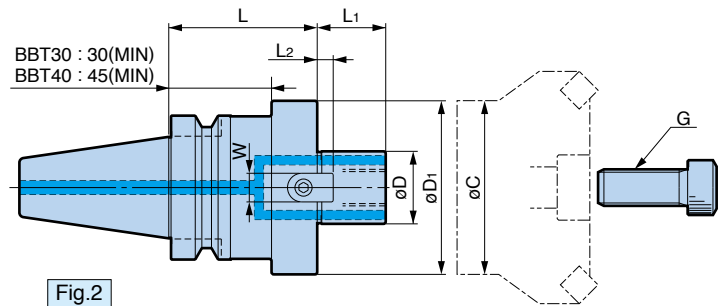


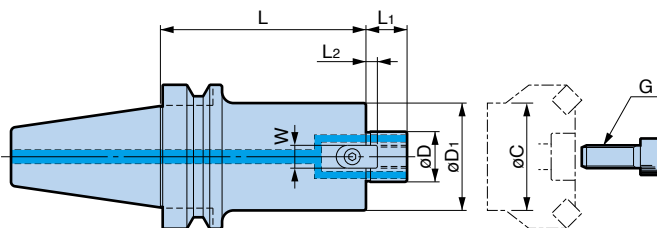
Fig.2

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	øD (h6)	øD1	L	L1	Driver keys		G	Weight (kg)	øC Min.
						L2	W			
BBT30-FMH16 -37- 35	1	16	37	35	16	5	8	M 8	0.53	32
-FMH22 -47- 45	2	22	47	45	18	5	10	M10	0.73	43
-FMH27 -60- 45	2	27	60	45	20	6	12	M12	0.89	46
BBT40-FMH16 -37- 40	1	16	37	40	16	5	8	M 8	1.1	32
-FMH22 -47- 45	1	22	47	45	18	5	10	M10	1.3	36
- 60				60					1.5	
- 90				90					1.9	
-150				150					2.7	
-FMH22 -60- 45	1	22	60	45	18	5	10	M10	1.5	49
- 60				60					1.8	
- 90				90					2.5	
-FMH27 -60- 45				1					27	
- 60	60	1.8								
- 90	90	2.5								
-FMH27 -76- 60	2	27	76		60	20	6	12		M12
- 90				90	2.8					
-FMH32 -96- 60	2	32	96	60	22	7	14	M16	2.4	80
-FMH22.225-47- 45	1	22.225	47	45	17	3.5	8	M10	1.3	39
- 60				60					1.5	
- 90				90					1.9	
-150				150					2.7	
-FMH22.225-60- 45	1	22.225	60	45	17	3.5	8	M10	1.5	53
- 60				60					1.8	
- 90				90					2.5	
-FMH25.4 -70- 60				2					25.4	
- 90	90	2.7								
-105	105	3.1								
-FMH31.75 -76- 60	2	31.75	76		60	30	7	12.7		M16
- 90				90	2.9					
-FMH31.75 -96- 60	2	31.75	96	60	30	7	12.7	M16	2.5	84

1. By utilizing a clamping bolt with a hole through, coolant is supplied through the bolt.
2. Hexagon Socket Head Cap Screw is included.

FACE MILL ARBOR Type FMH



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	øD (h6)	øD1	L	L1	Driver keys		G	Weight (kg)	øC Min.
					L2	W			
BBT50-FMH16 - 37- 60	16	37	60	16	5	8	M8	3.8	32
-105			105					4.1	
-150			150					4.5	
-200			200					4.9	
-FMH22 - 47- 60	22	47	60	18	5	10	M10	4.1	36
-105			105					4.7	
-150			150					5.3	
-200			200					6.0	
-250			250					6.7	
-300			300					7.8	
-FMH22 - 60- 60	22	60	60	18	5	10	M10	4.2	49
-105			105					5.2	
-150			150					5.2	
-200			200					7.4	
-250			250					8.5	
-300			300					9.6	
-FMH27 - 60- 45	27	60	45	20	6	12	M12	3.9	46
- 90			90					5.0	
-150			150					6.3	
-200			200					7.4	
-250			250					8.5	
-300			300					9.6	
-FMH27 - 76- 45	27	76	45	20	6	12	M12	4.0	62
- 90			90					5.6	
-150			150					7.8	
-200			200					9.7	
-250			250					11.4	
-300			300					13.2	
-FMH32 - 96- 45	32	96	45	22	7	14	M16	4.2	80
- 90			90					6.8	
-150			150					10.2	
-200			200					13.3	
-250			250					16.1	
-300			300					19.0	
-FMH40 -100- 45	40	100	45	26	8.5	16	M20 (MBA-M20H)	4.4	80
- 75			75					6.2	
-105			105					8.1	

1. By utilizing a clamping bolt with a hole through, coolant is supplied through the bolt.
2. Hexagon Socket Head Cap Screw is included.

BIG-PLUS tools can be used in machining centers with conventional spindles.

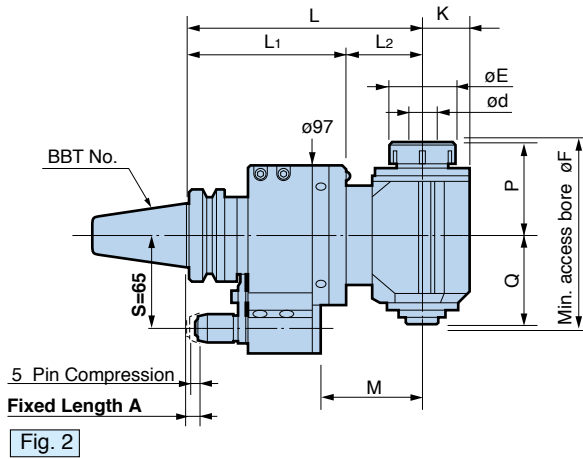
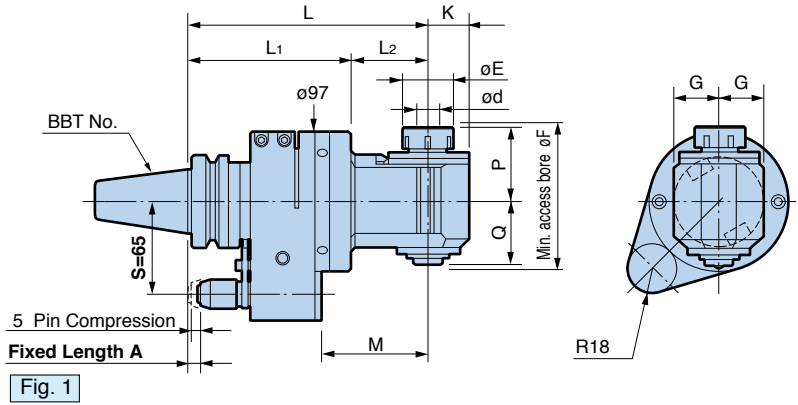
Model	øD (h6)	øD1	L	L1	Driver keys		G	Weight (kg)	øC Min.
					L2	W			
BBT50-FMH22.225-47- 60	22.225	47	60	17	3.5	8	M10	4.1	39
-105			105					4.7	
-150			150					5.3	
-200			200					6.0	
-250			250					6.6	
-300			300					7.7	
-350			350					8.9	
-FMH22.225-60- 60			22.225					60	
-105	105	5.2							
-150	150	6.2							
-200	200	7.4							
-250	250	8.5							
-300	300	9.5							
-350	350	10.6							
-FMH25.4 -70- 45	25.4	70		45	22	5	9.5		M12
- 60			60	4.5					
- 90			90	5.4					
-150			150	7.2					
-200			200	8.7					
-250			250	10.3					
-300			300	11.8					
-FMH31.75 -76- 45			31.75	76				45	
- 75	75	5.2							
-105	105	6.3							
-150	150	7.9							
-200	200	9.7							
-250	250	11.6							
-300	300	13.4							
-FMH31.75 -96- 45	31.75	96			45	30	7	12.7	M16
- 75			75	6.0					
-105			105	7.7					
-150			150	10.3					
-200			200	13.1					
-250			250	16.4					
-300			300	19.2					
-FMH38.1 -100- 45			38.1	100	45				
- 75	75	6.3							
-105	105	8.1							
-150	150	10.9							
-200	200	14.5							
-250	250	17.5							
-300	300	20.5							

1. By utilizing a clamping bolt with a hole through, coolant is supplied through the bolt.
 2. Hexagon Socket Head Cap Screw is included.

ANGLE HEAD

It is the outstanding rigidity and accuracy of the NEW BABY CHUCK, used for holding the cutting tool, that produces high precision with less runout. Available in various sizes to meet specific production requirements.

AG90 NBS type SPINDLE ANGLE : 90°



BIG-PLUS tools can be used in machining centers with conventional spindles.



Exclusive STOP BLOCK is required.

● The rotation of the cutting tool is in reverse direction of the machine spindle. (Speed Ratio 1:1)

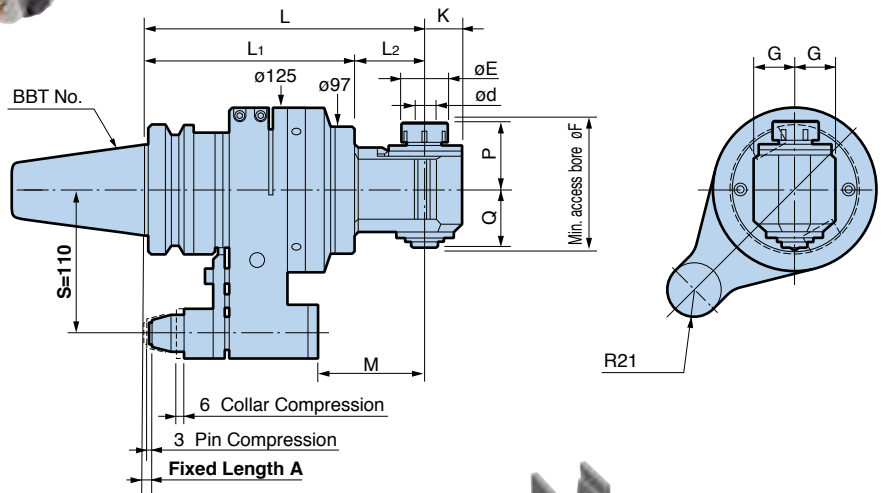
Model	Fig.	ød	øE	G	K	L	L1	L2	M	P	Q	øF	Collet	Max. min ⁻¹	Weight (kg)
BBT40-AG90/NBS 6 -170	1	0.25 – 6	20	21	17	170	115	55	77	33	29	67	NBC 6	6,000	5.1
						200		85	107						5.3
						230		115	137						5.5
						260		145	167						5.7
-AG90/NBS10 -170	1	1.5 – 10	30	30	25	170	115	55	77	45	43	91	NBC10	6,000	5.5
						200		85	107						5.9
						230		115	137						6.2
-AG90/NBS13 -170	1	2.5 – 13	35	31	28	170	115	55	77	52	45	101	NBC13	6,000	5.6
						200		85	107						6.0
						230		115	137						6.3
-AG90/NBS20S-165S	2	2.5 – 20	46	35	33	165	112	53	72	65	62	132	NBC20	3,000	8.0

- The standard Fixed Length A is 8mm. Other lengths are available upon request.
- The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
- Clamping nut and wrench are included. Collet must be ordered separately.
- New Baby Collet for endmill model NBC□-□EAA cannot be used.
- BBT30 models are also available. Please contact **BIG** agent.

For NEW BABY COLLET G 3

For STOP BLOCK G 25

A
BBT/BT SHANK



BIG-PLUS tools can be used in machining centers with conventional spindles.



Exclusive STOP BLOCK for ANGLE HEAD is required.

● The rotation of the cutting tool is in reverse direction of the machine spindle. (Speed Ratio 1:1)

Model	ød	øE	G	K	L	L1	L2	M	P	Q	øF	Collet	Max. min ⁻¹	Weight (kg)
BBT50-AG90/NBS 6-215	0.25 – 6	20	21	17	215	160	55	82	33	29	67	NBC 6	6,000	12.6
-245					85		112	12.8						
-275					115		142	13.0						
-305					145		172	13.2						
-AG90/NBS10-215	1.5 – 10	30	30	25	215	160	55	82	45	43	91	NBC10	6,000	13.0
-245					85		112	13.4						
-275					115		142	13.7						
-AG90/NBS13-215	2.5 – 13	35	31	28	215	160	55	82	52	45	101	NBC13	6,000	13.1
-245					85		112	13.5						
-275					115		142	13.8						
-AG90/NBS20-230	2.5 – 20	46	35	35	230	160	70	97	65	62	132	NBC20	3,000	14.2

1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
 2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
 3. Clamping nut and wrench are included. Collet must be ordered separately.
 4. New Baby Collet for endmill model NBC□-□EAA cannot be used.
- S=80 type is available upon request.**

For NEW BABY COLLET G 3

For STOP BLOCK G 25

ANGLE HEAD

Compact and lightweight design combined with the accuracy required for drilling.
Ideal size for small machining centers.

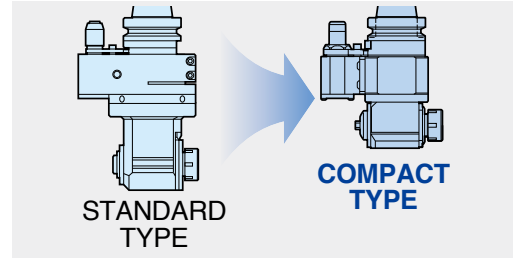
AG90 COMPACT type SPINDLE ANGLE : 90°

For drilling

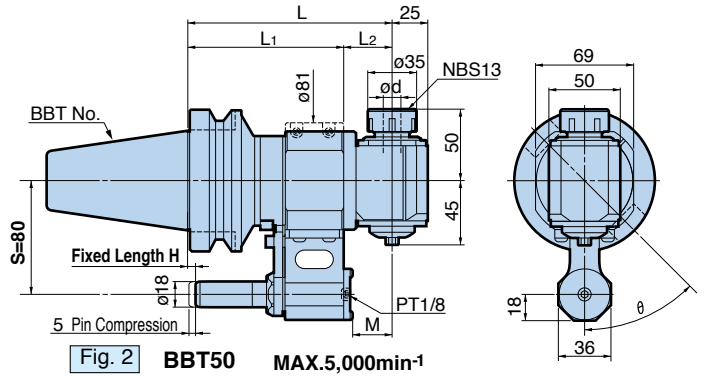
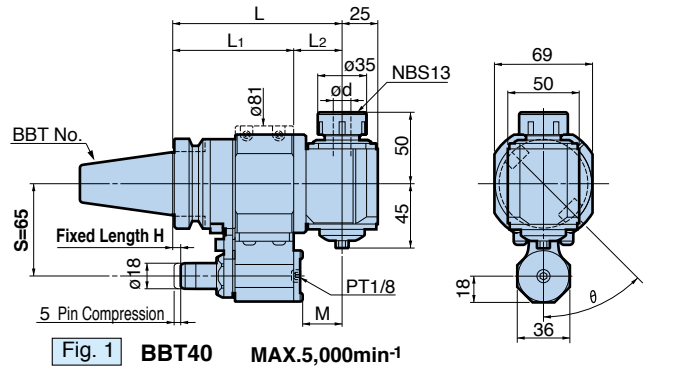
High quality components

- High precision New Baby Collet
- Spiral bevel gears and angular contact bearings
- Advanced non-contact sealing structure

■ Case & head sizes are substantially reduced.



Light
&
Compact



BIG-PLUS tools can be used in machining centers with conventional spindles.

- The rotation of the cutting tool is in reverse direction of the machine spindle.



Exclusive STOP BLOCK is required.
Exclusive STOP BLOCK for compact type is the same as HIGH SPINDLE & Hi JET HOLDER.

Model	Fig.	ød	L	L1	L2	M	Collet	Speed Ratio	Weight (kg)
BBT40-AG90-13-120	1	2.5 - 13	120	86	34	27.85	NBC13	1 : 1	4.5
-170			170			77.85			5.5
BBT50-AG90-13-145	2	2.5 - 13	145	111	34	27.85	NBC13	1 : 1	7.6
-195			195			77.85			8.6

1. Clamping nut and wrench are included. Collet must be ordered separately.
2. New Baby Collet for endmill model NBC13-□EAA cannot be used.
3. Fixed Length H and angle θ vary depending on machine models. Please specify your required dimensions.
4. 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.

For NEW BABY COLLET G 3 For STOP BLOCK G 25

Application example



High rigidity and runout accuracy provides stable machining.

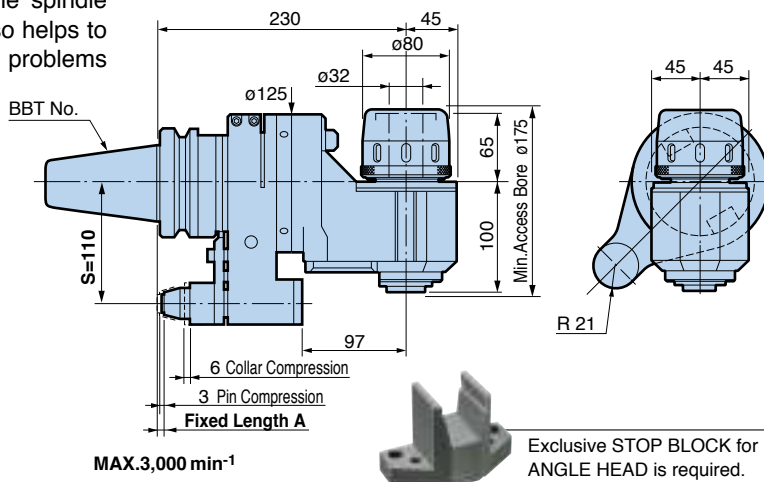
	Drilling
Cutter	ø12 carbide drill
Workpiece	C50(S50C)
Cutting Speed	70m/min
Cutting Feed	372mm/min 0.2mm/rev
Spindle Speed	1,860min ⁻¹

Improved versatility is achieved from the 32mm capacity Milling Chuck by using parallel reduction collets and other accessories.

AG90 HMC type SPINDLE ANGLE : 90°

[STANDARD TYPE]

Designed for greater rigidity by having the face of the spindle bore in line with the center of the machine spindle. Also helps to minimize interference problems with ATC and storage problems within magazine.



BIG-PLUS tools can be used in machining centers with conventional spindles.

- The cutter rotates in the same direction of the machine spindle.

Model	Weight (kg)
BBT50-AG90/HMC32-230	16.8

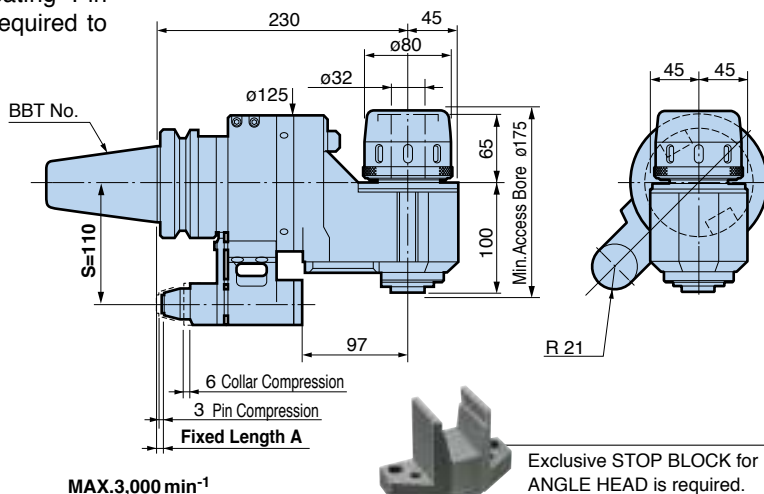
1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
3. Wrench (FK80-90) is included.

For STOP BLOCK G 25

For STRAIGHT COLLET G 15

[HIGH RIGIDITY TYPE]

Provided with a steel housing and reinforced Locating Pin assembly for applications where increased rigidity is required to perform various types of heavier machining.



BIG-PLUS tools can be used in machining centers with conventional spindles.

- The cutter rotates in the same direction of the machine spindle.

Model	Weight (kg)
BBT50-AG90/HMC32-230S	18.1

1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
3. Wrench (FK80-90) is included.

S=80 type is available upon request.

For STRAIGHT COLLET G 15

For STOP BLOCK G 25

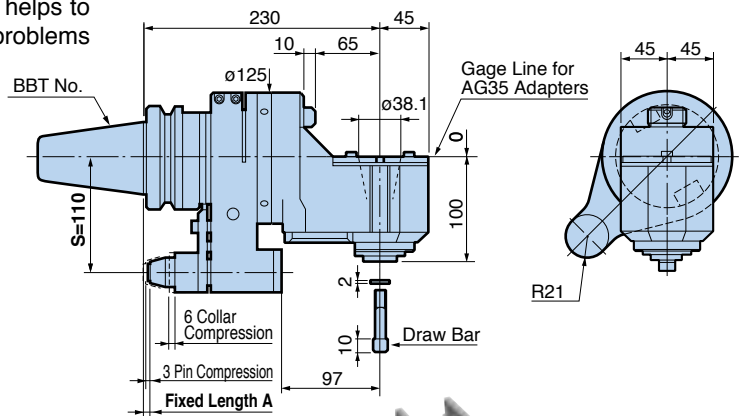
ANGLE HEAD

Spindle head is equipped with a short taper for quick changing of various adapters.

AG90 BUILD-UP type SPINDLE ANGLE : 90°

[STANDARD TYPE]

Designed for greater rigidity by having the face of the spindle bore in line with the center of the machine spindle. Also helps to minimize interference problems with ATC and storage problems within the magazine.



MAX.3,000 min⁻¹



Exclusive STOP BLOCK for ANGLE HEAD is required.

BIG-PLUS tools can be used in machining centers with conventional spindles.

- The cutter rotates in the same direction of the machine spindle.

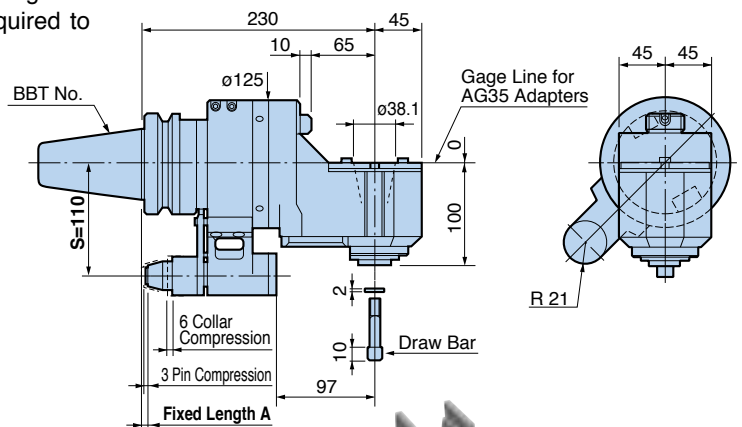
Model	Weight (kg)
BBT50-AG90/AGH35-230	15.0

1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.

For STOP BLOCK **G 25**

[HIGH RIGIDITY TYPE]

Provided with a steel housing and reinforced Locating Pin assembly for applications where increased rigidity is required to perform various types of heavier machining.



MAX.3,000 min⁻¹



Exclusive STOP BLOCK for ANGLE HEAD is required.

BIG-PLUS tools can be used in machining centers with conventional spindles.

- The cutter rotates in the same direction of the machine spindle.

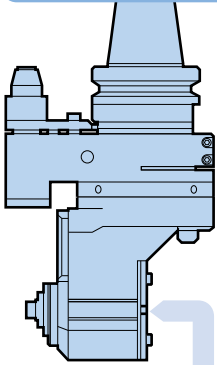
Model	Weight (kg)
BBT50-AG90/AGH35-230S	16.3

1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.

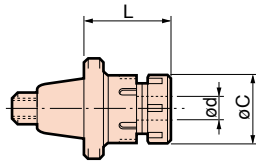
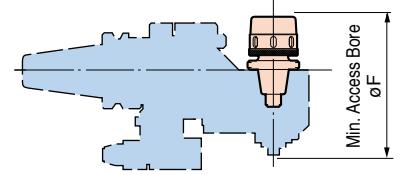
S=80 type is available upon request.

For STOP BLOCK **G 25**

BUILD-UP TYPE **AG35 ADAPTER SERIES**



ϕF = Minimum bore size that an AG35 adapter can fit into, excluding the cutting tool.



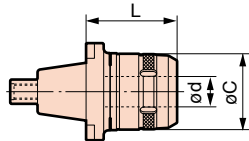
NEW BABY CHUCK

Model	ϕd	L	ϕC	ϕF	Weight (kg)
AG35-NBS10	1.5 - 10	47	30	162	0.6
-NBS13	2.5 - 13	54	35	168	0.7
-NBS16	2.5 - 16		42	170	0.8
-NBS20	2.5 - 20		46	170	0.9

Collet and wrench must be ordered separately.

For **NEW BABY COLLET G 3**

For **WRENCH A 15**

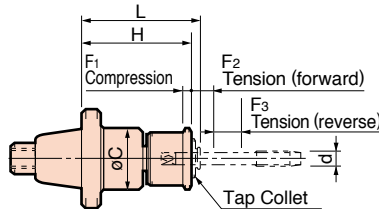


NEW HI-POWER MILLING CHUCK

Model	ϕd	L	ϕC	ϕF	Weight (kg)
AG35-HMC20S	20	60	50	178	1.5

Wrench(FK45-50L) is included.

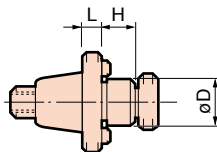
For **STRAIGHT COLLET G 15**



AUTO TAPPER TYPE B (Automatic depth control)

Model	d	L	ϕC	H	F ₁	F ₂	F ₃	Weight (kg)
AG35-ATB12E	M4 - M12	80	40.5	72	0.5	5	4	1.0
-ATB20E	M8 - M20	115	57.5	102.5		6.5	5	1.7

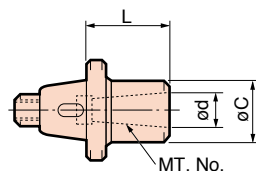
For Tap Collets, please contact **BIG** agent.



FACE MILL ARBOR

Model	ϕD	L	H	Weight (kg)
AG35-FMA25.4-20	25.4	20	22	1.0
AG35-FMH22 -30	22	30	18	1.0
-FMH27 -20	27	20	20	1.0

Cutter face protrudes by 7.5mm from the 125mm diameter housing with the following combinations; AG35-FMA25.4-20 + 50mm thick cutter, AG35-FMH22-30 + 40mm thick cutter, AG35-FMH27-20 + 50mm thick cutter



MORSE TAPER ADAPTER

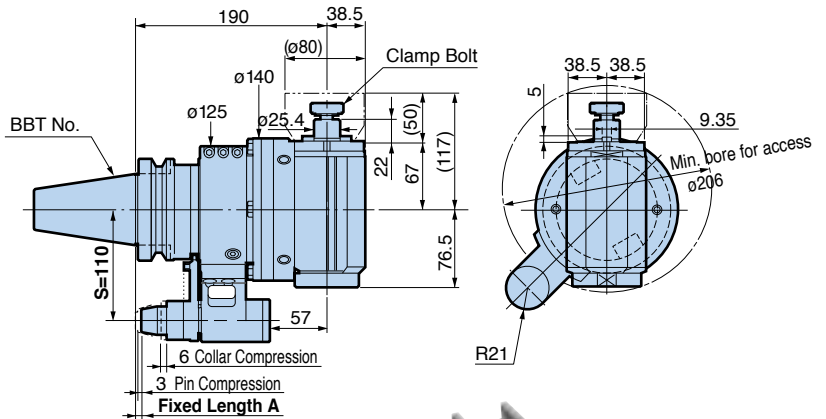
Model	ϕd	MT.No.	L	ϕC	ϕF	Weight (kg)
AG35-MT1	12.065	1	50	24	164	0.6
-MT2	17.78	2	60	32	180	0.7

ANGLE HEAD

High rigidity bearings and substantial spindle design.
Max. power transmission 20Kw. (at 1,500min⁻¹)

AG90 FACE MILL type SPINDLE ANGLE : 90°

BBT/BT SHANK



MAX.1,500 min⁻¹



Exclusive STOP BLOCK for ANGLE HEAD is required.

Simple 90° indexing of the cutter direction.
(Accuracy $\pm 5'$)

BIG-PLUS tools can be used in machining centers with conventional spindles.

- The rotation of the cutting tool is in reverse direction of the machine spindle.

Model	Weight (kg)
BBT50-AG90-FMA25.4S-190S	19.2

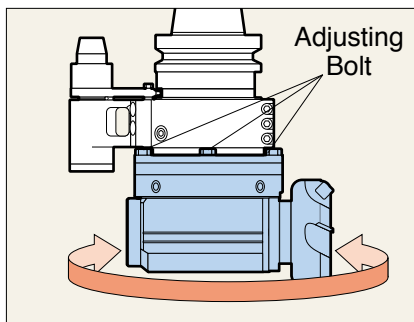
Figures in () indicate dimensions when 80mm diameter and 50mm high face mill cutter is mounted.

1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
2. Coolant cannot be supplied through the Locating Pin.
3. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.

For STOP BLOCK **G 25**

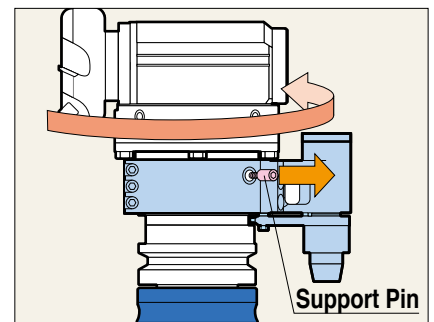
■ Cutter head adjustable through 360° to any angle

Following the release of the Adjusting Bolts (8 positions), the cutter direction can be easily adjusted.



■ Indexing through 90°

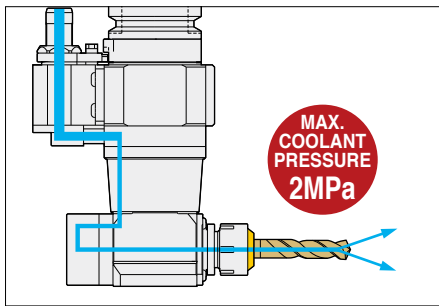
Cutter head is quickly indexable to 90° increments. (The Support Pin should be removed.)



CAUTION : Indexing should not take place within the machine.

AG90 OAG type SPINDLE ANGLE : 90°

For drilling Secure coolant supply through tool!



Coolant is supplied from the Stop Block through the cutting tool.

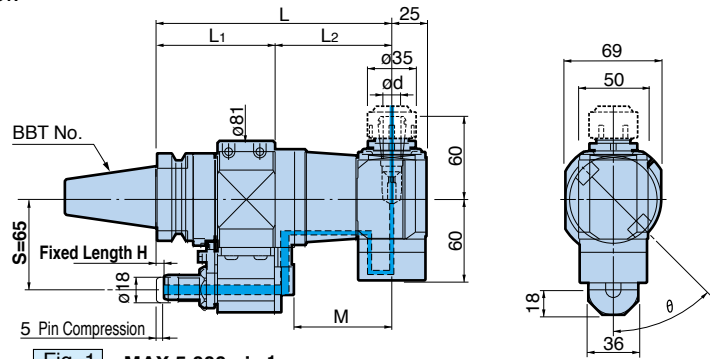


Fig. 1 MAX.5,000min⁻¹

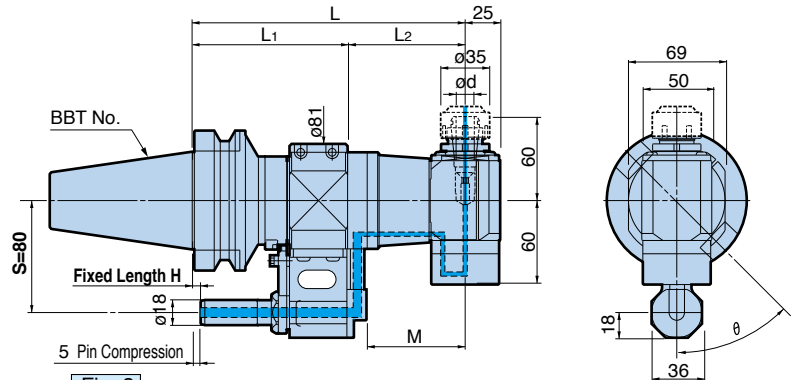


Fig. 2 MAX.5,000min⁻¹

BIG-PLUS tools can be used in machining centers with conventional spindles.

- The rotation of the cutting tool is in reverse direction of the machine spindle.



Exclusive STOP BLOCK is required.
Exclusive STOP BLOCK for OAG type is the same as HIGH SPINDLE & Hi JET HOLDER.

Model	Fig.	ød	L	L1	L2	M	Collet	NUT	Speed Ratio	Weight (kg)
BBT40-OAG90-13-170	1	2.5 - 13	170	86	84	70.5	NBC13	BPS13	1 : 1	6.0
BBT50-OAG90-13-195	2		195	111						9.2

1. Designed to be used with coolant. Never run dry.
2. Clamping nut must be ordered separately. Please order BABY PERFECT SEAL (BPS) for your application.
3. Collet must be ordered separately.
4. Adjusting screw and wrench are included.

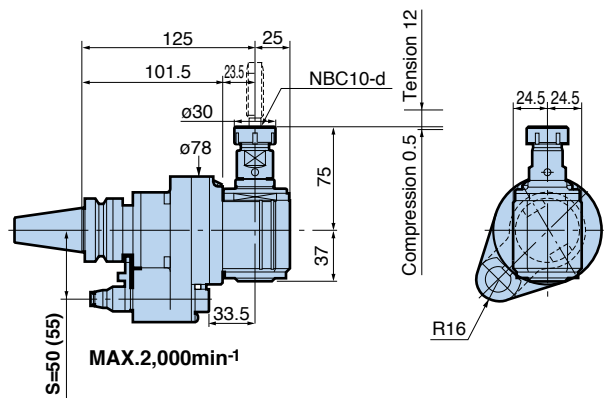
5. Fixed Length H and angle θ vary depending on machine models. Please specify your required dimensions.

For STOP BLOCK G 25

For NEW BABY COLLET G 3

For BABY PERFECT SEAL G 10

AG90 TAPPER type SPINDLE ANGLE : 90°



BIG-PLUS tools can be used in machining centers with conventional spindles.

- The rotation of the cutting tool is in reverse direction of the machine spindle.



Exclusive STOP BLOCK is required.
Exclusive STOP BLOCK for oil hole type is the same as HIGH SPINDLE & Hi JET HOLDER.

Model	d	Collet	Speed Ratio	Weight (kg)
BBT30-AG90-FT12-125	M4 - M12	NBC10	1 : 1	2.7

1. Clamping nut and wrench are included. Collet must be ordered separately.
2. The angles of Locating Pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
3. Automatic depth control is not provided.

For NEW BABY COLLET G 3

For STOP BLOCK G 25

ANGLE HEAD

A special head case, angled at 45°, insures an accurate cutting angle.
Utilizes NEW BABY CHUCK to assure high accuracy and versatility.

AG45 NBS type SPINDLE ANGLE : 45°

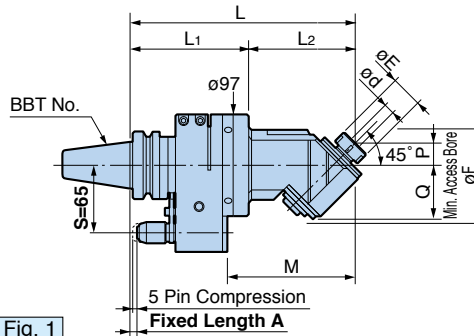


Fig. 1
MAX.6,000min⁻¹

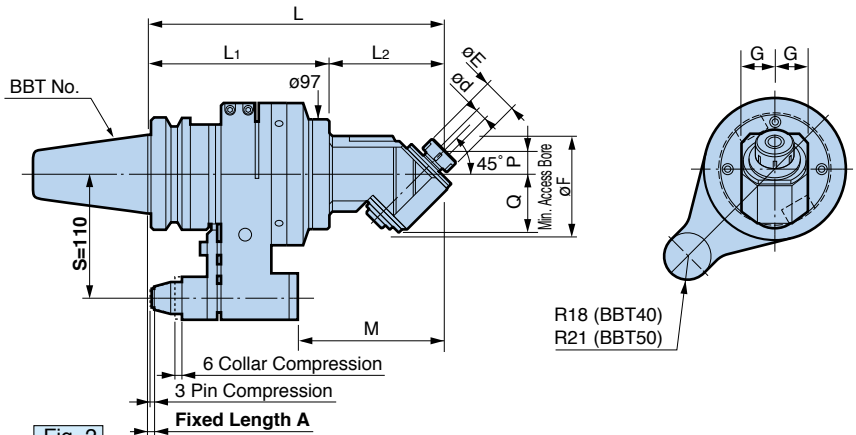


Fig. 2
MAX.6,000 min⁻¹

R18 (BBT40)
R21 (BBT50)

BIG-PLUS tools can be used in machining centers with conventional spindles.

● The rotation of the cutting tool is in reverse direction of the machine spindle.



Exclusive STOP BLOCK is required.

Model	Fig.	ϕd	ϕE	G	L	L1	L2	M	P	Q	ϕF	Collet	Weight (kg)
BBT40-AG45/NBS10-215	1	1.5 - 10	30	30	215	115	100	122	20	51.5	90	NBC10	5.7
-AG45/NBS13-220		2.5 - 13	35		220		105	127				25	NBC13
BBT50-AG45/NBS10-260	2	1.5 - 10	30	30	260	160	100	127	20	51.5	90	NBC10	13.2
-AG45/NBS13-265		2.5 - 13	35		265		105	132				25	NBC13

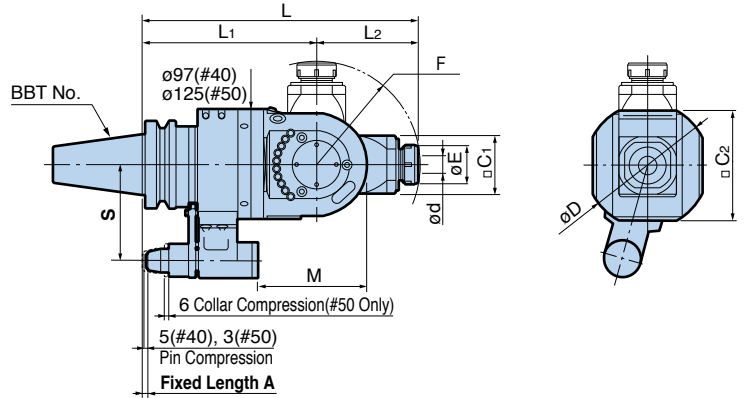
- The standard fixed length A: 40 taper=8mm , 50 taper=6mm.
Other lengths are available upon request.
- Clamping nut and wrench are included. Collet must be ordered separately.
- New Baby Collet for endmill model NBC□□EAA cannot be used.
- The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.

For NEW BABY COLLET G 3

For STOP BLOCK G 25

Suitable for all cutting angles. In addition to the cutter head being adjustable a full 360°, the spindle also becomes easily and precisely adjustable from 0° to 90° by 1° increments.

AGU UNIVERSAL type SPINDLE ANGLE : 0° to 90°



BIG-PLUS tools can be used in machining centers with conventional spindles.

● The rotation of the cutting tool is in reverse direction of the machine spindle.



Exclusive STOP BLOCK is required.

Model	ød	øE	øD	□C1	□C2	L	L1	L2	M	F	S	Collet	Max. min ⁻¹	Weight (kg)
BBT40-AGU/NBS13-270	2.5 – 13	35	115	51	97	270	170	100	124	102	65	NBC13	6,000	9.7
BBT50-AGU/NBS20-315	2.5 – 20	46	140	65	125	315	200	115	125	118	110	NBC20	4,000	20.8

1. The standard fixed length A: 40 taper=8mm, 50 taper=6mm. Other lengths are available upon request.
2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
3. Clamping nut and wrench are included. Collet must be ordered separately.

For NEW BABY COLLET G 3

For STOP BLOCK G 25

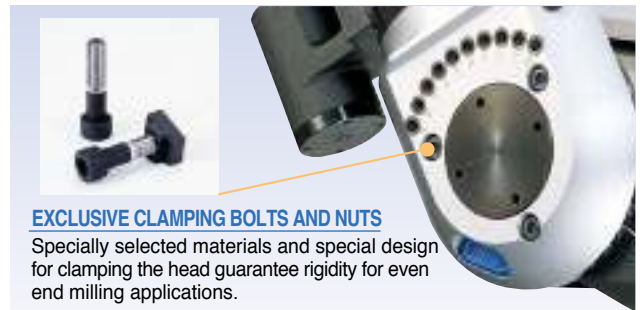


EASILY ADJUSTABLE SPINDLE ANGLE FROM 0° to 90°.



PRECISE ANGLE ADJUSTMENT

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

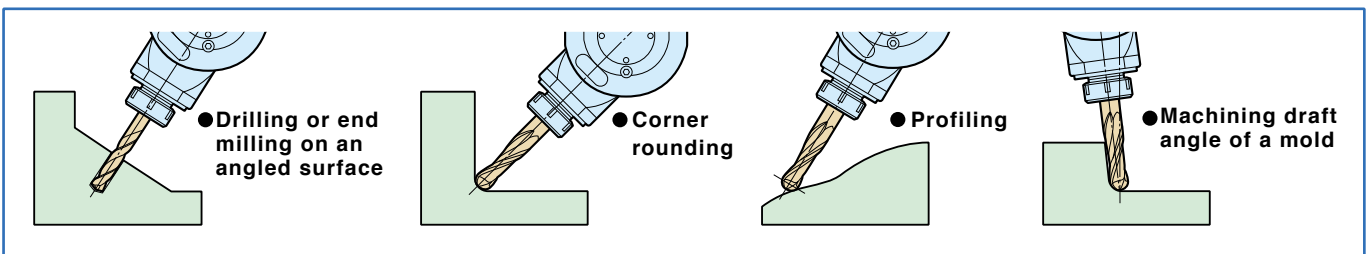


EXCLUSIVE CLAMPING BOLTS AND NUTS

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

Application example

Adjustable AGU Universal Series expands Angle Head capabilities to accomplish various angular machining applications.

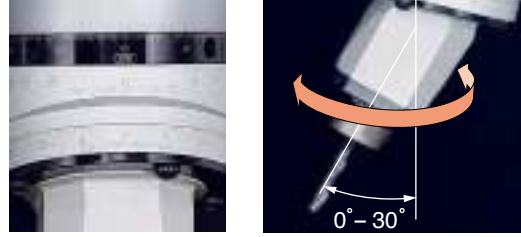


ANGLE HEAD

Spindle angle is adjustable from 0 to 30 .
Large swivel flange assures high rigidity.

AGU AGU30 type SPINDLE ANGLE : 0° to 30°

Light Weight



Angle adjustment by aligning divisions

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

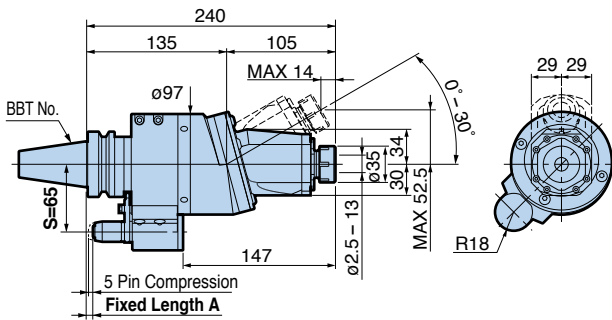


Fig. 1
MAX.6,000min⁻¹

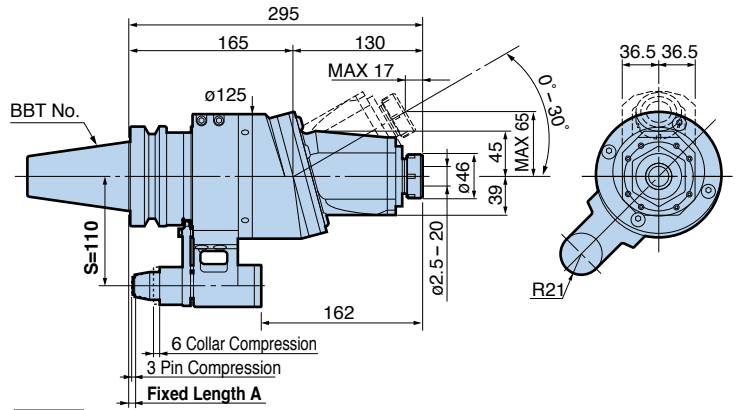


Fig. 2
MAX.4,000min⁻¹

BIG-PLUS tools can be used in machining centers with conventional spindles.

● The cutter rotates in the same direction of the machine spindle.

Model	Fig.	Collet	Speed Ratio	Weight (kg)
BBT40-AGU30/NBS13-240	1	NBC13	1 : 1	6.9
BBT50-AGU30/NBS20-295	2	NBC20	1 : 1	16.1

- The standard fixed length A: 40 taper=8mm, 50 taper=6mm. Other lengths are available upon request.
- Clamping nut and wrench are included. Collet must be ordered separately.
- The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.

For NEW BABY COLLET G 3

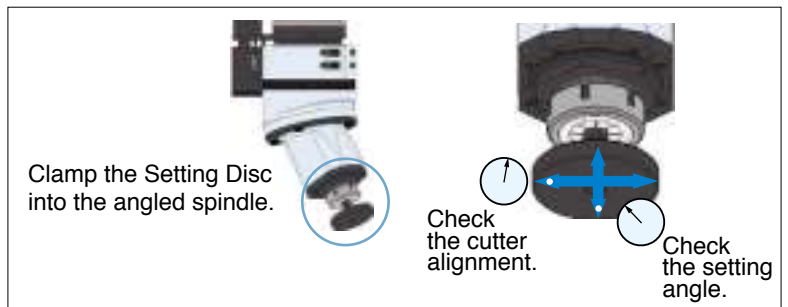
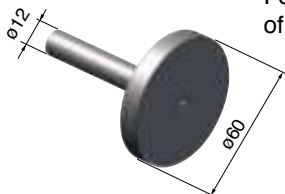
For STOP BLOCK G 25



Exclusive STOP BLOCK is required.

SETTING DISK (included accessory)

For the precise adjustment of spindle angle or direction.



Angular operation in a $\phi 30\text{mm}$ bore (min.) is possible. Modular heads enhance versatility. Head is aligned with spindle center for easy programing.

SMALL BORE type

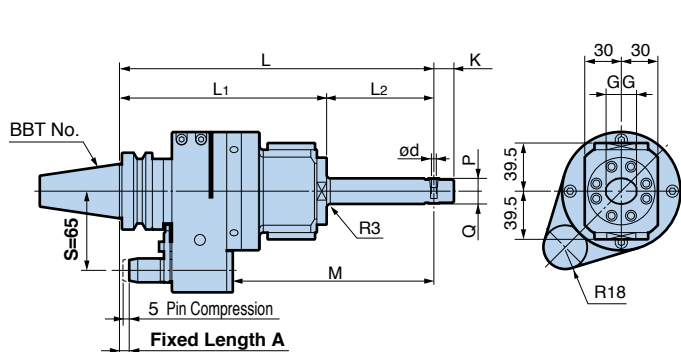
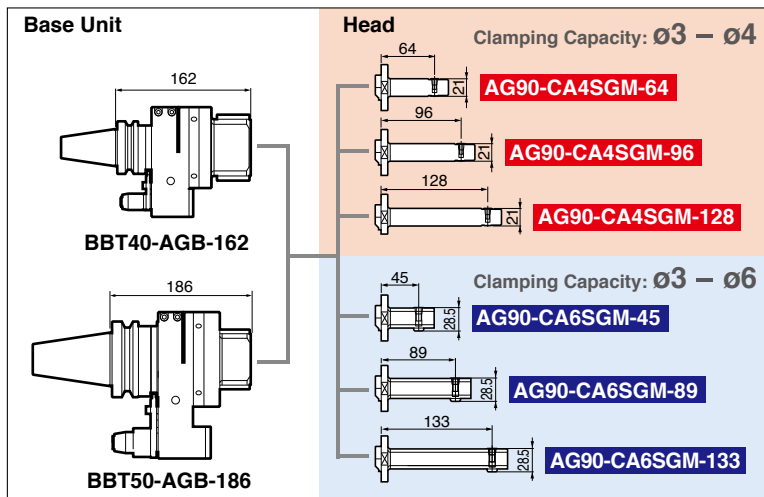


Fig. 1 MAX.2,000min⁻¹

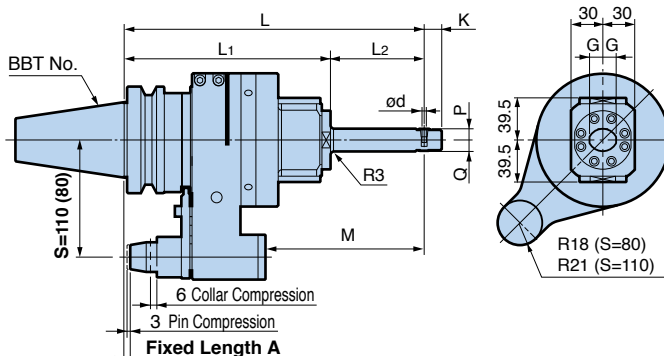


Fig. 2 MAX.2,000min⁻¹

BIG-PLUS tools can be used in machining centers with conventional spindles.

● The cutter rotates in the same direction of the machine spindle.



Exclusive STOP BLOCK is required.

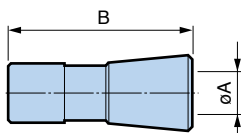
Set Model	Base	Head	Fig.	ϕd	G	K	L	L1	L2	M	P	Q	Speed Ratio	Weight (kg)					
														S=65	S=80	S=110			
BBT40-AG90-CA4SGM-226 -258 -290 -CA6SGM-207 -251 -295	BBT40-AGB-162	AG90-CA4SGM- 64	1	3 - 4	12.5	16.5	226	170	56	133	10.5	10.5	1:1.06 (Increase)	5.6					
		- 96												88	165	5.7			
		-128												120	197	5.8			
		AG90-CA6SGM- 45												207	37	114	5.7		
		- 89												251	81	158	5.9		
		-133												295	125	202	6.1		
BBT50-AG90-CA4SGM-250 -282 -314 -CA6SGM-231 -275 -319	BBT50-AGB-186	AG90-CA4SGM- 64	2	3 - 4	12.5	16.5	250	194	56	117	10.5	10.5	1:1.06 (Increase)	12.5	11.9				
		- 96												88	149	12.6	12		
		-128												120	181	12.7	12.1		
		AG90-CA6SGM- 45												231	37	98	12.6	12	
		- 89												275	81	142	12.8	12.2	
		-133												319	125	186	13	12.4	

1. The standard fixed length A: 40 taper=8mm, 50 taper=6mm. Other lengths are available upon request.
2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
3. Coolant cannot be supplied through the Locating Pin.

4. Exclusive collets should be ordered separately.
5. S=80 type is available for #50 taper models upon request.

For STOP BLOCK G 25

EXCLUSIVE COLLET



Model	ϕA	B	Model	ϕA	B
CA4-3	3	16.5	CA6-3	3	22
-3.5	3.5		-4	4	
-4	4		-5	5	
		-6	6		

1. Use only a cutting tool shank with exactly the same diameter as the collet bore diameter.
2. Tolerance of the cutting tool shank must be within h7.

ANGLE HEAD

Application example

A
BBT/BT SHANK



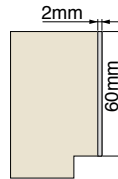
● AG90 SERIES (BUILD-UP TYPE)

STANDARD

BBT50-AG90/AGH35-230 (with AG35-FMA25.4-20)

Workpiece : Carbon Steel
S55C (JIS) / C55 (DIN)

Cutter : 80mm Face Mill
Cutting Depth : 2mm
Cutting Width : 60mm
Spindle Speed : 600 min⁻¹
Cutting Speed : 150m/min.
Cutting Feed : 360mm/min.

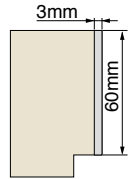


S TYPE

BBT50-AG90/AGH35-230S (with AG35-FMA25.4-20)

Workpiece : Carbon Steel
S55C (JIS) / C55 (DIN)

Cutter : 80mm Face Mill
Cutting Depth : 3mm
Cutting Width : 60mm
Spindle Speed : 600 min⁻¹
Cutting Speed : 150m/min.
Cutting Feed : 360mm/min.



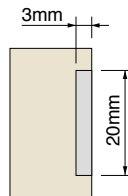
● AG90 SERIES (HMC TYPE)

STANDARD

BBT50-AG90/HMC32-230

Workpiece : Carbon Steel
S55C (JIS) / C55 (DIN)

Cutter : 20mm Endmill
with 2-flute of H.S.S.
Cutting Depth : 3mm
Spindle Speed : 400 min⁻¹
Cutting Speed : 25m/min.
Cutting Feed : 72mm/min.

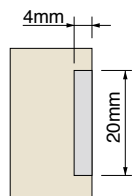


S TYPE

BBT50-AG90/HMC32-230S

Workpiece : Carbon Steel
S55C (JIS) / C55 (DIN)

Cutter : 20mm Endmill
with 2-flute of H.S.S.
Cutting Depth : 4mm
Spindle Speed : 400 min⁻¹
Cutting Speed : 25m/min.
Cutting Feed : 72mm/min.



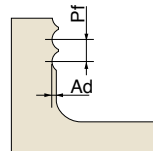
● AGU SERIES (AGU30 TYPE)

BBT40-AGU30/NBS13-240

Workpiece : Pre-hardened Steel (HRC40)

Cutter : R5 2-flute carbide ball endmill

Spindle Speed : 6,000 min⁻¹
Cutting Speed : 190m/min.
Cutting Feed : 900mm/min.
Cutting Depth : Ad=0.1mm
Peck Feed : Pf=0.1mm



※Results will vary depending on workpiece, cutting tool, machine model, and other conditions.

All new applications are subject to review by engineering in order to confirm the Angle Head will operate within its capacity.

SPECIAL DESIGNS

Our long experience and expertise enables us to design and manufacture special custom made Angle Heads for almost any customer application.

● SPECIAL ANGLE



● EXTRA LONG



● OIL FEEDER (SPECIAL ANGLE)



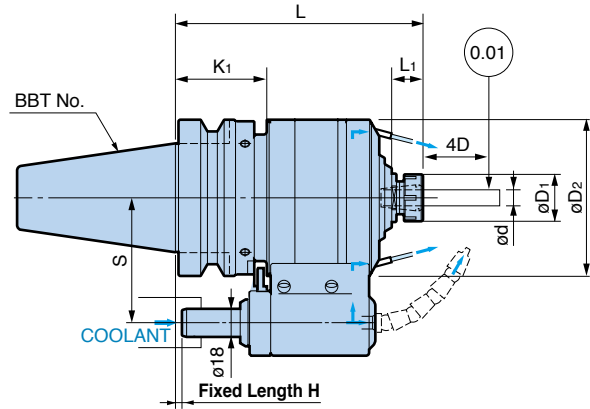
● BBT30



HIGH SPINDLE

GTG Type

Higher spindle speeds are available without excessive load on the machine spindle.



Exclusive STOP BLOCK is required.

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	ød	L	L1	øD1	øD2	K1	S	Collet	Speed Ratio	Max. min ⁻¹	Weight (kg)
BBT40-GTG5-10-140	1.5 – 10	140	20	30	80	43	65	NBC10	4.67	20,000	4.8
BBT50-GTG6-10-158	1.5 – 10	158	20	30	100	58	80	NBC10	5.67	20,000	8.8
-GTG4-16-177	2.5 – 16	177	25.5	42	110	58	80	NBC16	3.80	15,000	10.6

- The standard Fixed Length H is 6mm.
- 1 pce. of maximum size collet (GTG5,6=NBC10-10AA,GTG4=NBC16-16AA), clamping nut and wrench are included.
- θ (angle of locating pin to drive key groove) is adjustable to any degree from 0° to 360°.
- Special Air Purge oil mist lubrication style is available upon request for machining graphite, ceramic, tungsten and other composite materials.
- Please do not use with neat oil coolant. Using with neat oil coolant carries a risk of fire.

➔ For NEW BABY COLLET G 3

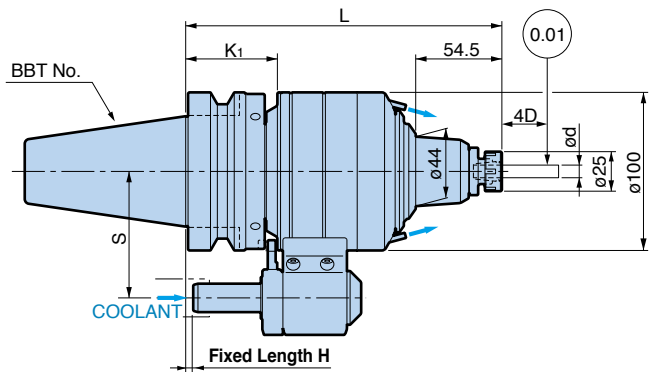
➔ For STOP BLOCK G 27

➔ For LOCATING PINS G 27

➔ For WRENCH A 15

GTX Type

Special design for die & mold.
Long nose design for minimized interference.
Long tool life with grease nipple.



Exclusive STOP BLOCK is required.

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	ød	L	K1	S	Collet	Weight (kg)
BBT50-GTX6-8-200	0.5 - 8	200	58	80	NBC8	9.3

- The standard Fixed Length H is 6mm.
- Clamping nut and wrench are included.
- Collet must be ordered separately.
- Please do not use with neat oil coolant. Using with neat oil coolant carries a risk of fire.

➔ For NEW BABY COLLET G 3

➔ For STOP BLOCK G 27

➔ For LOCATING PINS G 27

➔ For WRENCH A 15

AIR TURBINE SPINDLE

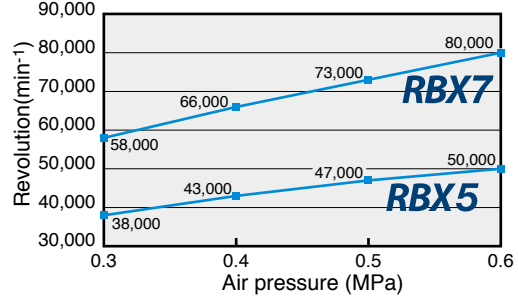
High-speed Micro-Machining can be done on a normal machining center, eliminating the need of an expensive high-speed machine.

**Machine Spindle
Rotation = 0**

**MAX.
80,000
min⁻¹**

	RBX7	RBX5
Practical spindle speed (min ⁻¹)	60,000 - 80,000	40,000 - 50,000
Clamping Range	ø0.45 - ø4.05mm (MEGA4S)	
T.I.R at nose	Less than 1 μm	
Air pressure	Less than 0.6MPa	
Air flow	300L/min [ANR](0.6MPa)	

Relation between Spindle speed and air pressure (Reference)

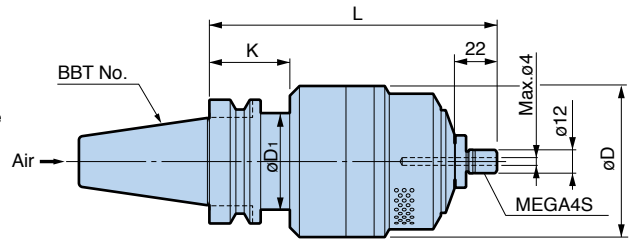


CENTER THROUGH Type

For compressed air through the machine spindle.



For automatic tool change



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Operating spindle speed(min ⁻¹)	Tool diameter	L	øD	øD1	K	Weight (kg)
BBT40- RBX7C-4S-150	60,000 - 80,000	ø1.0 or smaller	150	78	50	43	3.1
-RBX5C-4S-150	40,000 - 50,000	ø1.5 or smaller		96			4.1
BBT50-RBX7C-4S-160	60,000 - 80,000	ø1.0 or smaller	160	78	68	53	6.3
-RBX5C-4S-160	40,000 - 50,000	ø1.5 or smaller		96			7.3

1. Nut and wrenches are included. Collet must be ordered separately.
2. XF1(Air Unit) must be ordered separately. **A 65**

For MICRO COLLET **G 2**



CAUTION

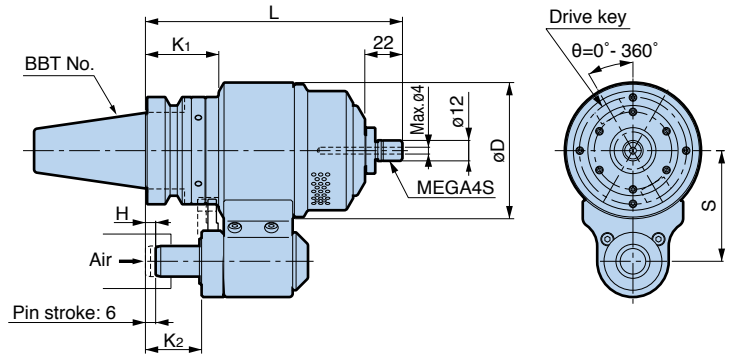
Compressed air to drive the AIR TURBINE SPINDLE must be clean. Therefore, coolant should not be supplied through the spindle on the machine that the AIR TURBINE SPINDLE is used.

SIDE THROUGH Type

The compressed air is supplied through the stop block which also enables automatic tool change.



For automatic tool change



Exclusive STOP BLOCK is required.

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Operating spindle speed (min ⁻¹)	Tool diameter	L	øD	K ₁	K ₂	S	H	Weight (kg)
BBT30-RBX7-4S-152-55	60,000 – 80,000	ø1.0 or smaller	152	80	28	33	55	-10 – 22	2.7
BBT40-RBX7-4S-151-65	60,000 – 80,000	ø1.0 or smaller	151	80	43	33	65	-24 – 21	4.0
-RBX5-4S-151-65	40,000 – 50,000	ø1.5 or smaller		96					5.0
BBT50-RBX7-4S-166-80	60,000 – 80,000	ø1.0 or smaller	166	100	58	48	80	-9 – 36	8.7
-RBX5-4S-166-80	40,000 – 50,000	ø1.5 or smaller							9.7

- Nut and wrenches are included. Collet must be ordered separately.
- XF1 (Air Unit) must be ordered separately. A 65

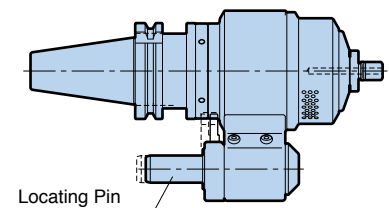
For MICRO COLLET G 2

SET UP INFORMATION for AIR TURBINE SPINDLE



● **Preparing the Stop Block**

The **BIG** AIR TURBINE SPINDLE utilizing a Locating Pin requires the Stop Block, which is mounted to the machine spindle. Please contact a **BIG** agent for details.

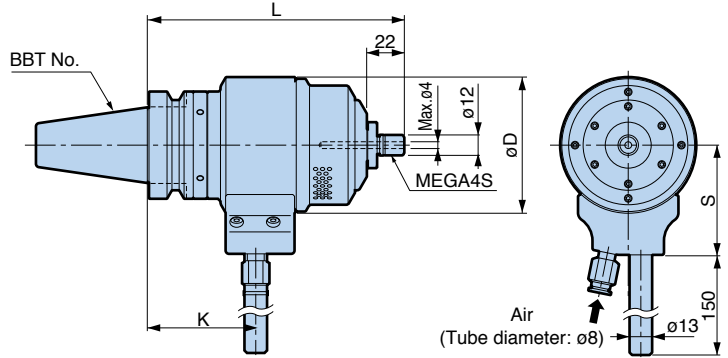


AIR TURBINE SPINDLE

H Type For Manual tool change

**Machine Spindle
Rotation = 0**

Easily mounted on machines without a stop block.



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Operating spindle speed(min ⁻¹)	Tool diameter	L	øD	K	S	Weight (kg)
BBT30-RBX7-4S-152H	60,000 – 80,000	ø1.0 or smaller	152	80	64.5	65	2.7
BBT40-RBX7-4S-151H	60,000 – 80,000	ø1.0 or smaller	151	80	63	65	4.0
-RBX5-4S-151H	40,000 – 50,000	ø1.5 or smaller		96		71	
BBT50-RBX7-4S-166H	60,000 – 80,000	ø1.0 or smaller	166	100	78	80	8.7
-RBX5-4S-166H	40,000 – 50,000	ø1.5 or smaller					9.7

- Nut and wrenches are included. Collet must be ordered separately.
- XF1(Air Unit) must be ordered separately.

For MICRO COLLET G 2

■ AIR FILTER REGULATOR for RBX (Contact our agent.)

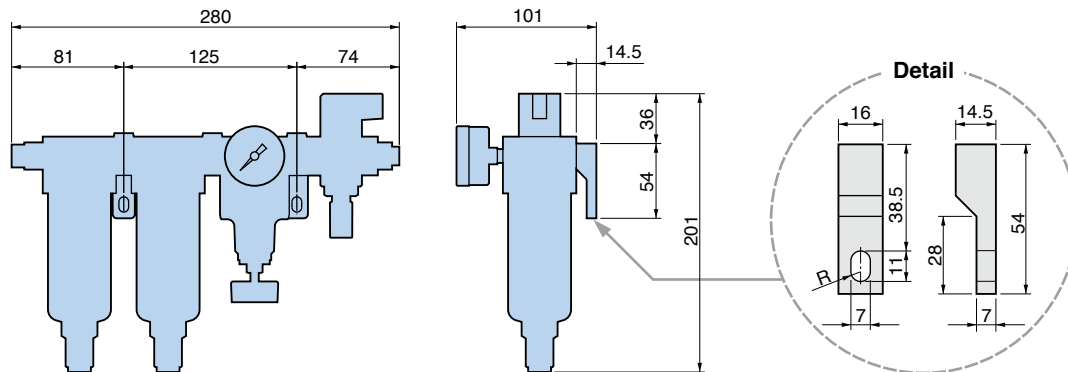
Air filtering for turbine drive.



Model	XF1
-------	-----

- Mist separator (filtration: 0.3 μm)
- Micro mist separator (filtration: 0.01 μm)
- Precision regulator
- Three ports valves for extracting pressurization (non-grease type)

● Dimensions

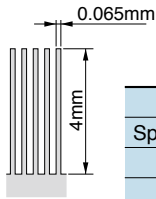


Application example

RBX7

Aluminum A2017

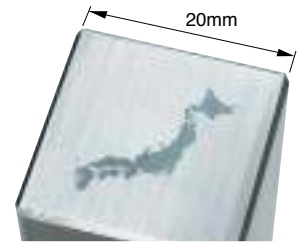
Outstanding runout accuracy permits super thin wall cutting.



Cutter	ø0.5mm Rib-endmill
Spindle speed	70,000min ⁻¹
Feed	1,500mm/min
D.O.C	Ad=0.02mm

Prehardened steel HRC40

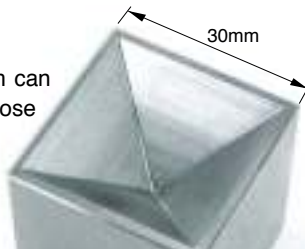
Drastic time reduction by ultra high speed rotation. Excellent dynamic runout accuracy makes DOC of 5μm clearly visible.



Cutter	R0.1mm Ball nose endmill
Spindle speed	80,000min ⁻¹
Feed	400mm/min
D.O.C	Ad=0.01mm

Prehardened steel HRC40

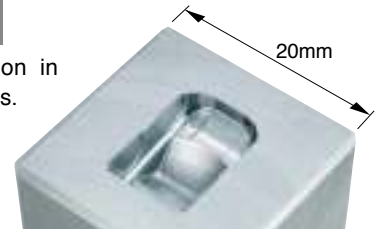
Overall cutting length of 656m can be achieved with one ball nose endmill. Drastically extended tool life.



Cutter	R0.5mm Ball nose endmill
Spindle speed	65,000min ⁻¹
Feed	4,200mm/min
D.O.C	Ad=0.2mm Rd=0.05mm

Prehardened steel HRC40

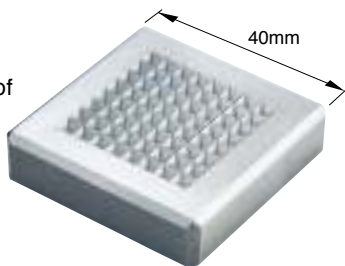
Original 5 hour operation in MC is reduced to 2 hours.



Cutter	R0.2mm Ball nose endmill
Spindle speed	70,000min ⁻¹
Feed	1,000mm/min
D.O.C	Ad=0.01mm

Prehardened steel HRC40

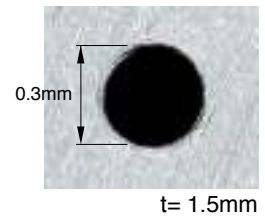
No thermal expansion of spindle results in finely detailed surface finish.



Cutter	R0.5mm Ball nose endmill
Spindle speed	75,000min ⁻¹
Feed	400mm/min
D.O.C	Ad=0.02mm

Aluminum A2017

High-precision drilling is possible without center drill operation. Even after 3,500 holes, no problems can be found on cutting edge.

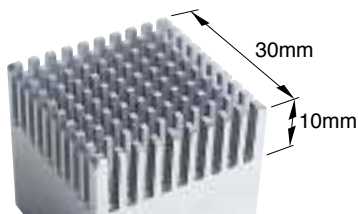


Cutter	ø0.3mm Solid drill
Spindle speed	75,000min ⁻¹
Feed	200mm/min
Peck	0.3mm

RBX5

Prehardened steel HRC40

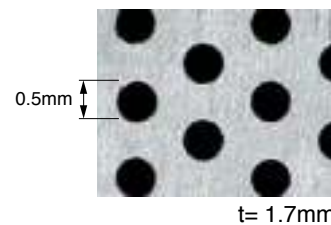
Even a taper endmill that has high cutting forces can achieve stable cutting.



Cutter	ø1.5mm Rib-endmill
Spindle speed	40,000min ⁻¹
Feed	1,000mm/min
D.O.C	Ad=0.05mm

Stainless Steel SUS303

Tool life is doubled with over 1,200 holes and cutting time is reduced to 1/3.



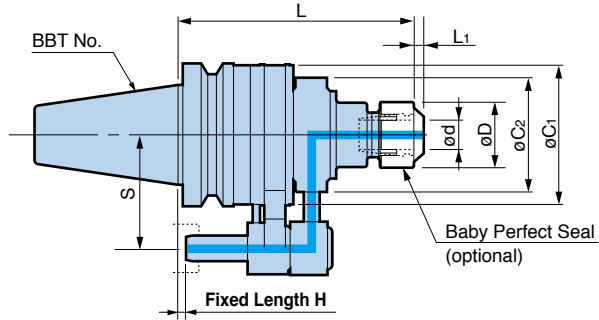
Cutter	ø0.5mm Solid drill
Spindle speed	40,000min ⁻¹
Feed	20mm/min
Peck	0.01mm

Hi-JET HOLDER

Bearings in a separate housing from the coolant for extended life.

NEW BABY CHUCK Type

Suitable for small diameter drills, gun drills and end mills due to high precision New Baby Chuck.



A
BBT/BT SHANK



Exclusive STOP BLOCK is required.

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	ød	øD	L	øC1	øC2	S	Collet	Max. min ⁻¹	Merit Set 2 pcs. of Merit Ring and 2 pcs. of Merit Plate	Weight (kg)		
BBT30-ONBS10N-135	3 - 10	30	138	66	65	☆	NBC10	10,000	MES-40	3.0		
-ONBS13N-140	3 - 13	35	143				NBC13			3.1		
-ONBS16N-140	3 - 16	42					NBC16			3.3		
-ONBS20N-140	3 - 20	46	NBC20				3.3					
BBT40-ONBS10N-165	3 - 10	30	168	81.6	73	65	NBC10	10,000	MES-40	3.9		
-200			203				NBC10	8,000		4.1		
-ONBS13N-165	3 - 13	35	168				NBC13	10,000		4.0		
-200			203				NBC13	8,000		4.2		
-ONBS16N-165	3 - 16	42	168				80	65	NBC16	8,000	MES-50	4.3
-200			203						NBC16	6,000		4.6
-ONBS20N-165	3 - 20	46	168						NBC20	8,000	4.3	
-200			203						NBC20	6,000	4.7	

- The standard Fixed Length H is 6mm.
 - Wrench, Collet and Adjusting Screw are optional items.
 - Max. coolant pressure is 2MPa.
 - Clamping Nut is sold separately. Please order BABY PERFECT SEAL(BPS) for your application.
- Please do not use with neat oil coolant.
Using with neat oil coolant carries a risk of fire.
5. ☆ Please consult with the machine tool builder for the suitable "S" dimension.

MERIT SET
Merit Set includes 2 pcs. each of Merit Plates, Merit Rings, O-Rings and Locking Pads.

For STOP BLOCK **G 27**
For LOCATING PINS **G 27**



Exclusive STOP BLOCK is required.

BIG-PLUS tools can be used in machining centers with conventional spindles.

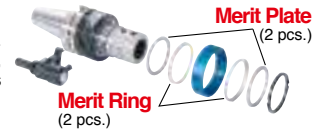
Model	ød	øD	L	øC1	øC2	S	Collet	Max. min ⁻¹	Merit Set 2 pcs. of Merit Ring and 2 pcs. of Merit Plate	Weight (kg)								
BBT50-ONBS10N-165	3 – 10	30	168	99.6	80	80	NBC10	8,000	MES-50	7.2								
-200			203					6,000		7.4								
-250			253					4,000		7.6								
-ONBS13N-165	3 – 13	35	168					99.6		80	NBC13	8,000	MES-50	7.3				
-200			203									6,000		7.5				
-250			253									4,000		7.8				
-ONBS16N-165	3 – 16	42	168									99.6		80	NBC16	8,000	MES-50	7.5
-200			203													6,000		7.8
-250			253													4,000		8.2
-ONBS20N-165	3 – 20	46	168	99.6	80	NBC20	8,000		MES-50							7.5		
-200			203				6,000									7.9		
-250			253				4,000									8.2		

- The standard Fixed Length H is 6mm.
- Wrench, Collet and Adjusting Screw are optional items.
- Max. coolant pressure is 2MPa.
- Clamping Nut is sold separately. Please order BABY PERFECT SEAL(BPS) for your application.

Please do not use with neat oil coolant.
Using with neat oil coolant carries a risk of fire.

MERIT SET

Merit Set includes 2 pcs. each of Merit Plates, Merit Rings, O-Rings and Locking Pads.

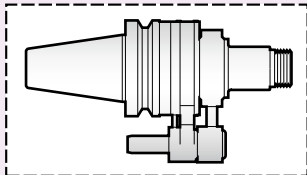


➡ For STOP BLOCK **G 27**

➡ For LOCATING PINS **G 27**

● **Order Example**

Please specify model numbers of the Hi-Jet Holder, collet and nut when ordering.



Hi-Jet Holder (Nut is not included.)
BBT40-ONBS10N-165

Option
(Order separately.)



Option
(Order separately.)



Through Tools

Jet Through



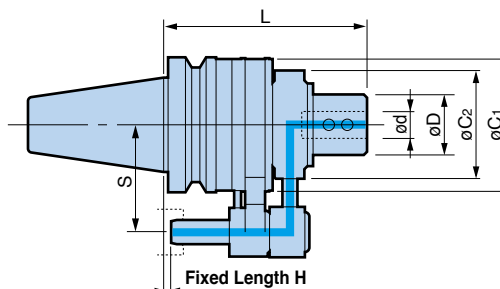
Accessories

WRENCH	NBC COLLET	BABY PERFECT SEAL	ADJUSTING SCREW	Rubber		
	 FOR ENDMILL COLLET					
Model	Model	Model	Model	G	L	B
NBK10	NBC10- □	BPS10- □	NBA10B	M11	16	3
NBK13	NBC13- □	BPS13- □	NBA13B	M14	20	4
NBK16	NBC16- □	BPS16- □	NBA16B	M18	20	4
NBK20	NBC20- □	BPS20- □	NBA20B	M21	20	4

Hi-JET HOLDER

SIDE LOCK Type

Suitable for popular straight shanks with flat.



BBT/BT SHANK

BIG-PLUS tools can be used in machining centers with conventional spindles.



Exclusive STOP BLOCK is required.

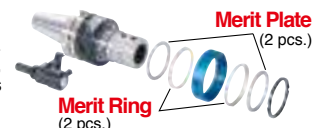
Model	ød	øD	L	øC1	øC2	S	Max. min ⁻¹	Merit Set 2 pcs. of Merit Ring and 2 pcs. of Merit Plate	Weight (kg)
BBT40-OSL16N-150	16	48	150	81.6	80	65	8,000	MES-50	4.4
-OSL20N-150	20				80				4.3
-OSL25N-165	25				80				4.4
-OSL32N-165	32	58	165	99.6	98	80	6,000	MES-65	5.7
BBT50-OSL16N-150	16	48	150	99.6	80	80	8,000	MES-50	7.5
-OSL20N-150	20				80				7.4
-OSL25N-165	25				80				7.5
-OSL32N-165	32	58	165	98	98	80	6,000	MES-65	7.9
-OSL40N-165	40	64	185	129.6	121	80	4,000	MES-90	8.0
-OSL50N-185	50	84	185	129.6	121	80	4,000	MES-90	11.9

1. The standard Fixed Length H is 6mm. 2. Max. coolant pressure is 2MPa.

Please do not use with neat oil coolant. Using with neat oil coolant carries a risk of fire.

MERIT SET

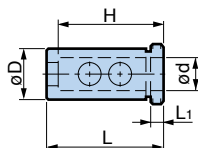
Merit Set includes 2 pcs. each of Merit Plates, Merit Rings, O-Rings and Locking Pads.



For STOP BLOCK G 27

For LOCATING PINS G 27

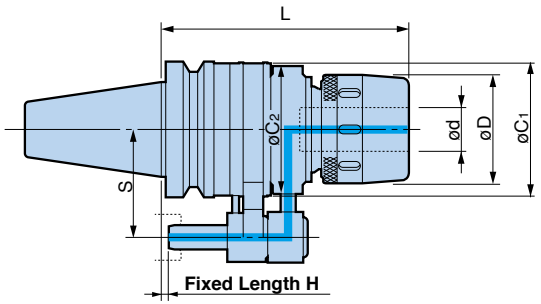
REDUCTION COLLET



Model	ød	øD	L	L ₁	H
OSL25-16	16	25	62	5.5	48
-20	20				50
OSL32-16	16	32	66	5.5	48
-20	20				50
-25	25				56
OSL40-16	16	40	76	5.5	48
-20	20				50
-25	25				56
-32	32				60

MILLING CHUCK Type

Suitable for end mills with straight shanks due to superior gripping force.



BIG-PLUS tools can be used in machining centers with conventional spindles.



Exclusive STOP BLOCK is required.

Model	ød	øD	L	øC1	øC2	S	Max. min ⁻¹	C-spanner Model	Merit Set 2 pcs. of Merit Ring and 2 pcs. of Merit Plate	Weight (kg)
BBT40-OMC 20N-170	20	60	170	81.6	80	65	8,000	FK58-62	MES-50	4.8
BBT50-OMC 20N-165	20	60	165	99.6	80	80	8,000		MES-50	6.8
OMC 32N-180	32	80	180		98			6,000	FK80-90	MES-65

- The standard Fixed Length H is 6mm.
- Max. coolant pressure is 2MPa.
- Nut for Milling chuck type (OMC) needs to be removed when replacing a merit ring and a merit plate. Contact **BIG** agent for this.
- Wrench is included.

Please do not use with neat oil coolant. Using with neat oil coolant carries a risk of fire.

MERIT SET
Merit Set includes 2 pcs. each of Merit Plates, Merit Rings, O-Rings and Locking Pads.

For STOP BLOCK G 27

For LOCATING PINS G 27

COOLANT HOLE STRAIGHT COLLET



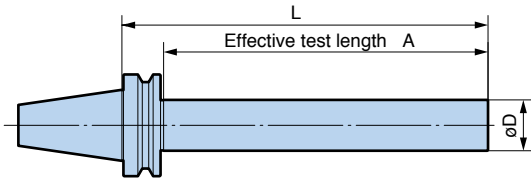
Model
OCA20- 6, 8, 10, 12, 14, 16
OCA32- 6, 8, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 28

DYNA TEST

A

BBT/BT SHANK

BBT Shank JIS B 6339 (BIG-PLUS)



Precision test bar of the highest quality.

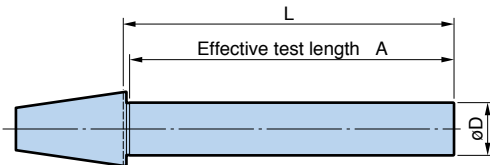
- Periodic inspection of machine tools to control production stability.
- Shorter models are ideal for measuring ATC repeatability.

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	L	A	øD
BBT30-32-L150	150	125	32
-L235	235	210	
BBT40-50-L200	200	170	50
-L350	350	320	
BBT50-50-L200	200	159	
-L360	360	319	

1. Taper length is in accordance with JIS BT standard.

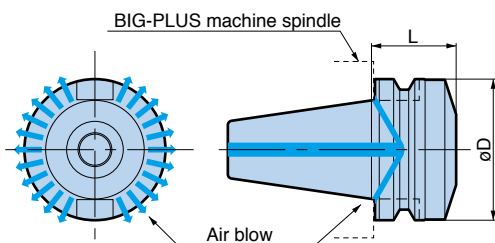
NT Shank Basic Type (NT Shank) is only suitable for BT shank.



Model	L	A	øD
NT30-32-L150	150	144	32
-L225	225	219	
NT40-50-L200	200	184	50
-L335	335	319	
NT50-50-L200	200	194	
-L335	335	319	

1. Taper length is in accordance with JIS BT standard.

CLEANER



Blowing air cleans the BIG-PLUS machine spindle face.
Oil and dirt is removed from the spindle face.

Model	øD	L
SBT30-ASC-30T	46	30
SBT40-ASC-40T	63	40
SBT50-ASC-60T	100	60

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

BDV/DV SHANK

MEGA MICRO CHUCK	B1
MEGA NEW BABY CHUCK	B2
MEGA E CHUCK	B4
MEGA DOUBLE POWER CHUCK	B5
NEW BABY CHUCK	B6
NEW Hi-POWER MILLING CHUCK	B8
MEGA ER GRIP	B9
MEGA SYNCHRO Tapping Holder	B10
FACE MILL ARBOR Type FMC	B11
ANGLE HEAD	B12
AIR TURBINE SPINDLE	B18
HIGH SPINDLE	B19
Hi-JET HOLDER	B20
DYNA TEST	B21



MEGA MICRO CHUCK®

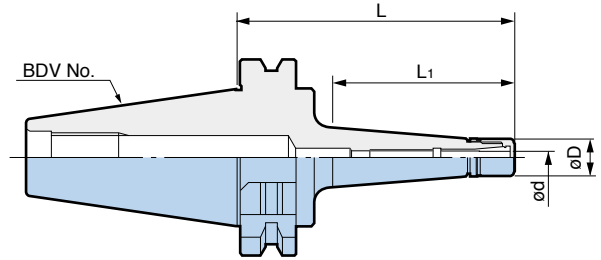
Coolant-through hole

Clamping Range : $\varnothing 0.45 - \varnothing 8.05$

Type T

Micro diameter design is ideal for high speed applications in tight areas with small diameter cutting tools.






MAX.
35,000
min⁻¹




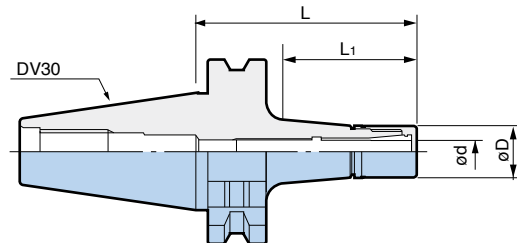
BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	MAX. min ⁻¹	Collet Model	Nut Model	Weight (kg)
BDV40-MEGA3S- 60T	0.45 – 3.25	10	60	30	35,000	NBC3S-□	MGN3S	0.95
- 90T			90	60	28,000			1.02
-120T			120	90	22,000			1.14
-MEGA4S- 60T	0.45 – 4.05	12	60	30	35,000	NBC4S-□	MGN4S	0.95
- 90T			90	60	28,000			1.03
-120T			120	90	22,000			1.17
-MEGA6S- 60T	0.45 – 6.05	14	60	30	35,000	NBC6S-□	MGN6S	0.96
- 90T			90	60	28,000			1.05
-120T			120	90	22,000			1.20

1. MEGA NUT is included.

	Spare Parts	Accessories			
	MEGA NUT 	MEGA WRENCH 	MICRO COLLET  G 2	MICRO COLLET PROTECTIVE CASE 	α TAPER CLEANER 
MEGA MICRO CHUCK	Model	Model	Model	Model	Model
MEGA3S	MGN3S	MGR10	NBC3S-□	NBB3S	SC-NBC3S
MEGA4S	MGN4S	MGR12	NBC4S-□	NBB4S	SC-NBC4S
MEGA6S	MGN6S	MGR14	NBC6S-□	NBB6S	SC-NBC6S
MEGA8S	MGN8S	MGR18	NBC8S-□	—	—

 For MICRO SEAL NUT A 2



DV30 SHANK

Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	MAX. min ⁻¹	Collet Model	Nut Model	Weight (kg)
DV30-MEGA6S- 60T	0.45 – 6.05	14	60	36	25,000	NBC6S-□	MGN6S	0.45
MEGA8S- 75T	2.95 – 8.05	18	75	51	25,000	NBC8S-□	MGN8S	0.55

MEGA NEW BABY CHUCK®

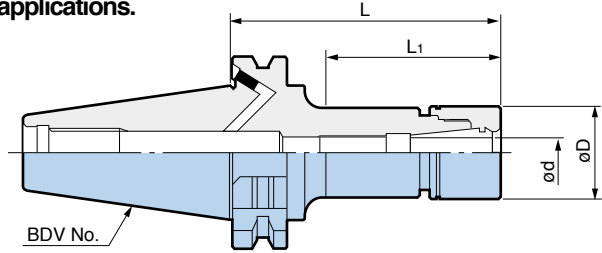
Coolant-through hole

Clamping Range : $\varnothing 0.25 - \varnothing 20$



MAX.
35,000
min⁻¹

Ideal ultra precision holders for high speed machining with carbide drills, reamers and endmills. Wide range of lengths and a variety of collet series sizes covers all machining applications.



BIG-PLUS tools can be used in machining centers with conventional spindles.

For BDV50, refer to the following page.

Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	MAX. min ⁻¹	Collet Model	Nut Model	Weight (kg)
BDV40-MEGA 6N- 60	0.25 – 6	20	60	29	35,000	NBC 6-□	MGN 6	1.0
- 90			90	55	35,000			1.1
-135			135	100	20,000			1.2
-165			165	130	14,000			1.2
-200			200	165	9,000			1.3
-MEGA 8N- 60	0.5 – 8	25	60	29	35,000	NBC 8-□	MGN 8	1.0
- 90			90	57	35,000			1.1
-135			135	102	20,000			1.3
-165			165	132	14,000			1.4
-200			200	167	9,000			1.5
-MEGA10N- 60	1.5 – 10	30	60	29	35,000	NBC10-□	MGN10	1.1
- 90			90	59	35,000			1.2
-135			135	104	20,000			1.4
-165			165	134	15,000			1.6
-200			200	169	10,000			1.7
-MEGA13N- 60	2.5 – 13	35	60	33	35,000	NBC13-□	MGN13	1.1
- 90			90	61	35,000			1.3
-135			135	106	20,000			1.6
-165			165	136	15,000			1.8
-200			200	171	10,000			2.0
-MEGA16N- 60	2.5 – 16	42	60	35	30,000	NBC16-□	MGN16	1.2
- 90			90	65	30,000			1.5
-135			135	110	20,000			1.9
-165			165	140	15,000			2.2
-200			200	175	10,000			2.5
-MEGA20N- 60	2.5 – 20	46	60	40	30,000	NBC20-□	MGN20	1.3
- 90			90	70	30,000			1.6
-135			135	115	20,000			2.0
-165			165	145	15,000			2.3
-200			200	180	10,000			2.6

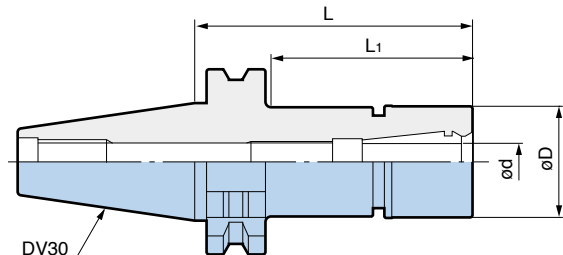
1. MEGA NUT is included.

For NEW BABY COLLET G 3

For MEGA WRENCH B 3

For NEW BABY COLLET for ENDMILL G 7

For ADJUSTING SCREW B 3



DV30 SHANK

Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	MAX. min ⁻¹	Collet Model	Nut Model	Weight (kg)
DV30-MEGA10N- 75	1.5 – 10	30	75	54	25,000	NBC10-□	MGN10	0.65

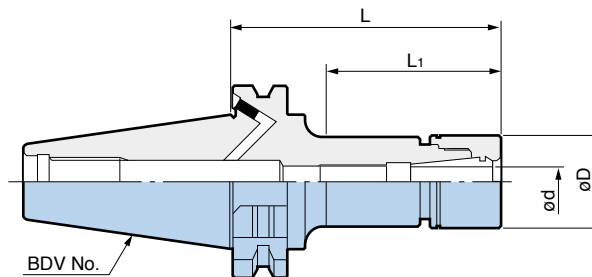
MEGA NEW BABY CHUCK®

Coolant-through hole

Clamping Range : $\varnothing 0.25 - \varnothing 20$



MAX.
20,000
min⁻¹



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	MAX. min ⁻¹	Collet Model	Nut Model	Weight (kg)
BDV50-MEGA 6N- 90	0.25- 6	20	90	50	20,000	NBC 6-□	MGN 6	3.0
-120			120	80	20,000			3.0
-165			165	125	14,000			3.1
-200			200	160	9,000			3.2
-MEGA 8N- 90	0.5 - 8	25	90	50	20,000	NBC 8-□	MGN 8	3.1
-120			120	80	20,000			3.2
-165			165	125	16,000			3.3
-200			200	160	11,000			3.4
-MEGA10N- 90	1.5 - 10	30	90	55	20,000	NBC10-□	MGN10	3.2
-120			120	80	20,000			3.3
-165			165	125	16,000			3.5
-200			200	160	12,000			3.7
-MEGA13N- 90	2.5 - 13	35	90	55	18,000	NBC13-□	MGN13	3.2
-120			120	80	18,000			3.4
-165			165	125	16,000			3.7
-200			200	160	12,000			3.9
-MEGA16N- 90	2.5 - 16	42	90	55	17,000	NBC16-□	MGN16	3.4
-120			120	85	17,000			3.7
-165			165	130	16,000			4.1
-200			200	165	13,000			4.4
-MEGA20N- 90	2.5 - 20	46	90	55	16,000	NBC20-□	MGN20	3.5
-120			120	85	16,000			3.8
-165			165	130	15,000			4.3
-200			200	165	13,000			4.6

1. MEGA NUT is included.

MEGA NEW BABY CHUCK	Spare Parts	Accessories						
	MEGA NUT 	MEGA WRENCH 	NBC COLLET FOR ENDMILL COLLET 	SEALING NUT MEGA PERFECT SEAL 	ADJUSTING SCREW 			
Model	Model	Model	Model	Model	Model	G	L	B
MEGA 6N	MGN 6	MGR20	NBC 6-□	MPS 6-□	NBA 6B	M 7	12	2
MEGA 8N	MGN 8	MGR25	NBC 8-□	MPS 8-□	NBA 8B	M 9	13	2.5
MEGA10N	MGN10	MGR30	NBC10-□	MPS10-□	NBA10B	M11	16	3
MEGA13N	MGN13	MGR35	NBC13-□	MPS13-□	NBA13B	M14	20	4
MEGA16N	MGN16	MGR42	NBC16-□	MPS16-□	NBA16B	M18	20	4
MEGA20N	MGN20	MGR46	NBC20-□	MPS20-□	NBA20B	M21	20	4

MEGA E CHUCK®

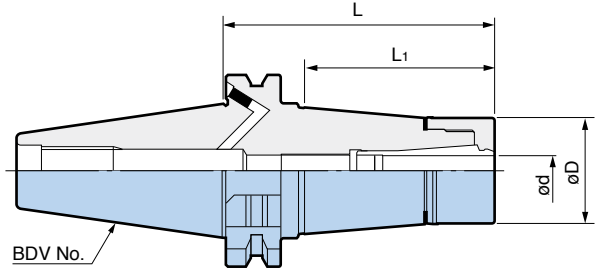
Coolant-through hole

Clamping Range : $\varnothing 3 - \varnothing 12$

Exclusively designed with the advanced technology for high speed endmilling. The long gripping length of the collet provides a powerful gripping force.



MAX.
30,000
min⁻¹



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	$\varnothing d$	$\varnothing D$	L	L ₁	MAX. min ⁻¹	Collet Model	Nut Model	Weight (kg)
BDV40-MEGA 6E- 60	3 – 6	25	60	30	30,000	MEC 6-□	MEN 6	1.1
- 90			90	60	30,000			1.2
-120			120	93	29,000			1.4
-MEGA 8E- 60	3 – 8	30	60	30	30,000	MEC 8-□	MEN 8	1.2
- 90			90	63	30,000			1.3
-120			120	94	29,000			1.5
-MEGA 10E- 60	3 – 10	35	60	33	30,000	MEC10-□	MEN10	1.3
- 90			90	64	30,000			1.4
-120			120	92	29,000			1.7
-MEGA 13E- 60	3 – 12	42	60	35	30,000	MEC13-□	MEN13	1.5
- 90			90	61	30,000			1.7
-120			120	95	29,000			1.9
BDV50-MEGA 6E-120	3 – 6	25	120	90	20,000	MEC 6-□	MEN 6	3.3
-165			165	135	14,000			3.8
-MEGA 8E-120	3 – 8	30	120	90	20,000	MEC 8-□	MEN 8	3.4
-165			165	135	16,000			3.9
-MEGA 10E- 90	3 – 10	35	90	60	20,000	MEC10-□	MEN10	3.3
-120			120	90	20,000			3.6
-165			165	135	16,000			4.1
-MEGA 13E- 90	3 – 12	42	90	60	18,000	MEC13-□	MEN13	3.6
-120			120	90	18,000			3.8
-165			165	137	16,000			4.4

1. MEGA E NUT is included.

MEGA E CHUCK	Spare Parts	Accessories						
	MEGA E NUT	MEGA WRENCH	MEGA E COLLET	SEALING NUT MEGA E PERFECT SEAL	ADJUSTING SCREW			
Model	Model	Model	Model	Model	Model	G	L	B
MEGA 6E	MEN 6	MGR25	MEC 6-□	EPS 6-□	NBA 6B	M 7	12	2
MEGA 8E	MEN 8	MGR30	MEC 8-□	EPS 8-□	NBA 8B	M 9	13	2.5
MEGA10E	MEN10	MGR35	MEC10-□	EPS10-□	NBA10B	M11	16	3
MEGA13E	MEN13	MGR42	MEC13-□	EPS13-□	NBA13B	M14	20	4

Coolant-through hole

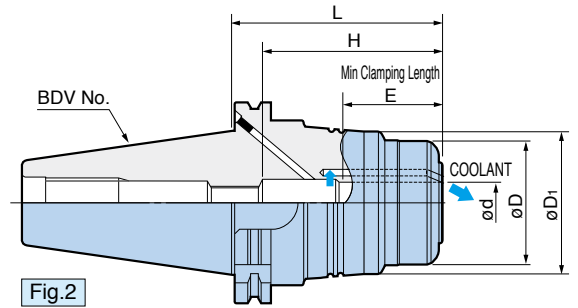
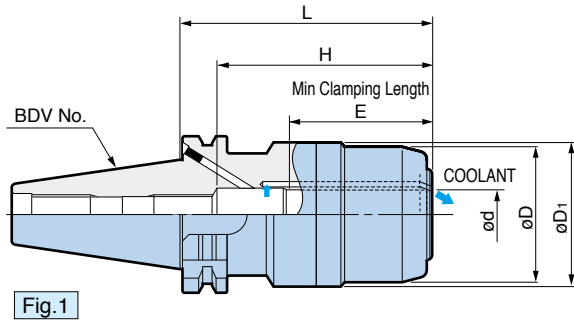
MEGA DOUBLE POWER CHUCK®

Clamping Range : $\varnothing 16 - \varnothing 42$

Type DS For coolant to cutting tool periphery

Close to integral rigidity and precision of a solid toolholder. Flange contacting nut assures highest rigidity.

MAX.
25,000
min⁻¹



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	ød	øD	øD1	L	H	E	MAX. min ⁻¹	Weight (kg)
BDV40-MEGA16DS- 90A	1	16	42	52.6	92	73	57	25,000	1.8
-MEGA20DS-100		20	55	55.7	102.5	71 - 81	58	22,000	2.1
-MEGA25DS-100A		25	62	62.7	102	73 - 83	59	18,000	2.4
-MEGA32DS-100		32	70	70.7	102.5	78 - 88	67	12,000	2.5
BDV50-MEGA16DS- 70	2	16	46	55	72.5	73	52	20,000	3.5
-MEGA20DS-100		20	60	69	102.5	71 - 81	58	20,000	4.9
-MEGA25DS-105		25	70	77	107.5	78 - 88	67	18,000	5.4
-MEGA32DS-105		32	80	86	107.5	80 - 97	73	15,000	5.7
-MEGA42DS-105	42	99	99.7	107.5	90 - 107	12,000		6.6	

1. Wrench is ordered separately.
2. "H" indicates the adjustment length with an Adjusting Screw.

For STRAIGHT COLLET G 15

Accessories

MEGA DOUBLE POWER CHUCK	MEGA WRENCH		ADJUSTING SCREW				
	Model	Model	ød	L	L1	G	W
BDV40-MEGA16DS	MGR42L	—	—	—	—	—	—
-MEGA20DS	MGR55L	HMA-M16	19	27	6	M16P1.5	8
-MEGA25DS	MGR62L	HMA-M16					
-MEGA32DS	MGR70L	HMA-M16S					
BDV50-MEGA16DS	MGR46L	—	—	—	—	—	—
-MEGA20DS	MGR60L	HMA-M16	19	27	6	M16P1.5	8
-MEGA25DS	MGR70L	HMA-M16					
-MEGA32DS	MGR80L	HMA-M24					
-MEGA42DS	MGR99L	HMA-M24	30	36	9.5	M24P1.5	10

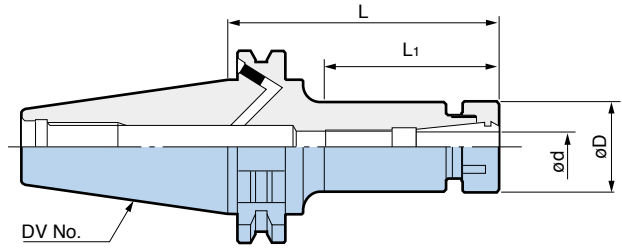
NEW BABY CHUCK

Coolant-through hole

Clamping Range : $\varnothing 0.25 - \varnothing 20$

Great variety in length in order to support high precision machining.

※MAX.
20,000
min⁻¹



For DV50, refer to the following page.

Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	Collet Model	Nut Model	Weight (kg)
DV40-NBS 6- 60	0.25 – 6	20	60	29	NBC 6-□	NBN 6	1.0
- 90			90	55			1.1
-135			135	100			1.2
-165			165	130			1.2
-200			200	165			1.3
-NBS 8- 60	0.5 – 8	25	60	29	NBC 8-□	NBN 8	1.0
- 90			90	57			1.1
-135			135	102			1.3
-165			165	132			1.4
-200			200	167			1.5
-NBS10- 60	1.5 – 10	30	60	29	NBC10-□	NBN10	1.1
- 90			90	59			1.2
-135			135	104			1.4
-165			165	134			1.6
-200			200	169			1.8
-NBS13- 60	2.5 – 13	35	60	32	NBC13-□	NBN13	1.1
- 90			90	61			1.3
-135			135	106			1.6
-165			165	136			1.8
-200			200	171			2.0
-NBS16- 60	2.5 – 16	42	60	34	NBC16-□	NBN16	1.2
- 90			90	64			1.5
-135			135	109			1.9
-165			165	139			2.2
-200			200	174			2.5
-NBS20- 60	2.5 – 20	46	60	40	NBC20-□	NBN20	1.3
- 90			90	70			1.6
-135			135	115			2.0
-165			165	145			2.3
-200			200	180			2.6

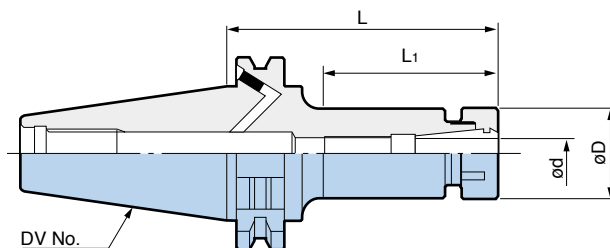
1. NEW BABY NUT is included.
2. ※Max. 20,000 min⁻¹ is valid for DV40 with L = 60 or 90mm.

- For NEW BABY COLLET G 3
- For NEW BABY COLLET for ENDMILL G 7
- For WRENCH B 7
- For ADJUSTING SCREW B 7
- For TAP DRIVING BACK STOP G 8

NEW BABY CHUCK

Coolant-through hole

Clamping Range : $\varnothing 0.25 - \varnothing 20$



Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	Collet Model	Nut Model	Weight (kg)
DV50-NBS 6- 90	0.25 – 6	20	90	50	NBC 6-□	NBN 6	3.0
-120			120	80			3.0
-165			165	125			3.1
-200			200	160			3.2
-NBS 8- 90	0.5 – 8	25	90	50	NBC 8-□	NBN 8	3.1
-120			120	80			3.2
-165			165	125			3.3
-200			200	160			3.4
-NBS10- 90	1.5 – 10	30	90	50	NBC10-□	NBN10	3.2
-120			120	80			3.3
-165			165	125			3.5
-200			200	160			3.7
-NBS13- 90	2.5 – 13	35	90	55	NBC13-□	NBN13	3.3
-120			120	80			3.4
-165			165	125			3.7
-200			200	160			3.9
-NBS16- 75	2.5 – 16	42	75	40	NBC16-□	NBN16	3.5
- 90			90	55			3.6
-120			120	85			3.9
-165			165	130			4.3
-200			200	165			4.6
-NBS20- 75	2.5 – 20	46	75	40	NBC20-□	NBN20	3.5
- 90			90	55			3.7
-120			120	85			4.0
-165			165	130			4.5
-200			200	165			4.8

1. NEW BABY NUT is included.

NEW BABY CHUCK	Spare Parts	Accessories						
	NEW BABY NUT	WRENCH	NBC COLLET	BABY PERFECT SEAL	ADJUSTING SCREW			
			 FOR ENDMILL COLLET		 Rubber			
	Model	Model	Model	Model	G	L	B	
NBS 6	NBN 6	NBK 6	NBC 6-□	BPS 6-□	NBA 6B	M 7	12	2
NBS 8	NBN 8	NBK 8	NBC 8-□	BPS 8-□	NBA 8B	M 9	13	2.5
NBS10	NBN10	NBK10	NBC10-□	BPS10-□	NBA10B	M11	16	3
NBS13	NBN13	NBK13	NBC13-□	BPS13-□	NBA13B	M14	20	4
NBS16	NBN16	NBK16	NBC16-□	BPS16-□	NBA16B	M18	20	4
NBS20	NBN20	NBK20	NBC20-□	BPS20-□	NBA20B	M21	20	4

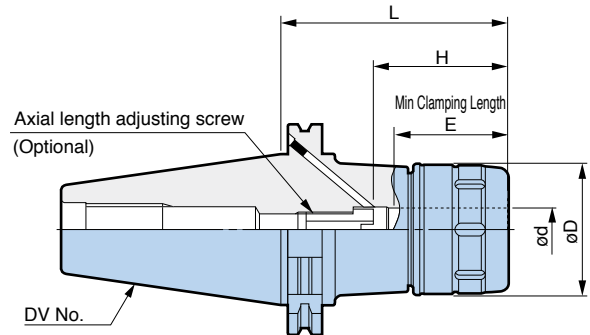
For TAP DRIVING BACK STOP G 8

NEW Hi-POWER MILLING CHUCK

Coolant-through hole

Clamping Range : $\varnothing 20 - \varnothing 42$

BIG's original design of slit structure supports heavy and finish end milling with high power and precision.



Model	$\varnothing d$	$\varnothing D$	L	H	Min. Clamping Length E	C-Spanner Model	Weight (kg)
DV40-HMC20S- 85	20	50	85	69 - 79	56	FK45- 50L	1.6
-105			105				1.8
-120			120				2.0
-HMC25S- 95	25	59	95	71 - 81	57	FK58- 62L	1.9
-105			105				2.1
-HMC32S- 95	32	68	95	79 - 89	64	FK68- 75L	2.0
-105			105				2.2
-135			135				2.7
DV50-HMC20-105	20	60	105	69 - 79	56	FK58- 62	4.6
-135			135				5.2
-HMC25-105	25	62	105	74 - 84	65	FK58- 62	4.6
-135			135				5.3
-HMC32-105	32	80	105	78 - 95	71	FK80- 90	5.2
-135			135				6.3
-165			165				7.4
-HMC42-105	42	99	105	93 - 105	73	FK92-100	6.0
-135			135				7.4
-165			165				9.1

1. Wrench and Axial Adjusting Screw are ordered separately.
2. "H" indicates the adjustment length with an Adjusting Screw.

For STRAIGHT COLLET G 15

Accessories

NEW Hi-POWER MILLING CHUCK	C-SPANNER	ADJUSTING SCREW					
	Model	Model	$\varnothing D$	L	L1	G	W
DV40-HMC20S	FK45- 50L	HMA-M16	19	27	6	M16P1.5	8
-HMC25S	FK58- 62L	HMA-M16	19	27	6	M16P1.5	8
-HMC32S	FK68- 75L	HMA-M16S	19	27	6	M16P1.5	10
DV50-HMC20	FK58- 62	HMA-M16	19	27	6	M16P1.5	8
-HMC25	FK58- 62	HMA-M16	19	27	6	M16P1.5	8
-HMC32	FK80- 90	HMA-M24	30	36	9.5	M24P1.5	10
-HMC42	FK92-100	HMA-M24	30	36	9.5	M24P1.5	10

MEGA ER GRIP

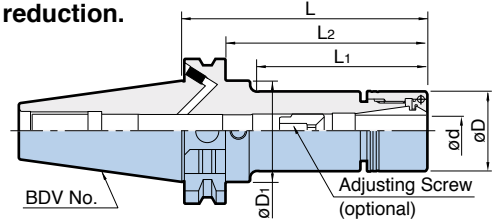
Coolant-through hole

Clamping Range : $\phi 1.9 - \phi 20$

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



MAX.
35,000
min⁻¹



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	ød	øD	øD ₁	L	L ₁	L ₂	H	Nut Model	MAX. min ⁻¹	Weight (kg)
BDV40-MEGAER16- 60	1.9 - 10.0	30	44.7	60	29	41	35 - 45	MERN16	35,000	1.3
- 90				90	57	71	35 - 47		35,000	1.5
-105				105	72	86			20,000	1.5
-135				135	102	116			20,000	1.7
-165				165	132	146			15,000	1.8
-MEGAER20- 60	2.75 - 13.0	35	44.7	60	30	41	42 - 57	MERN20	35,000	1.3
- 90				90	58	71	42 - 62		35,000	1.5
-105				105	73	86			20,000	1.6
-135				135	103	116			20,000	1.8
-165				165	133	146			15,000	2.0
-MEGAER25- 65	2.75 - 16.0	42	44.7	65	35	46	44 - 60	MERN25	30,000	1.4
- 90				90	60	71	44 - 67		30,000	1.6
-105				105	75	86			20,000	1.8
-135				135	105	116			20,000	2.0
-165				165	135	146			15,000	2.3
-MEGAER32- 70	2.75 - 20.0	50	-	70	-	51	50 - 64	MERN32	30,000	1.6
- 90				90	-	71	50 - 68		30,000	1.8
-105				105	-	86			20,000	2.0
-135				135	-	116			20,000	2.3
-165				165	-	146			15,000	2.7
BDV50-MEGAER16- 75	1.9 - 10.0	30	70.1	75	39	56	35 - 47	MERN16	20,000	3.8
-105				105	69	86			20,000	3.9
-135				135	99	116			20,000	4.0
-165				165	129	146			16,000	4.2
-MEGAER20- 75	2.75 - 13.0	35	70.1	75	39	56	42 - 62	MERN20	18,000	3.8
-105				105	69	86			18,000	4.0
-135				135	99	116			18,000	4.2
-165				165	129	146			16,000	4.4
-MEGAER25- 75	2.75 - 16.0	42	70.1	75	39	56	44 - 66	MERN25	17,000	3.9
-105				105	69	86	44 - 67		17,000	4.1
-135				135	99	116			17,000	4.4
-165				165	129	146			16,000	4.6
-MEGAER32- 75	2.75 - 20.0	50	70.1	75	39	56	50 - 66	MERN32	16,000	4.0
-105				105	69	86	50 - 68		16,000	4.3
-135				135	99	116			16,000	4.6
-165				165	129	146			15,000	5.0

- Mega ER Nut is included. Adjusting screw, collet and wrench must be ordered separately.
- "H" indicates the adjustment length with an adjusting screw.
- Balance screws are not included.
- Mega ER Grip is not able to use DIN6499 Form-A collets and ESX collets.



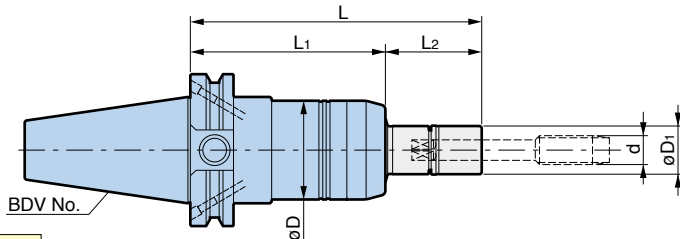
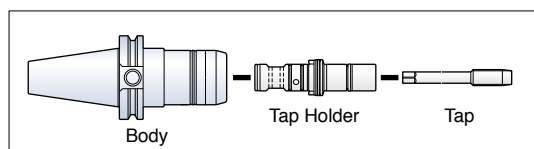
Caution

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. Also, we cannot guarantee the accuracy statement for our collets if they are assembled on the chuck body of another manufacturer.

Spare Parts		Accessories							
MEGA ER NUT		MEGA WRENCH	ER COLLET	SEALING NUT MEGA ER PERFECT SEAL	ADJUSTING SCREW				
MEGA ER GRIP	Model	Model	Model	Model	Model	G	L	B	
	MEGA ER16	MERN16	MGR30L	ERC16-□	MERPS16-□	NBA10B	M11	16	3
	MEGA ER20	MERN20	MGR35L	ERC20-□	MERPS20-□	NBA13B	M14	20	4
	MEGA ER25	MERN25	MGR42L	ERC25-□	MERPS25-□	NBA16B	M18	20	4
	MEGA ER32	MERN32	MGR50L	ERC32-□	MERPS32-□	NBA20B	M21	20	4

MEGA SYNCHRO® Tapping Holder

Coolant-through hole
Tapping Range : M2 - M20



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Tap Holder Model	Tapping Range d	øD	øD1	L	L1	L2	Weight (kg)
BDV40-MGT 6- 80	MGT 6-d- 30	M2 – M6	36	16	110	80	30	1.4
	- 70	No.3 – U1/4			150		70	
	-100				180		100	
-MGT12- 80	MGT12-d- 30	M6 – M12	41	20	110	80	30	1.5
	- 70	U1/4 – U7/16			150		70	
	-100	P1/8			180		100	
-MGT20-105	MGT20-d- 35	M12 – M20	54	30	140	105	35	1.9
	- 85	U1/2 – U3/4			190		85	
	-115	P1/4 – P3/8			220		115	
BDV50-MGT 6- 85	MGT 6-d- 30	M2 – M6	36	16	115	85	30	3.6
	- 70	No.3 – U1/4			155		70	
	-100				185		100	
-MGT12- 85	MGT12-d- 30	M6 – M12	41	20	115	85	30	3.7
	- 70	U1/4 – U7/16			155		70	
	-100	P1/8			185		100	
-MGT20-105	MGT20-d- 35	M12 – M20	54	30	140	105	35	4.2
	- 85	U1/2 – U3/4			190		85	
	-115	P1/4 – P3/8			220		115	

1. Tap Holder and wrench are ordered separately.
2. Coolant through flange is standard on all BDV40 & 50 Bodies. Rigid tapping function is required on the machine tool.

For TAP HOLDER A 33-A 36

For MEGA WRENCH A 32

● Tapping Range for DIN & ISO Standard

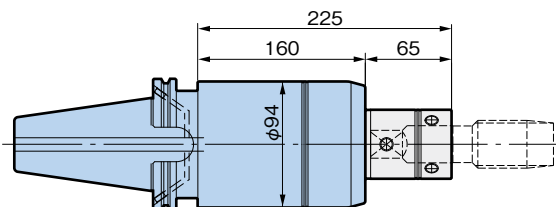
MGT Size	DIN Standard			ISO Standard	
	DIN371	DIN376	DIN353	ISO529	ISO2284
MGT 6	M3-M6	M5-M8		M3-M5	
MGT12	M5-M8	M8-M12	1/8	M6,M8,M12	1/8
MGT20	M10	M12-M20	1/4-1/2	M10-M20	1/4-3/8

For detail of TAP HOLDER A 35-A 36

Coolant-through hole

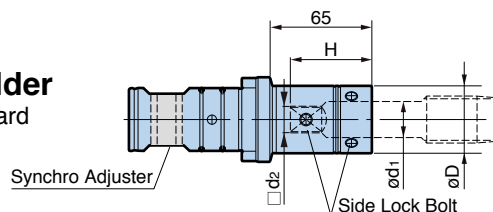
For Large Tap MGT36 Tapping Range : M22 - M36

BIG-PLUS tools can be used in machining centers with conventional spindles.



Model	BDV50-MGT36-160
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■ Tap Holder DIN standard



Tap Holder Model	Tap size		ød1	□d2	H	øD	Weight (kg)
	DIN376	DIN353					
MGT36-180145-65	M22,24	P5/8	18	14.5	45	38	1.4
-200160-65	M27	P3/4	20	16	51	40	1.4
-220180-65	M30	P7/8	22	18	53	42	1.5
-250200-65	M33	P1	25	20	58	49	1.6
-280220-65	M36		28	22	62	52	1.6

For JIS TAP HOLDER A 37

FACE MILL ARBOR Type FMC

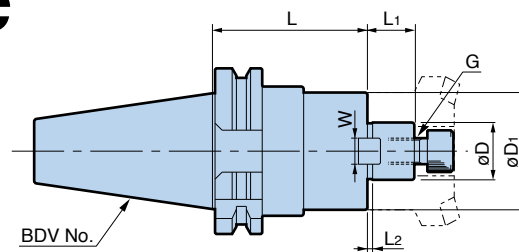


Fig. 1

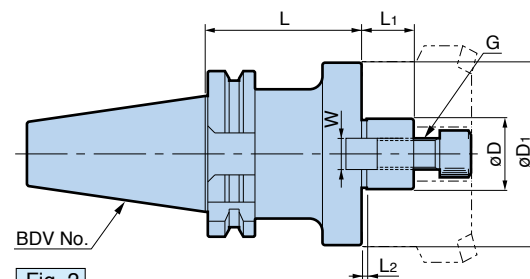


Fig. 2

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	Cutter Dia.	øD	øD1	L	L1	L2	W	G	Weight (kg)
BDV40-FMC16- 60	1	40	16	32	60	16	5	8	M 8	1.2
90					1.6					
-FMC22- 60		50, 63	22	45	60	18	5	10	M10	1.4
90					1.7					
-FMC27- 60	2	80	27	70	60	20	6	12	M12	2.0
90					2.6					
-FMC32- 60		100	32	85	60	22	7	14	M16	2.1
90					2.5					
BDV50-FMC22- 60	1	50, 63	22	45	60	18	5	10	M10	4.0
90					4.4					
150					4.8					
-FMC27- 60		80	27	70	60	20	6	12	M12	4.3
90	5.1									
150	6.9									
-FMC32- 60	2	100	32	85	60	22	7	14	M16	4.7
90					6.0					
150					8.0					

1. Clamp Bolt (Cap Screw) is included.

2. By utilizing a clamping bolt with a hole through, coolant is supplied through the bolt.

ANGLE HEAD

AG90 NBS type SPINDLE ANGLE : 90°

It is the outstanding rigidity and accuracy of the **NEW BABY CHUCK**, used for holding the cutting tool, that produces high precision with less runout. Available in various sizes to meet specific production requirements.

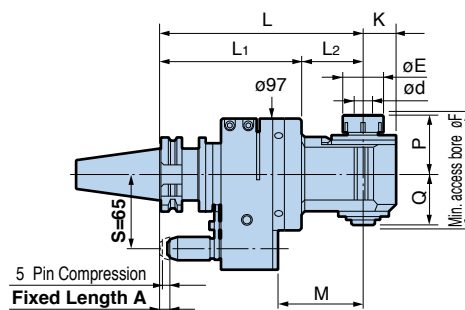


Fig. 1

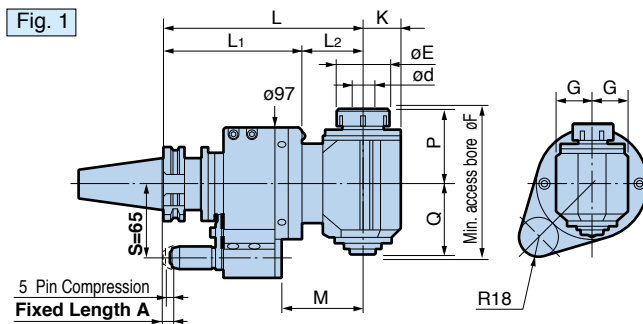


Fig. 2

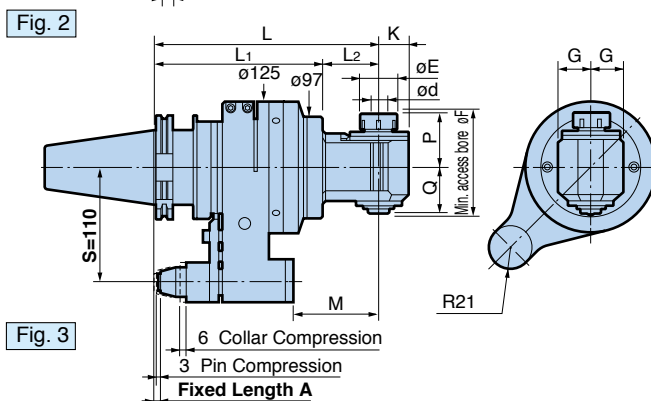


Fig. 3



Exclusive STOP BLOCK is required.

BIG-PLUS tools can be used in machining centers with conventional spindles.

● The rotation of the cutting tool is in reverse direction of the machine spindle. (Speed Ratio 1:1)

Model	Fig.	ød	øE	G	K	L	L1	L2	M	P	Q	øF	Collet	Max. min ⁻¹	Weight (kg)
BDV40-AG90/NBS 6 -180	1	0.25 – 6	20	21	17	180	125	55	77	33	29	67	NBC 6	6,000	5.1
-210						85		107	5.3						
-240						115		137	5.5						
-270						145		167	5.7						
-AG90/NBS10 -180	1	1.5 – 10	30	30	25	180	125	55	77	45	43	91	NBC10	6,000	5.5
-210						85		107	5.9						
-240						115		137	6.2						
-AG90/NBS13 -180	1	2.5 – 13	35	31	28	180	125	55	77	52	45	101	NBC13	6,000	5.6
-210						85		107	6.0						
-240						115		137	6.3						
-AG90/NBS20S-175S	2	2.5 – 20	46	35	33	175	122	53	72	65	62	132	NBC20	3,000	8.0
BDV50-AG90/NBS 6 -215	3	0.25 – 6	20	21	17	215	160	55	82	33	29	67	NBC 6	6,000	12.6
-245						85		112	12.8						
-275						115		142	13.0						
-305						145		172	13.2						
-305						145		172	13.2						
-AG90/NBS10 -215	3	1.5 – 10	30	30	25	215	160	55	82	45	43	91	NBC10	6,000	13.0
-245						85		112	13.4						
-275						115		142	13.7						
-AG90/NBS13 -215	3	2.5 – 13	35	31	28	215	160	55	82	52	45	101	NBC13	6,000	13.1
-245						85		112	13.5						
-275						115		142	13.8						
-AG90/NBS20 -230	3	2.5 – 20	46	35	35	230	160	70	97	65	62	132	NBC20	3,000	14.2

1. The shortest Fixed Length A: 40 taper = 8mm, 50 taper = 6mm. Other lengths are available upon request.
2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
3. Clamping nut and wrench are included. Collet must be ordered separately.
4. New Baby Collet for endmill model NBC□-□EAA cannot be used.

➔ For NEW BABY COLLET **G 3**

➔ For STOP BLOCK **G 25**

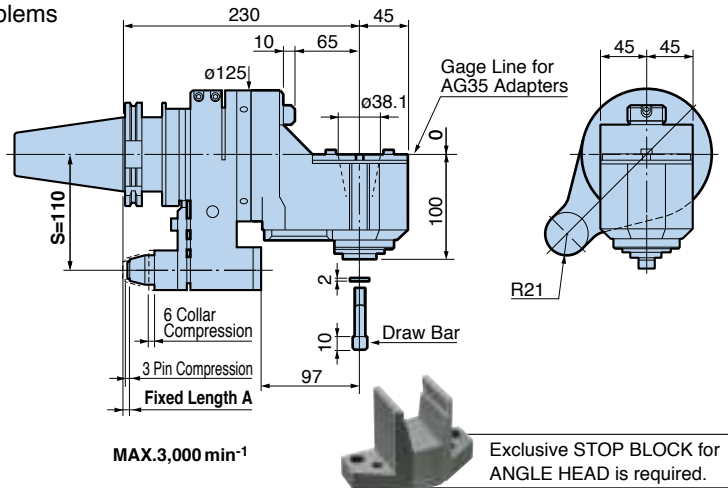
ANGLE HEAD

Spindle head is equipped with a short taper for quick changing of various adapters.

AG90 BUILD-UP type SPINDLE ANGLE : 90°

[STANDARD TYPE]

Designed for greater rigidity by having the face of the spindle bore in line with the center of the machine spindle. Also helps to minimize interference problems with ATC and storage problems within the magazine.



BIG-PLUS tools can be used in machining centers with conventional spindles.

- The cutter rotates in the same direction of the machine spindle.

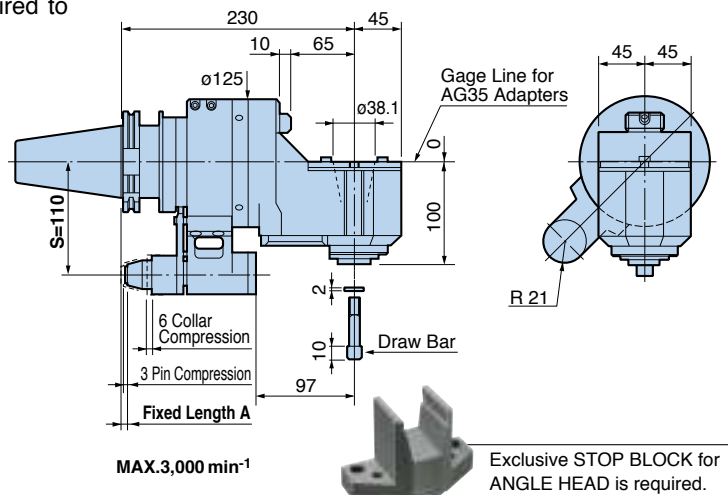
Model	Weight (kg)
BDV50-AG90/AGH35-230	15.0

1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.

For STOP BLOCK G 25

[HIGH RIGIDITY TYPE]

Provided with a steel housing and reinforced locating pin assembly for applications where increased rigidity is required to perform various types of heavier machining.



BIG-PLUS tools can be used in machining centers with conventional spindles.

- The cutter rotates in the same direction of the machine spindle.

Model	Weight (kg)
BDV50-AG90/AGH35-230S	16.3

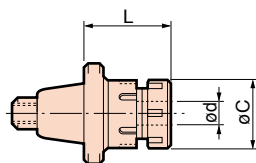
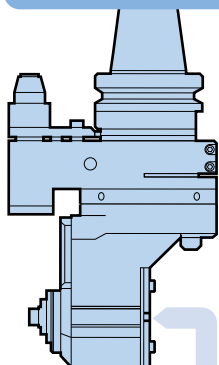
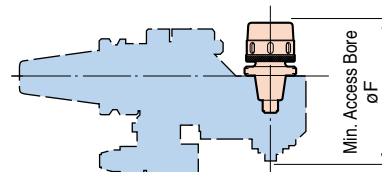
1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.

S=80 type is available upon request.

For STOP BLOCK G 25

BUILD-UP TYPE **AG35 ADAPTER SERIES**

ϕF = Minimum bore size that an AG35 adapter can fit into, excluding the cutting tool.



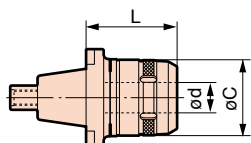
NEW BABY CHUCK

Model	ϕd	L	ϕC	ϕF	Weight (kg)
AG35-NBS10	1.5 - 10	47	30	162	0.6
-NBS13	2.5 - 13	54	35	168	0.7
-NBS16	2.5 - 16		42	170	0.8
-NBS20	2.5 - 20		46	170	0.9

Collet and wrench must be ordered separately.

For **NEW BABY COLLET G 3**

For **WRENCH A 15**

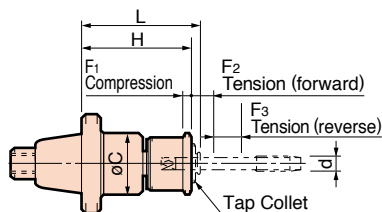


NEW HI-POWER MILLING CHUCK

Model	ϕd	L	ϕC	ϕF	Weight (kg)
AG35-HMC20S	20	60	50	178	1.5

Wrench(FK45-50L) is included.

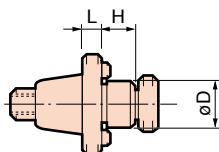
For **STRAIGHT COLLET G 15**



AUTO TAPPER TYPE B (Automatic depth control)

Model	d	L	ϕC	H	F ₁	F ₂	F ₃	Weight (kg)
AG35-ATB12E	M4 - M12	80	40.5	72	0.5	5	4	1.0
-ATB20E	M8 - M20	115	57.5	102.5		6.5	5	1.7

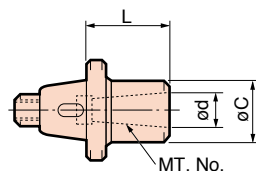
For Tap Collets, please contact **BIG** agent.



FACE MILL ARBOR

Model	ϕD	L	H	Weight (kg)
AG35-FMA25.4-20	25.4	20	22	1.0
AG35-FMH22 -30	22	30	18	1.0
-FMH27 -20	27	20	20	1.0

Cutter face protrudes by 7.5mm from the 125mm diameter housing with the following combinations; AG35-FMA25.4-20 + 50mm thick cutter, AG35-FMH22-30 + 40mm thick cutter, AG35-FMH27-20 + 50mm thick cutter



MORSE TAPER ADAPTER

Model	ϕd	MT.No.	L	ϕC	ϕF	Weight (kg)
AG35-MT1	12.065	1	50	24	164	0.6
-MT2	17.78	2	60	32	180	0.7

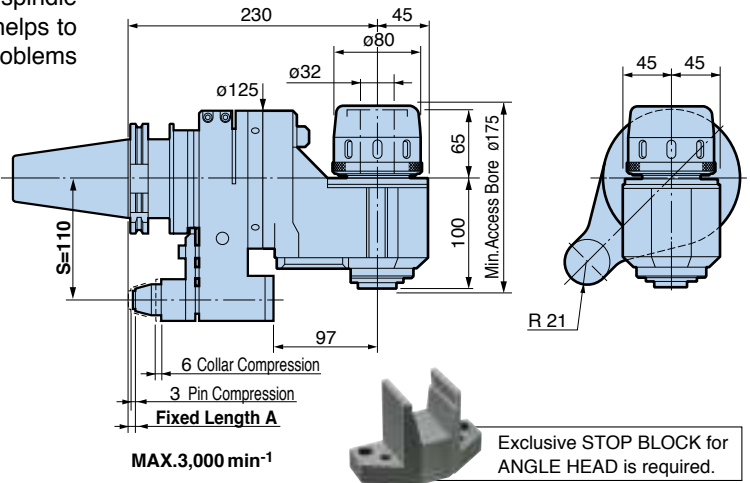
ANGLE HEAD

Improved versatility is achieved from the 32mm capacity Milling Chuck by using parallel reduction collets and other accessories.

AG90 HMC type SPINDLE ANGLE : 90°

[STANDARD TYPE]

Designed for greater rigidity by having the face of the spindle bore in line with the center of the machine spindle. Also helps to minimize interference problems with ATC and storage problems within magazine.



BIG-PLUS tools can be used in machining centers with conventional spindles.

- The cutter rotates in the same direction of the machine spindle.

Model	Weight (kg)
BDV50-AG90/HMC32-230	16.8

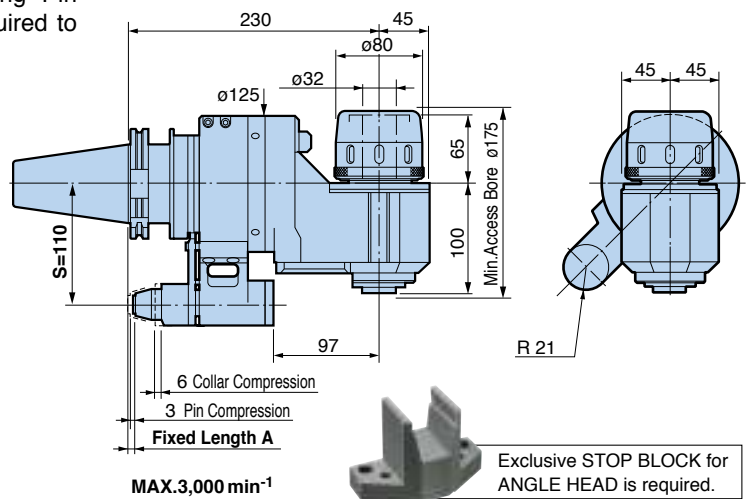
1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
3. Wrench (FK80-90) is included.

For STOP BLOCK G 25

For STRAIGHT COLLET G 15

[HIGH RIGIDITY TYPE]

Provided with a steel housing and reinforced Locating Pin assembly for applications where increased rigidity is required to perform various types of heavier machining.



BIG-PLUS tools can be used in machining centers with conventional spindles.

- The cutter rotates in the same direction of the machine spindle.

Model	Weight (kg)
BDV50-AG90/HMC32-230S	18.1

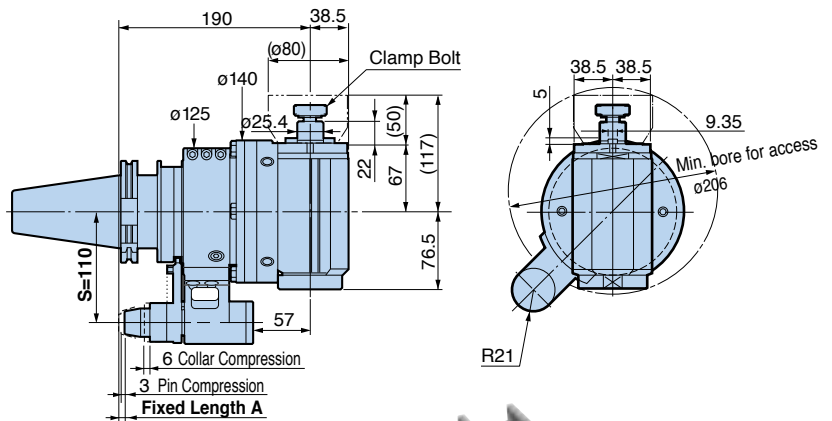
1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
 2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
 3. Wrench (FK80-90) is included.
- S=80 type is available upon request.**

For STRAIGHT COLLET G 15

For STOP BLOCK G 25

High rigidity bearings and substantial spindle design.
Max. power transmission 20Kw. (at 1,500min⁻¹)

AG90 FACE MILL type SPINDLE ANGLE : 90°



MAX.1,500 min⁻¹



Exclusive STOP BLOCK for ANGLE HEAD is required.

Simple 90° indexing of the cutter direction.

(Accuracy $\pm 5'$)

BIG-PLUS tools can be used in machining centers with conventional spindles.

- The rotation of the cutting tool is in reverse direction of the machine spindle.

Model	Weight (kg)
BDV50-AG90-FMA25.4S-190S	19.2

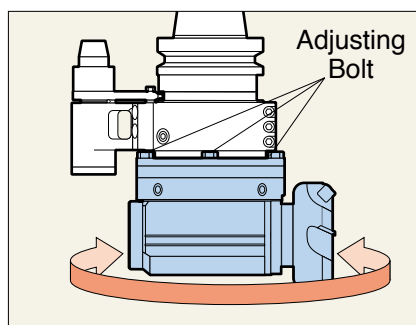
Figures in () indicate dimensions when 80mm diameter and 50mm high face mill cutter is mounted.

1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
2. Coolant cannot be supplied through the Locating Pin.
3. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.

For STOP BLOCK **G 25**

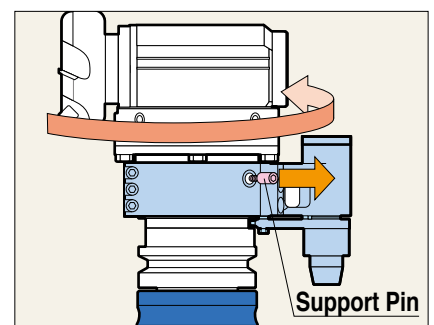
■ Cutter head adjustable through 360° to any angle

Following the release of the Adjusting Bolts (8 positions), the cutter direction can be easily adjusted.



■ Indexing through 90°

Cutter head is quickly indexable to 90° increments. (The Support Pin should be removed.)

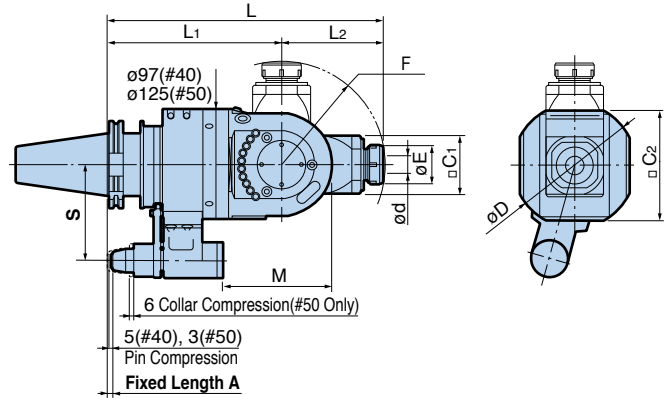


CAUTION : Indexing should not take place within the machine.

ANGLE HEAD

Suitable for all cutting angles. In addition to the cutter head being adjustable a full 360°, the spindle also becomes easily and precisely adjustable from 0° to 90° by 1° increments.

AGU UNIVERSAL type SPINDLE ANGLE : 0° to 90°



Exclusive STOP BLOCK is required.

BIG-PLUS tools can be used in machining centers with conventional spindles.

● The rotation of the cutting tool is in reverse direction of the machine spindle.

Model	ød	øE	øD	□C1	□C2	L	L1	L2	M	F	S	Collet	Max. min ⁻¹	Weight (kg)
BDV40-AGU/NBS13-280	2.5 – 13	35	115	51	97	280	180	100	124	102	65	NBC13	6,000	9.7
BDV50-AGU/NBS20-315	2.5 – 20	46	140	65	125	315	200	115	125	118	110	NBC20	4,000	20.8

- The standard fixed length A: 40 taper=8mm, 50 taper=6mm. Other lengths are available upon request.
- The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
- Clamping nut and wrench are included. Collet must be ordered separately.

For NEW BABY COLLET G 3 **For STOP BLOCK G 25**

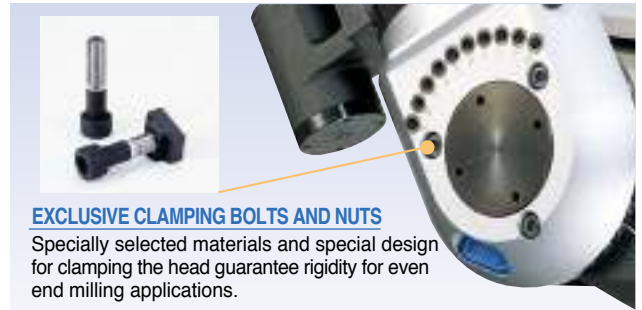


EASILY ADJUSTABLE SPINDLE ANGLE FROM 0° to 90°.



PRECISE ANGLE ADJUSTMENT

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

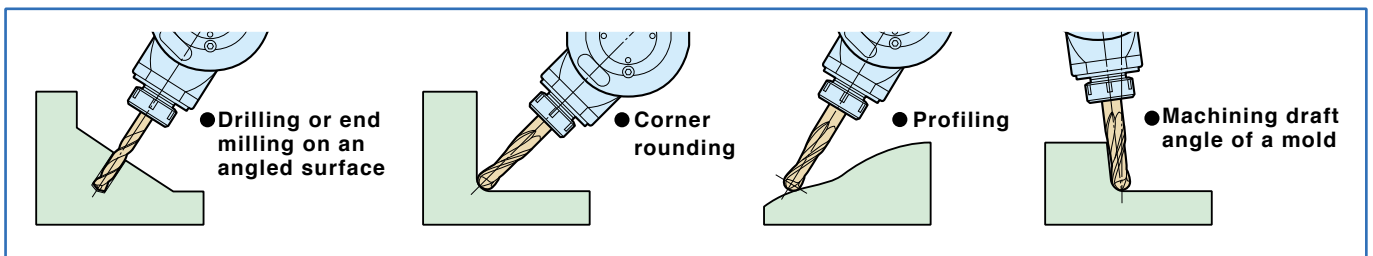


EXCLUSIVE CLAMPING BOLTS AND NUTS

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

Application example

Adjustable AGU Universal Series expands Angle Head capabilities to accomplish various angular machining applications.



AIR TURBINE SPINDLE

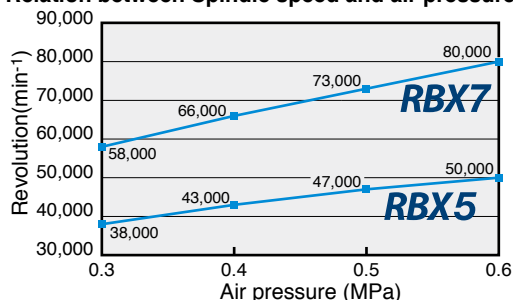
High-speed Micro-Machining can be done on a normal machining center, eliminating the need of an expensive high-speed machine.

Machine Spindle Rotation = 0

MAX. 80,000 min⁻¹

	RBX7	RBX5
Practical spindle speed (min ⁻¹)	60,000 - 80,000	40,000 - 50,000
Clamping Range	ø0.45 - ø4.05mm (MEGA4S)	
T.I.R at nose	Less than 1 μm	
Air pressure	Less than 0.6MPa	
Air flow	300L/min [ANR](0.6MPa)	

Relation between Spindle speed and air pressure (Reference)

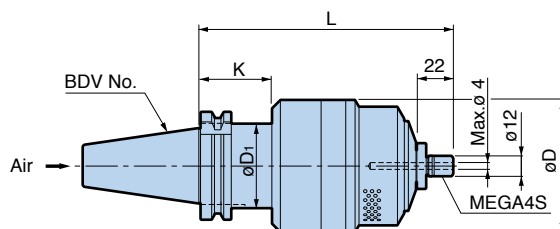


CENTER THROUGH Type

For compressed air through the machine spindle.



For automatic tool change



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Operating spindle speed(min ⁻¹)	Tool diameter	L	øD	øD1	K	Weight (kg)
BDV40-RBX7C-4S-150	60,000 - 80,000	ø1.0 or smaller	150	78	49.6	43	3.1
-RBX5C-4S-150	40,000 - 50,000	ø1.5 or smaller		96			4.1
BDV50-RBX7C-4S-145	60,000 - 80,000	ø1.0 or smaller	145	78	68	38	5.8
-RBX5C-4S-145	40,000 - 50,000	ø1.5 or smaller		96			6.8

- Nut and wrenches are included. Collet must be ordered separately.
- XF1(Air Unit) must be ordered separately. A 65

For MICRO COLLET G 2



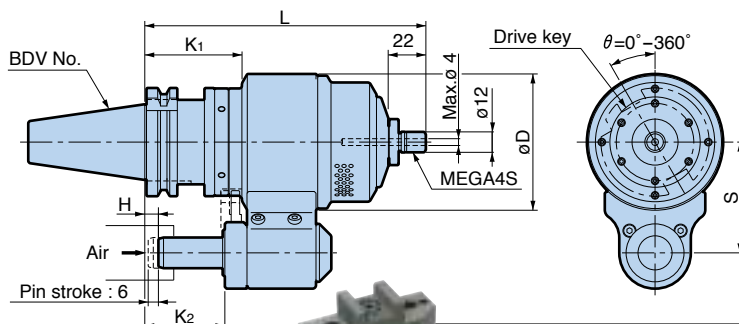
CAUTION

Compressed air to drive the AIR TURBINE SPINDLE must be clean. Therefore, coolant should not be supplied through the spindle on the machine that the AIR TURBINE SPINDLE is used.

SIDE THROUGH Type



For automatic tool change



Exclusive STOP BLOCK is required.

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Operating spindle speed(min ⁻¹)	Tool diameter	L	øD	K1	K2	S	H	Weight (kg)
BDV40-RBX7-4S-165-65	60,000 - 80,000	ø1.0 or smaller	165	80	57	47	65	-10 - 35	4.0
-RBX5-4S-165-65	40,000 - 50,000	ø1.5 or smaller		96					5.0
BDV50-RBX7-4S-170-80	60,000 - 80,000	ø1.0 or smaller	170	100	62	52	80	-5 - 40	8.7
-RBX5-4S-170-80	40,000 - 50,000	ø1.5 or smaller							9.7

- Nut and wrenches are included. Collet must be ordered separately.
- XF1(Air Unit) must be ordered separately. A 65

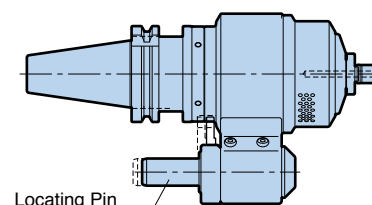
For MICRO COLLET G 2

SET UP INFORMATION for AIR TURBINE SPINDLE



● Preparing the Stop Block

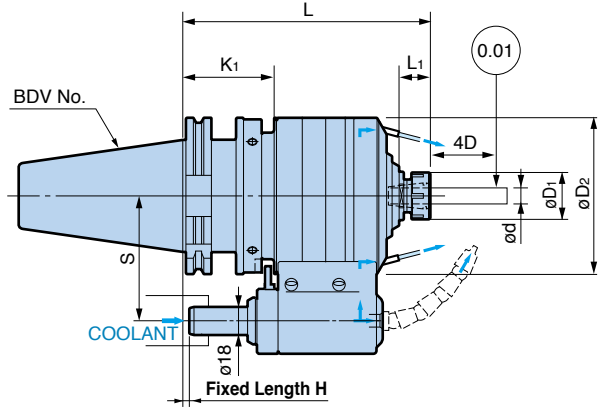
The **BIG** AIR TURBINE SPINDLE utilizing a Locating Pin requires the Stop Block, which is mounted to the machine spindle. Please contact a **BIG** agent for details.



HIGH SPINDLE

GTG Type

Higher spindle speeds are available without excessive load on the machine spindle.



Exclusive STOP BLOCK is required.

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	ød	L	L1	øD1	øD2	K1	S	Collet	Speed Ratio	Max. min ⁻¹	Weight (kg)
BDV40-GTG5-10-155	1.5 – 10	155	20	30	80	58	65	NBC10	4.67	20,000	5.0
BDV50-GTG6-10-163	1.5 – 10	163	20	30	100	63	80	NBC10	5.67	20,000	9.0
-GTG4-16-182	2.5 – 16	182	25.5	42	110	63	80	NBC16	3.80	15,000	10.8

1. The standard Fixed Length H is 6mm.
2. 1 pce. of maximum size collet (GTG5,6=NBC10-10AA,GTG4=NBC16-16AA) , clamping nut and wrench are included.
3. θ (angle of locating pin to drive key groove) is adjustable to any degree from 0° to 360°.
4. Special Air Purge oil mist lubrication style is available upon request for machining graphite, ceramic, tungsten and other composite materials.
5. Please do not use with neat oil coolant. Using with neat oil coolant carries a risk of fire.

➡ For NEW BABY COLLET G 3

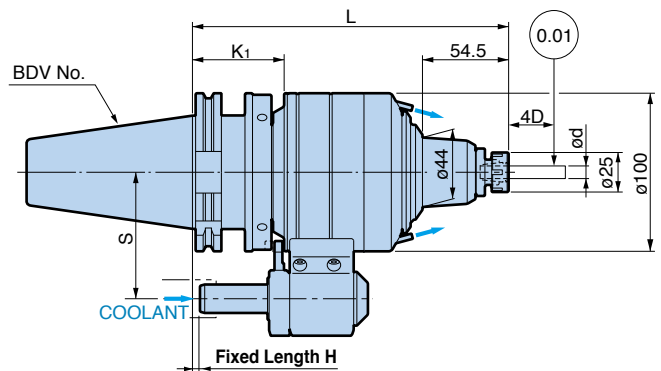
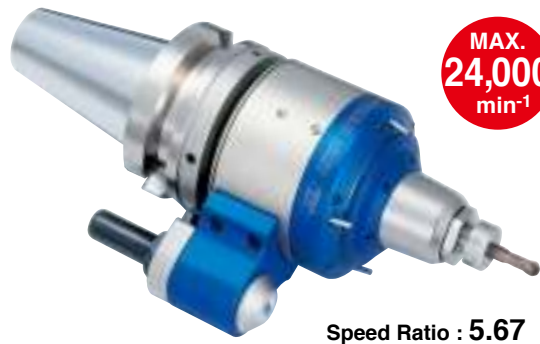
➡ For STOP BLOCK G 27

➡ For LOCATING PINS G 27

➡ For WRENCH A 15

GTX Type

Special design for die & mold.
Long nose design for minimized interference.
Long tool life with grease nipple.



Exclusive STOP BLOCK is required.

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	ød	L	K1	S	Collet	Weight (kg)
BDV50-GTX6-8-205	0.5 – 8	205	62	80	NBC8	9.5

1. The standard Fixed Length H is 6mm.
2. Clamping nut and wrench are included.
3. Collet must be ordered separately.
4. Please do not use with neat oil coolant. Using with neat oil coolant carries a risk of fire.

➡ For NEW BABY COLLET G 3

➡ For STOP BLOCK G 27

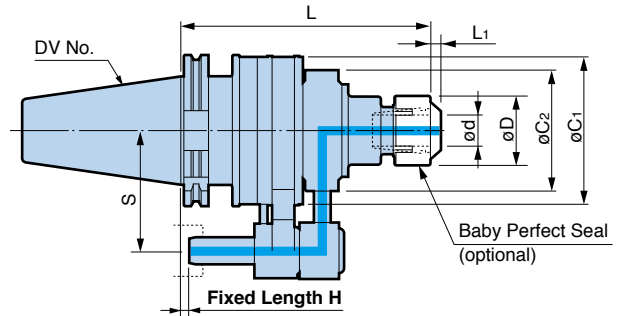
➡ For LOCATING PINS G 27

➡ For WRENCH A 15

Hi-JET HOLDER

NEW BABY CHUCK Type

Suitable for small diameter drills, gun drills and end mills due to high precision New Baby Chuck.



Exclusive STOP BLOCK is required.

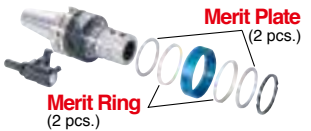
Model	ød	øD	L	øC1	øC2	S	Collet	Max. min ⁻¹	Merit Set 2 pcs. of Merit Ring and 2 pcs. of Merit Plate	Weight (kg)
DV40-ONBS13N-165	2.5 – 13	35	165	81.6	73	65	NBC13	10,000	MES-40	4.0
ONBS16N-165	2.5 – 16	42			80		8,000	MES-50	4.3	
-ONBS20N-165	2.5 – 20	46			8,000		4.3			
DV50-ONBS13N-165	2.5 – 13	35	165	99.6	80	NBC13	8,000	MES-50	7.3	
ONBS16N-165	2.5 – 16	42				7.3				
-ONBS20N-165	2.5 – 20	46				7.5				

- The standard Fixed Length H is 6mm.
- Wrench, Collet and Adjusting Screw are optional items.
- Max. coolant pressure is 2MPa.
- Clamping Nut is sold separately. Please order BABY PERFECT SEAL(BPS) for your application.

Please do not use with neat oil coolant.
Using with neat oil coolant carries a risk of fire.

MERIT SET

Merit Set includes 2 pcs. each of Merit Plates, Merit Rings, O-Rings and Locking Pads.



For STOP BLOCK G 27

For LOCATING PINS G 27

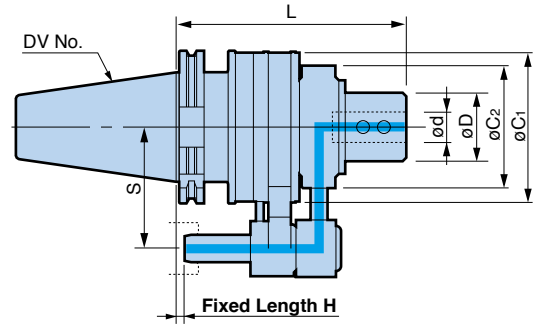
Accessories

WRENCH	NBC COLLET	BABY PERFECT SEAL	ADJUSTING SCREW	Rubber		
	 G 3 FOR ENDMILL COLLET G 7	 G 10				
Model	Model	Model	Model	G	L	B
NBK13	NBC13-□	BPS13-□	NBA13B	M14	20	4
NBK16	NBC16-□	BPS16-□	NBA16B	M18	20	4
NBK20	NBC20-□	BPS20-□	NBA20B	M21	20	4

Hi-JET HOLDER

SIDE LOCK Type

Suitable for popular straight shanks with flat.



Exclusive STOP BLOCK is required.

Model	ød	øD	L	øC1	øC2	S	Max. min ⁻¹	Merit Set 2 pcs. of Merit Ring and 2 pcs. of Merit Plate	Weight (kg)
DV40-OSL16N-150	16	48	150	81.6	80	65	8,000	MES-50	4.4
-OSL20N-150	20				80				4.3
-OSL25N-165	25				80				4.4
-OSL32N-165	32	58	165	99.6	98		6,000	MES-65	5.7
DV50-OSL16N-150	16	48	150	99.6	80	80	8,000	MES-50	7.5
-OSL20N-150	20				80				7.4
-OSL25N-165	25				80				7.5
-OSL32N-165	32	58	165		98		6,000	MES-65	7.9
-OSL40N-165	40	64							8.0
-OSL50N-185	50	84	185	129.6	121		4,000	MES-90	11.9

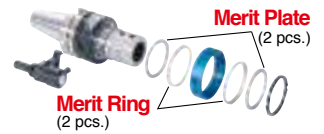
1. The standard Fixed Length H is 6mm. 2. Max. coolant pressure is 2MPa.

Please do not use with neat oil coolant. Using with neat oil coolant carries a risk of fire.

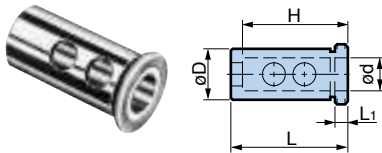
For STOP BLOCK G 27 For LOCATING PINS G 27

MERIT SET

Merit Set includes 2 pcs. each of Merit Plates, Merit Rings, O-Rings and Locking Pads.



REDUCTION COLLET



Model	ød	øD	L	L1	H
OSL25-16	16	25	62	5.5	48
-20	20				50
OSL32-16	16	32	66	5.5	48
-20	20				50
-25	25				56

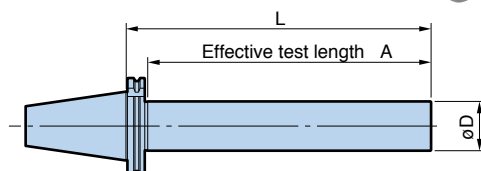
Model	ød	øD	L	L1	H
OSL40-16	16	40	76	5.5	48
-20	20				50
-25	25				56
-32	32				60

DYNA TEST



Precision test bar of the highest quality.

- Periodic inspection of machine tools to control production stability.
- Shorter models are ideal for measuring ATC repeatability.



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	L	A	øD
BDV40-50-L200SD	200	170	50
-L340SD	340	310	
BDV50-50-L200SD	200	178	
-L340SD	340	318	

HSK SHANK

Form A

MEGA MICRO CHUCK	C1
MEGA NEW BABY CHUCK	C3
MEGA E CHUCK	C7
MEGA DOUBLE POWER CHUCK	C9
NEW BABY CHUCK	C11
MEGA ER GRIP	C13
NEW Hi-POWER MILLING CHUCK	C15
HYDRAULIC CHUCK	C16
SHRINK CHUCK	C19
MOLD CHUCK	C21
FACE MILL ARBOR	C22
MEGA SYNCHRO Tapping Holder	C25
ANGLE HEAD	C27
AIR TURBINE SPINDLE	C38
DYNA TEST	C50

Form E

MEGA MICRO CHUCK	C40
MEGA NEW BABY CHUCK	C42
SHRINK CHUCK	C44
DYNA TEST	C50

Form F

MEGA MICRO CHUCK	C45
MEGA NEW BABY CHUCK	C46
MEGA E CHUCK	C47
MEGA DOUBLE POWER CHUCK	C48
DYNA TEST	C50
COOLANT PIPE	C51



MEGA MICRO CHUCK®

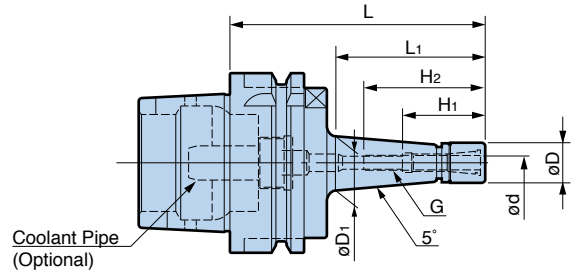
Clamping Range : $\varnothing 0.45 - \varnothing 8.05$

Type T

Taper-off design minimizes interference and maximizes rigidity.



MAX.
35,000
min⁻¹



Model	Clamping Range $\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	H ₁	H ₂	G	Max. min ⁻¹	Collet Model	Weight (kg)						
HSK-A40-MEGA3S- 75T	0.45 – 3.25	10	16.0	75	44	22	38	M4 P0.7	32,000	NBC 3S-□	0.28						
- 90T			18.0	90	60				28,000		0.31						
-MEGA4S- 60T	0.45 – 4.05	12	13.9	60	27	26.5	47	M5 P0.8	35,000	NBC 4S-□	0.27						
- 75T			16.7	75	43				32,000		0.30						
- 90T			20.0	90	60				28,000		0.33						
-105T			23.0	105	76				25,000		0.37						
-MEGA6S- 60T ※			19.0	75	45				32,000		0.31						
- 75T	0.45 – 6.05	14	21.1	90	60	28.5	49	M7 P0.75	28,000	NBC 6S-□	0.34						
- 90T			25.0	105	76				25,000		0.39						
-105T			16.0	60	29				35,000		0.28						
-MEGA6S- 60T ※			19.0	75	45				32,000		0.31						
- 75T	0.45 – 3.25	10	18.9	105	66	22	38	M4 P0.7	28,000	NBC 3S-□	0.55						
HSK-A50-MEGA3S-105T			20.6	105	66				25,000		0.58						
-MEGA4S-105T			22.2	105	66				25,000		0.60						
-MEGA6S-105T	0.45 – 4.05	12	13.6	75	36	22	38	M4 P0.7	32,000	NBC 3S-□	0.8						
HSK-A63-MEGA3S- 75T	0.45 – 3.25	10	16.2	90	51				28,000		0.8						
- 90T			21.5	120	81				25,000		0.9						
-120T	0.45 – 4.05	12	13.0	60	23	26.5	47	M5 P0.8	35,000	NBC 4S-□	0.8						
-MEGA4S- 60T			15.4	75	36				32,000		0.8						
- 75T			18.0	90	51				28,000		0.9						
- 90T			20.6	105	66				25,000		0.9						
-105T			23.3	120	81				22,000		0.9						
-120T			25.9	135	96				20,000		1.0						
-135T			0.45 – 6.05	14	15.4				60		23	28.5	37	M7 P0.75	35,000	NBC 6S-□	0.8
-MEGA6S- 60T					17.0				75		36		48		32,000		0.8
- 75T	19.6	90			51	28,000	0.9										
- 90T	22.2	105			66	25,000	0.9										
-105T	24.8	120			81	22,000	1.0										
-120T	2.95 – 8.05	18	27.5	135	96	31	50.5	M9 P0.75	20,000	NBC 8S-□	1.0						
-135T			23.3	90	51				30,000		0.89						
-MEGA8S- 90T			28.5	120	81				22,000		1.03						

1. MEGA NUT is included.
2. Coolant pipe is ordered separately.
3. For models with the mark of ※, there is no internal thread (G).

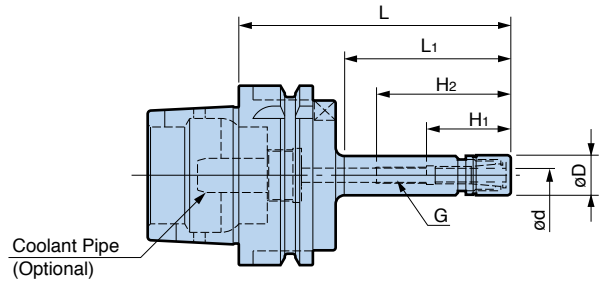
For COOLANT PIPE C 51

Type S

Micro diameter design is ideal for high speed applications in tight areas with small diameter cutting tools.



**MAX.
30,000
min⁻¹**



Model	Clamping Range ød	øD	L	L1	H1	H2	G	Max. min ⁻¹	Collet Model	Weight (kg)
HSK-A40-MEGA3S- 60	0.45 – 3.25	10	60	26	22	39	M4 P0.7	30,000	NBC 3S-□	0.26
-MEGA4S- 60	0.45 – 4.05	12	60	27	26.5	44	M5 P0.8	30,000	NBC 4S-□	0.26
- 90			90	57		47		25,000		0.29
-MEGA6S- 60 ※	0.45 – 6.05	14	60	28	28.5	40	-	30,000	NBC 6S-□	0.27
- 90			90	58		49		M7 P0.75		25,000
HSK-A50-MEGA3S- 75	0.45 – 3.25	10	75	36	22	38	M4 P0.7	30,000	NBC 3S-□	0.49
-MEGA4S- 75	0.45 – 4.05	12	75	36	26.5	47	M5 P0.8	30,000	NBC 4S-□	0.50
-MEGA6S- 75	0.45 – 6.05	14	75	36	28.5	49	M7 P0.75	30,000	NBC 6S-□	0.51
HSK-A63-MEGA3S- 60	0.45 – 3.25	10	60	22	22	35	M4 P0.7	30,000	NBC 3S-□	0.8
-MEGA4S- 75	0.45 – 4.05	12	75	36	26.5	48	M5 P0.8	30,000	NBC 4S-□	0.8
-105			105	61		47		25,000		0.8
-MEGA6S- 75	0.45 – 6.05	14	75	36	28.5	48	M7 P0.75	30,000	NBC 6S-□	0.8
-105			105	61		49		25,000		0.9
-MEGA8S- 90	2.95 – 8.05	18	90	48	31	50.5	M9 P0.75	30,000	NBC 8S-□	0.87

- MEGA NUT is included.
- Coolant pipe is ordered separately.
- For models with the mark of ※, there is no internal thread (G).

For COOLANT PIPE C 51

	Spare Parts	Accessories			
	MEGA NUT 	MEGA WRENCH 	MICRO COLLET G 2	MICRO COLLET PROTECTIVE CASE 	α TAPER CLEANER
MEGA MICRO CHUCK	Model	Model	Model	Model	Model
MEGA3S	MGN3S	MGR10	NBC3S-□	NBB3S	SC-NBC3S
MEGA4S	MGN4S	MGR12	NBC4S-□	NBB4S	SC-NBC4S
MEGA6S	MGN6S	MGR14	NBC6S-□	NBB6S	SC-NBC6S
MEGA8S	MGN8S	MGR18	NBC8S-□	—	—

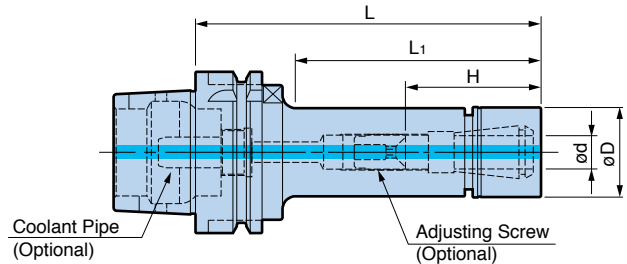
For MICRO SEAL NUT A 2

MEGA NEW BABY CHUCK®

Coolant-through hole
Clamping Range : $\varnothing 0.25 - \varnothing 20$

The Body, Collet, Nut and Wrench are specifically designed to be ideal for high speed operations.

MAX.
35,000
min⁻¹



Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	H	Max. min ⁻¹	Collet Model	Weight (kg)
HSK-A40-MEGA 6N- 60 ※	0.25 – 6	20	60	30	33	35,000	NBC 6-□	0.31
- 75			75	45	23 – 38	30,000		0.34
- 90			90	60	23 – 43	30,000		0.37
-MEGA 8N- 60 ※	0.5 – 8	25	60	30	41	35,000	NBC 8-□	0.35
- 75			75	45	26 – 38	30,000		0.39
- 90			90	60	26 – 44	30,000		0.44
-MEGA10N- 60 ※	1.5 – 10	30	60	26	40	35,000	NBC10-□	0.42
- 75 ※			75	39	55	30,000		0.49
- 90			90	54	38 – 48	30,000		0.56
-MEGA13N- 75 ※	2.5 – 13	35	75	55	55	25,000	NBC13-□	0.55
- 90 ※			90	70	64	25,000		0.64
-MEGA16N- 75 ※	2.5 – 16	42	75	55	53	20,000	NBC16-□	0.65
- 90 ※			90	70	63	15,000		0.78
-MEGA20N- 90 ※	2.5 – 20	46	90	70	66	15,000	NBC20-□	0.86

- MEGA NUT is included.
- Coolant pipe is ordered separately.
- "H" indicates the adjustment length with an Adjusting Screw.
- Adjusting screws can not be used with ※ marked models.

For COOLANT PIPE C 51

MEGA NEW BABY CHUCK	Spare Parts	Accessories							
	MEGA NUT	MEGA WRENCH	NBC COLLET	SEALING NUT MEGA PERFECT SEAL	ADJUSTING SCREW				
Model	Model	Model	Model	Model	Model	G	L	B	
MEGA 6N	MGN 6		 For ENDMILL COLLET 						
MEGA 8N	MGN 8								
MEGA10N	MGN10								
MEGA13N	MGN13								
MEGA16N	MGN16								
MEGA20N	MGN20								
		MGR20	NBC 6-□	MPS 6-□	NBA 6B	M 7	12	2	
		MGR25	NBC 8-□	MPS 8-□	NBA 8B	M 9	13	2.5	
		MGR30	NBC10-□	MPS10-□	NBA10B	M11	16	3	
		MGR35	NBC13-□	MPS13-□	NBA13B	M14	20	4	
		MGR42	NBC16-□	MPS16-□	NBA16B	M18	20	4	
		MGR46	NBC20-□	MPS20-□	NBA20B	M21	20	4	

 For HSK-A63 & A100, refer to the following pages.

Model	Clamping Range ød	øD	L	L ₁	H	Max. min ⁻¹	Collet Model	Weight (kg)
HSK-A50-MEGA 6N- 60	0.25 – 6	20	60	25	23 – 28	35,000	NBC 6-□	0.5
- 75			75	37	23 – 43	30,000		0.6
-100			100	60		25,000		0.6
-120			120	80		23,000		0.7
-135			135	93		20,000		0.7
-165			165	123		15,000		0.8
-MEGA 8N- 60 ※	0.5 – 8	25	60	26	34	35,000	NBC 8-□	0.5
- 75			75	37	26 – 37	30,000		0.6
-100			100	62	26 – 45	28,000		0.7
-120			120	82		25,000		0.8
-135			135	96		20,000		0.8
-165			165	125		15,000		0.9
-MEGA10N- 60 ※ ▲	1.5 – 10	30	60	27	35	35,000	NBC10-□	0.6
- 75 ※			75	38	46	33,000		0.7
-100			100	63	38 – 48	25,000		0.8
-120			120	83		20,000		0.9
-135			135	98		15,000		1.0
-165			165	128		15,000		1.1
-MEGA13N- 65 ※ ▲	2.5 – 13	35	65	30	39	30,000	NBC13-□	0.7
- 75 ※			75	40	46	28,000		0.7
-100			100	65	44 – 56	25,000		0.9
-120			120	85	44 – 63	20,000		1.0
-135			135	100		18,000		1.1
-165			165	130		15,000		1.4
-MEGA16N- 75 ※	2.5 – 16	42	75	49	48	28,000	NBC16-□	1.0
-100			100	74	48 – 55	20,000		1.1
-120			120	94	48 – 68	15,000		1.3
-135			135	109		10,000		1.4
-165			165	139		10,000		1.7
-MEGA20N- 75 ※ ▲			2.5 – 20	46		75		49
-100	100	74			51 – 54	15,000	1.3	
-120	120	94			51 – 68	13,000	1.6	
-135	135	109				10,000	1.8	
-165	165	139				8,000	2.2	

- MEGA NUT is included.
- Coolant pipe is ordered separately.
- "H" indicates the adjustment length with an Adjusting Screw.
- Adjusting screws can not be used with ※ marked models.
- NBC-E collet can not be used with ▲ marked models.

 For COOLANT PIPE C 51

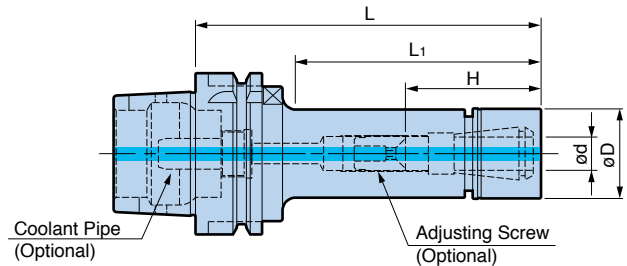
MEGA NEW BABY CHUCK®

Coolant-through hole

Clamping Range : $\varnothing 0.25 - \varnothing 20$

The Body, Collet, Nut and Wrench are specifically designed to be ideal for high speed operations.

MAX.
35,000
min⁻¹



Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	H	Max. min ⁻¹	Collet Model	Weight (kg)
HSK-A63-MEGA 6N- 75	0.25 – 6	20	75	35	23 – 38	35,000	NBC 6-□	0.9
- 90			90	48	23 – 43	30,000		0.9
-105			105	63		30,000		0.9
-120			120	76	25,000	1.0		
-135			135	91	20,000	1.0		
-165			165	121	15,000	1.0		
-MEGA 8N- 75	0.5 – 8	25	75	35	26 – 38	35,000	NBC 8-□	0.9
- 90			90	50	26 – 45	30,000		1.0
-105			105	63		30,000		1.0
-120			120	76	25,000	1.1		
-135			135	91	20,000	1.1		
-165			165	121	15,000	1.2		
-MEGA10N- 75 ※	1.5 – 10	30	75	36	50	33,000	NBC10-□	1.0
- 90			90	50	38 – 45	33,000		1.0
-105			105	65	38 – 48	25,000		1.1
-120			120	80		25,000		1.2
-135			135	93	20,000	1.3		
-165			165	123	15,000	1.4		
-MEGA13N- 75 ※	2.5 – 13	35	75	37	49	30,000	NBC13-□	1.0
- 90 ※			90	51	64	30,000		1.1
-105			105	66	44 – 56	25,000		1.2
-120			120	81	44 – 63	20,000		1.3
-135			135	96		20,000		1.4
-165			165	125	15,000	1.7		
-MEGA16N- 75 ※	2.5 – 16	42	75	39	48	30,000	NBC16-□	1.1
- 90 ※			90	54	63	25,000		1.3
-105			105	69	48 – 54	20,000		1.4
-120			120	84	48 – 68	15,000		1.5
-135			135	99		15,000		1.7
-165			165	129	10,000	2.0		
-MEGA20N- 75 ※	2.5 – 20	46	75	39	51	30,000	NBC20-□	1.2
- 90 ※			90	54	61	25,000		1.4
-105			105	69	51 – 54	20,000		1.5
-120			120	84	51 – 68	15,000		1.7
-135			135	99		15,000		1.8
-165			165	129	10,000	2.3		
-200	200	164	8,000	2.7				





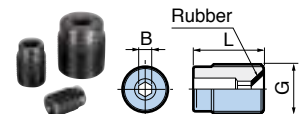
1. MEGA NUT is included.
 2. Coolant pipe is ordered separately.
 3. "H" indicates the adjustment length with an Adjusting Screw.
 4. Adjusting screws can not be used with ※ marked models.

For COOLANT PIPE **C 51**

Model	Clamping Range ød	øD	L	L ₁	H	Max. min ⁻¹	Collet Model	Weight (kg)
HSK-A100-MEGA 6N- 90	0.25 – 6	20	90	43	23 – 43	20,000	NBC 6- □	2.5
-105			105	58		18,000		2.5
-120			120	73		18,000		2.5
-135			135	88		14,000		2.5
-165			165	113		12,000		2.6
-MEGA 8N- 90			0.5 – 8	25		90		43
-105	105	58			18,000	2.6		
-120	120	73			18,000	2.6		
-135	135	88			14,000	2.7		
-165	165	113			14,000	2.7		
-MEGA10N- 90	1.5 – 10	30			90	43	38 – 45	20,000
-105			105	58	18,000	2.7		
-120			120	73	38 – 48	18,000		2.7
-135			135	88		14,000	2.8	
-165			165	113		14,000	3.0	
-MEGA13N- 90 ※			2.5 – 13	35	90	43	55	18,000
-105 ※	105	58			70	16,000	2.8	
-120	120	73			44 – 63	16,000	2.9	
-135	135	88				14,000	3.0	
-165	165	118				14,000	3.2	
-200	200	148				10,000	3.5	
-MEGA16N- 90 ※	2.5 – 16	42	90	47	55	15,000	NBC16- □	2.8
-105 ※			105	58	70	14,000		2.9
-120			120	73	48 – 68	14,000		3.1
-135			135	88		13,000		3.2
-165			165	118		13,000		3.6
-200			200	151		10,000		4.0
-MEGA20N- 90 ※	2.5 – 20	46	90	47	55	15,000	NBC20- □	2.9
-105 ※			105	58	70	14,000		3.0
-120			120	73	51 – 68	14,000		3.2
-135			135	88		13,000		3.3
-165			165	118		13,000		3.8
-200			200	153		10,000		4.3

- MEGA NUT is included.
- Coolant pipe is ordered separately.
- "H" indicates the adjustment length with an Adjusting Screw.
- Adjusting screws can not be used with ※ marked models.



Spare Parts		Accessories								
MEGA NUT 		MEGA WRENCH 		NBC COLLET G 3 For ENDMILL COLLET G 7 		SEALING NUT MEGA PERFECT SEAL G 9 		ADJUSTING SCREW Rubber 		
MEGA NEW BABY CHUCK	Model	Model	Model	Model	Model	Model	G	L	B	
MEGA 6N	MGN 6	MGR20	NBC 6- □	MPS 6- □	NBA 6B	M 7	12	2		
MEGA 8N	MGN 8	MGR25	NBC 8- □	MPS 8- □	NBA 8B	M 9	13	2.5		
MEGA10N	MGN10	MGR30	NBC10- □	MPS10- □	NBA10B	M11	16	3		
MEGA13N	MGN13	MGR35	NBC13- □	MPS13- □	NBA13B	M14	20	4		
MEGA16N	MGN16	MGR42	NBC16- □	MPS16- □	NBA16B	M18	20	4		
MEGA20N	MGN20	MGR46	NBC20- □	MPS20- □	NBA20B	M21	20	4		

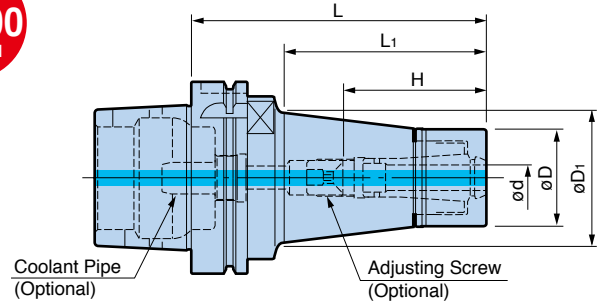
MEGA E CHUCK®

Coolant-through hole
Clamping Range : $\varnothing 3.0 - \varnothing 12$

Collet chuck designed exclusively for endmilling with high concentricity and rigidity.



MAX.
35,000
min⁻¹



Model	Clamping Range $\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	H	Max. min ⁻¹	Collet Model	Weight (kg)
HSK-A40-MEGA 6E- 60 ※	3 – 6	25	25.6	60	24	41	35,000	MEC 6- □	0.39
- 75 ※			28.2	75	39	55	35,000		0.45
- 90 ※			28.3	90	54	37 – 45	25,000		0.52
-MEGA 8E- 65 ※	3 – 8	30	33.6	65	30	44	35,000	MEC 8- □	0.46
- 75 ※			33.6	75	40	54	30,000		0.51
- 90 ※			33.6	90	55	42 – 51	25,000		0.61
-MEGA 10E- 70 ※	3 – 10	35	35	70	35	48	30,000	MEC10- □	0.52
- 90 ※			35	90	55	48 – 52	25,000		0.67
-MEGA 13E- 70 ※	3 – 12	42	42	70	35	50	30,000	MEC13- □	0.62
- 90 ※			42	90	55	67	25,000		0.81
HSK-A50-MEGA 6E- 75	3 – 6	25	28.5	75	37	37 – 43	30,000	MEC 6- □	0.6
-100			32.8	100	64	37 – 45	28,000		0.8
-MEGA 8E- 75 ※	3 – 8	30	33	75	40	42	30,000	MEC 8- □	0.7
-100			36.2	100	57	42 – 51	28,000		0.9
-MEGA 10E- 75 ※	3 – 10	35	38	75	40	48	30,000	MEC10- □	0.8
-100			39.8	100	57	48 – 58	25,000		0.9
-MEGA 13E- 75 ※	3 – 12	42	–	75	49	50	30,000	MEC13- □	0.9
-100			–	100	74	50 – 55	25,000		1.1
HSK-A63-MEGA 6E- 65 ※	3 – 6	25	26.2	65	28	43	30,000	MEC 6- □	0.9
- 90			30	90	51	37 – 45	29,000		1.0
-105			32.6	105	66				1.1
-120			36	120	82				1.2
-135			39	135	99				27,000
-MEGA 8E- 67 ※	3 – 8	30	31.3	67	30			45	30,000
- 90			35	90	52	37 – 45	30,000	1.1	
-105			38	105	68	42 – 51	29,000	1.2	
-120			40.4	120	83		28,000	1.4	
-135			44	135	100		27,000	1.6	
-MEGA 10E- 75 ※	3 – 10	35	37.4	75	37	48	30,000	MEC10- □	1.1
- 90			40	90	53	64	30,000		1.2
-105			42.8	105	69	48 – 58	29,000		1.4
-120			46	120	85		28,000		1.5
-135			42.8	135	99		27,000		1.7
-MEGA 13E- 75 ※	3 – 12	42	44	75	31	49	30,000	MEC13- □	1.2
- 90			44.8	90	46	64	30,000		1.4
-105			45.7	105	61	50 – 57	29,000		1.6
-120			47.3	120	77		28,000		1.8
-135			46.6	135	92		26,000		1.9

1. MEGA E NUT is included.
2. Coolant pipe is ordered separately.
3. "H" indicates the adjustment length with an Adjusting Screw.
4. Adjusting screws can not be used with ※ marked models.

For COOLANT PIPE C 51

Model	Clamping Range ød	øD	øD ₁	L	L ₁	H	Max. min ⁻¹	Collet Model	Weight (kg)	
HSK-A100-MEGA 6E- 75 ※	3 – 6	25	28	75	33	46	24,000	MEC 6-□	2.5	
- 90			29.5	90	48	37 – 45	20,000		2.6	
-105			32.1	105	63		18,000		2.7	
-120			34.7	120	78		14,000		2.8	
-135			37.4	135	93				2.9	
-165			42.6	165	123				3.2	
-MEGA 8E- 75 ※	3 – 8	30	33	75	33	46	24,000	MEC 8-□	2.5	
- 90			34.2	90	48	42 – 51	20,000		2.6	
-105			36.9	105	63		18,000		2.8	
-120			39.5	120	78		16,000		2.9	
-135			42.1	135	93				3.1	
-165			47.4	165	123				3.4	
-MEGA 10E- 80 ※	3 – 10	35	37.4	80	38	51	22,000	MEC10-□	2.6	
- 90			39.1	90	48	61	48 – 58		20,000	2.7
-105			41.8	105	63	18,000			2.9	
-120			44.4	120	78	16,000			3.1	
-135			47	135	93				3.3	
-165			52.3	165	123				3.7	
-MEGA 13E- 82 ※	3 – 12	42	44.4	82	40	50	20,000	MEC13-□	2.8	
- 90			45.8	90	48	50 – 61	18,000		2.9	
-105			48.5	105	63		16,000		3.1	
-120			51.1	120	78				3.3	
-135			53.7	135	93				3.6	
-165			59	165	123				4.2	

- MEGA E NUT is included.
- Coolant pipe is ordered separately.
- "H" indicates the adjustment length with an Adjusting Screw.
- Adjusting screws can not be used with ※ marked models.



Spare Parts		Accessories						
MEGA E CHUCK	MEGA E NUT	MEGA WRENCH	MEGA E COLLET	SEALING NUT MEGA E PERFECT SEAL	ADJUSTING SCREW			
Model	Model	Model	Model	Model	Model	G	L	B
MEGA 6E	MEN 6	MGR25	MEC 6-□	EPS 6-□	NBA 6B	M 7	12	2
MEGA 8E	MEN 8	MGR30	MEC 8-□	EPS 8-□	NBA 8B	M 9	13	2.5
MEGA10E	MEN10	MGR35	MEC10-□	EPS10-□	NBA10B	M11	16	3
MEGA13E	MEN13	MGR42	MEC13-□	EPS13-□	NBA13B	M14	20	4

MEGA DOUBLE POWER CHUCK®

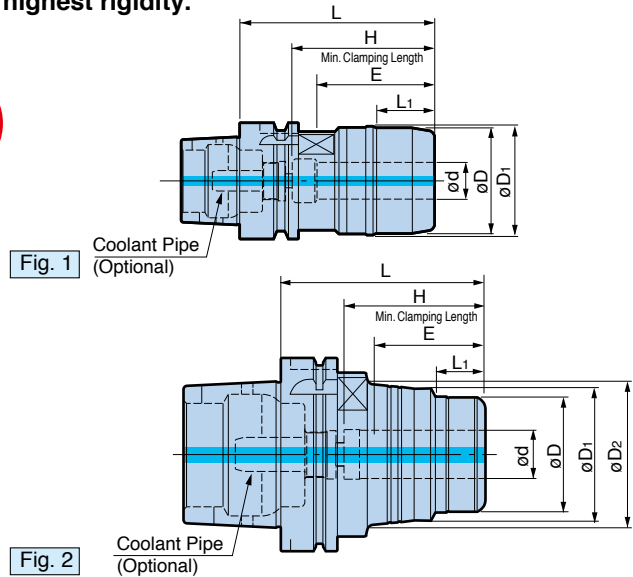
Coolant-through hole
Clamping Range : $\varnothing 16 - \varnothing 42$

Type D

Close to integral rigidity and precision of a solid toolholder.
Flange contacting nut assures highest rigidity.



MAX.
28,000
min⁻¹



Model	Fig.	ød	øD	øD1	øD2	L	L1	H	E	Max. min ⁻¹	Weight (kg)	
HSK-A 40-MEGA16D- 80	1	16	46	-	-	80	25.5	62	50	12,000	0.75	
HSK-A 50-MEGA16D- 85	1	16	46	-	-	85	25.5	62	50	25,000	1.0	
-MEGA20D- 85 ※		20	50	-	-	86	30.5	63	51	20,000	1.05	
HSK-A 63-MEGA16D- 80A	2	16	42	52.6	-	80	25	55	55	28,000	1.3	
- 90A						90		65			1.5	
-105A						105		71			26,000	1.8
-135A ○						135		71			22,000	2.3
-165A ○						165		71			22,000	2.8
-MEGA20D- 90	2	20	55	55.7	-	90	33	65	56	28,000	1.7	
-105						105		80		26,000	1.6	
-120						120		85		25,000	2.2	
-135						135		85		22,000	2.5	
-165 △						165		85		20,000	3.1	
-MEGA25D-100A	1	25	62	62.7	-	100	39	75	57	24,000	2.0	
-135A △						135		80		20,000	2.8	
-MEGA32D-105A	1	32	70	70.7	-	105	33.5	80	64	24,000	2.2	
-135A						135		90		20,000	2.9	
HSK-A100-MEGA16D-105	2	16	46	55	63	105	23.5	71	50	18,000	3.5	
-135 ○						135				16,000	4.1	
-165 ○						165				12,000	4.7	
-MEGA20D-105	2	20	60	69	74	105	25.5	73	56	18,000	4.1	
-135						135		85		16,000	5.0	
-165 △						165		85		15,000	5.9	
-MEGA25D-105	2	25	70	77	85	105	32	73	65	18,000	4.5	
-135						135		90		16,000	5.6	
-165 △						165		90		15,000	6.8	
-MEGA32D-115	2	32	80	86	-	115	39.5	83	71	18,000	5.0	
-135						135		103		16,000	5.8	
-165						165		105		14,000	7.1	
-MEGA42D-115	1	42	99	99.7	-	115	40	83	78	14,000	5.5	
-135						135		97		10,000	6.9	

- Wrench is ordered separately.
- Coolant pipe is ordered separately.
- The dimension H shows how deep a tool can be inserted.
- As a back stop of cutting tools, optional Adjusting Screw is available for models marked with △. Please refer to the following page.
For the models marked with ○, commercially available hex socket head screws can be used.
However, please contact a **BIG** agent when the screw needs to be used with coolant through the body.
- ※Straight Collet Type AC cannot be mounted in the HSK-A50-MEGA20D-85.
Other collets such as Type C and PJC are available.

For STRAIGHT COLLET **G 15**

For COOLANT PIPE **C 51**

Coolant-through hole

Type DS For coolant to cutting tool periphery



MAX.
25,000
min⁻¹

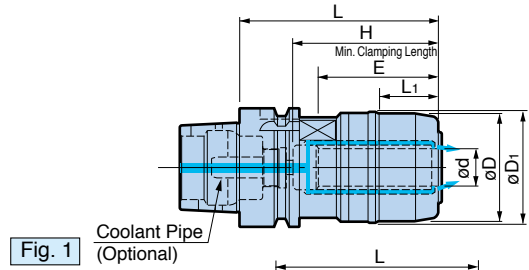


Fig. 1

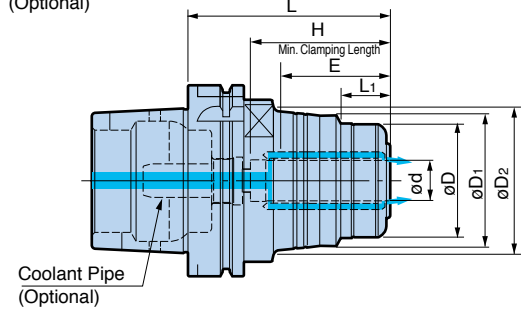


Fig. 2

Model	Fig.	ød	øD	øD1	øD2	L	L1	H	E	Max. min ⁻¹	Weight (kg)
HSK-A 40-MEGA16DS- 80	1	16	46	-	-	82.5	28	64	52	12,000	0.75
HSK-A 50-MEGA16DS- 85	1	16	46	-	-	87.5	28	64	52	25,000	1.0
-MEGA20DS- 85		20	50	-	-	88.5	33	65	53	20,000	1.05
HSK-A 63-MEGA16DS- 80A	2	16	42	52.6	-	82	27	57	52	25,000	1.3
-MEGA20DS- 90		20	55	55.7	-	92.5	35.5	67	58	25,000	1.7
-120						122.5		87		23,000	2.2
-MEGA25DS-100A	1	25	62	62.7	-	102	41	77	59	22,000	2.0
-MEGA32DS-105A		32	70	70.7	-	107	35	81	66	22,000	2.2
HSK-A100-MEGA16DS-105	2	16	46	55	63	107.5	26	73	52	18,000	3.5
-135 ○						137.5		75		16,000	4.1
-MEGA20DS-105		20	60	69	74	107.5	28	87	58	18,000	4.1
-135						137.5		75		16,000	5.0
-165 △						167.5		87		15,000	5.9
-MEGA25DS-105						107.5		34.5		75	67
-135		137.5	92	16,000	5.6						
-165 △		167.5	105	15,000	6.8						
-MEGA32DS-115		32	80	86	-	117.5	42	85	73	18,000	5.0
-135						137.5		105		16,000	5.8
-165	167.5					107		14,000		7.1	
-MEGA42DS-115	1	42	99	99.7	-	117	42	85	80	14,000	5.5

- Wrench is ordered separately.
 - Coolant pipe is ordered separately.
 - The dimension H shows how deep a tool can be inserted.
 - Type DS provides coolant around the cutting tool periphery, even if used with a cutting tool with a through hole.
 - As a back stop of cutting tools, optional Adjusting Screw is available for models marked with △.
- For the models marked with ○, commercially available hex socket head screws can be used. However, please contact a **(BIG)** agent when the screw needs to be used with coolant through the body.

For COOLANT PIPE C 51

Accessories

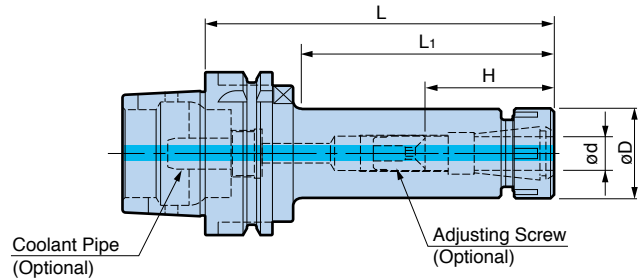
	MEGA WRENCH 	ADJUSTING SCREW 						
MEGA DOUBLE POWER CHUCK	Model	Model	ød	L	L1	G	W	
HSK-A 40-MEGA16D,16DS	MGR46L	-	-	-	-	-	-	-
HSK-A 50-MEGA16D,16DS	MGR46L	-	-	-	-	-	-	-
-MEGA20D,20DS	MGR50L	-	-	-	-	-	-	-
HSK-A 63-MEGA16D,16DS	MGR42L	-	-	-	-	-	-	-
-MEGA20D,20DS	MGR55L	HMA-M16	19	27	6	M16P1.5	8	
-MEGA25D,25DS	MGR62L	HMA-M16	19	27	6	M16P1.5	8	
-MEGA32D,32DS	MGR70L	-	-	-	-	-	-	-
HSK-A100-MEGA16D,16DS	MGR46L	-	-	-	-	-	-	-
-MEGA20D,20DS	MGR60L	HMA-M16	19	27	6	M16P1.5	8	
-MEGA25D,25DS	MGR70L	HMA-M16	19	27	6	M24P1.5	8	
-MEGA32D,32DS	MGR80L	-	-	-	-	-	-	-
-MEGA42D,42DS	MGR99L	-	-	-	-	-	-	-

NEW BABY CHUCK

Coolant-through hole

Clamping Range : $\varnothing 0.25 - \varnothing 20$

Great variety in length in order to support high precision machining



Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	H	Collet Model	Weight (kg)
HSK-A63-NBS 6- 75	0.25 – 6	20	75	35	20 – 35	NBC 6-□	0.9
-105			105	63	20 – 40		0.9
-135			135	91			1.0
-165			165	121			1.0
-NBS 8- 75	0.5 – 8	25	75	35	23 – 37	NBC 8-□	0.9
-105			105	61	23 – 42		1.0
-135			135	91			1.1
-165			165	121			1.2
-NBS10- 75 ※	1.5 – 10	30	75	35	48	NBC10-□	1.0
-105			105	63	35 – 45		1.1
-135			135	93			1.3
-165			165	123			1.4
-NBS13- 75 ※	2.5 – 13	35	75	35	48	NBC13-□	1.0
-105			105	65	41 – 55		1.2
-135			135	95	41 – 60		1.5
-165			165	125	1.7		
-NBS16- 75 ※	2.5 – 16	42	75	37	45	NBC16-□	1.1
-105			105	67	45 – 55		1.4
-135			135	97	45 – 65		1.8
-165			165	127			2.0
-200			200	162			2.4
-NBS20- 75 ※	2.5 – 20	46	75	39	48	NBC20-□	1.2
-105			105	69	48 – 53		1.5
-135			135	99	48 – 65		1.9
-165			165	129			2.3
-200			200	164			2.7

1. NEW BABY NUT is included.
2. "H" indicates the adjustment length with an Adjusting Screw.
3. Adjusting screws can not be used with ※ marked models.
4. Coolant pipe is ordered separately.

For COOLANT PIPE C 51

Model	Clamping Range ød	øD	L	L ₁	H	Collet Model	Weight (kg)
HSK-A100-NBS 6- 90	0.25 – 6	20	90	43	20 – 40	NBC 6-□	2.5
-120			120	68			2.5
-165			165	113			2.6
-NBS 8- 90	0.5 – 8	25	90	43	23 – 42	NBC 8-□	2.5
-120			120	73			2.6
-165			165	113			2.7
-NBS10- 90	1.5 – 10	30	90	43	35 – 45	NBC10-□	2.6
-120			120	73			2.7
-165			165	113			2.9
-NBS13- 90 ※	2.5 – 13	35	90	43	58	NBC13-□	2.7
-120			120	73	41 – 60		2.9
-165			165	113			3.2
-200			200	148			3.4
-NBS16- 90 ※	2.5 – 16	42	90	43	58	NBC16-□	2.8
-120			120	73	45 – 65		3.1
-165			165	118			3.5
-200			200	151			3.9
-NBS20- 90 ※	2.5 – 20	46	90	47	56	NBC20-□	2.9
-120			120	73	48 – 65		3.3
-165			165	118			3.8
-200			200	153			4.2

1. NEW BABY NUT is included.
2. "H" indicates the adjustment length with an Adjusting Screw.
3. Adjusting screws can not be used with ※ marked models.
4. Coolant pipe is ordered separately.

For COOLANT PIPE C 51

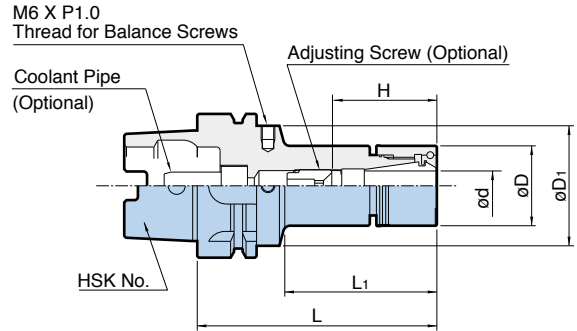
Spare Parts		Accessories						
NEW BABY NUT	NEW BABY CHUCK	WRENCH	NBC COLLET For ENDMILL COLLET	BABY PERFECT SEAL	ADJUSTING SCREW			
			 G 3 G 7	 G 10				
Model	Model	Model	Model	Model	Model	G	L	B
NBS 6	NBN 6	NBK 6	NBC 6-□	BPS 6-□	NBA 6B	M 7	12	2
NBS 8	NBN 8	NBK 8	NBC 8-□	BPS 8-□	NBA 8B	M 9	13	2.5
NBS10	NBN10	NBK10	NBC10-□	BPS10-□	NBA10B	M11	16	3
NBS13	NBN13	NBK13	NBC13-□	BPS13-□	NBA13B	M14	20	4
NBS16	NBN16	NBK16	NBC16-□	BPS16-□	NBA16B	M18	20	4
NBS20	NBN20	NBK20	NBC20-□	BPS20-□	NBA20B	M21	20	4

For TAP DRIVING BACK STOP G 8

MEGA ER GRIP Coolant-through hole
Clamping Range : $\varnothing 1.9 - \varnothing 20.0$



MAX.
33,000
min⁻¹



Model	$\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	H	Nut Model	Max. min ⁻¹	Weight (kg)	
HSK-A63-MEGA ER16- 70 ✱	1.9 – 10.0	30	52.6	70	32	35 – 47	MERN16	33,000	1.0	
- 90				90	49			33,000	1.1	
-105				105	64			25,000	1.1	
-135				135	94			20,000	1.3	
-165				165	124			15,000	1.4	
-MEGA ER20- 70 ✱	2.75 – 13.0	35	52.6	70	32	42 – 54	MERN20	30,000	1.0	
- 90 ✱				90	49			63	30,000	1.1
-105				105	64			42 – 54	25,000	1.2
-135				135	94			42 – 62	20,000	1.4
-165				165	124			15,000	1.6	
-MEGA ER25- 70 ✱	2.75 – 16.0	42	52.6	70	32	44 – 55	MERN25	30,000	1.1	
- 90 ✱				90	50			62	25,000	1.2
-105				105	65			44 – 55	20,000	1.4
-135				135	95			44 – 67	15,000	1.7
-165				165	125			10,000	1.9	
-MEGA ER32- 75 ✱	2.75 – 20.0	50	52.6	75	33	50 – 54	MERN32	30,000	1.3	
- 90 ✱				90	47			61	25,000	1.5
-105				105	62			50 – 54	20,000	1.7
-135				135	92			50 – 68	15,000	2.0
-165				165	122			10,000	2.4	

1. Mega ER Nut is included. Adjusting screw, collet and wrench must be ordered separately.
2. "H" indicates the adjustment length with an adjusting screw.
3. Adjusting screws cannot be used with models marked ✱.
4. Balance screws are not included.
5. Coolant pipe must be ordered separately.
6. Mega ER Grip is not able to use DIN6499 Form-A collets and ESX collets.
7. Coolant pipe is ordered separately.

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. Also, we cannot guarantee the accuracy statement for our collets if they are assembled on the chuck body of another manufacturer.

For COOLANT PIPE **C 51**

Model	ød	øD	øD1	L	L1	H	Nut Model	Max. min ⁻¹	Weight (kg)
HSK-A100-MEGA ER16- 75 ✱	1.9 – 10.0	30	85	75	31	46.5	MERN16	20,000	3.3
-105				105	59	35 – 47		18,000	3.4
-135				135	89			14,000	3.6
-165				165	119			14,000	3.7
-MEGA ER20- 75 ✱				2.75 – 13.0	35	85		75	31
-105	105	59	42 – 54				16,000	3.5	
-135	135	89	42 – 62				14,000	3.7	
-165	165	119					14,000	3.9	
-MEGA ER25- 75 ✱	2.75 – 16.0	42	85				75	32	44
-105				105	59	44 – 50	14,000	3.7	
-135				135	89	44 – 67	13,000	4.0	
-165				165	119		13,000	4.2	
-MEGA ER32- 80 ✱				2.75 – 20.0	50	85	80	36	49
-105 ✱	105	59	71				14,000	3.9	
-135	135	89	50 – 68				13,000	4.3	
-165	165	119					13,000	4.7	

- Mega ER Nut is included. Adjusting screw, collet and wrench must be ordered separately.
- "H" indicates the adjustment length with an adjusting screw.
- Adjusting screws cannot be used with models marked ✱.
- Balance screws are not included.
- Coolant pipe must be ordered separately.
- Mega ER Grip is not able to use DIN6499 Form-A collets and ESX collets.
- Coolant pipe is ordered separately.



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. Also, we cannot guarantee the accuracy statement for our collets if they are assembled on the chuck body of another manufacturer.

For COOLANT PIPE C 51

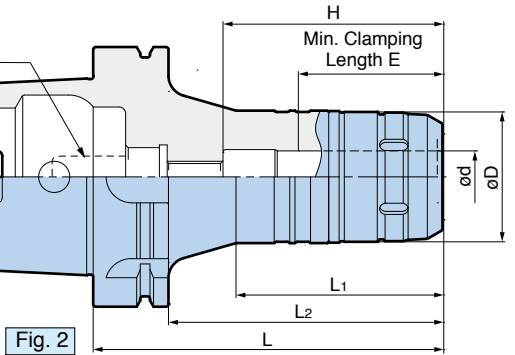
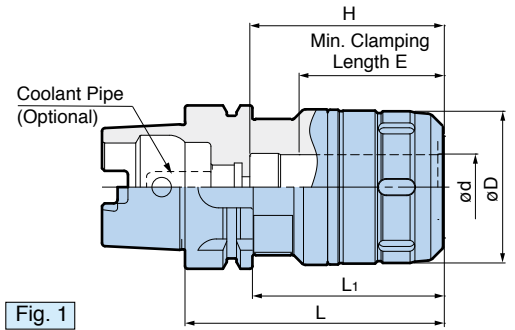
Spare Parts		Accessories						
	MEGA ER NUT 	MEGA WRENCH 	ER COLLET 	SEALING NUT MEGA ER PERFECT SEAL 	ADJUSTING SCREW 			
MEGA ER GRIP	Model	Model	Model	Model	Model	G	L	B
MEGA ER16	MERN16	MGR30L	ERC16- □	MERPS16- □	NBA10B	M11	16	3
MEGA ER20	MERN20	MGR35L	ERC20- □	MERPS20- □	NBA13B	M14	20	4
MEGA ER25	MERN25	MGR42L	ERC25- □	MERPS25- □	NBA16B	M18	20	4
MEGA ER32	MERN32	MGR50L	ERC32- □	MERPS32- □	NBA20B	M21	20	4

NEW Hi-POWER MILLING CHUCK

Coolant-through hole
Clamping Range : $\varnothing 20$ - $\varnothing 42$

S Type

BIG's original design of slit structure supports heavy and finish end milling with high power and precision.



Model	Fig.	$\varnothing d$	$\varnothing D$	L	L ₁	L ₂	H	E	C-spanner Model	Weight (kg)
HSK-A 40-HMC20S- 85	1	20	50	85	65	-	66	56	FK45-50L	0.9
HSK-A 50-HMC20S- 90	1	20	50	90	64	-	66	56	FK45-50L	1.2
HSK-A 63-HMC20S- 90	1	20	50	90	64	-	65	56	FK45-50L	1.5
-120 ○				120	94		85			1.9
-HMC25S-100	1	25	59	100	74	-	75	57	FK58-62L	1.9
-135 △				135	109		80			2.5
-HMC32S-110	1	32	68	110	84	-	85	64	FK68-75L	2.3
-135 ○				135	109		90			2.6
-165 △				165	139		90			3.2
HSK-A100-HMC20S-105	1	20	50	105	76	-	73	56	FK45-50L	3.0
-135 □	135			80	106	85	3.5			
-165 △	2			165	100	136	85			4.1
-HMC25S-105	1	25	59	105	76	-	73	57	FK58-62L	3.3
-135 □				135	106		90			3.9
-165 △	2	165	105	136	90	4.8				
-HMC32S-115	1	32	68	115	86	-	83	72	FK68-75L	3.9
-135				135	106		103			4.4
-165 □				2	165		105			136
-200 △	2	32	68	200	130	171	105	72	FK68-75L	6.4
-300 △				300	200	271	105			9.3
-HMC42S-115	1	42	85	115	86	-	83	73	FK80-90L	4.9
-135				135	106		103			5.5
-165 □				165	136		107			6.8

- Wrench is ordered separately.
- △ Axial length adjusting screw is available as option.
○/□ Commercially available hex socket head screws can be used as a back stop (○=M8 / □=M12).
Coolant is blocked by utilizing these commercial screws. Contact BIG agent when coolant flow is required.
- "H" is the max. tool shank length that can be inserted into the holder.
- Coolant pipe is ordered separately.

For COOLANT PIPE C 51

Accessories			
	C-SPANNER		C-SPANNER
NEW Hi-POWER MILLING CHUCK	Model	NEW Hi-POWER MILLING CHUCK	Model
HSK-A63-HMC20S	FK45-50L	HSK-A100-HMC20S	FK45-50L
-HMC25S	FK58-62L	-HMC25S	FK58-62L
-HMC32S	FK68-75L	-HMC32S	FK68-75L
		-HMC42S	FK80-90L

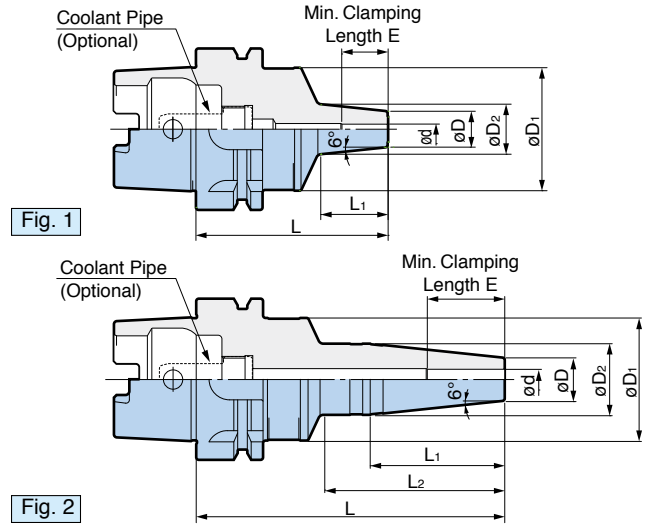
HYDRAULIC CHUCK

For high precision machining in Automotive, Aerospace, Medical and Die & Mold

SUPER SLIM Type

Coolant-through hole

Clamping Range : $\varnothing 4 - \varnothing 12$



BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	$\varnothing d$	$\varnothing D$	$\varnothing D_1$	$\varnothing D_2$	L	L1	L2	E	Weight (kg)
HSK-A63-HDC 4S- 75	1	4	14	48	20	75	26	—	19	1.0
-HDC 6S-120	2	6			26		57		25	
-HDC 8S-120		8	17		70	30	1.2			
-HDC10S-120		10	19			32	1.2			
-HDC12S-120		12	21			32	35	1.2		

1. Adjusting Screw cannot be used. 2. Coolant pipe is ordered separately.

For COOLANT PIPE C 51 For INNER BORE CLEANER G 19

Caution

- Use only cutting tools that have a shank tolerance within 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 Hydraulic Chuck.
- Roughing endmills are not recommended for use with Hydraulic Chucks.
- Always insert the cutting tool into the Hydraulic Chuck beyond min. clamping length E.

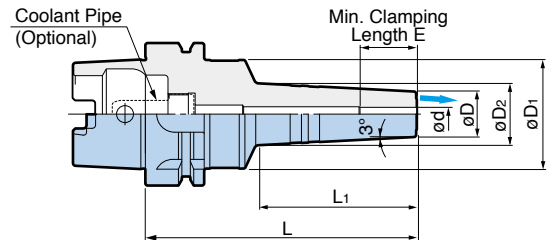
Coolant-through hole

JET THROUGH Type

Clamping Range : $\varnothing 4 - \varnothing 20$



NEW



Model	$\varnothing d$	$\varnothing D$	$\varnothing D_1$	$\varnothing D_2$	L	L1	E	Weight (kg)
HSK-A63-HDC 4J- 75	4	20	48	23	75	29	19	1.0
-HDC 6J-120	6			28			25	
-HDC 8J-120	8	22		70	30	30	1.2	
-HDC10J-120	10	24			32	32	1.3	
-HDC12J-120	12	26			34	35	1.3	
-HDC16J-120	16	34	76	43	42	1.5		
-HDC20J-120	20	38		42	1.5			

1. Adjusting Screw cannot be used. 2. Coolant pipe is ordered separately.

For COOLANT PIPE C 51 For INNER BORE CLEANER G 19

Caution

- Use only cutting tools that have a shank tolerance within 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 Hydraulic Chuck.
- Roughing endmills are not recommended for use with Hydraulic Chucks.
- Always insert the cutting tool into the Hydraulic Chuck beyond min. clamping length E.

HYDRAULIC CHUCK

Coolant-through hole

STANDARD Type

Clamping Range : $\varnothing 4$ - $\varnothing 32$

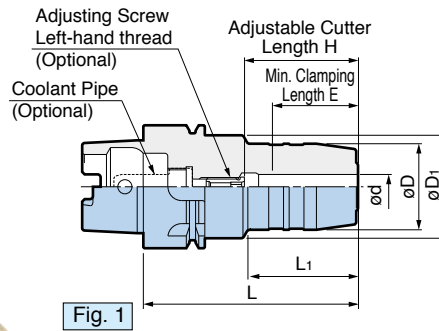


Fig. 1

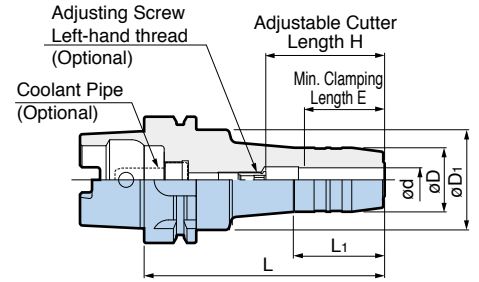


Fig. 2

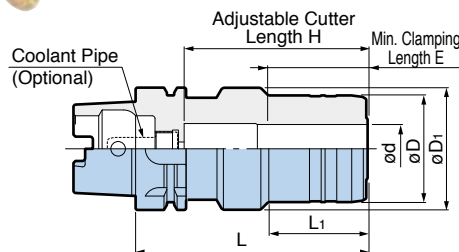


Fig. 3

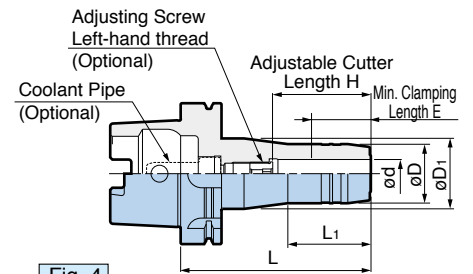


Fig. 4

Model	Fig.	$\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	H	E	Adjusting Screw (Optional)	Weight (kg)
HSK-A40-HDC 6- 70	1	6	26	33.6	70	36	28-36	28	HDA 6-05013	0.47
-HDC 8- 70		8	28						HDA 8-06013	0.48
-HDC10- 75		10	30		75	41	33-41	33	HDA 8-06013	0.50
-HDC12- 80		12	32		80	46	38-45	38	HDA 8-06013	0.55
HSK-A50-HDC 6- 75	1	6	26	41.6	75	32	28-37	28	HDA 6-05013	0.7
-HDC 8- 75		8	28						HDA 8-06013	0.7
-HDC10- 80		10	30		80	37	33-41	33	HDA10-08015	0.7
-HDC12- 85		12	32		85	42	38-46	38		0.8
-HDC16- 90▲		16	38		48	43-51	43	0.9		
-HDC20- 90▲		20	42		—	90	64	—	0.9	
-HDC25- 90※ ▲		25	55		62.9	23	62	52	—	1.3
HSK-A63-HDC 6- 70※	2	6	26	50	70	24	46	28	—	1.0
-120					120	44	28-48		HDA 6-05032	1.2
-150					150	44	28-48		HDA 6-05032	1.4
-HDC 7-120		7	27		120	44	28-48		HDA 6-05032	1.3
-HDC 8- 70※					70	24	46		—	1.0
-120		8	28		120	44	28-48		HDA 8-06032	1.3
-150					150	44	28-48		HDA 8-06032	1.5
-HDC 9-120					120	44	28-48		HDA 8-06032	1.3

C


HSK SHANK

Model	Fig.	ød	øD	øD ₁	L	L ₁	H	E	Adjusting Screw (Optional)	Weight (kg)			
HSK-A63-HDC10- 80 ※	2	10	30	50	80	35	55	33	—	1.1			
-120					120	45	33-53		HDA10-08032	1.3			
-150					150	45	33-53		HDA10-08032	1.6			
-HDC11-120		11	31		120	45	33-53	HDA10-08032	1.4				
-HDC12- 85 ※					12	32	85	40	60	—	1.1		
-120							120	45	38-58	HDA12-10025	1.4		
-150		150	45	38-58			HDA12-10025	1.6					
-HDC13-120		2	13	33	50	120	45	38-58	38	HDA12-10025	1.4		
-HDC14- 85 ※						14	34	85		40	60	—	1.2
-120								120		45	38-58	HDA12-10025	1.4
-150			150	45				38-58	HDA12-10025	1.7			
-HDC15-120			15	37		120	45	58-68	43	HDA16-12015	1.5		
-HDC16- 90 ※	16					38	90	46		65	—	1.3	
-120					120		58-68			HDA16-12015	1.5		
-150			150	43-68	HDA16-12037		1.9						
-HDC18- 90 ※	2		18	40	50	90	46	65	43	—	1.3		
-120						120		58-68		HDA20-16015	1.6		
-150						150		43-68		HDA25-16039	2.0		
-HDC20- 90 ※			20	42		90	48	65	43	—	1.3		
-120		120				58-68		HDA20-16015		1.6			
-150		150				43-68		HDA25-16039		2.0			
-HDC25-120 ※		3	25	55	63	120	51	95	52	—	2.1		
-HDC32-125 ※			32	60	69	125	59	100	56	—	2.4		
HSK-A100-HDC 6- 75 ※		4	6	26	50	75	26	46	28	—	2.4		
-120						120	44	28-48		HDA 6-05032	2.6		
-165						165	44	28-48			2.9		
-HDC 8- 75 ※						8	28	75			26	46	—
-120	120							44		28-48	HDA 8-06032	2.6	
-165	165							44		28-48		3.0	
-HDC10- 90 ※	10		30	90		42	61	33	—	2.5			
-120				120		45	33-53		HDA10-08032	2.7			
-165				165		45	33-53			3.1			
-HDC12- 95 ※				12		32	95			47	63	38	—
-120							120		38-58		HDA12-10025		2.7
-165							165		38-58		HDA12-10032		3.1
-HDC16-100 ※	16		38	100	53	68	43	—	2.6				
-135				135		43-68		HDA16-12030	3.0				
-165				165		43-68			HDA16-12037	3.3			
-HDC20-105 ※				20		42		105	59	73	43	—	2.7
-135	135		58-68		HDA20-16015		3.1						
-165	165		43-68		HDA25-16039		3.6						
-HDC25-110 ※	25		55		63		110	62		78		52	—
-HDC32-110 ※	32		64	75	110	62	78	56	—	3.7			

- H indicates the adjustment length with an Adjusting Screw.
- Adjusting Screws cannot be used with ※ marked models.
- H length is equal to the max. insertion length.
- Straight Collet cannot be used with ▲ mark.
- Coolant pipe is ordered separately.
- Add the letter "W" to Adjusting Screw model number for hexagon sockets on both sides. (e.g. HDA12-10025W)

 For STRAIGHT COLLET G 16
  For INNER BORE CLEANER G 19

 For COOLANT PIPE C 51



Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank (i.e.: Weldon type shank)
- Roughing endmills are not recommended for use with Hydraulic Chucks.
- Do not tighten the clamping screw without first inserting a cutting tool into the toolholder.
- Always insert the cutting tool into the Hydraulic Chuck beyond min. clamping length E.

SHRINK CHUCK

Coolant-through hole
Clamping Range : $\varnothing 6 - \varnothing 20$

SLIM Type



Slim design avoids interference with the side wall and draft of the mold.

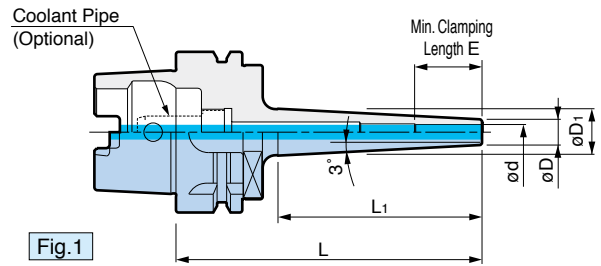


Fig. 1

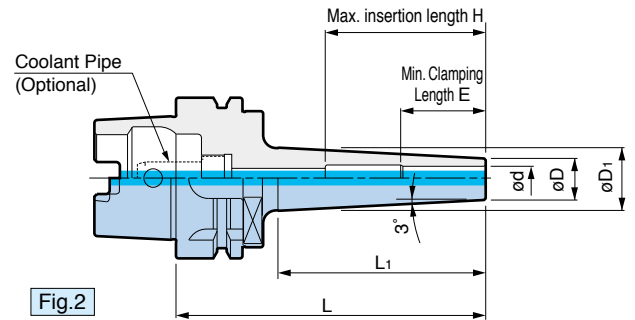


Fig. 2

Model	Fig.	$\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	E	H	Weight (kg)
HSK-A40-SRC 6S-105	2	6	10	17.5	105	74	26	52	0.32
-SRC 8S-105		8	13	21.0		74			
-SRC10S-105		10	16	24.0		76	32	62	0.39
-SRC12S-105		12	19	26.0		68	36	75	0.46
HSK-A50-SRC 6S-105	1	6	10	17.0	105	66	26	-	0.62
-SRC 8S-105	8	13	20.0	66				52	0.65
-SRC10S-105	2	10	16	23.0		32	62	0.68	
-SRC12S-105	12	19	27.0	68		36	72	0.71	
HSK-A63-SRC 6S-120	1	6	10	19.0	120	81	26	-	0.9
-165	23.0			165	121	1.0			
-SRC 8S-120	2	8	13	22.0	120	81	32	52	0.9
-165				26.0	165	123			1.1
-SRC10S-120		10	16	25.0	120	81	36	62	1.0
-165				29.0	165	123			1.1
-SRC12S-120	12	19	28.0	120	81	36	72	1.0	
-165			32.0	165	125			1.2	

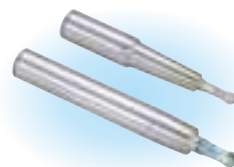
1. Use carbide cutter within a tolerance of h6.
2. Coolant pipe is ordered separately.

For COOLANT PIPE C 51

α Wiper Cleaner is recommended to clean the clamping bore. G 19

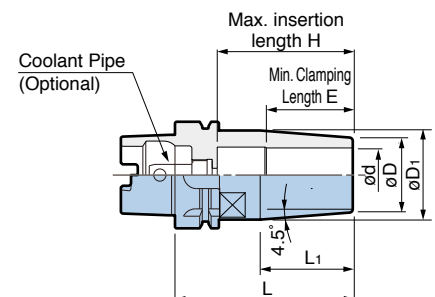
Please refer to the operation manual of heating / cooling equipment, as some equipments may not be compatible.

For $\varnothing 32$ mm Straight Shank



$\varnothing 32$ mm Straight Shank Type

D 7



Model	$\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	Min. Clamping Length E	Max. insertion length H	Weight (kg)
HSK-A 63-SRC32D-105	32	44	52.6	105	54	51	80	1.4
HSK-A100-SRC32D-115			56.3	115	72		82	2.9

1. Designed for center through coolant application when used with coolant through cutting tools.
2. Coolant pipe is ordered separately.

For COOLANT PIPE C 51

STANDARD Type

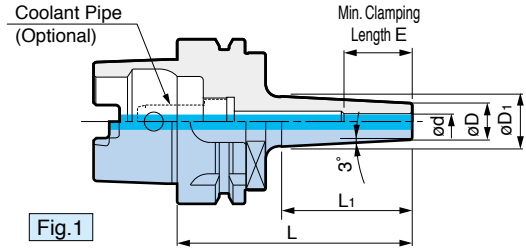


Fig.1

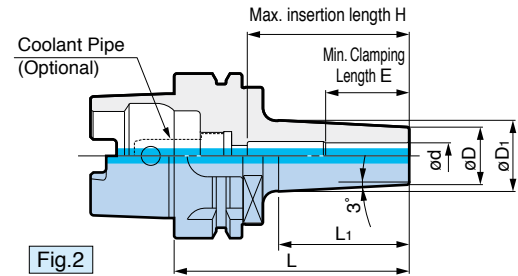


Fig.2

Model	Fig.	ød	øD	øD1	L	L1	E	H	Weight (kg)
HSK-A 40-SRC 4- 60 ※	2	4	10	12.8	60	26.5	16	44	0.27
- 70 ※				14.0	70	37		54	0.28
-SRC 6- 75		6	14	19.0	75	45	26	52	0.31
-SRC 8- 75		8	18	23.0		46		0.34	
-SRC10- 75		10	22	26.0		37	32	56	0.42
-SRC12- 75		12	24	28.0		38	36	56	0.43
HSK-A 50-SRC 4- 75 ※	2	4	10	14.0	75	36	16	55	0.51
-SRC 6- 75	1	6	14	18.0		26	-	0.61	
-SRC 8- 75	2	8	18	22.0		35	32	52	0.64
-SRC10- 75		10	22	25.5		37	36	52	0.67
-SRC12- 75		12	24	28.0		38	36	52	0.69
-SRC16- 75		16	28	32.0		38	36	52	0.71
HSK-A 63-SRC 4- 90 ※	2	4	10	15.0	90	46	16	68	0.85
-SRC 6- 90	1	6	14	20.0		51		-	0.9
-150				26.0	150	108	26	-	1.04
-SRC 8- 90	2	8	18	24.0	90	51	26	-	0.9
-150				30.0	150	110		-	1.15
-SRC10- 90		10	22	28.0	90	51	32	62	1.0
-150				34.0	150	111		62	1.29
-SRC12- 90		12	24	30.0	90	51	36	65	1.0
-150				36.0	150	112		72	1.33
-SRC16- 90		16	28	34.0	90	51	38	65	1.0
-165				41.0	165	119		80	1.7
-SRC20- 90	20	34	40.0	90	53	42	65	1.1	
-165			47.0	165	122		100	1.9	
HSK-A100-SRC 6-105	1	6	14	20.0	105	58	26	-	2.5
-165				27.0	165	118			2.7
-SRC 8-105		8	18	24.0	105	58	32		2.5
-165				31.0	165	118			2.8
-SRC10-105		10	22	28.0	105	58	36		2.6
-165				35.0	165	118			2.9
-SRC12-105	12	24	30.0	105	58	38	72	2.6	
-165			37.0	165	118		72	3.0	
-SRC16-105	16	28	34.0	105	58	42	80	2.7	
-165			41.0	165	118		80	3.1	
-SRC20-105	20	34	40.0	105	58	42	72	2.8	
-165			47.0	165	118		100	3.4	

1. Use carbide cutter within a tolerance of h6.
 2. ※ Use carbide cutter within a tolerance of h5.
 3. Coolant pipe is ordered separately.

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

α Wiper Cleaner or TK Cleaner is recommended to clean the clamping bore. G 19

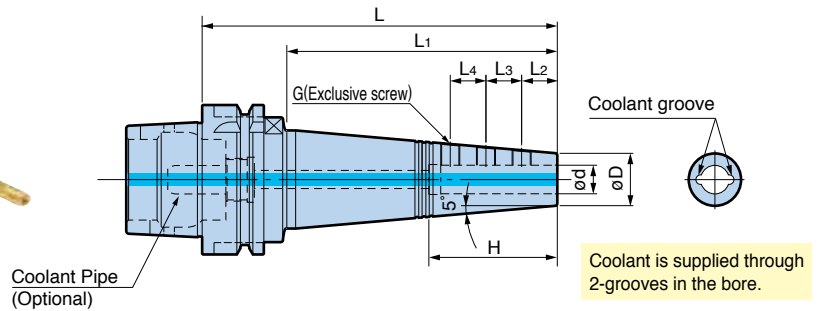
For COOLANT PIPE C 51

MOLD CHUCK

Coolant-through hole
Clamping Range : $\varnothing 3 - \varnothing 16$

MAX.
15,000
min⁻¹

Precision side lock holder to meet minimum interference, accuracy and high speed requirements.



Model	$\varnothing d$	$\varnothing D$	L	L ₁	L ₂	L ₃	L ₄	H	G	Max min ⁻¹	Weight (kg)		
HSK-A 63-SSL 3-135	3	10	135	99	6	6	—	—	M 3	15,000	1.0		
-SSL 4-135	4	11			7	M 4			1.0				
-SSL 6-135	6	13			12	13			M 6		1.1		
-SSL 8-135	8	15			13.5	18			M 6		1.1		
-SSL10-150	10	17	150	114	15	20	—	48	M 8	13,000	1.3		
-SSL12-150	12	22				16					16	1.5	
-SSL16-150	16	26				20					22	70	1.6

1. H dimension without values in the above table indicates that those models have a larger diameter hole behind the bore.
2. Coolant pipe is ordered separately.

For COOLANT PIPE C 51

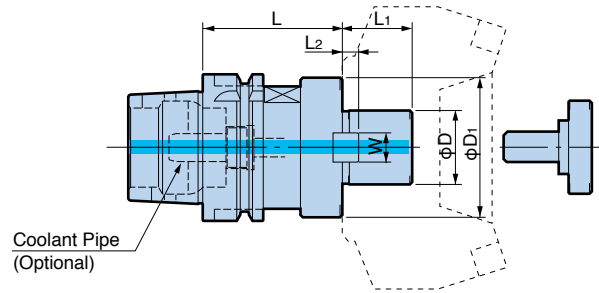
● BIG genuine side lock screws must be used as they are made to an exclusive design and different from other screws on the market.

■ SIDE LOCK SCREWS

Model	Screw size	Screw Length / Quantity	Chuck Model
H0304FS	M3 P0.5	4mm / 2pcs.	SSL3
H0404FS	M4 P0.5	4mm / 2pcs.	SSL4
H06FSA	M6 P0.75	4.5, 5mm / 1pce. each	SSL6
H06FSB		4.5, 6mm / 1pce. each	SSL8,10
H08FSA	M8 P0.75	6mm / 2pcs. 8mm / 1pce.	SSL12
H08FSB		6, 8, 10mm / 1pce. each	SSL16

1. Each model consists of 1 set of screws required for 1 Mold Chuck.

FACE MILL ARBOR Type A and C

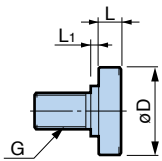


Model	øD	øD1	L	L1	L2	W	Clamp Bolt	Weight (kg)
HSK-A 40-FMA25.4 - 50	25.4	50	50	22	5	9.5	MBA-M12	0.6
HSK-A 50-FMA25.4 - 60	25.4	50	60	22	5	9.5	MBA-M12	1.0
-FMA31.75- 60	31.75	60		30	7	12.7	MBA-M16	1.2
HSK-A 63-FMA25.4 - 60	25.4	50	60	22	5	9.5	MBA-M12	1.3
- 90			90					1.7
-FMA31.75- 60	31.75	60	60	30	7	12.7	MBA-M16	1.5
HSK-A100-FMA25.4 -105	25.4	50	105	22	5	9.5	MBA-M12	4.5
-135			135					5.3
-195			195					7.1
-FMA31.75-105	31.75	60	105	30	7	12.7	MBA-M16	4.8
-135			135					5.6
-195			195					7.0
-FMA38.1 - 90	38.1	80	90	34	9	15.9	MBA-M20	4.9
-FMA50.8 - 75	50.8	100	75	36	10	19.05	MBA-M24	5.3
HSK-A 50-FMC22 - 60	22	45	60	18	5	10	M10-30L ※	0.9

- Standard Clamp Bolt (MBA-M□□) is included.
- To supply coolant through the arbor, Clamping Bolt with a hole through (TMBA-M□□) is required.
- ※M10-30L is a cap screw.
- Coolant pipe is ordered separately.

For COOLANT PIPE C 51

CLAMP BOLT



Standard Clamp Bolt (accessory)	Clamp Bolt with a hole through (option)				
Model	Model	øD	L	L1	G
MBA-M12	TMBA-M12	33	10	2	12
-M12H	—			—	
-M16	-M16	40	10	6	16
-M16H	—			—	
-M20	-M20	50	14	6	20
-M20H	—			—	
-M24	-M24	65	10	10	24

FACE MILL ARBOR Type FMH

Coolant-through hole



For cutters that require a coolant hole through the pilot.

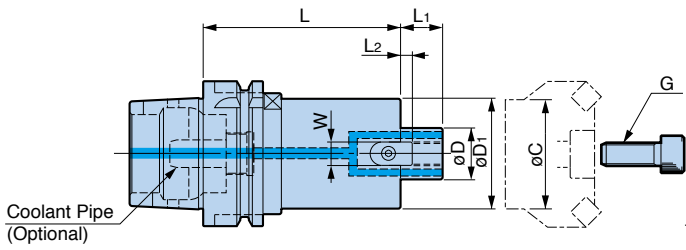
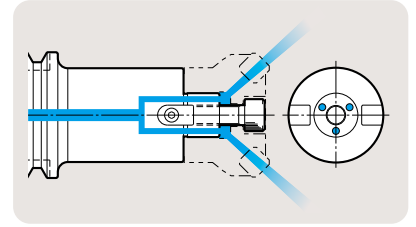


Fig.1

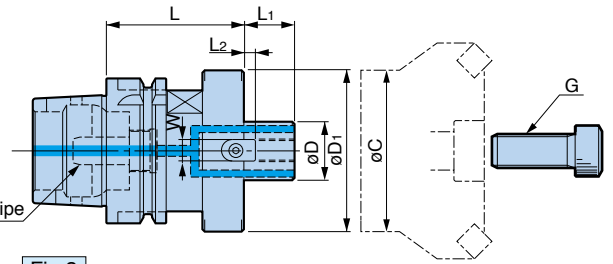


Fig.2

Model	Fig.	øD (h6)	øD1	L	L1	Drive keys		G	Weight (kg)	øC Min.
						L2	W			
HSK-A 50-FMH22 - 47- 60	2	22	47	60	18	5	10	M10	0.8	36
				90					1.2	
-FMH27 - 60- 60	2	27	60	60	20	6	12	M12	1.0	46
				90					1.3	
HSK-A 63-FMH16 - 37- 45	1	16	37	45	16	4	8	M 8	1.0	32
									1.1	
-FMH22 - 47- 45	1	22	47	60	18	5	10	M10	1.3	36
				90					1.7	
				150					2.5	
-FMH27 - 60- 60	2	27	60	60	20	6	12	M12	1.6	46
				90					2.3	
-FMH22.225- 47- 45	1	22.225	47	45	17	3.5	8	M10	1.1	39
				60					1.3	
				90					1.7	
				150					2.5	
-FMH25.4 - 70- 60	2	25.4	70	60	22	5	9.5	M12	1.8	55
				90					2.5	
				150					4.1	
-FMH31.75 - 76- 60	2	31.75	76	60	30	7	12.7	M16	2.0	63
				90					2.7	

- By utilizing a clamping bolt with a hole through, coolant is supplied through the bolt.
- Hexagon Socket Head Cap Screw is included.
- Coolant pipe is ordered separately.

For COOLANT PIPE C 51

Model	Fig.	øD (h6)	øD ₁	L	L ₁	Drive keys		G	Weight (kg)	øC Min.
						L ₂	W			
HSK-A100-FMH22 - 47-105	1	22	47	105	18	5	10	M10	3.4	36
-150				150					4.0	
-200				200					4.7	
-250				250					5.4	
-FMH22 - 60- 60	1	22	60	60	18	5	10	M10	2.9	49
-105				105					3.9	
-150				150					5.4	
-200				200					6.1	
-FMH27 - 60- 60	1	27	60	60	20	6	12	M12	2.9	46
- 90				90					3.7	
-150				150					5.0	
-FMH27 - 76- 60	1	27	76	60	20	6	12	M12	3.2	62
- 90				90					4.3	
-150				150					6.5	
-FMH32 - 96- 60	2	32	96	60	22	7	14	M16	3.8	80
- 90				90					5.5	
-150				150					8.9	
-FMH40 -100- 75	2	40	100	75	26	8.5	16	M20 (MBA-M20)	4.9	80
-105				105					6.8	
-FMH22.225- 47-105	1	22.225	47	105	17	3.5	8	M10	3.4	39
-150				150					4.0	
-200				200					4.7	
-250				250					5.3	
-FMH22.225- 60- 60	1	22.225	60	60	17	3.5	8	M10	2.9	53
-105				105					3.9	
-150				150					4.9	
-200				200					6.1	
-FMH25.4 - 70- 60	1	25.4	70	60	22	5	9.5	M12	3.2	55
- 90				90					4.1	
-150				150					5.9	
-200				200					7.4	
-FMH31.75 - 76- 60	1	31.75	76	60	30	7	12.7	M16	3.6	63
- 90				90					4.5	
-105				105					5.0	
-150				150					6.6	
-200				200					8.4	
-FMH31.75 - 96- 60	2	31.75	96	60	30	7	12.7	M16	3.9	84
- 90				90					5.5	
-105				105					6.4	
-150				150					9.0	
-200				200					11.8	
-FMH38.1 -100- 60	2	38.1	100	60	34	9	15.9	M20 (MBA-M20H)	4.1	89
- 90				90					5.9	
-105				105					6.8	85
-150				150					9.6	

- By utilizing a clamping bolt with a hole through, coolant is supplied through the bolt.
- Hexagon Socket Head Cap Screw is included.
- Coolant pipe is ordered separately.

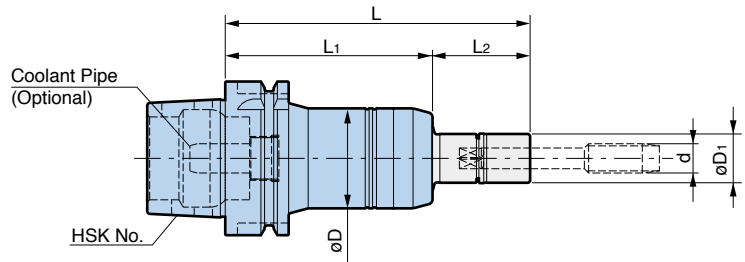
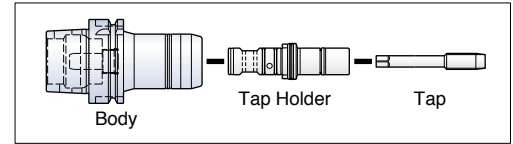
 For COOLANT PIPE C 51

MEGA SYNCHRO® Tapping Holder

Coolant-through hole

Tapping Range : M2 - M20

Available in short, long and extra long length (150mm, 200mm) to meet all production requirements.



Model	Tap Holder Model	Tapping Range d	øD	øD1	L	L1	L2	Weight (kg)
HSK-A 40-MGT 6- 80	MGT 6-d- 30	M2 – M6	36	16	110	80	30	0.6
	- 70	No.3 – U1/4			150		70	
	-100				180		100	
-MGT12- 85	MGT12-d- 30	M6 – M12	41	20	115	85	30	0.7
	- 70	U1/4 – U7/16			155		70	
	-100				P1/8		185	
HSK-A 50-MGT 6- 85	MGT 6-d- 30	M2 – M6	36	16	115	85	30	0.8
	- 70	No.3 – U1/4			155		70	
	-100				185		100	
-MGT12- 85	MGT12-d- 30	M6 – M12	41	20	115	85	30	0.9
	- 70	U1/4 – U7/16			155		70	
	-100				P1/8		185	
-MGT20-125	MGT20-d- 35	M12 – M20	54	30	160	125	35	1.6
	- 85	U1/2 – U3/4			210		85	
	-115				P1/4 – P3/8		240	
HSK-A 63-MGT 6- 85	MGT 6-d- 30	M2 – M6	36	16	115	85	30	1.1
	- 70	No.3 – U1/4			155		70	
	-100				185		100	
-MGT12- 85	MGT12-d- 30	M6 – M12	41	20	115	85	30	1.2
	- 70	U1/4 – U7/16			155		70	
	-100				P1/8		185	
-MGT20-110	MGT20-d- 35	M12 – M20	54	30	145	110	35	1.8
	- 85	U1/2 – U3/4			195		85	
	-115				P1/4 – P3/8		225	

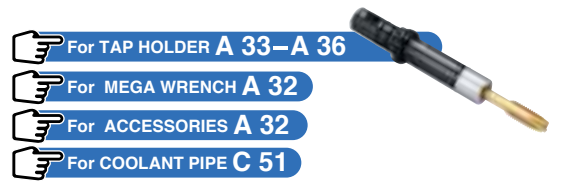
1. Tap Holder and wrench are ordered separately.
 2. Coolant Pipe is ordered separately.
- Rigid tapping function is required on the machine tool.

For TAP HOLDER A33–A36

For COOLANT PIPE C 51

Model	Tap Holder Model	Tapping Range d	øD	øD ₁	L	L ₁	L ₂	Weight (kg)
HSK-A100-MGT 6- 95	MGT 6-d- 30	M2 – M6	36	16	125	95	30	2.6
	- 70	No.3 – U1/4			165		70	
	-100				195		100	
-MGT12- 95	MGT12-d- 30	M6 – M12	41	20	125	95	30	2.7
	- 70	U1/4 – U7/16			165		70	
	-100	P1/8			195		100	
-MGT20-115	MGT20-d- 35	M12 – M20	54	30	150	115	35	3.3
	- 85	U1/2 – U3/4			200		85	
	-115	P1/4 – P3/8			230		115	

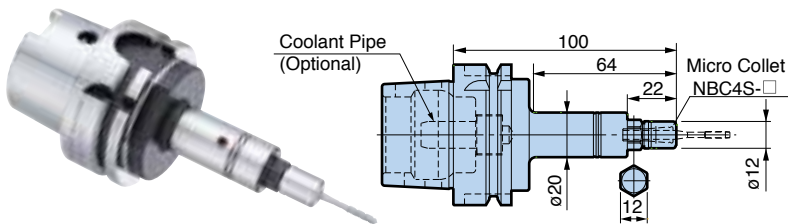
1. Tap Holder and wrench are ordered separately.
 2. Coolant Pipe is ordered separately.
 Rigid tapping function is required on the machine tool.



Coolant-through hole

For small Tap MGT3

Tapping Range : M1 - M3



Model HSK-A63-MGT3-100

- Nut is included. Wrench and collet are ordered separately.
 - 12mm common spanner is also required to hold the hex portion of the body when clamping/unclamping the tap.
- Rigid tapping function is required on the machine tool.
 - Not capable of supplying coolant through the holder body.

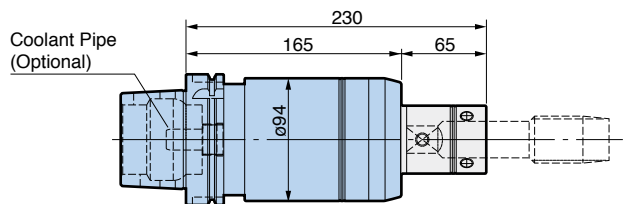
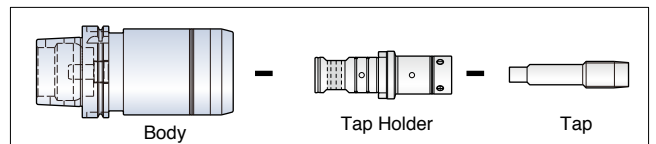
For MGT3 ACCESSORIES A 31

Coolant-through hole

For Large Tap MGT36

Tapping Range : M20 - M36

Compensation for synchronization error eliminates heavy thrust load of large diameter tapping.



Model HSK-A100-MGT36-165 Weight : 8.2kg



ANGLE HEAD

It is the outstanding rigidity and accuracy of the **NEW BABY CHUCK**, used for holding the cutting tool, that produces high precision with less runout. Available in various sizes to meet specific production requirements.

AG90 NBS type SPINDLE ANGLE : 90°

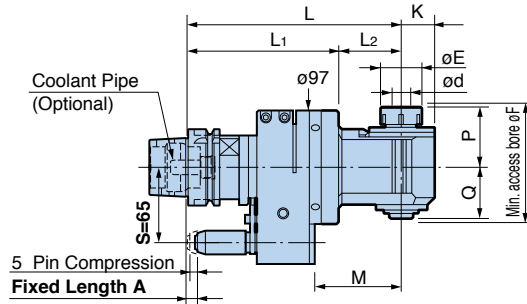


Fig. 1

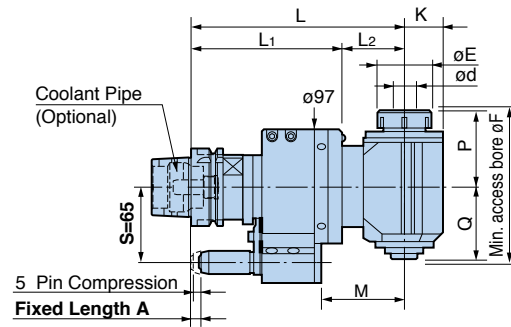
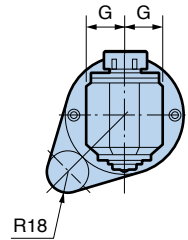


Fig. 2



Exclusive STOP BLOCK is required.

● The rotation of the cutting tool is in reverse direction of the machine spindle. (Speed Ratio 1:1)

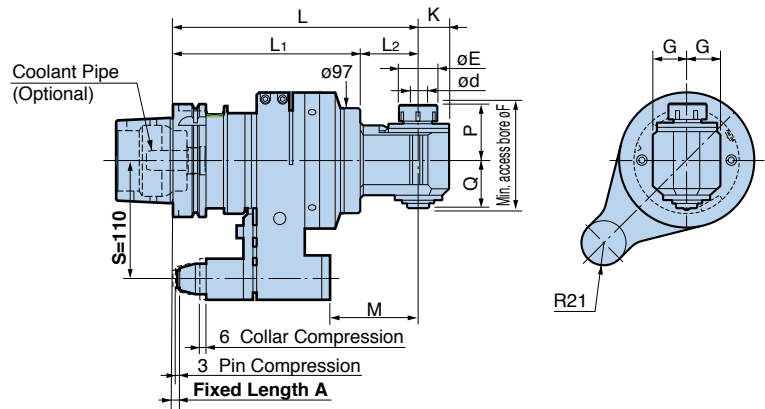
Model	Fig.	ød	øE	G	K	L	L1	L2	M	P	Q	øF	Collet	Max. min ⁻¹	Weight (kg)
HSK-A63-AG90/NBS 6 -185	1	0.25 – 6	20	21	17	185	130	55	77	33	29	67	NBC 6	6,000	5.0
						215		85	107						5.2
						245		115	137						5.4
						275		145	167						5.6
-AG90/NBS10 -185	1	1.5 – 10	30	30	25	185	130	55	77	45	43	91	NBC10	6,000	5.4
						215		85	107						5.8
						245		115	137						6.1
-AG90/NBS13 -185	1	2.5 – 13	35	31	28	185	130	55	77	52	45	101	NBC13	6,000	5.5
						215		85	107						5.9
						245		115	137						6.2
-AG90/NBS20S -180 S	2	2.5 – 20	46	35	33	180	127	53	72	65	62	132	NBC20	3,000	7.9

- The standard Fixed Length A is 8mm. Other lengths are available upon request.
- The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
- Clamping nut and wrench are included. Collet must be ordered separately.
- New Baby Collet for endmill model NBC□-□EAA cannot be used.
- Coolant Pipe is ordered separately. (Coolant is supplied through the Locating Pin, not the Coolant Pipe.)

For **NEW BABY COLLET G 3**

For **STOP BLOCK G 25**

For **COOLANT PIPE C 51**



Exclusive STOP BLOCK for ANGLE HEAD is required.

● The rotation of the cutting tool is in reverse direction of the machine spindle.(Speed Ratio 1:1)

Model	ød	øE	G	K	L	L1	L2	M	P	Q	øF	Collet	Max. min ⁻¹	Weight (kg)
HSK-A100-AG90/NBS6-225	0.25 – 6	20	21	17	225	170	55	82	33	29	67	NBC 6	6,000	11.8
					255		85	112						12.0
					285		115	142						12.2
					315		145	172						12.4
-AG90/NBS10 -225	1.5 – 10	30	30	25	225	170	55	82	45	43	91	NBC10	6,000	12.2
					255		85	112						12.6
					285		115	142						12.9
-AG90/NBS13 -225	2.5 – 13	35	31	28	225	170	55	82	52	45	101	NBC13	6,000	12.3
					255		85	112						12.7
					285		115	142						13.0
-AG90/NBS20 -240	2.5 – 20	46	35	35	240	170	70	97	65	62	132	NBC20	3,000	13.4

1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
 2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
 3. Clamping nut and wrench are included. Collet must be ordered separately.
 4. New Baby Collet for endmill model NBC□-□EAA cannot be used.
 5. Coolant Pipe is ordered separately. (Coolant is supplied through the Locating Pin, not the Coolant Pipe.)
- S=80 type is available upon request.**

For NEW BABY COLLET G 3

For STOP BLOCK G 25

For COOLANT PIPE C 51

ANGLE HEAD

Compact and lightweight design combined with the accuracy required for drilling.
Ideal size for small machining centers.

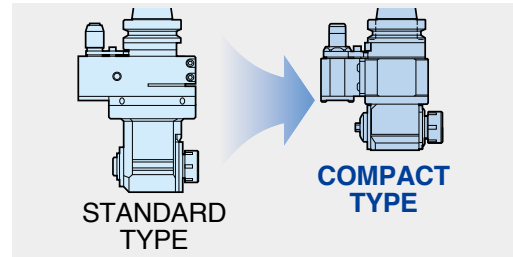
AG90 COMPACT type SPINDLE ANGLE : 90°

For drilling

High quality components

- High precision New Baby Collet
- Spiral bevel gears and angular contact bearings
- Advanced non-contact sealing structure

■ Case & head sizes are substantially reduced.



C HSK SHANK



Light & Compact

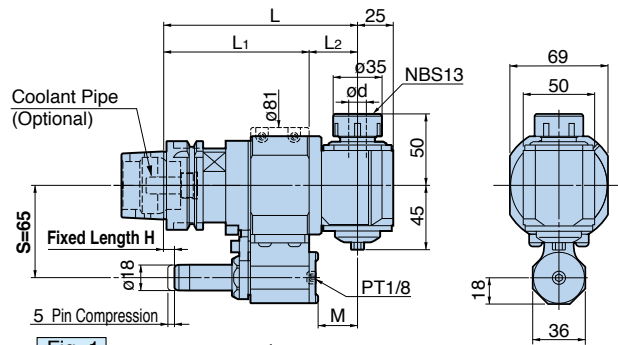


Fig. 1 MAX.5,000min⁻¹

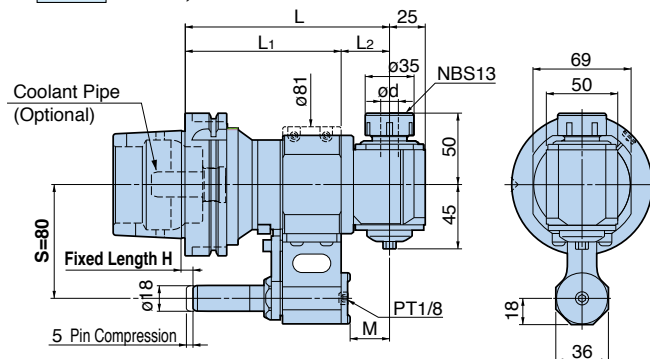


Fig. 2 MAX.5,000min⁻¹



Exclusive STOP BLOCK is required.
Exclusive STOP BLOCK for compact type is the same as HIGH SPINDLE & HI JET HOLDER.

● The rotation of the cutting tool is in reverse direction of the machine spindle.

Model	Fig.	ød	L	L1	L2	M	Collet	Speed Ratio	Weight (kg)
HSK-A 63-AG90-13-135 -185	1	2.5 - 13	135	101	34	27.85	NBC13	1 : 1	4.4
			185		84	77.85			5.4
HSK-A100-AG90-13-145 -195	2	2.5 - 13	145	111	34	27.85	NBC13	1 : 1	6.8
			195		84	77.85			7.8

1. Clamping nut and wrench are included. Collet must be ordered separately.
2. New Baby Collet for endmill model NBC13-□EAA cannot be used.
3. Fixed Length H and angle θ vary depending on machine models. Please specify your required dimensions.
4. 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.
5. Coolant Pipe is ordered separately. (Coolant is supplied through the Locating Pin, not the Coolant Pipe.)

➡ For NEW BABY COLLET G 3 ➡ For STOP BLOCK G 25 ➡ For COOLANT PIPE C 51

Application example



High rigidity and runout accuracy provides stable machining.

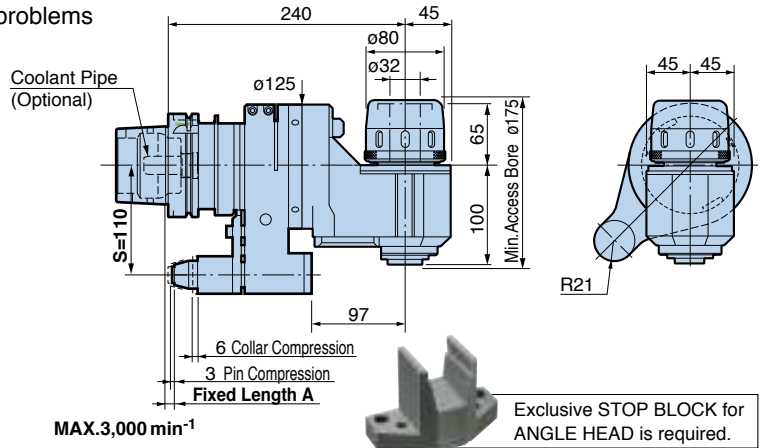
	Drilling
Cutter	ø12 carbide drill
Workpiece	C50(S50C)
Cutting Speed	70m/min
Cutting Feed	372mm/min 0.2mm/rev
Spindle Speed	1,860min ⁻¹

Improved versatility is achieved from the 32mm capacity Milling Chuck by using parallel reduction collets and other accessories.

AG90 HMC type SPINDLE ANGLE : 90°

[STANDARD TYPE]

Designed for greater rigidity by having the face of the spindle bore in line with the center of the machine spindle. Also helps to minimize interference problems with ATC and storage problems within magazine.



● The cutter rotates in the same direction of the machine spindle.

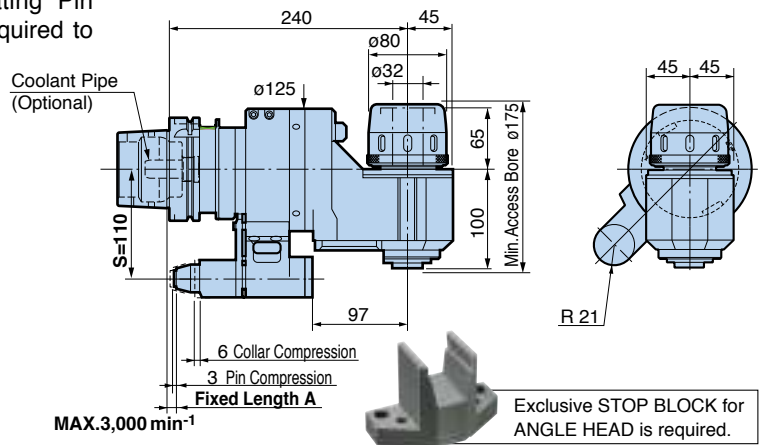
Model	Weight (kg)
HSK-A100-AG90/HMC32-240	16.0

1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
3. Wrench (FK80-90) is included.
4. Coolant Pipe is ordered separately. (Coolant is supplied through the Locating Pin, not the Coolant Pipe.)

➔ For STRAIGHT COLLET G 15 ➔ For STOP BLOCK G 25
➔ For COOLANT PIPE C 51

[HIGH RIGIDITY TYPE]

Provided with a steel housing and reinforced Locating Pin assembly for applications where increased rigidity is required to perform various types of heavier machining.



● The cutter rotates in the same direction of the machine spindle.

Model	Weight (kg)
HSK-A100-AG90/HMC32-240S	17.3

1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
3. Wrench (FK80-90) is included.
4. Coolant Pipe is ordered separately. (Coolant is supplied through the Locating Pin, not the Coolant Pipe.)

S=80 type is available upon request.

➔ For STRAIGHT COLLET G 15 ➔ For STOP BLOCK G 25
➔ For COOLANT PIPE C 51

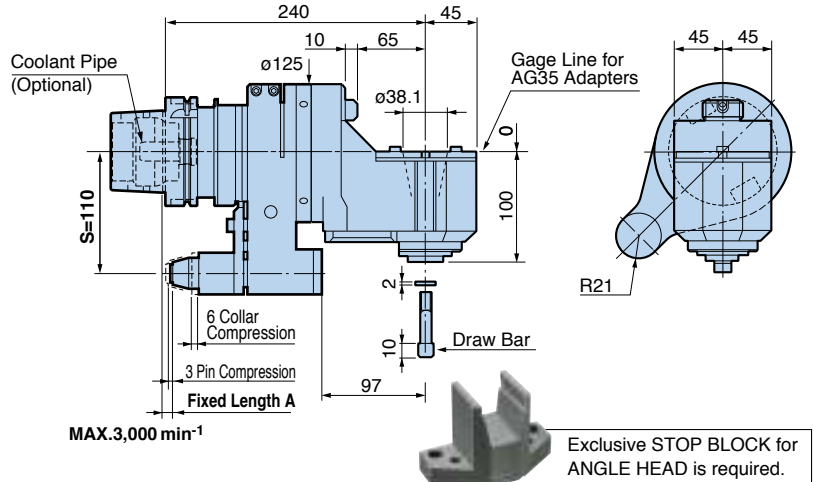
ANGLE HEAD

Spindle head is equipped with a short taper for quick changing of various adapters.

AG90 BUILD-UP type SPINDLE ANGLE : 90°

[STANDARD TYPE]

Designed for greater rigidity by having the face of the spindle bore in line with the center of the machine spindle. Also helps to minimize interference problems with ATC and storage problems within the magazine.



● The cutter rotates in the same direction of the machine spindle.

Model	Weight (kg)
HSK-A100-AG90/AGH35-240	14.2

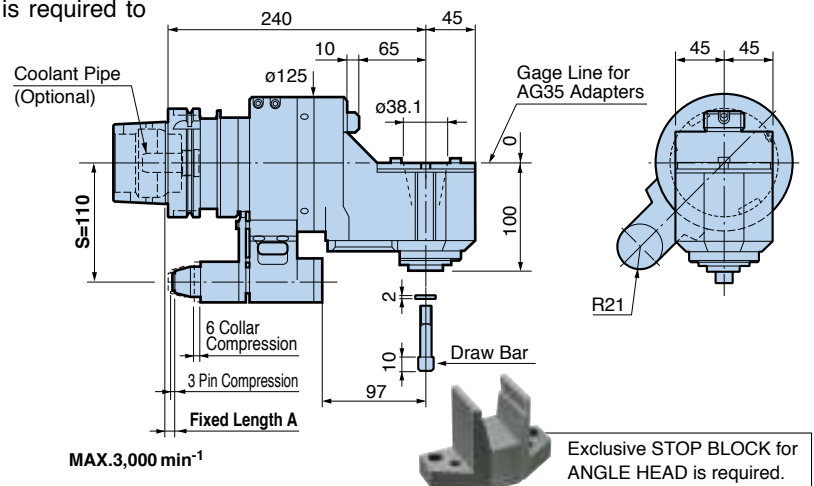
1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
3. Coolant Pipe is ordered separately. (Coolant is supplied through the Locating Pin, not the Coolant Pipe.)

➔ For AG35 ADAPTER A 54 ➔ For STOP BLOCK G 25

➔ For COOLANT PIPE C 51

[HIGH RIGIDITY TYPE]

Provided with a steel housing and reinforced Locating Pin assembly for applications where increased rigidity is required to perform various types of heavier machining.



● The cutter rotates in the same direction of the machine spindle.

Model	Weight (kg)
HSK-A100-AG90/AGH35-240S	15.5

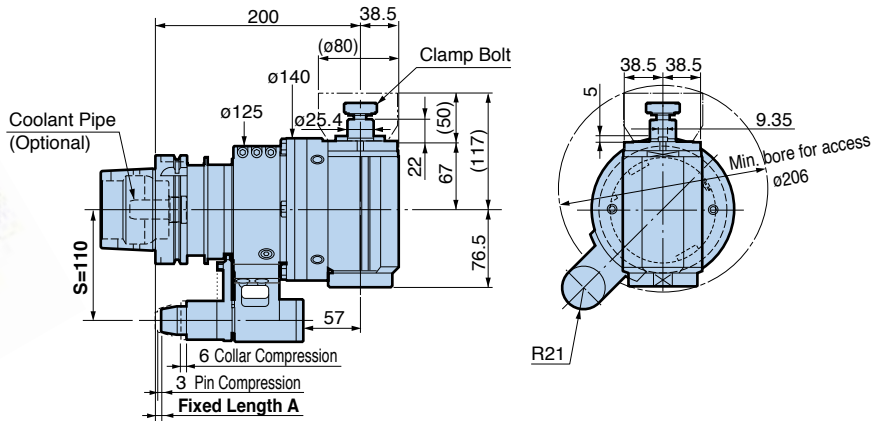
1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
 2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
 3. Coolant Pipe is ordered separately. (Coolant is supplied through the Locating Pin, not the Coolant Pipe.)
- S=80 type is available upon request.**

➔ For AG35 ADAPTER A 54 ➔ For STOP BLOCK G 25

➔ For COOLANT PIPE C 51

High rigidity bearings and substantial spindle design.
Max. power transmission 20Kw. (at 1,500min⁻¹)

AG90 FACE MILL type SPINDLE ANGLE : 90°



MAX.1,500 min⁻¹



Exclusive STOP BLOCK for ANGLE HEAD is required.

Simple 90° indexing of the cutter direction.
(Accuracy ±5')

● The rotation of the cutting tool is in reverse direction of the machine spindle.

Model	Weight (kg)
HSK-A100-AG90-FMA25.4S-200S	18.4

Figures in () indicate dimensions when 80mm diameter and 50mm high face mill cutter is mounted.

1. The standard Fixed Length A is 6mm. Other lengths are available upon request.
2. Coolant cannot be supplied through the Locating Pin.
3. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
4. Coolant Pipe is ordered separately. (Coolant is not supplied through the Coolant Pipe.)



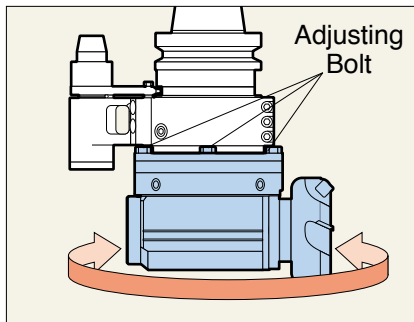
For STOP BLOCK G 25



For COOLANT PIPE C 51

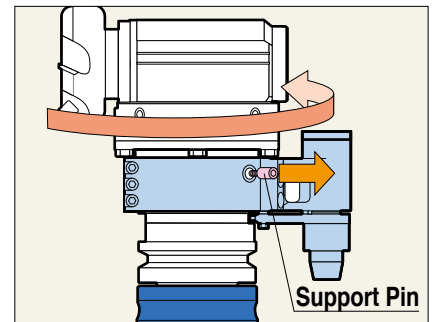
■ **Cutter head adjustable through 360° to any angle**

Following the release of the Adjusting Bolts (8 positions), the cutter direction can be easily adjusted.



■ **Indexing through 90°**

Cutter head is quickly indexable to 90° increments. (The Support Pin should be removed.)



⚠ CAUTION : Indexing should not take place within the machine.

ANGLE HEAD

AG90 OAG type SPINDLE ANGLE : 90°

For drilling Secure coolant supply through tool!

Coolant through tool

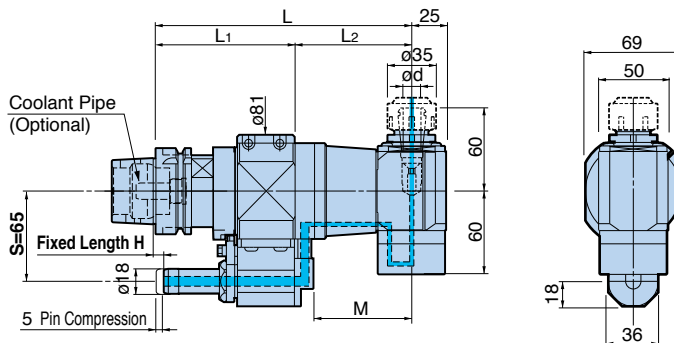


Fig. 1 MAX.5,000min⁻¹

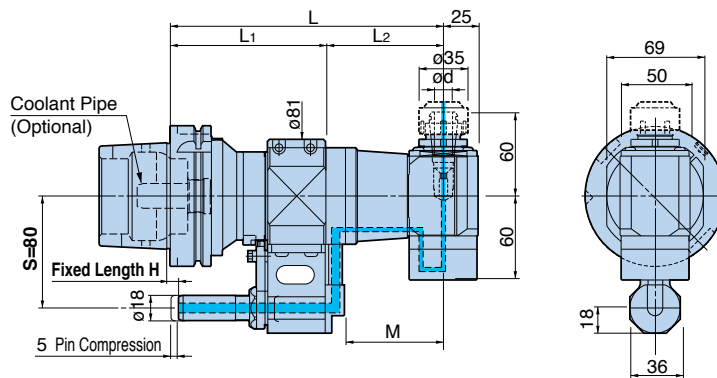
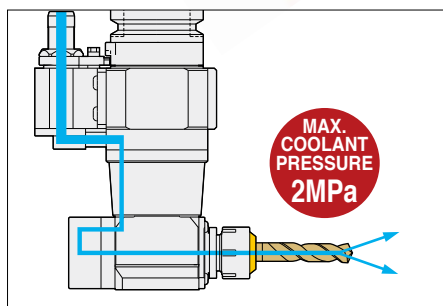


Fig. 2 MAX.5,000min⁻¹



Coolant is supplied from the Stop Block through the cutting tool.



Exclusive STOP BLOCK is required.
Exclusive STOP BLOCK for OAG type is the same as HIGH SPINDLE & Hi JET HOLDER.

● The rotation of the cutting tool is in reverse direction of the machine spindle.

Model	Fig.	ød	L	L1	L2	M	Collet	NUT	Speed Ratio	Weight (kg)
HSK-A 63-OAG90-13-185	1	2.5 - 13	185	101	84	70.5	NBC13	BPS13	1 : 1	5.9
HSK-A100-OAG90-13-195	2		195	111						8.4

1. Designed to be used with coolant. Never run dry.
2. Clamping nut must be ordered separately. Please order BABY PERFECT SEAL (BPS) for your application.
3. Coolant Pipe is ordered separately.
(Coolant is supplied through the Locating Pin, not the Coolant Pipe.)
4. Adjusting screw and wrench are included.
5. Fixed Length H and angle θ vary depending on machine models. Please specify your required dimensions.

For STOP BLOCK G 25

For NEW BABY COLLET G 3

For BABY PERFECT SEAL G 10

For COOLANT PIPE C 51

HSK SHANK

A special head case, angled at 45°, insures an accurate cutting angle.
Utilizes NEW BABY CHUCK to assure high accuracy and versatility.

AG45 NBS type SPINDLE ANGLE : 45°

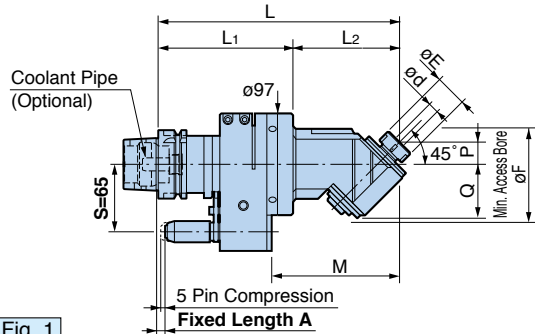


Fig. 1
MAX.6,000min⁻¹

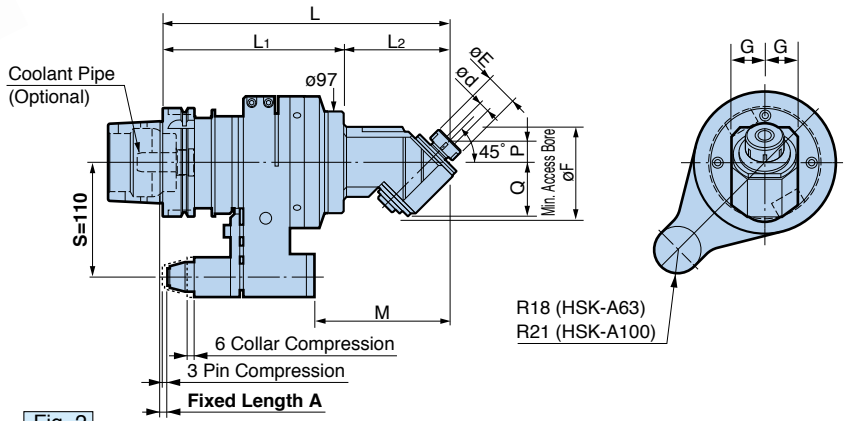


Fig. 2
MAX.6,000 min⁻¹

R18 (HSK-A63)
R21 (HSK-A100)



Exclusive STOP BLOCK is required.

● The rotation of the cutting tool is in reverse direction of the machine spindle.

Model	Fig.	ød	øE	G	L	L1	L2	M	P	Q	øF	Collet	Speed Ratio	Weight (kg)
HSK-A63 -AG45/NBS10-230	1	1.5 - 10	30	30	230	130	100	122	20	51.5	90	NBC10	1 : 1	5.6
		2.5 - 13	35		235		105	127	25			NBC13		5.7
HSK-A100-AG45/NBS10-270	2	1.5 - 10	30	30	270	170	100	127	20	51.5	90	NBC10	1 : 1	12.4
		2.5 - 13	35		275		105	132	25			NBC13		12.5

- The standard fixed length A: A63=8mm , A100=6mm.
Other lengths are available upon request.
- Clamping nut and wrench are included. Collet must be ordered separately.
- The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
- New Baby Collet for endmill model NBC□-□EAA cannot be used.
- Coolant Pipe is ordered separately. (Coolant is supplied through the Locating Pin, not the Coolant Pipe.)

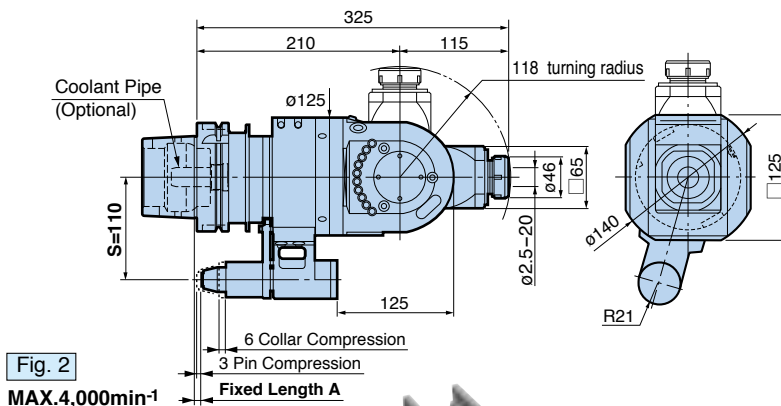
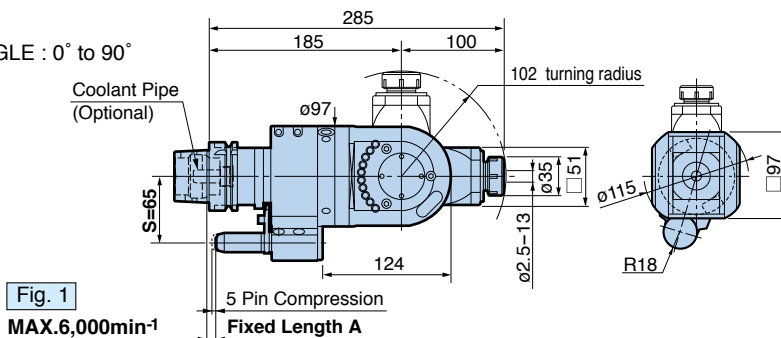
For NEW BABY COLLET G 3
 For STOP BLOCK G 25
 For COOLANT PIPE C 51

ANGLE HEAD

Suitable for all cutting angles. In addition to the cutter head being adjustable a full 360°, the spindle also becomes easily and precisely adjustable from 0° to 90° by 1° increments.

AGU UNIVERSAL type

SPINDLE ANGLE : 0° to 90°



Exclusive STOP BLOCK is required.

● The rotation of the cutting tool is in reverse direction of the machine spindle.

Model	Fig.	Collet	Speed Ratio	Weight (kg)
HSK-A 63-AGU/NBS13-285	1	NBC13	1 : 1	9.6
HSK-A 100-AGU/NBS20-325	2	NBC20	1 : 1	20.0

- The standard fixed length A: A63=8mm, A100=6mm. Other lengths are available upon request.
- The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
- Clamping nut and wrench are included. Collet must be ordered separately.
- Coolant Pipe is ordered separately. (Coolant is supplied through the Locating Pin, not the Coolant Pipe.)

➡ For NEW BABY COLLET **G 3**

➡ For STOP BLOCK **G 25**

➡ For COOLANT PIPE **C 51**



EASILY ADJUSTABLE SPINDLE ANGLE FROM 0° to 90°.



PRECISE ANGLE ADJUSTMENT

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

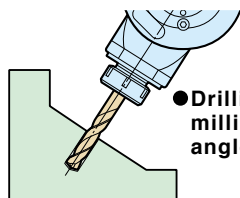


EXCLUSIVE CLAMPING BOLTS AND NUTS

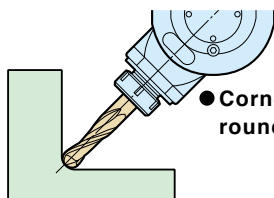
Specially selected materials and special design for clamping the head guarantee rigidity for even end milling applications.

Application example

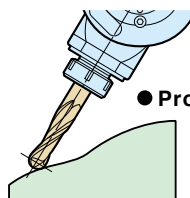
Adjustable AGU Universal Series expands Angle Head capabilities to accomplish various angular machining applications.



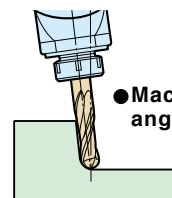
● Drilling or end milling on an angled surface



● Corner rounding



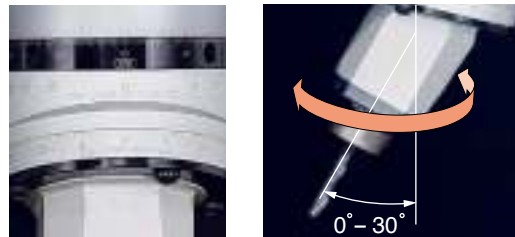
● Profiling



● Machining draft angle of a mold

Spindle angle is adjustable from 0 to 30 .
Large swivel flange assures high rigidity.

AGU AGU30 type SPINDLE ANGLE : 0° to 30°



Angle adjustment by aligning divisions

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

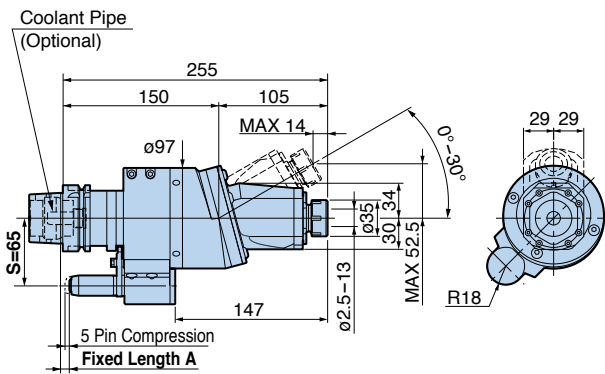


Fig. 1
MAX.6,000min⁻¹

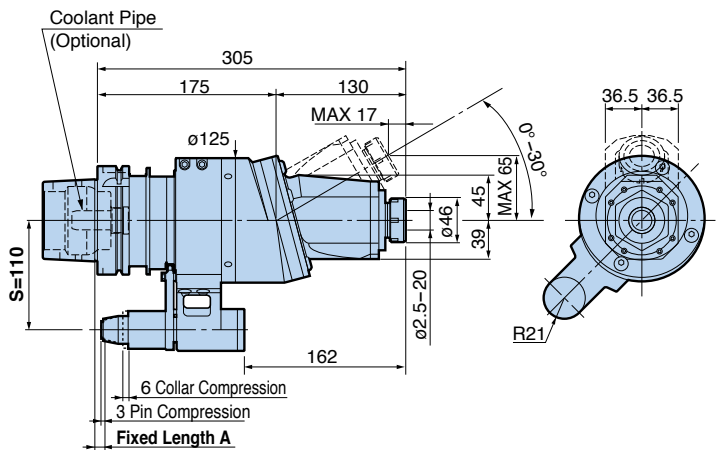


Fig. 2
MAX.4,000min⁻¹

● The cutter rotates in the same direction of the machine spindle.

Model	Fig.	Collet	Speed Ratio	Weight (kg)
HSK-A 63-AGU30/NBS13-255	1	NBC13	1 : 1	6.8
HSK-A100-AGU30/NBS20-305	2	NBC20	1 : 1	15.3

- The standard fixed length A: A63=8mm, A100=6mm. Other lengths are available upon request.
- Clamping nut and wrench are included. Collet must be ordered separately.
- The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
- Coolant Pipe is ordered separately. (Coolant is supplied through the Locating Pin, not the Coolant Pipe.)

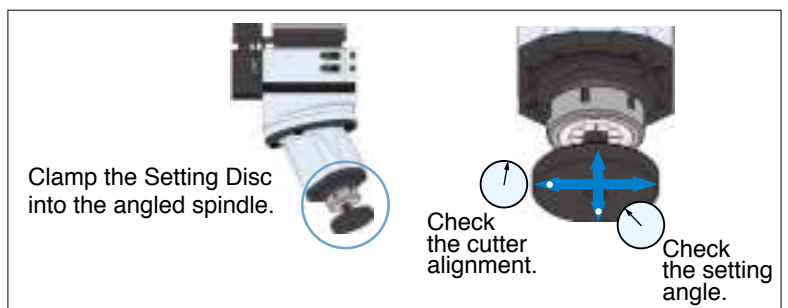
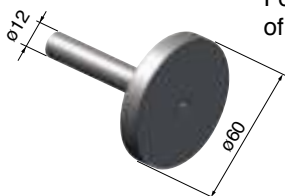
- For NEW BABY COLLET G 3
- For STOP BLOCK G 25
- For COOLANT PIPE C 51



Exclusive STOP BLOCK is required.

SETTING DISK (included accessory)

For the precise adjustment of spindle angle or direction.



ANGLE HEAD

Angular operation in a $\phi 30\text{mm}$ bore (min.) is possible. Modular heads enhance versatility. Head is aligned with spindle center for easy programing.

SMALL BORE type

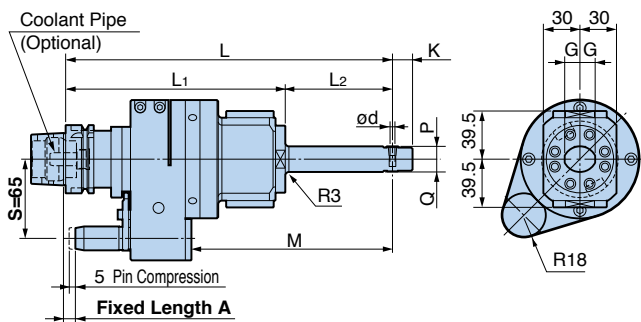
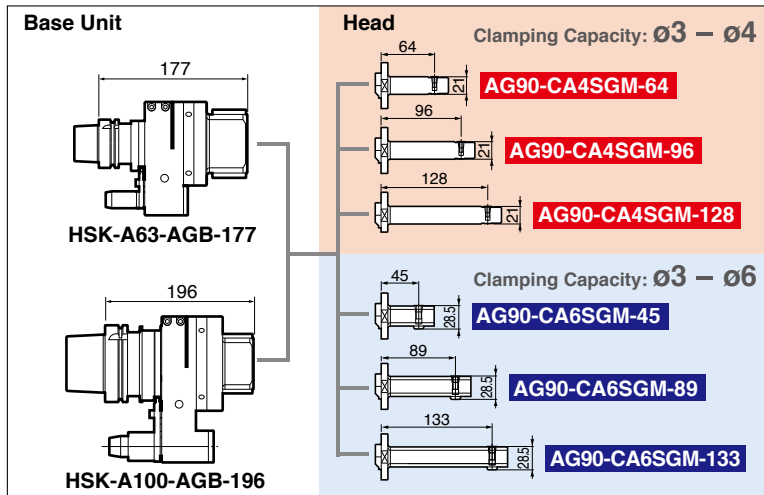


Fig. 1 MAX.2,000min⁻¹

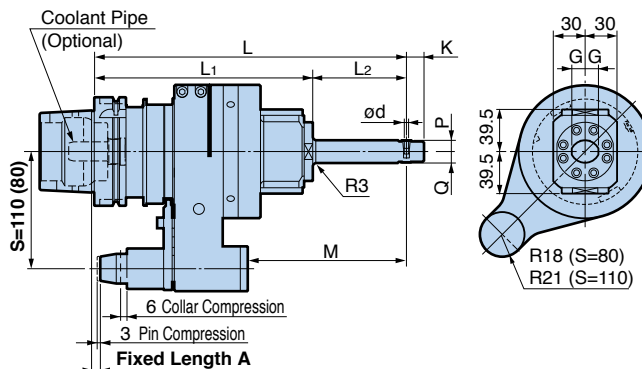


Fig. 2 MAX.2,000min⁻¹



Exclusive STOP BLOCK is required.

● The cutter rotates in the same direction of the machine spindle.

Set Model	Base	Head	Fig.	ϕd	G	K	L	L1	L2	M	P	Q	Speed Ratio	Weight (kg)		
														S=65	S=80	S=110
HSK-A63-AG90-CA4SGM-241 -273 -305 -CA6SGM-222 -266 -310	HSK-A63- AGB- 177	AG90-CA4SGM- 64	1	3 - 4	12.5	16.5	241	185	56	133	10.5	10.5	1:1.06 (Increase)	5.5	-	-
		- 96					273		88	165				5.6		
		-128					305		120	197				5.7		
		AG90-CA6SGM- 45					222		37	114				5.6		
		- 89					266		81	158				5.8		
		-133					310		125	202				6.0		
HSK-A100-AG90-CA4SGM-260 -292 -324 -CA6SGM-241 -285 -329	HSK-A100- AGB- 196	AG90-CA4SGM- 64	2	3 - 4	12.5	16.5	260	204	56	117	10.5	10.5	1:1.06 (Increase)	11.7	11.1	
		- 96					292		88	149				-	11.8	11.2
		-128					324		120	181				11.9	11.3	
		AG90-CA6SGM- 45					241		37	98				11.8	11.2	
		- 89					285		81	142				12.0	11.4	
		-133					329		125	186				12.2	11.6	

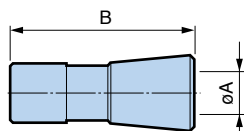
1. The standard fixed length A: A63=8mm, A100=6mm. Other lengths are available upon request.
 2. The angles of positioning pin to drive key groove and direction of cutting edge are adjustable from 0° to 360°.
 3. Coolant cannot be supplied through the Locating Pin.

4. Exclusive collets should be ordered separately.
 5. S=80 type is available for HSK-A100 models upon request.
 6. Coolant Pipe is ordered separately. (Coolant is not supplied through the Coolant Pipe.)

For STOP BLOCK G 25

For COOLANT PIPE C 51

EXCLUSIVE COLLET



Model	ϕA	B	Model	ϕA	B
CA4-3	3	16.5	CA6-3	3	22
-3.5	3.5		-4	4	
-4	4		-5	5	
			-6	6	

1. Use only a cutting tool shank with exactly the same diameter as the collet bore diameter.
 2. Tolerance of the cutting tool shank must be within h7.

AIR TURBINE SPINDLE

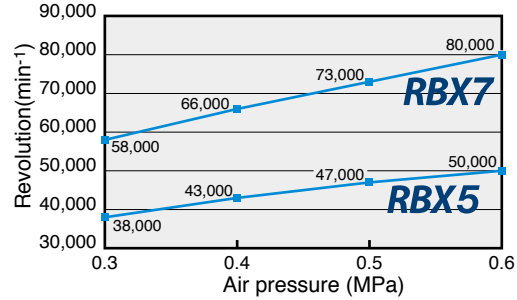
High-speed Micro-Machining can be done on a normal machining center, eliminating the need of an expensive high-speed machine.

Machine Spindle Rotation = 0

MAX. 80,000 min⁻¹

	RBX7	RBX5
Practical spindle speed (min ⁻¹)	60,000 - 80,000	40,000 - 50,000
Clamping Range	ø0.45 - ø4.05mm (MEGA4S)	
T.I.R at nose	Less than 1 μm	
Air pressure	Less than 0.6MPa	
Air flow	300L/min [ANR](0.6MPa)	

Relation between Spindle speed and air pressure (Reference)

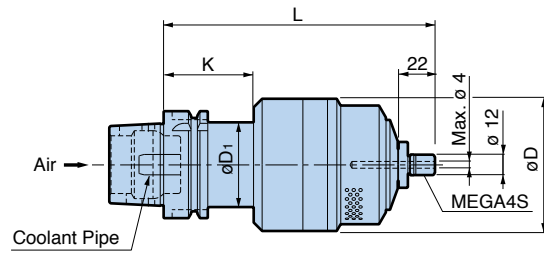


CENTER THROUGH Type

For compressed air through the machine spindle.



For automatic tool change



Model	Operating spindle speed (min ⁻¹)	Tool diameter	L	øD	øD1	K	Weight (kg)
HSK-A 63-RBX7C-4S-160	60,000 - 80,000	ø1.0 or smaller	160	78	50	53	2.9
-RBX5C-4S-160	40,000 - 50,000	ø1.5 or smaller		96			3.9
HSK-A100-RBX7C-4S-165	60,000 - 80,000	ø1.0 or smaller	165	78	68	58	4.9
-RBX5C-4S-165	40,000 - 50,000	ø1.5 or smaller		96			5.9

- Nut and wrenches are included. Collet must be ordered separately.
- XF1 (Air Unit) must be ordered separately.
- Coolant Pipe is included.

For COOLANT PIPE C 51

For MICRO COLLET G 2

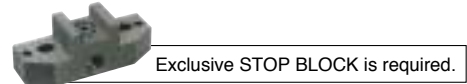
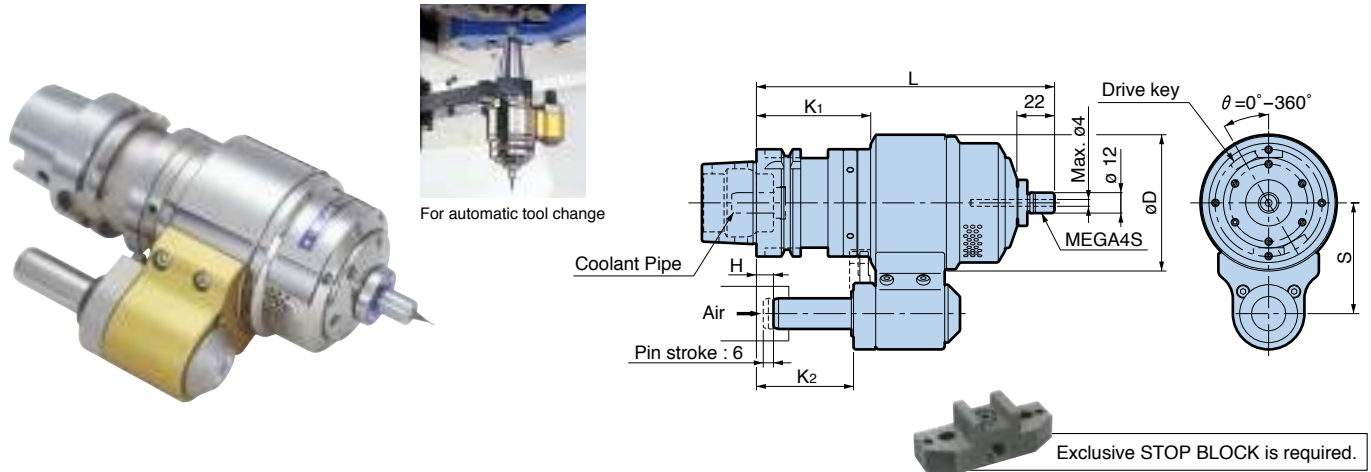
CAUTION

Compressed air to drive the AIR TURBINE SPINDLE must be clean. Therefore, coolant should not be supplied through the spindle on the machine that the AIR TURBINE SPINDLE is used.

AIR TURBINE SPINDLE

SIDE THROUGH Type

The compressed air is supplied through the stop block which also enables automatic tool change.



Model	Operating spindle speed(min ⁻¹)	Tool diameter	L	øD	K1	K2	S	H	Weight (kg)
HSK-A 63-RBX7-4S-175-65	60,000 – 80,000	ø1.0 or smaller	175	80	67	57	65	0 – 45	3.8
-RBX5-4S-175-65	40,000 – 50,000	ø1.5 or smaller		96					4.8
HSK-A100-RBX7-4S-180-80	60,000 – 80,000	ø1.0 or smaller	180	100	72	62	80	5 – 50	8.4
-RBX5-4S-180-80	40,000 – 50,000	ø1.5 or smaller							9.4

- Nut and wrenches are included. Collet must be ordered separately.
- XF1(Air Unit) must be ordered separately. A 65
- Coolant Pipe is included.

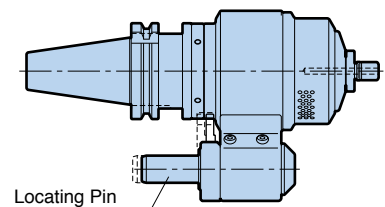
For MICRO COLLET G 2
 For COOLANT PIPE C 51

SET UP INFORMATION for AIR TURBINE SPINDLE



● Preparing the Stop Block

The **(BIG)** AIR TURBINE SPINDLE utilizing a Locating Pin requires the Stop Block, which is mounted to the machine spindle. Please contact a **(BIG)** agent for details.



[For manual tool change]

Easily mounted on machines without a stop block.

When ordering, please exchange the end of model number H.

Order Example
HSK-A63-RBX7-4S-175-65
 ↓
HSK-A63-RBX7-4S-175H

MEGA MICRO CHUCK®

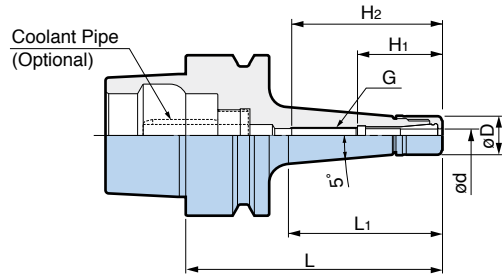
Clamping Range : $\varnothing 0.45 - \varnothing 8.05$

Type T



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

MAX.
50,000
min⁻¹



Model	Clamping Range $\varnothing D$	$\varnothing D$	L	L ₁	H ₁	H ₂	G	Max. min ⁻¹	Collet Model	Weight (kg)
HSK-E25-MEGA3S- 45T ※	0.45 – 3.25	10	45	32	22	32	—	50,000	NBC3S-□	0.06
			60	48		38				40,000
-MEGA4S- 45T ※	0.45 – 4.05	12	45	33	26.5	32	—	50,000	NBC4S-□	0.07
			60	49		41				40,000
-MEGA6S- 45T ※	0.45 – 6.05	14	45	33	28.5	31	—	50,000	NBC6S-□	0.08
			60	49		40				40,000
HSK-E32-MEGA3S- 60T	0.45 – 3.25	10	60	35	22	38	M4 P0.7	40,000	NBC3S-□	0.15
			75	50		38		40,000		0.17
-MEGA4S- 45T ※	0.45 – 4.05	12	45	23	26.5	26	—	50,000	NBC4S-□	0.14
			60	35		46		40,000		0.16
-MEGA6S- 45T ※	0.45 – 6.05	14	45	23	28.5	28	—	50,000	NBC6S-□	0.14
			60	36		38		40,000		0.17
-MEGA8S- 60T ※	2.95 – 8.05	18	60	38	31	(43)	—	40,000	NBC8S-□	0.20
HSK-E40-MEGA3S- 60T	0.45 – 3.25	10	60	35	22	39	M4 P0.7	40,000	NBC3S-□	0.23
			75	50		38		40,000		0.25
-MEGA4S- 60T	0.45 – 4.05	12	60	35	26.5	44	M5 P0.8	40,000	NBC4S-□	0.24
			75	50		47		40,000		0.27
-MEGA6S- 60T ※	0.45 – 6.05	14	60	35	28.5	(42)	—	40,000	NBC6S-□	0.24
			75	50		49		40,000		0.28
-90T			90	65		49	M7 P0.75	40,000		0.32
HSK-E50-MEGA3S- 80T	0.45 – 3.25	10		49	22	38	M4 P0.7	40,000	NBC3S-□	0.46
-MEGA4S- 80T	0.45 – 4.05	12	80	48	26.5	47	M5 P0.8	40,000	NBC4S-□	0.47
-MEGA6S- 80T	0.45 – 6.05	14		49	28.5	49	M7 P0.75	40,000	NBC6S-□	0.48

1. MEGA NUT is included.
2. For models with the mark of ※, there is no internal thread (G).
3. Coolant pipe is ordered separately.

For COOLANT PIPE C 51

	Spare Parts	Accessories			
	MEGA NUT	MEGA WRENCH	MICRO COLLET	MICRO COLLET PROTECTIVE CASE	α TAPER CLEANER
MEGA MICRO CHUCK	Model	Model	Model	Model	Model
MEGA3S	MGN3S	MGR10	NBC3S-□	NBB3S	SC-NBC3S
MEGA4S	MGN4S	MGR12	NBC4S-□	NBB4S	SC-NBC4S
MEGA6S	MGN6S	MGR14	NBC6S-□	NBB6S	SC-NBC6S
MEGA8S	MGN8S	MGR18	NBC8S-□	—	—

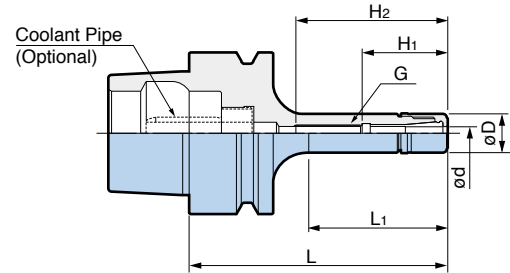
For MICRO SEAL NUT A 2

MEGA MICRO CHUCK®

Clamping Range : $\varnothing 0.45 - \varnothing 6.05$

Type S

MAX.
50,000
min⁻¹



Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	H ₁	H ₂	G	Max. min ⁻¹	Collet Model	Weight (kg)
HSK-E25-MEGA4S-45※	0.45 – 4.05	12	45	31	26.5	32	—	50,000	NBC4S-□	0.06
-60			60	46		42	M5 P0.8	40,000		0.08
-MEGA6S-45※	0.45 – 6.05	14	45	32	28	31	—	50,000	NBC6S-□	0.07
-60			60	47		28.5	41	M7 P0.75		40,000
HSK-E32-MEGA3S-45※	0.45 – 3.25	10	45	23	22	31	—	50,000	NBC3S-□	0.13
-MEGA4S-45	0.45 – 4.05	12	45	22	26.5	31	M5 P0.8	50,000	NBC4S-□	0.14
-60			60	34		46		40,000		0.15
-MEGA6S-45※	0.45 – 6.05	14	45	22	28.5	28	—	50,000	NBC6S-□	0.14
-60			60	35		38	M7 P0.75	40,000		0.15
HSK-E40-MEGA3S-40※	0.45 – 3.25	10	40	19	22	24	—	50,000	NBC3S-□	0.21
-MEGA4S-60	0.45 – 4.05	12	60	34	26.5	44	M5 P0.8	40,000	NBC4S-□	0.23
-MEGA6S-45※	0.45 – 6.05	14	45	23	27.5	27	—	50,000	NBC6S-□	0.22
-60※			60	35		28.5	42	—		40,000
HSK-E50-MEGA3S-50※	0.45 – 3.25	10	50	20	22	30	—	45,000	NBC3S-□	0.42
-MEGA4S-50※	0.45 – 4.05	12	50	21	26.5	30	—	45,000	NBC4S-□	0.43
-80			80	44		47	M5 P0.8	40,000		0.45
-MEGA6S-55※	0.45 – 6.05	14	55	26	28.5	35	—	45,000	NBC6S-□	0.44
-80			80	44		49	M7 P0.75	40,000		0.46

- MEGA NUT is included.
- For models with the mark of ※, there is no internal thread (G).
- Coolant pipe is ordered separately.

For COOLANT PIPE C 51

	Spare Parts	Accessories			
	MEGA NUT	MEGA WRENCH	MICRO COLLET	MICRO COLLET PROTECTIVE CASE	α TAPER CLEANER
MEGA MICRO CHUCK	Model	Model	Model	Model	Model
MEGA3S	MGN3S	MGR10	NBC3S-□	NBB3S	SC-NBC3S
MEGA4S	MGN4S	MGR12	NBC4S-□	NBB4S	SC-NBC4S
MEGA6S	MGN6S	MGR14	NBC6S-□	NBB6S	SC-NBC6S

For MICRO SEAL NUT A 2

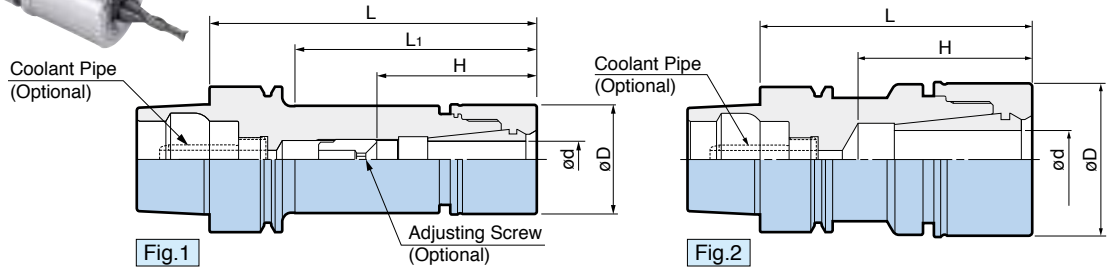
MEGA NEW BABY CHUCK®

Coolant-through hole
Clamping Range : $\varnothing 0.25 - \varnothing 20$



MAX.
40,000
min⁻¹

High speed design utilizes ultra precision New Baby Collet which guarantees a runout at the collet nose of less than 1 micron.



Model	Fig.	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	H	Max. min ⁻¹	Collet Model	Weight (kg)
HSK-E25-MEGA 6N- 40 ※	1	0.25 - 6	20	40	29	25	30,000	NBC 6- □	0.10
8N- 45 ※	2	0.5 - 8	25	45	—	30	25,000	NBC 8- □	0.12
10N- 60 ※ ▲		1.5 - 10	30	60	—	45	20,000	NBC10- □	0.17
HSK-E32-MEGA 6N- 45 ※	1	0.25 - 6	20	45	24	28	40,000	NBC 6- □	0.17
- 60				60	37	23 - 27	35,000		0.20
-MEGA 8N- 50 ※	1	0.5 - 8	25	50	29	33	40,000	NBC 8- □	0.22
- 65				65	44	26 - 32	35,000		0.27
-MEGA10N- 65 ※	2	1.5 - 10	30	65	—	47	30,000	NBC10- □	0.28
-MEGA13N- 70 ※				70	—	44	25,000		0.31
HSK-E40-MEGA 6N- 50 ※	1	0.25 - 6	20	50	26	31	40,000	NBC 6- □	0.26
- 60				60	34	23 - 26	35,000		0.28
- 75				75	49	23 - 41	30,000		0.31
- 90				90	64	23 - 43	28,000		0.35
-120				120	94	25,000	0.41		
-MEGA 8N- 55 ※	1	0.5 - 8	25	55	31	36	40,000	NBC 8- □	0.31
- 75				75	51	26 - 41	30,000		0.38
- 90				90	66	26 - 45	28,000		0.43
-MEGA10N- 60 ※	1	1.5 - 10	30	60	37	40	35,000	NBC10- □	0.39
- 75 ※				75	52	55	30,000		0.46
- 90				90	67	38 - 48	28,000		0.53
-MEGA13N- 65 ※	1	2.5 - 13	35	65	44	44	30,000	NBC13- □	0.45
- 75 ※				75	54	55	25,000		0.53
- 90				90	69	44 - 48	20,000		0.62
-120				120	99	44 - 63	15,000		0.80
-150				150	129	20,000	1.00		
-MEGA16N- 65 ※ ▲	2	2.5 - 16	42	65	—	46	25,000	NBC16- □	0.43
- 75 ※				75	—	48	20,000		0.60

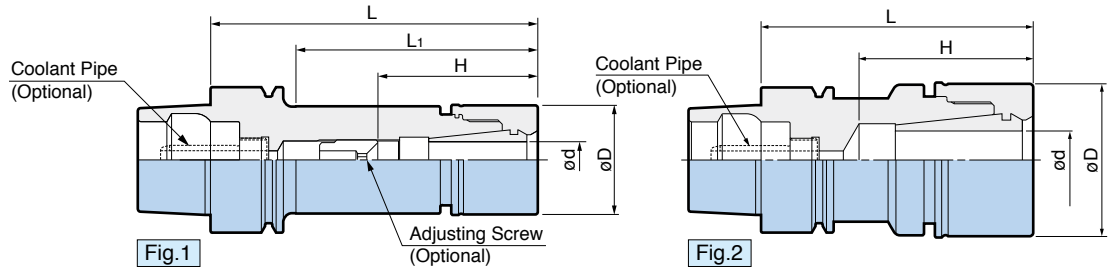
- MEGA NUT is included.
- Adjusting screws can not be used with ※ marked models.
- "H" indicates the adjustment length with an Adjusting Screw.
- Coolant pipe is ordered separately.
- NBC-E collet can not be used with ▲ marked models.

For COOLANT PIPE C 51

	Spare Parts	Accessories						
	MEGA NUT	MEGA WRENCH	NBC COLLET	SEALING NUT MEGA PERFECT SEAL	ADJUSTING SCREW			
MEGA NEW BABY CHUCK	Model	Model	Model	Model	Model	G	L	B
MEGA 6N	MGN 6	MGR20	NBC 6- □	MPS 6- □	NBA 6B	M 7	12	2
MEGA 8N	MGN 8	MGR25	NBC 8- □	MPS 8- □	NBA 8B	M 9	13	2.5
MEGA10N	MGN10	MGR30	NBC10- □	MPS10- □	NBA10B	M11	16	3
MEGA13N	MGN13	MGR35	NBC13- □	MPS13- □	NBA13B	M14	20	4
MEGA16N	MGN16	MGR42	NBC16- □	MPS16- □	NBA16B	M18	20	4
MEGA20N	MGN20	MGR46	NBC20- □	MPS20- □	NBA20B	M21	20	4

MEGA NEW BABY CHUCK®

Coolant-through hole
Clamping Range : $\varnothing 0.25 - \varnothing 20$



Model	Fig.	Clamping Range $\varnothing d$	$\varnothing D$	L	L1	H	Max. min ⁻¹	Collet Model	Weight (kg)
HSK-E50-MEGA 6N- 55 ※	1	0.25 – 6	20	55	27	35	40,000	NBC 6- □	0.47
- 70				70	38	23 – 39	30,000		0.50
-100				100	64	23 – 43	25,000		0.56
-130				130	94		20,000		0.63
-MEGA 8N- 60 ※	1	0.5 – 8	25	60	30	37	40,000	NBC 8- □	0.52
- 90				90	56	26 – 45	30,000		0.62
-MEGA10N- 60 ※▲	1	1.5 – 10	30	60	30	35	35,000	NBC10- □	0.56
- 90				90	58	38 – 48	30,000		0.70
-MEGA13N- 70 ※	1	2.5 – 13	35	70	40	45	28,000	NBC13- □	0.67
- 90				90	60	44 – 47	25,000		0.80
-120				120	90	44 – 63	20,000		1.00
-150				150	120		15,000		1.24
-MEGA16N- 75 ※	1	2.5 – 16	42	75	48	52	28,000	NBC16- □	0.85
- 90				90	63	65	25,000		1.00
-MEGA20N- 75 ※▲	2	2.5 – 20	46	75	—	49	25,000	NBC20- □	0.80
-100				100	—	51 – 54	20,000		1.10
-130				130	—	51 – 68	18,000		1.50
-160				160	—		15,000		1.80

- MEGA NUT is included.
- Adjusting screws can not be used with ※ marked models.
- "H" indicates the adjustment length with an Adjusting Screw.
- Coolant pipe is ordered separately.
- NBC-E collet can not be used with ▲ marked models.

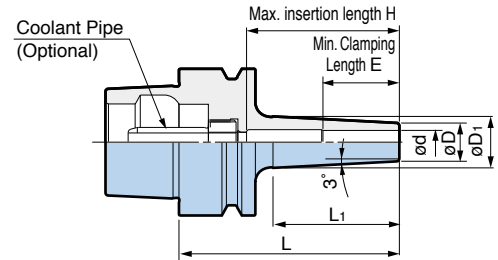
For COOLANT PIPE C 51

Spare Parts		Accessories						
	MEGA NUT 	MEGA WRENCH 	NBC COLLET For ENDMILL COLLET 	SEALING NUT MEGA PERFECT SEAL 	ADJUSTING SCREW 			
MEGA NEW BABY CHUCK	Model	Model	Model	Model	Model	G	L	B
MEGA 6N	MGN 6	MGR20	NBC 6- □	MPS 6- □	NBA 6B	M 7	12	2
MEGA 8N	MGN 8	MGR25	NBC 8- □	MPS 8- □	NBA 8B	M 9	13	2.5
MEGA10N	MGN10	MGR30	NBC10- □	MPS10- □	NBA10B	M11	16	3
MEGA13N	MGN13	MGR35	NBC13- □	MPS13- □	NBA13B	M14	20	4
MEGA16N	MGN16	MGR42	NBC16- □	MPS16- □	NBA16B	M18	20	4
MEGA20N	MGN20	MGR46	NBC20- □	MPS20- □	NBA20B	M21	20	4

SHRINK CHUCK

Coolant-through hole
Clamping Range : $\phi 4 - \phi 12$

Slim design avoids interference with the side wall and draft of the mold.



Model	ϕd	ϕD	ϕD_1	L	L ₁	E	H	Weight (kg)
HSK-E25-SRC 4S- 45 ※	4	7	10.0	45	29	16	18	0.06
-SRC 6S- 60	6	10	15.0	60	46	26	46	0.08
-SRC 8S- 60	8	13	18.0		48			0.10
HSK-E32-SRC 4S- 60 ※	4	7	10.0	60	33	16	18	0.14
-SRC 6S- 60	6	10	13.5		34	26	43	0.15
-SRC 8S- 60	8	13	16.5		36	32		0.16
-SRC10S- 60	10	16	20.0		37	35	0.18	
-SRC12S- 60	12	19	23.0		37	35	0.19	
HSK-E40-SRC 4S- 60 ※	4	7	10.0		60	34	16	44
-SRC 6S- 75	6	10	15.0	75	49	26	52	0.24
-SRC 8S- 75	8	13	18.0			32	56	0.26
-SRC10S- 75	10	16	21.0			36	56	0.29
-SRC12S- 75	12	19	24.0			36	56	0.31
HSK-E50-SRC 6S- 75	6	10	14.5			75	43	26
-SRC 8S- 75	8	13	17.5	32	52			0.46
-SRC10S- 75	10	16	20.5	32	52			0.48
-SRC12S- 75	12	19	23.5	36	52			0.51

1. Use carbide cutter within a tolerance of h6.
2. ※ Use carbide cutter within a tolerance of h5.
3. Coolant pipe is ordered separately.

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

α Wiper Cleaner is recommended to clean the clamping bore.



For COOLANT PIPE C 51

MEGA MICRO CHUCK®

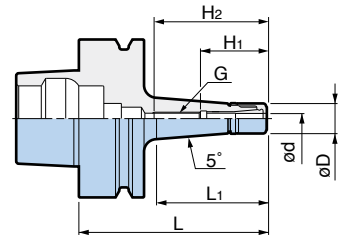
Clamping Range : $\varnothing 0.45 - \varnothing 6.05$

Type T



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

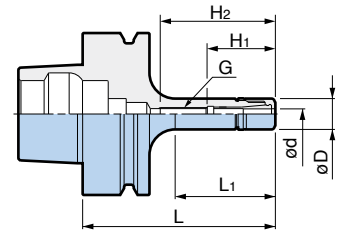
MAX.
32,000
min⁻¹



Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	H ₁	H ₂	G	Max. min ⁻¹	Collet Model	Weight (kg)
HSK-F63-MEGA4S- 75T	0.45 – 4.05	12	75	44	26.5	41	M5 P0.8	32,000	NBC4S-□	0.7
-MEGA6S- 75T	0.45 – 6.05	14	75	44	28.5	41	M7 P0.75	32,000	NBC6S-□	0.7

- MEGA NUT is included.
- Please contact **(BIG)** agent for HSK-F coolant pipe.

Type S



Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	H ₁	H ₂	G	Max. min ⁻¹	Collet Model	Weight (kg)
HSK-F63-MEGA4S- 75	0.45 – 4.05	12	75	39	26.5	41	M5 P0.8	30,000	NBC4S-□	0.7
			105	76		47		25,000		0.7
-MEGA6S- 75	0.45 – 6.05	14	75	46	28.5	41	M7 P0.75	30,000	NBC6S-□	0.7
			90	61		49		27,000		0.71
			105	76		49		25,000		0.75

- MEGA NUT is included.
- Please contact **(BIG)** agent for HSK-F coolant pipe.

	Spare Parts	Accessories			
	MEGA NUT	MEGA WRENCH	MICRO COLLET	MICRO COLLET PROTECTIVE CASE	α TAPER CLEANER
MEGA MICRO CHUCK	Model	Model	Model	Model	
MEGA4S	MGN4S	MGR12	NBC4S-□	NBB4S	SC-NBC4S
MEGA6S	MGN6S	MGR14	NBC6S-□	NBB6S	SC-NBC6S

For MICRO SEAL NUT A 2

MEGA NEW BABY CHUCK®

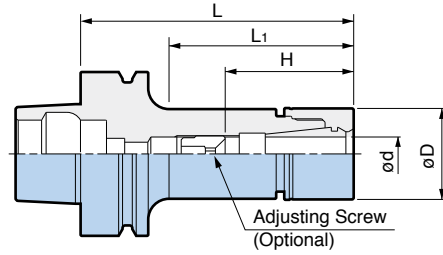
Coolant-through hole

Clamping Range : $\varnothing 0.25 - \varnothing 20$



The Body, Collet, Nut and Wrench are specifically designed to be ideal for high speed operations.

MAX.
35,000
min⁻¹



Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	H	Max. min ⁻¹	Collet Model	Weight (kg)
HSK-F63-MEGA 6N- 75	0.25 – 6	20	75	42	23 – 31	35,000	NBC 6-□	0.7
- 90			90	53	23 – 43	30,000		0.8
-105			105	69		25,000		0.8
-135			135	99	20,000	0.9		
-MEGA 8N- 75	0.5 – 8	25	75	43	26 – 38	32,000	NBC 8-□	0.8
- 90			90	54	26 – 45	30,000		0.9
-105			105	69		25,000		0.9
-120			120	84		20,000		0.9
-135			135	99	15,000	1.0		
-165			165	129	15,000	1.1		
-MEGA10N- 75 ※	1.5 – 10	30	75	43	48	32,000	NBC10-□	0.9
- 90			90	54	38 – 48	30,000		0.9
-105			105	69		25,000		1.0
-120			120	84	20,000	1.1		
-MEGA13N- 75 ※	2.5 – 13	35	75	43	47	30,000	NBC13-□	0.9
- 90			90	56	61	25,000		1.0
-105			105	71	44 – 53	20,000		1.1
-120			120	86	44 – 63	15,000		1.2
-165			165	131		15,000		1.6
-MEGA16N- 75 ※	2.5 – 16	42	75	43	48	30,000	NBC16-□	1.0
- 90			90	58	61	25,000		1.2
-105			105	73	48 – 56	20,000		1.3
-MEGA20N- 75 ※	2.5 – 20	46	75	45	51	30,000	NBC20-□	1.1
- 90			90	60	61	25,000		1.3
-105			105	75	51 – 58	20,000		1.4

- MEGA NUT is included.
- Adjusting screws can not be used with ※ marked models.
- "H" indicates the adjustment length with an Adjusting Screw.
- Please contact **(BIG)** agent for HSK-F coolant pipe.

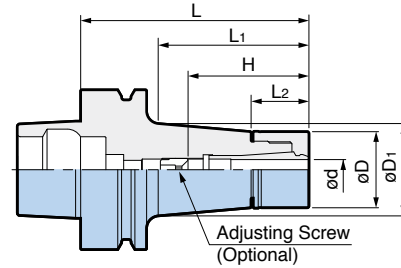
	Spare Parts	Accessories						
	MEGA NUT	MEGA WRENCH	NBC COLLET	SEALING NUT MEGA PERFECT SEAL	ADJUSTING SCREW			
MEGA NEW BABY CHUCK	Model	Model	Model	Model	Model	G	L	B
MEGA 6N	MGN 6	MGR20	NBC 6-□	MPS 6-□	NBA 6B	M 7	12	2
MEGA 8N	MGN 8	MGR25	NBC 8-□	MPS 8-□	NBA 8B	M 9	13	2.5
MEGA10N	MGN10	MGR30	NBC10-□	MPS10-□	NBA10B	M11	16	3
MEGA13N	MGN13	MGR35	NBC13-□	MPS13-□	NBA13B	M14	20	4
MEGA16N	MGN16	MGR42	NBC16-□	MPS16-□	NBA16B	M18	20	4
MEGA20N	MGN20	MGR46	NBC20-□	MPS20-□	NBA20B	M21	20	4

MEGA E CHUCK®

Coolant-through hole
Clamping Range : $\varnothing 3 - \varnothing 12$

Collet chuck designed exclusively for endmilling with high concentricity and rigidity.

MAX.
30,000
min⁻¹



Model	Clamping Range $\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	L ₂	H	Max. min ⁻¹	Collet Model	Weight (kg)
HSK-F63-MEGA 6E- 65 ※ - 90	3 - 6	25	28.1	65	34	21	39	30,000	MEC 6-□	0.8
			31.2	90	58		37 - 45			0.9
-MEGA 8E- 65 ※ - 90	3 - 8	30	32.8	65	34	22.5	41	30,000	MEC 8-□	0.8
			36.2	90	59		42 - 47			1.0
-MEGA10E- 75 ※ - 90 ※ -105 -120 -135	3 - 10	35	38.4	75	44	23	48	30,000	MEC10-□	1.0
			41.1	90	59		67			1.2
			43.9	105	75		48 - 58	29,000		1.3
			46.7	120	91					1.6
48.9	135	107	27,000	1.8						
-MEGA13E- 75 ※ - 90 ※ -105 -135	3 - 12	42	45.7	75	47	25	50	30,000	MEC13-□	1.1
			48.3	90	62		64			1.4
			51	105	78		50 - 58	29,000		1.6
			51.8	135	108		50 - 60	26,000		2.0

- MEGA E NUT is included.
- Adjusting screws can not be used with ※ marked models.
- "H" indicates the adjustment length with an Adjusting Screw.
- Please contact **(BIG)** agent for HSK-F coolant pipe.

Spare Parts		Accessories						
MEGA E NUT		MEGA WRENCH	MEGA E COLLET	SEALING NUT MEGA E PERFECT SEAL	ADJUSTING SCREW Rubber			
MEGA E CHUCK	Model					G	L	B
MEGA 6E	MEN 6	MGR25	MEC 6-□	EPS 6-□	NBA 6B	M 7	12	2
MEGA 8E	MEN 8	MGR30	MEC 8-□	EPS 8-□	NBA 8B	M 9	13	2.5
MEGA10E	MEN10	MGR35	MEC10-□	EPS10-□	NBA10B	M11	16	3
MEGA13E	MEN13	MGR42	MEC13-□	EPS13-□	NBA13B	M14	20	4

MEGA DOUBLE POWER CHUCK®

Coolant-through hole

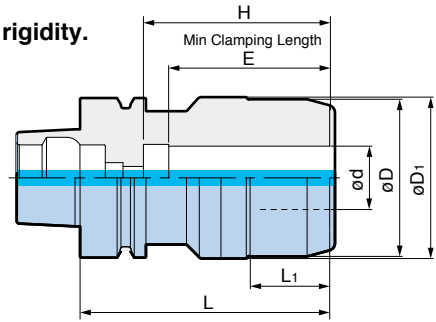
Clamping Range : $\varnothing 16 - \varnothing 32$

Type D

Close to integral rigidity and precision of a solid toolholder.
Flange contacting nut assures highest rigidity.



MAX.
28,000
min⁻¹



Model	$\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	H	E	Max. min ⁻¹	Weight (kg)
HSK-F63-MEGA16D- 80A	16	42	52.6	80	25	55	50	28,000	1.2
-MEGA20D- 90A	20	50	55	90	34	65	56	28,000	1.4
-MEGA25D-100A	25	62	62.7	100	39	75	57	25,000	1.8
-MEGA32D-105A	32	70	70.7	105	33.5	80	64	24,000	2.0

1. Wrench is ordered separately.
2. Please contact **BIG** agent for HSK-F coolant pipe.

For STRAIGHT COLLET G 15

C

HSK SHANK

Accessories	
	MEGA WRENCH
MEGA DOUBLE POWER CHUCK	Model
HSK-F63-MEGA16D	MGR42L
-MEGA20D	MGR50L
-MEGA25D	MGR62L
-MEGA32D	MGR70L

MEGA DOUBLE POWER CHUCK®

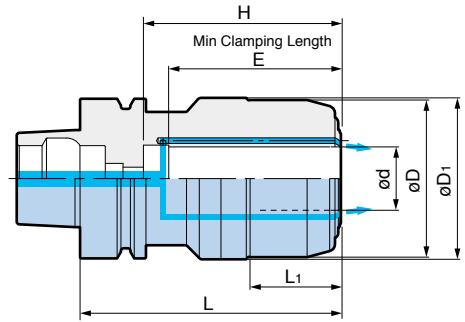
Coolant-through hole

Clamping Range : $\varnothing 16 - \varnothing 32$

Type DS For coolant to cutting tool periphery



MAX.
28,000
min⁻¹



Model	$\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	H	E	Max. min ⁻¹	Weight (kg)
HSK-F63-MEGA16DS- 80A	16	42	52.6	82	27	57	52	28,000	1.2
-MEGA20DS- 90A	20	50	55	92	36	67	58	28,000	1.4
-MEGA25DS-100A	25	62	62.7	102	41	77	59	25,000	1.8
-MEGA32DS-105A	32	70	70.7	107	35.5	82	66	24,000	2.0

1. Wrench is ordered separately.
2. Please contact **BIG** agent for HSK-F coolant pipe.

For STRAIGHT COLLET **G 15**

Accessories

	MEGA WRENCH
MEGA DOUBLE POWER CHUCK	Model
HSK-F63-MEGA16DS	MGR42L
-MEGA20DS	MGR50L
-MEGA25DS	MGR62L
-MEGA32DS	MGR70L

DYNA TEST



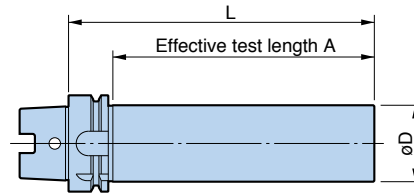
For inspection and adjustment of machine spindle.

Aluminum box

With in Aluminum box for strage.



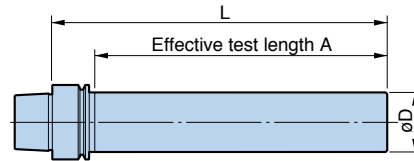
HSK-A Type [DIN 69893-1 & ISO 12164-1]



Model	L	A	øD
HSK-A 40-32-L180SD	180	157	32
-A 50-32-L240SD	240	211	
-A 63-50-L200SD	200	171	50
-L350SD	350	321	
-A100-50-L200SD	200	168	
-L350SD	350	318	

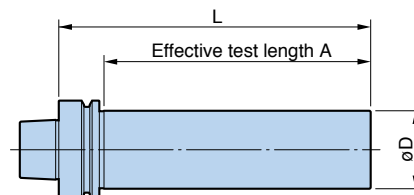
1. The drive key slots are symmetrical to allow the HSK form A Dyna Test Bar to be indexed 180 degrees.

HSK-E Type [DIN 69893-5]



Model	L	A	øD
HSK-E25-20-L175	175	163	20
-E32-20-L180	180	158	
-E40-32-L180		157	32
-E50-32-L240	240	211	

HSK-F Type [DIN V 69893-6]



Model	L	A	øD
HSK-F63-50-L200	200	171	50
-L350	350	321	

COOLANT PIPE For Form A and Form E

Form A **Form E**

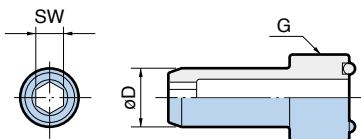
Please contact **BIG** agent for HSK-F coolant pipe.



Caution

For machines capable of supplying coolant through spindle, the Coolant Pipe should be fitted to all HSK holders to protect against accidental selection of coolant.

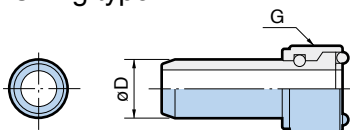
● Mono block type



Model	øD	G	SW
HSK 25-CP	5	M 8×P1	2.5
32-CP	6	M10×P1	3
40-CP	8	M12×P1	4
50-CP	10	M16×P1	5
63-CP	12	M18×P1	6
80-CP	14	M20×P1.5	8
100-CP	16	M24×P1.5	8



● 1° swing type



Model	øD	G	Wrench (Optional)
HSK 40-CPM	8	M12×P1	CPW 40
50-CPM	10	M16×P1	CPW 50
63-CPM	12	M18×P1	CPW 63
80-CPM	14	M20×P1.5	CPW 80
100-CPM	16	M24×P1.5	CPW100



HSK Turning tools HSK-T63, T100 (ISO 12164-3)

Revolutionary!
The very first modular tooling system for Turning application.

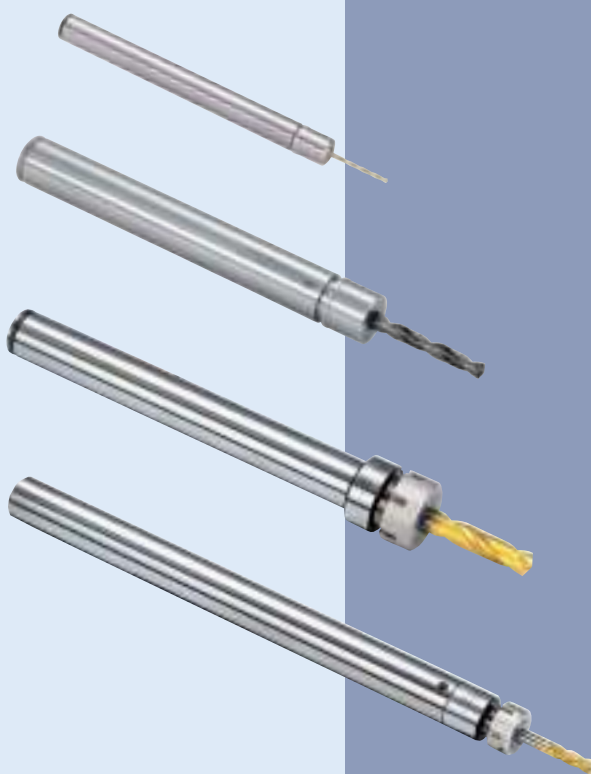


E 11 - E18



CYLINDRICAL SHANK

MEGA MICRO CHUCK ······	D1
MEGA NEW BABY CHUCK ······	D2
NEW BABY CHUCK ······	D3
SHRINK CHUCK ······	D5
MEGA SYNCHRO Tapping Holder ······	D8

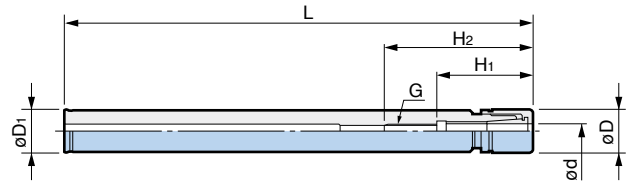


D

MEGA MICRO CHUCK®

Clamping Range : \varnothing 0.45 - \varnothing 8.05

\varnothing 10 ultra small dia. to avoid interference.
High precision is maintained by combination with
MEGA NEW BABY CHUCK.



Model	Clamping Range \varnothing d	\varnothing D	\varnothing D ₁	L	H ₁	H ₂	G	Collet Model	Nut Model	Weight (kg)
ST10-MEGA3S-120	0.45 – 3.25	10	10	120	22	38	M4 P0.7	NBC3S-□	MGN3S	0.06
ST12-MEGA4S-130	0.45 – 4.05	12	12	130	26.5	47	M5 P0.8	NBC4S-□	MGN4S	0.11
-160				160						0.13
ST14-MEGA6S-160	0.45 – 6.05	14	14	160	28.5	49	M7 P0.75	NBC6S-□	MGN6S	0.18
-200				200						0.21
ST16-MEGA8S-160	2.95 – 8.05	18	16	160	31	50.5	M9 P0.75	NBC8S-□	MGN8S	0.23

1. MEGA NUT is included.

MEGA MICRO CHUCK	Spare Parts	Accessories			
	MEGA NUT	MEGA WRENCH	MICRO COLLET	MICRO COLLET PROTECTIVE CASE	α TAPER CLEANER
	Model	Model	Model	Model	Model
MEGA3S	MGN3S	MGR10	NBC3S-□	NBB3S	SC-NBC3S
MEGA4S	MGN4S	MGR12	NBC4S-□	NBB4S	SC-NBC4S
MEGA6S	MGN6S	MGR14	NBC6S-□	NBB6S	SC-NBC6S
MEGA8S	MGN8S	MGR18	NBC8S-□	—	—

MEGA MICRO CHUCK SET



Including convenient storage case.

Set model **SST12-MEGA4S-130**

Contents

< SST12 - MEGA4S - 130 >

- BODY/ ST12 - MEGA4S - 130 (with MGN4S nut)
- COLLET/ NBC4S - 3 & 4 (2 pcs.)
- WRENCH/ MGR12

Set model **SST14-MEGA6S-160**

< SST14 - MEGA6S - 160 >

- BODY/ ST14 - MEGA6S - 160 (with MGN6S nut)
- COLLET/ NBC6S - 3,4,5 & 6 (4 pcs.)
- WRENCH/ MGR14

Set model **SST16-MEGA8S-160**

Contents

< SST16 - MEGA8S - 160 >

- BODY/ ST16 - MEGA8S - 160 (with MGN8S nut)
- COLLET/ NBC8S - 3,4,6 & 8 (4 pcs.)
- WRENCH/ MGR18

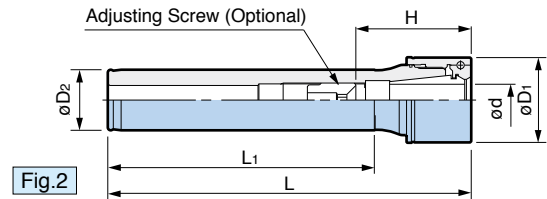
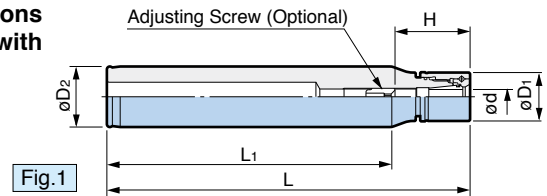
D

CYLINDRICAL SHANK

MEGA NEW BABY CHUCK®

Coolant-through hole
Clamping Range : $\varnothing 0.25 - \varnothing 20$

Cylindrical shank models offer flexible solutions against possible interference in combination with MEGA DOUBLE POWER CHUCK.



Model	Fig.	Clamping Range $\varnothing d$	$\varnothing D_1$	$\varnothing D_2$	L	L ₁	H	Nut Model	Weight (kg)		
ST20-MEGA 6N-100	1	0.25 - 6	20	20	100	76	23 - 43	MGON 6	0.2		
-150					150	126			0.3		
-250					250	226			0.5		
-MEGA 8N-100	2	0.5 - 8	25		100	65	26 - 45	MGON 8	0.3		
-150					150	115			0.4		
-250					250	215			0.6		
-MEGA10N-100	2	1.5 - 10	30		100	60	38 - 48	MGON10	0.3		
-150					150	110			0.4		
-250					250	210			0.6		
ST25-MEGA 6N-150	1	0.25 - 6	20	25	150	116	23 - 43	MGON 6	0.5		
-MEGA 8N-150					150	123			26 - 45	MGON 8	0.5
-200					200	173					0.7
-MEGA10N-150	2	1.5 - 10	30		150	123	38 - 48	MGON10			0.5
-200					200	173			0.7		
-MEGA13N-150					2	2.5 - 13			35	150	110
-200	200	160	0.7								
-200	200	160	0.7								
ST32-MEGA 6N-150	1	0.25 - 6	20		32	150	113	23 - 43	MGON 6	0.8	
-MEGA 8N-150				150		111	26 - 45			MGON 8	0.9
-MEGA10N-150				150		123					38 - 48
-200	200	173	1.1								
-MEGA13N-150	2	2.5 - 13	35	150		120	44 - 63	MGON13	0.9		
-200				200		170			1.1		
-300				300		270			1.6		
-MEGA16N-150	2	2.5 - 16	42	150		110	48 - 68	MGN 16	1.0		
-200				200		160			1.2		
-300				300	260	1.7					
-MEGA20N-150	2	2.5 - 20	46	150	105	51 - 68	MGN 20	1.0			
-200				200	155			1.3			
-300				300	255			1.9			

- MEGA NUT is included.
- "H" indicates the adjustment length with an Adjusting Screw.
- BIG** ST LOCK is recommended to mount / release a cutting tool.

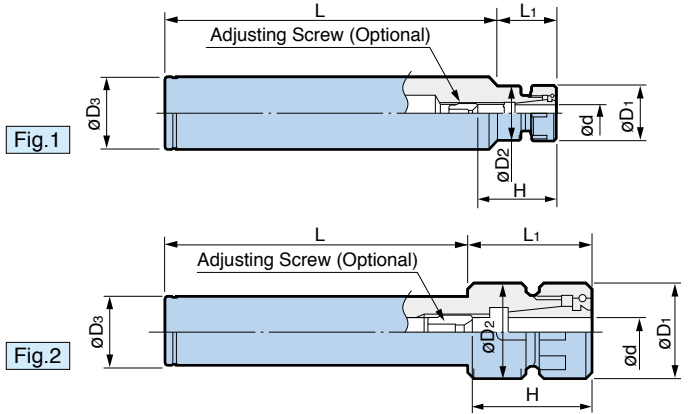
For ST LOCK G 18

MEGA NEW BABY CHUCK	Spare Parts	Accessories						
	MEGA NUT	MEGA WRENCH	NBC COLLET	SEALING NUT	ADJUSTING SCREW	Rubber		
Model	Model	Model	Model	Model	Model	G	L	B
MEGA 6N	MGON 6	MGR20	NBC 6-□	MPS 6-□	NBA 6B	M 7	12	2
MEGA 8N	MGON 8	MGR25	NBC 8-□	MPS 8-□	NBA 8B	M 9	13	2.5
MEGA10N	MGON10	MGR30	NBC10-□	MPS10-□	NBA10B	M11	16	3
MEGA13N	MGON13	MGR35	NBC13-□	MPS13-□	NBA13B	M14	20	4
MEGA16N	MGN16	MGR42	NBC16-□	MPS16-□	NBA16B	M18	20	4
MEGA20N	MGN20	MGR46	NBC20-□	MPS20-□	NBA20B	M21	20	4

NEW BABY CHUCK

Clamping Range : $\varnothing 0.25 - \varnothing 20$

Avoids interference when used in combination with BIG NEW Hi-POWER MILLING CHUCK.



Model	Fig.	Clamping Range $\varnothing d$	$\varnothing D_1$	$\varnothing D_2$	$\varnothing D_3$	L	L ₁	H	Weight (kg)	
ST20-NBS 6-100	1	0.25 – 6	20	19.5	20	100	24	20 – 40	0.27	
-150						150			0.39	
-250 *						250			0.64	
-NBS 8-100	2	0.5 – 8	25	24.5		100	26	23 – 42	0.29	
-150						150			0.41	
-250 *						250			0.66	
-NBS10-100	2	1.5 – 10	30	29.5		100	28	35 – 45	0.32	
-150						150			0.44	
-250 *						250			0.69	
-350 *						350			0.93	
ST25-NBS 6-150	1	0.25 – 6	20	19.5		25	150	24	20 – 40	0.60
-200 *							200			0.79
-250 *					250		0.98			
-NBS 8-150	1	0.5 – 8	25	24.5	150		26	23 – 42	0.62	
-200 *					200				0.81	
-250 *					250				1.00	
-NBS10-150	2	1.5 – 10	30	29.5	150		28	35 – 45	0.65	
-200 *					200				0.84	
-250 *					250				1.03	
-NBS13-150	2	2.5 – 13	35	34.5	150		34	41 – 60	0.67	
-200 *					200				0.86	
-250 *					250				1.05	
ST32-NBS 6-150	1	0.25 – 6	20	19.5	32	150	24	20 – 40	0.96	
-200 *						200			1.28	
-250 *						250			1.59	
-NBS 8-150	1	0.5 – 8	25	24.5		150	26	23 – 42	0.99	
-200 *						200			1.30	
-NBS10-150						1			1.5 – 10	30
-200 *	200	1.33								
-250 *	250	1.64								
-350 *						350			1.95	
-NBS13-150	2	2.5 – 13	35	34.5		150	34	41 – 60	1.04	
-200 *						200			1.35	
-250 *						250			1.67	
-300 *					300			2.30		
-NBS16-150	2	2.5 – 16	42	41.5	150	34	45 – 65	1.05		
-200 *					200			1.37		
-300 *					300			2.00		
-NBS20-150	2	2.5 – 20	46	45.5	150	34	48 – 65	1.05		
-200 *					200			1.37		
-300 *					300			2.00		

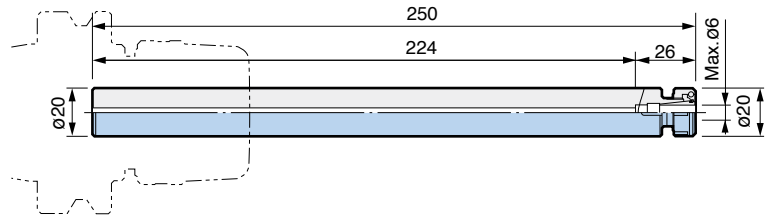
1. NEW BABY NUT is included.
2. Models marked with * are not equipped with a hole through for coolant.

NEW BABY CHUCK CARBIDE CYLINDRICAL SHANK

Coolant-through hole

Clamping Range : $\phi 0.25 - \phi 6$

Reliable solution for deep and narrow access
having slim head and solid carbide shank.



Standard Type	
Model	ST20W-NBS6-250 < NBN6 Nut included >
Remarks : Collet and Wrench are not included.	
Weight : 1.20 kg	

For ST LOCK **G 18**

NEW HI-POWER MILLING CHUCK

NEW HI-POWER MILLING CHUCK ensures high accuracy, high rigidity and powerful gripping force for Carbide Cylindrical Shank New Baby Chuck.



Application Example

Spindle Speed : 1,000 min⁻¹
 Cutting Feed : 0.1mm/rev.
 Cutting Depth : 0.5mm
 Cutter : 5mm Solid Carbide End Mill
 Workpiece : Cast Iron G025 (DIN)
 FC25 (JIS)

D
CYLINDRICAL SHANK

NEW BABY CHUCK	Spare Parts	Accessories						
	NEW BABY NUT	WRENCH	NBC COLLET	BABY PERFECT SEAL	ADJUSTING SCREW			
	Model	Model	Model	Model	Model	G	L	B
NBS 6	NBN 6	NBK 6	NBC 6- □	BPS 6- □	NBA 6B	M 7	12	2
NBS 8	NBN 8	NBK 8	NBC 8- □	BPS 8- □	NBA 8B	M 9	13	2.5
NBS10	NBN10	NBK10	NBC10- □	BPS10- □	NBA10B	M11	16	3
NBS13	NBN13	NBK13	NBC13- □	BPS13- □	NBA13B	M14	20	4
NBS16	NBN16	NBK16	NBC16- □	BPS16- □	NBA16B	M18	20	4
NBS20	NBN20	NBK20	NBC20- □	BPS20- □	NBA20B	M21	20	4

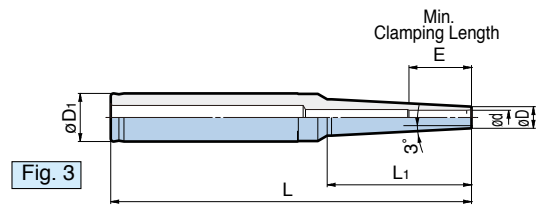
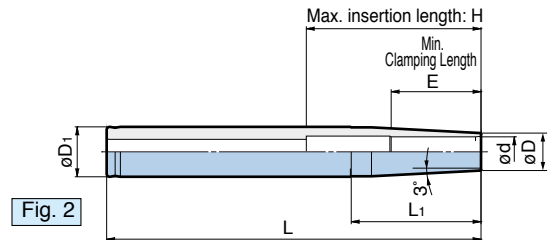
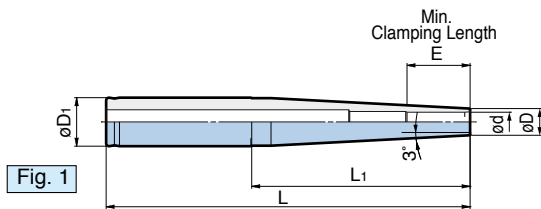
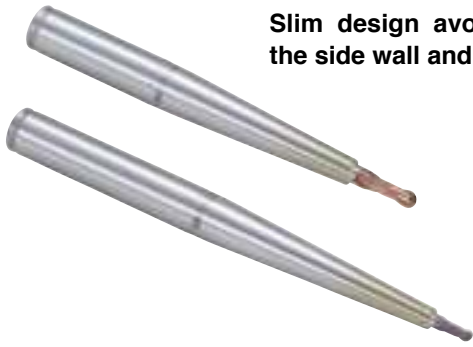
SHRINK CHUCK

Coolant-through hole

Clamping Range : $\phi 4 - \phi 20$

SUPER SLIM Type

Slim design avoids interference with the side wall and draft of the mold.



Model	Fig.	ϕd	ϕD	ϕD_1	L	L ₁	E	H	Weight (kg)
ST12-SRC 4SS-120 ※	1	4	7	12	120	51	16	-	0.10
-SRC 6SS-120	2	6	9			32	26	52	0.10
ST20-SRC 4SS-150-K40 ※	3	4	7	20	150	40	16	-	0.25
-SRC 6SS-150-K60						60	-	0.25	
-200	1	6	9	20	200	110	26	-	0.30
-200-K60	3					60			0.30
-250	1					110			0.35
-250-K60	3					60			0.40
-SRC 8SS-150	1	8	11	20	150	90	26	-	0.25
-200					200				0.30
-250					250				0.40
-SRC10SS-150	2	10	13	20	150	71	32	60	0.25
-200					200				0.35
-250					250				0.40
-SRC12SS-150					150				0.25
-200	200	52	36	70	0.35				
-250	250				0.45				

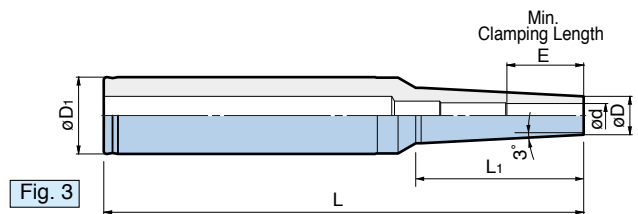
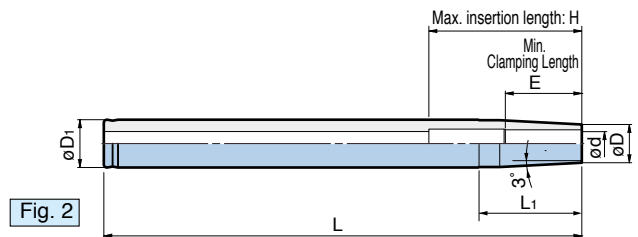
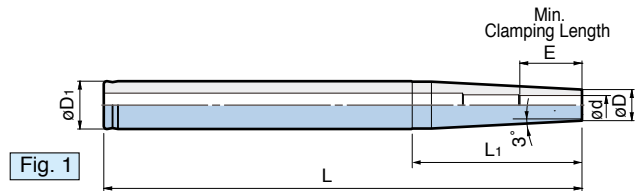
1. Use carbide cutter within a tolerance of h6.
2. ※ Use carbide cutter within a tolerance of h5.

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

Wiper Cleaner is recommended to clean the clamping bore.




SLIM Type



Model	Fig.	ϕd	ϕD	ϕD_1	L	L ₁	E	H	Weight (kg)
ST20-SRC 8S-150	1	8	13	20	150	71	26	-	0.25
-200					200				0.35
-250					250				0.45
SRC10S-150	2	10	16	20	150	43	32	60	0.25
-200					200				0.35
-250					250				0.45
ST32-SRC10S-150-K70	3	10	16	32	150	70	32	-	0.50
-200-K70					200				0.75
-300-K70					300				1.20
-SRC12S-150-K70	1	12	19	32	150	70	36	-	0.55
-200-K70					200				0.80
-300	3				300	129			1.20
-300-K70	3					70			1.25
-SRC16S-150	2	16	24	32	150	83	38	70	0.60
-200					200			80	0.85
-300					300			1.30	
-SRC20S-150	2	20	28	32	150	50	38	80	0.60
-200					200				0.85
-300					300				1.30

1. Use carbide cutter within a tolerance of h6.

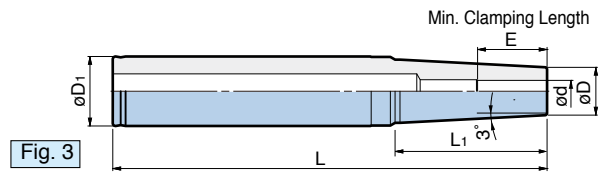
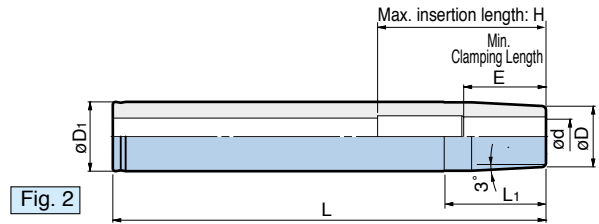
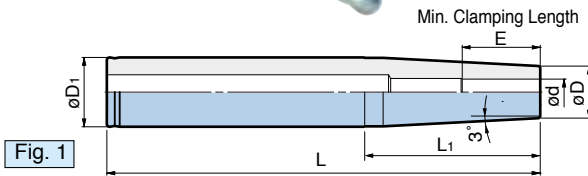
Please refer to the operation manual of heating / cooling equipment, as some equipments may not be compatible.

Wiper Cleaner is recommended to clean the clamping bore. 

SHRINK CHUCK

Coolant-through hole
Clamping Range : $\varnothing 4 - \varnothing 32$

STANDARD Type



Model	Fig.	$\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	E	H	Weight (kg)
ST20-SRC 4-150-K40 ※	3	4	10	20	150	40	16	-	0.25
-150-K80 ※						80			0.20
-SRC 6-150	1	6	14	20	150	62	26	-	0.30
-200					200				0.35
-250					250				0.45
ST32-SRC10-150-K70	3	10	22	32	150	70	32	-	0.65
-200	1				100	0.85			
-200-K70	3				70	0.90			
-300	1				100	1.30			
-300-K70	3				70	1.35			
SRC12-150	1	12	24	32	150	81	36	-	0.65
-200					200				0.90
-300					300				1.35
SRC16-150	2	16	28	32	150	47	38	70	0.70
-200					200			0.90	
-300					300			1.35	

1. Use carbide cutter within a tolerance of h6.
2. ※ Use carbide cutter within a tolerance of h5.

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

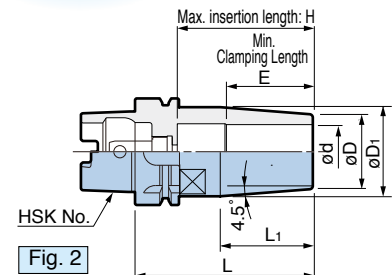
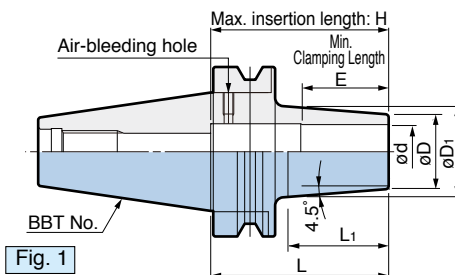
α Wiper Cleaner is recommended to clean the clamping bore.

For $\varnothing 32\text{mm}$ Straight Shank



BBT Type

HSK Type



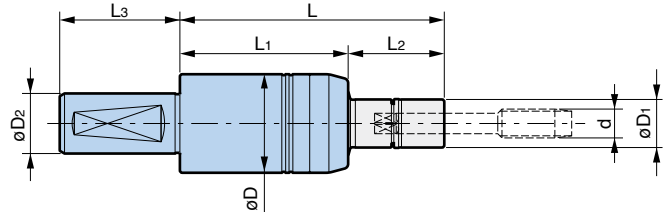
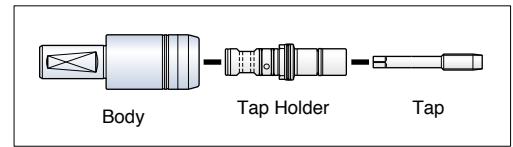
Model	Fig.	$\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	E	H	Weight (kg)
BBT40-SRC32D- 95	1	32	44	54	95	65	51	88	1.6
BBT50-SRC32D-105					105	61		105	4.1
HSK-A 63-SRC32D-105	2	32	44	52.6	105	54	51	80	1.4
HSK-A100-SRC32D-115					115	72		82	2.9

1. Designed for center through coolant application when used with coolant through cutting tools.

MEGA SYNCHRO[®] Tapping Holder

Coolant-through hole

Tapping Range : M1 - M20



Model	Tap Holder Model	Tapping Range d	øD	øD1	Shank Dia. øD2	L	L1	L2	L3	Weight (kg)
ST20-MGT 6-65	MGT 6-d- 30	M2 – M6 No.3 – U1/4	36	16	20	95	65	30	40	0.5
	- 70					70				
	-100					100				
ST25-MGT12-70	MGT12-d- 30	M6 – M12 U1/4 – U7/16 P1/8	41	20	25	100	70	30	50	0.8
	- 70					70				
	-100					100				
ST32-MGT20-90	MGT20-d- 35	M12 – M20 U1/2 – U3/4 P1/4 – P3/8	54	30	32	125	90	35	55	1.5
	- 85					85				
	-115					115				

1. Tap Holder and wrench are ordered separately.
Rigid tapping function is required on the machine tool.

※ (BIG) Side Lock Holder model TSL is recommended as a basic holder.

☞ For TAP HOLDER A 33-A 36

☞ For ACCESSORIES A 32

☞ For MEGA WRENCH A 32

☞ For SIDE LOCK HOLDER A 39

● Tapping Range for DIN & ISO Standard

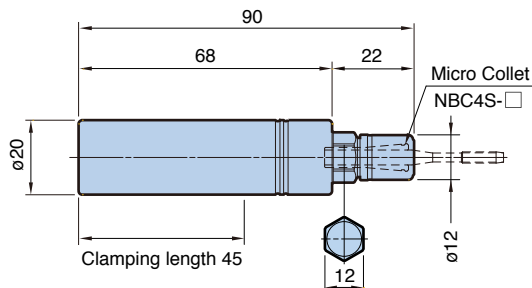
MGT Size	DIN Standard			ISO Standard	
	DIN371	DIN376	DIN353	ISO529	ISO2284
MGT 6	M3-M6	M5-M8		M3-M5	
MGT12	M5-M8	M8-M12	1/8	M6,M8,M12	1/8
MGT20	M10	M12-M18	1/4-3/8	M10-M20	1/4-3/8

☞ For detail of TAP HOLDER A 33-A 36

For small Tap MGT3



Model
ST20-MGT3-90



1. Nut is included. Wrench and collet are ordered separately.
2. 12mm common spanner is also required to hold the body when clamping/unclamping the tap.
• Rigid tapping function is required on the machine tool.
• Not capable of supplying coolant through the holder body.

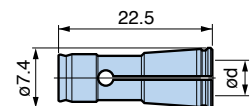
■ MEGA Wrench For (MGT3)



Model	MGR12
-------	-------

1. 12mm common spanner is also required to hold the body when clamping/unclamping the tap.

■ MICRO COLLET For (MGT3)



Model	Tapping Range		Tap Shank ød
	DIN371	ISO529	
NBC4S - 2.5AA	M1 – M1.8	M2	2.5
NBC4S - 2.8AA	M2 – M2.6	M2.2, M2.5	2.8
NBC4S - 3.1AA		M3	3.15
NBC4S - 3.5AA	M3		3.5

Other products with cylindrical shank

ACCESSORIES

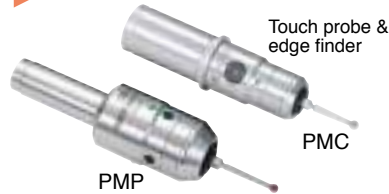


G 21

CLEAN TEC

Full automation of swarf and coolant removal by means of wind pressure.

MASURING TOOLS



POINT MASTER **H 1 - H 3**

Touch sensors provided with high precision stroke and interchangeable stylus for measuring different applications.



H 3

POINT CENTER

Precise detection of workpiece position in X & Y axes.



H 5

ACCU CENTER

Simple and precise edge finder offering repeatability within 3µm.

CUTTING TOOLS



I 2 & I 13

FULLCUT MILL

Shoulder and slot milling cutter with both high radial and axial rake angle.



C-CUTTER MINI **I 25**

Ultra High Feed Rate!
Increases the feed rate up to 400% using 4 inserts!



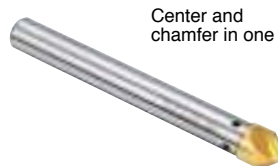
C-CUTTER **I 31**

Reduced number of tool holders and machining time by wide chamfering range.



R-CUTTER **I 33**

Automated R-chamfering. Front & back chamfering are available!



CENTER BOY **I 36**

Accurate centering and chamfering can be obtained in a single operation !!



BF-CUTTER **I 35**

Selected spot facing diameters suitable for cap screws.

MILLTURN TOOLING

BBT(BIG-PLUS) SERIES

TURNING TOOLS E1 - E10

SELECTION GUIDE E3

HSK-T SERIES

TURNING TOOLSE11 - E18

SELECTION GUIDE E3

BIG CAPTO SERIES

TURNING TOOLSE19 - E29

SELECTION GUIDE E3

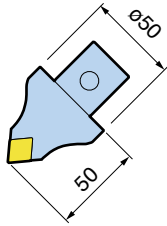
ROTATION TOOLSE30 - E53

The trademark CAPTO is licensed
from Sandvik Coromant



E

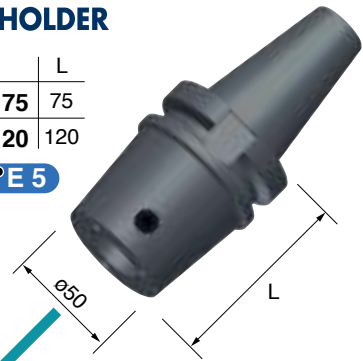
45°



S50
TYPE S BASIC HOLDER

	L
BBT40M-S50- 75	75
BBT50M-S50-120	120

E 5



TYPE S CARTRIDGE **E 6**

No.1

S50-DCLNN-00050-12

No.2

S50-DTJNR-00050-16
-DTJNL-00050-16
S50-DTJNR-00050-22
-DTJNL-00050-22

No.3

S50-DDHNN-00050-15

No.4

S50-DDJNR-00050-15
-DDJNL-00050-15

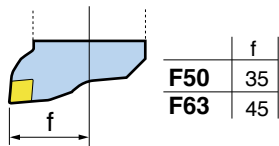
No.5

S50-SVQBN-00050-16

E 6 For SELECTION GUIDE **E 3**

※ In case of DN1506 insert (thickness of 6.35mm), please replace the standard Carbide Shim by DNS1506 (option).

90°



F50 / F63
TYPE F BASIC HOLDER

	L	øD
BBT40M-F50-	75	75
	-105	105
BBT50M-F63-	70	70
	-130	130

E 7



TYPE F CARTRIDGE **E 7**

No.10

F50-DCLNR-35035-12(16)
-DCLNL-35035-12(16)
F63-DCLNR-45035-12(16)
-DCLNL-45035-12(16)
F63-PCLNR-45045-19
-PCLNL-45045-19

No.12

F50-DTJNR-35035-16
-DTJNL-35035-16
F63-DTJNR-45035-16(22)
-DTJNL-45035-16(22)

No.13

F50-DDJNR-35035-15
-DDJNL-35035-15
F63-DDJNR-45035-15
-DDJNL-45035-15

No.14

F63-DDHNR-45040-15
-DDHNL-45040-15

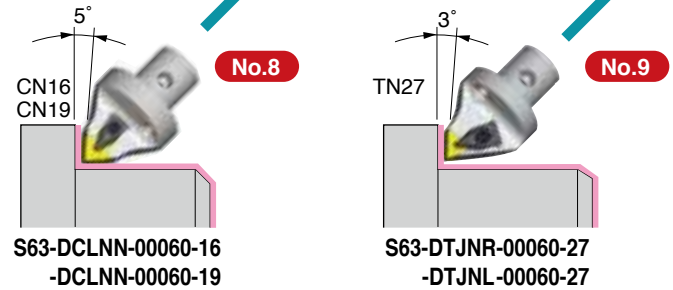
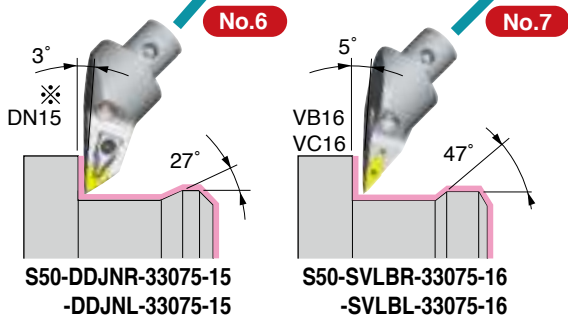
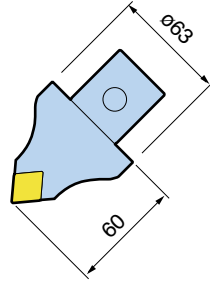
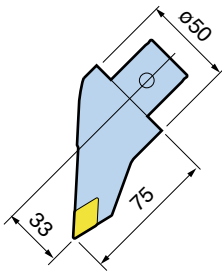
E 7 For SELECTION GUIDE **E 3**

※ In case of DN1506 insert (thickness of 6.35mm), please replace the standard Carbide Shim by DNS1506 (option).

S63
TYPE S BASIC HOLDER

	L
BBT40M-S63- 65	65
BBT50M-S63-110	110

E 5



S50-DDJNR-33075-15
-DDJNL-33075-15

S50-SVLBR-33075-16
-SVLBL-33075-16

S63-DCLNN-00060-16
-DCLNN-00060-19

S63-DTJNR-00060-27
-DTJNL-00060-27

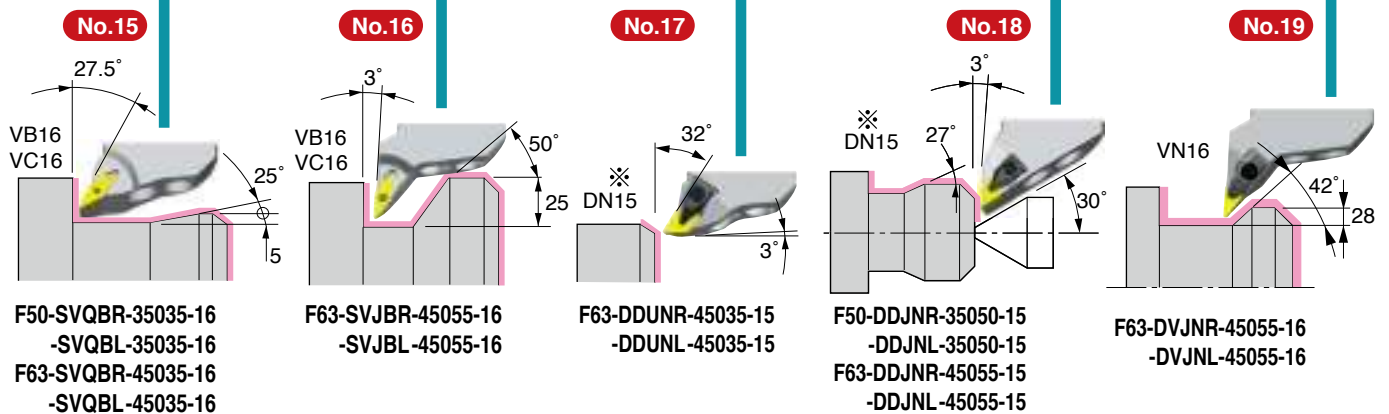
BORING BAR HOLDER

E 10



SQUARE TOOL HOLDER

E 9



F50-SVQBR-35035-16
-SVQBL-35035-16
F63-SVQBR-45035-16
-SVQBL-45035-16

F63-SVJBR-45055-16
-SVJBL-45055-16

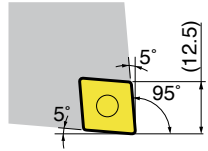
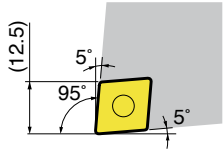
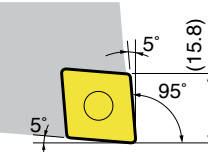
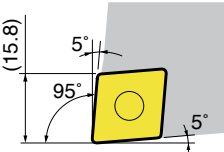
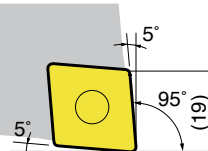
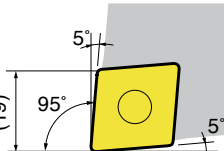
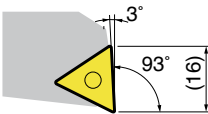
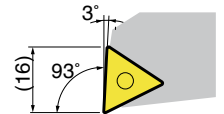
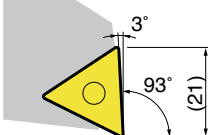
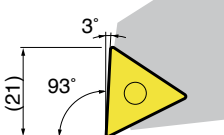
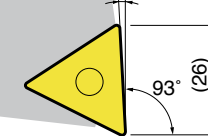
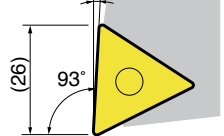
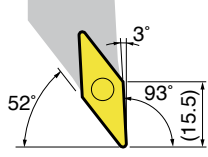
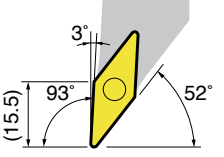
F63-DDUNR-45035-15
-DDUNL-45035-15

F50-DDJNR-35050-15
-DDJNL-35050-15
F63-DDJNR-45055-15
-DDJNL-45055-15

F63-DVJNR-45055-16
-DVJNL-45055-16

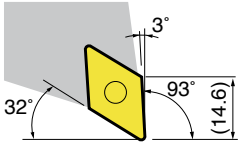
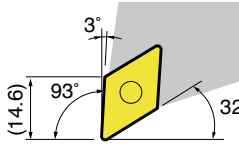
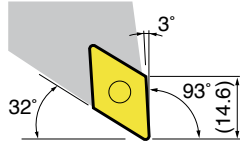
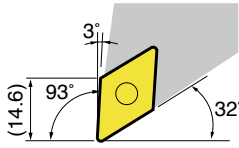
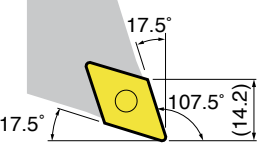
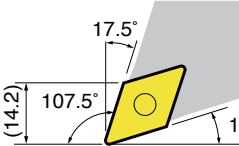
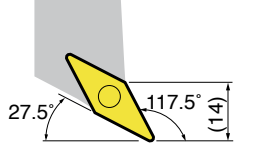
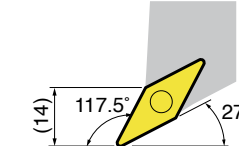
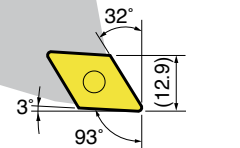
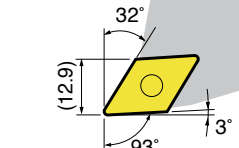
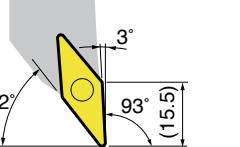
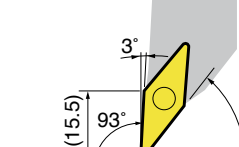
SELECTION GUIDE

※Cartridge No. in this table corresponds to the cartridge No. on page E1 and E2.

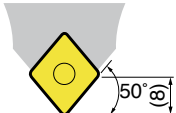
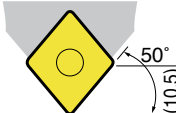
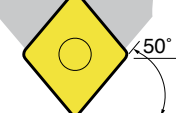
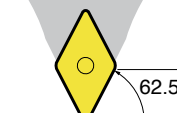
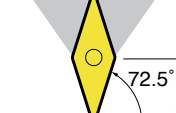
Entering Angle	Insert	Cartridge		Right hand	Left hand
		S type	F type		
95°	CN1204	No.1	No.10-1		
	CN1606	No.8-1	No.10-2		
	CN1906	No.8-2	No.10-3		
93°	TN1604	No.2-1	No.12-1		
	TN2204	No.2-2	No.12-2		
	TN2706	No.9			
	VB1604 VC1604	No.7	No.16		

E

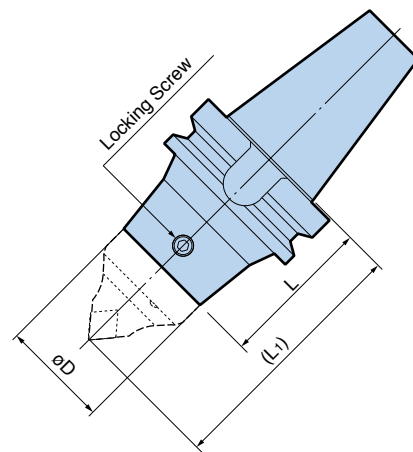
MILLTURN TOOLING

Entering Angle	Insert	Cartridge		Right hand	Left hand
		S type	F type		
93°	DN1504 (1506)	No.4	No.13		
	DN1504 (1506)	No.6	No.18		
107.5°	DN1504 (1506)	No.3	No.14		
117.5°	VB1604 VC1604	No.5	No.15		
93°	DN1504 (1506)		No.17		
	VN1604		No.19		

E
MILLTURN TOOLING

NEUTRAL TYPE				
Insert				
CN12	CN16	CN19	DN1504(1506)	VB1604 / VC1604
No.1	No.8-1	No.8-2	No.3	No.5
				

45° BASIC HOLDER Type S

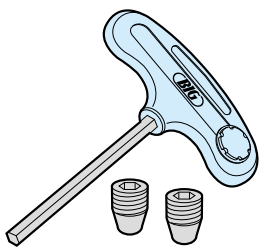


Type	Model	øD	L	(L1)	Locking Screw
S50	BBT40M-S50- 75	50	75	125	CK5S
S63	-S63- 65	63	65	125	CK6S
S50	BBT50M-S50-120	50	120	170	CK5S
S63	S63-110	63	110	170	CK6S

1. Basic holders include a locking screw.

■ LOCKING SCREW SET (option)

For type S basic holder

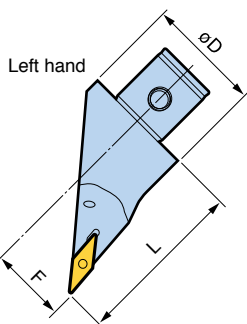
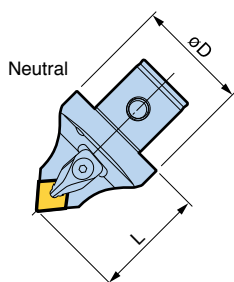


Type	Set Model	Screw (2p)	T-Wrench (1p)
S50	CK5S	M10 x P1.0	CK-T5
S63	CK6S	M12 x P1.0	CK-T6

E

MILLTURN TOOLING

45° CARTRIDGE Type S



Entering Angle	No.	Hand	Model	Insert	F	L	øD	Clamp Piece
95°	No.1	N	S50-DCLNN-00050-12	CN1204 Rhombic 80°	0	50	50	CP2
	No.8-1	N	S63-DCLNN-00060-16	CN1606 Rhombic 80°	0	60	63	CP3
	No.8-2		-00060-19	CN1906 Rhombic 80°				CP5
93°	No.2-1	R	S50-DTJNR-00050-16	TN1604 Triangle 60°	0	50	50	CP1
		L	-DTJNL-00050-16					
93°	No.2-2	R	S50-DTJNR-00050-22	TN2204 Triangle 60°	0	50	50	CP2
		L	-DTJNL-00050-22					
93°	No.9	R	S63-DTJNR-00060-27	TN2706 Triangle 60°	0	60	63	CP3
		L	-DTJNL-00060-27					
93°	No.4	R	S50-DDJNR-00050-15	DN1504*1 (DN1506) Rhombic 55°	0	50	50	CP2
		L	-DDJNL-00050-15					
	No.6	R	S50-DDJNR-33075-15		33	75		
		L	-DDJNL-33075-15					
107.5°	No.3	N	S50-DDHNN-00050-15	0	50			
95°	No.7	L	S50-SVLBR-33075-16	VB1604*2 VC1604 Rhombic 35°	33	75	50	M3.5*3
		R	-SVLBL-33075-16					
117.5°	No.5	N	S50-SVQBN-00050-16		0	50		

- Wrench is ordered separately.
- Inserts are not included. The standard ISO inserts are to be adapted.
- *1 Carbide Shim for 4.76mm thick DIN1504 insert is included as standard. In case of DN1506 insert (thickness of 6.35mm), please replace the standard Carbide Shim by DNS1506 (option).
- *2 Both VB1604 and VC1604 inserts are suitable.
- *3 M3.5 is screw-on type.

For SPARE PARTS E 29

Right Hand
Left Hand
Neutral

[Coding system for cartridge]

S50 - D C L N N - 00 050 - 12

- Cartridge Type and Size
- Clamping Method
- Insert Shape
- Entering Angle
- Relief Angle
- Hand
- Offset Value
- Length
- Insert Size

Clamping Method	
D	Double-Clamp
P	Lever lock
S	Screw-On

Insert Shape	
C	Rhombic 80°
T	Triangle 60°
D	Rhombic 55°
V	Rhombic 35°

Entering Angle	
J	93°
L	95°
H	107.5°
Q	117.5°

Relief Angle	
N	0° Negative
B	5° Positive
C	7° Positive

Hand	
R	Right Hand
L	Left Hand
N	Neutral

90° BASIC HOLDER Type F

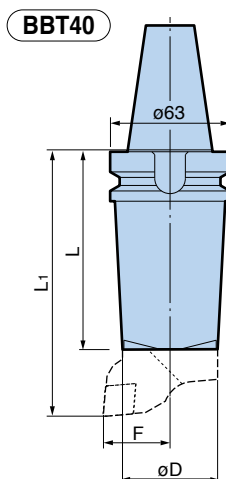


Fig. 1

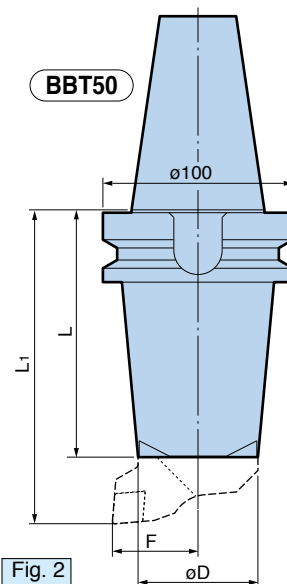
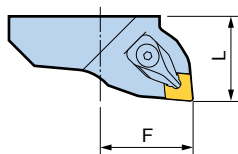


Fig. 2

Type	Model	Fig.	øD	L	L ₁	F
F50	BBT40M-F50- 75	1	50	75	110	35
	-105			105	140	
F63	BBT50M-F63- 70	2	63	70	105	45
	-130			130	165	

1. Basic holders include M10x22L and M10x25L screws for clamping cartridges.
2. Wrench is ordered separately.

90° CARTRIDGE Type F50



Right Hand

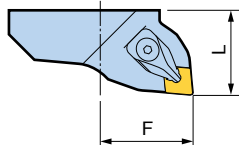
Right Hand
Left Hand

Entering Angle	No.	Hand	Model	Insert	F	L	Clamp Piece
95°	No.10-1	R	F50-DCLNR-35035-12	CN1204 Rhombic 80°	35	35	CP2
		L	-DCLNL-35035-12				
	No.10-2	R	F50-DCLNR-35035-16	CN1606 Rhombic 80°	35	35	CP3
		L	-DCLNL-35035-16				
93°	No.12-1	R	F50-DTJNR-35035-16	TN1604 Triangle 60°	35	35	CP1
		L	-DTJNL-35035-16				
95°	No.13	R	F50-DDJNR-35035-15	DN1504*1 (DN1506) Rhombic 55°	35	35	CP2
		L	-DDJNL-35035-15				
	No.18	R	F50-DDJNR-35050-15		35	50	CP2
		L	-DDJNL-35050-15				
117.5°	No.15	R	F50-SVQBR-35035-16	VB1604*2 Rhombic 35°	35	35	M3.5*3
		L	-SVQBL-35035-16				

1. Wrenches are not included in the cartridges. Please purchase separately.
2. Inserts are not included. The standard ISO inserts are to be adapted.
3. *1 Carbide Shim for 4.76mm thick DIN1504 insert is included as standard.
In case of DN1506 insert (thickness of 6.35mm), please replace the standard Carbide Shim by DNS1506 (option).
4. *2 Both VB1604 and VC1604 inserts are suitable.
5. *3 M3.5 is screw-on type.

For SPARE PARTS E 29

90° CARTRIDGE Type F63



Right Hand

Right Hand
 Left Hand

Entering Angle	No.	Hand	Model	Insert	F	L	Clamp Piece
95°	No.10-1	R	F63-DCLNR-45035-12	CN1204 Rhombic 80°	45	35	CP2
		L	-DCLNL-45035-12				
	No.10-2	R	F63-DCLNR-45035-16	CN1606 Rhombic 80°	45	35	CP3
		L	-DCLNL-45035-16				
	No.10-3	R	F63-PCLNR-45045-19	CN1906 Rhombic 80°	45	45	LEVER LOCK
		L	-PCLNL-45045-19				
93°	No.12-1	R	F63-DTJNR-45035-16	TN1604 Triangle 60°	45	35	CP1
		L	-DTJNL-45035-16				
	No.12-2	R	F63-DTJNR-45035-22	TN2204 Triangle 60°	45	35	CP2
		L	-DTJNL-45035-22				
93°	No.13	R	F63-DDJNR-45035-15	DN1504*1 (DN1506) Rhombic 55°	45	35	CP2
		L	-DDJNL-45035-15				
	No.18	R	F63-DDJNR-45055-15		45	55	CP2
		L	-DDJNL-45055-15				
107.5°	No.14	R	F63-DDHNR-45040-15	45	40	CP2	
		L	-DDHNL-45040-15				
93°	No.17	R	F63-DDUNR-45035-15	45	35	CP2	
		L	-DDUNL-45035-15				
117.5°	No.15	R	F63-SVQBR-45035-16	VB1604 Rhombic 35°	45	35	M3.5*2
		L	-SVQBL-45035-16				
93°	No.16	R	F63-SVJBR-45055-16	45	55	M3.5*2	
		L	-SVJBL-45055-16				
93°	No.19	R	F63-DVJNR-45055-16	VN1604 Rhombic 35°	45	55	CP4
		L	-DVJNL-45055-16				

- Wrench is ordered separately.
- Inserts are not included. The standard ISO inserts are to be adapted.
- *1 Carbide Shim for 4.76mm thick DIN1504 insert is included as standard.
In case of DN1506 insert (thickness of 6.35mm), please replace the standard Carbide Shim by DNS1506 (option).
- *2 M3.5 is screw-on type.

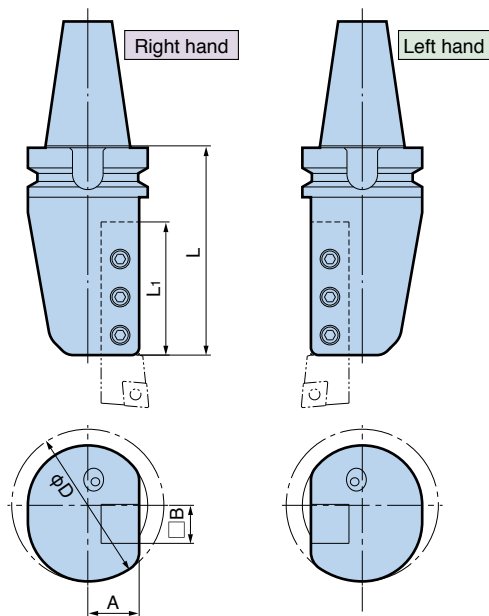
For SPARE PARTS E 29

[Coding system for cartridge]

F63 - DCLNR - 45035 - 12		Clamping Method		Insert Shape		Entering Angle	
F	63	D	Double-Clamp	C	Rhombic 80°	J	93°
D	C	P	Lever lock	T	Triangle 60°	L	95°
L	N	S	Screw-On	D	Rhombic 55°	H	107.5°
N	R			V	Rhombic 35°	Q	117.5°
						U	93°
		Relief Angle		Hand			
		N	0° Negative	R	Right Hand		
		B	5° Positive	L	Left Hand		
		C	7° Positive	N	Neutral		

SQUARE TOOL HOLDER

180 Type



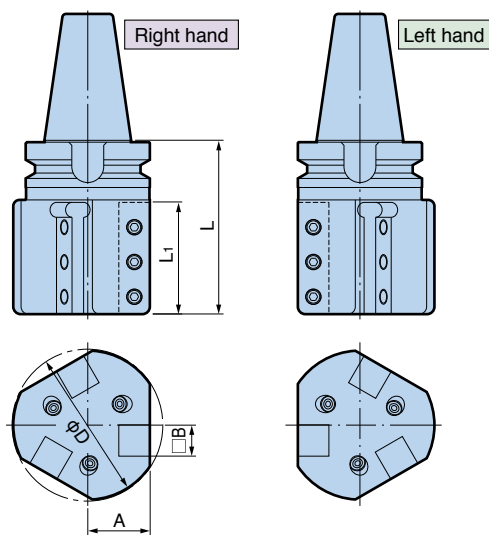
Right hand Left hand

Model	Hand	□B	L	L ₁	A	øD
BBT40M-180-BH20R-110	R	20	110	70	27	80
-BH20L-110	L					
-180-BH25R-130	R	25	130	90	31.5	90
-BH25L-130	L					
BBT50M-180-BH25R-140	R	25	140	90	50	120
-BH25L-140	L					

E

MILLTURN TOOLING

180 Multi Type



By assembling 3 square holders, ATC time can be reduced.

Right hand Left hand

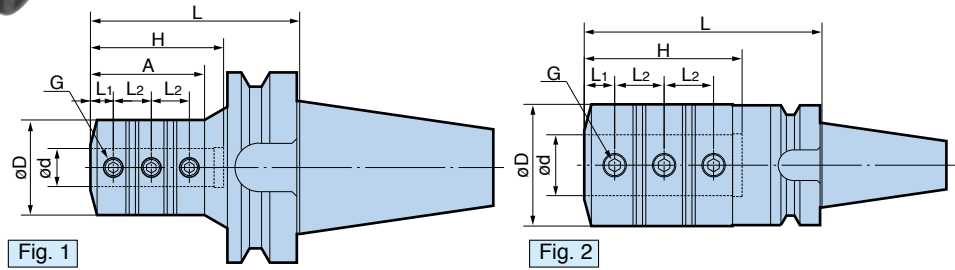
Model	Hand	□B	L	L ₁	A	øD
BBT40M-180-3BH20R-110	R	20	110	70	35	90
-3BH20L-110	L					
BBT50M-180-3BH25R-140	R	25	140	90	50	120
-3BH25L-140	L					

Caution - 60 degree indexing is required to the machine tool spindle.

BORING BAR HOLDER

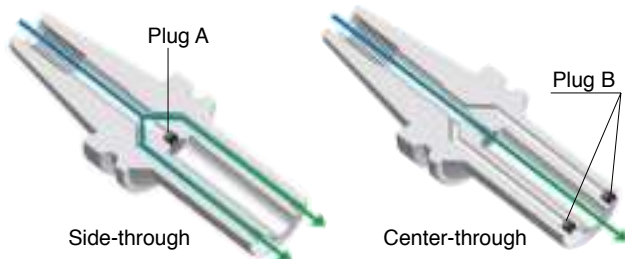
Coolant-through hole
Clamping Range : $\varnothing 6 - \varnothing 50$

Application: boring and thread cutting



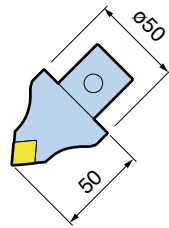
Model	Fig.	$\varnothing d$	$\varnothing D$	L	L ₁	L ₂	H	A	G	Plug A	Plug B
BBT40M-BSL 8- 75	1	8	25	75	6	10	40	40	M6 P1.0	M6x5L	M4x4L
-BSL10- 80		10	29	80	8	12	50	45	M8 P1.0	M6x5L	M5x5L
-BSL12- 90		12	34	90	8	16	55	53	M8 P1.0	M6x5L	M6x5L
-BSL16-100		16	40	100	10	21	68	65	M10 P1.25	M6x5L	M6x5L
-BSL20-100		20	50	100	12	20	70	67	M10 P1.25	M6x5L	M6x5L
-BSL25-110		25	55	110	14	23	74	83	M12 P1.5	M8x8L	M6x5L
-BSL32-125	2	32	64	125	16	26	83	-	M12 P1.5	M8x8L	M6x5L
-BSL40-150		40	80	150	18	32	98	-	M16 P1.5	M10x10L	M6x5L
BBT50M-BSL 6- 80	1	6	23	80	5	8	30	32	M5 P0.8	M5x5L	M4x4L
-BSL 8- 85		8	25	85	6	10	40	38	M6 P1.0	M6x5L	M4x4L
-BSL10- 90		10	29	90	8	12	50	43	M8 P1.0	M6x5L	M5x5L
-BSL12-100		12	34	100	8	16	55	53	M8 P1.0	M6x5L	M6x5L
-BSL16-105		16	40	105	10	21	68	61	M10 P1.25	M6x5L	M6x5L
-BSL20-110		20	50	110	12	20	70	60	M10 P1.25	M6x5L	M6x5L
-BSL25-120		25	55	120	14	23	74	70	M12 P1.5	M8x8L	M6x5L
-BSL32-125		32	64	125	16	26	83	80	M12 P1.5	M8x8L	M6x5L
-BSL40-135		40	80	135	18	32	98	91	M16 P1.5	M10x10L	M6x5L
-BSL50-145		50	90	145	18	36	115	102	M16 P1.5	M10x10L	M6x5L

Interchangeable between center-through and side-through coolant supply by using plugs.



Adjustment for either right hand or left hand is also possible.

45°



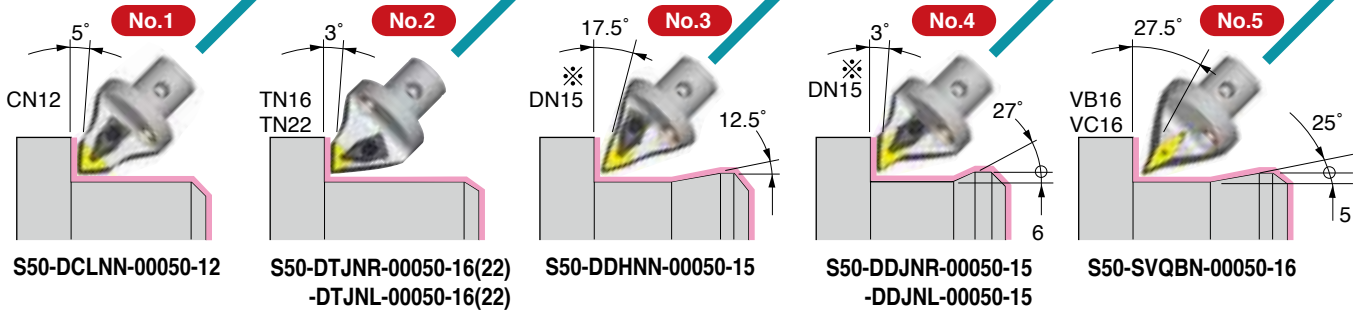
S50
TYPE S BASIC HOLDER

HSK-T 63-S50
HSK-T100-S50

E 13



TYPE S CARTRIDGE **E 14**



S50-DCLNN-00050-12

S50-DTJNR-00050-16(22)
-DTJNL-00050-16(22)

S50-DDHNN-00050-15

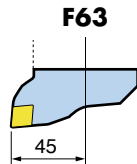
S50-DDJNR-00050-15
-DDJNL-00050-15

S50-SVQBN-00050-16

E 3 For SELECTION GUIDE

※ In case of DN1506 insert (thickness of 6.35mm), please replace the standard Carbide Shim by DNS1506 (option).

90°



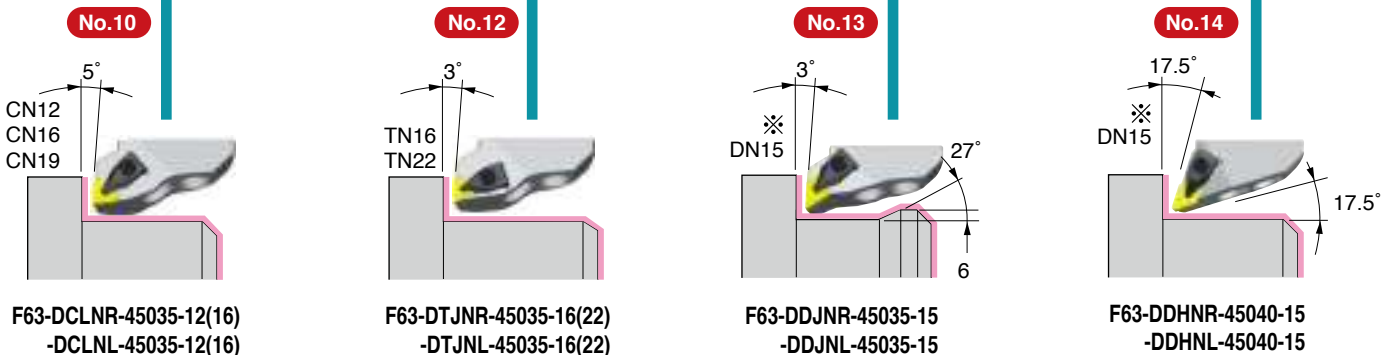
F63
TYPE F BASIC HOLDER

HSK-T 63-F63
HSK-T100-F63

E 15



TYPE F CARTRIDGE **E 16**



F63-DCLNR-45035-12(16)
-DCLNL-45035-12(16)

F63-DTJNR-45035-16(22)
-DTJNL-45035-16(22)

F63-DDJNR-45035-15
-DDJNL-45035-15

F63-DDHNR-45040-15
-DDHNL-45040-15

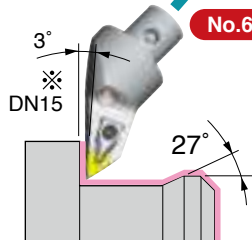
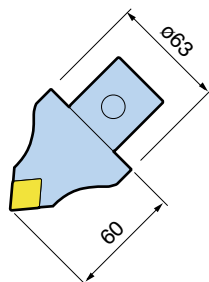
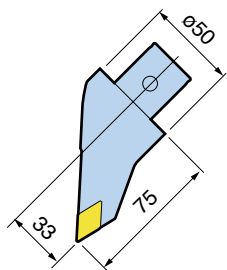
E 3 For SELECTION GUIDE

※ In case of DN1506 insert (thickness of 6.35mm), please replace the standard Carbide Shim by DNS1506 (option).

S63
TYPE S BASIC HOLDER

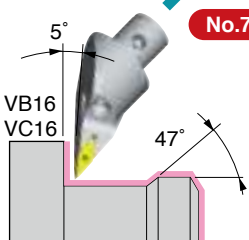
HSK-T 63-S63
HSK-T100-S63

E 13



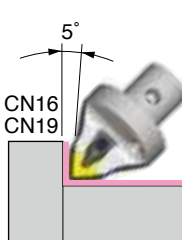
No.6

S50-DDJNR-33075-15
-DDJNL-33075-15



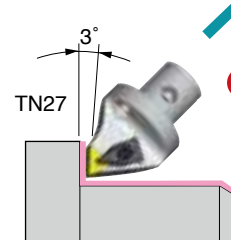
No.7

S50-SVLBR-33075-16
-SVLBL-33075-16



No.8

S63-DCLNN-00060-16
-DCLNN-00060-19



No.9

S63-DTJNR-00060-27
-DTJNL-00060-27

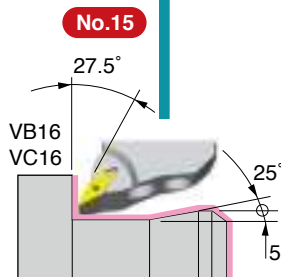
BORING BAR HOLDER

E 18



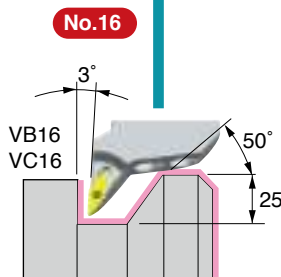
SQUARE TOOL HOLDER

E 17



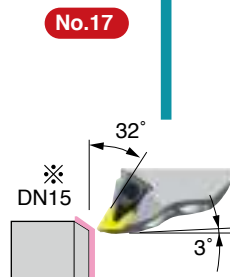
No.15

F63-SVQBR-45035-16
-SVQBL-45035-16



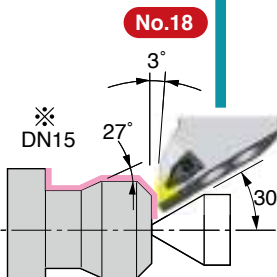
No.16

F63-SVJBR-45055-16
-SVJBL-45055-16



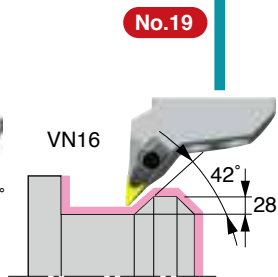
No.17

F63-DDUNR-45035-15
-DDUNL-45035-15



No.18

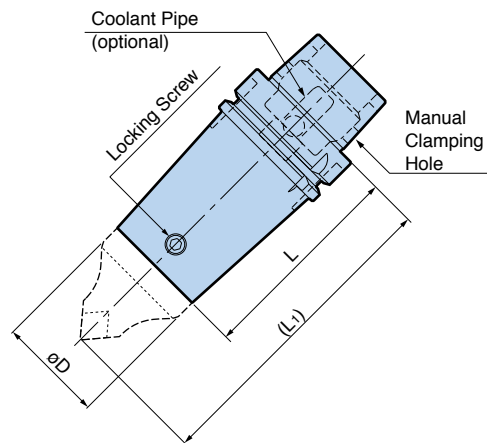
F63-DDJNR-45055-15
-DDJNL-45055-15



No.19

F63-DVJNR-45055-16
-DVJNL-45055-16

45° BASIC HOLDER Type S



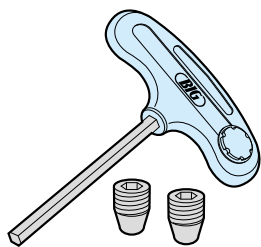
Type	Model	øD	L	(L1)	Locking Screw
S50	HSK- T63-S50- 60	50	60	110	CK5S
	- 75		75	125	
	-100		100	150	
S63	-S63- 70	63	70	130	CK6S
	- 90		90	150	
S50	HSK-T100-S50-115	50	115	165	CK5S
S63	-S63-105	63	105	165	CK6S

1. Basic holders include a locking screw.

For COOLANT PIPE C 51

■ LOCKING SCREW SET (option)

For type S basic holder

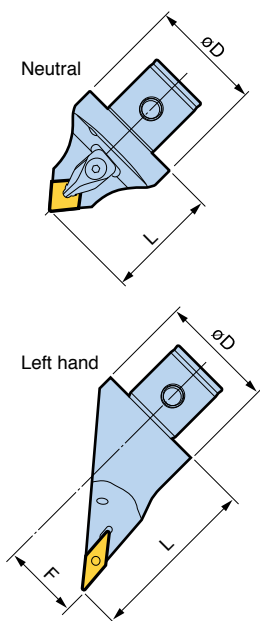


Type	Set Model	Screw (2p)	T-Wrench (1p)
S50	CK5S	M10 x P1.0	CK-T5
S63	CK6S	M12 x P1.0	CK-T6

E

MILLTURN TOOLING

45° CARTRIDGE Type S



Entering Angle	No.	Hand	Model	Insert	F	L	øD	Clamp Piece
95°	No.1	N	S50-DCLNN-00050-12	CN1204 Rhombic 80°	0	50	50	CP2
	No.8-1	N	S63-DCLNN-00060-16	CN1606 Rhombic 80°	0	60	63	CP3
	No.8-2		-00060-19	CN1906 Rhombic 80°				CP5
93°	No.2-1	R	S50-DTJNR-00050-16	TN1604 Triangle 60°	0	50	50	CP1
		L	-DTJNL-00050-16					
93°	No.2-2	R	S50-DTJNR-00050-22	TN2204 Triangle 60°	0	50	50	CP2
		L	-DTJNL-00050-22					
93°	No.9	R	S63-DTJNR-00060-27	TN2706 Triangle 60°	0	60	63	CP3
		L	-DTJNL-00060-27					
93°	No.4	R	S50-DDJNR-00050-15	DN1504*1 (DN1506) Rhombic 55°	0	50	50	CP2
		L	-DDJNL-00050-15					
	No.6	R	S50-DDJNR-33075-15		33	75		
		L	-DDJNL-33075-15					
107.5°	No.3	N	S50-DDHNN-00050-15	0	50			
95°	No.7	L	S50-SVLBR-33075-16	VB1604*2 VC1604 Rhombic 35°	33	75	50	M3.5*3
		R	-SVLBL-33075-16					
117.5°	No.5	N	S50-SVQBN-00050-16	0	50			

- Wrench is ordered separately.
- Inserts are not included. The standard ISO inserts are to be adapted.
- *1 Carbide Shim for 4.76mm thick DIN1504 insert is included as standard. In case of DN1506 insert (thickness of 6.35mm), please replace the standard Carbide Shim by DNS1506 (option).
- *2 Both VB1604 and VC1604 inserts are suitable.
- *3 M3.5 is screw-on type.

For SPARE PARTS E 29

 Right Hand
 Left Hand
 Neutral

[Coding system for cartridge]

S50 - D C L N N - 00 050 - 12

- Cartridge Type and Size
- Clamping Method
- Insert Shape
- Entering Angle
- Relief Angle
- Hand
- Offset Value
- Length
- Insert Size

Clamping Method	
D	Double-Clamp
P	Lever lock
S	Screw-On

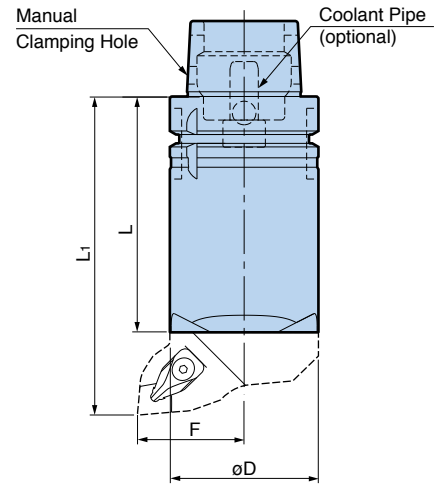
Insert Shape	
C	Rhombic 80°
T	Triangle 60°
D	Rhombic 55°
V	Rhombic 35°

Entering Angle	
J	93°
L	95°
H	107.5°
Q	117.5°

Relief Angle	
N	0° Negative
B	5° Positive
C	7° Positive

Hand	
R	Right Hand
L	Left Hand
N	Neutral

90° BASIC HOLDER Type F



Type	Model	øD	L	L1	F
F63	HSK-T63-F63- 50	63	50	85	45
	- 75		75	110	
	-100		100	135	
	-130		130	165	
	-170		170	205	
F63	HSK-T100-F63-100	63	100	135	45
	-150		150	185	

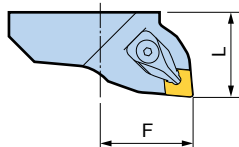
1. Basic holders include M10x22L and M10x25L screws for clamping cartridges.
2. Wrench is ordered separately.
3. Coolant pipe is ordered separately.

For COOLANT PIPE **C 51**

E

MILLTURN TOOLING

90° CARTRIDGE Type F63



Right Hand

Right Hand
 Left Hand

Entering Angle	No.	Hand	Model	Insert	F	L	Clamp Piece
95°	No.10-1	R	F63-DCLNR-45035-12	CN1204 Rhombic 80°	45	35	CP2
		L	-DCLNL-45035-12				
	No.10-2	R	F63-DCLNR-45035-16	CN1606 Rhombic 80°	45	35	CP3
		L	-DCLNL-45035-16				
	No.10-3	R	F63-PCLNR-45045-19	CN1906 Rhombic 80°	45	45	LEVER LOCK
		L	-PCLNL-45045-19				
93°	No.12-1	R	F63-DTJNR-45035-16	TN1604 Triangle 60°	45	35	CP1
		L	-DTJNL-45035-16				
	No.12-2	R	F63-DTJNR-45035-22	TN2204 Triangle 60°	45	35	CP2
		L	-DTJNL-45035-22				
93°	No.13	R	F63-DDJNR-45035-15	DN1504*1 (DN1506) Rhombic 55°	45	35	CP2
		L	-DDJNL-45035-15				
	No.18	R	F63-DDJNR-45055-15		45	55	CP2
		L	-DDJNL-45055-15				
107.5°	No.14	R	F63-DDHNR-45040-15	45	40	CP2	
		L	-DDHNL-45040-15				
93°	No.17	R	F63-DDUNR-45035-15	45	35	CP2	
		L	-DDUNL-45035-15				
117.5°	No.15	R	F63-SVQBR-45035-16	VB1604 Rhombic 35°	45	35	M3.5*2
		L	-SVQBL-45035-16				
93°	No.16	R	F63-SVJBR-45055-16	45	55	M3.5*2	
		L	-SVJBL-45055-16				
93°	No.19	R	F63-DVJNR-45055-16	VN1604 Rhombic 35°	45	55	CP4
		L	-DVJNL-45055-16				

- Wrench is ordered separately.
- Inserts are not included. The standard ISO inserts are to be adapted.
- *1 Carbide Shim for 4.76mm thick DIN1504 insert is included as standard.
In case of DN1506 insert (thickness of 6.35mm), please replace the standard Carbide Shim by DNS1506 (option).
- *2 M3.5 is screw-on type.

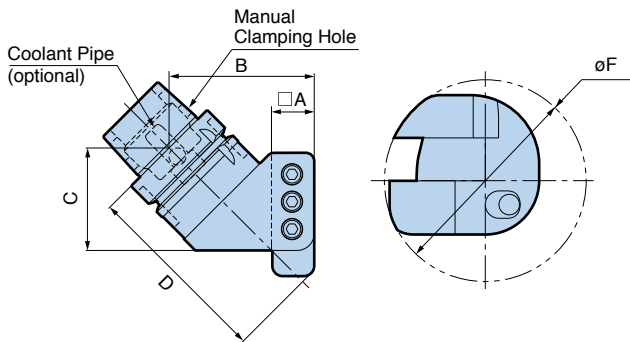
For SPARE PARTS **E 29**

[Coding system for cartridge]

F63 - D C L N R - 45 035 - 12	Clamping Method		Insert Shape		Entering Angle	
• Cartridge Type and Size	D	Double-Clamp	C	Rhombic 80°	J	93°
• Clamping Method	P	Lever lock	T	Triangle 60°	L	95°
• Insert Shape	S	Screw-On	D	Rhombic 55°	H	107.5°
• Entering Angle			V	Rhombic 35°	Q	117.5°
• Hand					U	93°
• Relief Angle	Relief Angle		Hand			
• Length	N	0° Negative	R	Right Hand		
• Offset Value	B	5° Positive	L	Left Hand		
• Insert Size	C	7° Positive	N	Neutral		

SQUARE TOOL HOLDER

45 Type

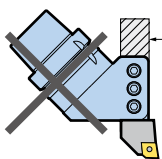


Model	Hand	□A	B	C	D	øF
	HSK-T63-45-BH25R-110	R	25	85	60	110
-BH25L-110	L					

1. Coolant pipe is ordered separately.

For COOLANT PIPE C 51

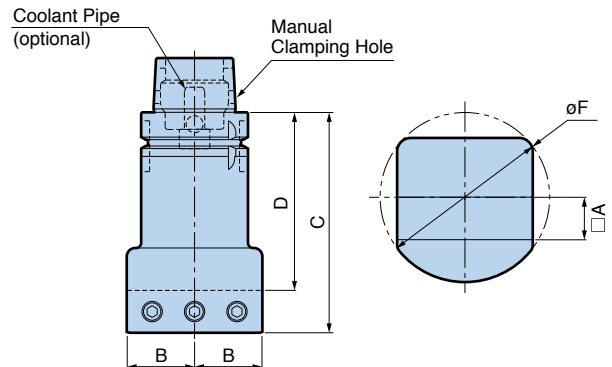
Caution



Projection prohibited

The excess length of a turning tool must be cut off to avoid interference with an ATC arm.

90 Type

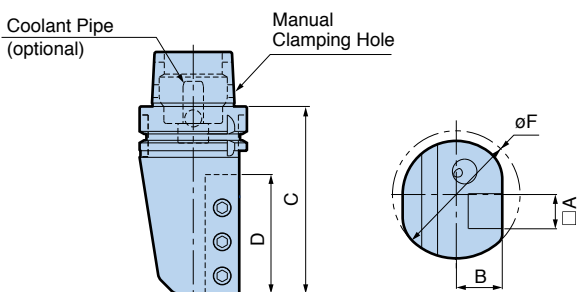


Model	Hand	□A	B	C	D	øF				
	HSK-T 63-90-BH20N- 80	N	20	32	80	60	80			
-BH25N-100	40							100	75	100
-BH25N-130								130	105	
HSK-T100-90-BH25N-150	N	25	55	150	125	128				

1. Coolant pipe is ordered separately.

For COOLANT PIPE C 51

180 Type



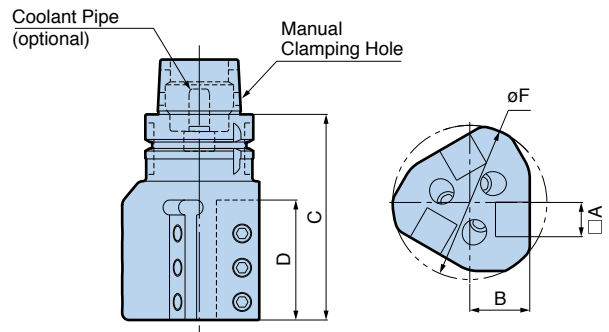
Model	Hand	□A	B	C	D	øF
	HSK-T 63-180-BH20R-110	R	20	27	110	70
-BH20L-110	L					
HSK-T 63-180-BH25R-115	R	25	29.5	115	80	90
-BH25L-115	L					
HSK-T100-180-BH25R-140	R	25	50	140	90	120
-BH25L-140	L					
-BH25R-180	R	25	50	180	115	120
-BH25L-180	L					

1. Coolant pipe is ordered separately.

For COOLANT PIPE C 51

180 Multi Type

By assembling 3 square holders, ATC time can be reduced.



Model	Hand	□A	B	C	D	øF
	HSK-T63-180-3BH20R-120	R	20	35	120	70
-3BH20L-120	L					
HSK-T63-180-3BH25R-120	R	25	45	120	80	110
-3BH25L-120	L					

1. Coolant pipe is ordered separately.

For COOLANT PIPE C 51

Caution

60 degree indexing is required to the machine tool spindle.

BORING BAR HOLDER

Coolant-through hole

Clamping Range : $\phi 6 - \phi 40$

Application: boring and thread cutting

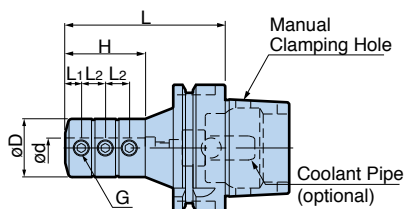


Fig. 1

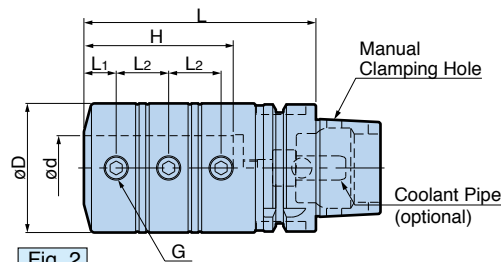


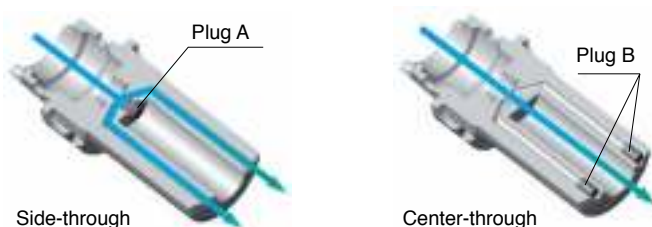
Fig. 2

Model	Fig.	ϕd	ϕD	L	L1	L2	H	G
HSK-T 63-BSL 6- 70	1	6	23	70	5	8	24	M 5 P0.8
-BSL 8- 75		8	25	75	6	10	32	M 6 P1.0
-BSL10- 80		10	29	80	8	12	40	M 8 P1.0
-BSL12- 85		12	34	85	8	16	45	M 8 P1.0
-BSL16-100		16	40	100	10	21	60	M10 P1.25
-BSL20-100	2	20	50	100	12	20	60	M10 P1.25
-BSL25-105		25	55	105	14	23	67	M12 P1.5
-BSL32-115		32	64	115	16	26	74	M12 P1.5
-BSL40-135		40	80	135	18	32	91	M16 P1.5
HSK-T100-BSL16-105	1	16	40	105	10	21	60	M10 P1.25
-BSL20-110		20	50	110	12	20	60	M10 P1.25
-BSL25-120		25	55	120	14	23	67	M12 P1.5
-BSL32-125		32	64	125	16	26	74	M12 P1.5
-BSL40-135		40	80	135	18	32	90	M16 P1.5

1. Coolant pipe is ordered separately.

For COOLANT PIPE C 51

Interchangeable between center-through and side-through coolant supply by using plugs.

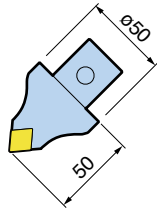


Adjustment for either right hand or left hand is also possible.

Chuck Model	Plug A	Plug B
BSL 6	M5 P0.8	M4 P0.7
8	M6 P1.0	
10		M5 P0.8
12		
16		M6 P1.0
20	* M6 P1.0	
25	* M8 P1.25	
32		
40		

Both plugs are included as standard.
*Button-head bolt.

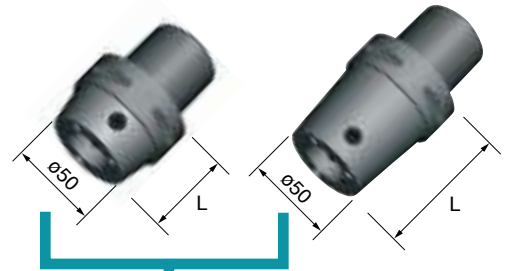
45°



S50
TYPE S BASIC HOLDER

- | | L |
|---------|-----|
| C5-S50- | 40 |
| - | 55 |
| - | 75 |
| - | 100 |
| C6-S50- | 45 |
| - | 75 |
| - | 100 |
| C8-S50- | 100 |
| - | 135 |

E 21



TYPE S CARTRIDGE **E 22**

<p>No.1</p> <p>S50-DCLNN-00050-12</p>	<p>No.2</p> <p>S50-DTJNR-00050-16 -DTJNL-00050-16 S50-DTJNR-00050-22 -DTJNL-00050-22</p>	<p>No.3</p> <p>S50-DDHNN-00050-15</p>	<p>No.4</p> <p>S50-DDJNR-00050-15 -DDJNL-00050-15</p>	<p>No.5</p> <p>S50-SVQBN-00050-16</p>
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E 22

For SELECTION GUIDE E 3

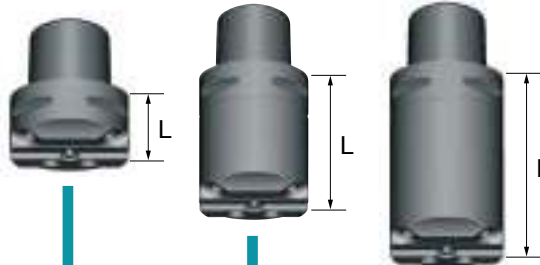
※ In case of DN1506 insert (thickness of 6.35mm), please replace the standard Carbide Shim by DNS1506 (option).

90°

F50
TYPE F BASIC HOLDER

- | | L |
|---------|-----|
| C5-F50- | 25 |
| - | 50 |
| - | 85 |
| - | 125 |

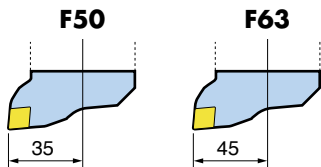
E 23



F63
TYPE F BASIC HOLDER

- | | L |
|---------|-----|
| C6-F63- | 30 |
| - | 75 |
| - | 100 |
| - | 130 |
| - | 170 |
| C8-F63- | 45 |
| - | 100 |
| - | 130 |
| - | 170 |

E 23



TYPE F CARTRIDGE **E 23**

<p>No.10</p> <p>F50-DCLNR-35035-12(16) -DCLNL-35035-12(16) F63-DCLNR-45035-12(16) -DCLNL-45035-12(16) F63-PCLNR-45045-19 -PCLNL-45045-19</p>	<p>No.12</p> <p>F50-DTJNR-35035-16 -DTJNL-35035-16 F63-DTJNR-45035-16(22) -DTJNL-45035-16(22)</p>	<p>No.13</p> <p>F50-DDJNR-35035-15 -DDJNL-35035-15 F63-DDJNR-45035-15 -DDJNL-45035-15</p>	<p>No.14</p> <p>F63-DDHNR-45040-15 -DDHNL-45040-15</p>
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E 23

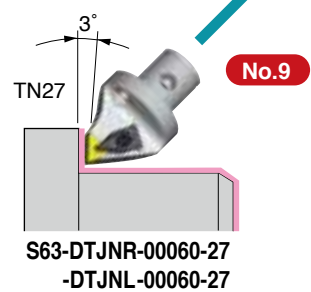
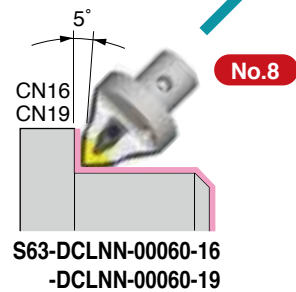
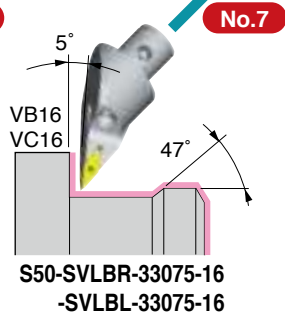
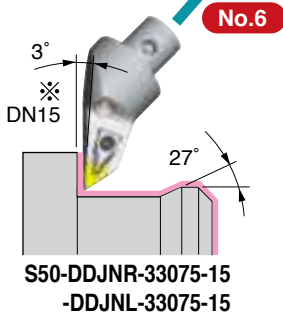
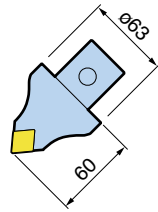
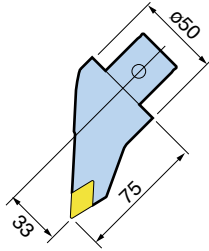
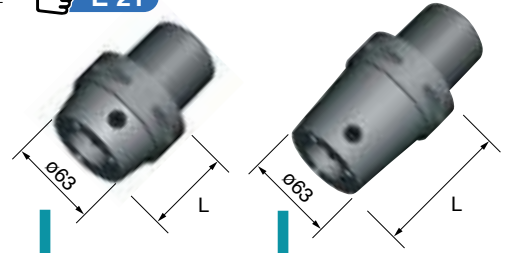
For SELECTION GUIDE E 3

※ In case of DN1506 insert (thickness of 6.35mm), please replace the standard Carbide Shim by DNS1506 (option).

S63
TYPE S BASIC HOLDER

	L
C6-S63-	50
-	90
C8-S63-	90
-	125

E 21



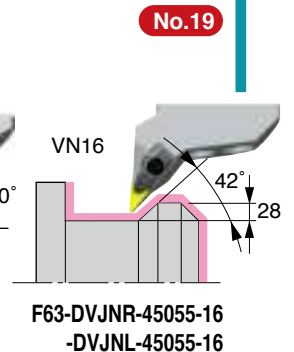
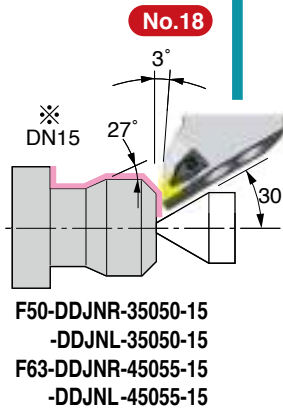
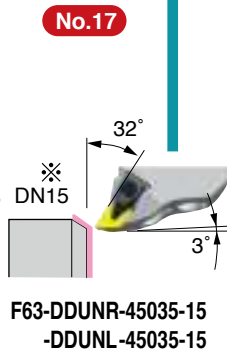
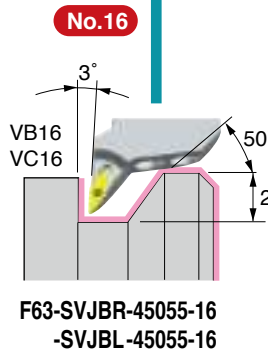
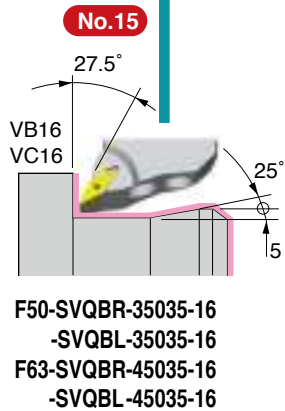
SQUARE TOOL HOLDER **E 25**



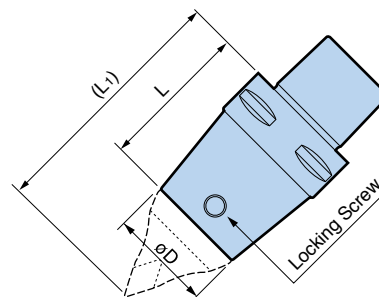
BORING BAR HOLDER

E 27

For Shank



45° BASIC HOLDER Type S

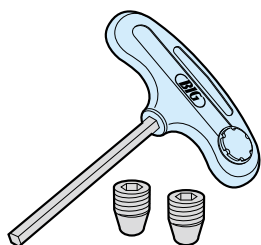


Type	Model	øD	L	(L ₁)	Locking Screw
S50	C5-S50 -40	50	40	90	CK5S
	-55		55	105	
	-75		75	125	
	-100		100	150	
S50	C6-S50 -45	50	45	95	CK5S
	-75		75	125	
	-100		100	150	
S63	-S63 -50	63	50	110	CK6S
	-90		90	150	
S50	C8-S50-100	50	100	150	CK5S
	-135		135	185	
S63	-S63 -90	63	90	150	CK6S
	-125		125	185	

1. Basic holders include a locking screw.

■ LOCKING SCREW SET (option)

For type S basic holder

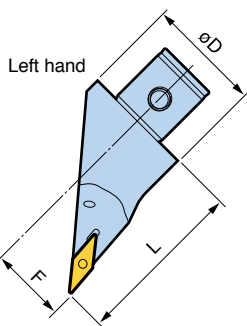
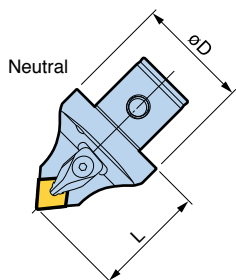


Type	Set Model	Screw (2p)	T-Wrench (1p)
S50	CK5S	M10 x P1.0	CK-T5
S63	CK6S	M12 x P1.0	CK-T6

E

MILLTURN TOOLING

45° CARTRIDGE Type S



Entering Angle	No.	Hand	Model	Insert	F	L	øD	Clamp Piece
95°	No.1	N	S50-DCLNN-00050-12	CN1204 Rhombic 80°	0	50	50	CP2
	No.8-1	N	S63-DCLNN-00060-16	CN1606 Rhombic 80°	0	60	63	CP3
	No.8-2		-00060-19	CN1906 Rhombic 80°				CP5
93°	No.2-1	R	S50-DTJNR-00050-16	TN1604 Triangle 60°	0	50	50	CP1
		L	-DTJNL-00050-16					
93°	No.2-2	R	S50-DTJNR-00050-22	TN2204 Triangle 60°	0	50	50	CP2
		L	-DTJNL-00050-22					
93°	No.9	R	S63-DTJNR-00060-27	TN2706 Triangle 60°	0	60	63	CP3
		L	-DTJNL-00060-27					
93°	No.4	R	S50-DDJNR-00050-15	DN1504*1 (DN1506) Rhombic 55°	0	50	50	CP2
		L	-DDJNL-00050-15					
	No.6	R	S50-DDJNR-33075-15		33	75		
		L	-DDJNL-33075-15					
107.5°	No.3	N	S50-DDHNN-00050-15	0	50			
95°	No.7	L	S50-SVLBR-33075-16	VB1604*2 VC1604 Rhombic 35°	33	75	50	M3.5*3
		R	-SVLBL-33075-16					
117.5°	No.5	N	S50-SVQBN-00050-16	0	50			

- Wrench is ordered separately.
- Inserts are not included. The standard ISO inserts are to be adapted.
- *1 Carbide Shim for 4.76mm thick DIN1504 insert is included as standard. In case of DN1506 insert (thickness of 6.35mm), please replace the standard Carbide Shim by DNS1506 (option).
- *2 Both VB1604 and VC1604 inserts are suitable.
- *3 M3.5 is screw-on type.

For SPARE PARTS E 29

Right Hand
Left Hand
Neutral

[Coding system for cartridge]

S50 - D C L N N - 00 050 - 12

- Cartridge Type and Size
- Clamping Method
- Insert Shape
- Entering Angle
- Relief Angle
- Hand
- Offset Value
- Length
- Insert Size

Clamping Method	
D	Double-Clamp
P	Lever lock
S	Screw-On

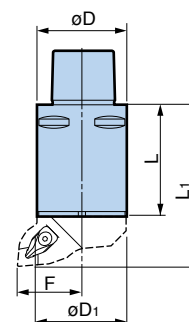
Relief Angle	
N	0° Negative
B	5° Positive
C	7° Positive

Insert Shape	
C	Rhombic 80°
T	Triangle 60°
D	Rhombic 55°
V	Rhombic 35°

Hand	
R	Right Hand
L	Left Hand
N	Neutral

Entering Angle	
J	93°
L	95°
H	107.5°
Q	117.5°

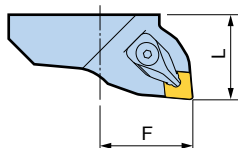
90° BASIC HOLDER Type F



Type	Model	øD	øD1	L	L1	F
F50	C5-F50-25	50	50	25	60	35
	-50			50	85	
	-85			85	120	
	-125			125	160	
F63	C6-F63-30	63	63	30	65	45
	-75			75	110	
	-100			100	135	
	-130			130	165	
	-170			170	205	
F63	C8-F63-45	80	63	45	80	45
	-100			100	135	
	-130			130	165	
	-170			170	205	

- Basic holders include M10x22L and M10x25L screws for clamping cartridges.
- Wrench is ordered separately.

90° CARTRIDGE Type F50



Right Hand

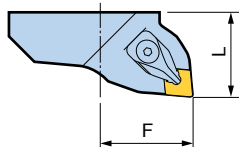
Right Hand
 Left Hand

Entering Angle	No.	Hand	Model	Insert	F	L	Clamp Piece
95°	No.10-1	R	F50-DCLNR-35035-12	CN1204 Rhombic 80°	35	35	CP2
		L	-DCLNL-35035-12				
	No.10-2	R	F50-DCLNR-35035-16	CN1606 Rhombic 80°	35	35	CP3
		L	-DCLNL-35035-16				
93°	No.12-1	R	F50-DTJNR-35035-16	TN1604 Triangle 60°	35	35	CP1
		L	-DTJNL-35035-16				
95°	No.13	R	F50-DDJNR-35035-15	DN1504*1 (DN1506) Rhombic 55°	35	35	CP2
		L	-DDJNL-35035-15				
	No.18	R	F50-DDJNR-35050-15		35	50	CP2
		L	-DDJNL-35050-15				
117.5°	No.15	R	F50-SVQBR-35035-16	VB1604*2 Rhombic 35°	35	35	M3.5*3
		L	-SVQBL-35035-16				

- Wrenches are not included in the cartridges. Please purchase separately.
- Inserts are not included. The standard ISO inserts are to be adapted.
- *1 Carbide Shim for 4.76mm thick DIN1504 insert is included as standard. In case of DN1506 insert (thickness of 6.35mm), please replace the standard Carbide Shim by DNS1506 (option).
- *2 Both VB1604 and VC1604 inserts are suitable.
- *3 M3.5 is screw-on type.

For SPARE PARTS **E 29**

90° CARTRIDGE Type F63



Right Hand



Entering Angle	No.	Hand	Model	Insert	F	L	Clamp Piece
95°	No.10-1	R	F63-DCLNR-45035-12	CN1204 Rhombic 80°	45	35	CP2
		L	-DCLNL-45035-12				
	No.10-2	R	F63-DCLNR-45035-16	CN1606 Rhombic 80°	45	35	CP3
		L	-DCLNL-45035-16				
	No.10-3	R	F63-PCLNR-45045-19	CN1906 Rhombic 80°	45	45	LEVER LOCK
		L	-PCLNL-45045-19				
93°	No.12-1	R	F63-DTJNR-45035-16	TN1604 Triangle 60°	45	35	CP1
		L	-DTJNL-45035-16				
	No.12-2	R	F63-DTJNR-45035-22	TN2204 Triangle 60°	45	35	CP2
		L	-DTJNL-45035-22				
93°	No.13	R	F63-DDJNR-45035-15	DN1504*1 (DN1506) Rhombic 55°	45	35	CP2
		L	-DDJNL-45035-15				
	No.18	R	F63-DDJNR-45055-15		45	55	CP2
		L	-DDJNL-45055-15				
107.5°	No.14	R	F63-DDHNR-45040-15	45	40	CP2	
		L	-DDHNL-45040-15				
93°	No.17	R	F63-DDUNR-45035-15	45	35	CP2	
		L	-DDUNL-45035-15				
117.5°	No.15	R	F63-SVQBR-45035-16	VB1604 Rhombic 35°	45	35	M3.5*2
		L	-SVQBL-45035-16				
93°	No.16	R	F63-SVJBR-45055-16		45	55	M3.5*2
		L	-SVJBL-45055-16				
93°	No.19	R	F63-DVJNR-45055-16	VN1604 Rhombic 35°	45	55	CP4
		L	-DVJNL-45055-16				

- Wrench is ordered separately.
- Inserts are not included. The standard ISO inserts are to be adapted.
- *1 Carbide Shim for 4.76mm thick DIN1504 insert is included as standard.
In case of DN1506 insert (thickness of 6.35mm), please replace the standard Carbide Shim by DNS1506 (option).
- *2 M3.5 is screw-on type.

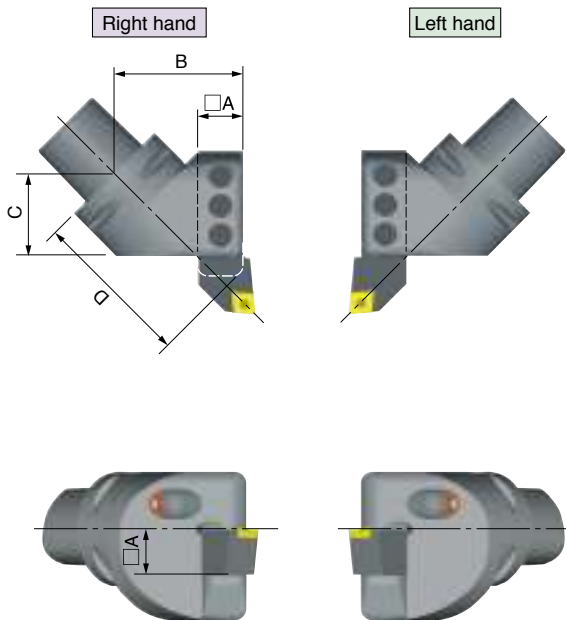
For SPARE PARTS **E 29**

[Coding system for cartridge]

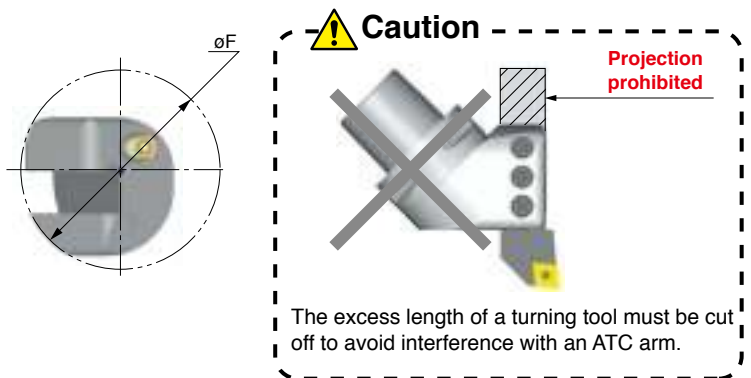
F63 - D C L N R - 45 035 - 12	Clamping Method	Insert Shape	Entering Angle
• Cartridge Type and Size	D Double-Clamp	C Rhombic 80°	J 93°
• Clamping Method	P Lever lock	T Triangle 60°	L 95°
• Insert Shape	S Screw-On	D Rhombic 55°	H 107.5°
• Entering Angle		V Rhombic 35°	Q 117.5°
• Relief Angle			U 93°
• Hand	Relief Angle	Hand	
• Offset Value	N 0° Negative	R Right Hand	
• Length	B 5° Positive	L Left Hand	
• Insert Size	C 7° Positive	N Neutral	

SQUARE TOOL HOLDER

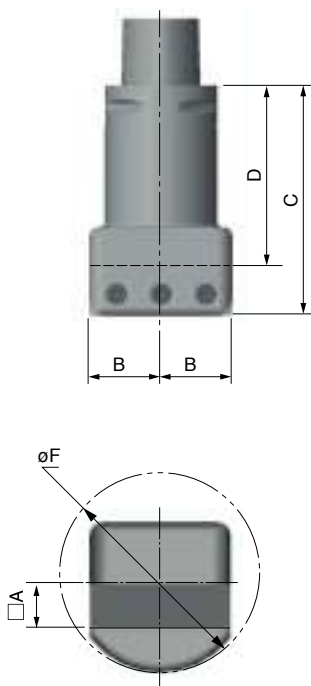
45 Type



Model	Hand	□A	B	C	D	øF	Weight (kg)
C5-45-BH20R- 5838	R	20	58	38	73	94	1.2
-BH20L- 5838	L						
C6-45-BH25R- 7752	R	25	77	52	100	118	2.5
-BH25L- 7752	L						
C8-45-BH32R-85109	R	32	85	109	145	135	7.3
-BH32L-85109	L						



90 Type



Model	Hand	□A	B	C	D	øF	Weight (kg)
C5-90-BH20N-32105	N	20	32	105	85	80	2.2
C6-90-BH25N-40130	N	25	40	130	105	100	4.2
C8-90-BH32N-51085	N	32	51	85	53	128	6.0
-51165				165	133		8.7

E

MILLTURN TOOLING

180 Type

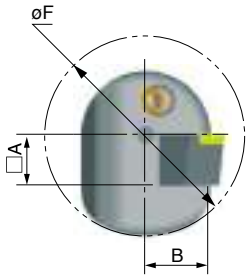
Right hand

Left hand



Right hand Left hand

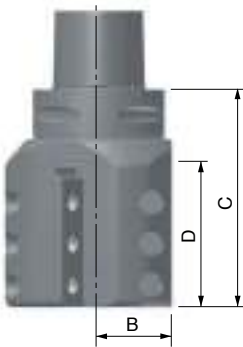
Model	Hand	A	B	C	D	E	øF	Weight (kg)
C5-180-BH20R- 2590	R	20	25	90	65	5	80	1.6
	L							
C6-180-BH25R-32120S	R	25	29.5	120	80	4.5	90	3.1
	L							
C8-180-BH32R-40125	R	32	40	125	85	8	128	6.0
	L							



180 Multi Type

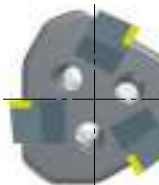
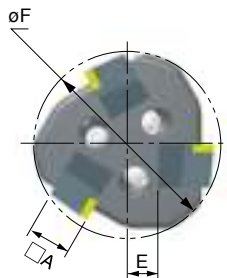
Right hand

Left hand



Right hand Left hand

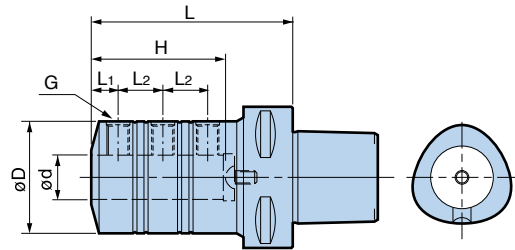
Model	Hand	A	B	C	D	E	øF	Weight (kg)
C5-180-3BH20R-100	R	20	35	100	70	15	90	2.6
	L							
C6-180-3BH20R-105	R	20	35	105	70	15	90	3.2
	L							
-3BH25R-110	R	25	45	110	80	20	110	4.6
	L							
C8-180-3BH25R-130	R	25	45	130	90	20	110	6.1
	L							



BORING BAR HOLDER

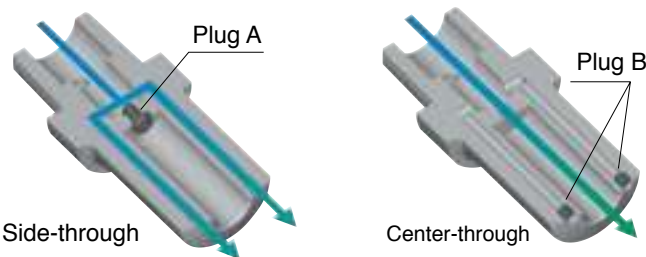
Application: boring and thread cutting

Coolant-through hole
Clamping Range : $\phi 6 - \phi 40$



Model	ϕd	ϕD	L	L ₁	L ₂	H	G	Weight (kg)
C5-BSL 6- 70	6	23	70	5	8	41	M 5 : P0.8	0.6
-BSL 8- 70	8	25		6	10		M 6 : P1.0	
-BSL10- 70	10	29		8	12		M 8 : P1.0	
-BSL12- 80	12	34	80	8	16	53	M10 : P1.25	0.8
-BSL16- 90	16	40	90	10	21	65	M10 : P1.25	1.0
-BSL20- 90	20	50		12	20	60		1.3
-BSL25-100	25	55	100	14	23	70	M12 : P1.5	1.6
-BSL32-110	32	64	110	16	26	78	M12 : P1.5	2.1
-BSL40-130	40	80	130	18	32	93	M16 : P1.5	3.7
C6-BSL 6- 70	6	23	70	5	8	41	M 5 : P0.8	1.4
-BSL 8- 70	8	25		6	10		M 6 : P1.0	
-BSL10- 70	10	29		8	12		M 8 : P1.0	
-BSL12- 80	12	34	80	8	16	53	M10 : P1.25	1.5
-BSL16- 90	16	40	90	10	21	65	M10 : P1.25	1.7
-BSL20- 90	20	50		12	22	60		2.0
-BSL25-100	25	55	100	14	26	70	M12 : P1.5	2.3
-BSL32-110	32	64	110	16	30	78	M12 : P1.5	2.8
-BSL40-130	40	80	130	18	32	93	M16 : P1.5	4.3
C8-BSL 6- 75	6	23	75	5	8	46	M 5 : P0.8	2.6
-BSL 8- 75	8	25		6	10	46	M 6 : P1.0	
-BSL10- 80	10	29	80	8	12	52	M 8 : P1.0	
-BSL12- 80	12	34			16	52	M 8 : P1.0	2.7
-BSL16- 90	16	40	90	10	21	65	M10 : P1.25	2.9
-BSL20-100	20	50	100	12	22	70	M10 : P1.25	3.3
-BSL25-110	25	55	110	14	26	80	M12 : P1.5	3.6
-BSL32-120	32	64	120	16	30	88	M12 : P1.5	4.1
-BSL40-130	40	80	130	18	32	93	M16 : P1.5	5.3

Interchangeable between center-through and side-through coolant supply by using plugs.



Adjustment for either right hand or left hand is also possible.

Chuck Model	Plug A	Plug B
BSL 6	M 8 P1.25	M 4 P0.7
8	M10 P1.0	
10	M12 P1.5	
12	M14 P1.5	M 5 P0.8
16	M18 P1.5 (C5: M6 P1.0)	
20	M 6 P1.0*	
25	M 6 P1.0*	
32	M 6 P1.0*	
40	M 8 P1.25*	M 6 P1.0

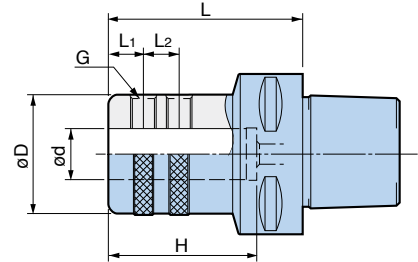
1. Both plugs are included as standard.
2. *Button-head bolt.

SIDE LOCK HOLDER

Coolant-through hole

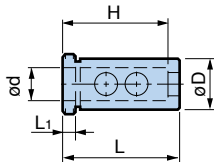
Clamping Range : $\varnothing 16 - \varnothing 40$

Application: indexable insert drill



Model	$\varnothing d$	$\varnothing D$	L	L ₁	L ₂	H	G	Weight (kg)
C5-TSL16-60	16	48	60	14	14	48	M10	0.8
-TSL20-60	20					50		0.9
-TSL25-75	25					56		0.9
-TSL32-85	32	63	85	20	15	60	M16	1.6
C6-TSL16-70	16	48	70	14	14	48	M10	1.7
-TSL20-70	20					50		1.7
-TSL25-70	25					56		1.6
-TSL32-75	32	63	75	20	15	60	M16	2.0
-TSL40-85	40	68	85	25		70		2.2
C8-TSL16-80	16	48	80	14	14	48	M10	3.1
-TSL20-80	20					50		3.1
-TSL25-85	25					56		3.0
-TSL32-90	32	63	90	20	15	60	M16	3.5
-TSL40-95	40	68	95	25		70		3.5

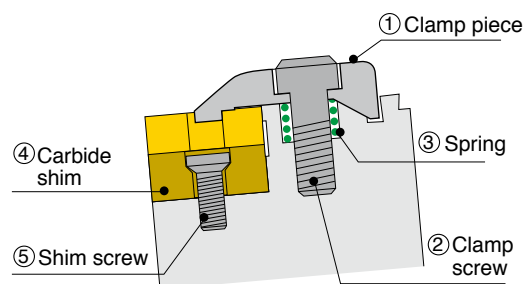
REDUCTION COLLET



Model	$\varnothing d$	$\varnothing D$	L	L ₁	H
OSL25-16	16	25	62	5.5	48
-20	20				50
OSL32-16	16	32	66	5.5	48
-20	20				50
-25	25				56
OSL40-16	16	40	76	5.5	48
-20	20				50
-25	25				56
-32	32				60

SPARE PARTS for Cartridge

DOUBLE CLAMP TYPE



Clamp Piece Set

Set model	① Clamp piece	② Screw	③ Spring	Insert
SCP-1	CP1	M5x20	ø8x10	TN16
SCP-2	CP2			CN12, TN22
SCP-3	CP3			DN15
SCP-4	CP4			CN16, TN27
SCP-5	CP5			VN16
				CN19

1. Set includes one each of clamp piece, screw and spring.
2. Wrench is ordered separately (Model: T-4-L70).

Carbide Shim Set

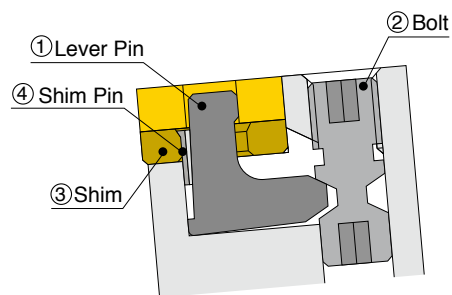
Insert	Set model	④ Shim	⑤ Screw	Torx size
TN1604	STNS1604	TNS1604	M3x7	T10
TN2204	STNS2204	TNS2204	M4x8	T15
TN2706	STNS2706	TNS2706	M5x12	T20
DN1504	SDNS1504	DNS1504	M4x8	T15
DN1506	SDNS1506	DNS1506	M4x8	T15

Insert	Set model	④ Shim	⑤ Screw	Torx size
CN1204	SCNS1204	CNS1204	M4x8	T15
CN1606	SCNS1606	CNS1606	M5x12	T20
CN1906	SCNS1906	CNS1906	M5x12	T20
VN1604	SVNS1604	VNS1604	M3x7	T10

1. Set includes one each of carbide shim and screw.
2. Wrench is ordered separately (Model: DA-T10, DA-T15, DA-T20).

LEVER LOCK TYPE

For F63-PCLNR(L)45045-19



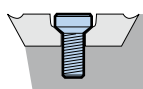
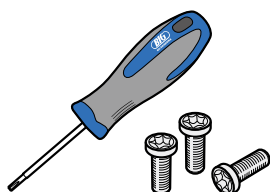
Lever Lock Set

Set model	① Lever	② Bolt	Spanner size
SLCL6	LCL6	LCS6	4mm

Carbide Shim Set

Set model	③ Shim	④ Shim Pin
SLSC63	LSC63	LSP6

INSERT CLAMPING SCREW SET



For VB16 Insert

Set model	S3508DS
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Contents

- M3.5 screws.....10pcs.
Wrench..... **DA-T15** 1pce.

MEGA MICRO CHUCK®

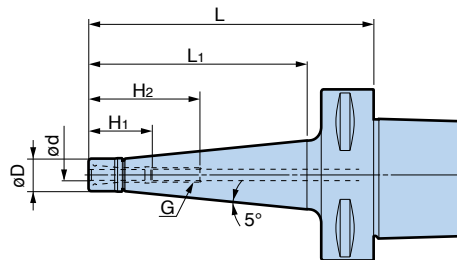
Clamping Range : $\varnothing 0.45 - \varnothing 6.05$

MAX.
30,000
min⁻¹

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

Type T

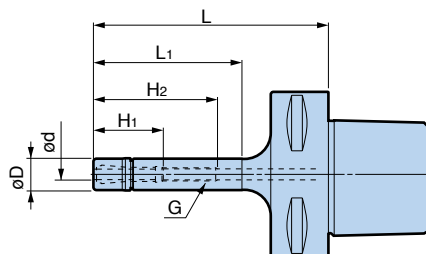
World's original



Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	H ₁	H ₂	G	Max. min ⁻¹	Collet	Weight (kg)
C4 -MEGA3S- 60T	0.45 – 3.25	10	60	35	22	38	M4 P0.7	35,000	NBC3S-□	0.3
-MEGA6S- 60T	0.45 – 6.05	14	60	35	28	47	M7 P0.75	30,000	NBC6S-□	0.3
90T			90	65				22,000		0.4
C5 -MEGA3S-105T	0.45 – 3.25	10	105	79	22.5	38.5	M4 P0.7	30,000	NBC3S-□	0.5
-MEGA4S-105T	0.45 – 4.05	12	105	79	26.5	47	M5 P0.8	25,000	NBC4S-□	0.5
-120T			120	94				20,000		0.6
-MEGA6S-105T	0.45 – 6.05	14	105	79	28.5	49	M7 P0.75	25,000	NBC6S-□	0.6
-120T			120	94				20,000		0.6
C6 -MEGA3S-120T	0.45 – 3.25	10	120	92	22.5	38.5	M4 P0.7	25,000	NBC3S-□	1.3
-MEGA4S-120T	0.45 – 4.05	12	120	92	26.5	47	M5 P0.8	22,000	NBC4S-□	1.3
-135T			135	107				20,000		1.4
-MEGA6S-120T	0.45 – 6.05	14	120	92	28.5	49	M7 P0.75	22,000	NBC6S-□	1.3
-135T			135	107				20,000		1.4

1. MEGA NUT is included.

Type S



Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	H ₁	H ₂	G	Max. min ⁻¹	Collet	Weight (kg)
C5 -MEGA3S-75	0.45 – 3.25	10	75	49	22.5	38	M4 P0.7	25,000	NBC3S-□	0.4
-MEGA4S-75	0.45 – 4.05	12		50	26.5	47	M5 P0.8	25,000	NBC4S-□	0.4
-MEGA6S-75	0.45 – 6.05	14		50	28.5	49	M7 P0.75	25,000	NBC6S-□	0.4
C6 -MEGA3S-90	0.45 – 3.25	10	90	50	22.5	38	M4 P0.7	25,000	NBC3S-□	1.1
-MEGA4S-90	0.45 – 4.05	12		58	26.5	47	M5 P0.8	25,000	NBC4S-□	1.2
-MEGA6S-90	0.45 – 6.05	14		58	28.5	49	M7 P0.75	25,000	NBC6S-□	1.2

1. MEGA NUT is included.

Spare Parts		Accessories			
	MEGA NUT 	MEGA WRENCH 	MICRO COLLET 	COLLET BOX 	α TAPER CLEANER
MEGA MICRO CHUCK	Model	Model	Model	Model	Model
MEGA3S	MGN3S	MGR10	NBC3S-□	NBB3S	SC-NBC3S
MEGA4S	MGN4S	MGR12	NBC4S-□	NBB4S	-NBC4S
MEGA6S	MGN6S	MGR14	NBC6S-□	NBB6S	-NBC6S

Coolant-through hole

MEGA NEW BABY CHUCK®

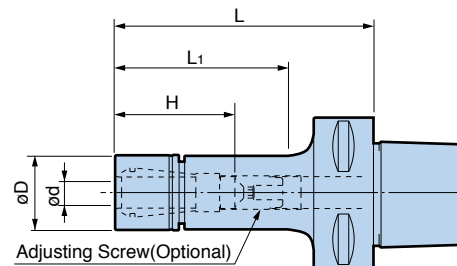
Clamping Range : $\varnothing 0.25 - \varnothing 20$

High speed design utilizes ultra precision New Baby Collet which guarantees a runout at the collet nose of less than 1 micron.



World's original

MAX. 35,000 min⁻¹



Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	H	Max. min ⁻¹	Collet	Weight (kg)
C5-MEGA 6N- 60 - 75 - 90 -105 -120 -135	0.25 - 6	20	60	34	23 - 36	35,000	NBC 6- □	0.5
			75	49	23 - 43	30,000		0.5
			90	62		30,000		0.5
			105	77	25,000	0.6		
			120	90	23,000	0.6		
			135	105	20,000	0.6		
-MEGA 8N- 60 - 75 - 90 -105 -120 -135	0.5 - 8	25	60	33	26 - 36	35,000	NBC 8- □	0.5
			75	49	26 - 45	30,000		0.6
			90	64		30,000		0.6
			105	77	27,000	0.7		
			120	92	25,000	0.7		
			135	107	20,000	0.8		
-MEGA10N- 55 ※ - 75 - 90 -105 -120 -135	1.5 - 10	30	55	31	48	35,000	NBC10- □	0.5
			75	49	38 - 48	33,000		0.6
			90	64		30,000		0.7
			105	79	27,000	0.8		
			120	92	25,000	0.9		
			135	107	20,000	0.9		
-MEGA13N- 55 ※ - 75 - 90 -105 -120 -135	2.5 - 13	35	55	31	48	30,000	NBC13- □	0.6
			75	49	44 - 48	28,000		0.7
			90	64	44 - 63	25,000		0.8
			105	79		22,000		0.9
			120	94	20,000	1.0		
			135	109	18,000	1.1		
-MEGA16N- 60 ※ - 75 ※ - 90 -105 -120 -135	2.5 - 16	42	60	38	53	30,000	NBC16- □	0.7
			75	53	68	28,000		0.9
			90	69	48 - 63	23,000		1.0
			105	84	48 - 68	20,000		1.1
			120	99		15,000		1.3
			135	114	15,000	1.4		
-MEGA20N- 60 ※ - 75 ※ - 90 -105 -120 -135	2.5 - 20	46	60	39	51	23,000	NBC20- □	0.8
			75	54	66	20,000		1.0
			90	69	51 - 60	17,000		1.1
			105	84	51 - 68	15,000		1.3
			120	99		13,000		1.4
			135	114	10,000	1.6		

- MEGA NUT is included.
- "H" indicates the adjustment length with an Adjusting Screw.
- Adjusting Screw cannot be used with ※marked model. "H" is the max. tool shank length that can be inserted into the holder.

Spare Parts		Accessories						
MEGA NEW BABY CHUCK	Model	MEGA WRENCH	COLLET G3	MEGA PERFECT SEAL G9	ADJUSTING SCREW			
					G	L	B	
MEGA 6N	MGN 6	MGR20	NBC 6-□	MPS 6-□	NBA 6B	M 7	12	2
MEGA 8N	MGN 8	MGR25	NBC 8-□	MPS 8-□	NBA 8B	M 9	13	2.5
MEGA10N	MGN10	MGR30	NBC10-□	MPS10-□	NBA10B	M11	16	3
MEGA13N	MGN13	MGR35	NBC13-□	MPS13-□	NBA13B	M14	20	4
MEGA16N	MGN16	MGR42	NBC16-□	MPS16-□	NBA16B	M18	20	4
MEGA20N	MGN20	MGR46	NBC20-□	MPS20-□	NBA20B	M21	20	4

MILLTURN TOOLING

Model	Clamping Range ϕ d	ϕ D	L	L ₁	H	Max. min ⁻¹	Collet	Weight (kg)	
C6 -MEGA 6N- 60	0.25 – 6	20	60	30	23 – 33	35,000	NBC 6- □	1.2	
- 75			75	43	23 – 43	35,000		1.2	
- 90			90	58		30,000		1.2	
-105			105	73		30,000		1.3	
-120			120	88		25,000		1.3	
-135			135	103		20,000		1.3	
-165			165	128		15,000		1.4	
-200			200	163		10,000		1.5	
-MEGA 8N- 60			0.5 – 8	25		60		29	26 – 31
- 75	75	43			26 – 45	35,000	1.3		
- 90	90	58				30,000	1.3		
-105	105	73				30,000	1.4		
-120	120	88				25,000	1.4		
-135	135	103				20,000	1.5		
-165	165	133				15,000	1.6		
-200	200	163				10,000	1.7		
-MEGA10N- 60 ※	1.5 – 10	30				60	32	51	35,000
- 75			75	43	38 – 45	33,000	1.4		
- 90			90	58	38 – 48	30,000	1.4		
-105			105	73		25,000	1.5		
-120			120	88		25,000	1.6		
-135			135	103		20,000	1.6		
-165			165	133		15,000	1.8		
-200			200	168		12,000	2.0		
-MEGA13N- 60 ※			2.5 – 13	35		60	32	51	35,000
- 75	75	45				66	32,000	1.4	
- 90	90	60			44 – 55	30,000	1.5		
-105	105	73			44 – 63	25,000	1.6		
-120	120	90				20,000	1.7		
-135	135	103				20,000	1.8		
-165	165	133				15,000	2.0		
-200	200	168				12,000	2.2		
-MEGA16N- 65 ※	2.5 – 16	42				65	37	56	32,000
- 75			75	47		66	30,000	1.6	
- 90			90	60		48 – 57	25,000	1.7	
-105			105	75	48 – 68	20,000	1.8		
-120			120	90		15,000	2.0		
-135			135	105		15,000	2.1		
-165			165	135		10,000	2.4		
-200			200	170		8,000	2.7		
-MEGA20N- 65 ※			2.5 – 20	46		65	37	51	32,000
- 75	75	47				65	30,000	1.6	
- 90	90	62				51 – 56	25,000	1.8	
-105	105	77			51 – 68	20,000	2.0		
-120	120	92				15,000	2.1		
-135	135	107				15,000	2.3		
-165	165	137				10,000	2.6		
-200	200	172				8,000	2.9		

- MEGA NUT is included.
- "H" indicates the adjustment length with an Adjusting Screw.
- Adjusting Screw cannot be used with ※ marked model. "H" is the max. tool shank length that can be inserted into the holder.

MEGA NEW BABY CHUCK®

Coolant-through hole

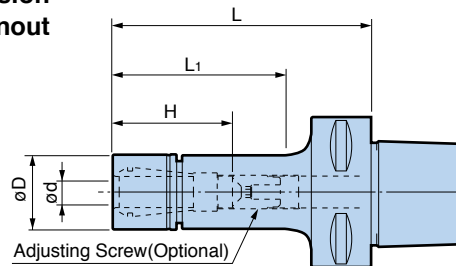
Clamping Range : $\varnothing 0.25 - \varnothing 20$



High speed design utilizes ultra precision New Baby Collet which guarantees a runout at the collet nose of less than 1 micron.

World's original

MAX. 20,000 min⁻¹



Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	H	Max. min ⁻¹	Collet	Weight (kg)
C8-MEGA 6N- 90	0.25 - 6	20	90	45	23 - 43	20,000	NBC 6-□	2.4
-105			105	60		18,000		2.5
-120			120	75		17,000		2.6
-135			135	90		15,000		2.6
-165			165	120		12,000		2.7
-200			200	155		10,000		2.7
-MEGA 8N- 90	0.5 - 8	25	90	46	26 - 45	20,000	NBC 8-□	2.6
-105			105	60		18,000		2.6
-120			120	75		17,000		2.7
-135			135	90		15,000		2.7
-165			165	120		13,000		2.8
-200			200	155		12,000		2.9
-MEGA10N- 70	1.5 - 10	30	70	30	38 - 46	22,000	NBC10-□	2.6
- 90			90	45		20,000		2.7
-105			105	60	38 - 48	18,000		2.7
-120			120	75		17,000		2.8
-135			135	90		15,000		2.9
-165			165	120		13,000		3.0
-200	200	155	12,000	3.2				
-MEGA13N- 70 ※	2.5 - 13	35	70	34	70	20,000	NBC13-□	2.6
- 90			90	50		18,000		2.8
-105			105	65	44 - 63	16,000		2.9
-120			120	80		15,000		2.9
-135			135	95		14,000		3.0
-165			165	120		12,000		3.2
-200	200	155	11,000	3.5				
-MEGA16N- 70 ※	2.5 - 16	42	70	34	70	17,000	NBC16-□	2.7
- 90			90	50		15,000		2.9
-105			105	65	48 - 68	14,000		3.0
-120			120	80		14,000		3.2
-135			135	95		13,000		3.3
-165			165	125		13,000		3.6
-200	200	160	10,000	3.9				
-MEGA20N- 70 ※	2.5 - 20	46	70	34	63	16,000	NBC20-□	2.8
- 90			90	50		15,000		3.0
-105			105	65	51 - 68	14,000		3.1
-120			120	80		14,000		3.3
-135			135	95		13,000		3.5
-165			165	125		13,000		3.8
-200	200	160	10,000	4.1				

- MEGA NUT is included.
- "H" indicates the adjustment length with an Adjusting Screw.
- Adjusting Screw cannot be used with ※ marked model. "H" is the max. tool shank length that can be inserted into the holder.

Spare Parts		Accessories						
	MEGA NUT 	MEGA WRENCH 	COLLET G 3 	MEGA PERFECT SEAL G 9 	ADJUSTING SCREW 			Rubber
MEGA NEW BABY CHUCK	Model	Model	Model	Model	Model	G	L	B
MEGA 6N	MGN 6	MGR20	NBC 6-□	MPS 6-□	NBA 6B	M 7	12	2
MEGA 8N	MGN 8	MGR25	NBC 8-□	MPS 8-□	NBA 8B	M 9	13	2.5
MEGA 10N	MGN10	MGR30	NBC10-□	MPS10-□	NBA10B	M11	16	3
MEGA 13N	MGN13	MGR35	NBC13-□	MPS13-□	NBA13B	M14	20	4
MEGA 16N	MGN16	MGR42	NBC16-□	MPS16-□	NBA16B	M18	20	4
MEGA 20N	MGN20	MGR46	NBC20-□	MPS20-□	NBA20B	M21	20	4

MEGA E CHUCK®

Coolant-through hole

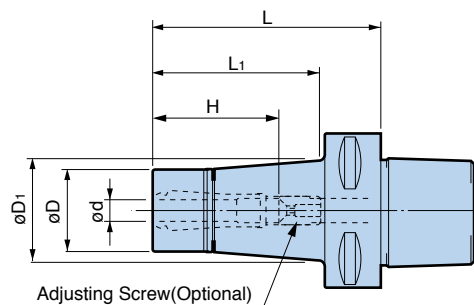
Clamping Range : $\varnothing 3.0 - \varnothing 12$

Collet chuck designed exclusively for endmilling with high concentricity and rigidity.



World's original

MAX. 35,000 min⁻¹



Model	Clamping Range $\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	H	Max. min ⁻¹	Collet	Weight (kg)
C5-MEGA 6E- 55 ※	3 - 6	25	26.4	55	29	48	35,000	MEC 6-□	0.5
- 75			29.6	75	49	37 - 45	30,000		0.6
- 90			32.3	90	64		25,000		0.7
-105			35.2	105	81		22,000		0.8
-120			37.9	120	97		20,000		0.9
-135			40.9	135	113		18,000		1.1
-MEGA 8E- 55 ※			3 - 8	30	31.3		55		31
- 75	34.0	75			51	42 - 51	30,000	0.7	
- 90	37.4	90			67		25,000	0.8	
-105	40.1	105			82		22,000	1.0	
-120	42.8	120			98		20,000	1.1	
-135	45.8	135			114		18,000	1.3	
-MEGA10E- 60 ※	3 - 10	35	37.4	60	37	53	30,000	MEC10-□	0.6
- 75			39.9	75	53	48 - 49	30,000		0.8
- 90			42.7	90	69	48 - 58	25,000		0.9
-105			45.3	105	84		20,000		1.1
-120			45.3	120	99		18,000		1.3
-135			44.6	135	114		16,000		1.4
-MEGA13E- 60 ※	3 - 12	42	44.4	60	39	50	30,000	MEC13-□	0.8
- 75 ※			44.8	75	54	68	30,000		0.9
- 90			44.8	90	69	50 - 60	25,000		1.1
-105			46.0	105	84		20,000		1.3
-120			45.8	120	99		16,000		1.4
-135			45.0	135	114		13,000		1.6

- MEGA E NUT is included.
- "H" indicates the adjustment length with an Adjusting Screw.
- Adjusting Screw cannot be used with ※ marked model. "H" is the max. tool shank length that can be inserted into the holder.

Spare Parts		Accessories							
	MEGA E NUT	MEGA WRENCH	MEGA E COLLET	MEGA E PERFECT SEAL	ADJUSTING SCREW				
MEGA E CHUCK	Model	Model	Model	Model	Model	G	L	B	
MEGA 6E	MEN 6	MGR25	MEC 6-□	EPS 6-□	NBA 6B	M 7	12	2	
MEGA 8E	MEN 8	MGR30	MEC 8-□	EPS 8-□	NBA 8B	M 9	13	2.5	
MEGA10E	MEN10	MGR35	MEC10-□	EPS10-□	NBA10B	M11	16	3	
MEGA13E	MEN13	MGR42	MEC13-□	EPS13-□	NBA13B	M14	20	4	

E
MILLTURN TOOLING

MEGA E CHUCK®

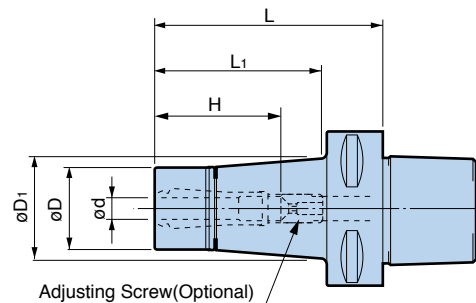
Coolant-through hole
Clamping Range : $\varnothing 3.0 - \varnothing 12$

Collet chuck designed exclusively for endmilling with high concentricity and rigidity.



World's original

MAX. 35,000 min⁻¹



Model	Clamping Range $\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	H	Max. min ⁻¹	Collet	Weight (kg)	
C6-MEGA 6E- 60 ※	3 - 6	25	27.9	60	33	51	35,000	MEC 6-□	1.2	
- 75			29.5	75	48		30,000		1.3	
- 90			32.1	90	63		30,000		1.4	
-105			34.7	105	78		37 - 45		28,000	1.5
-120			37.3	120	93				25,000	1.6
-135			40.0	135	108				22,000	1.8
-165			45.2	165	138				18,000	2.1
-200			51.7	200	175				15,000	2.7
-MEGA 8E- 60 ※			3 - 8	30	32.7		60		33	51
- 75	34.2	75			48	42 - 46	30,000	1.4		
- 90	36.7	90			63		30,000	1.5		
-105	39.5	105			78	42 - 51	28,000	1.7		
-120	42.1	120			93		25,000	1.8		
-135	44.7	135			108		23,000	1.9		
-165	50.3	165			140		20,000	2.4		
-200	56.6	200			176		15,000	3.1		
-MEGA10E- 65 ※	3 - 10	35			38.4	65	38	56	32,000	MEC10-□
- 75			39.1	75	48	66	30,000	1.5		
- 90			41.6	90	63	48 - 58	30,000	1.6		
-105			44.4	105	78		27,000	1.8		
-120			47.0	120	93		23,000	2.0		
-135			50.0	135	110		20,000	2.2		
-165			55.4	165	141		17,000	2.7		
-200			56.2	200	176	13,000	3.3			
-MEGA13E- 65 ※			3 - 12	42	45.1	65	39	56	30,000	
- 75	46.0	75			49	66	30,000	1.6		
- 90	49.0	90			66	50 - 55	28,000	1.8		
-105	51.4	105			80		25,000	2.1		
-120	54.2	120			96	50 - 60	22,000	2.3		
-135	56.8	135			112		18,000	2.6		
-165	62.3	165			141		15,000	3.2		
-200	57.8	200			177		10,000	3.6		





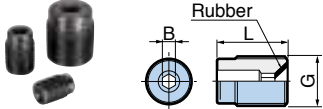
1. MEGA E NUT is included.
 2. "H" indicates the adjustment length with an Adjusting Screw.
 3. Adjusting Screw cannot be used with ※ marked model. "H" is the max. tool shank length that can be inserted into the holder.

E

MILLTURN TOOLING

Model	Clamping Range ϕd	ϕD	ϕD_1	L	L ₁	H	Max. min ⁻¹	Collet	Weight (kg)
C8-MEGA 6E- 70	3 – 6	25	28.2	70	30	37 – 45	20,000	MEC 6-□	2.5
- 90			30.7	90	55		20,000		2.6
-105			33.3	105	70		18,000		2.7
-120			35.9	120	85		16,000		2.9
-135			38.5	135	100		14,000		3.0
-165			43.6	165	129		13,000		3.3
-200			49.8	200	165		12,000		3.8
-MEGA 8E- 70	3 – 8	30	30.0	70	30	42 – 47	20,000	MEC 8-□	2.6
- 90			35.4	90	55	42 – 51	20,000		2.7
-105			38.0	105	70		20,000		2.9
-120			40.7	120	85		18,000		3.1
-135			43.3	135	100		16,000		3.2
-165			48.4	165	129		16,000		3.6
-200			54.5	200	165		13,000		4.2
-MEGA10E- 70 ※	3 – 10	35	37.9	70	30		70	22,000	MEC10-□
- 90			40.3	90	55	48 – 58	20,000	2.8	
-105			42.9	105	70		20,000	3.0	
-120			45.6	120	85		18,000	3.2	
-135			48.2	135	100		16,000	3.4	
-165			53.1	165	129		16,000	3.9	
-200			59.4	200	165		13,000	4.6	
-MEGA13E- 70 ※	3 – 12	42	44.6	70	30		70	20,000	MEC13-□
- 90			47.0	90	55	50 – 60	18,000	3.0	
-105			49.6	105	70		18,000	3.2	
-120			52.3	120	85		16,000	3.4	
-135			54.9	135	100		14,000	3.7	
-165			60.1	165	130		14,000	4.3	
-200			66.4	200	166		10,000	5.2	

- MEGA E NUT is included.
- "H" indicates the adjustment length with an Adjusting Screw.
- Adjusting Screw cannot be used with※ marked model. "H" is the max. tool shank length that can be inserted into the holder.

Spare Parts		Accessories						
	MEGA E NUT 	MEGA WRENCH 	MEGA E COLLET 	MEGA E PERFECT SEAL 	ADJUSTING SCREW 			
MEGA E CHUCK	Model	Model	Model	Model	Model	G	L	B
MEGA 6E	MEN 6	MGR25	MEC 6-□	EPS 6-□	NBA 6B	M 7	12	2
MEGA 8E	MEN 8	MGR30	MEC 8-□	EPS 8-□	NBA 8B	M 9	13	2.5
MEGA10E	MEN10	MGR35	MEC10-□	EPS10-□	NBA10B	M11	16	3
MEGA13E	MEN13	MGR42	MEC13-□	EPS13-□	NBA13B	M14	20	4

MEGA DOUBLE POWER CHUCK®

Close to integral rigidity and precision of a solid toolholder.
Advanced technology for high speed and heavy duty endmilling.

Coolant-through hole

Clamping Range : $\varnothing 16 - \varnothing 32$

Type D

For coolant through tools

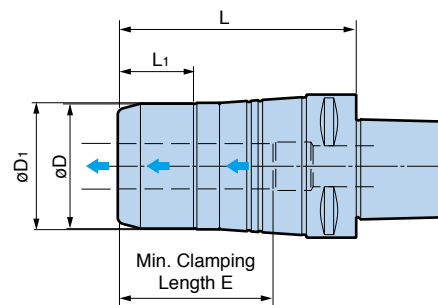
Type DS

For coolant to cutting tool periphery

For TYPE DS E 39



MAX.
30,000
min⁻¹



Model	Clamping Range $\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L ₁	E	Max. min ⁻¹	Weight (kg)
C5 -MEGA16D- 65	16	46	55	65	23.5	50	30,000	0.9
				90			28,000	1.4
				105			25,000	1.8
-MEGA20D- 75	20	55	55.7	75	33	56	30,000	1.2
				90			28,000	1.5
				105			25,000	1.8
-MEGA25D- 75	25	62	62.7	75	33	56	25,000	1.4
				90			22,000	1.7
				105			20,000	2.0
C6 -MEGA16D- 70A	16	42	52.6	70	25	55	30,000	1.6
				90			28,000	2.0
				105			25,000	2.3
				135			22,000	2.9
				165			18,000	3.6
				200			15,000	4.2
-MEGA20D- 75	20	55	55.7	75	33	56	30,000	2.0
				90			28,000	2.2
				105			25,000	2.5
				135			22,000	3.1
				165			18,000	3.7
				200			15,000	4.3
-MEGA25D- 75A	25	62	62.7	75	39	57	28,000	2.1
				90			25,000	2.4
				105			23,000	2.8
				135			20,000	3.3
				165			18,000	3.9
				200			15,000	4.8
-MEGA32D- 90	32	70	70.7	90	33.5	65	25,000	2.5
				105			22,000	2.9
				135			18,000	3.4
				165			15,000	3.9
				200			12,000	4.5

1. Wrench is ordered separately.

For STRAIGHT COLLET G 15



E

MILLTURN TOOLING

Model	Clamping Range ød	øD	øD1	L	L1	E	Max. min ⁻¹	Weight (kg)
C8 -MEGA16D- 70	16	46	55	70	23.5	50	25,000	2.8
-105				105			20,000	3.5
-135				135			18,000	4.1
-165				165			15,000	4.7
-200				200			12,000	5.6
-MEGA20D- 75	20	60	69	75	25.5	56	25,000	3.3
-105				105			20,000	4.2
-135				135			18,000	5.0
-165				165			15,000	5.9
-200				200			12,000	7.1
-MEGA25D- 75	25	70	77	75	32	65	21,000	3.4
-105				105			18,000	4.5
-135				135			15,000	5.4
-165				165			12,000	6.4
-200				200			10,000	7.8
-MEGA32D- 90	32	80	86	90	39.5	71	20,000	4.3
-105				105			17,000	4.8
-135				135			15,000	6.0
-165				165			12,000	7.3
-200				200			10,000	9.0

1. Wrench is ordered separately.

 For STRAIGHT COLLET G 15

Accessories			
	MEGA WRENCH		MEGA WRENCH
			
MEGA Double Power Chuck	Model	MEGA Double Power Chuck	Model
C5 -MEGA16D	MGR46L	C8 -MEGA16D	MGR46L
C6 -MEGA16D	MGR42L	-MEGA20D	MGR60L
C5 / C6 -MEGA20D	MGR55L	-MEGA25D	MGR70L
-MEGA25D	MGR62L	-MEGA32D	MGR80L
-MEGA32D	MGR70L		

E

MILLTURN TOOLING

MEGA DOUBLE POWER CHUCK®

Coolant-through hole

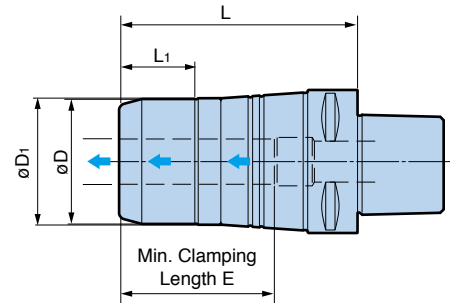
Clamping Range : $\phi 16 - \phi 32$

Type DS

For coolant to cutting tool periphery



**MAX.
30,000
min⁻¹**



Model	Clamping Range ϕd	ϕD	ϕD_1	L	L ₁	E	Max. min ⁻¹	Weight (kg)
C5 -MEGA16DS- 65 - 90 -105	16	46	55	67.5	25.5	52	30,000	0.9
				92.5			28,000	1.4
				107.5			25,000	1.8
-MEGA20DS- 75 - 90 -105	20	55	55.7	77.5	35.5	58	30,000	1.2
				92.5			28,000	1.5
				107.5			25,000	1.8
-MEGA25DS- 75 - 90 -105	25	62	62.7	77.5	35	58	25,000	1.4
				92.5			22,000	1.7
				107.5			20,000	2.0
C6 -MEGA16DS- 70A - 90A -105A -135A -165A -200A	16	42	52.6	72	27	57	30,000	1.6
				92			28,000	2.0
				107			25,000	2.3
				137			22,000	2.9
				167			18,000	3.6
				202			15,000	4.2
-MEGA20DS- 75 - 90 -105 -135 -165 -200	20	55	55.7	77.5	35.5	58	30,000	2.0
				92.5			28,000	2.2
				107.5			25,000	2.5
				137.5			22,000	3.1
				167.5			18,000	3.7
				202.5			15,000	4.3
-MEGA25DS- 75A - 90A -105A -135A -165A -200A	25	62	62.7	77	41	59	28,000	2.1
				92			25,000	2.4
				107			23,000	2.8
				137			20,000	3.3
				167			18,000	3.9
				202			15,000	4.8
-MEGA32DS- 90 -105 -135 -165 -200	32	70	70.7	92.5	36	67	25,000	2.5
				107.5			22,000	2.9
				137.5			18,000	3.4
				167.5			15,000	3.9
				202.5			12,000	4.5



1. Wrench is ordered separately.
2. Type DS provides coolant around the cutting tool periphery, even if used with a cutting tool with a through hole.

For STRAIGHT COLLET G 15

Model	Clamping Range ød	øD	øD ₁	L	L ₁	E	Max. min ⁻¹	Weight (kg)
C8 -MEGA16DS- 70	16	46	55	72.5	26	52	25,000	2.8
-105				107.5			20,000	3.5
-135				137.5			18,000	4.1
-165				167.5			15,000	4.7
-200				202.5			12,000	5.6
-MEGA20DS- 75	20	60	69	77.5	28	58	25,000	3.3
-105				107.5			20,000	4.2
-135				137.5			18,000	5.0
-165				167.5			15,000	5.9
-200				202.5			12,000	7.1
-MEGA25DS- 75	25	70	77	77.5	34	67	21,000	3.4
-105				107.5			18,000	4.5
-135				137.5			15,000	5.4
-165				167.5			12,000	6.4
-200				202.5			10,000	7.8
-MEGA32DS- 90	32	80	86	92.5	42	73	20,000	4.3
-105				107.5			17,000	4.8
-135				137.5			15,000	6.0
-165				167.5			12,000	7.3
-200				202.5			10,000	9.0

1. Wrench is ordered separately.
2. Type DS provides coolant around the cutting tool periphery, even if used with a cutting tool with a through hole.

 For STRAIGHT COLLET **G 15**

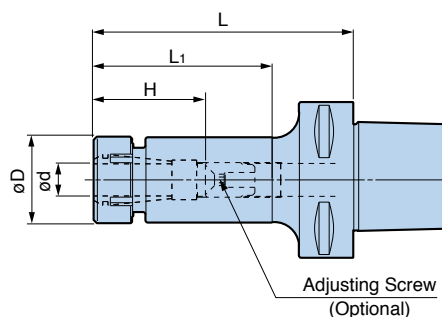
Accessories			
	MEGA WRENCH 		MEGA WRENCH 
MEGA Double Power Chuck	Model	MEGA Double Power Chuck	Model
C5 -MEGA16DS	MGR46L	C8 -MEGA16DS	MGR46L
C6 -MEGA16DS	MGR42L	-MEGA20DS	MGR60L
C5 / C6 -MEGA20DS	MGR55L	-MEGA25DS	MGR70L
-MEGA25DS	MGR62L	-MEGA32DS	MGR80L
-MEGA32DS	MGR70L		

NEW BABY CHUCK

Coolant-through hole

Clamping Range : $\varnothing 0.25 - \varnothing 20$

Great variety in length in order to support high precision machining.



Model	Clamping Range $\varnothing d$	$\varnothing D$	L	L ₁	H	Collet Model	Weight (kg)
C5-NBS 6- 60	0.25 – 6	20	60	34	20 – 40	NBC 6-□	0.5
- 90			90	62			0.6
-120			120	90			0.6
-135			135	105			0.6
-NBS 8- 60			0.5 – 8	25			60
- 90	90	64			0.7		
-120	120	92			0.7		
-135	135	107			0.8		
-NBS10- 60 *	1.5 – 10	30			60	31	35 – 45
- 90			90	64	0.7		
-120			120	92	0.8		
-135			135	109	0.9		
-NBS13- 60 *			2.5 – 13	35	60	31	
- 90	90	64			0.8		
-120	120	94			1.0		
-135	135	109			1.1		
-NBS16- 60 *	2.5 – 16	42			60	38	45 – 63
- 90			90	68	0.9		
-120			120	98	1.2		
-135			135	113	1.4		
-NBS20- 60 *			2.5 – 20	46	60	39	
- 90	90	69			1.1		
-120	120	99			1.4		
-135	135	114			1.6		
C6-NBS 6- 75	0.25 – 6	20			75	43	20 – 40
-105			105	73	1.3		
-135			135	103	1.4		
-165			165	133	1.4		
-200			200	168	1.5		
-NBS 8- 75	0.5 – 8	25	75	43	23 – 42	NBC 8-□	1.3
-105			105	73			1.4
-135			135	103			1.5
-165			165	133			1.6
-200			200	168			1.7
-NBS10- 75	1.5 – 10	30	75	43	35 – 45	NBC10-□	1.4
-105			105	73			1.5
-135			135	103			1.7
-165			165	133			1.8
-200			200	168			1.9
-NBS13- 75	2.5 – 13	35	75	45	41 – 57	NBC13-□	1.5
-105			105	73			1.7
-135			135	103			1.9
-165			165	133			2.0
-200			200	168			2.2
-NBS16- 75 *	2.5 – 16	42	75	47	45 – 65	NBC16-□	1.6
-105			105	75			1.9
-135			135	105			2.1
-165			165	135			2.4
-200			200	170			2.7
-NBS20- 75 *	2.5 – 20	46	75	47	48 – 65	NBC20-□	1.7
-105			105	77			2.0
-135			135	107			2.2
-165			165	137			2.6
-200			200	172			3.0





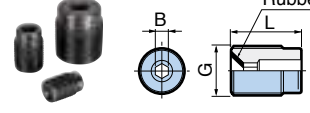
1. NEW BABY NUT is included.
 2. Adjusting screws can not be used with * marked models.
 3. "H" indicates the adjustment length with an Adjusting Screw.

E

MILLTURN TOOLING

Model	Clamping Range ød	øD	L	L1	H	Collet Model	Weight (kg)
C8-NBS 6- 90	0.25 - 6	20	90	45	20 - 40	NBC 6-□	2.6
-120			120	75			2.7
-165			165	120			2.7
-200			200	155			2.8
-NBS 8- 90			0.5 - 8	25			90
-120	120	75			2.8		
-165	165	120			2.9		
-200	200	155			2.9		
-NBS10- 90	1.5 - 10	30			90	50	35 - 45
-120			120	75	2.9		
-165			165	120	3.0		
-200			200	155	3.2		
-NBS13- 90			2.5 - 13	35	90	50	
-120	120	80			3.0		
-165	165	125			3.3		
-200	200	160			3.5		
-NBS16- 90	2.5 - 16	42			90	50	45 - 65
-120			120	80	3.2		
-165			165	125	3.6		
-200			200	160	3.9		
-NBS20- 90			2.5 - 20	46	90	50	
-120	120	80			48 - 65	3.4	
-165	165	125				3.8	
-200	200	160				4.2	

1. NEW BABY NUT is included.
2. Adjusting screws can not be used with ※ marked models.
3. "H" indicates the adjustment length with an Adjusting Screw.

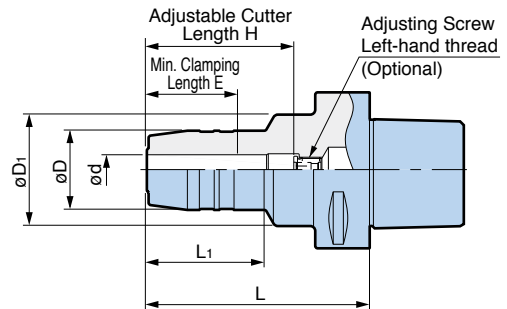
Spare Parts		Accessories						
	NEW BABY NUT 	WRENCH 	COLLET  G 3	BABY PERFECT SEAL  G 10	ADJUSTING SCREW 			
NEW BABY CHUCK	Model	Model	Model	Model	Model	G	L	B
NBS 6	NBN 6	NBK 6	NBC 6-□	BPS 6-□	NBA 6B	M 7	12	2
NBS 8	NBN 8	NBK 8	NBC 8-□	BPS 8-□	NBA 8B	M 9	13	2.5
NBS10	NBN10	NBK10	NBC10-□	BPS10-□	NBA10B	M11	16	3
NBS13	NBN13	NBK13	NBC13-□	BPS13-□	NBA13B	M14	20	4
NBS16	NBN16	NBK16	NBC16-□	BPS16-□	NBA16B	M18	20	4
NBS20	NBN20	NBK20	NBC20-□	BPS20-□	NBA20B	M21	20	4

Coolant-through hole

HYDRAULIC CHUCK

Clamping Range : $\phi 6 - \phi 32$

For high precision machining in Automotive, Aerospace, Medical and Die & Mold



Model	ϕd	ϕD	ϕD_1	L	L ₁	E	H	Adjusting Screw (Optional)	Weight (kg)
C5-HDC 6- 55 ※	6	26	45	55	18	28	48	-	0.8
- 90				90	45		33 - 50	HDA 6-05020	1.0
-120				120	45		28 - 50	HDA 6-05032	1.2
-HDC 8- 55 ※	8	28	45	55	18	28	48	-	0.8
- 90				90	45		33 - 50	HDA 8-06020	1.1
-120				120	45		28 - 50	HDA 8-06032	1.3
-HDC10- 60 ※	10	30	45	60	24	33	53	-	0.9
- 90				90	45		43 - 55	HDA10-08015	1.1
-120				120	45		33 - 54	HDA10-08032	1.3
-HDC12- 60 ※	12	32	46	60	24	38	53	-	0.9
- 90			90	48	53 - 60		HDA12-10010 ●	1.1	
-120			120	48	38 - 60		HDA12-10032	1.3	
-HDC14- 90	14	34	45	90	48	38	53 - 60	HDA12-10010 ●	1.1
-HDC16- 75 ※	16	38	50	75	35	43	68	-	1.1
- 90			48	90	48		83	-	1.2
-120			46	120	48		43 - 70	HDA16-12037	1.4
-HDC18- 90 ※	18	40	48	90	48	43	83	-	1.2
-HDC20- 75 ※	20	42	52	75	35	43	68	-	1.1
- 90			50	90	48		83	-	1.2
-120			47	120	48		43 - 70	HDA16-12037	1.5
-HDC25- 90 ※	25	55	63	90	48	52	83	-	1.7

- "H" indicates the adjustment length with an Adjusting Screw.
- Adjusting Screw cannot be used with ※ marked model. "H" is the max. tool shank length that can be inserted into the holder.
- Add the letter "W" to Adjusting Screw model number for hexagon sockets on both sides. (e.g. **HDA6-05020W**)
Adjusting Screw with ● indication is not available in W type.

For STRAIGHT COLLET **G 16**

For INNER BORE CLEANER **G 19**

E


MILLTURN TOOLING

Model	ød	øD	øD1	L	L1	E	H	Adjusting Screw (Optional)	Weight (kg)
C6-HDC 6- 60 ※	6	26	45	60	18	28	51	-	1.4
- 90				90	48		33 – 50	HDA 6-05020	1.5
-120				120	45		28 – 50	HDA 6-05032	1.8
-150				150	2.0				
-HDC 8- 60 ※	8	28	45	60	18	28	51	-	1.4
- 90				90	48		33 – 50	HDA 8-06020	1.6
-120				120	45		28 – 50	HDA 8-06032	1.8
-150				150	2.0				
-HDC10- 65 ※	10	30	45	65	24	33	56	-	1.4
- 90				90	48		43 – 55	HDA10-08015	1.6
-120				120	45		33 – 54	HDA10-08032	1.8
-150				150	2.1				
-HDC12- 65 ※	12	32	46	65	24	38	56	-	1.5
- 90			90	45	48		48 – 60	HDA10-08015	1.6
-120			120				38 – 60	HDA10-08032	1.8
-150			150				2.1		
-HDC14- 90	14	34	45	90	48	38	53 – 60	HDA12-10010 ●	1.6
-120				120	38 – 60		HDA12-10032	1.9	
-HDC16- 75 ※	16	38	50	75	35	43	66	-	1.6
- 90 ※			47	90	81		1.7		
-120			120	48	43 – 70		HDA16-12037	2.0	
-150			150	2.3					
-HDC18- 90 ※	18	40	48	90	48	43	66	-	1.7
-120			49	120	43 – 70		HDA16-12037	2.0	
-HDC20- 75 ※	20	42	53	75	33	43	66	-	1.7
- 90 ※			90	50	48		72	1.8	
-120			120				43 – 70	HDA16-12037	2.1
-150			150				2.4		
-HDC25- 90 ※	25	55	63	90	46	52	80	-	2.2
-120				120	51		67 – 79	HDA20-16015	2.8
-150				150	81		52 – 79	HDA25-16039	3.5
-HDC32- 90 ※	32	75	63	90	43	56	81	-	2.8
-120		63	-	120	-		66 – 78	HDA20-16015	3.0

- "H" indicates the adjustment length with an Adjusting Screw.
- Adjusting Screw cannot be used with ※ marked model. "H" is the max. tool shank length that can be inserted into the holder.
- Add the letter "W" to Adjusting Screw model number for hexagon sockets on both sides. (e.g. **HDA6-05020W**)
Adjusting Screw with ● indication is not available in W type.

 For STRAIGHT COLLET **G 16**

 For INNER BORE CLEANER **G 19**



Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank (i.e.: Weldon type shank)
- Roughing endmills are not recommended for use with Hydraulic Chucks.
- Do not tighten the clamping screw without first inserting a cutting tool into the toolholder.
- Always insert the cutting tool into the Hydraulic Chuck beyond min. clamping length E.

E

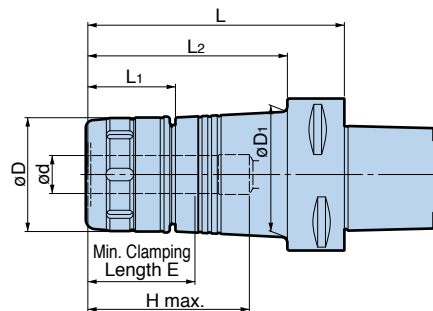
MILLTURN TOOLING

NEW Hi-POWER MILLING CHUCK

Coolant-through hole

Clamping Range : $\varnothing 16 - \varnothing 32$

BIG's original design of slit structure supports heavy and finish end milling with high power and precision.



Model	Clamping Range $\varnothing d$	$\varnothing D$	$\varnothing D_1$	L	L1	L2	H max.	E	Weight (kg)
C5-HMC16S- 65	16	43	-	65	44	45	58	55	0.8
-HMC20S- 75	20	50	-	75	44	-	68	56	1.0
-105			-	105		-	85		1.4
-HMC25S- 75	25	55	-	75	47	-	68	57	1.3
-105			-	105		-	87		1.7
-HMC32S- 85	32	62	-	85	56	-	78	58	1.6
C6-HMC16S- 70	16	43	-	70	44	48	61	55	1.5
-HMC20S- 75	20	50	-	75	44	53	66	56	1.7
-105			-	105		83	85		2.3
-120			-	120		98	85		2.5
-HMC25S- 75	25	59	-	75	45	53	66	57	2.0
-105			-	105		83	87		2.5
-135			-	135		113	87		3.1
-HMC32S- 90	32	68	-	90	54	-	81	64	2.4
-105			-	105		-	90		2.7
-135			-	135		-	90		3.3
C8-HMC20- 80	20	60	-	80	46	50	80	56	3.3
-105			63	105		75	85		3.9
-135			66	135		105	85		4.7
-165			69	165		135	85		5.5
-HMC25- 85	25	62	-	85	55	-	85	65	3.5
-105			65.5	105		75	90		3.9
-135			67	135		105	90		4.7
-165			70	165		135	90		5.4
-HMC32- 95	32	80	-	95	63	-	95	71	4.5
-105			-	105		-	105		4.9
-135			-	135		-	105		5.8
-165			-	165		-	105		6.8

1. C-Spanner is ordered separately.

For STRAIGHT COLLET G 15

Accessories

C-SPANNER		C-SPANNER	
NEW Hi-POWER MILLING CHUCK	Model	NEW Hi-POWER MILLING CHUCK	Model
C5-HMC16S	FK45-50L	C8-HMC20	FK58- 62
-HMC20S		-HMC25	
-HMC25S		-HMC32	FK80- 90
-HMC32S		FK58-62L	
C6-HMC16S	FK45-50L		
-HMC20S		FK58-62L	
-HMC25S		FK68-75L	
-HMC32S			

E MILLTURN TOOLING

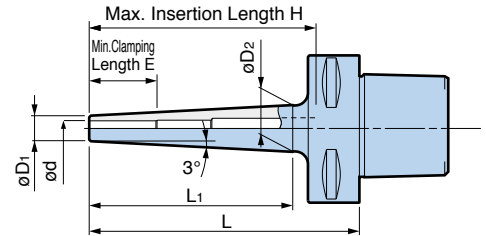
SHRINK CHUCK

Coolant-through hole

Clamping Range : $\varnothing 6 - \varnothing 20$



Slim design avoids interference with the side wall and draft of the mold.

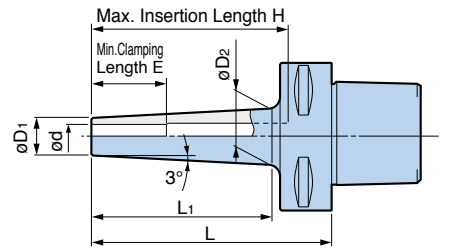


SLIM Type

Model	$\varnothing d$	$\varnothing D_1$	$\varnothing D_2$	L	L ₁	E	H	Weight (kg)
C5-SRC 6S-105	6	10	18.3	105	80	26	98	0.5
-SRC 8S-105	8	13	21.3			26		0.5
-SRC10S-105	10	16	24.3			32		0.5
-SRC12S-105	12	19	27.3			36		0.6
C6-SRC 6S-120	6	10	19.5	120	92	26	111	1.2
-165			23.8	165	133		156	1.4
-SRC 8S-120	8	13	22.5	120	92	26	111	1.3
-165			26.8	165	133		156	1.5
-SRC10S-120	10	16	25.5	120	92	32	111	1.3
-165			30.5	165	135		156	1.5
-SRC12S-120	12	19	28.5	120	92	36	111	1.4
-165			33	165	135		156	1.6

1. Use carbide cutter within a tolerance of h6.

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



STANDARD Type

Model	$\varnothing d$	$\varnothing D_1$	$\varnothing D_2$	L	L ₁	E	H	Weight (kg)
C5-SRC 6- 75	6	14	19.1	75	50	26	68	0.5
-SRC 8- 75	8	18	23.1	75	50	26		0.5
-SRC10- 75	10	22	27.1	75	50	32		0.6
-SRC12- 75	12	24	29.1	75	50	36		0.6
-SRC16- 75	16	28	33.1	75	50	38		0.6
C6-SRC 6- 90	6	14	20.5	90	63	26	81	1.2
-SRC 8- 90	8	18	24.5	90	63	26		1.3
-SRC10- 90	10	22	28.5	90	63	32		1.3
-SRC12- 90	12	24	30.5	90	63	36		1.4
-SRC16- 90	16	28	34.5	90	63	38		1.4
-165			42.4	165	138		80	2.1
-SRC20- 90	20	34	40.5	90	63	42	80	1.5
-165			48.4	165	138		100	2.5
C8 -SRC 6-120	6	14	22.8	120	85	26	120	2.6
-165			27	165	125		165	2.8
-SRC 8-120	8	18	26.8	120	85	26	120	2.6
-165			31	165	125		165	2.9
-SRC10-120	10	22	30.8	120	85	32	120	2.7
-165			35	165	125		165	3.0
-SRC12-120	12	24	32.8	120	85	36	120	2.7
-165			37	165	125		165	3.1
-SRC16-120	16	28	36.8	120	85	38	120	2.8
-165			41	165	125		165	3.3
-SRC20-120	20	34	42.8	120	85	42	100	3.0
-165			47	165	125			3.5

1. Use carbide cutter within a tolerance of h6.

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

E

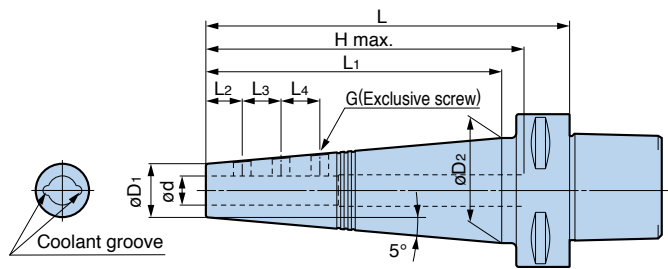
MILLTURN TOOLING

MOLD CHUCK

Coolant-through hole

Clamping Range : $\varnothing 3 - \varnothing 20$

Precision side lock holder to satisfy the requirements for minimum interference, accuracy and high speed.



Model	$\varnothing d$	$\varnothing D_1$	$\varnothing D_2$	L	L ₁	L ₂	L ₃	L ₄	G	H max.	Weight (kg)	
C6-SSL 3-135	3	10	29.2	135	111	6	6	-	M3	126	1.3	
-SSL 4-135	4	11	30.2			6	7		M4		1.4	
-SSL 6-135	6	13	32.2			12	13		M6		1.4	
-SSL 8-135	8	15	34			13.5	18				1.5	
-SSL10-150	10	17	38.5	150	126	15	20	-	M8	141	1.6	
-SSL12-150	12	22	43.3			15	16				16	1.9
-SSL16-150	16	26	47			15	20				22	2.0
C8-SSL 6-150	6	13	33.5			150	118				12	13
-SSL 8-150	8	15	35.3	13.5	18			2.8				
-SSL10-150	10	17	37.1	15	20			2.9				
-SSL12-150	12	22	42	15	16			16	3.0			
-SSL16-150	16	26	45.6	15	20			22	3.2			
-SSL20-150	20	30	49.6	15	20			25	3.3			

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 LOCK SCREWS

Model	Screw size	Screw Length / Quantity	Chuck Model
H0304FS	M3 P0.5	4mm / 2pcs.	SSL3
H0404FS	M4 P0.5	4mm / 2pcs.	SSL4
H06FSA	M6 P0.75	4.5, 5mm / 1pce. each	SSL6
H06FSB		4.5, 6mm / 1pce. each	SSL8,10
H08FSA	M8 P0.75	6mm / 2pcs. 8mm / 1pce.	SSL12
H08FSB		6, 8, 10mm / 1pce. each	SSL16,20

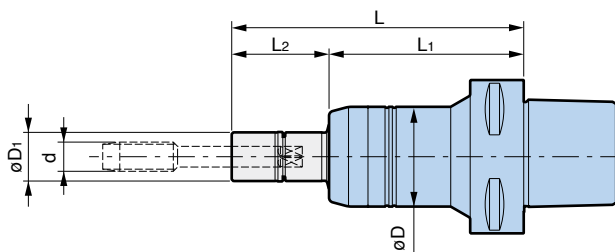
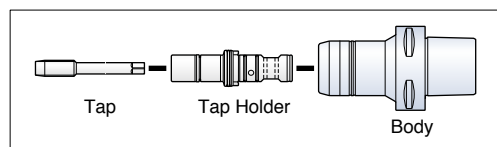
1. Each model consists of 1 set of screws required for 1 Mold Chuck.

MEGA SYNCHRO[®] Tapping Holder

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

Coolant-through hole

Tapping Range : M2 - M20



Model	Tap Holder Model	Tapping Range d	øD	øD1	L	L1	L2
C5-MGT 6- 75	MGT 6-d- 30	M2 – M6	36	16	105	75	30
	- 70	No.3 – U1/4			145		70
	-100				175		100
-MGT12- 75	MGT12-d- 30	M6 – M12	41	20	105	75	30
	- 70	U1/4 – U7/16			145		70
	-100	P1/8			175		100
-MGT20-100	MGT20-d- 35	M12 – M20	54	30	135	100	35
	- 85	U1/2 – U3/4			185		85
	-115	P1/4 – P3/8			215		115
C6-MGT 6- 80	MGT 6-d- 30	M2 – M6	36	16	110	80	30
	- 70	No.3 – U1/4			150		70
	-100				180		100
-MGT12- 80	MGT12-d- 30	M6 – M12	41	20	110	80	30
	- 70	U1/4 – U7/16			150		70
	-100	P1/8			180		100
-MGT20-100	MGT20-d- 35	M12 – M20	54	30	135	100	35
	- 85	U1/2 – U3/4			185		85
	-115	P1/4 – P3/8			215		115
C8-MGT 6- 80	MGT 6-d- 30	M2 – M6	36	16	110	80	30
	- 70	No.3 – U1/4			150		70
	-100				180		100
-MGT12- 80	MGT12-d- 30	M6 – M12	41	20	110	80	30
	- 70	U1/4 – U7/16			150		70
	-100	P1/8			180		100
-MGT20- 95	MGT20-d- 35	M12 – M20	54	30	130	95	35
	- 85	U1/2 – U3/4			180		85
	-115	P1/4 – P3/8			210		115

1. Tap Holder and wrench are ordered separately.
Rigid tapping function is required on the machine tool.

For TAP HOLDER A 33–A36

For MEGA WRENCH A 32

● Tapping Range for DIN & ISO Standard

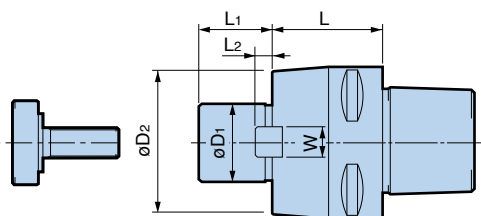
MGT Size	DIN Standard			ISO Standard	
	DIN371	DIN376	DIN353	ISO529	ISO2284
MGT 6	M3 – M6	M5 – M8		M3 – M5	
MGT12	M5 – M8	M8 – M12	1/8	M6,M8,M12	1/8
MGT20	M10	M12 – M20	1/4 – 1/2	M10 – M20	1/4 – 3/8

For detail of TAP HOLDER A 35 · A 36

E

MILLTURN TOOLING

FACE MILL ARBOR Type A

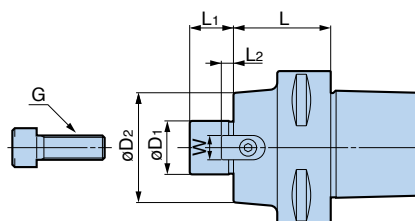


Model	øD1	øD2	L	L1	L2	W	Clamp Bolt	Weight (kg)
C5-FMA25.4 - 40	25.4	50	40	22	5	9.5	MBA-M12	0.9
- 75			75					1.2
C6-FMA25.4 - 40	25.4	50	40	22	5	9.5	MBA-M12	1.4
- 60			60					1.8
- 90			90					2.4
-FMA31.75- 40	31.75	60	40	30	7	12.7	MBA-M16	1.6
- 90			90					2.6
-FMA38.1 - 45	38.1	80	45	34	9	15.9	MBA-M20	2.2
C8-FMA25.4 - 40	25.4	50	40	22	5	9.5	MBA-M12	2.7
- 75			75					3.2
-105			105					3.8
-FMA31.75- 40	31.75	60	40	30	7	12.7	MBA-M16	2.7
- 90			90					4.0
-FMA38.1 - 45	38.1	80	45	34	9	15.9	MBA-M20	3.2

- Standard Clamp Bolt (MBA-M□□) is included.
- To supply coolant through the arbor, Clamping Bolt with a hole through (TMBA-M□□) is required.

For CLAMP BOLT A 43

FACE MILL ARBOR Type C



Model	øD1	øD2	L	L1	L2	W	G	Weight (kg)
C5-FMC16-40	16	32	40	16	5	8	M 8	0.5
-FMC22-40	22	45	40	18	5	10	M10	0.7
C6-FMC16-40	16	32	40	16	5	8	M 8	1.3
-FMC22-40	22	45	40	18	5	10	M10	1.4
-FMC27-45	27	62	45	20	6	12	M12	1.6
C8-FMC16-50	16	32	50	16	5	8	M 8	2.5
-FMC22-50	22	45	50	18	5	10	M10	2.7
-FMC27-50	27	62	50	20	6	12	M12	3.0
-FMC32-50	32	80	50	22	7	14	M16	3.2

- Clamp Bolt (Cap Screw) is included.
- By utilizing a clamping bolt with a hole through, coolant is supplied through the bolt.

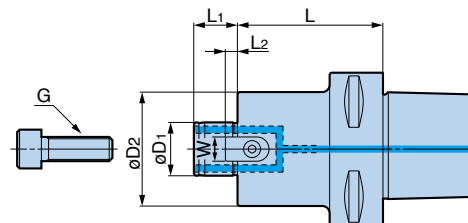
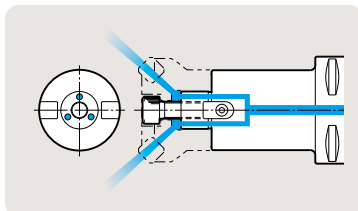
E

MILLTURN TOOLING

FACE MILL ARBOR Type FMH

Coolant-through hole

For cutters that require a coolant hole through the pilot.



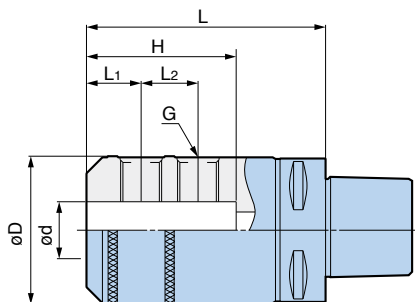
Model	øD1	øD2	L	L1	L2	W	G	Weight (kg)
C5-FMH22 - 47- 45	22	47	45	18	5	10	M10	0.7
			60					0.9
			90					1.4
-FMH22 - 60- 45	22	60	45	18	5	10	M10	0.9
			60					1.1
-FMH27 - 60- 60	27	60	60	20	6	12	M12	1.1
			90					1.6
-FMH25.4 - 70- 45	25.4	70	45	22	5	9.35	M12	1.0
			60					1.2
-FMH31.75- 96- 50	31.75	96	50	30	7	12.55	M16	1.8
C6-FMH22 - 47- 45	22	47	45	18	5	10	M10	1.4
			60					1.6
			90					2.0
			150					2.8
-FMH22 - 60- 45	22	60	45	18	5	10	M10	1.6
			60					2.0
			90					2.6
-FMH27 - 60- 45	27	60	45	20	6	12	M12	1.7
			60					2.0
			90					2.7
			150					3.9
-FMH25.4 - 70- 60	25.4	70	60	22	5	9.35	M12	2.1
			90					2.8
			150					4.2
-FMH31.75- 96- 60	31.75	96	60	30	7	12.55	M16	2.2
C8-FMH22 - 47- 60	22	47	60	18	5	10	M10	2.8
			105					3.4
			150					4.0
			200					4.7
-FMH22 - 60- 60	22	60	60	18	5	10	M10	3.1
			105					4.0
			150					5.0
-FMH27 - 60- 60	27	60	60	20	6	12	M12	3.1
			105					4.1
			150					5.0
			200					6.1
-FMH32 - 96- 75	32	96	75	22	7	14	M16	4.6
			105					6.8
			150					7.5
-FMH25.4 - 70- 60	25.4	70	60	22	5	9.35	M12	3.3
			105					4.6
			150					6.0
-FMH31.75- 96- 75	31.75	96	75	30	7	12.55	M16	4.5
			105					5.1
			150					7.3
-FMH38.1 -100- 75	38.1	100	75	34	9	15.8	MBA-M20H	4.7
			105					5.8

1. Clamp Bolt (Cap Screw) is included.
 2. By utilizing a clamping bolt with a hole through, coolant is supplied through the bolt.

E
MILLTURN TOOLING

SIDE LOCK ENDMILL HOLDER

Coolant-through hole



Model	ød	øD	L	L1	L2	H	G	Weight (kg)
C6-ISL12- 80	12	42	80	22.5	-	50	M12	1.7
-ISL16- 80	16	48	80	24		52	M14	1.8
-ISL20- 80	20	52	80	25		55	M16	1.9
-ISL25-105	25	63.5	105	24	25	60	M18x2	2.9
-ISL32-115	32	72	115	24	28	90	M20x2	3.5
C8-ISL16- 90	16	48	90	24	-	52	M14	3.1
-ISL20- 90	20	52	90	25		55	M16	3.2
-ISL25-105	25	63.5	105	24	25	60	M18x2	4.0
-ISL32-115	32	72	115	24	28	90	M20x2	4.5
-ISL40-125	40	90	125	30	32	90	M20x2	5.8
-ISL42-125	42	90	125	30	32	90	M20x2	5.9
-ISL50-135	50	99.5	135	35	35	90	M24x2	6.8

*SIDE LOCK HOLDER for Drill **E 28**

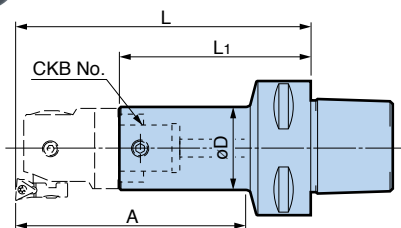
CK BORING SYSTEM

CK SHANK

Coolant-through hole



CKB modular system with BIG CAPTO shank enhances the capability of multi-tasking machines.



1. L and A dimensions on the table are reference figures when EWN Head is mounted.
 (※ indicates figures with EWN150 Head for large diameter. Please note that A-dimension is the distance from the face of the flange to the cutting edge.)

2. Designed to be capable of supplying coolant through the shank.

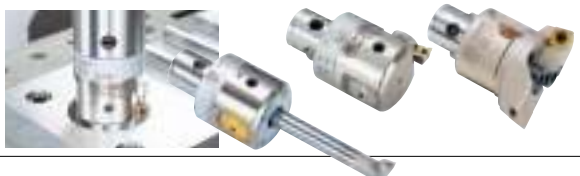
Licensed product from KAISER PRECISION TOOLING LTD. for limited sales territory, Asia and Oceania.

Model	CKB No.	øD	L	L1	A	Weight (kg)
C5-CKB1- 73	1	19	105	72.5	80	0.5
-CKB2- 85	2	24	120	84.5	96	0.6
-CKB3- 55	3	31	95	55	70	0.6
- 80			120	80	95	0.7
-CKB4- 48	4	39	95	48	70	0.6
- 73			120	73	95	0.7
-CKB5- 50	5	50	107	50	87	0.6
- 83			140	83	120	1.3
-CKB6- 50	6	64	121	50	101	1.0
C6-CKB1- 78	1	19	110	77.5	83	1.2
-CKB2- 90	2	24	125	89.5	98	1.3
-CKB3- 65	3	31	105	65	78	1.3
-100			140	100	113	1.5
-CKB4- 58	4	39	105	58	78	1.3
- 93			140	93	113	1.7
-CKB5- 48	5	50	105	48	79	1.3
- 83			140	83	114	1.7
-CKB6- 59	6	64	130	59	108	1.6
- 94			165	94	143	2.3
C8-CKB1-103	1	19	135	102.5	72.5	2.6
-CKB2-115	2	24	150	114.5	105.5	2.7
-CKB3-125	3	31	165	125	130	2.9
-CKB4-118	4	39	165	118	130	3.1
-178			225	178	190	3.7
-CKB5-108	5	50	165	108	130	3.5
-183			240	183	205	4.6
-CKB6- 74	6	64	145	74	110	3.2
-169			240	169	206	5.8
-CKB7- 73	7	90	160※	73	130※	5.0
-123			210※	123	180※	8.4

World's No.1 Modular Boring System

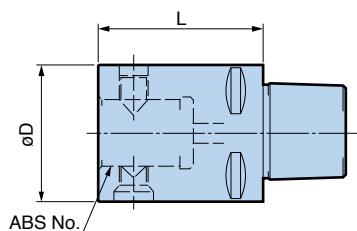
CKB BORING SYSTEM

High accuracy, high rigidity & wide variations.



ABS® SHANK

Coolant-through hole

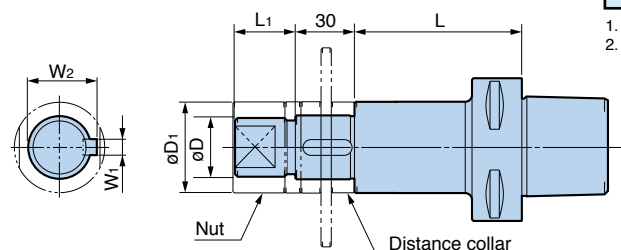


Model	ABS No.	øD	L	Weight (kg)
C5-ABS50- 50	50	50	50	0.7
C6-ABS50- 50	50	50	50	1.4
-ABS63- 63	63	63	60	1.8
C8-ABS50- 50	50	50	50	2.6
-ABS63- 50	63	63	60	2.9
-ABS80- 80	80	80	80	3.7

SIDE CUTTER ARBOR

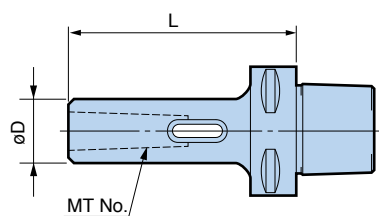


Model	øD	øD1	L	L1	W1	W2	Weight (kg)
C6-SCA25.4 - 75	25.4	40	75	25	6.35	27.78	2.0
-120			120				2.4
-SCA31.75- 75	31.75	46	75	30	7.92	34.92	2.4
C8-SCA25.4 - 90	25.4	40	90	25	6.35	27.78	3.3
-135			135				3.8
-SCA31.75- 90	31.75	46	90	30	7.92	34.92	3.7
-135			135				4.3



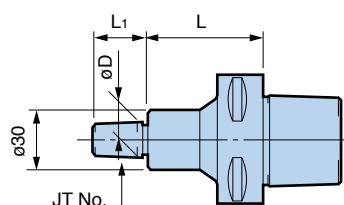
1. Nut is included.
2. Distance collars of 5mm, 8mm, 10mm and 12mm are included.

MORSE TAPER HOLDER



Model	MT No.	øD	L	Weight (kg)
C5-MTA1- 95	1	25	95	0.6
-MTA2-110	2	32	110	0.8
-MTA3-130	3	40	130	1.2
C6-MTA1- 95	1	25	95	1.3
-MTA2-110	2	32	110	1.5
-MTA3-130	3	40	130	1.9
C8-MTA1-105	1	25	105	2.6
-MTA2-120	2	32	120	2.8
-MTA3-140	3	40	140	3.2

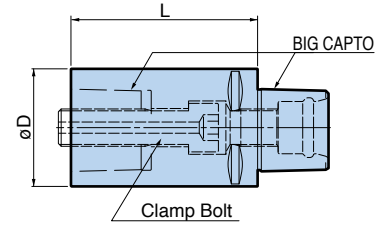
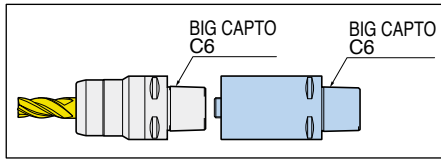
JACOBS TAPER ARBOR



Model	JT No.	øD	L	L1	Weight (kg)
C5-JTA1-40	1	9.754	40	15	0.5
-JTA2-40	2	14.199	40	20	0.5
-JTA6-40	6	17.170	40	24	0.5
C6-JTA1-40	1	9.754	40	15	1.2
-JTA6-40	6	17.170	40	24	1.2
C8-JTA1-50	1	9.754	50	15	2.5
-JTA6-50	6	17.170	50	24	2.5

BIG CAPTO
EXTENSION

Coolant-through hole

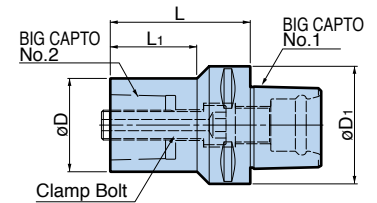
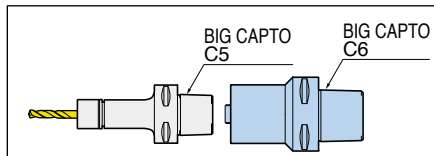


Model	BIG CAPTO	øD	L	Clamp Bolt			Weight (kg)
				Thread Size	Hex.	Tightening Torque	
C6-C6-100	C6	63	100	M20xP2	12mm	170N·m	1.2
C8-C8-100	C8	80					1.7

1. A clamp bolt is included.

BIG CAPTO
REDUCTION

Coolant-through hole

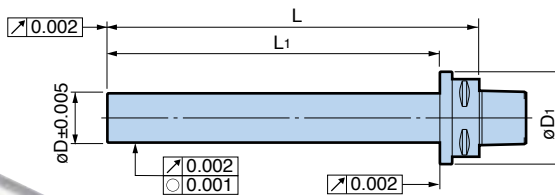


Model	BIG CAPTO No.1	BIG CAPTO No.2	øD	øD1	L	L1	Clamp Bolt			Weight (kg)
							Thread Size	Hex.	Tightening Torque	
C6-C5-75	C6	C5	50	63	75	46	M16xP1.5	12mm	95N·m	0.5
C8-C6-85	C8	C6	63	80	85	50			M20xP2	170N·m

1. A clamp bolt is included.

Test Bar

DYNA TEST

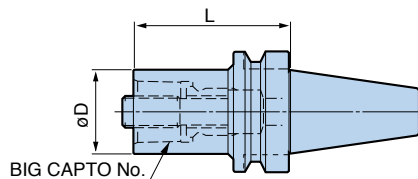


For maintenance of machine tool

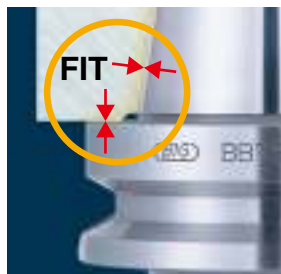
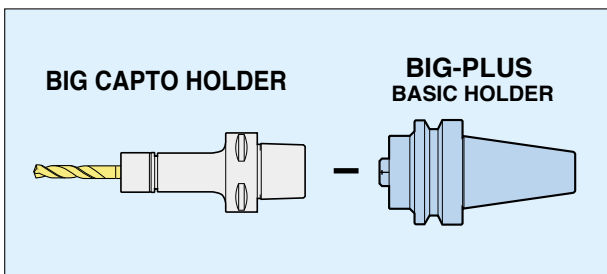
Model	øD	øD1	L	L1
C5-32- 150	32	63	180	150
			245	215
			280	250
C6-40-L150	40	75	182	150
			232	200
			352	320
C8-40-L200	40	85	240	200
			360	320

BIG-PLUS BASIC HOLDER

Coolant-through hole



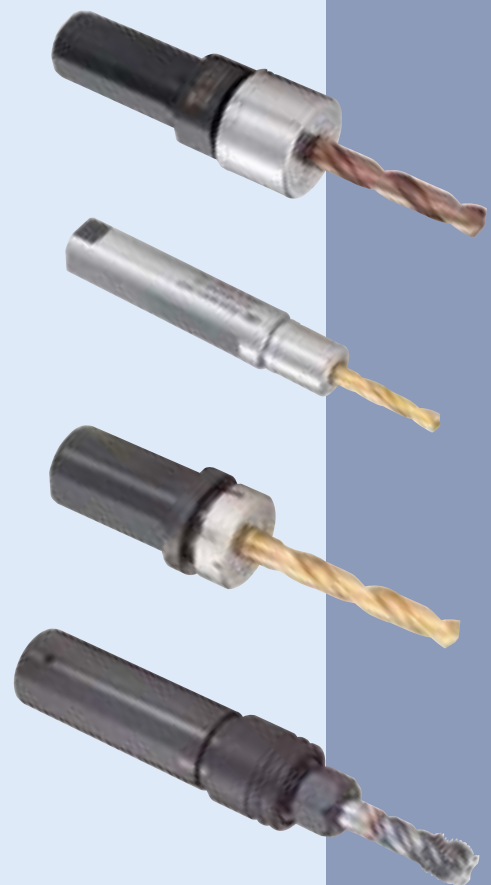
Model	BIG CAPTO	øD	L
BBT40-C3-30	C3	32	30
-C4-40	C4	40	40
-C5-50	C5	50	50
-C6-75	C6	63	75
BBT50-C3-40	C3	32	40
-C4-40	C4	40	
-C5-40	C5	50	
-C6-50	C6	63	
-C8-70	C8	80	



Interchangeable with existing standards. Cost saving dual contact system. BIG-PLUS is a simple Simultaneous Dual Contact Spindle System maintaining interchangeability with existing machines and toolholders.

N/C LATHE TOOLING

NEW BABY CHUCK	F1
MEGA ER GRIP	F3
MEGA MICRO CHUCK	F4
MEGA SYNCHRO Tapping Holder	F4
AUTO TAPPER TYPE B	F5
AUTO TAPPER TYPE R	F5



F

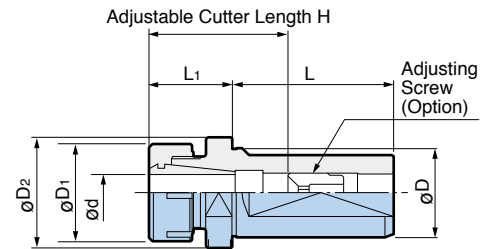
NEW BABY CHUCK

Coolant-through hole

Clamping Range : $\varnothing 2.5 - \varnothing 20$

STOPPER Type

Flange as a stopper enables presetting of the tool away from machine and minimizes downtime. Shank is designed to be directly mounted into the drill holder of turret.



Model	$\varnothing d$	$\varnothing D$	$\varnothing D1$	$\varnothing D2$	L	L1	H
SLS25-NBS13- 30	2.5 - 13	25	35	32	54	30	41 - 60
- 60						60	
SLS32-NBS13- 30	2.5 - 13	32	35	39.5	58	30	41 - 60
- 60						60	
-100						100	
-NBS20- 30	2.5 - 20	40	46	45.5	68	30	48 - 65
- 60						60	
-100						100	
SLS40-NBS13- 30	2.5 - 13	40	35	49.5	68	30	41 - 60
- 60						60	
-100	2.5 - 20	40	46	49.5	68	100	48 - 65
-NBS20- 30						30	
- 60						60	
-100						100	

1. NEW BABY NUT is included.
2. Designed to be capable of supplying coolant through the body.
3. "H" indicates the adjustment length with an Adjusting Screw.

Spare Parts

NEW BABY NUT



Accessories

WRENCH



COLLET

G 3

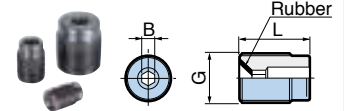


BABY PERFECT SEAL

G 10

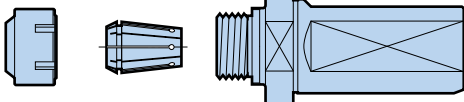


ADJUSTING SCREW



NEW BABY CHUCK	Model	Model	Model	Model	Model	G	L	B
NBS 6	NBN 6	NBK 6	NBC 6-□	BPS 6-□	NBA 6B	M 7	12	2
NBS 8	NBN 8	NBK 8	NBC 8-□	BPS 8-□	NBA 8B	M 9	13	2.5
NBS10	NBN10	NBK10	NBC10-□	BPS10-□	NBA10B	M11	16	3
NBS13	NBN13	NBK13	NBC13-□	BPS13-□	NBA13B	M14	20	4
NBS16	NBN16	NBK16	NBC16-□	BPS16-□	NBA16B	M18	20	4
NBS20	NBN20	NBK20	NBC20-□	BPS20-□	NBA20B	M21	20	4

For applications using the sealed collet nut BABY PERFECT SEAL, please order nut-less version of the NEW BABY CHUCK body by adding "NL" after each model number.



BPS13-03035 NBC13-3AA SLS32-NBS13-30/NL



G 10

Order Example

NEW BABY CHUCK model + NL
SLS32-NBS13-30 / NL
(Nut is not included)

SL20-NBS13-40 / NL
(Nut is not included)

+

BABY PERFECT SEAL model
BPS13-03035

STANDARD Type

Versatile as a basic holder for drills, taps, reamers and small tool bits.

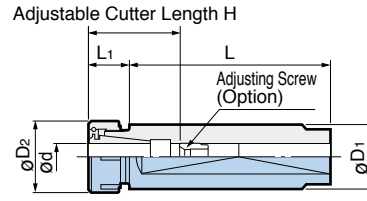


Fig. 1

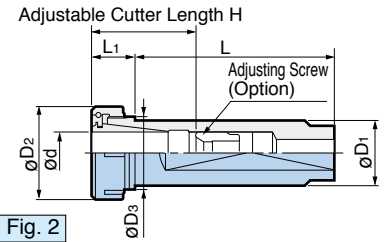


Fig. 2

Model	fig	ød	øD1	øD2	øD3	L	L1	H	
SL16 -NBS 6- 40 - 80	1	0.25 - 6	16	20	-	40	15	20 - 40	
				80					
		0.5 - 8		25	40	16.5	23 - 42		
-NBS 8- 40 - 80	2	1.5 - 10	-	30	21	40	37	35 - 45	
				80					
				-NBS10- 40	80	18	35 - 45		
SL20 -NBS 6- 40 - 80	1	0.25 - 6	20	20	-	40	15	20 - 40	
				80					
		0.5 - 8		25	40	16.5	23 - 42		
	-NBS 8- 40 - 80	2		1.5 - 10	30	21	40	18	35 - 45
					80				
					-NBS13- 40	80	43	41 - 60	
-NBS13- 40 - 80	1	0.25 - 6	22	20	-	40	15	20 - 40	
				80					
		0.5 - 8		25	40	16.5	23 - 42		
	-NBS 8- 40 - 80	2		1.5 - 10	30	26	40	18	35 - 45
					80				
					-NBS10- 40	80	21.5	41 - 60	
SL22 -NBS 6- 40 - 80	1	0.25 - 6	25	20	-	80	15	20 - 40	
				120					
		0.5 - 8		25	80	16.5	23 - 42		
	-NBS 8- 80 -120	2		1.5 - 10	30	26	80	18	35 - 45
					120				
					-NBS13- 80	80	21.5	41 - 60	
-NBS13- 80 -120	1	0.25 - 6	25.4	20	-	80	15	20 - 40	
				120					
		0.5 - 8		25	80	16.5	23 - 42		
	-NBS 8- 80 -120	2		1.5 - 10	30	26	80	18	35 - 45
					120				
					-NBS13- 80	80	21.5	41 - 50	
-NBS13- 80 -120	1	0.25 - 6	32	20	-	100	21.5	41 - 60	
				120					
		0.5 - 8		25	100	16.5	23 - 42		
	-NBS 8- 80 -120	2		1.5 - 10	30	36	100	48	45 - 65
					120				
					-NBS16- 80	100	48	45 - 65	
-NBS16- 80 -120	1	0.25 - 6	32	20	-	150	21.5	45 - 65	
				120					
		0.5 - 8		25	150	16.5	23 - 42		
	-NBS 8- 80 -120	2		1.5 - 10	30	36	150	48	48 - 65
					120				
					-NBS20-100	150	48	48 - 65	
SL25.4-NBS 6- 80 -120	1	0.25 - 6	32	20	-	100	21.5	41 - 60	
				120					
		0.5 - 8		25	100	16.5	23 - 42		
-NBS 8- 80 -120	2	1.5 - 10		30	36	100	48	48 - 65	
				120					
				-NBS13- 80	100	48	48 - 65		
-NBS13- 80 -120	1	0.25 - 6	32	20	-	150	21.5	45 - 65	
				120					
		0.5 - 8		25	150	16.5	23 - 42		
	-NBS 8- 80 -120	2		1.5 - 10	30	36	150	48	48 - 65
					120				
					-NBS20-100	150	48	48 - 65	
-NBS20-100 -150	2	2.5 - 20	32	46	36	150	48	48 - 65	
				150					

1. NEW BABY NUT is included.
 2. Designed to be capable of supplying coolant through the body.
 3. "H" indicates the adjustment length with an Adjusting Screw.

MEGA ER GRIP

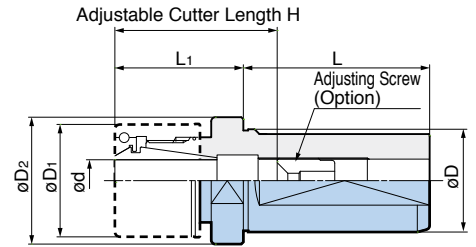
STOPPER Type



Coolant-through hole

Clamping Range : $\phi 2.75 - \phi 20$

High precision components outperform standard ER collet system.



Model	ϕd	ϕD	ϕD_1	ϕD_2	L	L ₁	H	Adjusting Screw
SLS25-MEGA ER20-45/NL	2.75 - 13	25	35	32	54	45	42 - 62	NBA13B
-75/NL						75		
SLS32-MEGA ER20-45/NL	2.75 - 13	32	35	39.5	58	45	42 - 62	NBA13B
-75/NL						75		
-MEGA ER32-45/NL	2.75 - 20		50	50		45	47 - 68	NBA20B
-75/NL						75	50 - 68	
SLS40-MEGA ER20-45/NL	2.75 - 13	40	35	49.5	68	45	42 - 62	NBA13B
-75/NL						75		
-MEGA ER32-45/NL	2.75 - 20		50	50		45	50 - 68	NBA20B
-75/NL						75		

- Nut is not included. Refer to the "Accessories" table below and select the suitable nut according to applications.
- Designed to be capable of supplying coolant through the body.
- "H" indicates the adjustment length with an Adjusting Screw.

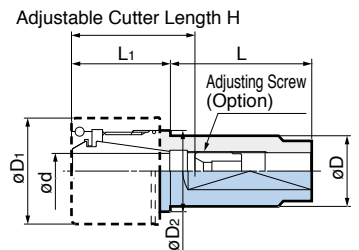
STANDARD Type



Coolant-through hole

Clamping Range : $\phi 1.9 - \phi 16$

Flat is provided on the shank to be mounted in the tool post of the NC lathe directly.



Model	ϕd	ϕD	ϕD_1	ϕD_2	L	L ₁	H	Adjusting Screw
SL16-MEGA ER11- 40/NL	2.75 - 6	16	19	-	40	19	23 - 40	NBA 6B
- 80/NL					80			
SL20-MEGA ER11- 40/NL	2.75 - 6	20	19	-	40	19	23 - 40	NBA 6B
- 80/NL					80			
-MEGA ER16- 40/NL	1.9 - 10	20	30	23	40	28	35 - 47	NBA10B
- 80/NL					80			
SL25-MEGA ER11- 60/NL	2.75 - 6	25	19	-	60	19	23 - 40	NBA 6B
-100/NL					100			
-MEGA ER16- 60/NL	1.9 - 10	25	30	-	60	28	35 - 47	NBA10B
-100/NL					100			
-MEGA ER20- 60/NL	2.75 - 13	25	35	27	60	30	42 - 62	NBA13B
-100/NL					100			
-MEGA ER25- 60/NL	2.75 - 16	25	42	33.5	60	48	44 - 67	NBA16B
-100/NL					100			
SL19.05-MEGA ER11- 40/NL	2.75 - 6	19.05	19	-	40	19	23 - 40	NBA 6B
- 80/NL					80			
-MEGA ER16- 40/NL	1.9 - 10	19.05	30	23	40	28	35 - 47	NBA10B
- 80/NL					80			

- Nut is not included. Refer to the "Accessories" table below and select the suitable nut according to applications.
- Designed to be capable of supplying coolant through the body.
- "H" indicates the adjustment length with an Adjusting Screw.

Accessories

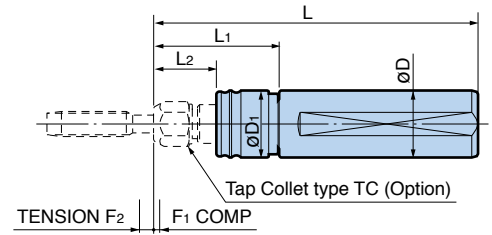
	MEGA ER NUT	MEGA ER PERFECT SEAL	MEGA WRENCH	ER NUT	C-SPANNER	ADJUSTING SCREW			
MEGA ER GRIP	Model	Model	Model	Model	Model	Model	G	L	B
MEGA ER11	-	-	-	ERN11	NBK 6	NBA6B	M 7	12	2
MEGA ER16	MERN16	MERPS16-□	MGR30L	ERN16	NBK10	NBA10B	M11	16	3
MEGA ER20	MERN20	MERPS20-□	MGR35L	ERN20	NBK13	NBA13B	M14	20	4
MEGA ER25	MERN25	MERPS25-□	MGR42L	ERN25	NBK16	NBA16B	M18	20	4
MEGA ER32	MERN32	MERPS32-□	MGR50L	ERN32	FK45-50L	NBA20B	M21	20	4

AUTO TAPPER TYPE B

Tapping Range: M3 - M20



Ideal for blind-hole or pipe tapping with depth control.
Designed with minimum projection to clear space limitation on turret.



Model	Max. Tap Size	øD	øD1	L	L1	L2	F1	F2	Tap Collet Model
SLS25-ATB 8- 45	M3 – M 8	25	25.5	130	45	17	0.5	3	TC 8-d
SLS32-ATB12- 60	M3 – M12	32	32	155	60	30		4	TC12-d
SLS40-ATB12- 60		32	32	155	60	25		4	TC12-d
-ATB20- 70	M8 – M20	40	44	180	70	70		5	TC20-d

1. Tap Collet type TC is ordered separately.
2. Not available for left-hand threading.
3. F2 in the table is tension amount to reach neutral position.

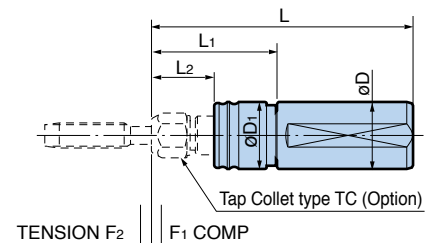
F1: Compression
F2: Tension

SYNCHRO TAPPING HOLDER TYPE R

Tapping Range: M3 - M20



Radial float eliminates misalignment of center between machine spindle and tap.
Small axial float compensates for synchronization errors and minimizes thrust loads on a tap.



Radial float = ±0.5mm/ø

Model	Max. Tap Size	øD	øD1	L	L1	L2	F1	F2	Tap Collet Model
SLS32-ATS12R- 60	M3 – M12	32	32	125	60	30	0.5	0.5	TC12-d
SLS40-ATS12R- 60		32	32	125	60	25	0.5	0.5	TC12-d
-ATS20R- 70	M8 – M20	40	44	145	70	70	0.5	0.5	TC20-d

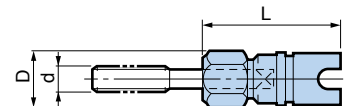
1. Tap Collet type TC is ordered separately.

F1: Compression
F2: Tension

Rigid tapping function is required on the machine tool.

TAP COLLET

(For Synchro Tapping Holder Type R & Auto Tapper Type B)



Model	Tapping Range d			D	L	Tapping Attachment
	Metric	Unify	Pipe			
TC 8-d	M 3 – M 4	No. 5 – No.8	–	15.8	40.5	ATB 8
	M 5 – M 8	No.10 – U5/16	–			
TC12-d	M 3 – M12	No. 5 – U1/2	P1/8	22	55	ATB12 , ATS12R
	M 8 – M12	U3/8 – U1/2	P1/8			
TC20-d	M 8 – M20	U9/16 – U3/4	P1/4 , P3/8	31	63	ATB20 , ATS20R
	M14 – M20	U9/16 – U3/4	P1/4 , P3/8			

Specify the tap size when ordering. <Order example> For M3: TC12-M3

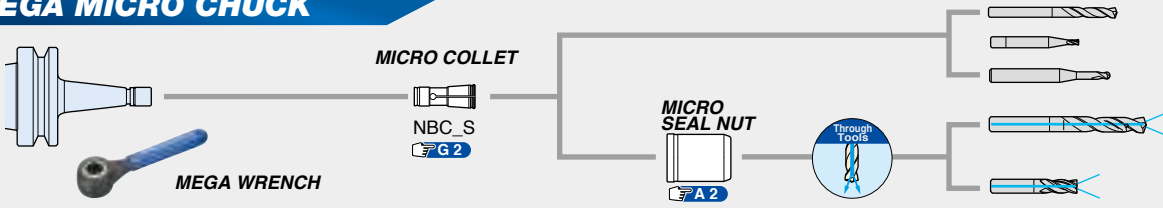
ACCESSORIES

MICRO COLLET	G2
NEW BABY COLLET(NBC / NBC-E / FONBC)	G3
COLLET EJECTOR / REMOVER	G8
PERFECT SEAL(MPS / BPS / EPS)	G9
MEGA E COLLET	G11
TORQUE WRENCH	G12
MEGA ER COLLET	G13
MEGA ER PERFECT SEAL	G14
STRAIGHT COLLET for HMC & HDC	G15
TOOLING MATE	G17
HOLDER LOCK	G17
KOMBI GRIP	G18
ST LOCK	G18
CLEANER SERIES	G19
CLEAN TEC	G21
T-SLOT CLEAN	G22

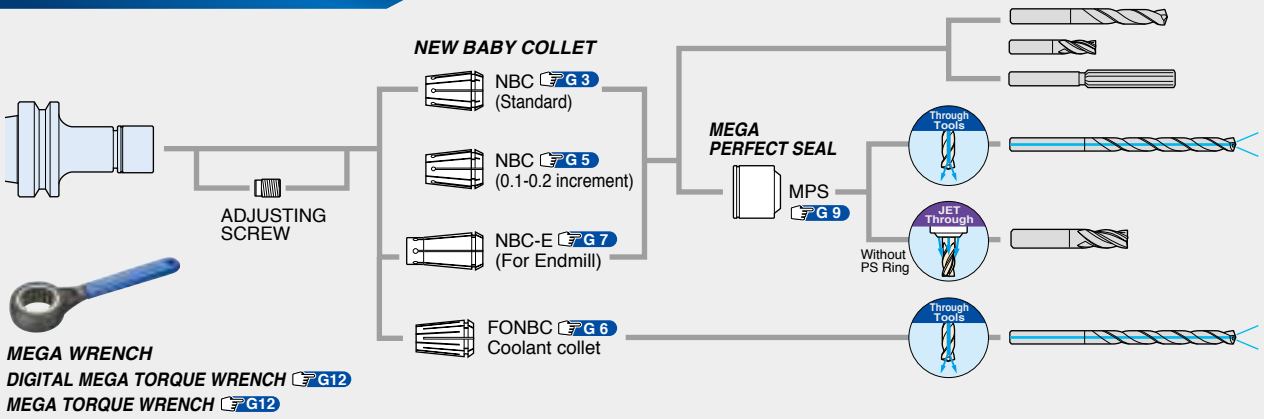


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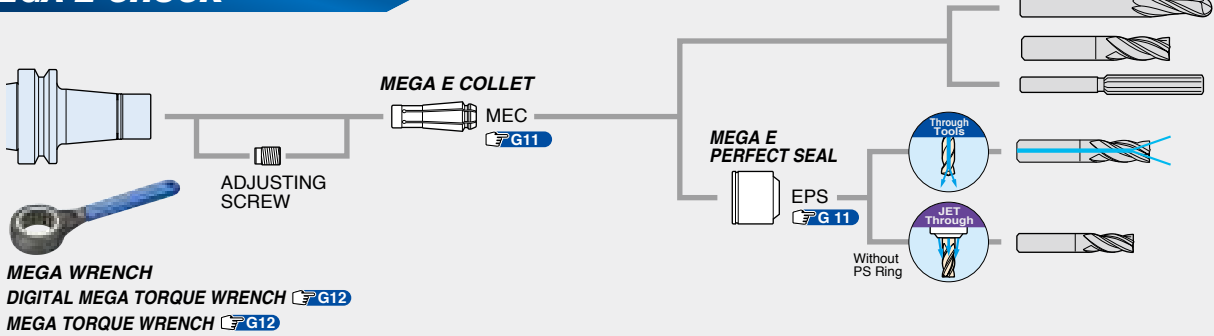
MEGA MICRO CHUCK



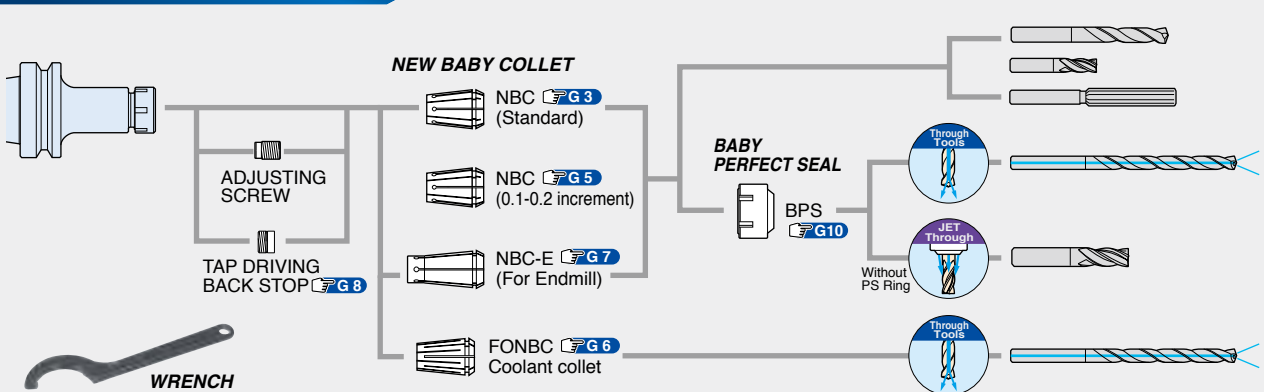
MEGA NEW BABY CHUCK



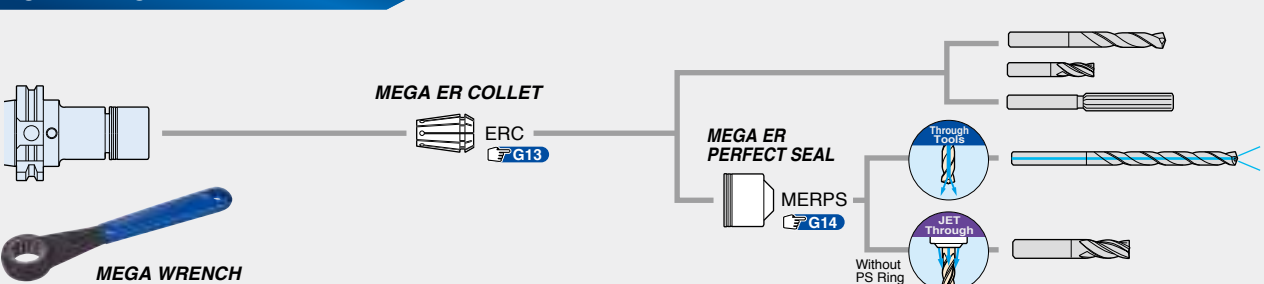
MEGA E CHUCK



NEW BABY CHUCK

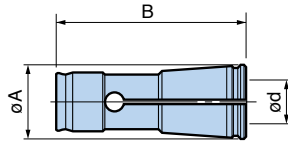


MEGA ER GRIP



MICRO COLLET For MEGA MICRO CHUCK

Available in 0.1mm diameter increments to suit all the cutting tool shank sizes with maximum accuracy. Despite their compact size, high clamping force and accuracy are achieved.



Collet concentricity

	Collet Class	Max. Runout	
		At nose	At end of test bar
	AA	Within 1µm	Within 3µm

MEGA3S	
Collet Model	Clamping Range ϕd
NBC3S-0.5 AA	0.45 - 0.55
-0.6 AA	0.55 - 0.65
-0.7 AA	0.65 - 0.75
-0.8 AA	0.75 - 0.85
-0.9 AA	0.85 - 0.95
-1.0 AA	0.95 - 1.05
-1.1 AA	1.05 - 1.15
-1.2 AA	1.15 - 1.25
-1.3 AA	1.25 - 1.35
-1.4 AA	1.35 - 1.45
-1.5 AA	1.45 - 1.55
-1.6 AA	1.55 - 1.65
-1.7 AA	1.65 - 1.75
-1.8 AA	1.75 - 1.85
-1.9 AA	1.85 - 1.95
-2.0 AA	1.95 - 2.05
-2.1 AA	2.05 - 2.15
-2.2 AA	2.15 - 2.25
-2.3 AA	2.25 - 2.35
-2.4 AA	2.35 - 2.45
-2.5 AA	2.45 - 2.55
-2.6 AA	2.55 - 2.65
-2.7 AA	2.65 - 2.75
-2.8 AA	2.75 - 2.85
-2.9 AA	2.85 - 2.95
-3.0 AA	2.95 - 3.05
-3.1 AA	3.05 - 3.15
-3.175 AA	3.125 - 3.225
-3.2 AA	3.15 - 3.25

$\phi A=6.06$ $B=18.8$

MEGA4S	
Collet Model	Clamping Range ϕd
NBC4S-0.5 AA	0.45 - 0.55
-0.6 AA	0.55 - 0.65
-0.7 AA	0.65 - 0.75
-0.8 AA	0.75 - 0.85
-0.9 AA	0.85 - 0.95
-1.0 AA	0.95 - 1.05
-1.1 AA	1.05 - 1.15
-1.2 AA	1.15 - 1.25
-1.3 AA	1.25 - 1.35
-1.4 AA	1.35 - 1.45
-1.5 AA	1.45 - 1.55
-1.6 AA	1.55 - 1.65
-1.7 AA	1.65 - 1.75
-1.8 AA	1.75 - 1.85
-1.9 AA	1.85 - 1.95
-2.0 AA	1.95 - 2.05
-2.1 AA	2.05 - 2.15
-2.2 AA	2.15 - 2.25
-2.3 AA	2.25 - 2.35
-2.4 AA	2.35 - 2.45
-2.5 AA	2.45 - 2.55
-2.6 AA	2.55 - 2.65
-2.7 AA	2.65 - 2.75
-2.8 AA	2.75 - 2.85
-2.9 AA	2.85 - 2.95
-3.0 AA	2.95 - 3.05
-3.1 AA	3.05 - 3.15
-3.175 AA	3.125 - 3.225
-3.2 AA	3.15 - 3.25
-3.3 AA	3.25 - 3.35
-3.4 AA	3.35 - 3.45
-3.5 AA	3.45 - 3.55
-3.6 AA	3.55 - 3.65
-3.7 AA	3.65 - 3.75
-3.8 AA	3.75 - 3.85
-3.9 AA	3.85 - 3.95
-4.0 AA	3.95 - 4.05

$\phi A=7.4$ $B=22.5$

MEGA6S			
Collet Model	Clamping Range ϕd	Collet Model	Clamping Range ϕd
NBC6S-0.5 AA	0.45 - 0.55	NBC6S-4.1 AA	4.05 - 4.15
-0.6 AA	0.55 - 0.65	-4.2 AA	4.15 - 4.25
-0.7 AA	0.65 - 0.75	-4.3 AA	4.25 - 4.35
-0.8 AA	0.75 - 0.85	-4.4 AA	4.35 - 4.45
-0.9 AA	0.85 - 0.95	-4.5 AA	4.45 - 4.55
-1.0 AA	0.95 - 1.05	-4.6 AA	4.55 - 4.65
-1.1 AA	1.05 - 1.15	-4.7 AA	4.65 - 4.75
-1.2 AA	1.15 - 1.25	-4.7625 AA	4.7125 - 4.8125
-1.3 AA	1.25 - 1.35	-4.8 AA	4.75 - 4.85
-1.4 AA	1.35 - 1.45	-4.9 AA	4.85 - 4.95
-1.5 AA	1.45 - 1.55	-5.0 AA	4.95 - 5.05
-1.6 AA	1.55 - 1.65	-5.1 AA	5.05 - 5.15
-1.7 AA	1.65 - 1.75	-5.2 AA	5.15 - 5.25
-1.8 AA	1.75 - 1.85	-5.3 AA	5.25 - 5.35
-1.9 AA	1.85 - 1.95	-5.4 AA	5.35 - 5.45
-2.0 AA	1.95 - 2.05	-5.5 AA	5.45 - 5.55
-2.1 AA	2.05 - 2.15	-5.6 AA	5.55 - 5.65
-2.2 AA	2.15 - 2.25	-5.7 AA	5.65 - 5.75
-2.3 AA	2.25 - 2.35	-5.8 AA	5.75 - 5.85
-2.4 AA	2.35 - 2.45	-5.9 AA	5.85 - 5.95
-2.5 AA	2.45 - 2.55	-6.0 AA	5.95 - 6.05
-2.6 AA	2.55 - 2.65		
-2.7 AA	2.65 - 2.75		
-2.8 AA	2.75 - 2.85		
-2.9 AA	2.85 - 2.95		
-3.0 AA	2.95 - 3.05		
-3.1 AA	3.05 - 3.15		
-3.175 AA	3.125 - 3.225		
-3.2 AA	3.15 - 3.25		
-3.3 AA	3.25 - 3.35		
-3.4 AA	3.35 - 3.45		
-3.5 AA	3.45 - 3.55		
-3.6 AA	3.55 - 3.65		
-3.7 AA	3.65 - 3.75		
-3.8 AA	3.75 - 3.85		
-3.9 AA	3.85 - 3.95		
-4.0 AA	3.95 - 4.05		

$\phi A=9.4$ $B=24.5$

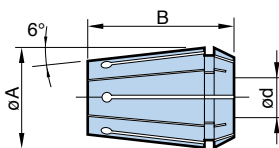
MEGA8S							
Collet Model	Clamping Range ϕd	Collet Model	Clamping Range ϕd	Collet Model	Clamping Range ϕd	Collet Model	Clamping Range ϕd
NBC8S-3.0 AA	2.95 - 3.05	NBC8S-4.4 AA	4.35 - 4.45	NBC8S-5.8 AA	5.75 - 5.85	NBC8S-7.2 AA	7.15 - 7.25
-3.1 AA	3.05 - 3.15	-4.5 AA	4.45 - 4.55	-5.9 AA	5.85 - 5.95	-7.3 AA	7.25 - 7.35
-3.2 AA	3.15 - 3.25	-4.6 AA	4.55 - 4.65	-6.0 AA	5.95 - 6.05	-7.4 AA	7.35 - 7.45
-3.3 AA	3.25 - 3.35	-4.7 AA	4.65 - 4.75	-6.1 AA	6.05 - 6.15	-7.5 AA	7.45 - 7.55
-3.4 AA	3.35 - 3.45	-4.8 AA	4.75 - 4.85	-6.2 AA	6.15 - 6.25	-7.6 AA	7.55 - 7.65
-3.5 AA	3.45 - 3.55	-4.9 AA	4.85 - 4.95	-6.3 AA	6.25 - 6.35	-7.7 AA	7.65 - 7.75
-3.6 AA	3.55 - 3.65	-5.0 AA	4.95 - 5.05	-6.4 AA	6.35 - 6.45	-7.8 AA	7.75 - 7.85
-3.7 AA	3.65 - 3.75	-5.1 AA	5.05 - 5.15	-6.5 AA	6.45 - 6.55	-7.9 AA	7.85 - 7.95
-3.8 AA	3.75 - 3.85	-5.2 AA	5.15 - 5.25	-6.6 AA	6.55 - 6.65	-8.0 AA	7.95 - 8.05
-3.9 AA	3.85 - 3.95	-5.3 AA	5.25 - 5.35	-6.7 AA	6.65 - 6.75		
-4.0 AA	3.95 - 4.05	-5.4 AA	5.35 - 5.45	-6.8 AA	6.75 - 6.85		
-4.1 AA	4.05 - 4.15	-5.5 AA	5.45 - 5.55	-6.9 AA	6.85 - 6.95		
-4.2 AA	4.15 - 4.25	-5.6 AA	5.55 - 5.65	-7.0 AA	6.95 - 7.05		
-4.3 AA	4.25 - 4.35	-5.7 AA	5.65 - 5.75	-7.1 AA	7.05 - 7.15		

$\phi A=12$ $B=27$

NEW BABY COLLET For MEGA NEW BABY CHUCK, NEW BABY CHUCK

STANDARD Type

Refer to page G5 for Collapsibility 0.1 & 0.2 mm/ø Type.



Collet concentricity

Collet Class	Max. Runout	
	At nose	At end of test bar
AA	Within 1µm	Within 3µm

Clamping diameter: ø0.25 - ø20.0

Collapsibility 0.1 & 0.2 mm/ø Type are also available in the range shown with . Refer to page G5.

Collapsibility 0.25/ø
 Collapsibility 0.5/ø

MEGA6N / NBS6	
Collet Model	Clamping Range
NBC6-0.5 AA	0.25 - 0.50
• -0.75AA	0.50 - 0.75
• -1 AA	0.75 - 1.00
• -1.25AA	1.00 - 1.25
• -1.5 AA	1.25 - 1.50
• -1.75AA	1.50 - 1.75
• -2 AA	1.75 - 2.00
• -2.25AA	2.00 - 2.25
• -2.5 AA	2.25 - 2.50
• -2.75AA	2.50 - 2.75
• -3 AA	2.75 - 3.00
• -3.175AA	2.925 - 3.175
• -3.25AA	3.00 - 3.25
• -3.5 AA	3.25 - 3.50
• -3.75AA	3.50 - 3.75
• -4 AA	3.75 - 4.00
• -4.25AA	4.00 - 4.25
• -4.5 AA	4.25 - 4.50
• -4.75AA	4.50 - 4.75
• -5 AA	4.75 - 5.00
• -5.25AA	5.00 - 5.25
• -5.5 AA	5.25 - 5.50
• -5.75AA	5.50 - 5.75
• -6 AA	5.75 - 6.00

øA=9.5 B=14

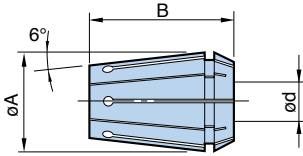
MEGA8N / NBS8	
Collet Model	Clamping Range
• NBC8-0.75AA	0.5 - 0.75
• -1 AA	0.75 - 1.0
• -1.25AA	1.0 - 1.25
• -1.5 AA	1.25 - 1.5
• -1.75AA	1.5 - 1.75
• -2 AA	1.75 - 2.0
• -2.25AA	2.0 - 2.25
• -2.5 AA	2.25 - 2.5
• -2.75AA	2.5 - 2.75
• -3 AA	2.75 - 3.0
• -3.175AA	2.675 - 3.175
• -3.5 AA	3.0 - 3.5
• -4 AA	3.5 - 4.0
• -4.5 AA	4.0 - 4.5
• -5 AA	4.5 - 5.0
• -5.25AA	4.75 - 5.25
• -5.5 AA	5.0 - 5.5
• -5.75AA	5.25 - 5.75
• -6 AA	5.5 - 6.0
• -6.5 AA	6.0 - 6.5
• -7 AA	6.5 - 7.0
• -7.5 AA	7.0 - 7.5
• -8 AA	7.5 - 8.0

øA=12.5 B=18

MEGA10N / NBS10	
Collet Model	Clamping Range
• NBC10- 1.75AA	1.5 - 1.75
• - 2 AA	1.75 - 2.0
• - 2.25AA	2.0 - 2.25
• - 2.5 AA	2.25 - 2.5
• - 2.75AA	2.5 - 2.75
• - 3 AA	2.75 - 3.0
• - 3.175AA	2.675 - 3.175
• - 3.25AA	2.75 - 3.25
• - 3.5 AA	3.0 - 3.5
• - 3.75AA	3.25 - 3.75
• - 4 AA	3.5 - 4.0
• - 4.25AA	3.75 - 4.25
• - 4.5 AA	4.0 - 4.5
• - 4.75AA	4.25 - 4.75
• - 5 AA	4.5 - 5.0
• - 5.25AA	4.75 - 5.25
• - 5.5 AA	5.0 - 5.5
• - 5.75AA	5.25 - 5.75
• - 6 AA	5.5 - 6.0
• - 6.5 AA	6.0 - 6.5
• - 7 AA	6.5 - 7.0
• - 7.5 AA	7.0 - 7.5
• - 8 AA	7.5 - 8.0
• - 8.5 AA	8.0 - 8.5
• - 9 AA	8.5 - 9.0
• - 9.5 AA	9.0 - 9.5
• -10 AA	9.5 - 10.0

øA=16.5 B=27

For NEW BABY COLLET SET G 7



Clamping diameter: $\varnothing 2.5 - \varnothing 20.0$

Collapsibility 0.5/ø

MEGA13N / NBS13	
Collet Model	Clamping Range
● NBC13- 3 AA	2.5 – 3.0
- 3.175AA	2.675 – 3.175
- 3.25AA	2.75 – 3.25
● - 3.5 AA	3.0 – 3.5
- 3.75AA	3.25 – 3.75
● - 4 AA	3.5 – 4.0
- 4.25AA	3.75 – 4.25
● - 4.5 AA	4.0 – 4.5
- 4.75AA	4.25 – 4.75
● - 5 AA	4.5 – 5.0
- 5.25AA	4.75 – 5.25
● - 5.5 AA	5.0 – 5.5
- 5.75AA	5.25 – 5.75
● - 6 AA	5.5 – 6.0
● - 6.5 AA	6.0 – 6.5
● - 7 AA	6.5 – 7.0
● - 7.5 AA	7.0 – 7.5
● - 8 AA	7.5 – 8.0
● - 8.5 AA	8.0 – 8.5
● - 9 AA	8.5 – 9.0
● - 9.5 AA	9.0 – 9.5
● -10 AA	9.5 – 10.0
● -10.5 AA	10.0 – 10.5
● -11 AA	10.5 – 11.0
● -11.5 AA	11.0 – 11.5
● -12 AA	11.5 – 12.0
● -12.5 AA	12.0 – 12.5
● -13 AA	12.5 – 13.0

øA=20.5 B=31

MEGA16N / NBS16	
Collet Model	Clamping Range
● NBC16- 3 AA	2.5 – 3.0
- 3.25AA	2.75 – 3.25
● - 3.5 AA	3.0 – 3.5
- 3.75AA	3.25 – 3.75
● - 4 AA	3.5 – 4.0
- 4.25AA	3.75 – 4.25
● - 4.5 AA	4.0 – 4.5
- 4.75AA	4.25 – 4.75
● - 5 AA	4.5 – 5.0
- 5.25AA	4.75 – 5.25
● - 5.5 AA	5.0 – 5.5
- 5.75AA	5.25 – 5.75
● - 6 AA	5.5 – 6.0
● - 6.5 AA	6.0 – 6.5
● - 7 AA	6.5 – 7.0
● - 7.5 AA	7.0 – 7.5
● - 8 AA	7.5 – 8.0
● - 8.5 AA	8.0 – 8.5
● - 9 AA	8.5 – 9.0
● - 9.5 AA	9.0 – 9.5
● -10 AA	9.5 – 10.0
● -10.5 AA	10.0 – 10.5
● -11 AA	10.5 – 11.0
● -11.5 AA	11.0 – 11.5
● -12 AA	11.5 – 12.0
● -12.5 AA	12.0 – 12.5
● -13 AA	12.5 – 13.0
● -13.5 AA	13.0 – 13.5
● -14 AA	13.5 – 14.0
● -14.5 AA	14.0 – 14.5
● -15 AA	14.5 – 15.0
● -15.5 AA	15.0 – 15.5
● -16 AA	15.5 – 16.0

øA=25.5 B=35

MEGA20N / NBS20	
Collet Model	Clamping Range
● NBC20- 3 AA	2.5 – 3.0
- 3.25AA	2.75 – 3.25
● - 3.5 AA	3.0 – 3.5
- 3.75AA	3.25 – 3.75
● - 4 AA	3.5 – 4.0
- 4.25AA	3.75 – 4.25
● - 4.5 AA	4.0 – 4.5
- 4.75AA	4.25 – 4.75
● - 5 AA	4.5 – 5.0
- 5.25AA	4.75 – 5.25
● - 5.5 AA	5.0 – 5.5
- 5.75AA	5.25 – 5.75
● - 6 AA	5.5 – 6.0
● - 6.5 AA	6.0 – 6.5
● - 7 AA	6.5 – 7.0
● - 7.5 AA	7.0 – 7.5
● - 8 AA	7.5 – 8.0
● - 8.5 AA	8.0 – 8.5
● - 9 AA	8.5 – 9.0
● - 9.5 AA	9.0 – 9.5
● -10 AA	9.5 – 10.0
● -10.5 AA	10.0 – 10.5
● -11 AA	10.5 – 11.0
● -11.5 AA	11.0 – 11.5
● -12 AA	11.5 – 12.0
● -12.5 AA	12.0 – 12.5
● -13 AA	12.5 – 13.0
● -13.5 AA	13.0 – 13.5
● -14 AA	13.5 – 14.0
● -14.5 AA	14.0 – 14.5
● -15 AA	14.5 – 15.0
● -15.5 AA	15.0 – 15.5
● -16 AA	15.5 – 16.0
● -16.5 AA	16.0 – 16.5
● -17 AA	16.5 – 17.0
● -17.5 AA	17.0 – 17.5
● -18 AA	17.5 – 18.0
● -18.5 AA	18.0 – 18.5
● -19 AA	18.5 – 19.0
● -19.5 AA	19.0 – 19.5
● -20 AA	19.5 – 20.0

øA= 28.5 B=38

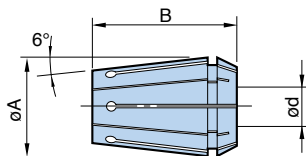
NEW BABY COLLET For MEGA NEW BABY CHUCK, NEW BABY CHUCK

Collapsibility 0.1 & 0.2mm/ø Type

(NBC6, NBC8, NBC10)



0.1 or 0.2mm increments



Clamping diameter: $\varnothing 0.4 -$

Collapsibility 0.1/ø (light blue) Collapsibility 0.2/ø (light yellow)

Collet concentricity

Collet Class	Max. Runout	
	At nose	At end of test bar
AA	Within 1µm	Within 3µm

MEGA6N / NBS6			
Collet Model	Clamping Range	Collet Model	Clamping Range
NBC6-0.50AA	0.4 – 0.5	NBC6-4.10AA	4.0 – 4.1
-0.60AA	0.5 – 0.6	-4.20AA	4.1 – 4.2
-0.70AA	0.6 – 0.7	-4.30AA	4.2 – 4.3
-0.80AA	0.7 – 0.8	-4.40AA	4.3 – 4.4
-0.90AA	0.8 – 0.9	-4.50AA	4.4 – 4.5
-1.00AA	0.9 – 1.0	-4.60AA	4.5 – 4.6
-1.10AA	1.0 – 1.1	-4.70AA	4.6 – 4.7
-1.20AA	1.1 – 1.2	-4.80AA	4.7 – 4.8
-1.30AA	1.2 – 1.3	-4.90AA	4.8 – 4.9
-1.40AA	1.3 – 1.4	-5.00AA	4.9 – 5.0
-1.50AA	1.4 – 1.5	-5.10AA	5.0 – 5.1
-1.60AA	1.5 – 1.6	-5.20AA	5.1 – 5.2
-1.70AA	1.6 – 1.7	-5.30AA	5.2 – 5.3
-1.80AA	1.7 – 1.8	-5.40AA	5.3 – 5.4
-1.90AA	1.8 – 1.9	-5.50AA	5.4 – 5.5
-2.00AA	1.9 – 2.0	-5.60AA	5.5 – 5.6
-2.10AA	2.0 – 2.1	-5.70AA	5.6 – 5.7
-2.20AA	2.1 – 2.2	-5.80AA	5.7 – 5.8
-2.30AA	2.2 – 2.3	-5.90AA	5.8 – 5.9
-2.40AA	2.3 – 2.4	-6.00AA	5.9 – 6.0
-2.50AA	2.4 – 2.5		
-2.60AA	2.5 – 2.6		
-2.70AA	2.6 – 2.7		
-2.80AA	2.7 – 2.8		
-2.90AA	2.8 – 2.9		
-3.00AA	2.9 – 3.0		
-3.10AA	3.0 – 3.1		
-3.20AA	3.1 – 3.2		
-3.30AA	3.2 – 3.3		
-3.40AA	3.3 – 3.4		
-3.50AA	3.4 – 3.5		
-3.60AA	3.5 – 3.6		
-3.70AA	3.6 – 3.7		
-3.80AA	3.7 – 3.8		
-3.90AA	3.8 – 3.9		
-4.00AA	3.9 – 4.0		

$\varnothing A=9.3$ $B=13.5$

MEGA8N / NBS8	
Collet Model	Clamping Range
NBC8-0.60AA	0.5 – 0.6
-0.70AA	0.6 – 0.7
-0.80AA	0.7 – 0.8
-0.90AA	0.8 – 0.9
-1.00AA	0.9 – 1.0
-1.10AA	1.0 – 1.1
-1.20AA	1.1 – 1.2
-1.30AA	1.2 – 1.3
-1.40AA	1.3 – 1.4
-1.50AA	1.4 – 1.5
-1.60AA	1.5 – 1.6
-1.70AA	1.6 – 1.7
-1.80AA	1.7 – 1.8
-1.90AA	1.8 – 1.9
-2.00AA	1.9 – 2.0
-2.10AA	2.0 – 2.1
-2.20AA	2.1 – 2.2
-2.30AA	2.2 – 2.3
-2.40AA	2.3 – 2.4
-2.50AA	2.4 – 2.5
-2.60AA	2.5 – 2.6
-2.70AA	2.6 – 2.7
-2.80AA	2.7 – 2.8
-2.90AA	2.8 – 2.9
-3.00AA	2.8 – 3.0
-3.20AA	3.0 – 3.2
-3.40AA	3.2 – 3.4
-3.60AA	3.4 – 3.6
-3.80AA	3.6 – 3.8
-4.00AA	3.8 – 4.0
-4.20AA	4.0 – 4.2
-4.40AA	4.2 – 4.4
-4.60AA	4.4 – 4.6
-4.80AA	4.6 – 4.8
-5.00AA	4.8 – 5.0

Refer to page G3 for larger sizes.

$\varnothing A=12.2$ $B=17$

MEGA10N / NBS10	
Collet Model	Clamping Range
NBC10- 1.60AA	1.5 – 1.6
- 1.70AA	1.6 – 1.7
- 1.80AA	1.7 – 1.8
- 1.90AA	1.8 – 1.9
- 2.00AA	1.9 – 2.0
- 2.10AA	2.0 – 2.1
- 2.20AA	2.1 – 2.2
- 2.30AA	2.2 – 2.3
- 2.40AA	2.3 – 2.4
- 2.50AA	2.4 – 2.5
- 2.60AA	2.5 – 2.6
- 2.70AA	2.6 – 2.7
- 2.80AA	2.7 – 2.8
- 2.90AA	2.8 – 2.9

Refer to page G3 for larger sizes.

$\varnothing A=16.2$ $B=26$

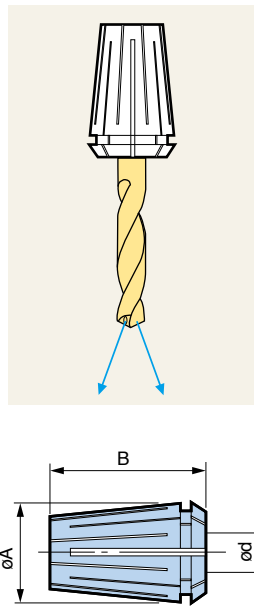
FONBC COOLANT COLLET For MEGA NEW BABY CHUCK, NEW BABY CHUCK

MAX. COOLANT PRESSURE
7MPa



For cutters with coolant-through

Optimum collet for center-through coolant applications with coolant-through cutting tools.



MEGA6N / NBS6	
Collet Model	Clamping Range
FONBC 6-3 AA	※ 3.00
- 3.25AA	3.15 – 3.25
- 3.5 AA	3.40 – 3.50
- 3.75AA	3.65 – 3.75
- 4 AA	3.90 – 4.00
- 4.25AA	4.15 – 4.25
- 4.5 AA	4.40 – 4.50
- 4.75AA	4.65 – 4.75
- 5 AA	4.90 – 5.00
- 5.25AA	5.15 – 5.25
- 5.5 AA	5.40 – 5.50
- 5.75AA	5.65 – 5.75
- 6 AA	5.90 – 6.00

$\phi A=9.5$ B=14

MEGA8N / NBS8	
Collet Model	Clamping Range
FONBC 8-3 AA	2.9 – 3.0
- 3.5AA	3.4 – 3.5
- 4 AA	3.9 – 4.0
- 4.5AA	4.4 – 4.5
- 5 AA	4.9 – 5.0
- 5.5AA	5.4 – 5.5
- 6 AA	5.9 – 6.0
- 6.5AA	6.4 – 6.5
- 7 AA	6.9 – 7.0
- 7.5AA	7.4 – 7.5
- 8 AA	7.9 – 8.0

$\phi A=12.5$ B=18

MEGA10N / NBS10	
Collet Model	Clamping Range
FONBC10- 3 AA	2.9 – 3.0
- 3.5AA	3.4 – 3.5
- 4 AA	3.9 – 4.0
- 4.5AA	4.4 – 4.5
- 5 AA	4.9 – 5.0
- 5.5AA	5.4 – 5.5
- 6 AA	5.9 – 6.0
- 6.5AA	6.4 – 6.5
- 7 AA	6.9 – 7.0
- 7.5AA	7.4 – 7.5
- 8 AA	7.9 – 8.0
- 8.5AA	8.4 – 8.5
- 9 AA	8.9 – 9.0
- 9.5AA	9.4 – 9.5
- 10 AA	9.9 – 10.0

$\phi A=16.5$ B=27

MEGA13N / NBS13	
Collet Model	Clamping Range
FONBC13- 3 AA	※ 3.0
- 3.5AA	3.4 – 3.5
- 4 AA	3.9 – 4.0
- 4.5AA	4.4 – 4.5
- 5 AA	4.9 – 5.0
- 5.5AA	5.4 – 5.0
- 6 AA	5.9 – 6.0
- 6.5AA	6.4 – 6.5
- 7 AA	6.9 – 7.0
- 7.5AA	7.4 – 7.5
- 8 AA	7.9 – 8.0
- 8.5AA	8.4 – 8.5
- 9 AA	8.9 – 9.0
- 9.5AA	9.4 – 9.5
- 10 AA	9.9 – 10.0
- 10.5AA	10.4 – 10.5
- 11 AA	10.9 – 11.0
- 11.5AA	11.4 – 11.5
- 12 AA	11.9 – 12.0
- 12.5AA	12.4 – 12.5
- 13 AA	12.9 – 13.0

$\phi A=20.5$ B=31

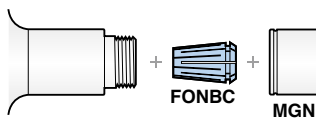
MEGA16N / NBS16	
Collet Model	Clamping Range
FONBC16- 5 AA	4.9 – 5.0
- 5.5AA	5.4 – 5.5
- 6 AA	5.9 – 6.0
- 6.5AA	6.4 – 6.5
- 7 AA	6.9 – 7.0
- 7.5AA	7.4 – 7.5
- 8 AA	7.9 – 8.0
- 8.5AA	8.4 – 8.5
- 9 AA	8.9 – 9.0
- 9.5AA	9.4 – 9.5
- 10 AA	9.9 – 10.0
- 10.5AA	10.4 – 10.5
- 11 AA	10.9 – 11.0
- 11.5AA	11.4 – 11.5
- 12 AA	11.9 – 12.0
- 12.5AA	12.4 – 12.5
- 13 AA	12.9 – 13.0
- 13.5AA	13.4 – 13.5
- 14 AA	13.9 – 14.0
- 14.5AA	14.4 – 14.5
- 15 AA	14.9 – 15.0
- 15.5AA	15.4 – 15.5
- 16 AA	15.9 – 16.0

$\phi A=25.5$ B=35

MEGA20N / NBS20	
Collet Model	Clamping Range
FONBC20- 5 AA	4.9 – 5.0
- 5.5AA	5.4 – 5.5
- 6 AA	5.9 – 6.0
- 6.5AA	6.4 – 6.5
- 7 AA	6.9 – 7.0
- 7.5AA	7.4 – 7.5
- 8 AA	7.9 – 8.0
- 8.5AA	8.4 – 8.5
- 9 AA	8.9 – 9.0
- 9.5AA	9.4 – 9.5
- 10 AA	9.9 – 10.0
- 10.5AA	10.4 – 10.5
- 11 AA	10.9 – 11.0
- 11.5AA	11.4 – 11.5
- 12 AA	11.9 – 12.0
- 12.5AA	12.4 – 12.5
- 13 AA	12.9 – 13.0
- 13.5AA	13.4 – 13.5
- 14 AA	13.9 – 14.0
- 14.5AA	14.4 – 14.5
- 15 AA	14.9 – 15.0
- 15.5AA	15.4 – 15.5
- 16 AA	15.9 – 16.0
- 16.5AA	16.4 – 16.5
- 17 AA	16.9 – 17.0
- 17.5AA	17.4 – 17.5
- 18 AA	17.9 – 18.0
- 18.5AA	18.4 – 18.5
- 19 AA	18.9 – 19.0
- 19.5AA	19.4 – 19.5
- 20 AA	19.9 – 20.0

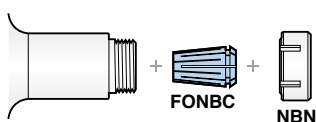
$\phi A=28.5$ B=38

● For MEGA New Baby Chuck:



Use the standard MGN nut.

● For New Baby Chuck:



Use the standard NBN nut.

[Note]

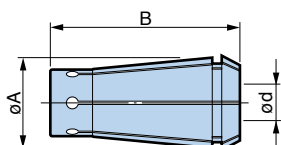
Collapsibility is different from standard NBC collet.

NEW BABY COLLET For MEGA NEW BABY CHUCK, NEW BABY CHUCK

For ENDMILL Type



For ENDMILL



MEGA6N / NBS6	
Model	ød
NBC 6-3E AA	3
-4E AA	4
-5E AA	5
-6E AA	6

øA=9.2 B=17

MEGA8N / NBS8	
Model	ød
NBC 8-3E AA	3
-4E AA	4
-5E AA	5
-6E AA	6
-8E AA	8

øA=12 B=20

MEGA10N / NBS10	
Model	ød
NBC10- 3E AA	3
- 4E AA	4
- 5E AA	5
- 6E AA	6
- 8E AA	8
-10E AA	10

øA=16 B=32

MEGA13N / NBS13	
Model	ød
NBC13- 3E AA	3
- 4E AA	4
- 5E AA	5
- 6E AA	6
- 8E AA	8
-10E AA	10
-12E AA	12

øA=20 B=38

MEGA16N / NBS16	
Model	ød
NBC16- 3E AA	3
- 4E AA	4
- 5E AA	5
- 6E AA	6
- 8E AA	8
-10E AA	10
-12E AA	12
-14E AA	14
-16E AA	16

øA=25 B=42

MEGA20N / NBS20	
Model	ød
NBC20- 3E AA	3
- 4E AA	4
- 5E AA	5
- 6E AA	6
- 8E AA	8
-10E AA	10
-12E AA	12
-14E AA	14
-16E AA	16
-20E AA	20

øA=28 B=45

Collet concentricity

Collet Class	Max. Runout	
	At nose	At end of test bar
AA	Within 1µm	Within 3µm

- Use only a cutting tool shank with exactly the same diameter as the collet bore diameter.
- The tolerance of the cutting tool shank must be within h7.

NEW BABY COLLET SET For MEGA NEW BABY CHUCK, NEW BABY CHUCK

- Contains all the major collet models to cover entire clamping range.



Model	Capacity	Number of Collet	Case Size (Width × Length)	Corresponding Chuck Model
SNBC 6AA-22	0.5 – 6	22	200 × 170 × 50	MEGA 6N / NBS 6
SNBC 8AA-20	0.5 – 8	20	200 × 170 × 50	MEGA 8N / NBS 8
SNBC10AA-20	1.5 – 10	20	200 × 170 × 50	MEGA10N / NBS10
SNBC13AA-21	2.5 – 13	21	245 × 210 × 60	MEGA13N / NBS13
SNBC16AA-27	2.5 – 16	27	275 × 230 × 65	MEGA16N / NBS16
SNBC20AA-35	2.5 – 20	35	310 × 260 × 75	MEGA20N / NBS20

Provided in an exclusive storage box.

BOX for NEW BABY COLLET For MEGA NEW BABY CHUCK, NEW BABY CHUCK

- Exclusive case to protect and maintain the high precision collets.



Model	Number of Holes	Case Size (Width × Length)	Corresponding Collet Model
NBB 6	60	200 × 170 × 50	NBC 6 / FONBC 6
NBB 8	50	200 × 170 × 50	NBC 8 / FONBC 8
NBB 10	40	200 × 170 × 50	NBC10 / FONBC10
NBB 13	35	245 × 210 × 60	NBC13 / FONBC13
NBB 16	35	275 × 230 × 65	NBC16 / FONBC16
NBB 20	45	310 × 260 × 75	NBC20 / FONBC20

1. The boxes can not be used for New Baby Collet for ENDMILL Type show above.

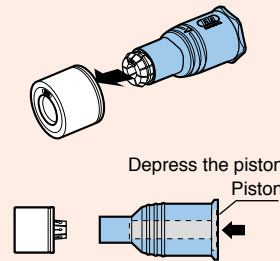
COLLET EJECTOR

Collet Ejector can easily and quickly remove New Baby Collets from MEGA Nuts & NEW BABY Nuts.



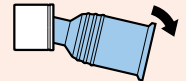
● HOW TO ASSEMBLE A COLLET

Insert the collet into the Collet Ejector. Then insert it into the nut and depress the piston.

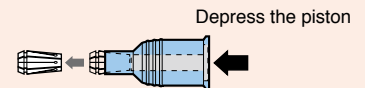


● HOW TO REMOVE A COLLET

1. Tilt the Collet Ejector as shown in the picture to remove the collet from the nut.



2. Finally, depress the piston and the collet will be removed.



■ For NEW BABY COLLET

Model	Nut Model	Collet Model
NBC 6-CE	MGN 6 / NBN 6	NBC 6 / FONBC 6
NBC 8-CE	MGN 8 / NBN 8	NBC 8 / FONBC 8
NBC10-CE	MGN10 / NBN10	NBC10 / FONBC 10
NBC13-CE	MGN13 / NBN13	NBC13 / FONBC 13

■ For NEW BABY ENDMILL COLLET

Model	Nut Model	Collet Model
NBC 6E-CE	MGN 6 / NBN 6	NBC 6E
NBC 8E-CE	MGN 8 / NBN 8	NBC 8E
NBC10E-CE	MGN10 / NBN10	NBC10E
NBC13E-CE	MGN13 / NBN13	NBC13E

COLLET REMOVER

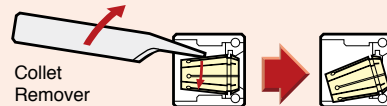
For MEGA NEW BABY CHUCK, NEW BABY CHUCK & MEGA ER GRIP

Collet Remover eases removal of the collet from the nut. Especially helpful for small collet series (MEGA6N to 13N).



Model **NBJ**

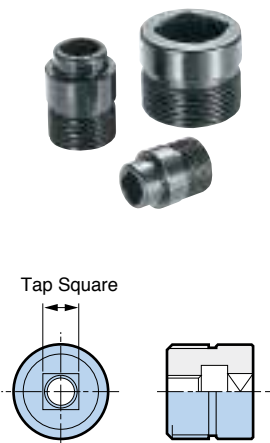
● How to use



TAP DRIVING BACK STOP

For NEW BABY CHUCK

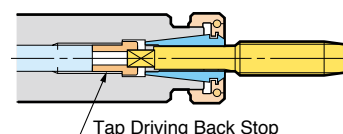
To suit synchronized tapping.



Chuck Model			NBS10	NBS13	NBS16	NBS20
Tap size	Standard	Tap square	Model	Model	Model	Model
M 8	DIN 371	6.2	—	NBA13-M 8DD	—	—
	JIS	5.0	NBA10-M 8	NBA13-M 8	—	—
M10	DIN 371	8.0	—	NBA13-M14M10DD	NBA16-M14M10DD	—
	JIS	5.5	NBA10-M10	NBA13-M10	NBA16-M10	—
M12	DIN 376	7.0	—	NBA13-M12D	NBA16-M12D	NBA20-M12D
	JIS	6.5	—	NBA13-M12	NBA16-M12	NBA20-M12
M14	DIN 376	9.0	—	—	NBA16-M14DM16D	NBA20-M14DM16D
	JIS	8.0	—	NBA13-M14M10DD	NBA16-M14M10DD	NBA20-M14
M16	DIN 376	9.0	—	—	NBA16-M14DM16D	NBA20-M14DM16D
	JIS	10.0	—	—	NBA16-M16	NBA20-M16
M20	DIN 376	12.0	—	—	—	NBA20-M20
	JIS	12.0	—	—	—	NBA20-M20

1. Rigid tapping function is required on the machine tool.

The square of the tap is positively located by fitting the Tap Driving Back Stop.



ACCESSORIES

Sealed collet nut for coolant-through tools

MEGA PERFECT SEAL For MEGA NEW BABY CHUCK

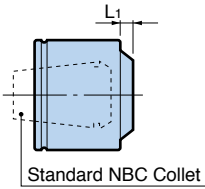
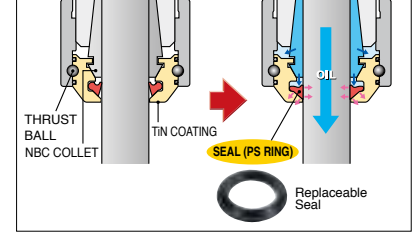


MAX. COOLANT PRESSURE
7MPa

Reliable coolant supply to the tool tip!

Unique design increases sealing performance with higher coolant pressure to create a "perfect seal".

Remove the PS Ring, to supply coolant to the cutting tool periphery.



2way coolant

Through Tools

Jet Through



With PS RING



Without PS RING

Model	Cutter Shank Dia.	L1	Collet Model	Model	Cutter Shank Dia.	L1	Collet Model		
MPS 6-03035	3 - 3.5	2.3	NBC 6-3 - 3.75	MPS16-03035	3 - 3.5	4.0	NBC16-3 - 4		
-0304	3 - 4		-3 - 4.25	-0304	3 - 4		-3 - 4.5		
-04045	4 - 4.5		-4 - 4.75	-04045	4 - 4.5		-4 - 5		
-0405	4 - 5		-4 - 5.25	-0405	4 - 5		-4 - 5.5		
-05055	5 - 5.5		-5 - 5.75	-05055	5 - 5.5		-5 - 6		
-0506	5 - 6		-5 - 6	-0506	5 - 6		-5 - 6.5		
MPS 8-03035	3 - 3.5	3.9	NBC 8-3 - 4	-06065	6 - 6.5	4.3	-6 - 7		
-0304	3 - 4		-3 - 4.5	-0607	6 - 7		-6 - 7.5		
-04045	4 - 4.5		-4 - 5	-07075	7 - 7.5		-7 - 8		
-0405	4 - 5		-4 - 5.5	-0708	7 - 8		-7 - 8.5		
-05055	5 - 5.5		-5 - 6	-08085	8 - 8.5		-8 - 9		
-0506	5 - 6		-5 - 6.5	-0809	8 - 9		-8 - 9.5		
-06065	6 - 6.5	3.4	-6 - 7	-09095	9 - 9.5	4.6	-9 - 10		
-0607	6 - 7		-6 - 7.5	-0910	9 - 10		-9 - 10.5		
-07075	7 - 7.5		-7 - 8	-10105	10 - 10.5		-10 - 11		
-0708	7 - 8		-7 - 8	-1011	10 - 11		-10 - 11.5		
MPS10-03035	3 - 3.5		3.9	NBC10-3 - 4	-11115		11 - 11.5	5.1	-11 - 12
-0304	3 - 4			-3 - 4.5	-1112		11 - 12		-11 - 12.5
-04045	4 - 4.5	-4 - 5		-12125	12 - 12.5	-12 - 13			
-0405	4 - 5	-4 - 5.5		-1213	12 - 13	-12 - 13.5			
-05055	5 - 5.5	-5 - 6		-1314	13 - 14	-13 - 14.5			
-0506	5 - 6	-5 - 6.5		-1415	14 - 15	-14 - 15.5			
-06065	6 - 6.5	4.3	-6 - 7	-1516	15 - 16	4.1	-15 - 16		
-0607	6 - 7		-6 - 7.5	MPS20-03035	3 - 3.5		4.0	NBC20-3 - 4	
-07075	7 - 7.5		-7 - 8	-0304	3 - 4			-3 - 4.5	
-0708	7 - 8		-7 - 8.5	-04045	4 - 4.5			-4 - 5	
-08085	8 - 8.5		-8 - 9	-0405	4 - 5			-4 - 5.5	
-0809	8 - 9		-8 - 9.5	-05055	5 - 5.5			-5 - 6	
-09095	9 - 9.5	-9 - 10	-0506	5 - 6	-5 - 6.5				
-0910	9 - 10	-9 - 10	-06065	6 - 6.5	-6 - 7				
MPS13-03035	3 - 3.5	4.3	NBC13-3 - 4	-0607	6 - 7	4.3	-6 - 7.5		
-0304	3 - 4		-3 - 4.5	-07075	7 - 7.5		-7 - 8		
-04045	4 - 4.5		-4 - 5	-0708	7 - 8		-7 - 8.5		
-0405	4 - 5		-4 - 5.5	-08085	8 - 8.5		-8 - 9		
-05055	5 - 5.5		-5 - 6	-0809	8 - 9		-8 - 9.5		
-0506	5 - 6		-5 - 6.5	-09095	9 - 9.5		-9 - 10		
-06065	6 - 6.5	4.6	-6 - 7	-0910	9 - 10	4.6	-9 - 10.5		
-0607	6 - 7		-6 - 7.5	-10105	10 - 10.5		-10 - 11		
-07075	7 - 7.5		-7 - 8	-1011	10 - 11		-10 - 11.5		
-0708	7 - 8		-7 - 8.5	-11115	11 - 11.5		-11 - 12		
-08085	8 - 8.5		-8 - 9	-1112	11 - 12		-11 - 12.5		
-0809	8 - 9		-8 - 9.5	-12125	12 - 12.5		-12 - 13		
-09095	9 - 9.5	4.9	-9 - 10	-1213	12 - 13	4.1	-12 - 13.5		
-0910	9 - 10		-9 - 10.5	-1314	13 - 14		-13 - 14.5		
-10105	10 - 10.5		-10 - 11	-1415	14 - 15		-14 - 15.5		
-1011	10 - 11		-10 - 11.5	-1516	15 - 16		-15 - 16.5		
-11115	11 - 11.5		-11 - 12	-1617	16 - 17		-16 - 17.5		
-1112	11 - 12		-11 - 12.5	-1718	17 - 18		-17 - 18.5		
-12125	12 - 12.5	4.2	-12 - 13	-1819	18 - 19	4.6	-18 - 19.5		
-1213	12 - 13		-12 - 13	-1920	19 - 20		-19 - 20		

- 1 pce. of PS Ring is included.
- To supply coolant to the periphery of the cutting tool, Adjusting Screw should not be mounted.

[PS RING]



• Replaceable seal is installed in the MEGA PERFECT SEAL

(Replacement seal is recommended when coolant leaks due to damage of the PS Ring.)

1 package contains
5 pcs. (1 size).

Model	Corresponding MPS Model	Model	Corresponding MPS Model	Model	Corresponding MPS Model
PS-0304	MPS □-03035,0304	PS-0809	MPS □-08085,0809	PS-1314	MPS □-1314
0405	04045,0405	0910	09095,0910	1415	1415
0506	05055,0506	1011	10105,1011	1516	1516
0607	06065,0607	1112	11115,1112	1617	1617
0708	07075,0708	1213	12125,1213	1718	1718
				1819	1819
				1920	1920

Sealed collet nut for coolant-through tools

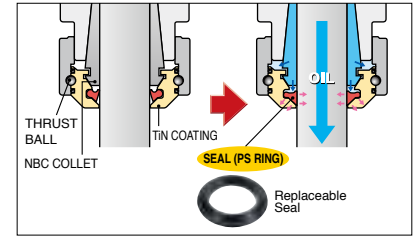
BABY PERFECT SEAL For NEW BABY CHUCK



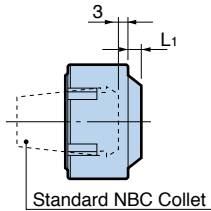
Reliable coolant supply to the tool tip!

Unique design increases sealing performance with higher coolant pressure to create a "perfect seal".

Remove the PS Ring, to supply coolant to the cutting tool periphery.



MAX. COOLANT PRESSURE
7MPa



2way coolant

Through Tools Jet Through



With PS RING Without PS RING

Model	Cutter Shank Dia.	L1	Collet Model	Model	Cutter Shank Dia.	L1	Collet Model		
BPS 6-03035	3 - 3.5	2.3	NBC 6-3 - 3.75	BPS16-03035	3 - 3.5	4.0	NBC16-3 - 4		
-0304	3 - 4		-3 - 4.25	-0304	3 - 4		-3 - 4.5		
-04045	4 - 4.5		-4 - 4.75	-04045	4 - 4.5		-4 - 5		
-0405	4 - 5		-4 - 5.25	-0405	4 - 5		-4 - 5.5		
-05055	5 - 5.5		-5 - 5.75	-05055	5 - 5.5		-5 - 6		
-0506	5 - 6		-5 - 6	-0506	5 - 6		-5 - 6.5		
BPS 8-03035	3 - 3.5	3.9	NBC 8-3 - 4	-06065	6 - 6.5	4.3	-6 - 7		
-0304	3 - 4		-3 - 4.5	-0607	6 - 7		-6 - 7.5		
-04045	4 - 4.5		-4 - 5	-07075	7 - 7.5		-7 - 8		
-0405	4 - 5		-4 - 5.5	-0708	7 - 8		-7 - 8.5		
-05055	5 - 5.5		-5 - 6	-08085	8 - 8.5		-8 - 9		
-0506	5 - 6		-5 - 6.5	-0809	8 - 9		-8 - 9.5		
-06065	6 - 6.5	3.4	-6 - 7	-09095	9 - 9.5	4.6	-9 - 10		
-0607	6 - 7		-6 - 7.5	-0910	9 - 10		-9 - 10.5		
-07075	7 - 7.5		-7 - 8	-10105	10 - 10.5		-10 - 11		
-0708	7 - 8		-7 - 8	-1011	10 - 11		-10 - 11.5		
BPS10-03035	3 - 3.5		3.9	NBC10-3 - 4	-11115		11 - 11.5	5.1	-11 - 12
-0304	3 - 4			-3 - 4.5	-1112		11 - 12		-11 - 12.5
-04045	4 - 4.5	-4 - 5		-12125	12 - 12.5	-12 - 13			
-0405	4 - 5	-4 - 5.5		-1213	12 - 13	-12 - 13.5			
-05055	5 - 5.5	-5 - 6		-1314	13 - 14	-13 - 14.5			
-0506	5 - 6	-5 - 6.5		-1415	14 - 15	-14 - 15.5			
-06065	6 - 6.5	4.3	-6 - 7	-1516	15 - 16	4.1	-15 - 16		
-0607	6 - 7		-6 - 7.5	BPS20-03035	3 - 3.5		4.0	NBC20-3 - 4	
-07075	7 - 7.5		-7 - 8	-0304	3 - 4			-3 - 4.5	
-0708	7 - 8		-7 - 8.5	-04045	4 - 4.5			-4 - 5	
-08085	8 - 8.5		-8 - 9	-0405	4 - 5			-4 - 5.5	
-0809	8 - 9		-8 - 9.5	-05055	5 - 5.5			-5 - 6	
-09095	9 - 9.5	-9 - 10	-0506	5 - 6	-5 - 6.5				
-0910	9 - 10	-9 - 10	-06065	6 - 6.5	-6 - 7				
BPS13-03035	3 - 3.5	4.3	NBC13-3 - 4	-0607	6 - 7	4.3	-6 - 7.5		
-0304	3 - 4		-3 - 4.5	-07075	7 - 7.5		-7 - 8		
-04045	4 - 4.5		-4 - 5	-0708	7 - 8		-7 - 8.5		
-0405	4 - 5		-4 - 5.5	-08085	8 - 8.5		-8 - 9		
-05055	5 - 5.5		-5 - 6	-0809	8 - 9		-8 - 9.5		
-0506	5 - 6		-5 - 6.5	-09095	9 - 9.5		-9 - 10		
-06065	6 - 6.5	4.6	-6 - 7	-0910	9 - 10	4.6	-9 - 10.5		
-0607	6 - 7		-6 - 7.5	-10105	10 - 10.5		-10 - 11		
-07075	7 - 7.5		-7 - 8	-1011	10 - 11		-10 - 11.5		
-0708	7 - 8		-7 - 8.5	-11115	11 - 11.5		-11 - 12		
-08085	8 - 8.5		-8 - 9	-1112	11 - 12		-11 - 12.5		
-0809	8 - 9		-8 - 9.5	-12125	12 - 12.5		-12 - 13		
-09095	9 - 9.5	-9 - 10	-1213	12 - 13	-12 - 13.5				
-0910	9 - 10	-9 - 10.5	-1314	13 - 14	-13 - 14.5				
-10105	10 - 10.5	-10 - 11	-1415	14 - 15	-14 - 15.5				
-1011	10 - 11	-10 - 11.5	-1516	15 - 16	-15 - 16.5				
-11115	11 - 11.5	-11 - 12	-1617	16 - 17	-16 - 17.5				
-1112	11 - 12	-11 - 12.5	-1718	17 - 18	-17 - 18.5				
-12125	12 - 12.5	-12 - 13	-1819	18 - 19	-18 - 19.5				
-1213	12 - 13	-12 - 13	-1920	19 - 20	-19 - 20				

• 1 pce. of PS Ring is included.

• To supply coolant to the periphery of the cutting tool, Adjusting Screw should not be mounted.

[PS RING]



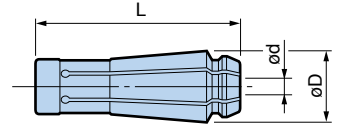
• Replaceable seal is installed in the BABY PERFECT SEAL

(Replacement seal is recommended when coolant leaks due to damage of the PS Ring.)

Model	Corresponding BPS Model	Model	Corresponding BPS Model	Model	Corresponding BPS Model
PS-0304	BPS □-03035,0304	PS-0809	BPS □-08085,0809	PS-1314	BPS □-1314
0405	04045,0405	0910	09095,0910	1415	1415
0506	05055,0506	1011	10105,1011	1516	1516
0607	06065,0607	1112	11115,1112	1617	1617
0708	07075,0708	1213	12125,1213	1718	1718
				1819	1819
				1920	1920

1 package contains
5 pcs. (1 size).

MEGA E COLLET For MEGA E CHUCK



MEGA 6E		
Model	ød	Min. Clamping Length
MEC6-3AA	3	19
-4AA	4	22
-5AA	5	25
-6AA	6	27

L=34.9 øD=11.3

MEGA 8E		
Model	ød	Min. Clamping Length
MEC8-3AA	3	19
-4AA	4	22
-5AA	5	25
-6AA	6	28
-7AA	7	29
-8AA	8	31

L=39.4 øD=14.1

MEGA10E		
Model	ød	Min. Clamping Length
MEC10- 3AA	3	19
- 4AA	4	22
- 5AA	5	25
- 6AA	6	28
- 7AA	7	29.5
- 8AA	8	31
- 9AA	9	33
-10AA	10	37

L=45.7 øD=17.1

MEGA13E		
Model	ød	Min. Clamping Length
MEC13- 3AA	3	19
- 4AA	4	22
- 5AA	5	25
- 6AA	6	28
- 7AA	7	29.5
- 8AA	8	31
- 9AA	9	33
-11AA	11	37
-12AA	12	39

L=47.9 øD=20.6

Collet concentricity

Collet Class	Max. Runout	
	At nose	At end of test bar
AA	Within 1µm	Within 3µm

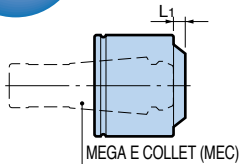
- Use only a cutting tool shank with exactly the same diameter as the collet bore diameter.
- The tolerance of the cutting tool shank must be within h7.

Sealed collet nut for coolant-through tools

MEGA E PERFECT SEAL For MEGA E CHUCK



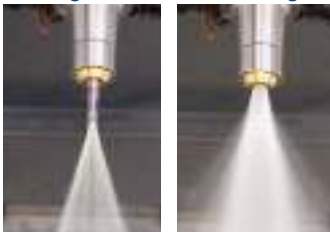
MAX. COOLANT PRESSURE
7MPa



2way coolant

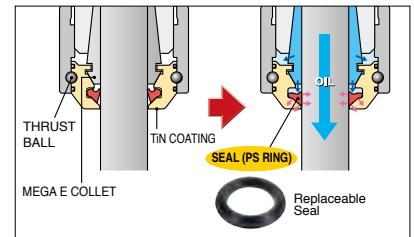
Through Tools

Jet Through



With PS RING

Without PS RING



Model	Cutter Shank Dia.	L1	Collet Model
EPS 6-03	3	5.6	MEC 6- 3
-04	4	5.2	- 4
-05	5		- 5
-06	6		- 6
EPS 8-03	3		6.4
-04	4	6	- 4
-05	5		- 5
-06	6		- 6
-07	7		- 7
-08	8	5.6	- 8
EPS10-03	3	6.4	MEC10- 3
-04	4	6	- 4
-05	5		- 5
-06	6		- 6
-07	7		- 7
-08	8	6.3	- 8
-09	9	5.7	- 9
-10	10		-10

Model	Cutter Shank Dia.	L1	Collet Model
EPS13-03	3	6.4	MEC13- 3
-04	4	6	- 4
-05	5		- 5
-06	6		- 6
-07	7		- 7
-08	8	6.5	- 8
-09	9		- 9
-10	10		-10
-11	11		-11
-12	12	6.2	-12

- 1 pce. of PS Ring is included.
- To supply coolant to the periphery of the cutting tool, Adjusting Screw should not be mounted.

[PS RING]

- Replaceable seal is installed in the MEGA E PERFECT SEAL.

(Replacement seal is recommended when coolant leaks due to damage of the PS Ring.)



1 package contains
5 pcs. (1 size).

Model	Chuck Model
PS-0304	EPS □-03
-0405	-04
-0506	-05
-0607	-06
-0708	-07
	-08

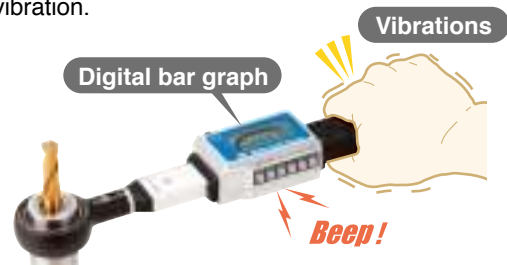
Model	Chuck Model
PS-0809	EPS □-09
-0910	-10
-1011	-11
-1112	-12

DIGITAL MEGA TORQUE WRENCH For MEGA NEW BABY CHUCK, NEW BABY CHUCK

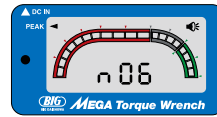
Informs secure and appropriate tightening with graphic, sound and vibration.



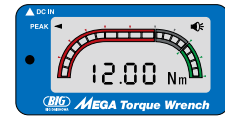
For Asia Only



Example: MEGA New Baby Chuck (MEGA6N)



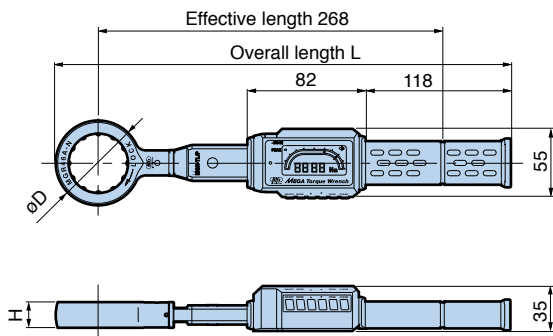
Collet chuck model



Recommended torque value

Predetermined torque values

The recommended torque for each collet chuck model is preset. Appropriate tightening torque is available easily and securely by choosing the model to be clamped.



● Mega Torque Wrench body



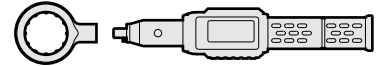
Model	MGR-TL / P
Torque range	10–50N·m
Minimum read (digit)	0.01N·m
Display	7 LCD segments → 4 digits, numerical display 20 LCD segments → bar graph
Basic function	PEAK hold Tightening completion signal → beep emission & vibration Auto power-off (5 minutes)
Power supply	Built-in lithium battery (Approx. 500 times rechargeable)
Operations per charge	4,000 times tightening operations per full charge
Recharging time	Approx. 3 hours (Using the exclusive AC adapter)
Operating temperature	0°C – 40°C (Without dew condensing)
Weight	290g (=Torque Wrench Body, excluding Mega Wrench Adapter and AC Adapter)

● Mega Wrench adapter (option)



Model	(mm)			Weight (kg)	Suitable collet chuck	
	L Overall length	øD	H		Mega New Baby Chuck	MEGA E Chuck
MGR20A-N	355	36	16	0.13	MEGA 6N	—
MGR25A-N	359	44	20	0.18	MEGA 8N	MEGA 6E
MGR30A-N	362	50	20	0.22	MEGA10N	MEGA 8E
MGR35A-N	364.5	55	20	0.23	MEGA13N	MEGA10E
MGR42A-N	368	62	20	0.25	MEGA16N	MEGA13E
MGR46A-N	370	66	20	0.27	MEGA20N	—

● Set



Model	Set contents
SMGR-TL / P	<ul style="list-style-type: none"> Body Mega Wrench adapters (MGR20A-N thru MGR46A-N) 6 pieces

Exclusive storage case

Easy to store and carry the equipments. (1) Body and (6) Mega Wrench Adapters are fit.

Standard accessory for the body (MGR-TL/P) and set (SMGR-TL/P) models.



MEGA TORQUE WRENCH For MEGA CHUCK SERIES

● With torque limiter.



Model	ød	Body		
		MEGA Micro Chuck	MEGA New Baby Chuck	MEGA E Chuck
MGR10TL	10	MEGA3S		
MGR12TL / MGR12TLS ※	12	MEGA4S		
MGR14TL / MGR14TLS ※	14	MEGA6S		
MGR18TL	18	MEGA8S		
MGR20TL / MGR20TLS ※	20		MEGA 6N	
MGR25TL / MGR25TLS ※	25		MEGA 8N	MEGA 6E
MGR30TL	30		MEGA10N	MEGA 8E
MGR35TL	35		MEGA13N	MEGA10E
MGR42TL	42		MEGA16N	MEGA13E
MGR46TL	46		MEGA20N	

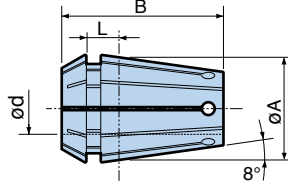
1. TLS models marked with ※ are recommended to tighten 3mm or smaller inner diameter collets.

MEGA ER COLLET For MEGA ER GRIP

All collets are inspected twice to guarantee the runout accuracy of "AA" quality.
Available in min. 0.1mm increments to suit each cutting tool shank size.



Measurement standards:
In accordance with
DIN6499 and ISO15488



Collapsibility 0.1/ø

Collapsibility 0.25/ø

Collapsibility 0.5/ø

Collet concentricity

Collet Class	Max. Runout	
	At nose	At end of test bar
AA	Within 1µm	Within 3µm

MEGA ER 11	
Collet Model	Clamping Range ød
ERC11-3AA	2.75 - 3.0
-3.25AA	3.0 - 3.25
-3.5AA	3.25 - 3.5
-3.75AA	3.5 - 3.75
-4AA	3.75 - 4.0
-4.25AA	4.0 - 4.25
-4.5AA	4.25 - 4.5
-4.75AA	4.5 - 4.75
-5AA	4.75 - 5.0
-5.25AA	5.0 - 5.25
-5.5AA	5.25 - 5.5
-5.75AA	5.5 - 5.75
-6AA	5.5 - 6.0

øA= 11 B= 18 L= 3.8

MEGA ER 16	
Collet Model	Clamping Range ød
ERC16-2AA	1.9 - 2.0
-2.1AA	2.0 - 2.1
-2.2AA	2.1 - 2.2
-2.3AA	2.2 - 2.3
-2.4AA	2.3 - 2.4
-2.5AA	2.4 - 2.5
-2.6AA	2.5 - 2.6
-2.7AA	2.6 - 2.7
-2.8AA	2.7 - 2.8
-2.9AA	2.8 - 2.9
-3AA	2.75 - 3.0
-3.25AA	3.0 - 3.25
-3.5AA	3.25 - 3.5
-3.75AA	3.5 - 3.75
-4AA	3.75 - 4.0
-4.25AA	4.0 - 4.25
-4.5AA	4.25 - 4.5
-4.75AA	4.5 - 4.75
-5AA	4.75 - 5.0
-5.25AA	5.0 - 5.25
-5.5AA	5.25 - 5.5
-5.75AA	5.5 - 5.75
-6AA	5.5 - 6.0
-6.5AA	6.0 - 6.5
-7AA	6.5 - 7.0
-7.5AA	7.0 - 7.5
-8AA	7.5 - 8.0
-8.5AA	8.0 - 8.5
-9AA	8.5 - 9.0
-9.5AA	9.0 - 9.5
-10AA	9.5 - 10.0

øA= 16 B= 27.5 L= 6.26

MEGA ER 20	
Collet Model	Clamping Range ød
ERC20-3AA	2.75 - 3.0
-3.25AA	3.0 - 3.25
-3.5AA	3.25 - 3.5
-3.75AA	3.5 - 3.75
-4AA	3.75 - 4.0
-4.25AA	4.0 - 4.25
-4.5AA	4.25 - 4.5
-4.75AA	4.5 - 4.75
-5AA	4.75 - 5.0
-5.25AA	5.0 - 5.25
-5.5AA	5.25 - 5.5
-5.75AA	5.5 - 5.75
-6AA	5.5 - 6.0
-6.5AA	6.0 - 6.5
-7AA	6.5 - 7.0
-7.5AA	7.0 - 7.5
-8AA	7.5 - 8.0
-8.5AA	8.0 - 8.5
-9AA	8.5 - 9.0
-9.5AA	9.0 - 9.5
-10AA	9.5 - 10.0
-10.5AA	10.0 - 10.5
-11AA	10.5 - 11.0
-11.5AA	11.0 - 11.5
-12AA	11.5 - 12.0
-12.5AA	12.0 - 12.5
-13AA	12.5 - 13.0

øA= 20 B= 31.5 L= 6.36

MEGA ER 25	
Collet Model	Clamping Range ød
ERC25-3AA	2.75 - 3.0
-3.25AA	3.0 - 3.25
-3.5AA	3.25 - 3.5
-3.75AA	3.5 - 3.75
-4AA	3.75 - 4.0
-4.25AA	4.0 - 4.25
-4.5AA	4.25 - 4.5
-4.75AA	4.5 - 4.75
-5AA	4.75 - 5.0
-5.25AA	5.0 - 5.25
-5.5AA	5.25 - 5.5
-5.75AA	5.5 - 5.75
-6AA	5.5 - 6.0
-6.5AA	6.0 - 6.5
-7AA	6.5 - 7.0
-7.5AA	7.0 - 7.5
-8AA	7.5 - 8.0
-8.5AA	8.0 - 8.5
-9AA	8.5 - 9.0
-9.5AA	9.0 - 9.5
-10AA	9.5 - 10.0
-10.5AA	10.0 - 10.5
-11AA	10.5 - 11.0
-11.5AA	11.0 - 11.5
-12AA	11.5 - 12.0
-12.5AA	12.0 - 12.5
-13AA	12.5 - 13.0
-13.5AA	13.0 - 13.5
-14AA	13.5 - 14.0
-14.5AA	14.0 - 14.5
-15AA	14.5 - 15.0
-15.5AA	15.0 - 15.5
-16AA	15.5 - 16.0

øA= 25 B= 34 L= 6.66

MEGA ER 32	
Collet Model	Clamping Range ød
ERC32-3AA	2.75 - 3.0
-3.25AA	3.0 - 3.25
-3.5AA	3.25 - 3.5
-3.75AA	3.5 - 3.75
-4AA	3.75 - 4.0
-4.25AA	4.0 - 4.25
-4.5AA	4.25 - 4.5
-4.75AA	4.5 - 4.75
-5AA	4.75 - 5.0
-5.25AA	5.0 - 5.25
-5.5AA	5.25 - 5.5
-5.75AA	5.5 - 5.75
-6AA	5.5 - 6.0
-6.5AA	6.0 - 6.5
-7AA	6.5 - 7.0
-7.5AA	7.0 - 7.5
-8AA	7.5 - 8.0
-8.5AA	8.0 - 8.5
-9AA	8.5 - 9.0
-9.5AA	9.0 - 9.5
-10AA	9.5 - 10.0
-10.5AA	10.0 - 10.5
-11AA	10.5 - 11.0
-11.5AA	11.0 - 11.5
-12AA	11.5 - 12.0
-12.5AA	12.0 - 12.5
-13AA	12.5 - 13.0
-13.5AA	13.0 - 13.5
-14AA	13.5 - 14.0
-14.5AA	14.0 - 14.5
-15AA	14.5 - 15.0
-15.5AA	15.0 - 15.5
-16AA	15.5 - 16.0
-16.5AA	16.0 - 16.5
-17AA	16.5 - 17.0
-17.5AA	17.0 - 17.5
-18AA	17.5 - 18.0
-18.5AA	18.0 - 18.5
-19AA	18.5 - 19.0
-19.5AA	19.0 - 19.5
-20AA	19.5 - 20.0

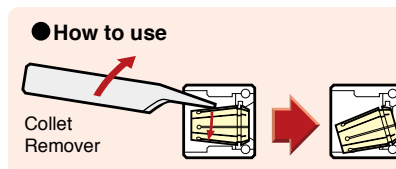
øA= 32 B= 40 L= 7.16

COLLET REMOVER

Collet Remover eases removal of the collet from the nut.



Model NBJ



Sealed collet nut for coolant-through tools

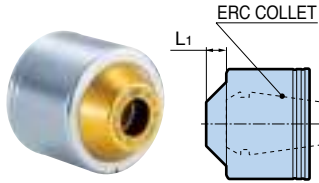
MEGA ER PERFECT SEAL For MEGA ER GRIP



Reliable coolant supply to the tool tip.

2way coolant

Through Tools Jet Through



With PS RING Without PS RING

Model	L1	Cutter Shank Dia.	Collet Model
MERPS16-030035	4.0	3 - 3.5	ERC16- 3 - 3.75
-035040		3.5 - 4	- 3.5- 4.25
-040045		4 - 4.5	- 4 - 4.75
-045050		4.5 - 5	- 4.5- 5.25
-050055		5 - 5.5	- 5 - 6
-055060		5.5 - 6	- 5.5- 6.5
-060065	4.3	6 - 6.5	- 6 - 7
-065070		6.5 - 7	- 6.5- 7.5
-070075		7 - 7.5	- 7 - 8
-075080	4.6	7.5 - 8	- 7.5- 8.5
-080085		8 - 8.5	- 8 - 9
-085090		8.5 - 9	- 8.5- 9.5
-090095		9 - 9.5	- 9 -10
-095100		9.5 -10	- 9.5-10
MERPS20-030035	4.0	3 - 3.5	ERC20- 3 - 3.75
-035040		3.5 - 4	- 3.5- 4.25
-040045		4 - 4.5	- 4 - 4.75
-045050		4.5 - 5	- 4.5- 5.25
-050055		5 - 5.5	- 5 - 6
-055060		5.5 - 6	- 5.5- 6.5
-060065	4.3	6 - 6.5	- 6 - 7
-065070		6.5 - 7	- 6.5- 7.5
-070075		7 - 7.5	- 7 - 8
-075080	4.6	7.5 - 8	- 7.5- 8.5
-080085		8 - 8.5	- 8 - 9
-085090		8.5 - 9	- 8.5- 9.5
-090095		9 - 9.5	- 9 -10
-095100		9.5 -10	- 9.5-10.5
-100105	5.1	10 -10.5	-10 -11
-105110		10.5 -11	-10.5-11.5
-110115		11 -11.5	-11 -12
-115120		11.5 -12	-11.5-12.5
-120125		12 -12.5	-12 -13
-125130		12.5 -13	-12.5-13

1. 1 pce. of PS Ring is included.

Model	L1	Cutter Shank Dia.	Collet Model
MERPS25-030035	4.0	3 - 3.5	ERC25- 3 - 3.75
-035040		3.5 - 4	- 3.5- 4.25
-040045		4 - 4.5	- 4 - 4.75
-045050		4.5 - 5	- 4.5- 5.25
-050055		5 - 5.5	- 5 - 6
-055060		5.5 - 6	- 5.5- 6.5
-060065	4.3	6 - 6.5	- 6 - 7
-065070		6.5 - 7	- 6.5- 7.5
-070075		7 - 7.5	- 7 - 8
-075080	4.6	7.5 - 8	- 7.5- 8.5
-080085		8 - 8.5	- 8 - 9
-085090		8.5 - 9	- 8.5- 9.5
-090095		9 - 9.5	- 9 -10
-095100		9.5 -10	- 9.5-10.5
-100105	5.1	10 -10.5	-10 -11
-105110		10.5 -11	-10.5-11.5
-110115		11 -11.5	-11 -12
-115120		11.5 -12	-11.5-12.5
-120125		12 -12.5	-12 -13
-125130		12.5 -13	-12.5-13
-130140	5.2	13 -14	-13 -14.5
-140150		14 -15	-14 -15.5
-150160		15 -16	-15 -16
MERPS32-030035	4.0	3 - 3.5	ERC32- 3 - 3.75
-035040		3.5 - 4	- 3.5- 4.25
-040045		4 - 4.5	- 4 - 4.75
-045050		4.5 - 5	- 4.5- 5.25
-050055		5 - 5.5	- 5 - 6
-055060		5.5 - 6	- 5.5- 6.5
-060065	4.3	6 - 6.5	- 6 - 7
-065070		6.5 - 7	- 6.5- 7.5
-070075		7 - 7.5	- 7 - 8
-075080	4.6	7.5 - 8	- 7.5- 8.5
-080085		8 - 8.5	- 8 - 9
-085090		8.5 - 9	- 8.5- 9.5
-090095		9 - 9.5	- 9 -10
-095100		9.5 -10	- 9.5-10.5
-100105	5.1	10 -10.5	-10 -11
-105110		10.5 -11	-10.5-11.5
-110115		11 -11.5	-11 -12
-115120		11.5 -12	-11.5-12.5
-120125		12 -12.5	-12 -13
-125130		12.5 -13	-12.5-13.5
-130140	5.2	13 -14	-13 -14.5
-140150		14 -15	-14 -15.5
-150160		15 -16	-15 -16.5
-160170	4.6	16 -17	-16 -17.5
-170180		17 -18	-17 -18.5
-180190		18 -19	-18 -19.5
-190200		19 -20	-19 -20

[PS RING]

• Replaceable seal is installed in the MEGA ER PERFECT SEAL

(Replacement seal is recommended when coolant leaks due to damage of the PS Ring.)



1 package contains 5 pcs. (1 size).

Model	Corresponding MERPS Model	Model	Corresponding MERPS Model	Model	Corresponding MERPS Model
PS-0304	MERPS□-030035, 035040	PS-0809	MERPS□-080085, 085090	PS-1314	MERPS□-130140
-0405	-040045, 045050	-0910	-090095, 095100	-1415	-140150
-0506	-050055, 055060	-1011	-100105, 105110	-1516	-150160
-0607	-060065, 065070	-1112	-110115, 115120	-1617	-160170
-0708	-070075, 075080	-1213	-120125, 125130	-1718	-170180
				-1819	-180190
				-1920	-190200

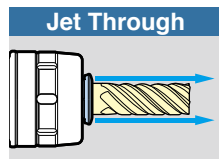
STRAIGHT COLLET For MEGA DOUBLE POWER CHUCK, NEW HI-POWER MILLING CHUCK & HYDRAULIC CHUCK

STRAIGHT COLLET SELECTION GUIDE

	PJC COLLET	OCA COLLET	PSC COLLET	AC COLLET
	 Peripheral Coolant Supply	 Through Tool Coolant Supply	 Through Tool Coolant Supply	 W/O Center coolant
MEGA DOUBLE POWER CHUCK MEGA-D	○	○		○
MEGA DOUBLE POWER CHUCK MEGA-DS	○			○
NEW HI-POWER MILLING CHUCK HMC	○	○		○
HYDRAULIC CHUCK HDC	○		○	

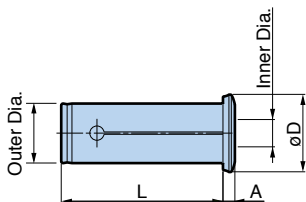
■ PJC COLLET For (MEGA-D/DS & HMC & HDC)

For coolant to cutting tool periphery



● Model Description

PJC **16** - **6**
 ● Outer Dia.
 ● Inner Dia.
 ● PJC Collet



JET THROUGH COLLET Coolant shoots out of the collet end face.

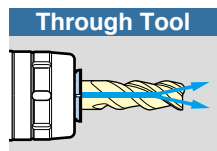
Model	A	øD	L
PJC16-6	6.0	23	54
-8,10,12	6.3		
PJC20-3,4,5,6,	5.2	27	61
-7,8,9,10	5.7		
-11,12	6.4		
-13	6.8		
-14,15,16	7.3		
PJC25-6,8,10,12	5.0	32.5	68
-16	5.4		
-18	5.8		
-20	6.5		

Model	A	øD	L
PJC32-6,8,10,12,14	5.0	39	74
-16,20			
-25	5.4		
PJC42-16,20,25,32	5.0	50.5	83

1. For coolant directed to cutting tool periphery.
2. Other sizes are available upon request.

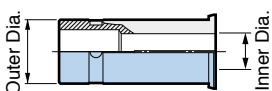
※ With either the Type D or Type DS chuck body, coolant is supplied to cutting tool periphery, not through the tool.

■ OCA COLLET For (MEGA-D & HMC)



● Model Description

OCA **20** - **6**
 ● Inner Dia.
 ● Outer Dia.
 ● Coolant Feed Straight Collet

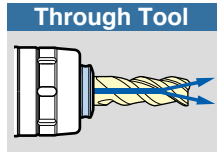


Model	Chuck Model
OCA16 - 6, 8, 10, 12	MEGA16D, HMC16(S)
OCA20 - 6, 8, 10, 12, 14, 16	MEGA20D, HMC20(S)
OCA25 - 6, 8, 10, 12, 14, 16, 18, 20	MEGA25D, HMC25(S)
OCA32 - 6, 8, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 28	MEGA32D, HMC32(S)
OCA42 - 6, 8, 10, 12, 16, 19, 20, 24, 25, 31, 32	MEGA42D, HMC42

1. For coolant-through tools

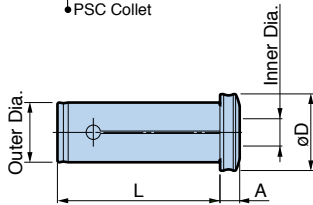
■ PSC COLLET For (HDC)

For coolant-through tools



Model Description

PSC **20** - **3**
 Inner Dia.
 Outer Dia.
 PSC Collet



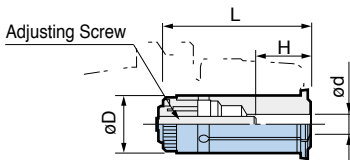
OIL HOLE COLLET

Model	A	øD	L
PSC20-3	7.7	27	61
-4,5,6,	7.5		
-7,8,9,10	8.2		
-11,12,13	8.7		
-14,15,16			

Model	A	øD	L
PSC32-6	7.5	38	74
-7,8,9,10	8.2		
-11,12,13,14,15,16	8.7		
-18,19,20,21	9.2		
-22,23,24,25	9.5		

■ AC COLLET For (MEGA D/DS & HMC)

ADJUSTABLE STRAIGHT COLLET (Type "C")



Model Description

AC **16** - **6**
 Inner Dia.
 Outer Dia.
 AC Collet

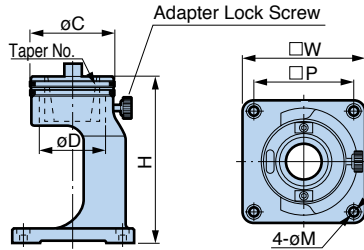
Model	ød	øD	L	H	
				Min.	Max.
AC16- 6	6	16	58	30	47
- 8	8			32	
-10	10			37	
-12	12				
AC20- 6	6	20	68	30	48
- 8	8			32	
-10	10			37	
-12	12			40	
-14	14			42	
-16	16				
AC25- 6	6	25	78.5	30	58
- 8	8			32	
-10	10			37	
-12	12			40	
-14	14			46	
-16	16			48	
-18	18			52	
-20	20				

Model	ød	øD	L	H	
				Min.	Max.
AC32- 6	6	32	84	30	62
- 8	8			32	
-10	10			37	
-12	12				
AC42- 6	6	42	99	30	77
- 8	8			34	
-10	10			37	
-12	12			46	
-16	16			52	
-20	20			55	
-25	25			62	
-32	32				

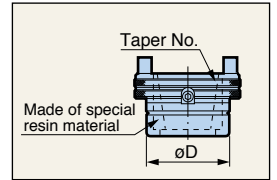
1. For use without coolant supply.
2. Straight Collet without Adjusting Screw is also available.
 Model example: **C32-20**
 Contact BIG agent for details.

TOOLING MATE

For BBT (BT) & BDV (DV)



Replaceable adapter



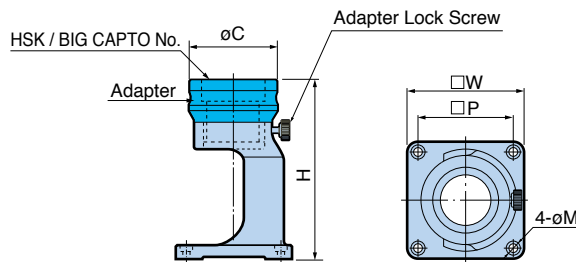
Model	BT / DV No.	øC	øD	H	□W	□P	øM	Adapter Model
TMS40-20	20	76	60	150	110	90	7 (for M6)	TMA40-20
-30	30							-30
-40	40							-40
TMS50-40	40	105	88	190	160	130	9 (for M8)	TMA50-40
-50	50							-50

- 1 pce. of Adapter is included.
- Adapter can be ordered individually.
- Adapter Lock Screw is available as a spare part. Model: **RTM0615**
- 4 pcs. of cap bolts to mount on the table are not included.

Caution
TOOLING MATE must be securely fixed to a bench with 4 mounting bolts.

For HSK & BIG CAPTO

Innovative "Two-way clutch needle roller clamping system" assures secure clamping at the tool flange periphery.



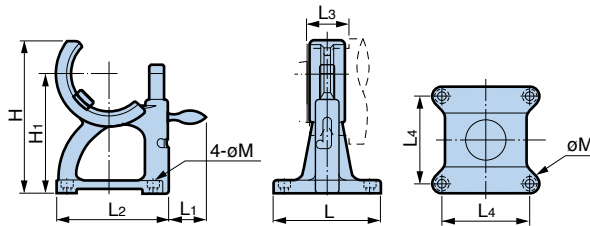
Model	HSK No.	BIG CAPTO No.	øC	H	□W	□P	øM	Adapter Model
TMS40- 32R	32	C3	76	165	110	90	7 (for M6)	TMA40- 32R
- 40R	40	C4	76	165				- 40R
- 50R	50	C5	76	165				- 50R
- 63R	63	C6	87	172				- 63R
TMS50- 80R	80	C8	114	215	160	130	9 (for M8)	TMA50- 80R
-100R	100	-	124	219				-100R

- 1 pce. of Adapter is included.
- Adapter can be ordered individually.
- Adapter Lock Screw is available as a spare part. Model: **RTM0615**
- 4 pcs. of cap bolts to mount on the table are not included.

Caution
TOOLING MATE must be securely fixed to a bench with 4 mounting bolts.

HOLDER LOCK

Horizontal tooling fixture.



Horizontal operation prevents small cutting tools from dropping into the toolholder.

Model	BT No.	L	L1	L2	L3	L4	H	H1	øM	Fixing cap
HL-BT30	30	82	31	82	26	65	120	100	7 (for M6)	HL-30CP
HL-BT40	40	98	33	98	32	80	140	115		HL-40CP
HL-BT50	50	124	43	131	44	100	178	140	9 (for M8)	HL-50CP

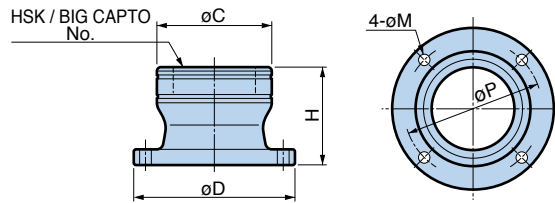
1. Fixing cap is available as a spare part.
2. Exclusive for each size of BBT/BT 30, 40 and 50.
3. 4 pcs. of cap bolts to mount on the table are not included.

Caution
HOLDER LOCK must be securely fixed to a bench with 4 mounting bolts.

KOMBI GRIP

Innovative "Two-way clutch needle roller clamping system" assures secure clamping at the tool flange periphery.

For HSK & BIG CAPTO



Model	HSK No.	BIG CAPTO No.	øC	øD	H	øP	øM
KG 25R	25	-	48	79	65	62	7 (for M6)
32R	32	C3	55	85		69	
40R	40	C4	63	93	70	77	
50R	50	C5	75	105		89	
63R	63	C6	88	123.5	75	105.5	9 (for M8)
80R	80	C8	107	142	90	124	
100R	100	-	127	162	100	144	



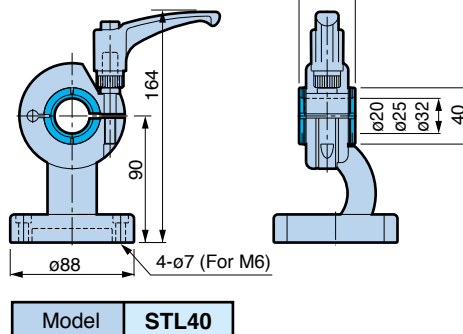
Caution
KOMBI GRIP must be securely fixed to a bench with 4 mounting bolts.

1. 4pcs. of cap bolts to mount on the table are not included.

ST LOCK

Ideal fixture for set-up of cylindrical shank toolholder.
Clamps 20, 25 & 32mm diameter shank holder by replacing the sleeve.

ø20, 25 & 32mm sleeves



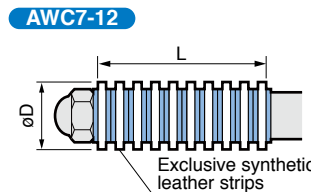
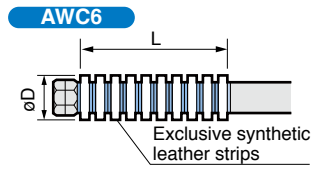
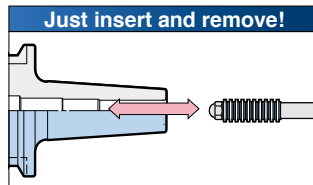
1. 1pc. each of ø20, 25 & 32mm sleeves are included.
2. 4pcs. of cap bolts to mount on the table are not included.

Caution
ST LOCK must be securely fixed to a bench with 4 mounting bolts.

Perfect for Hydraulic Chuck and Shrink Fit Holder

Q WIPER CLEANER

Easy cleaning by simply inserting and removing.



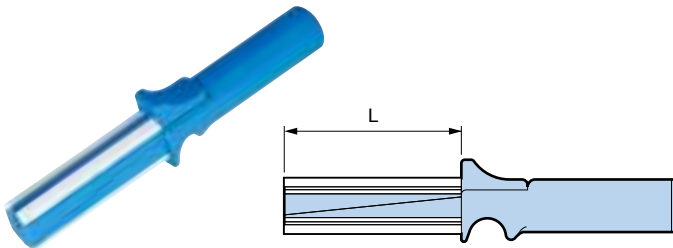
For 6 to 12mm clamping bores

Model	øD	L
AWC 6	6	20
AWC 7	7	
AWC 8	8	
AWC 9	9	26
AWC10	10	
AWC11	11	31
AWC12	12	

Perfect for Hydraulic Chuck and Milling chuck Holder

TK CLEANER

Absolute cleaning of clamping bore by unique "slide" feature.



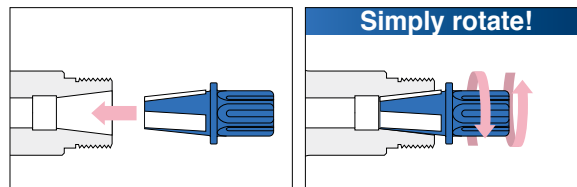
For 13 to 42mm clamping bores

Model	Bore diameter(ø)	L	Leather strips qty
TKC13	13	60	2
14	14		
15	15		
16	16	70	
18	18		
20	20		
25	25	80	3
32	32	105	4
40	40		
42	42		


For internal collet taper

Q TAPER CLEANER



Maintain accuracy of high precision collet chucks.




For MEGA MICRO CHUCK

	Model	Suitable body
	SC-NBC3S	MEGA 3S
	SC-NBC4S	MEGA 4S
	SC-NBC6S	MEGA 6S

For MEGA NEW BABY CHUCK & NEW BABY CHUCK

 	Model	Suitable body
	SC-NBC 6	MEGA 6N NBS 6
	SC-NBC 8	MEGA 8N NBS 8
	SC-NBC10	MEGA10N NBS10
	SC-NBC13	MEGA13N NBS13
	SC-NBC16	MEGA16N NBS16
SC-NBC20	MEGA20N NBS20	

For MEGA E CHUCK

	Model	Suitable body
	SC-MEC 6	MEGA 6E
	SC-MEC 8	MEGA 8E
	SC-MEC10	MEGA10E
SC-MEC13	MEGA13E	

For ER collet chuck

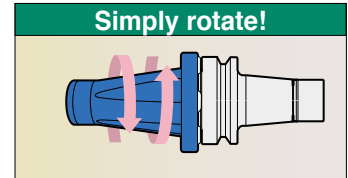
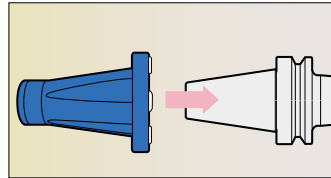
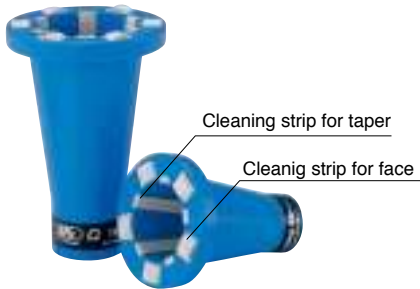


Model	Suitable body
SC-MER11	ER11
SC-MER16	ER16
SC-MER20	ER20
SC-MER25	ER25
SC-MER32	ER32

For tool shank taper and flange

α TOOLING CLEANER

Particles and oil on both taper and flange of 7/24 taper holder are easily removed.



For #30 & #40 tapers

Model	Shank size
SCE-30	No.30
SCE-40	No.40

For machine spindle

SPINDLE CLEANER

Easy cleaning of oil or particles from the machine spindle.



For ISO taper spindle

Model	Taper Size
SC20	#20
SC30	#30
SC40	#40
SC45	#45
SC50	#50

For Morse taper spindle

Model	Taper Size
SC1	MT1
SC2	MT2
SC3	MT3
SC4	MT4
SC5	MT5
SC6	MT6

For HSK spindle

Model	Spindle
SC-HSK 32	HSK-A 32
40	HSK-A 40
50	HSK-A 50
63	HSK-A 63
80	HSK-A 80
100	HSK-A100

Model	Spindle
SC-HSK25E	HSK-E25
32E	HSK-E32
40E	HSK-E40
50E	HSK-E50

SPINDLE CLEANER For BIG CAPTO

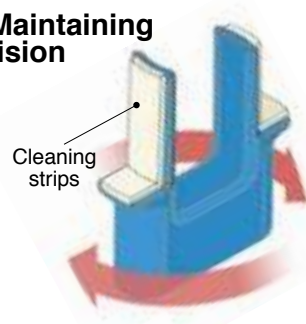
Easy cleaning of BIG CAPTO polygon taper.



EASY & SMOOTH
Wipe the BIG CAPTO Spindle!

Model	BIG CAPTO No.
SC-C3	C3
-C4	C4
-C5	C5
-C6	C6
-C8	C8

For Maintaining Precision

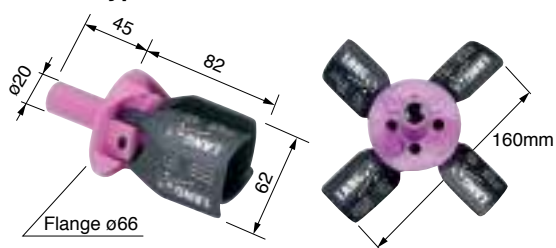


For machine spindle

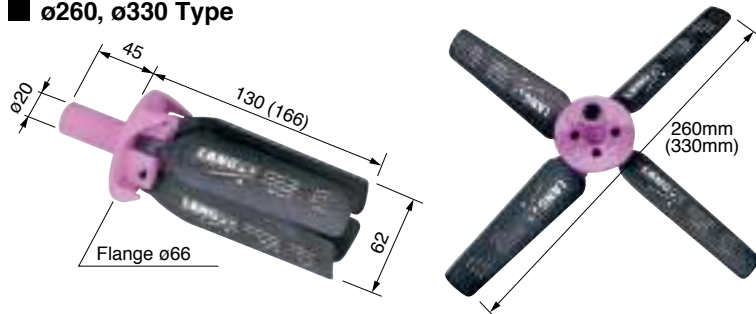
CLEAN TEC

Full automation of swarf and coolant removal by means of wind pressure.

■ ø160 Type



■ ø260, ø330 Type



Numbers shown in () are dimensions of ST20-CT330 model.

Model	ST20-CT160	ST20-CT260	ST20-CT330
Starting speed	1,000min ⁻¹ → 2,000min ⁻¹ → 3,000min ⁻¹ → 4,000min ⁻¹ (1sec) (0.5sec) (0.5sec) (0.5sec)		
Recommended rotation	Min.6,000 ⁻¹ – Max.9,000min ⁻¹	Min.4,000 – Max.7,000min ⁻¹	Min.3,000 – Max.6,000min ⁻¹
Direction of rotation	Clockwise		
Recommended feed	3,000 – 10,000mm/min		

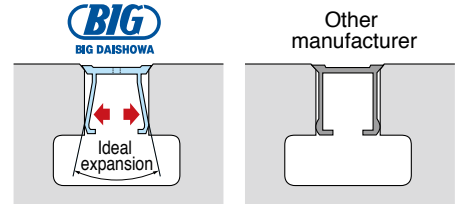
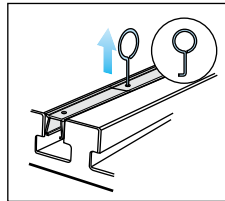
T-SLOT CLEAN

Improve efficiency of table cleaning.
Save you from cleaning T-slots packed with swarf.
Quick discharge of swarf out of a machine.

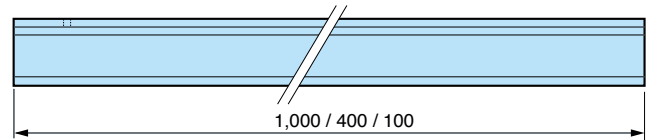
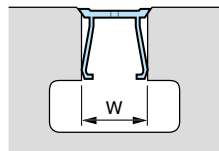
Better machining precision



Easy removal with a pin attached.



Coolant removes heated swarf and avoids thermal displacement of machine.



If necessary, cut off to the length that you need.

SET

Set Model	W	Contents of set
TS14-S	14	400mm × 4 pieces
TS18-S	18	100mm × 4 pieces
TS22-S	22	Removal pin × 1 piece

400mm SET

Model	W	Contents of set
TS14-400L-100P	14	400mm × 100 pieces Removal pin × 10 pieces
TS18-400L-100P	18	
TS22-400L-100P	22	

For large machines

1,000mm SET

1000mm (1m) long version is available.

Model	W	Contents of set
TS18-1000L-10P	18	1,000mm × 10 pieces
TS22-1000L-10P	22	Removal pin × 1 piece

CLEAN TEC

Quicker and more effective by using CLEAN TEC together with T-SLOT CLEAN.

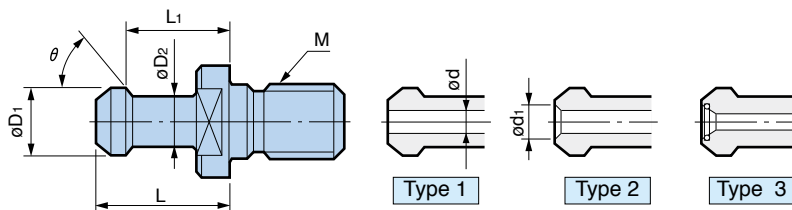


PULLSTUD BOLT



Before ordering

Ensure 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 especially, provide us a copy of the pullstud bolt drawing, as sealing method may vary even among machines with the same model number.



= MEGA PULLSTUD BOLT

Spindle	Model	Standard	ϕD_1	ϕD_2	L	L_1	θ	ϕd	ϕd_1	Hole Type	Specification / Feature					
30 (M12)	30PMG	JIS	12	8	23.4	18.4	75	None	-	-	JIS BT30					
	30PMGH							4.0	-	1	JIS BT30 with hole					
	30PMGH2							2.5	5.5	3	YASDA					
	P30T-1MG	MAS-I	11	7	23	18	45	None	-	-	MAS-1 BT30					
	P30T-1MGH							2.5	-	1	MAS-1 BT30 with hole					
	P30T-2MG	MAS-II	11	7	23	18	60	None	-	-	MAS-2 BT30					
	P30T-2MGH							2.5	-	1	MAS-2 BT30 with hole					
	30P-1MGH	Original	11	8	23	18	45	4.0	-	1	FANUC					
	P30T-2MGH3			7.5	23	18	60	2.5	-	1	BROTHER					
	PMO30MG			7	23	18	45	2.5	6.5	3	DMG MORI					
40 (M16)	40PMG	JIS	19	14	29	23	75	None	-	-	JIS BT40					
	40PMGH							7.0	-	1	JIS BT40 with hole					
	40PMGH2							7.0	-	1	MAKINO (Face G) ※1					
	40PMGH7							4.0	5.0	2	OKUMA (Face G) ※1					
	40PMGH4A							7.0	-	1	YASDA $\phi 3$ side hole					
	40PMGH11							-	10.0	3	YASDA					
	40PMGH12							5.0	-	1	MITSUI					
	P40T-1MG	MAS-I	15	10	35	28	45	None	-	-	MAS-1 BT40					
	P40T-1MGHA							3.0	-	1	MAS-1 BT40 with hole					
	P40T-1MGH1							3.5	5.5	2						
	P40T-1MGH4							3.0	7.0	3	OKUMA					
	P40T-1MGH7							4.0	-	1	MAKINO (Face G) ※1					
	P40T-1MGH8A							3.0	7.0	3	JTEKT					
	P40T-2							MAS-II	15	10	35	28	60	None	-	-
	P40T-2MG	3.0	-	1	MAS-2 BT40 with hole											
	P40T-2MGHA	3.5	5.5	2												
	P40T-2MGH8	3.0	7.0	3		OKUMA										
	P40T-2MGH1	3.0	7.0	3												
	PVD40MG	DIN	19	14	26	20	75	7.0	-	1	DIN 69872 from A					
	MP40MG	Original	15	10	25	18	90	None	-	-	MITSUI					
	POM40MG							15	10	35	28	90	None	-	-	DMG MORI w/o hole
	PMO40MG							19	14	29	23	75	7.0	10.0	3	DMG MORI with Hole
	PYN40MG							18.8	14.45	19.11	14.03	45	7.0	-	1	MAZAK

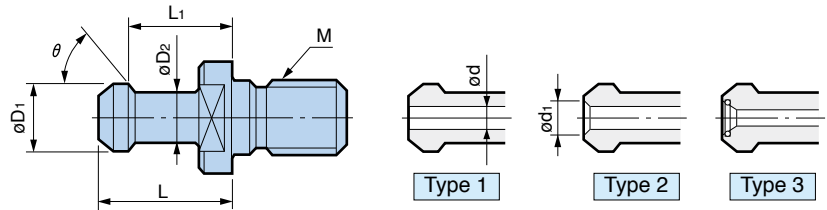
1. Machine tool builders have used many various shapes and sizes of pull stud bolts.
 2. The use of the incorrect bolts may result in injury or property damage for your machining center.
 ※1. End face was grinded for the sealing.
 ※2. End face has O-ring for the sealing.

Other sizes are also available. Contact BIG agent for pullstud bolts not listed above.



MEGA PULLSTUD BOLT

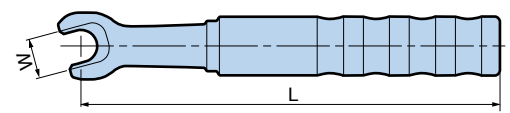
MG in the model numbers stand for MEGA PULLSTUD BOLT. Tensile strength is improved by utilizing tool steel. Especially recommended for the BIG-PLUS dual contact applications.



Spindle	Model	Standard	ϕD_1	ϕD_2	L	L_1	θ	ϕd	ϕd_1	Hole Type	Specification / Feature									
50 (M24)	50PH	JIS	28	21	34	25	75	10.0	-	1	JIS 50 with Hole									
	50PMGH										MAKINO (Face G) ※1									
	50PH2																			
	P50T-1	MAS-I	23	17	45	35	45	None	-	-	MAS-1 BT50									
	P50T-1MG																			
	P50T-1H										8.0	-	1	MAS-1 BT50 with hole						
	P50T-1MGH										6.0	-	1							
	P50T-1H1										6.0	-	1	MAKINO (Face G) ※1						
	P50T-1H4										6.0	10.4	3	JTEKT						
	P50T-1H5										5.5	11.2	3	YASDA						
	P50T-1H8										8.0	11.0	3	DMG MORI (Face G) ※1						
	P50T-1MGH25										6.0	7.0	2	OKUMA (Face G) ※1						
	P50T-1H18										6.0	9.5	3	OKUMA						
	P50T-1H19										4.5	-	1	TOSHIBA						
	P50T-2										MAS-II	23	17	45	35	60	None	-	-	MAS-2 BT40
	P50T-2MG																			
	P50T-2H	8.0	-	1	MAS-2 BT40 with hole															
	P50T-2MGH25	6.0	-	1																
	P50T-2H4	8.0	11.0	3	DMG MORI (Face G) ※1															
	P50T-2H14	6.0	7.0	2	OKUMA (Face G) ※1															
	P50T-2MGH14	6.0	7.0	2																
	P50T-2H11	6.0	9.5	3	OKUMA															
	P50T-2H15	6.0	10.4	3	JTEKT															
	P50T-2H16	5.5	11.2	3	YASDA															
	PVD50	DIN	28	21	34	25	75	11.5	-	1	DIN 69872 from A									
	MP50	Original	24	18	31	23	90	None	-	-	MITSUI									
	MP50H1										8.0	-	1	MITSUI with hole						
	POM50		23	17	45	35	90	None	-	-	DMG MORI									
	POM50H										8.0	-	1	DMG MORI with hole						
	POM50H1										8.0	12.4	3							
POM50H7	6.0										9.5	3	OKUMA with hole							
POM50H8	23		17	45	35	90	6.0	-	1	OKK (Face O) ※2										
PYN50-4	28.96		20.83	25.2	17.58	45	10.0	-	1	MAZAK (Face O) ※2										
PYN50-5											MAZAK (Face G) ※1									

1. Machine tool builders have used many various shapes and sizes of pull stud bolts.
 2. The use of the incorrect bolts may result in injury or property damage for your machining center.
 ※1. End face was grinded for the sealing.
 ※2. End face has O-ring for the sealing.

PULLSTUD WRENCH



Taper Size	Model	W	L	Suitable pullstud specification
BBT30	PLW30	13	140	JIS, MAS-I, MAS-II, 30P-1MGH, P30T-2MGH3, PMO30MG

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

STOP BLOCK For ANGLE HEAD

SET UP INFORMATION



● Preparing the Stop Block

The **BIG** 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 **BIG** ANGLE HEAD during operation. Therefore, it is necessary to use a Stop Block with the proper dimensions to match the Locating Pin of the **BIG** ANGLE HEAD.

Please contact a **BIG** agent if using an existing Stop Block.

1. 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** agent.

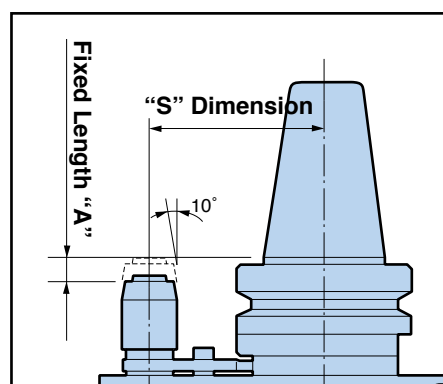
《 "S" Dimension 》

The distance from the centerline of the **BIG** ANGLE HEAD spindle to the centerline of the Locating Pin.

《 Fixed Length "A" 》

The axial distance from the gauge line to the top of the Locating Pin, when the Locating Pin is properly engaged in the Stop Block.

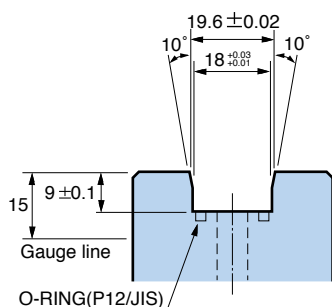
	"S" Dimension	Fixed Length "A"
BDV / BBT40 / HSK-A63	65	8
BDV / BBT50 / HSK-A100	110	6



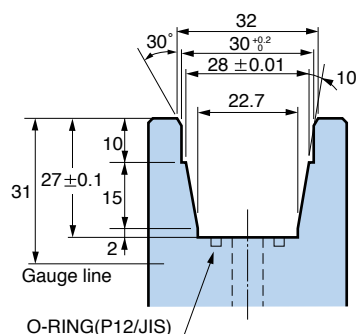
2. Stop Block Dimensions



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 **BIG** ANGLE HEAD.



《BDV40/BBT40/HSK-A63》



《BDV50/BBT50/HSK-A100》

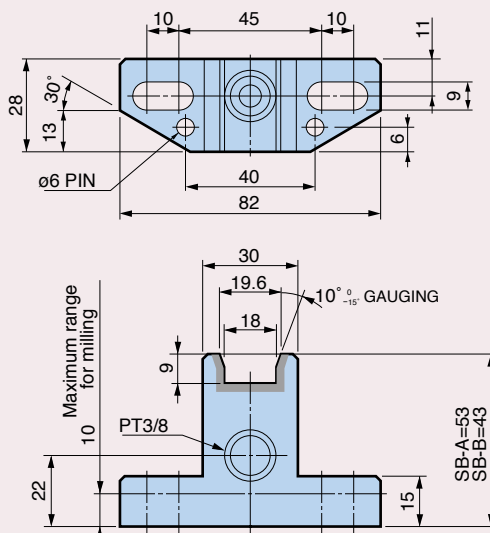
Note : For a BDV50/BBT50/HSK-A100 unit with an 80mm "S" dimension, please use the Stop Block dimensions for BDV40/BBT40/HSK-A63, as the Locating Pin dimension differs from that of a standard unit with a 110mm "S" dimension.

3. Semi-Finished Stop Block

A semi-finished Stop Block has the proper groove form for use with a **BIG** ANGLE HEAD, as well as additional material to allow the user 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 a semi-finished Stop Block.

《BDV40/BBT40/HSK-A63》

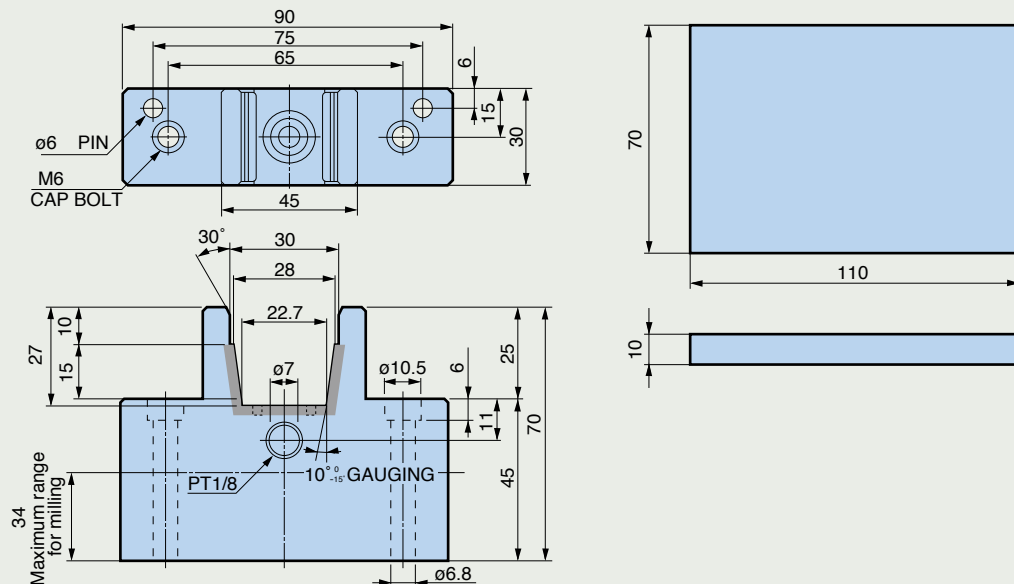
● MODEL : SB-A/SB-B



1. Adjustment to the required height by milling the base.
2. Fix the stop block by inserting two dowel pins (ø6).

《BDV50/BBT50/HSK-A100》

● MODEL : SB-G/E



1. Adjustment to the required height by milling the base.
2. Fix the stop block by inserting two dowel pins (ø6).

Note : ■ on the sketch indicates heat treatment (HRC45-50), all other surfaces can be milled.

STOP BLOCK For HIGH SPINDLE & HI-JET HOLDER

SET UP INFORMATION



● Preparing the Locating Pin and Stop Block

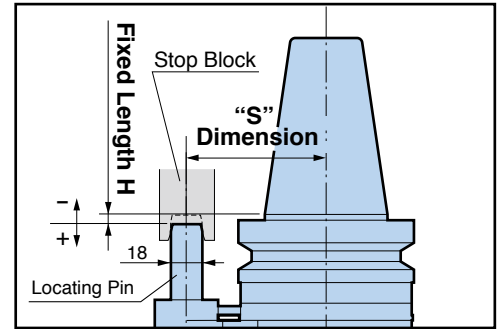
The HIGH SPINDLE and Hi-JET HOLDER utilize a Locating Pin that engages with the Stop Block, which is mounted to the machine spindle. Please refer to the following instructions to select / adjust the Locating Pin, and to prepare for the Stop Block.

1. 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.

	“S” Dimension
BDV / DV / BBT40	65
BDV / DV / BBT50	80



《Fixed Length “H”》

The axial distance from the gauge 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 “H”, as shown in the tables below. Please specify the required Fixed Length “H” when ordering. Otherwise, it will be delivered set at the **BIG** standard, 6mm.

HIGH SPINDLE

	BDV40	BDV50	BBT40	BBT50
LP-A	-9 / +6	-4 / +11	-24 / -9	-9 / +6
LP-B	+6 / +21	+11 / +26	-9 / +6	+6 / +21
LP-C	+21 / +36	+26 / +41	+6 / +21	+21 / +36

Hi-JET HOLDER

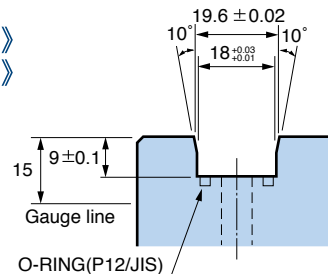
	DV40 BBT·BT40	DV50 BBT·BT50	DV40- OSL32N BBT40- OSL32N	DV50- OSL50N BBT50- OSL50N
LP-A	-6 / +9	-9 / +6	0 / +15	+3 / +18
LP-B	+9 / +24	+6 / +21	+15 / +30	+18 / +33
LP-C	+24 / +39	+21 / +36	+30 / +45	+33 / +48

Note: indicates adjustable range of the **BIG** standard setup.

2. Stop Block Dimensions

The diagram on the right shows the proper groove dimensions for a suitable Stop Block for use with **BIG** HIGH SPINDLE and Hi-JET HOLDER. When ordering a Stop Block from a machine tool builder, please refer to these dimensions.

《BDV/DV/BBT40》
《BDV/DV/BBT50》



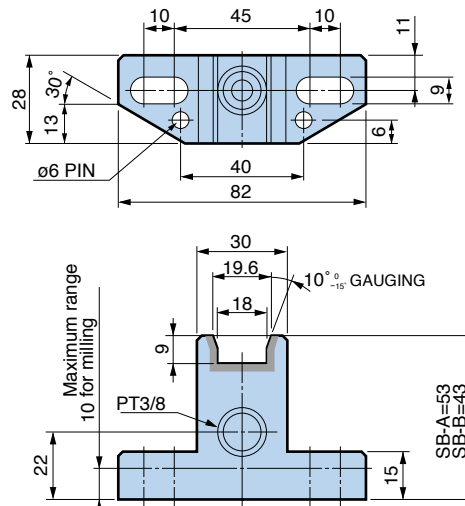
3. Semi-Finished Stop Block

A semi-finished Stop Block has the proper groove form for use with **BIG** HIGH SPINDLE and Hi-JET HOLDER, as well as additional material to allow the customer to machine the block to the correct height.

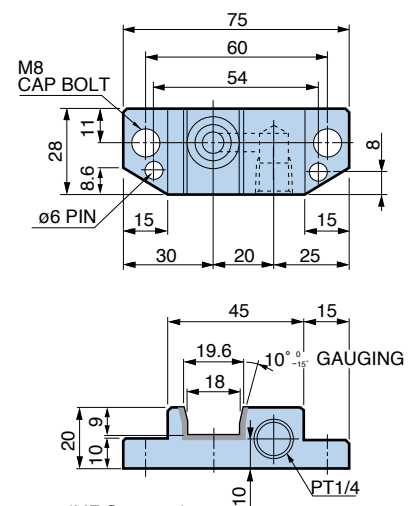
(NOTE: Stop Block SB-F is not height-adjustable.)
If a pre-made Stop Block is unobtainable from the machine tool builder, a semi-finished Stop Block can be used.

Please consult with the machine tool builder for selection, machining, and mounting of the semi-finished Stop Block.

● MODEL : SB-A/SB-B



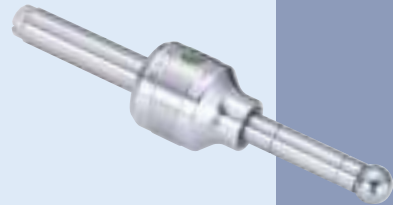
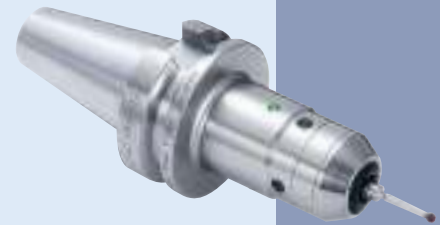
● MODEL : SB-F



Note: on the sketch indicates heat treatment (HRC45-50), all other surfaces can be milled.

MEASURING TOOLS

POINT MASTER PRO PMP	H1
POINT MASTER PMC	H3
POINT CENTER	H3
BASE MASTER SERIES	H4
TOOL MASTER	H5
ACCU CENTER	H5
ALIGNMENT TOOL for ATC arm	H6
DYNA FORCE	H7
TOOL PRESETTER type TPS	H8
LEVEL MASTER	H9



POINT MASTER PRO SERIES

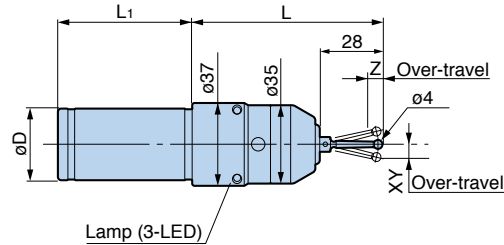
POINT MASTER PRO Series is a precision 3-D touch sensor which will operate in non-conductive as well as conductive applications, resin, ceramic or coated workpieces, machines with ceramic spindle taper or bearings can all be accommodated.



Touch Probe & Edge Finder

CYLINDRICAL Shank Type

For all materials, including non-conductive cutting tools, workpieces, and machine tools.



Model	øD (h7)	L	L1	Repeatability (Probe)	Over-travel		Measuring Pressure (N)		Battery	Battery life (Continuous use)	Standard Stylus	Weight (kg)
					XY	Z	XY	Z				
PMP-10	10	75	49	±1 μm (2σ)	±12	5	0.4	1.5	Panasonic Lithium BR435×1	50 hours	ST28-4R	0.4
-20	20	90	50						LR1×2	50 hours		0.5

- PMP-10 has one LED only.
- Above table indicates the specification when using stylus ST28-4R.
- There is approx 5μm lag in X & Y directions and approx. 2μm lag in Z direction to illuminate LED lamp when stylus touches workpiece surface.

BBT Shank Type JIS B 6339 (BIG-PLUS)

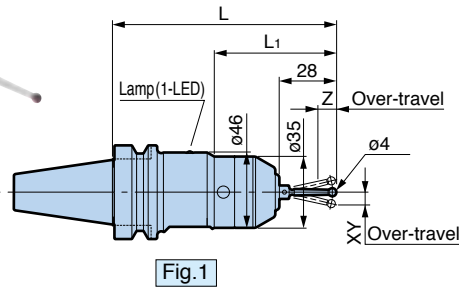


Fig.1

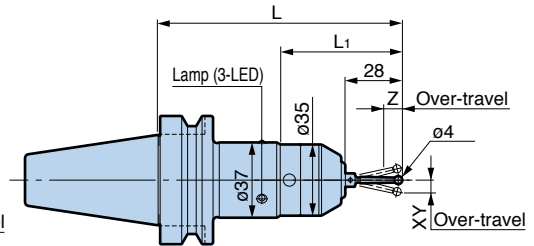


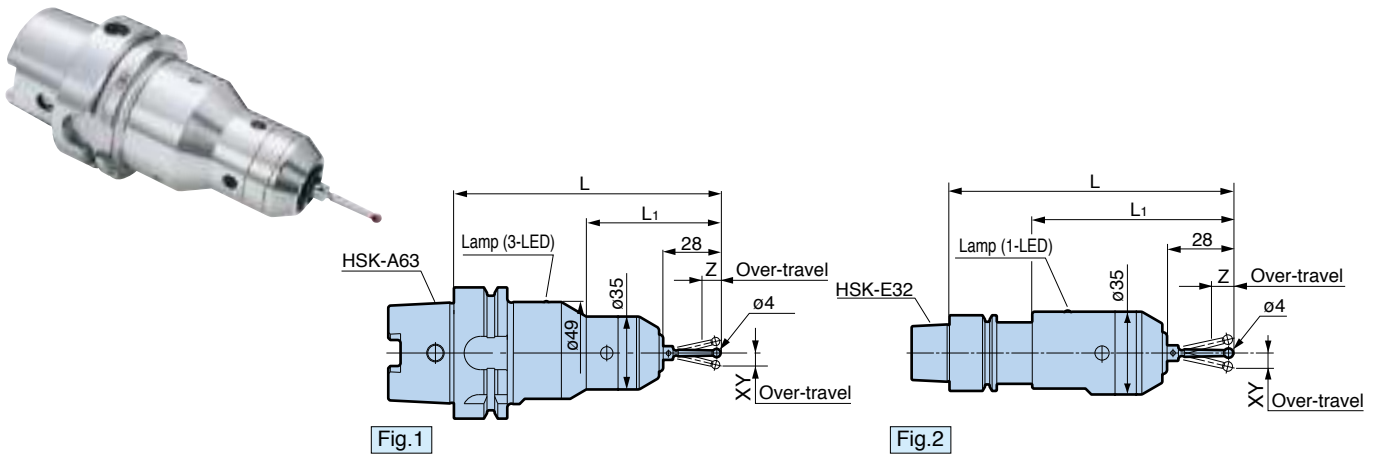
Fig.2

BIG-PLUS tools can be used in machining centers with conventional spindles.

Model	Fig.	BBT No.	L	L1	Repeatability (Probe)	Over-travel		Measuring Pressure (N)		Battery	Battery life (Continuous use)	Standard Stylus	Weight (kg)
						XY	Z	XY	Z				
BBT30-PMP-115	1	30	115	63	±1 μm (2σ)	±12	5	0.4	1.5	CR2×1	90 hours	ST28-4R	0.8
BBT40-PMP-120	2	40	120	60						LR1×2	50 hours		1.3

- Above table indicates the specification when using stylus ST28-4R.
- There is approx 5μm lag in X & Y directions and approx. 2μm lag in Z direction to illuminate LED lamp when stylus touches workpiece surface.

HSK Shank Type ISO 12164(DIN 69893-1) & DIN 69893-5

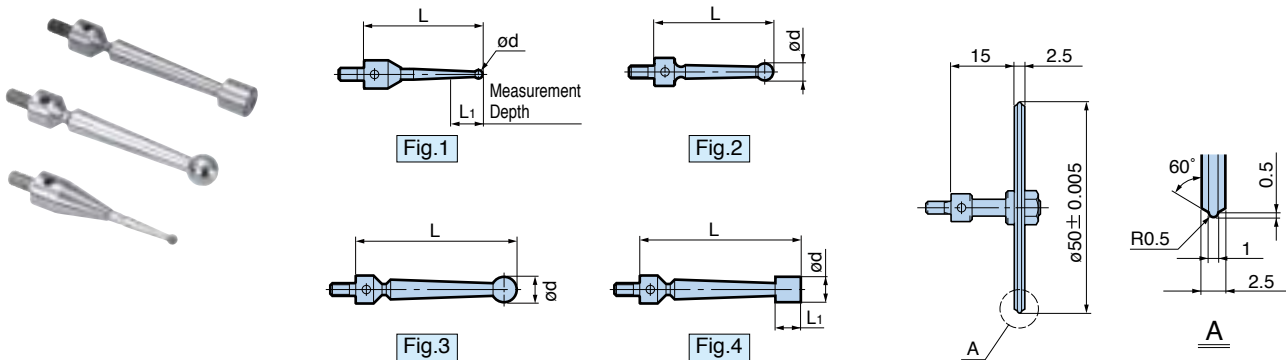


Model	Fig.	HSK No.	L	L1	Repeatability (Probe)	Over-travel		Measuring Pressure (N)		Battery	Battery life (Continuous use)	Standard Stylus	Weight (kg)
						XY	Z	XY	Z				
HSK-A63-PMP-130	1	HSK-A63	130	65	±1µm(2σ)	±12	5	0.4	1.5	CR2×1	90 hours	ST28-4R	1.3
HSK-E32-PMP-120	2	HSK-E32	120	85		SR44×2	24 hours	0.5					

- Above table indicates the specification when using stylus ST28-4R.
- There is approx 5µm lag in X & Y directions and approx. 2µm lag in Z direction to illuminate LED lamp when stylus touches workpiece surface.

ALTERNATIVE STYLUS

The stylus (M3 thread) is replaceable. Please replace when different model of stylus required or if damaged.



Model	Fig.	L	L1	ød	Material	Series
ST28-1P	1	28	2	1	Carbide	PMC-PMP
-2P			8	2		
-3P			—	3		
-4P			—	4		
ST38-6P	3	38	—	6	Steel	PMC
ST38-6×6	4		6	6	(SUS)	PMC□□S
ST28-4R	2	28	—	4	Ruby	PMP

※ Stylus model ST38-6×6 is exclusive for PMC-20S.
Runout accuracy may worsen when used on other models.

Ideal for peculiarly shaped workpiece or tapered portion of plastic mold.

Model **ST15-50K**

* PMC-Series only.



Tool Offset Sensor

BASE MASTER SERIES

BASE MASTER Series is a precision touch sensor to determine workpiece offsets and tool length. Mounted on workpiece surface or machine table, LED lamp illuminates immediately when the cutting edge touches the sensor plate and the position is detected.

BASE MASTER

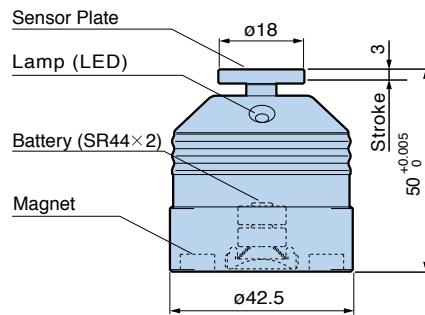
The most popular Base Master model with 1µm accuracy. Operates when a conductive circuit is completed.



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



Model **BM-50**



Height accuracy	50 ^{+0.005} ₀ mm
Measurable pressure	3N
Repeatability accuracy	±1µm (2σ)
Min. measurable tool diameter	ø1mm
Battery life	10 hours (continuous use)
Weight	0.23kg

BASE MASTER GOLD

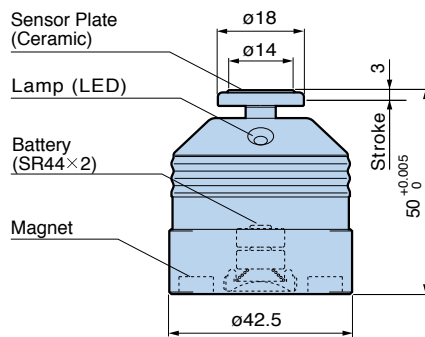
Suitable for various tools and workpieces, including non-conductive materials such as ceramics.



For all materials, including non-conductive cutting tools, workpieces, and machine tools.



Model **BM-50G**



Height accuracy	50 ^{+0.005} ₀ mm
Measurable pressure	2N
Repeatability accuracy	±1µm (2σ)
Min. measurable tool diameter	ø1mm
Battery life	10 hours (continuous use)
Weight	0.24kg

BASE MASTER MICRO

Specifically designed for micro cutting tools. Low measuring pressure protects the cutting edge.

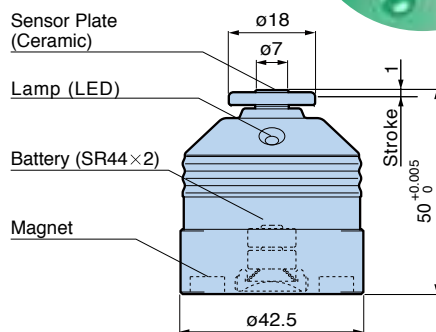


Pre-set **ø0.05mm** tools. Considerable reduction of set-up time for small dia. tools.

For all materials, including non-conductive cutting tools, workpieces, and machine tools.



Model **BM-50M**



Height accuracy	50 ^{+0.005} ₀ mm
Measurable pressure	0.3N
Repeatability accuracy	±1µm (2σ)
Min. measurable tool diameter	ø0.05mm
Battery life	10 hours (continuous use)
Weight	0.24kg

TOOL MASTER

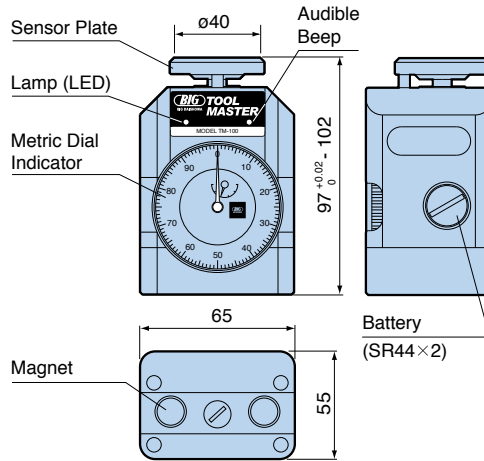
TOOL MASTER is a precision touch sensor with a large dial gauge. LED lamp and sound pre-indicate approach to 100mm height to ease the detecting operation.



Tool Offset Sensor



Model **TM-100**



For all materials, including non-conductive cutting tools, workpieces, and machine tools.

Height accuracy	100 ^{+0.02} ₀ mm	
Stroke	5mm	
Stroke range	97 - 102mm	
Measurable pressure	6N (100mm)	
Weight	1.2kg	
Dial gauge	Graduation	0.01mm
	Indication tolerance	±12µm
	Repeatability	3µm
	Return tolerance	3µm

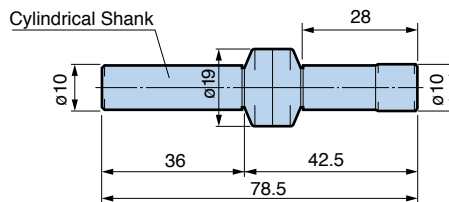
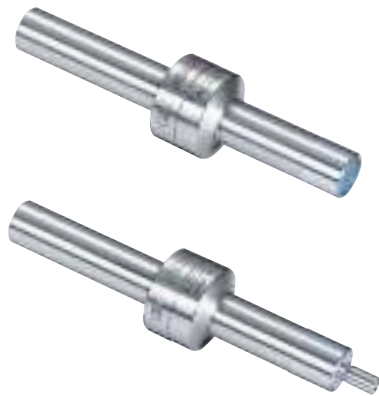
* Dial gauge accuracy in accordance with JISB7503:2011.

ACCU CENTER

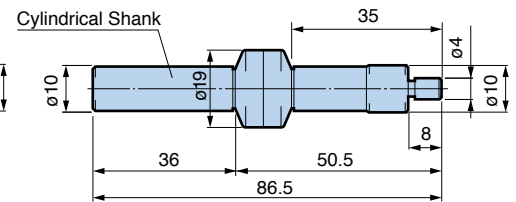
ACCU CENTER is a simple and precise edge finder offering repeatability within 3µm. Hard chrome plated stylus offers extended life.



Suitable for all materials



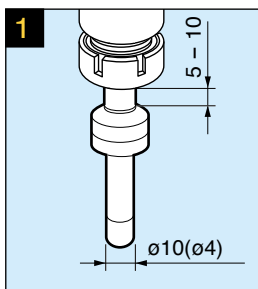
Model **ACCU-C10**



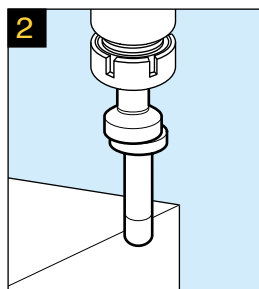
Model **ACCU-C104**

(Not for use with horizontal machine tools)

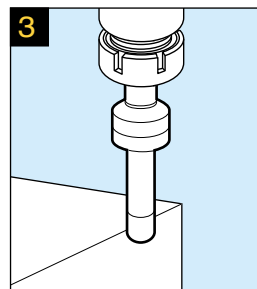
Operating Instructions



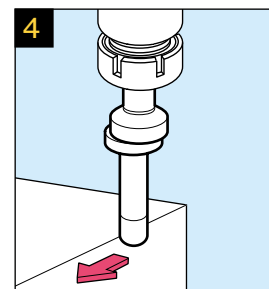
Clamp tool in a Chuck.



Move the stylus off center, and rotate between 400 and 600 min⁻¹.



Bring the tool into contact with the workpiece and advance slowly until the stylus lines up with the body.



If advanced too far the stylus will again move off center. Be sure to compensate location for half the stylus diameter.

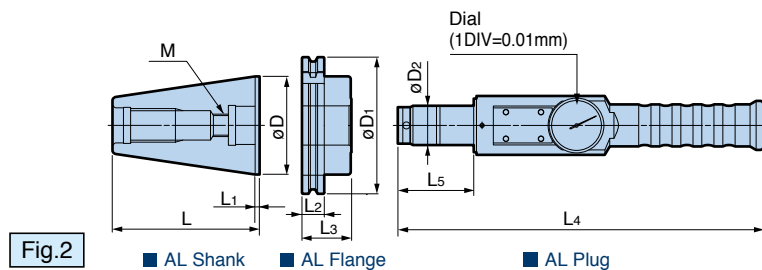
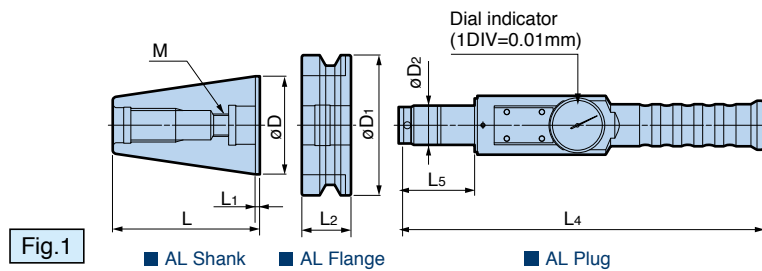
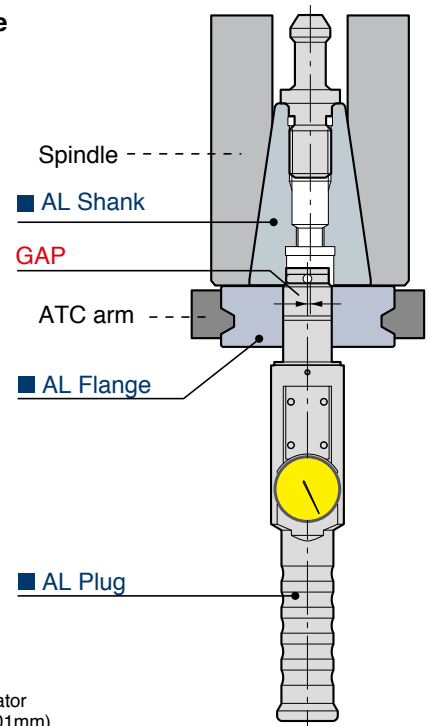
ALIGNMENT TOOL for ATC arm

For maintenance of machine tool spindle!
 Measuring equipment of misalignment between the ATC arm and machine tool spindle or magazine pot center. Dial indicator aids quick adjustment.



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.



Exclusive storage case

Set model	Fig.	øD	D1	D2	L	L1	L2	L3	L4	L5	M
BT30-ATC18	1	31.75	46.00	18	50.40	2.0	20.0	-	251	44	12
BT40-ATC20		44.45	63.00	20	67.40	2.0	25.0	-	251	44	12
BT50-ATC28		69.85	100.00	28	104.80	3.0	35.0	-	261	54	16
DV40-ATC20	2	44.45	63.55	20	71.60	3.2	15.9	24.3	251	44	12
DV50-ATC28		69.85	97.50	28	104.95	3.2	15.9	35.3	261	54	16

DYNA FORCE

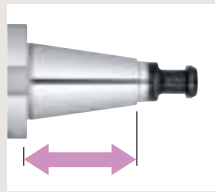
Measuring device for pulling force of machine tool spindle.



The necessity of machine tool maintenance

Periodical measurement avoids reduced rigidity leading to vibrations, loss of machining quality, shortened tool life, etc.

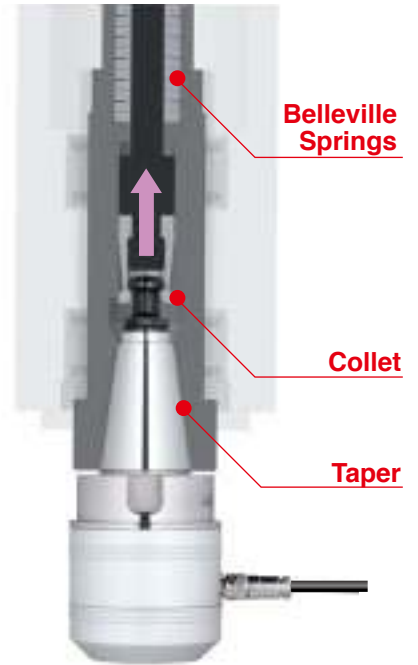
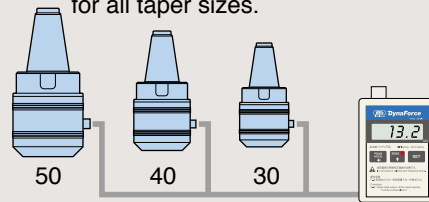
Longer taper shank to enhance reliability



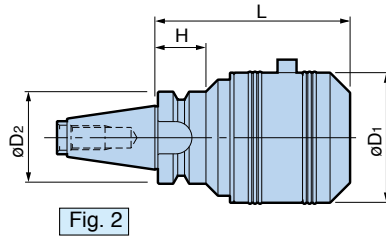
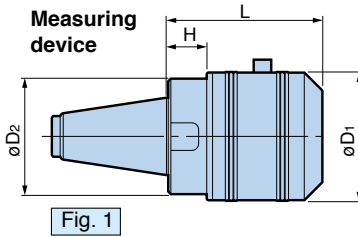
Long taper supports itself in long span and stabilizes the value of measurement.

Only one display for all taper sizes

One common display can be used for all taper sizes.



Specification Corresponding JIS, DIN, ANSI



Display



Cable



Exclusive case



Set Model	Contents of set				Taper size	Rated capacity	øD1	øD2	L	H	Weight (kg)		
	Measuring device	Fig.	Display	Cable									
SNT30-DF10	NT30-DF10	1	DFA-1 (AA battery × 2)	DFC-1 (1m)	30	10kN (980kgf)	65	58	80	20	1.5		
SBT30-DF10	BT30-DF10	2						46	98	26	1.6		
SNT40-DF30	NT40-DF30	1			50	30kN (2,940kgf)	73	66	90	24	2.5		
SNT50-DF50	NT50-DF50	1							96	90	110	33	6.0
-DF30 ※	-DF30	1							73	70	86	20	3.9

- Each component is also available separately. Measuring Device is provided with the Case.
- 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. For DIN, ISO, ANSI & CAT standard machines, exclusive pull stud bolt for Dyna Force is required.
- SNT50-DF30 marked with ※ is a light-weight model.

Certificate of calibration and diagram of traceability system are available with charge in order to keep the reliability of the device.

Exclusive pull stud bolts for DYNA FORCE

An exclusive pull stud bolt is needed for a machine spindle in DIN, ANSI or CAT standard. Pull stud bolts in MAS and JIS standards can be used. These pull stud bolts are not suitable for the SBT30-DF10.



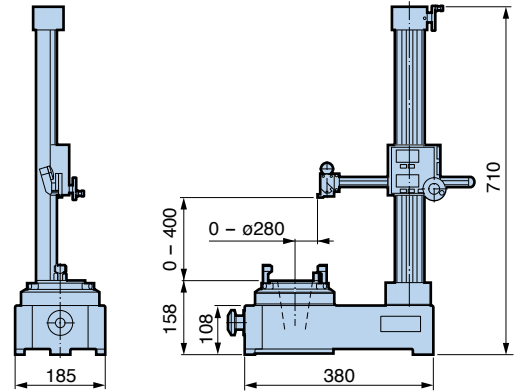
Standard No.	Shank No.		
	30	40	50
DIN69872	DF-PDV30	DF-PDV40A	DF-PDV50A
ISO7388	Type A	—	—
	Type B	—	—
ANSI B5.50	DF-PAV30	DF-PAV40	DF-PAV50
ASME B5.50	DF-PCV30	DF-PCV40	DF-PCV50

TOOL PRESETTER TYPE TPS

Detects both X and Z axes with 1 stylus for various measuring applications.
 Ceramic spindle avoids damage such as indentation, buldge or corrosion on the taper.
 Precise taper contact is maintained.



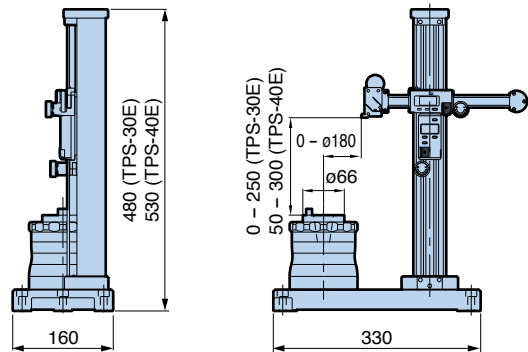
2D Edge Sensor



Model	Taper	Measuring range (mm)	Min. reading	Power supply	Operating temperature	Weight (kg)
TPS-40N	BT40	X : 0 - ø280 Z : 0 - 400	0.01mm	3V lithium battery: 2pcs.	5 - 40°C	38.5
-50N	BT50					41.0
-HSK63-N	HSK-A63					41.0
-HSK100-N	HSK-A100					43.0
-C5N	BIG CAPTO C5					41.0
-C6N	BIG CAPTO C6					41.0

- Spindle provides zero setting reference.
- Taper adapter and test bar are ordered separately.
- HSK form E & F holders, which have no drive key slots, cannot be measured.

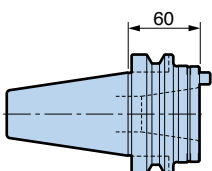
COMPACT Type



Model	Taper	Measuring range (mm)	Min. reading	Power supply	Operating temperature	Weight (kg)
TPS-30E	BT30	X : 0 - ø180 Z : 0 - 250 (BT30)	0.01mm	2 pcs. of 1.55V silver oxide battery (SR44)	5 - 40°C	18.5
-40E	BT40	Z : 50 - 300 (BT40)				20.0

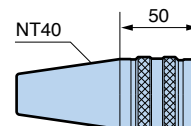
- Min. reading of the digital counter is 0.01mm for both X and Y axes. When the counter indicates diameter in X axis, the min. reading becomes 0.02mm.
- 2D Edge Sensor of the TPS-40E does not reach to the spindle surface. For setting reference value, optional Setting Gauge model SG40-50 or similar arbor having 50mm or more dimensions in both X and Z axes as reference dimensions is required.

ADAPTER (option)



Model	Taper
BT40-30	BT40 → BT30
BT50-30	BT50 → BT30
BT50-40	BT50 → BT40

SETTING GAUGE (option)



Model
SG40-50

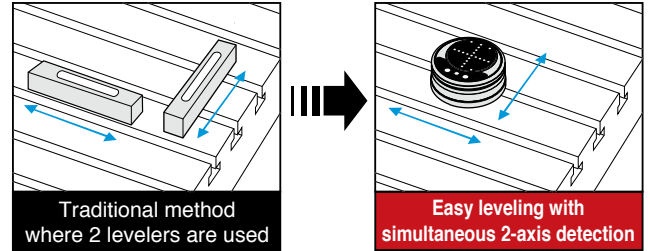
For setting reference value on TPS-40E

LEVEL MASTER

2-axis simultaneous detection leveler.
 LED displays level conditions for both axis simultaneously.
 LED and buzzer indication when leveling is complete.



Simultaneous 2-axis detection



Simultaneous 2-axis detection saves the extra time & cost of using 2 levelers.

Model	LVM-01
Minimum Read Value	0.01mm Inclination/m
Power Source	Alkaline batteries (AAA x 4 pcs)
Auto Power Off	30 minutes after power is turned on
Operational Temperature	0-40°C(Recommended 20°C ± 5°)
Battery Life	50 hours
Dimensions	ø109mm x 46mm H
Weight	985g

Note: 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.

LED & buzzer indicate leveling completion

HIGH Mode

when the required level condition is within **0.01mm/1m**

LOW Mode

when the required level condition is within **0.1mm/1m**

LED (blue) & buzzer are simultaneously activated

Included:

- Level Master
- Aluminum case
- Alkaline batteries (AAA x 4 pcs)
- Manual
- Warranty
- Inspection certificate



CUTTING TOOLS

FULLCUT MILL FCR	11
FULLCUT MILL FCM	110
CONTACT GRIP for FCR Head	14
for FCM Head	117
for Body	15
SPEED Finisher	123
C-CUTTER MINI	125
C-CUTTER	131
R-CUTTER	133
BF-CUTTER	135
CENTER BOY	136

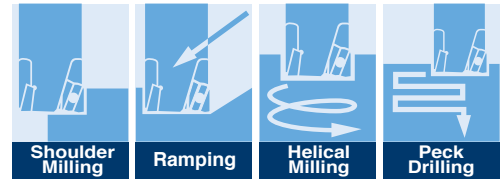


I

Ramping and Helical milling

FULLCUT MILL FCR Cutter Dia. ϕ 16 - ϕ 32

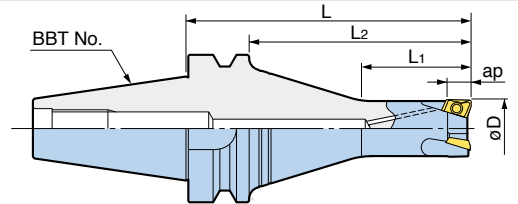
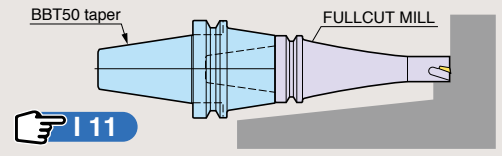
Unique inserts designed for ramping make multi-functional cutting possible.



BBT Standard type JIS B 6339 (BIG-PLUS)



Adapter for BT50 taper shank (FCR & FCM)



BIG-PLUS tools can be used in machining centers with conventional spindles.

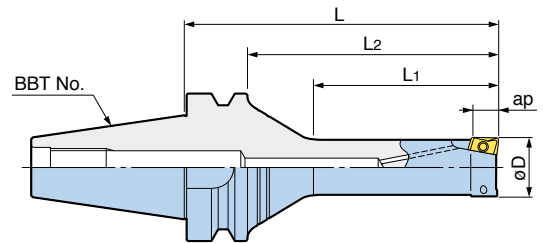
Cutter Dia. ϕ D	Model	ap	L	L1	L2	No. of Insert	Insert Size	Weight (kg)
16	BBT30-FCR16082- 65	8	65	28	43	2	BRG16	0.5
20	-FCR20083- 65		65	28	43	3	BRG20	0.5
25	-FCR25083- 65		65	33	43	3	BRG25	0.6
32	-FCR32103- 65	10	65	40	43	3	BRG32	0.6
16	BBT40-FCR16082- 85	8	85	25	58	2	BRG16	1.3
	-120		120	30	93			1.5
	-135		135	25	108			1.6
20	-FCR20083- 85	8	85	35	58	3	BRG20	1.2
	-120		120	30	93			1.6
	-135		135	30	108			1.7
25	-FCR25083- 85	8	85	40	58	3	BRG25	1.3
	-120		120	45	93			1.6
	-135		135	35	108			1.8
32	-FCR32103- 85	10	85	45	58	3	BRG32	1.4
	-120		120	50	93			1.7
	-135		135	40	108			1.9

1. Wrench and Anti-seizure Lubricant are included. Inserts are ordered separately.
2. Long nose type shown below is recommended for medium-heavy or heavy slot milling with long projection, exceeding L=120mm for 16 & 20mm diameters / L=135mm for 25 or larger diameters.

For Insert : | 7

For Cutting Condition : | 8

BBT Long nose type JIS B 6339 (BIG-PLUS)



BIG-PLUS tools can be used in machining centers with conventional spindles.

Cutter Dia. ϕ D	Model	ap	L	L1	L2	No. of Insert	Insert Size	Weight (kg)
16	BBT30-FCR16082L- 85	8	85	45	63	2	BRG16	0.5
20	-FCR20082L- 85		85	50	63	2	BRG20	0.5
25	-FCR25082L- 85		85	50	63	2	BRG25	0.6
32	-FCR32102L- 85	10	85	60	63	2	BRG32	0.7
16	BBT40-FCR16082L-105	8	105	45	78	2	BRG16	1.3
	-120		120	45	93			1.4
	-135		135	60	108			1.5
20	-FCR20082L-120	8	120	60	93	2	BRG20	1.4
	-135		135	60	108			1.5
	-150		150	75	123			1.7
25	-FCR25082L-135	8	135	75	108	2	BRG25	1.5
	-150		150	75	123			1.7
	-135		135	80	108			1.7
32	-FCR32102L-135	10	135	80	108	2	BRG32	1.7
	-150		150	90	123			1.9

1. Wrench and Anti-seizure Lubricant are included. Inserts are ordered separately.

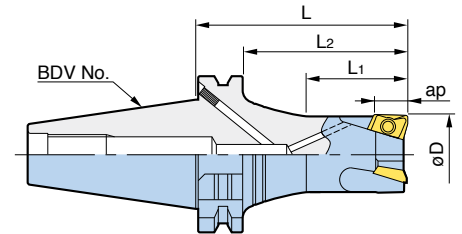
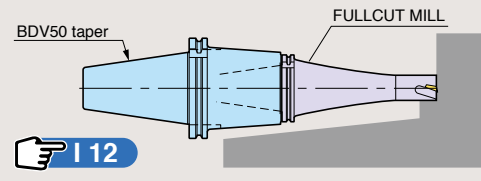
For Insert : | 7 For Cutting Condition : | 8

BDV Standard type

DIN 69871 A/B (BIG-PLUS)



Adapter for SK50 taper shank (FCR & FCM)



BIG-PLUS tools can be used in machining centers with conventional spindles.

Cutter Dia. øD	Model	ap	L	L ₁	L ₂	No. of Insert	Insert Size	Weight (kg)
16	BDV40-FCR16082- 85	8	85	25	65	2	BRG16	1.3
	-120		120	30	100			1.5
	-135		135	25	115			1.6
20	-FCR20083- 85	8	85	35	65	3	BRG20	1.2
	-120		120	30	100			1.6
	-135		135	30	115			1.7
25	-FCR25083- 85	8	85	40	65	3	BRG25	1.3
	-120		120	45	100			1.6
	-135		135	35	115			1.8
32	-FCR32103- 85	10	85	45	65	3	BRG32	1.4
	-120		120	50	100			1.7
	-135		135	40	115			1.9

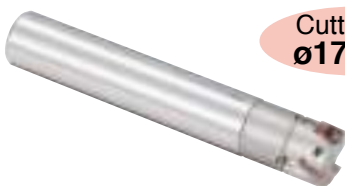
1. Wrench and Anti-seizure Lubricant are included. Inserts are ordered separately.
2. Long nose type shown below is recommended for medium-heavy or heavy slot milling with long projection, exceeding L=120mm for 16 & 20mm diameters / L=135mm for 25 or larger diameters.

For Insert : I 7

For Cutting Condition : I 8

Note 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 saving as no chuck is necessary.

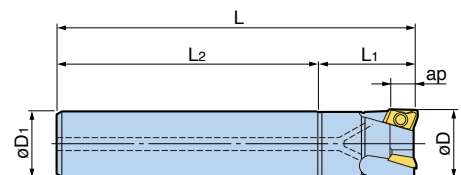
[OVER SIZE]



Cutter Dia
ø17-ø33

POINT $\phi D = \phi D1 + 1mm$

1mm larger Cutter Dia. than shank Dia. avoids any interference with work-piece.



Cutter dia øD	Model	øD ₁	ap	L	L ₁	L ₂	No. of Insert	Insert Size	Weight (kg)
17	ST16-FCR17082-120	16	8	120	25	95	2	BRG16	0.2
21	ST20-FCR21082-165	20	8	165	30	135	2	BRG20	0.4
	-FCR21083-135			135		105	3		0.3
26	ST25-FCR26082-165	25	8	165	38	127	2	BRG25	0.6
	-FCR26083-150			150		112	3		0.6
33	ST32-FCR33102-180	32	10	180	48	132	2	BRG32	1.1
	-FCR33103-180			180		132	3		1.0

1. Wrench and Anti-seizure Lubricant are included. Inserts are ordered separately.
2. Lower cutting parameters appropriately for applications with either long projection or 3-flutes models.
3. 2-flutes models are recommended for medium-heavy or heavy milling of slot or pocket.
4. For medium-heavy or heavy slot milling or ramping with projection longer than 2.5 times of diameter, 2-flutes models are recommended.

For Insert : I 7

For Cutting Condition : I 8

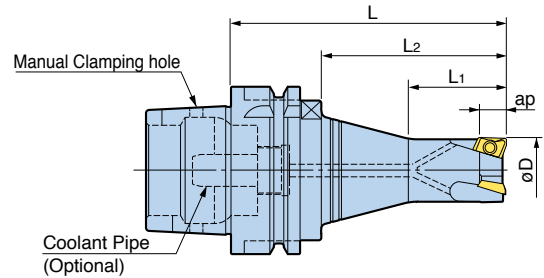
Ramping and Helical milling

FULLCUT MILL FCR Cutter Dia. ϕ 16 - ϕ 32

Unique inserts designed for ramping make multi-functional cutting possible.



HSK-A Standard type ISO12164 & DIN 69893-1



Cutter Dia. ϕ D	Model	ap	L	L ₁	L ₂	No. of Insert	Insert Size	Weight (kg)
16	HSK-A50-FCR16082- 75	8	75	27	41	2	BRG16	0.5
20	-FCR20083- 75		75	28	41	3	BRG20	0.6
25	-FCR25083- 75		75	33	41	3	BRG25	0.6
32	-FCR32103- 75	10	75	39	41	3	BRG32	0.7
16	HSK-A63-FCR16082- 85	8	85	25	51	2	BRG16	0.9
	-120		120	30	86			1.1
	-135		135	25	101			1.2
20	-FCR20083- 85	8	85	32	51	3	BRG20	1.0
	-120		120	30	86			1.2
	-135		135	30	101			1.3
25	-FCR25083- 85	8	85	35	51	3	BRG25	1.0
	-120		120	45	86			1.2
	-135		135	35	101			1.4
32	-FCR32103- 85	10	85	40	51	3	BRG32	1.1
	-120		120	50	86			1.4
	-135		135	40	101			1.5

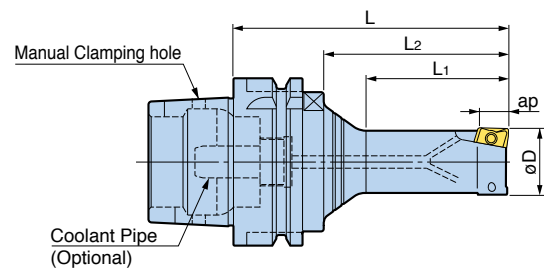
1. Coolant Pipe is ordered separately.

For Insert : | 7

For Cutting Condition : | 8

For COOLANT PIPE C 51

HSK-A Long nose type ISO12164 & DIN 69893-1



Cutter Dia. ϕ D	Model	ap	L	L ₁	L ₂	No. of Insert	Insert Size	Weight (kg)
16	HSK-A63-FCR16082L- 85	8	85	40	51	2	BRG16	0.9
	-120		120	45	86			1.0
20	-FCR20082L-105	8	105	50	71	2	BRG20	1.1
	-120		120	60	86			1.2
25	-FCR25082L-105	8	105	55	71	2	BRG25	1.1
	-120		120	65	86			1.1
32	-FCR32102L-120	10	120	70	86	2	BRG32	1.4
	-135		135	80	101			1.4

1. Coolant Pipe is ordered separately.

For Insert : | 7

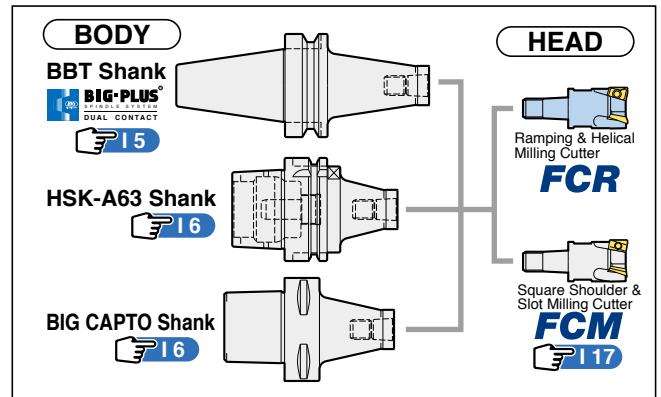
For Cutting Condition : | 8

For COOLANT PIPE C 51

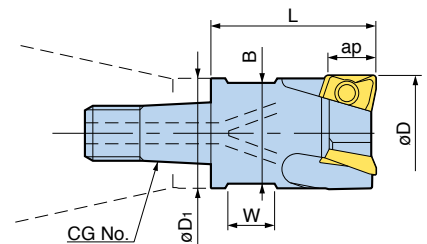
Threaded coupling with taper & face contact

CONTACT GRIP

Offers amazing cutting performance which is superior to the conventional threaded coupling system.



FCR HEAD



Cutter Dia ϕD	Model	CG No.	ϕD_1	ap	L	No. of Insert	Spanner flats		Insert Size
							B	W	
16	CG15-FCR16082-25	CG15	15	8	25	2	12	6.2	BRG16
	CG19-FCR20082-32								
20	-FCR20083-32	CG19	19	8	32	3	17	8.2	BRG20
	CG24-FCR25082-36								
25	-FCR25083-36	CG24	24	8	36	3	22	10.2	BRG25
	CG31-FCR32102-43								
32	-FCR32103-43	CG31	31	10	43	3	27	12.2	BRG32

1. Wrench to clamp insert and Anti-Seizure Lubricant are included.
2. Inserts are ordered separately.
3. Standard single-ended wrench is required to clamp the head.

For Insert : | 7

For Cutting Condition : | 8

Application example

Amazing cutting performance even on #40 taper machine.
(Below application example has been achieved with dry cutting.)

Type **FCR** Ramping



Machine	Vertical M/C, #40 taper
Contact Grip Head	FCR32 (3-inserts)
Work Material	C50(S50C)
Cutting Speed V (m/min.)	150
Feed Rate f (mm/tooth)	0.1
Axial DOC Ad (mm)	MAX.10 (Ramping Angle 3°)

Ramping and Helical milling

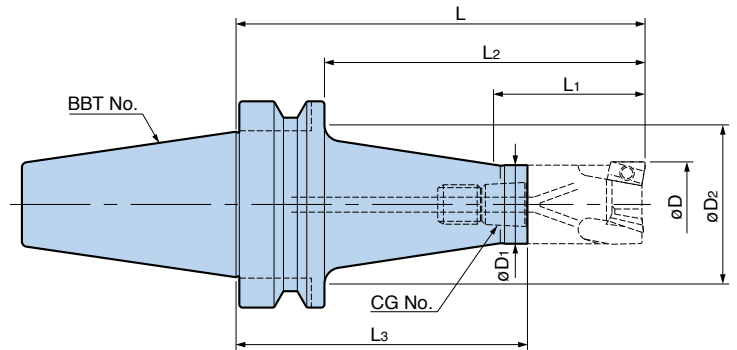
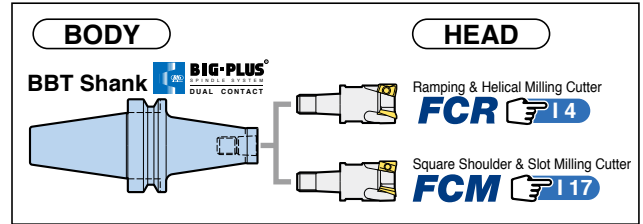
FULLCUT MILL

Threaded coupling with taper & face contact

CONTACT GRIP

BBT Holder

Improved rigidity and accuracy from the BIG-PLUS Dual Contact System

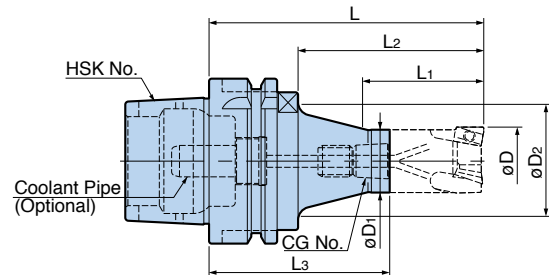
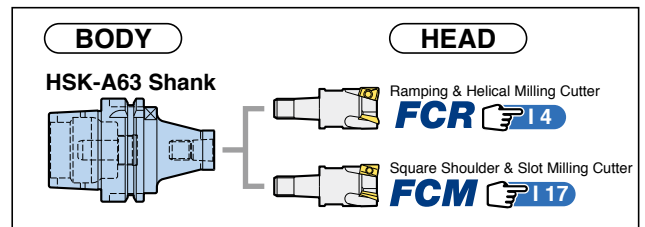


BIG-PLUS tools can be used in machining centers with conventional spindles.

Cutter Dia øD	Model	CG No.	øD ₁	øD ₂	L	L ₁	L ₂	L ₃
16	BBT30-CG15- 50	CG15	15	40	75	31	53	50
	- 80			40	105	32	83	80
20	-CG19- 43	CG19	19	40	75	39	53	43
	- 73			42	105	40	83	73
25	-CG24- 39	CG24	24	41	75	45	53	39
	- 69			42	105	45	83	69
32	-CG31- 32	CG31	31	41	75	49	53	32
	- 62			40	105	53	83	62
16	BBT40-CG15- 50	CG15	15	46	75	30	48	50
	- 80			48	105	32	78	80
	-100			49	125	32	98	100
20	-CG19- 43	CG19	19	45	75	36	48	43
	- 73			48	105	40	78	73
	- 93			49	125	40	98	93
25	-CG24- 39	CG24	24	39	75	41	48	39
	- 69			48	105	45	78	69
	- 89			49	125	45	98	89
32	-CG31- 37	CG31	31	43	80	48	53	37
	- 77			57	120	53	93	77
	- 92			57	135	53	108	92
16	BBT50-CG15-145	CG15	15	80	170	45	132	145
20	-CG19-153	CG19	19	80	185	60	147	153
25	-CG24-164	CG24	24	90	200	75	162	164
32	-CG31-157	CG31	31	90	200	90	162	157

1. Standard single-ended wrench is required to clamp the head.

HSK Holder ISO12164 & DIN69893-1

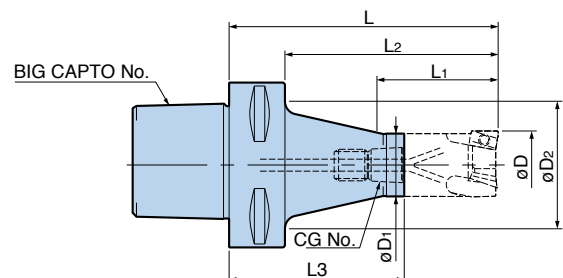
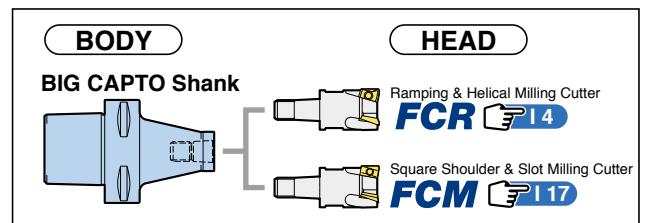


Cutter Dia øD	Model	CG No.	øD1	øD2	L	L1	L2	L3
16	HSK-A63-CG15- 50	CG15	15	36	75	30	41	50
	- 80			45	105	31	71	80
	-100			45	125	32	91	100
20	-CG19- 73	CG19	19	45	105	39	71	73
	- 93			45	125	40	91	93
	-CG24- 69			CG24	24	45	105	44
- 89	45	125	45			91	89	
32	-CG31- 77	CG31	31	45	120	53	86	77
	- 92			45	135	53	101	92

- Standard single-ended wrench is required to clamp the head.
- Coolant Pipe is ordered separately.

For COOLANT PIPE C 51

BIG CAPTO Holder ISO26623-1



Cutter Dia øD	Model	CG No.	øD1	øD2	L	L1	L2	L3
16	C6-CG15- 50	CG15	15	46	75	31	53	50
	- 80			48	105	31	83	80
	-100			49	125	32	103	100
20	-CG19- 43	CG19	19	45	75	39	53	43
	- 73			48	105	39	83	73
	- 93			49	125	40	103	93
25	-CG24- 69	CG24	24	49	105	44	83	69
	- 89			49	125	45	103	89
	-CG31- 77			CG31	31	57	120	53
- 92	57	135	53			113	92	

- Standard single-ended wrench is required to clamp the head.

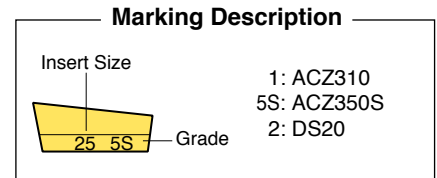
Ramping and Helical milling

FULLCUT MILL FCR

Indexable Inserts



Model Description
BRG16 **08** **08** **ACZ350S**
 Grade
 Nose Rd.
 Effective Cutting Length
 φ16 - 25...08 φ32...10



Cutter Dia	Insert Model	ap	Nose R	P	M	K	N
				ACZ350S		ACZ310	DS20
φ16, φ17	BRG160808	8	0.8	○	○	○	○
φ20, φ21	BRG200808	8	0.8	○	○	○	○
φ25, φ26	BRG250808	8	0.8	○	○	○	○
φ32, φ33	BRG321008	10	0.8	○	○	○	○
	BRG321032	10	3.2				○

※ Inserts are available in packets of 10 pcs.
 Please clarify the insert type and grade when ordering.
 For example, use ordering code: BRG160808ACZ350S.

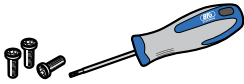
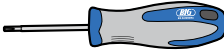

Caution

- It is important to use the correct insert for the diameter of FULLCUT MILL. Failure to use the correct insert will result in incorrect cutting conditions and poor results.
- There is no compatibility with those of FCM type.**

Insert Classifications

ISO	Grade	Material	Coating
P30	ACZ350S	General steel	TiAlN / TiCN
M30		Stainless steel	
K10	ACZ310	Cast Iron	DLC
N20	DS20	Aluminum	

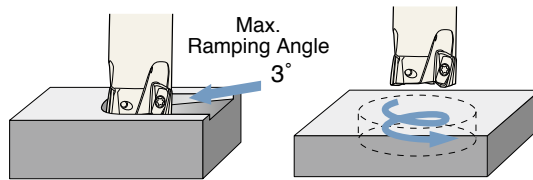
Spare Parts

		Insert Clamping Screw Set	Wrench	Anti-seizure Lubricant
		 (10) screws & (1) wrench		 5g contained
Cutter Dia	Insert	Model	Model	Model
φ16, φ17	BRG1608	S2506DS	DA-T8	BN-5
φ20, φ21	BRG2008			
φ25, φ26	BRG2508			
φ32, φ33	BRG3210	S3508DS	DA-T15	

Note It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained.

FCR Recommended Cutting Condition

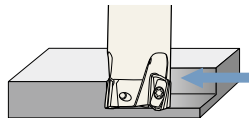
Ramping and helical interpolation



Cutter Dia.	Flat Bottom		Through Hole
	Max. Hole Dia.	Min. Hole Dia.	Min. Hole Dia.
ø16	ø30	ø27	ø22
ø20	ø38	ø36	ø29
ø25	ø48	ø45	ø39
ø32	ø62	ø59	ø48

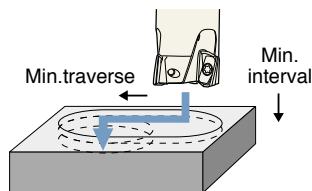
Cutter Dia.	Work Material	Carbon steel Alloy steel	Unalloyed steel	Prehardened steel <HRC40	Stainless steel	Die steel	Cast iron	Aluminium
	Insert Grade	ACZ350S					ACZ310	DS20
	Cutting fluid	Dry		Wet	Dry/Wet	Dry		Dry/Wet
ø16	Speed (m/min)	100 – 200	150 – 220	60 – 80	100 – 150	60 – 80	100 – 180	200 – 1,000
	Feed (mm/tooth)	0.06 – 0.12	0.06 – 0.12	0.05 – 0.08	0.08 – 0.16	0.06 – 0.1	0.08 – 0.18	0.06 – 0.24
ø20 ø25	Speed (m/min)	100 – 200	150 – 200	60 – 100	120 – 150	60 – 100	100 – 180	200 – 1,000
	Feed (mm/tooth)	0.08 – 0.2	0.08 – 0.2	0.05 – 0.1	0.12 – 0.2	0.06 – 0.1	0.02 – 0.18	0.1 – 0.35
ø32	Speed (m/min)	100 – 200	150 – 200	60 – 100	120 – 150	60 – 120	100 – 180	200 – 1,000
	Feed (mm/tooth)	0.08 – 0.2	0.08 – 0.2	0.05 – 0.1	0.12 – 0.2	0.08 – 0.12	0.06 – 0.2	0.1 – 0.35

Shoulder milling and slot milling



Cutter Dia.	Work Material	Carbon steel Alloy steel	Unalloyed steel	Prehardened steel <HRC40	Stainless steel	Die steel	Cast iron	Aluminium
	Insert Grade	ACZ350S					ACZ310	DS20
	Cutting fluid	Dry		Wet	Dry/Wet	Dry		Dry/Wet
ø16 ø20	Speed (m/min)	100 – 200	100 – 200	60 – 80	120 – 180	80 – 120	100 – 180	200 – 1,000
	Feed (mm/tooth)	0.08 – 0.18	0.08 – 0.18	0.05 – 0.1	0.12 – 0.18	0.08 – 0.12	0.08 – 0.18	0.1 – 0.3
ø25 ø32	Speed (m/min)	100 – 200	100 – 200	60 – 100	120 – 180	80 – 120	100 – 180	200 – 1,500
	Feed (mm/tooth)	0.08 – 0.2	0.08 – 0.2	0.05 – 0.1	0.12 – 0.2	0.08 – 0.12	0.08 – 0.2	0.1 – 0.35

Plunge milling



Cutter Dia.	Min. interval	Min. traverse
ø16	0.5	14
ø20	1	18
ø25	1	23
ø32	2	30

Cutter Dia.	Work Material	Carbon steel Alloy steel	Unalloyed steel	Prehardened steel <HRC40	Stainless steel	Die steel	Cast iron	Aluminium
	Insert Grade	ACZ350S					ACZ310	DS20
	Cutting fluid	Air blow		Wet	Air/Wet	Air blow		Air/Wet
ø16	Speed (m/min)	80 – 120	80 – 120	60	80 – 120	60 – 80	80 – 160	200 – 350
	Feed (mm/rev)	0.06 – 0.1	0.06 – 0.1	0.04 – 0.06	0.05 – 0.08	0.05 – 0.08	0.06 – 0.1	0.06 – 0.1
ø20 ø25	Speed (m/min)	100 – 160	100 – 160	60 – 100	100 – 160	60 – 100	80 – 180	200 – 500
	Feed (mm/rev)	0.1 – 0.25	0.1 – 0.25	0.1 – 0.25	0.12 – 0.25	0.1 – 0.2	0.08 – 0.3	0.1 – 0.3
ø32	Speed (m/min)	100 – 160	100 – 160	60 – 100	100 – 160	60 – 100	80 – 180	200 – 600
	Feed (mm/rev)	0.1 – 0.3	0.1 – 0.3	0.1 – 0.3	0.12 – 0.3	0.1 – 0.2	0.08 – 0.4	0.1 – 0.3

Caution

- The table is just a reference to determine cutting conditions. It should be adjusted according to a condition of a machine tool or workpiece.
- Since chips may scatter, utilize safety enclosures.
- Do not use oil-based cutting fluid, or a fire may take place.

Application example

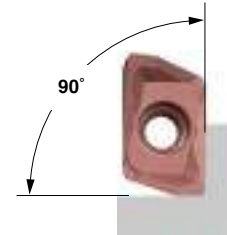
FULLCUT MILL FCR

■ Bore Dia. 38 with Helical milling



For carbon steel of C50, very smooth cutting with feed rate of 1,100mm/min and excellent squareness are achieved.

Fullcut Mill	BBT40-FCR20083-120
Insert	BRG200808(ACZ350S)
Work Material	C50(S50C) / Air blow
Cutting Speed V (m/min.)	150
Feed Rate f (mm/min.)	1,100
Axial DOC Ad (mm)	2mm × 3 times
Hole dia.	ø38



■ Honeycombed Pocket with Ramping



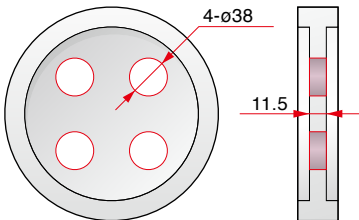
For less rigid workpiece with 3mm thickness clamped by a vise, feed rate of 4,300mm/min on both sides of the workpiece is achieved.

Fullcut Mill	BBT40-FCR20083-85
Insert	BRG200808(DS20)
Work Material	A2017 Duralumin / Air blow
Cutting Speed V (m/min.)	750
Feed Rate f (mm/min.)	4,300
Axial DOC Ad (mm)	6mm × 3 times
Radial DOC Rd (mm)	MAX. 20



Bottom thickness
3mm

■ Helical milling



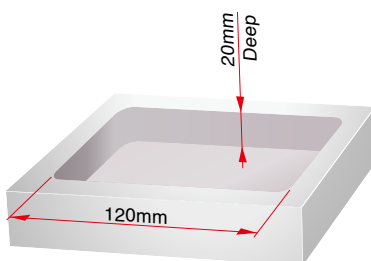
Stable helical milling with 4mm axial DOC on less rigid workpiece.

Fullcut Mill	BBT40-FCR20083-120
Insert	BRG200808(ACZ350S)
Work Material	15CrMo5(SCM415)
Cutting Speed V (m/min.)	150
Feed Rate f (mm/min.)	480
Axial DOC Ad (mm)	4mm × 3 times
Hole dia.	ø38

Compared to another manufacturer

Axial DOC → **1.3 times**
Insert life → **2 times**

■ Ramping



Example of use of BBT50-BBT40 Adapter.

An improved result is obtained compared to the product from another manufacturer.

Fullcut Mill	BBT50-BBT40-50 BBT40-FCR16082-120
Insert	BRG160808(ACZ350S)
Work Material	C50(S50C)
Cutting Speed V (m/min.)	120
Feed Rate f (mm/min.)	480
Axial DOC Ad (mm)	4mm × 5 times

Compared to another manufacturer

No chatter even at higher resistance corner.

Smooth chip evacuation eliminates re-cutting of the swarf and edge chipping of the inserts.

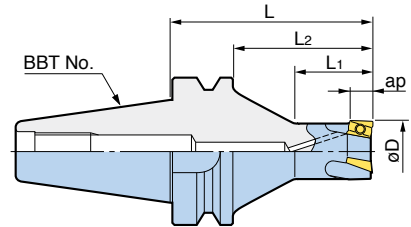
Square Shoulder and Slot milling

FULLCUT MILL FCM Cutter Dia. ϕ 16 - ϕ 50

The indexable endmill that combines sharpness and rigidity has no match.



BBT Standard type JIS B 6339 (BIG-PLUS)



BIG-PLUS tools can be used in machining centers with conventional spindles.

Cutter Dia. ϕ D	Model	ap	L	L1	L2	No. of Insert	Insert Size	Weight (kg)
16	BBT30-FCM16092- 65	9	65	23	43	2	ARG16	0.5
20	-FCM20093- 65			28	43	3	ARG20	0.5
25	-FCM25093- 65			33	43	3	ARG25	0.5
32	-FCM32113- 65	11	50	38	43	3	ARG32	0.6
40	-FCM40114- 50			25	28	4	ARG40	0.6
50	-FCM50115- 50			28		5		0.7
16	BBT40-FCM16092- 85	9	85	23	58	2	ARG16	1.2
	-105		105	30	78			1.3
	-120		120	25	93			1.4
	-150		150		123			1.7
20	-FCM20093- 85	9	85	28	58	3	ARG20	1.2
	-105		105	35	78			1.3
	-120		120	30	93			1.4
	-150		150		123			1.7
25	-FCM25093- 85	9	85	33	58	3	ARG25	1.2
	-120		120	45	93			1.4
	-135		135	40	108			1.6
	-165		165		138			1.9
32	-FCM32113- 85	11	85	38	58	3	ARG32	1.3
	-120		120	60	93			1.5
	-135		135	50	108			1.7
	-165		165	40	138			2.1
40	-FCM40114- 85	11	85	43	58	4	ARG40	1.4
	-120		120	65	93			1.7
	-135		135	60	108			2.0
	-165		165	50	138			2.4
50	-FCM50115- 70	11	70	38	43	5	ARG40	1.5
	-120		120	65	93			2.2
	-135		135	60	108			2.4
	-165		165	50	138			3.0

For Insert : | 18

For Cutting Condition : | 19

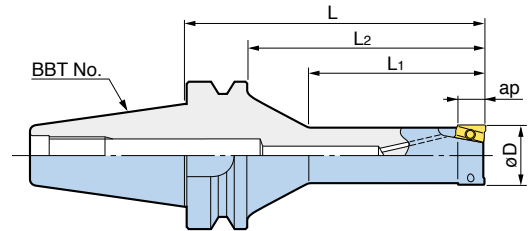
Square Shoulder and Slot milling

FULLCUT MILL FCM Cutter Dia. $\phi 16 - \phi 50$

The indexable endmill that combines sharpness and rigidity has no match.



BBT Long nose type JIS B 6339 (BIG-PLUS)



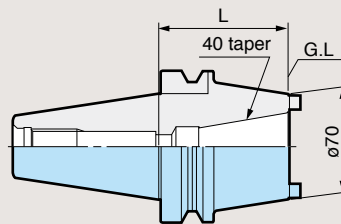
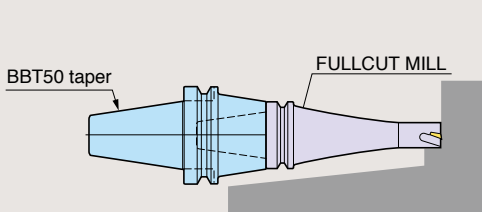
BIG-PLUS tools can be used in machining centers with conventional spindles.

Cutter Dia. ϕD	Model	ap	L	L1	L2	No. of Insert	Insert Size	Weight (kg)
16	BBT30-FCM16092L- 85	9	85	45	63	2	ARG16	0.5
20	-FCM20092L- 85			50	63		ARG20	0.5
25	-FCM25092L- 85			50	63		ARG25	0.6
32	-FCM32112L- 85	11		60	63		ARG32	0.7
16	BBT40-FCM16092L-105	9	105	45	78	2	ARG16	1.3
	-120		120		93			1.4
20	-FCM20092L-120	9	120	60	93	2	ARG20	1.4
	-135		135		108			1.5
25	-FCM25092L-135	9	135	75	108	2	ARG25	1.5
	-150		150		123			1.7
32	-FCM32112L-135	11	135	80	93	2	ARG32	1.7
	-150		150		123			1.9

For Insert : | 18

For Cutting Condition : | 19

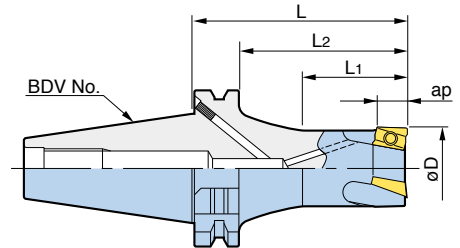
Adapter for BT50 taper shank (FCR & FCM)



Model	L
BBT50-BBT40-50	50
-90	90

BDV Standard type

DIN 69871 A/B (BIG-PLUS)



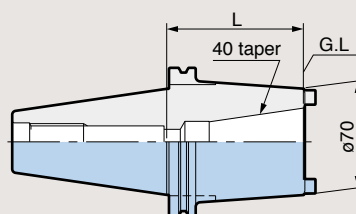
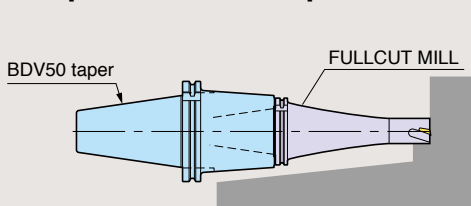
BIG-PLUS tools can be used in machining centers with conventional spindles.

Cutter Dia. øD	Model	ap	L	L1	L2	No. of Insert	Insert Size	Weight (kg)
16	BDV40-FCM16092- 85	9	85	23	58	2	ARG16	1.2
	-105		105	30	78			1.3
	-120		120	25	93			1.4
20	-FCM20093- 85	9	85	28	58	3	ARG20	1.2
	-105		105	35	78			1.3
	-120		120	30	93			1.4
25	-FCM25093- 85	9	85	33	58	3	ARG25	1.2
	-120		120	45	93			1.4
	-135		135	40	108			1.6
32	-FCM32113- 85	11	85	38	58	3	ARG32	1.3
	-120		120	60	93			1.5
	-135		135	50	108			1.7
40	-FCM40114- 85	11	85	43	58	4	ARG40	1.4
	-120		120	65	93			1.7
	-135		135	60	108			2.0
50	-FCM50115- 70	11	70	38	43	5	ARG40	1.5
	-120		120	65	93			2.2
	-135		135	60	108			2.4

For Insert : | 18

For Cutting Condition : | 19

Adapter for SK50 taper shank (FCR & FCM)



Model	L
BDV50-BDV40-50	50
-90	90

Square Shoulder and Slot milling

FULLCUT MILL FCM Cutter Dia. $\phi 16 - \phi 50$

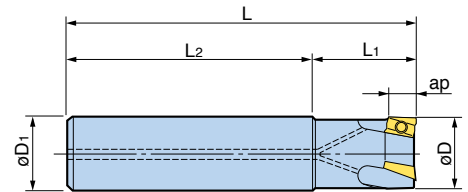
The indexable endmill that combines sharpness and rigidity has no match.



CYLINDRICAL Shank Type



Cutter Dia
 $\phi 12 - \phi 50$



Cutter dia ϕD	Model	ϕD_1	ap	L	L1	L2	No. of Insert	Insert Size	Weight (kg)
12	ST16-FCM12091- 90	16	9	90	15	70	1	ARG16	0.1
14	-FCM14091- 90				17				0.1
16	-FCM16092- 90				25				0.1
20	ST20-FCM20093-110	20	9	110	30	80	3	ARG20	0.2
25	ST25-FCM25093-120	25	9	120	35	85	3	ARG25	0.4
32	ST32-FCM32113-130	32	11	130	35	95	3	ARG32	0.7
40	-FCM40114-130				90	4	ARG40	0.8	
40	-180				140			1.2	
50	-FCM50115-130				130			90	5

For Insert : | 18

For Cutting Condition : | 19

"Trump card" at deep pocket & deep shoulder endmilling

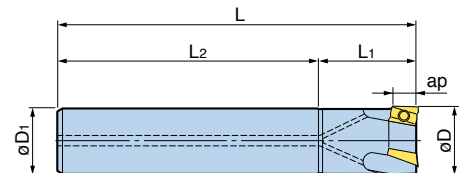
[OVER SIZE]



Cutter Dia
 $\phi 17 - \phi 33$

POINT $\phi D = \phi D_1 + 1mm$

1mm larger Cutter Dia. than shank Dia. avoids any interference with work-piece.



Cutter dia ϕD	Model	ϕD_1	ap	L	L1	L2	No. of Insert	Insert Size	Weight (kg)
17	ST16-FCM17092-120	16	9	120	25	95	2	ARG16	0.2
21	ST20-FCM21092-165	20	9	165	30	135	2	ARG20	0.4
	-FCM21093-135			135		105			3
26	ST25-FCM26092-165	25	9	165	38	127	2	ARG25	0.6
	-FCM26093-150			150		112			3
33	ST32-FCM33112-180	32	11	180	48	132	2	ARG32	1.1
	-FCM33113-180			180		132			3

1. Wrench and Anti-seizure Lubricant are included. Inserts are ordered separately.
2. 2-flutes models are recommended for medium-heavy or heavy slot milling.
3. For medium-heavy or heavy slot milling with projection longer than 2.5 times of diameter, 2-flutes models are recommended.

For Insert : | 18

For Cutting Condition : | 19

To suit FULLCUT MILL cylindrical shank type



MEGA DOUBLE POWER CHUCK

A9, B5, C9, C48, E37



NEW Hi-POWER MILLING CHUCK

A16, B8, C15, E45

Material: C55 (S55C)



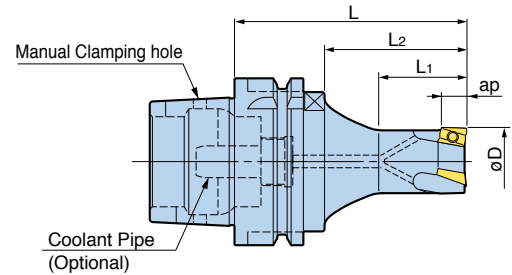
Model	ST32-FCM33112-180
Cutting Speed V (m/min.)	120
Feed Rate f (mm/tooth)	0.1
Axial DOC Ad (mm)	10mm x 10 steps
Radial DOC Rd (mm)	Max. 33mm

Result

Deep shoulder endmilling is achieved with 110mm projection length and 10mm axial depth.

HSK-A Standard type

ISO12164 & DIN 69893-1



Cutter Dia. øD	Model	ap	L	L1	L2	No. of Insert	Insert Size	Weight (kg)
16	HSK-A40-FCM16092- 65	9	65	23	37	2	ARG16	0.3
20	-FCM20093- 65			28			ARG20	0.3
25	-FCM25093- 65			35		ARG25	0.4	
32	-FCM32113- 65	11	65	45	-	4	ARG40	0.6
40	-FCM40114- 65							0.7
50	-FCM50115- 65					5	0.7	
16	HSK-A50-FCM16092- 75	9	75	23	41	2	ARG16	0.6
20	-FCM20093- 75			28			ARG20	0.6
25	-FCM25093- 75			33		ARG25	0.6	
32	-FCM32113- 75	11	75	39	-	3	ARG32	0.7
40	-FCM40114- 75							0.9
50	-FCM50115- 75					5	1.0	
16	HSK-A63-FCM16092- 85	9	85	23	51	2	ARG16	0.9
	-105		105	30	71			1.0
	-120		120	25	86			1.1
	-150		150	25	116			1.3
20	-FCM20093- 85	9	85	28	51	3	ARG20	1.0
	-105		105	35	71			1.1
	-120		120	30	86			1.2
	-150		150	30	116			1.4
25	-FCM25093- 85	9	85	33	51	3	ARG25	1.0
	-120		120	45	86			1.2
	-135		135	40	101			1.3
	-165		165	40	131			1.5
32	-FCM32113- 85	11	85	38	51	3	ARG32	1.1
	-120		120	60	86			1.3
	-135		135	50	101			1.4
	-165		165	40	131			1.7
40	-FCM40114- 85	11	85	43	51	4	ARG40	1.3
	120		120	65	86			1.5
	135		135	60	101			1.7
	165		165	50	131			2.1
50	-FCM50115- 70	11	70	28	28	5	ARG40	1.3
	-120		120	78	78			1.9
	-135		135	93	93			2.2
	-165		165	123	123			2.8

1. Coolant Pipe is ordered separately.

For Insert : | 18

For Cutting Condition : | 19

For COOLANT PIPE C 51

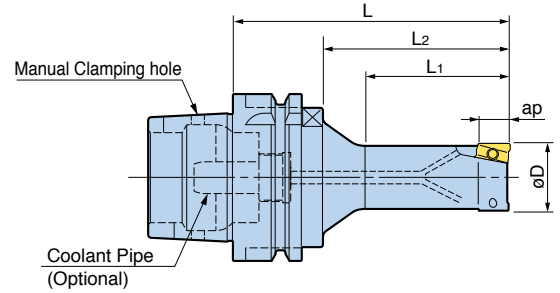
Square Shoulder and Slot milling

FULLCUT MILL FCM Cutter Dia. ϕ 12 - ϕ 50

The indexable endmill that combines sharpness and rigidity has no match.



HSK-A Long nose type ISO12164 & DIN 69893-1



Cutter Dia. ϕ D	Model	ap	L	L ₁	L ₂	No. of Insert	Insert Size	Weight (kg)
16	HSK-A63-FCM16092L- 85	9	85	40	51	2	ARG16	0.9
	-120		120	45	86			1.0
20	-FCM20092L-105	9	105	50	71	2	ARG20	1.1
	-120		120	60	86			1.2
25	-FCM25092L-105	9	105	55	71	2	ARG25	1.1
	-120		120	65	86			1.2
32	-FCM32112L-120	11	120	70	86	2	ARG32	1.3
	-135		135	80	101			1.4

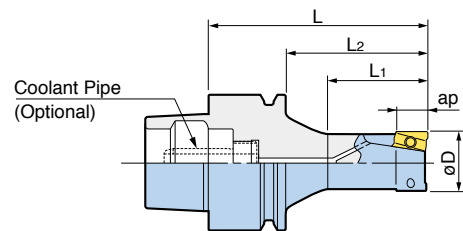
1. Coolant Pipe is ordered separately.

For Insert : | 18

For Cutting Condition : | 19

For COOLANT PIPE C 51

HSK-E Standard type DIN 69893-5



Cutter Dia. ϕ D	Model	ap	L	L ₁	L ₂	No. of Insert	Insert Size	Weight (kg)
16	HSK-E25-FCM16092-45	9	45	23	35	2	ARG16	0.17
	-E32-FCM16092-55		55	23	35			0.20
	-E40-FCM16092-65		65	28	45			0.45

1. Coolant Pipe is ordered separately.

For Insert : | 18

For Cutting Condition : | 19

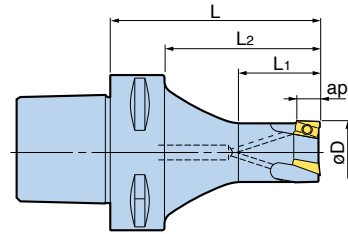
For COOLANT PIPE C 51

Caution

As HSK-E type interface does not have drive key-ways, there is a possibility that it may slip in machine tool spindles if cutting load exceeds the gripping force of machine tools. Please ensure to choose proper cutting condition.

BIG CAPTO Standard type

ISO26623-1



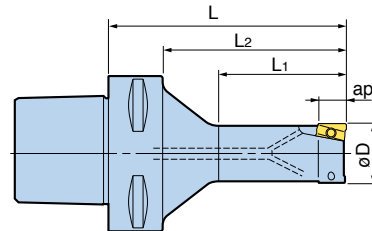
Cutter Dia. øD	Model	ap	L	L1	L2	No. of Insert	Insert Size	Weight (kg)
16	C5-FCM16092- 65	9	65	23	45	2	ARG16	0.5
	-FCM20093- 65		65	28	45			0.5
20	- 90	9	90	35	70	3	ARG20	0.6
	-FCM25093- 65		65	33	45			0.6
32	-FCM32113- 65	11	65	38	45	3	ARG32	0.6
	- 90		90	45	70			0.8
40	-FCM40114- 50	11	50	25	30	4	ARG40	0.6
	- 90		90	60	70			1.0
50	-FCM50115- 50	11	50	25	30	5		0.7
	- 90		90	65	70			1.0

For Insert : | 18

For Cutting Condition : | 19

BIG CAPTO Long nose type

ISO26623-1



Cutter Dia. øD	Model	ap	L	L1	L2	No. of Insert	Insert Size	Weight (kg)
16	C6-FCM16092L-105	9	105	45	83	2	ARG16	1.2
	-120		120		98			1.3
20	-FCM20092L-110	9	110	60	88	2	ARG20	1.2
	-135		135		113			1.4
25	-FCM25092L-135	9	135	75	113	2	ARG25	1.4
	-150		150		128			1.6
32	-FCM32112L-135	11	135	80	113	2	ARG32	1.6
	-150		150		128			1.7

For Insert : | 18

For Cutting Condition : | 19

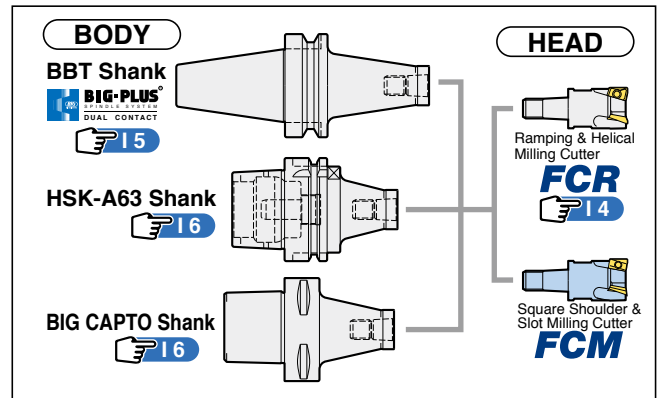
Square Shoulder and Slot milling

FULLCUT MILL FCM

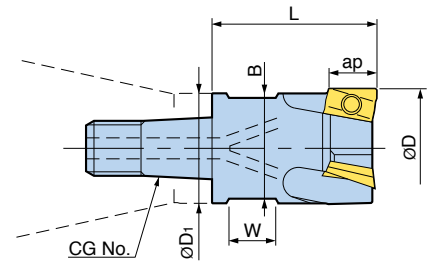
Threaded coupling with taper & face contact

CONTACT GRIP

Offers amazing cutting performance which is superior to the conventional threaded coupling system.



FCM HEAD



Cutter Dia øD	Model	CG No.	øD1	ap	L	No. of Insert	Spanner Flats		Insert Size
							B	W	
16	CG15-FCM16092-25	CG15	15	9	25	2	12	6.2	ARG16
20	CG19-FCM20092-32	CG19	19	9	32	2	17	8.2	ARG20
	3								
25	CG24-FCM25092-36	CG24	24	9	36	2	22	10.2	ARG25
	3								
32	CG31-FCM32112-43	CG31	31	11	43	2	27	12.2	ARG32
	3								

1. Wrench to clamp insert and Anti-Seizure Lubricant are included.
2. Inserts are ordered separately.
3. Standard single-ended wrench is required to clamp the head.

For Insert : I 18

Application example

Amazing cutting performance even on #40 taper machine.

(Below application example has been achieved with dry cutting.)

Type FCM Slot Milling

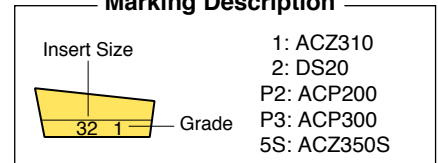


Machine	Vertical M/C, #40 taper
Contact Grip Head	FCM32 (2-inserts)
Work Material	C50 (S50C)
Cutting Speed V (m/min.)	150
Feed Rate f (mm/tooth)	0.1
Axial DOC Ad (mm)	11

Indexable Inserts



Marking Description



Cutter Dia	Insert Model	ap	Nose R	P		M	K	N
				ACP200	ACP300	ACZ350S	ACZ310	DS20
ø12 – ø17	ARG160902	9	0.2		△	○	△	○
	ARG160904		0.4	△	○	○	○	
ø20 – ø21	ARG200902	9	0.2		△	○	△	○
	ARG200904		0.4	△	○	○	○	
ø25 – ø26	ARG250902	9	0.2		△	○	△	○
	ARG250904		0.4	△	○	○	○	
ø32 – ø33	ARG321102	11	0.2		△	○	△	○
	ARG321104		0.4	△	○	○	○	
ø40 – ø50	ARG401102	11	0.2		△	○	△	○
	ARG401104		0.4	△	○	○	○	

※Inserts are available in packets of 10 pcs.
Please clarify the insert type and grade when ordering.
For example, use ordering code: ARG160904ACP300.

- : First choice
- △ : Suitable

Caution

- It is important to use the correct insert for the diameter of FULLCUT MILL. Failure to use the correct insert will result in incorrect cutting conditions and poor results.
- There is no compatibility with those of FCR type.
- Nose radius 0.2 inserts are suitable for light cutting.

Insert Classifications

ISO	Grade	Material	Coating
P20	ACP200	Prehardened steel	TiAlN / AlCrN
P30	ACP300	General steel	
M30	ACZ350S	Stainless steel	TiAlN / TiCN
K10	ACZ310	Cast Iron	
N20	DS20	Aluminum	DLC

Selection between ACP300 and ACP200 for steel.

ACP200 is superior in anti-wear resistance, while ACP300 is superior in its anti-chipping property. ACP300 is the first recommendation for steel cutting.

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.

Spare Parts

		Insert Clamping Screw Set (10) screws & (1) wrench	Wrench	Anti-seizure Lubricant 5g contained
Cutter Dia	Insert	Model	Model	Model
ø12	ARG1609	S2505DS	DA-T8	BN-5
ø14 ø16 ø17		S2506DS		
ø20 ø21	ARG2009			
ø25 ø26	ARG2509			
ø32 ø33	ARG3211	S3508DS	DA-T15	
ø40	ARG4011			
ø50				

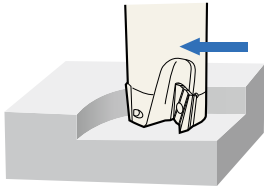


Note

It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained.

FCM Recommended Cutting Condition

Shoulder milling and slot milling



Caution

FULLCUT MILL, FCM type, cannot be used for feeding in 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	Aluminium
	Insert Grade	ACP300		ACP200	ACZ350S	ACZ310	DS20
	Cutting fluid	Dry			Dry/Wet	Dry	Dry/Wet
ø12 · ø14	Speed (m/min)	150 – 250	180 – 250	80 – 140	140 – 180	100 – 200	200 – 750
	Feed (mm/tooth)	0.1 – 0.2	0.1 – 0.2	0.08 – 0.12	0.12 – 0.18	0.1 – 0.2	0.10 – 0.3
ø16 – ø21	Speed (m/min)	150 – 250	180 – 250	80 – 140	140 – 180	100 – 200	200 – 1,000
	Feed (mm/tooth)	0.1 – 0.2	0.1 – 0.2	0.08 – 0.12	0.12 – 0.18	0.1 – 0.2	0.10 – 0.3
ø25 – ø33	Speed (m/min)	180 – 280	200 – 280	80 – 140	140 – 200	100 – 200	200 – 1,500
	Feed (mm/tooth)	0.1 – 0.24	0.1 – 0.22	0.08 – 0.14	0.12 – 0.2	0.1 – 0.2	0.10 – 0.35
ø40 · ø50	Speed (m/min)	180 – 280	200 – 280	80 – 140	140 – 200	80 – 200	200 – 1,500
	Feed (mm/tooth)	0.1 – 0.24	0.1 – 0.22	0.08 – 0.14	0.12 – 0.2	0.1 – 0.2	0.10 – 0.35

Medium-heavy cutting

Cutter Dia.	Work Material	Carbon steel Alloy steel	Unalloyed steel	Stainless steel	Cast iron	Aluminium
	Insert Grade	ACP300		ACZ350S	ACZ310	DS20
	Cutting fluid	Dry		Dry/Wet	Dry	Dry/Wet
ø12 · ø14	Speed (m/min)	100 – 200	150 – 200	120 – 180	100 – 180	200 – 750
	Feed (mm/tooth)	0.08 – 0.14	0.1 – 0.15	0.12 – 0.15	0.08 – 0.18	0.10 – 0.2
ø16 – ø21	Speed (m/min)	100 – 200	150 – 200	120 – 180	100 – 180	200 – 1,000
	Feed (mm/tooth)	0.08 – 0.14	0.1 – 0.15	0.12 – 0.15	0.08 – 0.18	0.10 – 0.2
ø25 – ø33	Speed (m/min)	100 – 200	160 – 220	120 – 180	100 – 200	200 – 1,500
	Feed (mm/tooth)	0.1 – 0.16	0.1 – 0.15	0.12 – 0.15	0.08 – 0.2	0.10 – 0.3
ø40 · ø50	Speed (m/min)	100 – 200	160 – 220	120 – 180	100 – 220	200 – 1,500
	Feed (mm/tooth)	0.1 – 0.16	0.1 – 0.15	0.12 – 0.15	0.08 – 0.2	0.10 – 0.3



Caution

- Nose radius 0.2 inserts are suitable for light cutting. 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. Please adjust according to machine and workpiece conditions, as well as width of cutting.
- Dry cutting (including air blow) is recommended when cutting of steel, except for finishing.
- Dry cutting is recommended for stainless steel. However use soluble oil in a case where severe built-up edge occurs.

Finish milling with axial DOC of 0.2mm or smaller.

Cutter Dia.	Work Material	Carbon steel Alloy steel	Unalloyed steel	Stainless steel	Cast iron
	Insert Grade	ACP200		ACZ310	
	Cutting fluid	Wet			
ø12 – ø50	Speed (m/min)	200 – 250			
	Feed (mm/tooth)	0.1 – 0.2			



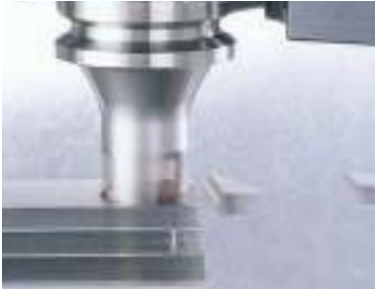
Caution

- For aluminium alloy, same conditions as "Finish-light cutting" shown above should be applied.
- For finishing of steel, wet cutting improves both surface finish and insert life. ACZ310 grade extends the life further.

Application example

FULLCUT MILL FCM

■ Slot Milling



Only FULLCUT MILL was capable of achieving this data in a No.40 spindle taper machine.

Fullcut Mill	BBT40-FCM32113-85
Insert	ARG321104(ACP300)
Work Material	C50(S50C)
Cutting Speed V (m/min.)	150
Feed Rate f (mm/tooth)	0.12
Axial DOC Ad (mm)	9

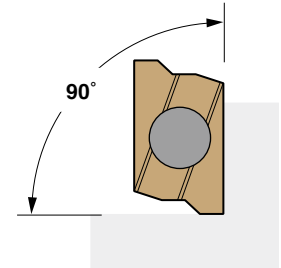


■ Shoulder Milling



Excellent perpendicularity is achieved.

Fullcut Mill	BBT40-FCM32113-85
Insert	ARG321104(ACP300)
Work Material	C50(S50C)
Cutting Speed V (m/min.)	200
Feed Rate f (mm/tooth)	0.15
Axial DOC Ad (mm)	11
Radial DOC Rd (mm)	5




■ Face Milling



Finishing surface roughness was Rz=2.53 at V=200, F=0.15 cutting data.

Fullcut Mill	BBT40-FCM50115-70
Insert	ARG401104(ACP300)
Work Material	C50(S50C)
Cutting Speed V (m/min.)	200
Feed Rate f (mm/tooth)	0.15
Axial DOC Ad (mm)	1
Radial DOC Rd (mm)	30

	Surface Roughness Rz
 BIG BIG DAIHWA	2.53
Manufacturer A	3.75
Manufacturer B	4.32

■ Material of Low Machineability



High efficiency and stable milling (F=1,140mm/min.) is achieved.

Fullcut Mill	ST25-FCM25093-120
Holder	BBT50-MEGA25D-105
Insert	ARG250904(ACZ350S)
Work Material	SUS304 Stainless steel
Cutting Speed V (m/min.)	150
Feed Rate f (mm/tooth)	0.2
Axial DOC Ad (mm)	9
Radial DOC Rd (mm)	3



Square Shoulder and Face milling

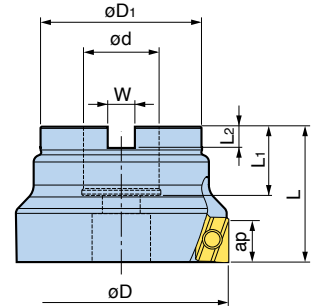
FULLCUT MILL FCM

Corresponding to Form FMH of new standard face milling adaptor

ARBOR type



Cutter Dia
ø50, ø63, ø80



Form FMH / FMC

Cutter dia øD	Model	ap	ød	øD1	L	L1	L2	W	No. of Insert	Insert Size	Weight (kg)
50	FMH22-FCM50115-40	11	22	47	40	20	6	10.4	5	ARG40	0.5
63	-FCM63116-40		22	47	40	20	6	10.4	6	ARG63	0.7
80	FMH27-FCM80116-50		27	60	50	22	7	12.4	6	ARG80	1.2

For FMC Type BBT: A 45

For FMC Type BDV: B 11

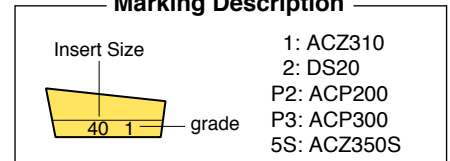
For FMH Type BBT: A 46

For FMH Type HSK: C 23

Indexable Inserts



Marking Description



Cutter Dia	Insert Model	ap	Nose R	P		M	K	N
				ACP200	ACP300	ACZ350S	ACZ310	DS20
ø50	ARG401102	11	0.2		○	○	○	○
	ARG401104	11	0.4	○	○	○	○	○
ø63	ARG631108	11	0.8	○	○	○	○	○
ø80	ARG801108	11	0.8	○	○	○	○	○

※ Inserts are available in packets of 10 pcs.
Please clarify the insert type and grade when ordering.
For example, use ordering code: ARG401104ACP300.

Caution

It is important to use the correct insert for the diameter of FULLCUT MILL. Failure to use the correct insert will result in incorrect cutting conditions and poor results.

Insert Classifications

ISO	Grade	Material	Coating
P20	ACP200	Prehardened steel	TiAlN / AlCrN
P30	ACP300	General steel	
M30	ACZ350S	Stainless steel	TiAlN / TiCN
K10	ACZ310	Cast Iron	
N20	DS20	Aluminum	DLC

Selection between ACP300 and ACP200 for steel.

ACP200 is superior in anti-wear resistance, while ACP300 is superior in its anti-chipping property. ACP300 is the first recommendation for steel cutting. 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.

■ Spare Parts

		Insert Clamping Screw Set (10) screws & (1) wrench	Wrench	Anti-seizure Lubricant 5g contained
Cutter Dia	Insert	Model	Model	Model
ø50	ARG401102	S3508DS	DA-T15	BN-5
	ARG401104			
ø63	ARG631108			
ø80	ARG801108			



Note

It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained.

FCM ARBOR type Recommended Cutting Condition

Square Shoulder and Face milling



Caution

FULLCUT MILL, FCM ARBOR type, cannot be used for feeding in 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	Aluminium
	Insert Grade	ACP300		ACP200	ACZ350S	ACZ310	DS20
	Cutting fluid	Dry			Dry/Wet	Dry	Dry/Wet
ø50 ø63 ø80	Speed (m/min)	100 – 220	150 – 240	80 – 120	120 – 180	100 – 200	200 – 1500
	Feed (mm/tooth)	0.1 – 0.24	0.1 – 0.22	0.08 – 0.14	0.12 – 0.20	0.10 – 0.25	0.10 – 0.35

■ Medium-heavy cutting

Cutter Dia.	Work Material	Carbon steel Alloy steel	Unalloyed steel	Stainless steel	Cast iron	Aluminium
	Insert Grade	ACP300		ACZ350S	ACZ310	DS20
	Cutting fluid	Dry			Dry/Wet	Dry
ø50 ø63 ø80	Speed (m/min)	100 – 220	150 – 240	120 – 180	100 – 200	200 – 1500
	Feed (mm/tooth)	0.08 – 0.18	0.08 – 0.16	0.12 – 0.15	0.10 – 0.20	0.10 – 0.30



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 of steel, except for finishing.
- Dry cutting is recommended for stainless steel. However use soluble oil in a case where severe built-up edge occurs.

Indexable Insert Endmill, achieving the excellent squareness and fine surface finish.



Machined by FULLCUT MILL model : FMH22-FCM63116-40
Arbor model : BBT40-FMH22-27-45

Squareness

Cutting Speed V (m/min.)	150
Feed Rate f (mm/tooth)	0.1
Axial DOC Ad (mm)	5
Radial DOC Rd (mm)	0.1

	10µm
Other manufacture	40µm

Wiper cutting edge

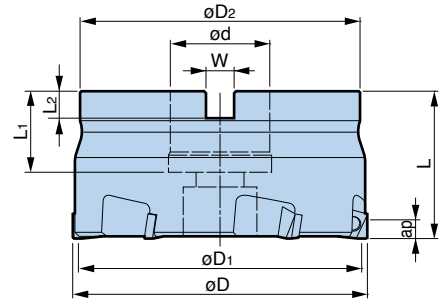
Cutting Speed V (m/min.)	250
Feed Rate f (mm/tooth)	0.2
Axial DOC Ad (mm)	0.1
Radial DOC Rd (mm)	50

	Ra=0.51µm
Other manufacture	Ra=1.56µm

High speed cutter for aluminum and cast iron

SPEED Finisher

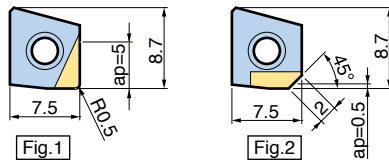
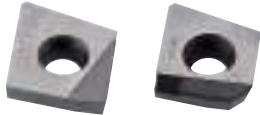
Amazing improvement of surface finish at high speed cutting.



Model	Diameter ϕD	ϕD_1		ϕD_2	ϕd	L	L ₁	L ₂	W	No. of insert	MAX min ⁻¹	Clamp Bolt	Weight (kg)
		DA2200	CBN										
FM22-PLS505-35	50	46.9	44.9	47	22	35	19	6	10.4	6	20,000	M10 Cap Screw	0.4
FM22-PLS636-35	63	59.9	57.9	60	22	35	19	6	10.4				
FM27-PLS806-40	80	76.9	74.9	76	27	40	22	7	12.4		16,000	M12 Cap Screw	1.2
FM32-PLS1006-42	100	96.9	94.6	96	32	42	24	8	14.4		12,800	MBA-M16	2.0

1. Wrench and screws are included. Inserts are ordered separately.
2. When using at 12,000min⁻¹ or higher speed, contact **BIG** agent for balancing of the cutter and arbor assembly.
3. Effective cutting edge length a_p varies depending on insert models. Refer to the table for insert shown below.
4. Adjusting amount of cutting edge is 0.1mm. Note this when using reground insert.

Insert



Insert grade

Insert model	Workpiece	Fig.	Material	Cutting edge length
PL0705 DA2200	Aluminum & nonferrous	1	PCD	5.0
PL0705 CBN	Cast iron	2	CBN	0.5

DA2200	CBN
High density sintered material made of ultra-micro diamond particles. Superior hardness comparable to carbide alloy and wear resistance.	Newly designed CBN sintered body with high content rate of CBN improves toughness and thermal conductivity.

1. Each insert is packed in a case. **[Order example] PL0705 DA2200 5pcs.**
2. Regrinding of the insert is possible only once (grinding amount 0.2mm).
Early regrinding is recommended, as regrinding becomes unavailable in the case excessive wear or chipping occurs.



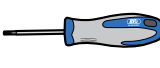
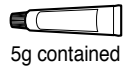
Recommended cutting condition

Workpiece material		Insert material	Cutting speed (m/min)	Feed rate (mm/tooth)	Coolant
Aluminum alloy	Si content 13% \geq	DA2200	2,000 – 4,000	0.05 – 0.2	Wet
	Si content 13% $<$		400 – 800		
Copper alloy		DA2200	500 – 2,500	0.05 – 0.2	Wet
Gray cast iron		CBN	800 – 2,000	0.1 – 0.3	Dry

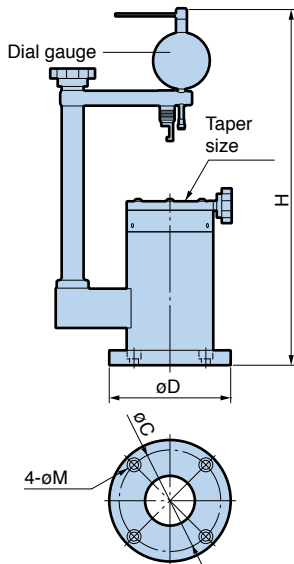
The table is a reference to determine cutting conditions. It should be adjusted according to cutting width, conditions of the machine tool and workpiece.

Spare parts

Insert clamping screws and wrenches are consumables. Regular replacement and storage are recommended.

Lifting Screw Set	Insert Clamping Screw Set	Wrench	Anti-seizure Lubricant
 <p>(1) Lifting screw (1) Lifting nut</p>	 <p>(10) Screw & (1) Wrench</p>		 <p>5g contained</p>
Model LSN35	Model S2506DS	Model DA-T8	Model BN-5

■ PL Presetter



Necessity of cutting edge presetting

- Exclusive presetter for quick adjustment in micron order.
- Each cutting edge height is adjustable within 15 sec.



Model	Taper size	H	øD	øC	øM	Max. tool length	Weight (kg)
PLP-BBT30	BBT30	> 417	122	102	9 (for M8)	150	7.5
-BBT40	BBT40						7.6
-BBT50	BBT50	> 502	172	149	11 (for M10)	160	17.5
-HSK63	HSK-A63	> 417	122	102	9 (for M8)	150	7.7

1. Dial gauge and indicator stabilizer (2pcs. AAA batteries included) are standard accessories.
2. Min. reading of the accessory dial gauge is 0.001mm.
3. BT shank cannot be used.
4. Max. tool length indicated in the table is the dimension from the gauge line of the arbor to the cutting edge.
5. Max. cutter diameter is ø160mm.

■ Arbor

Cutter dia.	BBT30	BBT40	BBT50	HSK-A63
ø50	BBT30-FMH22-47-45	BBT40-FMH22-47- 45 - 60 - 90	BBT50-FMH22-47- 60 -105	HSK-A63-FMH22-47- 45 -60 -90
ø63		BBT40-FMH22-60- 45 - 60 - 90	BBT50-FMH22-60- 60 -105	
ø80	BBT30-FMH27-60-45	BBT40-FMH27-76- 60 - 90	BBT50-FMH27-76- 45 -90	HSK-A63-FMH27-60- 60 -90
ø100	—	BBT40-FMH32-96- 60	BBT50-FMH32-96- 45 -90	—

Application example

(Cutter diameter : ø80)

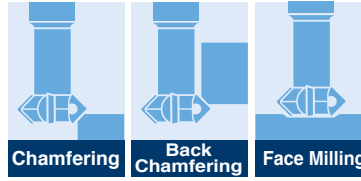
Workpiece	Conditions	Surface roughness	Height difference	No. of workpiece	Result
Crankcase ADC12 	Cutting speed : 4,000m/min Spindle speed : 15,900min ⁻¹ Feed rate : 9,550mm/min Depth of cut : 2.5mm	Ra=0.08µm Rz=0.55µm	Within 1µm	24,000	Rough & finish processes are combined in a single operation.
Parts of semiconductor manufacturing equipment A5052 	Cutting speed : 4,000m/min Spindle speed : 15,900min ⁻¹ Feed rate : 9,550mm/min Depth of cut : 2.0mm	Ra=0.07µm Rz=0.32µm	Within 1µm	320	Mirror finish is achieved.
Machine tool bed FC250 	Cutting speed : 1,500m/min Spindle speed : 6,000min ⁻¹ Feed rate : 3,600mm/min Depth of cut : 0.5mm	Ra=0.12µm Rz=0.67µm	Within 2µm	20	1 to 2µm flatness is obtained.

Ultra High Feed Chamfer Mill

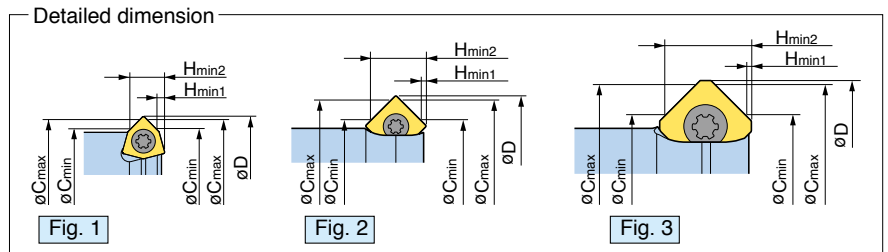
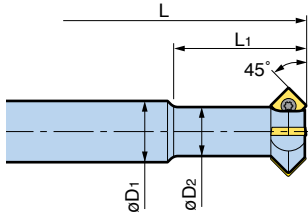
C-CUTTER mini

Front & back chamfering

Multi insert type



World's smallest
Hexagon insert



Model	Face Milling	Fig.	øD	øD1	øD2	L	L1	øCmin	øCmax	Hmin1	Hmin2	Insert Model	No. of Insert	
ST12-C1012-45B-20	—	1	12.7	12	9	93	20	10	12	1.0	3.7	CM04...	3	
						108	35							
ST12-C1116-45B-25	—	2	17.1	12	9.6	98	25	11	16	0.4	6.5	CM05...	4	
						113	40							
ST16-C1520-45B-50	—	2	20.7	16	13.2	123	50	15	20	0.6	6.3	CM05...		4
ST20-C1924-45B-60	—	2	24.7	20	17.2	143	60	19	24	0.6	6.3			
ST20-C2232-45B-50	○	3	32.7	20	19.2	130	50	22	32	0.4	12.4	CM10...		
						160	80							
ST32-C3242-45B-65	○	3	42.7	32	30.6	175	65	32	42	0.4	12.4	CM10...		
						211	100							

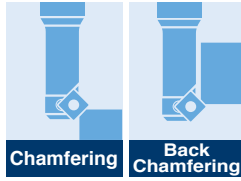
1. Wrench and screw are included. Inserts are ordered separately (10/pkg).
2. 10 screws and 1 wrench are included in Insert Clamping Screw Set.
3. In case of chamfering with 4 insert type, chatter may occur due to increased cutting resistance when plunge cutting. Please try the different types with less inserts, 1 or 2.

Refer to table A on page I 29 for cutting conditions.

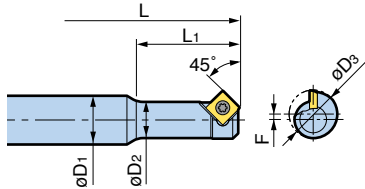
For Insert : I 29

Front & back chamfering

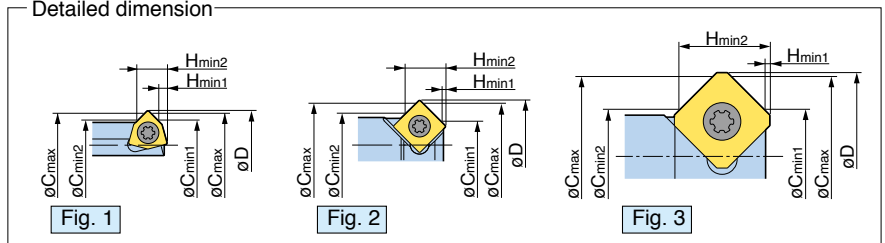
Single insert type



World's smallest
Hexagon insert



Detailed dimension



Model	Fig.	øD	øD1	øD2	øD3	L	L1	øCmin1	øCmin2	øCmax	Hmin1	Hmin2	Offset F	Insert Model
ST10-C0608-45B-16	1	8.8	10	5.7	5.7	78	16	6	6	8	1.0	3.8	1.55	CM04...
ST10-C0409-45B-20	2	9.8	10	5.4	7.7	86	20	4	6	9	0.5	5.4	1.1	CM05...
ST10-C0611-45B-20	2	12.0	10	7.4	9.8	81	20	6	8	11	0.4	5.5	1.1	CM05...
-35						96	35							
ST16-C1222-45B-40	3	22.6	16	11.0	16.9	117	40	12	12	22	0.3	12.4	2.9	CM10...

1. Wrench and screw are included. Inserts are ordered separately (10/pkg).
2. 10 screws and 1 wrench are included in Insert Clamping Screw Set.

Refer to table A on page I 29 for cutting conditions.

For Insert : I 29

Ultra High Feed Chamfer Mill

C-CUTTER mini

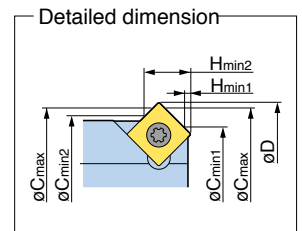
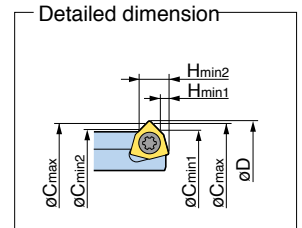
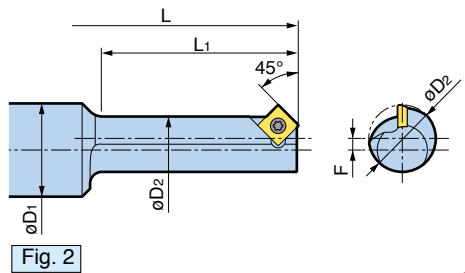
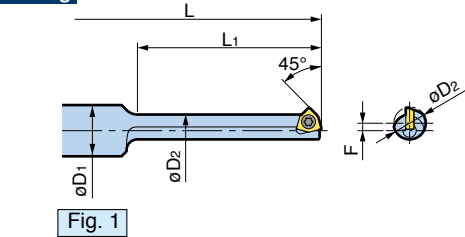
Front & back chamfering

Bolt hole & starting hole for tapping type

Tap size : M8 - M20



World's smallest
Hexagon insert



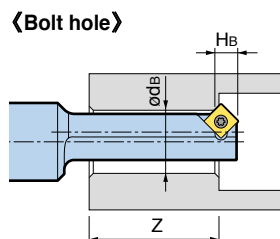
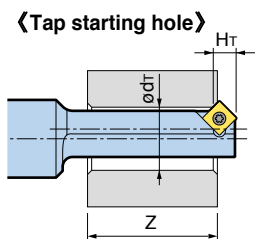
● in the table indicates Long Type

Model	Fig.	ϕD	ϕD_1	ϕD_2	L	L ₁	ϕC_{min1}	ϕC_{min2}	ϕC_{max}	H _{min1}	H _{min2}	Offset F	Insert Model				
ST10-CM08-45B-19	1	9.2	10	6.3	81	19	6.4	6.6	8.4	1.0	3.7	1.45	CM04...				
-35 ●					97	35											
ST12-CM10-45B-25	2	11.3	12	8.0	99	25	5.5	8.3	10.5	0.5	5.0	1.65		CM05...			
-45 ●					119	45											
ST12-CM12-45B-29	2	13.4	12	9.7	102	29	7.6	10.0	12.6	0.5	5.2	1.85			CM05...		
-53 ●					126	53											
ST16-CM14-45B-33	2	15.5	16	11.5	107	33	9.7	11.8	14.7	0.5	5.3	2.00				CM05...	
-61 ●					135	61											
ST16-CM16-45B-37	2	17.6	16	13.5	110	37	11.8	13.8	16.8	0.5	5.4	2.05					CM05...
-69 ●					142	69											
ST20-CM18-45B-42	2	19.7	20	14.9	126	42	13.9	15.2	18.9	0.5	5.7	2.40	CM05...				
-78 ●					162	78											
ST20-CM20-45B-46	2	21.8	20	16.9	129	46	16.0	17.2	21.0	0.5	5.8	2.45		CM05...			
-86 ●					169	86											

- Wrench and screw are included. Inserts are ordered separately (10/pkg).
- 10 screws and 1 wrench are included in Insert Clamping Screw Set.
- For ● Long Type, standard insert is recommended rather than "SE" sharp edge insert to avoid chipping.

Refer to page I 29 for cutting conditions, **table A** for long models marked with ●, **table B** for other models.

For Insert : I 29

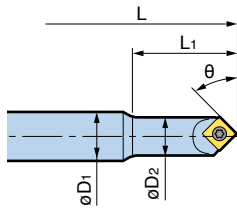


Cutter Type	Tap starting hole		Bolt hole		Z	
	ϕ_{dr}	H _T	ϕ_{db}	H _B	Standard type	Long type
CM08	6.8(M8)	3.6	6.6(M6)	3.7	13	29
CM10	8.5(M10)	4.9	9 (M8)	4.6	17	37
CM12	10.3(M12)	5.0	11 (M10)	4.7	21	45
CM14	12.0(M14)	5.2	-	-	25	53
CM16	14.0(M16)	5.3	14 (M12)	5.3	29	61
CM18	15.5(M18)	5.6	16 (M14)	5.3	33	69
CM20	17.5(M20)	5.6	18 (M16)	5.4	37	77

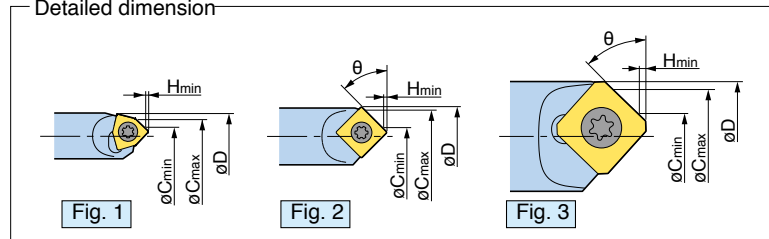
Front chamfering



World's smallest
Hexagon insert



Detailed dimension



Model	Fig.	θ	ϕD	ϕD_1	ϕD_2	L	L ₁	ϕC_{min}	ϕC_{max}	H _{min}	Insert Model
ST10-C0204-45-15 -25	1	45°	6.3	10	6	78	15	2	4	0.4	CM04...
						88	25				
ST10-C0207-45-20 -35	2	45°	8.1	10	7.8	81	20	2	7	0.4	CM05...
						96	35				
ST16-C0515-45-50	3	45°	15.8	16	15.2	122	50	5	15	0.4	CM10...
ST16-C0214-30-40	3	30°	15.9	16	15.4	105	40	2	14	0.2	CM10...
ST16-C0916-60-40	3	60°	16.5	16	15.6	105	40	9	16	0.8	CM10...

1. Wrench and screw are included. Inserts are ordered separately (10/pkg).
2. 10 screws and 1 wrench are included in Insert Clamping Screw Set.
3. Centering is not possible.

Refer to table A on page I 29 for cutting conditions.

For Insert : I 29

Ultra High Feed Chamfer Mill

C-CUTTER mini

Indexable Inserts

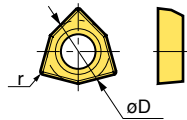


Fig. 1

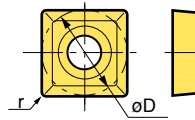


Fig. 2

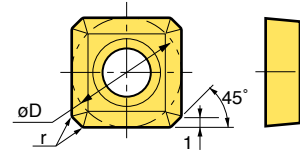
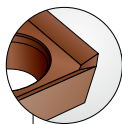


Fig. 3

The suffix **SE** designates a sharp cutting edge version.

Fig.	Insert Model	øD	Nose R	P	M	K	N	Insert Clamping Screw Set
				ACP300	ACP200	DS20		
1	CM0402	3.97	0.2	○	—	—	—	S2SS-T6
2	CM0502	5	0.2	—	○	—	○	S2TS-T6
	CM0502SE			○	○	—		
3	CM10C1	10	0.2	—	○	—	○	S4S-T15
	CM10C1SE			—	○	—		

1. Inserts are available in packet of 10pcs. Please specify model number and grade. (ie: CM0502-ACP200)
2. It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained.



Sharp cutting edge insert

Sharp cutting edge minimises the generation of burrs. This is especially beneficial when cutting stainless and mild steel materials.

Anti-seizure Lubricant



5g contained

Model **BN-5**

Recommended cutting condition

A (Standard conditions)

Work Material	Insert Grade	Cutting Speed Vc (m/min)	Feed rate f (mm/tooth)		Coolant
			Chamfering	Face Milling (CM10 insert only)	
General steel, Alloy steel, High-alloy steel	ACP200	100 – 350	0.05 – 0.4	0.05 – 0.2	Dry
Prehardened steel (Less than HRC40)		60 – 100	0.05 – 0.1	0.05 – 0.1	Wet
Stainless steel	ACP300	100 – 250	0.08 – 0.3	0.08 – 0.2	Dry/Wet
Cast iron	DS20, ACP300	100 – 350	0.1 – 0.5	0.05 – 0.25	Dry
Aluminum, Non-ferrous		100 – 800	0.1 – 0.5	0.05 – 0.3	Dry/Wet

1. The table is just a reference to determine cutting conditions. It should be adjusted according to the condition of the machine tool and workpiece.
2. Wet cutting is recommended to obtain the good surface quality.
3. In case built-up edge occurs when cutting aluminum and stainless steel, use soluble oil.

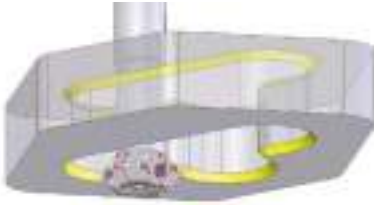
B (For long models of "bolt hole & starting hole for tapping type".)

Work Material	Insert Grade	Cutting Speed Vc (m/min)	Feed rate f (mm/tooth)	Coolant
General steel, Alloy steel, High-alloy steel	ACP200	20 – 100	0.03 – 0.12	Wet
Cast iron		50 – 160	0.05 – 0.20	Dry
Aluminum, Non-ferrous	ACP300	30 – 100	0.03 – 0.12	Wet

1. The table is just a reference to determine cutting conditions. It should be adjusted according to the condition of the machine tool and workpiece.
2. For stainless steel and hardened steel, shorter models are recommended.

C-CUTTER mini

■ Front & Back chamfering for Stainless



Material : X5CrNi18-9
Chamfer : 3mm x 45°
Feed : 0.1mm/tooth

	Competitor's tool (with TiAlN coated carbide insert)	C-CUTTER mini (ST20-C2232-45B-50)
Chamfering dia.	ø30	ø28
Number of tooth	1	4
Cutting speed (m/min)	140	180
Spindle speed (min ⁻¹)	1,490	2,050
Feed (mm/min)	149	819
Result	5 times better cutting efficiency	

■ Chamfering for Aluminum



Material : Al-Si7Mg(Fe)
Chamfer : 0.5mm x 45°
Feed : 0.1mm/tooth

	Competitor's tool	C-CUTTER mini (ST12-C1116-45B-25)
Chamfering dia.	ø40	ø12
Number of tooth	3	4
Cutting speed (m/min)	200	600
Spindle speed (min ⁻¹)	1,590	15,920
Feed (mm/min)	477	6,370
Result	13 times better cutting efficiency	

■ Front & back chamfering of starting holes for M8 tapping



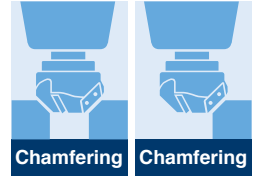
Material : FC250
Tapped hole : ø6.6
Chamfering dia. : ø8.4

	Competitor's tool (with Non-coated carbide insert)	C-CUTTER mini (ST10-CM08-45B-19)
Cutting speed (m/min)	30	150
Spindle speed (min ⁻¹)	1,140	5,680
Feed per tooth (mm/rev)	0.05	0.1
Feed (mm/min)	57	568

Chamfer cutter

C-CUTTER

Coolant-through hole



Chamfering

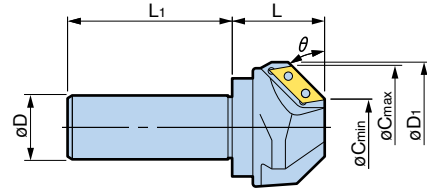
Chamfering

Standard type

30° & 60° chamfering types are newly introduced.

One C-Cutter to cover a wide chamfering range.

ø5 - ø25 ø10 - ø40 ø30 - ø60 ø50 - ø100



Chamfering angle θ	Chamfer		Model	ϕD	ϕD_1	L	L ₁	No. of Insert	Insert Model	Screw Set	Wrench
	$\phi C_{min.}$	$\phi C_{max.}$									
30°	16	52	ST32-C1652C-30	32	68	48	80	2	CW19	S3S	FLR-20S
	50	85	ST42-C5085C-30	42	96	52	80	3			
45°	5	25	ST20-C0525C	20	33	25	60	1	CW19	S2S-B	FLR-13S
	10	40	ST25-C1040C	25	45	35	70	2			
	30	60	ST32-C3060C	32	65	45	80	3			
	50	100	ST42-C50100C	42	106	70	80	3			
60°	14	34	ST25-C1434C-60	25	39	37	58	2	CW19	S3S	FLR-20S
	30	50	ST32-C3050C-60	32	54	45	80	3			
	45	65	ST32-C4565C-60	32	69	50	80	3			

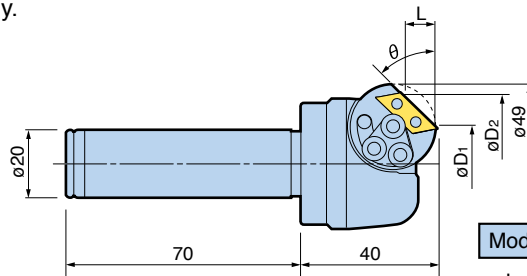
1. Inserts are ordered separately. An Insert Clamping key and Screws are included.
2. 10pcs. of screws and 1pc. of wrench are included in Screw Set.

For Insert : | 32

For Cutting Condition : | 32

Universal type

Easy angle adjustment from 5° to 85° with a hex key.



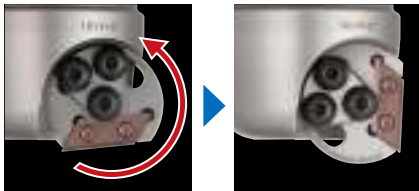
Model **ST20-C5/85A-40**

Insert Model : **CW12**

For Insert : | 32

For Cutting Condition : | 32

- Easy angle adjustment with a hex key.

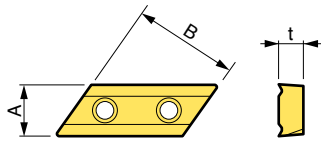


【 Chamfering range 】

Angle θ	Smallest hole dia. ϕD_1	Largest chamfering dia. ϕD_2	L	Angle θ	Smallest hole dia. ϕD_1	Largest chamfering dia. ϕD_2	L
5°	5.5	33.5	1.2	50°	24.0	42.2	10.8
10°	7.3	34.7	2.4	55°	26.4	42.4	11.4
15°	9.0	36.2	3.6	60°	28.5	42.5	12.1
20°	11.2	37.4	4.7	65°	30.7	42.4	12.5
25°	13.0	38.6	5.9	70°	32.9	42.1	12.6
30°	15.2	39.6	7.0	75°	34.9	41.7	12.7
35°	17.4	40.5	8.0	80°	36.9	41.1	11.9
40°	19.6	41.2	9.0	85°	38.8	40.3	8.6
45°	21.8	41.8	10.0				

Chamfering range and L dimensions are reference figures.

Indexable Inserts



A=Non-coated AZX=TICN+TiAlN multilayer coating

Insert Model	A	B	t	P30	P20
				A	AZX
CW1206	6.35	12.7	2.7	○	○
CW1909	9.525	19.05	4.5	○	○
CW3115	15.875	31.75	7.0	○	○

1. Insert is available from 1 pce.
2. Insert set is available in packs of 10 pcs. Please add "S" before each model number when ordering.
Example:SCW1206A

Recommended cutting conditions

Cutter Type	Max. Chamfer	Chamfering	General steel Alloy steel		Stainless steel		Cast iron		Aluminum	
			V (m/min)	f (mm/rev)	V (m/min)	f (mm/rev)	V (m/min)	f (mm/rev)	V (m/min)	f (mm/rev)
ST20-C5/85A-40	※2mm	Plunge Cutting	50	0.1	30	0.08	40	0.1	80	0.1
		Side Cutting	80	0.15	60	0.1	50	0.15	100	0.2
C0525C	C2	Plunge Cutting	50	0.1	30	0.08	40	0.1	80	0.1
		Side Cutting	80	0.15	60	0.1	50	0.15	100	0.15
C1040C	C3	Plunge Cutting	90	0.15	40	0.12	60	0.15	100	0.2
C1434C-60 C1652C-30	※3mm		Side Cutting	120	0.3	60	0.2	90	0.3	150
C3060C/C3060	C4	Plunge Cutting	120	0.3	60	0.18	90	0.25	150	0.3
C3050C-60 C4565C-60 C5085C-30	※4mm		Side Cutting	150	0.45	60	0.3	120	0.6	200
C50100C	C4	Plunge Cutting	150	0.4	80	0.25	120	0.35	180	0.4
		Side Cutting	150	0.45	60	0.36	120	0.6	240	0.6

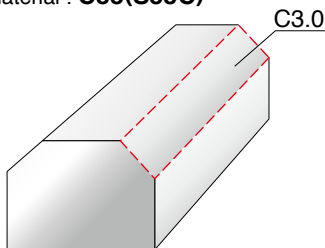
V : Cutting speed (m/min.) f: Feed per revolution (mm/rev.)

1. Cutting condition is the same for both non-coated and coated inserts. Coated inserts will achieve better surface finish and extended insert life.
2. Peck feed is necessary in case cutting chips are too long.
3. Reduce cutting speed if a larger chamfer than the max. amount shown in the table is required.
4. A high rigidity toolholder is recommended, such as BIG HMC or MEGA-D Chuck.
5. Max. chamfering amount with ※ in 30, 60 degree type and Universal type indicates the chamfering length of the longer side.

Application example

C3 traverse chamfering

Workmaterial : C55(S55C)



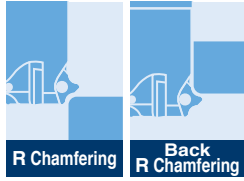
High cutting parameter was achieved without chattering.

C-CUTTER	ST25-C1040
Insert Model	CW1909A
Spindle speed	3,000 min ⁻¹
Feed	1,800mm/min

Ultra high feed chamfer mill

R-CUTTER

Front & back R-chamfering are available.
4 inserts multiply feed rate.



Front & back R chamfering

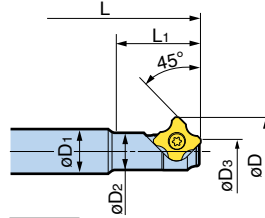


Fig. 1

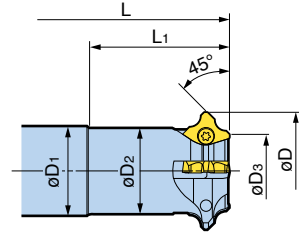
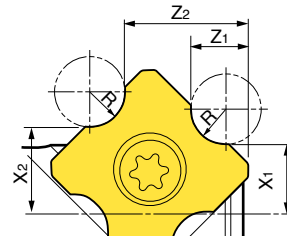


Fig. 2

R-dimensions



Model	Fig.	øD	øD ₁	øD ₂	øD ₃	L	L ₁	No. of Insert	R	X ₁	Z ₁	X ₂	Z ₂	Insert Model
ST10-RC061B-15	1	12.3	10	6.6	4.4	78	15	1	0.5	3.61	1.93	4.30	5.58	RC06....
									1	3.35	2.18	4.04	5.33	
									1.5	3.09	2.43	3.78	5.08	
									2	2.83	2.68	3.52	4.83	
ST16-RC121B-30	1	24.4	16	13.3	8.6	103	30	1	1	7.17	3.79	8.56	11.22	RC12....
									2	6.65	4.29	8.03	10.72	
									3	6.13	4.79	7.51	10.22	
									4	5.60	5.29	6.99	9.72	
ST16-RC064B-30	2	21	16	15.2	13.2	101	30	4	0.5	7.89	1.93	8.59	5.78	RC06....
									1	7.64	2.18	8.34	5.53	
									1.5	7.39	2.43	8.09	5.28	
									2	7.13	2.68	7.84	5.03	
ST32-RC124B-50	2	42	32	30.8	26.3	141	50	4	1	15.85	3.79	17.26	11.63	RC12....
									2	15.33	4.29	16.75	11.13	
									3	14.83	4.79	16.24	10.63	
									4	14.31	5.29	15.73	10.13	

Indexable Inserts



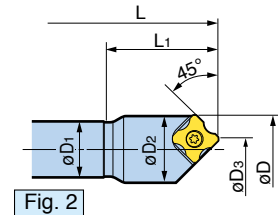
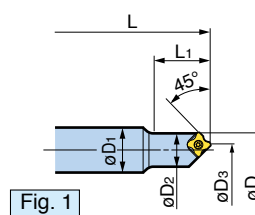
4 corners

Type	Insert model	Radius	Insert Clamping Screw Set
RC06	RC06050 ACP300	R0.5	S2TS-T6
	RC06100 ACP300	R1.0	
	RC06150 ACP300	R1.5	
	RC06200 ACP300	R2.0	
RC12	RC12100 ACP300	R1.0	S4S-T15
	RC12200 ACP300	R2.0	
	RC12300 ACP300	R3.0	
	RC12400 ACP300	R4.0	

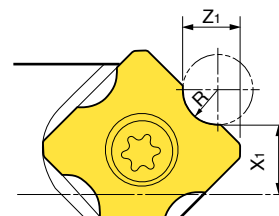
1. Inserts are available in packet of 10 pcs.
2. Material is coated carbide.



Front R chamfering



R-dimensions



Model	Fig.	øD	øD1	øD2	øD3	L	L1	No. of Insert	R	X1	Z1	Insert Model
ST16-RC061-20	1	12.3	16	11.9	4.5	94	20	1	0.5	3.61	1.93	RC06....
									1	3.35	2.18	
									1.5	3.09	2.43	
									2	2.83	2.68	
ST20-RC121-40	2	24.4	20	23.8	8.9	121	40	1	1	7.17	3.79	RC12....
									2	6.65	4.29	
									3	6.13	4.79	
									4	5.60	5.29	

Recommended cutting condition

Workpiece material	Cutting speed (mm/min)	Feed rate (mm/tooth)	Coolant
Structural, carbon or alloy steel	100 – 350	0.05 – 0.2	Dry
Prehardened steel less than HRC40	60 – 80	0.05 – 0.1	Wet
Stainless steel	100 – 250	0.08 – 0.2	Dry / Wet
Cast iron	100 – 350	0.05 – 0.25	Dry
Aluminum	100 – 800	0.05 – 0.25	Dry / Wet

1. The table is a reference to determine cutting conditions. It should be adjusted according to the condition of the machine tool and workpiece.

2. Wet cutting is generally recommended to obtain good surface quality.
3. In case of built-up edge occurs when cutting aluminum and stainless steel, use soluble oil.

Back spot facing tool for cap screw hole

BF-CUTTER

Coolant-through hole

Cap Screw Size : M6 - M16



Back Spot Facing

Selected spot facing diameters suitable for cap screws.

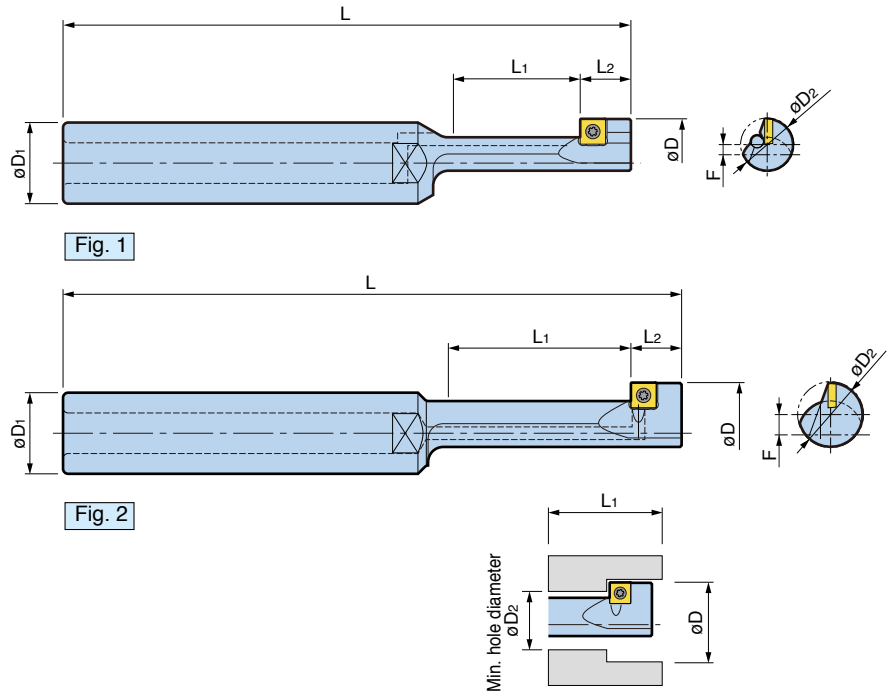


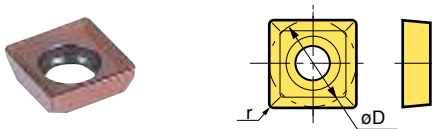
Fig. 1

Fig. 2

Model	Fig.	Chamfer øD	øD ₁	Min. hole diameter øD ₂	L	L ₁	L ₂	Offset F	Insert Model
ST16-BFM6 /11-12	1	11	16	6.5	102	12	9	2.40	CM0502
-BFM8 /14-20	1	14	16	8.5	108	20	9	2.90	
-BFM10 /17.5-25	1	17.5	16	10.5	112	25	10	3.65	
-BFM12 /20-36	2	20	16	13	122	36	10	3.65	
ST20-BFM14 /23-49	2	23	20	15	136	49	10	4.15	
-BFM16 /26-56	2	26	20	17	142	56	10	4.65	

1. Wrench and screw are included. Inserts are ordered separately (10/pkg).
2. 10 screws and 1 wrench are included in Insert Clamping Screw Set.

Indexable Inserts



Model	øD	Nose r	Insert Grade	
			ACP200	DS20
CM0502	ø5	0.2	○	○

Spare Parts

Cutter Type	Insert Clamping Screw Set	Anti-seizure Lubricant 5g contained
BFM6 / 11	S2SS-T6	BN-5
BFM8 / 14		
BFM10 / 17.5	S2TS-T6	
BFM12 / 20		
BFM14 / 23		
BFM16 / 26		

Recommended cutting condition

Work Material	Insert Grade	Cutting Speed (m/min)	Feed rate (mm/rev)
General steel, High-alloy Steel	ACP200	30	0.03
Cast iron		30	0.03
Aluminum, Non-ferrous	DS20	30 - 50	0.03

Insert grade

ACP200	DS20
General steel	Aluminum & non-ferrous
High wear-resistant PVD coating on carbide substrate with ultra multilayer TiAlN and AlCrN in micron order.	Ultra smooth and low friction DLC coating on carbide substrate having excellent anti-adhesive property.

Center and Chamfer in one **CENTER BOY**



Accurate centering and chamfering can be obtained in a single operation.

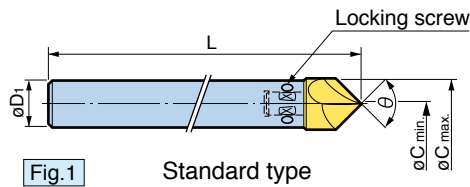
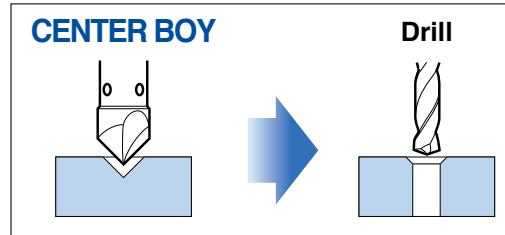


Fig.1 Standard type

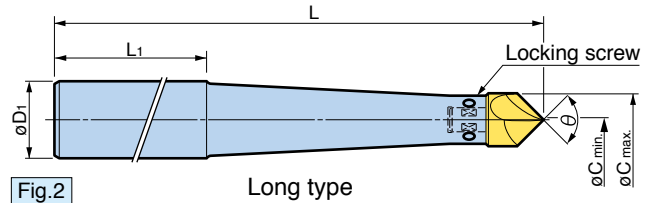


Fig.2 Long type

● in the table indicates Long Type

Chamfering Angle θ	Chamfer		Model	Fig.	ϕD_1	L	L_1	Insert Model	Spare Locking Screw
	ϕC_{min}	ϕC_{max}							
90°	0.9	10	ST10-CBY09010	1	10	150	-	CBY09010	H0403-5P
	0.9	13	ST12-CBY09013		12				
	1.0	16	ST16-CBY09016		16				
	1.5	22	ST20-CBY09022		20				
	0.9	13	ST20-CBY09013-220 ● -260 ●	2	20	220 ● 260 ●	120	CBY09013	H0403-5P
	1.5	22	ST32-CBY09022-260 ● -300 ●		32	260 ● 300 ●	120	CBY09022	H0505-5P
120°	0.9	13	ST12-CBY12013	1	12	150	-	CBY12013	H0403-5P

1. 2 pcs of Inserts are included as standard accessories.
2. 2 pcs. of Locking Screws are included. Spare Locking Screws are available in a packet of 5 pcs.

⚠ Hand feed is not recommended.

Insert



Chamfering Angle θ	Model	CENTER BOY
90°	CBY09010	ST10-CBY09010
	CBY09013	ST12-CBY09013 / ST20-CBY09013
	CBY09016	ST16-CBY09016
	CBY09022	ST20-CBY09022 / ST32-CBY09022
120°	CBY12013	ST12-CBY12013

1. Inserts are available in packages of 5 pcs.
2. Insert Grade is HSS with TiN coating.



Highly accurate
Replaceable Insert

Recommended cutting condition

Work Material	Cutter Type	Chamfering		Centering	
		V (m/min)	f (mm/rev)	V (m/min)	f (mm/rev)
General steel Alloy steel	Standard	20 – 35	0.10	25 – 50	0.08
	long	20 – 35	0.08	20 – 50	0.08
Stainless steel	Standard	15 – 30	0.08	20 – 40	0.08
	long	15 – 30	0.06	15 – 30	0.06
Cast iron	Standard	20 – 40	0.12	30 – 45	0.10
	long	20 – 40	0.10	30 – 45	0.10
Aluminum	Standard	45 – 60	0.15	50 – 65	0.15
	long	40 – 60	0.12	40 – 60	0.12

V: Cutting speed (m/min.) f: Feed per revolution (mm/rev.)

1. The table is just a reference to determine cutting conditions.
It should be adjusted according to the condition of the machine tool and workpiece.

2. In case vibration occurs, reduce cutting speed V.
3. Projection length should be as short as possible.



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JQA-QM3913
FA Dept.

CATALOG No.EXm400-5-0414-1 H
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