BIG DAISHOWA

Volume 5.1

HIGH PERFORMANCE TOOLING SOLUTIONS

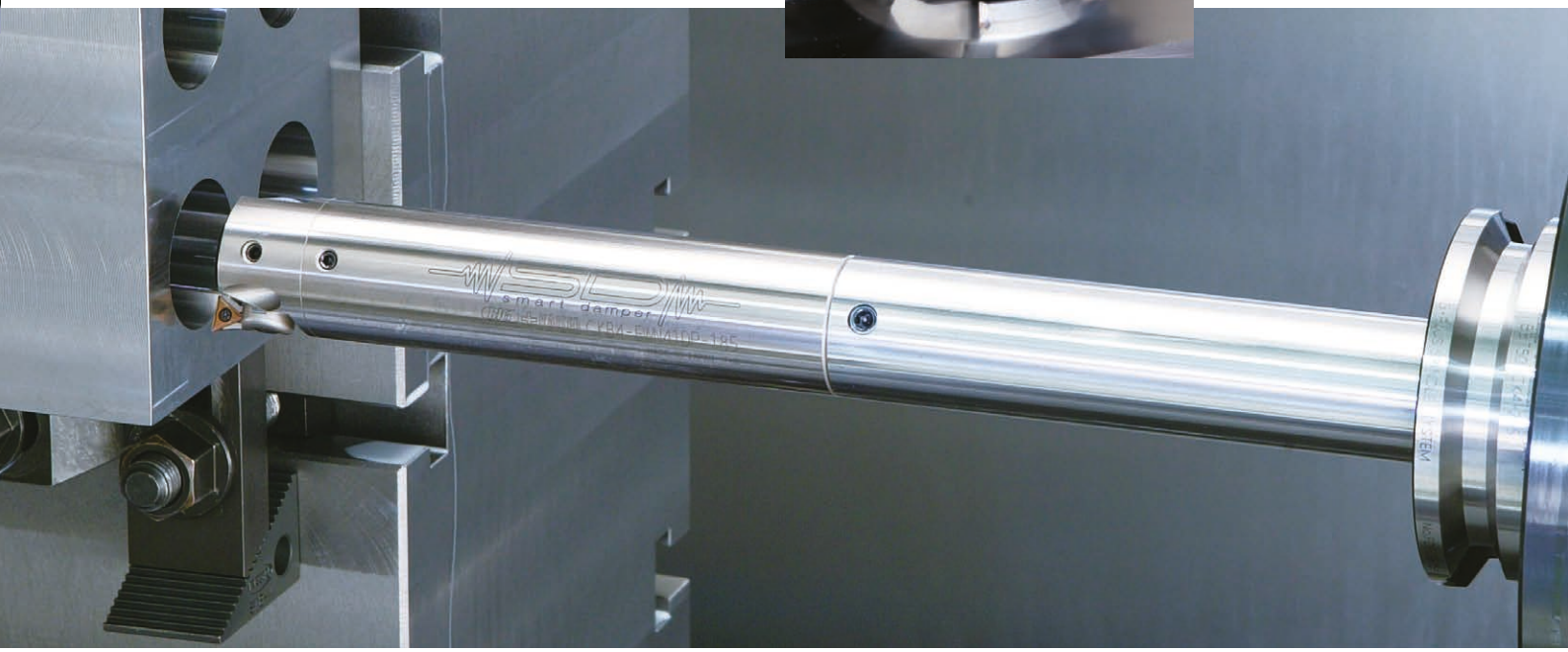
04/2026

BIG DAISHOWA

BIG DAISHOWA is a comprehensive tooling manufacturer that has been developing, manufacturing, and selling precision tools and systems for the metalworking industry since 1967.

OUR VISION OF **PRECISION**

With decades of experience and uncompromising quality control, we aim to manufacture "high precision" and "high quality" products that satisfy our customers. Additionally, we maintain a robust global network to source the optimal product solutions for our customers' requirements.



BIG DAISHOWA GROUP

Production facilities	**11 in Japan**
CNC machines	**> 750** (>200 grinding machines)
Employees worldwide	**> 1.000**
Production floorspace worldwide	**> 200.000 m²**
Tech Centers	**3** (Japan, Switzerland, USA)

Logistic Centers	**>16.500 m² in total** (Japan, Switzerland, Germany, USA)
Wide product range	CAPTO 3-4-5-6-8 / HSK 15-20-25-32-40-50-63-100-125 Type A-C-E-F-T / BT/BBT30-40-50 DV/BDV30-40-50 CV/BCV30-40-50

MANUFACTURING EXCELLENCE

Combining the latest equipment and the best technology to produce reliable products.

We have established a production system that combines quality with mass production based on our processing know-how accumulating over many years. Our fully automated production lines, in addition to state-of-the-art equipment, allow us to efficiently manufacture a wide variety of products.

In addition, the final grinding process is always conducted in a strictly temperature-controlled machining room to ensure stable quality and accuracy, ensuring that only reliable products are delivered to our customers.

No.9 Factory, Japan

TECHNICAL CENTER

State-of-the-art machinery and equipment for product development and research purposes.

The technical center is used to conduct processing tests to meet customer requirements and to develop new products.

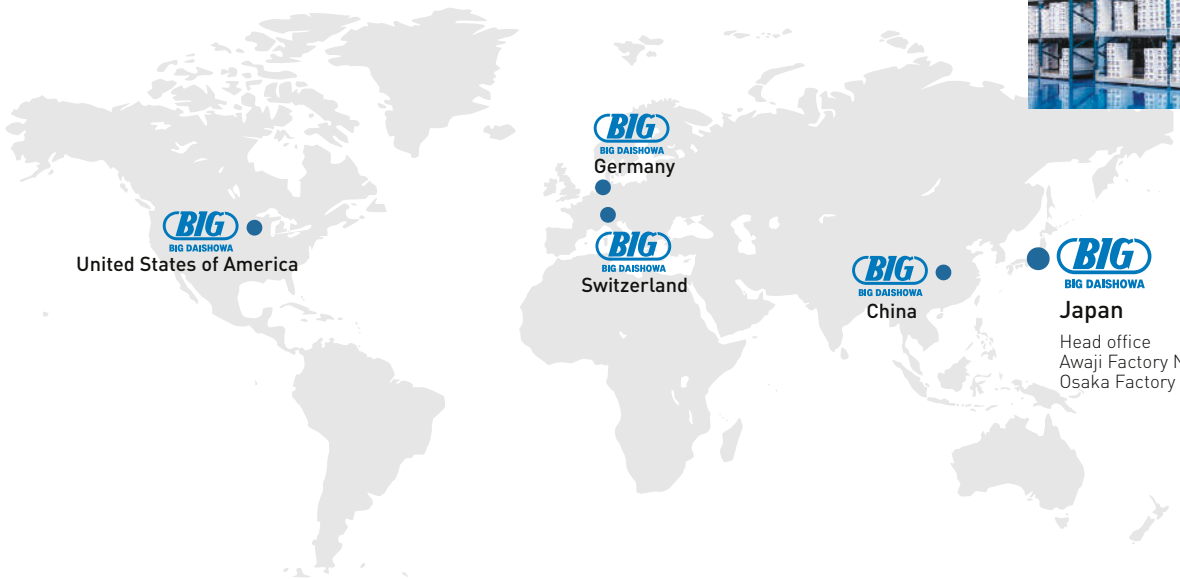
Technical Center, Japan

LOGISTICS CENTER

State-of-the-art distribution center that consolidates inspected products for rapid shipment.

More than 1.5 million products, including tooling, cutting tools, sensors, and accessories, are stocked in our distribution center to fulfill orders from customers worldwide.
Each product undergoes packaging, transportation, picking, and shipping using state-of-the-art systems in every department, ensuring enhanced efficiency and a streamlined process for rapid and precise product delivery.

Logistics Center, Japan



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MEGA Micro Chuck

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MEGA New Baby Chuck

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HSK Shank	188/250/259
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Collet Chucks

MEGA E Chuck

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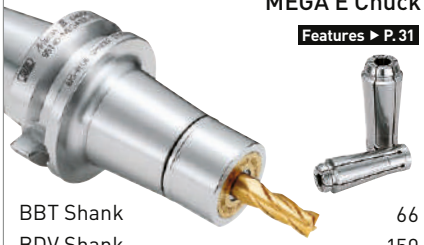

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Collet Chucks

New Baby Chuck

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New Baby Chuck Type NRA

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Milling Chucks

MEGA Perfect Grip

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Milling Chucks

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Hydraulic Chuck

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Mold Chuck

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Shrink Chuck

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CK Shanks

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Smart Damper CK Shanks

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Face Mill Arbors Type FMH

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Tool Holders

Smart Damper Basic Holders for Milling Heads

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Tool Holders

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Tool Holders

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Screw-On-Holder

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Angle Heads
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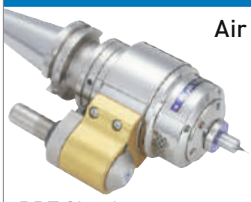

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Modular Turning

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Smart Damper Turning
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N/C Lathe Tooling

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Collets & Accessories

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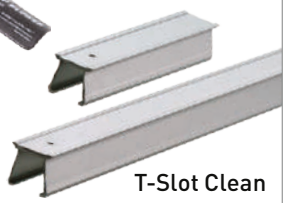
Accessories

Chip Blower



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Rough Boring

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Fine Boring

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Fine Boring

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CK Presetter

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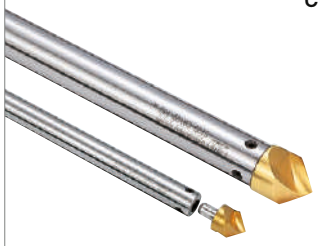
Center Boy



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For models that start with BBT, BT, BDV, DV, HSK, ST and C (BIG CAPTO)

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EWE-	Common Parts for EWE Boring Head		492
EWE□-□CK□	EWE Digital Fine Boring Head		441
EWE□-□CKB□	EWE Digital Fine Boring Head		430
EWN□-□CKB□	EWN Fine Boring Heads		428
EWN04□-	EWN Fine Boring Head		438
EWN2-□CK□	EWN Fine Boring Head		440, 452
EWN2-□ER□	EWN Fine Boring Head (ER Chuck Type)		440
EWN200	EWN Large Diameter Boring Head		433
EWN200AL	EWN Large Diameter Boring Head		434

F

F□	Basic Holder Type F (90°)	**BBT-M**	317
	Basic Holder Type F (90°)	**HSK-T**	323
	Basic Holder Type F (90°)	**BIG CAPTO**	332
F□-DCLN□	Cartridges Type F for Turning Tool (90°)		315
F□-DDJN□	Cartridges Type F for Turning Tool (90°)		315
F□-DTJN□	Cartridges Type F for Turning Tool (90°)		315
F□-SVQB□	Cartridges Type F for Turning Tool (90°)		315
FCM□-	Fullcut Mill FCM - for Standard Type	**BBT**	496
	Fullcut Mill FCM - for Standard Type	**BDV**	498
	Fullcut Mill FCM - for Standard Type	**HSK-A**	499
	Fullcut Mill FCM - for Standard Type	**HSK-E**	501
	Fullcut Mill FCM - for Standard Type	**BIG CAPTO**	502
	Fullcut Mill FCM - for Standard Type	**ST**	503
	Fullcut Mill FCM - for Oversize Type	**ST**	504
FCM□L-	Fullcut Mill FCM - for Long Nose Type	**BBT**	497
	Fullcut Mill FCM - for Long Nose Type	**HSK-A**	500
FCR□-	Fullcut Mill FCR - for Standard Type	**BBT**	511
	Fullcut Mill FCR - for Standard Type	**BDV**	513
	Fullcut Mill FCR - for Standard Type	**HSK-A**	514
	Fullcut Mill FCR - for Oversize Type	**ST**	516
FCR□L-	Fullcut Mill FCR - for Long Nose Type	**BBT**	512
	Fullcut Mill FCR - for Long Nose Type	**HSK-A**	515
FK□-	FK Wrenches		385
FLN□	Flange for Large Diameter Boring Tools		423
FM□-PLS□	Speed Finisher		523
FM□-SFM□	Surface Mill		522
FMH□-	Face Mill Arbors Type FMH	**BBT**	104
	Face Mill Arbors Type FMH	**BDV**	165
	Face Mill Arbors Type FMH	**HSK-A**	218
	Face Mill Arbors Type FMH	**BIG CAPTO**	281
FMH□-FCM□	Fullcut Mill FCM - Arbor Type		506
FONBC□-□	FONBC Coolant Collets		364
FS□LC	Hook wrench for Super Keyless Chuck (FS)		388

G

GRG-02	Grease Gun		477

H

H□	Radial Adjusting Screw (MW BORING HEAD)		490
H□	Screw for Side Lock Holder / EWN / EWE / EWB		490
H□	Locking Screw (For Center Boy)		545
H□FS□	Clamping Screw for Mold Chuck		400
HDA□	Adjusting Screw for Hydraulic Chuck		387
HDC□	Hydraulic Chuck Standard	BBT	87
	Hydraulic Chuck Standard	BDV	160
	Hydraulic Chuck Standard	HSK-A	208
	Hydraulic Chuck Standard	BIG CAPTO	278
HDC□	Hydraulic Chuck Lathe Type - Standard	for Lathes	350
HDC□E	Hydraulic Chuck E Type	BBT	91
HDC□J	Hydraulic Chuck Jet Through	BBT	85
	Hydraulic Chuck Jet Through	BDV	159
	Hydraulic Chuck Jet Through	HSK-A	207
	Hydraulic Chuck Jet Through	BIG CAPTO	277
HDC□L	Hydraulic Chuck Standard	BBT	89
	Hydraulic Chuck Standard	BDV	160
HDC□S	Hydraulic Chuck Super Slim	BBT	83
	Hydraulic Chuck Super Slim	BDV	158
	Hydraulic Chuck Super Slim	HSK-A	205
	Hydraulic Chuck Super Slim	HSK-E	252
	Hydraulic Chuck Super Slim	HSK-F	262
	Hydraulic Chuck Super Slim	ST	299
	Hydraulic Chuck Super Slim	BIG CAPTO	276
HDC□S-□UP	Hydraulic Chuck Ultra Precision Type	HSK-E	255
HDC□XS	Hydraulic Chuck Extra Slim	HSK-E	254
HMA-M□	Adjusting Screw for MEGA-D / HMC		399
HMC□	New Hi-Power Milling Chuck	BIG CAPTO	275
HMC□S	New Hi-Power Milling Chuck Type S	BBT	79
	New Hi-Power Milling Chuck Type S	BDV	155
	New Hi-Power Milling Chuck Type S	HSK-A	202
	New Hi-Power Milling Chuck Type S	BIG CAPTO	275
HMC□S-□NRA	New Hi-Power Milling Chuck Type NRA	BBT	82
	New Hi-Power Milling Chuck Type NRA	HSK-A	204
HMC12J	New Hi-Power Milling Chuck Type HMC12J	BBT	81
	New Hi-Power Milling Chuck Type HMC12J	BDV	157
	New Hi-Power Milling Chuck Type HMC12J	HSK-A	203
	New Hi-Power Milling Chuck Type HMC12J	ST	300
HSK□-CP	Coolant Pipes		264
HSK□-CPM	Coolant Pipes 1° swing type (DIN) for Form A/E		264
HSK□-PG	HSK Plug Screw		264

I

ISL□-	Side Lock Holders for Weldon	BBT	111
	Side Lock Holders for Weldon	BDV	169
	Side Lock Holders for Weldon	HSK-A	223
	Side Lock Holders for Weldon	BIG CAPTO	283

J

JS-M	Joint Screw (For CPG Collet)		382

K

KG□R	Kombi Grip		402
KLC□-	Super Keyless Chuck	BBT	108

L

LM-□	Lathe Master		564
LM□CS	Lathe Master Collar Set		564
LSN35	Lifting Screw Set for Speed Finisher		524
LVM-01	Level Master		563
LVM-WL	Level Master Wireless		563

M

M□-	Screw-On Holder	BBT	113
	Screw-On Holder	BDV	170
	Screw-On Holder	HSK-A	225
M1010-25	Extension (OD Turning Holders)		452
M25526IP-2P	Insert Holder Clamp Screw (EW MICRO HEAD)		491
MEC□-□	MEGA E Collets		372
MEGA□D-	MEGA Double Power Chuck Type D	BBT	74
	MEGA Double Power Chuck Type D	HSK-A	197
	MEGA Double Power Chuck Type D	HSK-F	261
MEGA□DPG	MEGA Perfect Grip	BBT	78
	MEGA Perfect Grip	DV	154
	MEGA Perfect Grip	HSK-A	201
MEGA□DS-	MEGA Double Power Chuck Type DS	BBT	76
	MEGA Double Power Chuck Type DS	BDV	153
	MEGA Double Power Chuck Type DS	HSK-A	199
	MEGA Double Power Chuck Type DS	HSK-F	261
	MEGA Double Power Chuck Type DS	BIG CAPTO	273
MEGA□E-	MEGA E Chuck	BBT	66
	MEGA E Chuck	BDV	150
	MEGA E Chuck	HSK-A	192
	MEGA E Chuck	HSK-F	260
	MEGA E Chuck	BIG CAPTO	271
MEGA□N-	MEGA New Baby Chuck	BBT	62
	MEGA New Baby Chuck	BDV/DV	148
	MEGA New Baby Chuck	HSK-A	187
	MEGA New Baby Chuck	HSK-E	250
	MEGA New Baby Chuck	HSK-F	259
	MEGA New Baby Chuck	BIG CAPTO	268
MEGA□S	MEGA Micro Chuck Type S	BBT	61
	MEGA Micro Chuck Type S	BDV/DV	147
	MEGA Micro Chuck Type S	HSK-A	187
	MEGA Micro Chuck Type S	HSK-E	248
	MEGA Micro Chuck Type S	HSK-F	258
	MEGA Micro Chuck Type S	ST	296
	MEGA Micro Chuck Type S	BIG CAPTO	267
	MEGA Micro Chuck Type S	for Lathes	346
MEGA□S-□T	MEGA Micro Chuck Type T	BBT	60
	MEGA Micro Chuck Type T	BDV/DV	146
	MEGA Micro Chuck Type T	HSK-A	186
	MEGA Micro Chuck Type T	HSK-E	247
	MEGA Micro Chuck Type T	HSK-F	258
	MEGA Micro Chuck Type T	BIG CAPTO	266
MEGAER□	MEGA ER Grip	for Lathes	344
MEN	MEGA E Nuts		372
MER□SN	MEGA ER Solid Nut		376

M

MERN□	MEGA ER Nut	**376**
MERPS□	MEGA ER Perfect Seal	**377**
MGN	MEGA Nuts Standard Type (For MEGA New Baby Chuck)	**367**
MGN□F	MEGA Nuts Flat Type (For MEGA New Baby Chuck)	**367**
MGN□S	MEGA Nuts (For MEGA Micro Chuck)	**358**
MGN□S-□J	MEGA Micro Coolant Nut	**359**
MGN□S-PS	MEGA Micro Seal Nut	**358**
MGN□T	MGT Nut (MEGA Syncro Tapping Holder)	**398**
MGR□A-N	Adapter (Digital MEGA Torque Wrench)	**386**
MGR□	MEGA Wrench	**384, 399**
MGR□TL	MEGA Torque Wrench	**385**
MGR□TTL	MEGA Torque Wrench	**385**
MGR-TL/P	Digital MEGA Torque Wrench	**386**
MGT□-	MEGA Synchro Tapping Holder **BBT**	**116**
	MEGA Synchro Tapping Holder **BDV/DV**	**171**
	MEGA Synchro Tapping Holder **ST**	**304**
	MEGA Synchro Tapping Holder **BIG CAPTO**	**285**
MGT□-□-	Tap Holders for MEGA Synchro Tapping Holder DIN	**390, 392, 394, 396**
MGT□-M/U/P□-	Tap Holders for MEGA Synchro Tapping Holder JIS	**391, 393, 395, 397**
MGT□OR	O-Ring Set for MEGA Syncro Tapping Holder	**398**
MGT□SA□	Syncro Adjuster for MEGA Syncro Tapping Holder	**398**
MGT□SS	Set Screw for MEGA Syncro Tapping Holder	**398**
MGT3-	MEGA Synchro Tapping Holder MGT3 **BBT**	**117**
	MEGA Synchro Tapping Holder MGT3 **HSK-A**	**228**
	MEGA Synchro Tapping Holder MGT3 **ST**	**305**
	MEGA Synchro Tapping Holder MGT3 **for Lathes**	**347**
MGT36-	MEGA Synchro Tapping Holder MGT36 **BBT**	**116**
	MEGA Synchro Tapping Holder MGT36 **BDV/DV**	**172**
	MEGA Synchro Tapping Holder MGT36 **HSK-A**	**227**
MGT36-	Tap Holders for MEGA Synchro Tapping Holder JIS	**397**
MGT36-	Tap Holders for MEGA Synchro Tapping Holder DIN	**396**
MGT36SL□	Side Lock Bolt Set for MGT36	**399**
MPS□-□	MEGA Perfect Seals	**368**
MT□-CKB□-□	Morse Taper shanks with tang	**293**
MT□M-CKB□-□-M□	Morse Taper with thread	**293**
MTA□-	Morse Taper Holders **BBT**	**109**
	Morse Taper Holders **HSK-A**	**226**
	Morse Taper Holders **BIG CAPTO**	**284**
MW□	MW Rough Boring Heads **ST**	**416**
MW16BS	Belleville Spring (MW BORING HEAD)	**490**
MW16SS	Clamping Screw (MW BORING HEAD)	**490**
MW□E	Cartridge for MW Boring Head	**416**
MW0404	Indexable Inserts for MW Boring Head	**471**

N

NBA□B	Adjusting Screws for Collet Chucks	**367**
NBB	Cases for New Baby Collets	**366**
NBB□S	Collet Protective Cases	**359**
NBC□-□	New Baby Collets	**360**
NBC□-□E	New Baby Collets for Endmills	**363**
NBC□-CE	Collet Ejectors	**366**
NBC□E-CE	Collet Ejectors	**366**
NBC□S-□	Micro Collets	**305, 331, 356, 399**
NBJ	Collet Removers	**366**
NBK□	New Baby Wrenches	**385**
NBK□TL/TLS	New Baby Torque Wrenches	**385**
NBN	New Baby Nuts	**367**

NBS□-□	New Baby Chuck	**BT**	**68**
	New Baby Chuck	**DV**	**151**
	New Baby Chuck	**HSK-A**	**194**
	New Baby Chuck	**ST**	**297**
	New Baby Chuck	**for Lathes**	**341**
NBS□-□	New Baby Chuck Extra Short	**BBT**	**72**
NBS□-□NRA	New Baby Chuck Type NRA	**BBT**	**73**
	New Baby Chuck Type NRA	**HSK-A**	**196**

O

OAG90-□	Angle Head New Baby Chuck Oil Coolant Type	**BBT**	**127**
	Angle Head New Baby Chuck Oil Coolant Type	**HSK-A**	**225**
OCA□-□	OCA Collets		**380**
OR-S□	O-ring for Straight Collet (EWN/EWE/EWB Cylindrical Tool Type)		**490**
OSL□-	Sleeves for Side Lock Holder		**389**

P

PJC□-	PJC Collets	**379**
PJC□OR	O-Ring Set (PJC / PSC / CPG)	**383**
PKG□	Key Grip (MEGA PERFECT GRIP / CPG)	**383**
PL□	Indexable Inserts for Speed Finisher	**523**
PLP	Presetter for Speed Finisher	**524**
PLW-□	Pullstud Wrenches	**411**
PMC-□	Point Master PMC Series	**553**
PMG-□	Point Master PMG Series	**554**
PMP-□	Point Master Pro Series	**552**
PS-□	PS Ring for Perfect Seal	**369**
PSC□-	PSC Collets	**380**
PSP□	Spring (MEGA PERFECT GRIP / CPG)	**383**

R

RBE	Jig Boring Bit		**443**
RBX□-□S-□	Air Turbine Spindle Side Through Type	**BBT**	**142**
RBX□-□S-□	Air Turbine Spindle Side Through Type	**BDV**	**182**
RBX□-□S-□	Air Turbine Spindle Side Through Type	**HSK-A**	**245**
RBX□-□S-□H	Air Turbine Spindle Manual Type	**BBT**	**143**
RBX□-□S-□H	Air Turbine Spindle Manual Type	**BDV**	**183**
RBX□-□S-□H	Air Turbine Spindle Manual Type	**HSK-A**	**246**
RBX□C-□S-□	Air Turbine Spindle Center Through Type	**BBT**	**141**
RBX□C-□S-□	Air Turbine Spindle Center Through Type	**BDV**	**181**
RBX□C-□S-□	Air Turbine Spindle Center Through Type	**HSK-A**	**244**
RC□	R-Cutter - Front Chamfering	**ST**	**541**
RC□ACP300	Indexable Inserts for R-Cutter		**543**
RC□B	R-Cutter - Front & Back R Chamfering	**ST**	**540**

S

S□	Tool Carrier Clamp Screw (EWB BORING HEAD)		**492**
S□	Basic Holder Type S (45°)	**BBT-M**	**317**
	Basic Holder Type S (45°)	**HSK-T**	**322**
	Basic Holder Type S (45°)	**BIG CAPTO**	**330**
S□DS	Insert Clamping Screw Set for Fullcut Mill (FCM / FCR)		**521**
S□-DCLNN	45° Cartridges Type S		**314**
S□-DDHNN	45° Cartridges Type S		**314**
S□-DDJN□	45° Cartridges Type S		**314**
S□-DTJN□	45° Cartridges Type S		**314**
S□S	Insert Clamping Screw Set for Boring		**476**

S

S□S-□IP	Insert Clamping Screw Set for Boring		476
S□S-A/B/S	Insert Clamping Screw Set for Boring		476
S□S-T□	Insert Clamping Screw Set for Boring		476
S□-SVLB□	45° Cartridges Type S		314
S□-SVQBN	45° Cartridges Type S		314
SB-□	Semi-Finished Stop Blocks		413
SBT□-ASC	Flange Face Cleaner	BBT	406
SBT30-DF10	Dyna Force		559
SC□	Spindle Cleaners		405
SC□□06	Indexable Inserts for Boring		471
SC□□07	Indexable Inserts for Boring		471
SC□□09	Indexable Inserts for Boring		471
SC□□12	Indexable Inserts for Boring		471
SCA□-	Side Cutter Arbors	BBT	114
	Side Cutter Arbors	BIG CAPTO	284
SCE-□	α Tooling Cleaners		405
SCH	Collet Hook		383
SC-HSK□	Spindle Cleaners		405
SC-MEC□	Taper Cleaners		404
SC-MER□	Taper Cleaners		404
SC-NBC□	Taper Cleaners		404
SC-NBC□S	Taper Cleaners		404
SDB□DP	Smart Damper Turning	ST	348
SDB□DP	Smart Damper Turning Adapter	BIG CAPTO	339
	Smart Damper Turning Adapter	HSK-T	327
SDF□	Smart Damper Basic Holders for Mills	BBT	106
	Smart Damper Basic Holders for Screw-On	BBT	112
	Smart Damper Basic Holders for Mills	BDV	167
	Smart Damper Basic Holders for Mills	HSK-A	220
SDF□-FMH□DP	Smart Damper Damper Heads for Mills		107, 168, 221
SDF□-M□DP	Smart Damper Damper Heads for Screw-On		112
SDV□-ASC	Flange Face Cleaner	BDV	406
SKL□-	Super Keyless Chuck	BBT	108
	Super Keyless Chuck	HSK-A	222
SL□F-HDC□	Hydraulic Chuck Lathe Type - Type F	for Lathes	351
SL□R-HDC□	Hydraulic Chuck Lathe Type - Type R	for Lathes	352
SLN□-	Slide for Large Diameter Boring Tools		423, 433
SLN□-□AL	Aluminum Slide for Large Diameter Boring Tools		424, 434
SMGR-TL/P	Digital MEGA Torque Wrench Set		386
SNBC	New Baby Collet Sets		366
SNT□-DF□	Dyna Force		559
SRC□-	Shrink Chuck Standard	BBT	96
	Shrink Chuck Standard	BDV	161
	Shrink Chuck Standard	HSK-A	213
	Shrink Chuck Standard	BIG CAPTO	279
SRC□J-	Shrink Chuck Jet Through	BBT	95
SRC□S-	Shrink Chuck Slim	BBT	94
	Shrink Chuck Slim	HSK-A	212
	Shrink Chuck Slim	ST	302
	Shrink Chuck Slim	BIG CAPTO	279
SRC□SS-	Shrink Chuck Super Slim	ST	301
SSL□-	Mold Chuck	BBT	97
	Mold Chuck	HSK-A	214
SST□-MEGA□S-	MEGA Micro Chuck Set	ST	296
ST□-M□-	Cylindrical Toolholder	ST	444
ST□-SL□	Side Lock Cylindrical Toolholder	ST	445, 448
ST□W-AJ□	Carbide Cylindrical Toolholder	ST	447
ST□W-CKB□-	Carbide Bars for Boring	ST	450

ST□W-EB□-	Carbide Cylindrical Insert Holder	**ST**	**438, 443**
ST□W-EW□-	EW Micro Head	**ST**	**449**
ST□W-M□-	Carbide Cylindrical Toolholder	**ST**	**444**
ST□W-MW□-	MW Rough Boring Heads	**ST**	**416**
ST12B-C0525	C-Cutter Boy	**ST**	**546**
ST15-50K	Alternative Stylus		**554**
ST16-SL□-	Cylindrical Toolholder (OD Turning Holders)		**452**
ST28/38-	Alternative Stylus		**554**
ST4W/7W-EB□	EWN04-7 / EWN04-15 Cylindrical Tool		**438**
STL40	Assembling unit ST Lock		**402**
SVQB□	90° Integral Tool Holder Type F	**BIG CAPTO**	**333**
SVQBN	45° Integral Tool Holder Type S	**BIG CAPTO**	**331**
SW□-□CKB□	SW Rough Boring Heads		**417**
SW□A	SW Cartridge Type SC		**419**
SW□E	SW Cartridge Type CC		**420**
SW□N	SW Cartridge Type ZN		**420**
SW□BS	Belleville Spring (SW BORING HEAD)		**490**
SW□RS	Radial Adjusting Screw (SW BORING HEAD)		**490**
SW□SS	Clamping Screw (SW BORING HEAD)		**490**

T

TAD□	Turning Adapter	**HSK-T**	**327**
	Turning Adapter	**BIG CAPTO**	**340**
TC□□11	Indexable Inserts for Boring		**470**
TF-□	Torque Fit		**403**
TKC□	TK Cleaners		**404**
TM-100N	Tool Master		**557**
TMA□-□	Tooling Mate / Torque Fit Adapter		**403**
TMBA-M□	Clamp Bolt for Face Mill Arbor		**388**
TMS□-□	Tooling Mate		**401**
TMS□-□R	Tooling Mate		**401**
TMS-HSK-A125	Tooling Mate		**401**
TP□□07	Indexable Inserts for Boring		**468**
TP□□08	Indexable Inserts for Boring		**469**
TS□-S	T-Slot Clean		**407**
TSB□	Grip Bar for Hydraulic Chuck		**387**
TSL□-	Side Lock Holders Type TSL	**BBT**	**110**
	Side Lock Holders Type TSL	**HSK-A**	**222**
	Side Lock Holders Type TSL	**BIG CAPTO**	**282**
TW□A/E/EL	Cartridge (Large-Diameter TW Boring Head)		**423**
TW□BS	Belleville Spring (Large-Diameter TW 200 / EWN200 Head)		**493**
TW200E/EL-SC	E Type Cartridge for Step Cutting		**424**
TW200RS	Radial Adjusting Screw (Large Diameter Type)		**493**

W

WC□□02	Indexable Inserts for Boring	**468**

X

XF1	Air Filter Regulator for RBX	**400**

Z

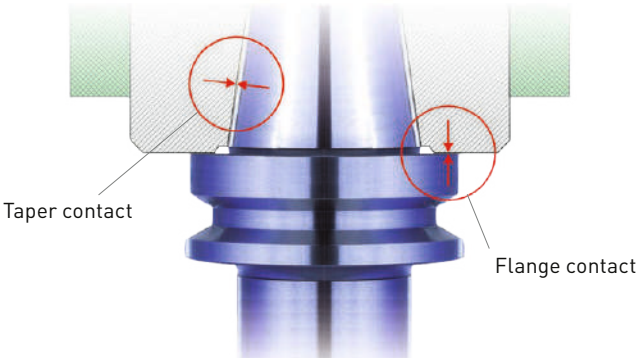
ZNMU□	Indexable Inserts for SW Boring Head	**473**

The Original Simultaneous Taper and Flange Fit Spindle System for Steep Taper

BIG-PLUS® SPINDLE SYSTEM DUAL CONTACT

The BIG-PLUS® spindle system exceeds all other interface concepts thanks to simultaneous taper and face contact between machine spindle and tool holder. Furthermore the system offers full interchangeability with existing machines and tool holders. In a first step a taper contact is resulting during entering the tool into the machine spindle. Due to the pull-in force the tool taper expands the spindle in the elastic range. The tool is pulled further into the spindle until the tool flange reaches the surface of the spindle nose.

Advantages
- 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

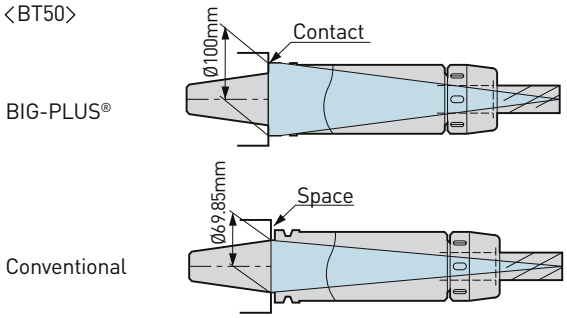
The BIG-PLUS® Spindle System is based on the most current available standards in JIS B6339 and DIN 69871.

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

	Conventional	BIG-PLUS®
BT50	Ø 69.85	Ø 100
BT40	Ø 44.45	Ø 63
BT30	Ø 31.75	Ø 46

Increased contact diameter (example of BT50)

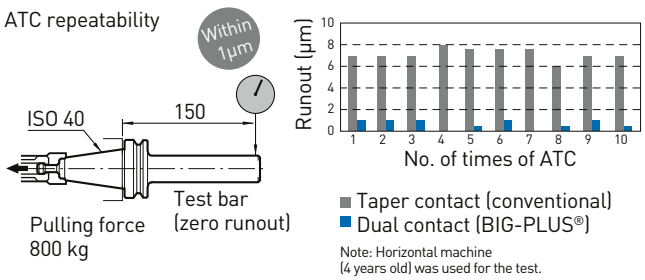
<BT50>



Improvement of ATC repeatability

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

ATC repeatability



Note: Horizontal machine (4 years old) was used for the test.

Perfect interchangeability

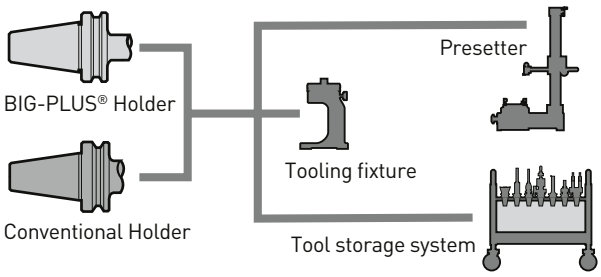
BIG-PLUS® tool holders can be used on existing standard machine spindles. Existing standard tool holders can also be used on BIG-PLUS® spindles. In this case, simultaneous contact cannot be attained.

BIG-PLUS® Spindle + BIG-PLUS® Holder

Conventional Spindle + BIG-PLUS® Holder

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

Existing accessories utilized

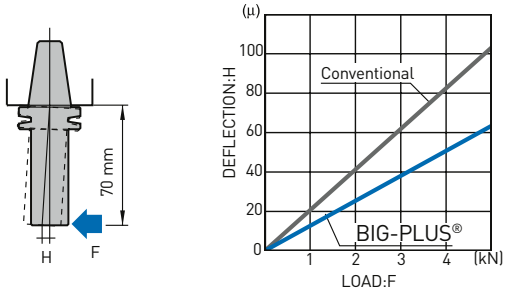


Minimized deflection for maximum machining, accuracy and superior finish

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

Comparison of deflection

BT40



Deflection of machine spindle is included. Vertical machine was used for the test.

Face milling application

BIG-PLUS® Standard

Machine tool:	#40 (horizontal machining center)
Cutter:	Face milling Ø 125 (6 cutting edges)
Work material:	A2017 Duralumin
Cutting depth:	2.4 mm

Caution: The Original Simultaneous Taper and Flange fit Spindle System for Steep Taper

More than 85% of not original dual contact BIG-PLUS® are not in tollerance

There are many manufacturers who claim to have dual contact tooling system:
But only a few have an official license of BIG-PLUS®. Without a license, these manufacturers haven't the master gauges nor the measuring devices or the tolerances for defining the critical dimension of the distance between the taper gauge line and the tool flange.
However, according to our inspection*, 85% of the tested tool holders are out of the official BIG-PLUS® tolerance. Only original BIG-PLUS® tool holders enable the benefits and strengths of a BIG-PLUS® spindle system. BIG DAISHOWA controls 100% of its BIG-PLUS® tool holders and therefore guarantees that all products are in the tight BIG-PLUS® tolerance.

BIG-PLUS® SPINDLE SYSTEM DUAL CONTACT

BDV | BBT | BCV

BIG-PLUS® is the trademark guarantee to maximize your machine capability.

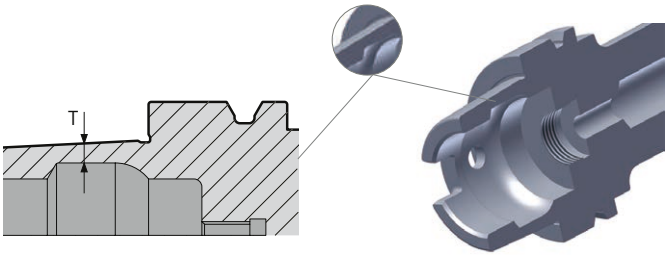
* Inspection results or samples of non-licensed dual contact tooling measured according to the BIG-PLUS® standard.

HSK Tooling Systems

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

Premium material selection

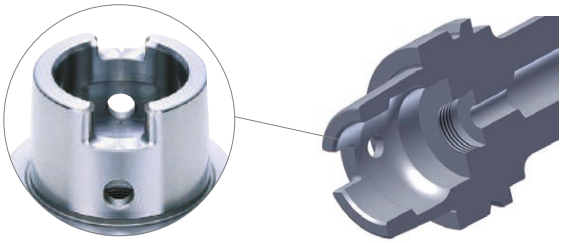
Since HSK is a hollow taper shank, the material has a critical role for optimum performance. BIG DAISHOWA uses carefully selected high grade alloy steels. Particularly, BIG DAISHOWA uses premium materials for HSK 40 and smaller where the cross section of shank taper is very thin.



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 DAISHOWA provides finishing of this feature after heat treatment.



Great variety of HSK

Following HSK types are standardized to offer the best possible solution. Other types are also available upon request.

HSK-A32/A40/A50/A63/A100/A125

HSK-E25/E32/E40/E50

HSK-F63/F80M

HSK turning tools

HSK-T63 / T100 (ISO 12164-3)

Unique modular type of turning system offer various solution for turning applications.

BIG CAPTO

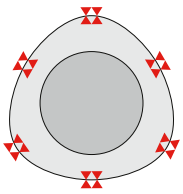
Polygonal tapered dual contact tooling system adopted by ISO standards. CAPTO is a trademark licensed by Sandvik Coromant.

Polygonal tapered dual contact tooling system

Sandvik Coromant AG developed, in 1989, a triangular polygon shaped 1/20 taper dual contact system.
BIG DAISHOWA launched licensed production in 2000.
Polygon taper maintains close contact and eliminates radial clearance, making it an ideal interface for turning.
ISO standardized in November 2008.

Outstanding cutting edge height repeatability

The polygon taper without clearance achieves high repeatability of cutting edge height, as well as secure function as a drive.



Complete Fit

Abundant rotating tool series

Collet Chuck, Milling Chuck, Boring Tool, Tapper, Sensor, Endmill Cutter, Arbor...
A wide range of tool holders are available.

Turning tool series ideal for millturn machines

The abundant cartridge range and revolutionary modular systems improve turning efficiency on millturn machines.

45°

Tilt Type
SType

S Type Cartridge

90°

Right Angle Type
F Type Pat.

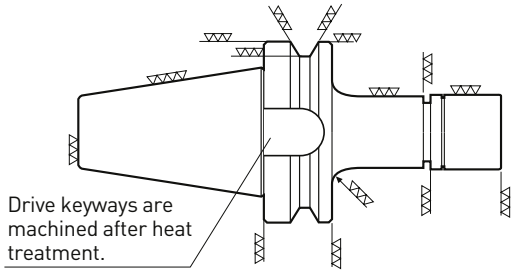
F Type Cartridge

BIG CAPTO's C3 and C4 series for Turning is now available

NEW

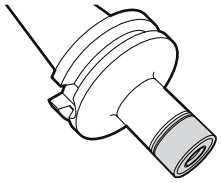
MEGA Chuck Series

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.



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.

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.



Perfect quality control

All tools are marked with serial no. as a proof of a high quality and good traceability. 100% tools are inspected its quality to guarantee high performance.

Tool identification service available

As an experienced partner for tool management solutions, BIG DAISHOWA is ready to provide its tooling with various solutions for tool identification such as data matrix codes or ID sensors.

4 chuck types for different high speed machining requirements

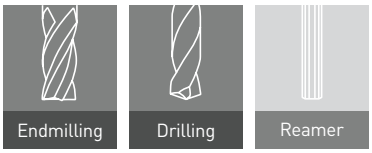
MEGA Micro Chuck
For micro drills and end mills
Clamping range:
Ø 0.45 - 8.05 mm

MEGA New Baby Chuck
For carbide drills,
reamers and end mills
Clamping range:
Ø 0.25 - 25 mm

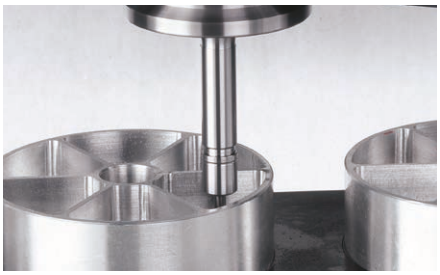
MEGA E Chuck
For end mills and reamers
Clamping range:
Ø 3 - 12 mm

MEGA Double Power Chuck
For end mills
Clamping range:
Ø 16 - 42 mm

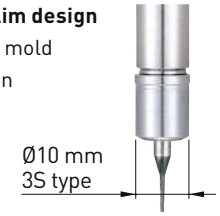
MEGA Micro Chuck



- max. 60 000 min^{-1}
- Clamping range: Ø 0.45 - 8.05
- 0.1 mm increments for higher precision



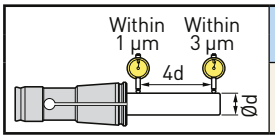
Nut diameter 10, 12, 14 & 18mm, extremely slim design
Slim design avoids interference. Ideal for small mold making combining high speed and high precision capability.



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

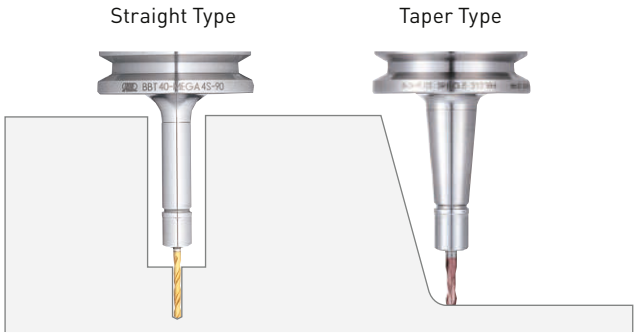
High precision Micro Collet

Collet concentricity



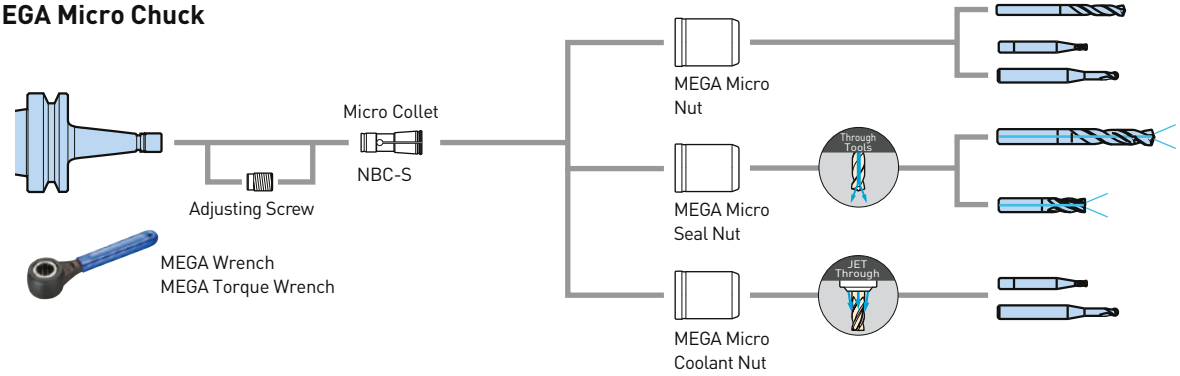
Collet class	Max. runout	
	At nose	4xD
AA	Within 1 µm	Within 3 µm

Three versions are available
Straight Type: where access is restricted
Taper Type: for increased rigidity
Cylindrical Shank Type: for increased versatility

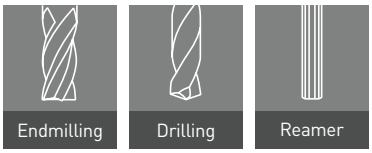


Cylindrical Shank Type
Flexible tool layout, for tighter and deeper area

MEGA Micro Chuck

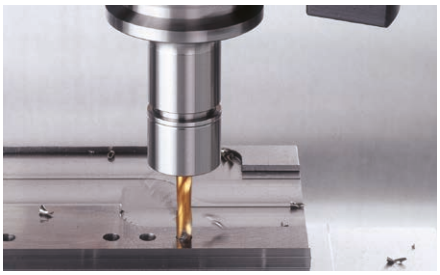


MEGA New Baby Chuck



High speed design, offered in six different size collet series, utilizes ultra precision New Baby Collets which guarantee a runout at the collet nose of less than 1 micron.

- max. 50 000 min^{-1}
- Clamping range: Ø 0.25 - 25.4

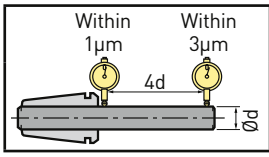


High precision collet, close to submicron

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

High precision NBC Collet

Collet concentricity

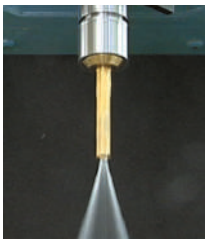


Collet class	Max. runout	
	At nose	4xD
AA	Within 1 µm	Within 3 µm

2 way coolant supply

Sealed collet nut MEGA Perfect Seal

- Standard NBC Collet is used
- High dust resistance
- Max. coolant pressure 7 MPa



Through Tools
Tools with holes

Jet Through
Tools without holes

Various collet and nut selection

Various type of collet and nut can bring the best solution for your demand.

NBC Standard
For general

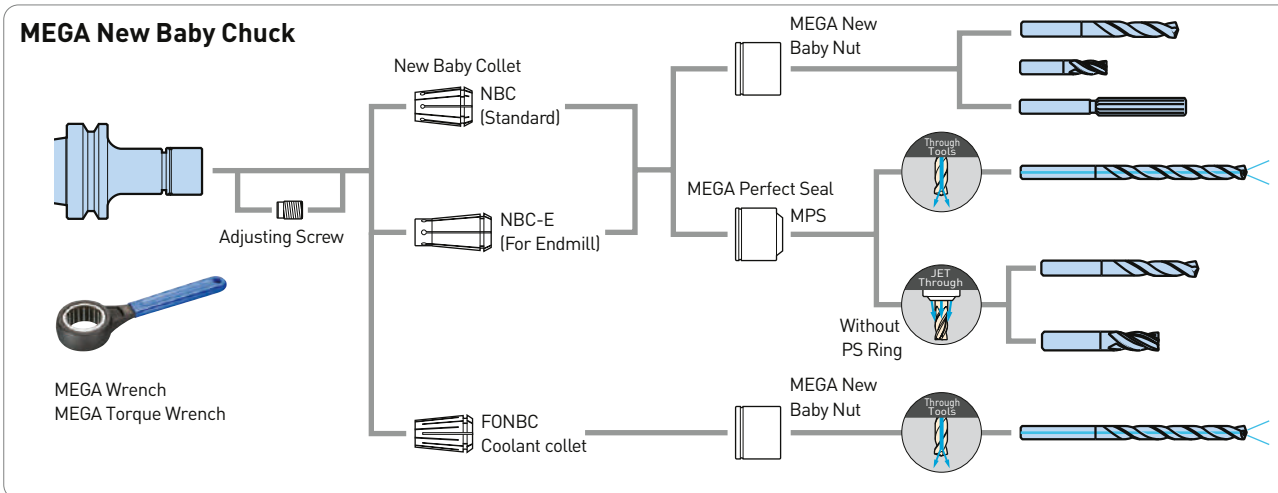
NBC-E collet
For end mill

FONBC collet
For coolant-through tools

MGN nut
For high speed

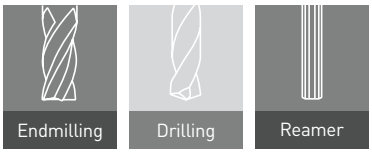
MPS nut
For efficient coolant supply

MEGA New Baby Chuck

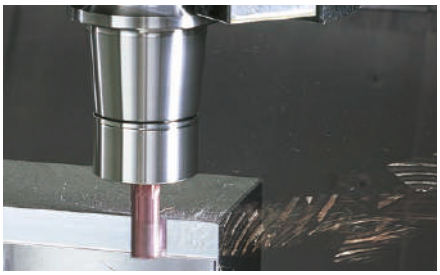


MEGA E Chuck

Collet chuck designed exclusively for endmilling up to Ø 12 mm with high concentricity and rigidity.



- max. 45 000 min^{-1}
- Clamping range: Ø 3 - 12

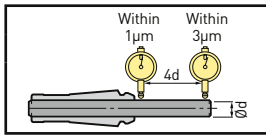


High concentricity

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

High precision MEGA E Collet

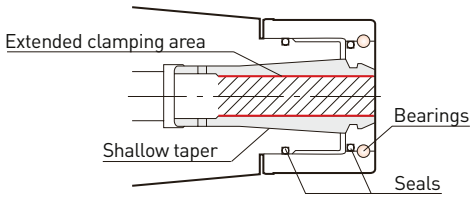
Collet concentricity



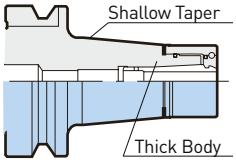
Collet class	Max. runout	
	At nose	4xD
AA	Within 1 µm	Within 3 µm

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.



Substantial and tapered body design



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

Slit-through coolant

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.

- Max. coolant pressure 7 MPa

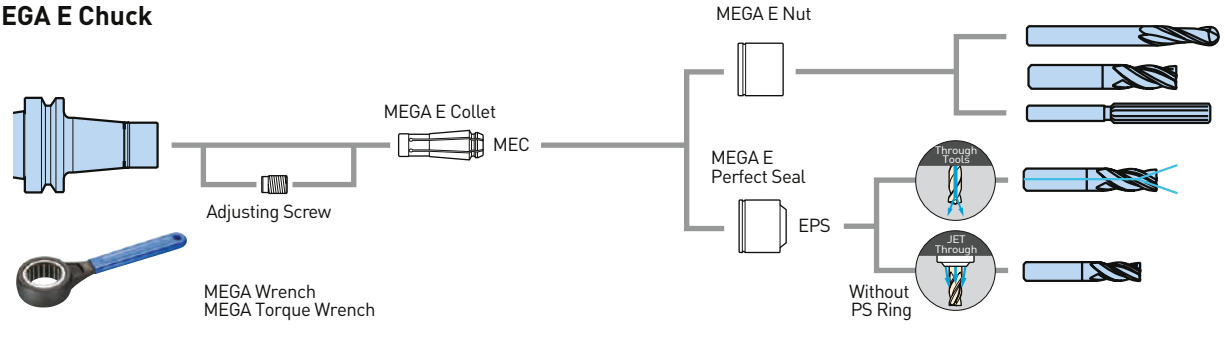
For coolant-through tools

Sealed collet nut to supply coolant reliably through cutting tool.

MEGA E Perfect Seal

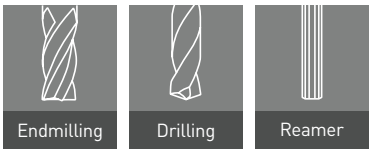
Ideal for burnishing drills and reamers due to extended gripping length.

MEGA E Chuck

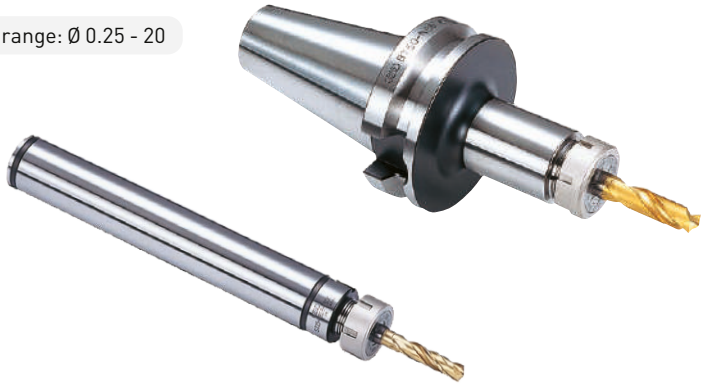


New Baby Chuck

New Baby Chuck is capable of achieving high spindle speeds as required for drilling and end milling with smaller diameter cutting tools.



- Clamping range: Ø 0.25 - 20



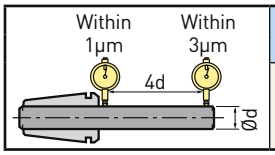
Ideal combination of taper angle and collet projection length

New Baby Chuck satisfies all requirements for accuracy, clamping force and clamping range, by utilizing the ideal 12° taper angle.

High concentricity

Each collet is inspected and double checked to meet maximum runout tolerance permitted.

Collet concentricity



Collet class	Max. runout	
	At nose	4xD
AA	Within 1 µm	Within 3 µm

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

- Standard NBC Collet is used.
- High dust resistance
- Max. coolant pressure 70 bar

Through Tools
Tools with holes

Jet Through
Tools without holes

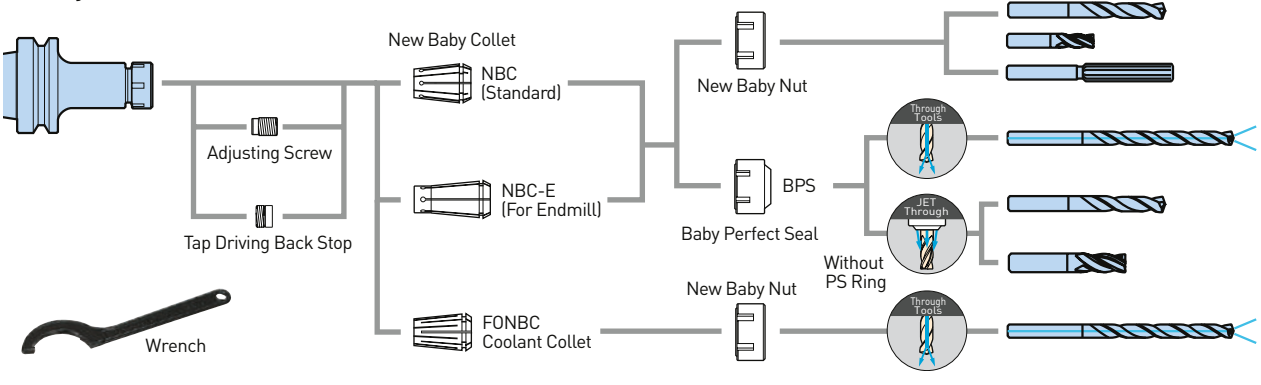
Runout adjustable RA holder

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

Tool edge runout: 2µm or less

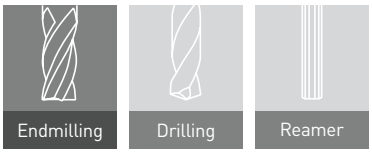
- Uniform hole diameter
- Improved surface roughness
- Increased tool life

New Baby Chuck

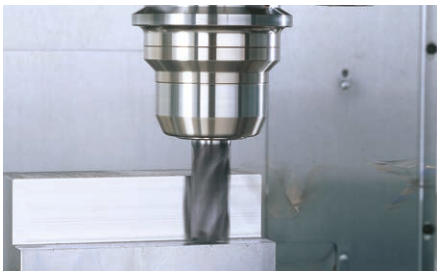


MEGA Double Power Chuck

Flange contacting nut and simultaneous taper & flange contact assure highest rigidity.



- max. 30 000 min^{-1}
- Clamping range: Ø 16 - 42
- Ideal for solid machines



Stabilizing contact between flange and 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.

Released

Tightened

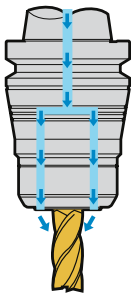
Secure coolant supply

Two types are designed for the most effective coolant supply.

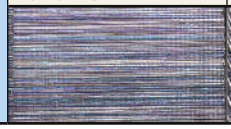
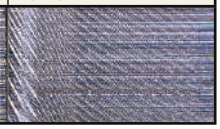
- Improved surface finish
- Extended tool life
- Smoother chip evacuation
- Cooling & lubrication of tools

Type D
through tools

Type DS
jet through



Cutting conditions

Coated carbide endmill **Ø 32, 4-flutes** **Workpiece: SS400 (JIS)** **V282 m/min** **S 2 800 min^{-1}** **F1 120 mm/min**	BBT50-MEGA32D-105 Radial d = 14 mm Power 15.2KW	Other manufacturer (L = 90) Radial d = 9.5 mm Power 9.2 KW
		

Various type of straight collets are available.

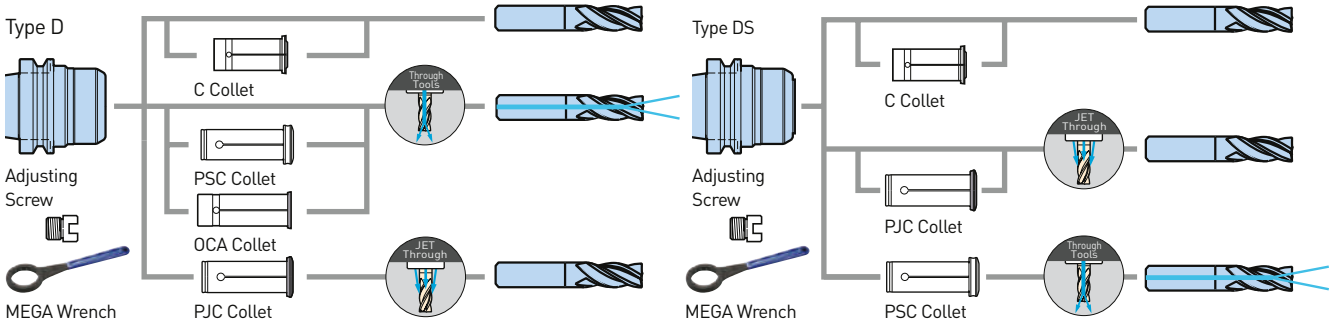
For jet through
PJC collet

For through tools
PSC collet

For through tools
OCA collet

For anti pullout collet
CPG Collet

MEGA Double Power Chuck



MEGA Perfect Grip

Features 100% security against pulling out the cutting tool under any torque load.

- Accepts industry standard Weldon flat milling cutters
- No special grinding of milling cutter required
- Flood jet-through coolant
- Available with BBT40/50/DV50 and HSK-A63/100/125

Simple, easy handling with secure clamping

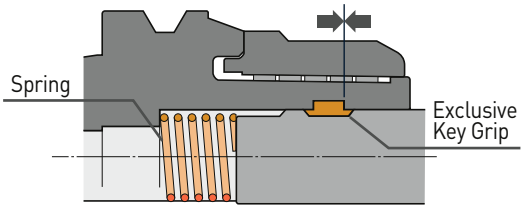
1. Place the exclusive key grip into the Weldon flat of the end mill shank.
2. Insert the end mill with the key grip in alignment with one of the three key grip grooves inside the milling chuck.
3. Rotate the end mill approximately 20° clockwise until the key grip stops securely against the stopper pin.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

Flood jet-through coolant

The key grip grooves provide channels for high volume coolant to the cutter. Effective end milling of HRSA's requires a high volume of coolant to the cutting edge to dissipate heat and aid in the removal of chips.

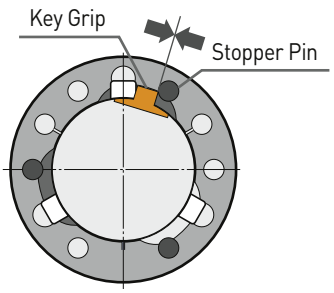
Anti-Pullout mechanism

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



Non-Slip mechanism

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

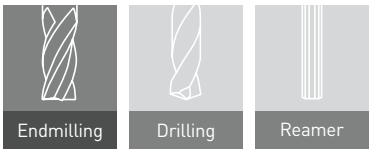


Anti Pullout collet, CPG collet

The same anti pullout function is available for straight collet. CPG collet can be used for MEGA Double Power Chuck and New Hi-Power Milling Chuck.

New Hi-Power Milling Chuck

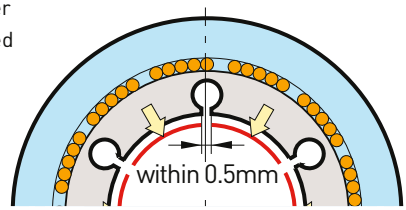
New Hi-Power Milling Chuck combines the high accuracy with high torque capability and rigidity.



- Clamping range: Ø 16 - 42

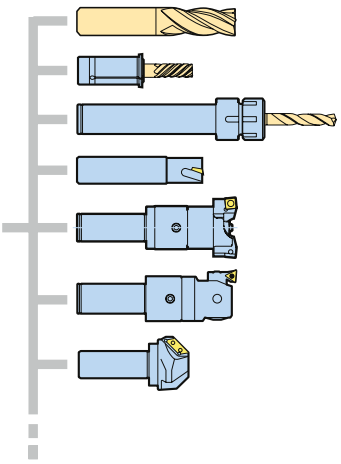
Secure and reliable slit design

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.



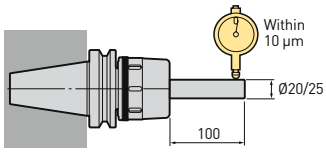
Basic tool for various applications

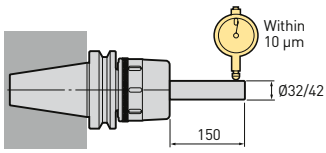
New Hi-Power Milling Chuck is a good basic tool. Not only for milling tool, but also for boring tools, chamfering tools and various applications.



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 10µm at 4D).





HMC12J type

Clamping diameter: Ø 12. A nut shape slimmer than collet chucks.

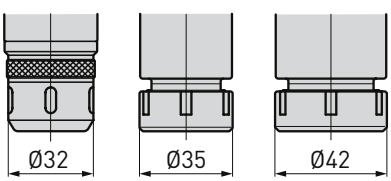
New Baby Collet Chuck

Runout adjustable RA holder

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

Tool edge runout: 2µm or less

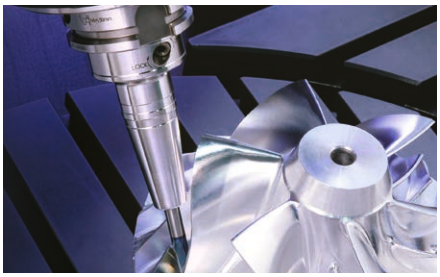
- Consistent hole diameter
- Improved surface roughness
- Increased tool life



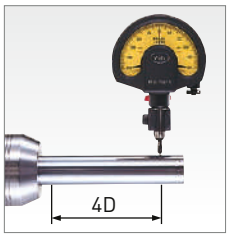
Peripheral coolant supply to cutting edge

Hydraulic Chuck

Ultra precision hydraulic clamping chuck holder with various additional features.

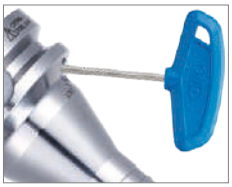


Runout accuracy less than 3 µm



High precision runout accuracy less than 3µm at 4d improves the workpiece surface finish and extends tool life.

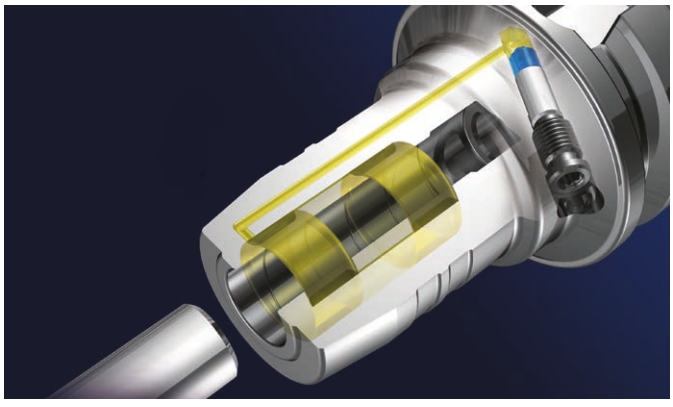
Easy clamping with 1 wrench

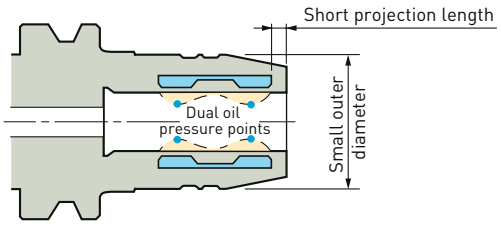


The cutting tool can be clamped or unclamped easily and securely with just 1 wrench. Extremely good repeatability and runout accuracy are guaranteed.

Integral sleeve construction

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



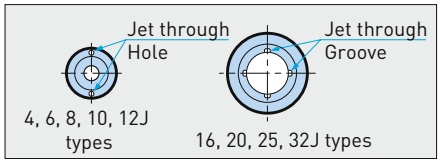


Complete sealing mechanism prevents oil-leaks

Specially selected material and shape of the hydraulic plunger seal prevents leakage of oil and decrease in gripping force. The complete seal design avoids minute cutting particles of graphite or ceramics from entering into the toolholder. This enables usage on tool grinding machines.

Jet through

Coolant hole at nose supplies coolant.



Super Slim Type

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

Tip diameter
Min. Ø 14 mm
Max. 60.000min^{-1}
(HSK-E25)

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

Ultra-compact and high precision.
Hydraulic chuck suitable for small machining centers.

Prebalancing
0.5g·mm or less
(HSK-E25)

Super Slim UP series

NEW

Amazing runout accuracy within 1µm at 4D.
The ultimate precision hydraulic chuck.
HSK-E25/E32/E40 Type

1µm ULTRA PRECISION

UP

Jet Through Type

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

Tip diameter
Min. Ø 20 mm
Max. 35.000min^{-1}

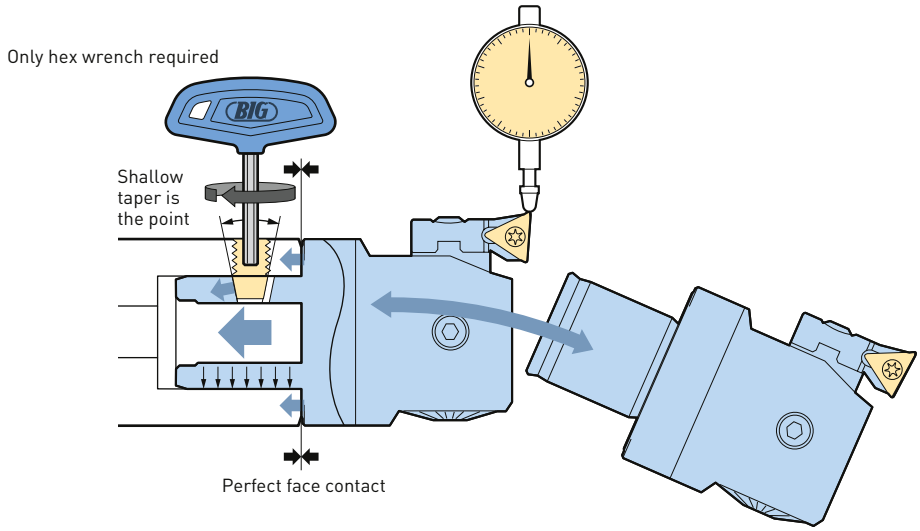
HDC4J to 12J models allow jet through to be switched to center through by assembling the accessory plug.

KAISER Boring Tools

KAISER Boring is the most reliable and accurate modular boring head in the world. By using the unique modular connection, from Ø 2 mm to over Ø 200 mm can be covered by a combination of 7 main bodies and various Rough and Fine Boring head.

Simple but reliable CK Connection

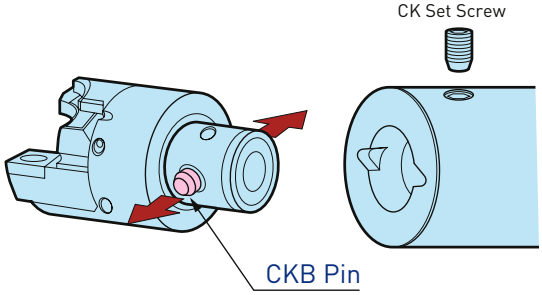
The CK Connection is a simple method for securely and powerfully clamping flange faces with a single wrench.
Moreover, even if the same boring head is repeatedly attached and removed, the cutting edge position does not vary by more than 2 microns. This accurate clamping allows boring diameter setup to be done with a boring head only, increasing the machine utilization and drastically reducing labor.



The cutting edge position does not vary by more than 2 microns, no matter how often the same head is inserted.

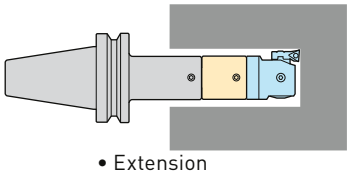
Safe structure at high torque

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

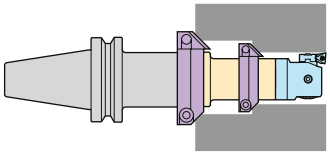


Rapid adaptation to special tools

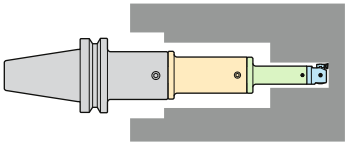
This is a freely combinable modular system that can be used to assemble special tools with standard items, allowing flexible compatibility.



• Extension



• Chamfering



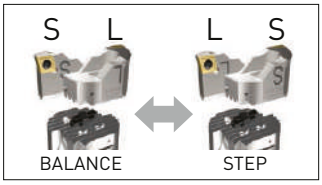
• Reduction

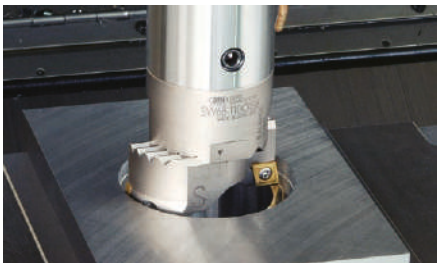
KAISER Boring Heads Overview

KAISER Boring is the most reliable and accurate modular boring head in the world. By using the unique modular connection, from Ø 2 mm to over Ø 200 mm can be covered by a combination of 7-main bodies and various Rough and Fine Boring head.

Roughing

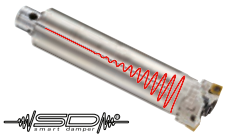
Adapted for both balance and step cutting by simply changing positions of standard Cartridges. (for blind holes)





High rigidity SW boring head
- Ø 20 - 203 mm
- Serrated for high connection rigidity

MW boring head
Boring tool for small-diameter 2-flute roughing.
- Ø 16 - 21 mm
- Versatile Ø 20 shank
- Spiral groove for improved chip evacuation



Smart Damper
Roughing Head with Built-In Damper.
SW Boring Head.
- Smart Damper with SW head
- Closely adjacent vibrating point and damper achieve a high damping effect.

Finishing with Insert Holder Type

Emphasis on chip evacuation properties
Replacing the insert holder makes it possible to secure sufficient clearance for chips.

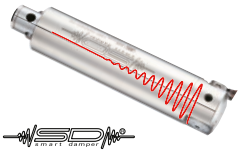
Back boring available as standard.
Supports back boring by simply reversing the insert holder.

EWN boring head
Prebalanced design/Multifunction head
- Ø 20 - 203 mm
- 0.01mm/Ø scale plus 2 micron vernier
- Prebalanced design supports high-speed boring
- Abundance of insert holders

EWB boring head
High speed
- Ø 32 - 105/Ø 100 - 203 mm (Aluminum)
- 0.01mm/Ø scale plus 1 micron vernier
- Built-in automatic precision balancing unit
- Vc Max. 2 000m/min.

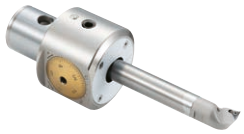
EWE boring head
Digital boring head with wireless communication
- Ø 41 - 203 mm
- Digital display allows the adjustment amount to be read at a glance
- Fully waterproof and dustproof structure (IP69K equivalent)

Display Resolution 1µm/Ø



EWN Smart Damper
Built-in damper
- Integrated EWN Boring Head and Smart Damper.
- Closely adjacent vibrating point and damper achieve a high damping effect.

Fine Boring Heads with Centric Cutting Edge



EWN boring head
High precision
- Ø 1 - 54 mm
- 0.01mm/Ø scale plus 2 micron vernier
- Combine with carbide shank for stable deep-hole boring

EWN 04-7/04-15
World's smallest precision boring head
- Ø 1 - 7/Ø 1 - 15 mm (EWN 04-7)
- O.D. Ø18.5 ultra-compact design
- Max. 30 000min^{-1}

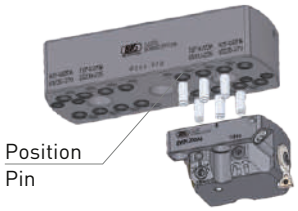
Display Resolution 1µm/Ø

EWE boring head
Digital boring head with wireless communication
- Ø 1 - 54 mm
- Digital display means the adjustment amount can be read at a glance
- Waterproof and dustproof structure (IP69K equivalent)

EWB boring head
High speed
- Ø 1 - 50 mm
- 5µm/Ø precision diameter adjustment
- Built-in manual precision balancing function
- Max. 16 000min^{-1}

For Large Diameter

New safe mechanism



Using the position pin fastens the head or clamp base to the slide. Prevents the head from flying off due to high-speed rotation caused by programming errors.

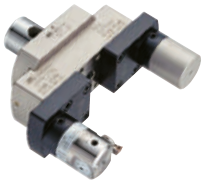
Aluminum high speed Type
- Lighter weight for greater speed.
- Uses hardened aluminum components, tough yet lightweight. (Slide/Clamp Base)
- Vc Max. 2 000m/min.

Center through supported
- Reliable coolant supply to finishing and roughing cutting tool peripheries.

Large Diameter Rough Boring Tools
For Roughing
- Ø 200 - 830 mm

Large Diameter Fine Boring Tools
For Finishing
- Ø 200 - 830 mm
- Precision head with outstanding operability.
- Back boring available.

OD Turning Holders



- Ø 0.5 - 686 mm
- Realizes finishing accuracy not possible with contouring.

Accessories

Various shanks/accessories. Combine with a CK Shank for a wide range of applications not limited to boring.

CK Extension

CK Shank

Smart Damper
Built-In Damper
- Unique dynamic damper eliminates chatter.

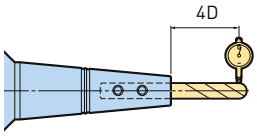
MOLD Chuck

Interference-free tool layout is available without special equipment with just one wrench.
A side lock holder in a class above the rest with superior balance and BIG-PLUS® effect.

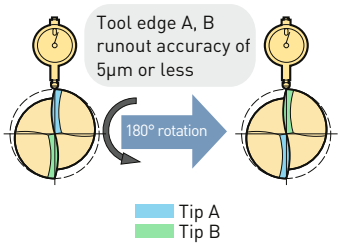
BIG-PLUS Dual-Contact

- Max. 15 000 min^{-1}

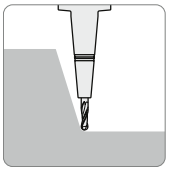
Runout accuracy within 5µm
2-flute ball endmills achieve a runout accuracy within 5µm. Both easy handling of side lock holder and high accuracy are realized.

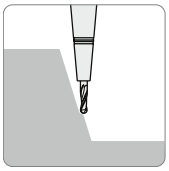


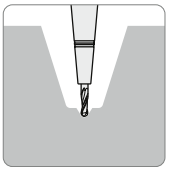
* Ensure the tip of the ball endmill is in 90° phase to the clamping bolt when clamping. (Endmill shank tolerance; h6)



Slim and tapered design minimizes interference
Interference is minimized with mold making. Also useful in machining draft angles of molds.

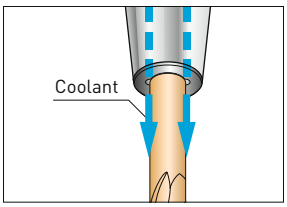

Close to wall


Wall machining


Groove milling

Balanced design realizes high speeds
With the entire outer diameter precision ground, stable machining is realized at high speeds.

Secure coolant supply to tool periphery



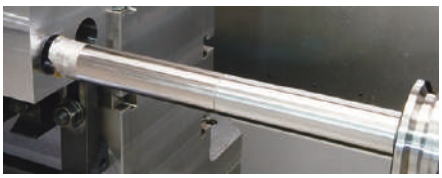
Center through coolant or oil mist can be ejected through the two coolant slits, allowing for a secure supply of coolant to the cutting edges. This helps in machining hard materials.

Smart Damper Series

Unique dynamic damping system eliminates vibration for higher productivity.

Anti-Vibration

- Unique damping system for milling and boring
- Center through coolant supply



EWN Fine Boring Type
Boring head with a built-in damper. The EWN Boring Head functions are maintained, featuring integrated damper.

SW Rough Boring Type
Boring head with a built-in damper. Damper located closer to the cutting edge provides greater damping effect.

CK Shank Integral Type
A damper is built into the CK Shank. L/D = 6x

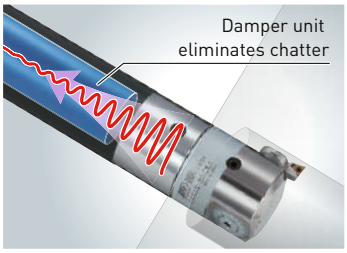
BIG-PLUS® SPINDLE SYSTEM DUAL CONTACT

CK Extension Type
Just combine it with your standard KAISER Boring Head/ CK Shank to achieve damping countermeasures.

Highly reliable scale plate with vernier scale enabling 1-micron adjustment.

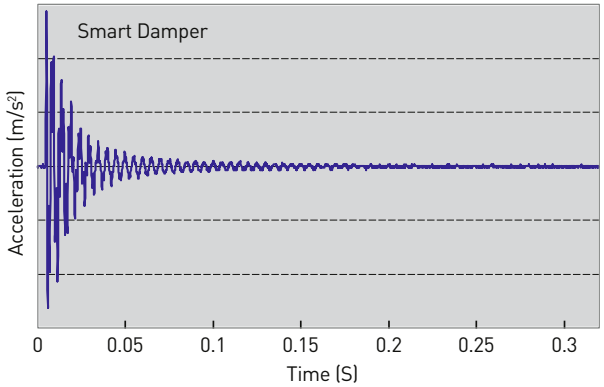
Damping mechanism
Smart Damper incorporates unique damping mechanism functioning both counter and friction dampers. Patent-pending counter weight maximizes effect of the friction damper. Vibration is absorbed effectively and higher machining accuracy is achieved.

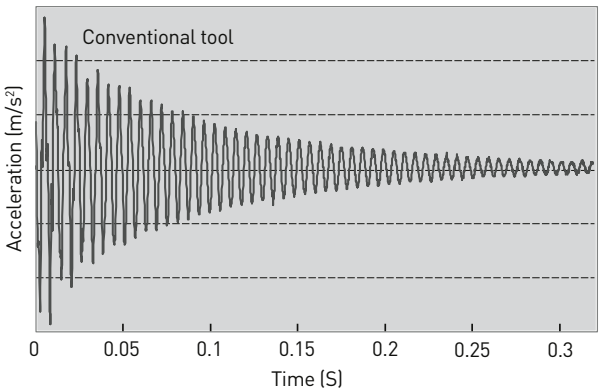
Chatter suppressing mechanism



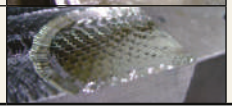
An incorporated unique damper that functions as both a counter damper and friction damper. Patent-pending counter weight maximizes effect of the friction damper. Chatter is absorbed effectively and higher machining accuracy is achieved.

Comparison of oscillatory waveforms





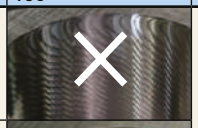
Face milling of C55 with high feed cutter

Holder	Radial depth of cut (mm)				Condition
	5	10	20	30	
Standard Holder	○	X	X		V=90 m/min Fz=1.0/tooth Ap=2.0 mm Overhang= 347 mm
Smart Damper	○	○	○		

Smart Damper achieves 6x deeper depth of cut.

6 times greater productivity. Superior surface finish and better tool life due to increased cutting speed.

Super finish surface with tough condition
Fine boring of ductile cast iron (FCD500) with horizontal MC
BIG-PLUS® BBT50

Holder	Cutting speed (m/min)				Condition
	25	50	100	150	
Holder without damper	○	X	X		Dia=Ø68 mm Depth=408 mm (L/D=6) Insert radius= R0.4 Feed=0.2 mm/ rev Depth of cut= 0.3 mm/Ø
Built-in Damper Smart Damper BBT50-CK-6DP-451	○	○	○		

X = Chattering ○ = Good ◎ = Excellent surface finish

Screw On Series

Dynamic damper secures damping effect even screw-on tool assembly. Tapered body design maximizes rigidity while minimizing interference.

Smart Damper Face Mill Arbor

Replaceable damper head enables use on various basic holders.

Caution
If attaching both a Basic Holder and damper head, note that the damper head cannot be removed once it has been used for work.

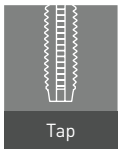
Smart Damper Turning

Newly developed for boring applications on turning machines. It performs perfectly in both roughing and finishing. Several cartridges are available for ISO insert, depending on the application.

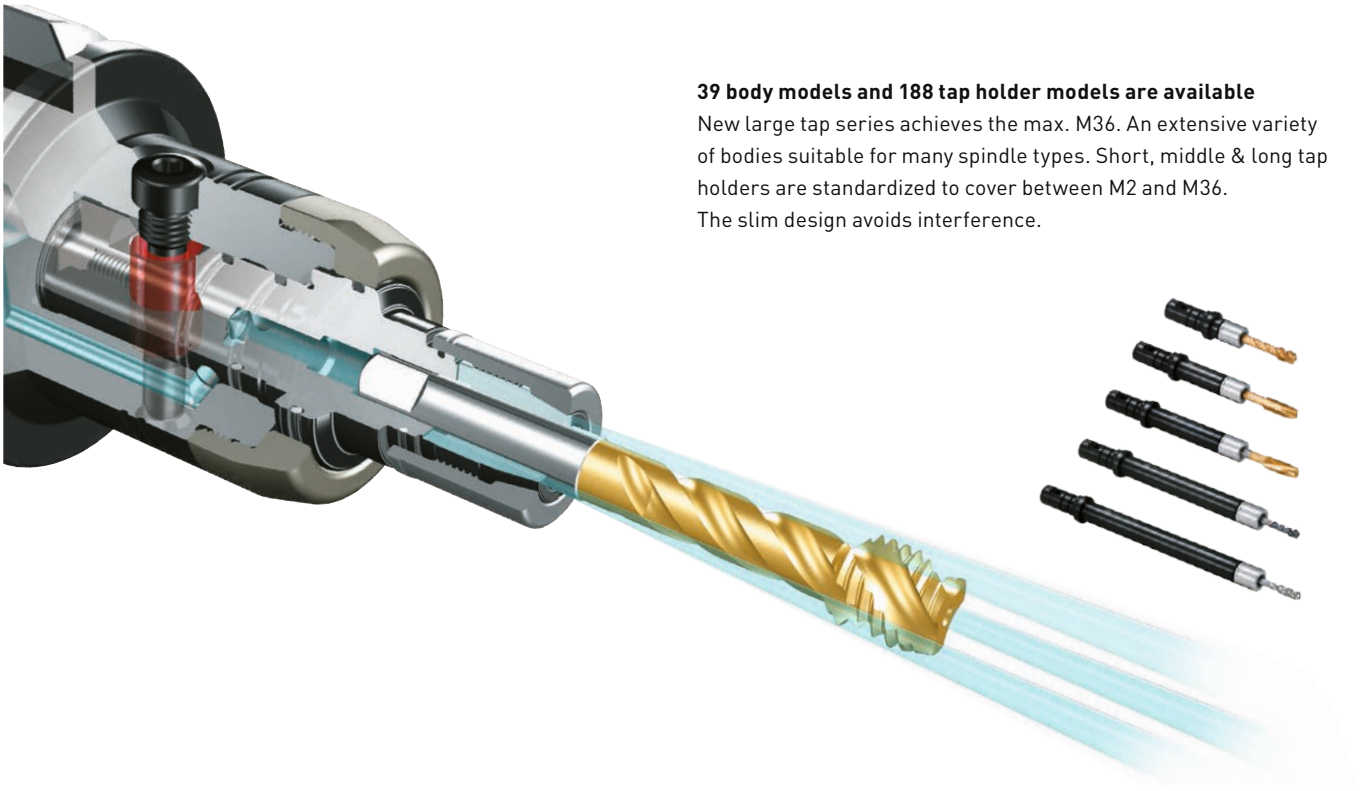
Cartridges can be exchanged according to the application (ISO insert).

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%.



- Tapping range: M1 - M36



39 body models and 188 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.

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.

Secure drive system
Body and tap holder are fixed with a drive key in the rotation direction as well as the square of the tap.

Coolant through center capability for all models
Coolant is supplied both through the tool and to the tool periphery simultaneously.

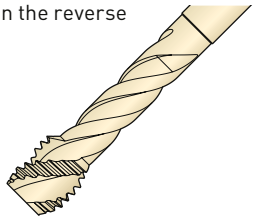
MEGA Synchro Tapping Holder compensates for synchronization errors with any type of tap

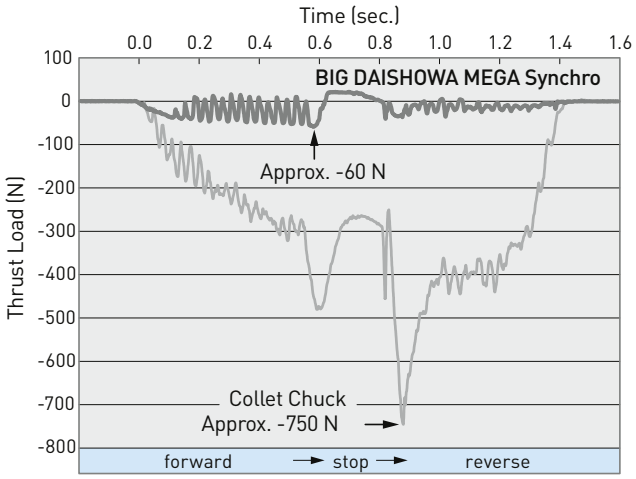
Minimized thrust load to both the tap and workpiece improves thread quality and tap life.

Load to tap – spiral tap

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

- M6 P1
- V: 20 m/min (1 060 min^{-1})
- Measured by Kistler dynamometer





Result

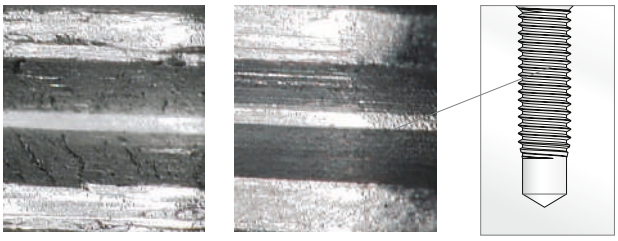
MEGA Synchro reduces load to approx. 60N. This is less than 1/10th of the load compared to a collet chuck. Approx. 750N of reversal load is applied to a tap held with a collet chuck.

Comparison of surface finish

Tapping of exotic materials tends to cause a compressed burr on the thread surface. BIG DAISHOWA MEGA Synchro compensates for synchronization errors and minimizes cutting load.

Spiral tap

M5 P0.8 Material : SNCM420(41CrNiMo2)

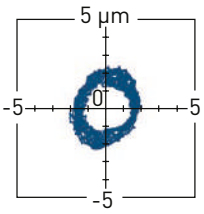


Collet chuck MEGA Synchro

For small tap MGT3 (M1 - M3)

Eliminated synchronization errors and minimized dynamic runout.

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



For large tap MGT36 (M22 - M36)

Smooth tapping for large tapping.

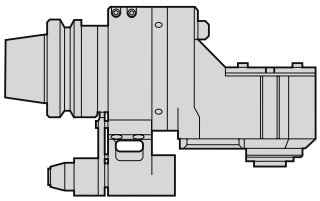
Angle Head

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

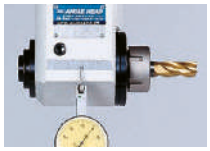
- Max. 6 000 min^{-1}
- Coolant-through from the locating pin

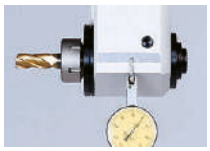
Compact design assures rigidity

Overhang is minimized for added rigidity and strength. As a result, the projection length with cutting tool is shorter, which reduces the overall load on the Angle Head and thus improves the unit's cutting capability. The minimized overhang helps to eliminate interference with the ATC and adjacent storage pockets in the tool magazine. High Rigidity S-type, which has a steel housing and a stronger locating pin assembly, is also available.

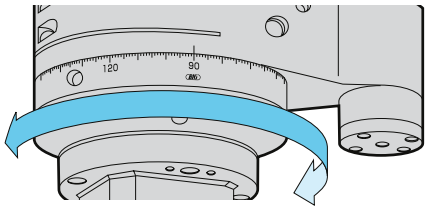


Cutter head adjustable 360°





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



Unique coolant jacket

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

Innovative sealing method

The advanced non-contact sealing method prevents coolant and particle contamination better than any other sealing method.

Superior quality components

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

Various executions of Angle Head

More types are available to offer the best solution for your demand.

AG90 NBS type

AG90 Build-Up type

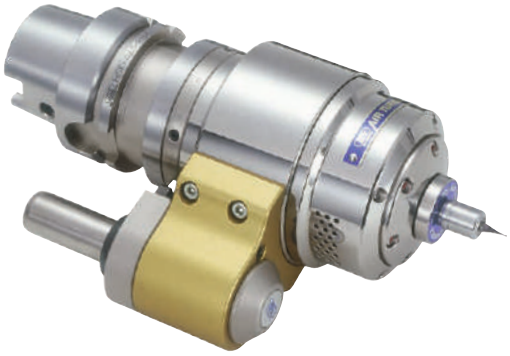
AGU type

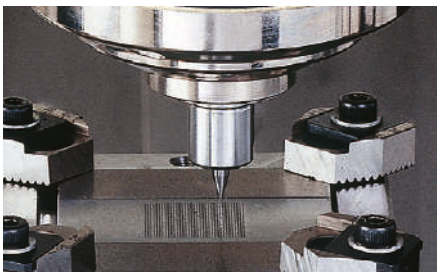
Small bore type

Air Turbine Spindle

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

- Max. 80 000 min^{-1}



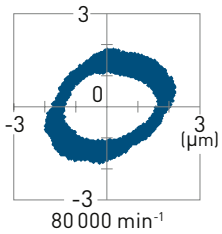


Dynamic runout accuracy

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.

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

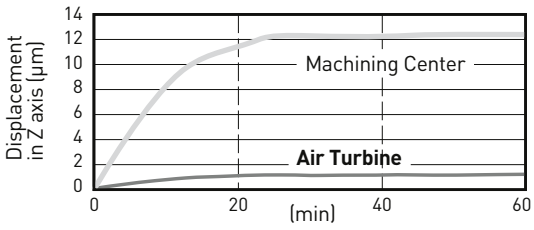
Plotted position of a test bar at the max. spindle speed (see image on the right).



Minimal thermal displacement

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

Axial displacement compared to operating time

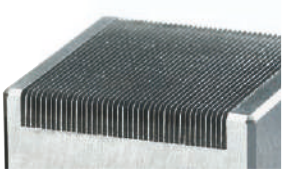


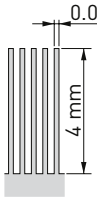
Application examples

RBX7

Aluminum A2017

Outstanding runout accuracy permits perfect thin wall cutting.



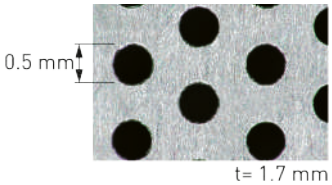


Cutter	Ø 0.5 mm rib-endmill
Spindle Speed	70 000 min^{-1}
Cutting Feed	1 500 mm/min
D.O.C	ap = 0.02 mm

RBX5

Stainless steel SUS303

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



Cutter	Ø 0.5 mm solid drill
Spindle Speed	40 000 min^{-1}
Cutting Feed	20 mm/min
Peck	0.01 mm

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

RBX5 = 50 000 min^{-1}

RBX7 = 80 000 min^{-1}

Application Range		RBX5	RBX7
Drill	Ø < 0.1 mm	△	△
	Ø 0.1 - 0.3 mm	○	○
	Ø 0.3 - 0.5 mm	○	⊙
	Ø 0.5 - 1.0 mm	⊙	○
	Ø 1.0 - 1.5 mm	△	x
End Mill	Ø < 0.5 mm	○	⊙
	Ø 0.1 - 1.0 mm	⊙	⊙
	Ø 1.0 - 1.5 mm	⊙	△
Jig Grinding		⊙	⊙

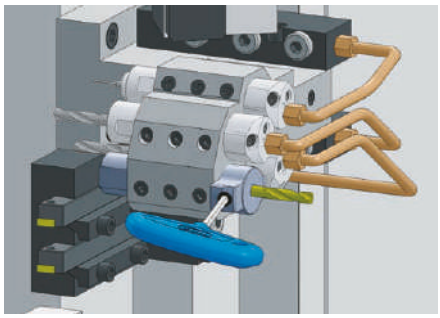
⊙ Optimum ○ Acceptable

△ Dependent upon cutting conditions x Not recommended for use

Hydraulic Chucks for Swiss lathe

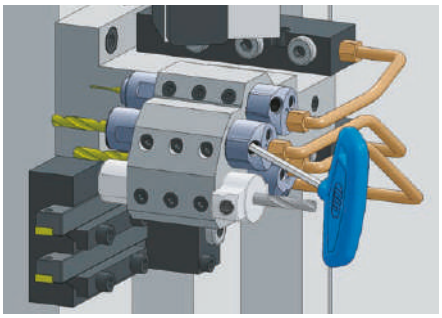
3 types for all tool posts

Standard Type



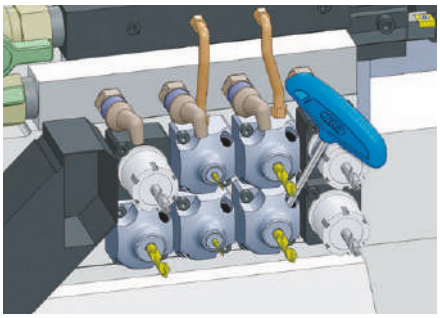
Tightening from the front side of the cutting tool. Adjustable length by cut.

F Type



Tightening from the opposite side of the cutting tool.

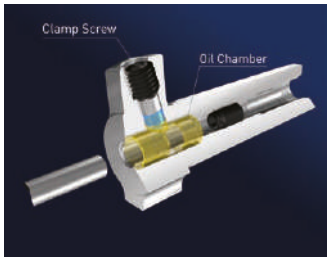
R Type



Easy handling of cutting tools by avoiding adjacent tools.

Structure with improved accuracy and rigidity

Based on the hydro chuck technology accumulated through milling machines for decades, the lathe type has been developed and designed from scratch. In addition to high accuracy and rigidity, a slim shape avoids interference with adjacent tools.

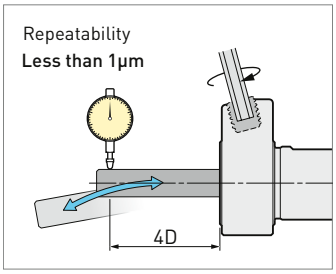


Safe and quick operation

The ability to change cutting tools with a single T-wrench drastically reduces the time required for tool change.
It also reduces the need to work in extremely limited spaces and improves operator safety.

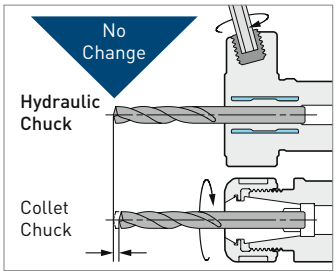
±1μm repeatability

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



No change in tool length

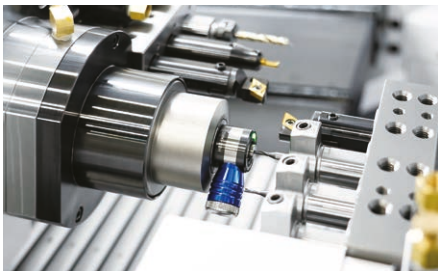
Since the tool projection length does not change after the clamping, it is easy to control the tool projection length in the machine.



Base Master Mini

Magnetable user-friendly compact height detector for Swill lathe machines improve set up time drastically.

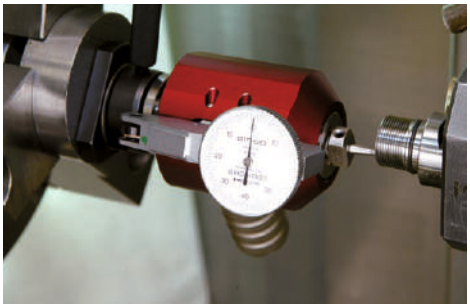
- Small pocket at the bottom to avoid an interference against the boss on the work piece
- Usable for all materials bigger than Ø 12 mm
- Minimum measurable tool Ø 0.1 mm
- It can be used for milling and large lathe machines



Centering Tool for Lathes

Revolutionary centering tool for lathe machines that allows the operator to fix the center very easily and quickly.

- Centering the tool holder while watching the dial gauge is possible, as the dial position is static at front
- Easy setting with fine adjustment mechanism (adjustment amount: 0.01 mm)
- Magnet base allows for flexible mounting positions

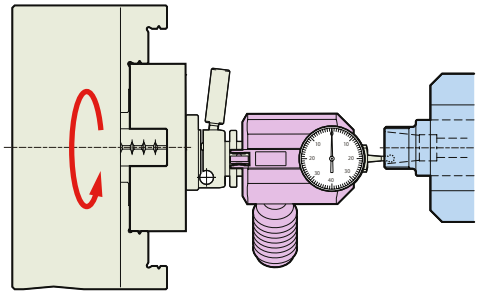


Dial Gauge (0.01 mm)

Magnetic Plate

Various Stylus available

Counter Weight



Tools for lathe machines

MEGA Micro Chuck

MEGA Synchro Tapping Holder Chuck

New Baby Chuck

MEGA ER Grip

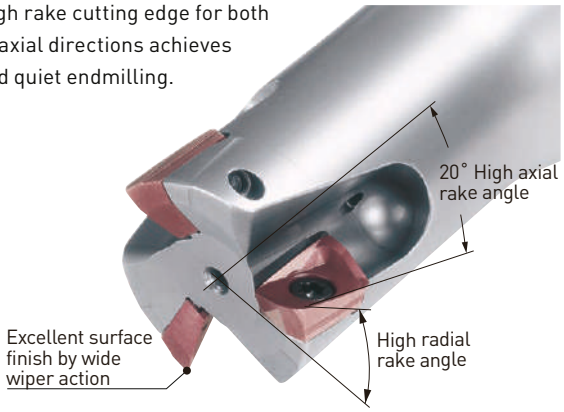
Centering Holder

Fullcut Mill

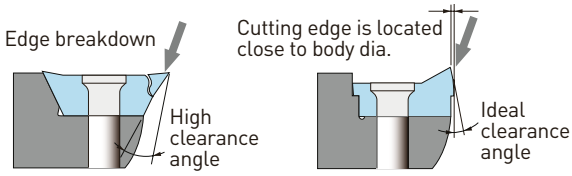
Indexable insert endmills with both excellent sharpness and toughness, achieving the performance of solid endmills.

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.



Strong cutting edge reduces edge chipping

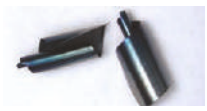


Amazing cutting performance even on #40 taper machine

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:	20 mm
Work material:	C50 (S50C)
Spindle speed:	2 400 min^{-1}
Speed:	V = 150 m/min
Feed:	0.12 mm/tooth



Amazing cutting performance, brought by integral deign and face contact body

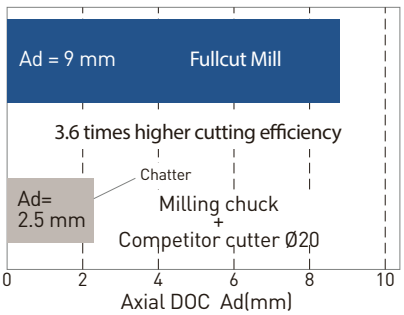
Integral design style with taper shank and flange contact with the machine spindle provides higher precision and rigidity thus achieving cutting conditions only otherwise available on larger machines.

BBT and BDV type

HSK type

Slotting

Excellent surface



Fullcut Mill Type FCR

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

- Cutter: Ø 16 - 33

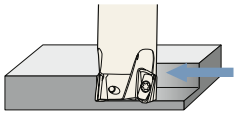
Higher rigidity with integral body with dual contact system.

BBT and BDV Type

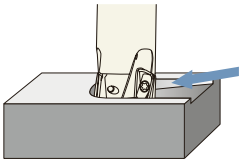
HSK Type

Cylindrical Shank Type

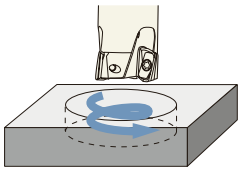
Shoulder Milling



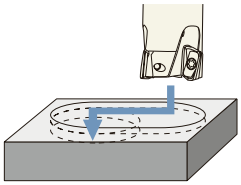
Ramping



Helical Milling

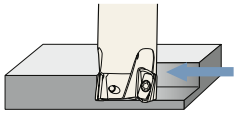


Peck-Drilling



Fullcut Mill Type FCM

Shoulder Milling



- Cutter: Ø 12 - 100

A variety of shanks including simultaneous fit with integral body.

BBT and BDV Type

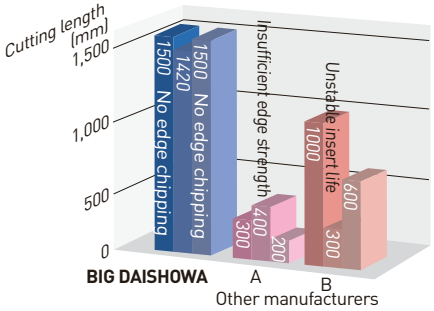
HSK Type

Cylindrical Shank Type

Arbor Type

Tough cutting edge of Fullcut Mill is proven

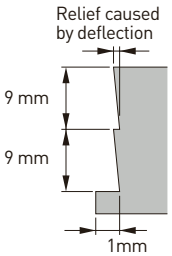
An evaluation of cutting length/life as measured when machining the most arduous workpiece by milling over a continuous series of holes. This is the condition most likely to cause edge chipping.



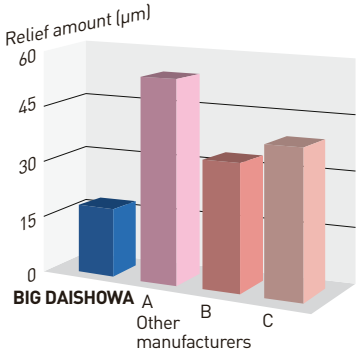
Finishing with indexable endmill - Why not?

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

Work material:	SUS304
Vertical M/C:	No. 40
Cutter dia.:	Ø 25 mm
Feed:	0.12 mm/tooth



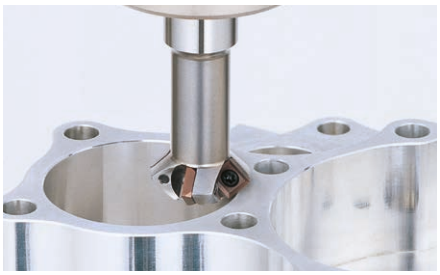
Squareness is influenced by the cutting parameters, work materials, rigidity of machine and workpiece, etc.



C-Cutter Mini

Compact design with 4 inserts and 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 and face milling

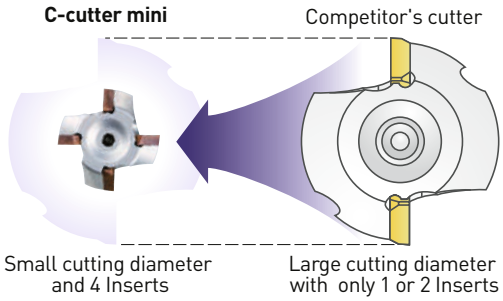


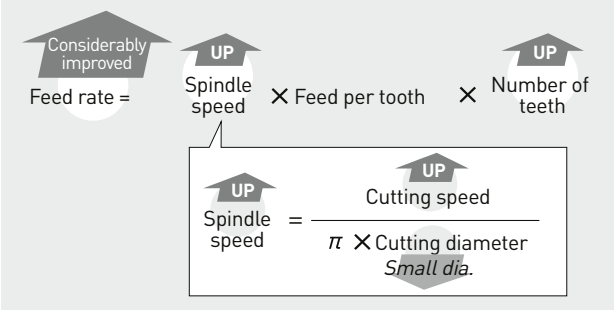
4 Inserts, small diameter and new coating achieve triple effect

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

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

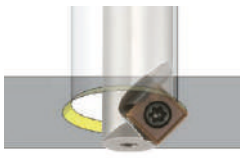
3. Latest coating (ACP200) increases the cutting speed.
Wear resistant multi layer PVD coating increases the cutting speed.





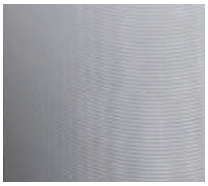
World smallest hex insert
Highly-efficient back chamfering from 6 mm starting hole diameter. 3-corner insert saves cost.

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



Surface Mill

Versatility of the insert
Sharp cutting edge of C-Cutter mini insert make superior surface finish. The same insert can be used with BIG DAISHOWA's original design face mill arbor, Surface Mill.

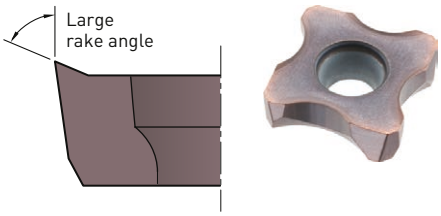


Surface Mill Rz = 1.42
Material = C50
V = 200 m/min
Fz = 0.2 mm/min
Ap = 3
Ad = 75

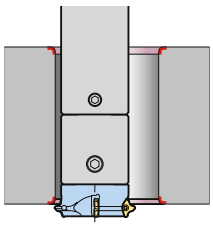
R-Cutter

For multi-functional round chamfering for both front and back chamfering.

Excellent sharpness with new insert shape!
R-CUTTER is the first in the industry to use an insert with a large rake angle that's capable of producing clean surfaces with no vertical streaking.

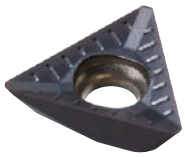


Flexible modular solution
CK extensions allow front/back chamfering of deep holes, as well as grooves or steps at the distance.



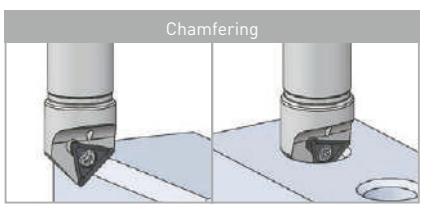
C-Centering Cutter

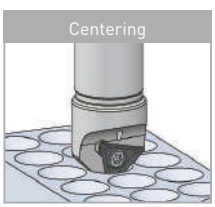
For centering and chamfering with a carbide insert.



Negative insert tip shape dramatically improves the life

Capable of both spot drilling and chamfering





Spot drilling is not available with the 3-insert type.

Effective for traverse chamfering (3-insert type)
3-insert type with maximum chamfering width of C9. Effectively reduces machining time.

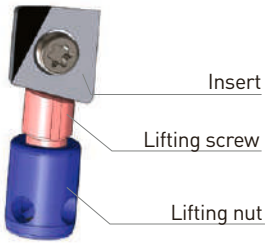
Max. chamfering width C9

Speed Finisher

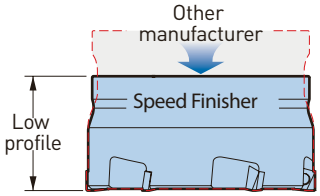
Amazing improvement of surface finish at high speed cutting.
RZ = 0.55 µm with aluminum die casting ADC12
RZ = 0.67 µm with gray cast iron FC250

- Cutter: Ø 50, Ø 63, Ø 80, Ø 100, Ø 125

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.

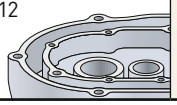


PL Presetter
Exclusive PL Presetter shortens the setup time further up to 15 sec./insert while avoiding chipping of the cutting edge.

- The cutting edge presetting is required

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.

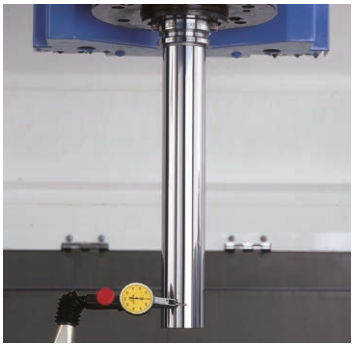
Application example
(Cutter: Ø 80 mm)

Workpiece	Conditions	Surface Roughness	Height Difference	No. of Workpieces	Result
Crankcase ADC12 	Cutting speed: 4 000 m/min Spindle speed: 15 900 min^{-1} Feed rate: 9 550 mm/min Depth of cut: 2.5 mm	Ra=0.08 µm Rz=0.55 µm	Within 1 µm	24 000	Rough and finish processes are combined in a single operation.

Dyna Test

For maintenance and inspection of machine tool spindles.

- A machine maintenance tool of the highest quality for use as a precision measurement instrument.
- Calibration certificate and traceability diagram available upon request. (with charge)



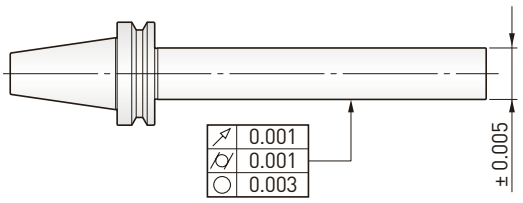
Dyna Test

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

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

Precision standard of BIG Daishowa Test Bars

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

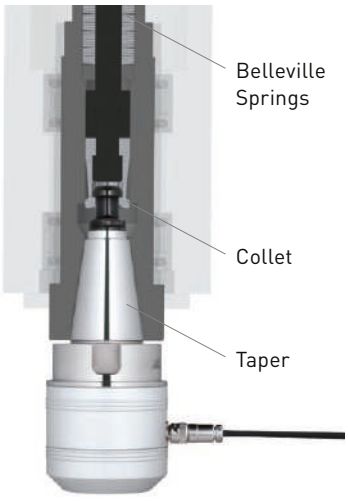


Runout	0.001 mm
Roundness	0.001 mm
Cylindricity	0.003 mm
Roughness	Ra: 0.1 µm
Diameter tol.	± 0.005 mm

Dyna Force

Measures pulling force of machine tool spindle, a vital factor of machine tool performance.
The pulling force produced by the clamping device of machine tools could deteriorate due to degradation of disc springs or wear of the components of the booster. Pulling force is especially vital when it comes to dual face contact spindle interface, thus regular inspection is recommended.

- Periodical measurement avoids reduce rigidity leading to vibrations, loss machining quality, shortened tool life



A calibration certificate and traceability diagram is offered upon request with charge for reliable use of these measuring instruments, or for the customers certified with ISO9000. Please contact us for details.

* Traceability is defined under JIS Z8103 as "the establishment of a pathway related to national and international standards in which standard instruments or measuring instruments are continually calibrated according to higher-level measurement standards."

Level Master

2-axis simultaneous detection leveler. LED displays level conditions for both axis simultaneously. LED and buzzer indication when leveling is complete.

Wireless

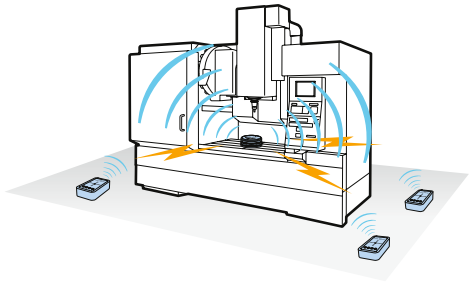
- LED lamp + beep sound
- Simultaneous 2-axis detection saves the extra time & cost of using 2 levelers.
- 0.01 mm/m readable value

Standard Type

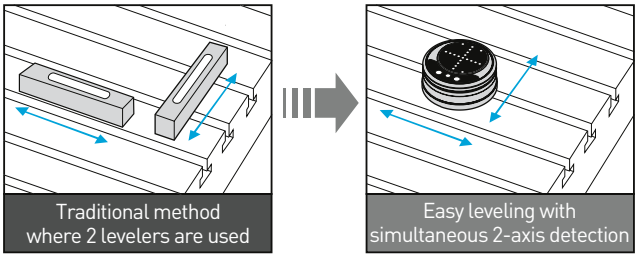
Wireless Type

Easy leveling with the remote display

Leveling by the single operator can be achievable by the use of the remote display while 2 operators have been necessary until now to allow them to conduct the level detecting inside the machine housing and the table leveling from outside of the machine separately.



Simultaneous 2-axis detection



Torque Fit

Controlling tightening torque for BIG DAISHOWA Tool assembly station with integrated torque measuring system.

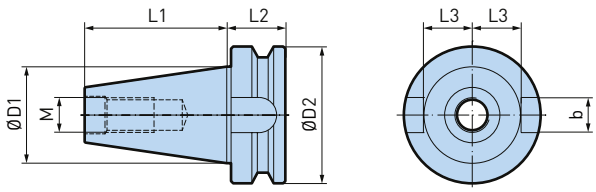
- Digital display helps to reach the proper torque
- Tightening values for BIG DAISHOWA collet chuck series data are preset
- Beeping on & after the proper tightening
- User mode for the customized torque value
- Error LED lightening at the overtightening
- Replaceable adaptors available for different interfaces

The starting point for the high precision cutting is proper tightening.

Insufficient tightening	Variant cutting edge position	Cutting Error Dimensional Error
Over tightening	Collet deformation Deteriorted runout	Shorter Cutter Life Shorter Tool Holder Life

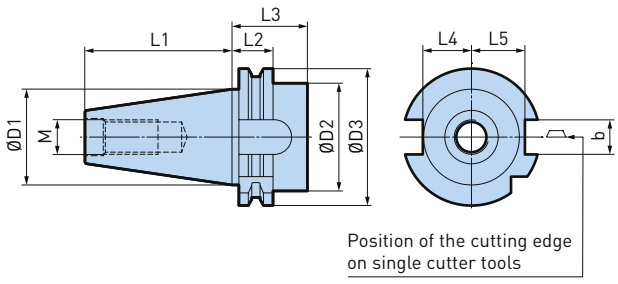
Steep taper shanks JIS B6339 / BT / BBT

Model	ØD1	ØD2	L1	L2	L3	b	M
BT30	31.75	46	48.4	22	16.3	16.1	M12
BT40	44.45	63	65.4	27	22.6	16.1	M16
BT50	69.85	100	101.8	38	35.4	25.7	M24



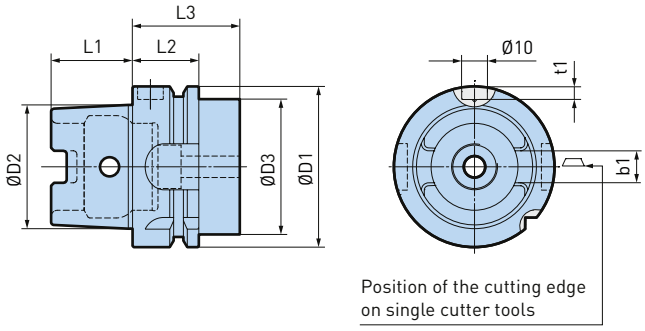
Steep taper shanks DIN 69871 / DV / BDV

Model	ØD1	ØD2 max.	ØD3	L1	L2	L3 min.	L4	L5	b	M
DV30	31.75	45	50	47.8	19.1	35	16.4	19	16.1	M12
DV40	44.45	50	63.55	68.4	19.1	35	22.8	25	16.1	M16
DV50	69.85	80	97.5	101.75	19.1	35	35.5	37.7	25.7	M24



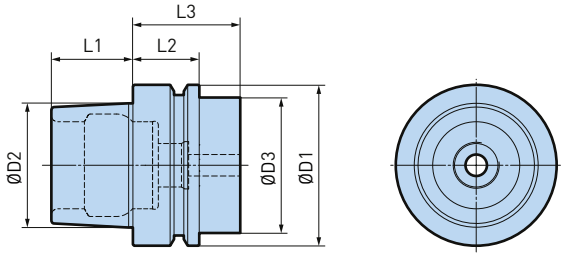
Hollow taper shanks DIN 69893, form A

Model	ØD1	ØD2	ØD3 max.	L1	L2	L3 min.	b1	t1
HSK-A32	32	24.007	26	16	20	35	7.05	5.4
HSK-A40	40	30.007	34	20	20	35	8.05	5.2
HSK-A50	50	38.009	42	25	26	42	10.54	5.1
HSK-A63	63	48.010	53	32	26	42	12.54	5.0
HSK-A80	80	60.012	68	40	26	42	16.04	4.9
HSK-A100	100	75.013	88	50	29	45	20.02	4.9



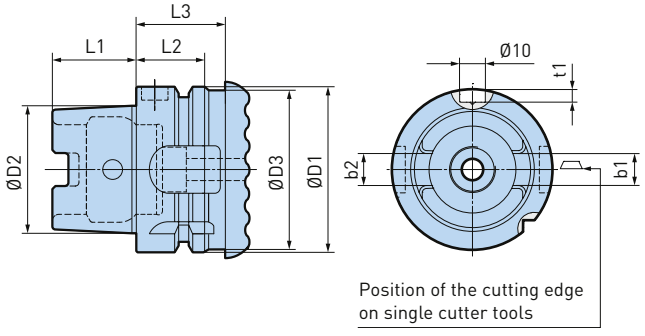
Hollow taper shanks DIN 69893, form E

Model	ØD1	ØD2	ØD3 max.	L1	L2	L3 min.
HSK-E25	25	19.006	20	13	10	20
HSK-E32	32	24.007	26	16	20	35
HSK-E40	40	30.007	34	20	20	35
HSK-E50	50	38.009	42	25	26	42
HSK-E63	63	48.010	53	32	26	42



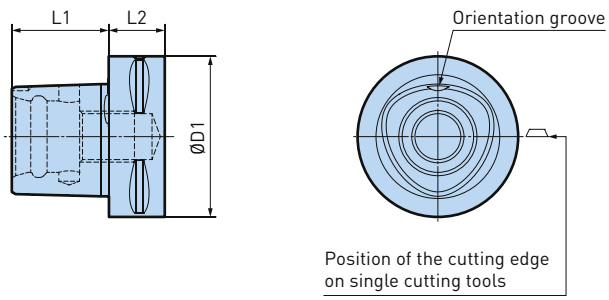
Hollow taper shanks ISO 12164-3, form T

Model	ØD1	ØD2	ØD3 max.	L1	L2	L3 min.	b1	b2	t1
HSK-T50	50	38.009	49	25	26	30	10.54	10.425	5.1
HSK-T63	63	48.010	62	32	26	30	12.54	12.425	5.0
HSK-T80	80	60.012	79	40	26	30	16.04	15.93	4.9
HSK-T100	100	75.013	99	50	29	34	20.02	19.91	4.9



BIG CAPTO (compatible with ISO 26623-1, polygonal hollow shank taper with face contact)

Model	ØD1	L1	L2
C3	32	19	15
C4	40	24	20
C5	50	30	20
C6	63	38	22
C8	80	48	30



BIG DAISHOWA Balancing according to ISO 16084

What does balancing / unbalance / balance quality mean?

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

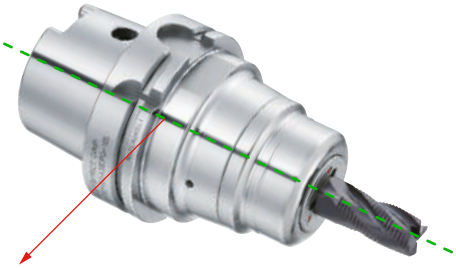


Fig. 1

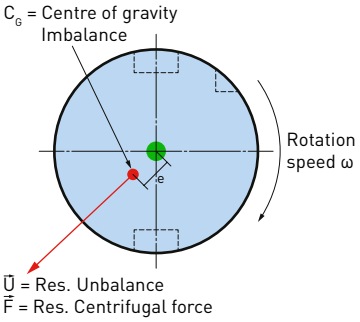


Fig. 2: unbalanced

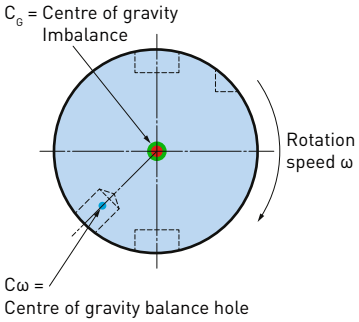


Fig. 3: balanced

Balancing requirements in practice using G2.5

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

BIG DAISHOWA balancing policy

For this reason, all BIG DAISHOWA tool holders are balanced according ISO 16084 (issued in 2017) specifically developed for rotating tool systems. ISO16084 focuses on the interaction between spindle and tool factoring in the allowable load on the spindle bearings generated by the tool's imbalance. This load must not exceed 1% of the dynamic load capacity of the spindle bearings. According to ISO 16084, the allowable unbalance tolerance is specified in [gmm], and is not expressed using a special quality grade [G].

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

Tool Holders BBT/BT, JIS B 6339

MEGA Micro Chuck	60
MEGA New Baby Chuck	62
MEGA E Chuck	66
New Baby Chuck	68
MEGA Double Power Chuck	74
MEGA Perfect Grip	78
New Hi-Power Milling Chuck	79
Hydraulic Chucks	83
SF Hydraulic Chuck	92
Shrink Chucks	94
Mold Chucks	97
CK Shanks	98
Face Mill Arbors	104
Smart Damper Face Mill	106
Super Keyless Chucks	108
Morse Taper Holders	109
Side Lock Holders	110
Screw-On-Holder	112
Side Cutter Arbors	114
BIG CAPTO Basic Holder	115
MEGA Synchro Tapping Holder	116
Angle Heads	118
Air Turbine Spindle	141

Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

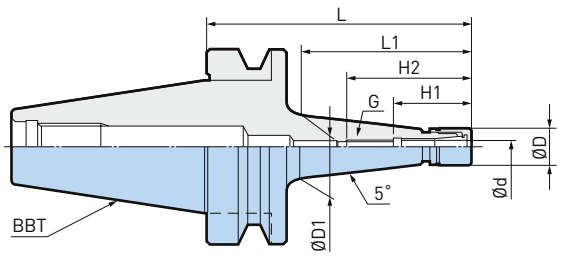
MEGA Micro Chuck Type T

Tapered and slim design, minimal interference combined with maximized rigidity.

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1



ø0.45 - 8.05mm

Model	Article No.	Ød	ØD	ØD1	L	L1	H1	H2	G	max. min-1	Collet Model	Nut Model	Weight (kg)
BBT30-MEGA3S-45T	969.209	0.45 - 3.25	10	11.5	45	20	22	38	M4 P0.7	40,000	NBC3S	MGN3S	0.39
BBT30-MEGA3S-75T	969.210	0.45 - 3.25	10	16	75	48	22	38	M4 P0.7	33,000	NBC3S	MGN3S	0.41
BBT30-MEGA3S-90T	969.211	0.45 - 3.25	10	18.5	90	63	22	38	M4 P0.7	26,000	NBC3S	MGN3S	0.45
BBT30-MEGA3S-105T	969.212	0,45 - 3,25	10	21	105	78	22	38	M4 P0.7	21,000	NBC3S	MGN3S	0.48
BBT30-MEGA4S-60T	969.213	0,45 - 4,05	12	15	60	33	26,5	47	M5 P0.8	40,000	NBC4S	MGN4S	0.42
BBT30-MEGA4S-75T	969.214	0.45 - 4.05	12	17.5	75	48	26.5	47	M5 P0.8	40,000	NBC4S	MGN4S	0.44
BBT30-MEGA4S-90T	969.215	0.45 - 4.05	12	20	90	63	26.5	47	M5 P0.8	30,000	NBC4S	MGN4S	0.47
BBT30-MEGA4S-105T	969.316	0,45 - 4,05	12	20	105	78	26,5	47	M5 P0.8	24,000	NBC4S	MGN4S	0.52
BBT30-MEGA4S-120T	969.217	0,45 - 4,05	12	25.5	120	93	26,5	47	M5 P0.8	20,000	NBC4S	MGN4S	0.57
BBT30-MEGA6S-60T	969.218	0.45 - 6.05	14	16.5	60	33	28.5	49	M7 P0.75	40,000	NBC6S	MGN6S	0.42
BBT30-MEGA6S-75T	969.319	0.45 - 6.05	14	19	75	48	28.5	49	M7 P0.75	40,000	NBC6S	MGN6S	0.44
BBT30-MEGA6S-90T	969.220	0.45 - 6.05	14	22	90	63	28.5	49	M7 P0.75	35,000	NBC6S	MGN6S	0.48
BBT30-MEGA6S-105T	969.221	0.45 - 6.05	14	24.5	105	78	28.5	49	M7 P0.75	28,000	NBC6S	MGN6S	0.51
BBT30-MEGA6S-120T	969.222	0.45 - 6.05	14	22	120	93	28.5	49	M7 P0.75	23,000	NBC6S	MGN6S	0.59
BBT30-MEGA8S-75T	803.597	2.95 - 8.05	18	23	75	48	31	50.5	M9 P0.75	40,000	NBC8S	MGN8S	0.48
BBT30-MEGA8S-105T	803.598	2.95 - 8.05	18	28	105	78	31	50.5	M9 P0.75	30,000	NBC8S	MGN8S	0.59
BBT40-MEGA3S-60T	969.321	0,45 - 3,25	10	12,5	60	28	22	38	M4 P0.7	35,000	NBC3S	MGN3S	1.00
BBT40-MEGA3S-90T	969.322	0.45 - 3.25	10	17.5	90	58	22	38	M4 P0.7	26,000	NBC3S	MGN3S	1.00
BBT40-MEGA3S-120T	969.323	0.45 - 3.25	10	23	120	88	22	38	M4 P0.7	15,000	NBC3S	MGN3S	1.10
BBT40-MEGA4S-60T	969.324	0.45 - 4.05	12	14	60	28	26.5	47	M5 P0.8	35,000	NBC4S	MGN4S	1.00
BBT40-MEGA4S-75T	969.325	0,45 - 4,05	12	16.5	75	43	26,5	47	M5 P0.8	32,000	NBC4S	MGN4S	1.00
BBT40-MEGA4S-90T	969.326	0.45 - 4.05	12	19.5	90	58	26.5	47	M5 P0.8	28,000	NBC4S	MGN4S	1.00
BBT40-MEGA4S-105T	969.327	0,45 - 4,05	12	22	105	73	26,5	47	M5 P0.8	25,000	NBC4S	MGN4S	1.10
BBT40-MEGA4S-120T	969.328	0.45 - 4.05	12	24.5	120	88	26.5	47	M5 P0.8	21,000	NBC4S	MGN4S	1.20
BBT40-MEGA4S-135T	969.329	0,45 - 4,05	12	27	135	103	26,5	47	M5 P0.8	18,000	NBC4S	MGN4S	1.20
BBT40-MEGA6S-60T	969.330	0.45 - 6.05	14	15.5	60	28	28.5	49	M7 P0.75	35,000	NBC6S	MGN6S	1.00
BBT40-MEGA6S-75T	969.331	0.45 - 6.05	14	18	75	43	28.5	49	M7 P0.75	32,000	NBC6S	MGN6S	1.00
BBT40-MEGA6S-90T	969.332	0.45 - 6.05	14	21	90	58	28.5	49	M7 P0.75	28,000	NBC6S	MGN6S	1.10
BBT40-MEGA6S-105T	969.333	0.45 - 6.05	14	23.5	105	73	28.5	49	M7 P0.75	25,000	NBC6S	MGN6S	1.10
BBT40-MEGA6S-120T	969.334	0.45 - 6.05	14	26	120	88	28.5	49	M7 P0.75	22,000	NBC6S	MGN6S	1.20
BBT40-MEGA6S-135T	969.335	0.45 - 6.05	14	29	135	103	28.5	49	M7 P0.75	20,000	NBC6S	MGN6S	1.20
BBT40-MEGA8S-90T	801.720	2.95 - 8.05	18	24.5	90	58	31	50.5	M9 P0.75	30,000	NBC8S	MGN8S	1.10
BBT40-MEGA8S-120T	803.601	2.95 - 8.05	18	30	120	88	31	50.5	M9 P0.75	22,000	NBC8S	MGN8S	1.20

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. MEGA nut is included in delivery.

Accessories & Spare Parts

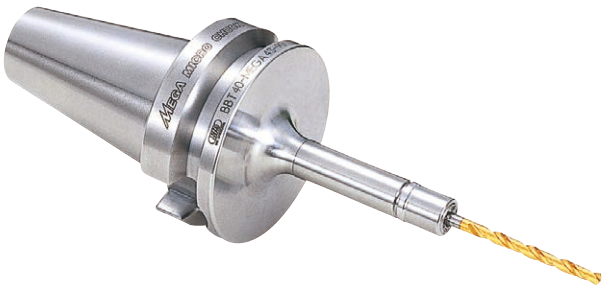
MEGA Nuts	Micro Seal Nuts	Micro Collets	MEGA Wrenches	Taper Cleaners	Collet Protective Cases
▶ 358	▶ 358	▶ 356	▶ 384	▶ 404	▶ 359

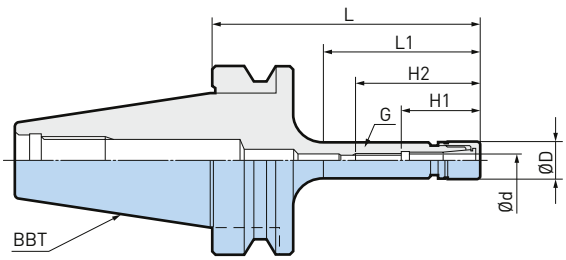
MEGA Micro Chuck Type S

Reduced diameter design is ideal for high speed applications and machining in tight spaces.

Coolant Through Hole

BIG-PLUS Dual-Contact





ø0.45 - 8.05mm

Model	Article No.	Ød	ØD	L	L1	H1	H2	G	max. min-1	Collet Model	Nut Model	Weight (kg)
BBT30-MEGA4S-90	969.502	0,45 - 4,05	12	90	62	26,5	47	M5 P0.8	20,000	NBC4S	MGN4S	0.43
BBT30-MEGA6S-60	969.503	0,45 - 6,05	14	60	32	28,5	49	M7 P0.75	40,000	NBC6S	MGN6S	0.42
BBT30-MEGA6S-90	969.504	0.45 - 6.05	14	90	62	28.5	49	M7 P0.75	27,000	NBC6S	MGN6S	0.44
BBT30-MEGA6S-105	800.058	0.45 - 6.05	14	105	73	28.5	49	M7 P0.75	20,000	NBC6S	MGN6S	0.46
BBT30-MEGA8S-90	803.608	2.95 - 8.05	18	90	60	31	50.5	M9 P0.75	35,000	NBC8S	MGN8S	0.48
BBT40-MEGA4S-90	969.506	0.45 - 4.05	12	90	53	26.5	47	M5 P0.8	19,000	NBC4S	MGN4S	1.00
BBT40-MEGA6S-90	969.508	0.45 - 6.05	14	90	53	28.5	49	M7 P0.75	25,000	NBC6S	MGN6S	1.00
BBT40-MEGA8S-90	803.599	2.95 - 8.05	18	90	55	31	50.5	M9 P0.75	30,000	NBC8S	MGN8S	1.10

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. MEGA nut is included in delivery.

Accessories & Spare Parts

MEGA Nuts	Micro Seal Nuts	Micro Collets	MEGA Wrenches	Taper Cleaners	Collet Protective Cases
▶ 358	▶ 358	▶ 356	▶ 384	▶ 404	▶ 359

MEGA New Baby Chuck

Ideal ultra precision collet holders for high speed machining. A wide range of lengths and a variety of collet series covers all machining applications.

Coolant Through Hole

BIG-PLUS Dual-Contact

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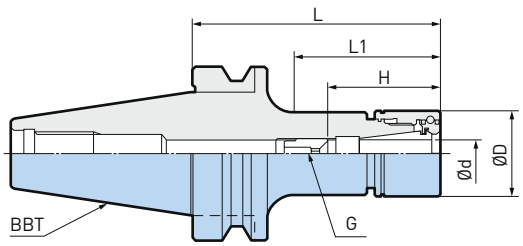
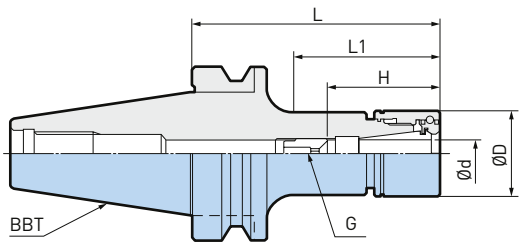


ø0.25 - 25.4mm

Model	Article No.	Ød	ØD	L	L1	H	max. min-1	Collet Model	Nut Model	Weight (kg)
BBT30-MEGA6N-60	969.509	0.25 - 6	20	60	32	23 - 43	40,000	NBC6	MGN6	0.45
BBT30-MEGA6N-75	969.341	0.25 - 6	20	75	47	23 - 43	35,000	NBC6	MGN6	0.48
BBT30-MEGA6N-90	969.510	0.25 - 6	20	90	62	23 - 43	30,000	NBC6	MGN6	0.51
BBT30-MEGA6N-105	969.342	0.25 - 6	20	105	77	23 - 43	20,000	NBC6	MGN6	0.54
BBT30-MEGA6N-120	969.343	0.25 - 6	20	120	90	23 - 43	18,000	NBC6	MGN6	0.55
BBT30-MEGA8N-60	969.511	0.5 - 8	25	60	34	26 - 45	40,000	NBC8	MGN8	0.49
BBT30-MEGA8N-75	969.344	0.5 - 8	25	75	49	26 - 45	35,000	NBC8	MGN8	0.53
BBT30-MEGA8N-90	969.512	0.5 - 8	25	90	64	26 - 45	30,000	NBC8	MGN8	0.58
BBT30-MEGA8N-105	969.345	0.5 - 8	25	105	79	26 - 45	20,000	NBC8	MGN8	0.62
BBT30-MEGA8N-120	969.346	0.5 - 8	25	120	92	26 - 45	18,000	NBC8	MGN8	0.67
BBT30-MEGA10N-60	969.513	1.5 - 10	30	60	34	38 - 48	40,000	NBC10	MGN10	0.52
BBT30-MEGA10N-75	969.347	1.5 - 10	30	75	49	38 - 48	30,000	NBC10	MGN10	0.57
BBT30-MEGA10N-90	969.534	1.5 - 10	30	90	64	38 - 48	25,000	NBC10	MGN10	0.66
BBT30-MEGA10N-105	969.348	1.5 - 10	30	105	79	38 - 48	18,000	NBC10	MGN10	0.73
BBT30-MEGA10N-120	978.207	1.5 - 10	30	120	94	38 - 48	15,000	NBC10	MGN10	0.78
BBT30-MEGA13N-60	969.516	2.5 - 13	35	60	34	44 - 63	40,000	NBC13	MGN13	0.54
BBT30-MEGA13N-75	969.349	2.5 - 13	35	75	49	44 - 63	30,000	NBC13	MGN13	0.64
BBT30-MEGA13N-90	969.517	2.5 - 13	35	90	64	44 - 63	25,000	NBC13	MGN13	0.73
BBT30-MEGA13N-105	969.350	2.5 - 13	35	105	79	44 - 63	18,000	NBC13	MGN13	0.82
BBT30-MEGA13N-120	969.518	2.5 - 13	35	120	94	44 - 63	15,000	NBC13	MGN13	0.93
BBT30-MEGA16N-60	969.519	2.5 - 16	42	60	37	48 - 63	35,000	NBC16	MGN16	0.57
BBT30-MEGA16N-75	969.351	2.5 - 16	42	75	52	48 - 68	25,000	NBC16	MGN16	0.70
BBT30-MEGA16N-90	969.520	2.5 - 16	42	90	67	48 - 68	20,000	NBC16	MGN16	0.85
BBT30-MEGA16N-105	969.352	2.5 - 16	42	105	82	48 - 68	18,000	NBC16	MGN16	1.00
BBT30-MEGA20N-60 *	969.521	2.5 - 20	46	60	-	70	30,000	NBC20	MGN20	0.60
BBT30-MEGA20N-75	969.353	2.5 - 20	46	75	-	51 - 68	20,000	NBC20	MGN20	0.75
BBT30-MEGA20N-90	969.522	2.5 - 20	46	90	-	51 - 68	15,000	NBC20	MGN20	0.92
BBT30-MEGA20N-105	969.354	2.5 - 20	46	105	-	51 - 68	13,000	NBC20	MGN20	1.10
BBT30-MEGA25N-85 *	806.379	15.5 - 25.4	60	85	-	80	12,000	NBC25	MGN25	0.98



Model	Article No.	Ød	ØD	L	L1	H	max. min-1	Collet Model	Nut Model	Weight (kg)
BBT40-MEGA6N-60	969.523	0.25 - 6	20	60	27	23 - 43	35,000	NBC6	MGN6	1.10
BBT40-MEGA6N-75	969.361	0.25 - 6	20	75	38	23 - 43	35,000	NBC6	MGN6	1.10
BBT40-MEGA6N-90	969.524	0.25 - 6	20	90	53	23 - 43	35,000	NBC6	MGN6	1.10
BBT40-MEGA6N-105	969.362	0.25 - 6	20	105	68	23 - 43	20,000	NBC6	MGN6	1.10
BBT40-MEGA6N-120	969.363	0.25 - 6	20	120	83	23 - 43	20,000	NBC6	MGN6	1.20
BBT40-MEGA6N-135	969.525	0.25 - 6	20	135	98	23 - 43	20,000	NBC6	MGN6	1.20
BBT40-MEGA6N-165	969.526	0.25 - 6	20	165	128	23 - 43	14,000	NBC6	MGN6	1.30
BBT40-MEGA6N-200	969.527	0.25 - 6	20	200	163	23 - 43	9,000	NBC6	MGN6	1.30
BBT40-MEGA8N-60	969.528	0.5 - 8	25	60	27	26 - 45	35,000	NBC8	MGN8	1.10
BBT40-MEGA8N-75	969.364	0.5 - 8	25	75	38	26 - 45	35,000	NBC8	MGN8	1.10
BBT40-MEGA8N-90	969.529	0.5 - 8	25	90	53	26 - 45	35,000	NBC8	MGN8	1.20
BBT40-MEGA8N-105	969.365	0.5 - 8	25	105	68	26 - 45	20,000	NBC8	MGN8	1.20
BBT40-MEGA8N-120	969.366	0.5 - 8	25	120	83	26 - 45	20,000	NBC8	MGN8	1.30
BBT40-MEGA8N-135	969.530	0.5 - 8	25	135	98	26 - 45	20,000	NBC8	MGN8	1.30
BBT40-MEGA8N-165	969.531	0.5 - 8	25	165	128	26 - 45	14,000	NBC8	MGN8	1.40
BBT40-MEGA8N-200	969.532	0.5 - 8	25	200	163	26 - 45	9,000	NBC8	MGN8	1.50
BBT40-MEGA10N-60	969.533	1.5 - 10	30	60	27	38 - 48	35,000	NBC10	MGN10	1.10
BBT40-MEGA10N-75	969.367	1.5 - 10	30	75	38	38 - 48	35,000	NBC10	MGN10	1.20
BBT40-MEGA10N-90	969.514	1.5 - 10	30	90	53	38 - 48	35,000	NBC10	MGN10	1.30
BBT40-MEGA10N-105	969.368	1.5 - 10	30	105	68	38 - 48	20,000	NBC10	MGN10	1.30
BBT40-MEGA10N-120	969.369	1.5 - 10	30	120	83	38 - 48	20,000	NBC10	MGN10	1.40
BBT40-MEGA10N-135	969.535	1.5 - 10	30	135	98	38 - 48	20,000	NBC10	MGN10	1.50
BBT40-MEGA10N-165	969.536	1.5 - 10	30	165	128	38 - 48	15,000	NBC10	MGN10	1.60
BBT40-MEGA10N-200	969.537	1.5 - 10	30	200	163	38 - 48	10,000	NBC10	MGN10	1.80
BBT40-MEGA13N-60	969.538	2.5 - 13	35	60	31	44 - 63	35,000	NBC13	MGN13	1.10
BBT40-MEGA13N-75	969.370	2.5 - 13	35	75	40	44 - 63	35,000	NBC13	MGN13	1.20
BBT40-MEGA13N-90	969.539	2.5 - 13	35	90	55	44 - 63	35,000	NBC13	MGN13	1.30
BBT40-MEGA13N-105	969.371	2.5 - 13	35	105	70	44 - 63	20,000	NBC13	MGN13	1.40
BBT40-MEGA13N-120	969.372	2.5 - 13	35	120	85	44 - 63	20,000	NBC13	MGN13	1.50
BBT40-MEGA13N-135	969.540	2.5 - 13	35	135	100	44 - 63	20,000	NBC13	MGN13	1.60
BBT40-MEGA13N-165	969.541	2.5 - 13	35	165	130	44 - 63	15,000	NBC13	MGN13	1.80
BBT40-MEGA13N-200	969.542	2.5 - 13	35	200	165	44 - 63	10,000	NBC13	MGN13	2.00

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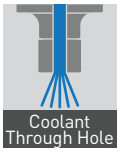
MEGA New Baby Chuck



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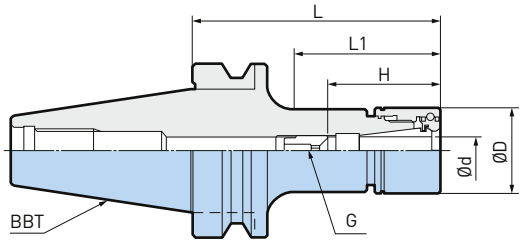
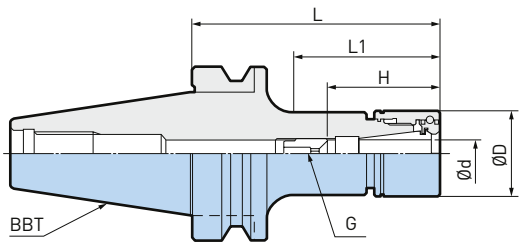


Model	Article No.	Ød	ØD	L	L1	H	max. min-1	Collet Model	Nut Model	Weight (kg)
BBT40-MEGA16N-60	969.543	2.5 - 16	42	60	31	48 - 68	30,000	NBC16	MGN16	1.10
BBT40-MEGA16N-75	969.373	2.5 - 16	42	75	40	48 - 68	30,000	NBC16	MGN16	1.30
BBT40-MEGA16N-90	969.544	2.5 - 16	42	90	55	48 - 68	30,000	NBC16	MGN16	1.40
BBT40-MEGA16N-105	969.374	2.5 - 16	42	105	70	48 - 68	20,000	NBC16	MGN16	1.60
BBT40-MEGA16N-120	969.375	2.5 - 16	42	120	85	48 - 68	20,000	NBC16	MGN16	1.70
BBT40-MEGA16N-135	969.545	2.5 - 16	42	135	100	48 - 68	20,000	NBC16	MGN16	1.90
BBT40-MEGA16N-165	969.546	2.5 - 16	42	165	130	48 - 68	15,000	NBC16	MGN16	2.10
BBT40-MEGA16N-200	969.547	2.5 - 16	42	200	165	48 - 68	10,000	NBC16	MGN16	2.50
BBT40-MEGA20N-60	969.548	2.5 - 20	46	60	31	51 - 68	30,000	NBC20	MGN20	1.10
BBT40-MEGA20N-75	969.376	2.5 - 20	46	75	42	51 - 68	30,000	NBC20	MGN20	1.30
BBT40-MEGA20N-90	969.549	2.5 - 20	46	90	57	51 - 68	30,000	NBC20	MGN20	1.50
BBT40-MEGA20N-105	969.377	2.5 - 20	46	105	72	51 - 68	20,000	NBC20	MGN20	1.60
BBT40-MEGA20N-120	969.378	2.5 - 20	46	120	87	51 - 68	20,000	NBC20	MGN20	1.80
BBT40-MEGA20N-135	969.550	2.5 - 20	46	135	102	51 - 68	20,000	NBC20	MGN20	2.00
BBT40-MEGA20N-165	969.551	2.5 - 20	46	165	132	51 - 68	15,000	NBC20	MGN20	2.30
BBT40-MEGA20N-200	969.552	2.5 - 20	46	200	167	51 - 68	10,000	NBC20	MGN20	2.70
BBT40-MEGA25N-75	806.380	15.5 - 25.4	60	75	47	64 - 74	24,000	NBC25	MGN25	1.40
BBT40-MEGA25N-90	806.381	15.5 - 25.4	60	90	62	64 - 74	20,000	NBC25	MGN25	1.70
BBT40-MEGA25N-105	806.382	15.5 - 25.4	60	105	77	64 - 74	19,000	NBC25	MGN25	2.00
BBT40-MEGA25N-120	806.383	15.5 - 25.4	60	120	92	64 - 74	17,000	NBC25	MGN25	2.30
BBT50-MEGA6N-90	969.553	0.25 - 6	20	90	37	23 - 43	20,000	NBC6	MGN6	3.70
BBT50-MEGA6N-120	969.554	0.25 - 6	20	120	67	23 - 43	20,000	NBC6	MGN6	3.70
BBT50-MEGA6N-165	969.555	0.25 - 6	20	165	112	23 - 43	13,000	NBC6	MGN6	3.80
BBT50-MEGA6N-200	969.556	0.25 - 6	20	200	147	23 - 43	9,000	NBC6-□	MGN6	3.90
BBT50-MEGA8N-90	969.557	0.5 - 8	25	90	42	26 - 45	20,000	NBC8-□	MGN8	3.70
BBT50-MEGA8N-120	969.558	0.5 - 8	25	120	67	26 - 45	20,000	NBC8-□	MGN8	3.80
BBT50-MEGA8N-165	969.559	0.5 - 8	25	165	112	26 - 45	16,000	NBC8-□	MGN8	4.00
BBT50-MEGA8N-200	969.560	0.5 - 8	25	200	147	26 - 45	11,000	NBC8	MGN8	4.10
BBT50-MEGA10N-90	969.561	1.5 - 10	30	90	42	38 - 48	20,000	NBC10	MGN10	3.80
BBT50-MEGA10N-120	969.562	1.5 - 10	30	120	67	38 - 48	20,000	NBC10	MGN10	3.90
BBT50-MEGA10N-165	969.563	1.5 - 10	30	165	112	38 - 48	16,000	NBC10	MGN10	4.10
BBT50-MEGA10N-200	969.564	1.5 - 10	30	200	147	38 - 48	13,000	NBC10	MGN10	4.30
BBT50-MEGA10N-250	969.565	1.5 - 10	30	250	197	38 - 48	8,000	NBC10	MGN10	4.50
BBT50-MEGA10N-300	969.566	1.5 - 10	30	300	247	38 - 48	5,500	NBC10	MGN10	4.80



Model	Article No.	Ød	ØD	L	L1	H	max. min-1	Collet Model	Nut Model	Weight (kg)
BBT50-MEGA13N-90	969.567	2.5 - 13	35	90	42	44 - 63	18,000	NBC13	MGN13	3.90
BBT50-MEGA13N-120	969.568	2.5 - 13	35	120	67	44 - 63	18,000	NBC13	MGN13	4.00
BBT50-MEGA13N-165	969.569	2.5 - 13	35	165	112	44 - 63	16,000	NBC13	MGN13	4.30
BBT50-MEGA13N-200	969.570	2.5 - 13	35	200	147	44 - 63	12,000	NBC13	MGN13	4.50
BBT50-MEGA13N-250	969.571	2.5 - 13	35	250	197	44 - 63	8,000	NBC13	MGN13	4.80
BBT50-MEGA13N-300	969.572	2.5 - 13	35	300	247	44 - 63	5,500	NBC13	MGN13	5.10
BBT50-MEGA16N-75	969.573	2.5 - 16	42	75	31	48 - 68	17,000	NBC16	MGN16	3.80
BBT50-MEGA16N-90	969.574	2.5 - 16	42	90	42	48 - 68	17,000	NBC16	MGN16	4.00
BBT50-MEGA16N-120	969.575	2.5 - 16	42	120	72	48 - 68	17,000	NBC16	MGN16	4.20
BBT50-MEGA16N-165	969.576	2.5 - 16	42	165	117	48 - 68	16,000	NBC16	MGN16	4.60
BBT50-MEGA16N-200	969.577	2.5 - 16	42	200	152	48 - 68	13,000	NBC16	MGN16	4.80
BBT50-MEGA16N-250	969.578	2.5 - 16	42	250	202	48 - 68	10,000	NBC16	MGN16	5.30
BBT50-MEGA20N-75	969.579	2.5 - 20	46	75	31	51 - 68	16,000	NBC20	MGN20	3.80
BBT50-MEGA20N-90	969.580	2.5 - 20	46	90	42	51 - 68	16,000	NBC20	MGN20	4.00
BBT50-MEGA20N-120	969.581	2.5 - 20	46	120	72	51 - 68	16,000	NBC20	MGN20	4.30
BBT50-MEGA20N-165	969.582	2.5 - 20	46	165	117	51 - 68	15,000	NBC20	MGN20	4.70
BBT50-MEGA20N-200	969.583	2.5 - 20	46	200	152	51 - 68	13,000	NBC20	MGN20	5.10
BBT50-MEGA20N-250	969.584	2.5 - 20	46	250	202	51 - 68	10,000	NBC20	MGN20	5.60
BBT50-MEGA25N-90	806.384	15.5 - 25.4	60	90	46	64 - 74	19,000	NBC25	MGN25	4.10
BBT50-MEGA25N-120	806.385	15.5 - 25.4	60	120	72	64 - 74	17,000	NBC25	MGN25	4.70
BBT50-MEGA25N-165	806.386	15.5 - 25.4	60	165	117	64 - 74	15,000	NBC25	MGN25	5.60
BBT50-MEGA25N-200	806.387	15.5 - 25.4	60	200	152	64 - 74	13,000	NBC25	MGN25	6.30

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. MEGA nut is included in delivery.
3. * Adjusting screw cannot be used.
4. "H" is the max. tool shank length that can be inserted for these models.
5. "G" is the adjusting screw (optional).

Accessories & Spare Parts

MEGA Nuts	MEGA Perfect Seals	New Baby Collets	MEGA Wrenches	Adjusting Screws NBA	Taper Cleaners
▶ 367	▶ 368	▶ 360	▶ 384	▶ 367	▶ 404

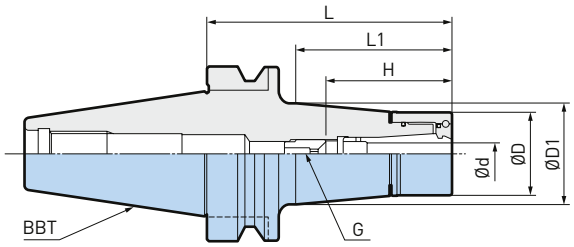
MEGA E Chuck

Collet chuck designed for milling with high concentricity and rigidity in hard materials.

Coolant Through Hole

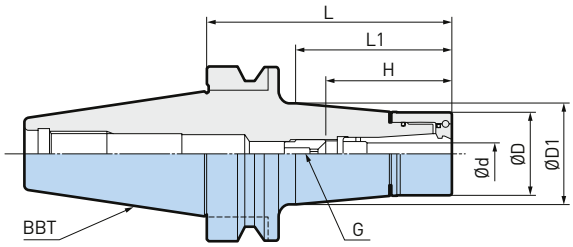
BIG-PLUS Dual-Contact

A.1



ø3 - 12mm

Model	Article No.	Ød	ØD	ØD1	L	L1	H	max. min-1	Collet Model	Nut Model	Weight (kg)
BBT30-MEGA6E-50	968.166	3 - 6	25	26	50	25	37 - 45	40,000	MEC6	MEN6	0.45
BBT30-MEGA6E-75	968.167	3 - 6	25	30	75	50	37 - 45	35,000	MEC6	MEN6	0.58
BBT30-MEGA6E-90	968.168	3 - 6	25	32.5	90	65	37 - 45	25,000	MEC6	MEN6	0.67
BBT30-MEGA6E-105	968.169	3 - 6	25	35.5	105	80	37 - 45	25,000	MEC6	MEN6	0.75
BBT30-MEGA8E-50	968.170	3 - 8	30	30.5	50	25	42 - 51	40,000	MEC8	MEN8	0.50
BBT30-MEGA8E-75	968.171	3 - 8	30	35	75	50	42 - 51	35,000	MEC8	MEN8	0.65
BBT30-MEGA8E-90	968.172	3 - 8	30	37.5	90	66	42 - 51	25,000	MEC8	MEN8	0.77
BBT30-MEGA8E-105	968.173	3 - 8	30	40.5	105	81	42 - 51	25,000	MEC8	MEN8	0.90
BBT30-MEGA10E-50	968.174	3 - 10	35	35.5	50	25	48 - 58	39,000	MEC10	MEN10	0.53
BBT30-MEGA10E-75	968.175	3 - 10	35	40	75	51	48 - 58	35,000	MEC10	MEN10	0.73
BBT30-MEGA10E-90	968.176	3 - 10	35	41	90	66	48 - 58	25,000	MEC10	MEN10	0.90
BBT30-MEGA10E-105	968.177	3 - 10	35	44	105	82	48 - 58	25,000	MEC10	MEN10	1.00
BBT30-MEGA13E-50	968.178	3 - 12	42	42.5	50	27	50 - 58	38,000	MEC13	MEN13	0.57
BBT30-MEGA13E-75	968.179	3 - 12	42	42	75	52	50 - 60	34,000	MEC13	MEN13	0.82
BBT30-MEGA13E-90	968.180	3 - 12	42	42	90	67	50 - 60	25,000	MEC13	MEN13	0.95
BBT30-MEGA13E-105	968.181	3 - 12	42	42	105	82	50 - 60	25,000	MEC13	MEN13	1.12
BBT40-MEGA6E-60	968.183	3 - 6	25	26.5	60	28	37 - 45	30,000	MEC6	MEN6	1.10
BBT40-MEGA6E-75	968.184	3 - 6	25	29	75	43	42 - 51	30,000	MEC6	MEN6	1.20
BBT40-MEGA6E-90	968.185	3 - 6	25	31.5	90	58	37 - 45	30,000	MEC6	MEN6	1.20
BBT40-MEGA6E-105	968.186	3 - 6	25	34	105	73	37 - 45	29,000	MEC6	MEN6	1.30
BBT40-MEGA6E-120	968.187	3 - 6	25	36.5	120	88	37 - 45	29,000	MEC6	MEN6	1.50
BBT40-MEGA6E-135	968.188	3 - 6	25	39	135	103	37 - 45	26,000	MEC6	MEN6	1.60
BBT40-MEGA6E-165	968.189	3 - 6	25	44.5	165	133	37 - 45	19,000	MEC6	MEN6	1.90
BBT40-MEGA6E-200	968.190	3 - 6	25	51	200	169	37 - 45	15,000	MEC6	MEN6	2.40
BBT40-MEGA8E-60	968.191	3 - 8	30	31	60	28	42 - 48	30,000	MEC8	MEN8	1.20
BBT40-MEGA8E-75	968.192	3 - 8	30	33.5	75	43	42 - 51	30,000	MEC8	MEN8	1.20
BBT40-MEGA8E-90	968.193	3 - 8	30	36	90	58	42 - 51	30,000	MEC8	MEN8	1.30
BBT40-MEGA8E-105	968.194	3 - 8	30	39	105	73	42 - 51	29,000	MEC8	MEN8	1.50
BBT40-MEGA8E-120	968.195	3 - 8	30	41.5	120	88	42 - 51	29,000	MEC8	MEN8	1.60
BBT40-MEGA8E-135	968.196	3 - 8	30	44	135	103	42 - 51	27,000	MEC8	MEN8	1.70
BBT40-MEGA8E-165	968.197	3 - 8	30	49.5	165	133	42 - 51	20,000	MEC8	MEN8	2.20
BBT40-MEGA8E-200	968.198	3 - 8	30	56	200	171	42 - 51	15,000	MEC8	MEN8	2.70
BBT40-MEGA10E-60	968.199	3 - 10	35	36	60	29	48 - 58	30,000	MEC10	MEN10	1.20
BBT40-MEGA10E-75	968.200	3 - 10	35	38.5	75	43	48 - 58	30,000	MEC10	MEN10	1.30
BBT40-MEGA10E-90	968.201	3 - 10	35	41	90	58	48 - 58	30,000	MEC10	MEN10	1.40
BBT40-MEGA10E-105	968.202	3 - 10	35	44	105	73	48 - 58	29,000	MEC10	MEN10	1.60
BBT40-MEGA10E-120	968.203	3 - 10	35	46.5	120	88	48 - 58	29,000	MEC10	MEN10	1.80
BBT40-MEGA10E-135	968.204	3 - 10	35	49	135	103	48 - 58	27,000	MEC10	MEN10	2.00
BBT40-MEGA10E-165	968.205	3 - 10	35	54.5	165	135	48 - 58	22,000	MEC10	MEN10	2.50
BBT40-MEGA10E-200	968.206	3 - 10	35	55.5	200	171	48 - 58	16,000	MEC10	MEN10	2.90



Model	Article No.	Ød	ØD	ØD1	L	L1	H	max. min-1	Collet Model	Nut Model	Weight (kg)
BBT40-MEGA13E-60	968.207	3 - 12	42	43	60	29	50 - 60	30,000	MEC13	MEN13	1.20
BBT40-MEGA13E-75	968.208	3 - 12	42	45	75	43	50 - 60	30,000	MEC13	MEN13	1.40
BBT40-MEGA13E-90	968.209	3 - 12	42	48	90	59	50 - 60	30,000	MEC13	MEN13	1.60
BBT40-MEGA13E-105	968.210	3 - 12	42	51	105	75	50 - 60	29,000	MEC13	MEN13	1.80
BBT40-MEGA13E-120	968.211	3 - 12	42	53.5	120	91	50 - 60	29,000	MEC13	MEN13	2.10
BBT40-MEGA13E-135	968.212	3 - 12	42	56	135	106	50 - 60	26,000	MEC13	MEN13	2.30
BBT40-MEGA13E-165	968.213	3 - 12	42	57.5	165	137	50 - 60	22,000	MEC13	MEN13	2.80
BBT40-MEGA13E-200	968.214	3 - 12	42	62.5	200	173	50 - 60	16,000	MEC13	MEN13	3.50
BBT50-MEGA6E-90	968.216	3 - 6	25	30.5	90	47	37 - 45	20,000	MEC6	MEN6	3.80
BBT50-MEGA6E-120	968.217	3 - 6	25	36	120	77	37 - 45	20,000	MEC6	MEN 6	4.00
BBT50-MEGA6E-165	968.218	3 - 6	25	43.5	165	122	37 - 45	14,000	MEC6	MEN6	4.40
BBT50-MEGA6E-200	968.219	3 - 6	25	50	200	157	37 - 45	9,000	MEC6	MEN6	4.80
BBT50-MEGA8E-90	968.220	3 - 8	30	35.5	90	47	42 - 51	20,000	MEC8	MEN8	3.80
BBT50-MEGA8E-120	968.221	3 - 8	30	40.5	120	77	42 - 51	20,000	MEC8	MEN 8	4.10
BBT50-MEGA8E-165	968.222	3 - 8	30	48.5	165	122	42 - 51	16,000	MEC8	MEN8	4.60
BBT50-MEGA8E-200	968.223	3 - 8	30	54.5	200	157	42 - 51	11,000	MEC8	MEN8	5.20
BBT50-MEGA10E-90	968.224	3 - 10	35	40	90	47	48 - 58	20,000	MEC10	MEN10	4.00
BBT50-MEGA10E-120	968.225	3 - 10	35	45.5	120	77	48 - 58	20,000	MEC10	MEN10	4.20
BBT50-MEGA10E-165	968.226	3 - 10	35	53	165	121	48 - 58	16,000	MEC10	MEN10	4.90
BBT50-MEGA10E-200	968.227	3 - 10	35	59.5	200	156	48 - 58	13,000	MEC10	MEN10	5.50
BBT50-MEGA13E-90	968.228	3 - 12	42	46.5	90	47	50 - 60	18,000	MEC13	MEN13	4.10
BBT50-MEGA13E-120	968.229	3 - 12	42	52	120	77	50 - 60	18,000	MEC13	MEN13	4.40
BBT50-MEGA13E-165	968.230	3 - 12	42	59	165	121	50 - 60	16,000	MEC13	MEN13	5.20
BBT50-MEGA13E-200	968.231	3 - 12	42	59	200	156	50 - 60	12,000	MEC13	MEN13	6.10

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. MEGA E nut is included.
3. "H" is the max. tool shank length that can be inserted for these models.
4. "G" is the adjusting screw (optional).

Accessories & Spare Parts

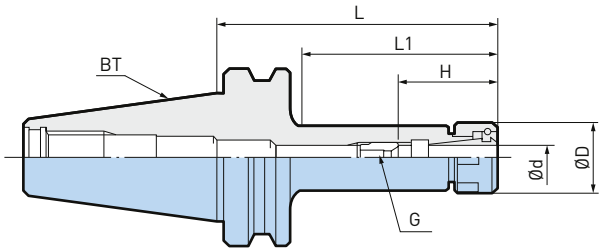
MEGA E Nuts	MEGA E Perfect Seals	MEGA E Collets	MEGA Wrenches	Adjusting Screws NBA	Taper Cleaners
▶ 372	▶ 373	▶ 372	▶ 384	▶ 367	▶ 404

New Baby Chuck

The original high precision collet chuck to perform all machining applications.

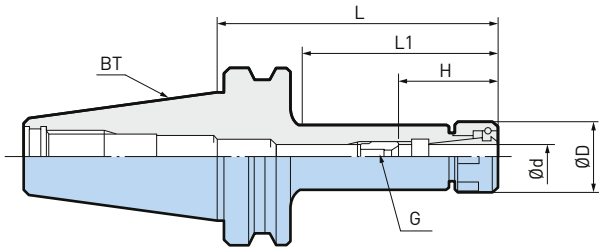
Coolant Through Hole

A.1



ø0.25 - 20mm

Model	Article No.	Ød	ØD	L	L1	H	Collet Model	Nut Model	Weight (kg)
BT30-NBS6-45	961.901	0.25 - 6	20	45	20	20 - 40	NBC6	NBN6	0.42
BT30-NBS6-60	961.917	0.25 - 6	20	60	32	20 - 40	NBC6	NBN6	0.45
BT30-NBS6-75	961.902	0.25 - 6	20	75	47	20 - 40	NBC6	NBN6	0.47
BT30-NBS6-90	961.918	0.25 - 6	20	90	62	20 - 40	NBC6	NBN6	0.49
BT30-NBS6-105	961.903	0,25 - 6	20	105	77	20 - 40	NBC6	NBN6	0.53
BT30-NBS6-120	800.031	0.25 - 6	20	120	90	20 - 40	NBC6	NBN6	0.57
BT30-NBS6-135	800.032	0.25 - 6	20	135	105	20 - 40	NBC6	NBN6	0.60
BT30-NBS8-45	961.904	0.5 - 8	25	45	20	23 - 42	NBC8	NBN8	0.43
BT30-NBS8-60	961.919	0.5 - 8	25	60	33	23 - 42	NBC8	NBN8	0.48
BT30-NBS8-75	961.905	0.5 - 8	25	75	48	23 - 42	NBC8	NBN8	0.53
BT30-NBS8-90	961.920	0.5 - 8	25	90	63	23 - 42	NBC8	NBN8	0.57
BT30-NBS8-105	961.906	0.5 - 8	25	105	78	23 - 42	NBC8	NBN8	0.60
BT30-NBS8-120	800.033	0.5 - 8	25	120	92	23 - 42	NBC8	NBN8	0.66
BT30-NBS8-135	800.034	0.5 - 8	25	135	107	23 - 42	NBC8	NBN8	0.71
BT30-NBS10-45	961.907	1.5 - 10	30	45	20	35 - 45	NBC10	NBN10	0.44
BT30-NBS10-60	961.921	1.5 - 10	30	60	34	35 - 45	NBC10	NBN10	0.51
BT30-NBS10-75	961.908	1.5 - 10	30	75	49	35 - 45	NBC10	NBN10	0.56
BT30-NBS10-90	961.922	1.5 - 10	30	90	64	35 - 45	NBC10	NBN10	0.65
BT30-NBS10-105	961.909	1,5 - 10	30	105	79	35 - 45	NBC10	NBN10	0.72
BT30-NBS10-120	800.597	1.5 - 10	30	120	94	35 - 45	NBC10	NBN10	0.78
BT30-NBS10-135	800.598	1.5 - 10	30	135	109	35 - 45	NBC10	NBN10	0.86
BT30-NBS13-45	961.910	2.5 - 13	35	45	21	41 - 53	NBC13	NBN13	0.42
BT30-NBS13-60	961.923	2.5 - 13	35	60	34	41 - 60	NBC13	NBN13	0.53
BT30-NBS13-75	961.911	2.5 - 13	35	75	49	41 - 60	NBC13	NBN13	0.62
BT30-NBS13-90	961.924	2.5 - 13	35	90	64	41 - 60	NBC13	NBN13	0.72
BT30-NBS13-105	961.912	2.5 - 13	35	105	79	41 - 60	NBC13	NBN13	0.82
BT30-NBS13-120	800.599	2.5 - 13	35	120	94	41 - 60	NBC13	NBN13	0.90
BT30-NBS13-135	800.600	2.5 - 13	35	135	109	41 - 60	NBC13	NBN13	1.02
BT30-NBS16-45	961.913	2.5 - 16	42	45	21	45 - 53	NBC16	NBN16	0.40
BT30-NBS16-60	961.925	2.5 - 16	42	60	37	45 - 55	NBC16	NBN16	0.54
BT30-NBS16-75	961.914	2.5 - 16	42	75	52	45 - 65	NBC16	NBN16	0.69
BT30-NBS16-90	961.926	2.5 - 16	42	90	67	45 - 65	NBC16	NBN16	0.83
BT30-NBS16-105	961.927	2.5 - 16	42	105	82	45 - 65	NBC16	NBN16	1.00
BT30-NBS16-120	800.601	2.5 - 16	42	120	97	45 - 65	NBC16	NBN16	1.14
BT30-NBS16-135	800.028	2.5 - 16	42	135	112	45 - 65	NBC16	NBN16	1.28
BT30-NBS20-60	961.915	2.5 - 20	46	60	38	48 - 58	NBC20	NBN20	0.58
BT30-NBS20-75	961.928	2.5 - 20	46	75	53	48 - 65	NBC20	NBN20	0.74
BT30-NBS20-90	961.916	2.5 - 20	46	90	68	48 - 65	NBC20	NBN20	0.92
BT30-NBS20-105	961.929	2.5 - 20	46	105	83	48 - 65	NBC20	NBN20	1.08
BT30-NBS20-120	800.029	2.5 - 20	46	120	98	48 - 65	NBC20	NBN20	1.25
BT30-NBS20-135	800.030	2.5 - 20	46	135	113	48 - 65	NBC20	NBN20	1.46



Model	Article No.	Ød	ØD	L	L1	H	Collet Model	Nut Model	Weight (kg)
BT40-NBS6-60	961.931	0.25 - 6	20	60	23	20 - 40	NBC6	NBN6	1.10
BT40-NBS6-75	968.596	0.25 - 6	20	75	38	20 - 40	NBC6	NBN6	1.10
BT40-NBS6-90	961.932	0.25 - 6	20	90	53	20 - 40	NBC6	NBN6	1.10
BT40-NBS6-105	968.597	0.25 - 6	20	105	68	20 - 40	NBC6	NBN6	1.10
BT40-NBS6-120	968.598	0.25 - 6	20	120	83	20 - 40	NBC6	NBN6	1.20
BT40-NBS6-135	961.933	0.25 - 6	20	135	98	20 - 40	NBC6	NBN6	1.20
BT40-NBS6-165	961.949	0.25 - 6	20	165	128	20 - 40	NBC6	NBN6	1.20
BT40-NBS6-200	961.950	0.25 - 6	20	200	158	20 - 40	NBC6	NBN6	1.30
BT40-NBS8-60	961.934	0.5 - 8	25	60	23	23 - 42	NBC8	NBN8	1.10
BT40-NBS8-75	968.599	0.5 - 8	25	75	38	23 - 42	NBC8	NBN8	1.10
BT40-NBS8-90	961.935	0.5 - 8	25	90	53	23 - 42	NBC8	NBN8	1.20
BT40-NBS8-105	968.600	0.5 - 8	25	105	68	23 - 42	NBC8	NBN8	1.20
BT40-NBS8-120	968.601	0.5 - 8	25	120	83	23 - 42	NBC8	NBN8	1.20
BT40-NBS8-135	961.936	0.5 - 8	25	135	98	23 - 42	NBC8	NBN8	1.30
BT40-NBS8-165	961.951	0.5 - 8	25	165	128	23 - 42	NBC8	NBN8	1.40
BT40-NBS8-200	961.952	0.5 - 8	25	200	158	23 - 42	NBC8	NBN8	1.50
BT40-NBS10-60	961.937	1.5 - 10	30	60	23	35 - 45	NBC10	NBN10	1.10
BT40-NBS10-75	968.602	1.5 - 10	30	75	38	35 - 45	NBC10	NBN10	1.20
BT40-NBS10-90	961.938	1.5 - 10	30	90	53	35 - 45	NBC10	NBN10	1.20
BT40-NBS10-105	968.603	1.5 - 10	30	105	68	35 - 45	NBC10	NBN10	1.30
BT40-NBS10-120	968.604	1.5 - 10	30	120	83	35 - 45	NBC10	NBN10	1.40
BT40-NBS10-135	961.939	1.5 - 10	30	135	98	35 - 45	NBC10	NBN10	1.40
BT40-NBS10-165	961.953	1.5 - 10	30	165	128	35 - 45	NBC10	NBN10	1.60
BT40-NBS10-200	961.954	1.5 - 10	30	200	163	35 - 45	NBC10	NBN10	1.70

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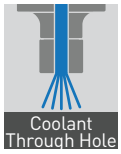
New Baby Chuck



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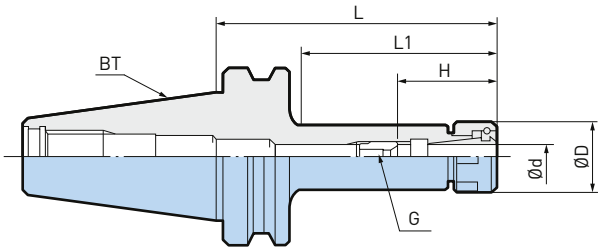
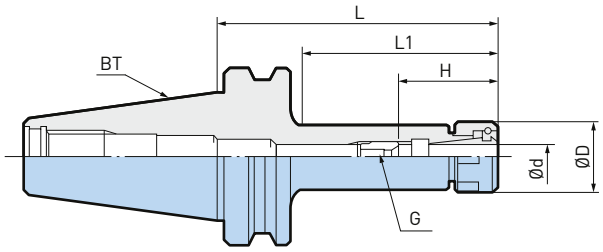


Model	Article No.	Ød	ØD	L	L1	H	Collet Model	Nut Model	Weight (kg)
BT40-NBS13-60	961.940	2.5 - 13	35	60	28	41 - 60	NBC13	NBN13	1.10
BT40-NBS13-75	968.605	2.5 - 13	35	75	40	41 - 60	NBC13	NBN13	1.20
BT40-NBS13-90	961.941	2.5 - 13	35	90	55	41 - 60	NBC13	NBN13	1.30
BT40-NBS13-105	968.606	2.5 - 13	35	105	70	41 - 60	NBC13	NBN13	1.40
BT40-NBS13-120	968.607	2.5 - 13	35	120	85	41 - 60	NBC13	NBN13	1.50
BT40-NBS13-135	961.942	2.5 - 13	35	135	100	41 - 60	NBC13	NBN13	1.60
BT40-NBS13-165	961.955	2.5 - 13	35	165	128	41 - 60	NBC13	NBN13	1.80
BT40-NBS13-200	961.956	2.5 - 13	35	200	163	41 - 60	NBC13	NBN13	2.00
BT40-NBS16-60	961.943	2.5 - 16	42	60	27	45 - 65	NBC16	NBN16	1.10
BT40-NBS16-75	968.608	2.5 - 16	42	75	40	45 - 65	NBC16	NBN16	1.30
BT40-NBS16-90	961.944	2.5 - 16	42	90	55	45 - 65	NBC16	NBN16	1.40
BT40-NBS16-105	968.609	2.5 - 16	42	105	70	45 - 65	NBC16	NBN16	1.60
BT40-NBS16-120	968.610	2.5 - 16	42	120	85	45 - 65	NBC16	NBN16	1.70
BT40-NBS16-135	961.945	2.5 - 16	42	135	100	45 - 65	NBC16	NBN16	1.90
BT40-NBS16-165	961.957	2.5 - 16	42	165	130	45 - 65	NBC16	NBN16	2.10
BT40-NBS16-200	961.958	2.5 - 16	42	200	165	45 - 65	NBC16	NBN16	2.40
BT40-NBS20-60	961.946	2.5 - 20	46	60	28	48 - 65	NBC20	NBN20	1.10
BT40-NBS20-75	968.611	2.5 - 20	46	75	42	48 - 65	NBC20	NBN20	1.30
BT40-NBS20-90	961.947	2.5 - 20	46	90	57	48 - 65	NBC20	NBN20	1.50
BT40-NBS20-105	968.612	2.5 - 20	46	105	72	48 - 65	NBC20	NBN20	1.70
BT40-NBS20-120	968.613	2.5 - 20	46	120	87	48 - 65	NBC20	NBN20	1.80
BT40-NBS20-135	961.948	2.5 - 20	46	135	102	48 - 65	NBC20	NBN20	2.00
BT40-NBS20-165	961.959	2.5 - 20	46	165	132	48 - 65	NBC20	NBN20	2.30
BT40-NBS20-200	961.960	2.5 - 20	46	200	167	48 - 65	NBC20	NBN20	2.70
BT50-NBS6-90	961.961	0.25 - 6	20	90	42	20 - 40	NBC6	NBN6	3.70
BT50-NBS6-120	961.962	0.25 - 6	20	120	67	20 - 40	NBC6	NBN6	3.70
BT50-NBS6-165	961.963	0.25 - 6	20	165	112	20 - 40	NBC6	NBN6	3.80
BT50-NBS6-200	961.964	0.25 - 6	20	200	147	20 - 40	NBC6	NBN6	3.80
BT50-NBS8-90	961.965	0.5 - 8	25	90	42	23 - 42	NBC8	NBN8	4.00
BT50-NBS8-120	961.966	0.5 - 8	25	120	67	23 - 42	NBC8	NBN8	3.80
BT50-NBS8-165	961.967	0.5 - 8	25	165	112	23 - 42	NBC8	NBN8	3.90
BT50-NBS8-200	961.968	0.5 - 8	25	200	147	23 - 42	NBC8	NBN8	4.00



Model	Article No.	Ød	ØD	L	L1	H	Collet Model	Nut Model	Weight (kg)
BT50-NBS10-90	961.969	1.5 - 10	30	90	42	35 - 45	NBC10	NBN10	3.70
BT50-NBS10-120	961.970	1.5 - 10	30	120	67	35 - 45	NBC10	NBN10	3.90
BT50-NBS10-165	961.971	1.5 - 10	30	165	112	35 - 45	NBC10	NBN10	4.10
BT50-NBS10-200	961.972	1.5 - 10	30	200	147	35 - 45	NBC10	NBN10	4.30
BT50-NBS10-250	961.973	1.5 - 10	30	250	197	35 - 45	NBC10	NBN10	4.70
BT50-NBS10-300	961.974	1.5 - 10	30	300	247	35 - 45	NBC10	NBN10	5.00
BT50-NBS13-90	961.975	2.5 - 13	35	90	42	41 - 60	NBC13	NBN13	3.80
BT50-NBS13-120	961.976	2.5 - 13	35	120	67	41 - 60	NBC13	NBN13	4.00
BT50-NBS13-165	961.977	2.5 - 13	35	165	112	41 - 60	NBC13	NBN13	4.30
BT50-NBS13-200	961.978	2.5 - 13	35	200	147	41 - 60	NBC13	NBN13	4.50
BT50-NBS13-250	961.979	2.5 - 13	35	250	197	41 - 60	NBC13	NBN13	5.10
BT50-NBS13-300	961.980	2.5 - 13	35	300	247	41 - 60	NBC13	NBN13	5.40
BT50-NBS16-75	961.981	2.5 - 16	42	75	29	45 - 65	NBC16	NBN16	3.80
BT50-NBS16-90	961.982	2.5 - 16	42	90	44	45 - 65	NBC16	NBN16	3.90
BT50-NBS16-120	961.983	2.5 - 16	42	120	72	45 - 65	NBC16	NBN16	4.20
BT50-NBS16-165	961.984	2.5 - 16	42	165	117	45 - 65	NBC16	NBN16	4.50
BT50-NBS16-200	961.985	2.5 - 16	42	200	152	45 - 65	NBC16	NBN16	4.80
BT50-NBS16-250	961.986	2.5 - 16	42	250	202	45 - 65	NBC16	NBN16	5.60
BT50-NBS20-75	961.987	2.5 - 20	46	75	31	48 - 65	NBC20	NBN20	3.80
BT50-NBS20-90	961.988	2.5 - 20	46	90	42	48 - 65	NBC20	NBN20	4.00
BT50-NBS20-120	961.989	2.5 - 20	46	120	72	48 - 65	NBC20	NBN20	4.20
BT50-NBS20-165	961.990	2.5 - 20	46	165	117	48 - 65	NBC20	NBN20	4.70
BT50-NBS20-200	961.991	2.5 - 20	46	200	152	48 - 65	NBC20	NBN20	5.10
BT50-NBS20-250 *	961.992	2.5 - 20	46	250	202	48 - 65	NBC20	NBN20	6.00

1. New Baby Nut is included.
2. Max. 20 000 min-1 is valid for L = 60 and 90 mm.
3. * Center through coolant is not available.
4. "H" is the max. tool shank length that can be inserted for these models.
5. "G" is the adjusting screw (optional).

Accessories & Spare Parts

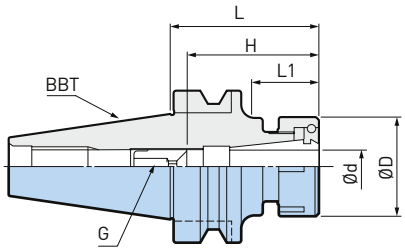
New Baby Nuts	Baby Perfect Seals	New Baby Collets	New Baby Wrenches	Adjusting Screws NBA	Taper Cleaners
▶ 367	▶ 370	▶ 360	▶ 385	▶ 367	▶ 404

New Baby Chuck Extra Short

A high precision collet chuck to perform all machining applications.

Coolant Through Hole

A.1



ø1.5 - 16mm

Model	Article No.	Ød	ØD	L	L1	H	Collet Model	Nut Model	Weight (kg)
BBT30-NBS10-45	100007.001.0	1.5 - 10	30	45	20	35 - 45	NBC10	NBN10	0.44
BBT30-NBS13-45	100007.002.0	2.5 - 13	35	45	21	41 - 53	NBC13	NBN13	0.43
BBT30-NBS16-45	100007.003.0	2.5 - 16	42	45	21	45 - 53	NBC16	NBN16	0.43

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. New Baby Nut is included.
3. "H" is the max. tool shank length that can be inserted for these models.
4. "G" is the adjusting screw (optional).

Accessories & Spare Parts

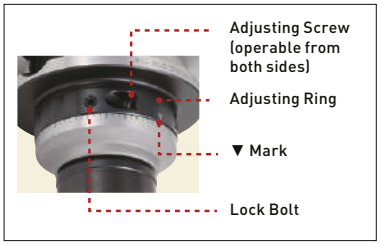
New Baby Nuts	Baby Perfect Seals	New Baby Collets	New Baby Wrenches	Adjusting Screws NBA	Taper Cleaners
▶ 367	▶ 370	▶ 360	▶ 385	▶ 367	▶ 404

New Baby Chuck Type NRA

New Baby Chuck holder with runout adjustable tool function.

Coolant Through Hole

BIG-PLUS Dual-Contact



Simple structure for easy adjustment

1. Turn the adjusting ring and line up the ▼ mark with peak runout position.
2. Adjust the lock bolts in 3 locations to fix the ring.
3. The runout amount is adjusted by tightening the adjusting screw.

A.1

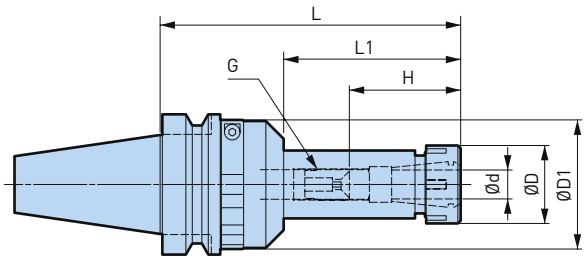


Fig. 1

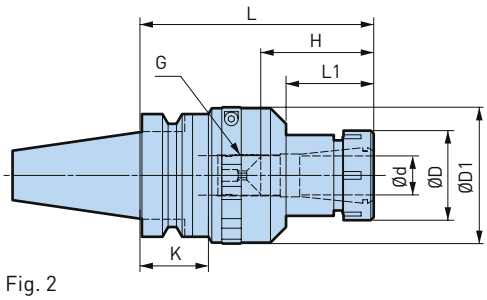


Fig. 2

ø0.5 - 20mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	K	H	Collet Model	Nut Model	Adjust-ment l=50	Adjust-ment l=100	Weight (kg)
BBT30-NBS8-75NRA	806.259	1	0.5 - 8	25	45	75	28	-	23 - 42	NBC8	NBN8	20 µm	31 µm	0.69
BBT30-NBS13-110NRA	806.260	2	2.5 - 13	35	58	110	34	35	41 - 60	NBC13	NBN13	18 µm	27 µm	1.35
BBT40-NBS8-90NRA	806.261	1	0.5 - 8	25	45	90	37	-	23 - 42	NBC8	NBN8	22 µm	33 µm	1.30
BBT40-NBS13-90NRA	806.262	1	2.5 -13	35	58	90	34	-	41 - 60	NBC13	NBN13	18 µm	27 µm	1.60
BBT40-NBS13-135NRA	806.263	1	2.5 -13	35	58	135	79	-	41 - 60	NBC13	NBN13	25 µm	34 µm	1.90
BBT40-NBS20-120NRA	804.693	2	2.5 - 20	46	70	120	45	35	48 - 65	NBC20	NBN20	17 µm	25 µm	2.40
BBT40-NBS20-150NRA	806.264	2	2.5 - 20	46	70	150	65	45	48 - 65	NBC20	NBN20	21 µm	29 µm	2.90
BBT50-NBS13-105NRA	804.697	1	2.5 -13	35	58	105	38	-	41 - 60	NBC13	NBN13	19 µm	28 µm	4.20
BBT50-NBS13-135NRA	804.698	1	2.5 -13	35	58	135	68	-	41 - 60	NBC13-□	NBN13	24 µm	33 µm	4.30
BBT50-NBS13-165NRA	806.265	1	2.5 -13	35	58	165	98	-	41 - 60	NBC13-□	NBN13	30 µm	39 µm	4.50
BBT50-NBS20-120NRA	804.699	1	2.5 - 20	46	70	120	48	-	48 - 65	NBC20-□	NBN20	17 µm	25 µm	4.70
BBT50-NBS20-150NRA	804.700	1	2.5 - 20	46	70	150	78	-	48 - 65	NBC20-□	NBN20	22 µm	30 µm	5.00

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Nut is included.
3. Collet, wrench and adjusting screw need to be ordered seperately.
4. "H" is the max. tool shank length that can be inserted for these models.
5. The adjustment amount depends on the length of the holder and the tool projection length. The maximum adjustment amount for tool projection lengths of 50 mm and 100 mm is shown in the table.

Accessories & Spare Parts

New Baby Collets	New Baby Nuts	Baby Perfect Seals	New Baby Wrenches
▶ 360	▶ 367	▶ 370	▶ 385

MEGA Double Power Chuck Type D

Flange contacting nut assures highest rigidity. Type D for use with/without coolant through.

Coolant Through Hole

BIG-PLUS Dual-Contact

ø16 - 42mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	L2	H	E	E1	max. min-1	Weight (kg)
BBT30-MEGA16D-60	978.188	1	16	45	47	60	25	-	62	48	50	30,000	0.72
BBT30-MEGA20D-65 *	978.187	1	20	50	51	65	30	-	60	50	50	25,000	0.77
BBT40-MEGA16D-75A	801.711	2	16	42	53	75	25	38	71	48	55	30,000	1.50
BBT40-MEGA16D-105A	801.730	2	16	42	53	105	25	38	71	48	55	30,000	2.10
BBT40-MEGA16D-135A	803.115	2	16	42	53	135	25	38	71	48	55	25,000	2.70
BBT40-MEGA16D-165A	803.196	2	16	42	53	165	25	38	71	48	55	22,000	3.20
BBT40-MEGA16D-200A	803.157	2	16	42	53	200	25	38	71	48	55	18,000	3.90
BBT40-MEGA20D-75A	803.148	2	20	50	55	75	34	44	69 - 79	50	56	30,000	1.50
BBT40-MEGA20D-105A	803.116	2	20	50	55	105	34	44	69 - 79	50	56	30,000	2.10
BBT40-MEGA20D-120A	803.197	2	20	50	55	120	34	44	69 - 79	50	56	27,000	2.40
BBT40-MEGA20D-135A	803.130	2	20	50	55	135	34	44	69 - 79	50	56	25,000	2.70
BBT40-MEGA20D-165A	803.158	2	20	50	55	165	34	44	69 - 79	50	56	22,000	3.30
BBT40-MEGA20D-200A	803.188	2	20	50	55	200	34	44	69 - 79	50	56	15,000	3.90
BBT40-MEGA25D-75A	801.731	1	25	62	63	75	39	-	73 - 83	56	57	27,000	1.70
BBT40-MEGA25D-105A	803.198	1	25	62	63	105	39	-	71 - 81	56	57	26,000	2.40
BBT40-MEGA25D-135A	801.732	1	25	62	63	135	39	-	71 - 81	56	57	24,000	3.00
BBT40-MEGA25D-165A	803.134	1	25	62	63	165	39	-	71 - 81	56	57	21,000	3.70
BBT40-MEGA25D-200A	803.138	1	25	62	63	200	39	-	71 - 81	56	57	12,000	4.50
BBT40-MEGA32D-90A	803.199	1	32	70	71	90	33	-	71 - 81	60	64	26,000	2.10
BBT40-MEGA32D-105A	803.131	1	32	70	71	105	33	-	79 - 89	60	64	26,000	2.40
BBT40-MEGA32D-135A	803.135	1	32	70	71	135	33	-	79 - 89	60	64	22,000	3.10
BBT40-MEGA32D-165A	803.159	1	32	70	71	165	33	-	79 - 89	60	64	20,000	3.80
BBT40-MEGA32D-200A	803.186	1	32	70	71	200	33	-	79 - 89	60	64	10,000	4.60

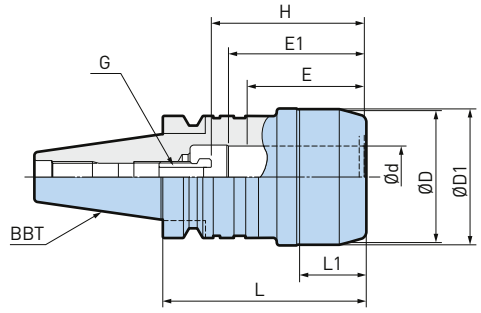


Fig. 1

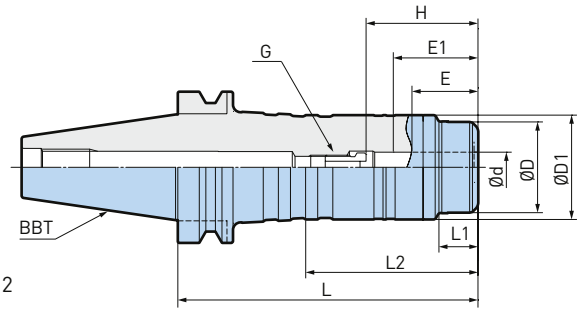


Fig. 2

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	L2	H	E	E1	max. min-1	Weight (kg)
BBT50-MEGA16D-105	969.592	2	16	46	55	105	23	33	71	48	50	20,000	4.60
BBT50-MEGA16D-135	968.026	2	16	46	55	135	23	33	71	48	50	19,000	5.20
BBT50-MEGA16D-165	968.027	2	16	46	55	165	23	33	71	48	50	17,000	5.70
BBT50-MEGA16D-200	968.028	2	16	46	55	200	23	33	71	48	50	15,000	6.40
BBT50-MEGA20D-105	969.593	2	20	60	69	105	25	36	69 - 79	50	56	20,000	5.10
BBT50-MEGA20D-135	969.594	2	20	60	69	135	25	36	69 - 79	50	56	19,000	6.00
BBT50-MEGA20D-165	968.030	2	20	60	69	165	25	36	69 - 79	50	56	17,000	6.80
BBT50-MEGA20D-200	968.031	2	20	60	69	200	25	114	69 - 79	50	56	14,000	7.60
BBT50-MEGA25D-105	969.595	2	25	70	77	105	32	45	76 - 86	56	65	20,000	5.40
BBT50-MEGA25D-135	969.596	2	25	70	77	135	32	45	76 - 86	56	65	19,000	6.50
BBT50-MEGA25D-165	968.033	2	25	70	77	165	32	45	76 - 86	56	65	17,000	7.50
BBT50-MEGA25D-200	968.034	2	25	70	77	200	32	119	76 - 86	56	65	12,000	8.60
BBT50-MEGA32D-90	968.036	2	32	80	86	92	39	54	78 - 95	60	71	20,000	4.90
BBT50-MEGA32D-105	969.597	2	32	80	86	105	39	54	78 - 95	60	71	20,000	5.50
BBT50-MEGA32D-135	969.598	2	32	80	86	135	39	54	78 - 95	60	71	18,000	6.90
BBT50-MEGA32D-165	968.037	2	32	80	86	165	39	54	78 - 95	60	71	15,000	8.30
BBT50-MEGA32D-200	968.038	2	32	80	86	200	39	129	78 - 95	60	71	12,000	9.60
BBT50-MEGA32D-250	968.039	2	32	80	86	250	39	169	78 - 95	60	71	10,000	11.80
BBT50-MEGA42D-105	968.041	1	42	99	100	105	40	-	88 - 105	70	71	15,000	6.10
BBT50-MEGA42D-135	968.042	1	42	99	100	135	40	-	88 - 105	70	71	15,000	7.80
BBT50-MEGA42D-165	968.043	1	42	99	100	165	40	-	88 - 105	70	71	14,000	9.60

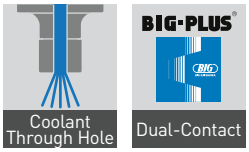
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Wrench and axial adjusting screw are to be ordered separately.
3. As a back stop for cutting tools for the MEGA16D models, a commercially available hex socket head screw can be used without coolant through.
4. "H" is the max. tool shank length that can be inserted for these models.
5. "G" is the adjusting screw (optional).
6. "E" is the min. clamping length.
7. "E1" is the min. clamping length for optimum use with center through coolant.
8. * Only OCA collet and C collet can be used.

Accessories & Spare Parts

PJC Collets	OCA Collets	PSC Collets	C Collets	MEGA Wrenches	Adjusting Screws HMA
▶ 379	▶ 380	▶ 380	▶ 381	▶ 384	▶ 383

MEGA Double Power Chuck Type DS

Flange contacting nut assures highest rigidity. Unique coolant supply design ensures efficient coolant supply to the cutting tool peripherally.



ø12 - 42mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	L2	H	E	max. min-1	Weight (kg)
BBT30-MEGA12DS-58	100006.004.0	2	12	38	43	59	25	33	61	43	30,000	0.65
BBT30-MEGA16DS-60	978.030	1	16	46	47	62.5	28	-	64	50	30,000	0.73
BBT30-MEGA20DS-65 *	978.184	1	20	50	51	67.5	33	-	62	52	25,000	0.78
BBT40-MEGA12DS-75	100006.005.0	2	12	38	43	76	25	33	65	43	30,000	1.40
BBT40-MEGA12DS-105	100006.006.0	2	12	38	43	106	25	33	65	43	30,000	1.80
BBT40-MEGA16DS-75A	801.712	2	16	42	53	77	27	40	73	50	30,000	1.50
BBT40-MEGA16DS-105A	803.149	2	16	42	53	107	27	40	73	50	30,000	2.10
BBT40-MEGA16DS-135A	803.117	2	16	42	53	137	27	40	73	50	25,000	2.70
BBT40-MEGA16DS-165A	803.200	2	16	42	53	167	27	40	73	50	22,000	3.20
BBT40-MEGA16DS-200A	803.160	2	16	42	53	202	27	40	73	50	18,000	3.90
BBT40-MEGA20DS-75A	803.150	2	20	50	55	77	36	46	71 - 81	52	30,000	1.50
BBT40-MEGA20DS-105A	803.118	2	20	50	55	107	36	46	71 - 81	52	30,000	2.10
BBT40-MEGA20DS-120A	803.201	2	20	50	55	122	36	46	71 - 81	52	27,000	2.40
BBT40-MEGA20DS-135A	803.132	2	20	50	55	137	36	46	71 - 81	52	25,000	2.70
BBT40-MEGA20DS-165A	803.161	2	20	50	55	167	36	46	71 - 81	58	22,000	3.30
BBT40-MEGA20DS-200A	803.189	2	20	50	55	202	36	46	71 - 81	52	15,000	4.00
BBT40-MEGA25DS-75A	803.119	1	25	62	63	77	41	-	75 - 85	58	27,000	1.70
BBT40-MEGA25DS-105A	801.713	1	25	62	63	107	41	-	73 - 83	58	26,000	2.40
BBT40-MEGA25DS-135A	803.162	1	25	62	63	137	41	-	73 - 83	58	24,000	3.00
BBT40-MEGA25DS-165A	803.136	1	25	62	63	167	41	-	73 - 83	58	21,000	3.70
BBT40-MEGA25DS-200A	803.139	1	25	62	63	202	41	-	71 - 81	58	12,000	4.50
BBT40-MEGA32DS-90A	803.202	1	32	70	71	92	35	-	73 - 83	62	26,000	2.10
BBT40-MEGA32DS-105A	803.133	1	32	70	71	107	35	-	81 - 91	62	26,000	2.40
BBT40-MEGA32DS-135A	803.137	1	32	70	71	137	35	-	81 - 91	62	22,000	3.10
BBT40-MEGA32DS-165A	803.163	1	32	70	71	167	35	-	81 - 91	62	16,000	3.80
BBT40-MEGA32DS-200A	803.187	1	32	70	71	202	35	-	81 - 91	62	10,000	4.60

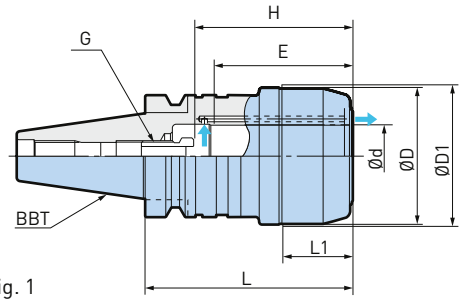


Fig. 1

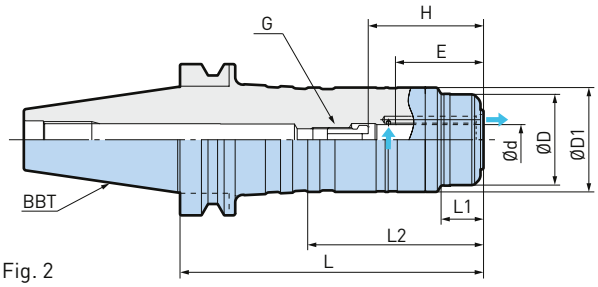


Fig. 2

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	L2	H	E	max. min-1	Weight (kg)
BBT50-MEGA12DS-105	100006.001.0	2	12	38	43	106	25	33	65	43	21,000	4.30
BBT50-MEGA12DS-135	100006.002.0	2	12	38	43	136	25	33	65	43	20,000	4.70
BBT50-MEGA12DS-165	100006.003.0	2	12	38	43	166	25	33	65	43	19,000	5.20
BBT50-MEGA16DS-105	968.708	2	16	46	55	107.5	26	36	73	50	20,000	4.60
BBT50-MEGA16DS-135	968.076	2	16	46	55	137.5	26	36	73	50	19,000	5.20
BBT50-MEGA16DS-165	968.077	2	16	46	55	167.5	26	36	73	50	17,000	5.70
BBT50-MEGA16DS-200	968.078	2	16	46	55	202,5	26	36	73	50	15,000	6.40
BBT50-MEGA16DS-250	968.079	2	20	46	55	252,5	26	36	73	50	13,000	7.40
BBT50-MEGA20DS-105	968.709	2	20	60	69	107.5	28	38	71 - 81	52	20,000	5.10
BBT50-MEGA20DS-135	968.710	2	20	60	69	137.5	28	38	71 - 81	52	19,000	6.00
BBT50-MEGA20DS-165	968.080	2	20	60	69	167.5	28	38	71 - 81	52	17,000	6.80
BBT50-MEGA20DS-200	968.081	2	20	60	69	202,5	28	116	71 - 81	52	14,000	7.60
BBT50-MEGA20DS-250	968.082	2	20	60	69	252,5	28	138	71 - 81	52	12,000	9.10
BBT50-MEGA25DS-105	968.711	2	25	70	77	107.5	34	47	78 - 88	58	20,000	5.40
BBT50-MEGA25DS-135	968.712	2	25	70	77	137.5	34	47	78 - 88	58	19,000	6.50
BBT50-MEGA25DS-165	968.083	2	25	70	77	167.5	34	47	78 - 88	58	17,000	7.50
BBT50-MEGA25DS-200	968.084	2	25	70	77	205,5	34	121	78 - 88	58	12,000	8.60
BBT50-MEGA25DS-250	968.085	2	25	70	77	252,5	34	138	78 - 88	58	10,000	10.50
BBT50-MEGA32DS-90	968.086	2	32	80	86	94.5	42	57	80 - 97	62	20,000	4.90
BBT50-MEGA32DS-105	968.713	2	32	80	86	107.5	42	57	80 - 97	62	20,000	5.50
BBT50-MEGA32DS-135	968.714	2	32	80	86	137.5	42	57	80 - 97	62	18,000	6.90
BBT50-MEGA32DS-165	968.087	2	32	80	86	167.5	42	57	80 - 97	62	15,000	8.40
BBT50-MEGA32DS-200	968.088	2	32	80	86	202.5	42	131	80 - 97	62	12,000	9.60
BBT50-MEGA32DS-250	968.089	2	32	80	86	252,5	42	171	80 - 97	62	10,000	11.80
BBT50-MEGA32DS-300	968.090	2	32	80	86	302,5	42	183	80 - 97	62	5,000	14.10
BBT50-MEGA42DS-105	968.091	1	42	99	100	107	42	-	90 - 107	72	15,000	6.10
BBT50-MEGA42DS-135	968.092	1	42	99	100	137	42	-	90 - 107	72	15,000	7.80
BBT50-MEGA42DS-165	968.093	1	42	99	100	167	42	-	90 - 107	72	14,000	9.60

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Wrench and axial adjusting screw are to be ordered separately.
3. As a back stop for cutting tools for MEGA16DS, a commercially available hex socket head screw (M8) can be used, without coolant through.
4. "E" is the min. clamping length.
5. "H" is the max. tool shank length that can be inserted for these models.
6. "G" is the adjusting screw (optional).
7. * Adjustable straight collet (C20-_+CS) and OCA collet cannot be used.

Accessories & Spare Parts

PJC Collets	PSC Collets	C Collets	MEGA Wrenches	Adjusting Screws HMA
▶ 379	▶ 380	▶ 381	▶ 384	▶ 383

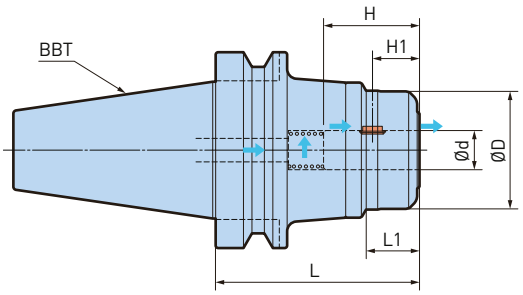
MEGA Perfect Grip

100% security against pulling out of the cutting tool under any torque load.

Coolant Through Hole

Dual-Contact

A.1



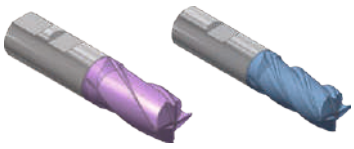
ø16 - 32mm

Model	Article No.	Ød	ØD	L	L1	H	H1	Weight (kg)
BBT40-MEGA16DPG-75	806.362	16	46	75	24	47	23	1.60
BBT40-MEGA20DPG-100	806.363	20	60	100	27	49	24	2.50
BBT50-MEGA16DPG-105	805.449	16	46	105	24	47	23	4.60
BBT50-MEGA16DPG-165	805.450	16	46	165	24	47	23	5.80
BBT50-MEGA20DPG-105	805.451	20	60	105	27	49	24	5.10
BBT50-MEGA20DPG-165	805.452	20	60	165	27	49	24	6.80
BBT50-MEGA25DPG-105	805.453	25	70	105	33	55	23	5.40
BBT50-MEGA25DPG-165	805.454	25	70	165	33	55	23	7.70
BBT50-MEGA32DPG-105	805.455	32	80	105	41	59	23	5.60
BBT50-MEGA32DPG-165	805.456	32	80	165	41	59	23	8.50

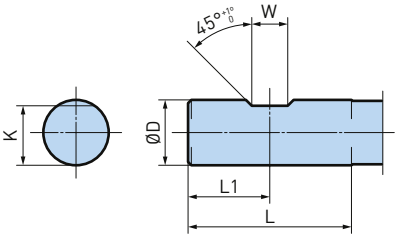
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Key grip and spring are included with each holder.
3. MEGA wrench is to be ordered separately.
4. „H1" shows distance from center of key grip to front end.

Weldon Shank Standards

(DIN 1835-1)
The following standard shank is required for MEGA Perfect Grip.

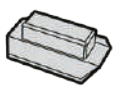


Ø 25/32 mm **Ø 20 mm**



ØD		L	L1	W		K	
Nominal	Tolerance			Nominal	Tolerance	Nominal	Tolerance
16	h6	48	24	10	+ 0.05 0	14.2	h13
20		50	25	11		18.2	
25		56	32	12		23	
32		60	36	14		30	

Accessories & Spare Parts

Key Grip	Spring	MEGA Wrenches
		
▶ 383	▶ 383	▶ 384

New Hi-Power Milling Chuck Type S

The original design assures heavy machining with high power and precision.

Coolant Through Hole

BIG-PLUS Dual-Contact

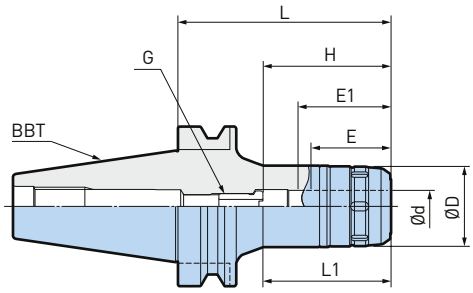


Fig. 1

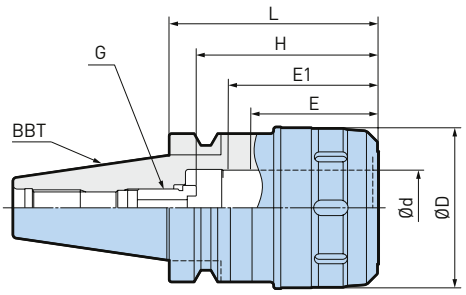


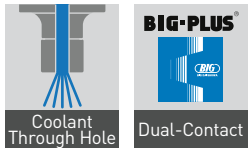
Fig. 2

ø16 - 42mm

Model	Article No.	Fig.	Ød	ØD	L	L1	H	E	E1	Weight (kg)
BBT30-HMC16S-70 *	964.101S	1	16	43	70	47	71	48	55	0.75
BBT30-HMC20S-75	964.102S	2	20	50	75	-	56 - 66	50	56	0.89
BBT30-HMC25S-90	964.103S	2	25	55	90	-	64 - 74	56	57	1.04
BBT30-HMC32S-105	978.181S	2	32	62	105	-	70 - 80	60	58	1.34
BBT40-HMC16S-75 *	964.190S	1	16	43	75	45	71	48	55	1.40
BBT40-HMC16S-120 *	800.144	1	16	43	120	90	71	48	55	1.80
BBT40-HMC20S-75	964.191S	1	20	50	75	46	69 - 79	50	56	1.40
BBT40-HMC20S-105	964.194S	1	20	50	105	75	69 - 79	50	56	1.90
BBT40-HMC20S-120	964.196S	1	20	50	120	90	69 - 79	50	56	2.10
BBT40-HMC25S-75	964.192S	1	25	59	75	47	73 - 83	56	57	1.60
BBT40-HMC25S-105	964.195S	1	25	59	105	77	73 - 83	56	57	2.20
BBT40-HMC25S-135	800.146	1	25	59	135	107	73 - 83	56	57	2.80
BBT40-HMC32S-90	978.279S	2	32	68	90	-	71 - 81	60	64	2.00
BBT40-HMC32S-105	800.147	2	32	68	105	-	79 - 89	60	64	2.30
BBT40-HMC32S-135	800.148	2	32	68	135	-	79 - 89	60	64	3.00

continues on the next page

New Hi-Power Milling Chuck Type S



A.1

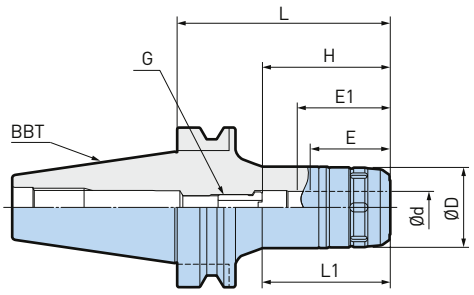


Fig. 1

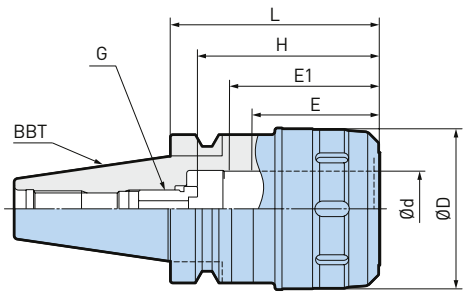


Fig. 2

Model	Article No.	Fig.	Ød	ØD	L	L1	H	E	E1	Weight (kg)
BBT50-HMC16S-105 *	800.278	1	16	43	105	57	71	48	55	4.20
BBT50-HMC16S-135 *	800.279	1	16	43	135	80	71	48	55	4.50
BBT50-HMC16S-165 *	800.280	1	16	43	165	100	71	48	55	5.00
BBT50-HMC16S-200 *	800.281	1	16	43	200	120	71	48	55	5.60
BBT50-HMC16S-250	100008.011.0	1	16	43	250	155	71	48	55	6.30
BBT50-HMC20S-105	800.282	1	20	50	105	57	69 - 79	50	56	4.40
BBT50-HMC20S-135	800.283	1	20	50	135	80	69 - 79	50	56	4.80
BBT50-HMC20S-165	800.284	1	20	50	165	100	69 - 79	50	56	5.30
BBT50-HMC20S-200	800.285	1	20	50	200	125	69 - 79	50	56	6.00
BBT50-HMC20S-250	100008.003.0	1	20	50	250	160	69 - 79	50	56	7.00
BBT50-HMC20S-300	800.286	1	20	50	300	200	69 - 79	50	56	8.00
BBT50-HMC25S-105	800.287	1	25	59	105	57	76 - 86	56	57	4.60
BBT50-HMC25S-135	800.288	1	25	59	135	87	76 - 86	56	57	5.20
BBT50-HMC25S-165	800.289	1	25	59	165	105	76 - 86	56	57	5.90
BBT50-HMC25S-200	800.290	1	25	59	200	125	76 - 86	56	57	6.80
BBT50-HMC25S-250	100008.012.0	1	25	59	250	160	76 - 86	56	57	8.10
BBT50-HMC32S-105	800.291	1	32	68	105	64	88 - 98	60	72	4.70
BBT50-HMC32S-135	800.292	1	32	68	135	89	88 - 98	60	72	5.50
BBT50-HMC32S-165	800.293	1	32	68	165	105	88 - 98	60	72	6.40
BBT50-HMC32S-200	800.294	1	32	68	200	130	88 - 98	60	72	7.50
BBT50-HMC32S-250	100008.004.0	1	32	68	250	165	88 - 98	60	72	9.00
BBT50-HMC32S-300	800.295	1	32	68	300	200	88 - 98	60	72	10.50
BBT50-HMC32S-350	100008.005.0	1	32	68	350	240	88 - 98	60	72	12.00
BBT50-HMC42S-105	806.709	1	42	85	105	65	93 - 105	70	73	5.10
BBT50-HMC42S-135	-	1	42	85	135	94	93 - 105	70	73	6.40
BBT50-HMC42S-165	805.773	1	42	85	165	123	93 - 105	70	73	7.70
BBT50-HMC42S-200	-	1	42	85	200	130	93 - 105	70	73	9.30
BBT50-HMC42S-300	807.003	1	42	85	300	200	93 - 105	70	73	13.70
BBT50-HMC42S-400	100008.006.0	1	42	85	400	300	93 - 105	70	73	18.00

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Wrench and axial adjusting screw are to be ordered separately.
3. * As a back stop for cutting tools for the HMC16S models, a commercially available hex socket head screw (M8) can be used, without coolant through.
4. "H" is the max. tool shank length that can be inserted for these models.
5. "G" is the adjusting screw (optional).
6. "E" is the min. clamping length.
7. "E1" is the min. clamping length for optimum use with center through coolant.

Accessories & Spare Parts

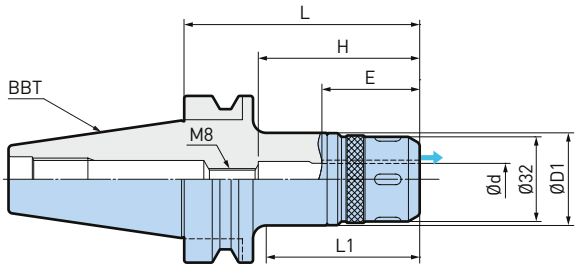
PJC Collets	OCA Collets	PSC Collets	C Collets	FK Wrenches	Adjusting Screws HMA
► 379	► 380	► 380	► 381	► 385	► 383

New Hi-Power Milling Chuck Type HMC12J

Extremely slim and rigid design with jet through coolant.

Coolant Through Hole

BIG-PLUS Dual-Contact



ø12mm

Model	Article No.	Ød	ØD1	L	L1	H	E	Weight (kg)
BBT30-HMC12J-60	805.814	12	35	60	38	65	43	0.56
BBT40-HMC12J-90	805.815	12	35	90	63	65	43	1.40
BBT40-HMC12J-120	805.816	12	35	120	70	65	43	1.60
BBT50-HMC12J-105	805.817	12	35	105	67	65	43	4.00
BBT50-HMC12J-135	805.818	12	35	135	70	65	43	4.30
BBT50-HMC12J-165	805.819	12	35	165	90	65	43	4.60

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Wrench is to be ordered separately.
3. "H" is the max. tool shank length that can be inserted for these models.
4. "E" is the min. clamping length.

Accessories & Spare Parts

PJC Collets	FK Wrenches
▶ 379	▶ 385

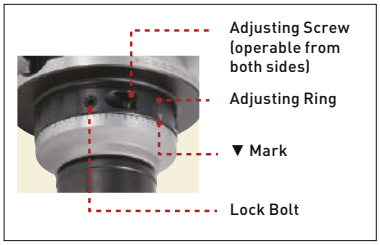
New Hi-Power Milling Chuck Type NRA

New Hi-Power Milling Chuck with runout adjustable function.

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1



Simple structure for easy adjustment

1. Turn the adjusting ring and line up the ▼ mark with peak runout position.
2. Adjust the lock bolts in 3 locations to fix the ring.
3. The runout amount is adjusted by tightening the adjusting screw.

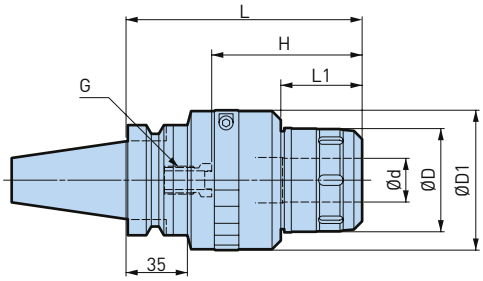


Fig. 1

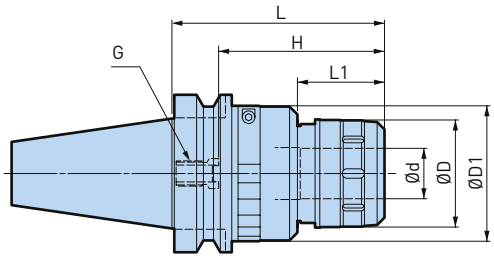


Fig. 2

ø20 - 32mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	H	Adjustment l=50	Adjustment l=100	Weight (kg)
BBT40-HMC20S-130NRA	806.164	1	20	50	72	130	46	69 - 79	23 µm	33 µm	2.90
BBT40-HMC25S-135NRA	804.690	1	25	59	80	135	46	75 - 85	21 µm	30 µm	3.50
BBT40-HMC32S-145NRA	804.691	1	32	68	86	145	55	85 - 95	20 µm	28 µm	4.10
BBT50-HMC20S-125NRA	806.270	2	20	50	72	125	46	69 - 79	23 µm	33 µm	5.20
BBT50-HMC25S-125NRA	806.271	2	25	59	80	125	46	75 - 85	21 µm	30 µm	5.50
BBT50-HMC32S-135NRA	806.272	2	32	68	86	135	55	85 - 95	20 µm	28 µm	6.30

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Wrench and axial adjusting screw are to be ordered separately.
3. "H" is the max. tool shank length that can be inserted for these models.
4. The adjustment amount depends on the length of the holder and the tool projection length. The maximum adjustment amount for tool projection lengths of 50 mm and 100 mm is shown in the table.

Accessories & Spare Parts

FK Wrenches	Adjusting Screws HMA	PJC Collets	PSC Collets	C Collets
▶ 385	▶ 383	▶ 379	▶ 380	▶ 381

Hydraulic Chuck Super Slim

Ultra precise hydraulic chuck with extremely slim design.

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1

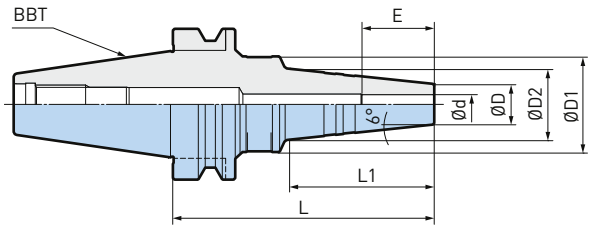


Fig. 1

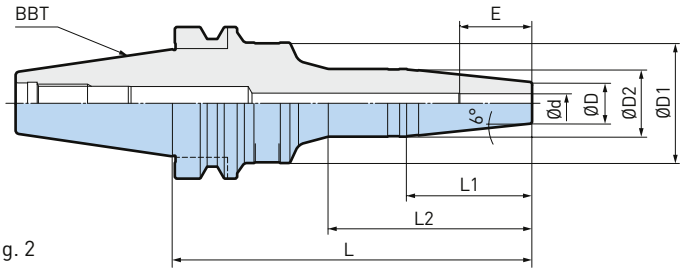


Fig. 2

ø3 - 12mm

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	E	Weight (kg)
BBT30-HDC3S-60 *	807.580	1	3	14	42	18	60	19	-	16	0.55
BBT30-HDC3S-90 *	805.462	1	3	14	42	25	90	50	-	16	0.62
BBT30-HDC3.175S-60	807.581	1	3.175	14	41.4	18	60	19	-	16	0.54
BBT30-HDC4S-60	803.053	1	4	14	46	20	60	28	-	19	0.48
BBT30-HDC4S-90	805.820	1	4	14	42	25	90	50	-	19	0.62
BBT30-HDC5S-90	805.821	1	5	14	42	25	90	50	-	22	0.63
BBT30-HDC6S-60	807.582	1	6	14	42	25	60	19	-	25	0.56
BBT30-HDC6S-90	803.054	1	6	14	42	25	90	50	-	25	0.62
BBT30-HDC6S-120	100010.002.0	2	6	14	42	26	120	57	77	25	0.75
BBT30-HDC8S-90	803.055	1	8	17	42	28	90	50	-	31	0.65
BBT30-HDC8S-120	100010.003.0	2	8	17	42	28	120	52	78	31	0.75
BBT30-HDC10S-90	803.051	1	10	19	44	30	90	50	-	33	0.67
BBT30-HDC10S-120	100010.004.0	2	10	19	44	30	120	52	78	33	0.80
BBT30-HDC12S-90	803.052	1	12	21	46	32	90	50	-	36	0.69
BBT30-HDC12S-120	100010.005.0	2	12	21	46	32	120	52	78	36	0.85
BBT40-HDC3S-90 *	805.463	1	3	14	38	24	90	44	-	16	1.20
BBT40-HDC3S-135	-	2	3	14	44	26	135	57	84	16	1.40
BBT40-HDC4S-60	803.060	1	4	14	38	19	60	22	-	19	1.10
BBT40-HDC4S-90	803.061	1	4	14	38	24	90	45	-	19	1.20
BBT40-HDC4S-135	805.464	2	4	14	44	26	135	57	84	19	1.40
BBT40-HDC5S-90	807.583	1	5	14	38	24	90	46	-	21	1.20

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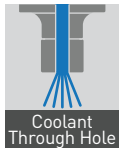
Hydraulic Chuck Super Slim



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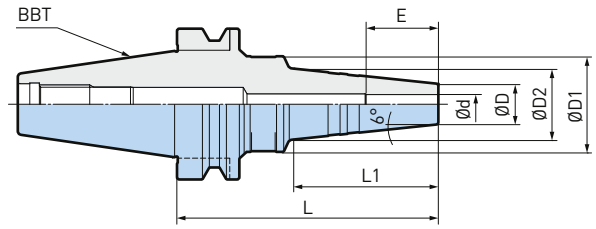


Fig. 1

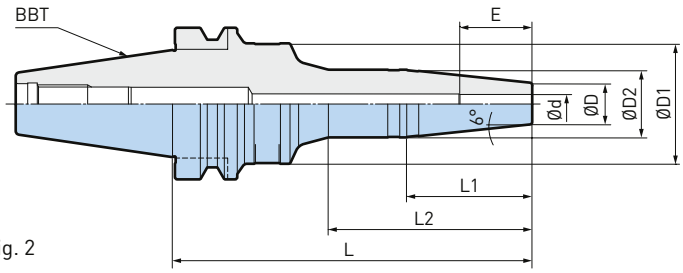


Fig. 2

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	E	Weight (kg)
BBT40-HDC6S-110	803.062	1	6	14	38	27	110	60	-	25	1.30
BBT40-HDC6S-150	803.063	2	6	14	48	26	150	57	85	25	1.60
BBT40-HDC6S-180	100010.006.0	2	6	14	48	26	180	57	100	25	1.70
BBT40-HDC8S-110	803.064	1	8	17	40	30	110	60	-	31	1.30
BBT40-HDC8S-150	803.065	2	8	17	50	28	150	52	85	31	1.60
BBT40-HDC8S-180	100010.007.0	2	8	17	50	28	180	52	100	31	1.80
BBT40-HDC10S-110	803.056	1	10	19	42	32	110	60	-	33	1.40
BBT40-HDC10S-150	803.057	2	10	19	50	30	150	52	85	33	1.70
BBT40-HDC10S-180	100010.008.0	2	10	19	50	30	180	52	100	33	1.80
BBT40-HDC12S-110	803.058	1	12	21	44	34	110	60	-	36	1.40
BBT40-HDC12S-150	803.059	2	12	21	50	32	150	52	85	36	1.70
BBT40-HDC12S-180	100010.009.0	2	12	21	50	32	180	52	100	36	1.90
BBT50-HDC4S-150	807.232	2	4	14	52	26	150	57	83	19	4.10
BBT50-HDC4S-200	807.584	2	4	14	56	26	200	57	100	19	4.60
BBT50-HDC6S-150	803.068	2	6	14	52	26	150	57	83	25	4.00
BBT50-HDC6S-200	805.822	2	6	14	56	26	200	57	100	25	4.60
BBT50-HDC8S-150	803.069	2	8	17	54	28	150	52	83	31	4.10
BBT50-HDC8S-200	805.823	2	8	17	58	28	200	52	100	31	4.70
BBT50-HDC10S-150	803.066	2	10	19	56	30	150	52	83	33	4.20
BBT50-HDC10S-200	805.824	2	10	19	60	30	200	52	100	33	4.80
BBT50-HDC12S-150	803.067	2	12	21	58	32	150	52	83	36	4.20
BBT50-HDC12S-200	805.825	2	12	21	62	32	200	52	100	36	4.90

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Adjusting screw and reduction collet can not be used.
3. "E" is the min. clamping length.
4. * Some coolant may leak from the inner diameter slits when using coolant.

Caution

- 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.

Accessories & Spare Parts

α Wiper Cleaners

▶ 404

Hydraulic Chuck Jet Through

Coolant or Minimum Quantity Lubrification is supplied to cutting edge securely. Maximum performance and high-precision with 5-axis machining.

Coolant Through Hole

BIG-PLUS Dual-Contact

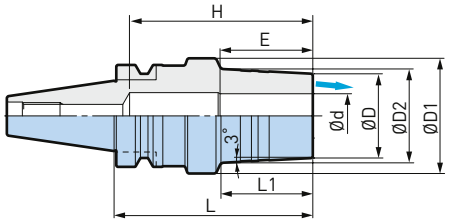


Fig. 2

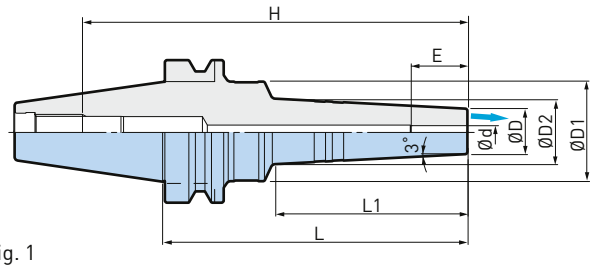


Fig. 1

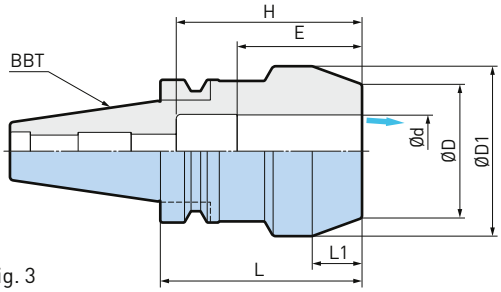
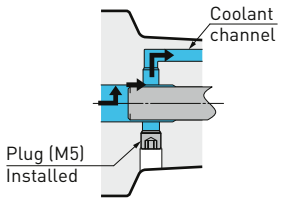


Fig. 3

ø4 - 32mm

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	H	E	Weight (kg)
BBT30-HDC4J-60	805.077	1	4	20	46	23	60	28	-	(84)	19	0.50
BBT30-HDC4J-90	807.372	1	4	20	42	26	90	50	-	(113)	19	0.66
BBT30-HDC6J-90	805.078	1	6	20	42	26	90	50	-	(113)	25	0.66
BBT30-HDC8J-90	805.079	1	8	22	42	28	90	50	-	(113)	31	0.68
BBT30-HDC10J-90	805.080	1	10	24	44	30	90	50	-	(113)	33	0.70
BBT30-HDC12J-90	805.081	1	12	26	46	32	90	50	-	113	36	0.72
BBT30-HDC16J-90	805.480	1	16	34	46	40	90	49	-	100	43	0.83
BBT30-HDC20J-90	805.481	2	20	38	52	43	90	40	-	83	43	0.92
BBT40-HDC4J-90	805.082	1	4	20	38	25	90	45	-	(125)	19	1.20
BBT40-HDC4J-135	805.549	1	4	20	44	30	135	85	-	(170)	19	1.50
BBT40-HDC6J-90	805.083	1	6	20	38	25	90	45	-	(125)	25	1.20
BBT40-HDC6J-135	805.084	1	6	20	44	29	135	85	-	(170)	25	1.50
BBT40-HDC6J-165	100011.002.0	1	6	20	46	32	165	105	-	(200)	25	1.70
BBT40-HDC8J-90	805.085	1	8	22	40	27	90	45	-	(125)	31	1.20
BBT40-HDC8J-135	805.086	1	8	22	46	31	135	85	-	(170)	31	1.50
BBT40-HDC8J-165	100011.003.0	1	8	22	48	34	165	105	-	(200)	31	1.80
BBT40-HDC10J-90	805.087	1	10	24	42	29	90	45	-	(125)	33	1.30
BBT40-HDC10J-135	805.088	1	10	24	48	33	135	85	-	(170)	33	1.60
BBT40-HDC10J-165	100011.004.0	1	10	24	50	36	165	105	-	(200)	33	1.90
BBT40-HDC12J-90	805.089	1	12	26	44	31	90	45	-	(125)	36	1.30
BBT40-HDC12J-135	805.090	1	12	26	50	35	135	85	-	(170)	36	1.60
BBT40-HDC12J-165	100011.005.0	1	12	26	52	38	165	105	-	(200)	36	1.90
BBT40-HDC16J-90	805.482	1	16	34	46	40	90	46	-	125	43	1.40
BBT40-HDC16J-135	805.483	1	16	34	50	44	135	89	-	170	43	1.80
BBT40-HDC20J-90	805.484	1	20	38	48	44	90	47	-	110	43	1.40
BBT40-HDC20J-135	805.485	1	20	38	53	48	135	90	-	155	43	1.90
BBT40-HDC25J-90	805.677	1	25	51	63	56	90	41	-	105	49	1.80
BBT40-HDC32J-90	805.678	3	32	59	75	-	90	20	-	82	56	2.10



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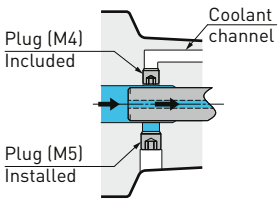
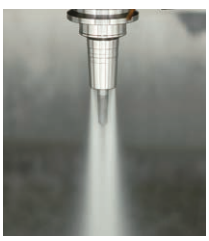


Center Through



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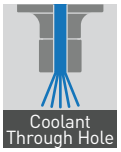
Hydraulic Chuck Jet Through



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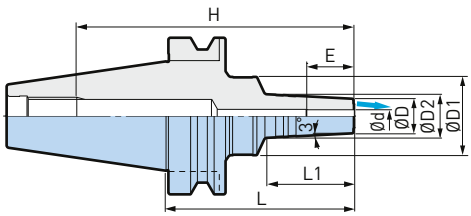

Fig. 4

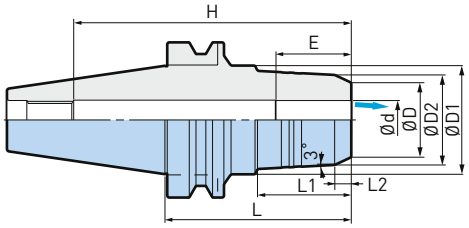

Fig. 5

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	H	E	Weight (kg)
BBT50-HDC4J-120	100011.006.0	4	4	20	48	26	120	55	-	(177)	17	3.80
BBT50-HDC6J-120	805.091	4	6	20	48	26	120	55	-	(177)	25	4.00
BBT50-HDC8J-120	805.092	4	8	22	50	28	120	55	-	(177)	31	4.00
BBT50-HDC10J-120	805.093	4	10	24	52	30	120	55	-	(177)	33	4.10
BBT50-HDC12J-120	805.094	4	12	26	54	32	120	55	-	(177)	36	4.10
BBT50-HDC16J-120	805.486	4	16	34	58	41	120	56	-	(177)	43	4.30
BBT50-HDC20J-120	805.487	4	20	38	62	45	120	56	-	(177)	43	4.30
BBT50-HDC25J-120	805.679	5	25	48	70	58	120	59	10	177	49	4.90
BBT50-HDC32J-120	805.680	5	32	58	78	67	120	60	9	177	56	5.00

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Straight collet can be used for HDC16J & 20J size models.
3. Adjusting screw cannot be used.
4. Larger diameter models, HDC16J or bigger are only available with peripheral coolant supply.
5. "E" is the min. clamping length.

Caution

- 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.

Accessories & Spare Parts

α Wiper Cleaners

► 404

Hydraulic Chuck Standard

For high precision machining in automotive, aerospace, medical and die & mold.

Coolant Through Hole

BIG-PLUS Dual-Contact

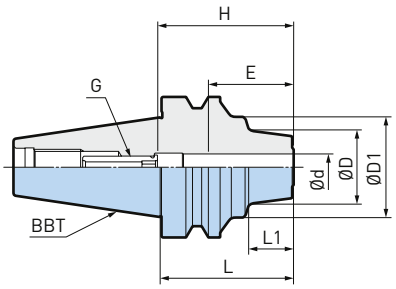

Fig. 1

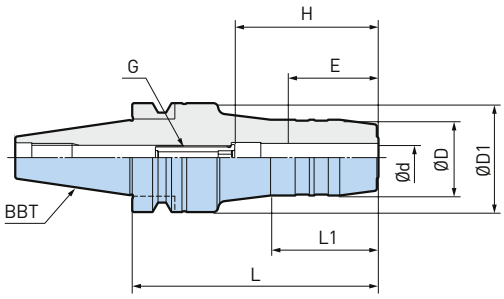

Fig. 2

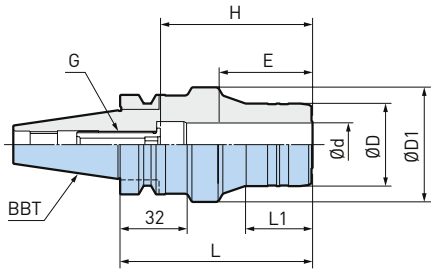

Fig. 3

ø6 - 42mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	L2	H	E	G	Weight (kg)
BBT30-HDC6-45	978.071	1	6	30	46	45	7	-	35 - 50	28	HDA6-05020	0.58
BBT30-HDC6-75	978.034	2	6	26	46	75	40	-	28 - 50	28	HDA6-05032	0.64
BBT30-HDC6-90	978.072	2	6	26	46	90	42	57	28 - 50	28	HDA6-05032	0.71
BBT30-HDC6-105	978.073	2	6	26	46	105	43	-	28 - 50	28	HDA6-05032	0.78
BBT30-HDC7-75	978.074	2	7	27	46	75	41	-	28 - 50	28	HDA6-05032	0.65
BBT30-HDC8-45	978.075	2	8	32	46	45	7	-	35 - 50	28	HDA8-06020	0.58
BBT30-HDC8-75	978.076	2	8	28	46	75	41	-	28 - 50	28	HDA8-06032	0.65
BBT30-HDC8-90	978.077	2	8	28	46	90	44	57	28 - 50	28	HDA6-05032	0.73
BBT30-HDC8-105	978.078	2	8	28	46	105	44	-	28 - 50	28	HDA8-06032	0.81
BBT30-HDC9-75	978.079	2	9	29	46	75	41	-	28 - 50	28	HDA8-06032	0.66
BBT30-HDC10-45	978.080	1	10	34	46	45	7	-	45 - 55	33	HDA10-08015	0.57
BBT30-HDC10-75	978.081	2	10	30	46	75	36	-	33 - 55	33	HDA10-08032	0.71
BBT30-HDC10-90	978.082	2	10	30	46	90	45	51	33 - 55	33	HDA10-08032	0.79
BBT30-HDC10-105	978.083	2	10	30	46	105	45	-	33 - 55	33	HDA10-08032	0.88
BBT30-HDC11-90	978.084	2	11	31	46	90	51	45	33 - 55	33	HDA10-08032	0.80
BBT30-HDC12-45	978.085	1	12	36	46	45	7	-	55 - 60	38	HDA12-10010	0.58
BBT30-HDC12-75	978.086	2	12	32	46	75	36	-	38 - 60	38	HDA12-10032	0.72
BBT30-HDC12-90	978.087	2	12	32	46	90	45	51	38 - 60	38	HDA12-10032	0.80
BBT30-HDC12-105	978.088	2	12	32	46	105	45	-	38 - 60	38	HDA12-10032	0.90
BBT30-HDC13-90	978.089	2	13	33	46	90	45	51	38 - 60	38	HDA12-10032	0.81
BBT30-HDC14-90	978.090	2	14	34	46	90	46	52	38 - 60	38	HDA12-10032	0.82
BBT30-HDC15-90	978.091	2	15	37	46	90	47	-	43 - 70	43	HDA12-10032	0.86
BBT30-HDC16-45 *	978.092	1	16	42	46	45	7	-	70 - 70	43	-	0.52
BBT30-HDC16-75	978.025	2	16	38	46	75	35	-	43 - 70	43	HDA16-12030	0.74
BBT30-HDC16-90	978.093	2	16	38	46	90	47	-	43 - 70	43	HDA16-12037	0.86
BBT30-HDC16-105	805.550	2	16	38	46	105	47	-	43 - 70	43	HDA16-12037	1.02
BBT30-HDC18-90	978.094	2	18	36	51	90	31	41	43 - 70	43	HDA16-12037	0.90
BBT30-HDC20-60 **	978.095	3	20	38	53	60	-	32	43 - 54	43	HDA16-12030	0.74
BBT30-HDC20-75	978.038	3	20	38	53	75	16	32	46 - 70	43	HDA16-12030	0.81
BBT30-HDC20-90	978.096	2	20	38	38	90	31	41	43 - 70	43	HDA16-12037	0.93
BBT30-HDC20-105	805.551	2	20	38	46	105	40	-	43 - 70	43	HDA16-12037	1.00
BBT30-HDC25-105	978.097	3	25	55	63	105	44	32	52 - 80	52	HDA25-16039	1.55
BBT30-HDC32-105	978.098	2	32	60	75	105	39	-	56 - 80	56	HDA25-16039	1.70

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A.1

Hydraulic Chuck Standard

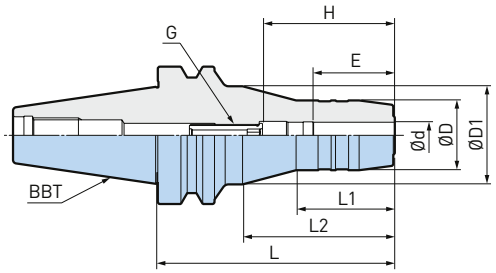

Fig. 4

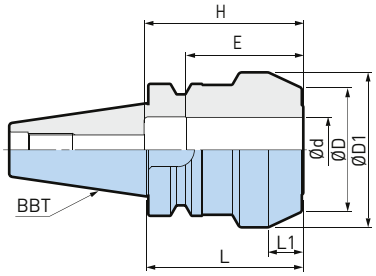

Fig. 5

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	L2	H	E	G	Weight (kg)
BBT40-HDC6-60	800.131	1	6	27	45	60	19	-	28 - 50	28	HDA6-05032	1.20
BBT40-HDC6-90	978.343	4	6	26	45	90	44	50	28 - 50	28	HDA6-05032	1.40
BBT40-HDC6-110	800.128	4	6	26	45	110	44	70	28 - 50	28	HDA6-05032	1.50
BBT40-HDC6-135	800.129	4	6	26	45	135	44	-	28 - 50	28	HDA6-05032	1.70
BBT40-HDC6-165	800.130	4	6	26	45	165	44	-	28 - 50	28	HDA6-05032	1.90
BBT40-HDC7-90	800.135	4	7	27	45	90	44	-	28 - 50	28	HDA6-05032	1.40
BBT40-HDC8-60	800.139	1	8	29	45	60	19	-	28 - 50	28	HDA8-06032	1.20
BBT40-HDC8-90	978.192	4	8	28	45	90	44	50	28 - 50	28	HDA8-06032	1.40
BBT40-HDC8-110	800.136	4	8	28	45	110	44	-	28 - 50	28	HDA8-06032	1.50
BBT40-HDC8-135	800.137	4	8	28	45	135	44	-	28 - 50	28	HDA8-06032	1.70
BBT40-HDC8-165	800.138	4	8	28	45	165	44	-	28 - 50	28	HDA8-06032	1.90
BBT40-HDC9-90	800.143	4	9	29	45	90	45	-	28 - 50	28	HDA8-06032	1.40
BBT40-HDC10-60	800.088	1	10	31	45	60	20	-	33 - 55	33	HDA10-08032	1.20
BBT40-HDC10-90	978.027	4	10	30	45	90	45	50	33 - 55	33	HDA10-08032	1.40
BBT40-HDC10-110	800.085	4	10	30	45	110	45	70	33 - 55	33	HDA10-08032	1.50
BBT40-HDC10-135	800.086	4	10	30	45	135	45	-	33 - 55	33	HDA10-08032	1.70
BBT40-HDC10-165	800.087	4	10	30	45	165	45	-	33 - 55	33	HDA10-08032	2.00
BBT40-HDC11-90	800.092	4	11	31	45	90	45	-	33 - 55	33	HDA10-08032	1.40
BBT40-HDC12-60	978.046	1	12	33	45	60	20	-	38 - 60	38	HDA12-10032	1.20
BBT40-HDC12-90	800.096	4	12	32	45	90	45	49	38 - 60	38	HDA12-10032	1.40
BBT40-HDC12-110	800.093	4	12	32	45	110	45	69	38 - 60	38	HDA12-10032	1.60
BBT40-HDC12-135	800.094	4	12	32	45	135	45	-	38 - 60	38	HDA12-10032	1.70
BBT40-HDC12-165	800.095	4	12	32	45	165	45	-	38 - 60	38	HDA12-10032	2.00
BBT40-HDC13-90	800.099	4	13	33	45	90	45	-	38 - 60	38	HDA12-10032	1.40
BBT40-HDC14-90	978.028	4	14	34	45	90	46	49	38 - 60	38	HDA12-10032	1.40
BBT40-HDC14-110	800.100	4	14	34	45	110	46	-	38 - 60	38	HDA12-10032	1.60
BBT40-HDC14-135	800.101	4	14	34	45	135	46	-	38 - 60	38	HDA12-10032	1.80
BBT40-HDC15-90	800.104	4	15	37	45	90	47	-	43 - 70	43	HDA16-12037	1.40
BBT40-HDC16-75	800.108	4	16	38	45	75	35	-	43 - 70	43	HDA16-12037	1.30
BBT40-HDC16-90	978.193	4	16	38	45	90	47	49	43 - 70	43	HDA16-12037	1.40
BBT40-HDC16-110	800.105	4	16	38	45	110	47	-	43 - 70	43	HDA16-12037	1.60
BBT40-HDC16-135	800.106	4	16	38	45	135	47	-	43 - 70	43	HDA16-12037	1.90
BBT40-HDC16-165	800.107	4	16	38	50	165	47	-	43 - 70	43	HDA16-12037	2.30
BBT40-HDC18-90	978.194	4	18	40	45	90	48	49	43 - 70	43	HDA16-12037	1.40
BBT40-HDC18-110	800.109	4	18	40	45	110	48	-	43 - 70	43	HDA16-12037	1.70
BBT40-HDC18-135	800.110	4	18	40	45	135	48	-	43 - 70	43	HDA16-12037	1.90
BBT40-HDC19-75 *	800.111	6	19	49.2	-	75	43	-	111	43	-	1.40
BBT40-HDC20-90	800.115	4	20	42	45	90	48	50	43 - 70	43	HDA16-12037	1.50
BBT40-HDC20-110	800.112	4	20	42	50	110	48	70	43 - 70	43	HDA16-12037	1.70
BBT40-HDC20-135	800.113	4	20	42	50	135	48	-	43 - 70	43	HDA16-12037	2.00
BBT40-HDC20-165	800.114	4	20	42	50	165	48	-	43 - 70	43	HDA16-12037	2.40
BBT40-HDC22-75 *	806.011	6	22	52	-	75	44,5	-	110	56	-	1.40
BBT40-HDC24-75 *	800.116	6	24	63	-	75	47	-	104	45	-	1.60
BBT40-HDC28-75 *	806.012	5	28	52	71	75	16	-	93	45	-	1.70
BBT40-HDC31-75 *	805.826	5	31	74	-	75	30	-	76	56	-	1.80

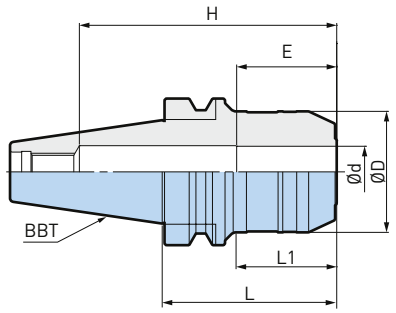

Fig. 6

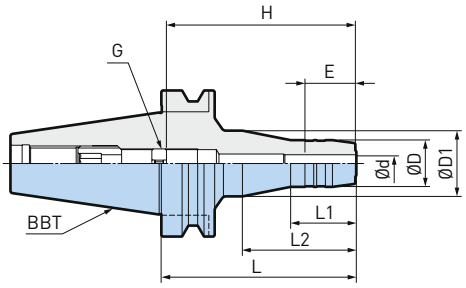

Fig. 7

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	L2	H	E	G	Weight (kg)
BBT50-HDC6L-105	800.023	7	6	26	45	105	44	48	80 - 120	28	HDA6-20010	3.90
BBT50-HDC6L-135	800.024	7	6	26	45	135	44	78	110 - 150	28	HDA6-20010	4.10
BBT50-HDC6L-150	800.025	7	6	26	45	150	44	93	125 - 165	28	HDA6-20010	4.30
BBT50-HDC6L-165	800.026	7	6	26	45	165	44	108	140 - 180	28	HDA6-20010	4.30
BBT50-HDC8L-105	800.027	7	8	28	45	105	45	48	80 - 120	28	HDA6-20010	4.00
BBT50-HDC8L-135	800.275	7	8	28	45	135	45	78	110 - 150	28	HDA6-20010	4.20
BBT50-HDC8L-150	800.276	7	8	28	45	150	45	93	125 - 165	28	HDA6-20010	4.30
BBT50-HDC8L-165	800.277	7	8	28	45	165	45	108	140 - 180	28	HDA6-20010	4.40
BBT50-HDC10L-105	800.264	7	10	30	45	105	45	48	80 - 120	33	HDA6-20010	3.90
BBT50-HDC10L-135	800.265	7	10	30	45	135	45	78	110 - 150	33	HDA6-20010	4.20
BBT50-HDC10L-150	800.266	7	10	30	45	150	45	93	125 - 165	33	HDA6-20010	4.30
BBT50-HDC10L-165	800.267	7	10	30	45	165	45	108	140 - 180	33	HDA6-20010	4.40
BBT50-HDC12L-105	800.268	7	12	32	45	105	45	48	80 - 120	38	HDA6-20010	3.90
BBT50-HDC12L-135	800.269	7	12	32	45	135	45	78	110 - 150	38	HDA6-20010	4.20
BBT50-HDC12L-150	800.270	7	12	32	45	150	45	93	125 - 165	38	HDA6-20010	4.30
BBT50-HDC12L-165	800.271	7	12	32	45	165	45	108	140 - 180	38	HDA6-20010	4.40
BBT50-HDC16L-90	800.000	8	16	38	47	90	40	43	56 - 96	43	HDA20-12047	3.90
BBT50-HDC16L-105	800.272	7	16	38	47	105	47	48	80 - 120	43	HDA6-20010	4.00
BBT50-HDC16L-135	800.273	7	16	38	47	135	48	78	110 - 150	43	HDA6-20010	4.30
BBT50-HDC16L-150	800.274	7	16	38	47	150	48	93	125 - 165	43	HDA6-20010	4.50
BBT50-HDC19L-90 *	800.001	6	19	49.2	-	90	45	-	149	43	-	4.10
BBT50-HDC20L-90	800.007	8	20	42	50	90	45	-	56 - 96	43	HDA20-12047	3.90
BBT50-HDC20L-105	800.002	8	20	42	50	105	47	48	71 - 111	43	HDA20-12047	4.10
BBT50-HDC20L-135	800.003	8	20	42	50	135	48	78	101 - 141	43	HDA20-12047	4.40
BBT50-HDC20L-150	800.004	8	20	42	50	150	48	93	116 - 156	43	HDA20-12047	4.50
BBT50-HDC20L-200	800.005	9	20	42	50	200	48	102	166 - 206	43	HDA20-12047	5.20
BBT50-HDC20L-250	800.006	9	20	42	50	250	48	102	216 - 256	43	HDA20-12047	6.10
BBT50-HDC22L-90 *	806.013	6	22	52	-	90	45	-	149	43	-	4.10
BBT50-HDC24L-90 *	800.008	6	24	63	-	90	41	-	149	45	-	4.40
BBT50-HDC25L-90	800.014	8	25	63	-	90	45	-	56 - 96	52	HDA20-12047	4.30
BBT50-HDC25L-105	800.009	8	25	63	-	105	60	-	71 - 111	52	HDA20-12047	4.60
BBT50-HDC25L-135	800.010	8	25	63	68	135	60	78	101 - 141	52	HDA20-12047	5.30
BBT50-HDC25L-150	800.011	8	25	63	70	150	60	92	116 - 156	52	HDA20-12047	5.70
BBT50-HDC25L-200	800.012	9	25	63	70	200	60	100	166 - 200	52	HDA20-12047	7.00
BBT50-HDC25L-250 *	800.013	9	25	63	70	250	60	100	200	52	-	8.50
BBT50-HDC28L-90 *	806.014	6	28	69	-	90	44	-	148	45	-	4.40
BBT50-HDC31L-90 *	800.015	6	31	72	-	90	45	-	147	56	-	4.30

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Hydraulic Chuck Standard

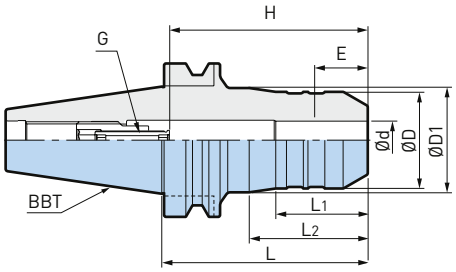


Fig. 8

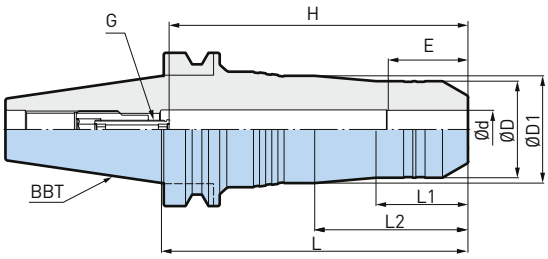


Fig. 9

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	L2	H	E	G	Weight (kg)
BBT50-HDC32L-90	800.021	8	32	72	-	90	47	-	56 - 96	56	HDA20-12047	4.30
BBT50-HDC32L-105	800.016	8	32	72	-	105	62	-	71 - 111	56	HDA20-12047	4.70
BBT50-HDC32L-135	800.017	8	32	72	78	135	60	78	101 - 141	56	HDA20-12047	5.60
BBT50-HDC32L-165	800.018	8	32	72	80	165	60	108	131 - 171	56	HDA20-12047	6.50
BBT50-HDC32L-200	800.019	9	32	72	80	200	60	100	166 - 200	56	HDA20-12047	7.80
BBT50-HDC32L-250 *	800.020	9	32	72	80	250	60	100	200	56	-	9.80
BBT50-HDC42L-110	800.022	8	42	96	-	110	72	-	76 - 116	65	HDA20-12047	5.80

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Straight collet (reduction sleeve) is available.
3. "E" is the min. clamping length.
4. "G" is the adjusting screw (optional).
5. "H" is the max. tool shank length that can be inserted for these models.
6. * Adjusting screw cannot be used.
7. ** Straight collet can not be used.

Caution

- 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.

Accessories & Spare Parts

PJC Collets	PSC Collets	Adjusting Screws HDA	α Wiper Cleaners
► 379	► 380	► 387	► 404

Hydraulic Chuck E Type

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

Coolant Through Hole

BIG-PLUS Dual-Contact

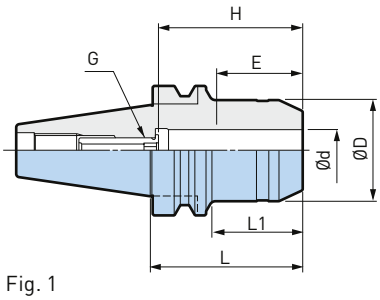


Fig. 1

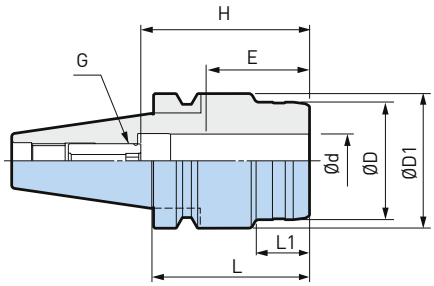


Fig. 2

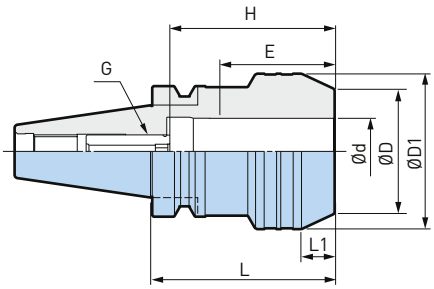


Fig. 3

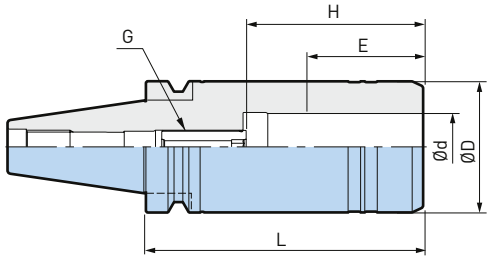


Fig. 4

ø20 - 32mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	H	E	G	Weight (kg)
BBT40-HDC20E-75	978.173	1	20	49,2	-	75	45	43 - 70	43	HDA16-12037	1.40
BBT40-HDC25E-75	800.120	2	25	55	63	75	25	52 - 80	52	HDA25-16033	1.60
BBT40-HDC25E-110	800.117	2	25	55	63	110	25	52 - 80	52	HDA25-16039	2.40
BBT40-HDC25E-135	800.118	2	25	55	63	135	25	52 - 80	52	HDA25-16039	3.00
BBT40-HDC25E-165	800.119	2	25	55	63	165	25	52 - 80	52	HDA25-16039	3.60
BBT40-HDC32E-90	800.124	3	32	60	75	90	16	56 - 80.5	56	HDA25-16039	2.20
BBT40-HDC32E-110	800.121	2	32	63	75	110	34	56 - 85	56	HDA25-16039	2.50
BBT40-HDC32E-135	800.122	4	32	62,9	-	135	-	56 - 85	56	HDA25-16039	2.80
BBT40-HDC32E-165	800.123	4	32	62,9	-	165	-	56 - 85	56	HDA25-16039	3.50

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. "H" is the max. tool shank length that can be inserted for these models.
3. Double sides hexagon screw type can be clamped from chuck and shank side.

Caution

- 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.

Accessories & Spare Parts

PJC Collets	PSC Collets	Adjusting Screws HDA	TK Cleaners
▶ 379	▶ 380	▶ 387	▶ 404

SF Hydraulic Chuck

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1

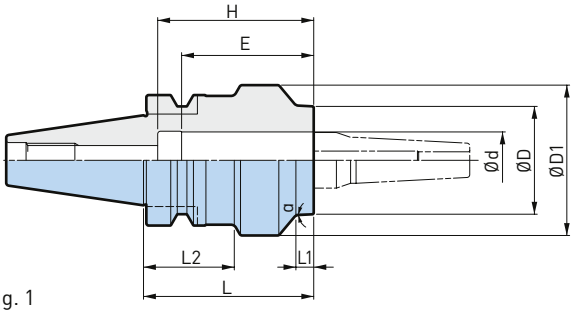


Fig. 1

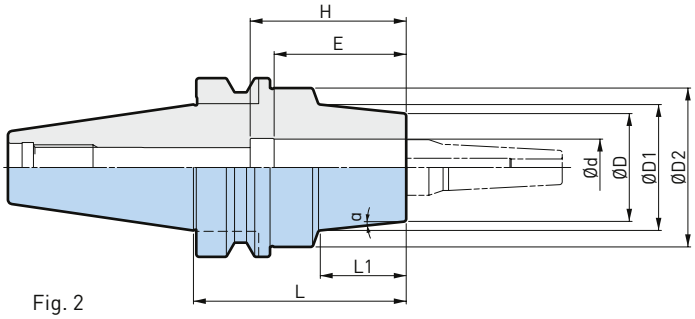


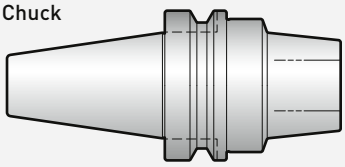
Fig. 2

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	α	H	E	Weight (kg)
BBT30-HDC20SF-60	-	1	20	38	53	-	60	5	32	3	55	48	0.75
BBT40-HDC20SF-75	-	2	20	38	45	56	75	30	-	6	55	48	1.40

1. Adjusting screw cannot be used.

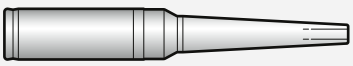
Combination according to application

SF Hydraulic Chuck



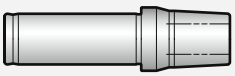
Combination example

SF Sleeve



ST20SF-SRM3-135

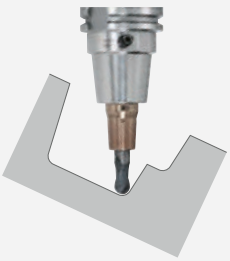
Minimizes work/jig interference, For deep drilling and difficult to access milling operations.



ST20SF-SRM12-90

Reduces unnecessary tool projection and increases machining efficiency.

Easy exchange of SF Sleeve with one wrench.



Accessories & Spare Parts

SF Sleeve

▶ 93

Caution

- Do not tighten the clamping screw without first inserting a cutting tool into the hydraulic chuck.

SF Sleeve

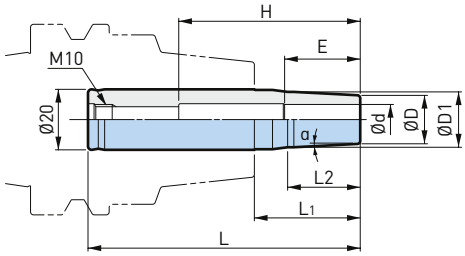


Fig. 1

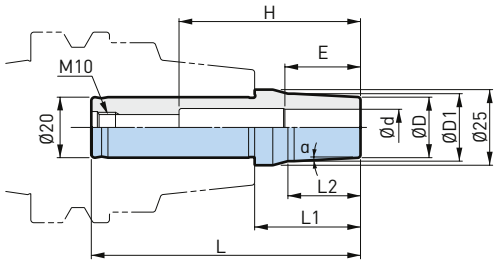


Fig. 2

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	α	H	E	Weight (kg)
ST20SF-SRM3-90 *	-	1	3	7.5	9.6	90	35	3	-	9	0.20
ST20SF-SRM3-110 *	-	1	3	7.5	11.7	110	55	3	-	9	0.20
ST20SF-SRM3-135 *	-	1	3	7.5	14.3	135	80	3	-	9	0.25
ST20SF-SRM4-90 *	-	1	4	10	12.1	90	35	3	-	12	0.20
ST20SF-SRM4-110 *	-	1	4	10	14.2	110	55	3	-	12	0.18
ST20SF-SRM4-135 *	-	1	4	10	16.8	135	80	3	-	12	0.25
ST20SF-SRM6-90	-	1	6	12	14.1	90	35	3	-	18	0.15
ST20SF-SRM6-110	-	1	6	12	16.2	110	55	3	-	18	0.18
ST20SF-SRM6-135	-	1	6	12	-	135	80	3	-	18	0.23
ST20SF-SRM8-90	-	1	8	14	16.1	90	35	3	-	20	0.15
ST20SF-SRM8-110	-	1	8	14	18.2	110	55	3	-	20	0.20
ST20SF-SRM8-135	-	1	8	14	-	135	80	3	-	20	0.23
ST20SF-SRM10-90	-	1	10	16	18.3	90	35	3	60	25	0.15
ST20SF-SRM10-110	-	1	10	16	-	110	55	3	60	25	0.20
ST20SF-SRM10-135	-	1	10	16	-	135	80	3	60	25	0.25
ST20SF-SRM12-90	-	2	12	20	22.3	89	35	3	60	25	0.18
ST20SF-SRM12-110	-	2	12	20	-	109	55	3	60	25	0.25
ST20SF-SRM12-135	-	2	12	20	-	134	80	3	60	25	0.30

1. *Models are made of stainless steel.

Ø3-4: Made of Stainless Steel
Ø6-12: Made of Steel

Caution
Please do not shrink cutting tools with assembled SF Sleeve / SF Hydraulic Chuck combination.

Accessories & Spare Parts

SF Hydraulic Chuck	SF Hydraulic Chuck
▶ 92	▶ 210

Shrink Chuck Slim

Slim design reduces outer diameter for machining in tight spaces.

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1

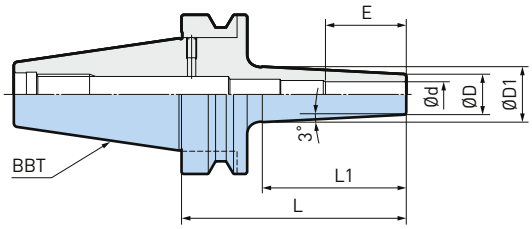


Fig. 1

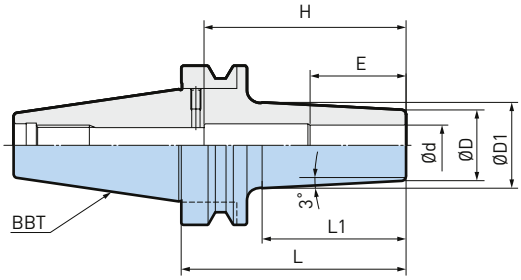


Fig. 2

ø6 - 12mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	H	E	Weight (kg)
BBT30-SRC6S-105	978.179	1	6	10	18	105	77	129 *	26	0.50
BBT30-SRC8S-105	978.180	1	8	13	21	105	77	129 *	26	0.50
BBT30-SRC10S-105	800.063	2	10	16	24	105	77	62	32	0.60
BBT30-SRC12S-105	978.007	2	12	19	27	105	77	72	36	0.60
BBT40-SRC6S-120	800.168	1	6	10	19	120	86	155 *	26	1.10
BBT40-SRC6S-165	978.136	1	6	10	23.5	165	127	200 *	26	1.20
BBT40-SRC8S-120	978.205	1	8	13	22	120	86	155 *	26	1.10
BBT40-SRC8S-165	978.137	1	8	13	26.5	165	129	200 *	26	1.30
BBT40-SRC10S-120	978.367	1	10	16	25	120	86	155 *	32	1.20
BBT40-SRC10S-165	978.138	1	10	16	29.5	165	129	200 *	32	1.40
BBT40-SRC12S-120	800.163	1	12	19	28	120	87	155 *	36	1.20
BBT40-SRC12S-165	978.139	1	12	19	33	165	131	200 *	36	1.40

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Use carbide cutter within a tolerance of h6.
3. Please refer to the operation manual of heating / cooling equipment, as some equipment may not be compatible.
4. "H" is the max. tool shank length that can be inserted for these models.
5. „H" with * indicates the maximum clamping depth to the Pull Stud Bolt.
6. "E" is the min. clamping length.

Accessories & Spare Parts

α Wiper Cleaners

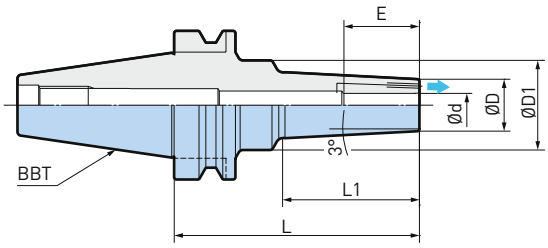
▶ 404

Shrink Chuck Jet Through

Efficient coolant supply to the cutting tool periphery.

Coolant Through Hole

BIG-PLUS Dual-Contact



ø6 - 12mm

Model	Article No.	Ød	ØD	ØD1	L	L1	E	Weight (kg)
BBT40-SRC6J-105	804.751	6	16	32	105	55	26	1.20
BBT40-SRC8J-105	804.752	8	19	35	105	55	26	1.20
BBT40-SRC10J-105	804.749	10	22	38	105	58	32	1.30
BBT40-SRC12J-105	804.750	12	24	40	105	63	36	1.30
BBT50-SRC6J-165	804.755	6	16	42	165	93	26	4.00
BBT50-SRC8J-165	804.756	8	19	45	165	99	26	4.20
BBT50-SRC10J-165	804.753	10	22	48	165	103	32	4.20
BBT50-SRC12J-165	804.754	12	24	50	165	108	36	4.20

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Use carbide cutter within a tolerance of h6.
3. Please refer to the operation manual of heating / cooling equipment, as some equipment may not be compatible.
4. "E" is the min. clamping length.

Accessories & Spare Parts

α Wiper Cleaners

▶ 404

Shrink Chuck Standard

Substantial body provides higher rigidity.

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1

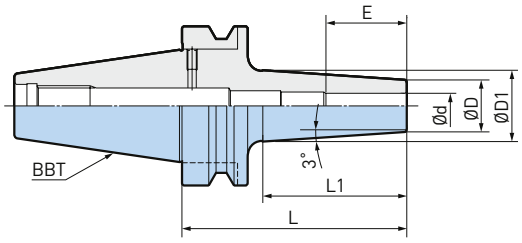


Fig. 1

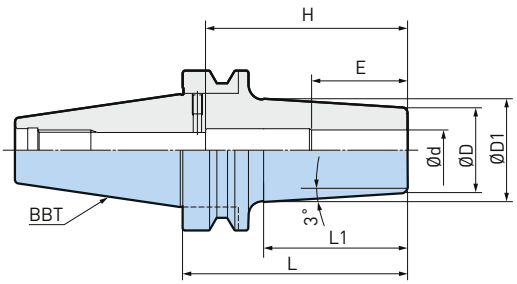


Fig. 2

ø4 - 20mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	H	E	Weight (kg)
BBT30-SRC4-75 *	978.001	1	4	10	15	75	44	-	16	0.50
BBT30-SRC6-75	978.002	1	6	14	19	75	47	-	26	0.50
BBT30-SRC8-75	978.003	1	8	18	23	75	47	-	26	0.50
BBT30-SRC10-75	978.004	2	10	22	27	75	47	62	32	0.60
BBT30-SRC12-75	978.005	2	12	24	29	75	47	72	36	0.60
BBT30-SRC16-75	978.006	2	16	28	33	75	48	80	38	0.60
BBT40-SRC4-90 *	978.291	1	4	10	15.5	90	52	-	16	1.10
BBT40-SRC6-90	978.056	1	6	14	20	90	57	-	26	1.10
BBT40-SRC6-150	800.167	1	6	14	26	150	114	-	26	1.20
BBT40-SRC8-90	978.057	1	8	18	24	90	57	-	26	1.10
BBT40-SRC8-150	800.169	1	8	18	18	150	114	-	26	1.40
BBT40-SRC10-90	978.058	1	10	22	28	90	57	-	32	1.20
BBT40-SRC10-150	800.161	1	10	22	34	150	116	-	32	1.50
BBT40-SRC12-90	978.059	1	12	24	30	90	57	-	36	1.20
BBT40-SRC12-150	800.162	1	12	24	36	150	116	-	36	1.50
BBT40-SRC16-90	978.060	2	16	28	34	90	57	80	38	1.20
BBT40-SRC16-165	800.164	2	16	28	42	165	132	80	38	1.80
BBT40-SRC20-90	978.061	2	20	34	40	90	57	100	42	1.30
BBT40-SRC20-165	800.165	2	20	34	48	165	132	100	42	2.10
BBT50-SRC6-105	978.105	1	6	14	20.5	105	61	-	26	3.60
BBT50-SRC6-165	800.354	1	6	14	26	165	116	-	26	3.80
BBT50-SRC8-105	978.107	1	8	18	24.5	105	61	-	26	3.80
BBT50-SRC8-165	800.355	1	8	18	30	165	116	-	26	3.90
BBT50-SRC10-105	978.109	1	10	22	28.5	105	61	-	32	3.70
BBT50-SRC10-165	800.350	1	10	22	34	165	116	-	32	4.00
BBT50-SRC12-105	978.111	1	12	24	30.5	105	61	-	36	3.70
BBT50-SRC12-165	800.351	1	12	24	36	165	116	-	36	4.10
BBT50-SRC16-105	978.113	1	16	28	34.5	105	61	-	38	3.80
BBT50-SRC16-165	978.114	1	16	28	40	165	116	-	38	4.20
BBT50-SRC20-105	978.115	1	20	34	40	105	61	-	42	3.90
BBT50-SRC20-165	800.352	1	20	34	46	165	116	-	42	4.40

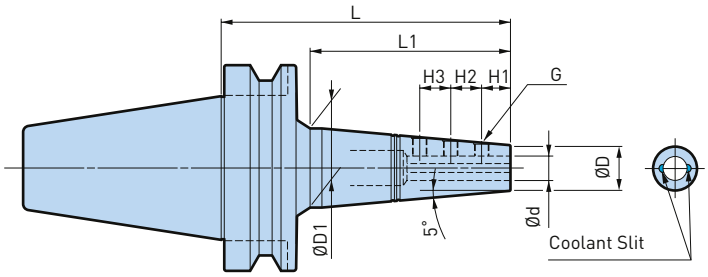
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Use carbide cutter within a tolerance of h6.
3. * Use carbide cutter within a tolerance of h5.
4. Please refer to the operation manual of heating / cooling equipment, as some equipment may not be compatible.
5. "H" is the max. tool shank length that can be inserted for these models.
6. "E" is the min. clamping length.

Mold Chuck

Slim and tapered design reduces outer diameter and improves stability.
Ideal for machining moulds with weldon tools.

Coolant Through Hole

BIG-PLUS Dual-Contact



ø3 - 20mm

Model	Article No.	Ød	ØD	ØD1	L	L1	G	H1	H2	H3	Weight (kg)
BBT40-SSL3-135	800.172	3	10	27,5	135	100	M3	6	6	-	1.20
BBT40-SSL4-135	800.173	4	11	28,5	135	100	M4	6	7	-	1.20
BBT40-SSL6-135	966.353	6	13	30	135	100	M6	12	13	-	1.30
BBT40-SSL8-135	966.354	8	15	32	135	100	M6	13,5	18	-	1.30
BBT40-SSL10-150	800.170	10	17	36,5	150	115	M6	15	20	-	1.50
BBT40-SSL12-150	800.171	12	22	41,5	150	115	M8	15	16	16	1.70
BBT50-SSL6-150	978.280	6	13	31	150	104	M6	12	13	-	3.90
BBT50-SSL6-200	800.363	6	13	39,5	200	154	M6	12	13	-	4.30
BBT50-SSL8-150	800.364	8	15	32,5	150	104	M6	13,5	18	-	3.90
BBT50-SSL8-200	800.365	8	15	41,5	200	154	M6	13,5	18	-	4.40
BBT50-SSL10-150	800.356	10	17	34,5	150	104	M6	15	20	-	4.00
BBT50-SSL10-200	800.357	10	17	43,5	200	154	M6	15	20	-	4.50
BBT50-SSL12-150	978.281	12	22	39,5	150	104	M8	15	16	16	4.10
BBT50-SSL12-200	800.358	12	22	48	200	154	M8	15	16	16	4.70
BBT50-SSL16-150	800.359	16	26	43	150	104	M8	15	20	22	4.30
BBT50-SSL16-200	800.360	16	26	52	200	154	M8	15	20	22	5.00
BBT50-SSL20-150	800.361	20	30	47	150	104	M8	15	20	25	4.30
BBT50-SSL20-200	800.362	20	30	56	200	154	M8	15	20	25	5.10

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Only 2 flute ball endmill with weldon shank is to be used.
3. 1 set of exclusive clamping screws are included.

Accessories & Spare Parts

Mold Chuck Clamping Screw

▶ 400

CK Shanks with Center Through Coolant

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1

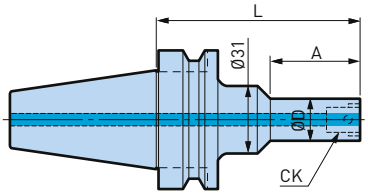


Fig. 1

CK1 - CK7

Model	Article No.	Fig.	CK	ØD	L	A	Weight (kg)
BBT30-CKB1-72	328.308	1	CK1	19	72	40	0.48
BBT30-CKB2-38	-	2	CK2	24	37.5	11	0.42
BBT30-CKB2-83	328.260	2	CK2	24	82.5	55	0.56
BBT30-CKB3-39	328.272	2	CK3	31	39	13	0.44
BBT30-CKB3-79	-	2	CK3	31	79	52	0.64
BBT30-CKB4-38	-	2	CK4	39	38	13	0.44
BBT30-CKB4-73	328.261	2	CK4	39	73	48	0.76
BBT30-CKB5-63	328.262	3	CK5	50	63	(41)	0.78
BBT30-CKB6-64	328.289	3	CK6	64	64	(42)	0.90
BBT40-CKB1-72	869.017	2	CK1	19	72	40	1.10
BBT40-CKB2-43	807.184	2	CK2	24	42.5	10.5	1.00
BBT40-CKB2-83	806.680	2	CK2	24	82.5	50.5	1.10
BBT40-CKB3-44	807.150	2	CK3	31	44	12	1.00
BBT40-CKB3-94	-	2	CK3	31	94	62	1.30
BBT40-CKB3-124	806.681	2	CK3	31	124	92	1.50
BBT40-CKB4-43	806.328	2	CK4	39	43	11	1.10
BBT40-CKB4-88	-	2	CK4	39	88	56	1.50
BBT40-CKB4-118	806.284	2	CK4	39	118	86	1.70
BBT40-CKB4-148	-	2	CK4	39	148	116	2.00
BBT40-CKB5-48	806.902	2	CK5	50	48	16	1.10
BBT40-CKB5-78	-	2	CK5	50	78	46	1.60
BBT40-CKB5-108	806.682	2	CK5	50	108	76	2.00
BBT40-CKB5-138	-	2	CK5	50	138	106	2.50
BBT40-CKB6-64	806.924	3	CK6	64	64	(37)	1.50
BBT40-CKB6-94	869.008	3	CK6	64	94	(67)	2.20
BBT40-CKB6-124	328.248	3	CK6	64	124	(97)	3.00
BBT40-CKB6-64/90 *	-	3	CK6	64	64	(37)	1.50

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1

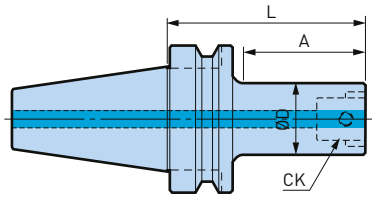


Fig. 2

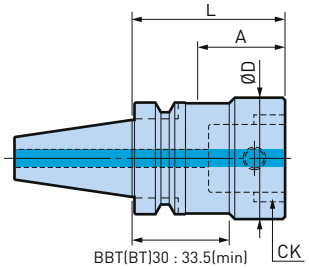


Fig. 3

Model	Article No.	Fig.	CK	ØD	L	A	Weight (kg)
BBT50-CKB1-72	100023.002.0	1	CK1	19	72	12	3.70
BBT50-CKB1-102	869.002	1	CK1	19	102	39	3.80
BBT50-CKB2-53	869.003	2	CK2	24	52.5	9	3.70
BBT50-CKB2-113	869.011	2	CK2	24	112.5	69	3.80
BBT50-CKB3-54	869.004	2	CK3	31	54	11	3.70
BBT50-CKB3-124	806.683	2	CK3	31	124	81	4.00
BBT50-CKB3-154	-	2	CK3	31	154	111	4.10
BBT50-CKB4-58	869.005	2	CK4	39	58	15	3.70
BBT50-CKB4-118	869.013	2	CK4	39	118	75	4.20
BBT50-CKB4-178	869.015	2	CK4	39	178	135	4.70
BBT50-CKB4-208	869.012	2	CK4	39	208	165	5.00
BBT50-CKB5-63	869.001	2	CK5	50	63	20	3.80
BBT50-CKB5-108	869.014	2	CK5	50	108	65	4.50
BBT50-CKB5-183	806.684	2	CK5	50	183	140	5.50
BBT50-CKB5-228	807.071	2	CK5	50	228	185	6.20
BBT50-CKB5-263	806.685	2	CK5	50	263	220	6.70
BBT50-CKB6-94	869.007	2	CK6	64	94	51	4.60
BBT50-CKB6-169	807.183	2	CK6	64	169	126	6.40
BBT50-CKB6-229	806.686	2	CK6	64	229	186	7.90
BBT50-CKB6-289	806.687	2	CK6	64	289	246	9.20
BBT50-CKB7-93	-	2	CK7	90	93	52	5.60
BBT50-CKB7-183	806.688	2	CK7	90	183	142	9.90
BBT50-CKB7-243	806.689	2	CK7	90	243	202	12.80

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Cutting edge and drive key grooves are located in the same orientation.
3. * marked models have cutting edge and drive key offset by 90°.

Accessories & Spare Parts

Fine Boring Heads	Rough Boring Heads
▶ 428	▶ 417

CK Shanks with Center Through Coolant

Coolant Through Hole

A.1

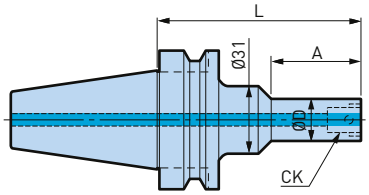


Fig. 1

Model	Article No.	Fig.	CK	ØD	L	A	Weight (kg)
BT30-CKB1-72	-	1	CK1	19	72	40	0.48
BT30-CKB2-38	-	2	CK2	24	37.5	11	0.40
BT30-CKB2-83	-	2	CK2	24	82.5	55	0.56
BT30-CKB3-39	-	2	CK3	31	39	13	0.43
BT30-CKB3-79	-	2	CK3	31	79	52	0.64
BT30-CKB4-38	-	2	CK4	39	38	13	0.44
BT30-CKB4-73	-	2	CK4	39	73	48	0.74
BT30-CKB5-63	-	3	CK5	50	63	(41)	0.76
BT30-CKB6-64	-	3	CK6	64	64	(42)	0.90
BT40-CKB1-72	-	2	CK1	19	72	40	1.10
BT40-CKB2-43	-	2	CK2	24	42.5	10.5	1.00
BT40-CKB2-83	-	2	CK2	24	82.5	50.5	1.10
BT40-CKB3-44	-	2	CK3	31	44	12	1.00
BT40-CKB3-94	-	2	CK3	31	94	62	1.30
BT40-CKB4-43	-	2	CK4	39	43	11	1.10
BT40-CKB4-88	-	2	CK4	39	88	56	1.40
BT40-CKB5-48	-	2	CK5	50	48	16	1.10
BT40-CKB5-78	-	2	CK5	50	78	46	1.60
BT40-CKB6-64	-	3	CK6	64	64	(37)	1.50

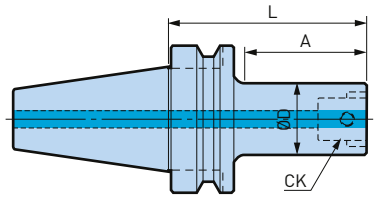


Fig. 2

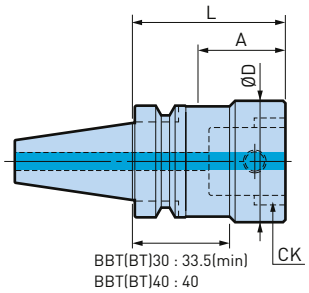


Fig. 3

Model	Article No.	Fig.	CK	ØD	L	A	Weight (kg)
BT50-CKB1-102	-	1	CK1	19	102	39	3.70
BT50-CKB2-53	-	2	CK2	24	52.5	9	3.50
BT50-CKB2-113	-	2	CK2	24	112.5	69	3.70
BT50-CKB3-54	-	2	CK3	31	54	11	3.60
BT50-CKB3-124	-	2	CK3	31	124	81	3.90
BT50-CKB4-58	-	2	CK4	39	58	15	3.70
BT50-CKB4-118	-	2	CK4	39	118	75	4.20
BT50-CKB4-178	-	2	CK4	39	178	135	4.70
BT50-CKB5-63	-	2	CK5	50	63	20	3.80
BT50-CKB5-108	-	2	CK5	50	108	65	4.50
BT50-CKB5-183	-	2	CK5	50	183	140	5.50
BT50-CKB5-228	-	2	CK5	50	228	185	6.20
BT50-CKB6-94	-	2	CK6	64	94	51	4.60
BT50-CKB6-169	-	2	CK6	64	169	126	6.40
BT50-CKB6-229	-	2	CK6	64	229	186	7.90
BT50-CKB7-93	-	2	CK7	90	93	52	5.60
BT50-CKB7-183	-	2	CK7	90	183	142	9.90
BT50-CKB7-243	-	2	CK7	90	243	202	12.70

1. Cutting edge and drive key grooves are located in the same orientation.

Accessories & Spare Parts

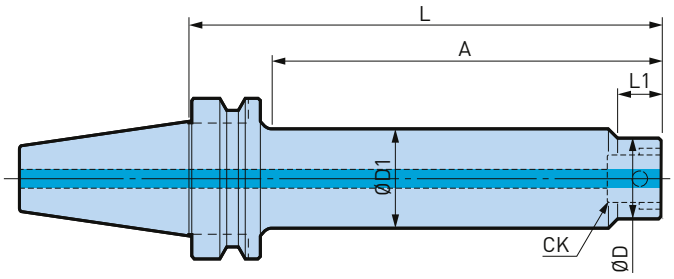
Fine Boring Heads	Rough Boring Heads
▶ 428	▶ 417

Extra Long CK Shanks with Center Through Coolant

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1



CK4 - CK6

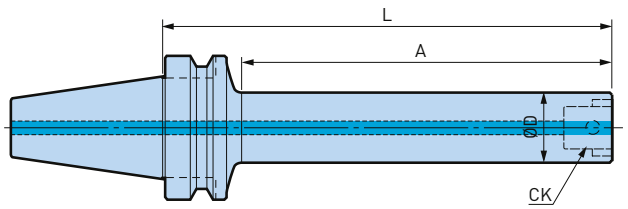
Model	Article No.	CK	Ød	ØD	ØD1	L	L1	A	Weight (kg)
BBT50-CKB4-48-193	806.690	CK4	50 - 74	39	48	193	19	150	5.50
BBT50-CKB4-48-238	806.692	CK4	50 - 74	39	48	238	19	195	6.10
BBT50-CKB5-62-243	806.693	CK5	65 - 95	50	62	243	24	200	7.70
BBT50-CKB5-62-303	806.694	CK5	65 - 95	50	62	303	24	260	9.10
BBT50-CKB6-72-259	806.695	CK6	75 - 203	64	72	259	29	216	9.70
BBT50-CKB6-72-314	869.018	CK6	75 - 203	64	72	314	29	271	11.50
BBT50-CKB6-80-289	806.696	CK6	85 - 203	64	80	289	29	246	12.20
BBT50-CKB6-80-349	806.697	CK6	85 - 203	64	80	349	29	306	14.40

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Cutting edge and drive key grooves are located in the same orientation.

Accessories & Spare Parts

Fine Boring Heads	Rough Boring Heads
▶ 428	▶ 417

Smart Damper CK Shanks



CK4 - CK6

Model	Article No.	CK	ØD	L	A	Weight (kg)
BBT50-CKB4DP-252	807.547	CK4	39	252	199	5.70
BBT50-CKB5DP-314	328.228	CK5	50	314	261	7.80
BBT50-CKB6DP-380	328.230	CK6	64	380	337	12.30

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Cutting edge and drive key grooves are located in the same orientation.

Accessories & Spare Parts

Fine Boring Heads	Rough Boring Heads
▶ 428	▶ 417

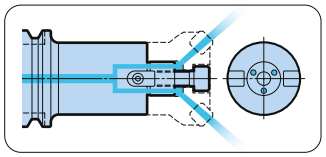
Face Mill Arbors Type FMH

Coolant ports on the face.

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1



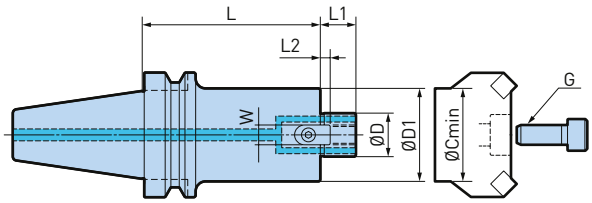


Fig. 1

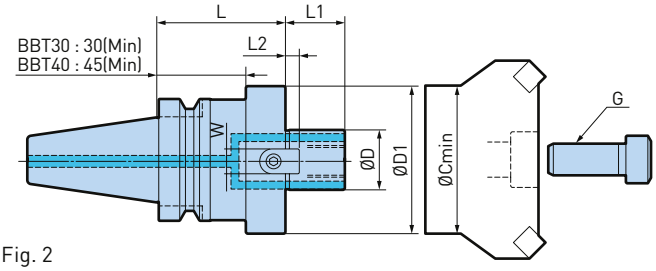


Fig. 2

Model	Article No.	Fig.	ØD	ØD1	L	L1	L2	W	G	ØC min.	Weight (kg)
BBT30-FMH16-37-35	978.326	1	16	37	35	16	5	8	M8	28	0.52
BBT30-FMH22-45-35	-	1	22	45	35	18	5	10	M10	38	0.60
BBT30-FMH22-47-45	978.259	2	22	47	45	18	5	10	M10	38	0.73
BBT30-FMH22-60-45	805.569	2	22	60	45	18	5	10	M10	38	0.87
BBT30-FMH27-45-35	-	1	27	45	35	20	6	12	M12	38	0.64
BBT30-FMH27-60-45	978.273	2	27	60	45	20	6	12	M12	46	0.91
BBT40-FMH16-37-40	800.066	1	16	37	40	16	5	8	M8	28	1.10
BBT40-FMH22-47-45	978.145	1	22	47	45	18	5	10	M10	38	1.30
BBT40-FMH22-47-60	978.324	1	22	47	60	18	5	10	M10	36	1.50
BBT40-FMH22-47-90	800.074	1	22	47	90	18	5	10	M10	36	1.90
BBT40-FMH22-47-150	978.378	1	22	47	150	18	5	10	M10	36	2.60
BBT40-FMH22-60-45	978.368	1	22	60	45	18	5	10	M10	38	1.40
BBT40-FMH22-60-60	800.075	1	22	60	60	18	5	10	M10	38	1.80
BBT40-FMH22-60-90	978.208	1	22	60	90	18	5	10	M10	38	2.40
BBT40-FMH27-60-45	978.219	1	27	60	45	20	6	12	M12	46	1.50
BBT40-FMH27-60-60	800.079	1	27	60	60	20	6	12	M12	46	1.80
BBT40-FMH27-60-90	978.128	1	27	60	90	20	6	12	M12	46	2.40
BBT40-FMH27-76-60	800.080	2	27	76	60	20	6	12	M12	48	2.00
BBT40-FMH27-76-90	800.081	2	27	76	90	20	6	12	M12	48	2.70
BBT40-FMH32-96-60	978.035	2	32	96	60	22	7	14	M16	58	2.40

Model	Article No.	Fig.	ØD	ØD1	L	L1	L2	W	G	ØC min.	Weight (kg)
BBT50-FMH16-37-60	800.207	1	16	37	60	16	5	8	M8	28	3.80
BBT50-FMH16-37-105	800.204	1	16	37	105	16	5	8	M8	28	4.10
BBT50-FMH16-37-150	800.205	1	16	37	150	16	5	8	M8	28	4.50
BBT50-FMH16-37-200	800.206	1	16	37	200	16	5	8	M8	28	4.80
BBT50-FMH22-47-60	978.129	1	22	47	60	18	5	10	M10	38	3.90
BBT50-FMH22-47-105	978.130	1	22	47	105	18	5	10	M10	36	4.50
BBT50-FMH22-47-150	978.131	1	22	47	150	18	5	10	M10	36	5.10
BBT50-FMH22-47-200	978.148	1	22	47	200	18	5	10	M10	36	5.70
BBT50-FMH22-47-250	800.221	1	22	47	250	18	5	10	M10	36	6.40
BBT50-FMH22-47-300	800.222	1	22	47	300	18	5	10	M10	36	7.00
BBT50-FMH22-47-350	800.223	1	22	47	350	18	5	10	M10	36	7.70
BBT50-FMH22-60-60	978.403	1	22	60	60	18	5	10	M10	38	4.10
BBT50-FMH22-60-105	978.167	1	22	60	105	18	5	10	M10	38	5.10
BBT50-FMH22-60-150	800.224	1	22	60	150	18	5	10	M10	38	6.00
BBT50-FMH22-60-200	800.225	1	22	60	200	18	5	10	M10	38	7.10
BBT50-FMH22-60-250	978.141	1	22	60	250	18	5	10	M10	38	8.20
BBT50-FMH22-60-300	800.226	1	22	60	250	18	5	10	M10	38	9.30
BBT50-FMH22-60-350	800.227	1	22	60	350	18	5	10	M10	38	10.30
BBT50-FMH27-60-45	800.237	1	27	60	45	20	6	12	M12	46	3.90
BBT50-FMH27-60-90	978.174	1	27	60	90	20	6	12	M12	46	4.80
BBT50-FMH27-60-150	978.175	1	27	60	150	20	6	12	M12	46	6.10
BBT50-FMH27-60-200	800.235	1	27	60	200	20	6	12	M12	46	7.10
BBT50-FMH27-60-250	978.029	1	27	60	250	20	6	12	M12	46	8.20
BBT50-FMH27-60-300	800.236	1	27	60	300	20	6	12	M12	46	9.30
BBT50-FMH27-76-45	978.341	1	27	76	45	20	6	12	M12	48	4.00
BBT50-FMH27-76-90	978.168	1	27	76	90	20	6	12	M12	48	5.50
BBT50-FMH27-76-150	978.142	1	27	76	150	20	6	12	M12	48	7.60
BBT50-FMH27-76-200	800.238	1	27	76	200	20	6	12	M12	48	9.30
BBT50-FMH27-76-250	800.239	1	27	76	250	20	6	12	M12	48	11.10
BBT50-FMH27-76-300	800.240	1	27	76	240	20	6	12	M12	48	12.80
BBT50-FMH32-96-45	978.132	1	32	96	45	22	7	14	M16	58	4.20
BBT50-FMH32-96-90	978.133	1	32	96	90	22	7	14	M16	58	6.60
BBT50-FMH32-96-150	978.143	1	32	96	150	22	7	14	M16	58	10.00
BBT50-FMH32-96-200	978.183	1	32	96	200	22	7	14	M16	58	12.80
BBT50-FMH32-96-250	800.255	1	32	96	250	22	7	14	M16	58	15.60
BBT50-FMH32-96-300	800.256	1	32	96	300	22	7	14	M16	80	18.30
BBT50-FMH40-100-45	978.149	1	40	100	45	26	8.5	16	M20 (MBA-M20H)	70	4.50
BBT50-FMH40-100-75	961.371	1	40	100	75	26	8.5	16	M20(MBA-M20H)	70	6.20
BBT50-FMH40-100-105	961.372	1	40	100	105	26	8.5	16	M20(MBA-M20H)	70	8.00

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Clamp bolt is included.
3. By using a clamping screw with a through bore, coolant is supplied through the screw.

Accessories & Spare Parts

Clamp Bolts	Fullcut Mill FCM - Arbor Type
▶ 388	▶ 506

Smart Damper Basic Holders for Milling Heads

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1

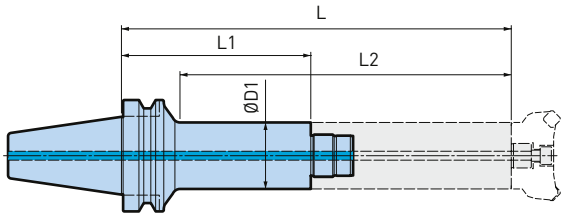


Fig. 1

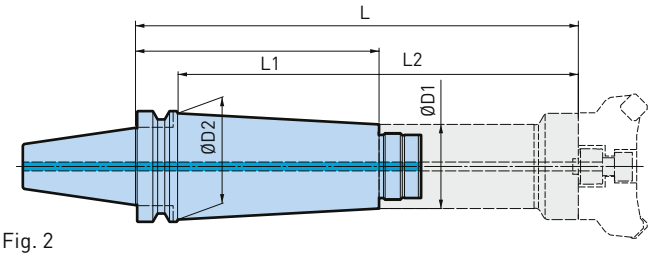


Fig. 2

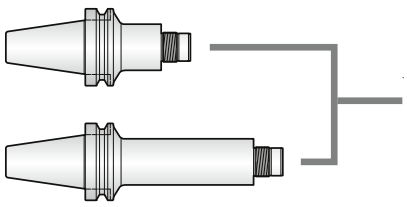
Model	Article No.	Fig.	ØD1	ØD2	L	L1	L2	Damper Head Model	Weight (kg)
BBT40-SDF28-38-30	-	1	38	-	200	30	171	FMH16DP-38	1.10
BBT40-SDF28-38-80	-	1	38	-	250	80	220	FMH16DP-38	1.50
BBT40-SDF36-47-30	-	1	47	-	210	30	181	FMH_DP-47	1.30
BBT40-SDF36-47-70	-	1	47	-	250	70	220	FMH_DP-47	1.80
BBT50-SDF28-38-80	-	1	38	-	250	80	195	FMH16DP-38	4.30
BBT50-SDF28-38-130	-	1	38	-	300	130	245	FMH16DP-38	4.70
BBT50-SDF28-38-180	-	1	38	-	350	180	295	FMH16DP-38	5.10
BBT50-SDF36-47-70	806.579	1	47	-	250	70	197	FMH_DP-47	4.30
BBT50-SDF36-47-120	806.580	1	47	-	300	120	247	FMH_DP-47	5.00
BBT50-SDF36-47-170	804.975	1	47	-	350	170	297	FMH_DP-47	5.60
BBT50-SDF36-47-220	804.970	1	47	-	400	220	347	FMH_DP-47	6.30
BBT50-SDF36-60-70	806.581	1	60	-	250	70	197	FMH_DP-60	4.60
BBT50-SDF36-60-120	806.582	1	60	-	300	120	247	FMH_DP-60	5.70
BBT50-SDF36-60-170	804.973	1	60	-	350	170	297	FMH_DP-60	6.70
BBT50-SDF36-60-220	804.974	1	60	-	400	220	347	FMH_DP-60	7.80
BBT50-SDF57-76-70	807.674	1	76	-	250	70	207	FMH_DP-76, -96, -100	5.40
BBT50-SDF57-76-120	807.675	1	76	-	300	120	257	FMH_DP-76, -96, -100	7.20
BBT50-SDF57-76-170	807.676	1	76	-	350	170	307	FMH_DP-76, -96, -100	8.90
BBT50-SDF57-76-170T	-	2	76	96	350	170	310	FMH_DP-76, -96, -100	10.30
BBT50-SDF57-76-220	807.677	1	76	-	400	220	357	FMH_DP-76, -96, -100	10.70
BBT50-SDF57-76-220T	100022.001.0	2	76	96	400	220	360	FMH_DP-76, -96, -100	12.50
BBT50-SDF57-76-270T	-	2	76	96	450	270	410	FMH_DP-76, -96, -100	14.70

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.

Combinations

Basic Holder

Damper Head



FMH16 / FMH22 / FMH27 / FMH32 / FMH40

Caution

Damper head becomes unremovable from the basic holder once they are used for machining after assembled.

Smart Damper Damper Heads for Mills

Coolant Through Hole

Anti-Vibration

A.1

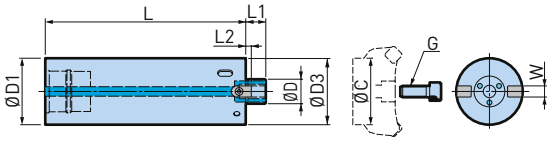


Fig. 1

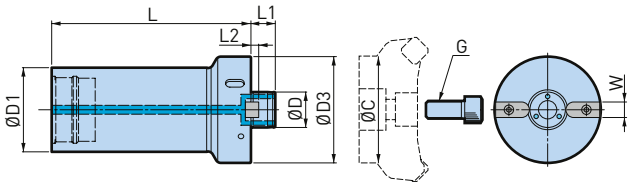


Fig. 2

Model	Article No.	Fig.	ØD	ØD1	ØD3	L	L1	L2	G	W	ØC min.	Weight (kg)
SDF28-FMH16DP-38-170	-	1	16	38	38	170	16	5	M8	8	28	1.90
SDF36-FMH22DP-47-180	804.969	1	22	47	47	180	18	5	M10	10	36	3.00
SDF36-FMH22DP-60-180	804.971	1	22	60	60	180	18	5	M10	10	49	4.50
SDF36-FMH27DP-60-180	804.972	1	27	60	60	180	20	6	M12	12	46	4.50
SDF57-FMH27DP-76-180	807.673	1	27	76	76	180	20	6	M12	12	48	7.90
SDF57-FMH32DP-96-180	100449.001.0	2	32	76	96	180	22	7	M16	14	58	8.70
SDF57-FMH40DP-100-180	-	2	40	76	100	180	26	8.5	M20(MBA-M20H)	16	70	9.10

1. Wrench and cutter clamping bolt are included.
2. By using a clamping screw with a through bore, coolant is supplied through the screw.

Accessories & Spare Parts

FK Wrenches	Clamp Bolts
▶ 385	▶ 388

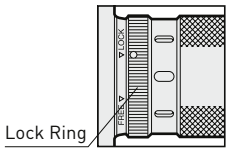
Super Keyless Chuck

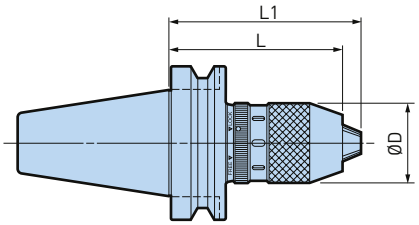
Securely chucks the drill with simple operation.

BIG-PLUS Dual-Contact

Reverse lock mechanism (SKL13)

- No loosening even when the main spindle suddenly stops, by the reverse lock mechanism using a lock ring.
- Runout accuracy within 0.05mm





Model	Article No.	Ød	ØD	L	L1	Wrench	Weight (kg)
BBT30-KLC6.5-70	805.444	0.5 - 6.5	34	70	76.5	FS6.5LC	0.63
BBT30-SKL13-110	802.336	0.5 - 13	51	110	122.5	FS13LC	1.40
BBT40-KLC6.5-75	805.531	0.5 - 6.5	34	75	81.5	FS6.5LC	1.22
BBT40-SKL13-105	805.168	0.5 - 13	51	106	118.5	FS13LC	1.90
BBT50-SKL13-115	805.170	0.5 - 13	51	115	127.5	FS13LC	4.46

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Wrench is included.
3. KLC type does not have the reverse lock mechanism.

Accessories & Spare Parts

Hook wrench for Super Keyless Chuck (FS)

► 388

Morse Taper Holders

Precise finish of inner taper guarantees high concentricity.

BIG-PLUS Dual-Contact

A.1

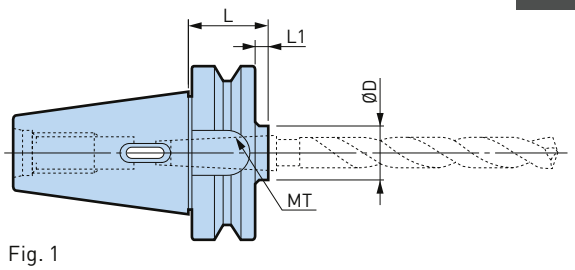


Fig. 1

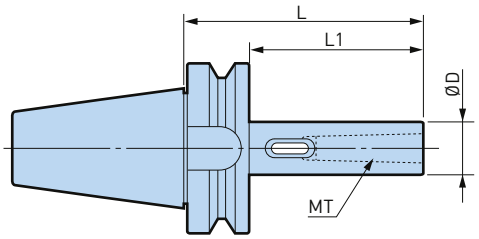


Fig. 2

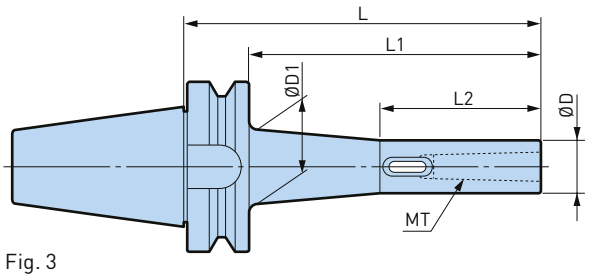


Fig. 3

Model	Article No.	Fig.	MT No.	ØD	ØD1	L	L1	L2	Weight (kg)
BBT30-MTA1-60	978.274	1	1	25	-	60	38	-	0.48
BBT30-MTA2-60	978.254	1	2	32	-	60	38	-	0.50
BBT30-MTA3-80	978.255	1	3	40	-	80	58	-	0.68
BBT40-MTA1-45	978.399	1	1	25	-	45	18	-	1.00
BBT40-MTA1-120	800.158	2	1	25	-	120	93	-	1.30
BBT40-MTA2-45	978.164	1	2	32	-	45	18	-	1.00
BBT40-MTA2-120	800.159	2	2	32	-	120	93	-	1.50
BBT40-MTA3-75	978.400	1	3	40	-	75	48	-	1.20
BBT40-MTA3-135	800.160	2	3	40	-	135	108	-	1.80
BBT40-MTA4-90	978.165	1	4	50	-	90	63	-	1.40
BBT50-MTA1-45	800.329	1	1	25	-	45	7	-	3.60
BBT50-MTA1-120	800.325	2	1	25	-	120	82	-	3.90
BBT50-MTA1-180	800.326	2	1	25	-	180	142	-	4.10
BBT50-MTA1-210	800.327	3	1	25	41	210	172	85	4.50
BBT50-MTA1-250	800.328	3	1	25	43	250	212	85	4.90
BBT50-MTA2-45	800.335	1	2	32	-	45	7	-	3.50
BBT50-MTA2-135	800.330	2	2	32	-	135	97	-	4.10
BBT50-MTA2-180	800.331	2	2	32	-	180	142	-	4.40
BBT50-MTA2-210	800.332	3	2	32	45.5	210	172	95	4.80
BBT50-MTA2-250	800.333	3	2	32	48.5	250	212	95	5.30
BBT50-MTA2-300	800.334	3	2	32	49.5	300	262	95	5.90
BBT50-MTA3-45	800.341	1	3	40	-	45	7	-	3.50
BBT50-MTA3-75	800.342	1	3	40	-	75	37	-	3.70
BBT50-MTA3-150	800.336	2	3	40	-	150	112	-	4.40
BBT50-MTA3-180	800.337	2	3	40	-	180	142	-	4.80
BBT50-MTA3-210	800.338	2	3	40	-	210	172	-	5.10
BBT50-MTA3-250	800.339	3	3	40	50.5	250	212	115	5.70
BBT50-MTA3-300	800.340	3	3	40	50.5	300	262	115	6.30
BBT50-MTA4-75	800.347	1	4	50	-	75	37	-	3.60
BBT50-MTA4-180	800.343	2	4	50	-	180	142	-	5.20
BBT50-MTA4-210	800.344	2	4	50	-	210	172	-	5.60
BBT50-MTA4-250	800.345	2	4	50	-	250	212	-	6.30
BBT50-MTA4-300	800.346	2	4	50	-	300	262	-	7.00
BBT50-MTA5-105	800.348	1	5	65	-	105	67	-	3.90
BBT50-MTA5-210	800.349	2	5	65	-	210	172	-	6.50

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.

Side Lock Holders Type TSL

For side lock drills.

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1

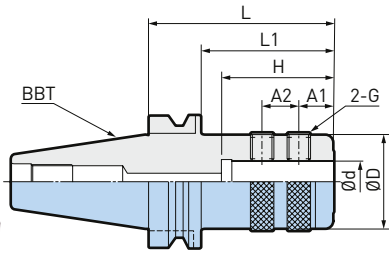


Fig. 1

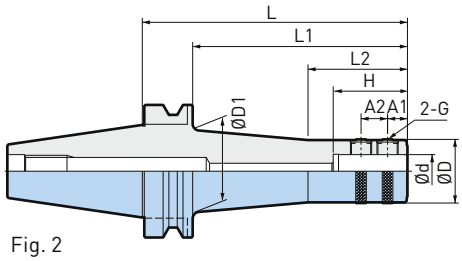


Fig. 2

ø16 - 50mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	L2	H	A1	A2	G	Weight (kg)
BBT30-TSL16-75	800.064	1	16	48	-	75	-	-	48	14	14	M10	1.00
BBT30-TSL20-75	978.314	1	20	48	-	75	-	-	50	14	14	M10	0.95
BBT30-TSL25-80	978.315	1	25	48	-	80	-	-	56	15	20	M16	0.93
BBT30-TSL32-85	805.243	1	32	63	-	85	-	-	60	15	20	M16	1.34
BBT40-TSL16-90	800.175	1	16	48	-	90	63	-	48	14	14	M10	1.70
BBT40-TSL16-105	800.174	1	16	48	-	105	78	-	48	14	14	M10	1.90
BBT40-TSL20-90	800.177	1	20	48	-	90	63	-	50	14	14	M10	1.70
BBT40-TSL20-105	800.176	1	20	48	-	105	78	-	50	14	14	M10	1.90
BBT40-TSL25-90	800.179	1	25	48	-	90	63	-	56	15	20	M16	1.60
BBT40-TSL25-105	800.178	1	25	48	-	105	78	-	56	15	20	M16	1.80
BBT40-TSL32-105	978.318	1	32	63	-	105	78	-	60	15	20	M16	2.40
BBT40-TSL32-135	800.180	1	32	63	-	135	108	-	60	15	20	M16	3.10
BBT40-TSL40-105	978.317	1	40	68	-	105	-	-	70	15	25	M16	2.40
BBT50-TSL16-90	800.369	1	16	48	-	90	52	-	48	14	14	M10	4.20
BBT50-TSL16-135	800.366	1	16	48	-	135	97	-	48	14	14	M10	4.80
BBT50-TSL16-165	800.367	1	16	48	-	165	127	-	48	14	14	M10	5.20
BBT50-TSL16-200	800.368	2	16	48	62.5	200	162	75	48	14	14	M10	6.00
BBT50-TSL20-90	800.374	1	20	48	-	90	52	-	50	14	14	M10	4.10
BBT50-TSL20-135	800.370	1	20	48	-	135	97	-	50	14	14	M10	4.70
BBT50-TSL20-165	800.371	1	20	48	-	165	127	-	50	14	14	M10	5.10
BBT50-TSL20-200	800.372	2	20	48	62.5	200	162	75	50	14	14	M10	5.90
BBT50-TSL20-250	800.373	2	20	48	64	250	212	90	50	14	14	M10	6.70
BBT50-TSL25-105	800.375	1	25	48	-	105	67	-	56	15	20	M16	4.20
BBT50-TSL25-135	800.376	1	25	48	-	135	97	-	56	15	20	M16	4.60
BBT50-TSL25-165	800.377	1	25	48	-	165	127	-	56	15	20	M16	5.00
BBT50-TSL25-200	800.378	2	25	48	62.5	200	162	75	56	15	20	M16	5.80
BBT50-TSL25-250	800.379	2	25	48	64	250	212	90	56	15	20	M16	6.70
BBT50-TSL32-105	800.380	1	32	63	-	105	67	-	60	15	20	M16	4.80
BBT50-TSL32-135	800.381	1	32	63	-	135	97	-	60	15	20	M16	6.10
BBT50-TSL32-165	800.382	1	32	63	-	165	127	-	60	15	20	M16	6.20
BBT50-TSL32-200	800.383	1	32	63	-	200	162	-	60	15	20	M16	6.90
BBT50-TSL32-250	800.384	1	32	63	-	250	212	-	60	15	20	M16	8.00
BBT50-TSL40-105	800.385	1	40	68	-	105	67	-	70	15	25	M16	4.70
BBT50-TSL40-135	800.386	1	40	68	-	135	97	-	70	15	25	M16	5.50
BBT50-TSL40-165	800.387	1	40	68	-	165	127	-	70	15	25	M16	6.30
BBT50-TSL40-200	800.388	1	40	68	-	200	162	-	70	15	25	M16	7.20
BBT50-TSL40-250	800.389	1	40	68	-	250	212	-	70	15	25	M16	8.50
BBT50-TSL50-105	800.390	1	50	84	-	105	67	-	70	15	25	M16	5.30
BBT50-TSL50-150	800.391	1	50	84	-	150	112	-	70	15	25	M16	7.20

Accessories & Spare Parts

Sleeves for TSL & OSL

▶ 389

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. "H" is the max. tool shank length that can be inserted for these models.
3. Not compatible with Weldon DIN 1835 B / DIN 6535 HB.

Side Lock Holders for Weldon

For cutting tools according to DIN 1835 form B.

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1

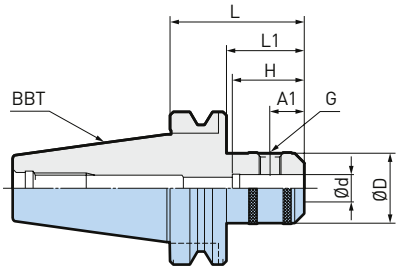


Fig. 1

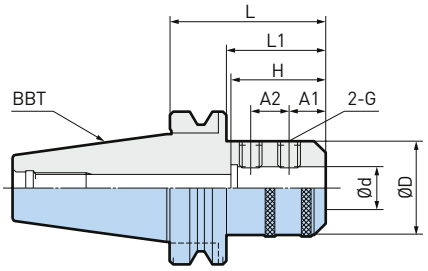


Fig. 2

ø6 - 50mm

Model	Article No.	Fig.	Ød	ØD	L	L1	A1	A2	H	G	Weight (kg)
BBT30-ISL6-60	961.394	1	6	25	60	38	18	-	85 *	M6	0.50
BBT30-ISL8-60	961.395	1	8	28	60	38	18	-	85 *	M8	0.52
BBT30-ISL10-60	961.396	1	10	35	60	38	20	-	45	M10	0.61
BBT30-ISL12-60	961.397	1	12	42	60	38	22.5	-	48	M12	0.71
BBT30-ISL16-60	966.341	1	16	48	60	38	24	-	53	M14	0.78
BBT40-ISL6-75	807.200	1	6	25	75	48	18	-	110 *	M6	1.20
BBT40-ISL8-75	807.201	1	8	28	75	48	18	-	110 *	M8	1.20
BBT40-ISL10-75	807.202	1	10	35	75	48	20	-	110 *	M10	1.30
BBT40-ISL12-75	961.362	1	12	42	75	48	22.5	-	110 *	M12	1.40
BBT40-ISL16-75	961.363	1	16	48	75	48	24	-	53	M14	1.50
BBT40-ISL20-75	961.364	1	20	52	75	48	25	-	55	M16	1.60
BBT40-ISL25-90	961.365	2	25	63.5	90	63	24	25	60	M18 P2	2.20
BBT40-ISL32-105	961.366	2	32	72	105	-	24	28	82	M20 P2	2.80
BBT50-ISL16-90	961.367	1	16	48	90	52	24	-	145 *	M14	4.10
BBT50-ISL16-150	800.297	2	16	48	150	60	24	-	205 *	M14	5.00
BBT50-ISL20-90	961.368	1	20	52	90	52	25	-	145 *	M16	4.20
BBT50-ISL20-150	800.299	2	20	52	150	60	25	-	60	M16	5.20
BBT50-ISL25-105	961.369	2	25	65	105	67	24	25	60	M18 P2	4.90
BBT50-ISL25-150	800.301	2	25	65	150	107	24	25	60	M18 P2	6.00
BBT50-ISL32-105	978.017	2	32	72	105	67	24	28	90	M20 P2	5.10
BBT50-ISL32-150	800.303	2	32	72	150	107	24	28	90	M20 P2	6.30
BBT50-ISL40-120	978.018	2	40	90	120	82	30	32	90	M20 P2	6.50
BBT50-ISL40-150	800.305	2	40	90	150	109	30	32	90	M20 P2	8.00
BBT50-ISL42-120	800.307	2	42	90	120	79	30	32	90	M20 P2	6.50
BBT50-ISL42-150	800.308	2	42	99,5	150	109	30	32	90	M20 P2	7.90
BBT50-ISL50-121	978.294	2	50	99.5	121	83	35	35	90	M24 P2	7.00

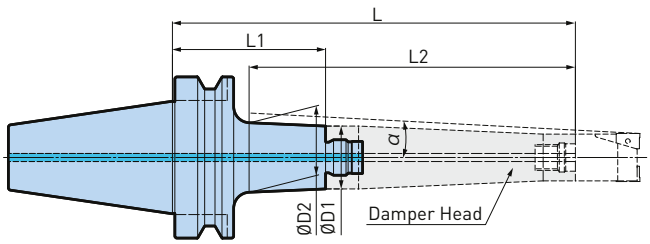
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Use a cutting tool in accordance to DIN 1835 B/DIN 6535 HB and ISO 5414.
3. "H" is the max. tool shank length that can be inserted for these models.
4. H with * indicates the maximum clamping depth to the Pull Stud Bolt.

Smart Damper Basic Holders for Screw on

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1



Model	Article No.	ØD1	ØD2	L	L1	L2	α	Damper Head Model	Weight (kg)
BBT50-SDF20-39-95T	100022.002.0	39	43.1	250	95	202.4	2°	SDF20-M16DO-29-155T	4.20
BBT50-SDF20-39-145T	100022.003.0	39	47.5	300	145	252.4	2°	SDF20-M16DO-29-155T	4.80
BBT50-SDF28-50-70T	100022.004.0	50	52.1	250	70	204.3	2°	SDF28-M16DP-38-180T	4.20
BBT50-SDF28-50-120T	100022.005.0	50	56.3	300	120	252.4	2°	SDF28-M16DP-38-180T	5.10
BBT50-SDF28-50-170T	100022.006.0	50	60.7	350	170	302.4	2°	SDF28-M16DP-38-180T	6.20

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.

Smart Damper Heads for Screw On

Coolant Through Hole

Anti-Vibration

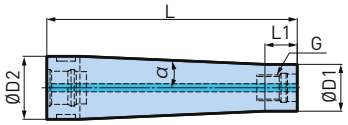


Fig. 1

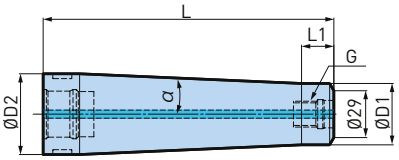
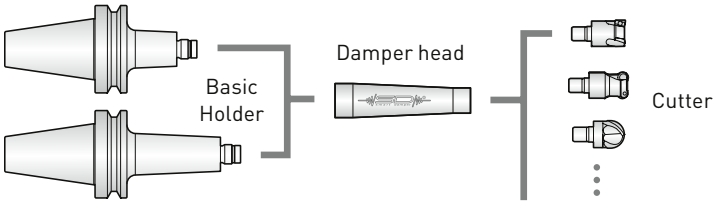


Fig. 2

Model	Article No.	Fig.	ØD1	ØD2	L	L1	α	G	Weight (kg)
SDF20-M16DP-29-155T	101255.001.0	1	29	39	155	20	2.5°	M16	1.20
SDF28-M16DP-38-180T	101255.002.0	2	38	50	180	20	2.5°	M16	2.50



Caution
Damper head becomes unremovable from the basic holder once they are used for machining after assembled.

Accessories & Spare Parts

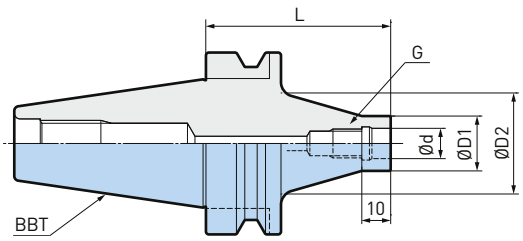
SD Holders BBT	SD Holders HSK	Full Cut Mill for Screw On FCM Type	Full Cut Mill for Screw On FCR Type
▶ 112	▶ 224	▶ 505	▶ 517

Screw-On Holder

General metric screw-on type cutting tools can be used with these models.

Coolant Through Hole

BIG-PLUS Dual-Contact



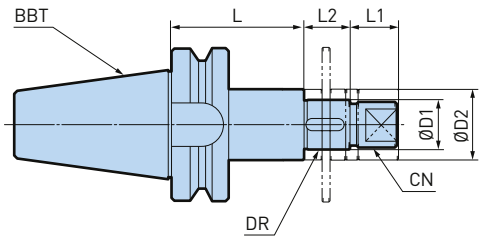
Model	Article No.	Ød	ØD1	ØD2	L	G	Weight (kg)
BBT30-M8-15-50	100019.003.0	8.5	15	30	50	M8	0.45
BBT30-M10-19-45	806.601	10.5	19	35	45	M10	0.45
BBT30-M12-24-40	806.602	12.5	24	40	40	M12	0.45
BBT30-M16-29-35	806.603	17	29	40	35	M16	0.41
BBT40-M8-15-70	100019.001.0	8.5	15	30	70	M8	1.10
BBT40-M8-15-115	100019.002.0	8.5	15	32	115	M8	1.30
BBT40-M10-19-65	806.604	10.5	19	35	65	M10	1.10
BBT40-M10-19-110	807.361	10.5	19	35	110	M10	1.30
BBT40-M12-24-60	806.605	12.5	24	40	60	M12	1.10
BBT40-M12-24-105	807.362	12.5	24	40	105	M12	1.40
BBT40-M16-29-55	806.606	17	29	45	55	M16	1.20
BBT40-M16-29-100	807.363	17	29	45	100	M16	1.50

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.

Side Cutter Arbors

BIG-PLUS Dual-Contact

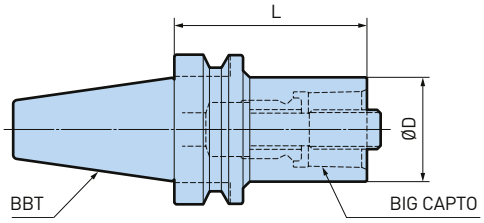
A.1



Model	Article No.	ØD1	ØD2	L	L1	L2	W1	W2	Weight (kg)
BBT40-SCA25.4-75	804.760	25.4	40	75	25	30	6.35	27.78	1.96
BBT40-SCA25.4-120	804.762	25.4	40	120	25	30	6.35	27.78	2.40
BBT40-SCA31.75-75	804.761	31.75	46	75	30	30	7.92	34.92	2.35
BBT50-SCA25.4-90	804.757	25.4	40	90	25	30	6.35	27.78	4.65
BBT50-SCA25.4-135	804.763	25.4	40	135	25	30	6.35	27.78	5.10
BBT50-SCA31.75-90	804.758	31.75	46	90	30	30	7.92	34.92	5.05
BBT50-SCA31.75-135	804.764	31.75	46	135	30	30	7.92	34.92	5.65
BBT50-SCA38.1-90	804.759	38.1	55	90	36	30	9.52	42.06	5.74
BBT50-SCA38.1-135	804.765	38.1	55	135	36	30	9.52	42.06	6.58

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Nut (CN) is included.
3. Distance collars (DR) of 5 mm, 8 mm, 10 mm and 12 mm are included.

BIG CAPTO Basic Holders



Model	Article No.	BIG CAPTO	ØD	L	Weight (kg)
BBT40-C3-30	973.598	C3	32	30	1.00
BBT40-C4-40	802.350	C4	40	40	1.00
BBT40-C5-50	973.600	C5	50	50	1.10
BBT40-C6-75	973.601	C6	63	75	1.70
BBT50-C3-40	973.602	C3	32	40	3.60
BBT50-C4-40	973.603	C4	40	40	3.60
BBT50-C5-40	973.604	C5	50	40	3.50
BBT50-C6-50	973.605	C6	63	50	3.50
BBT50-C8-70	803.736	C8	80	70	4.00

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Clamp bolt is included.

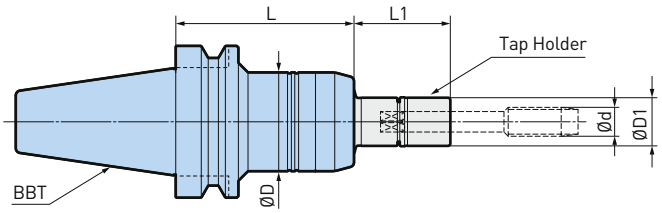
A.1

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

BIG-PLUS Dual-Contact



M2 - M20

Model	Article No.	Tap Holder	Ød	ØD	ØD1	L	L1	Weight (kg)
BBT30-MGT6-70	965.401	MGT6	M2-M8	36	16	70	30 - 200	0.67
BBT30-MGT12-70	965.402	MGT12	M5-M12 / P1/8	41	20	70	30 - 200	0.70
BBT30-MGT20-110	965.403	MGT20	M10-M20 / P1/4-P1/2	54	30	110	35 - 150	1.45
BBT40-MGT6-75	965.404	MGT6	M3-M8	36	16	75	30 - 200	1.30
BBT40-MGT12-75	965.405	MGT12	M5-M12 / P1/8	41	20	75	30 - 200	1.30
BBT40-MGT20-95	965.406	MGT20	M10-M20 / P1/4-P1/2	54	30	95	35 - 150	1.80
BBT50-MGT6-90	965.407	MGT6	M3-M8	36	16	90	30 - 200	3.90
BBT50-MGT12-90	965.408	MGT12	M5-M12 / P1/8	41	20	90	30 - 200	4.00
BBT50-MGT20-105	965.409	MGT20	M10-M20 / P1/4-P1/2	54	30	105	35 - 150	4.30

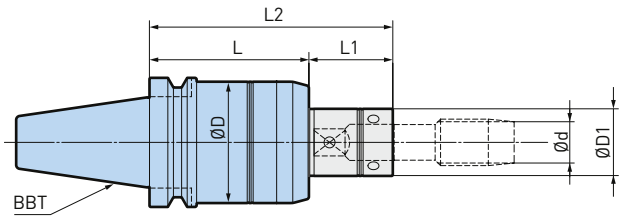
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Tap holder is to be ordered separately.
3. Synchronized tapping function is required on the machine.

MEGA Synchro Tapping Holder MGT36

For large Tap MGT36

Coolant Through Hole

BIG-PLUS Dual-Contact



M20 - M36

Model	Article No.	Ød	ØD	ØD1	L	L1	L2	Weight (kg)
BBT50-MGT36-125	800.323	M20-36 / P1/4-P1	94	38-52	125	65	190	7.10

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Tap holder is to be ordered separately.
3. Synchronized tapping function is required on the machine.

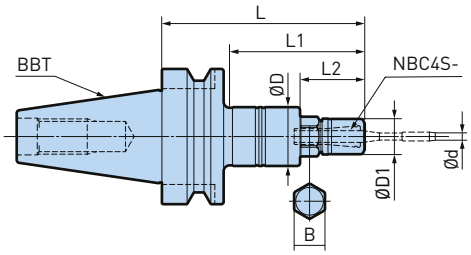
Accessories & Spare Parts

Tap Holder	MEGA Wrenches	Accessories
▶ 390	▶ 384	▶ 398

MEGA Synchro Tapping Holder MGT3

For small tapping tools: Type MGT3

BIG-PLUS Dual-Contact

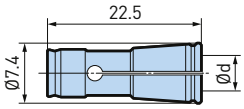


M1 - M3

Model	Article No.	Ød	ØD	ØD1	L	L1	L2	B	Weight (kg)
BBT30-MGT3-70	965.400	M1 - M3	20	12	70	46	22	12	0.46
BBT40-MGT3-90	805.723	M1 - M3	20	12	90	61	22	12	1.10

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Synchronized tapping function is required on the machine.
3. MEGA nut is included in delivery.
4. MEGA wrench (MGR12) and common spanner (12 mm) are required to clamp/unclamp the tap.

Micro Collet for MGT3



Model	Article No.	Tapping Range			Tap Shank
		DIN 371	ISO 529	JIS	Ød
NBC4S-2.5AA	961.468	M1 - M1.8	M2	-	2.5
NBC4S-2.8AA	968.353	M2 - M2.6	M2.2, M2.5	-	2.8
NBC4S-3.0AA	961.470	-	-	M1 - M2.6	3.0
NBC4S-3.1AA	968.355	-	M3	-	3.15
NBC4S-3.5AA	961.472	M3	-	-	3.5
NBC4S-4.0AA	961.474	-	-	M3	4.0

1. Other sizes available. Please refer to micro collet.

Accessories & Spare Parts

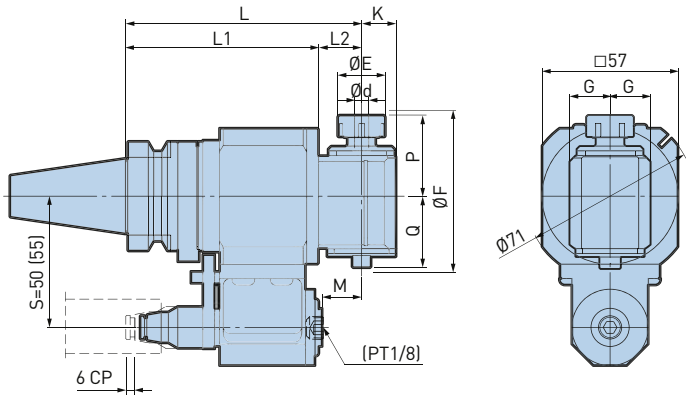
MEGA Wrenches

► 384

Angle Head Light Weight New Baby Chuck Type

BIG-PLUS Dual-Contact

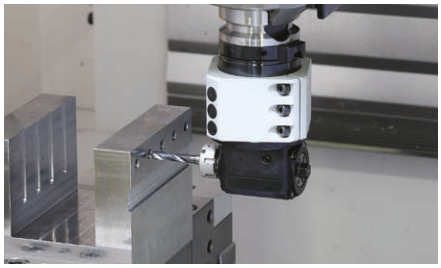
A.1



ø0.25 - 6mm

Model	Article No.	Ød	ØE	ØF	L	L1	L2	G	K	M	P	Q	max. min-1	Collet Model	Weight (kg)
BBT30-AG90-6-99	101389.001.0	0.25 - 6	20	68	99	81	18	17	14.5	16.5	34	30	6,000	NBC6	1.79

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required. Please contact BIG DAISHOWA.
3. H and S dimensions must be indicated before ordering.
4. Tolerance of the cutting tool shank must be within h7.
5. Exclusive collet is to be ordered separately.
6. „CP" indicates compression.



Compatible with high-speed ATC of ø30 taper machining center

Body weight sharply reduced.
Tool change time can be shortened.

Lightweight: 2kg or less

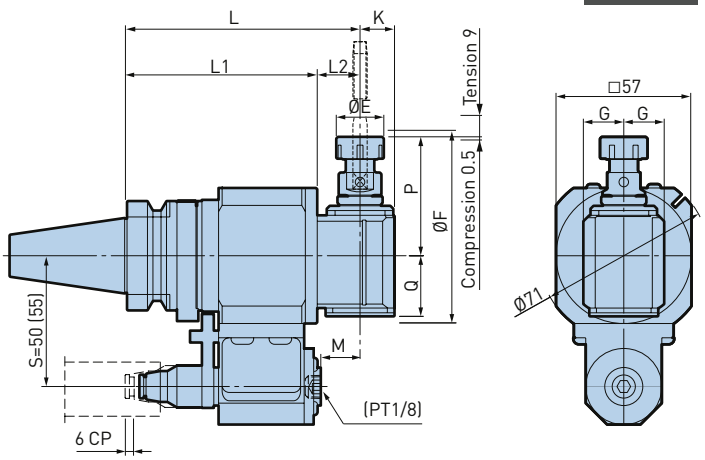
Accessories & Spare Parts

New Baby Collets

► 360

Angle Head Light Weight Tapper Type

BIG-PLUS Dual-Contact



M2-M6

Model	Article No.	ØE	ØF	L	L1	L2	G	K	M	P	Q	Tap Size d Metric	max. min-1	Collet Model	Weight (kg)
BBT30-AG90-FT6-99	101388.001.0	20	81	99	81	18	17	14.5	16.5	50	25.5	M2 - M6	2,000	NBC6	1.81

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required. Please contact BIG DAISHOWA.
3. H and S dimensions must be indicated before ordering.
4. Tolerance of the cutting tool shank must be within h7.
5. Exclusive collet is to be ordered separately.
6. „CP" indicates compression.

Accessories & Spare Parts

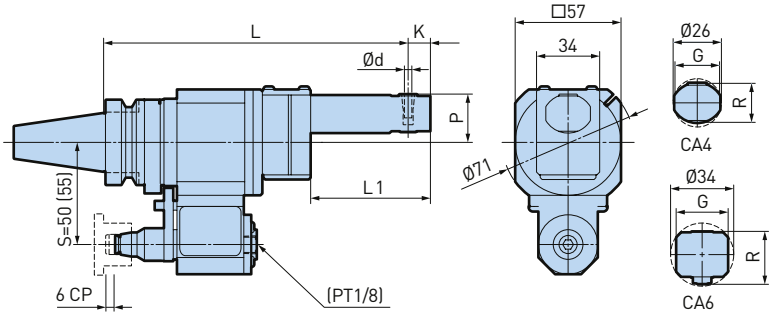
New Baby Collets

► 360

Angle Head Light Weight Small Bore Type

BIG-PLUS Dual-Contact

A.1



ø3 - 6mm

Model	Article No.	Ød	L	L1	K	P	G	R	Ratio	max. min-1	Collet Model	Weight (kg)
BBT30-AG90-CA4SG-164	805.570	3 - 4	164	64.5	12	26	24	21	1:1.13	2,000	CA4	1.90
BBT30-AG90-CA6SG-164	805.571	3 - 6	164	67	14.5	28	28	28.5	1:0.91	2,000	CA6	1.98

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. H and S dimensions must be indicated before ordering.
4. Tolerance of the cutting tool shank must be within h7.
5. Exclusive collet is to be ordered separately.
6. „CP" indicates compression.

Accessories & Spare Parts

Collet for Angle Head

► 400

Angle Head Compact Type for drilling and tapping

Compact and lightweight while fully equipped with the functions and accuracy required in drilling.

BIG-PLUS Dual-Contact

A.1

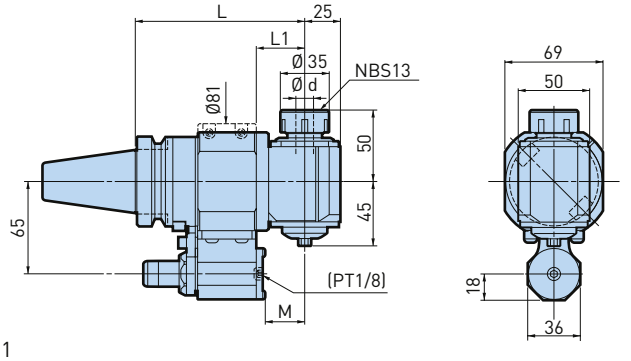


Fig. 1

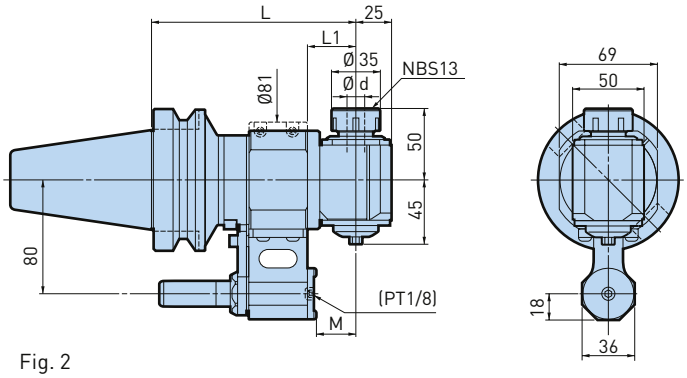


Fig. 2

ø2.5 - 13mm

Model	Article No.	Fig.	Ød	L	L1	M	max. min-1	Collet Model	Weight (kg)
BBT40-AG90-13-120	802.471	1	2.5 - 13	120	34	27.85	5,000	NBC13	4.50
BBT40-AG90-13-170	802.472	1	2.5 - 13	170	84	77.85	5,000	NBC13	5.50
BBT50-AG90-13-145	802.527	2	2.5 - 13	145	34	27.85	5,000	NBC13	7.60
BBT50-AG90-13-195	802.528	2	2.5 - 13	195	84	77.85	5,000	NBC13	8.60

1. Nut is included.
2. Wrench is included.
3. Exclusive Stop Block is required.
4. New Baby Collet for endmilling (NBC - EAA) can not be used.
5. The cutting tool rotates in reverse to the machine spindel.
6. Collet is not included.
7. The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable.
8. When used with stop block peripheral cooling is possible
9. Automatic tool change may not be available, depending on machine models.

Accessories & Spare Parts

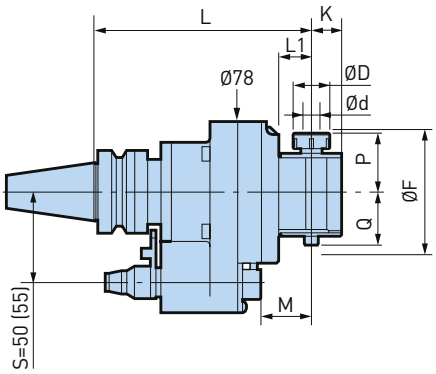
New Baby Collets	Semi-Finished Stop Blocks
► 360	► 413

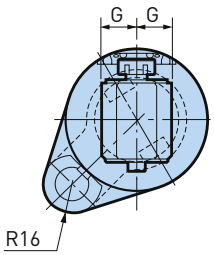
Angle Head New Baby Chuck Type

High run-out accuracy due to NBC technology.

BIG-PLUS Dual-Contact

A.1





ø0.25 - 13mm

Model	Article No.	Ød	ØD	G	K	L	L1	M	P	Q	ØF	max. min-1	Collet Model	Weight (kg)
BBT30-AG90-6-120	804.661	0,25 - 6	20	19,5	17	120	18,5	28,5	33	29	65	10,000	NBC6	2.30
BBT30-AG90-8-125	804.825	0,5 - 8	25	21,5	21	125	23,5	33,5	42	41	87	10,000	NBC8	2.30
BBT30-AG90-10-125	804.836	1,5 - 10	30	24,5	25	125	23,5	33,5	45	43	92	10,000	NBC10	2.50
BBT30-AG90-13-125	804.838	2,5 - 13	35	24,5	25	125	23,5	33,5	52	45	102	10,000	NBC13	2.60

1. Nut is included.
2. Wrench is included.
3. Exclusive Stop Block is required.
4. New Baby Collet for endmilling (NBC - EAA) can not be used.
5. The cutting tool rotates in reverse to the machine spindel.
6. Collet is not included.
7. The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable.
8. When used with stop block peripheral cooling is possible

Accessories & Spare Parts

New Baby Collets

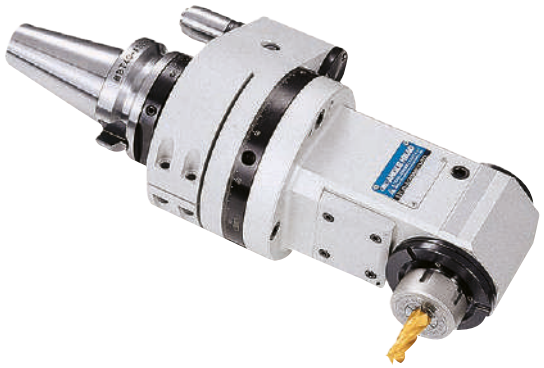
▶ 360

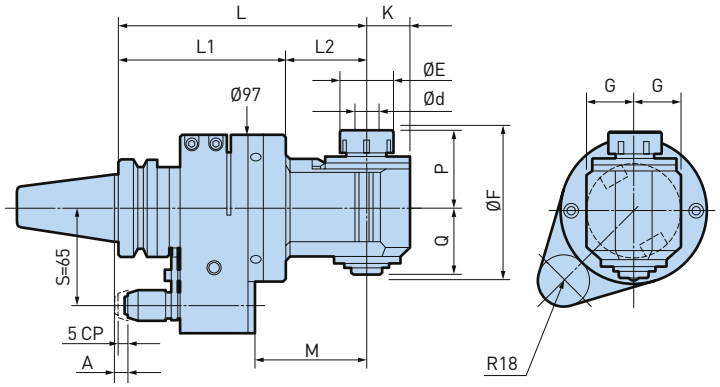
Angle Head New Baby Chuck Type

The Angle Head has an integrated New Baby Chuck, resulting in high precision. Available in various sizes to meet specific production requirements.

BIG-PLUS Dual-Contact

A.1





BBT40

ø0.25 - 20mm

Model	Article No.	Ød	ØE	ØF	L	L1	L2	G	K	M	P	Q	max. min-1	Collet Model	Weight (kg)
BBT40-AG90/NBS6-170	802.463	0.25 - 6	20	67	170	115	55	21	17	77	33	29	6,000	NBC6	5.10
BBT40-AG90/NBS6-200	802.465	0.25 - 6	20	67	200	115	85	21	17	107	33	29	6,000	NBC6	5.30
BBT40-AG90/NBS6-230	802.467	0.25 - 6	20	67	230	115	115	21	17	137	33	29	6,000	NBC6	5.50
BBT40-AG90/NBS6-260	802.469	0.25 - 6	20	67	260	115	145	21	17	167	33	29	6,000	NBC6	5.70
BBT40-AG90/NBS10-170	802.449	1.5 - 10	30	91	170	115	55	30	25	77	45	43	6,000	NBC10	5.50
BBT40-AG90/NBS10-200	802.451	1.5 - 10	30	91	200	115	85	30	25	107	45	43	6,000	NBC10	5.90
BBT40-AG90/NBS10-230	802.453	1.5 - 10	30	91	230	115	115	30	25	137	45	43	6,000	NBC10	6.20
BBT40-AG90/NBS13-170	802.455	2.5 - 13	35	101	170	115	55	31	28	77	52	45	6,000	NBC13	5.60
BBT40-AG90/NBS13-200	802.457	2.5 - 13	35	101	200	115	85	31	28	107	52	45	6,000	NBC13	6.00
BBT40-AG90/NBS13-230	802.459	2.5 - 13	35	101	230	115	115	31	28	137	52	45	6,000	NBC13	6.30
BBT40-AG90/NBS20S-165S	802.462	2.5 - 20	46	132	165	112	53	35	33	72	65	62	3,000	NBC20	8.00
BBT40-AG90/NBS20-185	-	2.5 - 20	46	132	185	70	115	35	35	92	65	62	3,000	NBC20	6.70

High rigidity S type with reinforced Locating Pin part is also available. Add the letter S at the end when ordering.

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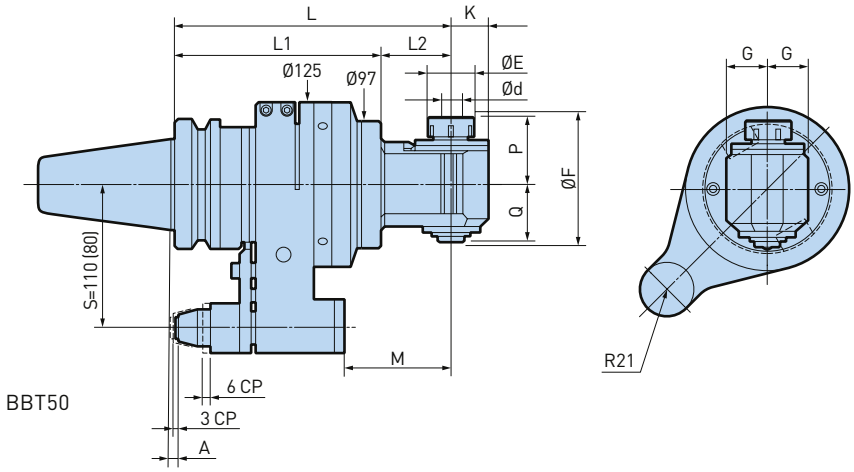
Angle Head New Baby Chuck Type

BIG-PLUS Dual-Contact

A.1



Model	Article No.	Ød	ØE	ØF	L	L1	L2	G	K	M	P	Q	max. min-1	Collet Model	Weight (kg)
BBT50-AG90/NBS6-215	802.515	0.25 - 6	20	67	215	160	55	21	17	82	33	29	6,000	NBC6	12.60
BBT50-AG90/NBS6-245	802.518	0.25 - 6	20	67	245	160	85	21	17	112	33	29	6,000	NBC6	12.80
BBT50-AG90/NBS6-275	802.521	0.25 - 6	20	67	275	160	115	21	17	142	33	29	6,000	NBC6	13.00
BBT50-AG90/NBS6-305	802.524	0.25 - 6	20	67	305	160	145	21	17	172	33	29	6,000	NBC6	13.20
BBT50-AG90/NBS10-215	802.494	1.5 - 10	30	91	215	160	55	30	25	82	45	43	6,000	NBC10	13.00
BBT50-AG90/NBS10-245	802.497	1.5 - 10	30	91	245	160	85	30	25	112	45	43	6,000	NBC10	13.40
BBT50-AG90/NBS10-275	802.500	1.5 - 10	30	91	275	160	115	30	25	142	45	43	6,000	NBC10	13.70
BBT50-AG90/NBS13-215	802.503	2.5 - 13	35	101	215	160	55	31	28	82	52	45	6,000	NBC13	13.10
BBT50-AG90/NBS13-245	802.506	2.5 - 13	35	101	245	160	85	31	28	112	52	45	6,000	NBC13	13.50
BBT50-AG90/NBS13-275	802.509	2.5 - 13	35	101	275	160	115	31	28	142	52	45	6,000	NBC13	13.80
BBT50-AG90/NBS16H-215	-	2.5 - 16	42	163	215	144	71	45	35	82	80	80	8,000	NBC16	14.60
BBT50-AG90/NBS20-230	802.512	2.5 - 20	46	132	230	160	70	35	35	97	65	62	3,000	NBC20	14.20

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. The standard fixed length A is 8 mm for BBT40 and 6 mm for BBT50. Other lengths are available upon request.
4. Artikel No. for BBT50 is with S = 110. S = 80 type for BBT50 is also available upon request.
5. Please add S-value at end of Model when placing an order with Model. (e.g. BBT50-A90/NBS-215-110)
6. Nut and wrench are included.
7. New Baby Collet is to be ordered separately.
8. New Baby Collet for endmilling (NBC - EAA) can not be used.
9. Coolant can be supplied through the locating pin.
10. „ØF" indicates the minimum dimension for access into the bore.
11. „CP" indicates compression.

High rigidity S type with reinforced Locating Pin part is also available. Add the letter S at the end when ordering.

Accessories & Spare Parts

New Baby Collets	Semi-Finished Stop Blocks
▶ 360	▶ 413

NEW BABY CHUCK Insertion Length List

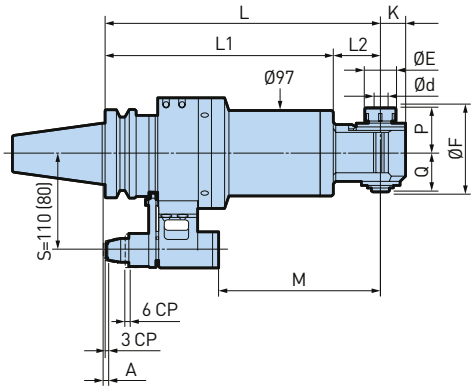
Model	Tool adjustment amount	Max. insertion length	Adjust Screw	Model	Tool adjustment amount	Max. insertion length	Adjust Screw
BBT30-AG90-6-99	-	33	-	AG35-NBS10	35 - 45	72	NBA10B
BBT30-AG90-6-120				AG35-NBS13	41 - 60	80	NBA13B
BBT30-AG90-8-125		40		AG35-NBS16	45 - 60	82	NBA16B
BBT30-AG90-10-125		45		AG35-NBS20	48 - 60		NBA20B
BBT30-AG90-13-125		52		AG35-ONBS13N	-	73	-
BBT40-AG90/NBS6	-	33	-	AG35-ONBS20N		78	
BBT40-AG90/NBS10		45		BBT50-AG90/NBS6	-	33	-
BBT40-AG90/NBS13		52		BBT50-AG90/NBS10		45	
BBT40-AG90/NBS20-185□		70		BBT50-AG90/NBS13		52	
BBT40-AG90/NBS20S-165S				BBT50-AG90/NBS20-230□		70	
BBT40-AG90/NBS10W-185□		60		BBT50-AG90/NBS16H-215□		98	
BBT40-AG45/NBS10-215□		45		BBT50-AG90/NBS10W-230□		60	
BBT40-AG45/NBS13-220□		52		BBT50-AG45/NBS10-260□		45	
BBT40-AGU/NBS13-270		50		BBT50-AG45/NBS13-265□		52	
BBT40-AGU30/NBS13-240	41 - 53	73	NBA13B	BBT50-AGU/NBS20-315		50	
BBT40-AG90-13-120	-	50	-	BBT50-AGU30/NBS20-295	48 - 65	85	NBA20B
BBT40-AG90-13-170				BBT50-AG90-13-145	-	50	-
BBT40-OAG90-13-170	36 - 40	60	NBA13B	BBT50-AG90-13-195			
				BBT50-OAG90-13-195	36 - 40	60	NBA13B

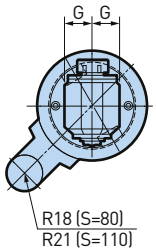
Angle Head New Baby Chuck Extralong Type

For drilling and key slotting in deep cavities of large workpieces.

BIG-PLUS Dual-Contact

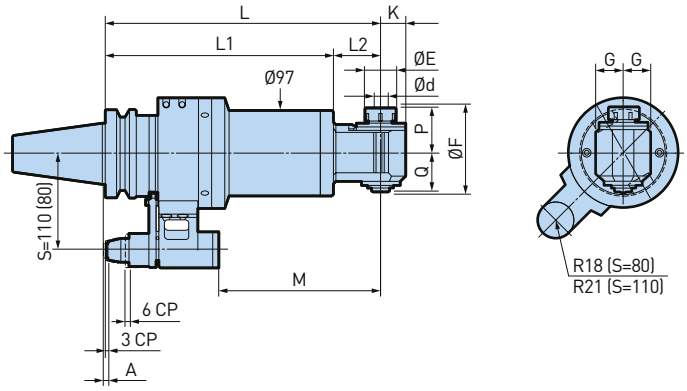
A.1





ø0.25 - 20mm

Model	Article No.	Ød	ØE	ØF	L	L1	L2	G	K	M	P	Q	max. min-1	Collet Model	Weight (kg)
BBT50-AG90/NBS6-315LS	805.035	0.25 - 6	20	67	315	260	55	21	17	182	33	29	6,000	NBC6	18.90
BBT50-AG90/NBS6-345LS	805.036	0.25 - 6	20	67	345	260	85	21	17	212	33	29	6,000	NBC6	19.10
BBT50-AG90/NBS6-375LS	805.037	0.25 - 6	20	67	375	260	115	21	17	242	33	29	6,000	NBC6	19.30
BBT50-AG90/NBS6-405LS	805.038	0.25 - 6	20	67	405	260	145	21	17	272	33	29	6,000	NBC6	19.50
BBT50-AG90/NBS6-415LS	805.039	0.25 - 6	20	67	415	360	55	21	17	282	33	29	6,000	NBC6	23.30
BBT50-AG90/NBS6-445LS	805.040	0.25 - 6	20	67	445	360	85	21	17	312	33	29	6,000	NBC6	23.50
BBT50-AG90/NBS6-475LS	805.041	0.25 - 6	20	67	475	360	115	21	17	342	33	29	6,000	NBC6	23.70
BBT50-AG90/NBS6-505LS	805.042	0.25 - 6	20	67	505	360	145	21	17	372	33	29	6,000	NBC6	23.90
BBT50-AG90/NBS6-515LS	805.043	0.25 - 6	20	67	515	460	55	21	17	382	33	29	6,000	NBC6	27.70
BBT50-AG90/NBS6-545LS	805.044	0.25 - 6	20	67	545	460	85	21	17	412	33	29	6,000	NBC6	27.90
BBT50-AG90/NBS6-575LS	805.045	0.25 - 6	20	67	575	460	115	21	17	442	33	29	6,000	NBC6	28.10
BBT50-AG90/NBS6-605LS	805.046	0.25 - 6	20	67	605	460	145	21	17	472	33	29	6,000	NBC6	28.30



Model	Article No.	Ød	ØE	ØF	L	L1	L2	G	K	M	P	Q	max. min-1	Collet Model	Weight (kg)
BBT50-AG90/NBS10-315LS	805.047	1.5 - 10	30	91	315	260	55	30	25	182	45	43	6,000	NBC10	19.30
BBT50-AG90/NBS10-345LS	805.048	1.5 - 10	30	91	345	260	85	30	25	212	45	43	6,000	NBC10	19.70
BBT50-AG90/NBS10-375LS	805.049	1.5 - 10	30	91	375	260	115	30	25	242	45	43	6,000	NBC10	20.00
BBT50-AG90/NBS10-415LS	805.050	1.5 - 10	30	91	415	360	55	30	25	282	45	43	6,000	NBC10	23.70
BBT50-AG90/NBS10-445LS	805.051	1.5 - 10	30	91	445	360	85	30	25	312	45	43	6,000	NBC10	24.10
BBT50-AG90/NBS10-475LS	805.052	1.5 - 10	30	91	475	360	115	30	25	342	45	43	6,000	NBC10	24.40
BBT50-AG90/NBS10-515LS	805.053	1.5 - 10	30	91	515	460	55	30	25	382	45	43	6,000	NBC10	28.10
BBT50-AG90/NBS10-545LS	805.054	1.5 - 10	30	91	545	460	85	30	25	412	45	43	6,000	NBC10	28.50
BBT50-AG90/NBS10-575LS	805.055	1.5 - 10	30	91	575	460	115	30	25	442	45	43	6,000	NBC10	28.80
BBT50-AG90/NBS13-315LS	805.057	2.5 - 13	35	101	315	260	55	31	28	182	52	45	6,000	NBC13	19.40
BBT50-AG90/NBS13-345LS	805.058	2.5 - 13	35	101	345	260	85	31	28	212	52	45	6,000	NBC13	19.80
BBT50-AG90/NBS13-375LS	805.060	2.5 - 13	35	101	375	260	115	31	28	242	52	45	6,000	NBC13	20.10
BBT50-AG90/NBS13-415LS	805.061	2.5 - 13	35	101	415	360	55	31	28	282	52	45	6,000	NBC13	23.80
BBT50-AG90/NBS13-445LS	805.062	2.5 - 13	35	101	445	360	85	31	28	312	52	45	6,000	NBC13	24.20
BBT50-AG90/NBS13-475LS	805.063	2.5 - 13	35	101	475	360	115	31	28	342	52	45	6,000	NBC13	24.50
BBT50-AG90/NBS13-515LS	805.064	2.5 - 13	35	101	515	460	55	31	28	382	52	45	6,000	NBC13	28.20
BBT50-AG90/NBS13-545LS	805.065	2.5 - 13	35	101	545	460	85	31	28	412	52	45	6,000	NBC13	28.60
BBT50-AG90/NBS13-575LS	805.066	2.5 - 13	35	101	575	460	115	31	28	442	52	45	6,000	NBC13	28.90
BBT50-AG90/NBS20-330LS	805.067	2.5 - 20	46	132	330	260	70	35	35	197	65	62	3,000	NBC20	20.50
BBT50-AG90/NBS20-430LS	805.069	2.5 - 20	46	132	430	360	70	35	35	297	65	62	3,000	NBC20	24.90
BBT50-AG90/NBS20-530LS	805.070	2.5 - 20	46	132	530	460	70	35	35	397	65	62	3,000	NBC20	28.95

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. The standard length A is 6 mm.
4. Artikel No. for BBT50 is with S = 110. S = 80 type for BBT50 is also available upon request.
5. Clamping nut and wrench are included.
6. New Baby Collet is to be ordered separately.
7. New Baby Collet for endmilling (NBC - EAA) can not be used.
8. Coolant can be supplied through the locating pin.
9. „CP" indicates compression.
10. „ØF" indicates the minimum dimension for access into the bore.

Accessories & Spare Parts

New Baby Collets	Semi-Finished Stop Blocks
▶ 360	▶ 413

Angle Head New Baby Chuck Twin Head Type

BIG-PLUS Dual-Contact

Twin spindle head with a compact design. Symmetrical machining can be performed using one unit, contributing to the reduction of the number of magazines.

A.1

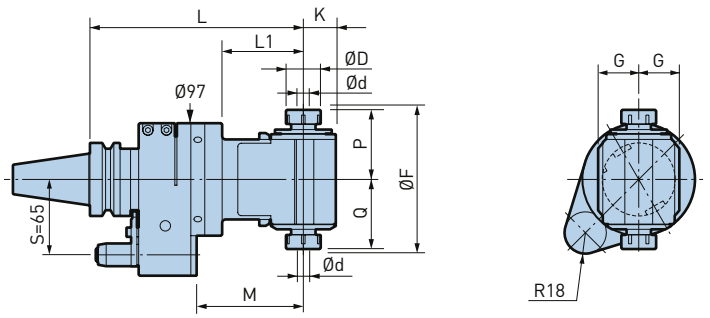


Fig. 1

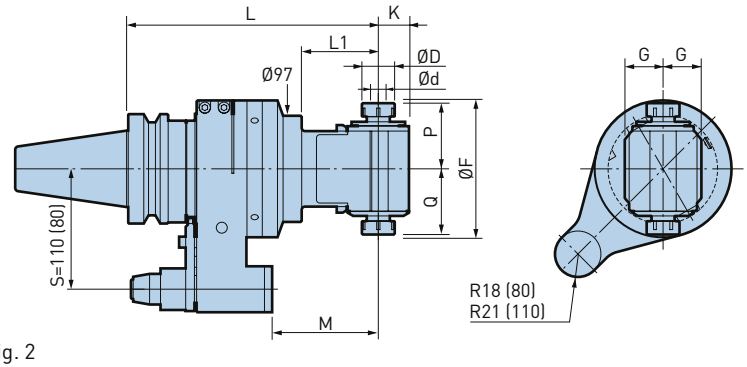


Fig. 2

Model	Article No.	Fig.	Ød	ØD	G	K	L	L1	M	P	Q	ØF	Collet Model	Weight (kg)
BBT40-AG90/NBS10W-185	101124.001.0	1	1,5 - 10	31	31	28	185	70	92	60	60	24	NBC10	6.30
BBT50-AG90/NBS10W-230	101124.002.0	2	1,5 - 10	30	31	28	230	70	97	60	60	124	NBC10	13.80

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Nut is included.
3. Wrench is included.
4. Exclusive Stop Block is required.
5. New Baby Collet for endmilling (NBC - EAA) can not be used.
6. Collet is not included.
7. The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable.
8. When used with stop block peripheral cooling is possible
9. Automatic tool change may not be available, depending on machine models.
10. Output spindles do not rotate in the same direction simultaneously.
11. The standard fixed length A is 8 mm for BBT40 and 6 mm for BBT50. Other lengths are available upon request.
12. Artikel No. for BBT50 is with S = 110. S = 80 type for BBT50 is also available upon request.

High rigidity S type with reinforced Locating Pin part is also available. Add the letter S at the end when ordering.

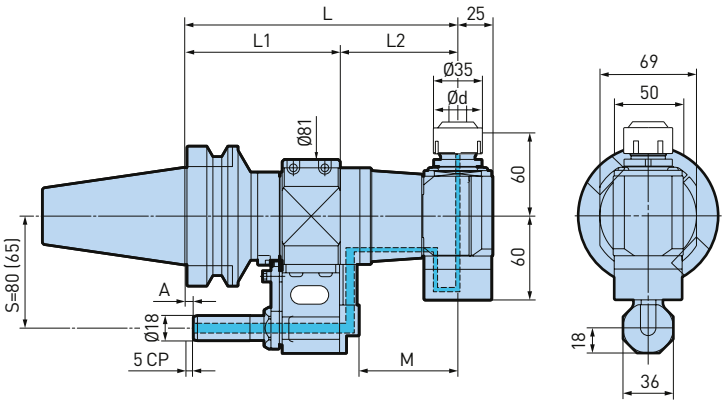
Accessories & Spare Parts

New Baby Collets	Semi-Finished Stop Blocks
▶ 360	▶ 413

Angle Head New Baby Chuck Oil Coolant Type

BIG-PLUS Dual-Contact

Feeds coolant through the cutting tool via the stop block.

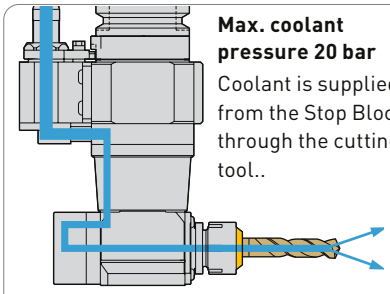


A.1

ø2.5 - 13mm

Model	Article No.	Ød	L	L1	L2	M	max. min-1	Collet Model	Nut Model	Weight (kg)
BBT40-OAG90-13-170-65	802.482	2.5 - 13	170	86	84	70.5	5,000	NBC13	BPS13	6.00
BBT50-OAG90-13-195-80	802.545	2.5 - 13	195	111	84	70.5	5,000	NBC13	BPS13	8.85

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. The standard length A is 6 mm.
4. Standard "S" is 80 mm for BBT50 and 65 mm for BBT40.
5. Wrench is included.
6. New Baby Collet and Baby Perfect Seal (BPS13) are to be ordered seperately.
7. New Baby Collet for endmilling (NBC - EAA) can not be used.
8. „CP" indicates compression.



Max. coolant pressure 20 bar
Coolant is supplied from the Stop Block through the cutting tool..

Accessories & Spare Parts

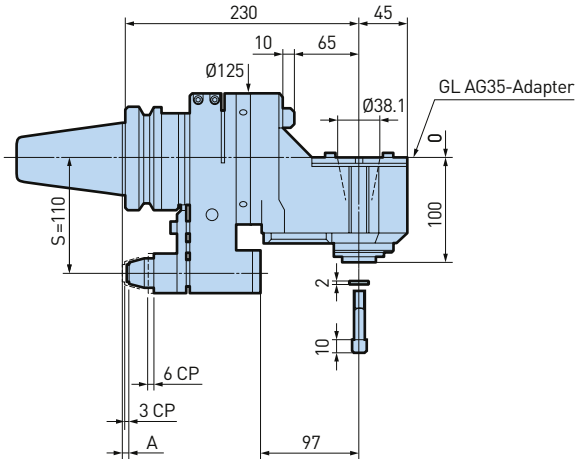
Baby Perfect Seals	New Baby Collets	Semi-Finished Stop Blocks
▶ 370	▶ 360	▶ 413

Angle Head Build-Up Type

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

BIG-PLUS Dual-Contact

A.1



Model	Article No.	max. min-1	Connection tool side	Weight (kg)
BBT50-AG90/AGH35-230	802.489	3,000	AGH35	15.00
BBT50-AG90/AGH35-230S	802.490	3,000	AGH35	16.30

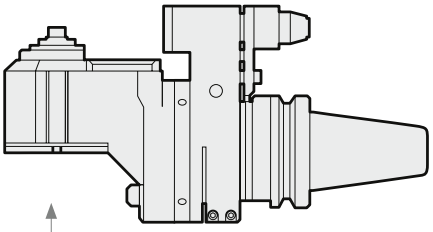
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. Models with a "S" are high rigidity type.
4. The standard length A is 6 mm.
5. Coolant can be supplied through the locating pin.
6. „CP" indicates compression.

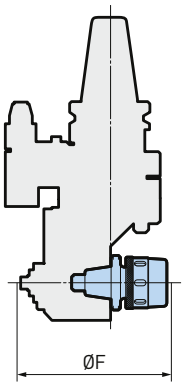
Accessories & Spare Parts

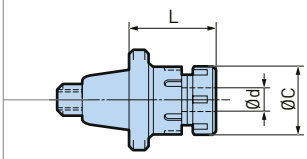
Semi-Finished Stop Blocks

▶ 413

AG35 adapters



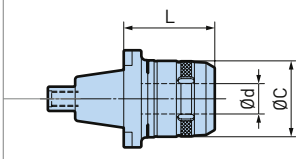




AG35 adapters New Baby Chuck

Model	Article No.	Ød	L	ØC	ØF	Collet Model	Head	Weight (kg)
AG35-NBS10	962.793	1.5 - 10	47	30	162	NBC10	AG35	0.60
AG35-NBS13	962.794	2.5 - 13	54	35	168	NBC13	AG35	0.70
AG35-NBS16	962.795	2.5 - 16	54	42	170	NBC16	AG35	0.80
AG35-NBS20	962.796	2.5 - 20	54	46	170	NBC20	AG35	0.85

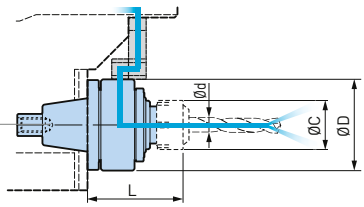
1. Collet and wrench are to be ordered separately.



AG35 adapters New Hi-Power Milling Chuck

Model	Article No.	Ød	L	ØC	ØF	Head	Weight (kg)
AG35-HMC20S	802.742	20	60	50	178	AG35	1.00

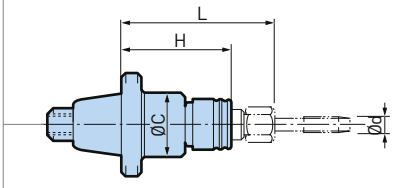
1. Wrench (FK45-50L) is included.



AG35 adapters Hi-Jet Holder

Model	Article No.	Ød	L	ØC	ØD	ØF	Head	Weight (kg)
AG35-ONBS13N	806.438	3 - 13	68	35	65	186	AG35	1.70
AG35-ONBS20N	806.974	3 - 20	68	46	65	188	AG35	1.85

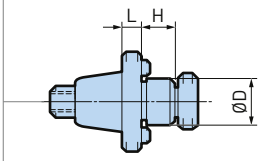
1. Baby Perfect Seal nut with sealing mechanism is required. (optional)
2. Anti-rotation block set is to be ordered separately. (Model: AG35-BL)
3. Collet and wrench are to be ordered separately.



AG35 adapters Auto Tapper Type B (automatic depth control)

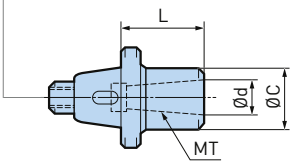
Model	Article No.	Ød	ØC	L	H	Head	Weight (kg)
AG35-ATB12E	802.435	M4 - M12	40.5	80	72	AG35	0.85
AG35-ATB20E	802.436	M8 - M20	57.5	115	102.5	AG35	1.65

1. Please contact us for tap collet.



AG35 adapters Face Mill Arbor

Model	Article No.	ØD	L	H	Head	Weight (kg)
AG35-FMH22-30	802.740	22	30	18	AG35	0.74
AG35-FMH27-20	802.741	27	20	20	AG35	0.80



AG35 adapters Morse Taper Adapter

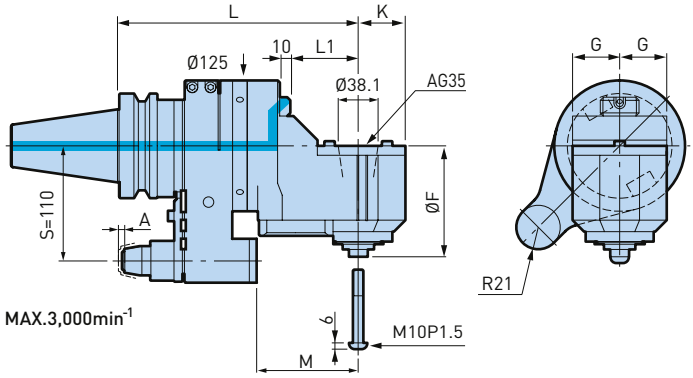
Model	Article No.	Ød	MT No.	L	ØC	ØF	Head	Weight (kg)
AG35-MT1	962.785	12.065	1	50	24	164	AG35	0.53
AG35-MT2	962.786	17.78	2	60	32	180	AG35	0.62

Angle Head Build up Type with center through coolant

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1

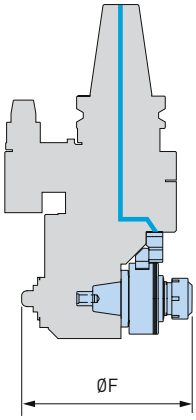


Model	Article No.	ØF	L	L1	G	K	M	Head	Weight (kg)
BBT50-TAG90/AGH35-230	-	106	230	65	45	45	97	AG35	15.60
BBT50-TAG90/AGH35-230S	-	106	230	65	45	45	97	AG35	16.90

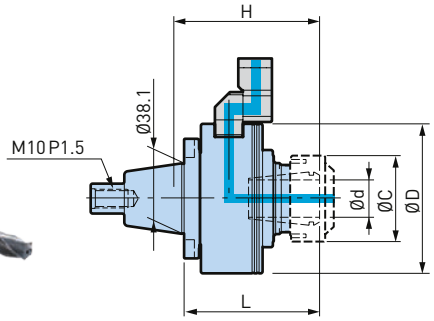
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. Models with a "S" are high rigidity type.
4. The standard length A is 6 mm.
5. Coolant can be supplied through the locating pin.

Accessories & Spare Parts

Adapter New Baby Chuck Type	Adapter Side Lock Type
▶ 133	▶ 133



Adapter New Baby Chuck Type



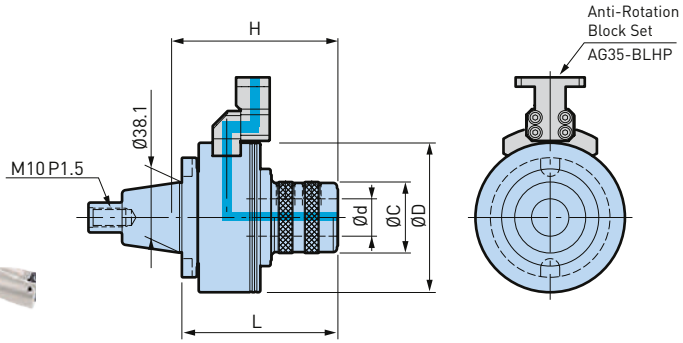
Model	Article No.	Ød	ØD	L	ØC	ØF	H	Head	Weight (kg)
AG35-ONBS20HP	-	3-20	80	72.5	46	195	78	AG35	1.40

1. Baby Perfect Seal nut with sealing mechanism is required. (optional)
2. Wrench is to be ordered separately.
3. Anti-rotation block set is to be ordered separately. (Model: AG35-BLHP)
4. Max. coolant flow rate: 30 l/min, max. coolant pressure: 70 Bar.
5. "H" indicates the maximum cutting tool insertion length.
6. Applicable only for water-solved coolant.

Anti-Rotation Block Set for Build-up type

Model
AG35-BLHP

Adapter Side Lock Type



Model	Article No.	Ød	ØD	L	ØC	ØF	H	Head	Weight (kg)
AG35-OSL20HP	-	20	80	83.5	38	198	89	AG35	1.60

1. Anti-rotation block set is to be ordered separately. (Model: AG35-BLHP)
2. Max. coolant flow rate: 30 l/min, max. coolant pressure: 70 Bar.
3. "H" indicates the maximum cutting tool insertion length.
4. Applicable only for water-solved coolant.

Anti-Rotation Block Set for Build-up type

Model
AG35-BLHP

Machining Examples -Drilling

Angle Head	BBT50-TAG90/AGH35-230S	
Adapter	AG35-ONBS20HP	AG35-OSL20HP
Tools	Ø 10 Solid carbide drill	Ø17 cutting-edge interchangeable drill
Workpiece	SUS304 C50	C50
Cutting Depth	50 mm (5xD)	50 mm (3xD)
Cutting Speed	80 m/min	120 m/min
Feed per Revolution	0.2 mm/rev	0.1 mm/rev
Rotation Speed	2,546 min-1	2,247 min-1
Table Feed	509 mm/min	225 mm/min
Coolant	70 Bar	50 Bar

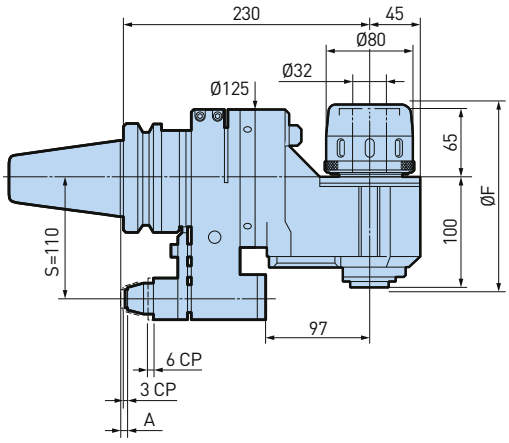
Results: Chip evacuation and edge cooling improved machining conditions.

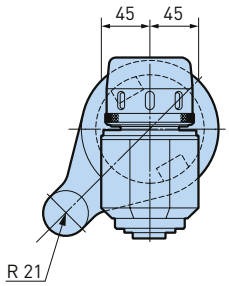
Angle Head HMC Type

BIG-PLUS Dual-Contact

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

A.1





ø6 - 32mm

Model	Article No.	ØF	max. min-1	Weight (kg)
BBT50-AG90/HMC32-230	802.492	175	3,000	16.80
BBT50-AG90/HMC32-230S	802.493	175	3,000	18.10

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. Models with a "S" are high rigidity type.
4. The standard length A is 6 mm.
5. Wrench (FK80-90) is included.
6. Coolant can be supplied through the locating pin.
7. „CP" indicates compression.
8. „ØF" indicates the minimum dimension for access into the bore.

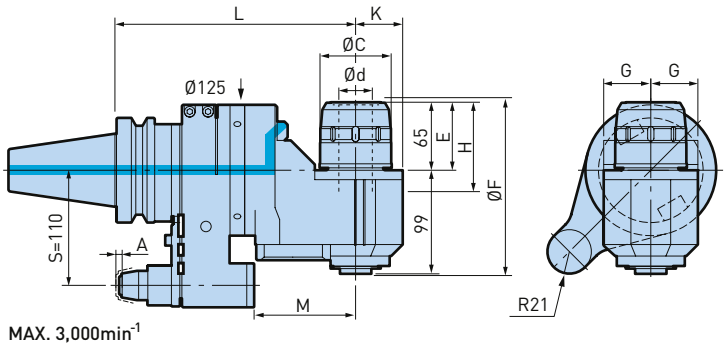
Accessories & Spare Parts

C Collets	Semi-Finished Stop Blocks	FK Wrenches
▶ 381	▶ 413	▶ 385

Angle Head HMC Type with cooling through the spindle

BIG-PLUS Dual-Contact

A.1



MAX. 3,000min^{-1}

Model	Article No.	Ød	E	H	ØC	ØF	L	G	K	M	Weight (kg)
BBT50-TAG90/HMC32S-230	-	32	65	95	68	170	230	45	45	97	16.80
BBT50-TAG90/HMC32S-230S	-	32	65	95	68	170	230	45	45	97	18.10

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. Models with a "S" are high rigidity type.
4. The standard length A is 6 mm.
5. Wrench (FK80-90) is included.
6. „ØF" indicates the minimum dimension for access into the bore.

Accessories & Spare Parts

C Collets	Semi-Finished Stop Blocks	FK Wrenches
▶ 381	▶ 413	▶ 385

A.1

Angle Head New Baby Chuck Type 45 degree

Highly versatile NEW BABY CHUCK type 45 degree housing enables high accuracy diagonal machining.

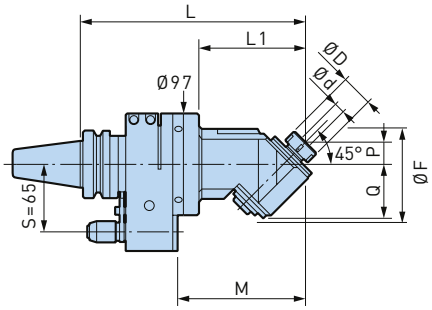


Fig. 1

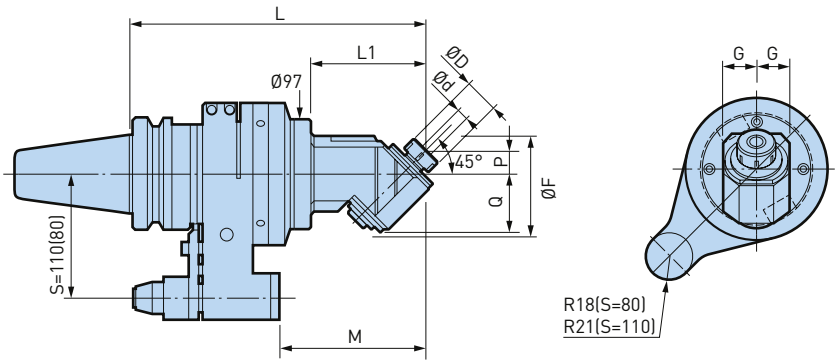


Fig. 2

Model	Article No.	Fig.	Ød	ØD	L	L1	ØF	G	M	P	Q	Collet Model	Weight (kg)
BBT40-AG45/NBS10-215	-	1	1.5 - 10	30	215	100	90	30	122	20	51.5	NBC10	5.70
BBT40-AG45/NBS13-220	-	1	2.5 - 13	35	220	105	90	30	127	25	51.5	NBC13	5.80
BBT50-AG45/NBS10-260	-	2	1.5 - 10	30	260	100	90	30	127	20	51.5	NBC10	13.20
BBT50-AG45/NBS13-265	-	2	2.5 - 13	35	265	105	90	30	132	25	51.5	NBC13	13.30

1. Nut and wrench are included.
2. New Baby Collet is to be ordered separately.
3. New Baby Collet for endmilling (NBC - EAA) can not be used.
4. Coolant can be supplied through the locating pin.
5. Exclusive Stop Block is required.
6. „ØF" indicates the minimum dimension for access into the bore.
7. „CP" indicates compression.
8. BBT50 is with S = 110. S = 80 type is available upon request.

High rigidity S type with reinforced Locating Pin part is also available. Add the letter S at the end when ordering.

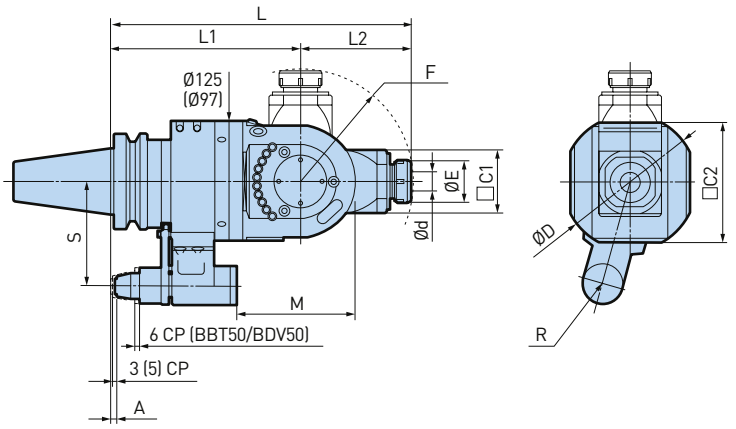
Accessories & Spare Parts

New Baby Collets	Semi-Finished Stop Blocks	New Baby Wrenches
▶ 360	▶ 413	▶ 385

Angle Head Universal Type

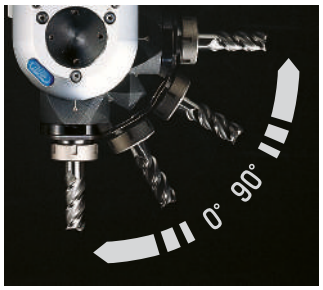
BIG-PLUS Dual-Contact

Suitable for cutting angles between 0° and 90°. In addition to that the cutter head can be rotated a full 360°, increasing flexibility!



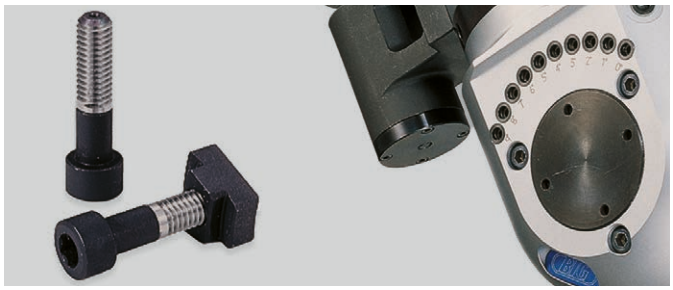
Model	Article No.	Ød	ØD	ØE	C1	C2	L	L1	L2	M	F	R	S	max. min-1	Collet Model	Weight (kg)
BBT40-AGU/NBS13-270	802.480	2.5 - 13	115	35	51	97	270	170	100	124	102	18	65	6,000	NBC13	9.70
BBT50-AGU/NBS20-315	802.318	2.5 - 20	140	46	65	125	315	200	115	125	118	21	110	4,000	NBC20	20.80

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. The standard fixed length A is 8 mm for BBT40 and 6 mm for BBT50. Other lengths are available upon request.
4. Figures in ( ) in the drawing indicate dimensions for BBT40.
5. Nut and wrench are included.
6. New Baby Collet is to be ordered separately.
7. Coolant can be supplied through the locating pin.
8. „CP" indicates compression.



Easily adjustable spindle angle from 0° to 90°.

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



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

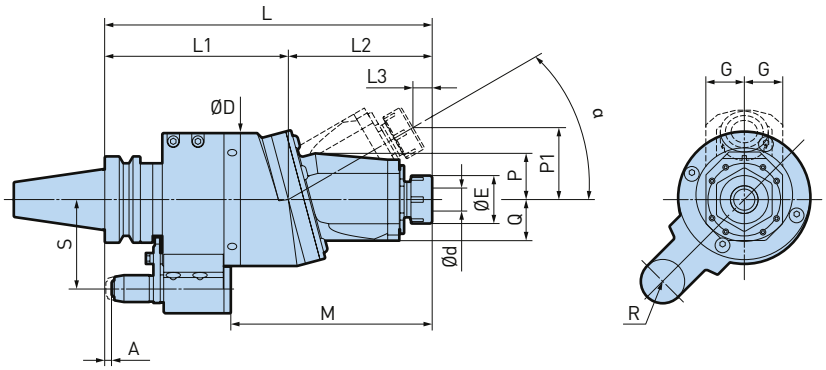
Accessories & Spare Parts

New Baby Collets	Semi-Finished Stop Blocks
▶ 360	▶ 413

Angle Head AGU30 Type

BIG-PLUS Dual-Contact

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

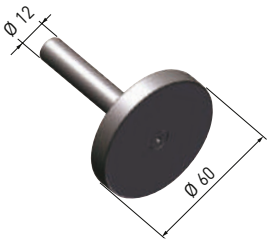


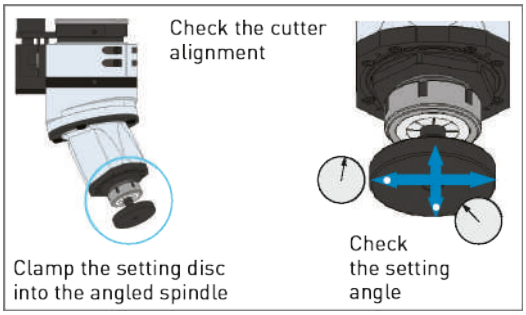
Model	Article No.	Ød	ØD	ØE	L	L1	L2	L3	G	Q	P	P1 max.	R	S	M	max. min-1	Collet Model	Weight (kg)
BBT40-AGU30/NBS13-240	802.481	2.5 - 13	97	35	240	135	105	14	29	30	34	52.5	18	65	147	6,000	NBC13	6.90
BBT50-AGU30/NBS20-295	802.544	2.5 - 20	125	46	295	165	130	17	36.5	39	45	65	21	110	162	4,000	NBC20	16.10

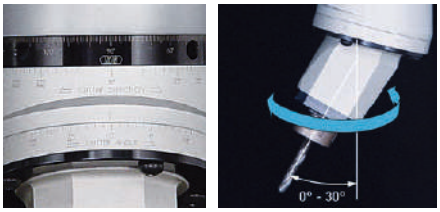
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. The standard fixed length A is 8 mm for BBT40 and 6 mm for BBT50. Other lengths are available upon request.
4. Coolant can be supplied through the locating pin.
5. New Baby Nut, wrench and setting disc are included.

Setting Disc (Included Accessory)

For precise adjustment of the spindle angle or direction.







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

Accessories & Spare Parts

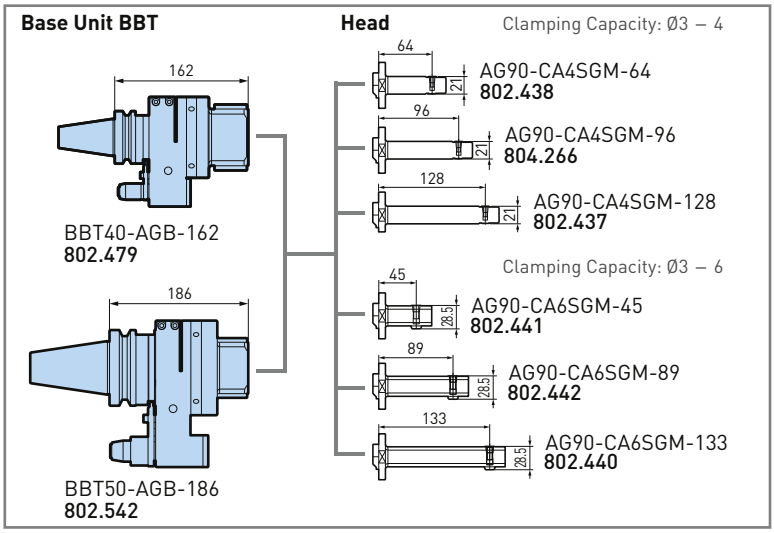
New Baby Collets	Semi-Finished Stop Blocks
▶ 360	▶ 413

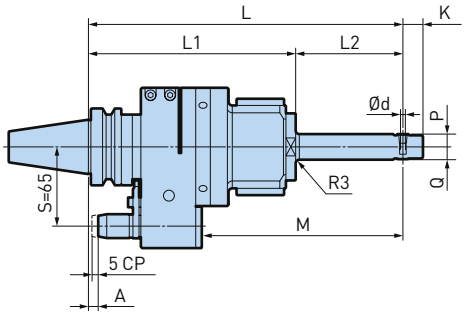
Angle Head Small Bore Type

Angular operation in a Ø 30 mm bore (min.) is possible. Modular heads enhance versatility. Head is aligned with spindle center for easy programing.

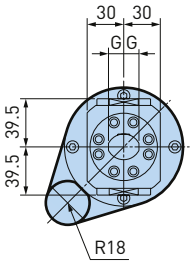
BIG-PLUS Dual-Contact

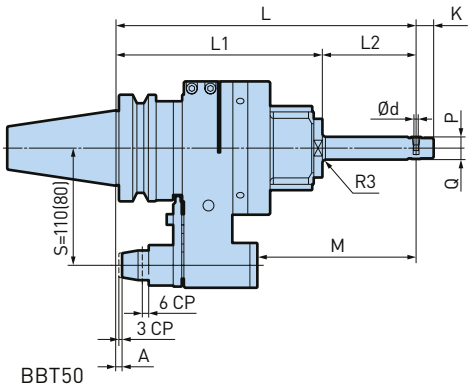
A.1



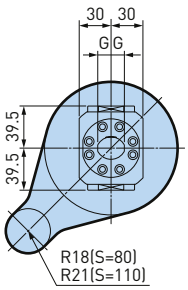


BBT40





BBT50



ø3 - 6mm

Model	Article No.	Base Unit	Head	Ød	L	L1	L2	G	K	M	P	Q	Ratio	Weight (kg)
BBT40-AG90-CA4SGM-226	802.473	BBT40-AGB-162	AG90-CA4SGM-64	3 - 4	226	170	56	12.5	16.5	133	10.5	10.5	1:1.06	5.60
BBT40-AG90-CA4SGM-258	802.474	BBT40-AGB-162	AG90-CA4SGM-96	3 - 4	258	170	88	12.5	16.5	165	10.5	10.5	1:1.06	5.70
BBT40-AG90-CA4SGM-290	802.475	BBT40-AGB-162	AG90-CA4SGM-128	3 - 4	290	170	120	12.5	16.5	197	10.5	10.5	1:1.06	5.80
BBT40-AG90-CA6SGM-207	802.476	BBT40-AGB-162	AG90-CA6SGM-45	3 - 6	207	170	37	15	20	114	12.5	16	1:0.77	5.70
BBT40-AG90-CA6SGM-251	802.477	BBT40-AGB-162	AG90-CA6SGM-89	3 - 6	251	170	81	15	20	158	12.5	16	1:0.77	5.90
BBT40-AG90-CA6SGM-295	802.478	BBT40-AGB-162	AG90-CA6SGM-133	3 - 6	295	170	125	15	20	202	12.5	16	1:0.77	6.10
BBT50-AG90-CA4SGM-250	802.529	BBT50-AGB-186	AG90-CA4SGM-64	3 - 4	250	194	56	12.5	16.5	117	10.5	10.5	1:1.06	11.90
BBT50-AG90-CA4SGM-282	802.531	BBT50-AGB-186	AG90-CA4SGM-96	3 - 4	282	194	88	12.5	16.5	149	10.5	10.5	1:1.06	12.00
BBT50-AG90-CA4SGM-314	802.533	BBT50-AGB-186	AG90-CA4SGM-128	3 - 4	314	194	120	12.5	16.5	181	10.5	10.5	1:1.06	12.10
BBT50-AG90-CA6SGM-231	802.535	BBT50-AGB-186	AG90-CA6SGM-45	3 - 6	231	194	37	15	20	98	12.5	16	1:0.77	12.00
BBT50-AG90-CA6SGM-275	802.537	BBT50-AGB-186	AG90-CA6SGM-89	3 - 6	275	194	81	15	20	142	12.5	16	1:0.77	12.20
BBT50-AG90-CA6SGM-319	802.539	BBT50-AGB-186	AG90-CA6SGM-133	3 - 6	319	194	125	15	20	186	12.5	16	1:0.77	12.40

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. The standard fixed length A is 8 mm for BBT40 and 6 mm for BBT50. Other lengths are available upon request.
4. Artikel No. for BBT50 is with S = 110. S = 80 type for BBT50 is also available upon request.
5. Coolant-through hole is not available.
6. Exclusive collet is to be ordered separately.
7. „CP" indicates compression.
8. max. 2000 min-1

Accessories & Spare Parts

Collet for Angle Head	Semi-Finished Stop Blocks
► 400	► 413

Application Examples

AG90-Series (Build-Up Type)

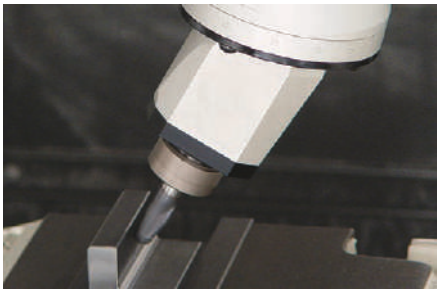
Standard Type
BBT50-AG90/AGH35-230
(with AG35-FMA25.4-20)
Workpiece: Carbon Steel C55
Cutter: 80 mm Face Mill
Cutting Depth: 2 mm
Spindle Speed: 600 min^{-1}
Cutting Speed: 150 m/min
Cutting Feed: 360 mm/min

S-Type
BBT50-AG90/AGH35-230S
(with AG35-FMA25.4-20)
Workpiece: Carbon Steel C55
Cutter: 80 mm Face Mill
Cutting Depth: 3 mm
Spindle Speed: 600 min^{-1}
Cutting Speed: 150 m/min
Cutting Feed: 360 mm/min

AG90-Series (HMC Type)

Standard Type
BBT50-AG90/HMC32-230
Workpiece: Carbon Steel C55
Cutter: 20 mm Face Mill
Cutting Depth: 3 mm
Spindle Speed: 400 min^{-1}
Cutting Speed: 25 m/min
Cutting Feed: 72 mm/min

S-Type
BBT50-AG90/HMC32-230S
Workpiece: Carbon Steel C55
Cutter: 20 mm Face Mill
Cutting Depth: 4 mm
Spindle Speed: 400 min^{-1}
Cutting Speed: 25 m/min
Cutting Feed: 72 mm/min



AGU-Series (AGU30 Type)

BBT40-AGU30/NBS13-240
Workpiece: Pre-hardened steel (HRC40)
Cutter: R5 2-flute carbide ball end mill
Cutting Depth: Ad = 0.1 mm
Spindle Speed: 6 000 min^{-1}
Peck Feed: Pf = 0.4
Cutting Speed: 90 m/min
Cutting Feed: 900 mm/min

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

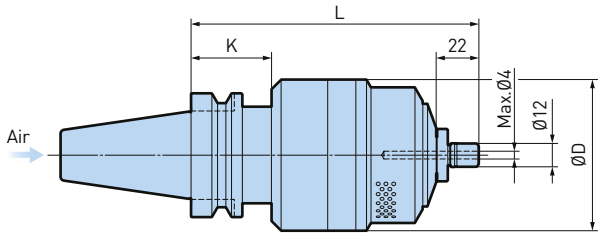
Special length

Coolant feeder

BBT30

Air Turbine Spindle Center Through Type

BIG-PLUS Dual-Contact



ø0.5 - 4mm

Model	Article No.	Operation Speed (min-1)	ØD	L	K	Nut Model	Weight (kg)
BBT40-RBX5C-4S-150	802.403	40,000 - 50,000	96	150	43	MGN4S	4.10
BBT40-RBX7C-4S-150	802.409	60,000 - 80,000	78	150	43	MGN4S	3.10
BBT50-RBX5C-4S-160	802.415	40,000 - 50,000	96	160	53	MGN4S	7.30
BBT50-RBX7C-4S-160	802.420	60,000 - 80,000	78	160	53	MGN4S	6.30

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Nut and wrench are included.
3. Collet (NBC4S-_) and XF1 (air unit) are to be ordered separately.

Caution
Clean air is an essential condition for the use of this product. Therefore, coolant should never be supplied through the spindle of the machine using the Air Turbine Spindle.

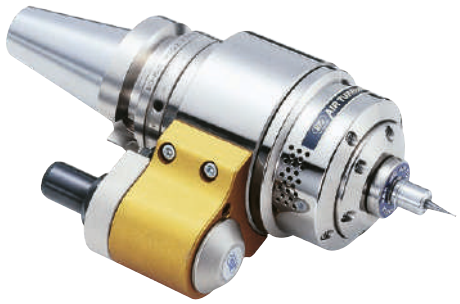
Accessories & Spare Parts

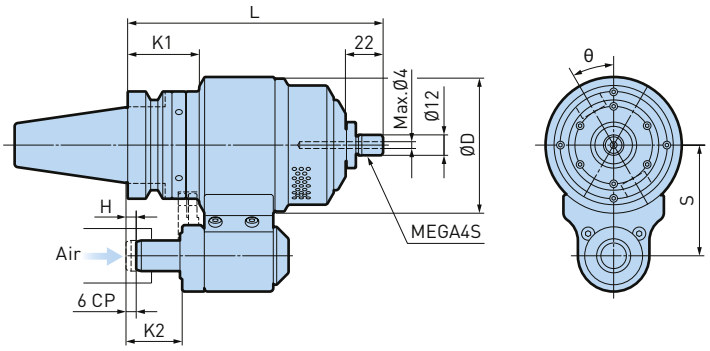
MEGA Nuts	Micro Collets	MEGA Wrenches	Air Filter Regulator for RBX
▶ 358	▶ 356	▶ 384	▶ 400

Air Turbine Spindle Side Through Type

BIG-PLUS Dual-Contact

A.1





ø0.5 - 4mm

Model	Article No.	Operation Speed (min-1)	ØD	L	K1	K2	S	H	Nut Model	Weight (kg)
BBT30-RBX7-4S-152-55	802.395	60,000 - 80,000	80	152	28	33	55	-10 - 22	MGN4S	2.70
BBT40-RBX5-4S-151-65	802.398	40,000 - 50,000	96	151	43	33	65	-24 - 21	MGN4S	5.00
BBT40-RBX7-4S-151-65	802.404	60,000 - 80,000	80	151	43	33	65	-24 - 21	MGN4S	4.00
BBT50-RBX5-4S-166-80	802.411	40,000 - 50,000	100	166	58	48	80	-9 - 36	MGN4S	9.70
BBT50-RBX7-4S-166-80	802.416	60,000 - 80,000	100	166	58	48	80	-9 - 36	MGN4S	8.70

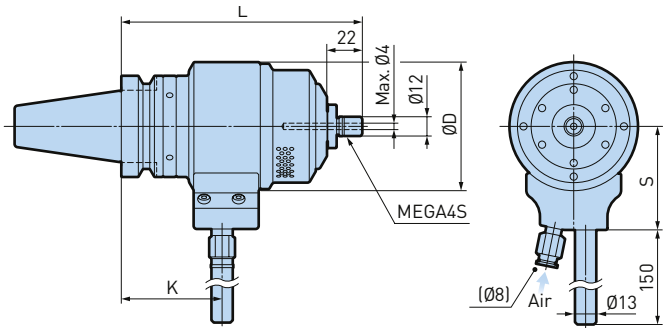
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. Nut and wrench are included.
4. Collet (NBC4S-_) and XF1 (air unit) are to be ordered separately.
5. „CP" indicates compression.

Accessories & Spare Parts

MEGA Nuts	Micro Collets	MEGA Wrenches	Semi-Finished Stop Blocks	Air Filter Regulator for RBX
▶ 358	▶ 356	▶ 384	▶ 413	▶ 400

Air Turbine Spindle Manual Type

BIG-PLUS Dual-Contact



ø0.5 - 4mm

Model	Article No.	Operation Speed (min-1)	ØD	L	K	S	Nut Model	Weight (kg)
BBT30-RBX7-4S-152H	802.396	60,000 - 80,000	80	152	64.5	65	MGN4S	2.70
BBT40-RBX5-4S-151H	802.399	40,000 - 50,000	96	151	63	71	MGN4S	5.00
BBT40-RBX7-4S-151H	802.405	60,000 - 80,000	80	151	63	65	MGN4S	4.00
BBT50-RBX5-4S-166H	802.412	40,000 - 50,000	100	166	78	80	MGN4S	9.70
BBT50-RBX7-4S-166H	802.417	60,000 - 80,000	100	166	78	80	MGN4S	8.70

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Nut and wrench are included.
3. Collet (NBC4S-_) and XF1 (air unit) are to be ordered separately.

Accessories & Spare Parts

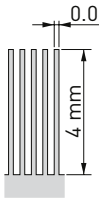
MEGA Nuts	Micro Collets	MEGA Wrenches	Air Filter Regulator for RBX
▶ 358	▶ 356	▶ 384	▶ 400

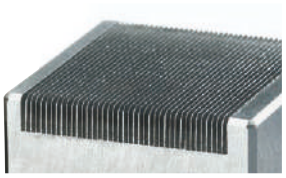
Application Examples

RBX7

Aluminium A2017

Outstanding runout accuracy permits perfect thin wall cutting.

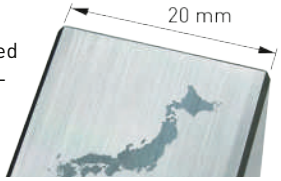




Cutter	Ø 0.5 mm Rib-endmill
Spindle Speed	70 000 min^{-1}
Cutting Feed	1500 mm/min
D.O.C	ap = 0.02 mm

Prehardened steel HRC40

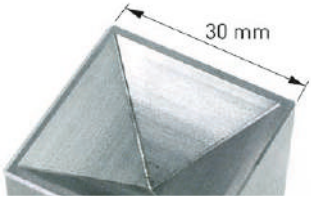
Drastic time reduction by ultra high speed rotation. Excellent dynamic runout accuracy makes DOC of 5 µm clearly visible.



Cutter	R0.1 mm Ball nose endmill
Spindle Speed	80 000 min^{-1}
Cutting Feed	400 mm/min
D.O.C	ap = 0.01 mm

Prehardened steel HRC40

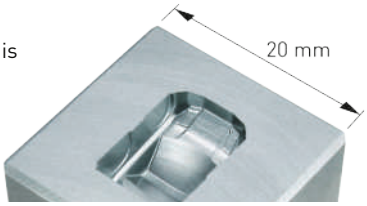
Overall cutting length of 656 m can be achieved with one ball nose endmill. Drastically extended tool life.



Cutter	R0.5 mm Ball nose endmill
Spindle Speed	65 000 min^{-1}
Cutting Feed	4 200 mm/min
D.O.C	ap = 0.02 mm; ae = 0.05 mm

Prehardened steel HRC40

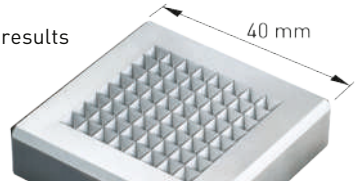
Original 5hour operation in MC is reduced to 2 hours.



Cutter	R0.2 mm Ball nose endmill
Spindle Speed	70 000 min^{-1}
Cutting Feed	1000 mm/min
D.O.C	ap = 0.01 mm

Prehardened steel HRC40

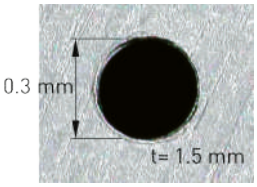
No thermal expansion of spindle results in finely detailed surface finish.



Cutter	R0.5 mm Ball nose endmill
Spindle Speed	75 000 min^{-1}
Cutting Feed	400 mm/min
D.O.C	ap = 0.02 mm

Aluminium A2017

High-precision drilling is possible without center drill operation. Even after 3500 holes, no problems can be found on the cutting edge.

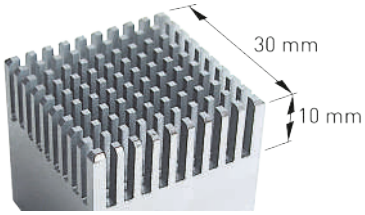


Cutter	Ø 0.3 mm Solid drill
Spindle Speed	75 000 min^{-1}
Cutting Feed	200 mm/min
Peck	ap = 0.03 mm

RBX5

Prehardened steel HRC40

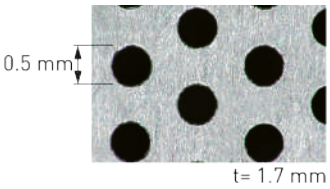
Even a taper endmill that has high cutting forces can achieve stable cutting.



Cutter	Ø 1.5 mm Rib-endmill
Spindle Speed	40 000 min^{-1}
Cutting Feed	1000 mm/min
D.O.C	ap = 0.05 mm

Stainless steel SUS303

Tool life is doubled with over 1200 holes and cutting time is reduced to 1/3.



Cutter	Ø 0.5 mm Solid drill
Spindle Speed	40 000 min^{-1}
Cutting Feed	20 mm/min
Peck	ap = 0.01 mm

Tool Holders DV/BDV, DIN 69871

MEGA Micro Chuck	146
MEGA New Baby Chuck	148
MEGA E Chuck	150
New Baby Chuck	151
MEGA Double Power Chuck	153
MEGA Perfect Grip	154
New Hi-Power Milling Chuck	155
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Face Mill Arbors	165
Smart Damper Face Mill	167
Side Lock Holders	169
Holders for Screw-On Cutter	171
MEGA Synchro Tapping Holder	167
Angle Heads	173
Air Turbine Spindle	181

Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

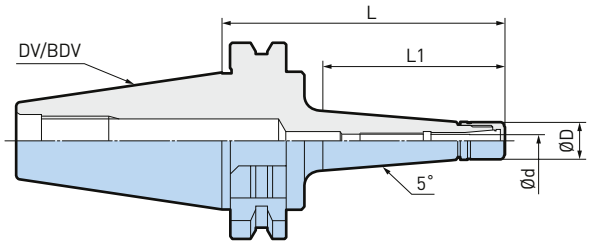
A.2

MEGA Micro Chuck Type T

Tapered and slim design, minimal interference combined with maximized rigidity.

Coolant Through Hole

Dual-Contact



ø0.45 - 8.05mm

Model	Article No.	Ød	ØD	L	L1	max. min-1	Collet Model	Nut Model	Weight (kg)
DV30-MEGA6S-60T	805.016	0.45 - 6.05	14	60	36	33,000	NBC6S	MGN6S	0.41
DV30-MEGA8S-75T	805.246	2.95 - 8.05	18	75	51	32,000	NBC8S	MGN8S	0.47
BDV40-MEGA3S-90T	969.302	0.45 - 3.25	10	90	60	26,000	NBC3S	MGN3S	0.90
BDV40-MEGA4S-90T	969.305	0.45 - 4.05	12	90	60	28,000	NBC4S	MGN4S	1.00
BDV40-MEGA6S-60T	969.307	0.45 - 6.05	14	60	30	35,000	NBC6S	MGN6S	1.00
BDV40-MEGA6S-90T	969.308	0.45 - 6.05	14	90	60	28,000	NBC6S	MGN6S	1.00
BDV40-MEGA6S-120T	969.309	0.45 - 6.05	14	120	90	22,000	NBC6S	MGN6S	1.10
BDV40-MEGA8S-90T	806.747	2.95 - 8.05	18	90	60	28,000	NBC8S	MGN8S	1.00

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. MEGA nut is included in delivery.

Accessories & Spare Parts

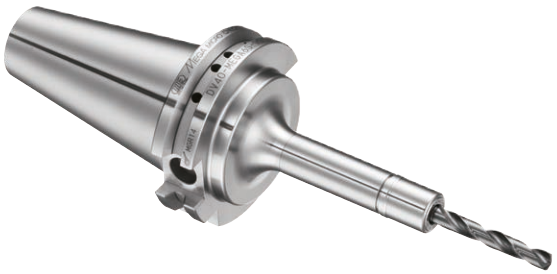
MEGA Nuts	Micro Seal Nuts	Micro Collets	MEGA Wrenches	Taper Cleaners	Collet Protective Cases
▶ 358	▶ 358	▶ 356	▶ 384	▶ 404	▶ 359

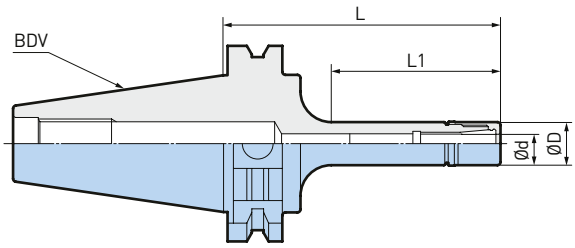
MEGA Micro Chuck Type S

Micro diameter design is ideal for high speed applications in tight areas.

Coolant Through Hole

Dual-Contact





A.2

ø0.45 - 6.05mm

Model	Article No.	Ød	ØD	L	L1	max. min-1	Collet Model	Nut Model	Weight (kg)
BDV40-MEGA6S-90	969.208	0.45 - 6.05	14	90	55	24,000	NBC6S	MGN6S	1.00

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. MEGA nut is included in delivery.

Accessories & Spare Parts

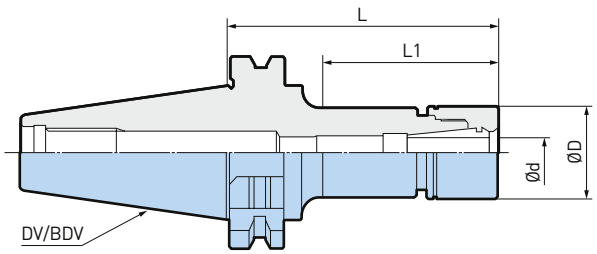
MEGA Nuts	Micro Seal Nuts	Micro Collets	MEGA Wrenches	Taper Cleaners	Collet Protective Cases
▶ 358	▶ 358	▶ 356	▶ 384	▶ 404	▶ 359

MEGA New Baby Chuck

Ideal ultra precision collet holders for high speed machining. Wide range of lengths and a variety of collet series covers all machining applications.

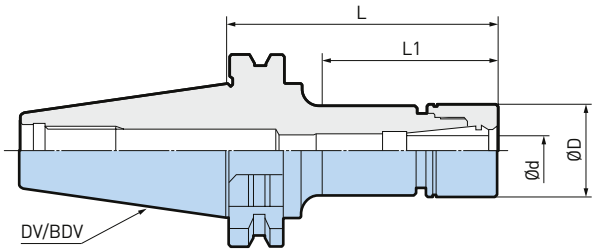
Coolant Through Hole

BIG-PLUS Dual-Contact



ø0.25 - 25.4mm

Model	Article No.	Ød	ØD	L	L1	max. min-1	Collet Model	Nut Model	Weight (kg)
DV30-MEGA10N-75	805.247	1.5 - 10	30	75	54	27,000	NBC10	MGN10	0.58
BDV40-MEGA6N-90	969.224	0.25 - 6	20	90	55	35,000	NBC6	MGN6	1.00
BDV40-MEGA6N-135	969.225	0.25 - 6	20	135	100	20,000	NBC6	MGN6	1.10
BDV40-MEGA8N-90	969.229	0.5 - 8	25	90	57	35,000	NBC8	MGN8	1.10
BDV40-MEGA8N-135	969.230	0.5 - 8	25	135	102	20,000	NBC8	MGN8	1.20
BDV40-MEGA10N-90	969.234	1.5 - 10	30	90	59	35,000	NBC10	MGN10	1.20
BDV40-MEGA10N-135	969.235	1.5 - 10	30	135	104	20,000	NBC10	MGN10	1.40
BDV40-MEGA13N-90	969.239	2.5 - 13	35	90	61	35,000	NBC13	MGN13	1.20
BDV40-MEGA13N-135	969.240	2.5 - 13	35	135	106	20,000	NBC13	MGN13	1.50
BDV40-MEGA13N-165	969.241	2.5 - 13	35	165	136	15,000	NBC13	MGN13	1.70
BDV40-MEGA16N-90	969.244	2.5 - 16	42	90	65	30,000	NBC16	MGN16	1.30
BDV40-MEGA16N-135	969.245	2.5 - 16	42	135	110	20,000	NBC16	MGN16	1.80
BDV40-MEGA16N-165	969.246	2.5 - 16	42	165	140	15,000	NBC16	MGN16	2.00
BDV40-MEGA20N-60	969.248	2.5 - 20	46	60	40	30,000	NBC20	MGN20	1.10
BDV40-MEGA20N-90	969.249	2.5 - 20	46	90	70	30,000	NBC20	MGN20	1.40
BDV40-MEGA20N-135	969.250	2.5 - 20	46	135	115	20,000	NBC20	MGN20	1.90
BDV40-MEGA20N-165	969.251	2.5 - 20	46	165	145	15,000	NBC20	MGN20	2.20
BDV40-MEGA20N-200	969.252	2.5 - 20	46	200	180	10,000	NBC20	MGN20	2.60
BDV40-MEGA25N-90	806.375	15.5 - 25.4	60	90	70	19,000	NBC25	MGN25	1.60
BDV40-MEGA25N-120	806.376	15.5 - 25.4	60	120	100	16,000	NBC25	MGN25	2.10



ø0.25 - 25.4mm

Model	Article No.	Ød	ØD	L	L1	max. min-1	Collet Model	Nut Model	Weight (kg)
BDV50-MEGA6N-90	969.253	0.25 - 6	20	90	50	20,000	NBC6	MGN6	2.90
BDV50-MEGA6N-120	969.254	0.25 - 6	20	120	80	17,000	NBC6	MGN6	3.10
BDV50-MEGA6N-165	969.255	0.25 - 6	20	165	125	11,000	NBC6	MGN6	3.10
BDV50-MEGA10N-90	969.261	1.5 - 10	30	90	55	20,000	NBC10	MGN10	3.00
BDV50-MEGA10N-120	969.262	1.5 - 10	30	120	80	20,000	NBC10	MGN10	3.20
BDV50-MEGA10N-165	969.263	1.5 - 10	30	165	125	16,000	NBC10	MGN10	3.40
BDV50-MEGA13N-90	969.267	2.5 - 13	35	90	55	18,000	NBC13	MGN13	3.10
BDV50-MEGA13N-120	969.268	2.5 - 13	35	120	80	18,000	NBC13	MGN13	3.30
BDV50-MEGA13N-165	969.269	2.5 - 13	35	165	125	16,000	NBC13	MGN13	3.60
BDV50-MEGA16N-90	969.274	2.5 - 16	42	90	55	17,000	NBC16	MGN16	3.30
BDV50-MEGA16N-120	969.275	2.5 - 16	42	120	85	17,000	NBC16	MGN16	3.50
BDV50-MEGA16N-165	969.276	2.5 - 16	42	165	130	16,000	NBC16	MGN16	3.90
BDV50-MEGA16N-200	969.277	2.5 - 16	42	200	165	13,000	NBC16	MGN16	4.20
BDV50-MEGA20N-90	969.280	2.5 - 20	46	90	55	16,000	NBC20	MGN20	3.30
BDV50-MEGA20N-120	969.281	2.5 - 20	46	120	85	16,000	NBC20	MGN20	3.60
BDV50-MEGA20N-165	969.282	2.5 - 20	46	165	130	15,000	NBC20	MGN20	4.10
BDV50-MEGA20N-200	969.283	2.5 - 20	46	200	165	13,000	NBC20	MGN20	4.40
BDV50-MEGA25N-105	806.377	15.5 - 25.4	60	105	77	16,000	NBC25	MGN25	3.80
BDV50-MEGA25N-135	806.378	15.5 - 25.4	60	135	107	15,000	NBC25	MGN25	4.40

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. MEGA nut is included in delivery.

Accessories & Spare Parts

MEGA Nuts	MEGA Perfect Seals	New Baby Collets	MEGA Wrenches	Adjusting Screws NBA	Taper Cleaners
▶ 367	▶ 368	▶ 360	▶ 384	▶ 367	▶ 404

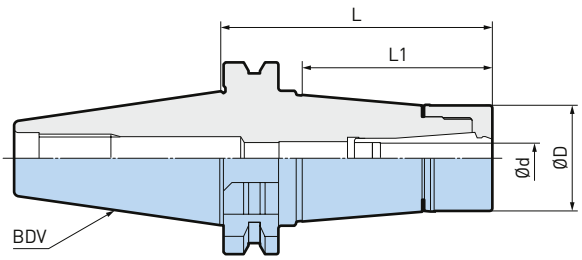
MEGA E Chuck

Collet chuck designed exclusively for endmilling with high concentricity and rigidity.

Coolant Through Hole

BIG-PLUS Dual-Contact

A.2



ø3 - 12mm

Model	Article No.	Ød	ØD	L	L1	max. min-1	Collet Model	Nut Model	Weight (kg)
BDV40-MEGA6E-90	968.142	3 - 6	25	90	60	30,000	MEC6	MEN6	1.20
BDV40-MEGA8E-60	968.144	3 - 8	30	60	30	30,000	MEC8	MEN8	1.10
BDV40-MEGA8E-90	968.145	3 - 8	30	90	63	30,000	MEC8	MEN8	1.30
BDV40-MEGA10E-60	968.147	3 - 10	35	60	33	30,000	MEC10	MEN10	1.10
BDV40-MEGA10E-90	968.148	3 - 10	35	90	64	30,000	MEC10	MEN10	1.40
BDV40-MEGA13E-60	968.150	3 - 12	42	60	35	30,000	MEC13	MEN13	1.20
BDV40-MEGA13E-90	968.151	3 - 12	42	90	61	30,000	MEC13	MEN13	1.50
BDV40-MEGA13E-120	968.152	3 - 12	42	120	95	29,000	MEC13	MEN13	1.90
BDV50-MEGA6E-120	968.154	3 - 6	25	120	90	20,000	MEC6	MEN6	3.20
BDV50-MEGA8E-120	968.156	3 - 8	30	120	90	20,000	MEC8	MEN8	3.40
BDV50-MEGA10E-120	968.159	3 - 10	35	120	90	20,000	MEC10	MEN10	3.60
BDV50-MEGA13E-90	968.161	3 - 12	42	90	60	18,000	MEC13	MEN13	3.40
BDV50-MEGA13E-120	968.162	3 - 12	42	120	90	18,000	MEC13	MEN13	3.90
BDV50-MEGA13E-165	968.163	3 - 12	42	165	137	16,000	MEC13	MEN13	4.70

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. MEGA E nut is included.

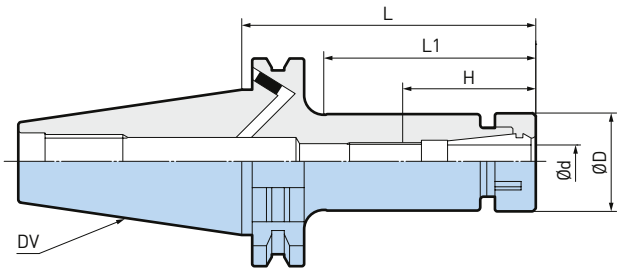
Accessories & Spare Parts

MEGA E Nuts	MEGA E Perfect Seals	MEGA E Collets	MEGA Wrenches	Adjusting Screws NBA	Taper Cleaners
▶ 372	▶ 373	▶ 372	▶ 384	▶ 367	▶ 404

New Baby Chuck

The original high precision collet chuck to perform all machining applications.

Coolant Through Hole



A.2

ø0.25 - 20mm

Model	Article No.	Ød	ØD	L	L1	H	Collet Model	Nut Model	Weight (kg)
DV40-NBS6-60	961.831	0.25 - 6	20	60	34	20 - 40	NBC6	NBN6	0.90
DV40-NBS6-90	969.032	0.25 - 6	20	90	60	20 - 40	NBC6	NBN6	1.00
DV40-NBS6-135	961.833	0.25 - 6	20	135	105	20 - 40	NBC6	NBN6	1.00
DV40-NBS8-60	969.034	0.5 - 8	25	60	34	23 - 42	NBC8	NBN8	0.90
DV40-NBS8-90	961.835	0.5 - 8	25	90	62	23 - 42	NBC8	NBN8	1.00
DV40-NBS8-135	969.036	0.5 - 8	25	135	107	23 - 42	NBC8	NBN8	1.10
DV40-NBS10-60	969.037	1.5 - 10	30	60	34	35 - 45	NBC10	NBN10	1.00
DV40-NBS10-90	969.038	1.5 - 10	30	90	64	35 - 45	NBC10	NBN10	1.10
DV40-NBS10-135	961.839	1.5 - 10	30	135	104	35 - 45	NBC10	NBN10	1.40
DV40-NBS13-60	969.040	2.5 - 13	35	60	37	41 - 60	NBC13	NBN13	0.90
DV40-NBS13-90	969.041	2.5 - 13	35	90	66	41 - 60	NBC13	NBN13	1.20
DV40-NBS13-135	969.042	2.5 - 13	35	135	106	41 - 60	NBC13	NBN13	1.50
DV40-NBS16-60	969.043	2.5 - 16	42	60	38	45 - 65	NBC16	NBN16	1.10
DV40-NBS16-90	969.044	2.5 - 16	42	90	68	45 - 65	NBC16	NBN16	1.30
DV40-NBS16-135	969.045	2.5 - 16	42	135	113	45 - 65	NBC16	NBN16	1.70
DV40-NBS20-60	969.046	2.5 - 20	46	60	40	48 - 65	NBC20	NBN20	1.00
DV40-NBS20-90	969.047	2.5 - 20	46	90	70	48 - 65	NBC20	NBN20	1.40
DV40-NBS20-135	969.048	2.5 - 20	46	135	115	48 - 65	NBC20	NBN20	1.80
DV40-NBS20-165	969.059	2.5 - 20	46	165	145	48 - 65	NBC20	NBN20	2.20
DV40-NBS20-200	969.060	2.5 - 20	46	200	180	48 - 65	NBC20	NBN20	2.60

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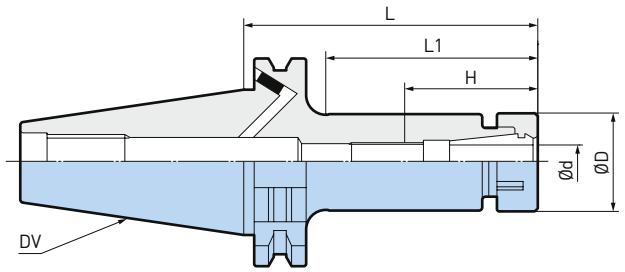
New Baby Chuck

Coolant Through Hole



Model	Article No.	Ød	ØD	L	L1	H	Collet Model	Nut Model	Weight (kg)
DV50-NBS6-120	969.062	0.25 - 6	20	120	85	20 - 40	NBC6	NBN6	2.70
DV50-NBS6-165	969.063	0.25 - 6	20	165	125	20 - 40	NBC6	NBN6	3.00
DV50-NBS8-120	969.066	0.5 - 8	25	120	80	23 - 42	NBC8	NBN8	3.10
DV50-NBS8-165	969.067	0.5 - 8	25	165	130	23 - 42	NBC8	NBN8	3.00
DV50-NBS10-90	969.069	1.5 - 10	30	90	60	35 - 45	NBC10	NBN10	2.80
DV50-NBS10-120	969.070	1.5 - 10	30	120	85	35 - 45	NBC10	NBN10	3.00
DV50-NBS10-165	969.071	1.5 - 10	30	165	130	35 - 45	NBC10	NBN10	3.20
DV50-NBS13-90	969.075	2.5 - 13	35	90	60	41 - 60	NBC13	NBN13	2.90
DV50-NBS13-120	961.876	2.5 - 13	35	120	80	41 - 60	NBC13	NBN13	3.20
DV50-NBS13-165	969.077	2.5 - 13	35	165	125	41 - 60	NBC13	NBN13	3.50
DV50-NBS16-90	969.082	2.5 - 16	42	90	60	45 - 65	NBC16	NBN16	3.20
DV50-NBS16-120	969.083	2.5 - 16	42	120	85	45 - 65	NBC16	NBN16	3.90
DV50-NBS16-165	969.084	2.5 - 16	42	165	130	45 - 65	NBC16	NBN16	3.60
DV50-NBS16-200	969.085	2.5 - 16	42	200	165	45 - 65	NBC16	NBN16	4.10
DV50-NBS20-75	969.087	2.5 - 20	46	75	45	45	NBC20	NBN20	3.00
DV50-NBS20-90	969.088	2.5 - 20	46	90	60	45	NBC20	NBN20	3.20
DV50-NBS20-120	961.889	2.5 - 20	46	120	85	45	NBC20	NBN20	3.50
DV50-NBS20-165	969.090	2.5 - 20	46	165	130	45	NBC20	NBN20	4.00
DV50-NBS20-200	969.091	2.5 - 20	46	200	165	45	NBC20	NBN20	4.40

1. New Baby Nut is included.
2. "H" is the max. tool shank length that can be inserted for these models.

Accessories & Spare Parts

New Baby Nuts	Baby Perfect Seals	New Baby Collets	New Baby Wrenches	Adjusting Screws NBA	Taper Cleaners
▶ 367	▶ 370	▶ 360	▶ 385	▶ 367	▶ 404

MEGA Double Power Chuck Type DS

Flange contacting nut assures highest rigidity. Unique coolant supply design ensures efficient coolant supply to the cutting tool periphery

Coolant Through Hole

BIG-PLUS Dual-Contact

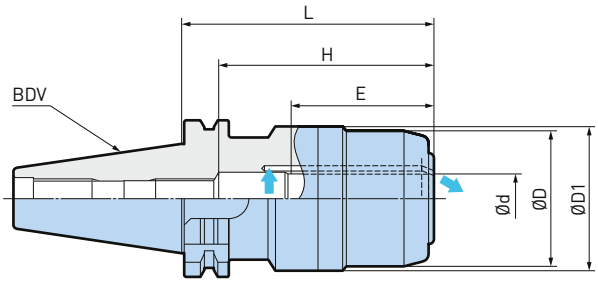


Fig. 1

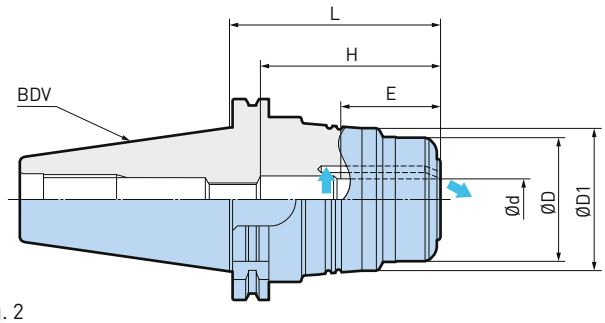


Fig. 2

ø16 - 42mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	H	E	max. min-1	Weight (kg)
BDV40-MEGA16DS-90A *	803.075	1	16	42	52.6	92	73	50	25,000	1.70
BDV40-MEGA20DS-100A	803.076	1	20	50	55	102	71 - 81	52	22,000	1.90
BDV40-MEGA20DS-135A	805.596	1	20	50	55	137	71 - 81	52	20,000	2.50
BDV40-MEGA25DS-100A	803.077	1	25	62	62.7	102	73 - 83	58	18,000	2.10
BDV40-MEGA25DS-135A	805.597	1	25	62	62.7	137	73 - 83	58	16,000	3.00
BDV40-MEGA32DS-100A	803.078	1	32	70	70.7	102	78 - 88	62	12,000	2.20
BDV40-MEGA32DS-135A	805.598	1	32	70	70.7	137	78 - 88	62	10,000	3.00
BDV50-MEGA16DS-70 *	969.023	2	16	46	55	72.5	73	50	20,000	3.40
BDV50-MEGA20DS-100	969.025	2	20	60	69	102.5	71 - 81	52	20,000	4.60
BDV50-MEGA20DS-135	805.753	2	20	60	69	137.5	71 - 81	52	19,000	5.60
BDV50-MEGA25DS-105	968.059	2	25	70	77	107.5	78 - 88	58	18,000	5.00
BDV50-MEGA25DS-135	805.600	2	25	70	77	137.5	78 - 88	58	17,000	6.30
BDV50-MEGA32DS-105	968.060	1	32	80	86	107.5	80 - 97	62	15,000	5.20
BDV50-MEGA32DS-135	805.601	1	32	80	86	137.5	80 - 97	62	13,000	6.60
BDV50-MEGA42DS-105	968.061	1	42	99	99.7	107	90 - 107	62	12,000	5.80

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Wrench and axial adjusting screw are to be ordered separately.
3. "H" is the max. tool shank length that can be inserted for these models.
4. "E" is the min. clamping length.
5. * Adjusting screw cannot be used.

Accessories & Spare Parts

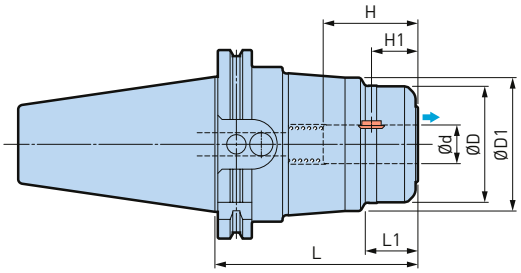
PJC Collets	PSC Collets	C Collets	MEGA Wrenches	Adjusting Screws HMA
▶ 379	▶ 380	▶ 381	▶ 384	▶ 383

MEGA Perfect Grip

100% security against pulling out of the cutting tool under any torque load.

Coolant Through Hole

BIG-PLUS Dual-Contact



ø20 - 32mm

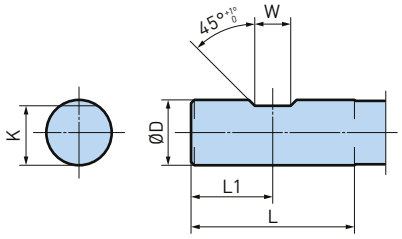
Model	Article No.	Ød	ØD	L	L1	H	H1	Weight (kg)
BDV50-MEGA20DPG-105	-	20	60	105	27	49	24	4.80
BDV50-MEGA25DPG-105	-	25	70	105	33	55	23	5.00
BDV50-MEGA32DPG-105	-	32	80	105	41	59	23	5.20

1. Key grip and spring are included with each holder.
2. MEGA wrench is to be ordered separately.
3. „H1" shows distance from center of key grip to front end.

Weldon Shank Standards

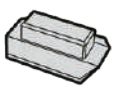
(DIN 1835-1)
The following standard shank is required for MEGA Perfect Grip.

Ø 25/32 mm Ø 20 mm



ØD		L	L1	W		K	
Nominal	Tolerance			Nominal	Tolerance	Nominal	Tolerance
20	h6	50	25	11	+ 0.05 0	18.2	h13
25		56	32	12		23	
32		60	36	14		30	

Accessories & Spare Parts

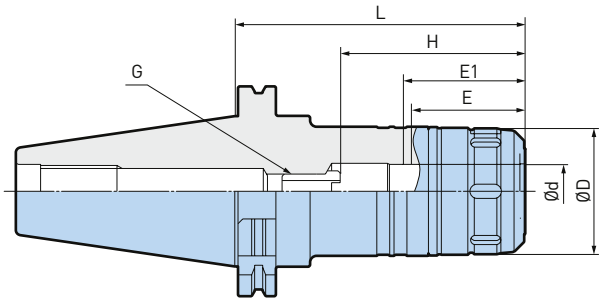
Key Grip	Spring	MEGA Wrenches
		
▶ 383	▶ 383	▶ 384

New Hi-Power Milling Chuck Type S

The original design assures heavy machining with high power and precision.

Coolant Through Hole

BIG-PLUS Dual-Contact



A.2

ø20 - 42mm

Model	Article No.	Ød	ØD	L	H	E	E1	Wrench	Weight (kg)
BDV40-HMC20S-85	962.121S	20	50	85	69 - 79	50	56	FK45-50L / MGR50L	1.70
BDV40-HMC20S-105	800.972	20	50	105	69 - 79	50	56	FK45-50L / MGR50L	1.80
BDV40-HMC20S-120	800.973	20	50	120	69 - 79	50	56	FK45-50L / MGR50L	2.00
BDV40-HMC25S-95	800.975	25	59	95	71 - 81	56	57	FK58-62L / MGR59L	1.80
BDV40-HMC25S-105	800.974	25	59	105	71 - 81	56	57	FK58-62L / MGR59L	2.10
BDV40-HMC32S-95	962.124S	32	68	95	79 - 89	60	64	FK68-75L / MGR68L	1.90
BDV40-HMC32S-105	800.976	32	68	105	79 - 89	60	64	FK68-75L / MGR68L	2.10
BDV40-HMC32S-135	800.977	32	68	135	79 - 89	60	64	FK68-75L / MGR68L	2.80
BDV50-HMC20S-105	805.430	20	50	105	69 - 79	50	56	FK45-50L / MGR50L	3.90
BDV50-HMC20S-135	805.431	20	50	135	69 - 79	50	56	FK45-50L / MGR50L	4.20
BDV50-HMC25S-105	805.424	25	59	105	76 - 86	56	57	FK58-62L / MGR59L	4.10
BDV50-HMC25S-135	805.433	25	59	135	76 - 86	56	57	FK58-62L / MGR59L	4.70
BDV50-HMC32S-105	804.995	32	68	105	88 - 98	60	72	FK68-75L / MGR68L	4.20
BDV50-HMC32S-135	805.435	32	68	135	88 - 98	60	72	FK68-75L / MGR68L	5.00
BDV50-HMC32S-165	805.436	32	68	165	88 - 98	60	72	FK68-75L / MGR68L	5.80
BDV50-HMC42S-135	805.438	42	85	135	93 - 105	70	73	FK80-90L / MGR85L	6.10

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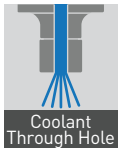
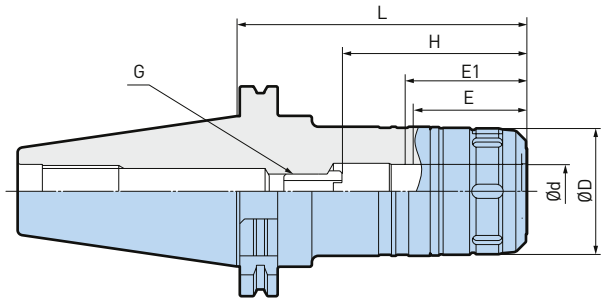
New Hi-Power Milling Chuck Type S





Model	Article No.	Ød	ØD	L	H	E	E1	Wrench	Weight (kg)
DV40-HMC20S-85	806.754	20	50	85	69 - 79	50	56	FK45-50L / MGR50L	1.50
DV40-HMC20S-105	806.755	20	50	105	69 - 79	50	56	FK45-50L / MGR50L	1.80
DV40-HMC20S-120	806.756	20	50	120	69 - 79	50	56	FK45-50L / MGR50L	2.00
DV40-HMC25S-95	806.757	25	59	95	71 - 81	56	57	FK58-62L / MGR59L	1.90
DV40-HMC25S-105	806.758	25	59	105	71 - 81	56	57	FK58-62L / MGR59L	2.10
DV40-HMC32S-95	806.759	32	68	95	79 - 89	60	64	FK68-75L / MGR68L	1.90
DV40-HMC32S-105	806.760	32	68	105	79 - 89	60	64	FK68-75L / MGR68L	2.10
DV40-HMC32S-135	806.761	32	68	135	79 - 89	60	64	FK68-75L / MGR68L	2.80
DV50-HMC20S-105	806.762	20	50	105	69 - 79	50	56	FK45-50L / MGR50L	3.80
DV50-HMC20S-135	806.763	20	50	135	69 - 79	50	56	FK45-50L / MGR50L	4.20
DV50-HMC25S-105	806.764	25	59	105	76 - 86	56	57	FK58-62L / MGR59L	4.10
DV50-HMC25S-135	806.765	25	59	135	76 - 86	56	57	FK58-62L / MGR59L	4.60
DV50-HMC32S-105	806.766	32	68	105	88 - 98	60	72	FK68-75L / MGR68L	4.20
DV50-HMC32S-135	806.767	32	68	135	88 - 98	60	72	FK68-75L / MGR68L	4.80
DV50-HMC32S-165	806.768	32	68	165	88 - 98	60	72	FK68-75L / MGR68L	5.70
DV50-HMC42S-135	806.769	42	85	135	93 - 105	70	73	FK80-90L / MGR85L	6.10

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Wrench and axial adjusting screw are to be ordered separately.
3. "E" is the min. clamping length.
4. "G" is the adjusting screw (optional).
5. "H" is the max. tool shank length that can be inserted for these models.
6. "E1" is the min. clamping length for optimum use with center through coolant.

Accessories & Spare Parts

PJC Collets	OCA Collets	PSC Collets	C Collets	FK Wrenches	Adjusting Screws HMA
▶ 379	▶ 380	▶ 380	▶ 381	▶ 385	▶ 383

New Hi-Power Milling Chuck Type HMC12J

Extremely slim and rigid design with jet through coolant.

Coolant Through Hole

BIG-PLUS Dual-Contact

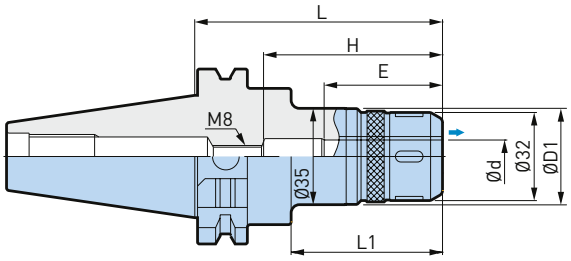


Fig. 1

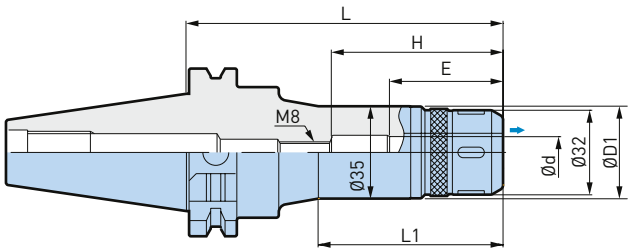


Fig. 2

ø12mm

Model	Article No.	Fig.	Ød	ØD1	L	L1	H	E	Wrench	Weight (kg)
BDV40-HMC12J-90	806.810	1	12	35	90	55	65	43	FK31-33	1.30
BDV40-HMC12J-120	806.811	2	12	35	120	70	65	43	FK31-33	1.60
BDV50-HMC12J-105	806.812	1	12	35	105	70	65	43	FK31-33	3.50
BDV50-HMC12J-135	806.813	2	12	35	135	70	65	43	FK31-33	3.80

Model	Article No.	Fig.	Ød	ØD1	L	L1	H	E	Wrench	Weight (kg)
DV40-HMC12J-90	806.366	1	12	35	90	55	65	43	FK31-33	1.30
DV40-HMC12J-120	806.367	2	12	35	120	70	65	43	FK31-33	1.60
DV50-HMC12J-105	806.368	1	12	35	105	70	65	43	FK31-33	3.50
DV50-HMC12J-135	806.369	2	12	35	135	70	65	43	FK31-33	3.80

1. "E" is the min. clamping length.
2. Wrench is to be ordered separately.
3. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.

Accessories & Spare Parts

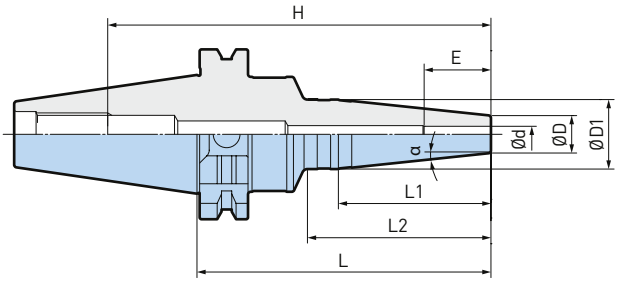
PJC Collets	FK Wrenches
▶ 379	▶ 385

Hydraulic Chuck Super Slim

Ultra precise hydraulic chuck with extremely slim design.

Coolant Through Hole

BIG-PLUS Dual-Contact



ø4 - 12mm

Model	Article No.	Ød	ØD	ØD1	L	L1	L2	H	E	α	Weight (kg)
BDV40-HDC4S-110	806.347	4	14	26	110	57	68	145	19	6°	1.20
BDV40-HDC6S-110	806.348	6	14	26	110	57	68	145	25	6°	1.20
BDV40-HDC8S-110	806.349	8	17	28	110	52	69	145	31	6°	1.20
BDV40-HDC10S-110	806.350	10	19	30	110	52	69	145	33	6°	1.30
BDV40-HDC12S-110	806.351	12	21	32	110	52	70	145	36	6°	1.30

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. "E" is the min. clamping length.
3. Adjusting Screw and straight collet cannot be used.
4. "H"indicates the maximum cutting tool insertion length.

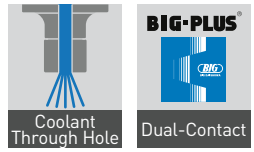
Accessories & Spare Parts

α Wiper Cleaners

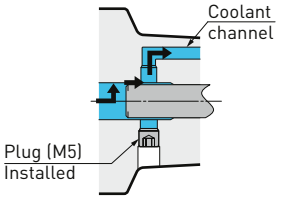
▶ 404

Hydraulic Chuck Jet Through

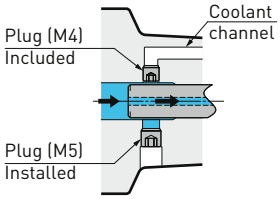
Coolant or Minimum Quantity Lubrification is supplied to cutting edge securely. Maximum performance and high-precision with 5-axis machining.

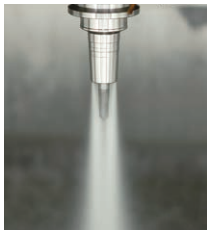


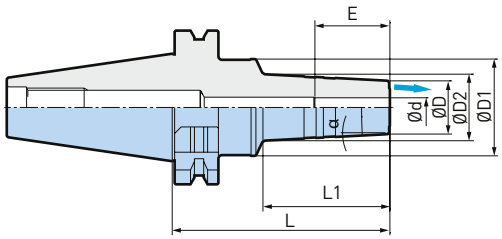
Peripheric



Center Through







ø4 - 12mm

Model	Article No.	Ød	ØD	ØD1	ØD2	L	L1	E	α	Weight (kg)
BDV40-HDC4J-90	807.203	4	20	46	23	90	50	19	3°	1.10
BDV40-HDC6J-90	807.204	6	20	42	26	90	50	25	3°	1.10
BDV40-HDC8J-90	807.205	8	22	42	28	90	50	31	3°	1.10
BDV40-HDC10J-90	807.206	10	24	44	30	90	50	33	3°	1.20
BDV40-HDC12J-90	807.207	12	26	46	32	90	50	36	3°	1.20

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Adjusting Screw and straight collet cannot be used.

Caution

- 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.

Accessories & Spare Parts

α Wiper Cleaners

► 404

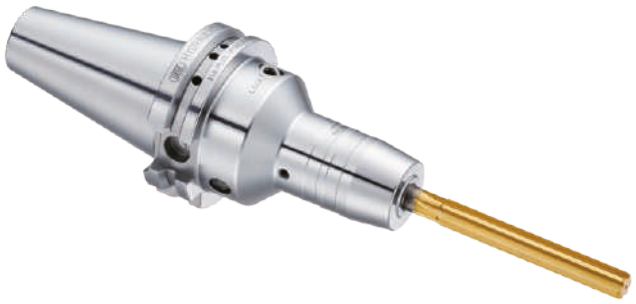
Hydraulic Chuck Standard

For high precision machining in automotive, aerospace, medical and die & mold.

Coolant Through Hole

BIG-PLUS Dual-Contact

A.2



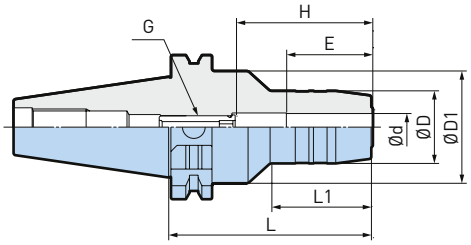


Fig. 1

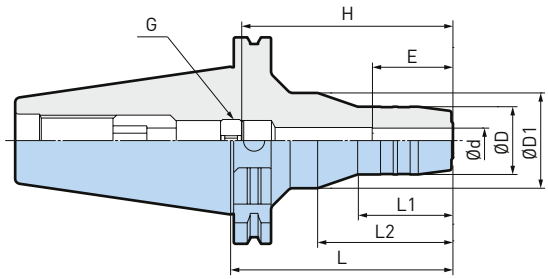


Fig. 2

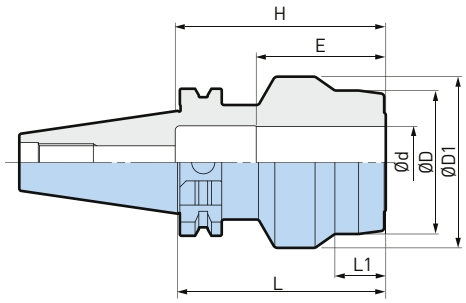


Fig. 3

ø6 - 31mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	L2	H	E	G	Weight (kg)
BDV40-HDC6-90	806.352	1	6	26	49.5	90	43	-	28 - 50	28	HDA6-05032	1.30
BDV40-HDC8-90	806.353	1	8	28	49.5	90	43	-	28 - 50	28	HDA8-06032	1.30
BDV40-HDC10-90	806.354	1	10	30	49.5	90	44	-	33 - 55	33	HDA10-08032	1.30
BDV40-HDC12-90	806.355	1	12	32	49.5	90	44	-	38 - 60	38	HDA12-10032	1.30
BDV40-HDC14-90	806.356	1	14	34	49.5	90	44	-	38 - 60	38	HDA12-10032	1.30
BDV40-HDC16-90	806.357	1	16	38	49.5	90	47	-	43 - 70	43	HDA16-12037	1.40
BDV40-HDC18-90	806.358	1	18	40	49.5	90	49	-	43 - 70	43	HDA16-12037	1.40
BDV40-HDC20-90	806.359	1	20	42	49.5	90	51	-	43 - 70	43	HDA16-12037	1.40
BDV40-HDC31-90	806.441	3	31	62	74	90	22	-	91	56	-	1.90
BDV50-HDC12L-105	806.360	2	12	32	45	105	44	63	100 - 120	38	HDA6-20010	3.20
BDV50-HDC20L-105	806.361	2	20	42	50	105	46	63	71 - 111	43	HDA20-12047	3.30

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. "E" is the min. clamping length.
3. "G" is the adjusting screw (optional).
4. "H" is the max. tool shank length that can be inserted for these models.

Accessories & Spare Parts

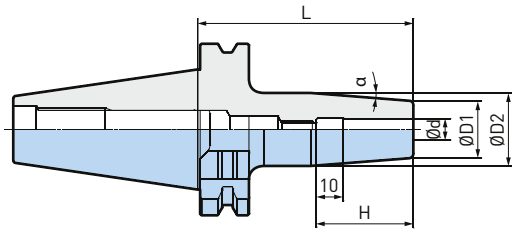
PJC Collets	PSC Collets	Adjusting Screws HDA	α Wiper Cleaners
▶ 379	▶ 380	▶ 387	▶ 404

Shrink Chuck Standard

Solid body provides higher rigidity.

Coolant Through Hole

BIG-PLUS Dual-Contact



A.2

ø6 - 25mm

Model	Article No.	Ød	ØD1	ØD2	L	H	α	Weight (kg)
BDV40-SRC6D-80	490.506	6	21	27	80	36	4.5°	1.00
BDV40-SRC6D-120	490.556	6	21	27	120	36	4.5°	1.20
BDV40-SRC8D-80	490.508	8	21	27	80	36	4.5°	1.00
BDV40-SRC8D-120	490.558	8	21	27	120	36	4.5°	1.20
BDV40-SRC10D-80	490.510	10	24	32	80	42	4.5°	1.10
BDV40-SRC10D-120	490.560	10	24	32	120	42	4.5°	1.30
BDV40-SRC12D-80	490.512	12	24	32	80	47	4.5°	1.10
BDV40-SRC12D-120	490.562	12	24	32	120	47	4.5°	1.30
BDV40-SRC16D-80	490.516	16	27	34	80	50	4.5°	1.10
BDV40-SRC16D-120	490.566	16	27	34	120	50	4.5°	1.40
BDV40-SRC20D-80	490.520	20	33	42	80	52	4.5°	1.20
BDV40-SRC20D-120	490.570	20	33	42	120	52	4.5°	1.60
BDV50-SRC6D-80	490.606	6	21	27	80	36	4.5°	2.80
BDV50-SRC6D-160	490.656	6	21	38	160	36	4.5°	3.50
BDV50-SRC8D-80	490.608	8	21	27	80	36	4.5°	2.80
BDV50-SRC8D-160	490.658	8	21	38	160	36	4.5°	3.50
BDV50-SRC10D-80	490.610	10	24	32	80	42	4.5°	2.80
BDV50-SRC10D-160	490.660	10	24	41	160	42	4.5°	3.50
BDV50-SRC12D-80	490.612	12	24	32	80	47	4.5°	2.80
BDV50-SRC12D-160	490.662	12	24	41	160	47	4.5°	3.50
BDV50-SRC16D-80	490.616	16	27	34	80	50	4.5°	2.80
BDV50-SRC16D-160	490.666	16	27	44	160	50	4.5°	3.60
BDV50-SRC20D-80	490.620	20	33	42	80	52	4.5°	3.00
BDV50-SRC20D-160	490.670	20	33	50	160	52	4.5°	3.90
BDV50-SRC25D-100	490.625	25	44	53	100	58	4.5°	3.50
BDV50-SRC25D-160	490.675	25	44	61	160	58	4.5°	4.80

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Use carbide cutter within a tolerance of h6.
3. Please refer to the operation manual of heating / cooling equipment, as some equipment may not be compatible.

Accessories & Spare Parts

α Wiper Cleaners

► 404

CK Shanks with Center Through Coolant

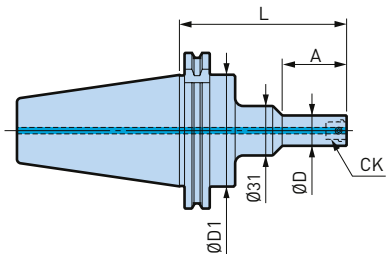


Fig. 1

Model	Article No.	Fig.	CK	ØD	ØD1	L	A	Weight (kg)
BDV40-CKB4-73	-	2	CK4	39	-	73	48	1.20
BDV40-CKB5-43	-	3	CK5	50	49.5	43	23	1.00
BDV40-CKB6-59	-	3	CK6	64	49.5	59	39	1.30
BDV50-CKB5-83	-	2	CK5	50	-	83	58	3.20
BDV50-CKB6-69	-	2	CK6	64	-	69	44	3.50
BDV50-CKB6-129	-	2	CK6	64	-	129	104	4.90
BDV50-CKB6-229	-	2	CK6	64	-	229	204	7.20
BDV50-CKB7-83	-	3	CK7	90	80	83	63	4.80
BDV50-CKB7-133	-	3	CK7	90	80	133	113	7.20
BDV50-CKB7-243	-	3	CK7	90	80	243	223	12.50

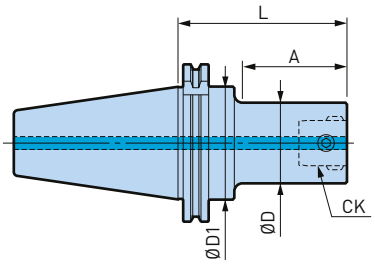


Fig. 2

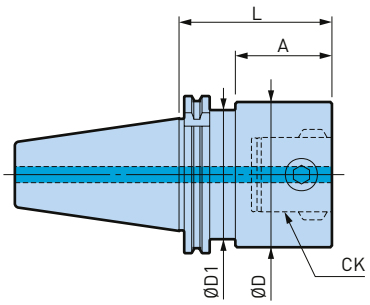


Fig. 3

Model	Article No.	Fig.	CK	ØD	ØD1	L	A	Weight (kg)
DV30-CKB5-60	-	3	CK5	50	45	60	40	0.75
DV40-CKB1-75	-	1	CK1	19	44.7	75	35	1.10
DV40-CKB2-85	-	2	CK2	24	44.7	85	45	1.10
DV40-CKB3-45	-	2	CK3	31	-	45	20	0.90
DV40-CKB3-95	-	2	CK3	31	44.7	95	55	1.30
DV40-CKB4-90	-	2	CK4	39	44.7	90	54	1.40
DV40-CKB5-50	-	3	CK5	50	49.5	50	30	1.10
DV40-CKB5-80	-	3	CK5	50	49.5	80	60	1.50
DV40-CKB6-65	-	3	CK6	64	49.5	65	45	1.40
DV40-CKB6-95	-	3	CK6	64	49.5	95	75	2.10
DV50-CKB1-105	-	1	CK1	19	70.1	105	39	3.00
DV50-CKB2-115	-	2	CK2	24	70.1	115	74	3.00
DV50-CKB3-125	-	2	CK3	31	70.1	125	95	3.20
DV50-CKB4-90	-	2	CK4	39	-	90	65	3.10
DV50-CKB4-120	-	2	CK4	39	70.1	120	90	3.50
DV50-CKB4-180	-	2	CK4	39	70.1	180	150	4.00
DV50-CKB5-75	-	2	CK5	50	-	75	50	3.20
DV50-CKB5-105	-	2	CK5	50	70.1	105	75	3.70
DV50-CKB5-180	-	2	CK5	50	70.1	180	150	4.90
DV50-CKB5-225	-	2	CK5	50	70.1	225	195	5.50
DV50-CKB6-65	-	2	CK6	64	-	65	40	3.40
DV50-CKB6-95	-	2	CK6	64	70.1	95	59	4.20
DV50-CKB6-170	-	2	CK6	64	70.1	170	134	6.00
DV50-CKB6-230	-	2	CK6	64	70.1	230	194	7.50
DV50-CKB7-95	-	3	CK7	90	80	95	75	5.40
DV50-CKB7-275	-	3	CK7	90	80	275	255	8.30

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Cutting edge and drive key grooves are located in the same orientation.

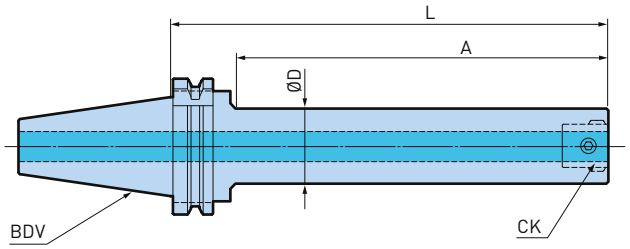
Accessories & Spare Parts

Fine Boring Heads	Rough Boring Heads
▶ 428	▶ 417

Smart Damper CK Shanks

Tool shanks with integrated damping system for highly efficient deep hole fine boring.

Anti-Vibration | Coolant Through Hole | Dual-Contact



CK5 - CK6

Model	Article No.	CK	ØD	L	A	Weight (kg)
BDV50-CKB5DP-301	328.233	CK5	50	301	261	7.50
BDV50-CKB6DP-377	328.235	CK6	64	377	337	12.10

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Cutting edge and drive key grooves are located in the same orientation.

Accessories & Spare Parts

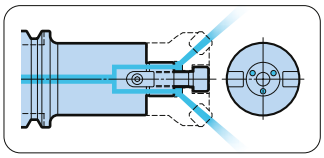
Fine Boring Heads	Rough Boring Heads
▶ 428	▶ 417

Face Mill Arbors Type FMH

For cutters that have a coolant bore through the face.

Coolant Through Hole

BIG-PLUS Dual-Contact



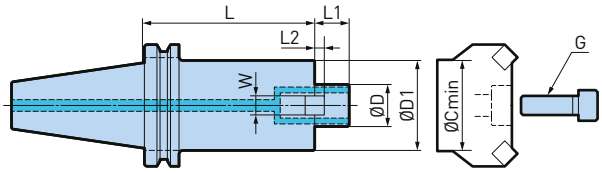


Fig. 1

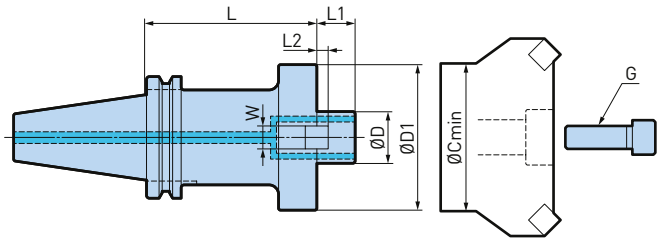


Fig. 2

Model	Article No.	Fig.	ØD	ØD1	L	L1	L2	W	G	ØC min.	Weight (kg)
BDV40-FMH16-37-40	806.896	1	16	37	40	16	5	8	M8	28	1.00
BDV40-FMH22-47-45	805.584	1	22	47	45	18	5	10	M10	38	1.20
BDV40-FMH22-47-60	807.208	1	22	47	60	18	5	10	M10	38	1.50
BDV40-FMH22-47-90	805.585	1	22	47	90	18	5	10	M10	36	1.80
BDV40-FMH22-47-150	805.604	1	22	47	150	18	5	10	M10	36	2.60
BDV40-FMH22-60-50	805.605	2	22	60	50	18	5	10	M10	38	1.50
BDV40-FMH22-60-90	805.606	2	22	60	90	18	5	10	M10	38	2.00
BDV40-FMH27-60-50	805.586	2	27	60	50	20	6	12	M12	46	1.50
BDV40-FMH27-60-90	805.608	2	27	60	90	20	6	12	M12	46	2.00
BDV40-FMH27-76-60	805.609	2	27	76	60	20	6	12	M12	48	1.90
BDV40-FMH27-76-90	805.610	2	27	76	90	20	6	12	M12	48	2.30
BDV40-FMH32-96-60	805.611	2	32	96	60	22	7	14	M16	58	2.30

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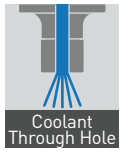
Face Mill Arbors Type FMH



A.2

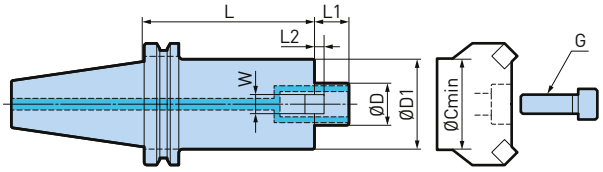


Fig. 1

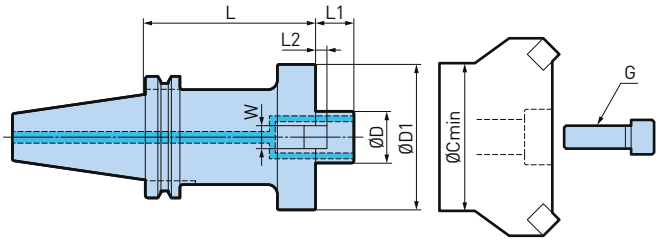


Fig. 2

Model	Article No.	Fig.	ØD	ØD1	L	L1	L2	W	G	ØC min.	Weight (kg)
BDV50-FMH16-37-105	807.209	1	16	37	105	16	5	8	M8	28	3.30
BDV50-FMH22-47-60	805.758	1	22	47	60	18	5	10	M10	38	3.20
BDV50-FMH22-47-105	805.623	1	22	47	105	18	5	10	M10	36	3.80
BDV50-FMH22-47-150	805.624	1	22	47	150	18	5	10	M10	36	4.40
BDV50-FMH22-47-200	978.226	1	22	47	200	18	5	10	M10	36	5.00
BDV50-FMH22-47-250	807.210	1	22	47	250	18	5	10	M10	36	5.60
BDV50-FMH22-60-60	805.626	1	22	60	60	18	5	10	M10	38	3.50
BDV50-FMH22-60-105	805.627	1	22	60	105	18	5	10	M10	38	4.50
BDV50-FMH22-60-150	805.628	1	22	60	150	18	5	10	M10	38	5.50
BDV50-FMH22-60-200	805.629	1	22	60	200	18	5	10	M10	38	6.50
BDV50-FMH27-60-45	805.630	1	27	60	45	20	6	12	M12	46	3.30
BDV50-FMH27-60-90	805.631	1	27	60	90	20	6	12	M12	46	4.20
BDV50-FMH27-60-150	805.632	1	27	60	150	20	6	12	M12	46	5.50
BDV50-FMH27-60-200	805.633	1	27	60	200	20	6	12	M12	46	6.50
BDV50-FMH27-76-45	805.635	1	27	76	45	20	6	12	M12	48	3.60
BDV50-FMH27-76-90	805.636	1	27	76	90	20	6	12	M12	48	5.10
BDV50-FMH27-76-150	805.637	1	27	76	150	20	6	12	M12	48	7.20
BDV50-FMH27-76-200	805.638	1	27	76	200	20	6	12	M12	48	9.00
BDV50-FMH32-96-50	805.639	2	32	96	50	22	7	14	M16	58	4.20
BDV50-FMH32-96-90	805.640	2	32	96	90	22	7	14	M16	58	6.30
BDV50-FMH32-96-150	805.641	2	32	96	150	22	7	14	M16	58	8.50
BDV50-FMH32-96-200	805.642	2	32	96	200	22	7	14	M16	58	12.40
BDV50-FMH40-100-50	805.643	2	40	100	50	26	8.5	16	M20	70	4.60
BDV50-FMH40-100-75	805.644	2	40	100	75	26	8.5	16	M20	70	5.90
BDV50-FMH40-100-105	805.645	2	40	100	105	26	8.5	16	M20	70	7.20

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Clamp bolt is included.
3. By using a clamping screw with a through bore, coolant is supplied through the screw.

Accessories & Spare Parts

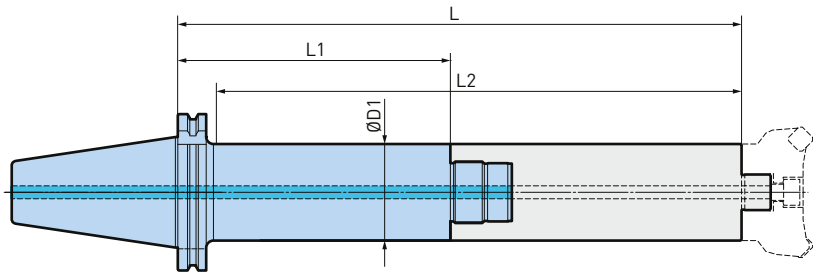
Clamp Bolts

▶ 388

Smart Damper Basic Holders for Milling Heads

Coolant Through Hole

BIG-PLUS Dual-Contact



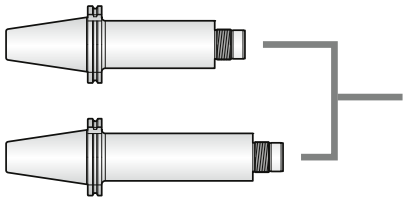
A.2

Model	Article No.	ØD1	L	L1	L2	Damper Head Model	Weight (kg)
BDV50-SDF36-47-170	805.296	47	350	170	325	FMH_DP-47	4.90
BDV50-SDF36-60-170	805.298	60	350	170	325	FMH_DP-60	6.20
BDV50-SDF36-60-220	805.299	60	400	220	375	FMH_DP-60	7.30
BDV50-SDF57-76-170	807.678	76	350	170	325	FMH_DP-76	8.70
BDV50-SDF57-76-220	807.679	76	400	220	375	FMH_DP-76	10.50

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.

Basic Holder

Damper Head



FMH16 / FMH22 / FMH27 / FMH32 / FMH40

Caution
Damper head becomes unremovable from the basic holder once they are used for machining after assembled.

Smart Damper Damper Heads for Mills

Coolant Through Hole

Anti-Vibration

A.2

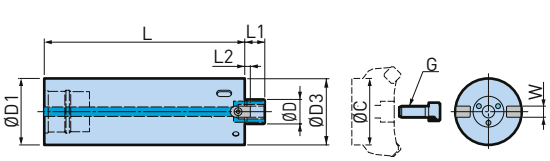


Fig. 1

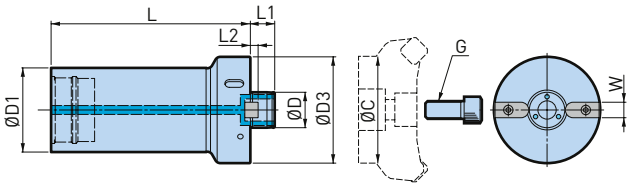


Fig. 2

Model	Article No.	Fig.	ØD	ØD1	ØD3	L	L1	L2	G	W	ØC min.	Weight (kg)
SDF28-FMH16DP-38-170	-	1	16	38	38	170	16	5	M8	8	28	1.90
SDF36-FMH22DP-47-180	804.969	1	22	47	47	180	18	5	M10	10	36	3.00
SDF36-FMH22DP-60-180	804.971	1	22	60	60	180	18	5	M10	10	49	4.50
SDF36-FMH27DP-60-180	804.972	1	27	60	60	180	20	6	M12	12	46	4.50
SDF57-FMH27DP-76-180	807.673	1	27	76	76	180	20	6	M12	12	48	7.90
SDF57-FMH32DP-96-180	100449.001.0	2	32	76	96	180	22	7	M16	14	58	8.70
SDF57-FMH40DP-100-180	-	2	40	76	100	180	26	8.5	M20(MBA-M20H)	16	70	9.10

1. Wrench and cutter clamping bolt are included.
2. By using a clamping screw with a through bore, coolant is supplied through the screw.

Accessories & Spare Parts

FK Wrenches	Clamp Bolts	Fullcut Mill FCM - Arbor Type
▶ 385	▶ 388	▶ 506

Side Lock Holders for Weldon

Coolant Through Hole

BIG-PLUS Dual-Contact

A.2

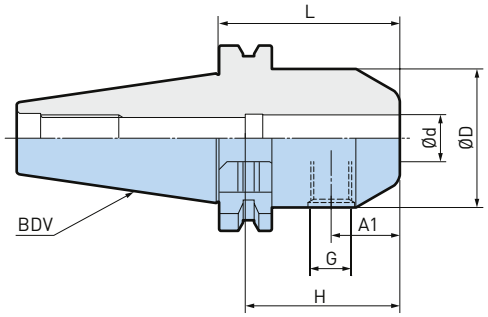


Fig. 1

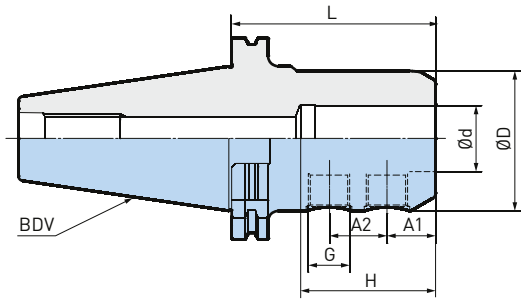


Fig. 2

ø6 - 40mm

Model	Article No.	Fig.	Ød	ØD	L	A1	A2	H	G	Weight (kg)
BDV40-ISL6-50	490.106	1	6	25	50	17.5	-	85 *	M6	0.90
BDV40-ISL8-50	490.108	1	8	28	50	17.5	-	85 *	M8	0.90
BDV40-ISL10-50	490.110	1	10	35	50	19.5	-	85 *	M10	1.00
BDV40-ISL12-50	490.112	1	12	42	50	22	-	85 *	M12	1.10
BDV40-ISL16-63	490.116	1	16	48	63	23.5	-	53	M14	1.30
BDV40-ISL20-63	490.120	1	20	52	63	24.5	-	55	M16	1.40
BDV40-ISL25-100	490.125	2	25	65	100	23.5	25	60	M18 P2	2.50
BDV40-ISL32-100	490.132	2	32	72	100	23.5	28	66	M20 P2	2.60
BDV50-ISL6-63	490.206	1	6	25	63	17.5	-	116 *	M6	2.70
BDV50-ISL8-63	490.208	1	8	28	63	17.5	-	116 *	M8	2.80
BDV50-ISL10-63	490.210	1	10	35	63	19.5	-	116 *	M10	2.90
BDV50-ISL12-63	490.212	1	12	42	63	22	-	116 *	M12	3.00
BDV50-ISL16-63	490.216	1	16	48	63	23.5	-	116 *	M14	3.10
BDV50-ISL20-63	490.220	1	20	52	63	24.5	-	116 *	M16	3.20
BDV50-ISL25-80	490.225	2	25	65	80	23.5	25	60	M18 P2	3.90
BDV50-ISL32-100	490.232	2	32	70	100	23.5	28	66	M20 P2	4.50
BDV50-ISL40-100	490.240	2	40	90	100	29.5	32	79	M20 P2	5.50

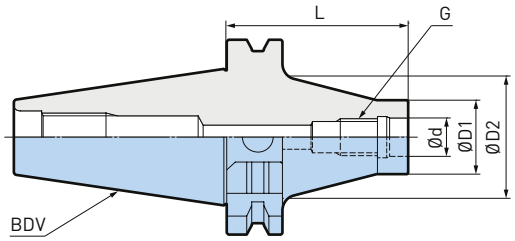
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. "H" is the max. tool shank length that can be inserted for these models.
3. Use a cutting tool in accordance to DIN 1835 B / DIN 6538 HB
4. H with * indicates the maximum clamping depth to the Pull Stud Bolt.

Holders for Screw-On Cutter

General metric screw-on type cutting tools can be used with these models.

Coolant Through Hole

BIG-PLUS Dual-Contact



Model	Article No.	Ød	ØD1	ØD2	L	G	Weight (kg)
BDV40-M10-19-65	806.607	10.5	19	35	65	M10	1.00
BDV40-M10-19-110	807.364	10.5	19	35	110	M10	1.20
BDV40-M12-24-60	806.608	12.5	24	40	60	M12	1.00
BDV40-M12-24-105	807.365	12.5	24	40	105	M12	1.30
BDV40-M16-29-55	806.609	17	29	45	55	M16	1.10
BDV40-M16-29-100	807.366	17	29	45	100	M16	1.40

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.

Accessories & Spare Parts

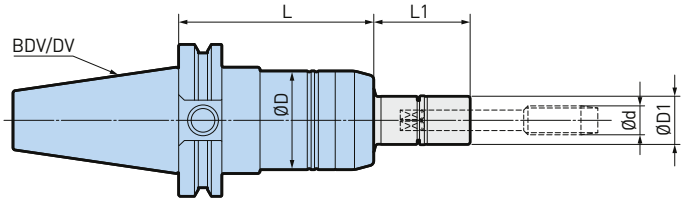
Full Cut Mill for Screw On FCM Type	Full Cut Mill for Screw On FCR Type
▶ 505	▶ 517

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

BIG-PLUS Dual-Contact



A.2

M3 - M20

Model	Article No.	Tap Holder	Ød	ØD	ØD1	L	L1	Weight (kg)
BDV40-MGT6-80	963.401	MGT6	M3-M8	36	16	80	30 - 200	1.20
BDV40-MGT12-80	963.402	MGT12	M5-M12 / P1/8	41	20	80	30 - 200	1.30
BDV40-MGT20-105	963.403	MGT20	M10-M20 / P1/4-P1/2	54	30	105	35 - 150	1.80
BDV50-MGT6-85	963.404	MGT6	M3-M8	36	16	85	30 - 200	3.10
BDV50-MGT12-85	963.405	MGT12	M5-M12 / P1/8	41	20	85	30 - 200	3.20
BDV50-MGT20-105	963.406	MGT20	M10-M20 / P1/4-P1/2	54	30	105	35 - 150	3.80

Model	Article No.	Tap Holder	Ød	ØD	ØD1	L	L1	Weight (kg)
DV40-MGT6-80	805.692	MGT6	M3-M8	36	16	80	30 - 200	1.30
DV40-MGT12-80	805.693	MGT12	M5-M12 / P1/8	41	20	80	30 - 200	1.30
DV40-MGT20-105	805.694	MGT20	M10-M20 / P1/4-P1/2	54	30	105	35 - 200	1.90
DV50-MGT6-85	805.619	MGT6	M3-M8	36	16	85	30 - 200	3.10
DV50-MGT12-85	805.620	MGT12	M5-M12 / P1/8	41	20	85	30 - 200	3.20
DV50-MGT20-105	805.621	MGT20	M10-M20 / P1/4-P1/2	54	30	105	35 - 150	3.80

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Tap holder is to be ordered separately.
3. Synchronized tapping function is required on the machine.

Accessories & Spare Parts

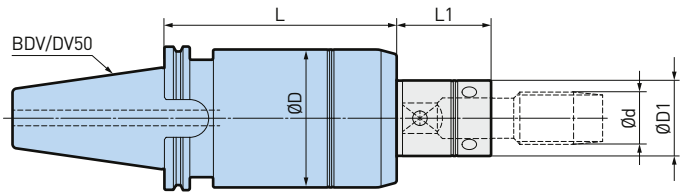
Tap Holder	MEGA Wrenches	Accessories
▶ 390	▶ 384	▶ 398

MEGA Synchro Tapping Holder MGT36

For large Tapping Type MGT36

Coolant Through Hole

BIG-PLUS Dual-Contact



A.2

M22 - M36

Model	Article No.	Tap Holder	Ød	ØD	ØD1	L	L1	Weight (kg)
BDV50-MGT36-160	805.002	MGT36	M22-M36 / P5/8-P1	94	38-52	160	65	8.60

Model	Article No.	Tap Holder	Ød	ØD	ØD1	L	L1	Weight (kg)
DV50-MGT36-160	805.721	MGT36	M22-M36 / P5/8-P1	94	38-52	160	65	8.70

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Tap holder is to be ordered separately.
3. Synchronized tapping function is required on the machine.

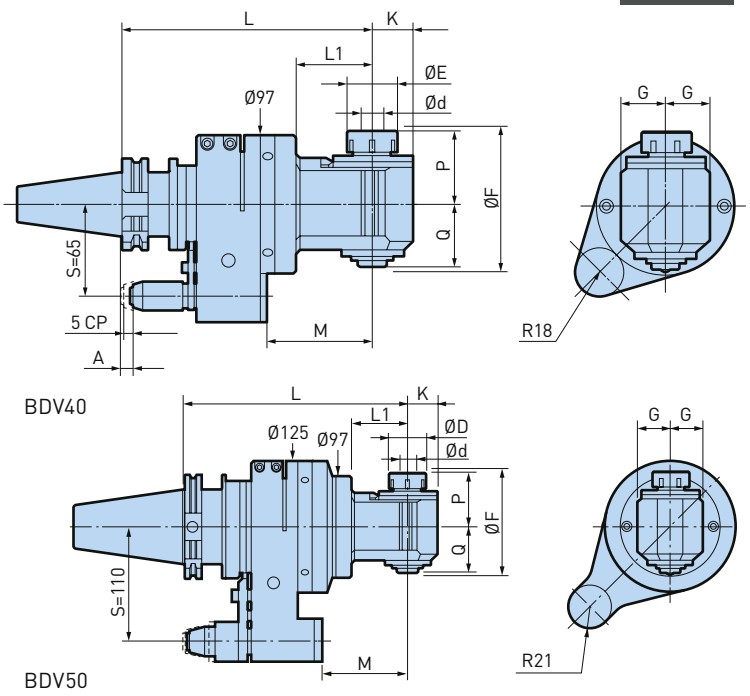
Accessories & Spare Parts

Tap Holders MGT36	Accessories
▶ 396	▶ 398

Angle Head New Baby Chuck Type

BIG-PLUS Dual-Contact

The Angle Head has an integrated New Baby Chuck, resulting in high precision. Available in various sizes to meet specific production requirements.



Model	Article No.	Ød	ØE	ØF	L	L1	G	K	M	P	Q	max. min-1	Collet Model	Weight (kg)
BDV40-AG90/NBS6-180	802.553	0.25 - 6	20	67	180	55	21	17	77	33	29	6,000	NBC6	5.10
BDV40-AG90/NBS6-210	802.554	0.25 - 6	20	67	210	85	21	17	107	33	29	6,000	NBC6	5.30
BDV40-AG90/NBS6-240	802.555	0.25 - 6	20	67	240	115	21	17	137	33	29	6,000	NBC6	5.50
BDV40-AG90/NBS6-270	802.556	0.25 - 6	20	67	270	145	21	17	167	33	29	6,000	NBC6	5.70
BDV40-AG90/NBS10-180	802.546	1.5 - 10	30	91	180	55	30	25	77	45	43	6,000	NBC10	5.50
BDV40-AG90/NBS10-210	802.547	1.5 - 10	30	91	210	85	30	25	107	45	43	6,000	NBC10	5.90
BDV40-AG90/NBS10-240	802.548	1.5 - 10	30	91	240	115	30	25	137	45	43	6,000	NBC10	6.20
BDV40-AG90/NBS13-180	802.549	2.5 - 13	35	101	180	55	31	28	77	52	45	6,000	NBC13	5.60
BDV40-AG90/NBS13-210	802.550	2.5 - 13	35	101	210	85	31	28	107	52	45	6,000	NBC13	6.00
BDV40-AG90/NBS13-240	802.551	2.5 - 13	35	101	240	115	31	28	137	52	45	6,000	NBC13	6.30
BDV40-AG90/NBS20S-175S	802.552	2.5 - 20	46	132	175	53	35	33	72	65	62	3,000	NBC20	8.00
BDV50-AG90/NBS6-215	802.569	0.25 - 6	20	67	215	55	21	17	82	33	29	6,000	NBC6	12.60
BDV50-AG90/NBS6-245	802.570	0.25 - 6	20	67	245	85	21	17	112	33	29	6,000	NBC6	12.80
BDV50-AG90/NBS6-275	802.571	0.25 - 6	20	67	275	115	21	17	142	33	29	6,000	NBC6	13.00
BDV50-AG90/NBS6-305	802.572	0.25 - 6	20	67	305	145	21	17	172	33	29	6,000	NBC6	13.20
BDV50-AG90/NBS10-215	802.562	1.5 - 10	30	91	215	55	30	25	82	45	43	6,000	NBC10	13.00
BDV50-AG90/NBS10-245	802.563	1.5 - 10	30	91	245	85	30	25	112	45	43	6,000	NBC10	13.40
BDV50-AG90/NBS10-275	802.564	1.5 - 10	30	91	275	115	30	25	142	45	43	6,000	NBC10	13.70
BDV50-AG90/NBS13-215	802.565	2.5 - 13	35	101	215	55	31	28	82	52	45	6,000	NBC13	13.10
BDV50-AG90/NBS13-245	802.566	2.5 - 13	35	101	245	85	31	28	112	52	45	6,000	NBC13	13.50
BDV50-AG90/NBS13-275	802.567	2.5 - 13	35	101	275	115	31	28	142	52	45	6,000	NBC13	13.80
BDV50-AG90/NBS20-230	802.568	2.5 - 20	46	132	230	70	35	35	97	65	62	3,000	NBC20	14.20

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. The standard fixed length A is 8 mm for BDV40 and 6 mm for BDV50. Other lengths are available upon request.
3. Nut and wrench are included.
4. New Baby Collet is to be ordered separately.
5. New Baby Collet for endmilling (NBC - EAA) can not be used.
6. Coolant can be supplied through the locating pin.
7. Exclusive Stop Block is required.
8. „CP" indicates compression.
9. „ØF" indicates the minimum dimension for access into the bore.

Accessories & Spare Parts

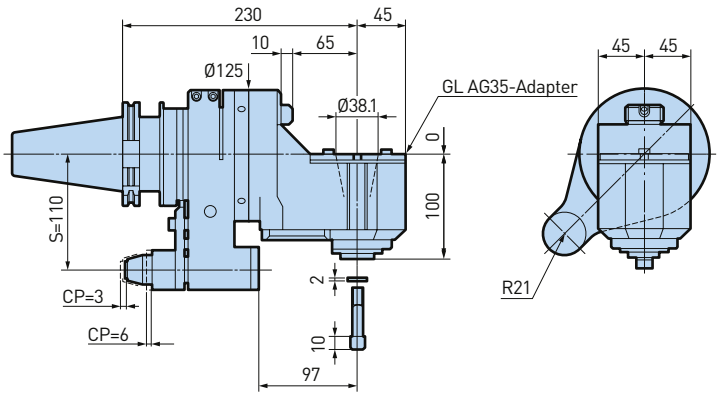
New Baby Collets	Semi-Finished Stop Blocks
▶ 360	▶ 413

Angle Head Build-Up Type

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

BIG-PLUS Dual-Contact

A.2



Model	Article No.	max. min-1	Connection tool side	Weight (kg)
BDV50-AG90/AGH35-230	802.558	3,000	AGH35	15.00
BDV50-AG90/AGH35-230S	802.559	3,000	AGH35	16.30

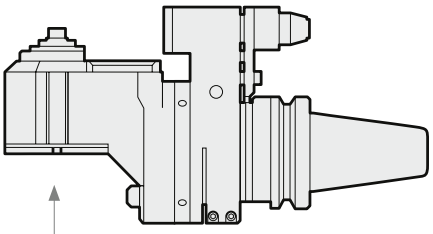
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Models with a "S" are high rigidity type.
3. The standard length A is 6 mm.
4. Article No. is with S = 110. S = 80 type is also available upon request.
5. Coolant can be supplied through the locating pin.
6. Exclusive Stop Block is required.

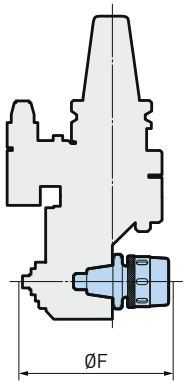
Accessories & Spare Parts

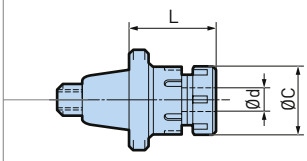
Semi-Finished Stop Blocks

► 413

AG35 adapters



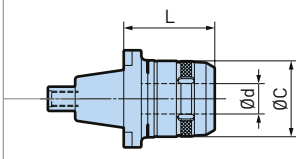




AG35 adapters New Baby Chuck

Model	Article No.	Ød	L	ØC	ØF	Collet Model	Head	Weight (kg)
AG35-NBS10	962.793	1.5 - 10	47	30	162	NBC10	AG35	0.60
AG35-NBS13	962.794	2.5 - 13	54	35	168	NBC13	AG35	0.70
AG35-NBS16	962.795	2.5 - 16	54	42	170	NBC16	AG35	0.80
AG35-NBS20	962.796	2.5 - 20	54	46	170	NBC20	AG35	0.85

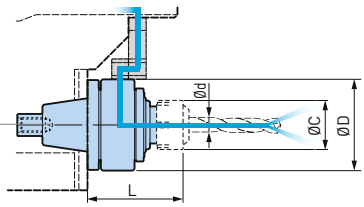
1. Collet and wrench are to be ordered separately.



AG35 adapters New Hi-Power Milling Chuck

Model	Article No.	Ød	L	ØC	ØF	Head	Weight (kg)
AG35-HMC20S	802.742	20	60	50	178	AG35	1.00

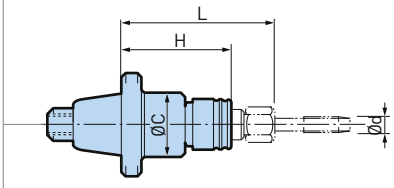
1. Wrench (FK45-50L) is included.



AG35 adapters Hi-Jet Holder

Model	Article No.	Ød	L	ØC	ØD	ØF	Head	Weight (kg)
AG35-ONBS13N	806.438	3 - 13	68	35	65	186	AG35	1.70
AG35-ONBS20N	806.974	3 - 20	68	46	65	188	AG35	1.85

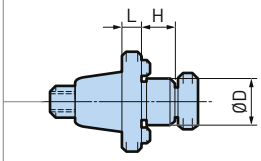
1. Baby Perfect Seal nut with sealing mechanism is required. (optional)
2. Anti-rotation block set is to be ordered separately. (Model: AG35-BL)
3. Collet and wrench are to be ordered separately.



AG35 adapters Auto Tapper Type B (automatic depth control)

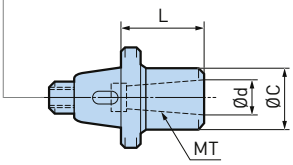
Model	Article No.	Ød	ØC	L	H	Head	Weight (kg)
AG35-ATB12E	802.435	M4 - M12	40.5	80	72	AG35	0.85
AG35-ATB20E	802.436	M8 - M20	57.5	115	102.5	AG35	1.65

1. Please contact us for tap collet.



AG35 adapters Face Mill Arbor

Model	Article No.	ØD	L	H	Head	Weight (kg)
AG35-FMH22-30	802.740	22	30	18	AG35	0.74
AG35-FMH27-20	802.741	27	20	20	AG35	0.80



AG35 adapters Morse Taper Adapter

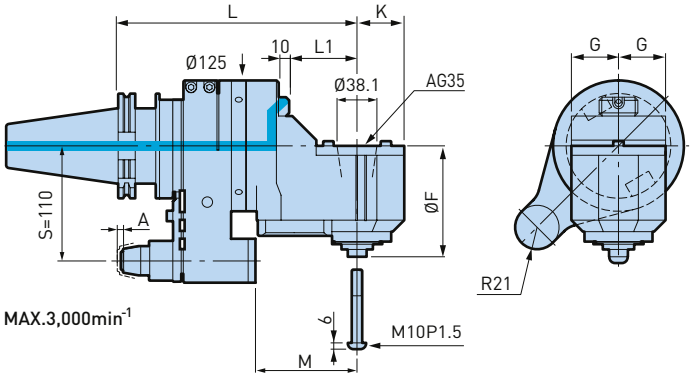
Model	Article No.	Ød	MT No.	L	ØC	ØF	Head	Weight (kg)
AG35-MT1	962.785	12.065	1	50	24	164	AG35	0.53
AG35-MT2	962.786	17.78	2	60	32	180	AG35	0.62

Angle Head Build up Type with center through coolant

Coolant Through Hole

BIG-PLUS Dual-Contact

A.2

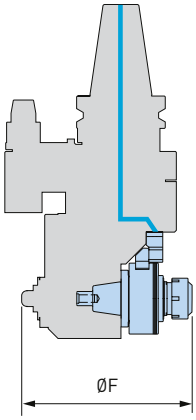


Model	Article No.	ØF	L	L1	G	K	M	Head	Weight (kg)
BDV50-TAG90/AGH35-230	-	106	230	65	45	45	97	AG35	15.60
BDV50-TAG90/AGH35-230S	-	106	230	65	45	45	97	AG35	16.90

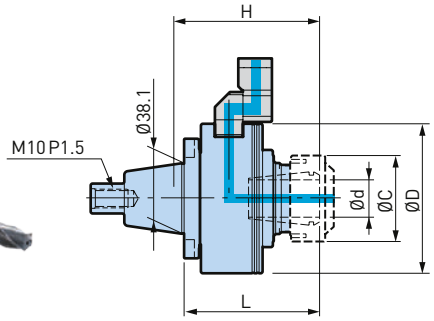
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. Models with a "S" are high rigidity type.
4. The standard length A is 6 mm.
5. Coolant can be supplied through the locating pin.

Accessories & Spare Parts

Adapter New Baby Chuck Type	Adapter Side Lock Type
▶ 133	▶ 133



Adapter New Baby Chuck Type



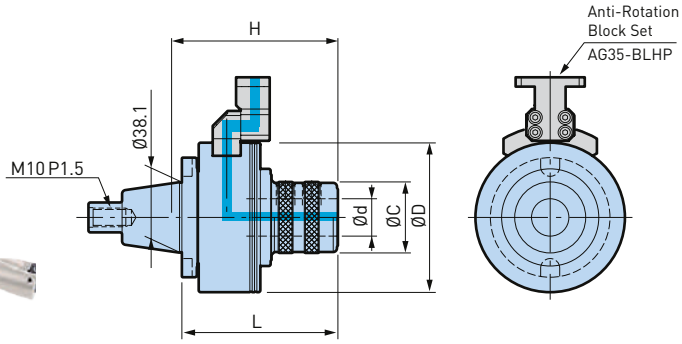
Model	Article No.	Ød	ØD	L	ØC	ØF	H	Head	Weight (kg)
AG35-ONBS20HP	-	3-20	80	72.5	46	195	78	AG35	1.40

1. Baby Perfect Seal nut with sealing mechanism is required. (optional)
2. Wrench is to be ordered separately.
3. Anti-rotation block set is to be ordered separately. (Model: AG35-BLHP)
4. Max. coolant flow rate: 30 l/min, max. coolant pressure: 70 Bar.
5. "H" indicates the maximum cutting tool insertion length.
6. Applicable only for water-solved coolant.

Anti-Rotation Block Set for Build-up type

Model
AG35-BLHP

Adapter Side Lock Type



Model	Article No.	Ød	ØD	L	ØC	ØF	H	Head	Weight (kg)
AG35-OSL20HP	-	20	80	83.5	38	198	89	AG35	1.60

1. Anti-rotation block set is to be ordered separately. (Model: AG35-BLHP)
2. Max. coolant flow rate: 30 l/min, max. coolant pressure: 70 Bar.
3. "H" indicates the maximum cutting tool insertion length.
4. Applicable only for water-solved coolant.

Anti-Rotation Block Set for Build-up type

Model
AG35-BLHP

Machining Examples -Drilling

Angle Head	BBT50-TAG90/AGH35-230S	
Adapter	AG35-ONBS20HP	AG35-OSL20HP
Tools	Ø 10 Solid carbide drill	Ø17 cutting-edge interchangeable drill
Workpiece	SUS304 C50	C50
Cutting Depth	50 mm (5xD)	50 mm (3xD)
Cutting Speed	80 m/min	120 m/min
Feed per Revolution	0.2 mm/rev	0.1 mm/rev
Rotation Speed	2,546 min-1	2,247 min-1
Table Feed	509 mm/min	225 mm/min
Coolant	70 Bar	50 Bar

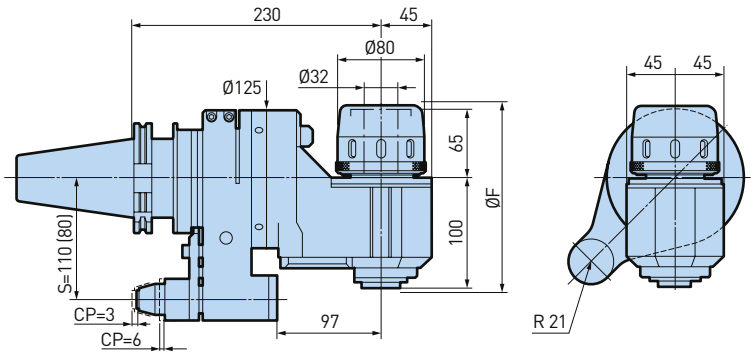
Results: Chip evacuation and edge cooling improved machining conditions.

Angle Head HMC Type

BIG-PLUS Dual-Contact

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

A.2



ø32mm

Model	Article No.	ØF	max. min-1	Weight (kg)
BDV50-AG90/HMC32-230	802.560	175	3,000	16.80
BDV50-AG90/HMC32-230S	802.561	175	3,000	18.10

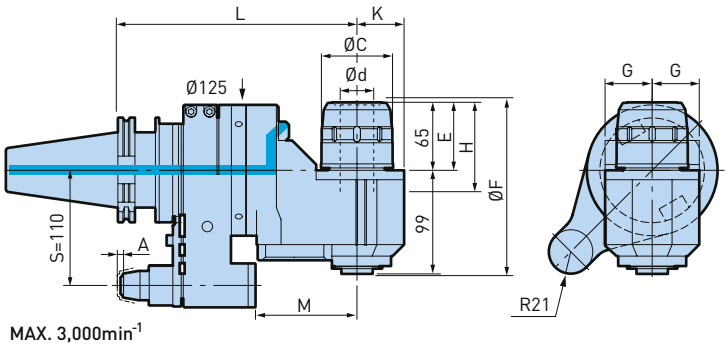
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. The standard length A is 6 mm.
3. Models with a "S" are high rigidity type.
4. Article No. is with S = 110. S = 80 type is also available upon request.
5. Wrench (FK80-90) is included.
6. Coolant can be supplied through the locating pin.
7. Exclusive Stop Block is required.
8. „ØF" indicates the minimum dimension for access into the bore.

Accessories & Spare Parts

C Collets	Semi-Finished Stop Blocks	FK Wrenches
▶ 381	▶ 413	▶ 385

Angle Head HMC Type with cooling through the spindle

BIG-PLUS Dual-Contact



MAX. 3,000min^{-1}

ø32mm

Model	Article No.	Ød	E	H	ØC	ØF	L	G	K	M	Weight (kg)
BDV50-TAG90/HMC32S-230	-	32	65	95	68	170	230	45	45	97	16.80
BDV50-TAG90/HMC32S-230S	-	32	65	95	68	170	230	45	45	97	18.10

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. Models with a "S" are high rigidity type.
4. The standard length A is 6 mm.
5. Wrench (FK80-90) is included.
6. „ØF" indicates the minimum dimension for access into the bore.

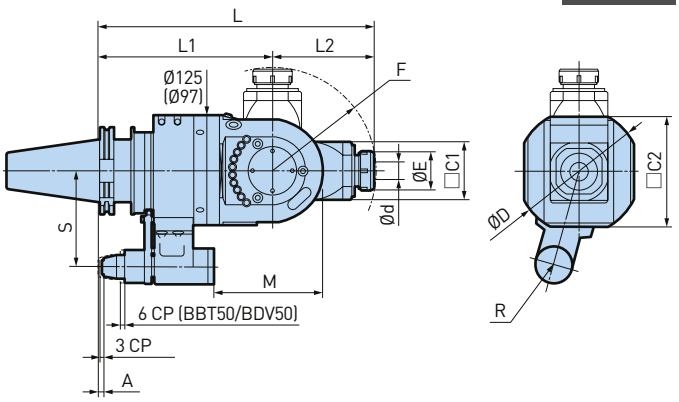
Accessories & Spare Parts

C Collets	Semi-Finished Stop Blocks	FK Wrenches
▶ 381	▶ 413	▶ 385

Angle Head Universal Type

Suitable for cutting angles between 0°and 90°. In addition to that the cutter head can be rotated a full 360°, increasing flexibility!

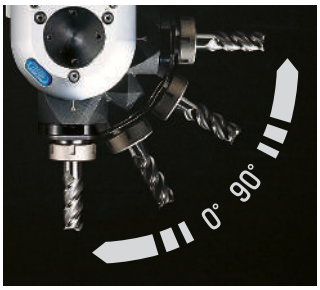
BIG-PLUS Dual-Contact



ø2.5 - 20mm

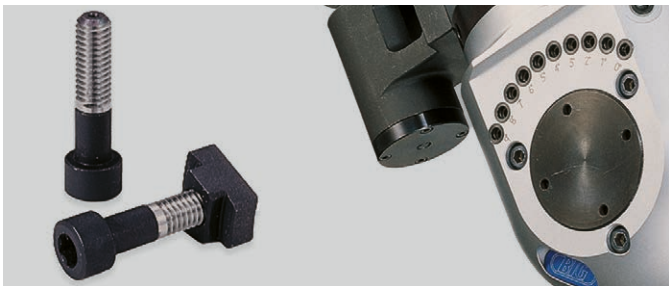
Model	Article No.	Ød	ØD	ØE	C1	C2	L	L1	L2	M	F	R	S	max. min-1	Collet Model	Weight (kg)
BDV40-AGU/NBS13-280	802.557	2.5 - 13	115	35	51	97	280	180	100	124	102	18	65	6,000	NBC13	9.70
BDV50-AGU/NBS20-315	802.573	2.5 - 20	140	46	65	125	315	200	115	125	118	21	110	4,000	NBC20	20.80

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. Standard fixed length A is 6 mm for BDV50 and 8 mm for BDV40. Other lengths are available upon request.
4. Figures in ( ) in the drawing indicate dimensions for BDV40.
5. Nut and wrench are included.
6. Coolant can be supplied through the locating pin.
7. „CP" indicates compression.



Easily adjustable spindle angle from 0° to 90°.

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



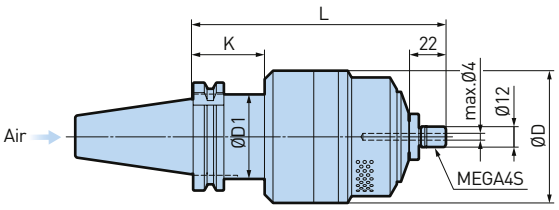
Specially selected materials and special design for clamping the head guarantees rigidity for even end milling applications.

Accessories & Spare Parts

New Baby Collets	Semi-Finished Stop Blocks
▶ 360	▶ 413

Air Turbine Spindle Center Through Type

BIG-PLUS Dual-Contact



ø0.5 - 4mm

Model	Article No.	Operation Speed (min-1)	ØD	ØD1	L	K	Nut Model	Weight (kg)
BDV40-RBX5C-4S-150	962.642	40,000 - 50,000	96	49.6	150	43	MGN4S	4.10
BDV40-RBX7C-4S-150	801.040	60,000 - 80,000	78	49.6	150	43	MGN4S	3.10
BDV50-RBX5C-4S-145	802.422	40,000 - 50,000	96	68	145	38	MGN4S	6.80
BDV50-RBX7C-4S-145	802.424	60,000 - 80,000	78	68	145	38	MGN4S	5.80

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Collet (NBC4S-_) and XF1 (air unit) are to be ordered separately.
3. Nut and wrench are included.

Caution
Clean air is an essential condition for the use of this product. Therefore, coolant should never be supplied through the spindle of the machine using the Air Turbine Spindle.

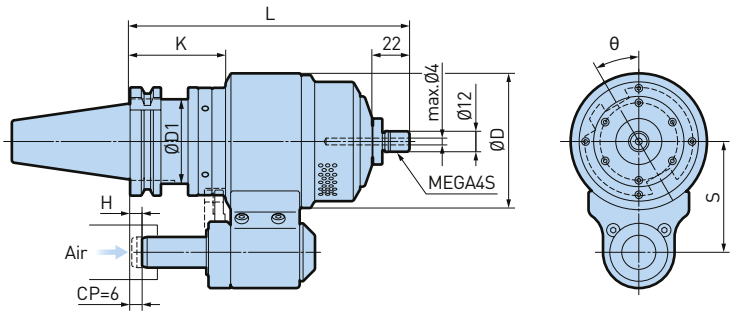
Accessories & Spare Parts

MEGA Nuts	Micro Collets	MEGA Wrenches	Air Filter Regulator for RBX
▶ 358	▶ 356	▶ 384	▶ 400

Air Turbine Spindle Side Through Type

BIG-PLUS Dual-Contact

A.2



ø0.5 - 4mm

Model	Article No.	Operation Speed (min-1)	ØD	L	K	S	H	Nut Model	Weight (kg)
BDV40-RBX5-4S-165	962.668	40,000 - 50,000	96	165	57	65	-10 - -35	MGN4S	5.00
BDV40-RBX7-4S-165	962.667	60,000 - 80,000	80	165	57	65	-10 - -35	MGN4S	4.00
BDV50-RBX5-4S-170	962.670	40,000 - 50,000	100	170	62	80	-5 - -40	MGN4S	9.70
BDV50-RBX7-4S-170	962.669	60,000 - 80,000	100	170	62	80	-5 - -40	MGN4S	8.70

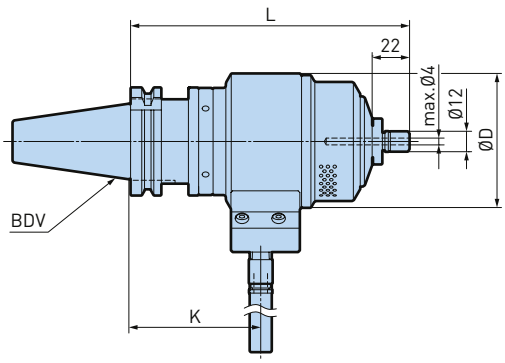
1. Exclusive Stop Block is required.
2. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
3. Nut, wrench (RBX5, 7 : XW27) and MEGA wrench (MGR12) are included.
4. Collet (NBC4S-_) and XF1 (air unit) are to be ordered separately.
5. „CP“ indicates compression.
6. θ: Drive grooves adjustable 0 - 360°.

Accessories & Spare Parts

MEGA Nuts	Micro Collets	MEGA Wrenches	Semi-Finished Stop Blocks	Air Filter Regulator for RBX
▶ 358	▶ 356	▶ 384	▶ 413	▶ 400

Air Turbine Spindle Manual Type

BIG-PLUS Dual-Contact



A.2

ø0.5 - 4mm

Model	Article No.	Operation Speed (min-1)	ØD	L	K	S	Nut Model	Weight (kg)
BDV40-RBX5-4S-165H	962.649	40,000 - 50,000	96	151	63	71	MGN4S	5.00
BDV40-RBX7-4S-165H	801.681	60,000 - 80,000	80	151	63	65	MGN4S	4.00
BDV50-RBX5-4S-170H	802.421	40,000 - 50,000	100	166	78	80	MGN4S	9.70
BDV50-RBX7-4S-170H	802.423	60,000 - 80,000	100	166	78	80	MGN4S	8.70

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Collet (NBC4S-_) and XF1 (air unit) are to be ordered separately.
3. Nut and wrench are included.

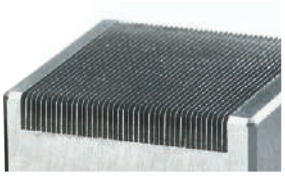
Accessories & Spare Parts

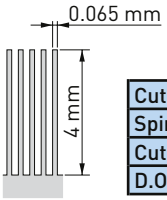
MEGA Nuts	Micro Collets	MEGA Wrenches	Air Filter Regulator for RBX
▶ 358	▶ 356	▶ 384	▶ 400

Application Examples

RBX7

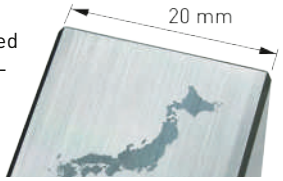
Aluminium A2017
Outstanding runout accuracy permits perfect thin wall cutting.





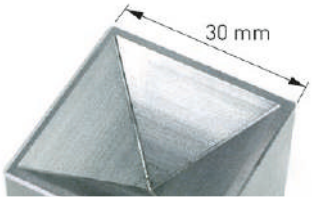
Cutter	Ø 0.5 mm Rib-endmill
Spindle Speed	70 000 min^{-1}
Cutting Feed	1500 mm/min
D.O.C	ap = 0.02 mm

Prehardened steel HRC40
Drastic time reduction by ultra high speed rotation. Excellent dynamic runout accuracy makes DOC of 5 µm clearly visible.



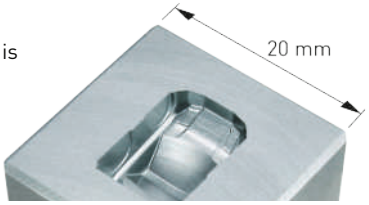
Cutter	R0.1 mm Ball nose endmill
Spindle Speed	80 000 min^{-1}
Cutting Feed	400 mm/min
D.O.C	ap = 0.01 mm

Prehardened steel HRC40
Overall cutting length of 656 m can be achieved with one ball nose endmill. Drastically extended tool life.



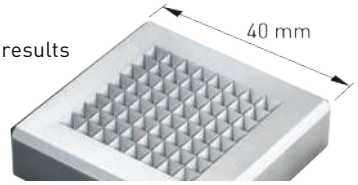
Cutter	R0.5 mm Ball nose endmill
Spindle Speed	65 000 min^{-1}
Cutting Feed	4 200 mm/min
D.O.C	ap = 0.02 mm; ae = 0.05 mm

Prehardened steel HRC40
Original 5hour operation in MC is reduced to 2 hours.



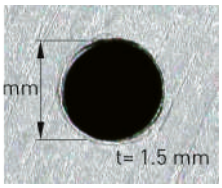
Cutter	R0.2 mm Ball nose endmill
Spindle Speed	70 000 min^{-1}
Cutting Feed	1000 mm/min
D.O.C	ap = 0.01 mm

Prehardened steel HRC40
No thermal expansion of spindle results in finely detailed surface finish.



Cutter	R0.5 mm Ball nose endmill
Spindle Speed	75 000 min^{-1}
Cutting Feed	400 mm/min
D.O.C	ap = 0.02 mm

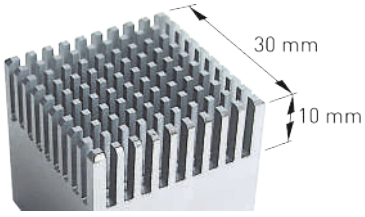
Aluminium A2017
High-precision drilling is possible without center drill operation. Even after 3500 holes, no problems can be found on the cutting edge.



Cutter	Ø 0.3 mm Solid drill
Spindle Speed	75 000 min^{-1}
Cutting Feed	200 mm/min
Peck	ap = 0.03 mm

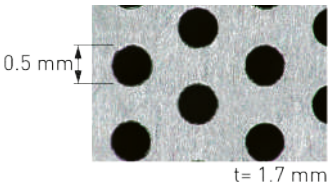
RBX5

Prehardened steel HRC40
Even a taper endmill that has high cutting forces can achieve stable cutting.



Cutter	Ø 1.5 mm Rib-endmill
Spindle Speed	40 000 min^{-1}
Cutting Feed	1000 mm/min
D.O.C	ap = 0.05 mm

Stainless steel SUS303
Tool life is doubled with over 1200 holes and cutting time is reduced to 1/3.



Cutter	Ø 0.5 mm Solid drill
Spindle Speed	40 000 min^{-1}
Cutting Feed	20 mm/min
Peck	ap = 0.01 mm

Tool Holders HSK, DIN 69893, ISO 12164

	HSK-A	HSK-E	HSK-F
MEGA Micro Chuck	186	247	258
MEGA New Baby Chuck	188	250	259
MEGA E Chuck	192		260
New Baby Chuck	194		
MEGA Double Power Chuck	197		261
MEGA Perfect Grip	201		
New Hi-Power Milling Chuck	202		
Hydraulic Chucks	205	252	262
SF Hydraulic Chuck	210		
Shrink Chuck	212	256	
Mold Chuck	214		
CK Shanks	215		263
Face Mill Arbors	218		
Smart Damper Face Mill	220		
Super Keyless Chuck	222		
Side Lock Holders	222		
Screw-On-Holder	224		
Morse Taper Holder	226		
MEGA Synchro Tapping Holder	227		
Angle Heads	229		
Air Turbine Spindle	244		
HSK Accessories	264	264	264

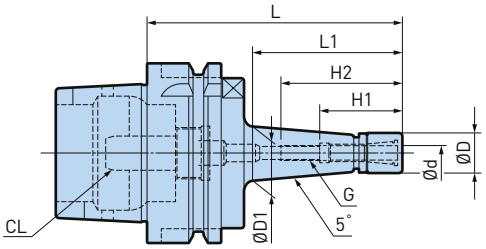
Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

A.3

MEGA Micro Chuck Type T

Tapered and slim design, minimal interference combined with maximized rigidity.

Coolant Through Hole



A.3

ø0.45 - 8.05mm

Model	Article No.	Ød	ØD	ØD1	L	L1	H1	H2	G	max. min-1	Collet Model	Weight (kg)
HSK-A40-MEGA3S-75T	968.936	0.45 - 3.25	10	16	75	44	22	38	M4 P0.7	32,000	NBC3S	0.27
HSK-A40-MEGA3S-90T	968.937	0.45 - 3.25	10	18	90	60	22	38	M4 P0.7	26,000	NBC3S	0.29
HSK-A40-MEGA4S-60T	968.934	0.45 - 4.05	12	14	60	27	26.5	44	M5 P0.8	35,000	NBC4S	0.26
HSK-A40-MEGA4S-90T	802.355	0.45 - 4.05	12	20	90	60	26.5	47	M5 P0.8	28,000	NBC4S	0.31
HSK-A40-MEGA4S-105T	802.356	0.45 - 4.05	12	23	105	76	26.5	47	M5 P0.8	24,000	NBC4S	0.35
HSK-A40-MEGA6S-60T *	968.925	0.45 - 6.05	14	16	60	29	-	40	-	35,000	NBC6S	0.27
HSK-A40-MEGA6S-75T	968.926	0.45 - 6.05	14	19	75	45	28.5	49	M7 P0.75	32,000	NBC6S	0.29
HSK-A40-MEGA6S-90T	968.927	0.45 - 6.05	14	21.5	90	60	28.5	49	M7 P0.75	28,000	NBC6S	0.33
HSK-A40-MEGA6S-105T	802.357	0.45 - 6.05	14	25	105	76	28.5	49	M7 P0.75	25,000	NBC6S	0.37
HSK-A50-MEGA6S-75T	805.828	0.45 - 6.05	14	17	75	36	28.5	49	M7 P0.75	30,000	NBC6S	0.50
HSK-A50-MEGA6S-105T	805.251	0.45 - 6.05	14	22.5	105	66	28.5	49	M7 P0.75	25,000	NBC6S	0.60
HSK-A63-MEGA3S-75T	968.961	0.45 - 3.25	10	14	75	36	22	38	M4 P0.7	32,000	NBC3S	0.80
HSK-A63-MEGA3S-120T	968.963	0.45 - 3.25	10	21.5	120	81	22	38	M4 P0.7	19,000	NBC3S	0.90
HSK-A63-MEGA4S-75T	805.259	0.45 - 4.05	12	15.5	75	36	26.5	47	M5 P0.8	32,000	NBC4S	0.90
HSK-A63-MEGA4S-90T	968.966	0.45 - 4.05	12	18	90	51	26.5	47	M5 P0.8	28,000	NBC4S	0.90
HSK-A63-MEGA4S-120T	968.968	0,45 - 4,05	12	23.5	120	81	26.5	47	M5 P0.8	22,000	NBC4S	1.00
HSK-A63-MEGA6S-60T	968.970	0.45 - 6.05	14	15.5	60	23	28.5	37	M7 P0.75	35,000	NBC6S	0.80
HSK-A63-MEGA6S-75T	968.971	0.45 - 6.05	14	17	75	36	28.5	48	M7 P0.75	32,000	NBC6S	0.80
HSK-A63-MEGA6S-90T	805.260	0.45 - 6.05	14	20	90	51	28.5	49	M7 P0.75	28,000	NBC6S	0.90
HSK-A63-MEGA6S-105T	968.973	0.45 - 6.05	14	22.5	105	66	28.5	49	M7 P0.75	25,000	NBC6S	0.90
HSK-A63-MEGA6S-120T	805.261	0.45 - 6.05	14	25	120	81	28.5	49	M7 P0.75	22,000	NBC6S	1.00
HSK-A63-MEGA6S-135T	968.975	0.45 - 6.05	14	27.5	135	96	28.5	49	M7 P0.75	20,000	NBC6S	1.00
HSK-A63-MEGA8S-90T	801.724	2.95 - 8.05	18	23.5	90	51	31	50.5	M9 P0.75	30,000	NBC8S	0.90
HSK-A63-MEGA8S-120T	803.603	2.95 - 8.05	18	28.5	120	81	31	50.5	M9 P0.75	23,000	NBC8S	1.00

1. MEGA nut is included in delivery.
2. Coolant pipe (CL) is to be ordered separately.
3. * Internal thread (G) is not available.

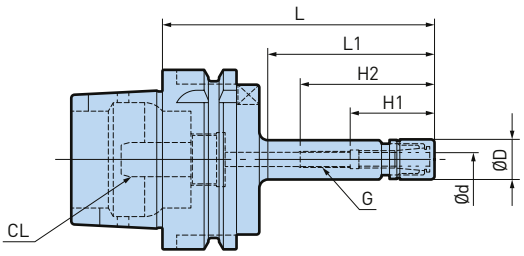
Accessories & Spare Parts

MEGA Nuts	Micro Seal Nuts	Micro Collets	MEGA Wrenches	Taper Cleaners	Collet Protective Cases	Coolant Pipes
▶ 358	▶ 358	▶ 356	▶ 384	▶ 404	▶ 359	▶ 264

MEGA Micro Chuck Type S

Micro diameter design is ideal for high speed applications in tight spaces.

Coolant Through Hole



ø0.45 - 8.05mm

Model	Article No.	Ød	ØD	L	L1	H1	H2	G	max. min-1	Collet Model	Weight (kg)
HSK-A40-MEGA3S-60	968.933	0.45 - 3.25	10	60	26	22	39	M4 P0.7	30,000	NBC3S	0.25
HSK-A40-MEGA4S-60	968.931	0.45 - 4.05	12	60	27	26.5	44	M5 P0.8	30,000	NBC4S	0.25
HSK-A40-MEGA4S-90	968.932	0.45 - 4.05	12	90	57	26.5	47	M5 P0.8	21,000	NBC4S	0.28
HSK-A40-MEGA6S-60 *	968.929	0.45 - 6.05	14	60	28	-	40	-	30,000	NBC6S	0.26
HSK-A40-MEGA6S-90	968.930	0.45 - 6.05	14	90	58	28.5	49	M7 P0.75	24,000	NBC6S	0.29
HSK-A50-MEGA4S-75	978.310	0.45 - 4.05	12	75	36	26.5	47	M5 P0.8	30,000	NBC4S	0.49
HSK-A50-MEGA6S-75	805.250	0.45 - 6.05	14	75	36	28.5	49	M7 P0.75	30,000	NBC6S	0.60
HSK-A63-MEGA4S-75	968.965	0.45 - 4.05	12	75	36	26.5	48	M5 P0.8	30,000	NBC4S	0.80
HSK-A63-MEGA4S-105	805.257	0.45 - 4.05	12	105	61	26.5	47	M5 P0.8	16,000	NBC4S	0.90
HSK-A63-MEGA6S-75	968.803	0.45 - 6.05	14	75	36	-	48	M7 P0.75	30,000	NBC6S	0.80
HSK-A63-MEGA6S-105	805.258	0.45 - 6.05	14	105	61	28.5	49	M7 P0.75	21,000	NBC6S	0.90
HSK-A63-MEGA8S-90	803.600	2.95 - 8.05	18	90	48	31	50.5	M9 P0.75	30,000	NBC8S	0.90

1. MEGA nut is included in delivery.
2. Coolant pipe (CL) is to be ordered separately.
3. * Internal thread (G) is not available.

Accessories & Spare Parts

MEGA Nuts	Micro Seal Nuts	Micro Collets	MEGA Wrenches	Taper Cleaners	Collet Protective Cases	Coolant Pipes
▶ 358	▶ 358	▶ 356	▶ 384	▶ 404	▶ 359	▶ 264

MEGA New Baby Chuck

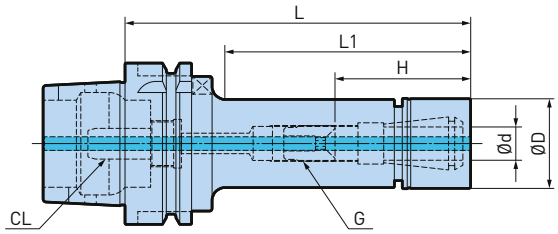
Ideal ultra precision collet holders for high speed machining. Wide range of lengths and a variety of collet series covers all machining applications.

Coolant Through Hole

A.3

Ø0.25 - 25.4mm

Model	Article No.	Ød	ØD	L	L1	H	max. min-1	Collet Model	Weight (kg)
HSK-A40-MEGA6N-60 *	968.940	0.25 - 6	20	60	30	33	35,000	NBC6	0.29
HSK-A40-MEGA6N-75	968.941	0.25 - 6	20	75	45	23 - 38	30,000	NBC6	0.32
HSK-A40-MEGA6N-90	968.942	0.25 - 6	20	90	60	23 - 43	30,000	NBC6	0.35
HSK-A40-MEGA8N-60 *	968.943	0.5 - 8	25	60	30	41	35,000	NBC8	0.32
HSK-A40-MEGA8N-90	968.945	0.5 - 8	25	90	60	26 - 44	30,000	NBC8	0.42
HSK-A40-MEGA10N-60 *	968.946	1.5 - 10	30	60	26	40	32,000	NBC10	0.36
HSK-A40-MEGA10N-90	968.948	1.5 - 10	30	90	54	38 - 48	28,000	NBC10	0.50
HSK-A40-MEGA13N-75 *	968.949	2.5 - 13	35	75	55	55	25,000	NBC13	0.46
HSK-A40-MEGA13N-90 *	968.950	2.5 - 13	35	90	70	64	25,000	NBC13	0.55
HSK-A40-MEGA16N-75 *	968.951	2.5 - 16	42	75	55	53	20,000	NBC16	0.52
HSK-A40-MEGA16N-90 *	968.952	2.5 - 16	42	90	70	63	15,000	NBC16	0.65
HSK-A40-MEGA20N-90 *	968.953	2.5 - 20	46	90	70	66	15,000	NBC20	0.70



Model	Article No.	Ød	ØD	L	L1	H	max. min-1	Collet Model	Weight (kg)
HSK-A50-MEGA6N-75	805.252	0.25 - 6	20	75	37	23 - 43	30,000	NBC6	0.60
HSK-A50-MEGA6N-100	978.031	0.25 - 6	20	100	60	23 - 43	25,000	NBC6	0.60
HSK-A50-MEGA6N-135	968.745	0.25 - 6	20	135	93	23 - 43	20,000	NBC6	0.70
HSK-A50-MEGA6N-165	803.625	0.25 - 6	20	165	123	23 - 43	14,000	NBC6	0.80
HSK-A50-MEGA8N-75	968.738	0.5 - 8	25	75	37	26 - 37	30,000	NBC8	0.60
HSK-A50-MEGA8N-100	978.239	0.5 - 8	25	100	62	26 - 45	28,000	NBC8	0.70
HSK-A50-MEGA8N-135	803.629	0.5 - 8	25	135	96	26 - 45	20,000	NBC8	0.80
HSK-A50-MEGA8N-165	803.616	0.5 - 8	25	165	125	26 - 45	14,000	NBC8	0.90
HSK-A50-MEGA10N-75 *	805.253	1.5 - 10	30	75	38	46	33,000	NBC10	0.70
HSK-A50-MEGA10N-100	978.261	1.5 - 10	30	100	63	38 - 48	25,000	NBC10	0.80
HSK-A50-MEGA10N-135	803.622	1.5 - 10	30	135	98	38 - 48	20,000	NBC10	0.90
HSK-A50-MEGA10N-165	803.627	1.5 - 10	30	165	128	38 - 48	14,000	NBC10	1.10
HSK-A50-MEGA13N-75 *	805.254	2.5 - 13	35	75	40	46	28,000	NBC13	0.70
HSK-A50-MEGA13N-100	801.179	2.5 - 13	35	100	65	44 - 56	25,000	NBC13	0.80
HSK-A50-MEGA13N-135	803.620	2.5 - 13	35	135	100	44 - 63	18,000	NBC13	1.10
HSK-A50-MEGA13N-165	978.262	2.5 - 13	35	165	130	44 - 63	12,000	NBC13	1.30
HSK-A50-MEGA16N-75 *	805.255	2.5 - 16	42	75	49	48	28,000	NBC16	0.80
HSK-A50-MEGA16N-100	803.623	2.5 - 16	42	100	74	48 - 55	20,000	NBC16	1.00
HSK-A50-MEGA16N-135	803.619	2.5 - 16	42	135	109	48 - 68	15,000	NBC16	1.30
HSK-A50-MEGA16N-165	803.626	2.5 - 16	42	165	139	48 - 68	10,000	NBC16	1.60
HSK-A50-MEGA20N-75 **	805.256	2.5 - 20	46	75	49	47	20,000	NBC20	0.80
HSK-A50-MEGA20N-100	968.742	2.5 - 20	46	100	74	51 - 54	15,000	NBC20	1.00
HSK-A50-MEGA20N-135	803.624	2.5 - 20	46	135	109	51 - 68	10,000	NBC20	1.40
HSK-A50-MEGA20N-165	803.621	2.5 - 20	46	165	139	51 - 68	8,000	NBC20	1.80
HSK-A50-MEGA25N-95 *	806.370	15.5 - 25.4	60	95	69	65	12,000	NBC25	1.10

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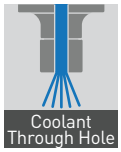
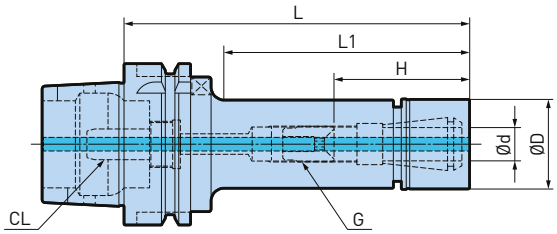
MEGA New Baby Chuck



Model	Article No.	Ød	ØD	L	L1	H	max. min-1	Collet Model	Weight (kg)
HSK-A63-MEGA6N-75	968.811	0.25 - 6	20	75	35	23 - 38	35,000	NBC6	0.90
HSK-A63-MEGA6N-90	805.262	0.25 - 6	20	90	48	23 - 43	30,000	NBC6	0.90
HSK-A63-MEGA6N-105	968.812	0.25 - 6	20	105	63	23 - 43	30,000	NBC6	0.90
HSK-A63-MEGA6N-120	968.981	0.25 - 6	20	120	76	23 - 43	25,000	NBC6	1.00
HSK-A63-MEGA6N-135	968.813	0.25 - 6	20	135	91	23 - 43	20,000	NBC6	1.00
HSK-A63-MEGA6N-165	968.814	0.25 - 6	20	165	121	23 - 43	15,000	NBC6	1.10
HSK-A63-MEGA8N-75	968.815	0.5 - 8	25	75	35	26 - 38	35,000	NBC8	0.90
HSK-A63-MEGA8N-90	805.263	0.5 - 8	25	90	50	26 - 45	30,000	NBC8	1.00
HSK-A63-MEGA8N-105	968.816	0.5 - 8	25	105	63	26 - 45	30,000	NBC8	1.00
HSK-A63-MEGA8N-120	968.982	0.5 - 8	25	120	76	26 - 45	25,000	NBC8	1.00
HSK-A63-MEGA8N-135	805.264	0.5 - 8	25	135	91	26 - 45	20,000	NBC8	1.10
HSK-A63-MEGA8N-165	968.818	0.5 - 8	25	165	121	26 - 45	15,000	NBC8	1.20
HSK-A63-MEGA10N-75 *	968.819	1.5 - 10	30	75	36	50	33,000	NBC10	1.00
HSK-A63-MEGA10N-90	805.265	1.5 - 10	30	90	50	38 - 45	33,000	NBC10	1.00
HSK-A63-MEGA10N-105	968.820	1.5 - 10	30	105	65	38 - 48	25,000	NBC10	1.10
HSK-A63-MEGA10N-120	968.983	1.5 - 10	30	120	80	38 - 48	25,000	NBC10	1.20
HSK-A63-MEGA10N-135	805.266	1.5 - 10	30	135	93	38 - 48	20,000	NBC10	1.20
HSK-A63-MEGA10N-165	968.822	1.5 - 10	30	165	123	38 - 48	15,000	NBC10	1.40
HSK-A63-MEGA13N-75 *	968.823	2.5 - 13	35	75	37	49	30,000	NBC13	1.00
HSK-A63-MEGA13N-90 *	805.267	2.5 - 13	35	90	51	64	30,000	NBC13	1.10
HSK-A63-MEGA13N-105	968.824	2.5 - 13	35	105	66	44 - 56	25,000	NBC13	1.20
HSK-A63-MEGA13N-120	968.984	2.5 - 13	35	120	81	44 - 63	20,000	NBC13	1.30
HSK-A63-MEGA13N-135	805.268	2.5 - 13	35	135	96	44 - 63	20,000	NBC13	1.40
HSK-A63-MEGA13N-165	968.826	2.5 - 13	35	165	125	44 - 63	15,000	NBC13	1.50
HSK-A63-MEGA16N-75 *	968.827	2.5 - 16	42	75	39	48	30,000	NBC16	1.10
HSK-A63-MEGA16N-90 *	805.269	2.5 - 16	42	90	54	63	25,000	NBC16	1.20
HSK-A63-MEGA16N-105	968.828	2.5 - 16	42	105	69	48 - 54	20,000	NBC16	1.30
HSK-A63-MEGA16N-120	968.985	2.5 - 16	42	120	84	48 - 68	15,000	NBC16	1.40
HSK-A63-MEGA16N-135	968.829	2.5 - 16	42	135	99	48 - 68	15,000	NBC16	1.60
HSK-A63-MEGA16N-165	968.830	2.5 - 16	42	165	129	48 - 68	10,000	NBC16	1.90
HSK-A63-MEGA16N-200	968.831	2.5 - 16	42	200	164	48 - 68	8,000	NBC16	2.20
HSK-A63-MEGA20N-75 *	968.832	2.5 - 20	46	75	39	51	30,000	NBC20	1.10
HSK-A63-MEGA20N-90 *	805.270	2.5 - 20	46	90	54	61	25,000	NBC20	1.30
HSK-A63-MEGA20N-105	968.833	2.5 - 20	46	105	69	51 - 54	20,000	NBC20	1.40
HSK-A63-MEGA20N-120	968.986	2.5 - 20	46	120	84	51 - 68	15,000	NBC20	1.60
HSK-A63-MEGA20N-135	805.271	2.5 - 20	46	135	99	51 - 68	15,000	NBC20	1.80
HSK-A63-MEGA20N-165	968.835	2.5 - 20	46	165	129	51 - 68	10,000	NBC20	2.10
HSK-A63-MEGA20N-200	968.836	2.5 - 20	46	200	164	51 - 68	8,000	NBC20	2.50
HSK-A63-MEGA25N-90 *	806.371	15.5 - 25.4	60	90	-	63	20,000	NBC25	1.40
HSK-A63-MEGA25N-120 *	806.372	15.5 - 25.4	60	120	-	90	12,000	NBC25	2.00



Model	Article No.	Ød	ØD	L	L1	H	max. min-1	Collet Model	Weight (kg)
HSK-A100-MEGA6N-90	968.841	0.25 - 6	20	90	43	23 - 43	20,000	NBC6	2.40
HSK-A100-MEGA6N-105	801.146	0.25 - 6	20	105	58	23 - 43	18,000	NBC6	2.40
HSK-A100-MEGA6N-120	968.842	0.25 - 6	20	120	73	23 - 43	18,000	NBC6	2.50
HSK-A100-MEGA6N-135	801.147	0.25 - 6	20	135	88	23 - 43	14,000	NBC6	2.50
HSK-A100-MEGA6N-165	968.843	0.25 - 6	20	165	113	23 - 43	12,000	NBC6	2.60
HSK-A100-MEGA8N-90	968.844	0.5 - 8	25	90	43	26 - 45	20,000	NBC8	2.40
HSK-A100-MEGA8N-105	968.989	0.5 - 8	25	105	58	26 - 45	18,000	NBC8	2.50
HSK-A100-MEGA8N-120	968.845	0.5 - 8	25	120	73	26 - 45	18,000	NBC8	2.50
HSK-A100-MEGA8N-135	968.990	0.5 - 8	25	135	88	26 - 45	14,000	NBC8	2.60
HSK-A100-MEGA8N-165	968.846	0.5 - 8	25	165	113	26 - 45	14,000	NBC8	2.70
HSK-A100-MEGA10N-90	968.847	1.5 - 10	30	90	43	38 - 45	20,000	NBC10	2.50
HSK-A100-MEGA10N-105	968.991	1.5 - 10	30	105	58	38 - 48	18,000	NBC10	2.60
HSK-A100-MEGA10N-120	968.848	1.5 - 10	30	120	73	38 - 48	18,000	NBC10	2.60
HSK-A100-MEGA10N-135	968.992	1.5 - 10	30	135	88	38 - 48	14,000	NBC10	2.70
HSK-A100-MEGA10N-165	968.849	1.5 - 10	30	165	113	38 - 48	14,000	NBC10	2.90
HSK-A100-MEGA13N-90 *	968.850	2.5 - 13	35	90	43	55	18,000	NBC13	2.60
HSK-A100-MEGA13N-105 *	968.993	2.5 - 13	35	105	58	70	16,000	NBC13	2.70
HSK-A100-MEGA13N-120	968.851	2.5 - 13	35	120	73	44 - 63	16,000	NBC13	2.80
HSK-A100-MEGA13N-135	968.994	2.5 - 13	35	135	88	44 - 63	14,000	NBC13	2.90
HSK-A100-MEGA13N-165	968.852	2.5 - 13	35	165	118	44 - 63	14,000	NBC13	3.00
HSK-A100-MEGA13N-200	968.853	2.5 - 13	35	200	148	44 - 63	10,000	NBC13	3.30
HSK-A100-MEGA16N-90 *	968.854	2.5 - 16	42	90	47	55	15,000	NBC16	2.70
HSK-A100-MEGA16N-105 *	968.995	2.5 - 16	42	105	58	70	14,000	NBC16	2.80
HSK-A100-MEGA16N-120	968.855	2.5 - 16	42	120	73	48 - 68	14,000	NBC16	2.90
HSK-A100-MEGA16N-135	968.996	2.5 - 16	42	135	88	48 - 68	13,000	NBC16	3.10
HSK-A100-MEGA16N-165	968.856	2.5 - 16	42	165	118	48 - 68	13,000	NBC16	3.40
HSK-A100-MEGA16N-200	968.857	2.5 - 16	42	200	151	48 - 68	10,000	NBC16	3.70
HSK-A100-MEGA20N-90 *	968.858	2.5 - 20	46	90	47	55	15,000	NBC20	2.70
HSK-A100-MEGA20N-105 *	968.997	2.5 - 20	46	105	58	70	14,000	NBC20	2.90
HSK-A100-MEGA20N-120	968.859	2.5 - 20	46	120	73	51 - 68	14,000	NBC20	3.00
HSK-A100-MEGA20N-135	968.998	2.5 - 20	46	135	88	51 - 68	13,000	NBC20	3.20
HSK-A100-MEGA20N-165	968.860	2.5 - 20	46	165	118	51 - 68	13,000	NBC20	3.50
HSK-A100-MEGA20N-200	968.861	2.5 - 20	46	200	153	51 - 68	10,000	NBC20	3.90
HSK-A100-MEGA25N-120 *	806.373	15.5 - 25.4	60	120	78	85	12,000	NBC25	3.50
HSK-A100-MEGA25N-165	806.374	15.5 - 25.4	60	165	123	64 - 74	10,000	NBC25	4.30
HSK-A125-MEGA20N-120	805.290	2.5 - 20	46	120	72	51 - 68	12,000	NBC20	4.60
HSK-A125-MEGA20N-165	806.575	2.5 - 20	46	165	117	51 - 68	10,000	NBC20	5.10

1. MEGA nut is included in delivery.
2. Coolant pipe (CL) is to be ordered separately.
3. "G" is the adjusting screw (optional).
4. "H" is the max. tool shank length that can be inserted for these models.
5. * Adjusting screws can not be used.
6. ** Adjusting screw and New Baby Endmill collet (NBC-E) cannot be used.

Accessories & Spare Parts

MEGA Nuts	MEGA Perfect Seals	New Baby Collets	MEGA Wrenches	Adjusting Screws NBA	Taper Cleaners	Coolant Pipes
▶ 367	▶ 368	▶ 360	▶ 384	▶ 367	▶ 404	▶ 264

MEGA E Chuck

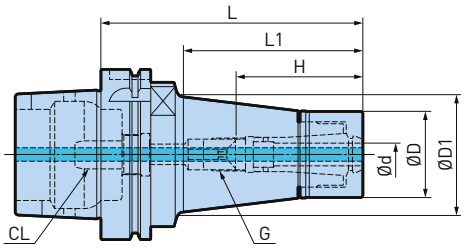
Collet chuck designed exclusively for milling with high precision in hard materials.

Coolant Through Hole

A.3

ø3 - 12mm

Model	Article No.	Ød	ØD	ØD1	L	L1	H	max. min-1	Collet Model	Weight (kg)
HSK-A40-MEGA6E-60 *	968.235	3 - 6	25	26	60	24	41	35,000	MEC6	0.36
HSK-A40-MEGA6E-75 *	968.236	3 - 6	25	28.5	75	39	55	30,000	MEC6	0.42
HSK-A40-MEGA8E-65 *	968.238	3 - 8	30	34	65	30	44	35,000	MEC8	0.41
HSK-A40-MEGA8E-75 *	968.239	3 - 8	30	34	75	40	54	30,000	MEC8	0.47
HSK-A40-MEGA10E-70 *	968.241	3 - 10	35	35	70	35	48	30,000	MEC10	0.48
HSK-A40-MEGA10E-90	968.242	3 - 10	35	35	90	55	48 - 52	25,000	MEC10	0.67
HSK-A40-MEGA13E-70 *	968.243	3 - 12	42	42	70	35	50	27,000	MEC13	0.55
HSK-A40-MEGA13E-90 *	968.244	3 - 12	42	42	90	55	67	25,000	MEC13	0.69
HSK-A50-MEGA6E-75	803.221	3 - 6	25	28.5	75	37	37 - 43	30,000	MEC6	0.60
HSK-A50-MEGA8E-75 *	803.222	3 - 8	30	33	75	40	42	30,000	MEC8	0.70
HSK-A50-MEGA10E-75 *	978.170	3 - 10	35	38	75	40	48	30,000	MEC10	0.80
HSK-A50-MEGA13E-75 *	978.010	3 - 12	42	-	75	49	50	30,000	MEC13	0.80
HSK-A50-MEGA13E-100	803.220	3 - 12	42	-	100	74	50 - 55	25,000	MEC13	1.10
HSK-A63-MEGA6E-65 *	968.247	3 - 6	25	26.5	65	28	43	30,000	MEC6	0.90
HSK-A63-MEGA6E-90	968.248	3 - 6	25	30	90	51	37 - 45	30,000	MEC6	1.00
HSK-A63-MEGA6E-105	968.249	3 - 6	25	33	105	66	37 - 45	29,000	MEC6	1.10
HSK-A63-MEGA6E-120	968.250	3 - 6	25	36	120	82	37 - 45	28,000	MEC6	1.20
HSK-A63-MEGA6E-135	968.251	3 - 6	25	39	135	99	37 - 45	27,000	MEC6	1.30
HSK-A63-MEGA8E-67 *	968.252	3 - 8	30	31.5	67	30	45	30,000	MEC8	0.90
HSK-A63-MEGA8E-90	968.253	3 - 8	30	35	90	52	37 - 45	30,000	MEC8	1.10
HSK-A63-MEGA8E-105	968.254	3 - 8	30	38	105	68	42 - 51	29,000	MEC8	1.20
HSK-A63-MEGA8E-120	968.255	3 - 8	30	40.5	120	83	42 - 51	28,000	MEC8	1.30
HSK-A63-MEGA8E-135	968.256	3 - 8	30	44	135	100	42 - 51	27,000	MEC8	1.50
HSK-A63-MEGA10E-75 *	968.257	3 - 10	35	37.5	75	37	48	30,000	MEC10	1.00
HSK-A63-MEGA10E-90 *	968.258	3 - 10	35	40	90	53	64	30,000	MEC10	1.20
HSK-A63-MEGA10E-105	968.259	3 - 10	35	43	105	69	48 - 58	29,000	MEC10	1.30
HSK-A63-MEGA10E-120	968.260	3 - 10	35	46	120	85	48 - 58	28,000	MEC10	1.50
HSK-A63-MEGA10E-135	968.261	3 - 10	35	43	135	99	48 - 58	27,000	MEC10	1.60
HSK-A63-MEGA13E-75 *	968.262	3 - 12	42	44	75	31	49	30,000	MEC13	1.20
HSK-A63-MEGA13E-90 *	968.263	3 - 12	42	45	90	46	64	30,000	MEC13	1.40
HSK-A63-MEGA13E-105	968.264	3 - 12	42	46	105	61	50 - 57	29,000	MEC13	1.50
HSK-A63-MEGA13E-120	968.265	3 - 12	42	47.5	120	77	50 - 57	28,000	MEC13	1.70
HSK-A63-MEGA13E-135	968.266	3 - 12	42	47	135	92	50 - 57	26,000	MEC13	1.90



Model	Article No.	Ød	ØD	ØD1	L	L1	H	max. min-1	Collet Model	Weight (kg)
HSK-A100-MEGA6E-75 *	968.268	3 - 6	25	28	75	33	46	20,000	MEC6	2.40
HSK-A100-MEGA6E-90	968.269	3 - 6	25	29.5	90	48	37 - 45	20,000	MEC6	2.50
HSK-A100-MEGA6E-105	968.270	3 - 6	25	32.5	105	63	37 - 45	20,000	MEC6	2.60
HSK-A100-MEGA6E-120	968.271	3 - 6	25	35	120	78	37 - 45	18,000	MEC6	2.70
HSK-A100-MEGA6E-135	968.272	3 - 6	25	37.5	135	93	37 - 45	14,000	MEC6	2.80
HSK-A100-MEGA6E-165	968.273	3 - 6	25	43	165	123	37 - 45	12,000	MEC6	3.10
HSK-A100-MEGA8E-75 *	968.274	3 - 8	30	33	75	33	46	20,000	MEC8	2.50
HSK-A100-MEGA8E-90	968.275	3 - 8	30	34.5	90	48	42 - 51	20,000	MEC8	2.50
HSK-A100-MEGA8E-105	968.276	3 - 8	30	37	105	63	42 - 51	20,000	MEC6	2.70
HSK-A100-MEGA8E-120	968.277	3 - 8	30	39.5	120	78	42 - 51	18,000	MEC8	2.80
HSK-A100-MEGA8E-135	968.278	3 - 8	30	42.5	135	93	42 - 51	16,000	MEC8	3.00
HSK-A100-MEGA8E-165	968.279	3 - 8	30	47.5	165	123	42 - 51	14,000	MEC8	3.30
HSK-A100-MEGA10E-80 *	968.280	3 - 10	35	37.5	80	38	51	20,000	MEC10	2.60
HSK-A100-MEGA10E-90 *	968.281	3 - 10	35	39.5	90	48	61	20,000	MEC10	2.60
HSK-A100-MEGA10E-105	968.282	3 - 10	35	42	105	63	48 - 58	20,000	MEC10	2.80
HSK-A100-MEGA10E-120	968.283	3 - 10	35	44.5	120	78	48 - 58	18,000	MEC10	3.00
HSK-A100-MEGA10E-135	968.284	3 - 10	35	47	135	93	48 - 58	16,000	MEC10	3.10
HSK-A100-MEGA10E-165	968.285	3 - 10	35	52.5	165	123	48 - 58	14,000	MEC10	3.60
HSK-A100-MEGA13E-90 *	968.287	3 - 12	42	46	90	48	50	18,000	MEC13	2.80
HSK-A100-MEGA13E-105	968.288	3 - 12	42	48.5	105	63	50 - 61	18,000	MEC13	3.00
HSK-A100-MEGA13E-120	968.289	3 - 12	42	51.5	120	78	50 - 61	16,000	MEC13	3.20
HSK-A100-MEGA13E-135	968.290	3 - 12	42	54	135	93	50 - 61	14,000	MEC13	3.50
HSK-A100-MEGA13E-165	968.291	3 - 12	42	59	165	123	50 - 61	14,000	MEC13	4.00

1. MEGA E nut is included.
2. Coolant pipe (CL) is to be ordered separately.
3. * Adjusting screws can not be used.
4. "G" is the adjusting screw (optional).
5. "H" is the max. tool shank length that can be inserted for these models.

Accessories & Spare Parts

MEGA E Nuts	MEGA E Perfect Seals	MEGA E Collets	MEGA Wrenches	Adjusting Screws NBA	Taper Cleaners	Coolant Pipes
▶ 372	▶ 373	▶ 372	▶ 384	▶ 367	▶ 404	▶ 264

New Baby Chuck

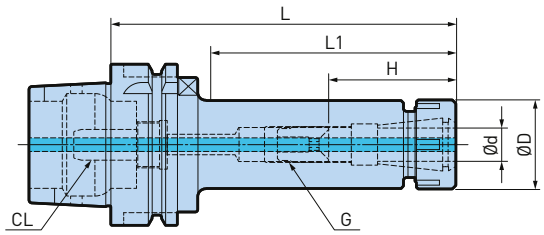
The original high precision collet chuck to perform all machining applications.

Coolant Through Hole

A.3

ø0.25 - 20mm

Model	Article No.	Ød	ØD	L	L1	H	Collet Model	Nut Model	Weight (kg)
HSK-A63-NBS6-75	968.771	0.25 - 6	20	75	35	20 - 35	NBC6	NBN6	0.90
HSK-A63-NBS6-105	968.772	0.25 - 6	20	105	63	20 - 40	NBC6	NBN6	0.90
HSK-A63-NBS6-135	968.773	0.25 - 6	20	135	91	20 - 40	NBC6	NBN6	1.00
HSK-A63-NBS6-165	968.774	0.25 - 6	20	165	121	20 - 40	NBC6	NBN6	1.10
HSK-A63-NBS8-75	968.775	0.5 - 8	25	75	35	23 - 37	NBC8	NBN8	0.90
HSK-A63-NBS8-105	968.776	0.5 - 8	25	105	61	23 - 42	NBC8	NBN8	1.00
HSK-A63-NBS8-135	968.777	0.5 - 8	25	135	91	23 - 42	NBC8	NBN8	1.10
HSK-A63-NBS8-165	968.778	0.5 - 8	25	165	121	23 - 42	NBC8	NBN8	1.20
HSK-A63-NBS10-75 *	968.779	1.5 - 10	30	75	35	48	NBC10	NBN10	1.00
HSK-A63-NBS10-105	968.780	1.5 - 10	30	105	63	35 - 45	NBC10	NBN10	1.10
HSK-A63-NBS10-135	968.781	1.5 - 10	30	135	93	35 - 45	NBC10	NBN10	1.20
HSK-A63-NBS10-165	968.782	1.5 - 10	30	165	123	35 - 45	NBC10	NBN10	1.40
HSK-A63-NBS13-75 *	968.783	2.5 - 13	35	75	37	48	NBC13	NBN13	1.00
HSK-A63-NBS13-105	968.784	2.5 - 13	35	105	67	41 - 55	NBC13	NBN13	1.20
HSK-A63-NBS13-135	968.785	2.5 - 13	35	135	97	41 - 60	NBC13	NBN13	1.40
HSK-A63-NBS13-165	968.786	2.5 - 13	35	165	127	41 - 60	NBC13	NBN13	1.60
HSK-A63-NBS16-75 *	968.787	2.5 - 16	42	75	37	45	NBC16	NBN16	1.10
HSK-A63-NBS16-105	968.788	2.5 - 16	42	105	67	45 - 55	NBC16	NBN16	1.30
HSK-A63-NBS16-135	968.789	2.5 - 16	42	135	97	45 - 65	NBC16	NBN16	1.60
HSK-A63-NBS16-165	968.790	2.5 - 16	42	165	127	45 - 65	NBC16	NBN16	1.90
HSK-A63-NBS16-200	968.791	2.5 - 16	42	200	162	45 - 65	NBC16	NBN16	2.20
HSK-A63-NBS20-75 *	968.792	2.5 - 20	46	75	39	48	NBC20	NBN20	1.10
HSK-A63-NBS20-105	968.793	2.5 - 20	46	105	69	48 - 53	NBC20	NBN20	1.40
HSK-A63-NBS20-135	968.794	2.5 - 20	46	135	99	48 - 65	NBC20	NBN20	1.80
HSK-A63-NBS20-165	968.795	2.5 - 20	46	165	129	48 - 65	NBC20	NBN20	2.10
HSK-A63-NBS20-200	968.796	2.5 - 20	46	200	164	48 - 65	NBC20	NBN20	2.50



Model	Article No.	Ød	ØD	L	L1	H	Collet Model	Nut Model	Weight (kg)
HSK-A100-NBS6-90	968.571	0.25 - 6	20	90	43	20 - 40	NBC6	NBN6	2.40
HSK-A100-NBS6-120	968.572	0.25 - 6	20	120	68	20 - 40	NBC6	NBN6	2.40
HSK-A100-NBS6-165	968.573	0.25 - 6	20	165	113	20 - 40	NBC6	NBN6	2.50
HSK-A100-NBS8-90	968.574	0.5 - 8	25	90	43	23 - 42	NBC8	NBN8	2.40
HSK-A100-NBS8-120	968.575	0.5 - 8	25	120	73	23 - 42	NBC8	NBN8	2.50
HSK-A100-NBS8-165	968.578	0.5 - 8	25	165	113	23 - 42	NBC8	NBN8	2.70
HSK-A100-NBS10-90	968.579	1.5 - 10	30	90	43	35 - 45	NBC10	NBN10	2.50
HSK-A100-NBS10-120	968.580	1.5 - 10	30	120	73	35 - 45	NBC10	NBN10	2.70
HSK-A100-NBS10-165	968.581	1.5 - 10	30	165	113	35 - 45	NBC10	NBN10	2.90
HSK-A100-NBS13-90	968.582	2.5 - 13	35	90	43	58	NBC13	NBN13	2.60
HSK-A100-NBS13-120	968.583	2.5 - 13	35	120	73	41 - 60	NBC13	NBN13	2.70
HSK-A100-NBS13-165	968.584	2.5 - 13	35	165	113	41 - 60	NBC13	NBN13	3.10
HSK-A100-NBS13-200	968.585	2.5 - 13	35	200	148	41 - 60	NBC13	NBN13	3.30
HSK-A100-NBS16-90	968.586	2.5 - 16	42	90	43	58	NBC16	NBN16	2.70
HSK-A100-NBS16-120	968.587	2.5 - 16	42	120	73	45 - 65	NBC16	NBN16	2.90
HSK-A100-NBS16-165	968.588	2.5 - 16	42	165	118	45 - 65	NBC16	NBN16	3.40
HSK-A100-NBS16-200	968.591	2.5 - 16	42	200	151	45 - 65	NBC16	NBN16	3.70
HSK-A100-NBS20-90 *	968.592	2,5 - 20	46	90	47	56	NBC20	NBN20	2.70
HSK-A100-NBS20-120	968.593	2.5 - 20	46	120	73	48 - 65	NBC20	NBN20	3.00
HSK-A100-NBS20-165	968.594	2.5 - 20	46	165	118	48 - 65	NBC20	NBN20	3.50
HSK-A100-NBS20-200	968.595	2.5 - 20	46	200	153	48 - 65	NBC20	NBN20	3.90

1. New Baby Nut is included.
2. Coolant pipe (CL) is to be ordered separately.
3. "G" is the adjusting screw (optional).
4. "H" is the max. tool shank length that can be inserted for these models.
5. * Adjusting screws can not be used.

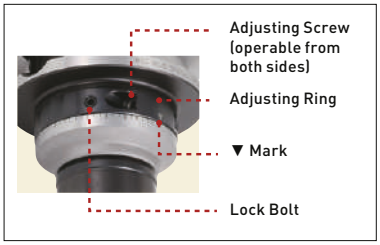
Accessories & Spare Parts

New Baby Nuts	Baby Perfect Seals	New Baby Collets	New Baby Wrenches	Adjusting Screws NBA	Taper Cleaners	Coolant Pipes
▶ 367	▶ 370	▶ 360	▶ 385	▶ 367	▶ 404	▶ 264

New Baby Chuck Type NRA

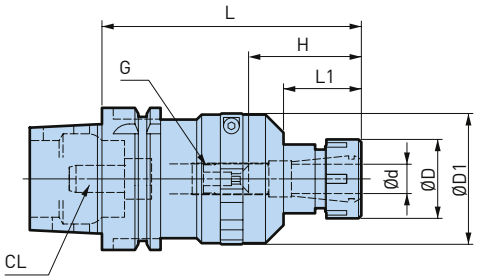
New Baby Chuck with runout adjustable tool function.

Coolant Through Hole



Simple structure for easy adjustment

1. Turn the adjusting ring and line up the ▼ mark with peak runout position.
2. Adjust the lock bolts in 3 locations to fix the ring.
3. The runout amount is adjusted by tightening the adjusting screw.



Model	Article No.	Ød	ØD	ØD1	L	L1	H	Collet Model	Nut Model	Adjustment l=50	Adjustment l=100	Weight (kg)
HSK-A63-NBS8-105NRA	806.266	0.5 - 8	25	45	105	43	23 - 42	NBC8	NBN8	23 µm	34 µm	1.20
HSK-A63-NBS13-115NRA	806.267	2.5 - 13	35	58	115	34.5	41 - 60	NBC13	NBN13	18 µm	27 µm	1.70
HSK-A63-NBS20-135NRA	806.268	2.5 - 20	46	70	135	45	48 - 65	NBC20	NBN20	17 µm	25 µm	2.40

1. Coolant pipe (CL) is to be ordered separately.
2. Nut is included.
3. Collet, wrench and adjusting screw need to be ordered seperately.
4. "H" is the max. tool shank length that can be inserted for these models.
5. The adjustment amount depends on the length of the holder and the tool projection length. The maximum adjustment amount for tool projection lengths of 50 mm and 100 mm is shown in the table.

Accessories & Spare Parts

New Baby Nuts	New Baby Collets	Coolant Pipes	New Baby Wrenches	Baby Perfect Seals	Adjusting Screws NBA
▶ 367	▶ 360	▶ 264	▶ 385	▶ 370	▶ 367

MEGA Double Power Chuck Type D

Flange contacting nut assures highest rigidity. Type D for use with/without coolant-through the tool.

Coolant Through Hole

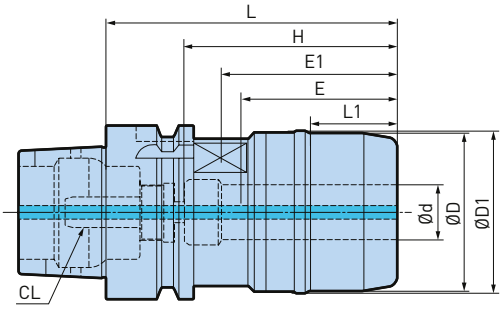


Fig. 1

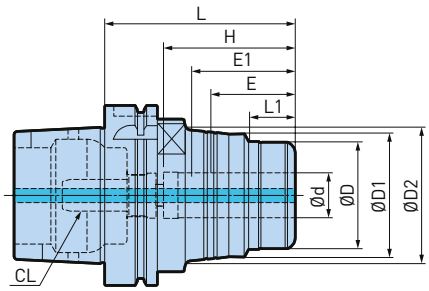


Fig. 2

ø16 - 42mm

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	H	E	E1	max. min-1	Weight (kg)
HSK-A40-MEGA16D-80	803.105	1	16	46	-	-	80	25	62	48	50	12,000	0.69
HSK-A50-MEGA16D-85	803.085	1	16	46	-	-	85	25	62	48	50	25,000	1.00
HSK-A50-MEGA20D-85 *	978.011	1	20	50	-	-	86	30	63	50	51	20,000	1.00
HSK-A63-MEGA16D-80A	803.086	2	16	42	53	-	80	25	55	48	50	25,000	1.40
HSK-A63-MEGA16D-90A	801.734	2	16	42	53	-	90	25	65	48	55	28,000	1.40
HSK-A63-MEGA16D-105A	803.087	2	16	42	53	-	105	25	71	48	55	28,000	1.70
HSK-A63-MEGA16D-135A	801.736	2	16	42	53	-	135	25	71	48	55	24,000	2.20
HSK-A63-MEGA16D-165A	803.100	2	16	42	53	-	165	25	71	48	55	20,000	2.70
HSK-A63-MEGA20D-90A	801.737	2	20	50	55	-	90	34	65	50	56	25,000	1.50
HSK-A63-MEGA20D-105A	803.084	2	20	50	55	-	165	34	80	50	56	25,000	1.70
HSK-A63-MEGA20D-120A	801.739	2	20	50	55	-	120	34	85	50	56	23,000	2.00
HSK-A63-MEGA20D-135A	803.079	2	20	50	55	-	105	34	85	50	56	20,000	2.30
HSK-A63-MEGA20D-165A ****	803.098	2	20	50	55	-	135	34	69 - 79	50	56	18,000	2.80
HSK-A63-MEGA25D-100A	803.101	1	25	62	63	-	100	39	75	56	57	22,000	1.90
HSK-A63-MEGA25D-135A ****	803.099	1	25	62	63	-	135	39	66 - 76	56	57	20,000	2.60
HSK-A63-MEGA32D-105A	803.080	1	32	70	71	-	105	33	80	60	64	22,000	2.10
HSK-A63-MEGA32D-135A	803.097	1	32	70	71	-	135	33	90	60	64	20,000	2.80

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MEGA Double Power Chuck Type D

Coolant Through Hole

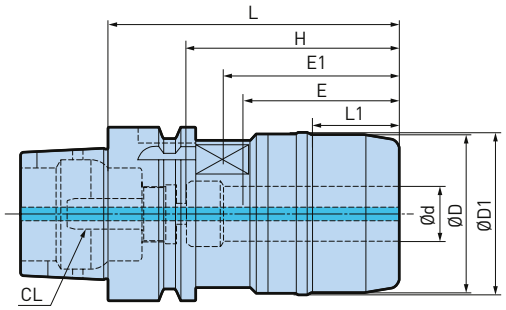

Fig. 1

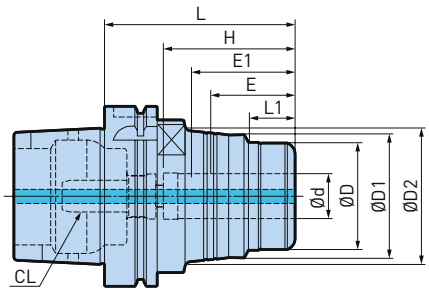

Fig. 2

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	H	E	E1	max. min-1	Weight (kg)
HSK-A100-MEGA16D-105	968.132	2	16	46	55	63	105	23	71	48	50	18,000	3.30
HSK-A100-MEGA16D-135 **	968.055	2	16	46	55	63	135	23	71	48	50	16,000	4.00
HSK-A100-MEGA16D-165 **	968.056	2	16	46	55	63	165	23	71	48	50	16,000	4.60
HSK-A100-MEGA20D-105	968.105	2	20	60	69	74	105	25	73	50	56	18,000	4.00
HSK-A100-MEGA20D-135 ***	968.106	2	20	60	69	74	135	25	85	50	56	16,000	4.90
HSK-A100-MEGA20D-165 ****	968.107	2	20	60	69	74	165	25	69 - 79	50	56	16,000	5.80
HSK-A100-MEGA25D-105 *	968.108	2	25	70	77	85	105	32	73	56	65	18,000	4.30
HSK-A100-MEGA25D-135 ***	968.109	2	25	70	77	85	135	32	90	56	65	16,000	5.40
HSK-A100-MEGA25D-165 ****	968.110	2	25	70	77	85	165	32	76 - 86	56	65	16,000	6.60
HSK-A100-MEGA32D-115	968.111	2	32	80	86	-	115	39	83	60	71	18,000	4.80
HSK-A100-MEGA32D-135	968.112	2	32	80	86	-	135	39	103	60	71	16,000	5.60
HSK-A100-MEGA32D-165 ***	968.113	2	32	80	86	-	165	39	105	60	71	14,000	6.90
HSK-A100-MEGA42D-115 *	968.114	1	42	99	100	-	115	40	83	70	71	14,000	5.60
HSK-A100-MEGA42D-135	968.057	1	42	99	100	-	135	40	97	70	71	12,000	6.70

1. Wrench and coolant pipe (CL) is to be ordered separately.
2. "E" is the min. clamping length.
3. "E1" is the min. clamping length for optimum use with center through coolant.
4. "H" is the max. tool shank length that can be inserted for these models.
5. * Adjustable straight collet (AC20-) can not be used.
6. **/ *** Commercially available hex socket head screws can be used as a back stop (**=M8 /***=M12). Coolant is blocked by utilizing these commercial screws.
7. **** Optional axial adjusting screw (HMA-M_) can be used.

Accessories & Spare Parts

PJC Collets	OCA Collets	PSC Collets	C Collets	MEGA Wrenches	Coolant Pipes
▶ 379	▶ 380	▶ 380	▶ 381	▶ 384	▶ 264

MEGA Double Power Chuck Type DS

Flange contacting nut assures highest rigidity. Unique coolant supply design ensures efficient coolant supply to the cutting tool periphery.

Coolant Through Hole

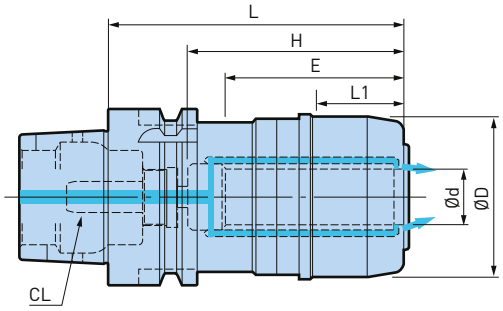

Fig. 1

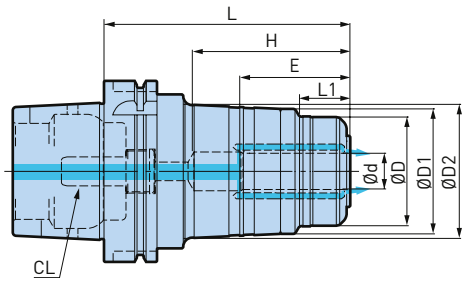

Fig. 2

ø12 - 42mm

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	H	E	max. min-1	Weight (kg)
HSK-A40-MEGA16DS-80	803.106	1	16	46	-	-	81.5	27	63	51	12,000	0.70
HSK-A50-MEGA16DS-85	801.688	1	16	46	-	-	86.5	27	63	51	25,000	1.00
HSK-A50-MEGA20DS-85	803.088	1	20	50	-	-	87.5	32	64	52	20,000	1.00
HSK-A63-MEGA12DS-75	100104.003.0	1	12	38	43	45	76	25	51	43	27,000	1.10
HSK-A63-MEGA12DS-105	100104.004.0	1	12	38	43	48	106	25	65	43	25,000	1.50
HSK-A63-MEGA16DS-80A	803.089	2	16	42	53	-	81	26	56	51	25,000	1.30
HSK-A63-MEGA20DS-90A	803.090	2	20	50	55	-	91	35	66	57	25,000	1.50
HSK-A63-MEGA20DS-120A **	801.740	2	20	50	55	-	121	35	86	57	23,000	2.00
HSK-A63-MEGA25DS-100A	803.102	1	25	62	-	-	101	40	76	58	22,000	1.90
HSK-A63-MEGA32DS-105A	803.081	1	32	70	-	-	106	34	81	65	22,000	2.10
HSK-A100-MEGA12DS-105	100104.001.0	1	12	38	43	51	106	25	65	43	20,000	2.90
HSK-A100-MEGA12DS-135	100104.002.0	1	12	38	43	57	136	25	65	43	18,000	3.40
HSK-A100-MEGA16DS-105	968.131	2	16	46	55	63	106.5	25	72	51	18,000	3.30
HSK-A100-MEGA16DS-135 **	968.095	2	16	46	55	63	136,5	25	72	51	16,000	4.00
HSK-A100-MEGA20DS-105	968.121	2	20	60	69	74	106.5	27	74	57	18,000	4.00
HSK-A100-MEGA20DS-135 ***	968.122	2	20	60	69	74	136.5	27	86	57	16,000	4.90
HSK-A100-MEGA20DS-165 ****	968.123	2	20	60	69	74	166.5	27	70 - 80	57	15,000	5.80
HSK-A100-MEGA25DS-105	968.124	2	25	70	77	85	106.5	33	74	66	18,000	4.30
HSK-A100-MEGA25DS-135 ***	968.125	2	25	70	77	85	136.5	33	91	66	16,000	5.40
HSK-A100-MEGA25DS-165 ****	968.126	2	25	70	77	85	166.5	33	77 - 87	66	16,000	6.60
HSK-A100-MEGA32DS-115	968.127	2	32	80	86	-	116.5	41	84	72	18,000	4.80
HSK-A100-MEGA32DS-135	968.128	2	32	80	86	-	136.5	41	104	72	16,000	5.60
HSK-A100-MEGA32DS-165 ***	968.129	2	32	80	86	-	166.5	41	106	72	14,000	6.90
HSK-A100-MEGA42DS-115 *	968.130	1	42	99	-	-	116	41	84	72	14,000	5.50

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MEGA Double Power Chuck Type DS

Coolant Through Hole

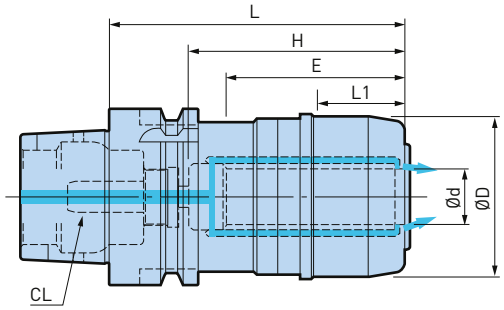


Fig. 1

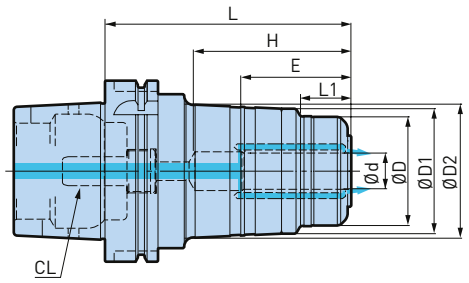


Fig. 2

A.3

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	H	E	max. min-1	Weight (kg)
HSK-A125-MEGA20DS-135	805.658	2	20	60	69	80	137.5	28	87	50	8,000	6.50
HSK-A125-MEGA20DS-165 ****	805.659	2	20	60	69	79	167.5	28	71 - 81	50	7,000	7.40
HSK-A125-MEGA25DS-135	805.660	2	25	70	77	83	137.5	34	92	66	8,000	6.80
HSK-A125-MEGA32DS-135	805.750	2	32	80	86	93	137.5	42	92	60	8,000	7.50
HSK-A125-MEGA32DS-165	805.661	2	32	80	86	93	167.5	42	107	60	6,000	8.80
HSK-A125-MEGA42DS-120	805.662	2	42	99	100	100	122	42	85	60	7,000	7.60

1. Wrench and coolant pipe (CL) is to be ordered separately.
2. "E" is the min. clamping length.
3. "H" is the max. tool shank length that can be inserted for these models.
4. * Adjustable straight collet (C42-_+CS) and OCA collet cannot be used.
5. **/ *** Commercially available hex socket head screws can be used as a back stop (**=M8 /***=M12). Coolant is blocked by utilizing these commercial screws.
6. **** Optional axial adjusting screw (HMA-M_) can be used.

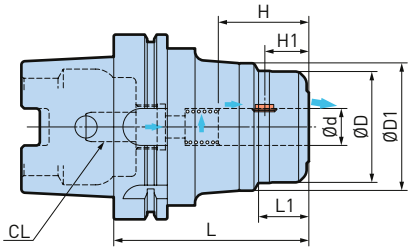
Accessories & Spare Parts

PJC Collets	PSC Collets	C Collets	MEGA Wrenches	Adjusting Screws HMA	Coolant Pipes
▶ 379	▶ 380	▶ 381	▶ 384	▶ 383	▶ 264

MEGA Perfect Grip

100% security against pulling out of the cutting tool under any torque load.

Coolant Through Hole



ø16 - 32mm

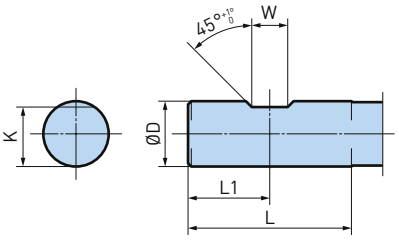
Model	Article No.	Ød	ØD	ØD1	L	L1	H	H1	Weight (kg)
HSK-A63-MEGA16DPG-90	806.364	16	46	55	90	24	47	23	1.50
HSK-A63-MEGA20DPG-100	806.365	20	60	69	100	27	49	24	2.10
HSK-A100-MEGA20DPG-105	805.457	20	60	69	105	27	49	24	4.00
HSK-A100-MEGA25DPG-105	805.458	25	70	77	105	33	55	23	4.30
HSK-A100-MEGA32DPG-115	805.459	32	80	86	115	41	59	23	4.80
HSK-A125-MEGA16DPG-135	807.092	16	46	55	135	24	47	23	5.80
HSK-A125-MEGA20DPG-135	806.627	20	60	69	135	27	49	24	6.60
HSK-A125-MEGA25DPG-135	806.628	25	70	77	135	33	55	23	7.10
HSK-A125-MEGA32DPG-135	806.629	32	80	86	135	41	59	23	7.50

1. Key grip and spring are included with each holder.
2. MEGA wrench is to be ordered separately.
3. „H1" shows distance from center of key grip to front end.
4. Coolant pipe (CL) is to be ordered separately.

Weldon Shank Standards

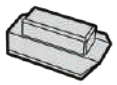
(DIN 1835-1)
The following standard shank is required for MEGA Perfect Grip.

Ø 25/32 mm Ø 20 mm



ØD		L	L1	W		K	
Nominal	Tolerance			Nominal	Tolerance	Nominal	Tolerance
16	h6	48	24	10	+ 0.05 0	14.2	h13
20		50	25	11		18.2	
25		56	32	12		23	
32		60	36	14		30	

Accessories & Spare Parts

Key Grip	Spring	MEGA Wrenches	Coolant Pipes
			
▶ 383	▶ 383	▶ 384	▶ 264

New Hi-Power Milling Chuck Type S

The original design assures heavy milling with high power and precision.

Coolant Through Hole

A.3

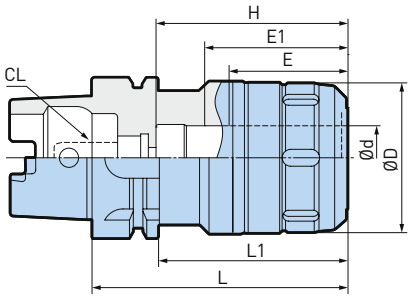


Fig. 1

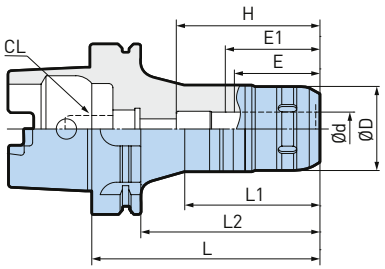


Fig. 2

ø20 - 42mm

Model	Article No.	Fig.	Ød	ØD	L	L1	L2	H	E	E1	Weight (kg)
HSK-A40-HMC20S-85	805.100	1	20	50	85	65	-	66	50	56	0.77
HSK-A50-HMC20S-90	805.101	1	20	50	90	64	-	66	50	56	1.00
HSK-A50-HMC32S-115 ****	806.595	1	32	62	115	89	-	69	56	58	1.50
HSK-A63-HMC20S-90	965.511S	1	20	50	90	64	-	65	50	56	1.40
HSK-A63-HMC20S-120 **	805.102	1	20	50	120	94	-	85	50	56	1.80
HSK-A63-HMC25S-100	968.136S	1	25	59	100	74	-	75	56	57	1.80
HSK-A63-HMC25S-135 *	805.103	1	25	59	135	109	-	66 - 76	56	57	2.40
HSK-A63-HMC32S-110	968.137S	1	32	68	110	84	-	85	60	64	2.00
HSK-A63-HMC32S-135 **	805.104	1	32	68	135	109	-	90	60	64	2.60
HSK-A63-HMC32S-165 *	805.105	1	32	68	165	139	-	79 - 89	60	64	3.30
HSK-A100-HMC20S-105	805.106	1	20	50	105	76	-	73	50	56	2.90
HSK-A100-HMC20S-135 ***	805.107	2	20	50	135	80	106	85	50	56	3.50
HSK-A100-HMC20S-165 *	805.108	2	20	50	165	100	136	69 - 79	50	56	4.00
HSK-A100-HMC25S-105 *****	805.110	1	25	59	105	76	-	73	56	57	3.30
HSK-A100-HMC25S-135 ***	804.917	1	25	59	135	106	-	90	56	57	3.90
HSK-A100-HMC25S-165 *	805.111	2	25	59	165	105	136	76 - 86	56	57	4.70
HSK-A100-HMC32S-115	805.112	1	32	68	115	86	-	83	60	72	3.70
HSK-A100-HMC32S-135	805.113	1	32	68	135	106	-	103	60	72	4.20
HSK-A100-HMC32S-165 ***	805.114	2	32	68	165	105	136	105	60	72	5.20
HSK-A100-HMC32S-200 *	805.115	2	32	68	200	130	171	90 - 100	60	72	6.20
HSK-A100-HMC32S-300	805.116	2	32	68	300	200	271	90 - 100	60	72	9.10
HSK-A100-HMC42S-115 ******	805.117	1	42	85	115	86	-	83	70	73	4.70
HSK-A100-HMC42S-135	805.118	1	42	85	135	106	-	103	70	73	5.30
HSK-A100-HMC42S-165 ***	805.119	1	42	85	165	136	-	107	70	73	6.60

1. Wrench and coolant pipe (CL) is to be ordered separately.
2. "E1" is the min. clamping length for optimum use with center through coolant.
3. "E" is the min. clamping length.
4. "H" is the max. tool shank length that can be inserted for these models.
5. * Axial length adjusting screw can be used.
   / * Commercially available hex socket head screws can be used as a back stop (**=M8 /***=M12). Coolant is blocked by utilizing these commercial screws.
6. **** Only the straight collet (C32-) can be used.
7. ***** Adjustable straight collet (C25-_+CS) cannot be used.
8. ****** Only OCA collet and C collet can be used.

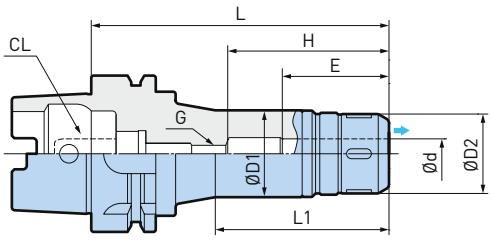
Accessories & Spare Parts

PJC Collets	OCA Collets	PSC Collets	C Collets	FK Wrenches	Adjusting Screws HMA	Coolant Pipes
▶ 379	▶ 380	▶ 380	▶ 381	▶ 385	▶ 383	▶ 264

New Hi-Power Milling Chuck HMC12J

Extremely slim and rigid design with jet through coolant.

Coolant Through Hole



ø12mm

Model	Article No.	Ød	ØD1	ØD2	L	L1	H	E	G	Weight (kg)
HSK-A63-HMC12J-90	805.829	12	35	32	90	52	65	43	-	1.10
HSK-A63-HMC12J-120 *	805.830	12	35	32	120	70	65	43	M8	1.30

1. Wrench and coolant pipe (CL) is to be ordered separately.
2. "E" is the min. clamping length.
3. * Hex socked head screw (M8) can be used as a adjusting screw.

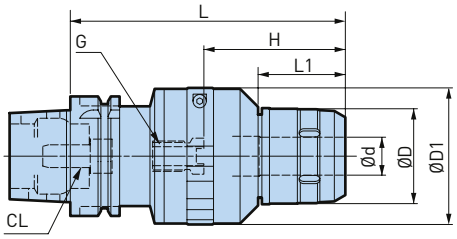
Accessories & Spare Parts

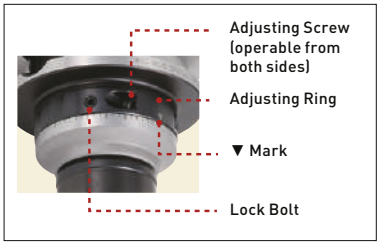
PJC Collets	FK Wrenches	Coolant Pipes
▶ 379	▶ 385	▶ 264

New Hi-Power Milling Chuck Type NRA

The runout adjustment design assures precision even with heavy milling.

Coolant Through Hole





Simple structure for easy adjustment

1. Turn the adjusting ring and line up the ▼ mark with peak runout position.
2. Adjust the lock bolts in 3 locations to fix the ring.
3. The runout amount is adjusted by tightening the adjusting screw.

A.3

ø20 - 32mm

Model	Article No.	Ød	ØD	ØD1	L	L1	H	Adjustment l=50	Adjustment l=100	Weight (kg)
HSK-A63-HMC20S-145NRA	806.273	20	50	72	145	46	69 - 79	23 µm	33 µm	2.90
HSK-A63-HMC32S-155NRA *	806.274	32	68	86	155	55	-	20 µm	28 µm	3.90

1. Coolant pipe (CL) is to be ordered separately.
2. "H" is the max. tool shank length that can be inserted for these models.
3. Wrench and axial adjusting screw are to be ordered separately.
4. * Adjusting screw cannot be used.

Accessories & Spare Parts

FK Wrenches	C Collets	PSC Collets	PJC Collets	Adjusting Screws HMA	Coolant Pipes
▶ 385	▶ 381	▶ 380	▶ 379	▶ 383	▶ 264

Hydraulic Chuck Super Slim

Ultra precise hydraulic chuck with extremely slim design.

Coolant Through Hole

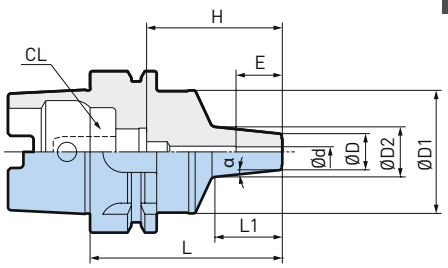


Fig. 1

A.3

ø3 - 12mm

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	H	E	α	Weight (kg)
HSK-A40-HDC3S-55 *	100108.011.0	1	3	14	33	18	55	18	-	39	16	6°	0.30
HSK-A40-HDC4S-65	805.527	1	4	14	33	21	65	28	-	49	19	6°	0.39
HSK-A40-HDC6S-75	100108.007.0	1	6	14	23	33	75	39	-	49	25	6°	0.34
HSK-A40-HDC8S-75	100108.008.0	1	8	17	26	33	75	40	-	47	31	6°	0.36
HSK-A40-HDC10S-75	100108.009.0	1	10	19	28	33	75	40	-	47	33	6°	0.37
HSK-A40-HDC12S-80	100108.010.0	1	12	21	31	33	80	45	-	47	36	6°	0.40
HSK-A50-HDC4S-75	805.548	1	4	14	40	21	75	31	-	55	19	6°	0.60
HSK-A63-HDC3S-90 *	805.465	1	3	14	48	24	90	43	-	68	16	6°	1.00
HSK-A63-HDC3S-120 *	807.788	2	3	14	48	26	120	57	72	98	16	6°	1.10
HSK-A63-HDC4S-75	803.072	1	4	14	48	20	75	26	-	53	19	6°	1.00
HSK-A63-HDC4S-90	807.373	1	4	14	48	23	90	43	-	68	19	6°	1.00
HSK-A63-HDC4S-120	805.466	2	4	14	48	26	120	57	72	98	19	6°	1.10
HSK-A63-HDC5S-120	807.374	2	5	14	48	26	120	57	72	98	22	6°	1.10
HSK-A63-HDC6S-120	803.073	2	6	14	48	26	120	57	70	98	25	6°	1.10
HSK-A63-HDC6S-150	805.467	2	6	14	48	26	150	57	85	128	25	6°	1.30
HSK-A63-HDC6S-180	100108.015.0	2	6	14	48	26	180	57	100	158	25	6°	1.40
HSK-A63-HDC8S-120	803.074	2	8	17	48	28	120	52	70	95	31	6°	1.10
HSK-A63-HDC8S-150	805.468	2	8	17	48	28	150	52	85	125	31	6°	1.30
HSK-A63-HDC8S-180	100108.014.0	2	8	17	48	28	180	52	100	125	31	6°	1.50
HSK-A63-HDC10S-120	803.070	2	10	19	48	30	120	52	70	94	33	6°	1.20
HSK-A63-HDC10S-150	805.469	2	10	19	48	30	150	52	87	124	33	6°	1.30
HSK-A63-HDC10S-180	100108.012.0	2	10	19	48	30	180	52	100	124	33	6°	1.60
HSK-A63-HDC12S-120	803.071	2	12	21	48	32	120	52	70	93	36	6°	1.20
HSK-A63-HDC12S-150	805.470	2	12	21	48	32	150	52	87	123	36	6°	1.40
HSK-A63-HDC12S-180	100108.013.0	2	12	21	48	32	180	52	100	123	36	6°	1.60

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Hydraulic Chuck Super Slim

Coolant Through Hole

A.3

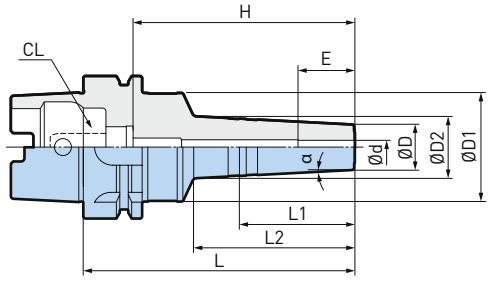


Fig. 2

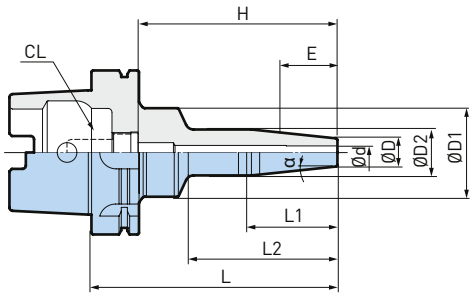


Fig. 3

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	H	E	α	Weight (kg)
HSK-A100-HDC4S-150	100108.002.0	3	4	14	52	26	150	57	90	121	19	6°	2.60
HSK-A100-HDC6S-150	100108.003.0	3	6	14	52	26	150	57	90	121	25	6°	2.60
HSK-A100-HDC8S-150	100108.004.0	3	8	17	54	28	150	52	90	121	31	6°	2.70
HSK-A100-HDC10S-150	100108.005.0	3	10	19	56	30	150	52	90	121	33	6°	2.80
HSK-A100-HDC12S-150	100108.006.0	3	12	21	58	32	150	52	90	115	36	6°	2.80

1. Adjusting screw and reduction collet can not be used.
2. Coolant pipe (CL) is to be ordered separately.
3. "E" is the min. clamping length.
4. "H" is the max. tool shank length that can be inserted for these models.
5. * Some coolant may leak from the inner diameter slits when using coolant.

Caution

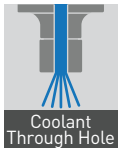
- Use only cutting tools that have a shank tolerance within h6.
- Roughing endmills are not recommended for use with hydraulic chucks.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)
- Do not tighten the clamping screw without first inserting a cutting tool into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

Accessories & Spare Parts

α Wiper Cleaners	Coolant Pipes
▶ 404	▶ 264

Hydraulic Chuck Jet Through

Coolant or MQL is supplied to cutting edge securely. Maximum performance in high-precision operations with 5-axis machining.



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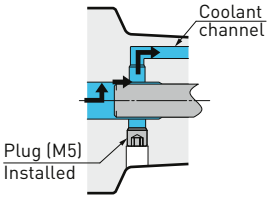
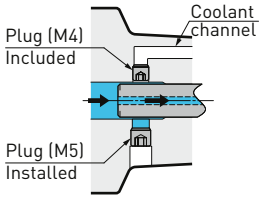
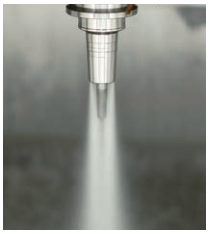


Center Through





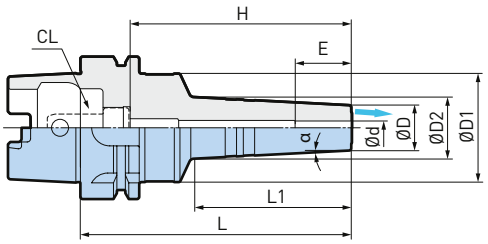


Fig. 1

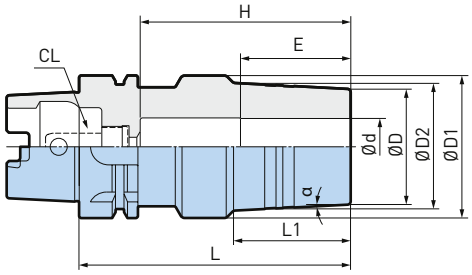


Fig. 2

ø4 - 32mm

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	H	E	α	Weight (kg)
HSK-A63-HDC4J-75	805.477	1	4	20	48	23	75	29	53	19	3°	0.90
HSK-A63-HDC4J-120	100109.001.0	1	4	20	48	28	120	29	98	19	3°	1.10
HSK-A63-HDC6J-90	100109.002.0	1	6	20	48	25	90	39	68	25	3°	1.00
HSK-A63-HDC6J-120	805.096	1	6	20	48	28	120	70	98	25	3°	1.20
HSK-A63-HDC6J-165	100109.003.0	1	6	20	50	32	165	105	143	25	3°	1.50
HSK-A63-HDC8J-90	100109.004.0	1	8	22	48	27	90	40	65	31	3°	1.00
HSK-A63-HDC8J-120	805.097	1	8	22	48	30	120	70	95	31	3°	1.20
HSK-A63-HDC8J-165	100109.005.0	1	8	22	50	34	165	105	110	26	3°	1.50
HSK-A63-HDC10J-90	100109.006.0	1	10	24	48	29	90	40	64	33	3°	1.00
HSK-A63-HDC10J-120	805.098	1	10	24	48	32	120	70	94	33	3°	1.20
HSK-A63-HDC10J-165	100109.007.0	1	10	24	50	36	165	106	109	33	3°	1.60
HSK-A63-HDC12J-90	100109.008.0	1	12	26	48	31	90	40	63	36	3°	1.10
HSK-A63-HDC12J-120	805.099	1	12	26	48	34	120	70	93	36	3°	1.20
HSK-A63-HDC12J-165	100109.009.0	1	12	26	50	38	165	106	108	36	3°	1.60
HSK-A63-HDC16J-120	805.478	1	16	34	48	43	120	76	92	43	3°	1.40
HSK-A63-HDC20J-120	805.479	1	20	38	48	43	120	76	91	43	3°	1.40
HSK-A63-HDC25J-120	805.831	2	25	51	63	57	120	50	93	49	3°	2.00
HSK-A63-HDC32J-120	805.832	2	32	60	69	-	120	53	93	56	3°	2.10

1. Adjusting screw cannot be used.
2. Straight collet can be used for HDC16J & 20J size models.
3. Coolant pipe (CL) is to be ordered separately.
4. Larger diameter models, HDC16J, 20J, 25J, 32J are available with only peripherical coolant supply.
5. "E" is the min. clamping length.
6. "H" is the max. tool shank length that can be inserted for these models.

Caution

- 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.

Accessories & Spare Parts

α Wiper Cleaners	Coolant Pipes
▶ 404	▶ 264

Hydraulic Chuck Standard

For high precision machining in automotive, aerospace, medical and die & mold.

Coolant Through Hole

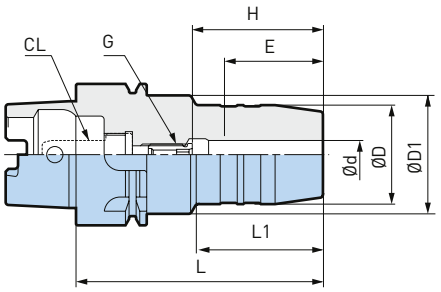


Fig. 1

A.3

ø6 - 32mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	H	E	G	Weight (kg)
HSK-A40-HDC6-70	803.044	1	6	26	34	70	36	28 - 36	28	HDA 6-05013	0.40
HSK-A40-HDC8-70	803.046	1	8	28	34	70	36	28 - 36	28	HDA 8-06013	0.41
HSK-A40-HDC10-75	803.048	1	10	30	34	75	41	33 - 41	33	HDA 8-06013	0.45
HSK-A40-HDC12-80	803.050	1	12	32	34	80	46	38 - 45	38	HDA 8-06013	0.49
HSK-A50-HDC6-75	801.177	1	6	26	42	75	32	28 - 37	28	HDA 6-05013	0.70
HSK-A50-HDC8-75	801.178	1	8	28	42	75	32	28 - 37	28	HDA 8-06013	0.70
HSK-A50-HDC10-80	801.172	1	10	30	42	80	37	33 - 41	33	HDA 10-08015	0.70
HSK-A50-HDC12-85	801.173	1	12	32	42	85	42	38 - 46	38	HDA 10-08015	0.80
HSK-A50-HDC16-90 **	801.174	1	16	38	42	90	48	43 - 51	43	HDA 10-08015	0.90
HSK-A50-HDC20-90 **	801.175	1	20	42	-	90	64	43 - 51	43	HDA 10-08015	0.90
HSK-A50-HDC25-90 *	801.176	1	25	55	63	90	23	62	52	-	1.30
HSK-A63-HDC6-70 *	801.222	2	6	26	50	70	24	46	28	-	1.00
HSK-A63-HDC6-120	978.402	2	6	26	50	120	44	28 - 48	28	HDA 6-05032	1.20
HSK-A63-HDC6-150	801.221	2	6	26	50	150	44	28 - 48	28	HDA 6-05033	1.40
HSK-A63-HDC7-120	801.223	2	7	27	50	120	44	28 - 48	28	HDA 6-05032	1.20
HSK-A63-HDC8-70 *	801.227	2	8	28	50	70	24	46	28	-	1.00
HSK-A63-HDC8-120	979.202	2	8	28	50	120	44	28 - 48	28	HDA 8-06032	1.20
HSK-A63-HDC8-150	801.226	2	8	28	50	150	44	28 - 48	28	HDA 8-06032	1.50
HSK-A63-HDC9-120	801.228	2	9	29	50	120	44	28 - 48	28	HDA 8-06032	1.20
HSK-A63-HDC10-80 *	801.196	2	10	30	50	80	35	55	33	-	1.10
HSK-A63-HDC10-120	979.203	2	10	30	50	120	45	33 - 53	33	HDA 10-08032	1.30
HSK-A63-HDC10-150	801.195	2	10	30	50	150	45	33 - 53	33	HDA 10-08032	1.50
HSK-A63-HDC11-120	801.197	2	11	31	50	120	45	33 - 53	38	HDA 10-08032	1.30
HSK-A63-HDC12-85 *	801.201	2	12	32	50	85	40	60	33	-	1.10
HSK-A63-HDC12-120	979.204	2	12	32	50	120	45	38 - 58	38	HDA 12-10025	1.30
HSK-A63-HDC12-150	801.200	2	12	32	50	150	45	38 - 58	38	HDA 12-10025	1.60
HSK-A63-HDC13-120	801.202	2	13	33	50	120	45	38 - 58	38	HDA 12-10025	1.30
HSK-A63-HDC14-85 *	801.207	2	14	34	50	85	40	60	38	-	1.10
HSK-A63-HDC14-120	801.205	2	14	34	50	120	45	38 - 58	38	HDA 12-10026	1.30
HSK-A63-HDC14-150	801.206	2	14	34	50	150	45	38 - 58	38	HDA 12-10025	1.70
HSK-A63-HDC15-120	801.208	2	15	37	50	120	45	58 - 68	43	HDA 16-12015	1.40
HSK-A63-HDC16-90 *	801.212	2	16	38	50	90	46	65	43	-	1.20
HSK-A63-HDC16-120	978.404	2	16	38	50	120	46	58 - 68	43	HDA 16-12016	1.50
HSK-A63-HDC16-150	801.211	2	16	38	50	150	46	43 - 68	43	HDA 16-12037	1.80
HSK-A63-HDC18-90 *	801.215	2	18	40	50	90	46	65	43	-	1.20
HSK-A63-HDC18-120	801.213	2	18	40	50	120	46	58 - 68	43	HDA 20-16015	1.50
HSK-A63-HDC18-150	801.214	2	18	40	50	150	46	43 - 68	43	HDA 25-16039	2.00
HSK-A63-HDC20-90 *	801.217	2	20	42	50	90	48	65	43	-	1.20
HSK-A63-HDC20-120	979.206	2	20	42	50	120	48	58 - 68	43	HDA 20-16015	1.50
HSK-A63-HDC20-150	801.216	2	20	42	50	150	48	43 - 68	43	HDA 25-16039	1.90
HSK-A63-HDC25-120 *	801.218	3	25	55	50	120	51	95	52	-	2.10
HSK-A63-HDC31-95	806.444	3	31	63	74	95	27	70	56	-	1.90
HSK-A63-HDC32-125 *	801.219	3	32	60	69	125	59	100	56	-	2.10

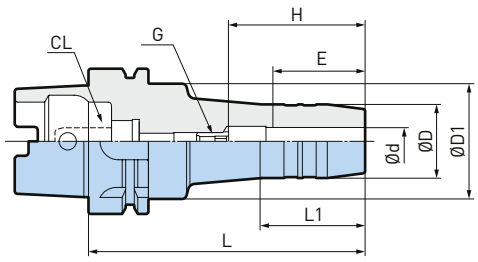


Fig. 2

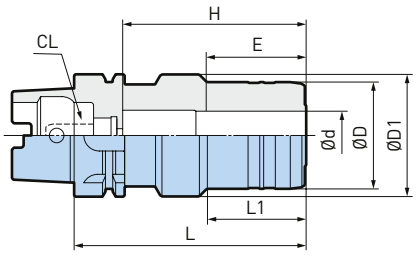


Fig. 3

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	H	E	G	Weight (kg)
HSK-A100-HDC6-75 *	801.142	1	6	26	50	75	26	46	28	-	2.30
HSK-A100-HDC6-120	801.140	1	6	26	50	120	44	28 - 48	28	HDA 6-05032	2.50
HSK-A100-HDC6-165	801.141	1	6	26	50	165	44	28 - 48	28	HDA 6-05032	2.80
HSK-A100-HDC8-75 *	801.145	1	8	28	50	75	26	46	28	-	2.30
HSK-A100-HDC8-120	801.143	1	8	28	50	120	44	28 - 48	28	HDA 8-06032	2.60
HSK-A100-HDC8-165	801.144	1	8	28	50	165	44	28 - 48	28	HDA 8-06032	2.90
HSK-A100-HDC10-90 *	801.128	1	10	30	50	90	42	61	33	-	2.40
HSK-A100-HDC10-120	801.126	1	10	30	50	120	45	33 - 53	33	HDA 10-08032	2.60
HSK-A100-HDC10-165	801.127	1	10	30	50	165	45	33 - 53	33	HDA 10-08032	3.00
HSK-A100-HDC12-95 *	801.131	1	12	32	50	95	47	63	38	-	2.50
HSK-A100-HDC12-120	801.129	1	12	32	50	120	47	38 - 58	38	HDA 12-10025	2.60
HSK-A100-HDC12-165	801.130	1	12	32	50	165	47	38 - 58	38	HDA 12-10032	3.00
HSK-A100-HDC16-100 *	801.132	1	16	38	50	100	53	68	43	-	2.60
HSK-A100-HDC16-135	801.133	1	16	38	50	135	53	43 - 68	43	HDA 16-12030	2.90
HSK-A100-HDC16-165	801.134	1	16	38	50	165	53	43 - 68	43	HDA 16-12037	3.30
HSK-A100-HDC20-105 *	801.135	1	20	42	50	105	59	73	43	-	2.60
HSK-A100-HDC20-135	801.136	1	20	42	50	135	59	58 - 68	43	HDA 20-16015	3.00
HSK-A100-HDC20-165	801.137	1	20	42	50	165	59	43 - 68	43	HDA 25-16039	3.30
HSK-A100-HDC25-110 *	801.138	1	25	55	63	110	62	78	52	-	3.20
HSK-A100-HDC32-110 *	801.139	1	32	64	75	110	62	78	56	-	3.50

1. Coolant pipe (CL) is to be ordered separately.
2. * Adjusting screw cannot be used.
3. ** Straight collet can not be used.
4. "E" is the min. clamping length.
5. "G" is the adjusting screw (optional).
6. "H" is the max. tool shank length that can be inserted for these models.

Caution

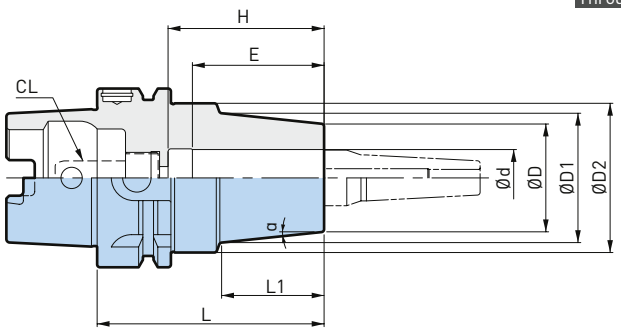
- Use only cutting tools that have a shank tolerance within h6.
- Roughing endmills are not recommended for use with hydraulic chucks.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)
- Do not tighten the clamping screw without first inserting a cutting tool into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

Accessories & Spare Parts

PJC Collets	PSC Collets	Adjusting Screws HDA	α Wiper Cleaners	Coolant Pipes
▶ 379	▶ 380	▶ 387	▶ 404	▶ 264

SF Hydraulic Chuck

Coolant Through Hole



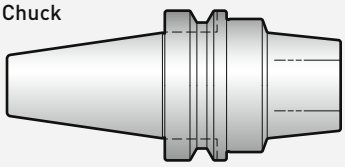
A.3

Model	Article No.	Ød	ØD	ØD1	ØD2	L	L1	α
HSK-A63-HDC20SF-80	-	20	38	46	53	80	36	6

1. Adjusting screw cannot be used.

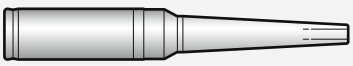
Combination according to application

SF Hydraulic Chuck



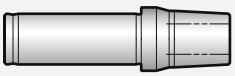
Combination example

SF Sleeve



ST20SF-SRM3-135

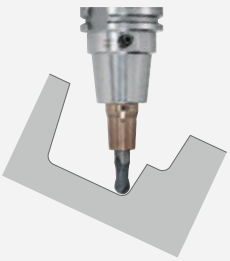
Minimizes work/jig interference, For deep drilling and difficult to access milling operations.



ST20SF-SRM12-90

Reduces unnecessary tool projection and increases machining efficiency.

Easy exchange of SF Sleeve with one wrench.



Accessories & Spare Parts

SF Sleeve

▶ 93

Caution

- Do not tighten the clamping screw without first inserting a cutting tool into the hydraulic chuck.

SF Sleeve

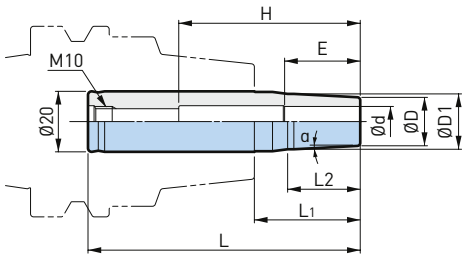


Fig. 1

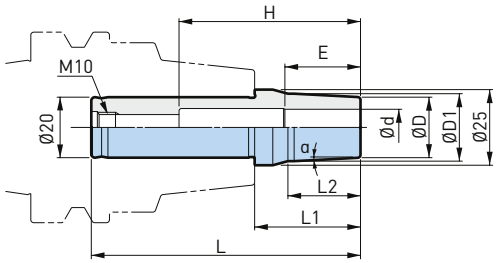


Fig. 2

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	α	H	E	Weight (kg)
ST20SF-SRM3-90 *	-	1	3	7.5	9.6	90	35	3	-	9	0.20
ST20SF-SRM3-110 *	-	1	3	7.5	11.7	110	55	3	-	9	0.20
ST20SF-SRM3-135 *	-	1	3	7.5	14.3	135	80	3	-	9	0.25
ST20SF-SRM4-90 *	-	1	4	10	12.1	90	35	3	-	12	0.20
ST20SF-SRM4-110 *	-	1	4	10	14.2	110	55	3	-	12	0.18
ST20SF-SRM4-135 *	-	1	4	10	16.8	135	80	3	-	12	0.25
ST20SF-SRM6-90	-	1	6	12	14.1	90	35	3	-	18	0.15
ST20SF-SRM6-110	-	1	6	12	16.2	110	55	3	-	18	0.18
ST20SF-SRM6-135	-	1	6	12	-	135	80	3	-	18	0.23
ST20SF-SRM8-90	-	1	8	14	16.1	90	35	3	-	20	0.15
ST20SF-SRM8-110	-	1	8	14	18.2	110	55	3	-	20	0.20
ST20SF-SRM8-135	-	1	8	14	-	135	80	3	-	20	0.23
ST20SF-SRM10-90	-	1	10	16	18.3	90	35	3	60	25	0.15
ST20SF-SRM10-110	-	1	10	16	-	110	55	3	60	25	0.20
ST20SF-SRM10-135	-	1	10	16	-	135	80	3	60	25	0.25
ST20SF-SRM12-90	-	2	12	20	22.3	89	35	3	60	25	0.18
ST20SF-SRM12-110	-	2	12	20	-	109	55	3	60	25	0.25
ST20SF-SRM12-135	-	2	12	20	-	134	80	3	60	25	0.30

1. *Models are made of stainless steel.

Ø3-4: Made of Stainless Steel
Ø6-12: Made of Steel

Caution
Please do not shrink cutting tools with assembled SF Sleeve / SF Hydraulic Chuck combination.

Accessories & Spare Parts

SF Hydraulic Chuck	SF Hydraulic Chuck
▶ 92	▶ 210

Shrink Chuck Slim

Slim design reduces interference contours.

Coolant Through Hole

A.3

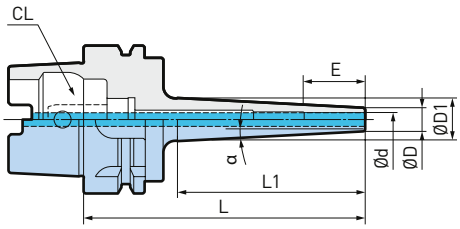


Fig. 1

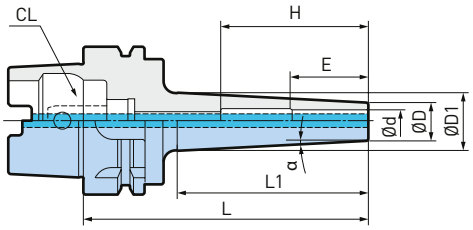


Fig. 2

ø6 - 12mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	H	E	α	Weight (kg)
HSK-A63-SRC6S-120	801.264	1	6	10	19	120	81	(98)	26	3°	0.90
HSK-A63-SRC6S-165	801.265	1	6	10	23	165	121	(143)	26	3°	1.00
HSK-A63-SRC8S-120	801.267	2	8	13	22	120	81	(98)	26	3°	0.90
HSK-A63-SRC8S-165	801.268	2	8	13	26	165	123	(143)	26	3°	1.10
HSK-A63-SRC10S-120	801.253	2	10	16	25	120	81	62	32	3°	1.00
HSK-A63-SRC10S-165	801.254	2	10	16	29	165	123	62	32	3°	1.10
HSK-A63-SRC12S-120	801.256	2	12	19	28	120	81	72	36	3°	1.00
HSK-A63-SRC12S-165	801.257	2	12	19	32	165	125	72	36	3°	1.20

1. Use carbide cutter within a tolerance of h6.
2. Coolant pipe (CL) is to be ordered separately.
3. "E" is the min. clamping length.
4. "H" dimensions in ( ) are reference length up to the coolant pipe.
5. Please refer to the operation manual of heating / cooling equipment, as some equipment may not be compatible.

Accessories & Spare Parts

α Wiper Cleaners	Coolant Pipes
▶ 404	▶ 264

Shrink Chuck Standard

Stable body provides high rigidity.

Coolant Through Hole

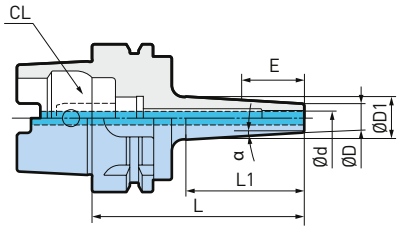


Fig. 1

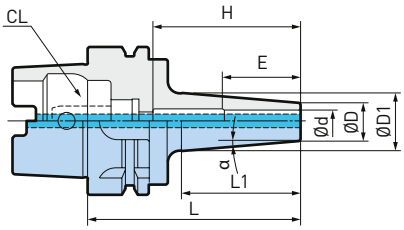


Fig. 2

ø4 - 20mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	H	E	α	Weight (kg)
HSK-A63-SRC4-90 *	801.262	1	4	10	15	90	46	(68)	16	3°	0.80
HSK-A63-SRC6-90	978.295	1	6	14	20	90	51	(68)	26	3°	0.90
HSK-A63-SRC6-150	801.263	1	6	14	26	150	108	(128)	26	3°	1.00
HSK-A63-SRC8-90	978.296	2	8	18	24	90	51	(68)	26	3°	1.00
HSK-A63-SRC8-150	801.266	2	8	18	30	150	110	(128)	26	3°	1.20
HSK-A63-SRC10-90	978.297	2	10	22	28	90	51	62	32	3°	1.00
HSK-A63-SRC10-150	801.252	2	10	22	34	150	111	62	32	3°	1.30
HSK-A63-SRC12-90	978.298	2	12	24	30	90	51	65	36	3°	1.00
HSK-A63-SRC12-150	801.255	2	12	24	36	150	112	72	36	3°	1.30
HSK-A63-SRC16-90	978.299	2	16	28	34	90	51	65	38	3°	1.00
HSK-A63-SRC16-165	801.258	2	16	28	41	165	119	80	38	3°	1.60
HSK-A63-SRC20-90	801.260	2	20	34	40	90	53	65	42	3°	1.10
HSK-A63-SRC20-165	801.259	2	20	34	47	165	122	100	42	3°	1.90

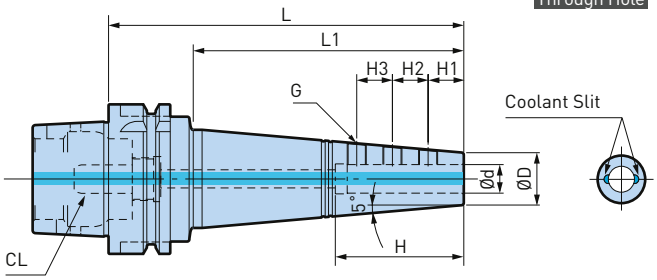
1. * Use carbide cutter within a tolerance of h5.
2. Use carbide cutter within a tolerance of h6.
3. "H" dimensions in ( ) are reference length up to the coolant pipe.
4. "E" is the min. clamping length.
5. Coolant pipe (CL) is to be ordered separately.
6. Please refer to the operation manual of heating / cooling equipment, as some equipment may not be compatible.

Accessories & Spare Parts

α Wiper Cleaners	Coolant Pipes
▶ 404	▶ 264

Mold Chuck

Slim and tapered design reduces outer diameter and improves stability.
Ideal for machining moulds with weldon tools.



Coolant Through Hole

A.3

ø3 - 20mm

Model	Article No.	Ød	ØD	L	L1	H	H1	H2	H3	G	Weight (kg)
HSK-A63-SSL3-135	801.269	3	10	135	99	113	6	6	-	M3	1.00
HSK-A63-SSL4-135	801.270	4	11	135	99	113	6	7	-	M4	1.00
HSK-A63-SSL6-135	978.020	6	13	135	99	113	12	13	-	M6	1.10
HSK-A63-SSL8-135	978.021	8	15	135	99	40	13,5	18	-	M6	1.10
HSK-A63-SSL10-150	978.022	10	17	150	114	48	15	20	-	M6	1.30
HSK-A63-SSL12-150	978.023	12	22	150	115	60	15	16	16	M8	1.40
HSK-A63-SSL16-150	978.024	16	26	150	115	70	15	20	22	M8	1.50

1. Coolant pipe (CL) is to be ordered separately.
2. Only 2 flute ball endmill with weldon shank is to be used.

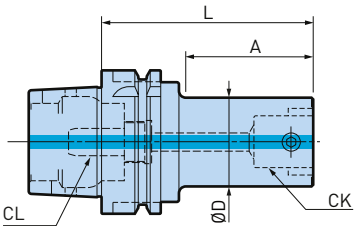
Accessories & Spare Parts

Mold Chuck Clamping Screw	Coolant Pipes
▶ 400	▶ 264

CK Shanks with Center Through Coolant

With drive key grooves and orientation notch.

Coolant Through Hole



CK1-CK7

Model	Article No.	CK	ØD	L	A	Weight (kg)
HSK-A40-CKB1-73	-	CK1	19	72.5	41	0.32
HSK-A40-CKB2-85	-	CK2	24	84.5	56	0.41
HSK-A40-CKB3-80	-	CK3	31	80	44	0.48
HSK-A40-CKB4-73	-	CK4	39	73	(53)	0.57
HSK-A50-CKB1-73	-	CK1	19	72.5	33	0.60
HSK-A50-CKB2-85	-	CK2	24	84.5	45	0.60
HSK-A50-CKB3-80	-	CK3	31	80	45	0.70
HSK-A50-CKB4-73	-	CK4	39	73	30	0.80
HSK-A50-CKB5-83	-	CK5	50	83	(57)	1.00
HSK-A63-CKB1-78	-	CK1	19	77.5	38	0.90
HSK-A63-CKB2-90	-	CK2	24	89.5	50	1.00
HSK-A63-CKB3-80	-	CK3	31	80	41	1.00
HSK-A63-CKB3-100	-	CK3	31	100	61	1.10
HSK-A63-CKB3-130	-	CK3	31	130	91	1.20
HSK-A63-CKB4-93	-	CK4	39	93	57	1.20
HSK-A63-CKB4-123	-	CK4	39	123	87	1.50
HSK-A63-CKB5-63	-	CK5	50	63	28	1.10
HSK-A63-CKB5-83	-	CK5	50	83	48	1.40
HSK-A63-CKB5-113	-	CK5	50	113	78	1.80
HSK-A63-CKB6-79	-	CK6	64	79	(53)	1.50
HSK-A63-CKB6-109	-	CK6	64	109	(83)	2.20

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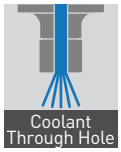
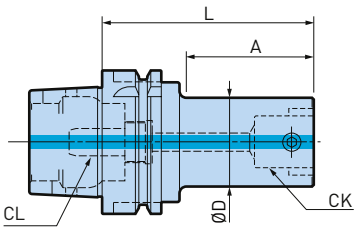
CK Shanks with Center Through Coolant





Model	Article No.	CK	ØD	L	A	Weight (kg)
HSK-A100-CKB1-103	-	CK1	19	102.5	60	2.50
HSK-A100-CKB2-115	-	CK2	24	114.5	72	2.50
HSK-A100-CKB3-125	-	CK3	31	125	83	2.70
HSK-A100-CKB4-118	-	CK4	39	118	76	2.90
HSK-A100-CKB4-148	-	CK4	39	148	106	3.20
HSK-A100-CKB4-178	-	CK4	39	178	136	3.40
HSK-A100-CKB5-108	-	CK5	50	108	66	3.20
HSK-A100-CKB5-183	-	CK5	50	183	141	4.30
HSK-A100-CKB5-228	-	CK5	50	228	186	5.00
HSK-A100-CKB6-79	-	CK6	64	79	39	3.00
HSK-A100-CKB6-94	-	CK6	64	94	54	3.30
HSK-A100-CKB6-169	-	CK6	64	169	129	5.30
HSK-A100-CKB6-229	-	CK6	64	229	189	6.70
HSK-A100-CKB7-93	-	CK7	90	93	63	4.30
HSK-A100-CKB7-123	-	CK7	90	123	94	5.80
HSK-A100-CKB7-213	-	CK7	90	213	184	10.20
HSK-A100-CKB7-273	-	CK7	90	273	244	13.20
HSK-A125-CKB6-94	869.024	CK6	64	94	52	4.90
HSK-A125-CKB7-123	869.025	CK7	90	123	75	7.50

1. Coolant pipe (CL) is to be ordered separately.
2. () indicate the reference length.

Accessories & Spare Parts

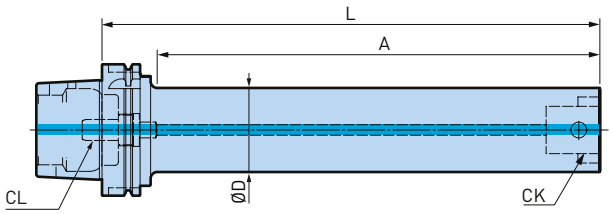
Coolant Pipes	Fine Boring Heads	Rough Boring Heads
▶ 264	▶ 428	▶ 417

Smart Damper CK Shanks

Tool shanks with integrated damping system for highly efficient deep hole fine boring.

Anti-Vibration

Coolant Through Hole



Model	Article No.	CK	ØD	L	A	Weight (kg)
HSK-A100-CKB4DP-241	807.546	CK4	39	241	199	4.30
HSK-A100-CKB5DP-303	328.238	CK5	50	303	261	6.50
HSK-A100-CKB6DP-379	328.240	CK6	64	379	337	11.30

1. Coolant pipe (CL) is to be ordered separately.

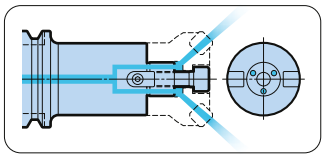
Accessories & Spare Parts

Coolant Pipes	Fine Boring Heads	Rough Boring Heads
▶ 264	▶ 428	▶ 417

Face Mill Arbors Type FMH

For milling heads that require a coolant bore in the face .

Coolant Through Hole



A.3

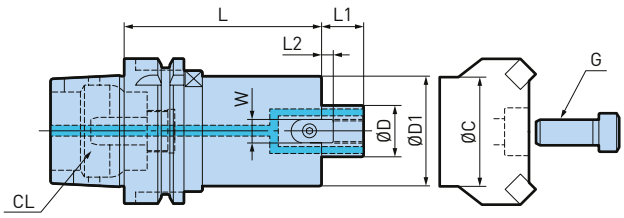


Fig. 1

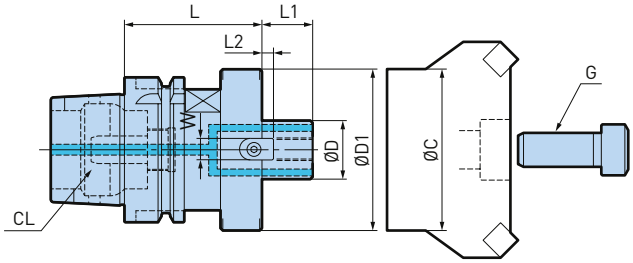


Fig. 2

Model	Article No.	Fig.	ØD	ØD1	L	L1	L2	W	G	ØC min.	Weight (kg)
HSK-A50-FMH22-47-60	805.833	2	22	47	60	18	5	10	M10	36	0.90
HSK-A50-FMH22-47-90	807.246	2	22	47	90	18	5	10	M10	36	1.20
HSK-A50-FMH27-60-60	805.834	2	27	60	60	20	6	12	M12	46	1.00
HSK-A50-FMH27-60-90	807.247	2	27	60	90	20	6	12	M12	46	1.40
HSK-A63-FMH16-37-45	979.194	1	16	37	45	16	5	8	M8	28	0.90
HSK-A63-FMH22-47-60	801.189	1	22	47	60	18	5	10	M10	36	1.20
HSK-A63-FMH22-47-90	978.186	1	22	47	90	18	5	10	M10	36	1.60
HSK-A63-FMH22-47-150	801.188	1	22	47	150	18	5	10	M10	36	2.40
HSK-A63-FMH22-60-60	805.573	2	22	60	60	18	5	10	M10	38	1.40
HSK-A63-FMH22-60-90	805.574	2	22	60	90	18	5	10	M10	38	1.90
HSK-A63-FMH27-60-60	978.185	2	27	60	60	20	6	12	M12	46	1.40
HSK-A63-FMH27-60-90	979.196	2	27	60	90	20	6	12	M12	46	1.90
HSK-A63-FMH32-96-60	805.646	2	32	96	60	22	7	14	M16	58	2.00

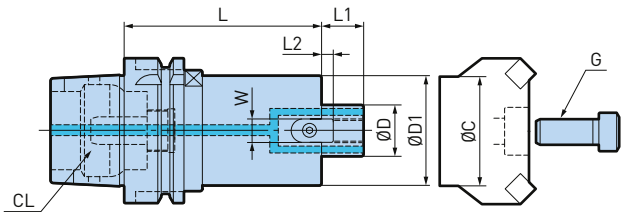


Fig. 1

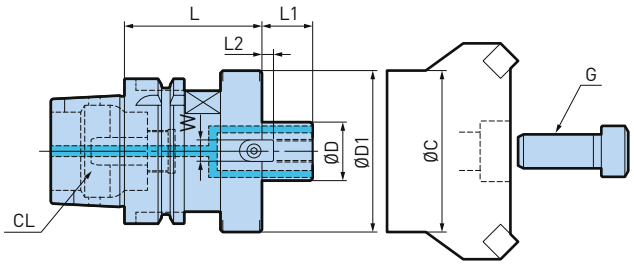


Fig. 2

Model	Article No.	Fig.	ØD	ØD1	L	L1	L2	W	G	ØC min.	Weight (kg)
HSK-A100-FMH16-37-105	-	1	16	37	105	16	5	8	M8	28	2.80
HSK-A100-FMH16-37-150	-	1	16	37	150	16	5	8	M8	28	3.10
HSK-A100-FMH16-37-200	-	1	16	37	200	16	5	8	M8	28	3.50
HSK-A100-FMH22-47-105	965.523	1	22	47	105	18	5	10	M10	36	3.20
HSK-A100-FMH22-47-150	978.120	1	22	47	150	18	5	10	M10	36	3.80
HSK-A100-FMH22-47-200	978.121	1	22	47	200	18	5	10	M10	36	4.50
HSK-A100-FMH22-47-250	801.091	1	22	47	250	18	5	10	M10	36	5.10
HSK-A100-FMH22-60-60	801.096	1	22	60	60	18	5	10	M10	38	3.00
HSK-A100-FMH22-60-105	801.092	1	22	60	105	18	5	10	M10	38	3.90
HSK-A100-FMH22-60-150	801.093	1	22	60	150	18	5	10	M10	38	4.90
HSK-A100-FMH22-60-200	801.094	1	22	60	200	18	5	10	M10	38	6.00
HSK-A100-FMH22-60-250	801.095	1	22	60	250	18	5	10	M10	38	7.00
HSK-A100-FMH27-60-60	801.102	1	27	60	60	20	6	12	M12	46	2.90
HSK-A100-FMH27-60-90	801.103	1	27	60	90	20	6	12	M12	46	3.60
HSK-A100-FMH27-60-150	801.101	1	27	60	150	20	6	12	M12	46	4.90
HSK-A100-FMH27-60-200	807.130	1	27	60	200	20	6	12	M12	46	6.00
HSK-A100-FMH27-60-250	807.114	1	27	60	250	20	6	12	M12	46	7.10
HSK-A100-FMH27-76-60	801.105	1	27	76	60	20	6	12	M12	62	3.30
HSK-A100-FMH27-76-90	801.106	1	27	76	90	20	6	12	M12	62	4.40
HSK-A100-FMH27-76-150	801.104	1	27	76	150	20	6	12	M12	62	6.50
HSK-A100-FMH32-96-60	801.118	2	32	96	60	22	7	14	M16	80	3.70
HSK-A100-FMH32-96-90	801.119	2	32	96	90	22	7	14	M16	80	5.30
HSK-A100-FMH32-96-150	801.117	2	32	96	150	22	7	14	M16	80	8.50
HSK-A100-FMH40-100-75	801.125	2	40	100	75	26	8.5	16	M20 (MBA-M20H)	80	5.00
HSK-A100-FMH40-100-105	801.124	2	40	100	105	26	8.5	16	M20 (MBA-M20H)	80	6.40
HSK-A125-FMH22A-49-50	806.585	1	22	49	50	18	5	10	M10	40	4.10
HSK-A125-FMH22A-49-100	806.586	1	22	49	100	18	5	10	M10	40	4.80
HSK-A125-FMH22A-49-150	806.587	1	22	49	150	18	5	10	M10	40	5.40
HSK-A125-FMH22A-49-200	806.588	1	22	49	200	18	5	10	M10	36	6.70
HSK-A125-FMH27A-60-90	806.589	1	27	60	90	20	6	12	M12	46	5.00
HSK-A125-FMH27A-60-150	806.590	1	27	60	150	20	6	12	M12	46	6.30

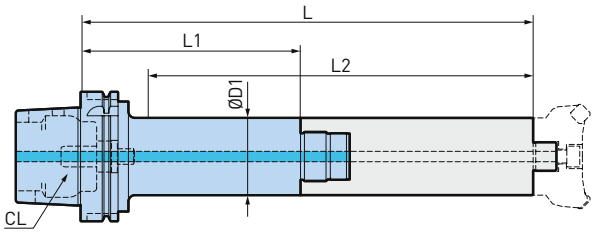
1. Clamp bolt is included.
2. By using a clamping screw with a through bore, coolant is supplied through the screw.
3. Coolant pipe (CL) is to be ordered separately.

Accessories & Spare Parts

Clamp Bolts	Coolant Pipes
▶ 388	▶ 264

Smart Damper Basic Holders for Mills

Coolant Through Hole



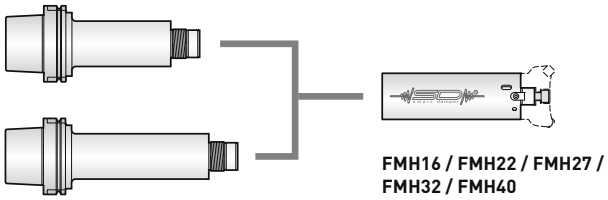
Model	Article No.	ØD1	L	L1	L2	Damper Head Model	Weight (kg)
HSK-A63-SDF28-38-40	-	38	210	40	175	FMH16DP-38	0.90
HSK-A63-SDF28-38-80	-	38	250	80	215	FMH16DP-38	1.30
HSK-A63-SDF36-47-45	-	47	225	45	182	FMH_DP-60	1.20
HSK-A63-SDF36-47-85	-	47	265	85	222	FMH_DP-60	1.70
HSK-A100-SDF36-47-170	804.976	47	350	170	310	FMH_DP-47	4.40
HSK-A100-SDF36-47-220	804.978	47	400	220	360	FMH_DP-47	5.00
HSK-A100-SDF36-60-170	804.977	60	350	170	310	FMH_DP-60	5.50
HSK-A100-SDF36-60-220	804.979	60	400	220	360	FMH_DP-60	6.50
HSK-A100-SDF57-76-170	807.680	76	350	170	310	FMH_DP-76	7.70
HSK-A100-SDF57-76-220	807.681	76	400	220	360	FMH_DP-76	9.40
HSK-A125-SDF36-60-250	806.631	60	430	250	380	FMH_DP-60	8.00

1. Coolant pipe (CL) is to be ordered separately.

Combinations

Basic Holder

Damper Head



FMH16 / FMH22 / FMH27 / FMH32 / FMH40

Caution
Damper head becomes unremovable from the basic holder once they are used for machining after assembled.

Accessories & Spare Parts

Coolant Pipes

▶ 264

Smart Damper Damper Heads for Mills

Coolant Through Hole

Anti-Vibration

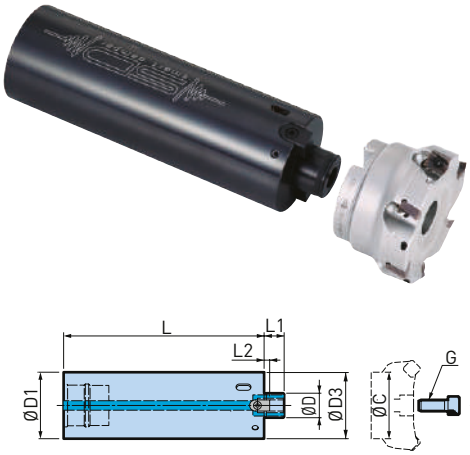


Fig. 1

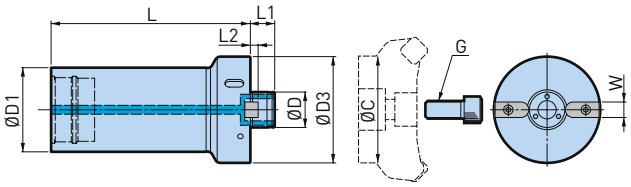


Fig. 2

Model	Article No.	Fig.	ØD	ØD1	ØD3	L	L1	L2	G	W	ØC min.	Weight (kg)
SDF28-FMH16DP-38-170	-	1	16	38	38	170	16	5	M8	8	28	1.90
SDF36-FMH22DP-47-180	804.969	1	22	47	47	180	18	5	M10	10	36	3.00
SDF36-FMH22DP-60-180	804.971	1	22	60	60	180	18	5	M10	10	49	4.50
SDF36-FMH27DP-60-180	804.972	1	27	60	60	180	20	6	M12	12	46	4.50
SDF57-FMH27DP-76-180	807.673	1	27	76	76	180	20	6	M12	12	48	7.90
SDF57-FMH32DP-96-180	100449.001.0	2	32	76	96	180	22	7	M16	14	58	8.70
SDF57-FMH40DP-100-180	-	2	40	76	100	180	26	8.5	M20(MBA-M20H)	16	70	9.10

1. Wrench and cutter clamping bolt are included.
2. By using a clamping screw with a through bore, coolant is supplied through the screw.

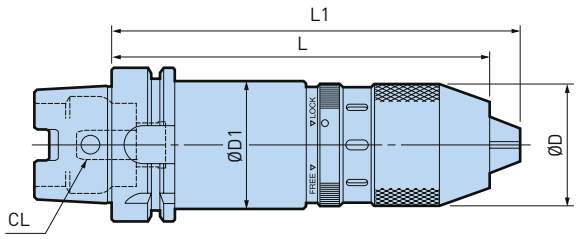
Accessories & Spare Parts

FK Wrenches	Clamp Bolts	Fullcut Mill FCM - Arbor Type
▶ 385	▶ 388	▶ 506

A.3

Super Keyless Chuck

The known design assures prismatic clamping between 0.5 and 13 mm.



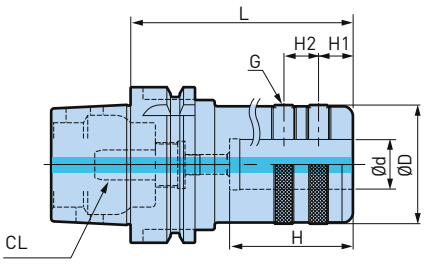
ø0.5 - 13mm

Model	Article No.	Ød	ØD	ØD1	L	L1	Wrench	Weight (kg)
HSK-A63-SKL13-155	805.282	0.5 - 13	51	53	155	167.5	FS13LC	2.36

1. Coolant-through hole is not available.
2. Wrench is included.

Side Lock Drill Holder

Coolant Through Hole



ø16 - 50mm

Model	Article No.	Ød	ØD	L	H	H1	H2	G	Weight (kg)
HSK-A63-TSL16-90	805.234	16	48	90	48	14	14	M10	1.50
HSK-A63-TSL20-90	805.235	20	48	90	50	14	14	M10	1.40
HSK-A63-TSL25-90	805.236	25	48	90	56	15	20	M16	1.40
HSK-A63-TSL32-105	805.237	32	63	105	60	15	20	M16	2.00
HSK-A63-TSL40-120	805.232	40	68	120	70	15	25	M16	2.40
HSK-A100-TSL16-90	806.044	16	48	90	48	14	14	M10	2.90
HSK-A100-TSL20-90	806.045	20	48	90	50	14	14	M10	2.90
HSK-A100-TSL25-90	806.046	25	48	90	56	15	20	M16	2.80
HSK-A100-TSL32-105	806.047	32	63	105	60	15	20	M16	3.50
HSK-A100-TSL40-105	806.048	40	68	105	70	15	25	M16	3.60
HSK-A100-TSL50-105	806.049	50	84	105	70	15	25	M16	4.20

1. Coolant pipe (CL) is to be ordered separately.

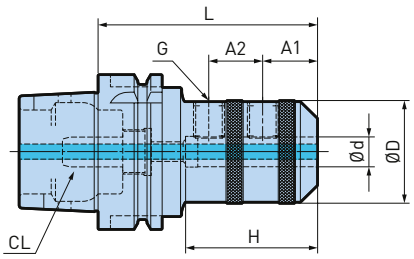
Accessories & Spare Parts

Sleeves for TSL & OSL

► 389

Side Lock Holders for Weldon

Coolant Through Hole



A.3

ø6 - 50mm

Model	Article No.	Ød	ØD	L	A1	A2	H	G	Weight (kg)
HSK-A63-ISL6-80	807.321	6	25	80	18	-	58	M6	0.90
HSK-A63-ISL8-80	807.322	8	28	80	18	-	58	M8	1.00
HSK-A63-ISL10-80	807.323	10	35	80	20	-	44	M10	1.10
HSK-A63-ISL12-80	805.732	12	42	80	22.5	-	50	M12	1.20
HSK-A63-ISL16-80	807.319	16	48	80	24	-	52	M14	1.40
HSK-A63-ISL20-80	806.050	20	52	80	25	-	54	M16	1.40
HSK-A63-ISL25-105	805.019	25	65	105	24	25	60	M18 P2	2.20
HSK-A63-ISL32-115	805.018	32	72	115	24	28	64	M20 P2	2.70
HSK-A100-ISL20-90	805.152	20	52	90	25	-	54	M16	3.00
HSK-A100-ISL20-135	807.227	20	52	135	25	-	55	M16	3.60
HSK-A100-ISL20-195	-	20	52	195	25	-	54	M16	4.60
HSK-A100-ISL25-105	806.051	25	65	105	24	25	60	M18 P2	3.70
HSK-A100-ISL25-135	807.228	25	65	135	24	25	60	M18 P2	4.40
HSK-A100-ISL25-195	-	25	65	195	24	25	60	M18	5.90
HSK-A100-ISL32-125	805.151	32	72	125	24	28	90	M20 P2	4.50
HSK-A100-ISL32-165	807.229	32	72	165	24	28	90	M20 P2	5.70
HSK-A100-ISL32-195	-	32	72	195	24	28	90	M20	6.60
HSK-A100-ISL40-125	805.201	40	90	125	30	32	90	M20 P2	5.60
HSK-A100-ISL40-165	807.230	40	90	165	30	32	90	M20 P2	7.50
HSK-A100-ISL40-210	-	40	90	210	30	32	90	M20	9.80
HSK-A100-ISL50-135	806.052	50	99.5	135	35	35	90	M24 P2	6.70
HSK-A100-ISL50-165	807.231	50	99.5	165	35	35	90	M24 P2	8.30
HSK-A100-ISL50-210	-	50	99.5	210	35	35	90	M24	11.00

1. "H" is the max. tool shank length that can be inserted for these models.
2. Use a cutting tool in accordance to DIN 1835 B/DIN 6535 HB and ISO 5414.
3. Coolant pipe (CL) is to be ordered separately.

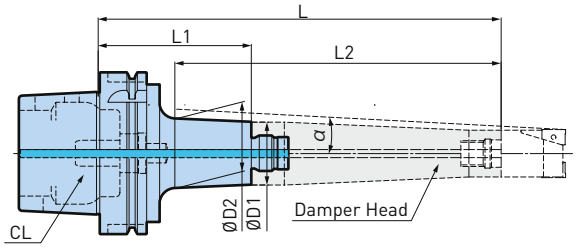
Accessories & Spare Parts

Coolant Pipes

▶ 264

SMART DAMPER Screw On Basic Holder

Coolant Through Hole



A.3

Model	Article No.	ØD1	ØD2	L	L1	L2	α	Damper Head Model	Weight (kg)
HSK-A100-SDF20-39-95T	-	39	44.1	250	95	203.4	2	SDF20-M16DP-29-155T	2.90
HSK-A100-SDF20-39-145T	-	39	48.4	300	145	253.4	2	SDF20-M16DP-29-155T	3.60
HSK-A100-SDF28-50-120T	-	50	57.2	300	120	258.2	2	SDF28-M16DP-38-180T	3.80
HSK-A100-SDF28-50-170T	-	50	61.6	350	170	308.2	2	SDF28-M16DP-38-180T	4.90

1. Coolant pipe (CL) is to be ordered separately.

Smart Damper Heads for Screw On

Coolant Through Hole

Anti-Vibration

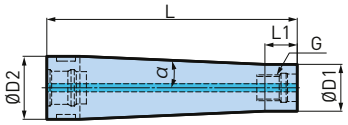


Fig. 1

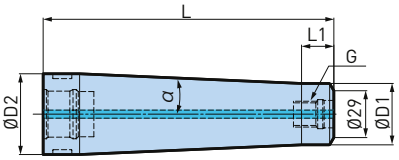
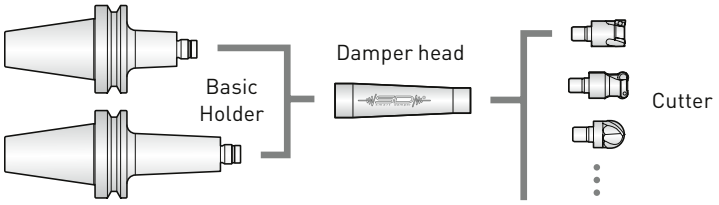


Fig. 2

Model	Article No.	Fig.	ØD1	ØD2	L	L1	α	G	Weight (kg)
SDF20-M16DP-29-155T	101255.001.0	1	29	39	155	20	2.5°	M16	1.20
SDF28-M16DP-38-180T	101255.002.0	2	38	50	180	20	2.5°	M16	2.50



Caution
Damper head becomes unremovable from the basic holder once they are used for machining after assembled.

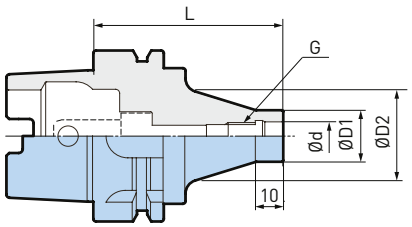
Accessories & Spare Parts

SD Holders BBT	SD Holders HSK	Full Cut Mill for Screw On FCM Type	Full Cut Mill for Screw On FCR Type
▶ 112	▶ 224	▶ 505	▶ 517

Holders for Screw-On Cutter

General metric screw-on type cutting tools can be used with these models.

Coolant Through Hole



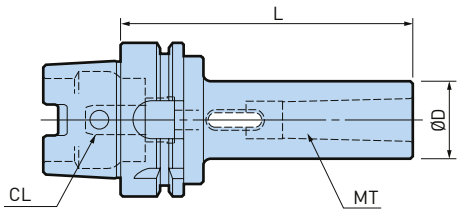
Model	Article No.	Ød	ØD1	ØD2	L	G	Weight (kg)
HSK-A63-M8-15-75	101142.001.0	8.5	15	30	75	M8	0.90
HSK-A63-M10-19-70	101142.002.0	10.5	19	35	70	M10	0.90
HSK-A63-M12-24-65	101142.003.0	12.5	24	40	65	M12	0.90
HSK-A63-M16-29-60	101142.004.0	17	29	40	60	M16	0.90

1. Coolant pipe (CL) is to be ordered separately.

Accessories & Spare Parts

Full Cut Mill for Screw On FCM Type	Full Cut Mill for Screw On FCR Type
► 505	► 517

Morse Taper Holder



A.3

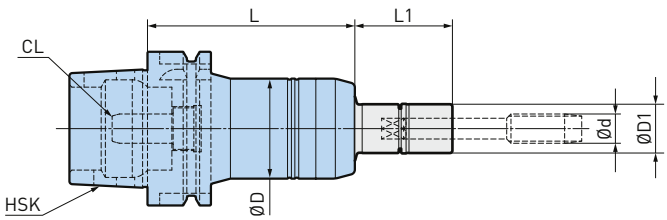
Model	Article No.	ØD	MT No.	L	Weight (kg)
HSK-A63-MTA1-100	801.248	25	1	100	1.00
HSK-A63-MTA2-120	801.249	32	2	120	1.20
HSK-A63-MTA3-135	801.250	40	3	135	1.50
HSK-A63-MTA4-165	801.251	50	4	165	2.20
HSK-A100-MTA1-105	801.165	25	1	105	2.50
HSK-A100-MTA2-125	801.166	32	2	125	2.70
HSK-A100-MTA3-140	801.167	40	3	140	3.00
HSK-A100-MTA4-165	801.168	50	4	165	3.60

1. Coolant pipe (CL) is to be ordered separately.

MEGA Synchro Tapping Holder

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

Coolant Through Hole



A.3

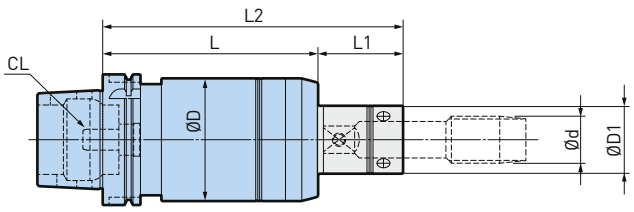
M3 - M20

Model	Article No.	Tap Holder	Ød	ØD	ØD1	L	L1	Weight (kg)
HSK-A40-MGT6-80	965.601	MGT6	M3-M8	36	16	80	30 - 200	0.54
HSK-A40-MGT12-85	965.602	MGT12	M5-M12 / P1/8	41	20	85	30 - 200	0.63
HSK-A50-MGT6-85	965.603	MGT6	M3-M8	36	16	85	30 - 200	0.80
HSK-A50-MGT12-85	965.604	MGT12	M5-M12 / P1/8	41	20	85	30 - 200	0.90
HSK-A50-MGT20-125	978.325	MGT20	M10-M20 / P1/4-P1/2	54	30	125	35 - 150	1.60
HSK-A63-MGT6-85	965.606	MGT6	M3-M8	36	16	85	30 - 200	1.00
HSK-A63-MGT12-85	965.607	MGT12	M5-M12 / P1/8	41	20	85	30 - 200	1.10
HSK-A63-MGT20-110	965.608	MGT20	M10-M20 / P1/4-P1/2	54	30	110	35 - 150	1.70
HSK-A100-MGT6-95	965.609	MGT6	M3-M8	36	16	95	30 - 200	2.50
HSK-A100-MGT12-95	965.610	MGT12	M5-M12 / P1/8	41	20	95	30 - 200	2.60
HSK-A100-MGT20-115	965.611	MGT20	M10-M20 / P1/4-P1/2	54	30	115	35 - 150	3.10
HSK-A125-MGT12-105	805.655	MGT12	M5-M12 / P1/8	41	20	105	30 - 200	4.10
HSK-A125-MGT20-120	805.656	MGT20	M10-M20 / P1/4-P1/2	54	30	120	35 - 150	4.70

1. Tap holder is to be ordered separately.
2. Coolant pipe (CL) is to be ordered separately.
3. Synchronized tapping function is required on the machine.

MEGA Synchro Tapping Holder MGT36

For large Tapping: Type MGT36



M22 - M36

Model	Article No.	Ød	ØD1	L	L1	L2	Weight (kg)
HSK-A100-MGT36-165	801.164	M22-M36 / P5/8-P1	32-52	165	65	230	8.00
HSK-A125-MGT36-170	805.657	M22-M36 / P1/2-P1	32-52	170	65	235	10.10

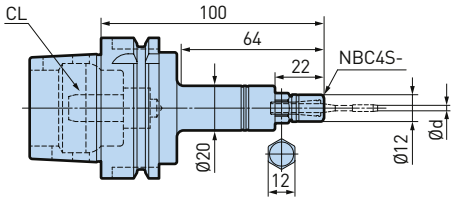
1. Tap holder is to be ordered separately.
2. Coolant pipe (CL) is to be ordered separately.
3. Synchronized tapping function is required on the machine.

Accessories & Spare Parts

Tap Holder	MEGA Wrenches	Accessories	Coolant Pipes
▶ 390	▶ 384	▶ 398	▶ 264

MEGA Synchro Tapping Holder

For small Tapping: Type MGT3



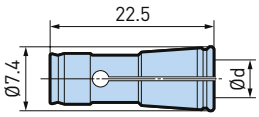
A.3

M1 - M3

Model	Article No.	Ød	Weight (kg)
HSK-A63-MGT3-100	805.542	M1 - M3	0.90

1. MEGA nut is included in delivery.
2. MEGA wrench (MGR12) and common spanner (12 mm) are required to clamp/unclamp the tap.
3. Synchronized tapping function is required on the machine.
4. Coolant pipe (CL) is to be ordered separately.
5. Coolant-through hole is not available.
6. Micro Collet is to be ordered separately.

Micro Collet for MGT3



Model	Article No.	Tapping Range			Tap Shank
		DIN 371	ISO 529	JIS	Ød
NBC4S-2.5AA	961.468	M1 - M1.8	M2	-	2.5
NBC4S-2.8AA	968.353	M2 - M2.6	M2.2, M2.5	-	2.8
NBC4S-3.0AA	961.470	-	-	M1 - M2.6	3.0
NBC4S-3.1AA	968.355	-	M3	-	3.15
NBC4S-3.5AA	961.472	M3	-	-	3.5
NBC4S-4.0AA	961.474	-	-	M3	4.0

1. Other sizes available. Please refer to micro collet.

Accessories & Spare Parts

MEGA Wrenches

▶ 384

Angle Head Compact Type

Compact and lightweight, but fully equipped with the functions and accuracy required for drilling.

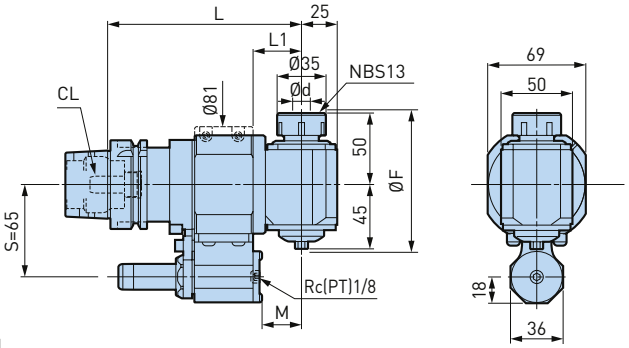


Fig. 1

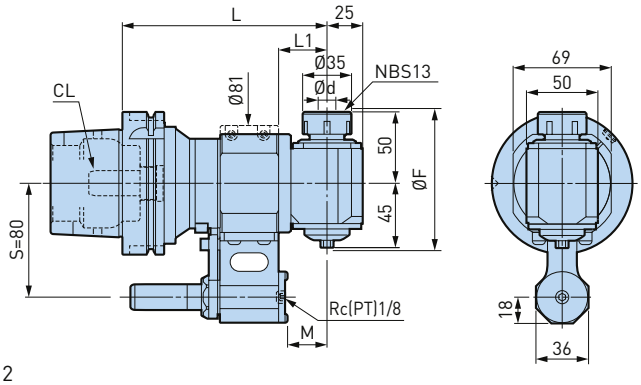


Fig. 2

Model	Article No.	Fig.	Ød	ØF	L	L1	M	max. min-1	Collet Model	Weight (kg)
HSK-A63-AG90-13-135	802.725	1	2.5 - 13	99	135	34	27.85	5,000	NBC13	4.40
HSK-A63-AG90-13-185	802.726	1	2.5 - 13	99	185	84	77.85	5,000	NBC13	5.40
HSK-A100-AG90-13-145	802.678	2	2.5 - 13	99	145	34	27.85	5,000	NBC13	6.80
HSK-A100-AG90-13-195	802.679	2	2.5 - 13	99	195	84	77.85	5,000	NBC13	7.80

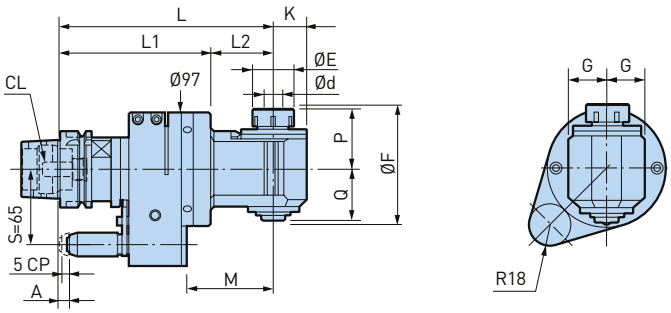
1. Nut is included.
2. Wrench is included.
3. Exclusive Stop Block is required.
4. New Baby Collet for endmilling (NBC - EAA) can not be used.
5. The cutting tool rotates in reverse to the machine spindel.
6. Collet is not included.
7. The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable.
8. When used with stop block peripheral cooling is possible

Accessories & Spare Parts

New Baby Collets	Semi-Finished Stop Blocks
▶ 360	▶ 413

Angle Head New Baby Chuck Type

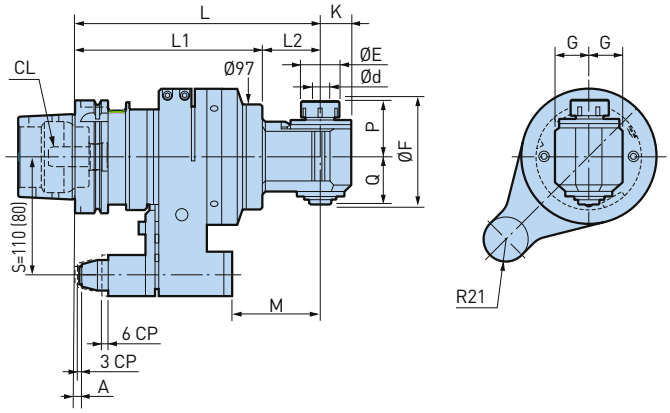
The Angle Head has an integrated New Baby Chuck, resulting in high precision. Available in various sizes to meet specific production requirements.



HSK-A63

Model	Article No.	Ød	ØE	ØF	L	L1	L2	G	K	M	P	Q	Collet Model	Weight (kg)
HSK-A63-AG90/NBS6-185	802.717	0.25 - 6	20	67	185	130	55	21	17	77	33	29	NBC6	5.00
HSK-A63-AG90/NBS6-215	802.719	0.25 - 6	20	67	215	130	85	21	17	107	33	29	NBC6	5.20
HSK-A63-AG90/NBS6-245	802.721	0.25 - 6	20	67	245	130	115	21	17	137	33	29	NBC6	5.40
HSK-A63-AG90/NBS6-275	802.723	0.25 - 6	20	67	275	130	145	21	17	167	33	29	NBC6	5.60
HSK-A63-AG90/NBS10-185	802.702	1.5 - 10	30	91	185	130	55	30	25	77	45	43	NBC10	5.40
HSK-A63-AG90/NBS10-215	802.704	1.5 - 10	30	91	215	130	85	30	25	107	45	43	NBC10	5.80
HSK-A63-AG90/NBS10-245	802.706	1.5 - 10	30	91	245	130	115	30	25	137	45	43	NBC10	6.10
HSK-A63-AG90/NBS13-185	802.708	2.5 - 13	35	101	185	130	55	31	28	77	52	45	NBC13	5.50
HSK-A63-AG90/NBS13-215	802.710	2.5 - 13	35	101	215	130	85	31	28	107	52	45	NBC13	5.90
HSK-A63-AG90/NBS13-245	802.712	2.5 - 13	35	101	245	130	115	31	28	137	52	45	NBC13	6.20
HSK-A63-AG90/NBS20S-180S	802.716	2.5 - 20	46	132	180	127	53	35	33	72	65	62	NBC20	7.90
HSK-A63-AG90/NBS20-200	802.714	2.5 - 20	46	132	200	130	70	35	35	92	65	62	NBC20	6.60

High rigidity S type with reinforced Locating Pin part is also available. Add the letter S at the end when ordering.



HSK-A100

Model	Article No.	Ød	ØE	ØF	L	L1	L2	G	K	M	P	Q	Collet Model	Weight (kg)
HSK-A100-AG90/NBS6-225	802.666	0.25 - 6	20	67	225	170	55	21	17	82	33	29	NBC6	11.80
HSK-A100-AG90/NBS6-255	802.669	0.25 - 6	20	67	255	170	85	21	17	112	33	29	NBC6	12.00
HSK-A100-AG90/NBS6-285	802.672	0.25 - 6	20	67	285	170	115	21	17	142	33	29	NBC6	12.20
HSK-A100-AG90/NBS6-315	802.675	0.25 - 6	20	67	315	170	145	21	17	172	33	29	NBC6	12.40
HSK-A100-AG90/NBS10-225	802.645	1.5 - 10	30	91	225	170	55	30	25	82	45	43	NBC10	12.20
HSK-A100-AG90/NBS10-255	802.648	1.5 - 10	30	91	255	170	85	30	25	112	45	43	NBC10	12.60
HSK-A100-AG90/NBS10-285	802.651	1.5 - 10	30	91	285	170	115	30	25	142	45	43	NBC10	12.90
HSK-A100-AG90/NBS13-225	802.654	2.5 - 13	35	101	225	170	55	31	28	82	52	45	NBC13	12.30
HSK-A100-AG90/NBS13-255	802.657	2.5 - 13	35	101	255	170	85	31	28	112	52	45	NBC13	12.70
HSK-A100-AG90/NBS13-285	802.660	2.5 - 13	35	101	285	170	115	31	28	142	52	45	NBC13	13.00
HSK-A100-AG90/NBS16H-225	-	2.5 - 16	42	163	225	154	71	45	35	82	80	80	NBC16	14.60
HSK-A100-AG90/NBS20-240	802.663	2.5 - 20	46	132	240	170	70	35	35	97	65	62	NBC20	13.40

1. The standard fixed length A is 8 mm for HSK-A63 and 6 mm for HSK-A100. Other lengths are available upon request.
2. Nut and wrench are included.
3. New Baby Collet is to be ordered separately.
4. New Baby Collet for endmilling (NBC - EAA) can not be used.
5. Coolant can be supplied through the locating pin.
6. Coolant pipe (CL) is to be ordered separately.
7. Exclusive Stop Block is required.
8. „CP" indicates compression.
9. „ØF" indicates the minimum dimension for access into the bore.
10. Article No. for HSK-A100 is with S =110. S = 80 type for HSK-A100 is available upon request.

High rigidity S type with reinforced Locating Pin part is also available. Add the letter S at the end when ordering.

Accessories & Spare Parts

New Baby Collets	Semi-Finished Stop Blocks	Coolant Pipes
▶ 360	▶ 413	▶ 264

Angle Head Twin Head Type

Twin spindle head with a compact design. Symmetrical machining can be performed using one unit, contributing to the reduction of the number of magazine tool spots.

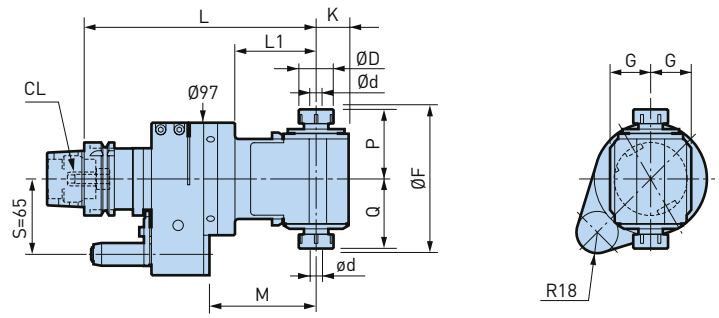


Fig. 1

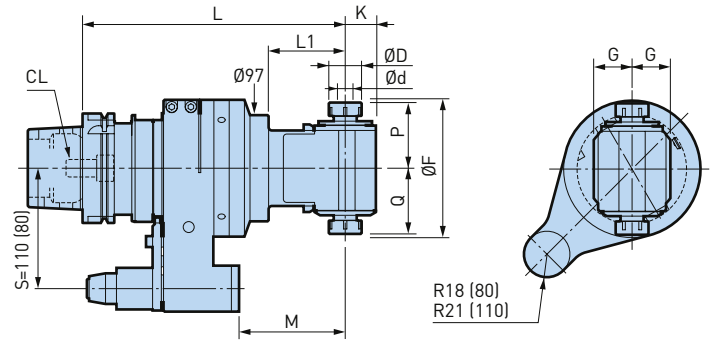


Fig. 2

Model	Article No.	Fig.	Ød	ØD	G	K	L	L1	M	P	Q	ØF	Collet Model	Weight (kg)
HSK-A63-AG90/NBS10W-200	101123.001.0	1	1.5 - 10	30	31	28	200	70	97	60	60	124	NBC10	6.20
HSK-A100-AG90/NBS10W-240	101123.002.0	2	1.5 - 10	30	31	28	240	70	92	60	60	124	NBC10	13.00

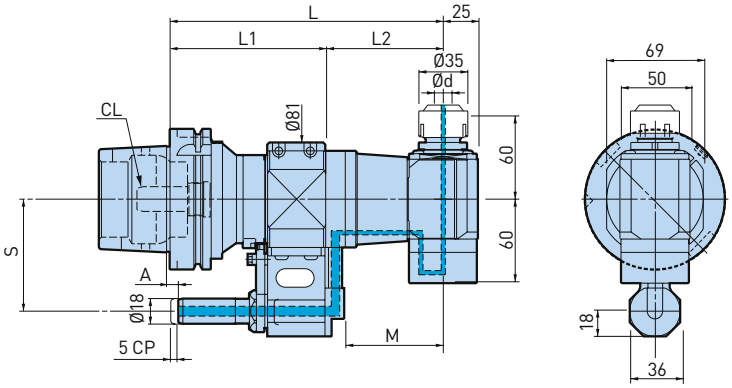
1. Coolant pipe (CL) is to be ordered separately.
2. Exclusive Stop Block is required.
3. Nut and wrench are included.
4. New Baby Collet is to be ordered separately.
5. New Baby Collet for endmilling (NBC - EAA) can not be used.
6. Output spindles do not rotate in the same direction simultaneously.
7. The angles of the locating pin to the drive key groove and direction of cutting edge are freely adjustable.
8. When used with stop block peripheral cooling is possible
9. Automatic tool change may not be available, depending on machine models.
10. The standard fixed length A is 8 mm for HSK-A63 and 6 mm for HSK-A100. Other lengths are available upon request.
11. Article No. for HSK-A100 is with S = 110. S = 80 type for HSK-A100 is also available upon request.

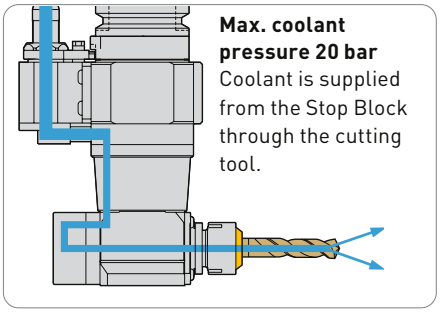
High rigidity S type with reinforced Locating Pin part is also available. Add the letter S at the end when ordering.

Accessories & Spare Parts

New Baby Collets	Semi-Finished Stop Blocks
▶ 360	▶ 413

Angle Head New Baby Chuck Oil Coolant Type





Max. coolant pressure 20 bar
Coolant is supplied from the Stop Block through the cutting tool.

Model	Article No.	Ød	L	L1	L2	M	Collet Model	Nut Model	max. min-1	Weight (kg)
HSK-A63-OAG90-13-185	802.736	2.5 - 13	185	101	84	70.5	NBC13	BPS13	5,000	5.90
HSK-A100-OAG90-13-195	802.697	2.5 - 13	195	111	84	70.5	NBC13	BPS13	5,000	6.40

1. The standard length A is 6 mm.
2. Standard "S" is 80 mm for HSK-A100 and 65 mm for HSK-A63.
3. Nut and wrench are included.
4. New Baby Collet is to be ordered separately.
5. New Baby Collet for endmilling (NBC - EAA) can not be used.
6. Coolant pipe (CL) is to be ordered separately.
7. Exclusive Stop Block is required.
8. „CP" indicates compression.

NEW BABY CHUCK Insertion Length List

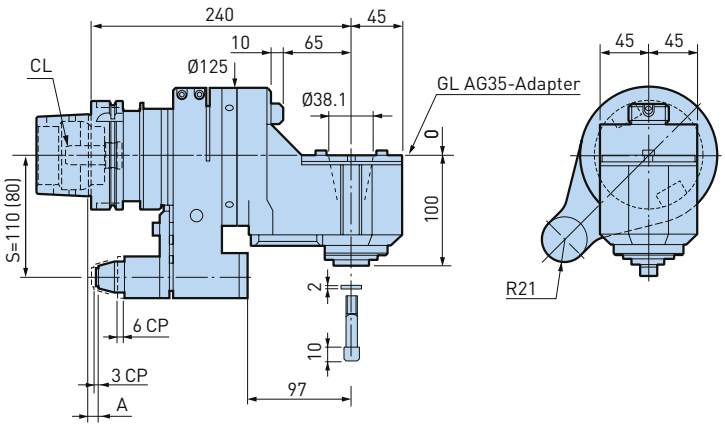
Model	Tool adjustment amount	Max. insertion length	Adjust Screw	Model	Tool adjustment amount	Max. insertion length	Adjust Screw
HSK-A63-AG90/NBS6		33		HSK-A100-AG90/NBS6		33	
HSK-A63-AG90/NBS10		45		HSK-A100-AG90/NBS10		45	
HSK-A63-AG90/NBS13		52		HSK-A100-AG90/NBS13		52	
HSK-A63-AG90/NBS20-200☐		70		HSK-A100-AG90/NBS20-240☐		70	
HSK-A63-AG90/NBS20S-180S	-		-	HSK-A100-AG90/NBS16H-225☐	-	98	-
HSK-A63-AG90/NBS10W-200☐		60		HSK-A100-AG90/NBS10W-240☐		60	
HSK-A63-AG45/NBS10-230☐		45		HSK-A100-AG45/NBS10-270☐		45	
HSK-A63-AG45/NBS13-235☐		52		HSK-A100-AG45/NBS13-275☐		52	
HSK-A63-AGU/NBS13-285		50		HSK-A100-AGU/NBS20-325		50	
HSK-A63-AGU30/NBS13-255	41 - 53	73	NBA13B	HSK-A100-AGU30/NBS20-305	48 - 65	85	NBA20B
HSK-A63-AG90-13-135	-	50	-	HSK-A100-AG90-13-145	-	50	-
HSK-A63-AG90-13-185				HSK-A100-AG90-13-195			
HSK-A63-OAG90-13-185	36 - 40	60	NBA13B	HSK-A100-OAG90-13-195	36 - 40	60	NBA13B

Accessories & Spare Parts

Baby Perfect Seals	New Baby Collets	Semi-Finished Stop Blocks
► 370	► 360	► 413

Angle Head Build-Up Type

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



Model	Article No.	max. min-1	Connection tool side	Weight (kg)
HSK-A100-AG90/AGH35-240	802.639	3,000	AGH35	14.20
HSK-A100-AG90/AGH35-240S	802.640	3,000	AGH35	15.50

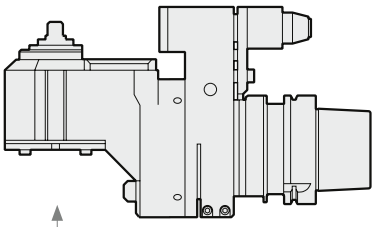
1. Models with a "S" are high rigidity type.
2. The standard length A is 6 mm.
3. Coolant can be supplied through the locating pin.
4. Coolant pipe (CL) is to be ordered separately.
5. Exclusive Stop Block is required.
6. „CP" indicates compression.

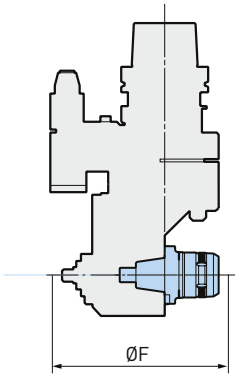
Accessories & Spare Parts

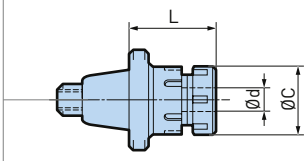
Semi-Finished Stop Blocks

► 413

AG35 adapters



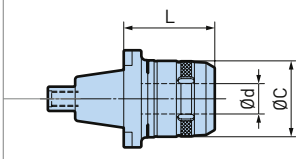




AG35 adapters New Baby Chuck

Model	Article No.	Ød	L	ØC	ØF	Collet Model	Head	Weight (kg)
AG35-NBS10	962.793	1.5 - 10	47	30	162	NBC10	AG35	0.60
AG35-NBS13	962.794	2.5 - 13	54	35	168	NBC13	AG35	0.70
AG35-NBS16	962.795	2.5 - 16	54	42	170	NBC16	AG35	0.80
AG35-NBS20	962.796	2.5 - 20	54	46	170	NBC20	AG35	0.85

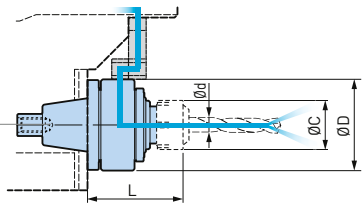
1. Collet and wrench are to be ordered separately.



AG35 adapters New Hi-Power Milling Chuck

Model	Article No.	Ød	L	ØC	ØF	Head	Weight (kg)
AG35-HMC20S	802.742	20	60	50	178	AG35	1.00

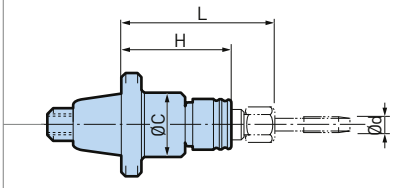
1. Wrench (FK45-50L) is included.



AG35 adapters Hi-Jet Holder

Model	Article No.	Ød	L	ØC	ØD	ØF	Head	Weight (kg)
AG35-ONBS13N	806.438	3 - 13	68	35	65	186	AG35	1.70
AG35-ONBS20N	806.974	3 - 20	68	46	65	188	AG35	1.85

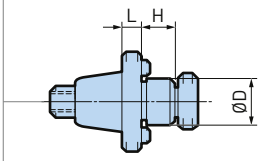
1. Baby Perfect Seal nut with sealing mechanism is required. (optional)
2. Anti-rotation block set is to be ordered separately. (Model: AG35-BL)
3. Collet and wrench are to be ordered separately.



AG35 adapters Auto Tapper Type B (automatic depth control)

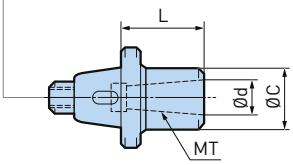
Model	Article No.	Ød	ØC	L	H	Head	Weight (kg)
AG35-ATB12E	802.435	M4 - M12	40.5	80	72	AG35	0.85
AG35-ATB20E	802.436	M8 - M20	57.5	115	102.5	AG35	1.65

1. Please contact us for tap collet.



AG35 adapters Face Mill Arbor

Model	Article No.	ØD	L	H	Head	Weight (kg)
AG35-FMH22-30	802.740	22	30	18	AG35	0.74
AG35-FMH27-20	802.741	27	20	20	AG35	0.80



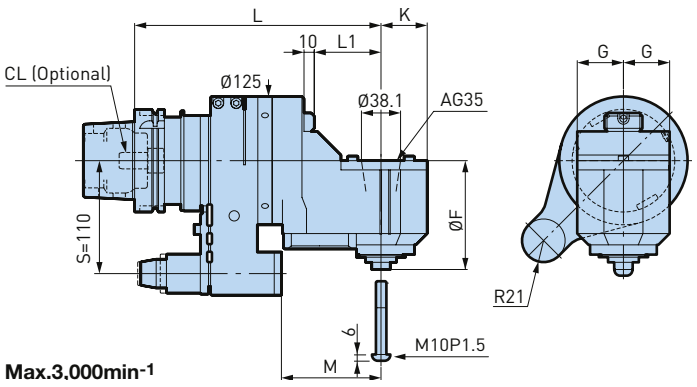
AG35 adapters Morse Taper Adapter

Model	Article No.	Ød	MT No.	L	ØC	ØF	Head	Weight (kg)
AG35-MT1	962.785	12.065	1	50	24	164	AG35	0.53
AG35-MT2	962.786	17.78	2	60	32	180	AG35	0.62

Angle Head Build up Type with center through coolant

Coolant Through Hole

A.3



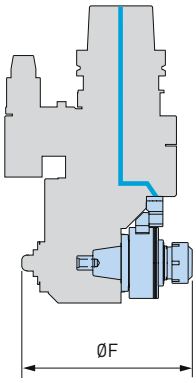
Model	Article No.	ØF	L	L1	G	K	M	Head	Weight (kg)
HSK-A100-TAG90/AGH35-240	-	106	240	65	45	45	97	AG35	14.20
HSK-A100-TAG90/AGH35-240S	-	106	240	65	45	45	97	AG35	15.50

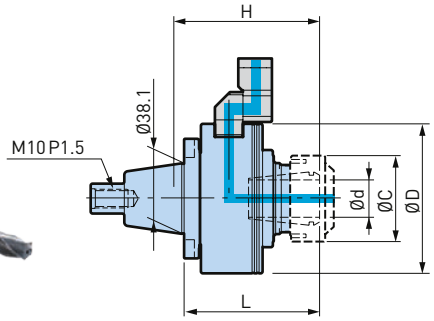
1. Exclusive Stop Block is required.
2. Models with a "S" are high rigidity type.
3. The standard length A is 6 mm.
4. Coolant can be supplied through the locating pin.

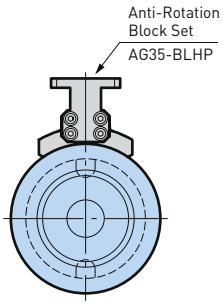
Accessories & Spare Parts

Adapter New Baby Chuck Type	Adapter Side Lock Type
▶ 133	▶ 133

Adapter New Baby Chuck Type







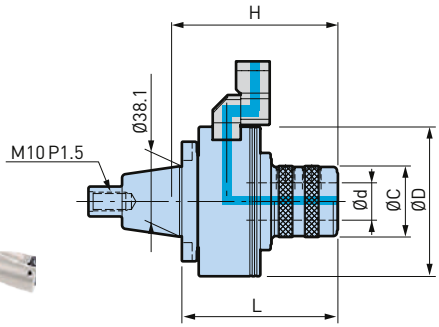
Model	Article No.	Ød	ØD	L	ØC	ØF	H	Head	Weight (kg)
AG35-ONBS20HP	-	3-20	80	72.5	46	195	78	AG35	1.40

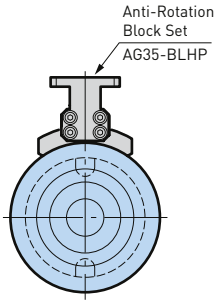
1. Baby Perfect Seal nut with sealing mechanism is required. (optional)
2. Wrench is to be ordered separately.
3. Anti-rotation block set is to be ordered separately. (Model: AG35-BLHP)
4. Max. coolant flow rate: 30 l/min, max. coolant pressure: 70 Bar.
5. "H"indicates the maximum cutting tool insertion length.
6. Applicable only for water-solved coolant.

Anti-Rotation Block Set for Build-up type

Model
AG35-BLHP

Adapter Side Lock Type





Model	Article No.	Ød	ØD	L	ØC	ØF	H	Head	Weight (kg)
AG35-OSL20HP	-	20	80	83.5	38	198	89	AG35	1.60

1. Anti-rotation block set is to be ordered separately. (Model: AG35-BLHP)
2. Max. coolant flow rate: 30 l/min, max. coolant pressure: 70 Bar.
3. "H"indicates the maximum cutting tool insertion length.
4. Applicable only for water-solved coolant.

Anti-Rotation Block Set for Build-up type

Model
AG35-BLHP

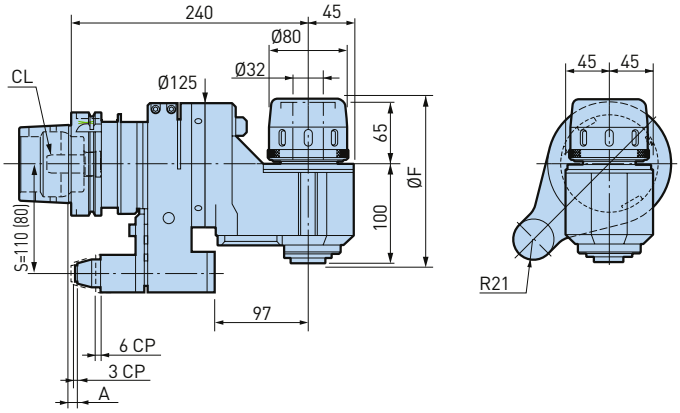
Machining Examples -Drilling

Angle Head	BBT50-TAG90/AGH35-230S	
Adapter	AG35-ONBS20HP	AG35-OSL20HP
Tools	Ø 10 Solid carbide drill	Ø17 cutting-edge interchangeable drill
Workpiece	SUS304 C50	C50
Cutting Depth	50 mm (5xD)	50 mm (3xD)
Cutting Speed	80 m/min	120 m/min
Feed per Revolution	0.2 mm/rev	0.1 mm/rev
Rotation Speed	2,546 min-1	2,247 min-1
Table Feed	509 mm/min	225 mm/min
Coolant	70 Bar	50 Bar

Results: Chip evacuation and edge cooling improved machining conditions.

Angle Head HMC Type

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



Model	Article No.	max. min-1	Weight (kg)
HSK-A100-AG90/HMC32-240	802.642	3,000	16.00
HSK-A100-AG90/HMC32-240S	802.643	3,000	16.60

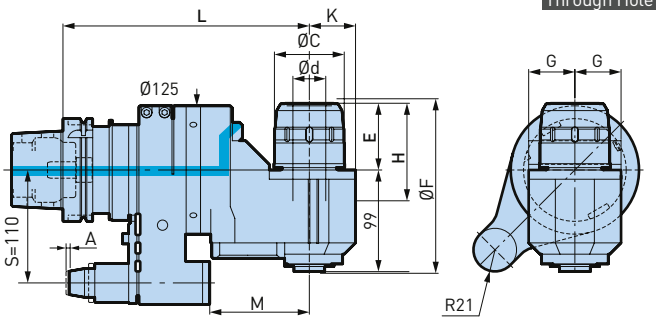
1. Exclusive Stop Block is required.
2. The standard length A is 6 mm.
3. Article No. is with S = 110. S = 80 type is also available upon request.
4. Wrench (FK80-90) is included.
5. Coolant can be supplied through the locating pin.
6. Coolant pipe (CL) is to be ordered separately.
7. „CP" indicates compression.
8. „ØF" indicates the minimum dimension for access into the bore.

Accessories & Spare Parts

C Collets	Semi-Finished Stop Blocks
► 381	► 413

Angle Head HMC Type with cooling through the spindle

Coolant Through Hole



MAX. 3,000min^{-1}

Model	Article No.	Ød	E	H	ØC	ØF	L	G	K	M	Weight (kg)
HSK-A100-TAG90/HMC32S-240	-	32	65	95	68	170	240	45	45	97	16.00
HSK-A100-TAG90/HMC32S-240S	-	32	65	95	68	170	240	45	45	97	17.30

1. Exclusive Stop Block is required.
2. Models with a "S" are high rigidity type.
3. The standard length A is 6 mm.

Accessories & Spare Parts

C Collets	Semi-Finished Stop Blocks	FK Wrenches
▶ 381	▶ 413	▶ 385

Angle Head New Baby Chuck Type

Highly versatile NEW BABY CHUCK type 45 degree housing enables high accuracy diagonal machining.

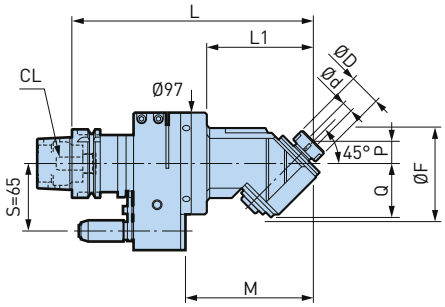


Fig. 1

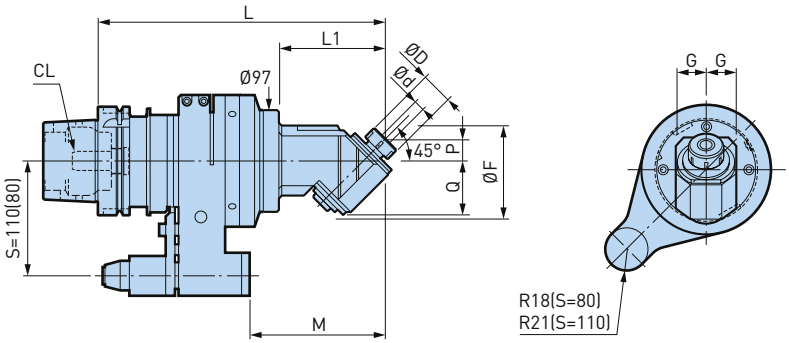


Fig. 2

Model	Article No.	Fig.	Ød	ØD	L	L1	ØF	G	M	P	Q	Collet Model	Weight (kg)
HSK-A63-AG45/NBS10-230	802.698	1	1.5 - 10	30	230	100	90	30	122	20	51.5	NBC10	5.60
HSK-A63-AG45/NBS13-235	802.700	1	2.5 - 13	35	235	105	90	30	127	25	51.5	NBC13	5.70
HSK-A100-AG45/NBS10-270	802.633	2	1.5 - 10	30	270	100	90	30	127	20	51.5	NBC10	12.40
HSK-A100-AG45/NBS13-275	802.636	2	2.5 - 13	35	275	105	90	30	132	25	51.5	NBC13	12.50

1. Nut and wrench are included.
2. New Baby Collet is to be ordered separately.
3. New Baby Collet for endmilling (NBC - EAA) can not be used.
4. Coolant can be supplied through the locating pin.
5. Coolant pipe (CL) is to be ordered separately.
6. Exclusive Stop Block is required.
7. „CP" indicates compression.
8. „ØF" indicates the minimum dimension for access into the bore.
9. Article No. is with S = 110. S = 80 type is also available upon request.

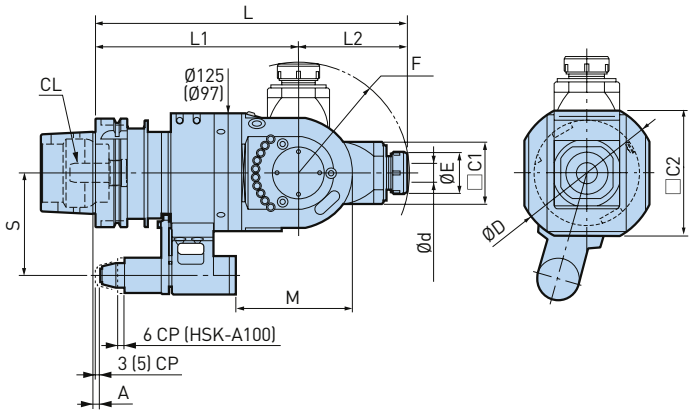
High rigidity S type with reinforced Locating Pin part is also available. Add the letter S at the end when ordering.

Accessories & Spare Parts

New Baby Collets	New Baby Wrenches	Semi-Finished Stop Blocks
▶ 360	▶ 385	▶ 413

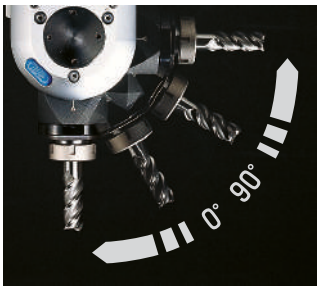
Angle Head Universal Type

Suitable for cutting angles between 0°and 90°. In addition to that the cutter head can be rotated a full 360°, increasing flexibility!



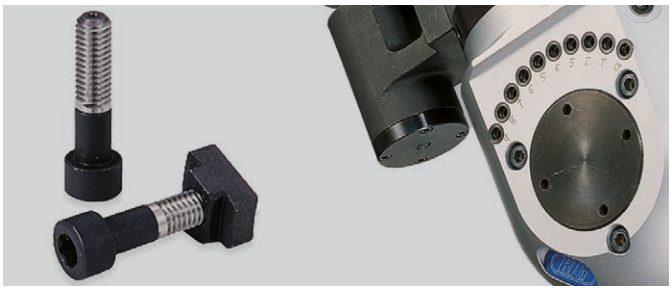
Model	Article No.	Ød	ØD	ØE	L	L1	L2	C1	C2	M	F	S	max. min-1	Collet Model	Weight (kg)
HSK-A63-AGU/NBS13-285	802.734	2.5 - 13	115	35	285	185	100	51	97	124	102	65	6,000	NBC13	9.60
HSK-A100-AGU/NBS20-325	802.695	2.5 - 20	140	46	325	210	115	65	125	125	118	110	4,000	NBC20	20.00

1. Exclusive Stop Block is required.
2. Figures in ( ) in the drawing indicate dimensions for HSK-A63.
3. Nut and wrench are included.
4. New Baby Collet is to be ordered separately.
5. Coolant can be supplied through the locating pin.
6. Coolant pipe (CL) is to be ordered separately.
7. „CP" indicates compression.



Easily adjustable spindle angle from 0° to 90°.

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



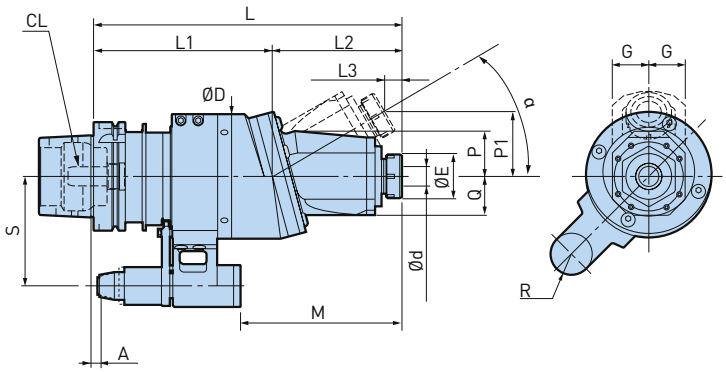
Specially selected materials and special design for clamping the head guarantees rigidity for even end milling applications.

Accessories & Spare Parts

New Baby Collets	Semi-Finished Stop Blocks
▶ 360	▶ 413

Angle Head AGU30 Type

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

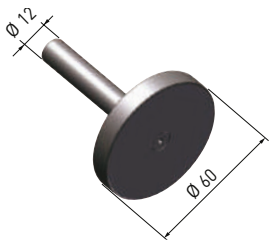


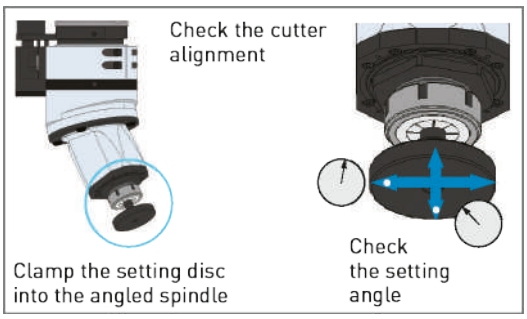
Model	Article No.	Ød	ØD	ØE	L	L1	L2	L3	G	Q	P	P1 max.	R	S	max. min-1	Collet Model	Weight (kg)
HSK-A63-AGU30/NBS13-255	802.735	2.5 - 13	97	35	255	150	105	14	29	30	34	52.5	18	65	6,000	NBC13	6.80
HSK-A100-AGU30/NBS20-305	802.696	2.5 - 20	125	46	305	175	130	17	36.5	39	45	65	21	110	4,000	NBC20	15.30

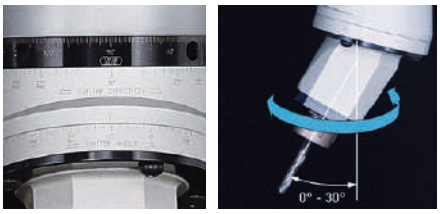
1. Exclusive Stop Block is required.
2. Standard fixed length A is 6 mm for HSK-A100 and 8 mm for HSK-A63. Other lengths are available upon request.
3. New Baby Nut, wrench and setting disc are included.
4. Coolant can be supplied through the locating pin.
5. Coolant pipe (CL) is to be ordered separately.

Setting Disc (included accessory)

For precise adjustment of the spindle angle or direction.







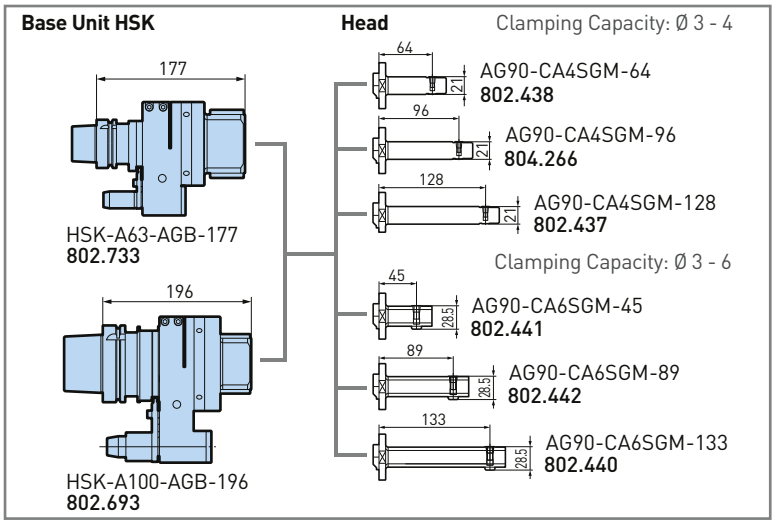
Spindle angle is easily adjustable from 0° to 30° using the scale indication on the body.

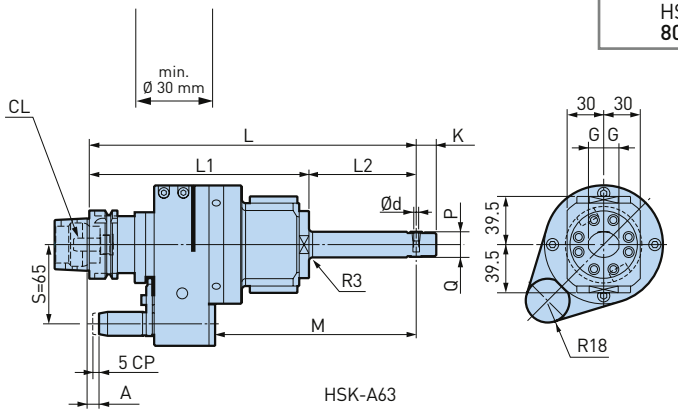
Accessories & Spare Parts

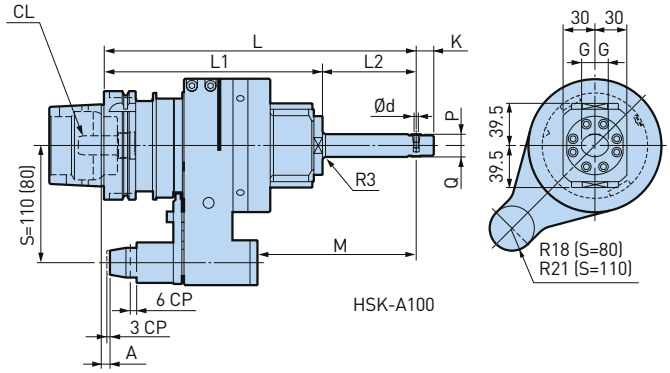
New Baby Collets	Semi-Finished Stop Blocks
▶ 360	▶ 413

Small Bore Type

Angular operation from a Ø 30 mm bore is possible. Modular heads enhance versatility. Head is aligned with spindle center for easy programming.







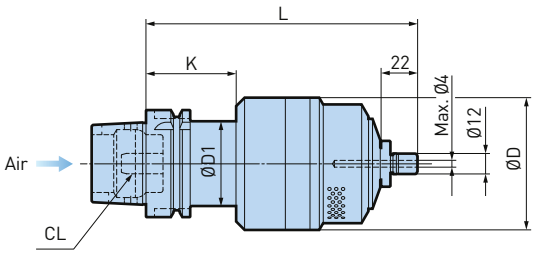
Model	Article No.	Base Unit	Head	Ød	L	L1	L2	G	K	M	P	Q	Ratio	Weight (kg)
HSK-A63-AG90-CA4SGM-241	802.727	HSK-A63-AGB-177	AG90-CA4SGM-64	3 - 4	241	185	56	12.5	16.5	133	10.5	10.5	1:1.06	5.50
HSK-A63-AG90-CA4SGM-273	802.728	HSK-A63-AGB-177	AG90-CA4SGM-96	3 - 4	273	185	88	12.5	16.5	165	10.5	10.5	1:1.06	5.60
HSK-A63-AG90-CA4SGM-305	802.729	HSK-A63-AGB-177	AG90-CA4SGM-128	3 - 4	305	185	120	12.5	16.5	197	10.5	10.5	1:1.06	5.70
HSK-A63-AG90-CA6SGM-222	802.730	HSK-A63-AGB-177	AG90-CA6SGM-45	3 - 6	222	185	37	15	20	114	12.5	16	1:0.77	5.60
HSK-A63-AG90-CA6SGM-266	802.731	HSK-A63-AGB-177	AG90-CA6SGM-89	3 - 6	266	185	81	15	20	158	12.5	16	1:0.77	5.80
HSK-A63-AG90-CA6SGM-310	802.732	HSK-A63-AGB-177	AG90-CA6SGM-133	3 - 6	310	185	125	15	20	202	12.5	16	1:0.77	6.00
HSK-A100-AG90-CA4SGM-260	802.680	HSK-A100-AGB-196	AG90-CA4SGM-64	3 - 4	260	204	56	12.5	16.5	117	10.5	10.5	1:1.06	11.10
HSK-A100-AG90-CA4SGM-292	802.682	HSK-A100-AGB-196	AG90-CA4SGM-96	3 - 4	292	204	88	12.5	16.5	149	10.5	10.5	1:1.06	11.20
HSK-A100-AG90-CA4SGM-324	802.684	HSK-A100-AGB-196	AG90-CA4SGM-128	3 - 4	324	204	120	12.5	16.5	181	10.5	10.5	1:1.06	11.30
HSK-A100-AG90-CA6SGM-241	802.686	HSK-A100-AGB-196	AG90-CA6SGM-45	3 - 6	241	204	37	15	20	98	12.5	16	1:0.77	11.20
HSK-A100-AG90-CA6SGM-285	802.688	HSK-A100-AGB-196	AG90-CA6SGM-89	3 - 6	285	204	81	15	20	145	12.5	16	1:0.77	11.40
HSK-A100-AG90-CA6SGM-329	802.690	HSK-A100-AGB-196	AG90-CA6SGM-133	3 - 6	329	204	125	15	20	186	12.5	16	1:0.77	11.60

1. Standard fixed length A is 6 mm for HSK-A100 and 8 mm for HSK-A63. Other lengths are available upon request.
2. Article No. for HSK-A100 is with S = 110. S = 80 type for HSK-A100 is also available upon request.
3. Coolant-through hole is not available.
4. Exclusive collet is to be ordered separately.
5. Coolant pipe (CL) is to be ordered separately.
6. Exclusive Stop Block is required.
7. „CP" indicates compression.
8. max. 2000 min-1

Accessories & Spare Parts

Semi-Finished Stop Blocks	Collet for Angle Head
▶ 413	▶ 400

Air Turbine Spindle Center Through Type



A.3

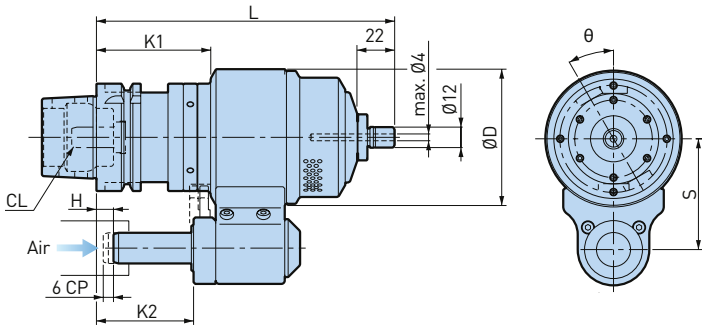
Model	Article No.	Operation Speed (min-1)	ØD	ØD1	L	K	Nut Model	Weight (kg)
HSK-A63-RBX5C-4S-160	965.506	40,000 - 50,000	96	50	160	53	MGN4S	3.90
HSK-A63-RBX7C-4S-160	965.505	60,000 - 80,000	78	50	160	53	MGN4S	2.90
HSK-A100-RBX5C-4S-165	802.427	40,000 - 50,000	96	68	165	58	MGN4S	5.90
HSK-A100-RBX7C-4S-165	802.430	60,000 - 80,000	78	68	165	58	MGN4S	4.90

1. Nut and wrench are included.
2. Collet (NBC4S-_) and XF1 (air unit) are to be ordered separately.
3. Coolant pipe (CL) is to be ordered separately.
4. Dry and clean air is an essential condition for the use of this product. Therefore, coolant should never be supplied through the spindle of the machine using the Air Turbine Spindle.

Accessories & Spare Parts

MEGA Nuts	Micro Collets	MEGA Wrenches	Air Filter Regulator for RBX
▶ 358	▶ 356	▶ 384	▶ 400

Air Turbine Spindle



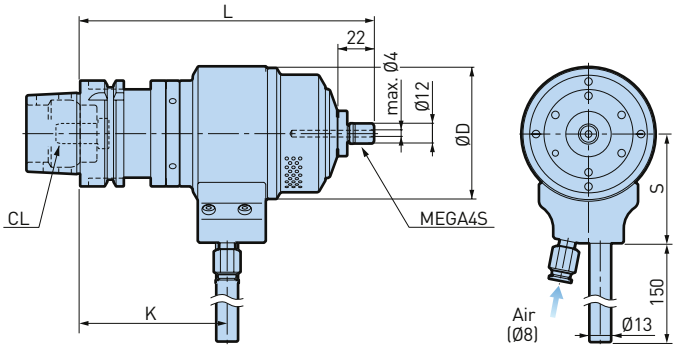
Model	Article No.	Operation Speed (min-1)	ØD	L	K1	K2	S	H	Nut Model	Weight (kg)
HSK-A63-RBX5-4S-175-65	802.431	40,000 - 50,000	96	175	67	57	65	0 - 45	MGN4S	4.80
HSK-A63-RBX7-4S-175-65	802.433	60,000 - 80,000	80	175	67	57	65	0 - 45	MGN4S	3.80
HSK-A100-RBX5-4S-180-80	802.425	40,000 - 50,000	100	180	72	62	80	5 - 50	MGN4S	9.40
HSK-A100-RBX7-4S-180-80	802.428	60,000 - 80,000	100	180	72	62	80	5 - 50	MGN4S	8.40

1. Exclusive Stop Block is required.
2. Nut and wrench are included.
3. Collet (NBC4S-_) and XF1 (air unit) are to be ordered separately.
4. Coolant pipe (CL) is to be ordered separately.
5. Dry and clean air is an essential condition for the use of this product. Therefore, coolant should never be supplied through the spindle of the machine using the Air Turbine Spindle.
6. „CP" indicates compression.
7. θ: Drive grooves adjustable 0 - 360°.

Accessories & Spare Parts

MEGA Nuts	Micro Collets	MEGA Wrenches	Semi-Finished Stop Blocks	Air Filter Regulator for RBX
▶ 358	▶ 356	▶ 384	▶ 413	▶ 400

Air Turbine Spindle Manual Type



Model	Article No.	Operation Speed (min-1)	ØD	L	K	S	Nut Model	Weight (kg)
HSK-A63-RBX5-4S-175H	802.432	40,000 - 50,000	96	175	87	65	MGN4S	4.80
HSK-A63-RBX7-4S-175H	802.434	60,000 - 80,000	80	175	87	65	MGN4S	3.80
HSK-A100-RBX5-4S-180H	802.426	40,000 - 50,000	100	180	92	80	MGN4S	9.40
HSK-A100-RBX7-4S-180H	802.429	60,000 - 80,000	100	180	92	80	MGN4S	8.40

1. Nut and wrench are included.
2. Collet (NBC4S-_) and XF1 (air unit) are to be ordered separately.
3. Dry and clean air is an essential condition for the use of this product. Therefore, coolant should never be supplied through the spindle of the machine using the Air Turbine Spindle.
4. Coolant pipe (CL) is to be ordered separately.

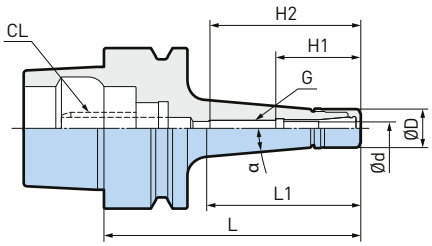
Accessories & Spare Parts

MEGA Nuts	Micro Collets	MEGA Wrenches	Air Filter Regulator for RBX
▶ 358	▶ 356	▶ 384	▶ 400

MEGA Micro Chuck Type T

Tapered and slim design, minimal interference combined with maximized rigidity.

Coolant Through Hole



A.3

ø0.45 - 8.05mm

Model	Article No.	Ød	ØD	L	L1	H1	H2	G	α	max. min-1	Collet Model	Weight (kg)
HSK-E25-MEGA3S-45T *	968.870	0.45 - 3.25	10	45	32	22	32	-	5°	43,000	NBC3S	0.06
HSK-E25-MEGA3S-60T	968.871	0.45 - 3.25	10	60	48	22	38	M4 P0.7	5°	34,000	NBC3S	0.08
HSK-E25-MEGA4S-45T *	968.872	0,45 - 4,05	12	45	33	26.5	32	-	5°	43,000	NBC4S	0.06
HSK-E25-MEGA4S-60T	968.873	0,45 - 4,05	12	60	49	26.5	41	M5 P0.8	5°	40,000	NBC4S	0.09
HSK-E25-MEGA6S-45T *	968.874	0.45 - 6.05	14	45	33	28.5	31	-	5°	43,000	NBC6S	0.08
HSK-E25-MEGA6S-60T	968.875	0.45 - 6.05	14	60	49	28.5	40	M7 P0.75	5°	40,000	NBC6S	0.09
HSK-E32-MEGA3S-60T	968.917	0.45 - 3.25	10	60	35	22	38	M4 P0.7	5°	40,000	NBC3S	0.15
HSK-E32-MEGA3S-75T	968.918	0,45 - 3,25	10	75	50	22	38	M4 P0.7	5°	32,000	NBC3S	0.17
HSK-E32-MEGA4S-45T *	968.880	0.45 - 4.05	12	45	23	26.5	26	-	5°	46,000	NBC4S	0.14
HSK-E32-MEGA4S-60T	968.881	0.45 - 4.05	12	60	35	26.5	46	M5 P0.8	5°	40,000	NBC4S	0.16
HSK-E32-MEGA6S-45T *	968.882	0.45 - 6.05	14	45	23	28.5	28	-	5°	46,000	NBC6S	0.14
HSK-E32-MEGA6S-60T	968.883	0.45 - 6.05	14	60	36	28.5	38	M7 P0.75	5°	40,000	NBC6S	0.16
HSK-E32-MEGA8S-60T *	803.604	2.95 - 8.05	18	60	38	31	43	-	5°	30,000	NBC8S	0.18
HSK-E40-MEGA3S-60T	968.919	0.45 - 3.25	10	60	35	22	39	M4 P0.7	5°	37,000	NBC3S	0.23
HSK-E40-MEGA3S-75T	968.920	0.45 - 3.25	10	75	50	22	38	M4 P0.7	5°	27,000	NBC3S	0.25
HSK-E40-MEGA4S-60T	968.890	0.45 - 4.05	12	60	35	26.5	44	M5 P0.8	5°	37,000	NBC4S	0.24
HSK-E40-MEGA4S-75T	968.891	0.45 - 4.05	12	75	50	26.5	47	M5 P0.8	5°	32,000	NBC4S	0.27
HSK-E40-MEGA6S-60T *	968.892	0.45 - 6.05	14	60	35	28.5	42	-	5°	37,000	NBC6S	0.24
HSK-E40-MEGA6S-75T	968.893	0.45 - 6.05	14	75	50	28.5	49	M7 P0.75	5°	36,000	NBC6S	0.27
HSK-E40-MEGA6S-90T	968.894	0.45 - 6.05	14	90	65	28.5	49	M7 P0.75	5°	29,000	NBC6S	0.32
HSK-E50-MEGA3S-80T	968.921	0,45 - 3,25	10	80	49	22	38	M4 P0.7	5°	33,000	NBC3S	0.45
HSK-E50-MEGA4S-80T	968.906	0,45 - 4,05	12	80	48	26,5	47	M5 P0.8	5°	40,000	NBC4S	0.47
HSK-E50-MEGA6S-80T	968.907	0.45 - 6.05	14	80	49	28.5	49	M7 P0.75	5°	40,000	NBC6S	0.47

1. MEGA nut is included in delivery.
2. * Internal thread (G) is not available.
3. Coolant pipe (CL) is to be ordered separately.

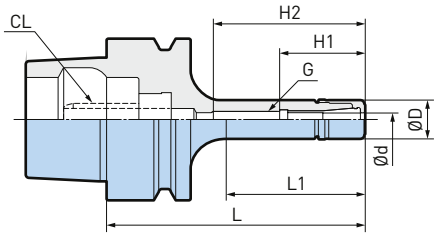
Accessories & Spare Parts

MEGA Nuts	Micro Seal Nuts	Micro Collets	MEGA Wrenches	Taper Cleaners	Collet Protective Cases	Coolant Pipes
▶ 358	▶ 358	▶ 356	▶ 384	▶ 404	▶ 359	▶ 264

MEGA Micro Chuck Type S

Micro diameter design is ideal for high speed applications in tight areas.

Coolant Through Hole



A.3

ø0.45 - 6.05mm

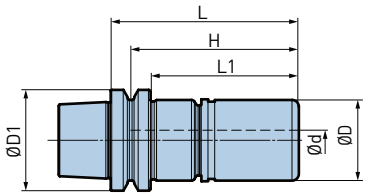
Model	Article No.	Ød	ØD	L	L1	H1	H2	G	max. min-1	Collet Model	Weight (kg)
HSK-E25-MEGA4S-45 *	968.866	0,45 - 4,05	12	45	31	26,5	32	-	43,000	NBC4S	0.06
HSK-E25-MEGA4S-60	968.867	0,45 - 4,05	12	60	46	26,5	42	M5 P0.8	40,000	NBC4S	0.07
HSK-E25-MEGA6S-45 *	968.868	0.45 - 6.05	14	45	32	28	31	-	43,000	NBC6S	0.06
HSK-E25-MEGA6S-60	968.869	0.45 - 6.05	14	60	47	28.5	41	M7 P0.75	40,000	NBC6S	0.08
HSK-E32-MEGA3S-45 *	968.914	0.45 - 3.25	10	45	23	22	31	-	46,000	NBC3S	0.13
HSK-E32-MEGA4S-45	968.876	0.45 - 4.05	12	45	22	26.5	31	M5 P0.8	46,000	NBC4S	0.14
HSK-E32-MEGA4S-60	968.877	0.45 - 4.05	12	60	34	26.5	46	M5 P0.8	40,000	NBC4S	0.15
HSK-E32-MEGA6S-45 *	968.878	0.45 - 6.05	14	45	22	28.5	28	-	46,000	NBC6S	0.14
HSK-E32-MEGA6S-60	968.879	0.45 - 6.05	14	60	35	28.5	38	M7 P0.75	40,000	NBC6S	0.15
HSK-E40-MEGA3S-40 *	968.915	0.45 - 3.25	10	40	19	22	24	-	38,000	NBC3S	0.21
HSK-E40-MEGA4S-60	968.756	0,45 - 4,05	12	60	34	26,5	44	M5 P0.8	33,000	NBC4S	0.23
HSK-E40-MEGA6S-45 *	968.716	0.45 - 6.05	14	45	23	27.5	27	-	37,000	NBC6S	0.23
HSK-E40-MEGA6S-60 *	968.757	0.45 - 6.05	14	60	35	28.5	42	-	37,000	NBC6S	0.24
HSK-E50-MEGA3S-50	968.916	0,45 - 3,25	10	50	20	22	30	-	41,000	NBC3S	0.41
HSK-E50-MEGA4S-50	968.725	0,45 - 4,05	12	50	21	26,5	30	-	41,000	NBC4S	0.42
HSK-E50-MEGA4S-80	968.759	0,45 - 4,05	12	80	44	26,5	47	M5 P0.8	27,000	NBC4S	0.45
HSK-E50-MEGA6S-55 *	978.100	0.45 - 6.05	14	55	26	28.5	35	-	41,000	NBC6S	0.41
HSK-E50-MEGA6S-80	968.760	0.45 - 6.05	14	80	44	28.5	49	M7 P0.75	31,000	NBC6S	0.46

1. MEGA nut is included in delivery.
2. Coolant pipe (CL) is to be ordered separately.
3. * Internal thread (G) is not available.

Accessories & Spare Parts

MEGA Nuts	Micro Seal Nuts	Micro Collets	MEGA Wrenches	Taper Cleaners	Collet Protective Cases	Coolant Pipes
▶ 358	▶ 358	▶ 356	▶ 384	▶ 404	▶ 359	▶ 264

HSK-EZ15 MEGA Micro Chuck



Model	Article No.	Ød	ØD	ØD1	L	L1	H	Collet Model	Nut Model	Weight (kg)
HSK-EZ15-MEGA3S-25	-	0.45 - 3.25	10	15	25	18	22	NBC3S-	MGN3S	0.30
HSK-EZ15-MEGA4S-28	-	0.45 - 4.05	12	15	28	21	25	NBC4S-	MGN4S	0.30
HSK-EZ15-MEGA6S-30	-	0.45 - 6.05	14	15	30	23	27	NBC6S-	MGN6S	0.30

1. MEGA nut is included in delivery.
2. "H" is the max. tool shank length that can be inserted for these models.
3. Collet and wrench are to be ordered separately.

Accessories & Spare Parts

Micro Collets	MEGA Torque Wrench
► 356	► 385

MEGA New Baby Chuck

Ideal ultra precision collet holders for high speed machining. Wide range of lengths and a variety of collet series covers all machining applications.

Coolant Through Hole

A.3

ø0.25 - 20mm

Model	Article No.	Fig.	Ød	ØD	L	L1	H	max. min-1	Collet Model	Weight (kg)
HSK-E25-MEGA6N-40 *	968.752	1	0.25 - 6	20	40	29	25	30,000	NBC6	0.09
HSK-E25-MEGA8N-45 *	968.753	2	0.5 - 8	25	45	-	30	25,000	NBC8	0.12
HSK-E25-MEGA10N-60 **	968.754	2	1.5 - 10	30	60	-	45	20,000	NBC10	0.19
HSK-E32-MEGA6N-45 *	968.884	1	0.25 - 6	20	45	24	28	35,000	NBC6	0.16
HSK-E32-MEGA6N-60	968.885	1	0.25 - 6	20	60	37	23 - 27	34,000	NBC6	0.19
HSK-E32-MEGA8N-50 *	968.886	1	0.5 - 8	25	50	29	33	34,000	NBC8	0.20
HSK-E32-MEGA8N-65	968.887	1	0,5 - 8	25	65	44	26 - 32	33,000	NBC8	0.24
HSK-E32-MEGA10N-65 *	968.888	2	1.5 - 10	30	65	-	47	28,000	NBC10	0.27
HSK-E32-MEGA13N-70 *	968.889	2	2.5 - 13	35	70	-	44	23,000	NBC13	0.31
HSK-E40-MEGA6N-50 *	968.717	1	0.25 - 6	20	50	26	31	37,000	NBC6	0.26
HSK-E40-MEGA6N-60	968.895	1	0.25 - 6	20	60	34	23 - 26	35,000	NBC6	0.28
HSK-E40-MEGA6N-75	968.718	1	0.25 - 6	20	75	49	23 - 41	30,000	NBC6	0.31
HSK-E40-MEGA6N-90	968.896	1	0.25 - 6	20	90	64	23 - 43	28,000	NBC6	0.34
HSK-E40-MEGA6N-120	968.897	1	0.25 - 6	20	120	94	23 - 43	20,000	NBC6	0.40
HSK-E40-MEGA8N-55 *	968.719	1	0.5 - 8	25	55	31	36	36,000	NBC8	0.30
HSK-E40-MEGA8N-75	968.720	1	0.5 - 8	25	75	51	26 - 41	30,000	NBC8	0.36
HSK-E40-MEGA8N-90	968.898	1	0,5 - 8	25	90	66	26 - 45	28,000	NBC 8	0.41
HSK-E40-MEGA10N-60 *	968.721	1	1.5 - 10	30	60	37	40	35,000	NBC10	0.35
HSK-E40-MEGA10N-75 *	968.899	1	1.5 - 10	30	75	52	55	30,000	NBC10	0.42
HSK-E40-MEGA10N-90	968.722	1	1.5 - 10	30	90	67	38 - 48	28,000	NBC10	0.49
HSK-E40-MEGA13N-65 *	968.900	1	2.5 - 13	35	65	44	44	30,000	NBC13	0.42
HSK-E40-MEGA13N-75	968.723	1	2.5 - 13	35	75	54	55	25,000	NBC13	0.48
HSK-E40-MEGA13N-90	968.901	1	2.5 - 13	35	90	69	44 - 48	25,000	NBC13	0.57
HSK-E40-MEGA13N-120	968.902	1	2,5 - 13	35	120	99	44 - 63	20,000	NBC13	0.80
HSK-E40-MEGA13N-150	968.903	1	2,5 - 13	35	150	129	44 - 63	15,000	NBC13	0.95
HSK-E40-MEGA16N-65	968.904	2	2,5 - 16	42	65	-	46	25,000	NBC16	0.46
HSK-E40-MEGA16N-75 *	968.905	2	2.5 - 16	42	75	-	48	20,000	NBC16	0.55

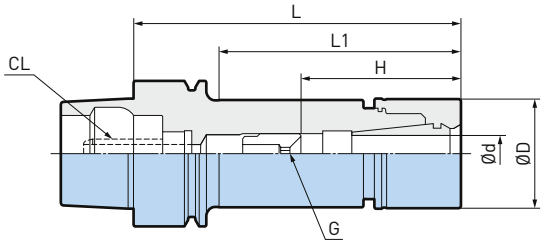


Fig. 1

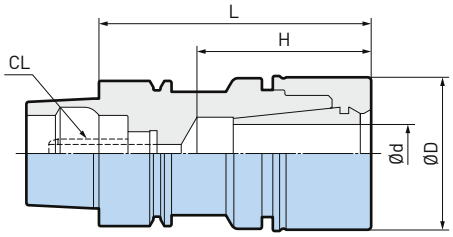


Fig. 2

Model	Article No.	Fig.	Ød	ØD	L	L1	H	max. min-1	Collet Model	Weight (kg)
HSK-E50-MEGA6N-55 *	968.727	1	0,25 - 6	20	55	27	35	40,000	NBC6	0.50
HSK-E50-MEGA6N-70	968.728	1	0.25 - 6	20	70	38	23 - 39	30,000	NBC6	0.50
HSK-E50-MEGA6N-100	968.761	1	0,25 - 6	20	100	64	23 - 43	25,000	NBC6	0.60
HSK-E50-MEGA8N-60 *	968.729	1	0.5 - 8	25	60	30	37	40,000	NBC8	0.50
HSK-E50-MEGA8N-90	968.730	1	0.5 - 8	25	90	56	26 - 45	30,000	NBC8	0.60
HSK-E50-MEGA10N-60 **	968.731	1	1.5 - 10	30	60	30	35	35,000	NBC10	0.60
HSK-E50-MEGA10N-90	968.732	1	1,5 - 10	30	90	58	38 - 48	30,000	NBC10	0.70
HSK-E50-MEGA13N-70 *	968.733	1	2.5 - 13	35	70	40	45	28,000	NBC13	0.70
HSK-E50-MEGA13N-90	968.734	1	2.5 - 13	35	90	60	44 - 47	25,000	NBC13	0.80
HSK-E50-MEGA13N-120	968.763	1	2,5 - 13	35	120	90	44 - 63	20,000	NBC13	1.00
HSK-E50-MEGA13N-150	968.910	1	2.5 - 13	35	150	120	44 - 63	15,000	NBC13	1.00
HSK-E50-MEGA16N-75 *	968.735	1	2,5 - 16	42	75	48	52	28,000	NBC16	0.80
HSK-E50-MEGA16N-90 *	968.736	1	2.5 - 16	42	90	63	65	25,000	NBC16	0.90
HSK-E50-MEGA20N-75 **	968.764	2	2.5 - 20	46	75	-	49	25,000	NBC20	0.80
HSK-E50-MEGA20N-100	968.911	2	2.5 - 20	46	100	-	51 - 54	20,000	NBC20	1.10
HSK-E50-MEGA20N-130	968.912	2	2,5 - 20	46	130	-	51 - 68	18,000	NBC20	1.30

1. MEGA nut is included in delivery.
2. Coolant pipe (CL) is to be ordered separately.
3. * Adjusting screw cannot be used.
4. ** NBC-E collet and adjusting screw can not be used.
5. "G" is the adjusting screw (optional).
6. "H" is the max. tool shank length that can be inserted for these models.

Accessories & Spare Parts

MEGA Nuts	MEGA Perfect Seals	New Baby Collets	MEGA Wrenches	Adjusting Screws NBA	Taper Cleaners	Coolant Pipes
▶ 367	▶ 368	▶ 360	▶ 384	▶ 367	▶ 404	▶ 264

Hydraulic Chuck Super Slim

Ultra precise hydraulic chuck with extremely slim design.

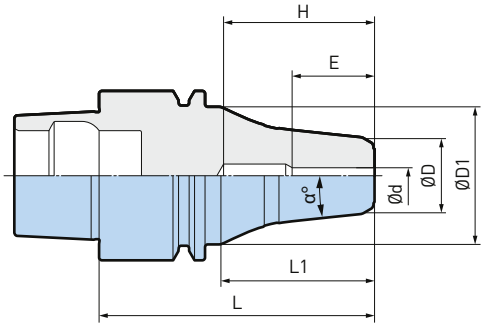


Fig. 1

ø3 - 12mm

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	E	α	H	max. min-1	Weight (kg)
HSK-E25-HDC3.175S-40	807.116	1	3.175	14	20	-	40	27	-	16	6°	22	60,000	0.09
HSK-E25-HDC3S-40	806.430	1	3	14	20	-	40	27	-	16	6°	22	60,000	0.09
HSK-E25-HDC4S-40	806.431	1	4	14	20	-	40	27	-	16	6°	21	60,000	0.09
HSK-E25-HDC6S-45	806.734	1	6	14	23	-	45	31	-	16	8°	26	60,000	0.10
HSK-E32-HDC3.175S-52	807.117	1	3.175	14	26	-	52	29	-	16	6°	28	45,000	0.19
HSK-E32-HDC3S-52	805.471	1	3	14	26	-	52	29	-	16	6°	28	45,000	0.19
HSK-E32-HDC4S-52	805.472	1	4	14	26	-	52	29	-	19	6°	28	45,000	0.19
HSK-E32-HDC6S-57	805.473	1	6	14	26	-	57	34	-	25	6°	33	45,000	0.19

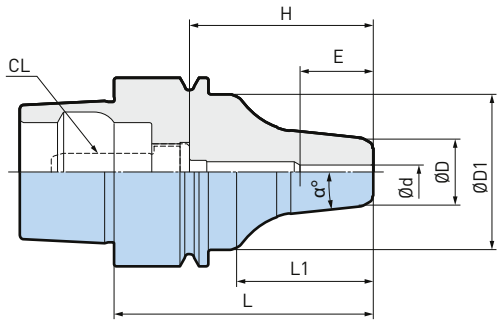


Fig. 2

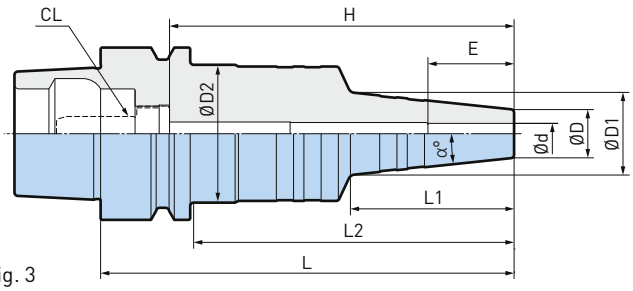


Fig. 3

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	E	α	H	max. min-1	Weight (kg)
HSK-E40-HDC3.175S-55	807.118	2	3.175	14	33	-	55	29	-	16	6°	39	42,000	0.19
HSK-E40-HDC3S-55	805.474	2	3	14	33	-	55	29	-	16	6°	39	42,000	0.29
HSK-E40-HDC4S-55	805.475	2	4	14	33	-	55	29	-	19	6°	39	42,000	0.29
HSK-E40-HDC4S-75	100132.007.0	2	4	14	33	-	75	40	-	19	6°	59	40,000	0.37
HSK-E40-HDC6S-60	805.476	2	6	14	33	-	60	34	-	25	6°	40	42,000	0.30
HSK-E40-HDC6S-75	100132.008.0	2	6	14	33	-	75	40	-	25	6°	48	40,000	0.36
HSK-E40-HDC8S-65	807.252	2	8	17	33	-	65	39	-	31	6°	39	40,000	0.30
HSK-E40-HDC10S-70	807.168	2	10	19	33	-	70	40	-	33	6°	42	38,000	0.36
HSK-E40-HDC12S-70	807.253	2	12	21	33	-	70	40	-	36	6°	42	38,000	0.37
HSK-E50-HDC4S-120	807.115	3	4	14	24	40	120	47	93	19	6°	100	30,000	0.90
HSK-E50-HDC6S-120	807.088	3	6	14	24	40	120	47	93	25	6°	100	30,000	0.90
HSK-E50-HDC8S-120	807.089	3	8	17	28	40	120	48	93	31	6°	85	30,000	0.90
HSK-E50-HDC10S-120	807.090	3	10	19	30	40	120	48	93	33	6°	85	30,000	1.00
HSK-E50-HDC12S-120	807.091	3	12	21	32	40	120	49	93	36	6°	85	30,000	1.00

1. Adjusting screw cannot be used.
2. "E" is the min. clamping length.
3. "H" is the max. tool shank length that can be inserted for these models.
4. Center through coolant is available for HSK-E40 and HSK-E50.

Caution

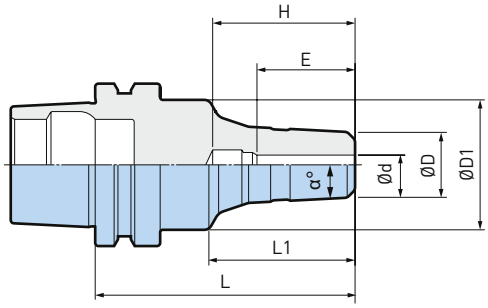
- Use only cutting tools that have a shank tolerance within h6.
- Roughing endmills are not recommended for use with hydraulic chucks.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)
- Do not tighten the clamping screw without first inserting a cutting tool into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

Accessories & Spare Parts

α Wiper Cleaners	Coolant Pipes
▶ 404	▶ 264

Hydraulic Chuck Extra Slim

Slim design hydraulic chuck minimizes workpiece interference.



A.3

ø3 - 4mm

Model	Article No.	Ød	ØD	ØD1	L	L1	α	E	H	max. min-1	Weight (kg)
HSK-E25-HDC3XS-40	101144.001.0	3	10	20	40	22.5	3°	16	22	60,000	0.07
HSK-E25-HDC4XS-40	101144.002.0	4	10	20	40	22.5	3°	16	22	60,000	0.07

1. Adjusting screw cannot be used.
2. "E" is the min. clamping length.
3. "H" is the max. tool shank length that can be inserted for these models.
4. Center through coolant is not available.

Accessories & Spare Parts

α Wiper Cleaners

▶ 404

Hydraulic Chuck Ultra Precision Type

The most accurate hydraulic chuck made is based on decades of experience and know-how.
Guaranteed runout of less than 1µm in 4D.

1µm ULTRA PRECISION

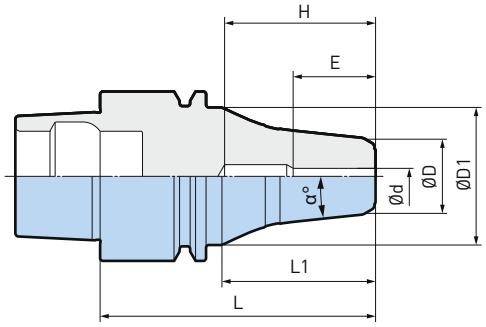


Fig. 1

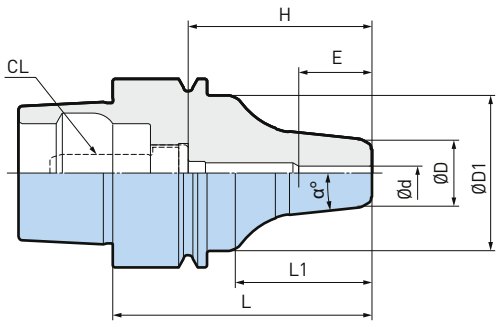


Fig. 2

ø3 - 6mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	α	E	H	max. min-1	Weight (kg)
HSK-E25-HDC3S-40UP	806.907	1	3	14	20	40	27	6°	16	22	60,000	0.09
HSK-E25-HDC4S-40UP	806.908	1	4	14	20	40	27	6°	16	21	60,000	0.09
HSK-E25-HDC6S-45UP	807.120	1	6	14	23	45	31	8°	21	26	60,000	0.10
HSK-E32-HDC3S-52UP	806.909	1	3	14	26	52	29	6°	16	28	45,000	0.18
HSK-E32-HDC4S-52UP	806.910	1	4	14	26	52	29	6°	19	28	45,000	0.19
HSK-E32-HDC6S-57UP	806.911	1	6	14	26	57	34	6°	25	33	45,000	0.19
HSK-E40-HDC3S-55UP	807.123	2	3	14	33	55	29	6°	16	39	42,000	0.29
HSK-E40-HDC4S-55UP	807.125	2	4	14	33	55	29	6°	19	39	42,000	0.29
HSK-E40-HDC6S-60UP	807.126	2	6	14	33	60	34	6°	25	40	42,000	0.30

1. Coolant pipe (CL) is to be ordered separately.
2. Adjusting screw cannot be used.
3. "E" is the min. clamping length.
4. "H" is the max. tool shank length that can be inserted for these models.
5. Center through coolant is available for HSK-E40.

Caution

- 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.

Accessories & Spare Parts

α Wiper Cleaners	Coolant Pipes
▶ 404	▶ 264

Shrink Chuck SRM Slim Type

Renewal of series.
Lineup enables selection and thoroughly ground periphery to support fine machining.

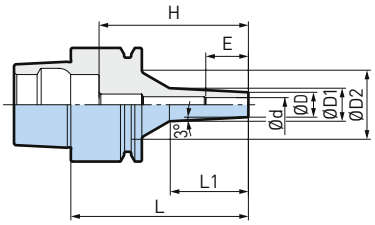


Fig. 1

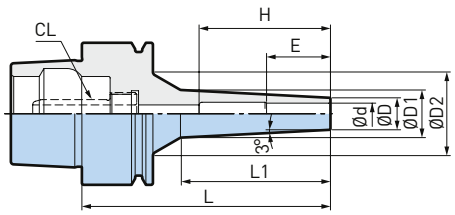


Fig. 2

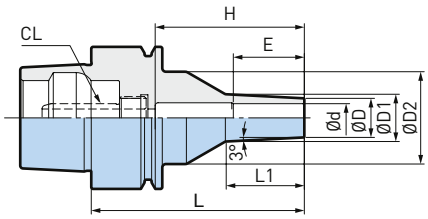


Fig. 3

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	H	E	Weight (kg)
HSK-E25-SRM3.175S-35	-	1	3.175	6.2	8	18.2	35	17	29	9	0.05
HSK-E25-SRM3S-35	-	1	3	6	7.8	18	35	17	29	9	0.05
HSK-E25-SRM3.175S-50	-	1	3.175	6.2	9.6	19.7	50	32	44	9	0.06
HSK-E25-SRM3S-50	-	1	3	6	9.4	19.5	50	32	44	9	0.06
HSK-E25-SRM4S-35	-	1	4	7	8.8	19	35	17	29	12	0.05
HSK-E25-SRM4S-50	-	1	4	7	10.4	17.6	50	32	44	12	0.06
HSK-E25-SRM6S-35	-	1	6	9	10.8	18	35	17	29	18	0.05
HSK-E32-SRM3.175S-50	-	1	3.175	6.2	8.5	18.7	50	22	42	9	0.14
HSK-E32-SRM3S-50	-	1	3	6	8.3	18.5	50	22	42	9	0.14
HSK-E32-SRM3S-70	-	1	3	6	10.4	20.6	70	42	62	9	0.15
HSK-E32-SRM4S-50	-	1	4	7	9.3	19.5	50	22	42	12	0.14
HSK-E32-SRM4S-70	-	1	4	7	11.4	21.6	70	42	62	12	0.16
HSK-E32-SRM6S-70	-	1	6	9	13.4	23.6	70	42	62	18	0.16
HSK-E40-SRM3.175S-50	-	2	3.175	6.2	8.5	18.7	50	22	34	9	0.22
HSK-E40-SRM3S-50	-	2	3	6	8.3	18.5	50	22	34	9	0.22
HSK-E40-SRM3S-70	-	2	3	6	10.4	20.6	70	42	54	9	0.23
HSK-E40-SRM4S-50	-	2	4	7	9.3	19.5	50	22	34	12	0.22
HSK-E40-SRM4S-70	-	2	4	7	11.4	21.6	70	42	54	12	0.23
HSK-E40-SRM6S-50	-	2	6	9	11.3	21.5	50	22	31	18	0.22
HSK-E40-SRM6S-70	-	2	6	9	13.4	23.6	70	42	36	18	0.24
HSK-E40-SRM8S-60	-	3	8	11	13.3	26	60	22	41	20	0.26
HSK-E40-SRM8S-80	-	3	8	11	15.4	26	80	42	49	20	0.29

1. Use carbide cutter within a tolerance of h6.
2. Please refer to the operation manual of heating / cooling equipment, as some equipment may not be compatible.
3. "H" is the max. tool shank length that can be inserted for these models.
4. "E" is the min. clamping length.

Accessories & Spare Parts

α Wiper Cleaners

▶ 404

Shrink Chuck SRM Standard Type

Renewal of series.
Lineup enables selection and thoroughly ground periphery to support fine machining.

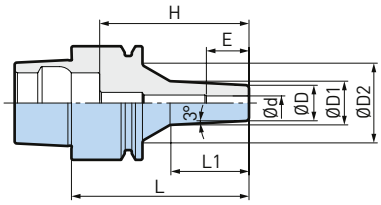


Fig. 1

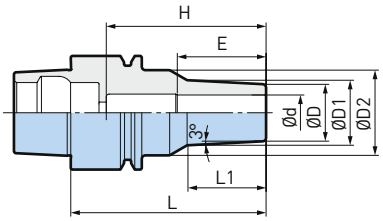


Fig. 2

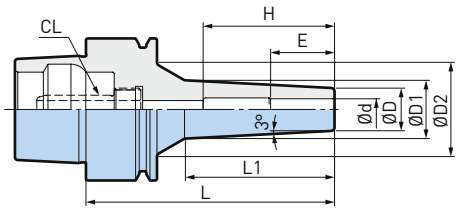


Fig. 3

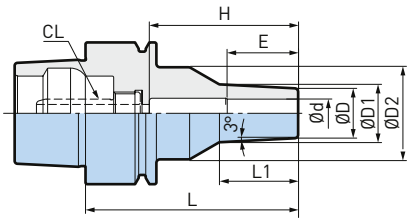


Fig. 4

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	H	E	Weight (kg)
HSK-E25-SRM3-35	-	1	3	7.5	9.3	19.5	35	17	29	9	0.06
HSK-E25-SRM3.175-35	-	1	3.175	7.7	9.5	19.7	35	17	29	9	0.06
HSK-E25-SRM4-35	-	1	4	10	11.8	19	35	17	29	2	0.06
HSK-E25-SRM6-35	-	1	6	12	13.8	19.6	35	17	29	18	0.07
HSK-E32-SRM3-50	-	1	3	7.5	9.8	20	50	22	42	9	0.07
HSK-E32-SRM3.175-50	-	1	3.175	7.7	10	20.2	50	22	42	9	0.15
HSK-E32-SRM3-70	-	1	3	7.5	11.9	22.1	70	42	62	9	0.16
HSK-E32-SRM4-50	-	1	4	10	12.3	22.5	50	22	42	12	0.15
HSK-E32-SRM4-70	-	1	4	10	14.4	24.6	70	42	62	12	0.18
HSK-E32-SRM6-50	-	1	6	12	14.3	24.5	50	22	42	18	0.16
HSK-E32-SRM6-70	-	1	6	12	16.4	26	70	42	62	18	0.19
HSK-E32-SRM8-50	-	1	8	14	16.3	26	50	22	42	20	0.16
HSK-E32-SRM10-55	-	2	10	16	18.3	24	55	22	47	25	0.18
HSK-E32-SRM12-55	-	2	12	20	22.3	24	55	22	45	25	0.19
HSK-E40-SRM3-50	-	3	3	7.5	9.8	20	50	22	34	9	0.22
HSK-E40-SRM3.175-50	-	3	3.175	7.7	10	20.2	50	22	34	9	0.22
HSK-E40-SRM3-70	-	3	3	7.5	11.9	22.1	70	42	54	9	0.24
HSK-E40-SRM4-50	-	3	4	10	12.3	22.5	50	22	34	12	0.23
HSK-E40-SRM4-70	-	3	4	10	14.4	24.6	70	42	54	12	0.25
HSK-E40-SRM6-50	-	3	6	12	14.3	24.5	50	22	31	18	0.24
HSK-E40-SRM6-70	-	3	6	12	16.4	26.6	70	42	36	18	0.26
HSK-E40-SRM8-60	-	4	8	14	16.3	26	60	22	41	20	0.28
HSK-E40-SRM10-65	-	4	10	16	18.3	26	65	22	46	25	0.30
HSK-E40-SRM12-65	-	4	12	20	22.3	26	65	22	46	25	0.31

1. Use carbide cutter within a tolerance of h6.
2. Please refer to the operation manual of heating / cooling equipment, as some equipment may not be compatible.
3. "H" is the max. tool shank length that can be inserted for these models.
4. "E" is the min. clamping length.

Accessories & Spare Parts

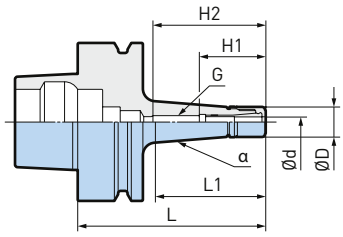
α Wiper Cleaners

▶ 404

MEGA Micro Chuck Type T

Tapered and slim design, minimal interference combined with maximized rigidity.

Coolant Through Hole



A.3

ø0.45 - 8.05mm

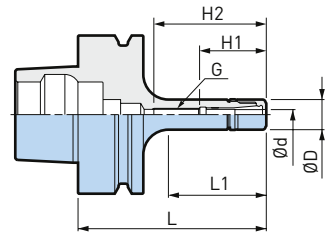
Model	Article No.	Ød	ØD	L	L1	H1	H2	G	α	max. min-1	Collet Model	Weight (kg)
HSK-F63-MEGA4S-75T	803.588	0,45 - 4,05	12	75	44	26,5	41	M5 P0.8	5°	32,000	NBC4S	0.70
HSK-F63-MEGA6S-75T	803.589	0.45 - 6.05	14	75	44	28.5	41	M7 P0.75	5°	32,000	NBC6S	0.70
HSK-F63-MEGA8S-75T	805.576	2.95 - 8.05	18	75	44	31	58	M9 P0.75	5°	32,000	NBC8S	0.80

1. MEGA nut is included in delivery.
2. Coolant pipe (CL) is to be ordered separately.

MEGA Micro Chuck Type S

Slim design for tight spaces.

Coolant Through Hole



ø0.45 - 6.05mm

Model	Article No.	Ød	ØD	L	L1	H1	H2	G	max. min-1	Collet Model	Weight (kg)
HSK-F63-MEGA4S-75	803.586	0,45 - 4,05	12	75	39	26,5	41	M5 P0.8	26,000	NBC4S	0.70
HSK-F63-MEGA4S-105	803.590	0,45 - 4,05	12	105	76	26,5	47	M5 P0.8	14,000	NBC4S	0.70
HSK-F63-MEGA6S-75	803.587	0,45 - 6,05	14	75	46	28,5	41	M7 P0.75	30,000	NBC6S	0.70
HSK-F63-MEGA6S-90	803.592	0.45 - 6.05	14	90	61	28.5	49	M7 P0.75	23,000	NBC6S	0.70
HSK-F63-MEGA6S-105	803.591	0.45 - 6.05	14	105	76	28.5	49	M7 P0.75	18,000	NBC6S	0.80

1. MEGA nut is included in delivery.
2. Coolant pipe (CL) is to be ordered separately.

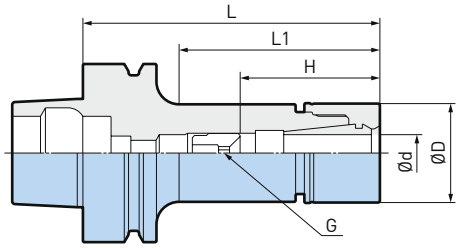
Accessories & Spare Parts

MEGA Nuts	Micro Seal Nuts	Micro Collets	MEGA Wrenches	Taper Cleaners	Collet Protective Cases	Coolant Pipes
▶ 358	▶ 358	▶ 356	▶ 384	▶ 404	▶ 359	▶ 264

MEGA New Baby Chuck

Ideal ultra precision collet holders for high speed machining. Wide range of lengths and a variety of collet series covers all machining applications.

Coolant Through Hole



A.3

ø0.25 - 20mm

Model	Article No.	Ød	ØD	L	L1	H	max. min-1	Collet Model	Weight (kg)
HSK-F40-MEGA6N-60	979.031	0.25 - 6	20	60	34	35	34,000	NBC6	0.26
HSK-F40-MEGA10N-70	978.012	1.5 - 10	30	70	48	44	28,000	NBC10	0.39
HSK-F40-MEGA13N-70	978.013	2.5 - 13	35	70	49	44	25,000	NBC13	0.44
HSK-F40-MEGA16N-75	978.041	2.5 - 16	42	75	-	48	22,000	NBC16	0.54
HSK-F63-MEGA6N-75	978.195	0,25 - 6	20	75	42	23 - 31	35,000	NBC6	0.80
HSK-F63-MEGA6N-90	801.287	0.25 - 6	20	90	53	23 - 43	30,000	NBC6	0.80
HSK-F63-MEGA6N-105	801.286	0,25 - 6	20	105	69	23 - 43	25,000	NBC6	0.90
HSK-F63-MEGA6N-135	801.677	0.25 - 6	20	135	99	23 - 43	19,000	NBC6	0.90
HSK-F63-MEGA8N-75	801.668	0,5 - 8	25	75	43	26 - 38	32,000	NBC8	0.80
HSK-F63-MEGA8N-90	978.199	0.5 - 8	25	90	54	26 - 45	30,000	NBC8	0.90
HSK-F63-MEGA8N-105	801.288	0,5 - 8	25	105	69	26 - 45	30,000	NBC8	0.90
HSK-F63-MEGA8N-120	804.962	0.5 - 8	25	120	84	26 - 45	25,000	NBC8	1.00
HSK-F63-MEGA8N-135	-	0.5 - 8	25	135	99	26 - 45	19,000	NBC8	1.00
HSK-F63-MEGA8N-165	803.631	0,5 - 8	25	165	129	26 - 45	15,000	NBC8	1.10
HSK-F63-MEGA10N-75 *	978.189	1,5 - 10	30	75	43	48	32,000	NBC10	0.90
HSK-F63-MEGA10N-90	978.146	1.5 - 10	30	90	54	38 - 48	30,000	NBC10	1.00
HSK-F63-MEGA10N-105	801.282	1,5 - 10	30	105	69	38 - 48	25,000	NBC10	1.00
HSK-F63-MEGA10N-120	978.152	1.5 - 10	30	120	84	38 - 48	25,000	NBC10	1.10
HSK-F63-MEGA13N-75 *	978.190	2.5 - 13	35	75	43	47	30,000	NBC13	0.90
HSK-F63-MEGA13N-90 *	978.215	2.5 - 13	35	90	56	61	30,000	NBC13	1.00
HSK-F63-MEGA13N-105	801.283	2.5 - 13	35	105	71	44 - 53	25,000	NBC13	1.10
HSK-F63-MEGA13N-120	801.284	2,5 - 13	35	120	86	44 - 63	20,000	NBC13	1.20
HSK-F63-MEGA13N-165	801.285	2,5 - 13	35	165	131	44 - 63	15,000	NBC13	1.50
HSK-F63-MEGA16N-75 *	978.102	2.5 - 16	42	75	43	48	30,000	NBC16	1.00
HSK-F63-MEGA16N-90 *	978.151	2.5 - 16	42	90	58	61	25,000	NBC16	1.20
HSK-F63-MEGA16N-105	978.123	2,5 - 16	42	105	73	48 - 56	20,000	NBC16	1.30
HSK-F63-MEGA20N-75 *	978.047	2.5 - 20	46	75	45	51	30,000	NBC20	1.10
HSK-F63-MEGA20N-90 *	978.147	2.5 - 20	46	90	60	61	25,000	NBC20	1.20
HSK-F63-MEGA20N-105	978.124	2.5 - 20	46	105	75	51 - 58	20,000	NBC20	1.40

1. MEGA nut is included in delivery.
2. * Adjusting screws can not be used.
3. Coolant pipe (CL) is to be ordered separately.
4. "G" is the adjusting screw (optional).
5. "H" is the max. tool shank length that can be inserted for these models.

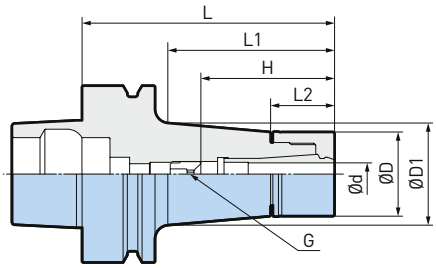
Accessories & Spare Parts

MEGA Nuts	MEGA Perfect Seals	New Baby Collets	MEGA Wrenches	Adjusting Screws NBA	Taper Cleaners	Coolant Pipes
▶ 367	▶ 368	▶ 360	▶ 384	▶ 367	▶ 404	▶ 264

MEGA E Chuck

Collet chuck designed exclusively for endmilling with high concentricity and rigidity.

Coolant Through Hole



A.3

ø3 - 12mm

Model	Article No.	Ød	ØD	ØD1	L	L1	L2	H	max. min-1	Collet Model	Weight (kg)
HSK-F63-MEGA6E-65 *	803.214	3 - 6	25	28.5	65	34	21	39	30,000	MEC6	0.80
HSK-F63-MEGA6E-90	803.215	3 - 6	25	31.5	90	58	21	37 - 45	30,000	MEC6	1.00
HSK-F63-MEGA8E-65 *	803.218	3 - 8	30	33	65	34	22.5	41	30,000	MEC8	0.90
HSK-F63-MEGA8E-90	802.338	3 - 8	30	36.5	90	59	22,5	42 - 47	30,000	MEC8	1.00
HSK-F63-MEGA10E-75 *	803.207	3 - 10	35	38.5	75	44	23	48	30,000	MEC10	1.00
HSK-F63-MEGA10E-90 *	803.208	3 - 10	35	41.5	90	59	23	67	30,000	MEC10	1.10
HSK-F63-MEGA10E-105	803.209	3 - 10	35	44	105	75	23	48 - 58	29,000	MEC10	1.30
HSK-F63-MEGA10E-120	803.213	3 - 10	35	47	120	91	23	48 - 58	29,000	MEC10	1.50
HSK-F63-MEGA10E-135	803.217	3 - 10	35	49	135	107	23	48 - 58	27,000	MEC10	1.70
HSK-F63-MEGA13E-75 *	803.210	3 - 12	42	46	75	47	25	50	30,000	MEC13	1.10
HSK-F63-MEGA13E-90 *	803.211	3 - 12	42	48.5	90	62	25	64	30,000	MEC13	1.30
HSK-F63-MEGA13E-105	803.212	3 - 12	42	51	105	78	25	50 - 58	29,000	MEC13	1.50
HSK-F63-MEGA13E-135	803.216	3 - 12	42	52	135	108	25	50 - 60	26,000	MEC13	1.90

1. MEGA E nut is included.
2. * Adjusting screws can not be used.
3. Coolant pipe (CL) is to be ordered separately.
4. "G" is the adjusting screw (optional).
5. "H" is the max. tool shank length that can be inserted for these models.

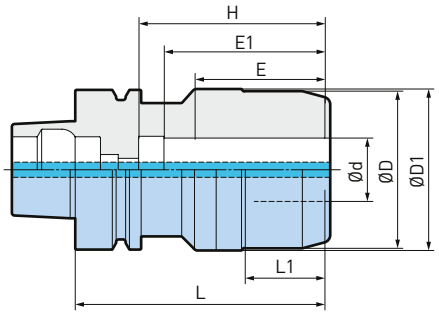
Accessories & Spare Parts

MEGA E Nuts	MEGA E Perfect Seals	MEGA E Collets	MEGA Wrenches	Adjusting Screws NBA	Taper Cleaners	Coolant Pipes
▶ 372	▶ 373	▶ 372	▶ 384	▶ 367	▶ 404	▶ 264

MEGA Double Power Chuck Type D

Close to integral rigidity and precision of a solid tool holder. Flange contacting nut assures highest rigidity.
Type D for use with/without coolant-through the tool.

Coolant Through Hole



A.3

ø16 - 32mm

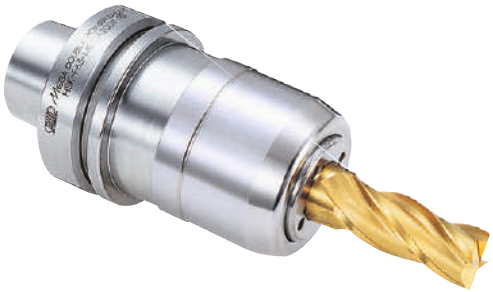
Model	Article No.	Ød	ØD	ØD1	L	L1	H	E	E1	max. min-1	Weight (kg)
HSK-F63-MEGA16D-80A	803.092	16	42	52.6	80	25	55	48	50	28,000	1.30
HSK-F63-MEGA20D-90A	803.093	20	50	55	90	34	65	50	56	28,000	1.50
HSK-F63-MEGA25D-100A	803.103	25	62	62.7	100	39	75	56	57	25,000	1.90
HSK-F63-MEGA32D-105A	803.082	32	70	70.7	105	33.5	80	60	64	24,000	2.10

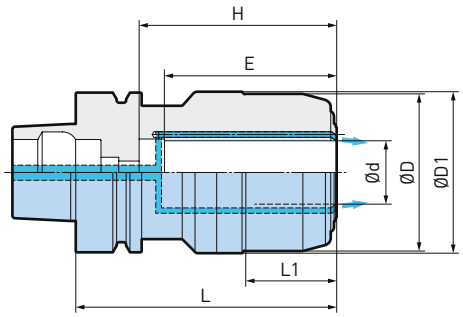
1. Wrench and coolant pipe (CL) is to be ordered separately.
2. "E" is the min. clamping length.
3. "E1" is the min. clamping length for optimum use with center through coolant.
4. "H" is the max. tool shank length that can be inserted for these models.

MEGA Double Power Chuck Type DS

Close to integral rigidity and precision of a solid tool holder. Flange contacting nut assures highest rigidity. Unique coolant supply design ensures efficient coolant supply to the cutting tool periphery.

Coolant Through Hole





ø16 - 32mm

Model	Article No.	Ød	ØD	ØD1	L	L1	H	E	max. min-1	Weight (kg)
HSK-F63-MEGA16DS-80A	803.095	16	42	52.6	82	27	57	50	28,000	1.30
HSK-F63-MEGA20DS-90A	803.096	20	50	55	92	36	67	56	28,000	1.50
HSK-F63-MEGA25DS-100A	803.104	25	62	62.7	102	41	77	57	25,000	1.90
HSK-F63-MEGA32DS-105A	803.083	32	70	70.7	107	35.5	82	64	24,000	2.10

1. Wrench and coolant pipe (CL) is to be ordered separately.
2. "H" is the max. tool shank length that can be inserted for these models.
3. "E" is the min. clamping length.

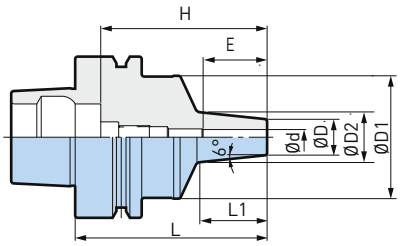
Accessories & Spare Parts

PJC Collets	OCA Collets	PSC Collets	C Collets	MEGA Wrenches	Coolant Pipes
▶ 379	▶ 380	▶ 380	▶ 381	▶ 384	▶ 264

Hydraulic Chuck Super Slim

Ultra precise hydraulic chuck with extremely slim design.

Coolant Through Hole



ø3 - 12mm

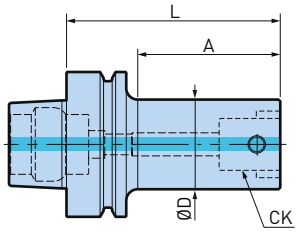
Model	Article No.	Ød	ØD	ØD1	ØD2	L	L1	H	E	Weight (kg)
HSK-F63-HDC3S-75	-	3	14	48	20	75	26	65	16	1.00
HSK-F63-HDC4S-75	-	4	14	48	20	75	26	65	19	1.00
HSK-F63-HDC6S-75	-	6	14	48	20	75	26	65	25	1.00
HSK-F63-HDC8S-75	-	8	17	48	23	75	27	65	31	1.00
HSK-F63-HDC10S-75	-	10	19	48	26	75	27	65	33	1.00
HSK-F63-HDC12S-75	-	12	21	48	28	75	28	65	36	1.00

1. Adjusting screw cannot be used.
2. "H" is the max. tool shank length that can be inserted for these models.
3. "E" is the min. clamping length.
4. Coolant pipe (CL) is to be ordered separately.

Accessories & Spare Parts

Coolant Pipes	ɑ Wiper Cleaners
▶ 264	▶ 404

CK Shanks with Center Through Hole



CK1 - CK5

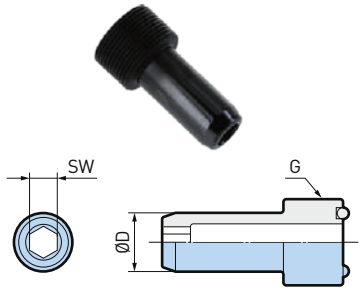
Model	Article No.	CK	ØD	L	A	Weight (kg)
HSK-F63-CKB1-78	-	CK1	19	77.5	40	0.80
HSK-F63-CKB2-90	-	CK2	24	89.5	58	0.80
HSK-F63-CKB3-100	-	CK3	31	100	69	1.00
HSK-F63-CKB4-93	-	CK4	39	93	62	1.20
HSK-F63-CKB5-83	-	CK5	50	83	55	1.40

1. Coolant pipe (CL) is to be ordered separately.

Accessories & Spare Parts

Coolant Pipes	Fine Boring Heads	Rough Boring Heads
▶ 264	▶ 428	▶ 417

Coolant Pipes

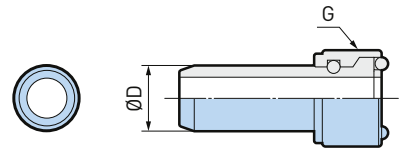


Model	Article No.	ØD	G	SW
HSK25-CP	978.921	5	M8 P1	2.5
HSK32-CP	978.909	6	M10 P1	3
HSK40-CP	978.913	8	M12 P1	4
HSK50-CP	801.071	10	M16 P1	5
HSK63-CP	969.475	12	M18 P1	6
HSK80-CP	802.828	14	M20 P1.5	8
HSK100-CP	802.351	16	M24 P1.5	8
HSK125-CP	805.684	18	M30 P1.5	10

1. Other sizes available upon request.

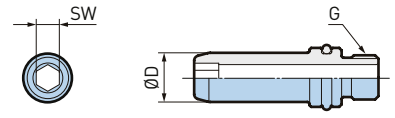
A.3

Coolant Pipes 1° swing type (DIN) for Form A/E



Model	Article No.	ØD	G	Wrench
HSK40-CPM	978.907	8	M12 P1	CPW-40
HSK50-CPM	801.690	10	M16 P1	CPW-50
HSK63-CPM	978.910	12	M18 P1	CPW-63
HSK80-CPM	802.827	14	M20 P1.5	CPW-80
HSK100-CPM	802.314	16	M24 P1.5	CPW-100
HSK125-CPM	806.594	18	M30 P1.5	CPW-125

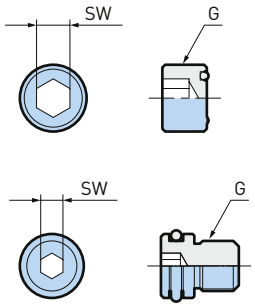
Coolant Pipes Coolant Pipe Form F



Model	Article No.	ØD	G	SW
HSKF63-CP	801.280	10	M9 P0.75	5

1. This model can be used for BIG Original Tool Holder only.

HSK Plug Screw



Model	Article No.	G	SW
HSK25-PG	807.215	M8 P1	4
HSK32-PG	807.216	M10 P1	5
HSK40-PG	807.189	M12 P1	6

1. In case our HSK tool holders are used in the machine which do not recommend the center through coolant, the plug screw should be mounted to our tools.

Model	Article No.	G	SW
HSK-F63-PG	807.190	M9 P0.75	4

1. In case our HSK tool holders are used in the machine which do not recommend the center through coolant, the plug screw should be mounted to our tools.
2. HSK-F63-PG can only be used in original BIG HSK-F63 tool holders, not compatible with other manufacturers.

Clamping Wrench

Model	Article No.
CPW-40	802.825
CPW-50	802.315
CPW-63	978.911
CPW-80	802.824
CPW-100	802.316

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.

Tool Holders BIG CAPTO, ISO 26623

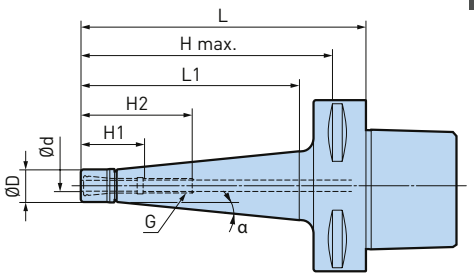
MEGA Micro Chuck	266
MEGA New Baby Chuck	268
MEGA E Chuck	271
MEGA Double Power Chuck	273
New Hi-Power Milling Chuck	275
Hydraulic Chucks	276
Shrink Chucks	279
CK Shanks	280
Face Mill Arbors FMH	281
Side Lock Holders	282
Side Cutter Arbors / Morse Taper Holders	284
MEGA Synchro Tapping Holder	285
Extensions / Reductions	286
BBT / BIG CAPTO Basic Holders	286

Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

MEGA Micro Chuck Type T

Tapered and slim design, minimal interference combined with maximized rigidity.

Coolant Through Hole



A.4

ø0.45 - 6.05mm

Model	Article No.	Ød	ØD	L	L1	H1	H2	H max.	G	α	Collet Model	Weight (kg)
C3-MEGA6S-45T	807.667	0.45 - 6.05	14	45	27	28	-	39	-	5°	NBC6S	0.15
C4-MEGA3S-60T	973.954	0.45 - 3.25	10	60	35	22	38	54	M4 P0.7	5°	NBC3S	0.28
C4-MEGA6S-60T	973.955	0.45 - 6.05	14	60	35	28	47	54	M7 P0.75	5°	NBC6S	0.29
C4-MEGA6S-90T	805.194	0.45 - 6.05	14	90	65	28	49	84	M7 P0.75	5°	NBC6S	0.36
C5-MEGA3S-105T	973.201	0.45 - 3.25	10	105	79	22.5	38.5	98	M4 P0.7	5°	NBC3S	0.60
C5-MEGA4S-105T	973.202	0.45 - 4.05	12	105	79	26.5	47	98	M5 P0.8	5°	NBC4S	0.50
C5-MEGA4S-120T	800.743	0.45 - 4.05	12	120	94	26.5	47	113	M5 P0.8	5°	NBC4S	0.60
C5-MEGA6S-105T	973.203	0.45 - 6.05	14	105	79	28.5	49	98	M7 P0.75	5°	NBC6S	0.60
C5-MEGA6S-120T	800.746	0.45 - 6.05	14	120	94	28.5	49	113	M7 P0.75	5°	NBC6S	0.70
C6-MEGA3S-120T	973.204	0.45 - 3.25	10	120	92	22.5	38.5	111	M4 P0.7	5°	NBC3S	0.90
C6-MEGA4S-120T	973.205	0.45 - 4.05	12	120	92	26.5	47	111	M5 P0.8	5°	NBC4S	1.00
C6-MEGA4S-135T	800.557	0.45 - 4.05	12	135	107	26.5	47	126	M5 P0.9	5°	NBC4S	1.00
C6-MEGA6S-120T	973.206	0.45 - 6.05	14	120	92	28.5	49	111	M7 P0.75	5°	NBC6S	1.00
C6-MEGA6S-135T	978.134	0.45 - 6.05	14	135	107	28.5	49	126	M7 P0.75	5°	NBC6S	1.10

1. MEGA nut is included in delivery.

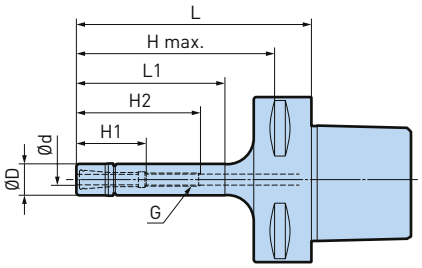
Accessories & Spare Parts

MEGA Nuts	Micro Seal Nuts	Micro Collets	MEGA Wrenches	Taper Cleaners	Collet Protective Cases
▶ 358	▶ 358	▶ 356	▶ 384	▶ 404	▶ 359

MEGA Micro Chuck Type S

Micro diameter design is ideal for high speed applications in tight areas.

Coolant Through Hole



A.4

ø0.45 - 6.05mm

Model	Article No.	Ød	ØD	L	L1	H1	H2	H max.	G	Collet Model	Weight (kg)
C5-MEGA3S-75	973.207	0,45 - 3,25	10	75	49	22,5	38	68	M4 P0.7	NBC3S	0.50
C5-MEGA4S-75	973.208	0.45 - 4.05	12	75	50	26.5	47	68	M5 P0.8	NBC4S	0.50
C5-MEGA6S-75	973.209	0.45 - 6.05	14	75	50	28.5	49	68	M7 P0.75	NBC6S	0.50
C6-MEGA3S-90	973.210	0.45 - 3.25	10	90	50	22.5	38	81	M4 P0.7	NBC3S	0.80
C6-MEGA4S-90	973.211	0.45 - 4.05	12	90	58	26.5	47	81	M5 P0.8	NBC4S	0.90
C6-MEGA6S-90	973.212	0.45 - 6.05	14	90	58	28.5	49	81	M7 P0.75	NBC6S	0.90

1. MEGA nut is included in delivery.

Accessories & Spare Parts

MEGA Nuts	Micro Seal Nuts	Micro Collets	MEGA Wrenches	Taper Cleaners	Collet Protective Cases
▶ 358	▶ 358	▶ 356	▶ 384	▶ 404	▶ 359

MEGA New Baby Chuck

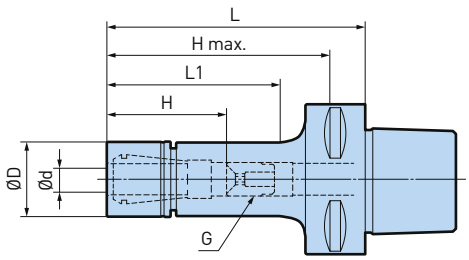
Ideal ultra precision collet holders for high speed machining. Wide range of lengths and a variety of collet series covers all machining applications.

Coolant Through Hole

A.4

ø0.25 - 20mm

Model	Article No.	Ød	ØD	L	L1	H	H max.	Collet Model	Weight (kg)
C3-MEGA6N-45 *	806.312	0.25 - 6	20	45	28	23	23	NBC6	0.14
C3-MEGA8N-45 *	807.669	0.5 - 8	25	45	28	26	26	NBC8	0.15
C3-MEGA10N-50 *	806.313	1.5 - 10	30	50	34	38	38	NBC10	0.22
C3-MEGA13N-50 *	807.671	2.5 - 13	35	50	35	44	44	NBC13	0.27
C3-MEGA16N-55 *	806.463	2.5 - 16	42	55	-	49	49	NBC16	0.34
C4-MEGA6N-75	978.196	0.25 - 6	20	75	48	23 - 43	69	NBC6	0.36
C4-MEGA8N-75	978.201	0.5 - 8	25	75	49	26 - 45	69	NBC8	0.41
C4-MEGA10N-50 *	978.334	1,5 - 10	30	50	28	44	44	NBC10	0.35
C4-MEGA10N-75	978.202	1.5 - 10	30	75	52	38 - 48	69	NBC10	0.47
C4-MEGA13N-50 *	978.335	2,5 - 13	35	50	29	44	44	NBC13	0.37
C4-MEGA13N-75 *	978.197	2.5 - 13	35	75	54	64	64	NBC13	0.47
C4-MEGA16N-55 *	978.203	2.5 - 16	42	55	-	48	48	NBC16	0.45
C4-MEGA20N-60 *	978.204	2.5 - 20	46	60	-	53	53	NBC20	0.54
C5-MEGA6N-60	973.213	0.25 - 6	20	60	34	23 - 36	53	NBC6-	0.60
C5-MEGA6N-75	973.214	0.25 - 6	20	75	49	23 - 43	68	NBC6-	0.60
C5-MEGA6N-90	973.215	0.25 - 6	20	90	62	23 - 43	83	NBC6-	0.60
C5-MEGA6N-105	973.216	0,25 - 6	20	105	77	23 - 43	98	NBC6	0.60
C5-MEGA6N-120	973.217	0,25 - 6	20	120	90	23 - 43	113	NBC6	0.70
C5-MEGA8N-60	973.218	0.5 - 8	25	60	33	26 - 36	53	NBC8	0.60
C5-MEGA8N-75	973.219	0.5 - 8	25	75	49	26 - 45	68	NBC8	0.60
C5-MEGA8N-90	973.220	0.5 - 8	25	90	64	26 - 45	83	NBC8	0.70
C5-MEGA8N-105	973.221	0,5 - 8	25	105	77	26 - 45	98	NBC8	0.70
C5-MEGA8N-120	973.222	0,5 - 8	25	120	92	26 - 45	113	NBC8	0.80
C5-MEGA10N-55 *	973.223	1.5 - 10	30	55	31	48	48	NBC10	0.50
C5-MEGA10N-75	973.224	1.5 - 10	30	75	49	38 - 48	68	NBC10	0.70
C5-MEGA10N-90	973.225	1.5 - 10	30	90	64	38 - 48	83	NBC10	0.80
C5-MEGA10N-105	973.226	1,5 - 10	30	105	79	38 - 48	98	NBC10	0.80
C5-MEGA10N-120	973.227	1,5 - 10	30	120	92	38 - 48	113	NBC10	0.90
C5-MEGA13N-55 *	973.229	2.5 - 13	35	55	31	48	48	NBC13	0.60
C5-MEGA13N-75	973.230	2.5 - 13	35	75	49	44 - 48	68	NBC13	0.80
C5-MEGA13N-90	973.231	2.5 - 13	35	90	64	44 - 63	83	NBC13	0.80
C5-MEGA13N-105	973.232	2,5 - 13	35	105	79	44 - 63	98	NBC13	0.90
C5-MEGA13N-120	973.233	2,5 - 13	35	120	94	44 - 63	113	NBC13	1.00
C5-MEGA16N-60 *	973.235	2.5 - 16	42	60	38	53	53	NBC16	0.70
C5-MEGA16N-75 *	973.236	2.5 - 16	42	75	53	68 - 68	68	NBC16	0.90
C5-MEGA16N-90	973.237	2.5 - 16	42	90	69	48 - 63	83	NBC16	1.00
C5-MEGA16N-105	973.238	2,5 - 16	42	105	84	48 - 68	98	NBC16	1.10
C5-MEGA16N-120	973.239	2,5 - 16	42	120	99	48 - 68	111	NBC16	1.20
C5-MEGA20N-60 *	973.241	2.5 - 20	46	60	39	51	51	NBC20	0.80
C5-MEGA20N-75 *	973.242	2.5 - 20	46	75	54	66	66	NBC20	0.90
C5-MEGA20N-90	973.243	2.5 - 20	46	90	69	51 - 60	83	NBC20	1.10
C5-MEGA20N-105	973.244	2,5 - 20	46	105	84	51 - 68	98	NBC20	1.20
C5-MEGA20N-120	973.245	2,5 - 20	46	120	99	51 - 68	111	NBC20	1.30



Model	Article No.	Ød	ØD	L	L1	H	H max.	Collet Model	Weight (kg)
C6-MEGA6N-60	973.247	0.25 - 6	20	60	30	23 - 33	51	NBC6	0.90
C6-MEGA6N-75	973.248	0.25 - 6	20	75	43	23 - 43	66	NBC6	0.90
C6-MEGA6N-90	973.249	0.25 - 6	20	90	58	23 - 43	81	NBC6	0.90
C6-MEGA6N-105	973.250	0.25 - 6	20	105	73	23 - 43	96	NBC6	1.00
C6-MEGA6N-120	973.251	0.25 - 6	20	120	88	23 - 43	111	NBC6	1.20
C6-MEGA6N-135	973.252	0.25 - 6	20	135	103	23 - 43	126	NBC6	1.50
C6-MEGA6N-165	973.253	0.25 - 6	20	165	128	23 - 43	156	NBC6	1.10
C6-MEGA6N-200	800.858	0,25 - 6	20	200	163	23 - 43	191	NBC6	1.10
C6-MEGA8N-60	973.254	0.5 - 8	25	60	29	26 - 31	51	NBC8	0.90
C6-MEGA8N-75	973.255	0.5 - 8	25	75	43	26 - 45	66	NBC8	0.90
C6-MEGA8N-90	973.256	0.5 - 8	25	90	58	26 - 45	81	NBC8	1.00
C6-MEGA8N-105	973.257	0.5 - 8	25	105	73	26 - 45	96	NBC8	1.10
C6-MEGA8N-120	973.258	0.5 - 8	25	120	88	26 - 45	111	NBC8	1.10
C6-MEGA8N-135	973.259	0.5 - 8	25	135	103	26 - 45	126	NBC8	1.10
C6-MEGA8N-165	973.260	0.5 - 8	25	165	133	26 - 45	156	NBC8	1.20
C6-MEGA8N-200	800.860	0,5 - 8	25	200	163	26 - 45	191	NBC8	1.30
C6-MEGA10N-60 *	973.261	1.5 - 10	30	60	32	51 - 51	51	NBC10	0.90
C6-MEGA10N-75	973.262	1.5 - 10	30	75	43	38 - 45	66	NBC10	1.00
C6-MEGA10N-90	973.263	1.5 - 10	30	90	58	38 - 48	81	NBC10	1.10
C6-MEGA10N-105	973.264	1.5 - 10	30	105	73	38 - 48	96	NBC10	1.20
C6-MEGA10N-120	973.265	1.5 - 10	30	120	88	38 - 48	111	NBC10	1.20
C6-MEGA10N-135	973.266	1.5 - 10	30	135	103	38 - 48	126	NBC10	1.30
C6-MEGA10N-165	973.267	1.5 - 10	30	165	133	38 - 48	156	NBC10	1.50
C6-MEGA10N-200	973.268	1,5 - 10	30	200	168	38 - 48	191	NBC10	1.60
C6-MEGA13N-60 *	973.269	2.5 - 13	35	60	32	51 - 51	51	NBC13	1.00
C6-MEGA13N-75 *	973.270	2.5 - 13	35	75	45	66 - 66	66	NBC13	1.00
C6-MEGA13N-90	973.271	2.5 - 13	35	90	60	44 - 55	81	NBC13	1.10
C6-MEGA13N-105	973.272	2.5 - 13	35	105	73	44 - 63	96	NBC13	1.30
C6-MEGA13N-120	973.273	2.5 - 13	35	120	90	44 - 63	111	NBC13	1.30
C6-MEGA13N-135	973.274	2.5 - 13	35	135	103	44 - 63	126	NBC13	1.40
C6-MEGA13N-165	973.275	2.5 - 13	35	165	133	44 - 63	156	NBC13	1.60
C6-MEGA13N-200	973.276	2,5 - 13	35	200	168	44 - 63	191	NBC13	1.80
C6-MEGA16N-65 *	973.277	2.5 - 16	42	65	37	56 - 56	56	NBC16	1.10
C6-MEGA16N-75 *	973.278	2.5 - 16	42	75	47	66 - 66	66	NBC16	1.10
C6-MEGA16N-90	973.279	2.5 - 16	42	90	60	48 - 57	81	NBC16	1.30
C6-MEGA16N-105	973.280	2.5 - 16	42	105	75	48 - 68	96	NBC16	1.40
C6-MEGA16N-120	973.281	2.5 - 16	42	120	90	48 - 68	111	NBC16	1.60
C6-MEGA16N-135	973.282	2.5 - 16	42	135	105	48 - 68	126	NBC16	1.50
C6-MEGA16N-165	973.283	2.5 - 16	42	165	135	48 - 68	156	NBC16	1.80
C6-MEGA16N-200	973.284	2,5 - 16	42	200	170	48 - 68	191	NBC16	2.20
C6-MEGA20N-65 *	973.285	2.5 - 20	46	65	37	51 - 51	51	NBC20	1.10
C6-MEGA20N-75 *	973.286	2.5 - 20	46	75	47	65 - 65	65	NBC20	1.20
C6-MEGA20N-90	973.287	2.5 - 20	46	90	62	51 - 56	76	NBC20	1.40
C6-MEGA20N-105	973.288	2.5 - 20	46	105	77	51 - 68	91	NBC20	1.50
C6-MEGA20N-120	973.289	2.5 - 20	46	120	92	51 - 68	104	NBC20	1.70
C6-MEGA20N-135	973.290	2.5 - 20	46	135	107	51 - 68	111	NBC20	1.60
C6-MEGA20N-165	973.291	2.5 - 20	46	165	137	51 - 68	111	NBC20	2.00
C6-MEGA20N-200	973.292	2.5 - 20	46	200	172	51 - 68	111	NBC20	2.50

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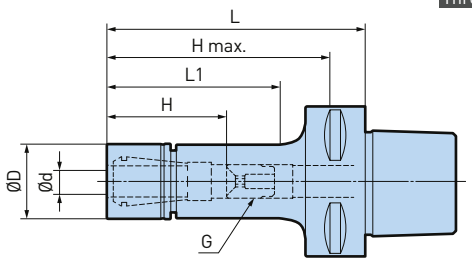
MEGA New Baby Chuck

Coolant Through Hole



A.4

Model	Article No.	Ød	ØD	L	L1	H	H max.	Collet Model	Weight (kg)
C8-MEGA6N-90	973.293	0.25 - 6	20	90	45	23 - 43	90	NBC6	2.00
C8-MEGA6N-120	973.295	0.25 - 6	20	120	75	23 - 43	120	NBC6	1.90
C8-MEGA6N-165	973.297	0.25 - 6	20	165	120	23 - 43	165	NBC6	2.10
C8-MEGA8N-90	973.298	0.5 - 8	25	90	46	26 - 45	90	NBC8	2.00
C8-MEGA8N-120	973.300	0.5 - 8	25	120	75	26 - 45	120	NBC8	2.10
C8-MEGA8N-165	973.302	0.5 - 8	25	165	120	26 - 45	165	NBC8	2.20
C8-MEGA10N-90	973.304	1.5 - 10	30	90	45	38 - 48	90	NBC10	2.00
C8-MEGA10N-120	973.306	1.5 - 10	30	120	75	38 - 48	120	NBC10	2.10
C8-MEGA10N-165	973.308	1.5 - 10	30	165	120	38 - 48	165	NBC10	2.40
C8-MEGA13N-90	973.311	2.5 - 13	35	90	50	44 - 63	90	NBC13	2.10
C8-MEGA13N-120	973.313	2.5 - 13	35	120	80	44 - 63	120	NBC13	2.20
C8-MEGA13N-165	973.315	2.5 - 13	35	165	120	44 - 63	165	NBC13	2.60
C8-MEGA13N-200	973.316	2.5 - 13	35	200	155	44 - 63	200	NBC13	2.80
C8-MEGA16N-90	973.318	2.5 - 16	42	90	50	48 - 66	90	NBC16	2.20
C8-MEGA16N-120	973.320	2.5 - 16	42	120	80	48 - 68	120	NBC16	2.40
C8-MEGA16N-165	973.322	2.5 - 16	42	165	125	48 - 68	165	NBC16	2.80
C8-MEGA20N-90	973.325	2.5 - 20	46	90	50	51 - 68	83	NBC20	2.30
C8-MEGA20N-120	973.327	2.5 - 20	46	120	80	51 - 68	113	NBC20	2.60
C8-MEGA20N-165	973.329	2.5 - 20	46	165	125	51 - 68	113	NBC20	3.00
C8-MEGA20N-200	973.330	2.5 - 20	46	200	160	51 - 68	113	NBC20	3.50

1. MEGA nut is included in delivery.
2. * Adjusting screw cannot be used.
3. "G" is the adjusting screw (optional).
4. "H" indicates the adjustment length with an adjusting screw.

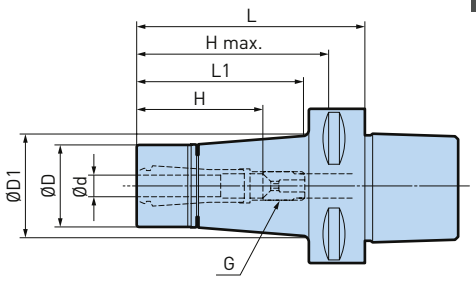
Accessories & Spare Parts

MEGA Nuts	MEGA Perfect Seals	New Baby Collets	MEGA Wrenches	Adjusting Screws NBA	Taper Cleaners
▶ 367	▶ 368	▶ 360	▶ 384	▶ 367	▶ 404

MEGA E Chuck

Collet chuck designed exclusively for endmilling with high concentricity and rigidity.

Coolant Through Hole



ø3 - 12mm

Model	Article No.	Ød	ØD	ØD1	L	L1	H	H max.	Collet Model	Weight (kg)
C4-MEGA6E-50 *	800.683	3 - 6	25	26	50	25	44	44	MEC6	0.34
C4-MEGA8E-50 *	800.685	3 - 8	30	31	50	28	44	44	MEC8	0.50
C4-MEGA10E-55 *	800.676	3 - 10	35	37	55	34	49	49	MEC10	0.45
C4-MEGA13E-60 *	800.678	3 - 12	42	-	60	-	50	50	MEC13	0.44
C5-MEGA6E-55 *	973.331	3 - 6	25	26.5	55	29	48	48	MEC6	0.60
C5-MEGA6E-90	973.333	3 - 6	25	32.5	90	64	37 - 45	83	MEC6	0.80
C5-MEGA6E-105	973.334	3 - 6	25	35.5	105	81	37 - 45	98	MEC6	0.90
C5-MEGA6E-120	973.335	3 - 6	25	38	120	97	37 - 45	113	MEC6	1.00
C5-MEGA8E-55 *	973.336	3 - 8	30	31.5	55	31	48	48	MEC8	0.60
C5-MEGA8E-90	973.338	3 - 8	30	37.5	90	67	42 - 51	83	MEC8	0.90
C5-MEGA8E-105	973.339	3 - 8	30	40.5	105	82	42 - 51	98	MEC8	1.00
C5-MEGA8E-120	973.340	3 - 8	30	43	120	98	42 - 51	113	MEC8	1.20
C5-MEGA10E-60 *	973.341	3 - 10	35	37.5	60	37	53	53	MEC10	0.70
C5-MEGA10E-90	973.343	3 - 10	35	43	90	69	48 - 50	83	MEC10	1.00
C5-MEGA10E-105	973.344	3 - 10	35	45.5	105	84	48 - 58	98	MEC10	1.10
C5-MEGA10E-120	973.345	3 - 10	35	45.5	120	99	48 - 58	113	MEC10	1.30
C5-MEGA13E-60 *	973.347	3 - 12	42	44.4	60	39	50	50	MEC13	0.80
C5-MEGA13E-75 *	973.348	3 - 12	42	44.8	75	54	68	68	MEC13	1.00
C5-MEGA13E-90	973.349	3 - 12	42	44.8	90	69	50 - 60	83	MEC13	1.10
C5-MEGA13E-105	973.350	3 - 12	42	46	105	84	50 - 60	98	MEC13	1.30
C5-MEGA13E-120	973.351	3 - 12	42	46	120	99	50 - 60	113	MEC13	1.50
C6-MEGA6E-60 *	973.353	3 - 6	25	28	60	33	51	51	MEC6	0.90
C6-MEGA6E-75	973.354	3 - 6	25	29.5	75	48	37 - 45	66	MEC6	1.00
C6-MEGA6E-90	973.355	3 - 6	25	32.1	90	63	37 - 45	81	MEC6	1.10
C6-MEGA6E-105	973.356	3 - 6	25	34.7	105	78	37 - 45	96	MEC6	1.20
C6-MEGA6E-120	973.357	3 - 6	25	37.3	120	93	37 - 45	111	MEC6	1.30
C6-MEGA6E-135	973.358	3 - 6	25	40	135	108	37 - 45	126	MEC6	1.50
C6-MEGA6E-165	973.359	3 - 6	25	45,5	165	138	37 - 45	156	MEC6	1.80
C6-MEGA8E-60 *	973.360	3 - 8	30	33	60	33	51	51	MEC8	1.00
C6-MEGA8E-75	973.361	3 - 8	30	34.2	75	48	42 - 46	66	MEC8	1.10
C6-MEGA8E-90	973.362	3 - 8	30	36.7	90	63	42 - 51	81	MEC8	1.20
C6-MEGA8E-105	973.363	3 - 8	30	39.5	105	78	42 - 51	96	MEC8	1.20
C6-MEGA8E-120	973.364	3 - 8	30	42.1	120	93	42 - 51	111	MEC8	1.50
C6-MEGA8E-135	973.365	3 - 8	30	45	135	108	42 - 51	126	MEC8	1.70
C6-MEGA8E-165	973.366	3 - 8	30	50.5	165	140	42 - 51	156	MEC8	2.00
C6-MEGA10E-65 *	973.367	3 - 10	35	38.5	65	38	56	56	MEC10	0.90
C6-MEGA10E-75 *	973.368	3 - 10	35	39.1	75	48	66	66	MEC10	1.20
C6-MEGA10E-90	973.369	3 - 10	35	41.6	90	63	48 - 58	81	MEC10	1.30
C6-MEGA10E-105	973.370	3 - 10	35	44.4	105	78	48 - 58	96	MEC10	1.50
C6-MEGA10E-120	973.371	3 - 10	35	47	120	93	48 - 58	111	MEC10	1.70
C6-MEGA10E-135	973.372	3 - 10	35	50	135	110	48 - 58	126	MEC10	1.90
C6-MEGA10E-165	973.373	3 - 10	35	55.5	165	141	48 - 58	156	MEC10	2.30

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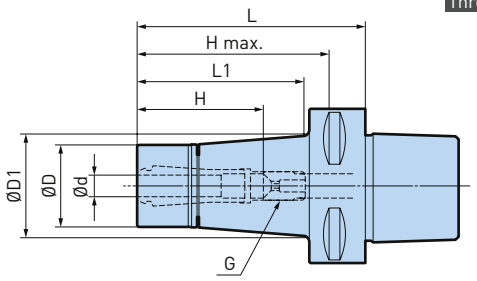
MEGA E Chuck

Coolant Through Hole



A.4

Model	Article No.	Ød	ØD	ØD1	L	L1	H	H max.	Collet Model	Weight (kg)
C6-MEGA13E-65 *	973.374	3 - 12	42	45.1	65	39	56	56	MEC13	1.20
C6-MEGA13E-75 *	973.375	3 - 12	42	46	75	49	66	66	MEC13	1.30
C6-MEGA13E-90	973.376	3 - 12	42	49	90	66	50 - 55	81	MEC13	1.50
C6-MEGA13E-105	973.377	3 - 12	42	51.4	105	80	50 - 55	96	MEC13	1.70
C6-MEGA13E-120	973.378	3 - 12	42	54.2	120	96	50 - 60	111	MEC13	1.90
C6-MEGA13E-135	973.379	3 - 12	42	56.8	135	112	50 - 60	126	MEC13	2.20
C6-MEGA13E-165	973.380	3 - 12	42	62.3	165	141	50 - 60	156	MEC13	3.00
C8-MEGA6E-90	973.382	3 - 6	25	30.7	90	55	37 - 45	90	MEC6	2.00
C8-MEGA6E-135	973.385	3 - 6	25	38.5	135	100	37 - 45	135	MEC6	2.30
C8-MEGA8E-90	973.388	3 - 8	30	35.4	90	55	42 - 51	90	MEC8	2.10
C8-MEGA8E-135	973.391	3 - 8	30	43.3	135	100	42 - 51	135	MEC8	2.50
C8-MEGA10E-90	973.394	3 - 10	35	40.3	90	55	48 - 58	90	MEC10	2.20
C8-MEGA10E-120	973.396	3 - 10	35	45.6	120	85	48 - 58	120	MEC10	2.50
C8-MEGA10E-135	973.397	3 - 10	35	48.2	135	100	48 - 58	135	MEC10	2.70
C8-MEGA13E-90	973.400	3 - 12	42	47	90	55	50 - 60	90	MEC13	2.30
C8-MEGA13E-120	973.402	3 - 12	42	52.3	120	85	50 - 60	120	MEC13	2.70
C8-MEGA13E-135	973.403	3 - 12	42	54.9	135	100	50 - 60	135	MEC13	2.90
C8-MEGA13E-165	973.404	3 - 12	42	60.1	165	130	50 - 60	165	MEC13	3.30

1. MEGA E nut is included.
2. * Adjusting screw cannot be used.
3. "G" is the adjusting screw (optional).
4. "H" indicates the adjustment length with an adjusting screw.

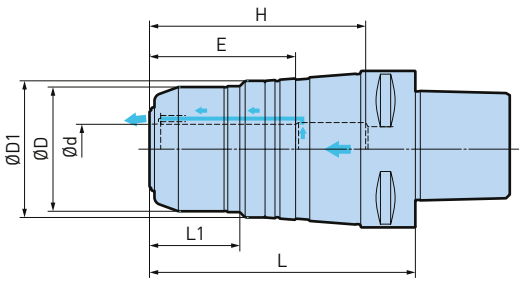
Accessories & Spare Parts

MEGA E Nuts	MEGA E Perfect Seals	MEGA E Collets	MEGA Wrenches	Adjusting Screws NBA	Taper Cleaners
▶ 372	▶ 373	▶ 372	▶ 384	▶ 367	▶ 404

MEGA Double Power Chuck Type DS

Close to integral rigidity and precision of a solid tool holder. Flange contacting nut assures highest rigidity. Unique coolant supply design ensures efficient coolant supply to the cutting tool periphery.

Coolant Through Hole



A.4

ø16 - 32mm

Model	Article No.	Ød	ØD	ØD1	L	L1	H	E	Weight (kg)
C4-MEGA16DS-70	800.680	16	46	47	71	27	65	48	0.80
C4-MEGA20DS-65	800.682	20	50	51	66	32	60	50	0.70
C5-MEGA16DS-65A	803.141	16	42	52.6	67	27	60	50	0.90
C5-MEGA16DS-90A	803.144	16	42	52.6	92	27	73	50	1.30
C5-MEGA20DS-75A	803.108	20	50	55	77	36	70	52	1.10
C5-MEGA20DS-90A	803.183	20	50	55	92	36	85	52	1.40
C5-MEGA25DS-75A ****	803.147	25	62	62.7	77	41	70	58	1.30
C5-MEGA25DS-90A	803.179	25	62	62.7	92	41	85	58	1.60
C6-MEGA12DS-90	100146.002.0	12	38	43	91	25	82	43	1.40
C6-MEGA16DS-70A	803.145	16	42	52.6	72	27	63	50	1.30
C6-MEGA16DS-90A	803.206	16	42	52.6	92	27	83	50	1.40
C6-MEGA16DS-105A ***	803.184	16	42	52.6	107	27	73	50	2.00
C6-MEGA16DS-135A ***	803.112	16	42	52.6	137	27	73	50	2.60
C6-MEGA20DS-75A	803.185	20	50	55	77	36	68	52	1.40
C6-MEGA20DS-90A	803.125	20	50	55	92	36	83	52	1.70
C6-MEGA20DS-105A	803.113	20	50	55	107	36	87	52	2.00
C6-MEGA20DS-135A *	803.166	20	50	55	137	36	71 - 81	52	2.60
C6-MEGA25DS-75A **	803.114	25	62	62.7	77	41	68	58	1.70
C6-MEGA25DS-90A	803.177	25	62	62.7	92	41	83	58	2.00
C6-MEGA25DS-105A	803.128	25	62	62.7	107	41	87	58	2.20
C6-MEGA25DS-135A *	803.195	25	62	62.7	137	41	73 - 83	58	2.90
C6-MEGA32DS-90A	803.129	32	70	70.7	92	35	83	62	2.00
C6-MEGA32DS-105A	803.167	32	70	70.7	107	35	92	62	2.30
C6-MEGA32DS-135A *	803.121	32	70	70.7	137	35	81 - 91	62	3.00

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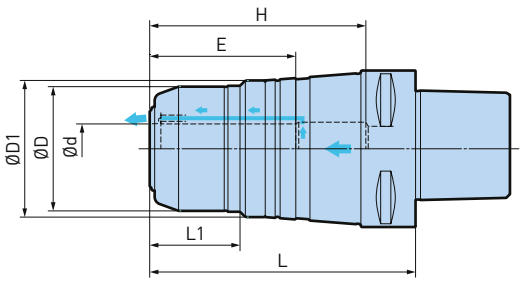
MEGA Double Power Chuck Type DS

Coolant Through Hole



A.4

Model	Article No.	Ød	ØD	ØD1	L	L1	H	E	Weight (kg)
C8-MEGA16DS-70	973.465	16	46	55	72.5	26	73	52	2.20
C8-MEGA16DS-105 ***	973.466	16	46	55	107.5	26	73	52	2.90
C8-MEGA16DS-135 ***	973.467	16	46	55	137,5	26	73	48	3.60
C8-MEGA20DS-75	973.469	20	60	69	77.5	28	77	58	2.60
C8-MEGA20DS-135 *	973.471	20	60	69	137.5	28	71 - 81	58	4.30
C8-MEGA20DS-165 *	973.472	20	60	69	167,5	28	71 - 81	50	5.20
C8-MEGA25DS-75	973.473	25	70	77	77.5	34	77	67	2.70
C8-MEGA25DS-135 *	973.475	25	70	77	137.5	34	78 - 88	67	4.80
C8-MEGA25DS-165 *	973.476	25	70	77	167.5	34	78 - 89	67	5.80
C8-MEGA32DS-90	973.477	32	80	86	92.5	42	92	73	3.30
C8-MEGA32DS-105	973.478	32	80	86	107.5	42	102	73	3.90
C8-MEGA32DS-135	973.479	32	80	86	137,5	42	107	60	5.30
C8-MEGA32DS-165 *	973.480	32	80	86	167.5	42	80 - 97	73	6.50

1. * Adjusting screw can be used
2. ** Only C collet (C25-) and OCA are compatible.
3. *** Hex socked head screw (M8) can be used as an adjusting screw.
4. **** Adjustable straight collet (C25-_+CS) and OCA collet cannot be used.
5. MEGA wrench is to be ordered separately.
6. "E" is the min. clamping length.
7. "H" is the max. tool shank length that can be inserted for these models.

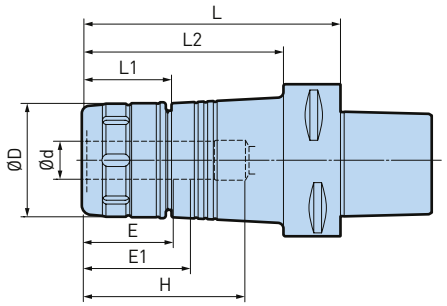
Accessories & Spare Parts

PJC Collets	PSC Collets	C Collets	MEGA Wrenches	Adjusting Screws HMA
▶ 379	▶ 380	▶ 381	▶ 384	▶ 383

New Hi-Power Milling Chuck

The original design of slit structure assures heavy and finish end milling with high power and precision.

Coolant Through Hole



ø16 - 32mm

Model	Article No.	Ød	ØD	L	L1	L2	H	E	E1	Weight (kg)
C5-HMC16S-65	800.734	16	43	65	44	45	58	48	55	0.80
C5-HMC20S-75	800.736	20	50	75	44	-	68	50	56	1.10
C5-HMC20S-105	800.735	20	50	105	44	-	85	50	56	1.40
C5-HMC25S-75 **	803.042	25	55	75	47	-	68	56	57	1.00
C5-HMC25S-105	803.041	25	55	105	47	-	87	56	57	1.40
C5-HMC32S-85 ***	803.043	32	62	85	56	-	78	60	58	1.30
C6-HMC16S-70	800.842	16	43	70	44	48	61	48	55	1.10
C6-HMC20S-75	800.845	20	50	75	44	53	66	50	56	1.40
C6-HMC20S-105	800.843	20	50	105	44	83	85	50	56	1.80
C6-HMC20S-120 *	800.844	20	50	120	44	98	69 - 79	50	56	2.00
C6-HMC25S-75 ****	800.848	25	59	75	45	53	66	56	57	1.50
C6-HMC25S-105	800.846	25	59	105	45	81	87	56	57	2.00
C6-HMC25S-135 *	800.847	25	59	135	45	133	73 - 83	56	57	2.60
C6-HMC32S-90	800.851	32	68	90	54	-	81	60	64	1.90
C6-HMC32S-105	800.849	32	68	105	54	-	90	60	64	2.20
C6-HMC32S-135 *	800.850	32	68	135	54	-	79 - 89	60	64	2.90
C8-HMC20-80	973.680	20	60	80	46	50	80	50	56	2.50
C8-HMC20-135 *	973.682	20	60	135	46	105	69 - 79	50	56	3.80
C8-HMC25-85	973.684	25	62	85	55	-	85	56	65	2.80
C8-HMC25-135 *	973.686	25	62	135	55	105	76 - 86	56	65	3.70
C8-HMC32-95	973.688	32	80	95	63	-	95	60	71	3.30
C8-HMC32-135	973.690	32	80	135	63	-	105	60	71	4.80

1. * Adjusting screw can be used
2. ** Only C collet (C25-) and OCA are compatible.
3. *** Adjustable straight collet (C25-_+CS) cannot be used.
4. **** Only C collet (C25-) can be used.
5. Wrench is to be ordered separately.
6. "E" is the min. clamping length.
7. "E1" is the min. clamping length for optimum use with center through coolant.
8. "H" is the max. tool shank length that can be inserted for these models.

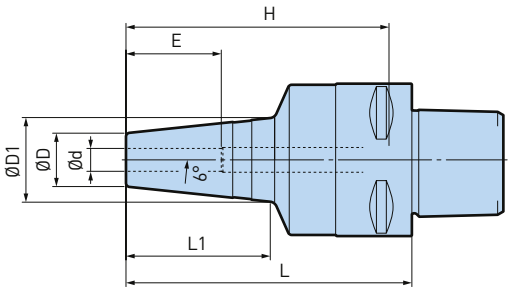
Accessories & Spare Parts

PJC Collets	OCA Collets	PSC Collets	C Collets	FK Wrenches	Adjusting Screws HMA
▶ 379	▶ 380	▶ 380	▶ 381	▶ 385	▶ 383

Hydraulic Chuck Super Slim

Ultra precise hydraulic chuck with extremely slim design.

Coolant Through Hole



A.4

ø3 - 12mm

Model	Article No.	Ød	ØD	ØD1	L	L1	H	E	Weight (kg)
C4-HDC3S-55	101230.006.0	3	14	18	55	17	49	16	0.40
C4-HDC4S-75	101230.001.0	4	14	23	75	38	69	19	0.50
C4-HDC6S-75	101230.002.0	6	14	23	75	38	69	25	0.50
C4-HDC8S-75	101230.003.0	8	17	26	75	38	69	31	0.50
C4-HDC10S-75	101230.004.0	10	19	28	75	39	69	33	0.50
C4-HDC12S-75	101230.005.0	12	21	30	75	39	69	36	0.50

1. "E" is the min. clamping length.

Caution

- 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.

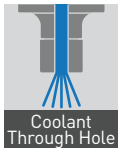
Accessories & Spare Parts

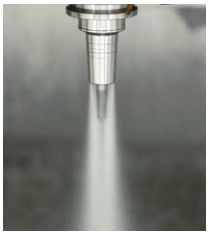
α Wiper Cleaners

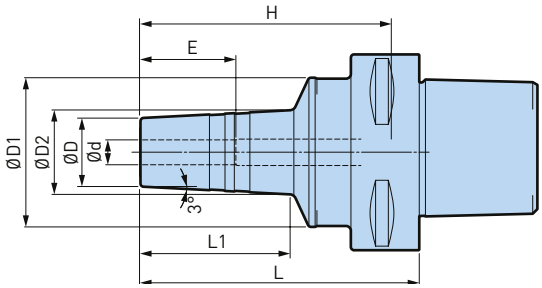
▶ 404

Hydraulic Chuck Jet Through

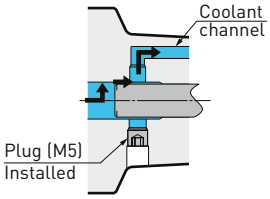
Hydraulic chuck provides efficient coolant supply through the cutting tool or periphery of the cutting tool.



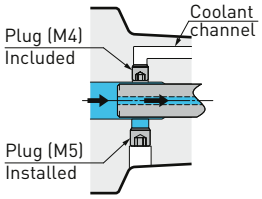




Peripheric



Center Through



ø4 - 12mm

Model	Article No.	Ød	ØD	ØD1	ØD2	L	L1	H	E	Weight (kg)
C5-HDC4J-90	807.434	4	20	42	26	90	51	83	19	0.70
C5-HDC6J-90	807.435	6	20	42	26	90	51	83	25	0.70
C5-HDC8J-90	807.436	8	22	42	28	90	52	83	31	0.80
C5-HDC10J-90	807.437	10	24	44	30	90	52	83	33	0.80
C5-HDC12J-90	807.438	12	26	46	32	90	52	83	36	0.80
C6-HDC4J-90	807.439	4	20	48	26	90	47	81	19	1.10
C6-HDC6J-90	807.440	6	20	48	26	90	47	81	25	1.10
C6-HDC6J-120	807.441	6	20	48	28	120	74	111	25	1.30
C6-HDC8J-90	807.442	8	22	48	28	90	48	81	31	1.10
C6-HDC8J-120	807.443	8	22	48	30	120	75	111	31	1.30
C6-HDC10J-90	807.444	10	24	48	30	90	48	81	33	1.10
C6-HDC10J-120	807.445	10	24	48	32	120	75	111	33	1.30
C6-HDC12J-90	807.446	12	26	48	32	90	49	81	36	1.10
C6-HDC12J-120	807.447	12	26	48	34	120	76	111	36	1.50

1. "E" is the min. clamping length.
2. "H" is the max. tool shank length that can be inserted for these models.

Caution

- 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.

Accessories & Spare Parts

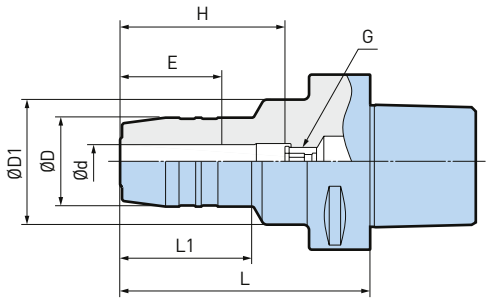
α Wiper Cleaners

► 404

Hydraulic Chuck Standard

For high precision machining in automotive, aerospace, medical and die & mold.

Coolant Through Hole



A.4

ø14 - 32mm

Model	Article No.	Ød	ØD	ØD1	L	L1	H	E	G	Weight (kg)
C5-HDC14-90	800.712	14	34	45	90	48	53 - 60	38	HDA12-10010	0.90
C5-HDC16-75 *	800.716	16	38	50	75	35	68	43	-	0.90
C5-HDC16-90 *	800.717	16	38	48	90	48	83	43	-	1.00
C5-HDC18-90 *	800.719	18	40	48	90	48	83	43	-	1.10
C5-HDC20-75 *	800.721	20	42	52	75	35	68	43	-	0.90
C5-HDC20-90 *	800.722	20	42	50	90	48	83	43	-	1.00
C5-HDC25-90 *	800.723	25	55	63	90	48	83	52	-	1.40
C6-HDC14-90	800.808	14	34	45	90	48	48 - 60	38	HDA10-08015	1.30
C6-HDC14-120	800.806	14	34	45	120	48	38 - 60	38	HDA10-08032	1.60
C6-HDC16-75 *	800.814	16	38	50	75	35	66	43	-	1.20
C6-HDC16-90 *	800.815	16	38	47	90	48	81	43	-	1.30
C6-HDC16-120	800.812	16	38	48	120	48	43 - 70	43	HDA16-12037	1.70
C6-HDC18-90 *	800.818	18	40	48	90	48	66	43	-	1.40
C6-HDC18-120	800.816	18	40	49	120	48	43 - 70	43	HDA16-12037	1.80
C6-HDC20-75 *	800.821	20	42	53	75	33	66	43	-	1.30
C6-HDC20-90 *	800.822	20	42	50	90	48	72	43	-	1.30
C6-HDC20-120	800.819	20	42	50	120	48	43 - 70	43	HDA16-12037	1.70
C6-HDC25-90 *	800.825	25	55	63	90	46	80	52	-	1.80
C6-HDC25-120	800.823	25	55	63	120	51	67 - 79	52	HDA20-16015	2.50
C6-HDC32-90 *	800.827	32	75	63	90	43	81	56	-	2.10
C6-HDC32-120	800.826	32	63	-	120	-	66 - 78	56	HDA20-16015	2.60

1. * Adjusting screw cannot be used.
2. "E" is the min. clamping length.
3. "G" is the adjusting screw (optional).
4. "H" is the max. tool shank length that can be inserted for these models.

Caution

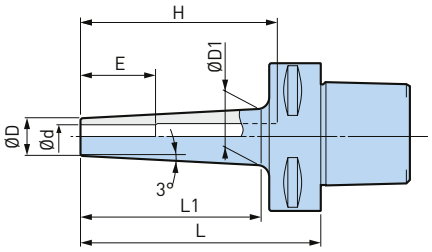
- Use only cutting tools that have a shank tolerance within h6.
- Roughing endmills are not recommended for use with hydraulic chucks.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)
- Do not tighten the clamping screw without first inserting a cutting tool into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

Accessories & Spare Parts

PJC Collets	PSC Collets	Adjusting Screws HDA	α Wiper Cleaners
▶ 379	▶ 380	▶ 387	▶ 404

Shrink Chuck Slim

Slim design reduces outer diameter for machining in tight spaces.



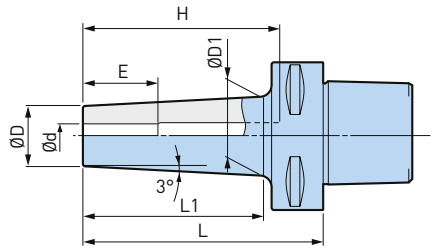
ø6 - 12mm

Model	Article No.	Ød	ØD	ØD1	L	L1	E	H	Weight (kg)
C6-SRC6S-120	973.709	6	10	19.5	120	92	26	111	0.90
C6-SRC6S-165	973.710	6	10	24	165	133	26	156	1.00
C6-SRC8S-120	973.711	8	13	22.5	120	92	26	111	0.90
C6-SRC8S-165	973.712	8	13	27	165	133	26	156	1.10
C6-SRC10S-120	973.713	10	16	25.5	120	92	32	111	1.00
C6-SRC10S-165	973.714	10	16	30.5	165	135	32	156	1.10
C6-SRC12S-120	973.715	12	19	28.5	120	92	36	111	1.00
C6-SRC12S-165	973.716	12	19	33	165	135	36	156	1.20

1. Use a carbide shank cutter with tolerance h6.
2. Please refer to the operation manual of heating / cooling equipment, as some equipment may not be compatible.

Shrink Chuck Standard

Substantial body provides higher rigidity.



ø6 - 20mm

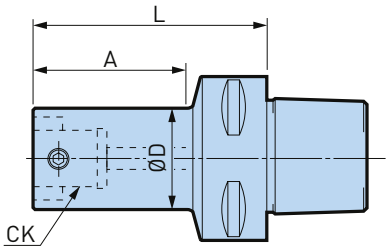
Model	Article No.	Ød	ØD	ØD1	L	L1	E	H	Weight (kg)
C6-SRC6-90	973.553	6	14	20,5	90	63	26	81	0.90
C6-SRC8-90	973.554	8	18	24,5	90	63	26	81	0.90
C6-SRC10-90	973.555	10	22	28,5	90	63	32	81	1.00
C6-SRC12-90	973.556	12	24	30,5	90	63	36	81	1.00
C6-SRC16-90	973.557	16	28	34,5	90	63	38	81	1.10
C6-SRC16-165	973.558	16	28	42,5	165	138	38	80	1.70
C6-SRC20-90	973.559	20	34	40,5	90	63	42	80	1.20
C6-SRC20-165	973.560	20	34	48,5	165	138	42	100	2.00

1. Use a carbide shank cutter with tolerance h6.
2. Please refer to the operation manual of heating / cooling equipment, as some equipment may not be compatible.

CKB Shanks with Center Through Coolant

Basic Holder for rough and finish boring heads of the proven BIG Boring System.

Coolant Through Hole



A.4

CK1 - CK7

Model	Article No.	CK	ØD	L	A	Weight (kg)
C4-CKB1-48	806.698	CK1	19	47.5	22	0.30
C4-CKB2-45	806.699	CK2	24	44.5	19	0.31
C4-CKB3-40	806.700	CK3	31	40	17	0.32
C4-CKB4-33	806.701	CK4	39	33	15	0.29
C5-CKB1-73	806.702	CK1	19	72.5	47	0.50
C5-CKB2-85	328.273	CK2	24	84.5	60	0.61
C5-CKB3-55	328.223	CK3	31	55	30	0.56
C5-CKB4-48	328.224	CK4	39	48	24	0.60
C5-CKB5-50	328.226	CK5	50	50	(30)	0.70
C5-CKB6-50	328.037	CK6	64	50	(30)	0.80
C6-CKB1-78	328.321	CK1	19	77.5	50	0.85
C6-CKB2-90	328.322	CK2	24	89.5	62	0.95
C6-CKB3-65	328.036	CK3	31	65	38	1.30
C6-CKB3-100	-	CK3	31	100	73	1.15
C6-CKB4-58	328.035	CK4	39	58	31	1.00
C6-CKB4-93	869.019	CK4	39	93	66	1.40
C6-CKB5-48	328.034	CK5	50	48	22	0.98
C6-CKB5-83	-	CK5	50	83	57	1.40
C6-CKB6-59	328.033	CK6	64	59	(37)	1.31
C6-CKB6-94	-	CK6	64	94	(72)	2.18
C8-CKB4-118	806.703	CK4	39	118	83	2.45
C8-CKB4-178	806.704	CK4	39	178	143	2.95
C8-CKB5-108	806.705	CK5	50	108	73	2.70
C8-CKB5-183	806.706	CK5	50	183	148	3.85
C8-CKB6-74	328.053	CK6	64	74	39	2.45
C8-CKB6-169	806.707	CK6	64	169	135	4.80
C8-CKB7-73	328.032	CK7	90	73	(43)	3.05
C8-CKB7-123	806.708	CK7	90	123	(93)	5.50

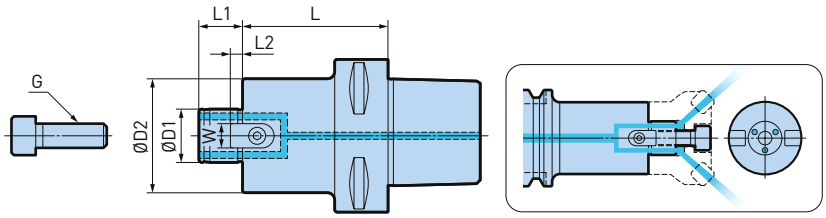
Accessories & Spare Parts

Rough Boring Heads	Fine Boring Heads
▶ 417	▶ 428

Face Mill Arbors Type FMH

For cutters that require a coolant hole through the pilot.

Coolant Through Hole



A.4

Model	Article No.	ØD1	ØD2	L	L1	L2	W	G	ØC min.	Weight (kg)
C4-FMH22-47-45	100153.001.0	22	47	45	18	5	10	M10	38	0.62
C5-FMH22-47-60	973.718	22	47	60	18	5	10	M10	36	1.00
C5-FMH22-47-90	800.695	22	47	90	18	5	10	M10	36	1.40
C5-FMH22-60-60	973.720	22	60	60	18	5	10	M10	38	1.20
C5-FMH27-60-60	800.698	27	60	60	20	6	12	M12	46	1.20
C6-FMH22-47-45	973.721	22	47	45	18	5	10	M10	38	1.10
C6-FMH22-47-60	973.722	22	47	60	18	5	10	M10	36	1.30
C6-FMH22-47-90	973.723	22	47	90	18	5	10	M10	36	1.70
C6-FMH22-47-150	800.783	22	47	150	18	5	10	M10	36	2.50
C6-FMH22-60-45	973.724	22	60	45	18	5	10	M10	38	1.30
C6-FMH22-60-60	973.725	22	60	60	18	5	10	M10	38	1.70
C6-FMH22-60-90	973.726	22	60	90	18	5	10	M10	38	2.30
C6-FMH27-60-45	800.788	27	60	45	20	6	12	M12	46	1.40
C6-FMH27-60-60	800.789	27	60	60	20	6	12	M12	46	1.70
C6-FMH27-60-90	800.790	27	60	90	20	6	12	M12	46	2.30
C6-FMH27-60-150	800.787	27	60	150	20	6	12	M12	46	3.60
C8-FMH22-47-60	973.727	22	47	60	18	5	10	M10	36	2.20
C8-FMH22-47-105	973.728	22	47	105	18	5	10	M10	36	2.80
C8-FMH22-47-150	973.729	22	47	150	18	5	10	M10	36	3.30
C8-FMH22-47-200	800.899	22	47	200	18	5	10	M10	36	4.00
C8-FMH22-60-60	973.730	22	60	60	18	5	10	M10	38	2.50
C8-FMH22-60-105	973.731	22	60	105	18	5	10	M10	38	3.40
C8-FMH22-60-150	973.732	22	60	150	18	5	10	M10	38	4.40
C8-FMH27-60-60	800.906	27	60	60	20	6	12	M12	46	2.50
C8-FMH27-60-105	800.903	27	60	105	20	6	12	M12	46	3.40
C8-FMH27-60-150	800.904	27	60	150	20	6	12	M12	46	4.20
C8-FMH27-60-200	800.905	27	60	200	20	6	12	M12	46	5.50
C8-FMH32-96-75	800.912	32	96	75	22	7	14	M16	58	4.00
C8-FMH32-96-105	800.910	32	96	105	22	7	14	M16	58	5.20
C8-FMH32-96-150	800.911	32	96	150	22	7	14	M16	58	6.80

1. By using a clamping screw with a through bore, coolant is supplied through the screw.
2. Clamp bolt is included.

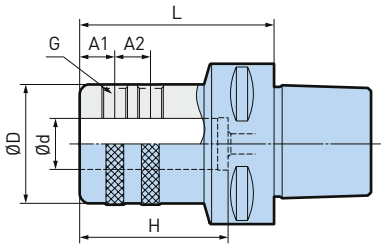
Accessories & Spare Parts

Clamp Bolts

► 388

Side Lock Holders for Drills

Coolant Through Hole



A.4

ø16 - 40mm

Model	Article No.	Ød	ØD	L	A1	A2	H	G	Weight (kg)
C4-TSL16-56	800.687	16	48	56	14	14	48	M10 P1.25	0.65
C4-TSL20-60	800.688	20	48	60	14	14	50	M10 P1.25	0.66
C4-TSL25-77	800.689	25	48	77	15	20	56	M16 P1.5	0.79
C5-TSL16-60	973.115	16	48	60	14	14	48	M10 P1.25	0.90
C5-TSL20-60	973.116	20	48	60	14	14	50	M10 P1.25	0.90
C5-TSL25-75	973.117	25	48	75	15	20	56	M16 P1.5	1.00
C5-TSL32-85	800.775	32	63	85	15	20	60	M16 P1.5	1.50
C6-TSL16-70	973.119	16	48	70	14	14	48	M10 P1.25	1.30
C6-TSL20-70	973.120	20	48	70	14	14	50	M10 P1.25	1.30
C6-TSL25-70	973.121	25	48	70	15	20	56	M16 P1.5	1.20
C6-TSL32-75	973.122	32	63	75	15	20	60	M16 P1.5	1.60
C6-TSL40-85	973.123	40	68	85	15	25	70	M16 P1.5	1.80
C8-TSL16-80	973.124	16	48	80	14	14	48	M10 P1.25	2.40
C8-TSL20-80	973.125	20	48	80	14	14	50	M10 P1.25	2.30
C8-TSL25-85	973.126	25	48	85	15	20	56	M16 P1.5	2.30
C8-TSL32-90	973.127	32	63	90	15	20	60	M16 P1.5	2.70
C8-TSL40-95	973.128	40	68	95	15	25	70	M16 P1.5	2.80

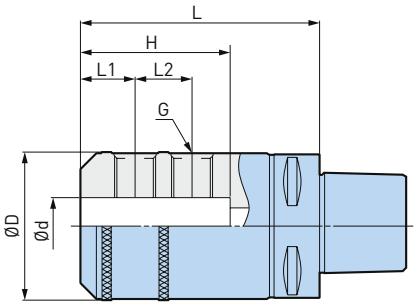
1. "H" is the max. tool shank length that can be inserted for these models.
2. Not compatible with Weldon DIN 1835 B / DIN 6535 HB.

Accessories & Spare Parts

Sleeves for TSL & OSL

► 389

Side Lock Holders for Weldon



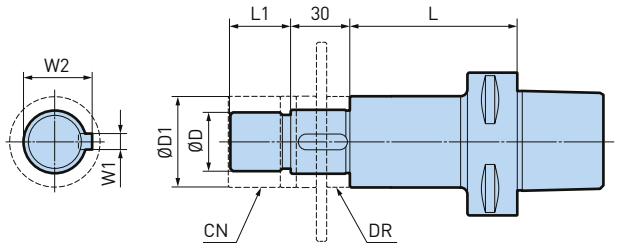
Coolant Through Hole

ø16 - 32mm

Model	Article No.	Ød	ØD	L	L1	L2	H	G	Weight (kg)
C6-ISL16-80	973.562	16	48	80	24	-	52	M14	1.40
C6-ISL20-80	973.563	20	52	80	25	-	55	M16	1.50
C6-ISL25-105	973.564	25	65	105	24	25	60	M18 P2.0	2.90
C6-ISL32-115	973.565	32	72	115	24	28	90	M20 P2.0	3.00

1. "H" is the max. tool shank length that can be inserted for these models.
2. Use a cutting tool in accordance to DIN 1835 B/DIN 6535 HB and ISO 5414.
3. * Peripherical coolant supply is not available.

Side Cutter Arbors

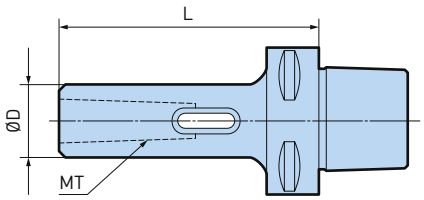


A.4

Model	Article No.	ØD	ØD1	L	L1	W1	W2	Weight (kg)
C6-SCA25.4-75	800.887	25.4	40	75	25	6.35	27.78	1.80
C6-SCA25.4-120	800.886	25.4	40	120	25	6.35	27.78	2.20
C6-SCA31.75-75	800.888	31.75	46	75	30	7.92	34.92	2.20
C8-SCA25.4-90	800.940	25.4	40	90	25	6.35	27.78	2.90
C8-SCA31.75-90	800.942	31.75	46	90	30	7.92	34.92	3.30

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

Morse Taper Holders

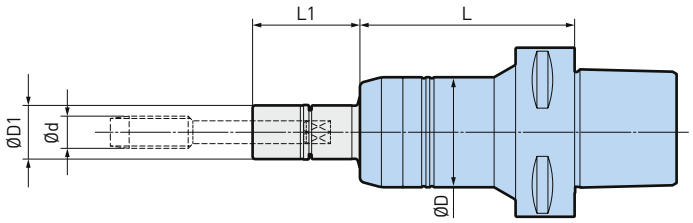


Model	Article No.	MT No.	ØD	L	Weight (kg)
C5-MTA1-95	973.572	1	25	95	0.70
C5-MTA2-110	973.573	2	32	110	0.90
C5-MTA3-130	973.574	3	40	130	1.20
C6-MTA1-95	973.575	1	25	95	1.00
C6-MTA2-110	973.576	2	32	110	1.20
C6-MTA3-130	973.577	3	40	130	1.50
C8-MTA1-105	973.578	1	25	105	2.00
C8-MTA2-120	973.579	2	32	120	2.20
C8-MTA3-140	973.580	3	40	140	2.50

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



A.4

M3 - M20

Model	Article No.	Tap Holder	Ød	ØD	ØD1	L	L1	Weight (kg)
C5-MGT6-75	800.767	MGT6	M3-M8	36	16	75	30 - 200	0.80
C5-MGT12-75	800.765	MGT12	M5-M12 / P1/8	41	20	75	30 - 200	0.90
C5-MGT20-100	800.766	MGT20	M10-M20 / P1/4-P1/2	54	30	100	35 - 150	1.40
C6-MGT6-80	973.754	MGT6	M3-M8	36	16	80	30 - 200	1.20
C6-MGT12-80	973.755	MGT12	M5-M12 / P1/8	41	20	80	30 - 200	1.20
C6-MGT20-100	973.756	MGT20	M10-M20 / P1/4-P1/2	54	30	100	35 - 150	1.70
C8-MGT6-80	800.935	MGT6	M3-M8	36	16	80	30 - 200	2.10
C8-MGT12-80	800.933	MGT12	M5-M12 / P1/8	41	20	80	30 - 200	2.10
C8-MGT20-95	800.934	MGT20	M10-M20 / P1/4-P1/2	54	30	95	35 - 150	2.50

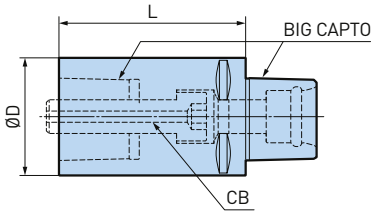
1. Tap holder and wrench are to be ordered separately.
2. Synchronized tapping function is required on the machine.

Accessories & Spare Parts

Tap Holder	MEGA Wrenches	Accessories
▶ 390	▶ 384	▶ 398

Extensions

Coolant Through Hole



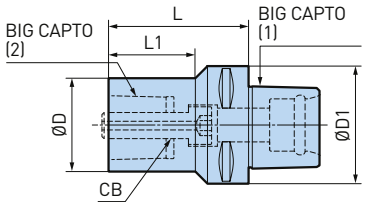
Model	Article No.	BIG CAPTO	ØD	L	Weight (kg)
C6-C6-100	803.738	C6	63	100	2.20
C8-C8-100	803.740	C8	80	100	3.60

A.4

1. Hexagon socket head cap screw (CB) is included. M20xP2 / Tightening Torque 170 Nm

Reductions

Coolant Through Hole



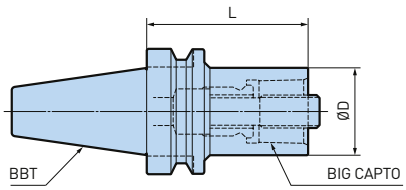
Model	Article No.	BIG CAPTO	ØD	ØD1	L	L1	Weight (kg)
C6-C5-75	803.737	C6 (1) - C5 (2)	50	63	75	46	1.40
C8-C6-85	803.739	C8 (1) - C6 (2)	63	80	85	50	2.60

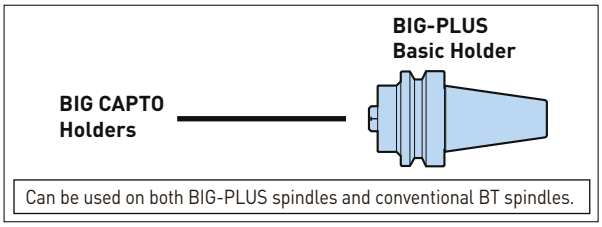
1. Hexagon socket head cap screw (CB) is included.
   C6-C5: M16xP1.5 / Tightening Torque 95 Nm
   C8-C6: M20xP2 / Tightening Torque 170 Nm

BIG CAPTO Basic Holders

Coolant Through Hole

Dual-Contact





Model	Article No.	BIG CAPTO	ØD	L	Weight (kg)
BBT40-C3-30	973.598	C3	32	30	1.00
BBT40-C4-40	802.350	C4	40	40	1.00
BBT40-C5-50	973.600	C5	50	50	1.10
BBT40-C6-75	973.601	C6	63	75	1.70
BBT50-C3-40	973.602	C3	32	40	3.60
BBT50-C4-40	973.603	C4	40	40	3.60
BBT50-C5-40	973.604	C5	50	40	3.50
BBT50-C6-50	973.605	C6	63	50	3.50
BBT50-C8-70	803.736	C8	80	70	4.00

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Clamp bolt is included.

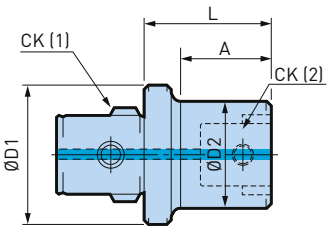
Tool Holders and Components CK

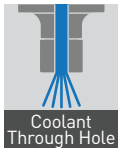
Reductions	288
Extensions / Smart Damper Extensions	289
Milling Chucks	290
MEGA Synchro Tapping Holder	291
Tapping Holders	292
Morse Taper Shanks	293

Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

A.5

Reductions



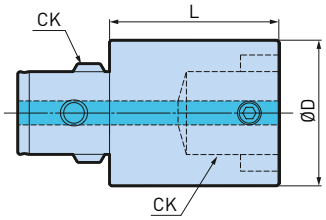


Model	Article No.	CK (1)	CK (2)	ØD1	ØD2	L	A	Weight (kg)
CKB21-36	-	CK2	CK1	24	19	36	27	0.09
CKB31-41	-	CK3	CK1	31	19	40.5	29	0.14
CKB32-35	-	CK3	CK2	31	24	34.5	23	0.15
CKB41-58	-	CK4	CK1	39	19	57.5	44	0.24
CKB42-52	-	CK4	CK2	39	24	51.5	38	0.27
CKB43-47	-	CK4	CK3	39	31	47	34	0.32
CKB51-58	-	CK5	CK1	50	19	57.5	40	0.39
CKB52-52	-	CK5	CK2	50	24	51.5	34	0.41
CKB52-82	-	CK5	CK2	50	24	81.5	64	0.51
CKB53-47	-	CK5	CK3	50	31	47	30	0.45
CKB53-77	-	CK5	CK3	50	31	77	60	0.62
CKB54-40	-	CK5	CK4	50	39	40	23	0.47
CKB54-70	-	CK5	CK4	50	39	70	53	0.73
CKB61-67	-	CK6	CK1	64	19	66.5	35	0.88
CKB62-61	-	CK6	CK2	64	24	60.5	43	0.70
CKB62-96	-	CK6	CK2	64	24	95.5	78	0.83
CKB63-56	-	CK6	CK3	64	31	56	39	0.78
CKB63-91	-	CK6	CK3	64	31	91	74	0.96
CKB64-49	-	CK6	CK4	64	39	49	32	0.80
CKB64-84	-	CK6	CK4	64	39	84	67	1.10
CKB65-39	-	CK6	CK5	64	50	39	22	0.82
CKB65-74	-	CK6	CK5	64	50	74	57	1.30
CKB74-70	-	CK7	CK4	90	39	70	53	1.50
CKB75-60	-	CK7	CK5	90	50	60	43	1.65
CKB76-106	-	CK7	CK6	90	64	106	89	3.00

Accessories & Spare Parts

Fine Boring Heads	Rough Boring Heads
▶ 428	▶ 417

Extensions

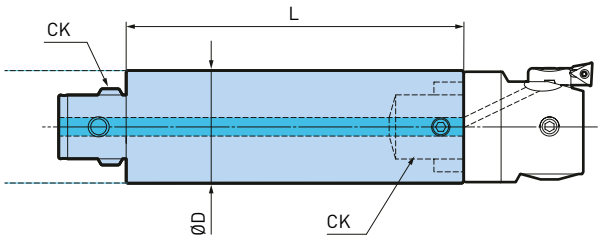


Model	Article No.	CK	ØD	L	Weight (kg)
CKB11-20	-	CK1	19	20	0.04
CKB11-30	-	CK1	19	30	0.06
CKB22-30	-	CK2	24	30	0.10
CKB22-45	-	CK2	24	45	0.15
CKB33-30	-	CK3	31	30	0.16
CKB33-45	-	CK3	31	45	0.24
CKB44-45	-	CK4	39	45	0.38
CKB44-60	-	CK4	39	60	0.51
CKB55-60	-	CK5	50	60	0.84
CKB55-90	-	CK5	50	90	1.26
CKB66-60	-	CK6	64	60	1.38
CKB66-100	-	CK6	64	100	2.34
CKB77-105	-	CK7	90	105	5.20

1. * Two pieces of CK-screws are included.

Smart Damper Extensions

Extension with integrated damping system for highly efficient deep hole finish boring.



Model	Article No.	CK	ØD	L	Weight (kg)
CKB44DP-120	389.365	CK4	39	120	1.30
CKB55DP-150	389.366	CK5	50	150	2.60
CKB66DP-180	389.367	CK6	64	180	5.30

1. Please do not use other extentions as they may cause chattering.

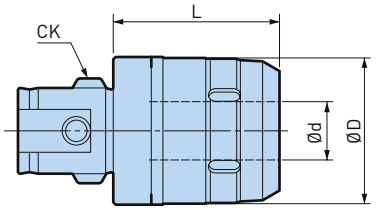
Accessories & Spare Parts

Fine Boring Heads	Rough Boring Heads
▶ 428	▶ 417

Milling Chucks

With needle-bearing chucking nut for maximum clamping force and high concentricity.

Coolant Through Hole



Model	Article No.	CK	Ød	ØD	ØD1	L	Weight (kg)
CKB5-HMC20S *	807.572	CK5	20	63,5	50	57	0.80
CKB6-HMC20 *	335.066	CK6	20	63,5	60	56	1.30
CKB7-HMC32	335.077	CK7	32	90	80	102	3.90

A.5

1. Wrench (FK) is included.
2. Straight collets C and OCA are applicable.
3. * OCA collet can not be used.

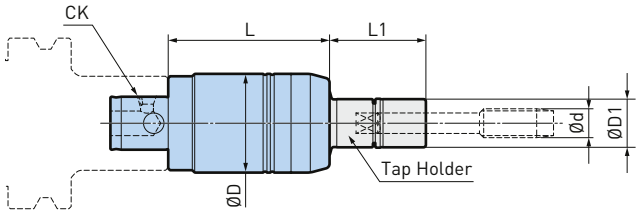
Accessories & Spare Parts

OCA Collets	C Collets	FK Wrenches
▶ 380	▶ 381	▶ 385

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



Model	Article No.	CK	Tap Holder	Ød	ØD	ØD1	L	L1	Weight (kg)
CKB4-MGT6-62	335.764	CK4	MGT6	M2 - M6	36	16	62	30 - 200	0.50
CKB4-MGT12-67	335.768	CK4	MGT12	M6 - M12	41	20	67	30 - 200	0.60
CKB5-MGT20-87	335.769	CK5	MGT20	M12 - M20	54	30	87	35 - 150	1.20

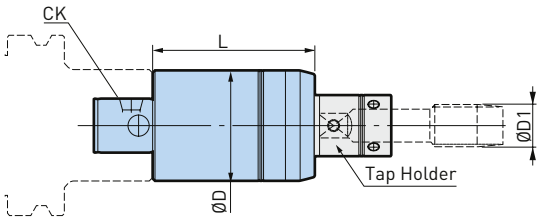
1. Tap holder is to be ordered separately.
2. Synchronized tapping function is required on the machine.

A.5

MEGA Synchro Tapping Holder MGT36

For large Tapping: Type MGT36

Coolant Through Hole



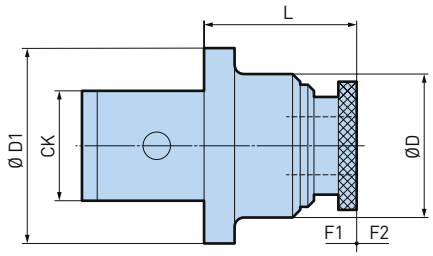
Model	Article No.	CK	Tap Holder	ØD	ØD1	L	Weight (kg)
CKB7-MGT36-137	800.949	CK7	MGT36	94	38-52	137	6.70

1. Tap holder is to be ordered separately.
2. Synchronized tapping function is required on the machine.

Accessories & Spare Parts

Tap Holder	MEGA Wrenches	Accessories
▶ 390	▶ 384	▶ 398

Tapping Holders

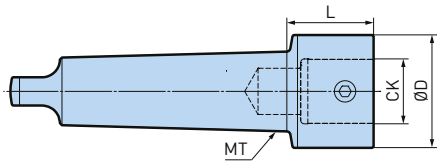


A.5

Model	Article No.	CK	ØD	ØD1	L	F1	F2	Weight (kg)
CK6-ATE12E	335.762	CK6	47	63.5	50	5	10	0.90
CK6-ATE24E	335.763	CK6	64	63.5	80	7	14	1.80

1. F1 = length compensation compression.
2. F2 = length compensation extension.
3. Please contact us for tap collet.

Morse Taper shanks with tang



Model	Article No.	CK	ØD	L	Weight (kg)
MT3-CKB1-47	806.671	CKB1	19	47	0.40
MT3-CKB2-68	806.712	CKB2	24	67.5	0.46
MT3-CKB3-64	806.713	CKB3	31	64	0.56
MT3-CKB5-48	806.714	CKB5	50	48	0.70
MT4-CKB1-52	806.715	CKB1	19	51.5	0.60
MT4-CKB2-74	806.716	CKB2	24	74	0.80
MT4-CKB3-66	806.717	CKB3	31	65.5	0.90
MT4-CKB4-60	806.718	CKB4	39	59.5	0.99
MT4-CKB5-50	806.719	CKB5	50	49.5	1.09
MT4-CKB6-61	806.720	CKB6	64	60.5	1.57
MT5-CKB4-86	806.721	CKB4	39	85.5	2.30
MT5-CKB5-75	806.722	CKB5	50	74.5	2.35
MT5-CKB6-61	806.723	CKB6	64	60.5	2.48
MT6-CKB6-61	806.724	CKB6	64	60.5	5.10

Morse Taper with thread

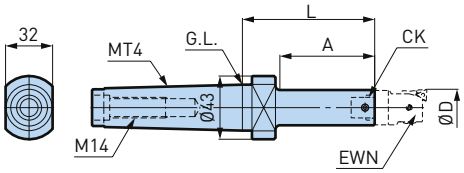


Fig. 1

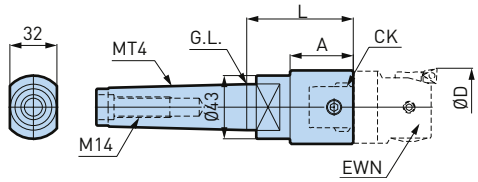


Fig. 2

Model	Article No.	Fig.	CK	ØD	L	A	Weight (kg)
MT4M-CKB1-68-M14	-	1	CK1	20 - 36	67.5	41	0.72
MT4M-CKB2-90-M14	-	1	CK2	25 - 47	90	64	0.84
MT4M-CKB3-86-M14	-	1	CK3	32 - 60	85.5	60	0.95
MT4M-CKB4-76-M14	-	1	CK4	41 - 74	75.5	53	1.04
MT4M-CKB5-73-M14	-	2	CK5	53 - 95	72.5	43	1.20
MT4M-CKB6-84-M14	-	2	CK6	68 - 150	83.5	54	1.70

1. Boring Head is not included

Accessories & Spare Parts

Fine Boring Heads	Rough Boring Heads
▶ 428	▶ 417

Tool Holders Cylindrical Shank

MEGA Micro Chuck	296
New Baby Chuck	297
Hydraulic Chucks	299
New Hi-Power Milling Chuck	300
Shrink Chuck	301
CK Shanks	303
MEGA Synchro Tapping Holder	304
Other Products	306

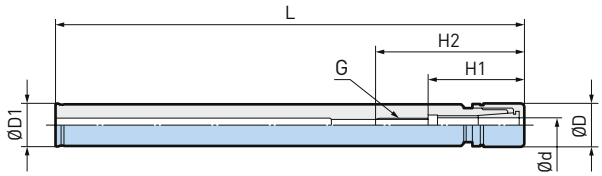
Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

A.6

MEGA Micro Chuck

Ultra small diameter (Ø 10 - Ø 18) to minimize interference. High precision is guaranteed in combination with MEGA New Baby Chuck.

Coolant Through Hole



ø0.45 - 8.05mm

Model	Article No.	Ød	ØD	ØD1	L	H1	H2	G	Collet Model	Nut Model	Weight (kg)
ST10-MEGA3S-120	961.777	0.45 - 3.25	10	10	120	22	38	M4 P0.7	NBC3S	MGN3S	0.06
ST12-MEGA4S-80	100268.002.0	0.45 - 4.05	12	12	80	26.5	47	M5 P0.8	NBC4S	MGN4S	0.06
ST12-MEGA4S-130	961.773	0.45 - 4.05	12	12	130	26.5	47	M5 P0.8	NBC4S	MGN4S	0.10
ST12-MEGA4S-160	961.778	0.45 - 4.05	12	12	160	26.5	47	M5 P0.8	NBC4S	MGN4S	0.12
ST14-MEGA6S-80	100268.003.0	0.45 - 6.05	14	14	80	28.5	49	M7 P0.75	NBC6S	MGN6S	0.07
ST14-MEGA6S-160	961.774	0.45 - 6.05	14	14	160	28.5	49	M7 P0.75	NBC6S	MGN6S	0.15
ST14-MEGA6S-200	961.779	0.45 - 6.05	14	14	200	28.5	49	M7 P0.75	NBC6S	MGN6S	0.18
ST16-MEGA8S-80	100268.004.0	2.95 - 8.05	18	16	80	31	50.5	M9 P0.75	NBC8S	MGN8S	0.09
ST16-MEGA8S-160	803.596	2.95 - 8.05	18	16	160	31	50.5	M9 P0.75	NBC8S	MGN8S	0.20
ST16-MEGA8S-200	805.575	2.95 - 8.05	18	16	200	31	50.5	M9 P0.75	NBC8S	MGN8S	0.25

1. MEGA nut is included in delivery.

MEGA Micro Chuck Set

Including convenient storage case.

Set Model	Article No.
SST12-MEGA4S-130	961.775

Contents

- Body / ST12 - MEGA4S - 130 (with MGN4S nut)
- Collet / NBC4S - 3.0 & 4.0 (2 pcs.)
- Wrench / MGR12

Set Model	Article No.
SST14-MEGA6S-160	961.776

Contents

- Body / ST14 - MEGA6S - 160 (with MGN6S nut)
- Collet / NBC6S - 3.0,4.0,5.0 & 6.0 (4 pcs.)
- Wrench / MGR14

Set Model	Article No.
SST16-MEGA8S-160	805.412

Contents

- Body / ST16 - MEGA8S - 160 (with MGN8S nut)
- Collet / NBC8S - 3.0,4.0,6.0 & 8.0 (4 pcs.)
- Wrench / MGR18

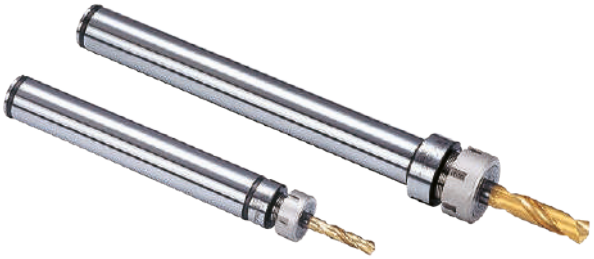
Accessories & Spare Parts

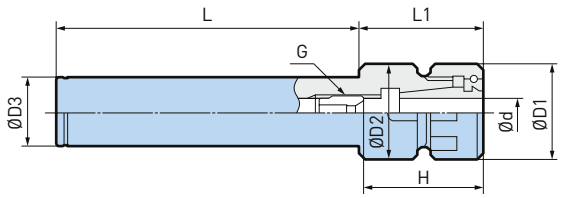
MEGA Nuts	Micro Seal Nuts	Micro Collets	MEGA Wrenches	Collet Protective Cases	Taper Cleaners
▶ 358	▶ 358	▶ 356	▶ 384	▶ 359	▶ 404

New Baby Chuck

Avoids interference when used in combination with BIG New Hi-Power Milling Chuck.

Coolant Through Hole





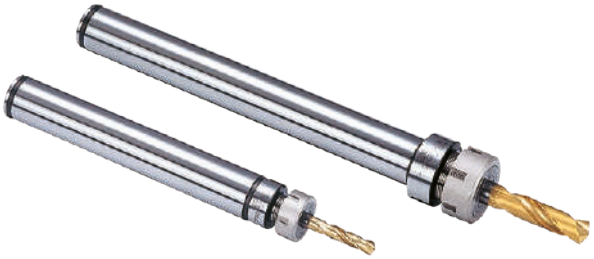
ø0.25 - 20mm

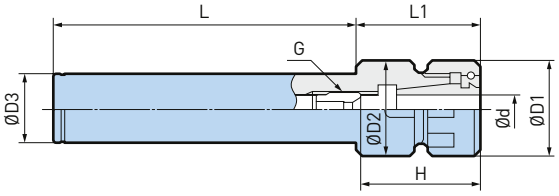
Model	Article No.	Ød	ØD1	ØD2	ØD3	L	L1	H	Collet Model	Weight (kg)
ST20-NBS6-100	961.701	0.25 - 6	20	19.5	20	100	24	20 - 40	NBC6	0.23
ST20-NBS6-150	961.702	0.25 - 6	20	19.5	20	150	24	20 - 40	NBC6	0.33
ST20-NBS6-250	961.703	0.25 - 6	20	19.5	20	250	24	20 - 40	NBC6	0.52
ST20-NBS8-100	961.706	0.5 - 8	25	24.5	20	100	26	23 - 43	NBC8	0.26
ST20-NBS8-150	961.707	0.5 - 8	25	24.5	20	150	26	23 - 43	NBC8	0.35
ST20-NBS8-250	961.708	0.5 - 8	25	24.5	20	250	26	23 - 43	NBC8	0.54
ST20-NBS10-60	100270.001.0	1.5 - 10	30	21	20	78	18	35 - 45	NBC10	0.15
ST20-NBS10-100	961.711	1.5 - 10	30	29.5	20	100	28	35 - 45	NBC10	0.28
ST20-NBS10-150	961.712	1.5 - 10	30	29.5	20	150	28	35 - 45	NBC10	0.37
ST20-NBS10-250	961.713	1.5 - 10	30	29.5	20	250	28	35 - 45	NBC10	0.56
ST20-NBS10-350	961.714	1.5 - 10	30	29.5	20	350	28	35 - 45	NBC10	0.75
ST25-NBS6-150	961.716	0.25 - 6	20	19.5	25	150	24	20 - 40	NBC6	0.51
ST25-NBS8-150	961.721	0.5 - 8	25	24.5	25	150	26	23 - 42	NBC8	0.53
ST25-NBS8-200	961.722	0.5 - 8	25	24.5	25	200	26	23 - 42	NBC8	0.67
ST25-NBS8-250	961.723	0.5 - 8	25	24.5	25	250	26	23 - 42	NBC8	0.83
ST25-NBS10-150	961.726	1.5 - 10	30	29.5	25	150	28	35 - 45	NBC10	0.54
ST25-NBS10-200	961.727	1.5 - 10	30	29.5	25	200	28	35 - 45	NBC10	0.70
ST25-NBS10-250	961.728	1.5 - 10	30	29.5	25	250	28	35 - 45	NBC10	0.85
ST25-NBS13-60	100270.002.0	2.5 - 13	35	26	25	60	22	41 - 60	NBC13	0.24
ST25-NBS13-150	961.731	2.5 - 13	35	34.5	25	150	34	41 - 60	NBC13	0.59
ST25-NBS13-200	961.732	2.5 - 13	35	34.5	25	200	34	41 - 60	NBC13	0.73
ST25-NBS13-250	961.733	2.5 - 13	35	34.5	25	250	34	41 - 60	NBC13	0.88

A.6

continues on the next page

New Baby Chuck





Model	Article No.	Ød	ØD1	ØD2	ØD3	L	L1	H	Collet Model	Weight (kg)
ST32-NBS6-150	961.736	0.25 - 6	20	19.5	32	150	24	20 - 40	NBC6	0.77
ST32-NBS8-150	961.741	0.5 - 8	25	24.5	32	150	26	23 - 42	NBC8	0.80
ST32-NBS10-150	961.746	1.5 - 10	30	29.5	32	150	28	35 - 45	NBC10	0.83
ST32-NBS10-200	961.747	1.5 - 10	30	29.5	32	200	28	35 - 45	NBC10	1.08
ST32-NBS10-250	961.748	1.5 - 10	30	29.5	32	250	28	35 - 45	NBC10	1.30
ST32-NBS10-350	961.749	1.5 - 10	30	29.5	32	350	28	35 - 45	NBC10	1.90
ST32-NBS13-150	961.751	2.5 - 13	35	34.5	32	150	34	41 - 60	NBC13	0.88
ST32-NBS13-200	961.752	2.5 - 13	35	34.5	32	200	34	41 - 60	NBC13	1.12
ST32-NBS13-250	961.753	2.5 - 13	35	34.5	32	250	34	41 - 60	NBC13	1.36
ST32-NBS13-300	961.754	2.5 - 13	35	34.5	32	300	34	41 - 60	NBC13	1.63
ST32-NBS16-150	961.756	2.5 - 16	42	41.5	32	150	34	45 - 65	NBC16	0.90
ST32-NBS16-200	961.757	2.5 - 16	42	41.5	32	200	34	45 - 65	NBC16	1.14
ST32-NBS16-300	961.758	2.5 - 16	42	41.5	32	300	34	45 - 65	NBC16	1.65
ST32-NBS20-150	961.761	2.5 - 20	46	45.5	32	150	34	48 - 65	NBC20	0.90
ST32-NBS20-200	961.762	2.5 - 20	46	45.5	32	200	34	48 - 65	NBC20	1.10
ST32-NBS20-300	961.763	2.5 - 20	46	45.5	32	300	34	48 - 65	NBC20	1.60

1. New Baby Nut is included.
2. "G" is the adjusting screw (optional).
3. "H" is the max. tool shank length that can be inserted for these models.

Accessories & Spare Parts

New Baby Nuts	Baby Perfect Seals	New Baby Collets	New Baby Wrenches	Adjusting Screws NBA	Taper Cleaners
▶ 367	▶ 370	▶ 360	▶ 385	▶ 367	▶ 404

Hydraulic Chuck Super Slim

Ultra precise hydraulic chuck with extremely slim design.

Coolant Through Hole

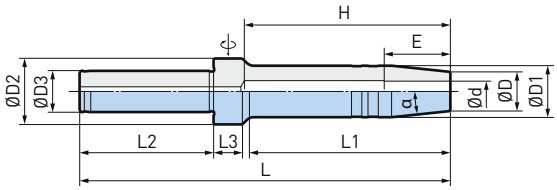


Fig. 1

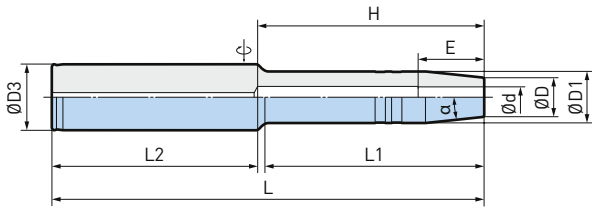


Fig. 2

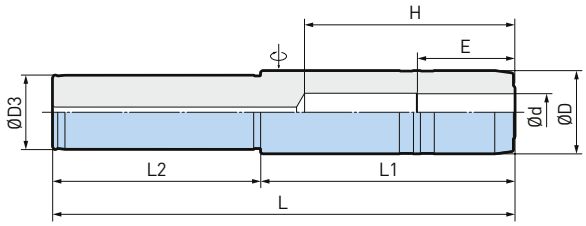


Fig. 3

A.6

ø4 - 20mm

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	ØD3	L	L1	L2	H	E	α	Weight (kg)
ST20-HDC4S-180	805.835	1	4	14	18	32	20	180	94	65	-	19	6°	0.42
ST20-HDC6S-180	805.836	1	6	14	20	32	20	180	95	65	101	25	6°	0.44
ST20-HDC8S-180	805.837	1	8	17	23	32	20	180	96	65	101	31	6°	0.49
ST20-HDC10S-180	805.838	1	10	19	25	32	20	180	97	65	100	33	6°	0.52
ST20-HDC12S-180	805.839	1	12	21	28	32	20	180	99	65	100	36	6°	0.57
ST32-HDC10S-210	805.595	2	10	19	25	-	32	210	106	100	110	33	6°	0.92
ST32-HDC12S-210	805.560	2	12	21	28	-	32	210	108	100	109	36	6°	0.98
ST32-HDC16-200	805.840	3	16	36	-	-	32	200	110	90	91	43	-	1.22
ST32-HDC20-200	805.841	3	20	38	-	-	32	200	110	90	90	43	-	1.25

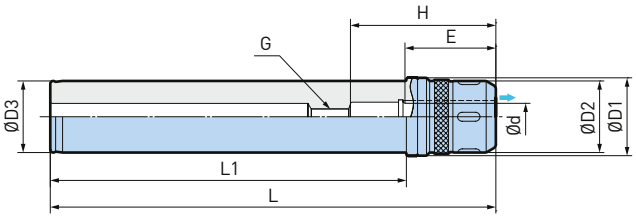
1. Adjusting screw cannot be used.
2. Use carbide cutter within a tolerance of h6.
3. "E" is the min. clamping length.
4. "H" is the max. tool shank length that can be inserted for these models.

Accessories & Spare Parts

PJC Collets	PSC Collets	α Wiper Cleaners
▶ 379	▶ 380	▶ 404

New Hi-Power Milling Chuck HMC12J

Extremely slim and rigid design with jet through coolant.



ø12mm

Model	Article No.	Ød	ØD1	ØD2	ØD3	L	L1	H	E	G	Weight (kg)
ST32-HMC12J-120	805.842	12	35	32	32	120	80	65	43	M8	0.70
ST32-HMC12J-160	805.843	12	35	32	32	160	120	65	43	M8	0.90
ST32-HMC12J-200	805.844	12	35	32	32	200	160	65	43	M8	1.10

1. Wrench is to be ordered separately.
2. "E" is the min. clamping length.
3. "H" is the max. tool shank length that can be inserted for these models.

Accessories & Spare Parts

PJC Collets	FK Wrenches
► 379	► 385

Shrink Chuck Super Slim

Slim design reduces interference contours of the holder

Coolant Through Hole

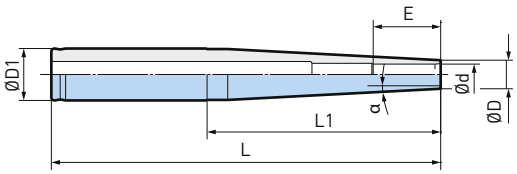


Fig. 1

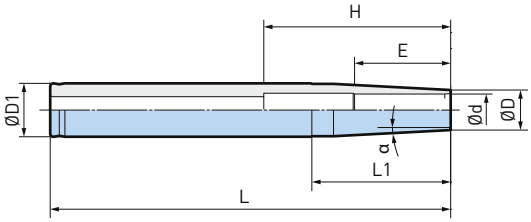


Fig. 2

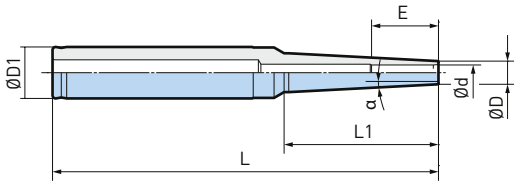


Fig. 3

A.6

ø4 - 12mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	H	E	α	Weight (kg)
ST12-SRC4SS-120	802.189	1	4	7	12	120	51	-	16	3°	0.07
ST12-SRC6SS-120	802.190	2	6	9	12	120	32	52	26	3°	0.08
ST20-SRC6SS-200	802.210	1	6	9	20	200	110	-	26	3°	0.29
ST20-SRC6SS-250	802.212	1	6	9	20	250	110	-	26	3°	0.38
ST20-SRC8SS-150	802.217	1	8	11	20	150	90	-	26	3°	0.21
ST20-SRC8SS-200	802.218	1	8	11	20	200	90	-	26	3°	0.30
ST20-SRC8SS-250	802.219	1	8	11	20	250	90	-	26	3°	0.39
ST20-SRC10SS-150	802.197	2	10	13	20	150	71	60	32	3°	0.22
ST20-SRC10SS-200	802.198	2	10	13	20	200	71	60	32	3°	0.35
ST20-SRC10SS-250	802.199	2	10	13	20	250	71	60	32	3°	0.40
ST20-SRC12SS-150	802.200	2	12	15	20	150	52	70	36	3°	0.23
ST20-SRC12SS-200	802.201	2	12	15	20	200	52	70	36	3°	0.32
ST20-SRC12SS-250	802.202	2	12	15	20	250	52	70	36	3°	0.41
ST20-SRC4SS-150-K40	802.205	3	4	7	20	150	40	-	16	3°	0.25
ST20-SRC6SS-150-K60	802.209	3	6	9	20	150	60	-	26	3°	0.21

1. Use carbide cutter within a tolerance of h6.
2. "E" is the min. clamping length.
3. "H" is the max. tool shank length that can be inserted for these models.
4. Please refer to the operation manual of heating / cooling equipment, as some equipment may not be compatible.

Accessories & Spare Parts

α Wiper Cleaners

▶ 404

Shrink Chuck Slim

Slim design reduces interference contours of the holder.

Coolant Through Hole

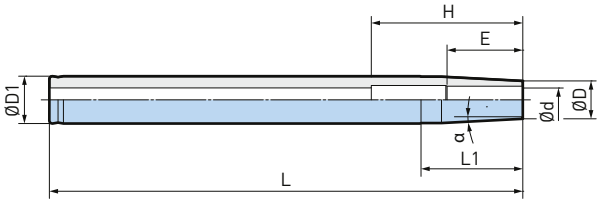


Fig. 1

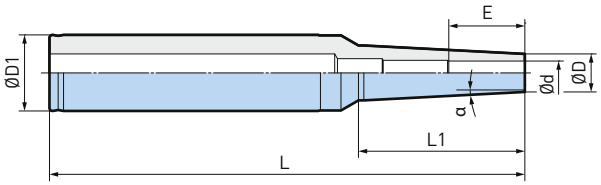


Fig. 2

A.6

ø12 - 20mm

Model	Article No.	Fig.	Ød	ØD	ØD1	L	L1	H	E	α	Weight (kg)
ST32-SRC16S-150	802.245	1	16	24	32	150	83	70	38	3°	0.58
ST32-SRC16S-200	802.246	1	16	24	32	200	83	80	38	3°	0.81
ST32-SRC16S-300	802.247	1	16	24	32	300	83	80	38	3°	1.25
ST32-SRC20S-150	802.248	1	20	28	32	150	50	80	38	3°	0.59
ST32-SRC20S-200	802.249	1	20	28	32	200	50	80	38	3°	0.83
ST32-SRC20S-300	802.250	1	20	28	32	300	50	80	38	3°	1.30
ST32-SRC12S-150-K70	802.238	2	12	19	32	150	70	-	36	3°	0.55
ST32-SRC12S-200-K70	802.239	2	12	19	32	200	70	-	36	3°	0.76
ST32-SRC12S-300-K70	802.241	2	12	19	32	300	70	-	36	3°	1.23

1. Use carbide cutter within a tolerance of h6.
2. "E" is the min. clamping length.
3. "H" is the max. tool shank length that can be inserted for these models.
4. Please refer to the operation manual of heating / cooling equipment, as some equipment may not be compatible.

Accessories & Spare Parts

α Wiper Cleaners

▶ 404

CK Shanks

Coolant Through Hole

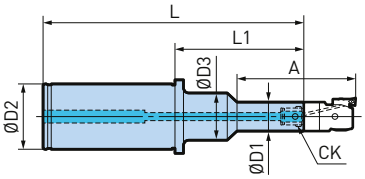


Fig. 1

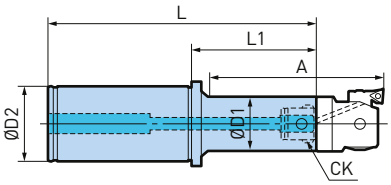


Fig. 2

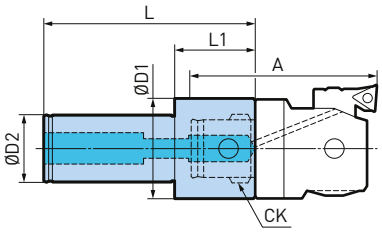


Fig. 3

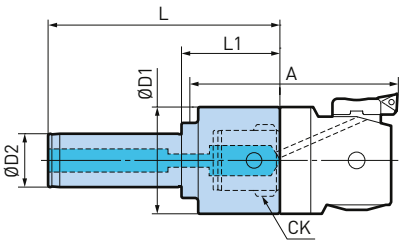


Fig. 4

A.6

CK1 - CK6

Model	Article No.	Fig.	CK	ØD1	ØD2	ØD3	L	L1	A	Weight (kg)
ST32-CKB1-77	806.725	1	CK1	19	32	31	157	77	73	0.65
ST32-CKB2-73	978.413	2	CK2	24	32	-	152.5	72.5	100	0.64
ST32-CKB3-69	806.726	2	CK3	31	32	-	149	69	100	0.71
ST32-CKB4-58	978.406	3	CK4	39	32	-	138	58	100	0.93
ST32-CKB5-48	806.727	4	CK5	50	32	-	128	48	100	0.92
ST32-CKB6-59	978.357	4	CK6	64	32	-	139	59	125	1.38
ST42-CKB1-77	806.728	1	CK1	19	42	31	157	77	73	1.00
ST42-CKB2-73	806.729	2	CK2	24	42	-	152.5	72.5	100	0.96
ST42-CKB3-69	806.730	2	CK3	31	42	-	149	69	100	1.07
ST42-CKB4-63	806.731	2	CK4	39	42	-	143	63	100	1.20
ST42-CKB5-48	806.732	3	CK5	50	42	-	128	48	100	1.25
ST42-CKB6-59	806.733	4	CK6	64	42	-	139	59	125	1.75

1. A and L1 dimensions on the table are reference figures when EWN/EWE head is mounted.

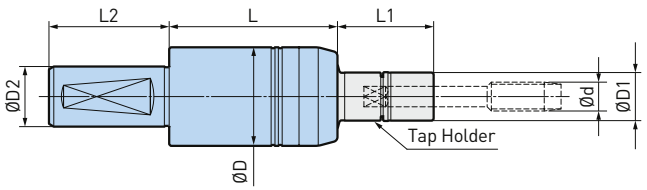
Accessories & Spare Parts

Fine Boring Heads	Rough Boring Heads
▶ 428	▶ 417

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



M3 - M20

A.6

Model	Article No.	Tap Holder	Ød	ØD	ØD1	ØD2	L	L1	L2	Weight (kg)
ST20-MGT6-65	963.601	MGT6	M3-M8	36	16	20	65	30 - 200	40	0.49
ST25-MGT12-70	963.602	MGT12	M5-M12 / P1/8	41	20	25	70	30 - 200	50	0.73
ST32-MGT20-90	963.603	MGT20	M10-M20 / P1/4-P1/2	54	30	32	90	35 - 150	55	1.45

1. Tap holder and wrench are to be ordered separately.
2. Synchronized tapping function is required on the machine.
3. Side lock holder model TSL is recommended as a basic holder.

Accessories & Spare Parts

Tap Holder	MEGA Wrenches	Accessories
▶ 390	▶ 384	▶ 398

MEGA Synchro Tapping Holder

For small Tap MGT3

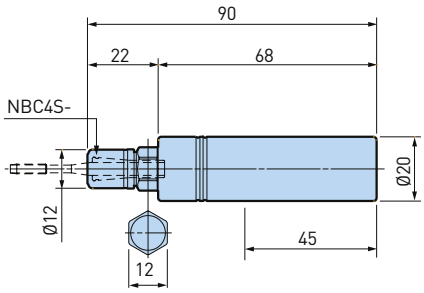


Fig. 1

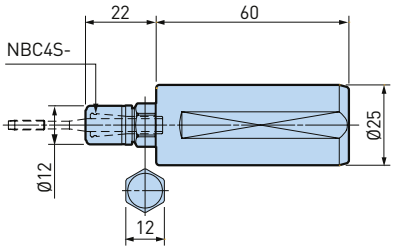
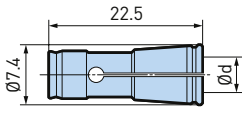


Fig. 2

Model	Article No.	Fig.	Weight (kg)
ST20-MGT3-90	978.356	1	0.18
SLS25-MGT3-22	804.115	2	0.25

1. MEGA nut is included in delivery.
2. MEGA wrench (MGR12) and common spanner (12 mm) are required to clamp/unclamp the tap.
3. 12 mm wrench is additionally required to clamp/release the tool.
4. Synchronized tapping function is required on the machine.
5. Coolant-through hole is not available.
6. ST20 has no flat on the shank.

Micro Collet for MGT3



Model	Article No.	Tapping Range			Tap Shank
		DIN 371	ISO 529	JIS	Ød
NBC4S-2.5AA	961.468	M1 - M1.8	M2	-	2.5
NBC4S-2.8AA	968.353	M2 - M2.6	M2.2, M2.5	-	2.8
NBC4S-3.0AA	961.470	-	-	M1 - M2.6	3.0
NBC4S-3.1AA	968.355	-	M3	-	3.15
NBC4S-3.5AA	961.472	M3	-	-	3.5
NBC4S-4.0AA	961.474	-	-	M3	4.0

1. Other sizes available. Please refer to micro collet.

Accessories & Spare Parts

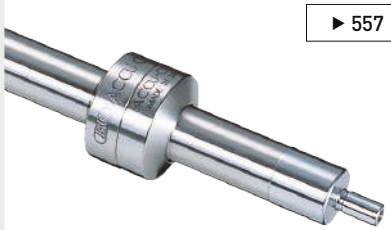
MEGA Wrenches

▶ 384

Other products with cylindrical shank

▶ 552

Point Master
- Touch probe and edge finder
- High precision stroke and interchangeable stylus for measuring different applications



▶ 557

Accu Center
- Edge finder
- Simple and precise edge finder offering repeatability within 3 µm

▶ 503

Fullcut Mill
- Indexable insert endmill
- Shoulder and slot milling cutter with both high radial and axial rake angle

▶ 526

C-Cutter
- Wide range chamfer mill
- Reduced number of tools and tool change time

▶ 530

C-Cutter Mini
- Ultra high feed chamfer mill
- 4 inserts and small tool diameter minimize cutting speed

▶ 540

R-Cutter
- Corner rounding mill
- Front & back chamfering
- 4 inserts multiply feed rate

▶ 544

C-Centering Cutter
- Centering and chamfer with insert
- Stable and long life time operation with insert

▶ 545

Center Boy
- Center and chamfer in one
- Accurate centering and chamfering can be obtained in a single operation

▶ 547

BF-Cutter
- Back spot facing tool for cap screw hole Selected spot facing diameters suitable for cap screws

▶ 438

EWN Fine Boring
- EWN 04-7 is the world smallest boring head available from Ø0.4 bore

▶ 439

Carbide Bar Boring Tools
- Carbide long Boring Bars for Roughing and Finishing
- Various size of Boring Heads and shank size offer the most suitable solution

▶ 341

Turning Tool Series
- Various turning tool tools for NC lathe and Swiss Lathe machines.

Modular Turning / Lathe Tools

Modular Turning Overview	**308**
Selection Guide	**312**
BBT SERIES	
Turning Tool System Chart	**310**
Modular Turning Tools	**314**
HSK-T SERIES	
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Modular and Monoblock Turning Tools	**330**
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N/C LATHE TOOLING	
Collet Chucks	**341**
Tapping Holder	**348**
Smart Damper Turning and Turning Cartridge	**349**
Hydraulic Chucks	**350**

A.7

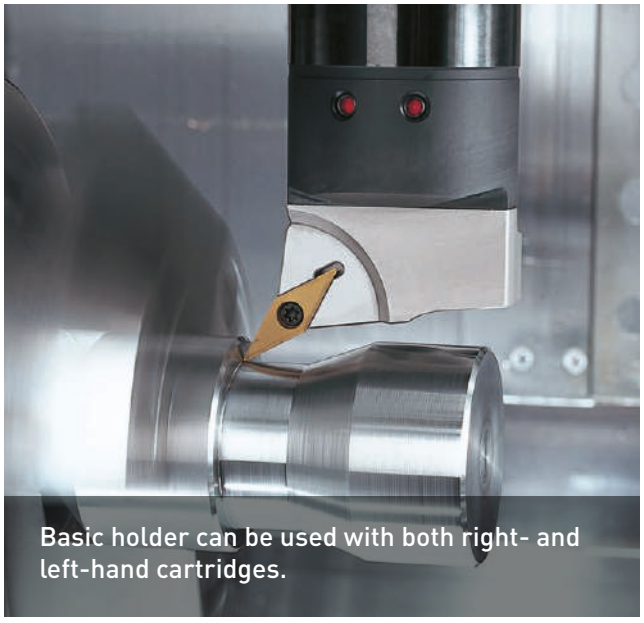
Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

Revolutionary modular system for turning

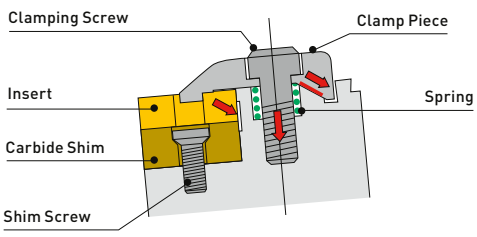
45° (Tilt Type) **S Type**

Tilting the "B" axis 45° minimizes the cutting forces transmitted to the machine spindle.

90° (Right Angle Type) **F Type**



Basic holder can be used with both right- and left-hand cartridges.



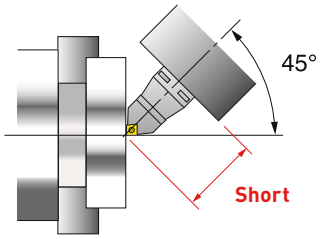
A double-clamping system that utilizes a "Push and Draw" mechanism to fix inserts securely

Secure insert clamping has been realized through the double-clamping system, which pushes the insert downwards while at the same time generating drawing force on the insert contact surface.

The issue of a valuable holder breakage caused by problems such as chipping has been eliminated through the use of a "modular system", resulting in enhanced efficiency and economy.

45° incline avoids interference with the chuck

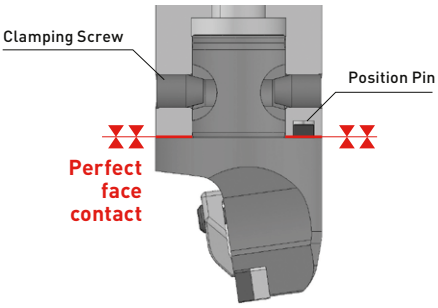
Tool length can be minimized.



A total of 15 types of cartridges are available to support various applications

Strong clamping system

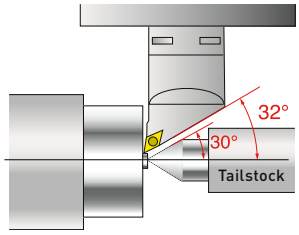
The two shallow-tapered clamping screws securely maintain contact between the cartridge and the basic holder flange face.



A.7

Comprehensive interference countermeasures

A series of "near-center" type cartridges are available, eliminating interference with the tailstock.

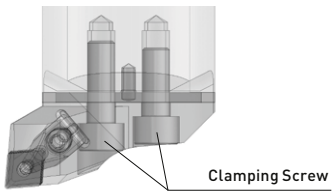


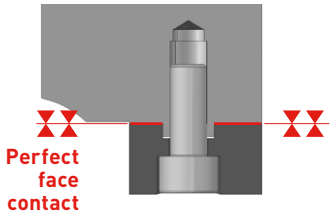
13 types of cartridges are available to support various applications

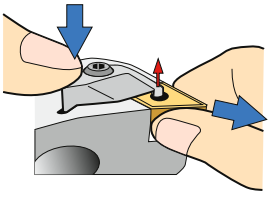
Both right hand and left hand are available.

Strong clamping system

In the F Type clamping system, cartridges are fixed using the two front clamping screws. The interlocking drive slot receives the cutting torque firmly.







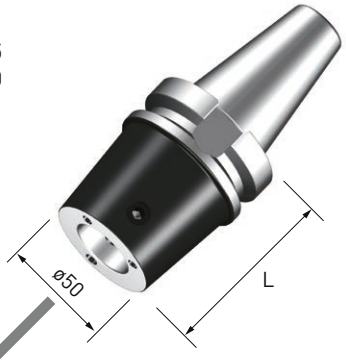
Easy attachment and removal of inserts

Insert attachment and removal can be performed easily by the built-in spring.
Loosen the clamping screw one full rotation, lightly press the clamp piece with a finger, and its tip will pop up.

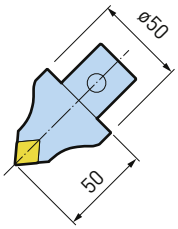
45°

S Type Basic Holder

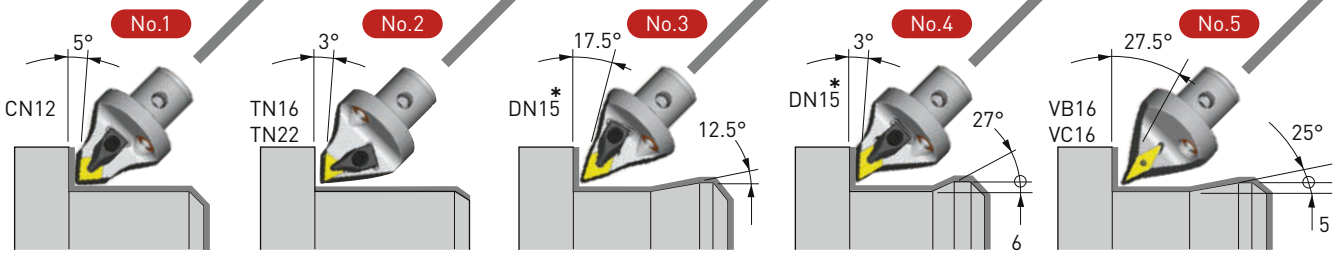
BBT40M- S50- 75
BBT50M- S50- 120



S Type (Tilt Type) Cartridge



A.7



S50-DCLNN-00050-12

S50-DTJNR-00050-16(22)
-DTJNL-00050-16(22)

S50-DDHNN-00050-15

S50-DDJNR-00050-15
-DDJNL-00050-15

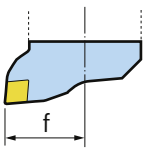
S50-SVQBN-00050-16

* When using a DN1506 insert (thickness: 6.35mm), replace the standard carbide shim with the DNS1506 (optional).

90°

F Type Basic Holder

BBT40M- F50- 75
- 105
BBT50M- F63- 70
- 130



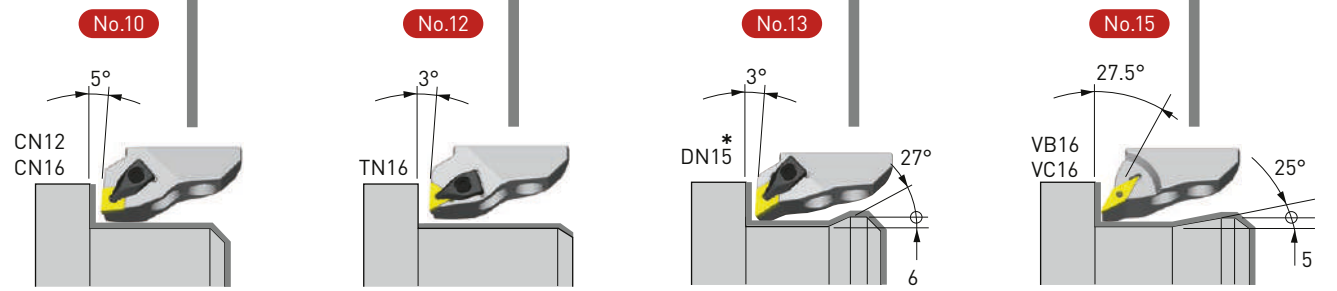
	f
F50	35
F63	45

S Type Basic Holder

S Type Cartrige

- No.1
- No.3
- No.5
- No.8

F Type (Right Angle Type) **Cartridge**



F50-DCLNR-35035-12(16)
-DCLNL-35035-12(16)

F63-DCLNR-45035-12(16)
-DCLNL-45035-12(16)

F50-DTJNR-35035-16
-DTJNL-35035-16

F63-DTJNR-45035-16
-DTJNL-45035-16

F50-DDJNR-35035-15
-DDJNL-35035-15

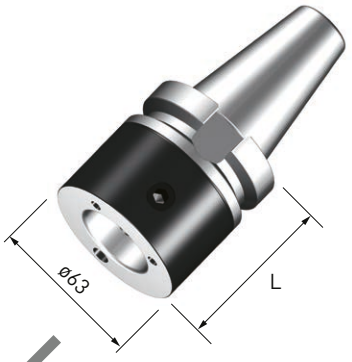
F63-DDJNR-45035-15
-DDJNL-45035-15

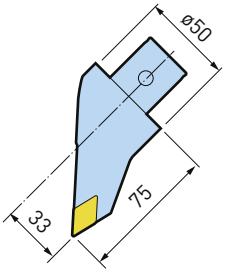
F63-SVQBR-45035-16
-SVQBL-45035-16

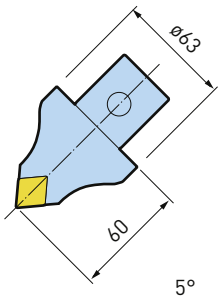
* When using a DN1506 insert (thickness: 6.35mm), replace the standard carbide shim with the DNS1506 (optional).

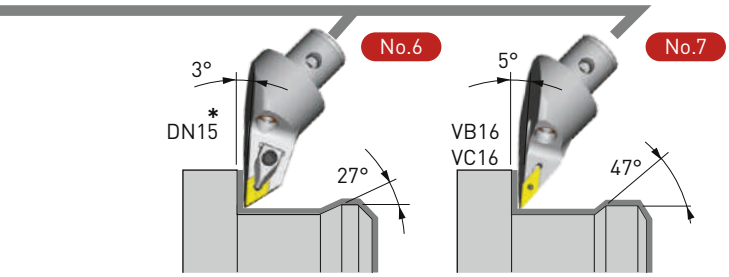
S Type
Basic Holder

BBT50M- S63- 110



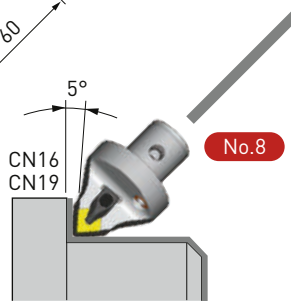




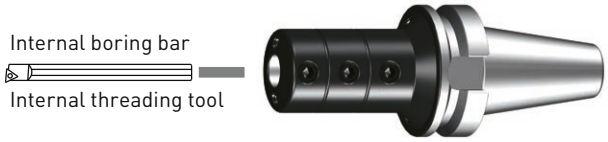


S50-DDJNR-33075-15
-DDJNL-33075-15

S50-SVLBR-33075-16
-SVLBL-33075-16

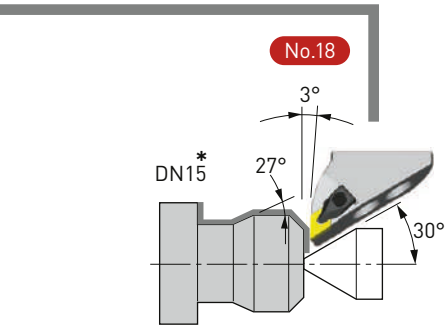


S63-DCLNN-00060-16
-DCLNN-00060-19



Side Lock Holder
for Boring Bar

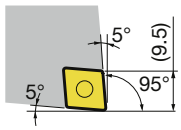
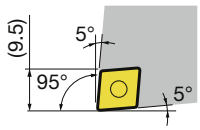
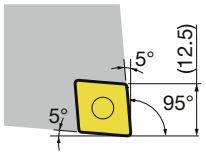
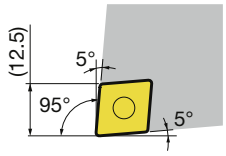
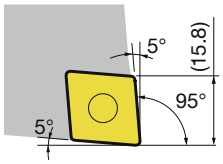
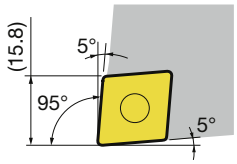
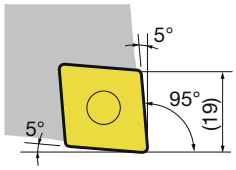
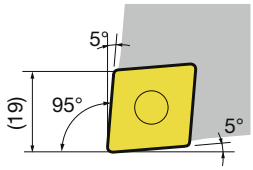
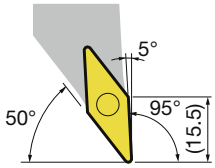
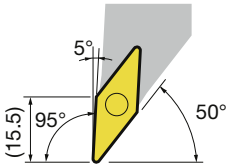
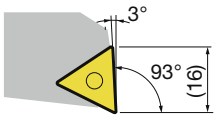
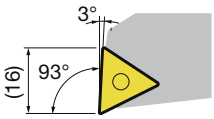
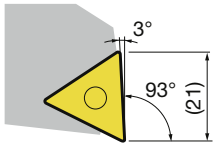
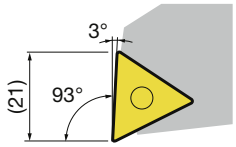
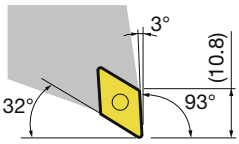
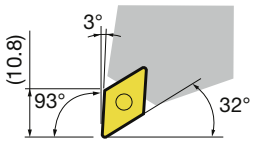
Square Tool Holder



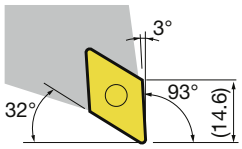
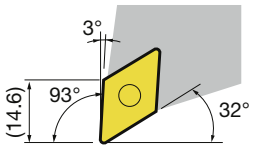
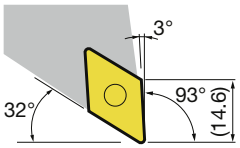
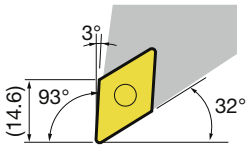
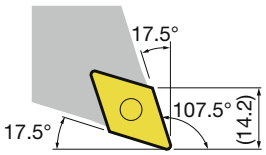
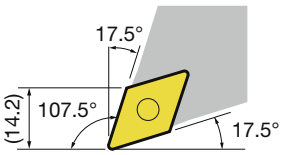
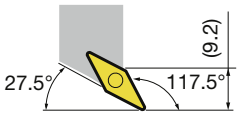
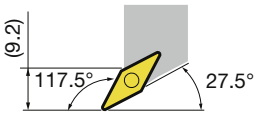
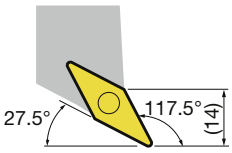
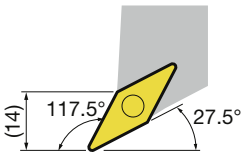
F50-DDJNR-35050-15
-DDJNL-35050-15

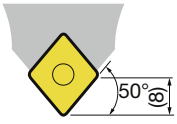
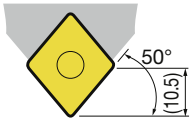
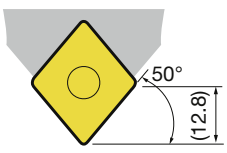
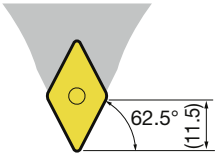
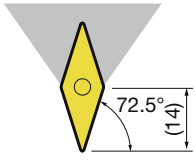
F63-DDJNR-45055-15
-DDJNL-45055-15

Selection Guide Table

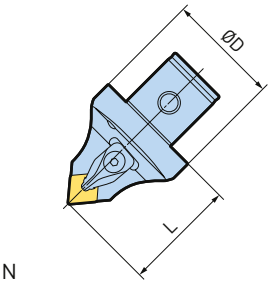
Entering angle	Insert	Cartridge or Mono-block		Right hand	Left hand
		S Type	F Type		
95°	CN0903 (CN0904)		No.19		
	CN1204	No.1	No.10-1		
	CN1606	No.8-1	No.10-2		
	CN1906	No.8-2			
	VB1604 VC1604	No.7			
93°	TN1604	No.2-1	No.12		
	TN2204	No.2-2			
	DN1104		No.20		

A.7

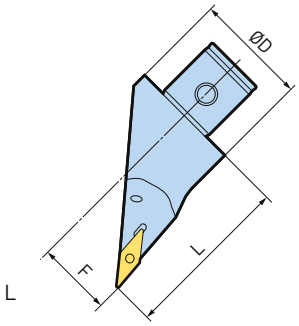
Entering angle	Insert	Cartridge or Mono-block		Right hand	Left hand
		S Type	F Type		
93°	DN1504 (DN1506)	No.4	No.13		
	DN1504 (DN1506)	No.6	No.18		
107.5°	DN1504 (DN1506)	No.3			
117.5°	VB1103 VC1103		No.21		
	VB1604 VC1604	No.5	No.15		

Neutral				
Insert				
CN12	CN16	CN19	DN1504 (DN1506)	VB1604 / VC1604
No.1 	No.8-1 	No.8-2 	No.3 	No.5 

45° Cartridges Type S



N



L

Model	Article No.	Type	Hand	ØD	L	F	Entering Angle	Clamp Piece	Insert	No.	Weight (kg)
S50-DCLNN-00050-12	973.014	S50	N	50	50	-	95°	CP2	CN1204	1	0.47
S50-DTJNR-00050-16	973.015	S50	R	50	50	-	93°	CP1	TN1604	2 - 1	0.50
S50-DTJNL-00050-16	973.016	S50	L	50	50	-	93°	CP1	TN1604	2 - 1	0.50
S50-DTJNR-00050-22	802.130	S50	R	50	50	-	93°	CP2	TN2204	2 - 2	0.50
S50-DTJNL-00050-22	802.129	S50	L	50	50	-	93°	CP2	TN2204	2 - 2	0.50
S50-DDHNN-00050-15	973.021	S50	N	50	50	-	107.5°	CP2	DN1504* (DN1506)	3	0.44
S50-DDJNR-00050-15	973.017	S50	R	50	50	-	93°	CP2	DN1504* (DN1506)	4	0.47
S50-DDJNL-00050-15	973.018	S50	L	50	50	-	93°	CP2	DN1504* (DN1506)	4	0.47
S50-DDJNR-33075-15	973.019	S50	R	50	75	33	93°	CP2	DN1504* (DN1506)	6	0.75
S50-DDJNL-33075-15	973.020	S50	L	50	75	33	93°	CP2	DN1504* (DN1506)	6	0.75
S50-SVQBN-00050-16	973.024	S50	N	50	50	-	117.5°	M3.5	VB1604** / VC1604	5	0.44
S50-SVLBR-33075-16	973.022	S50	R	50	75	33	95°	M3.5	VB1604** / VC1604	7	0.69
S50-SVLBL-33075-16	973.023	S50	L	50	75	33	95°	M3.5	VB1604** / VC1604	7	0.69
S63-DCLNN-00060-16	973.025	S50	N	63	60	-	95°	CP3	CN1606	8 - 1	0.95
S63-DCLNN-00060-19	805.724	S50	N	63	60	-	95°	CP5	CN1906	8 - 1	0.92

1. Inserts are not included.
2. Wrench is to be ordered separately.
3. * Carbide shim for 4.76 mm thick DN1504 insert is included as standard. In case of DN1506 insert (thickness of 6.35 mm), please replace the standard carbide shim with DNS1506 (option).
4. ** VB1604 and VC1604 Inserts are suitable.

Coding system for cartridge

S50 - D C L N N - 00 050 - 12

- 12 – Insert Size
- 050 – Length
- 00 – Offset Value
- N – Hand
- N – Relief Angle
- L – Entering Angle
- C – Insert Shape
- D – Clamping Method
- S50 – Cartridge Type and Size

Clamping Method	
D	Double-Clamp
S	Screw-On

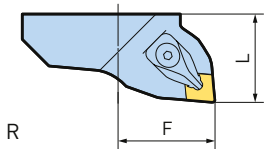
Insert Shape	
C	Rhombic 80°
T	Triangle 60°
D	Rhombic 55°
V	Rhombic 35°

Entering Angle	
J	93°
L	95°
H	107.5°
Q	117.5°

Relief Angle	
N	0° Negative
B	5° Positive

Hand	
R	Right Hand
L	Left Hand
N	Neutral

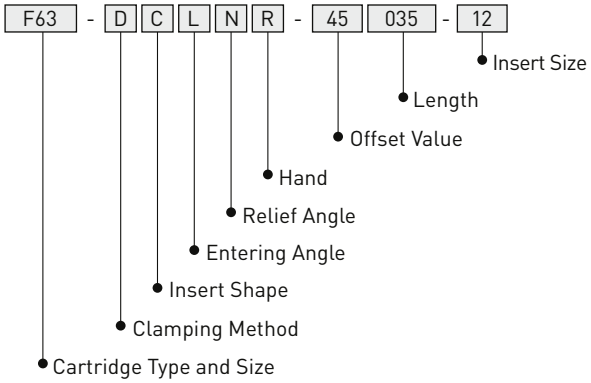
90° Cartridges Type F



Model	Article No.	Type	Hand	Entering Angle	Insert	L	F	No.	Weight (kg)
F50-DCLNR-35035-12	973.064	F50	R	95°	CN1204	35	35	10 - 1	0.25
F50-DCLNL-35035-12	973.065	F50	L	95°	CN1204	35	35	10 - 1	0.25
F50-DCLNR-35035-16	973.066	F50	R	95°	CN1606	35	35	10 - 2	0.24
F50-DCLNL-35035-16	973.067	F50	L	95°	CN1606	35	35	10 - 2	0.24
F50-DTJNR-35035-16	973.068	F50	R	93°	TN1604	35	35	12	0.24
F50-DTJNL-35035-16	973.069	F50	L	93°	TN1604	35	35	12	0.24
F50-DDJNR-35035-15	973.070	F50	R	95°	DN1504 * (DN1506)	35	35	13	0.22
F50-DDJNL-35035-15	973.071	F50	L	95°	DN1504 * (DN1506)	35	35	13	0.23
F50-DDJNR-35050-15	973.072	F50	R	95°	DN1504 * (DN1506)	50	35	18	0.30
F50-DDJNL-35050-15	973.073	F50	L	95°	DN1504 * (DN1506)	50	35	18	0.30
F63-DCLNR-45035-12	973.076	F63	R	95°	CN1204	35	45	10 - 1	0.33
F63-DCLNL-45035-12	973.077	F63	L	95°	CN1204	35	45	10 - 1	0.33
F63-DCLNR-45035-16	973.078	F63	R	95°	CN1606	35	45	10 - 2	0.34
F63-DCLNL-45035-16	973.079	F63	L	95°	CN1606	35	45	10 - 2	0.33
F63-DTJNR-45035-16	973.080	F63	R	93°	TN1604	35	45	12	0.35
F63-DTJNL-45035-16	973.081	F63	L	93°	TN1604	35	45	12	0.33
F63-DDJNR-45035-15	973.082	F63	R	93°	DN1504 * (DN1506)	35	45	13	0.31
F63-DDJNL-45035-15	973.083	F63	L	93°	DN1504 * (DN1506)	35	45	13	0.31
F63-SVQBR-45035-16	973.086	F63	R	117.5°	VB1604 / VC1604 **	35	45	15	0.26
F63-SVQBL-45035-16	973.087	F63	L	117.5°	VB1604 / VC1604 **	35	45	15	0.26
F63-DDJNR-45055-15	973.084	F63	R	93°	DN1504 * (DN1506)	55	45	18	0.31
F63-DDJNL-45055-15	973.085	F63	L	93°	DN1504 * (DN1506)	55	45	18	0.41

1. Inserts are not included.
2. Wrench is to be ordered separately.
3. * Carbide shim for 4.76 mm thick DN1504 insert is included as standard. In case of DN1506 insert (thickness of 6.35 mm), please replace the standard carbide shim with DNS1506 (option).
4. ** VB1604 and VC1604 Inserts are suitable.

Coding system for cartridge



Clamping Method	
D	Double-Clamp
S	Screw-On

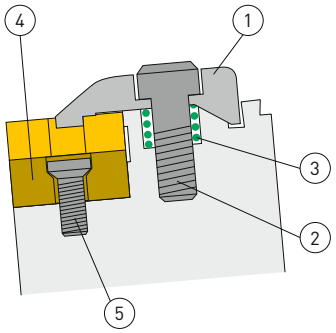
Insert Shape	
C	Rhombic 80°
T	Triangle 60°
D	Rhombic 55°
V	Rhombic 35°

Entering Angle	
J	93°
L	95°
H	107.5°
Q	117.5°
U	93°

Relief Angle	
N	0° Negative
B	5° Positive

Hand	
R	Right Hand
L	Left Hand
N	Neutral

Spare parts for turning holders



Clamp Piece Set

Model	Article No.	Clamp Piece	Clamping Screw	Spring	Insert
SCP1	973.181	CP1	M5 x 20	Ø8 x 10	TN1604
SCP2	973.182	CP2	M5 x 20	Ø8 x 10	CN1204, TN2204, DN15
SCP2S *	100674.001.0	CP2	M5 x 20	Ø6.8 x 11.5	DN1504, DN1506
SCP3	973.183	CP3	M5 x 20	Ø8 x 10	CN1606
SCP5	802.133	CP5	M5 x 20	Ø8 x 10	CN1906
SCP7	807.554	CP7	M5 x 20	Ø8 x 10	CN0903, CN0904, DN11

1. 1 pce. each of the clamp piece, clamp screw and spring are included in the set.
2. The tightening wrench is a 4mm hex wrench. T-type hex wrench is sold as Model CK-T4.
3. (1) Clamp Piece (2) Clamp Screw (3) Spring
4. *Set Model: SCP2S is exclusive for C4-DDHNN-00075-15.

A.7

Carbide Shim Set

Model	Article No.	Insert	Carbide Shim	Clamping Screw	Torx size
SCNS0903C	807.650	CN0903	CNS0903C	M3 x 7	10IP
SCNS0904C	807.651	CN0904	CNS0904C	M3 x 7	10IP
SDNS1104C *	807.556	DN1104	DNS1104C	M3 x 7	10IP
SDNS1504C *	807.557	DN1504	DNS1504C	M4 x 8	15IP
SDNS1506C *	807.558	DN1506	DNS1506C	M4 x 8	15IP
SCNS1204C *	807.559	CN1204	CNS1204C	M4 x 8	15IP
SCNS1204	973.185	CN1204	CNS1204	M4 x 8	T15
SDNS1504	973.186	DN1504	DNS1504	M4 x 8	T15
SDNS1506	973.187	DN1506	DNS1506	M4 x 8	T15
SCNS1606	973.188	CN1606	CNS1606	M5 x 12	T20
SCNS1906	802.131	CN1906	CNS1906	M5 x 12	T20
STNS1604	973.184	TN1604	TNS1604	M3 x 7	T10
STNS2204	804.821	TN2204	TNS2204	M4 x 8	T15

1. 1 pce. each of the carbide shim and shim clamp screw are included in the set.
2. The tightening wrench is a torx wrench. Driver-type torx wrench is sold as models DA-T10, DA-T15, and DA-T20.
3. (4) Carbide Shim (5) Shim Clamp Screw
4. * Models are exclusively applicable for Smart Damper negative cartridges.

Insert Clamping Screw Set

For VB11, VC11, VB16 and VC16 insert.

Model	Article No.	Insert	Screw	Wrench
S3508DS	966.273	VB1604 / VC1604	M3.5 x 8	DA-T15
S2.5S-7IP	100763.001.0	VB1103 / VC1103	M2.5 x 6.5	FS-7IP

1. 10 screws and 1 wrench are included.

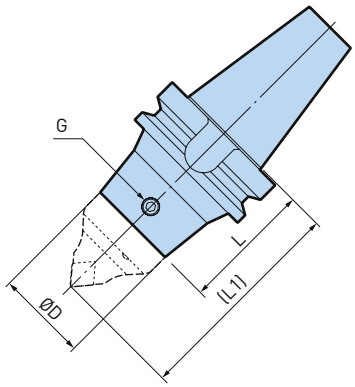
CK Screw Set

Clamping screw Set- Type S

Model	Article No.	Type	Screw
CK5S	805.891	S50	M10 x P1
CK6S	805.892	S63	M12 x P1

1. 2 screws and 1 wrench are included

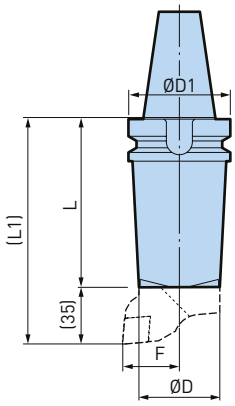
BBT(M) Basic Holder Type S (45°)



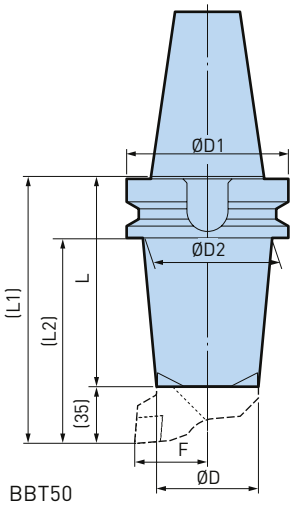
Model	Article No.	ØD	L	L1	Clamp Screw	Weight (kg)
BBT40M-S50-75	978.160	50	75	125	CK5S	1.70
BBT50M-S50-120	804.877	50	120	170	CK5S	5.40
BBT50M-S63-110	804.878	63	110	170	CK6S	5.40

1. Clamping screw is included.

BBT(M) Basic Holder Type F (90°)



BBT40

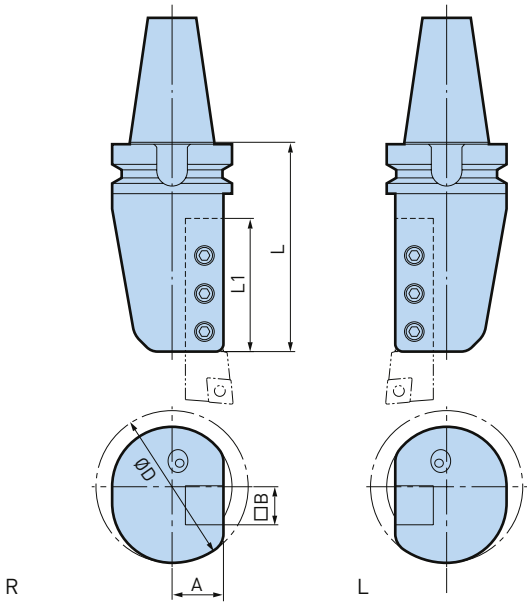


BBT50

Model	Article No.	ØD	ØD1	ØD2	L	L1	L2	F	Weight (kg)
BBT40M-F50-75	800.157	50	63	-	75	110	-	35	1.80
BBT40M-F50-105	978.162	50	63	-	105	140	-	35	2.30
BBT50M-F63-70	800.322	63	100	80	70	105	67	45	4.50
BBT50M-F63-130	800.321	63	100	80	130	165	127	45	6.40

1. Cartridge clamping screw is included.
2. Hexagon wrench is required to clamp cartridge (not included).

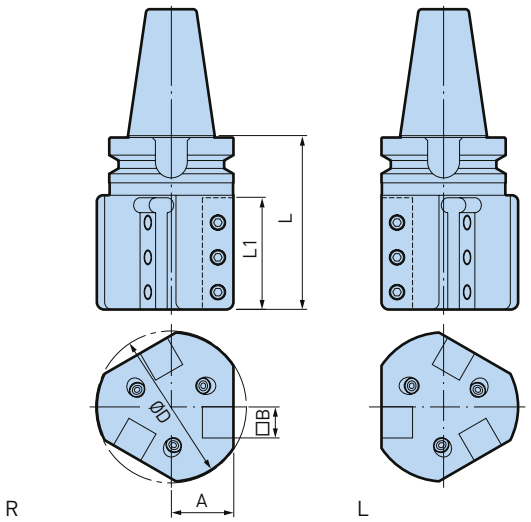
BBT(M) Square Tool Holder (180°)



Model	Article No.	Hand	ØD	L	L1	A	B	Weight (kg)
BBT40M-180-BH20L-110	978.161	L	80	110	70	27	20	2.80
BBT40M-180-BH20R-110	800.153	R	80	110	70	27	20	2.80
BBT40M-180-BH25L-130	978.248	L	90	130	90	31,5	25	3.40
BBT40M-180-BH25R-130	978.285	R	90	130	90	31,5	25	3.40
BBT50M-180-BH25L-140	800.314	L	120	140	90	50	25	7.70
BBT50M-180-BH25R-140	978.407	R	120	140	90	50	25	7.70

A.7

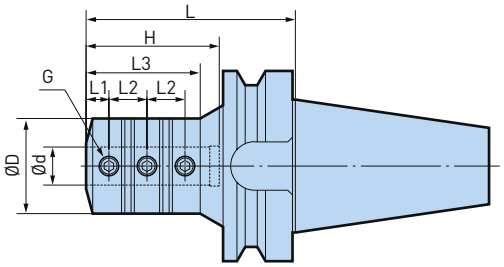
BBT(M) Square Tool Holder Multi Type (180°)



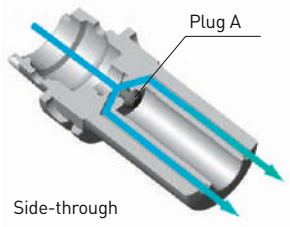
Model	Article No.	Hand	ØD	L	L1	A	B	Weight (kg)
BBT40M-180-3BH20L-110	800.151	L	90	110	70	35	20	3.30
BBT40M-180-3BH20R-110	800.152	R	90	110	70	38	20	3.30
BBT50M-180-3BH25L-140	800.312	L	120	140	90	50	25	9.40
BBT50M-180-3BH25R-140	800.313	R	120	140	90	50	25	9.20

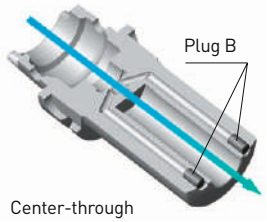
1. 60° indexing is required to the machine tool spindle.

BBT(M) Boring Bar Holder



Model	Article No.	Ød	ØD	L	L1	L2	L3	H	G	Weight (kg)
BBT40M-BSL8-75	800.154	8	25	75	6	10	40	40	M6 P1.0	1.10
BBT40M-BSL10-80	978.292	10	29	80	8	12	45	50	M8 P1.0	1.20
BBT40M-BSL12-90	978.323	12	34	90	8	16	53	55	M8 P1.0	1.40
BBT40M-BSL16-100	978.293	16	40	100	10	21	65	68	M10 P1.24	1.60
BBT40M-BSL20-100	978.252	20	50	100	12	20	67	70	M10 P1.24	1.90
BBT40M-BSL25-110	978.319	25	55	110	14	23	83	74	M12 P1.5	2.20
BBT40M-BSL32-125	978.320	32	64	125	16	26	-	83	M12 P1.5	2.80
BBT40M-BSL40-150	978.321	40	80	150	18	32	-	98	M16 P1.5	4.40
BBT50M-BSL16-105	800.315	16	40	105	10	21	61	68	M10 P1.25	4.10
BBT50M-BSL20-110	800.316	20	50	110	12	20	60	70	M10 P1.25	4.50
BBT50M-BSL25-120	800.317	25	55	120	14	23	70	74	M12 P1.5	4.80
BBT50M-BSL32-125	800.318	32	64	125	16	26	80	83	M12 P1.5	5.20
BBT50M-BSL40-135	800.319	40	80	135	18	32	91	98	M16 P1.5	6.30
BBT50M-BSL50-145	800.320	50	90	145	18	36	102	115	M16 P1.5	7.00





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
BSL	8	M6 P1.0	
BSL	10		M5 P0.8
BSL	12		M6 P1.0
BSL	16	M6 P1.0	
BSL	20		
BSL	25	T63: M6 P1.0 T100: M8 P1.25	
BSL	32	M8 P1.25	
BSL	40		

1. Both plugs are included as standard.

Accessories & Spare Parts

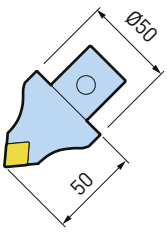
Sleeve for Boring Bar Holders for BSL

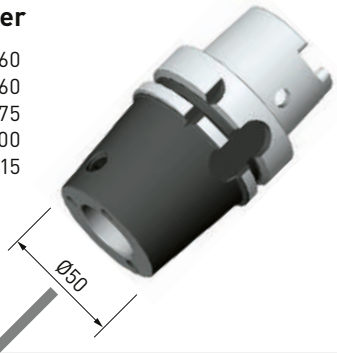
► 389

45°

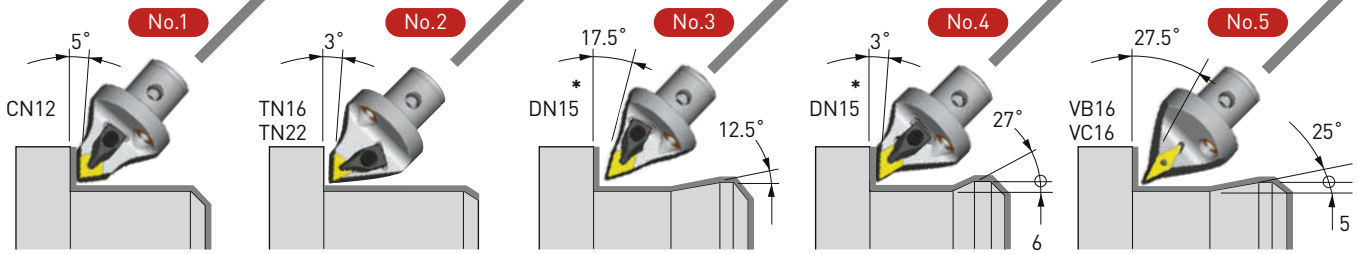
S50
Type S basic holder

HSK-T 50-S50 - 60
HSK-T 63-S50 - 60
- 75
- 100
HSK-T100-S50 - 115





Type S cartridge



S50-DCLNN-00050-12

S50-DTJNR-00050-16(22)
-DTJNL-00050-16(22)

S50-DDHNN-00050-15

S50-DDJNR-00050-15
-DDJNL-00050-15

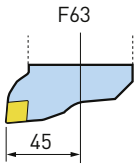
S50-SVQBN-00050-16

* 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 - 50
- 75
- 100
- 130
- 170
-T100-F63 - 100
- 150

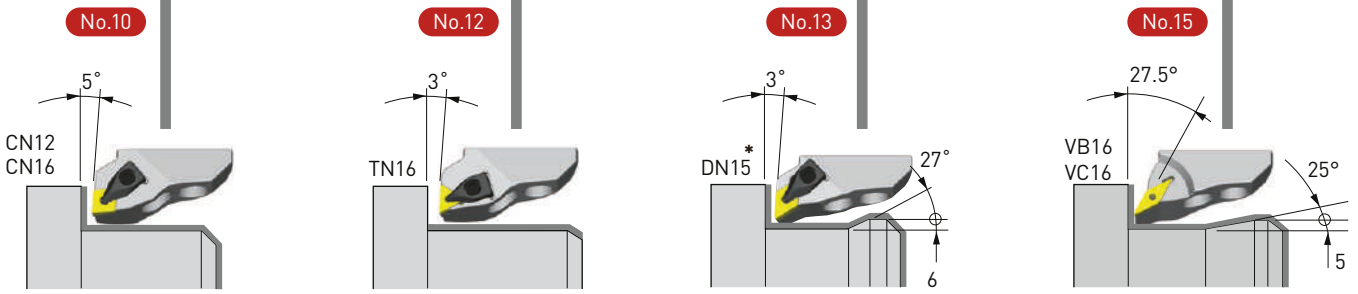


S63
Type S
basic holder

Type S cartridge

No.1
No.3
No.5
No.8

Type F cartridge



F63-DCLNR-45035-12(16)
-DCLNL-45035-12(16)

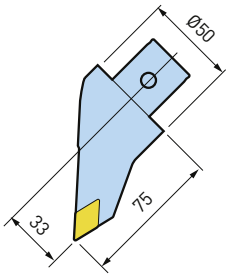
F63-DTJNR-45035-16
-DTJNL-45035-16

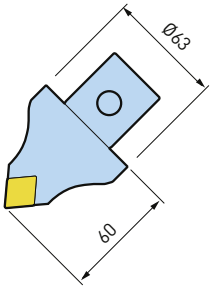
F63-DDJNR-45035-15
-DDJNL-45035-15

F63-SVQBR-45035-16
-SVQBL-45035-16

* In case of DN1506 insert (thickness of 6.35mm), please replace the standard Carbide Shim by DNS1506 (option).

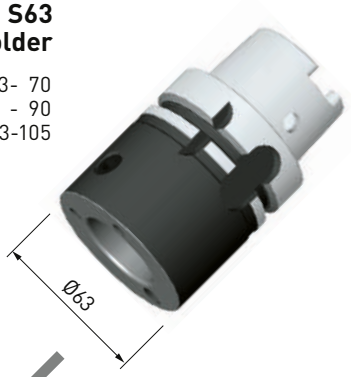
A.7

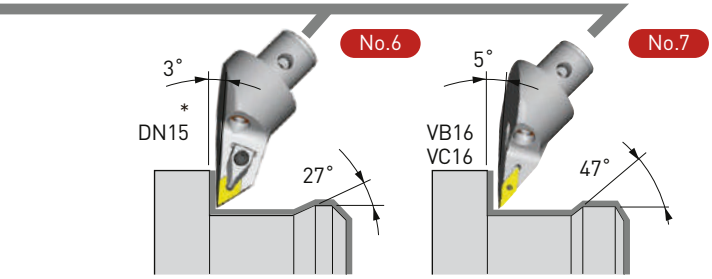




S63
Type S basic holder

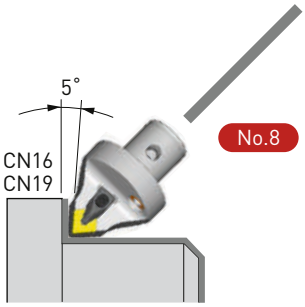
HSK-T 63-S63- 70
- 90
HSK-T100-S63-105





S50-DDJNR-33075-15
-DDJNL-33075-15

S50-SVLBR-33075-16
-SVLBL-33075-16

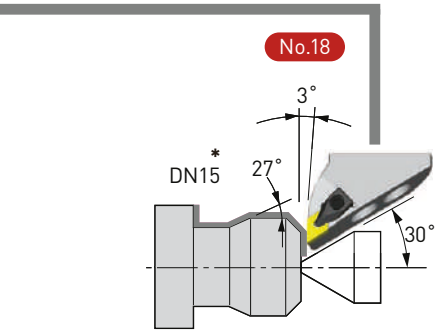


S63-DCLNN-00060-16
-DCLNN-00060-19

A.7

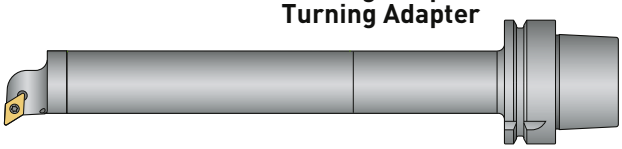
Boring bar holder

Square tool holder 180°



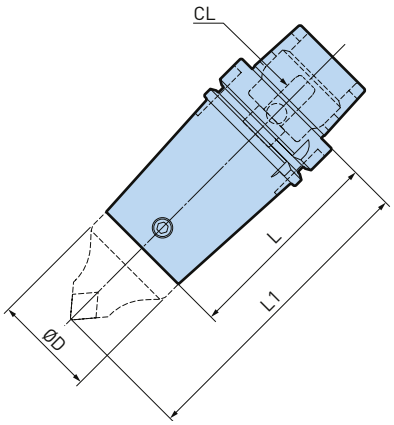
F63-DDJNR-45055-15
-DDJNL-45055-15

SMART DAMPER
Turning Adapter/
Turning Adapter



45° Basic Holders Type S

Coolant Through Hole



Model	Article No.	Type	ØD	L	L1	Clamp Screw	Weight (kg)
HSK-T50-S50-60	806.020	S50	50	60	110	CK5S	0.80
HSK-T63-S50-60	801.303	S50	50	60	110	CK5S	1.10
HSK-T63-S50-75	974.006	S50	50	75	125	CK5S	1.30
HSK-T63-S50-100	801.302	S50	50	100	150	CK5S	1.80
HSK-T63-S63-70	805.874	S63	63	70	130	CK6S	1.40
HSK-T63-S63-90	805.875	S63	63	90	150	CK6S	1.90
HSK-T100-S50-115	805.876	S50	50	115	165	CK5S	3.70
HSK-T100-S63-105	805.877	S63	63	105	165	CK6S	4.00

1. Basic holders include a clamp screw.
2. Coolant pipe (CL) is to be ordered separately.

Accessories & Spare Parts

45° Cartridges Type S	Coolant Pipes	CK Screw Set
▶ 314	▶ 264	▶ 316

90° Basic Holders Type F

Coolant Through Hole

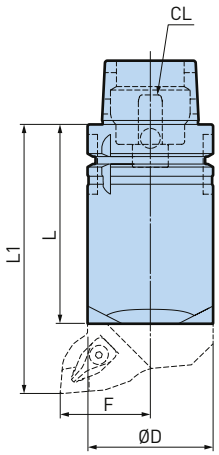


Fig. 1

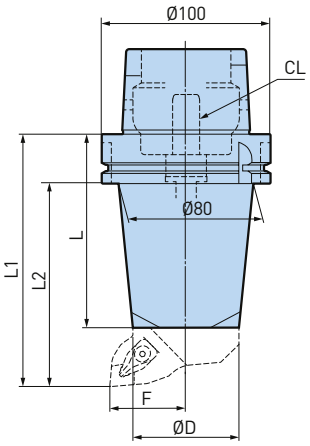


Fig. 2

Model	Article No.	Fig.	Type	ØD	L	L1	L2	F	Weight (kg)
HSK-T63-F63-50	801.301	1	F63	63	50	85	-	45	1.20
HSK-T63-F63-75	974.056	1	F63	63	75	110	-	45	1.80
HSK-T63-F63-100	974.057	1	F63	63	100	135	-	45	2.40
HSK-T63-F63-130	801.299	1	F63	63	130	165	-	45	3.20
HSK-T63-F63-170	801.300	1	F63	63	170	205	-	45	4.10
HSK-T100-F63-100	805.878	2	F63	63	100	135	105	45	4.20
HSK-T100-F63-150	805.879	2	F63	63	150	185	155	45	5.70

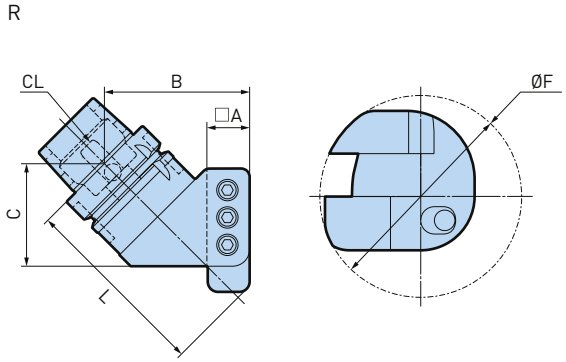
1. Basic holders include M10x22L and M10x25L screws for clamping cartridges.
2. Hexagon wrench is required to clamp cartridge (not included).
3. Coolant pipe (CL) is to be ordered separately.

Accessories & Spare Parts

90° Cartridges Type F	Coolant Pipes
► 315	► 264

Square Tool Holders - 45° Type

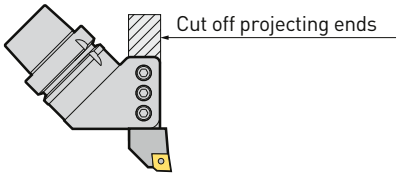
Coolant Through Hole



Model	Article No.	Hand	□A	B	C	L	ØF	Weight (kg)
HSK-T63-45-BH25L-110	801.294	L	25	85	60	110	118	2.50
HSK-T63-45-BH25R-110	974.028	R	25	85	60	110	118	2.50

1. Coolant pipe (CL) is to be ordered separately.

A.7

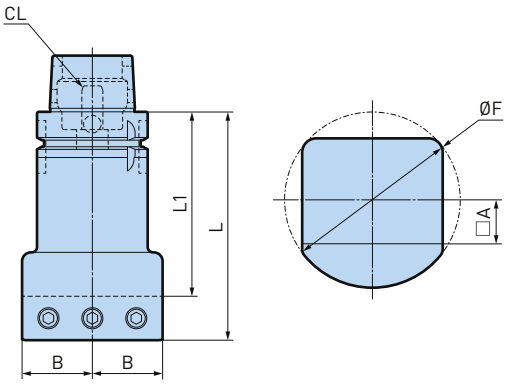


Caution

The projecting end of a turning tool must be cut off to avoid interference with an ATC arm.

Square Tool Holders - 90° Type

Coolant Through Hole



Model	Article No.	Hand	□A	B	L	L1	ØF	Weight (kg)
HSK-T63-90-BH20N-85	806.246	N	20	32	85	65	80	2.10
HSK-T63-90-BH25N-100	801.296	N	25	40	100	75	100	3.20
HSK-T63-90-BH25N-130	801.297	N	25	40	130	105	100	3.90
HSK-T100-90-BH25N-150	805.537	N	25	55	150	125	128	6.60

1. Coolant pipe (CL) is to be ordered separately.

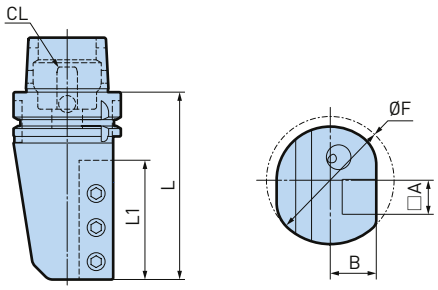
Accessories & Spare Parts

Coolant Pipes

▶ 264

Square Tool Holders - 180° Type

R

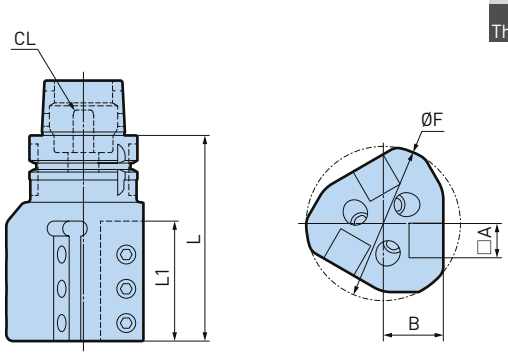


Model	Article No.	Hand	□A	B	L	L1	ØF	Weight (kg)
HSK-T63-180-BH20L-120	806.247	L	20	27	120	70	75	2.70
HSK-T63-180-BH20R-120	806.248	R	20	27	120	70	75	2.70
HSK-T63-180-BH25L-125	806.249	L	25	29.5	127	80	90	3.10
HSK-T63-180-BH25R-125	806.250	R	25	29.5	127	80	90	3.10
HSK-T100-180-BH25L-140	805.305	L	25	50	140	90	120	7.40
HSK-T100-180-BH25R-140	805.306	R	25	50	140	90	120	7.40
HSK-T100-180-BH25L-180	805.535	L	25	50	180	90	120	9.70
HSK-T100-180-BH25R-180	805.536	R	25	50	180	90	120	9.70

1. Coolant pipe (CL) is to be ordered separately.

Square Tool Holders - 180° Multi Type

R



Model	Article No.	Hand	□A	B	L	L1	ØF	Weight (kg)
HSK-T63-180-3BH20L-120	801.289	L	20	35	120	70	90	3.20
HSK-T63-180-3BH20R-120	801.290	R	20	35	120	70	90	3.20
HSK-T63-180-3BH25L-125	806.255	L	25	45	127	80	110	5.00
HSK-T63-180-3BH25R-125	806.252	R	25	45	127	80	110	4.90

1. 60° indexing is required to the machine tool spindle.
2. Coolant pipe (CL) is to be ordered separately.

Accessories & Spare Parts

Coolant Pipes

► 264

Boring Bar Holders

Application: boring and thread cutting

Coolant Through Hole

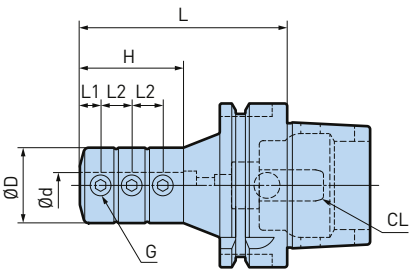


Fig. 1

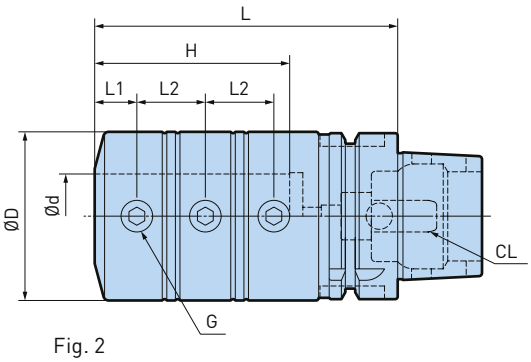
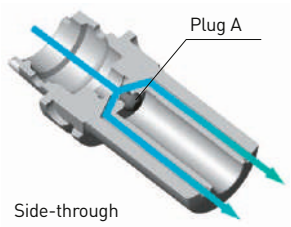


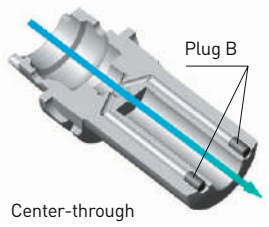
Fig. 2

ø6 - 50mm

Model	Article No.	Fig.	Ød	ØD	L	L1	L2	H	G	Weight (kg)
HSK-T63-BSL6-70	979.198	1	6	23	70	5	8	24	M5 P0.8	0.90
HSK-T63-BSL8-75	801.298	1	8	25	75	6	10	32	M6 P1.0	0.90
HSK-T63-BSL10-80	979.199	1	10	29	80	8	12	40	M8 P1.0	0.90
HSK-T63-BSL12-85	974.100	1	12	34	85	8	16	45	M8 P1.0	1.00
HSK-T63-BSL16-80	806.021	1	16	40	80	10	21	41	M10 P1.25	1.10
HSK-T63-BSL16-100	978.135	1	16	40	100	10	21	60	M10 P1.25	1.30
HSK-T63-BSL20-80 *	806.022	2	20	50	80	12	20	41	M10 P1.25	1.30
HSK-T63-BSL20-100	974.102	2	20	50	100	12	20	60	M10 P1.25	1.60
HSK-T63-BSL25-85	806.023	2	25	55	85	14	23	47	M12 P1.5	1.50
HSK-T63-BSL25-110	806.243	2	25	55	110	14	23	67	M12 P1.5	1.80
HSK-T63-BSL32-90 *	806.024	2	32	64	90	16	26	49	M12 P1.5	1.80
HSK-T63-BSL32-125	806.244	2	32	64	125	16	26	74	M12 P1.5	2.50
HSK-T63-BSL40-105	806.025	2	40	80	105	18	32	61	M16 P1.5	2.90
HSK-T63-BSL40-145	806.245	2	40	80	145	18	32	91	M16 P1.5	4.00
HSK-T63-BSL50-145	807.576	2	50	90	145	18	30	88	M16 P1.5	4.50
HSK-T100-BSL16-105	805.880	1	16	40	105	10	21	60	M10 P1.25	2.70
HSK-T100-BSL20-110	805.881	1	20	50	110	12	20	60	M10 P1.25	3.20
HSK-T100-BSL25-120	805.538	1	25	55	120	14	23	67	M12 P1.5	3.50
HSK-T100-BSL32-125	805.539	1	32	64	125	16	26	74	M12 P1.5	3.80
HSK-T100-BSL40-135	805.540	2	40	80	135	18	32	90	M16 P1.5	5.00
HSK-T100-BSL50-145	807.577	2	50	90	145	18	34	96	M16 P1.5	6.00

1. Coolant pipe (CL) is to be ordered separately.
2. For sealing purpose, please use plugs according to drawing below. Both, plug A and B are included as standard.
3. * Sleeve for BSL cannot be used.





Interchangeable between center-through and side-through coolant supply by using plugs.
Adjustment for either right hand or left hand is also possible.

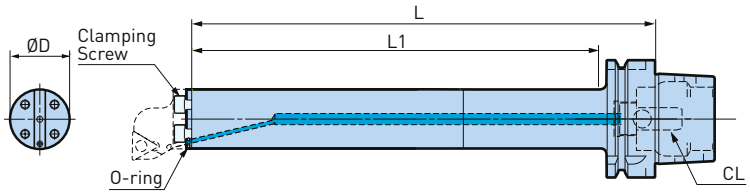
Chuck Model	Plug A	Plug B
BSL 6	M5 P0.8	M4 P0.7
BSL 8	M6 P1.0	
BSL 10		M5 P0.8
BSL 12		M6 P1.0
BSL 16	M6 P1.0	
BSL 20		
BSL 25	T63: M6 P1.0 T100: M8 P1.25	
BSL 32	M8 P1.25	
BSL 40		

1. Both plugs are included as standard.

Accessories & Spare Parts

Sleeve for Boring Bar Holders for BSL	Coolant Pipes
▶ 389	▶ 264

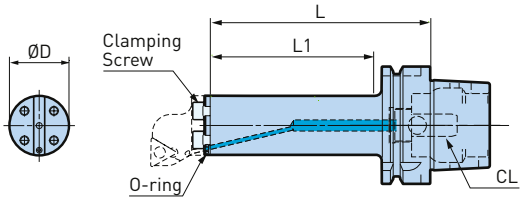
Smart Damper Turning Adapter



Model	Article No.	Cartridge	ØD	L	L1	Weight (kg)
HSK-T63-SDB40DP-172	101127.001.0	B32	32	172	145	1.90
HSK-T63-SDB40DP-250	101127.002.0	B32	32	250	219	2.40
HSK-T63-SDB50DP-235	101127.003.0	B40	40	235	204	3.40
HSK-T63-SDB50DP-315	101127.004.0	B40	40	315	284	4.10
HSK-T63-SDB60DP-268	-	B40	50	268	237	5.50
HSK-T63-SDB60DP-368	-	B40	50	368	337	7.00
HSK-T100-SDB40DP-255	-	B32	32	255	221	3.60
HSK-T100-SDB50DP-320	-	B40	40	320	286	5.40
HSK-T100-SDB60DP-400	-	B40	50	400	366	8.70

1. Clamp bolts (3 pcs.) and o-rings (2 pcs.) are included.
2. Cartridge is to be ordered separately.
3. Coolant pipe (CL) and inserts are to be ordered separately.

Turning Adapter



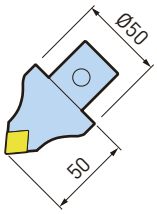
Model	Article No.	Cartridge	ØD	L	L1	Weight (kg)
HSK-T63-TAD40-125	101128.001.0	B32	32	125	94	1.30
HSK-T63-TAD50-155	101128.002.0	B40	40	155	124	1.90
HSK-T63-TAD60-195	-	B40	50	195	166	3.10
HSK-T100-TAD40-130	-	B32	32	130	96	2.50
HSK-T100-TAD50-160	-	B40	40	160	126	3.10
HSK-T100-TAD60-200	-	B40	50	200	166	4.50

1. Clamp bolts (3 pcs.) and o-rings (2 pcs.) are included.
2. Cartridge is to be ordered separately.
3. Coolant pipe (CL) and inserts are to be ordered separately.

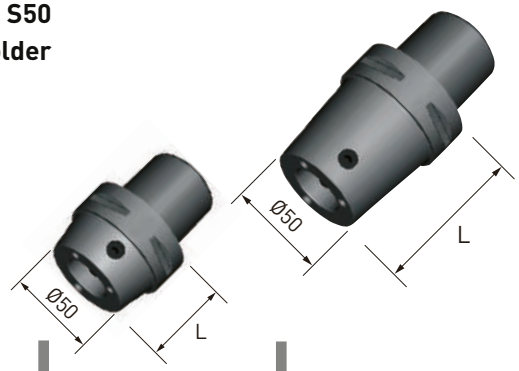
Application	Inner angle face machining	Copy machining		Blind hole machining	
Shape	80° rhombic	55° rhombic	35° rhombic	Triangular	
Screw-on type (for positive insert)	CC1204	DC11T3	VB1604	TP1604	TC1102
Double clamp type (for negative insert)	CN1204	DN1104 DN1504 DN1506	—	TN1604	

Cartrige ▶ 348
Spare Parts ▶ 349

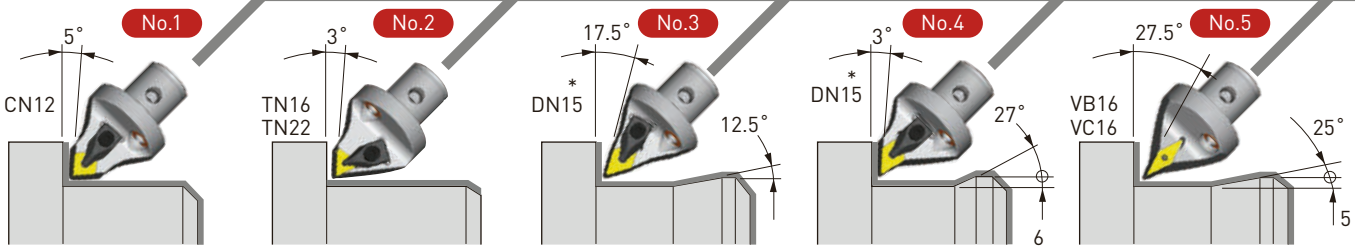
S50
Type S basic holder



C5-S50- 40
- 55
- 75
C6-S50- 75
-100
C8-S50-135



Type S cartridge



S50-DCLNN-00050-12

S50-DTJNR-00050-16
-DTJNL-00050-16
S50-DTJNR-00050-22
-DTJNL-00050-22

S50-DDHNN-00050-15

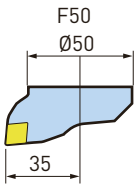
S50-DDJNR-00050-15
-DDJNL-00050-15

S50-SVQBN-00050-16

* In case of DN1506 insert (thickness of 6.35 mm), please replace the standard Carbide Shim by DNS1506 (option).

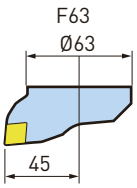
F50
Type F
basic holder

C5-F50- 25
- 50
- 85
-125

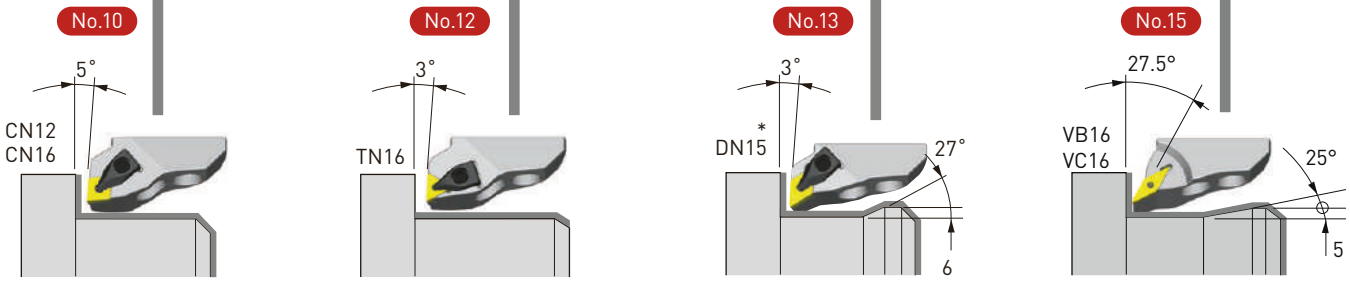


F63
Type F
basic holder

C6-F63- 30
- 75
-100
-130
-170
C8-F63- 45
-100
-130
-170



Type F cartridge



F50-DCLNR-35035-12(16)
-DCLNL-35035-12(16)
F63-DCLNR-45035-12(16)
-DCLNL-45035-12(16)

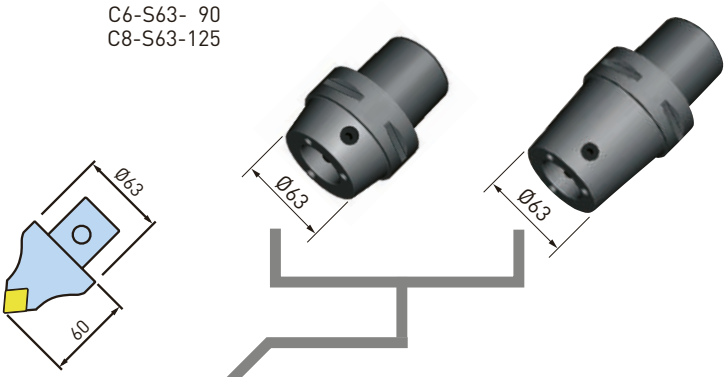
F50-DTJNR-35035-16
-DTJNL-35035-16
F63-DTJNR-45035-16
-DTJNL-45035-16

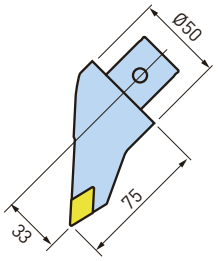
F50-DDJNR-35035-15
-DDJNL-35035-15
F63-DDJNR-45035-15
-DDJNL-45035-15

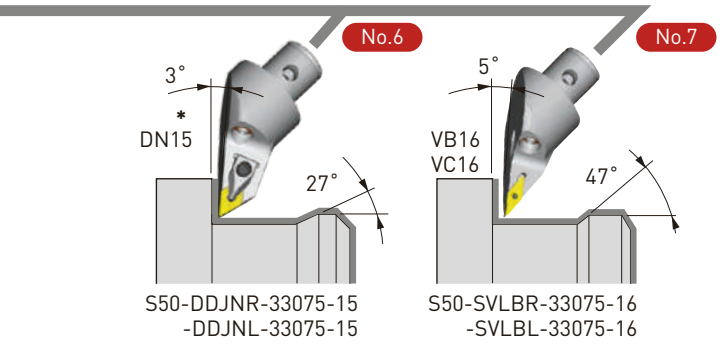
F63-SVQBR-45035-16
-SVQBL-45035-16

* In case of DN1506 insert (thickness of 6.35 mm), please replace the standard Carbide Shim by DNS1506 (option).

S63
Type S basic holder







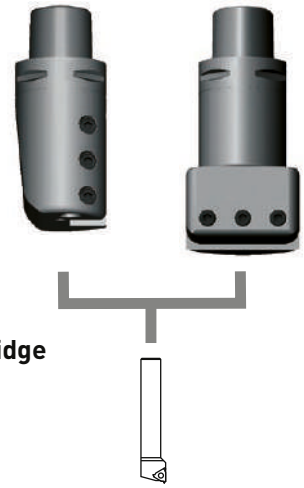
S50-DDJNR-33075-15
-DDJNL-33075-15

S50-SVLBR-33075-16
-SVLBL-33075-16

S63-DCLNN-00060-16
-DCLNN-00060-19

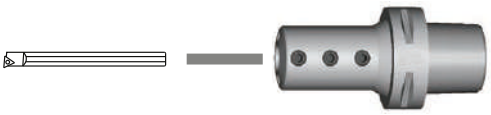
Square tool holder

S50/S63
Type S
basic holder

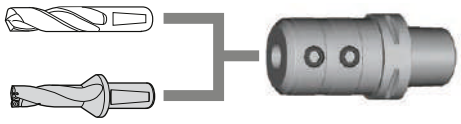


Type S cartridge

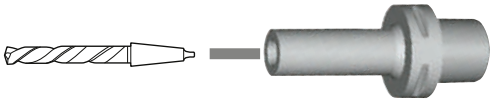
No.1
No.3
No.5
No.8



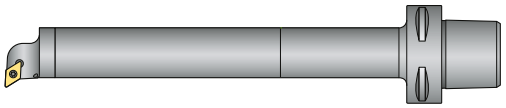
Boring bar holder



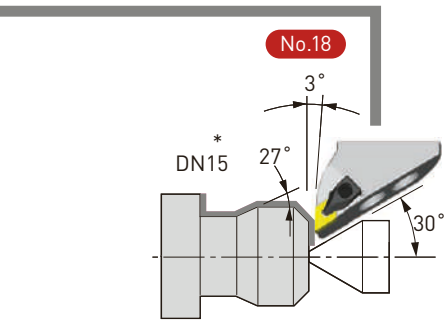
Side lock holder



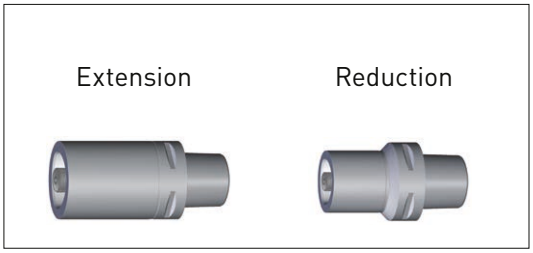
Morse taper holder



SMART DAMPER Turning Adapter/ Turning Adapter

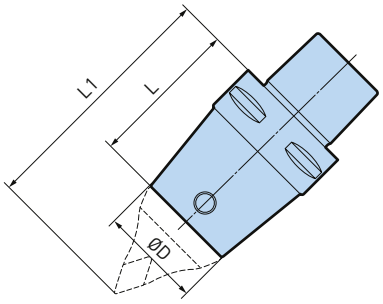


F50-DDJNR-35050-15
-DDJNL-35050-15
F63-DDJNR-45055-15
-DDJNL-45055-15



45° Basic Holders Type S

Coolant Through Hole



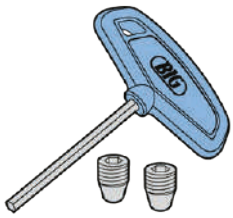
Model	Article No.	Type	ØD	L	L1	Clamp Screw	Weight (kg)
C5-S50-40	973.001	S50	50	40	90	CK5S	0.60
C5-S50-55	973.002	S50	50	55	105	CK5S	0.80
C5-S50-75	973.003	S50	50	75	125	CK5S	1.10
C6-S50-45	973.005	S50	50	45	95	CK5S	1.00
C6-S50-75	973.006	S50	50	75	125	CK5S	1.50
C6-S50-100	973.007	S50	50	100	150	CK5S	2.00
C6-S63-90	805.530	S63	63	90	150	CK6S	2.10
C8-S50-135	973.011	S50	50	135	185	CK5S	4.00
C8-S63-125	973.013	S63	63	125	185	CK6S	4.10

1. Basic holders include a clamp screw.

A.7

CK Screw Set

Clamping screw Set- Type S



Model	Article No.	Type	Screw
CK5S	805.891	S50	M10 x P1
CK6S	805.892	S63	M12 x P1

1. 2 screws and 1 wrench are included

Accessories & Spare Parts

45° Cartridges Type S

▶ 314

45° Integral Tool Holder Type S

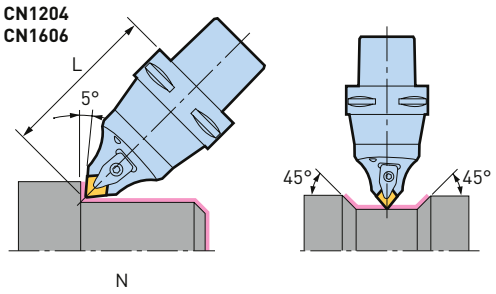


Fig. 1

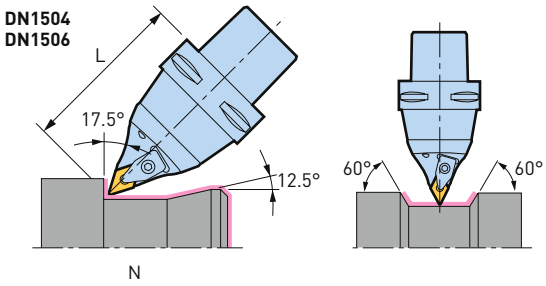


Fig. 2

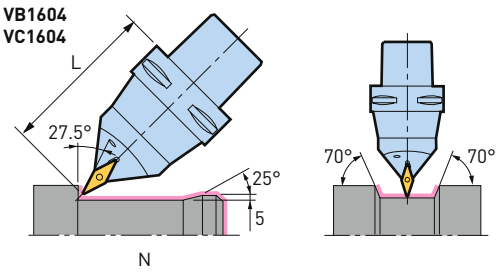


Fig. 3

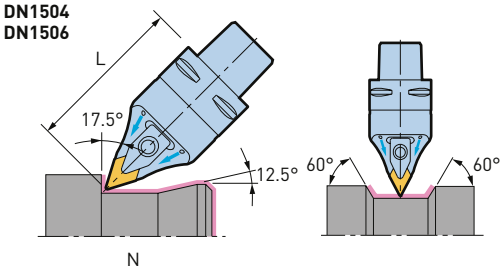


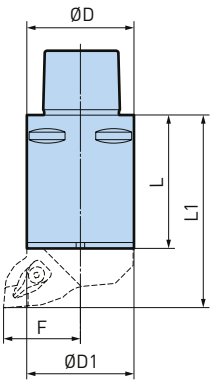
Fig. 4

Model	Article No.	Fig.	Hand	L	Entering Angle	Insert	Clamp Piece	No.	Weight (kg)
C4-DDHNN-00075-15	101356.001.0	4	N	75	107.5°	DN1504 * (DN1506)	SCP2S	3	0.53
C5-DCLNN-00105-12	800.691	1	N	105	95°	CN1204	CP2	1	1.30
C5-DDHNN-00105-15	800.693	2	N	105	107.5°	DN1504/DN1506*	CP2	3	1.30
C5-DCLNN-00105-16	800.692	1	N	105	95°	CN1606	CP3	8 - 1	1.30
C5-SVQBN-00105-16	800.774	3	N	105	117.5°	VB1604/VC1604**	M3.5	5	1.10
C6-DCLNN-00115-12	973.752	1	N	115	95°	CN1204	CP2	1	1.90
C6-DDHNN-00115-15	800.781	2	N	115	107.5°	DN1504/DN1506*	CP2	3	1.90
C6-DCLNN-00115-16	800.780	1	N	115	95°	CN1606	CP3	8 - 1	2.00
C6-SVQBN-00115-16	973.751	3	N	115	117.5°	VB1604/VC1604**	M3.5	5	1.70
C8-DCLNN-00150-12	800.890	1	N	150	95°	CN1204	CP2	1	3.90
C8-DDHNN-00150-15	800.892	2	N	150	107.5°	DN1504/DN1506*	CP2	3	3.90
C8-DCLNN-00150-16	800.891	1	N	150	95°	CN1606	CP3	8 - 1	3.90

1. Inserts are not included.
2. * Carbide shim for 4.76 mm thick DN1504 insert is included as standard. In case of DN1506 insert (thickness of 6.35 mm), please replace the standard carbide shim with DNS1506 (option).
3. ** VB1604 and VC1604 Inserts are suitable.
4. M3.5 is a screw-on type.

90° Basic Holders Type F

Coolant Through Hole



Model	Article No.	Type	ØD	ØD1	L	L1	F	Weight (kg)
C5-F50-25	801.657	F50	50	50	25	60	35	0.50
C5-F50-50	973.052	F50	50	50	50	85	35	0.50
C5-F50-85	973.053	F50	50	50	85	120	35	1.40
C5-F50-125	973.054	F50	50	50	125	160	35	2.00
C6-F63-30	973.055	F63	63	63	30	65	45	1.00
C6-F63-75	973.056	F63	63	63	75	110	45	2.10
C6-F63-100	973.057	F63	63	63	100	135	45	2.60
C6-F63-130	973.058	F63	63	63	130	165	45	3.40
C6-F63-170	973.059	F63	63	63	170	205	45	4.30
C8-F63-45	973.060	F63	80	63	45	80	45	2.20
C8-F63-100	973.061	F63	80	63	100	135	45	3.70
C8-F63-130	973.062	F63	80	63	130	165	45	4.60
C8-F63-170	973.063	F63	80	63	170	205	45	5.70

1. Basic holders include M10x22L and M10x25L screws for clamping cartridges.
2. Hexagon wrench is required to clamp cartridge (not included).

Accessories & Spare Parts

90° Cartridges Type F

▶ 315

90° Integral Tool Holder Type F

Coolant Through Hole

Fig. 1

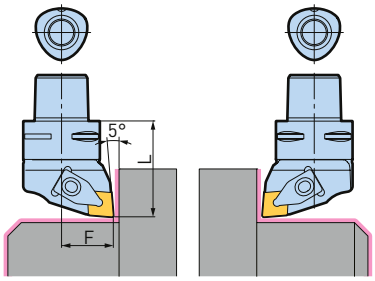


Fig. 2

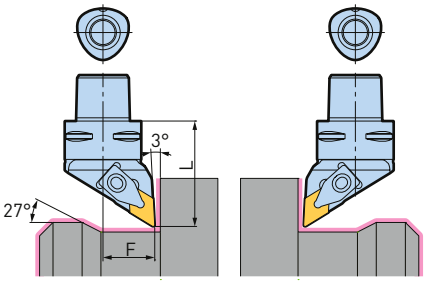
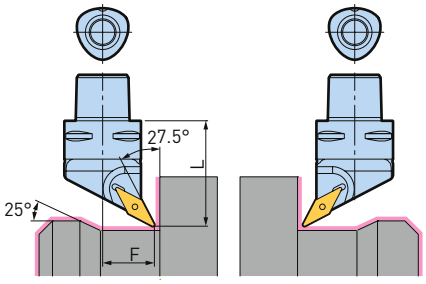


Fig. 3

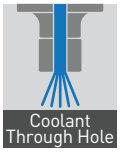


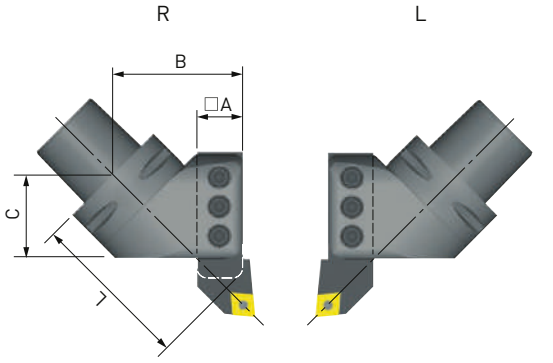
A.7

Model	Article No.	Fig.	Hand	L	F	Entering Angle	Insert	Clamp Piece	No.	Weight (kg)
C3-DCLNL-22038-09	807.640	1	L	38	22	95°	CN0903 (CN0904)**	CP7	19	0.21
C3-DCLNR-22038-09	807.641	1	R	38	22	95°	CN0903 (CN0904)**	CP7	19	0.21
C3-DDJNL-22045-11	807.642	2	L	45	22	93°	DN1104	CP7	20	0.21
C3-DDJNR-22045-11	807.643	2	R	45	22	93°	DN1104	CP7	20	0.21
C3-SVQBL-22038-11	807.645	3	L	38	22	117.5°	VB1103 (VC1103)****	M2,5	21	0.16
C3-SVQBR-22038-11	807.644	3	R	38	22	117.5°	VB1103 (VC1103)****	M2,5	21	0.16
C4-DCLNL-27050-12	806.951	1	L	50	27	95°	CN1204	CP2	10 - 1	0.44
C4-DCLNR-27050-12	806.950	1	R	50	27	95°	CN1204	CP2	10 - 1	0.44
C4-DDJNL-27055-15	806.953	2	L	55	27	93°	DN1504 * (DN1506)	CP2	18	0.41
C4-DDJNR-27055-15	806.952	2	R	55	27	93°	DN1504 * (DN1506)	CP2	18	0.41
C4-SVQBL-27055-16	806.955	3	L	55	27	117.5°	VB1604 / VC1604 ***	M3.5	15	0.39
C4-SVQBR-27055-16	806.954	3	R	55	27	117.5°	VB1604 / VC1604 ***	M3.5	15	0.39

1. Inserts are not included.
2. Wrench is to be ordered separately.
3. * A carbide shim for 4.76 mm thick DN1504 insert is included.
   When using DN1506 insert (thickness of 6.35 mm), replace the standard carbide shim with the CNS1506 (option).
4. ** A carbide shim for CN0903 (thickness: 3.18mm) is included.
   When using a CN0904 insert (thickness: 4.75mm), replace the standard carbide shim with the CNS0904C (option).
5. *** VB1604 and VC1604 Inserts are suitable.
6. **** Either VB1103 or VC1103 insert are suitable.
7. M2.5 and M3.5 is a screw-on type.

Square Tool Holders - 45° Type

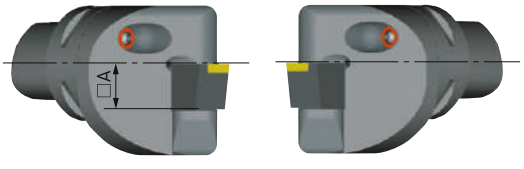


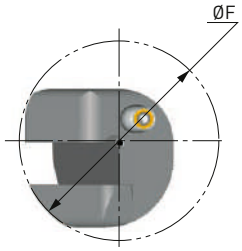


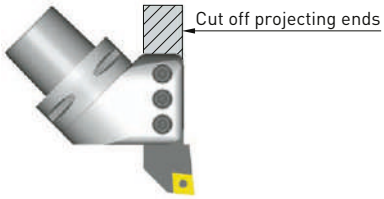
Model	Article No.	Hand	□A	B	C	L	ØF	Weight (kg)
C5-45-BH20L-5838	973.027	L	20	58	38	73	94	1.20
C5-45-BH20R-5838	973.026	R	20	58	38	73	94	1.20
C6-45-BH25L-7752	800.776	L	25	77	52	100	118	2.60
C6-45-BH25R-7752	973.028	R	25	77	52	100	118	2.60
C8-45-BH32L-85109	973.031	L	32	85	109	145	135	6.70
C8-45-BH32R-85109	973.030	R	32	85	109	145	135	6.70

Caution

The projecting end of a turning tool must be cut off to avoid interference with an ATC arm.

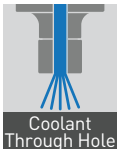


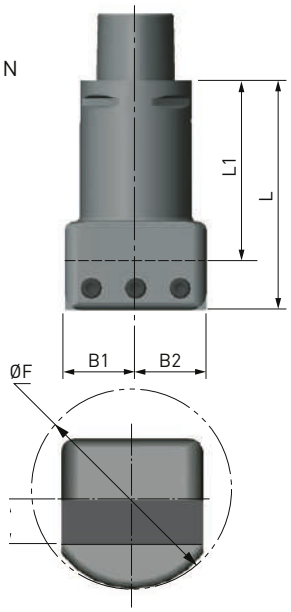




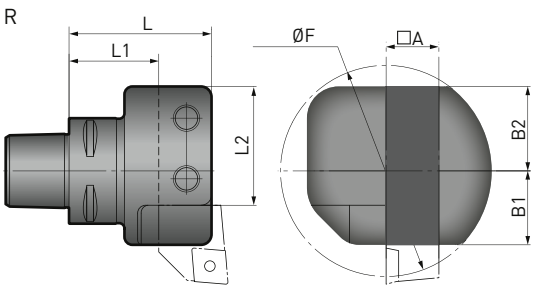
A.7

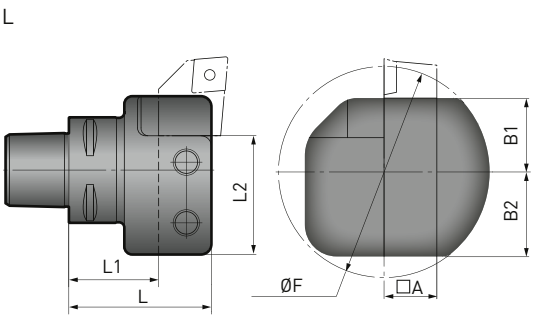
Square Tool Holders - 90° Type



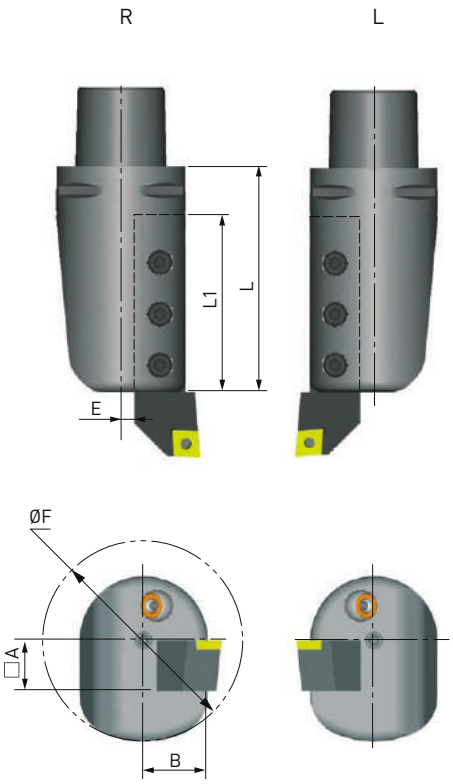


Model	Article No.	Hand	□A	B1	B2	L	L1	L2	ØF	Weight (kg)
C3-90-BH16L-2547	807.646	L	16	25	27	47	30	40	70	0.63
C3-90-BH16R-2547	807.647	R	16	25	27	47	30	40	70	0.63
C4-90-BH20L-2854	806.957	L	20	28	32	54	34	45	80	0.96
C4-90-BH20R-2854	806.956	R	20	28	32	54	34	45	80	0.95
C5-90-BH20N-32058	978.476	N	20	32	32	58	38	-	80	1.40
C5-90-BH20N-32105	801.653	N	20	32	32	105	85	-	80	2.10
C6-90-BH20N-32060	800.777	N	20	32	32	60	40	-	80	1.70
C6-90-BH20N-32115	800.778	N	20	32	32	115	95	-	80	2.90
C6-90-BH25N-40071	800.779	N	25	40	40	71	46	-	100	2.70
C6-90-BH25N-40130	801.664	N	25	40	40	130	105	-	100	4.10
C8-90-BH25N-40071	328.380	N	25	40	40	71	45	-	100	3.40
C8-90-BH32N-51085	800.889	N	32	51	51	85	53	-	128	5.20
C8-90-BH32N-51165	801.665	N	32	51	51	165	133	-	128	8.70





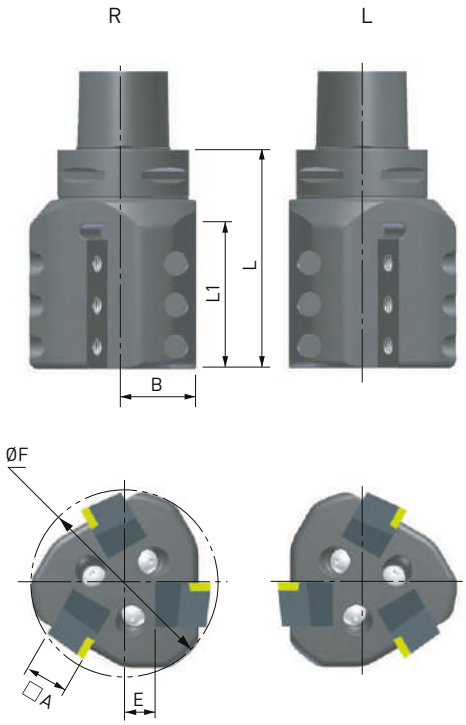
Square Tool Holders - 180° Type



Model	Article No.	Hand	□A	B	L	L1	E	ØF	Weight (kg)
C3-180-BH16L-2058	807.648	L	16	20	58	37	2	65	0.62
C3-180-BH16R-2058	807.649	R	16	20	58	37	2	65	0.62
C4-180-BH20L-2265	806.959	L	20	22	65	40	2	70	0.84
C4-180-BH20R-2265	806.958	R	20	22	65	40	2	70	0.85
C5-180-BH20L-2590	973.033	L	20	25	90	65	5	80	1.60
C5-180-BH20R-2590	973.032	R	20	25	90	65	5	80	1.60
C6-180-BH20L-32100	801.663	L	20	31.5	100	65	11.5	80	2.60
C6-180-BH20R-32100	973.753	R	20	31.5	100	65	11.5	80	2.60
C6-180-BH25L-32120S	973.035	L	25	29.5	120	80	4.5	90	3.10
C6-180-BH25R-32120S	973.034	R	25	29.5	120	80	4.5	90	3.10
C8-180-BH25L-32120	328.379	L	25	38	120	82	13	100	5.20
C8-180-BH25R-32120	328.378	R	25	38	120	82	13	100	5.20
C8-180-BH32L-40125	973.039	L	32	40	125	85	8	128	6.00
C8-180-BH32R-40125	973.038	R	32	40	125	85	8	128	6.00

A.7

Square Tool Holders - 180° Multi Type



Model	Article No.	Hand	□A	B	L	L1	E	ØF	Weight (kg)
C5-180-3BH20L-100	973.041	L	20	35	100	70	15	90	2.60
C5-180-3BH20R-100	973.040	R	20	35	100	70	15	90	2.70
C6-180-3BH20L-110	806.253	L	20	35	110	70	15	90	3.10
C6-180-3BH20R-110	806.254	R	20	35	110	70	15	90	3.20
C6-180-3BH25L-125	973.045	L	25	45	125	80	20	110	5.10
C6-180-3BH25R-125	806.256	R	25	45	125	70	20	110	5.20
C8-180-3BH25L-130	973.047	L	25	45	130	70	20	110	6.10
C8-180-3BH25R-130	973.046	R	25	45	130	90	20	110	6.10

1. 60° indexing is required to the machine tool spindle.

Square Bit Holder Spike Screw Type

C4S (Extra short version)

C4 (ATC version)

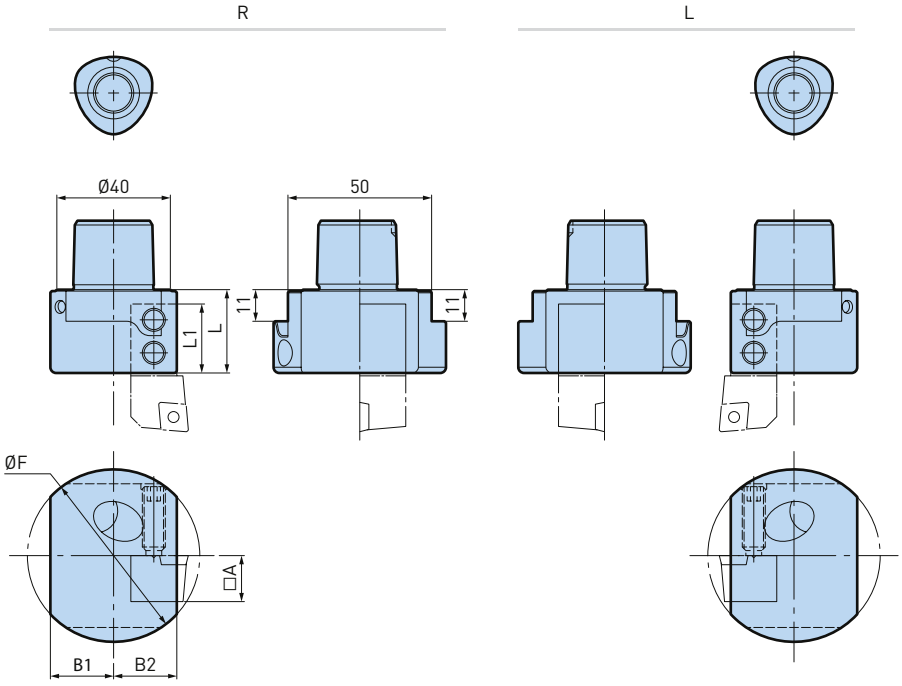


Fig. 1

Fig. 2

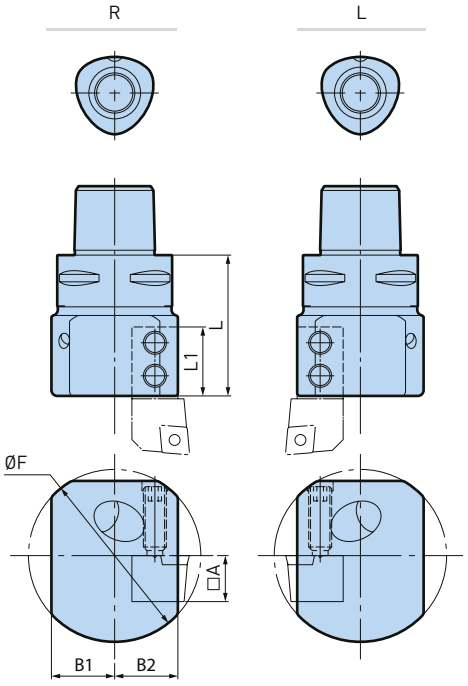


Fig. 3

Fig. 4

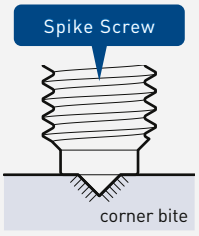
Model	Article No.	Fig.	Hand	□A	B1	B2	L	L1	ØF	Weight (kg)
C4S-180-BHS16L-2229	-	2	L	16	22	22	29	24	60	0.52
C4S-180-BHS16R-2229	-	1	R	16	22	22	29	24	60	0.52
C4-180-BHS16L-2249	-	4	L	16	22	22	49	24	60	0.69
C4-180-BHS16R-2249	-	3	R	16	22	22	49	24	60	0.69

1. Screws are included in delivery.
2. Before use, cut the square tool to be attached so that it protrudes as little as possible from the holder.
3. C4S Models are not compatible with ATC.

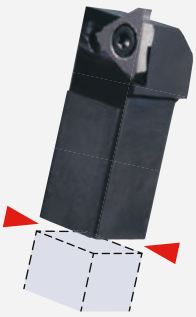
Spike Screw

Model
BHS0824-2P

1. 2 pcs. in a set



Spike screw type
The spike (protruding part) at the tip of the screw bites into the square bit to prevent slippage.



Please prepare a square bit of □16 mm and cut it so that the holder protrudes as little as possible before use.

Boring Bar Holders

Application: boring and thread cutting

Coolant Through Hole

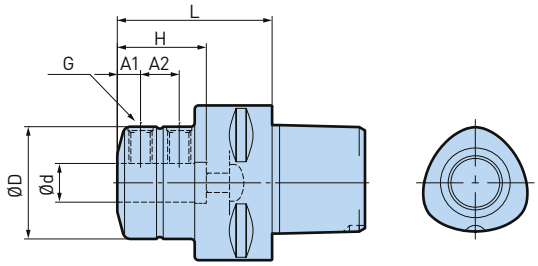


Fig. 1

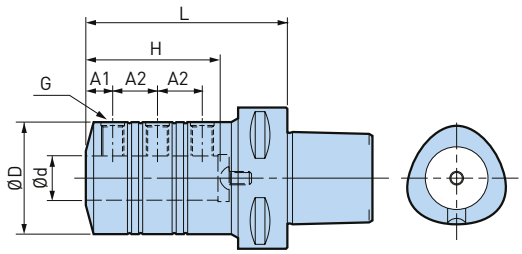


Fig. 2

A.7

ø6 - 50mm

Model	Article No.	Fig.	Ød	ØD	L	A1	A2	H	G	Weight (kg)
C3-BSL6-35	807.663	1	6	23	35	5	9	22	M5 P0.8	0.17
C3-BSL8-35	807.664	1	8	25	35	6	10	22	M6 P1.0	0.18
C3-BSL10-35	807.665	1	10	29	35	6	10	22	M5 P0.8	0.20
C3-BSL12-40	807.666	1	12	34	40	8	12	27	M6 P1.0	0.26
C4-BSL6-40	806.960	1	6	23	40	5	9	23	M5 P0.8	0.30
C4-BSL8-40	806.961	1	8	25	40	6	10	23	M6 P1.0	0.31
C4-BSL10-40	806.962	1	10	29	40	6	10	23	M6 P1.0	0.33
C4-BSL12-45	806.963	1	12	34	45	8	12	28	M8 P1.0	0.38
C4-BSL16-50	806.964	1	16	40	50	10	14	33	M10 P1.25	0.46
C4-BSL20-60	806.965	1	20	50	60	12	15	43	M10 P1.25	0.69
C5-BSL6-70	973.088	2	6	23	70	5	8	41	M5 P0.8	0.70
C5-BSL8-70	973.089	2	8	25	70	6	10	41	M6 P1.0	0.70
C5-BSL10-70	973.090	2	10	29	70	8	12	42	M8 P1.0	0.70
C5-BSL12-80	973.091	2	12	34	80	8	16	53	M8 P1.0	0.80
C5-BSL16-90	973.092	2	16	40	90	10	21	65	M10 P1.25	1.00
C5-BSL20-90	973.093	2	20	50	90	12	20	60	M10 P1.25	1.30
C5-BSL25-100	973.094	2	25	55	100	14	23	70	M12 P1.5	1.60
C5-BSL32-110	973.095	2	32	64	110	16	26	78	M12 P1.5	2.10
C5-BSL40-130	973.096	2	40	80	130	18	32	93	M16 P1.5	3.60
C6-BSL6-70	973.097	2	6	23	70	5	8	41	M5 P0.8	1.00
C6-BSL8-70	973.098	2	8	25	70	6	10	41	M6 P1.0	1.00
C6-BSL10-70	973.099	2	10	29	70	8	12	42	M8 P1.0	1.00
C6-BSL12-80	973.100	2	12	34	80	8	16	53	M8 P1.0	1.10
C6-BSL16-90	973.101	2	16	40	90	10	21	65	M10 P1.25	1.30
C6-BSL20-90	973.102	2	20	50	90	12	22	60	M10 P1.25	1.60
C6-BSL25-100	973.103	2	25	55	100	14	26	70	M12 P1.5	1.90
C6-BSL32-110	973.104	2	32	64	110	16	30	78	M12 P1.5	2.40
C6-BSL40-130	973.105	2	40	80	130	18	32	93	M16 P1.5	3.80
C6-BSL50-135	807.574	2	50	90	135	18	30	88	M16 P1.5	4.40

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Boring Bar Holders

Coolant Through Hole

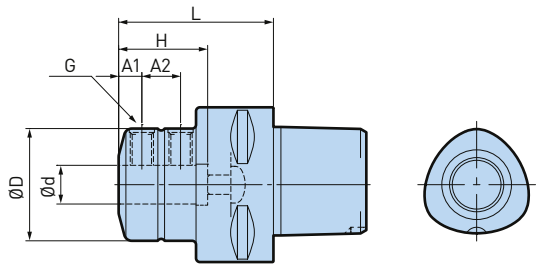


Fig. 1

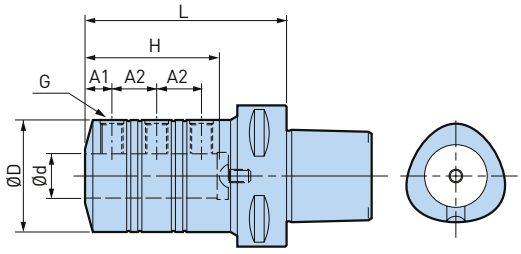
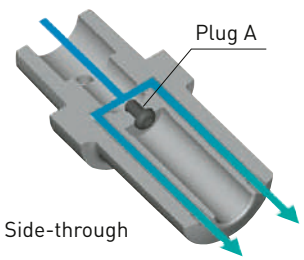


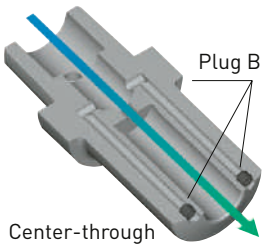
Fig. 2

Model	Article No.	Fig.	Ød	ØD	L	A1	A2	H	G	Weight (kg)
C8-BSL16-90	973.110	2	16	40	90	10	21	65	M10 P1.25	2.10
C8-BSL20-100	973.111	2	20	50	100	12	22	70	M10 P1.25	2.50
C8-BSL25-110	973.112	2	25	55	110	14	26	80	M12 P1.5	2.80
C8-BSL32-120	973.113	2	32	64	120	16	30	88	M12 P1.5	3.30
C8-BSL40-130	973.114	2	40	80	130	18	32	93	M16 P1.5	4.50
C8-BSL50-140	807.575	2	50	90	140	18	36	105	M16 P1.5	5.40

A.7

1. For sealing purpose, please use plugs according to drawing below. Both, plug A and B are included as standard.
2. Sleeve for BSL cannot be used for C3 and C4 models.





Interchangeable between center-through and side-through coolant supply by using plugs.
Adjustment for either right hand or left hand is also possible.

For C3

Chuck Model	Plug A	Plug B
BSL 6	M5 P0.8	M4 P0.7
BSL 8		
BSL 10		
BSL 12		

1. Both plugs are included as standard.

For C4

Chuck Model	Plug A	Plug B
BSL 6	M5 P0.8	M4 P0.7
BSL 8		
BSL 10		M5 P0.8
BSL 12		M6 P1.0
BSL 16		
BSL 20		

1. Both plugs are included as standard.

For C5, C6 and C8

Chuck Model	Plug A	Plug B
BSL 6	M8P1.25	M4 P0.7
BSL 8	M10P1.0	
BSL 10	M12P1.5	M5 P0.8
BSL 12	M14P1.5	M6 P1.0
BSL 16	M18P1.5 (C5:M6P1.0)	
BSL 20	M6P1.0	
BSL 25		
BSL 32	M8P1.25	
BSL 40		

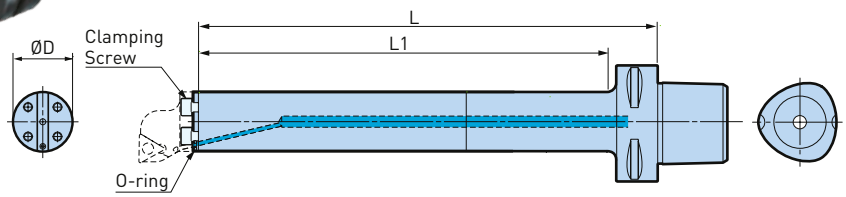
1. Both plugs are included as standard.

Accessories & Spare Parts

Sleeve for Boring Bar Holders for BSL

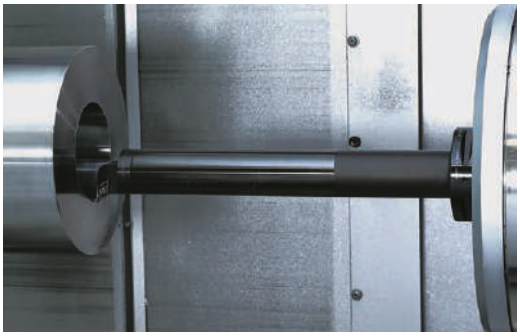
▶ 389

Smart Damper Turning Adapter



Model	Article No.	Cartridge	ØD	L	L1	Weight (kg)
C6-SDB40DP-168	101126.001.0	B32	32	168	145	2.00
C6-SDB40DP-245	101126.002.0	B32	32	245	218	2.50
C6-SDB50DP-230	101126.003.0	B40	40	230	203	3.40
C6-SDB50DP-310	101126.004.0	B40	40	310	283	4.20
C6-SDB60DP-268	-	B40	50	268	241	5.70
C6-SDB60DP-368	-	B40	50	368	341	7.20
C8-SDB40DP-255	-	B32	32	255	220	3.40
C8-SDB50DP-320	-	B40	40	320	285	5.10
C8-SDB60DP-400	-	B40	50	400	365	8.50

1. Clamp bolts (3 pcs.) and o-rings (2 pcs.) are included.
2. Cartridge is to be ordered separately.
3. Inserts are not included.



Accessories & Spare Parts

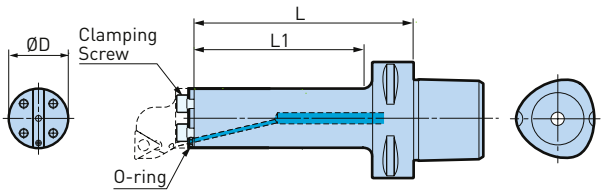
Cartridges for Turning Adapter

▶ 348

Spare Parts ▶ 349

Turning Adapter

Coolant Through Hole



Model	Article No.	Cartridge	ØD	L	L1	Weight (kg)
C6-TAD40-120	101129.001.0	B32	32	120	93	1.40
C6-TAD50-150	101129.002.0	B40	40	150	123	2.00
C6-TAD60-190	-	B40	50	190	163	3.20
C8-TAD40-130	-	B32	32	130	95	2.30
C8-TAD50-160	-	B40	40	160	125	2.90
C8-TAD60-200	-	B40	50	200	165	4.20

A.7

1. Clamp bolts (3 pcs.) and o-rings (2 pcs.) are included.
2. Cartridge is to be ordered separately.
3. Inserts are not included.

Application	Inner angle face machining	Copy machining		Blind hole machining	
Shape	80° rhombic	55° rhombic	35° rhombic	Triangular	
Screw-on type (for positive insert)	CC1204	DC11T3	VB1604	TP1604	TC1102
Double clamp type (for negative insert)	CN1204	DN1104 DN1504 DN1506	—	TN1604	

Accessories & Spare Parts

Cartridges for Turning Adapter

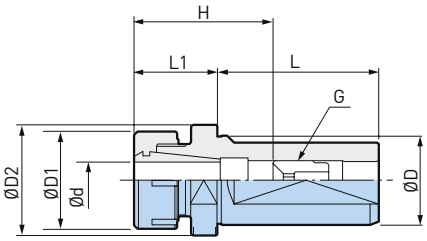
▶ 348

Spare Parts ▶ 349

New Baby Chuck Stopper

Flange as a stopper enables external presetting of the tool and minimizes downtime. Shank is designed to be directly mounted into the drill holder of turret.

Coolant Through Hole



ø2.5 - 20mm

Model	Article No.	Ød	ØD	ØD1	ØD2	L	L1	H	Collet Model	Weight (kg)
SLS25-NBS13-30	804.285	2.5 - 13	25	35	32	54	30	41 - 60	NBC13	0.26
SLS25-NBS13-60	804.286	2.5 - 13	25	35	32	54	60	41 - 60	NBC13	0.45
SLS32-NBS13-30	804.288	2.5 - 13	32	35	39.5	58	30	41 - 60	NBC13	0.44
SLS32-NBS13-60	804.289	2.5 - 13	32	35	39.5	58	60	41 - 60	NBC13	0.61
SLS32-NBS13-100	804.287	2.5 - 13	32	35	39.5	58	100	41 - 60	NBC13	0.84
SLS32-NBS20-30	804.291	2.5 - 20	32	46	45.5	58	30	48 - 65	NBC20	0.42
SLS32-NBS20-60	804.292	2.5 - 20	32	46	45.5	58	60	48 - 65	NBC20	0.76
SLS32-NBS20-100	804.290	2.5 - 20	32	46	45.5	58	100	48 - 65	NBC20	1.20
SLS40-NBS13-30	804.294	2.5 - 13	40	35	49.5	68	30	41 - 60	NBC13	0.76
SLS40-NBS13-60	804.295	2.5 - 13	40	35	49.5	68	60	41 - 60	NBC13	0.90
SLS40-NBS13-100	804.293	2.5 - 13	40	35	49.5	68	100	41 - 60	NBC13	1.12
SLS40-NBS20-30	804.297	2.5 - 20	40	46	49.5	68	30	48 - 65	NBC20	0.70
SLS40-NBS20-60	804.298	2.5 - 20	40	46	49.5	68	60	48 - 65	NBC20	0.98
SLS40-NBS20-100	804.296	2.5 - 20	40	46	49.5	68	100	48 - 65	NBC20	1.36

1. New Baby Nut is included.
2. "G" is the adjusting screw (optional).
3. "H" is the max. tool shank length that can be inserted for these models.

Accessories & Spare Parts

New Baby Nuts	Baby Perfect Seals	New Baby Collets	New Baby Wrenches	Adjusting Screws NBA
▶ 367	▶ 370	▶ 360	▶ 385	▶ 367

New Baby Chuck Standard

Versatile basic holder for drills, taps and reamers.

ø0.25 - 20mm

Model	Article No.	Fig.	Ød	ØD1	ØD2	ØD3	L	L1	H	Collet Model	Weight (kg)
SL16-NBS6-40	802.154	1	0.25 - 6	16	20	-	40	15	20 - 40	NBC6	0.07
SL16-NBS6-80	802.155	1	0.25 - 6	16	20	-	80	15	20 - 40	NBC6	0.12
SL16-NBS8-40	802.156	1	0.5 - 8	16	25	-	40	16.5	23 - 42	NBC8	0.08
SL16-NBS8-80	802.157	1	0.5 - 8	16	25	-	80	16.5	23 - 42	NBC8	0.12
SL16-NBS10-40	802.152	2	1.5 - 10	16	30	21	40	37	35 - 45	NBC10	0.12
SL16-NBS10-80	802.153	2	1.5 - 10	16	30	21	80	37	35 - 45	NBC10	0.17
SL20-NBS6-40	802.162	1	0.25 - 6	20	20	-	40	15	20 - 40	NBC6	0.10
SL20-NBS6-80	802.163	1	0.25 - 6	20	20	-	80	15	20 - 40	NBC6	0.17
SL20-NBS8-40	802.164	1	0.5 - 8	20	25	-	40	16.5	23 - 42	NBC8	0.11
SL20-NBS8-80	802.165	1	0.5 - 8	20	25	-	80	16.5	23 - 42	NBC8	0.18
SL20-NBS10-40	802.158	2	1.5 - 10	20	30	21	40	18	35 - 45	NBC10	0.11
SL20-NBS10-80	802.159	2	1.5 - 10	20	30	21	80	18	35 - 45	NBC10	0.18
SL20-NBS13-40	802.160	2	2.5 - 13	20	35	26	40	43	41 - 60	NBC13	0.19
SL20-NBS13-80	802.161	2	2.5 - 13	20	35	26	80	43	41 - 60	NBC13	0.26
SL22-NBS6-40	804.271	1	0.25 - 6	22	20	-	40	15	20 - 40	NBC6	0.12
SL22-NBS8-40	804.273	1	0.5 - 8	22	25	-	40	16.5	23 - 42	NBC8	0.13
SL22-NBS10-40	804.267	1	1.5 - 10	22	30	-	40	18	35 - 45	NBC10	0.13
SL22-NBS10-80	804.268	1	1.5 - 10	22	30	-	80	18	35 - 45	NBC10	0.22
SL22-NBS13-40	804.269	2	2.5 - 13	22	35	26	40	21.5	41 - 47	NBC13	0.15
SL22-NBS13-80	804.270	2	2.5 - 13	22	35	26	80	21.5	41 - 60	NBC13	0.22

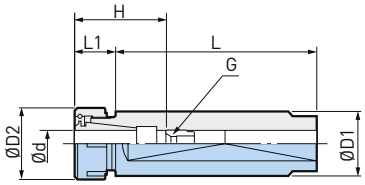


Fig. 1

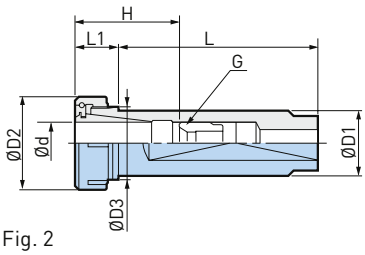


Fig. 2

Model	Article No.	Fig.	Ød	ØD1	ØD2	ØD3	L	L1	H	Collet Model	Weight (kg)
SL25-NBS6-80	802.173	1	0.25 - 6	25	20	-	80	15	20 - 40	NBC6	0.27
SL25-NBS6-120	802.172	1	0.25 - 6	25	20	-	120	15	20 - 40	NBC6	0.37
SL25-NBS8-80	802.175	1	0.5 - 8	25	25	-	80	16.5	23 - 42	NBC8	0.27
SL25-NBS8-120	802.174	1	0.5 - 8	25	25	-	120	16.5	23 - 42	NBC8	0.38
SL25-NBS10-80	802.167	1	1.5 - 10	25	30	-	80	18	35 - 45	NBC10	0.28
SL25-NBS10-120	802.166	1	1.5 - 10	25	30	-	120	18	35 - 45	NBC10	0.39
SL25-NBS13-80	802.169	2	2.5 - 13	25	35	26	80	21.5	41 - 60	NBC13	0.29
SL25-NBS13-120	802.168	2	2.5 - 13	25	35	26	120	21.5	41 - 60	NBC13	0.40
SL25-NBS16-80	802.171	2	2.5 - 16	25	42	32	80	48	45 - 65	NBC16	0.40
SL25-NBS16-120	802.170	2	2.5 - 16	25	42	32	120	48	45 - 65	NBC16	0.51
SL25.4-NBS6-80	804.282	1	0.25 - 6	25.4	20	-	80	15	20 - 40	NBC6	0.27
SL25.4-NBS8-80	804.284	1	0.5 - 8	25.4	25	-	80	16.5	23 - 42	NBC8	0.28
SL25.4-NBS10-80	804.276	1	1.5 - 10	25.4	30	-	80	18	35 - 45	NBC10	0.29
SL25.4-NBS13-80	804.278	2	2.5 - 13	25.4	35	26	80	21.5	41 - 50	NBC13	0.30
SL25.4-NBS16-80	804.280	2	2.5 - 16	25.4	42	32	80	48	45 - 65	NBC16	0.41
SL32-NBS13-100	802.176	1	2.5 - 13	32	35	-	100	21.5	41 - 60	NBC13	0.57
SL32-NBS13-150	802.177	1	2.5 - 13	32	35	-	150	21.5	41 - 60	NBC13	0.82
SL32-NBS16-100	802.178	1	2.5 - 16	32	42	-	100	21.5	45 - 65	NBC16	0.54
SL32-NBS16-150	802.179	1	2.5 - 16	32	42	-	150	21.5	45 - 65	NBC16	0.79
SL32-NBS20-100	802.180	2	2.5 - 20	32	46	36	100	21.5	48 - 65	NBC20	0.51
SL32-NBS20-150	802.181	2	2.5 - 20	32	46	36	150	21.5	48 - 65	NBC20	0.76

1. New Baby Nut is included.
2. "G" is the adjusting screw (optional).
3. "H" is the max. tool shank length that can be inserted for these models.

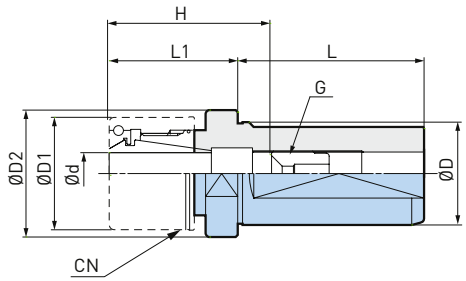
Accessories & Spare Parts

New Baby Nuts	Baby Perfect Seals	New Baby Collets	New Baby Wrenches	Adjusting Screws NBA
▶ 367	▶ 370	▶ 360	▶ 385	▶ 367

MEGA ER Grip Stopper

High precision components outperform standard ER collet system.

Coolant Through Hole



ø2.75 - 20mm

Model	Article No.	Ød	ØD	ØD1	ØD2	L	L1	H	Collet Model	Weight (kg)
SLS25-MEGAER20-45/NL	803.571	2.75 - 13	25	35	32	54	45	42 - 62	ERC20	0.26
SLS25-MEGAER20-75/NL	803.572	2.75 - 13	25	35	32	54	75	42 - 62	ERC20	0.46
SLS32-MEGAER20-45/NL	803.573	2.75 - 13	32	35	39.5	58	45	42 - 62	ERC20	0.45
SLS32-MEGAER20-75/NL	803.574	2.75 - 13	32	35	39.5	58	75	42 - 62	ERC20	0.61
SLS32-MEGAER32-45/NL	803.575	2.75 - 20	32	50	50	58	45	47 - 68	ERC32	0.43
SLS32-MEGAER32-75/NL	803.576	2.75 - 20	32	50	50	58	75	50 - 68	ERC32	0.86
SLS40-MEGAER20-45/NL	803.577	2.75 - 13	40	35	49.5	68	45	42 - 62	ERC20	0.80
SLS40-MEGAER20-75/NL	803.578	2.75 - 13	40	35	49.5	68	75	42 - 62	ERC20	0.91
SLS40-MEGAER32-45/NL	803.579	2.75 - 20	40	50	50	68	45	50 - 68	ERC32	0.68
SLS40-MEGAER32-75/NL	803.580	2.75 - 20	40	50	50	68	75	50 - 68	ERC32	1.06

1. Nut (CN) is not included.
2. "G" is the adjusting screw (optional).
3. "H" is the max. tool shank length that can be inserted for these models.

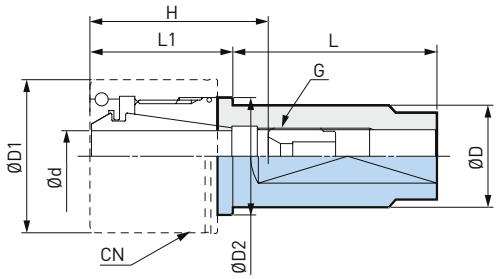
Accessories & Spare Parts

MEGA ER Nut	ER Nuts	MEGA ER Perfect Seal	MEGA ER Collets	MEGA Wrenches	Adjusting Screws NBA
▶ 376	▶ 376	▶ 377	▶ 374	▶ 384	▶ 367

MEGA ER Grip Standard

Flat is provided on the shank to be mounted in the tool post of the NC lathe directly.

Coolant Through Hole



ø1.9 - 16mm

Model	Article No.	Ød	ØD	ØD1	ØD2	L	L1	H	Collet Model	Weight (kg)
SL16-MEGAER11-40/NL	803.554	2.75 - 6	16	19	-	40	19	23 - 40	ERC11	0.06
SL16-MEGAER11-80/NL	803.555	2.75 - 6	16	19	-	80	19	23 - 40	ERC11	0.11
SL19.05-MEGAER11-40/NL	803.556	2.75 - 6	19.05	19	-	40	19	23 - 40	ERC11	0.09
SL19.05-MEGAER11-80/NL	803.557	2.75 - 6	19.05	19	-	80	19	23 - 40	ERC11	0.15
SL19.05-MEGAER16-40/NL	803.558	1.9 - 10	19.05	30	23	40	28	35 - 47	ERC16	0.09
SL19.05-MEGAER16-80/NL	803.559	1.9 - 10	19.05	30	23	80	28	35 - 47	ERC16	0.16
SL20-MEGAER11-40/NL	803.560	2.75 - 6	20	19	-	40	19	23 - 40	ERC11	0.09
SL20-MEGAER11-80/NL	803.561	2.75 - 6	20	20	-	80	19	23 - 40	ERC11	0.16
SL20-MEGAER16-40/NL	801.714	1.9 - 10	20	30	23	40	28	35 - 47	ERC16	0.10
SL20-MEGAER16-80/NL	803.562	1.9 - 10	20	30	23	80	28	35 - 47	ERC16	0.17
SL25-MEGAER11-60/NL	803.564	2.75 - 6	25	19	-	60	19	23 - 40	ERC11	0.20
SL25-MEGAER11-100/NL	803.563	2.75 - 6	25	19	-	100	19	23 - 40	ERC11	0.31
SL25-MEGAER16-60/NL	803.566	1.9 - 10	25	30	-	60	28	35 - 47	ERC16	0.21
SL25-MEGAER16-100/NL	803.565	1.9 - 10	25	30	-	100	28	35 - 47	ERC16	0.32
SL25-MEGAER20-45/NL	-	2.75 - 13	25	35	27	45	30	62	ERC20	0.16
SL25-MEGAER20-60/NL	803.568	2.75 - 13	25	35	27	60	30	42 - 62	ERC20	0.20
SL25-MEGAER20-100/NL	803.567	2.75 - 13	25	35	27	100	30	42 - 62	ERC20	0.31
SL25-MEGAER25-60/NL	803.570	2.75 - 16	25	42	33.5	60	48	44 - 67	ERC25	0.27
SL25-MEGAER25-100/NL	803.569	2.75 - 16	25	42	33.5	100	48	44 - 67	ERC25	0.38

1. Nut (CN) is not included.
2. "G" is the adjusting screw (optional).
3. "H" is the max. tool shank length that can be inserted for these models.

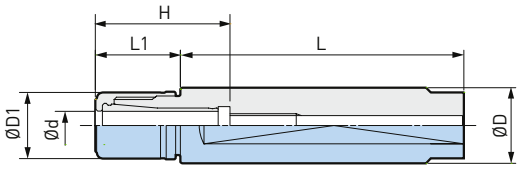
Accessories & Spare Parts

MEGA ER Nut	ER Nuts	MEGA ER Perfect Seal	MEGA ER Collets	MEGA Wrenches	Adjusting Screws NBA
▶ 376	▶ 376	▶ 377	▶ 374	▶ 384	▶ 367

MEGA Micro Chuck

Smaller nut diameter than body allows installation into toolholder of small lathes from the back side.

Coolant Through Hole



ø0.45 - 8.05mm

Model	Article No.	Ød	ØD	ØD1	L	L1	H	Collet Model	Weight (kg)
SL15.875-MEGA6S-60	803.593	0.45 - 6.05	15.875	14	60	18	28.5	NBC6S	0.09
SL16-MEGA6S-60	803.594	0.45 - 6.05	16	14	60	18	28.5	NBC6S	0.09
SL19.05-MEGA6S-40	100570.001.0	0.45 - 6.05	19.05	14	40	18	28.5	NBC6S	0.09
SL19.05-MEGA6S-80	807.710	0.45 - 6.05	19.05	14	80	18	28.5	NBC6S	0.15
SL19.05-MEGA8S-40	807.410	2.95 - 8.05	19.05	18	40	19	31	NBC8S	0.09
SL19.05-MEGA8S-80	807.411	2.95 - 8.05	19.05	18	80	19	31	NBC8S	0.15
SL20-MEGA6S-40	803.595	0.45 - 6.05	20	14	40	18	28.5	NBC6S	0.10
SL20-MEGA6S-80	803.602	0.45 - 6.05	20	14	80	18	28.5	NBC6S	0.17
SL20-MEGA8S-40	807.412	2.95 - 8.05	20	18	40	19	31	NBC8S	0.10
SL20-MEGA8S-80	807.413	2.95 - 8.05	20	18	80	19	31	NBC8S	0.17

1. MEGA nut is included in delivery.
2. MEGA wrench is to be ordered separately.

A.7

Accessories & Spare Parts

MEGA Nuts	Micro Seal Nuts	Micro Collets	MEGA Wrenches
▶ 358	▶ 358	▶ 356	▶ 384

MEGA Synchro Tapping Holder

For small Tap MGT3

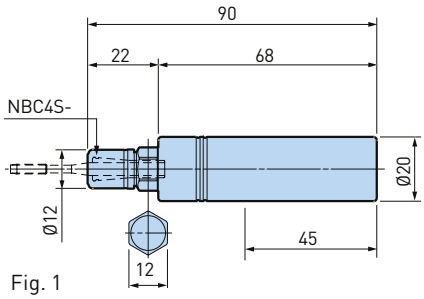


Fig. 1

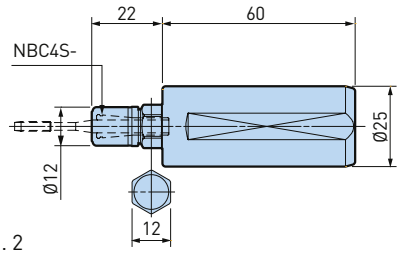


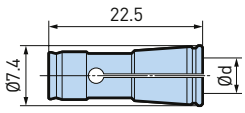
Fig. 2

Model	Article No.	Fig.	Weight (kg)
ST20-MGT3-90	978.356	1	0.18
SLS25-MGT3-22	804.115	2	0.25

1. MEGA nut is included in delivery.
2. MEGA wrench (MGR12) and common spanner (12 mm) are required to clamp/unclamp the tap.
3. 12 mm wrench is additionally required to clamp/release the tool.
4. Synchronized tapping function is required on the machine.
5. Coolant-through hole is not available.
6. ST20 has no flat on the shank.

A.7

Micro Collet for MGT3



Model	Article No.	Tapping Range			Tap Shank
		DIN 371	ISO 529	JIS	Ød
NBC4S-2.5AA	961.468	M1 - M1.8	M2	-	2.5
NBC4S-2.8AA	968.353	M2 - M2.6	M2.2, M2.5	-	2.8
NBC4S-3.0AA	961.470	-	-	M1 - M2.6	3.0
NBC4S-3.1AA	968.355	-	M3	-	3.15
NBC4S-3.5AA	961.472	M3	-	-	3.5
NBC4S-4.0AA	961.474	-	-	M3	4.0

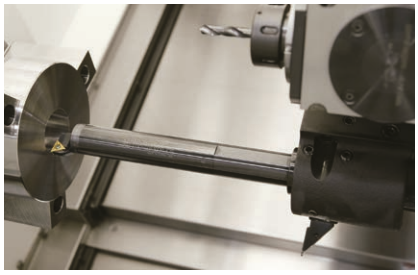
1. Other sizes available. Please refer to micro collet.

Accessories & Spare Parts

MEGA Wrenches

▶ 384

Smart Damper Turning



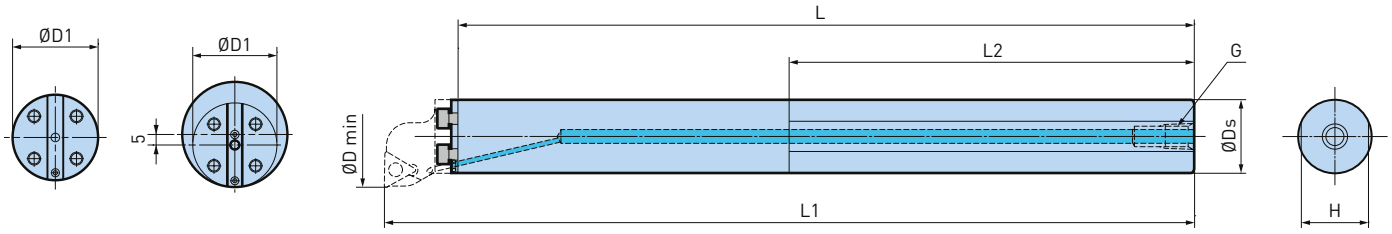


Fig. 1 Fig. 2

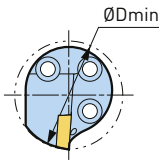
A.7

Model	Article No.	Fig.	Cartridge	ØD	ØDs	ØD1	L	L1	L2	H	G	Weight (kg)
ST32-SDB40DP-320	806.422	1	B32	40	32	32	320	352	176	30	PT1/4	2.20
ST40-SDB50DP-410	806.423	1	B40	50	40	40	410	442	240	37	PT3/8	4.50
ST50-SDB60DP-520	807.403	2	B40	60	50	40	520	552	330	47	PT3/8	8.90

1. Clamp bolts (3 pcs.) and o-rings (2 pcs.) are included.
2. Cartridge is to be ordered separately.

Cartridges for Turning Adapter

Positive



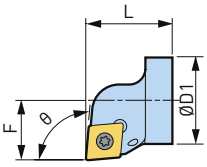


Fig. 1

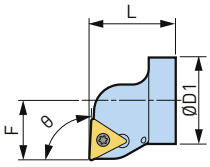


Fig. 2

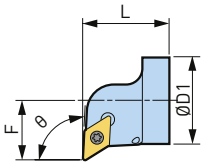


Fig. 3

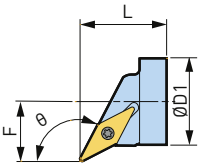


Fig. 4

Model	Article No.	Fig.	Type	Insert	Hand	ØD1	L	F	Entering Angle	Screw Set	Weight (kg)
B32-SDUCR-22032-11	806.426	3	B32	DC11T3	R	32	32	22	93°	S4 S-15IP	0.10
B32-STUCR-22032-11	806.802	2	B32	TC1102	R	32	32	22	93°	S2.5S-7IP	0.12
B32-SCLCR-22032-12	806.424	1	B32	CC1204	R	32	32	22	95°	S5 S-20IP	0.11
B32-STUPR-22032-16	806.425	2	B32	TP1604	R	32	32	22	93°	S4 S-15IP	0.11
B32-SVUBR 22032-16	-	4	B32	VB1604	R	32	32	22	93°	S3.5S-15IP	0.10
B32-SVPBR-22032A-16	-	4	B32	VB1604	R	32	32	22	117.5°	S3.5S-15IP	0.09
B40-SDUCR-27032-11	806.429	3	B40	DC11T3	R	40	32	27	93°	S4 S-15IP	0.16
B40-STUCR-27032-11	806.803	2	B40	TC1102	R	40	32	27	93°	S2.5S-7IP	0.18
B40-SCLCR-27032-12	806.427	1	B40	CC1204	R	40	32	27	95°	S5 S-20IP	0.17
B40-STUPR-27032-16	806.428	2	B40	TP1604	R	40	32	27	93°	S4 S-15IP	0.17
B40-SVUBR-27032-16	-	4	B40	VB1604	R	40	32	27	93°	S3.5S-15IP	0.20
B40-SVPBR-27032A-16	-	4	B40	VB1604	R	40	32	27	117.5°	S3.5S-15IP	0.13

Negative

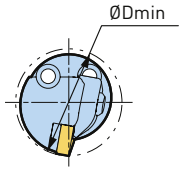


Fig. 1

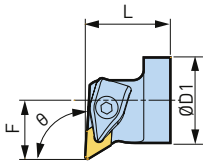


Fig. 2

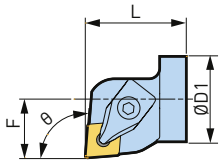
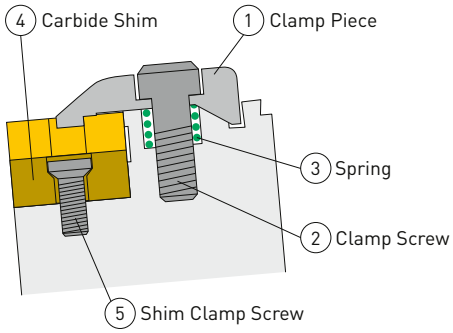


Fig. 3

Model	Article No.	Fig.	Type	Insert	Hand	ØD1	L	F	Entering Angle	Weight (kg)
B32-DDUNR-22032-11	807.404	1	B32	DN1104	R	32	32	22	93°	0.12
B32-DCLNR-22038-12	807.405	2	B32	CN1204	R	32	38	22	95°	0.15
B32-DTFNR-22038-16	-	3	B32	TN1604	R	32	38	22	91°	0.16
B40-DDUNR-27032-15	807.407	1	B40	DN1506*/ DN1504	R	40	32	27	93°	0.18
B40-DCLNR-27038-12	807.408	2	B40	CN1204	R	40	38	27	95°	0.23
B40-DTFNR-27038-16	-	3	B40	TN1604	R	40	38	27	91°	0.23

1. Wrench is included.
2. Inserts are to be ordered separately.
3. Carbide shim for 6.35 mm thick DN1506 insert is included as standard. In case of DN1504 insert (thickness of 4.76 mm), please replace the standard carbide shim with DNS1506 (option).

Spare Parts for Turning Cartriges



Clamp Piece Set (for Negative)

Set Model	Article No.	(1) Clamp Piece	(2) Clamp Screw	(3) Spring	Compatible Insert
SCP1	973.181	CP1	M5 x 20	Ø8 x 10	TN1604
SCP2	973.182	CP2			DN1504,DN1506, CN1204
SCP7	807.554	CP7			DN1104

1. 1 pc. each of the clamp piece, clamp screw and spring are included in the set.
2. The tightening wrench is a 4 mm hex wrench.

Insert Clamping Screw Set (for Positive)

Set Model	Article No.	Screw	Wrench Model
S2.5S-7IP	100763.001.0	M2.5× 6.5	FS-7IP
S3.5S-15IP	807.697	M3.5× 8	FS-15IP
S4S-15IP	806.624	M4 × 8	FS-15IP
S5S-20IP	100763.002.0	M5 ×12	FS-20IP

1. The insert clamping screw set contains 10 screws and 1 wrench.

Carbide Shim Set (for Negative)

Compatible Insert	Set Model	Article No.	(4) Carbide Shim	(5) Shim Clamp Screw	Torx size
DN1104	SDNS1104C	807.556	DNS1104C	M3×7	10IP
DN1504	SDNS1504C	807.557	DNS1504C	M4×8	15IP
DN1506	SDNS1506C	807.558	DNS1506C	M4×8	15IP
CN1204	SCNS1204C	807.559	CNS1204C	M4×8	15IP
TN1604	STNS1604C	-	TNS1604C	M3×7	10IP

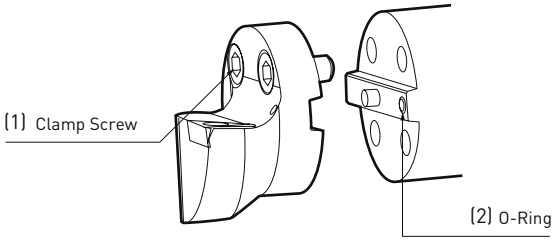
1. 1 pc. each of the carbide shim and shim clamp screw are included in the set.
2. The tightening wrench is a torx wrench.

Torx Plus Wrench (optional)

Set Model	Article No.	Torx Plus Size
FS-10IP	-	10IP
FS-15IP	-	15IP

Clamp Bolt / O-Rings

Cartridge No.	Clamp Bolt (1P)	⬡SW	O-Rings (2P)
B32	C0510	4	SDB200R-2P
B40	C0610	5	



Clamping Screw (for Smart Damper / Turning Adapter)

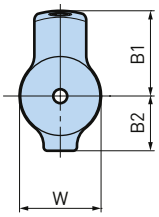
Type	(1)	⬡SW	N·m	(2)
SDB40DP / TAD40	C0510	4	7	SDB200R-2P
SDB50DP / TAD50	C0610	5	10	
SDB60DP / TAD60				

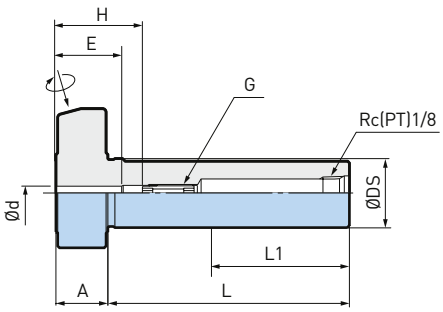
1. (1) Clamping Screw x 1p
2. (2) O-Ring x 2p

Hydraulic Chuck Lathe Type - Standard

Coolant Through Hole

Simple slim design allows to mount various tool post positions. Coolant trough drills can be used for coolant delivery with Rc (PT) 1/8.





ø3 - 12mm

Model	Article No.	Ød	ØDs	L	L1	A	B1	B2	W	H	E	G	Weight (kg)
SL19.05-HDC3-60 *	807.220	3	19.05	60	20	15	24.5	15.8	22	20 - 32	16	HDA4-05015W	0.18
SL19.05-HDC3.175-60 *	807.696	3.175	19.05	60	20	15	24.5	15.8	22	20 - 32	16	HDA4-05015W	0.18
SL19.05-HDC4-60	806.991	4	19.05	60	20	15	24.5	15.8	22	23 - 32	19	HDA4-05015W	0.18
SL19.05-HDC5-60	100572.002.0	5	19.05	60	20	15	24.5	15.8	22	31 - 48	22	-	0.18
SL19.05-HDC6-60	806.992	6	19.05	60	20	15	24.5	15.8	22	31 - 48	25	NBA6B	0.18
SL19.05-HDC8-60 **	806.993	8	19.05	60	20	15	25.5	15.8	22	65	31	-	0.17
SL20-HDC3-70 *	807.221	3	20	70	30	15	24.5	15.8	23	20 - 32	16	HDA4-05015W	0.22
SL20-HDC4-70	807.222	4	20	70	30	15	24.5	15.8	23	23 - 32	19	HDA4-05015W	0.22
SL20-HDC5-70	100572.001.0	5	20	70	30	15	24.5	15.8	23	31 - 48	22	-	0.21
SL20-HDC6-70	807.223	6	20	70	30	15	24.5	15.8	23	31 - 48	25	NBA6B	0.21
SL20-HDC8-70 **	807.224	8	20	70	30	15	25.5	15.8	23	75	31	-	0.21
SL22-HDC3-70 *	807.225	3	22	70	30	15	24.5	15.8	25	20 - 32	16	HDA4-05015W	0.26
SL22-HDC4-70	806.994	4	22	70	30	15	24.5	15.8	25	23 - 32	19	HDA4-05015W	0.25
SL22-HDC6-70 **	806.995	6	22	70	30	15	24.5	15.8	25	31 - 48	25	NBA6B	0.25
SL22-HDC8-70 **	806.996	8	22	70	30	15	25.5	15.8	25	75	31	-	0.24
SL22-HDC10-70 **	807.488	10	22	70	30	15	27	16.8	25	70	33	-	0.23
SL25-HDC3-65 *	807.489	3	25	65	25	15	23	14	28	20 - 32	16	HDA4-05015W	0.31
SL25-HDC4-65	807.490	4	25	65	25	15	23	14	28	23 - 32	19	HDA4-05015W	0.31
SL25-HDC6-65	807.491	6	25	65	25	15	24.5	15	28	31 - 48	25	NBA6B	0.31
SL25-HDC8-65 **	807.492	8	25	65	25	15	25.5	16	28	70	31	-	0.30
SL25-HDC10-65 **	807.493	10	25	65	25	15	27	17	28	65	33	-	0.29
SL25-HDC12-65 **	807.497	12	25	65	25	15	28	18	28	65	36	-	0.28
SL25.4-HDC3-80 *	807.498	3	25.4	80	40	15	23	14	28	20 - 32	16	HDA4-05015W	0.37
SL25.4-HDC4-80	807.499	4	25.4	80	40	15	23	14	28	23 - 32	19	HDA4-05015W	0.37
SL25.4-HDC6-80	807.500	6	25.4	80	40	15	24.5	15	28	31 - 48	25	NBA6B	0.37
SL25.4-HDC8-80 **	807.501	8	25.4	80	40	15	25.5	16	28	85	31	-	0.36
SL25.4-HDC10-80 **	807.502	10	25.4	80	40	15	27	17	28	80	33	-	0.34
SL25.4-HDC12-80 **	807.503	12	25.4	80	40	15	28	18	28	80	36	-	0.32

Machine
- Citizen
- Star
- Tsugami
- Tornos

1. * Some coolant comes out from the inner slots in the case of the coolant-through application.
2. ** Adjusting screw cannot be used.
3. "E" is the min. clamping length.
4. "G" is the adjusting screw.
5. "H" is the max. tool shank length that can be inserted for these models.
6. „H" for HDC8 is the maximum clamping depth of the cutting tool in the holder.
7. „L1" is the minimum length, in case of shortening the shank.

Caution:
- Use only cutting tools that have a shank tolerance within h6 or better.
- 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.

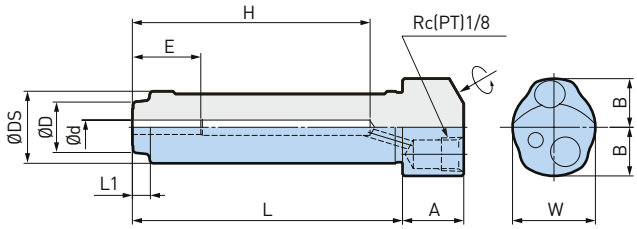
Accessories & Spare Parts

Adjusting Screws HDA	Adjusting Screws NBA
▶ 387	▶ 367

Hydraulic Chuck Lathe Type - Type F

Coolant Through Hole

Single wrench enables the easy cutting tool change on the tool post. User-friendly rear clamping design is ideal for main tool blocks

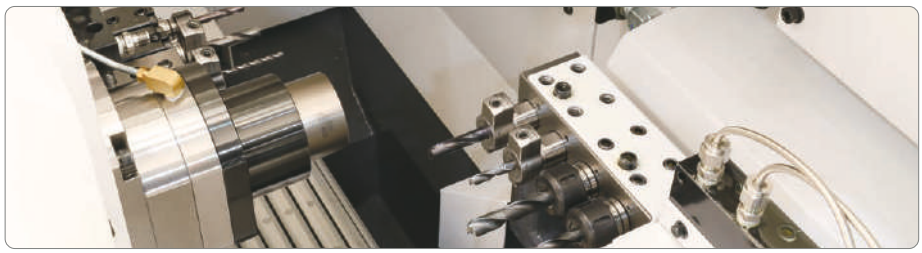


Model	Article No.	Ød	ØD	ØDs	L	L1	A	B	W	H	E	Weight (kg)
SL19.05F-HDC3-85 *	807.504	3	14	19.05	85	5	17	13.5	22	76	16	0.22
SL19.05F-HDC3.175-85	-	3.175	14	19.05	85	5	17	13.5	22	76	16	0.22
SL19.05F-HDC4-85	807.505	4	14	19.05	85	5	17	13.5	22	76	19	0.22
SL19.05F-HDC6-80	807.506	6	-	19.05	80	-	17	13.5	22	71	25	0.20
SL19.05F-HDC8-80	807.507	8	-	19.05	80	-	17	13.5	22	71	31	0.19
SL20F-HDC3-75 *	807.512	3	14	20	75	5	17	13.5	23	66	16	0.22
SL20F-HDC4-75	807.513	4	14	20	75	5	17	13.5	23	66	19	0.22
SL20F-HDC6-70	807.514	6	-	20	70	-	17	13.5	23	61	25	0.20
SL20F-HDC8-70	807.515	8	-	20	70	-	17	13.5	23	61	31	0.19
SL22F-HDC3-75 *	807.516	3	14	22	75	5	17	13.5	25	66	16	0.26
SL22F-HDC4-75	807.517	4	14	22	75	5	17	13.5	25	66	19	0.26
SL22F-HDC6-70	807.518	6	-	22	70	-	17	13.5	25	61	25	0.24
SL22F-HDC8-70	807.519	8	-	22	70	-	17	13.5	25	61	31	0.23
SL22F-HDC10-70	807.520	10	-	22	70	-	17	13.5	25	61	33	0.22
SL25F-HDC3-110	100911.001.0	3	14	25	110	7	-	13.5	-	82	16	0.37
SL25F-HDC4-110	100911.002.0	4	14	25	110	7	-	13.5	-	82	19	0.37
SL25F-HDC6-105	100911.003.0	6	14	25	105	3	-	13.5	-	77	25	0.35
SL25F-HDC8-100	100911.004.0	8	17	25	100	3	-	13.5	-	72	31	0.32
SL25F-HDC10-95	100911.005.0	10	-	25	95	-	-	13.5	-	67	33	0.29
SL25F-HDC12-90	100911.006.0	12	-	25	90	-	-	13.5	-	61	36	0.26
SL25.4F-HDC3-105	100911.007.0	3	14	25.4	105	7	-	13.5	-	77	16	0.37
SL25.4F-HDC4-105	100911.008.0	4	14	25.4	105	7	-	13.5	-	77	19	0.36
SL25.4F-HDC6-100	100911.009.0	6	14	25.4	100	3	-	13.5	-	72	25	0.35
SL25.4F-HDC8-95	100911.010.0	8	17	25.4	95	3	-	13.5	-	62	31	0.32
SL25.4F-HDC10-90	100911.011.0	10	-	25.4	90	-	-	13.5	-	67	33	0.29
SL25.4F-HDC12-85	100911.012.0	12	-	25.4	85	-	-	13.5	-	56	36	0.26

Machine
- Citizen
- Star
- Tsugami
- Tornos

1. * Some coolant comes out from the inner slots in the case of the coolant-through application.
2. Adjusting screw cannot be used.
3. "E" is the min. clamping length.
4. "H" is the max. tool shank length that can be inserted for these models.

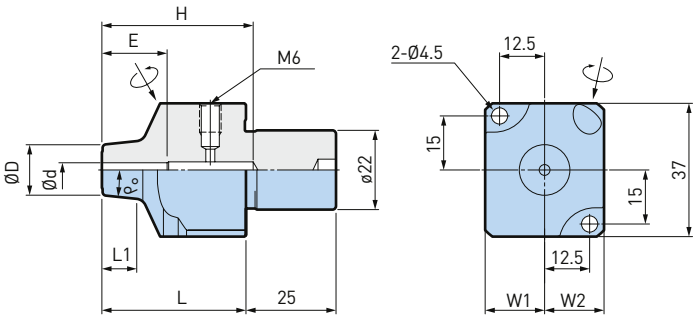
Caution:
- Use only cutting tools that have a shank tolerance within h6 or better.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon Type shank)
- Do not tighten the clamping screw without first inserting a cutting tool into the hydraulic chuck.
- Always insert the cutting tool into the hydraulic chuck beyond min. clamping length E.



Hydraulic Chuck Lathe Type - Type R

Coolant Through Hole

Unique block design enables easy handling for both upper or lower tool block positions. Coolant through drills can be used for coolant delivery with M6.



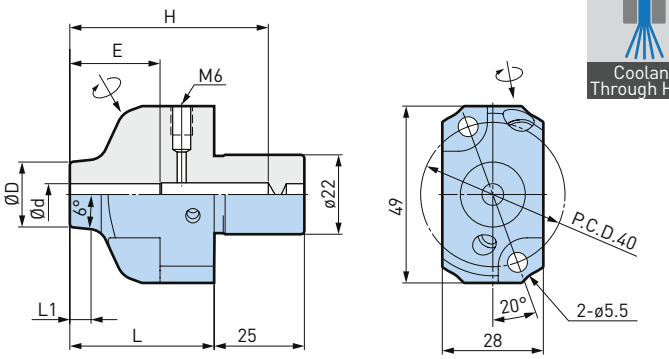
Model	Article No.	Ød	ØD	L	L1	W1	W2	H	E	Weight (kg)
SL22R-HDC3-40 *	807.521	3	14	40	7	16.5	16.5	35	16	0.31
SL22R-HDC4-40	807.522	4	14	40	9	16.5	16.5	42	19	0.31
SL22R-HDC6-40	807.523	6	18	40	5	16.5	16.5	55	25	0.33
SL22R-HDC8-40	807.524	8	20	40	6	16.5	17.5	54	31	0.33
SL22R-HDC10-40	807.525	10	22	40	6	16.5	17.5	54	33	0.32

A.7

1. * Some coolant comes out from the inner slots in the case of the coolant-through application.
2. Adjusting screw cannot be used.
3. "E" is the min. clamping length.

Hydraulic Chuck Lathe Type - Type B

Coolant Through Hole



Model	Article No.	Ød	ØD	L	L1	H	E	Weight (kg)
SL22B-HDC3-45	101350.001.0	3	14	45	7	40	16	0.36
SL22B-HDC4-45	101350.002.0	4	14	45	9	42	19	0.35
SL22B-HDC6-40	101350.003.0	6	18	40	5	55	25	0.34
SL22B-HDC8-40	101350.004.0	8	20	40	5	54	31	0.33
SL22B-HDC10-40	101350.005.0	10	22	40	6	54	33	0.32

1. * Some coolant comes out from the inner slots in the case of the coolant-through application.
2. Adjusting screw cannot be used.
3. "E" is the min. clamping length.

Machine
- Citizen
- Star
- Tsugami
- Tornos

Caution:
- Use only cutting tools that have a shank tolerance within h6 or better.
- 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.

Measurement Tools for Lathe

Base Master Mini BMM-20H

▶ 556

Centering tool for lathe CTL-90

▶ 564

Collets & Accessories

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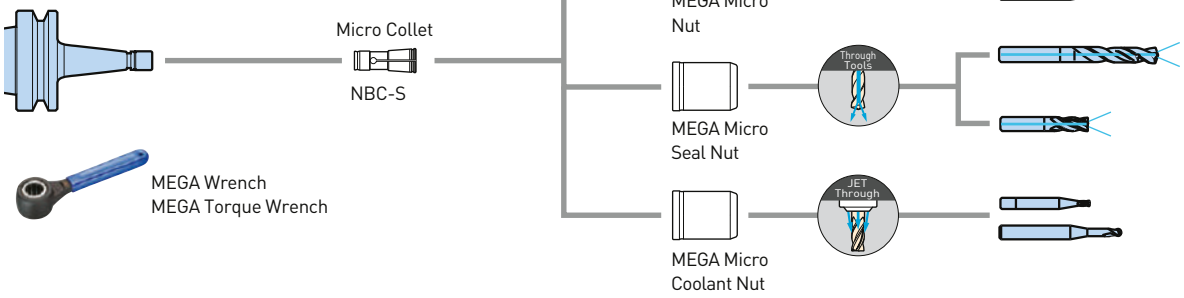
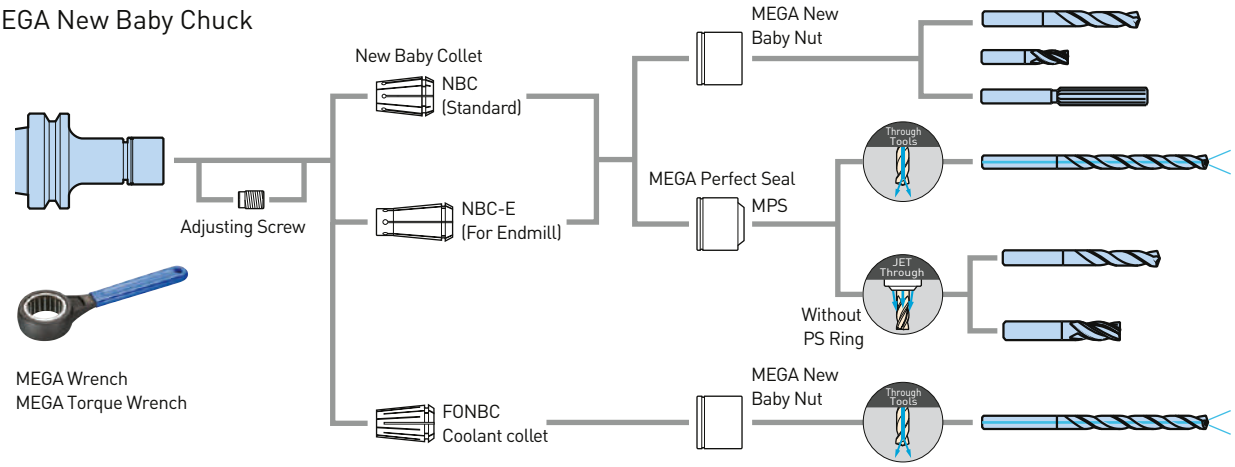
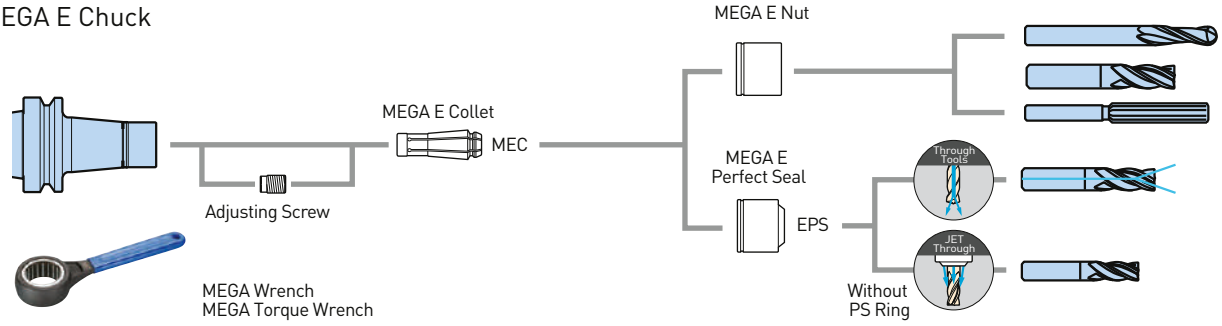
MEGA Micro Chuck



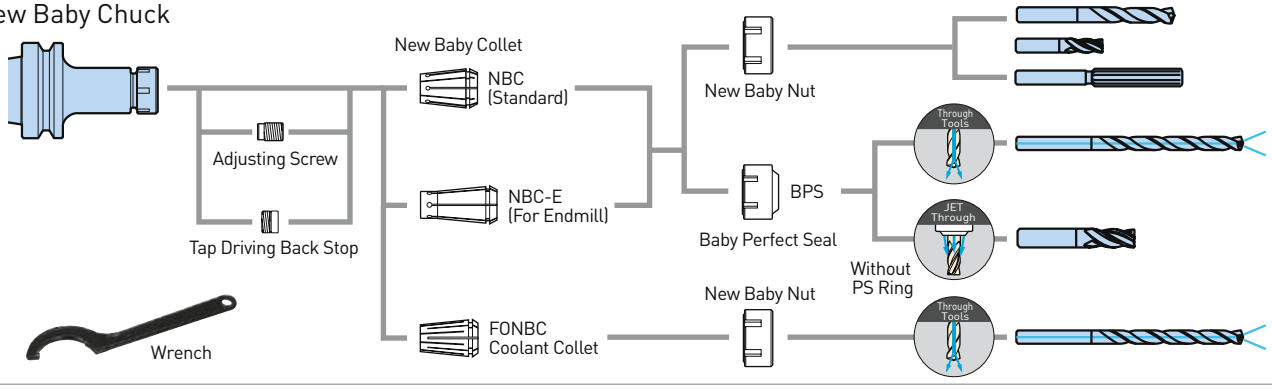
MEGA New Baby Chuck



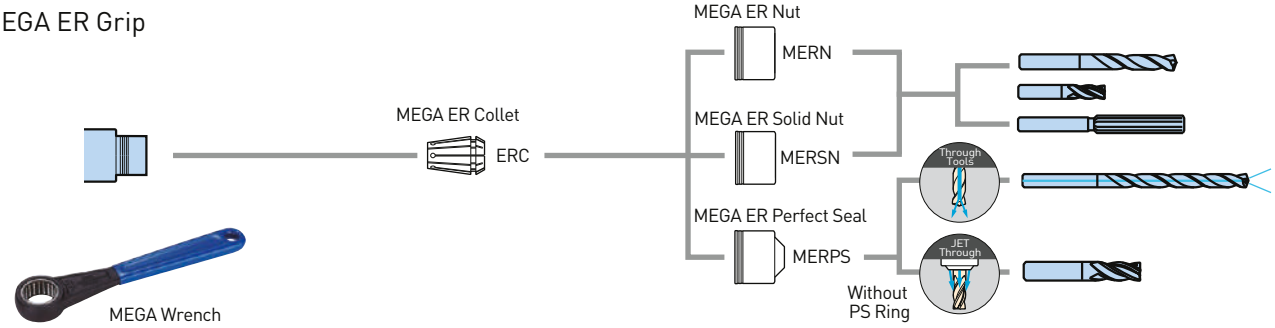
MEGA E Chuck



New Baby Chuck



MEGA ER Grip



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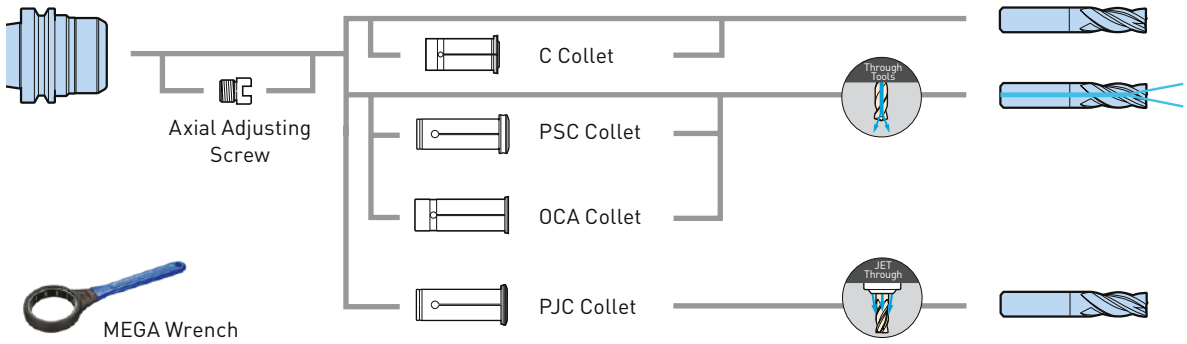
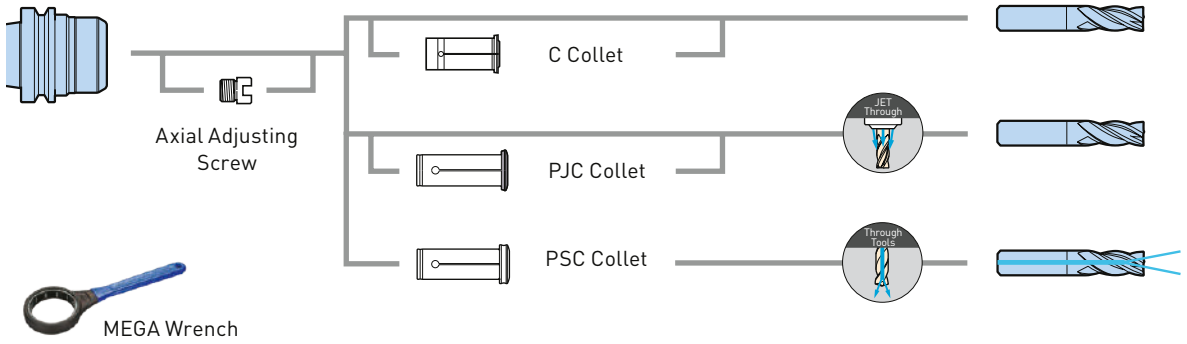
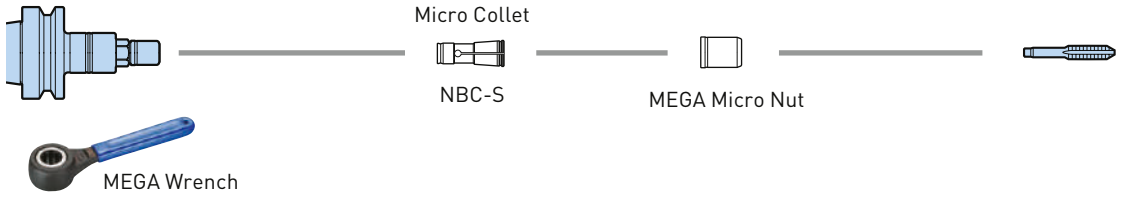
MEGA Double Power Chuck D type



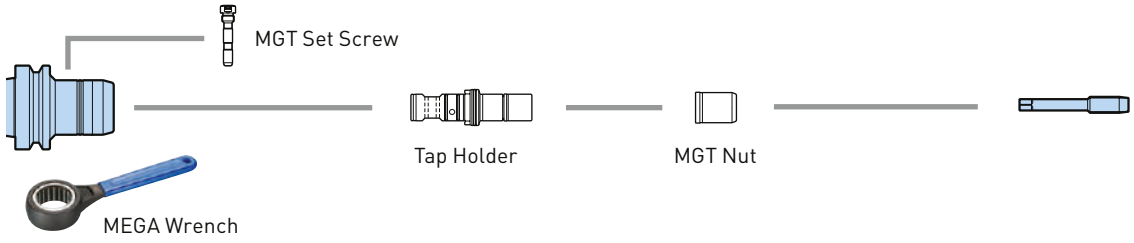
MEGA Double Power Chuck DS type



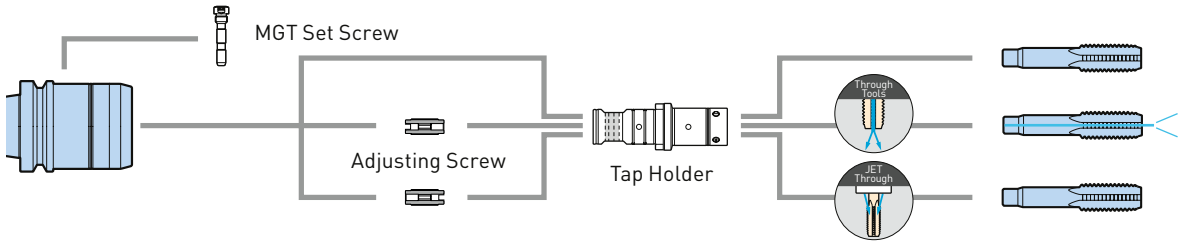
MEGA Synchro Tapping Holder MGT3



MEGA Synchro Tapping Holder MGT6, 12 and 20



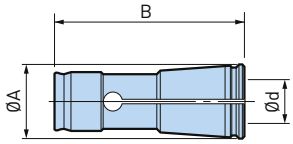
MEGA Synchro Tapping Holder MGT36

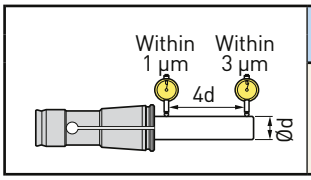


A.8

Micro Collets

For MEGA Micro Chuck
Available in 0.1 mm 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 class	Max. runout	
	At nose	4xD
AA	Within 1 µm	Within 3 µm

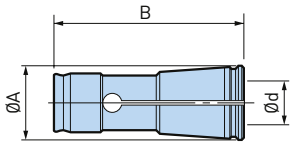
MEGA3S

Model	Article No.	Ød	ØA	B
NBC3S-0.5AA	968.301	0.45 - 0.55	6.06	18.8
NBC3S-0.6AA	968.302	0.55 - 0.65	6.06	18.8
NBC3S-0.7AA	968.303	0.65 - 0.75	6.06	18.8
NBC3S-0.8AA	968.304	0.75 - 0.85	6.06	18.8
NBC3S-0.9AA	968.305	0.85 - 0.95	6.06	18.8
NBC3S-1.0AA	968.306	0.95 - 1.05	6.06	18.8
NBC3S-1.1AA	968.307	1.05 - 1.15	6.06	18.8
NBC3S-1.2AA	968.308	1.15 - 1.25	6.06	18.8
NBC3S-1.3AA	968.309	1.25 - 1.35	6.06	18.8
NBC3S-1.4AA	968.310	1.35 - 1.45	6.06	18.8
NBC3S-1.5AA	968.311	1.45 - 1.55	6.06	18.8
NBC3S-1.6AA	968.312	1.55 - 1.65	6.06	18.8
NBC3S-1.7AA	968.313	1.65 - 1.75	6.06	18.8
NBC3S-1.8AA	968.314	1.75 - 1.85	6.06	18.8
NBC3S-1.9AA	968.315	1.85 - 1.95	6.06	18.8
NBC3S-2.0AA	968.316	1.95 - 2.05	6.06	18.8
NBC3S-2.1AA	968.317	2.05 - 2.15	6.06	18.8
NBC3S-2.2AA	968.318	2.15 - 2.25	6.06	18.8
NBC3S-2.3AA	968.319	2.25 - 2.35	6.06	18.8
NBC3S-2.4AA	968.320	2.35 - 2.45	6.06	18.8
NBC3S-2.5AA	968.321	2.45 - 2.55	6.06	18.8
NBC3S-2.6AA	968.322	2.55 - 2.65	6.06	18.8
NBC3S-2.7AA	968.323	2.65 - 2.75	6.06	18.8
NBC3S-2.8AA	968.324	2.75 - 2.85	6.06	18.8
NBC3S-2.9AA	968.325	2.85 - 2.95	6.06	18.8
NBC3S-3.0AA	968.326	2.95 - 3.05	6.06	18.8
NBC3S-3.1AA	968.327	3.05 - 3.15	6.06	18.8
NBC3S-3.175AA	968.328	3.125 - 3.225	6.06	18.8
NBC3S-3.2AA	968.329	3.15 - 3.25	6.06	18.8

MEGA4S

Model	Article No.	Ød	ØA	B
NBC4S-0.5AA	968.334	0.45 - 0.55	7.4	22.5
NBC4S-0.6AA	968.335	0.55 - 0.65	7.4	22.5
NBC4S-0.7AA	968.336	0.65 - 0.75	7.4	22.5
NBC4S-0.8AA	968.337	0.75 - 0.85	7.4	22.5
NBC4S-0.9AA	968.338	0.85 - 0.95	7.4	22.5
NBC4S-1.0AA	961.462	0.95 - 1.05	7.4	22.5
NBC4S-1.1AA	968.339	1.05 - 1.15	7.4	22.5
NBC4S-1.2AA	968.340	1.15 - 1.25	7.4	22.5
NBC4S-1.3AA	968.341	1.25 - 1.35	7.4	22.5
NBC4S-1.4AA	968.342	1.35 - 1.45	7.4	22.5
NBC4S-1.5AA	961.464	1.45 - 1.55	7.4	22.5
NBC4S-1.6AA	968.343	1.55 - 1.65	7.4	22.5
NBC4S-1.7AA	968.344	1.65 - 1.75	7.4	22.5
NBC4S-1.8AA	968.345	1.75 - 1.85	7.4	22.5
NBC4S-1.9AA	968.346	1.85 - 1.95	7.4	22.5
NBC4S-2.0AA	961.466	1.95 - 2.05	7.4	22.5
NBC4S-2.1AA	968.347	2.05 - 2.15	7.4	22.5
NBC4S-2.2AA	968.348	2.15 - 2.25	7.4	22.5
NBC4S-2.3AA	968.349	2.25 - 2.35	7.4	22.5
NBC4S-2.4AA	968.350	2.35 - 2.45	7.4	22.5
NBC4S-2.5AA	961.468	2.45 - 2.55	7.4	22.5
NBC4S-2.6AA	968.351	2.55 - 2.65	7.4	22.5
NBC4S-2.7AA	968.352	2.65 - 2.75	7.4	22.5
NBC4S-2.8AA	968.353	2.75 - 2.85	7.4	22.5
NBC4S-2.9AA	968.354	2.85 - 2.95	7.4	22.5
NBC4S-3.0AA	961.470	2.95 - 3.05	7.4	22.5
NBC4S-3.1AA	968.355	3.05 - 3.15	7.4	22.5
NBC4S-3.175AA	968.356	3.125 - 3.225	7.4	22.5
NBC4S-3.2AA	968.357	3.15 - 3.25	7.4	22.5
NBC4S-3.3AA	968.358	3.25 - 3.35	7.4	22.5
NBC4S-3.4AA	968.359	3.35 - 3.45	7.4	22.5
NBC4S-3.5AA	961.472	3.45 - 3.55	7.4	22.5
NBC4S-3.6AA	968.360	3.55 - 3.65	7.4	22.5
NBC4S-3.7AA	968.361	3.65 - 3.75	7.4	22.5
NBC4S-3.8AA	968.362	3.75 - 3.85	7.4	22.5
NBC4S-3.9AA	968.363	3.85 - 3.95	7.4	22.5
NBC4S-4.0AA	961.474	3.95 - 4.05	7.4	22.5

Micro Collets



MEGA6S

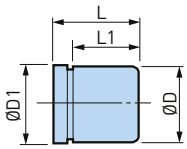
Model	Article No.	Ød	ØA	B
NBC6S-0.5AA	968.369	0.45 - 0.55	9.4	24.5
NBC6S-0.6AA	968.370	0.55 - 0.65	9.4	24.5
NBC6S-0.7AA	968.371	0.65 - 0.75	9.4	24.5
NBC6S-0.8AA	968.372	0.75 - 0.85	9.4	24.5
NBC6S-0.9AA	968.373	0.85 - 0.95	9.4	24.5
NBC6S-1.0AA	961.477	0.95 - 1.05	9.4	24.5
NBC6S-1.1AA	968.374	1.05 - 1.15	9.4	24.5
NBC6S-1.2AA	968.375	1.15 - 1.25	9.4	24.5
NBC6S-1.3AA	968.376	1.25 - 1.35	9.4	24.5
NBC6S-1.4AA	968.377	1.35 - 1.45	9.4	24.5
NBC6S-1.5AA	961.479	1.45 - 1.55	9.4	24.5
NBC6S-1.6AA	968.378	1.55 - 1.65	9.4	24.5
NBC6S-1.7AA	968.379	1.65 - 1.75	9.4	24.5
NBC6S-1.8AA	968.380	1.75 - 1.85	9.4	24.5
NBC6S-1.9AA	968.381	1.85 - 1.95	9.4	24.5
NBC6S-2.0AA	961.481	1.95 - 2.05	9.4	24.5
NBC6S-2.1AA	968.382	2.05 - 2.15	9.4	24.5
NBC6S-2.2AA	968.383	2.15 - 2.25	9.4	24.5
NBC6S-2.3AA	968.384	2.25 - 2.35	9.4	24.5
NBC6S-2.4AA	968.385	2.35 - 2.45	9.4	24.5
NBC6S-2.5AA	961.483	2.45 - 2.55	9.4	24.5
NBC6S-2.6AA	968.386	2.55 - 2.65	9.4	24.5
NBC6S-2.7AA	968.387	2.65 - 2.75	9.4	24.5
NBC6S-2.8AA	968.388	2.75 - 2.85	9.4	24.5
NBC6S-2.9AA	968.389	2.85 - 2.95	9.4	24.5
NBC6S-3.0AA	961.485	2.95 - 3.05	9.4	24.5
NBC6S-3.1AA	968.390	3.05 - 3.15	9.4	24.5
NBC6S-3.175AA	968.391	3.125 - 3.225	9.4	24.5
NBC6S-3.2AA	968.392	3.15 - 3.25	9.4	24.5
NBC6S-3.3AA	968.393	3.25 - 3.35	9.4	24.5
NBC6S-3.4AA	968.394	3.35 - 3.45	9.4	24.5
NBC6S-3.5AA	961.487	3.45 - 3.55	9.4	24.5
NBC6S-3.6AA	968.395	3.55 - 3.65	9.4	24.5
NBC6S-3.7AA	968.396	3.65 - 3.75	9.4	24.5
NBC6S-3.8AA	968.397	3.75 - 3.85	9.4	24.5
NBC6S-3.9AA	968.398	3.85 - 3.95	9.4	24.5
NBC6S-4.0AA	961.489	3.95 - 4.05	9.4	24.5
NBC6S-4.1AA	968.399	4.05 - 4.15	9.4	24.5
NBC6S-4.2AA	968.400	4.15 - 4.25	9.4	24.5
NBC6S-4.3AA	968.401	4.25 - 4.35	9.4	24.5
NBC6S-4.4AA	968.402	4.35 - 4.45	9.4	24.5
NBC6S-4.5AA	961.491	4.45 - 4.55	9.4	24.5
NBC6S-4.6AA	968.403	4.55 - 4.65	9.4	24.5
NBC6S-4.7AA	968.404	4.65 - 4.75	9.4	24.5
NBC6S-4.7625AA	801.743	4.7125 - 4.8125	9.4	24.5
NBC6S-4.8AA	968.405	4.75 - 4.85	9.4	24.5
NBC6S-4.9AA	968.406	4.85 - 4.95	9.4	24.5
NBC6S-5.0AA	961.493	4.95 - 5.05	9.4	24.5
NBC6S-5.1AA	968.408	5.05 - 5.15	9.4	24.5
NBC6S-5.2AA	968.409	5.15 - 5.25	9.4	24.5
NBC6S-5.3AA	968.410	5.25 - 5.35	9.4	24.5
NBC6S-5.4AA	968.411	5.35 - 5.45	9.4	24.5
NBC6S-5.5AA	961.495	5.45 - 5.55	9.4	24.5
NBC6S-5.6AA	968.412	5.55 - 5.65	9.4	24.5
NBC6S-5.7AA	968.413	5.65 - 5.75	9.4	24.5
NBC6S-5.8AA	968.414	5.75 - 5.85	9.4	24.5
NBC6S-5.9AA	968.415	5.85 - 5.95	9.4	24.5
NBC6S-6.0AA	961.497	5.95 - 6.05	9.4	24.5

MEGA8S

Model	Article No.	Ød	ØA	B
NBC8S-3.0AA	801.709	2.95 - 3.05	12	27
NBC8S-3.1AA	804.132	3.05 - 3.15	12	27
NBC8S-3.175AA	804.133	3.170 - 3.180	12	27
NBC8S-3.2AA	804.134	3.15 - 3.25	12	27
NBC8S-3.3AA	804.135	3.25 - 3.35	12	27
NBC8S-3.4AA	804.136	3.35 - 3.45	12	27
NBC8S-3.5AA	804.137	3.45 - 3.55	12	27
NBC8S-3.6AA	804.138	3.55 - 3.65	12	27
NBC8S-3.7AA	804.139	3.65 - 3.75	12	27
NBC8S-3.8AA	804.140	3.75 - 3.85	12	27
NBC8S-3.9AA	804.141	3.85 - 3.95	12	27
NBC8S-4.0AA	801.742	3.95 - 4.05	12	27
NBC8S-4.1AA	804.142	4.05 - 4.15	12	27
NBC8S-4.2AA	804.143	4.15 - 4.25	12	27
NBC8S-4.3AA	804.144	4.25 - 4.35	12	27
NBC8S-4.4AA	804.145	4.35 - 4.45	12	27
NBC8S-4.5AA	804.146	4.45 - 4.55	12	27
NBC8S-4.6AA	804.147	4.55 - 4.65	12	27
NBC8S-4.7AA	804.148	4.65 - 4.75	12	27
NBC8S-4.8AA	804.149	4.75 - 4.85	12	27
NBC8S-4.9AA	804.150	4.85 - 4.95	12	27
NBC8S-5.0AA	801.702	4.95 - 5.05	12	27
NBC8S-5.1AA	804.151	5.05 - 5.15	12	27
NBC8S-5.2AA	804.152	5.15 - 5.25	12	27
NBC8S-5.3AA	804.153	5.25 - 5.35	12	27
NBC8S-5.4AA	804.154	5.35 - 5.45	12	27
NBC8S-5.5AA	804.155	5.45 - 5.55	12	27
NBC8S-5.6AA	804.156	5.55 - 5.65	12	27
NBC8S-5.7AA	804.157	5.65 - 5.75	12	27
NBC8S-5.8AA	804.158	5.75 - 5.85	12	27
NBC8S-5.9AA	801.746	5.85 - 5.95	12	27
NBC8S-6.0AA	801.703	5.95 - 6.05	12	27
NBC8S-6.1AA	804.159	6.05 - 6.15	12	27
NBC8S-6.2AA	804.160	6.15 - 6.25	12	27
NBC8S-6.3AA	804.161	6.25 - 6.35	12	27
NBC8S-6.4AA	804.162	6.35 - 6.45	12	27
NBC8S-6.5AA	804.163	6.45 - 6.55	12	27
NBC8S-6.6AA	804.164	6.55 - 6.65	12	27
NBC8S-6.7AA	804.165	6.65 - 6.75	12	27
NBC8S-6.8AA	804.166	6.75 - 6.85	12	27
NBC8S-6.9AA	804.167	6.85 - 6.95	12	27
NBC8S-7.0AA	804.168	6.95 - 7.05	12	27
NBC8S-7.1AA	804.169	7.05 - 7.15	12	27
NBC8S-7.2AA	804.170	7.15 - 7.25	12	27
NBC8S-7.3AA	804.171	7.25 - 7.35	12	27
NBC8S-7.4AA	804.172	7.35 - 7.45	12	27
NBC8S-7.5AA	804.173	7.45 - 7.55	12	27
NBC8S-7.6AA	804.174	7.55 - 7.65	12	27
NBC8S-7.7AA	804.175	7.65 - 7.75	12	27
NBC8S-7.8AA	804.176	7.75 - 7.85	12	27
NBC8S-7.9AA	804.177	7.85 - 7.95	12	27
NBC8S-8.0AA	801.704	7.95 - 8.05	12	27

MEGA Nuts

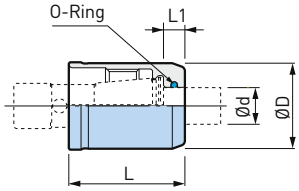
For MEGA Micro Chuck



Model	Article No.	ØD	ØD1	L	L1	Body
MGN3S	969.480	10	10.3	13	11	MEGA3S
MGN4S	969.481	12	12.2	14.5	12	MEGA4S
MGN6S	969.482	14	14.2	17	14.5	MEGA6S
MGN8S	804.108	18	18.3	18.5	15.5	MEGA8S

Micro Seal Nuts

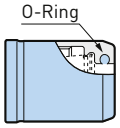
For MEGA Micro Chuck
Sealed nut for coolant-through tools.



Model	Article No.	Ød	ØD	L	L1	Body
MGN3S-PS3	-	3	10	15.5	3.5	MEGA3S
MGN4S-PS3	978.417	3	12	16.5	3.5	MEGA4S
MGN4S-PS4	-	4	12	16.5	3.5	MEGA4S
MGN6S-PS3	978.516	3	14	19	3.5	MEGA6S
MGN6S-PS4	978.513	4	14	19	3.5	MEGA6S
MGN6S-PS5	978.517	5	14	19	3.5	MEGA6S
MGN6S-PS6	978.511	6	14	19	3.5	MEGA6S
MGN8S-PS3	804.109	3	18	20.2	3.5	MEGA8S
MGN8S-PS4	804.110	4	18	20.2	3.5	MEGA8S
MGN8S-PS5	804.111	5	18	20.2	3.5	MEGA8S
MGN8S-PS6	804.112	6	18	20.2	3.5	MEGA8S
MGN8S-PS7	804.113	7	18	20.2	3.5	MEGA8S
MGN8S-PS8	804.114	8	18	20.2	3.5	MEGA8S

O-Ring Set

For MEGA Micro Seal Nut

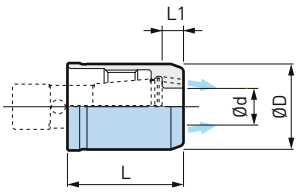


Model	Article No.	Seal Nut
PS3-OR-5P	806.799	MGN3S-PS3 / MGN4S-PS3
PS4-OR-5P	807.151	MGN4S-PS4 / MGN6S-PS4
PS5-OR-5P	807.152	MGN6S-PS5 / MGN8S-PS5
PS6-OR-5P	807.153	MGN6S-PS6 / MGN8S-PS6
PS7-OR-5P	807.154	MGN8S-PS7
PS8-OR-5P	807.155	MGN8S-PS8

1. Set includes 5 pieces.

MEGA Micro Coolant Nut

For MEGA Micro Chuck
MEGA Micro Coolant Nut; for more efficient coolant supply to micro cutting tools.



Model	Article No.	Ød	ØD	L	L1	Body
MGN3S-2J	-	2	10	15	3.0	MEGA3S
MGN3S-3J	-	3	10	13	1.5	MEGA3S
MGN4S-2J	-	2	12	16.5	3.5	MEGA4S
MGN4S-3J	-	3	12	16.5	3.5	MEGA4S
MGN4S-4J	-	4	12	19	3.5	MEGA4S
MGN6S-2J	806.862	2	14	19	3.5	MEGA6S
MGN6S-3J	806.863	3	14	19	3.5	MEGA6S
MGN6S-4J	806.864	4	14	19	3.5	MEGA6S
MGN6S-5J	806.865	5	14	17	1.5	MEGA6S
MGN6S-6J	806.866	6	14	17	1.5	MEGA6S
MGN8S-3J	-	3	18	20.2	3.5	MEGA8S
MGN8S-4J	-	4	18	20.2	3.5	MEGA8S
MGN8S-5J	-	5	18	20.2	3.5	MEGA8S
MGN8S-6J	-	6	18	20.2	3.5	MEGA8S
MGN8S-8J	-	8	18	18.5	1.8	MEGA8S

Collet Protective Cases

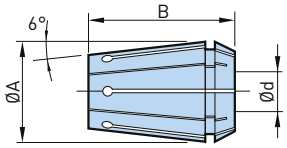
Exclusive case for MEGA Micro Collet.

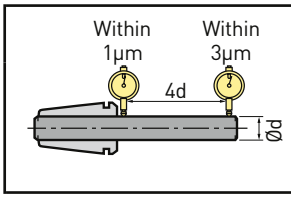
Model	Article No.	Number of Holes	Size	Collet Model
NBB3S	968.330	50	200 x 170 x 50	NBC3S
NBB4S	968.364	50	200 x 170 x 50	NBC4S
NBB6S	961.498	60	200 x 170 x 50	NBC6S
NBB8S	805.802	60	200 x 170 x 50	NBC8S

1. Micro collet is not included.

New Baby Collets

For MEGA New Baby Chuck and New Baby Chuck





Collet class	Max. runout	
	At nose	4xD
AA	Within 1 µm	Within 3 µm

MEGA6N / NBS6

Model	Article No.	Ød	ØA	B
NBC6-0.5AA	961.500	0.25 - 0.5	9.5	14
NBC6-0.75AA	961.501 ▫	0.5 - 0.75	9.5	14
NBC6-1AA	961.502 ▫	0.75 - 1	9.5	14
NBC6-1.25AA	961.503 ▫	1 - 1.25	9.5	14
NBC6-1.5AA	961.504 ▫	1.25 - 1.5	9.5	14
NBC6-1.75AA	961.505 ▫	1.5 - 1.75	9.5	14
NBC6-2AA	961.506 ▫	1.75 - 2	9.5	14
NBC6-2.25AA	961.507 ▫	2 - 2.25	9.5	14
NBC6-2.5AA	961.508 ▫	2.25 - 2.5	9.5	14
NBC6-2.75AA	961.509 ▫	2.5 - 2.75	9.5	14
NBC6-3AA	961.510 ▫	2.75 - 3	9.5	14
NBC6-3.175AA	801.738	2.925 - 3.175	9.5	14
NBC6-3.25AA	961.511 ▫	3 - 3.25	9.5	14
NBC6-3.5AA	961.512 ▫	3.25 - 3.5	9.5	14
NBC6-3.75AA	961.513 ▫	3.5 - 3.75	9.5	14
NBC6-4AA	961.514 ▫	3.75 - 4	9.5	14
NBC6-4.25AA	961.515 ▫	4 - 4.25	9.5	14
NBC6-4.5AA	961.516 ▫	4.25 - 4.5	9.5	14
NBC6-4.75AA	961.517 ▫	4.5 - 4.75	9.5	14
NBC6-5AA	961.518 ▫	4.75 - 5	9.5	14
NBC6-5.25AA	961.519 ▫	5 - 5.25	9.5	14
NBC6-5.5AA	961.520 ▫	5.25 - 5.5	9.5	14
NBC6-5.75AA	961.521 ▫	5.5 - 5.75	9.5	14
NBC6-6AA	961.522 ▫	5.75 - 6	9.5	14

MEGA8N / NBS8

Model	Article No.	Ød	ØA	B
NBC8-0.75AA	978.507 ▫	0.5 - 0.75	12.5	18
NBC8-1AA	961.531 ▫	0.75 - 1	12.5	18
NBC8-1.25AA	978.500 ▫	1 - 1.25	12.5	18
NBC8-1.5AA	961.532 ▫	1.25 - 1.5	12.5	18
NBC8-1.75AA	801.744 ▫	1.5 - 1.75	12.5	18
NBC8-2AA	961.533 ▫	1.75 - 2	12.5	18
NBC8-2.25AA	978.505 ▫	2 - 2.25	12.5	18
NBC8-2.5AA	961.534 ▫	2.25 - 2.5	12.5	18
NBC8-2.75AA	978.506 ▫	2.5 - 2.75	12.5	18
NBC8-3AA	961.535 ▫	2.75 - 3	12.5	18
NBC8-3.175AA	978.499	2.675 - 3.175	12.5	18
NBC8-3.5AA	961.536 ▫	3 - 3.5	12.5	18
NBC8-4AA	961.537 ▫	3.5 - 4	12.5	18
NBC8-4.5AA	961.538 ▫	4 - 4.5	12.5	18
NBC8-5AA	961.539 ▫	4.5 - 5	12.5	18
NBC8-5.25AA	801.750	4.75 - 5.25	12.5	18
NBC8-5.5AA	961.540 ▫	5 - 5.5	12.5	18
NBC8-5.75AA	801.751	5.25 - 5.75	12.5	18
NBC8-6AA	961.541 ▫	5.5 - 6	12.5	18
NBC8-6.5AA	961.542 ▫	6 - 6.5	12.5	18
NBC8-7AA	961.543 ▫	6.5 - 7	12.5	18
NBC8-7.5AA	961.544 ▫	7 - 7.5	12.5	18
NBC8-8AA	961.545 ▫	7.5 - 8	12.5	18

MEGA10N / NBS10

Model	Article No.	Ød	ØA	B
NBC10-1.75AA	961.599 ▫	1.5 - 1.75	16.5	27
NBC10-2AA	961.551 ▫	1.75 - 2	16.5	27
NBC10-2.25AA	978.508 ▫	2 - 2.25	16.5	27
NBC10-2.5AA	961.552 ▫	2.25 - 2.5	16.5	27
NBC10-2.75AA	978.509 ▫	2.5 - 2.75	16.5	27
NBC10-3AA	961.553 ▫	2.75 - 3	16.5	27
NBC10-3.175AA	961.120	2.675 - 3.175	16.5	27
NBC10-3.25AA	801.651	2.75 - 3.25	16.5	27
NBC10-3.5AA	961.554 ▫	3 - 3.5	16.5	27
NBC10-3.75AA	801.652	3.25 - 3.75	16.5	27
NBC10-4AA	961.555 ▫	3.5 - 4	16.5	27
NBC10-4.25AA	801.655	3.75 - 4.25	16.5	27
NBC10-4.5AA	961.556 ▫	4 - 4.5	16.5	27
NBC10-4.75AA	801.656	4.25 - 4.75	16.5	27

Model	Article No.	Ød	ØA	B
NBC10-5AA	961.557 ▫	4.5 - 5	16.5	27
NBC10-5.25AA	801.659	4.75 - 5.25	16.5	27
NBC10-5.5AA	961.558 ▫	5 - 5.5	16.5	27
NBC10-5.75AA	801.660	5.25 - 5.75	16.5	27
NBC10-6AA	961.559 ▫	5.5 - 6	16.5	27
NBC10-6.5AA	961.560 ▫	6 - 6.5	16.5	27
NBC10-7AA	961.561 ▫	6.5 - 7	16.5	27
NBC10-7.5AA	961.562 ▫	7 - 7.5	16.5	27
NBC10-8AA	961.563 ▫	7.5 - 8	16.5	27
NBC10-8.5AA	961.564 ▫	8 - 8.5	16.5	27
NBC10-9AA	961.565 ▫	8.5 - 9	16.5	27
NBC10-9.5AA	961.566 ▫	9 - 9.5	16.5	27
NBC10-10AA	961.567 ▫	9.5 - 10	16.5	27

▫ Models are included in new baby collet set.

MEGA13N / NBS13

Model	Article No.	Ød	ØA	B
NBC13-3AA	961.573 ▫	2.5 - 3	20.5	31
NBC13-3.175AA	961.127	2.675 - 3.175	20.5	31
NBC13-3.25AA	801.671	2.75 - 3.25	20.5	31
NBC13-3.5AA	961.574 ▫	3 - 3.5	20.5	31
NBC13-3.75AA	801.672	3.25 - 3.75	20.5	31
NBC13-4AA	961.575 ▫	3.5 - 4	20.5	31
NBC13-4.25AA	801.675	3.75 - 4.25	20.5	31
NBC13-4.5AA	961.576 ▫	4 - 4.5	20.5	31
NBC13-4.75AA	801.676	4.25 - 4.75	20.5	31
NBC13-5AA	961.577 ▫	4.5 - 5	20.5	31
NBC13-5.25AA	801.679	4.75 - 5.25	20.5	31
NBC13-5.5AA	961.578 ▫	5 - 5.5	20.5	31
NBC13-5.75AA	801.680	5.25 - 5.75	20.5	31
NBC13-6AA	961.579 ▫	5.5 - 6	20.5	31
NBC13-6.5AA	961.580 ▫	6 - 6.5	20.5	31
NBC13-7AA	961.581 ▫	6.5 - 7	20.5	31
NBC13-7.5AA	961.582 ▫	7 - 7.5	20.5	31
NBC13-8AA	961.583 ▫	7.5 - 8	20.5	31
NBC13-8.5AA	961.584 ▫	8 - 8.5	20.5	31
NBC13-9AA	961.585 ▫	8.5 - 9	20.5	31
NBC13-9.5AA	961.586 ▫	9 - 9.5	20.5	31
NBC13-10AA	961.587 ▫	9.5 - 10	20.5	31
NBC13-10.5AA	961.588 ▫	10 - 10.5	20.5	31
NBC13-11AA	961.589 ▫	10.5 - 11	20.5	31
NBC13-11.5AA	961.590 ▫	11 - 11.5	20.5	31
NBC13-12AA	961.591 ▫	11.5 - 12	20.5	31
NBC13-12.5AA	961.592 ▫	12 - 12.5	20.5	31
NBC13-13AA	961.593 ▫	12.5 - 13	20.5	31

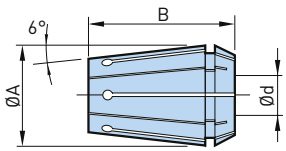
MEGA16N / NBS16

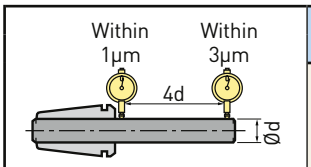
Model	Article No.	Ød	ØA	B
NBC16-3AA	961.601 ▫	2.5 - 3	25.5	35
NBC16-3.25AA	801.694	2.75 - 3.25	25.5	35
NBC16-3.5AA	961.602 ▫	3 - 3.5	25.5	35
NBC16-3.75AA	801.695	3.25 - 3.75	25.5	35
NBC16-4AA	961.603 ▫	3.5 - 4	25.5	35
NBC16-4.25AA	801.697	3.75 - 4.25	25.5	35
NBC16-4.5AA	961.604 ▫	4 - 4.5	25.5	35
NBC16-4.75AA	801.698	4.25 - 4.75	25.5	35
NBC16-5AA	961.605 ▫	4.5 - 5	25.5	35
NBC16-5.25AA	801.700	4.75 - 5.25	25.5	35
NBC16-5.5AA	961.606 ▫	5 - 5.5	25.5	35
NBC16-5.75AA	801.701	5.25 - 5.75	25.5	35
NBC16-6AA	961.607 ▫	5.5 - 6	25.5	35
NBC16-6.5AA	961.608 ▫	6 - 6.5	25.5	35
NBC16-7AA	961.609 ▫	6.5 - 7	25.5	35
NBC16-7.5AA	961.610 ▫	7 - 7.5	25.5	35
NBC16-8AA	961.611 ▫	7.5 - 8	25.5	35
NBC16-8.5AA	961.612 ▫	8 - 8.5	25.5	35
NBC16-9AA	961.613 ▫	8.5 - 9	25.5	35
NBC16-9.5AA	961.614 ▫	9 - 9.5	25.5	35
NBC16-10AA	961.615 ▫	9.5 - 10	25.5	35
NBC16-10.5AA	961.616 ▫	10 - 10.5	25.5	35
NBC16-11AA	961.617 ▫	10.5 - 11	25.5	35
NBC16-11.5AA	961.618 ▫	11 - 11.5	25.5	35
NBC16-12AA	961.619 ▫	11.5 - 12	25.5	35
NBC16-12.5AA	961.620 ▫	12 - 12.5	25.5	35
NBC16-13AA	961.621 ▫	12.5 - 13	25.5	35
NBC16-13.5AA	961.622 ▫	13 - 13.5	25.5	35
NBC16-14AA	961.623 ▫	13.5 - 14	25.5	35
NBC16-14.5AA	961.624 ▫	14 - 14.5	25.5	35
NBC16-15AA	961.625 ▫	14.5 - 15	25.5	35
NBC16-15.5AA	961.626 ▫	15 - 15.5	25.5	35
NBC16-16AA	961.627 ▫	15.5 - 16	25.5	35

▫ Models are included in new baby collet set.

New Baby Collets

For MEGA New Baby Chuck and New Baby Chuck





Collet class	Max. runout	
	At nose	4xD
AA	Within 1 µm	Within 3 µm

MEGA20N / NBS20

Model	Article No.	Ød	ØA	B
NBC20-3AA	961.641 ▫	2.5 - 3	28.5	38
NBC20-3.25AA	801.718	2.75 - 3.25	28.5	38
NBC20-3.5AA	961.642 ▫	3 - 3.5	28.5	38
NBC20-3.75AA	801.719	3.25 - 3.75	28.5	38
NBC20-4AA	961.643 ▫	3.5 - 4	28.5	38
NBC20-4.25AA	801.722	3.75 - 4.25	28.5	38
NBC20-4.5AA	961.644 ▫	4 - 4.5	28.5	38
NBC20-4.75AA	801.723	4.25 - 4.75	28.5	38
NBC20-5AA	961.645 ▫	4.5 - 5	28.5	38
NBC20-5.25AA	801.726	4.75 - 5.25	28.5	38
NBC20-5.5AA	961.646 ▫	5 - 5.5	28.5	38
NBC20-5.75AA	801.727	5.25 - 5.75	28.5	38
NBC20-6AA	961.647 ▫	5.5 - 6	28.5	38
NBC20-6.5AA	961.648 ▫	6 - 6.5	28.5	38
NBC20-7AA	961.649 ▫	6.5 - 7	28.5	38
NBC20-7.5AA	961.650 ▫	7 - 7.5	28.5	38
NBC20-8AA	961.651 ▫	7.5 - 8	28.5	38
NBC20-8.5AA	961.652 ▫	8 - 8.5	28.5	38
NBC20-9AA	961.653 ▫	8.5 - 9	28.5	38
NBC20-9.5AA	961.654 ▫	9 - 9.5	28.5	38
NBC20-10AA	961.655 ▫	9.5 - 10	28.5	38
NBC20-10.5AA	961.656 ▫	10 - 10.5	28.5	38
NBC20-11AA	961.657 ▫	10.5 - 11	28.5	38
NBC20-11.5AA	961.658 ▫	11 - 11.5	28.5	38
NBC20-12AA	961.659 ▫	11.5 - 12	28.5	38
NBC20-12.5AA	961.660 ▫	12 - 12.5	28.5	38
NBC20-13AA	961.661 ▫	12.5 - 13	28.5	38
NBC20-13.5AA	961.662 ▫	13 - 13.5	28.5	38
NBC20-14AA	961.663 ▫	13.5 - 14	28.5	38
NBC20-14.5AA	961.664 ▫	14 - 14.5	28.5	38
NBC20-15AA	961.665 ▫	14.5 - 15	28.5	38
NBC20-15.5AA	961.666 ▫	15 - 15.5	28.5	38
NBC20-16AA	961.667 ▫	15.5 - 16	28.5	38
NBC20-16.5AA	961.668 ▫	16 - 16.5	28.5	38
NBC20-17AA	961.669 ▫	16.5 - 17	28.5	38
NBC20-17.5AA	961.670 ▫	17 - 17.5	28.5	38
NBC20-18AA	961.671 ▫	17.5 - 18	28.5	38
NBC20-18.5AA	961.672 ▫	18 - 18.5	28.5	38
NBC20-19AA	961.673 ▫	18.5 - 19	28.5	38
NBC20-19.5AA	961.674 ▫	19 - 19.5	28.5	38
NBC20-20AA	961.675 ▫	19.5 - 20	28.5	38

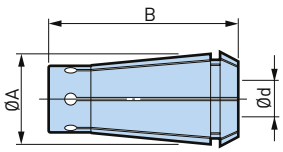
MEGA25N

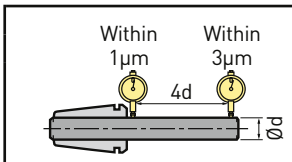
Model	Article No.	Ød	ØA	B
NBC25-16AA	806.390 ▫	15.5 - 16	35.5	52
NBC25-16.5AA	806.391 ▫	16 - 16.5	35.5	52
NBC25-17AA	806.392 ▫	16.5 - 17	35.5	52
NBC25-17.5AA	806.393 ▫	17 - 17.5	35.5	52
NBC25-18AA	806.394 ▫	17.5 - 18	35.5	52
NBC25-18.5AA	806.395 ▫	18 - 18.5	35.5	52
NBC25-19AA	806.396 ▫	18.5 - 19	35.5	52
NBC25-19.5AA	806.397 ▫	19 - 19.5	35.5	52
NBC25-20AA	806.398 ▫	19.5 - 20	35.5	52
NBC25-20.5AA	806.399 ▫	20 - 20.5	35.5	52
NBC25-21AA	806.400 ▫	20.5 - 21	35.5	52
NBC25-21.5AA	806.401 ▫	21 - 21.5	35.5	52
NBC25-22AA	806.402 ▫	21.5 - 22	35.5	52
NBC25-22.5AA	806.403 ▫	22 - 22.5	35.5	52
NBC25-23AA	806.404 ▫	22.5 - 23	35.5	52
NBC25-23.5AA	806.405 ▫	23 - 23.5	35.5	52
NBC25-24AA	806.406 ▫	23.5 - 24	35.5	52
NBC25-24.5AA	806.407 ▫	24 - 24.5	35.5	52
NBC25-25AA	806.408 ▫	24.5 - 25	35.5	52
NBC25-25.4AA	806.409	24.9 - 25.4	35.5	52

▫ Models are included in new baby collet set.

New Baby Collets for Endmills

For MEGA New Baby Chuck and New Baby Chuck





Collet class	Max. runout	
	At nose	4xD
AA	Within 1 µm	Within 3 µm

MEGA6N / NBS6

Model	Article No.	Ød	ØA	B
NBC6-3EAA	961.148	3	9.2	17
NBC6-4EAA	961.149	4	9.2	17
NBC6-5EAA	961.150	5	9.2	17
NBC6-6EAA	961.151	6	9.2	17

MEGA8N / NBS8

Model	Article No.	Ød	ØA	B
NBC8-3EAA	961.152	3	12	20
NBC8-4EAA	961.153	4	12	20
NBC8-5EAA	961.154	5	12	20
NBC8-6EAA	961.155	6	12	20
NBC8-8EAA	961.156	8	12	20

MEGA10N / NBS10

Model	Article No.	Ød	ØA	B
NBC10-3EAA	801.654	3	16	32
NBC10-4EAA	801.658	4	16	32
NBC10-5EAA	801.662	5	16	32
NBC10-6EAA	961.160	6	16	32
NBC10-8EAA	961.161	8	16	32
NBC10-10EAA	961.146	10	16	32

MEGA13N / NBS13

Model	Article No.	Ød	ØA	B
NBC13-3EAA	801.674	3	20	38
NBC13-4EAA	801.678	4	20	38
NBC13-5EAA	801.682	5	20	38
NBC13-6EAA	961.165	6	20	38
NBC13-8EAA	961.166	8	20	38
NBC13-10EAA	961.147	10	20	38
NBC13-12EAA	961.167	12	20	38

MEGA16N / NBS16

Model	Article No.	Ød	ØA	B
NBC16-3EAA	961.168	3	25	42
NBC16-4EAA	961.169	4	25	42
NBC16-5EAA	961.170	5	25	42
NBC16-6EAA	961.171	6	25	42
NBC16-8EAA	961.172	8	25	42
NBC16-10EAA	961.173	10	25	42
NBC16-12EAA	961.174	12	25	42
NBC16-14EAA	961.175	14	25	42
NBC16-16EAA	961.176	16	25	42

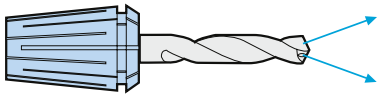
MEGA20N / NBS20

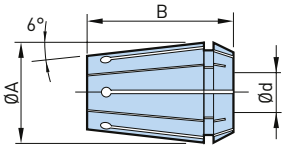
Model	Article No.	Ød	ØA	B
NBC20-3EAA	801.721	3	28	45
NBC20-4EAA	801.725	4	28	45
NBC20-5EAA	801.729	5	28	45
NBC20-6EAA	961.180	6	28	45
NBC20-8EAA	801.733	8	28	45
NBC20-10EAA	961.182	10	28	45
NBC20-12EAA	961.183	12	28	45
NBC20-14EAA	961.184	14	28	45
NBC20-16EAA	961.185	16	28	45
NBC20-20EAA	961.186	20	28	45

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.

FONBC Coolant Collets

For MEGA New Baby Chuck and New Baby Chuck
Optimum collet for center-through coolant applications with coolant-through cutting tools.





MEGA6N / NBS6

Model	Article No.	Ød	ØA	B
FONBC6-3AA	969.601	3.00 *	9.5	14
FONBC6-3.25AA	969.602	3.15 - 3.25	9.5	14
FONBC6-3.5AA	969.603	3.4 - 3.5	9.5	14
FONBC6-3.75AA	969.604	3.65 - 3.75	9.5	14
FONBC6-4AA	969.605	3.9 - 4	9.5	14
FONBC6-4.25AA	969.606	4.15 - 4.25	9.5	14
FONBC6-4.5AA	969.607	4.4 - 4.5	9.5	14
FONBC6-4.75AA	969.608	4.65 - 4.75	9.5	14
FONBC6-5AA	969.609	4.9 - 5	9.5	14
FONBC6-5.25AA	969.610	5.15 - 5.25	9.5	14
FONBC6-5.5AA	969.611	5.4 - 5.5	9.5	14
FONBC6-5.75AA	969.612	5.65 - 5.75	9.5	14
FONBC6-6AA	969.613	5.9 - 6	9.5	14

1. * No collapsibility

MEGA8N / NBS8

Model	Article No.	Ød	ØA	B
FONBC8-3AA	969.615	2.9 - 3	12.5	18
FONBC8-3.5AA	969.616	3.4 - 3.5	12.5	18
FONBC8-4AA	969.617	3.9 - 4	12.5	18
FONBC8-4.5AA	969.618	4.4 - 4.5	12.5	18
FONBC8-5AA	969.619	4.9 - 5	12.5	18
FONBC8-5.5AA	969.620	5.4 - 5.5	12.5	18
FONBC8-6AA	969.621	5.9 - 6	12.5	18
FONBC8-6.5AA	969.622	6.4 - 6.5	12.5	18
FONBC8-7AA	969.623	6.9 - 7	12.5	18
FONBC8-7.5AA	969.624	7.4 - 7.5	12.5	18
FONBC8-8AA	969.625	7.9 - 8	12.5	18

MEGA10N / NBS10

Model	Article No.	Ød	ØA	B
FONBC10-3AA	969.627	2.9 - 3	16.5	27
FONBC10-3.5AA	969.628	3.4 - 3.5	16.5	27
FONBC10-4AA	969.629	3.9 - 4	16.5	27
FONBC10-4.5AA	969.630	4.4 - 4.5	16.5	27
FONBC10-5AA	969.631	4.9 - 5	16.5	27
FONBC10-5.5AA	969.632	5.4 - 5.5	16.5	27
FONBC10-6AA	969.633	5.9 - 6	16.5	27
FONBC10-6.5AA	969.634	6.4 - 6.5	16.5	27
FONBC10-7AA	969.635	6.9 - 7	16.5	27
FONBC10-7.5AA	969.636	7.4 - 7.5	16.5	27
FONBC10-8AA	969.637	7.9 - 8	16.5	27
FONBC10-8.5AA	969.638	8.4 - 8.5	16.5	27
FONBC10-9AA	969.639	8.9 - 9	16.5	27
FONBC10-9.5AA	969.640	9.4 - 9.5	16.5	27
FONBC10-10AA	969.641	9.9 - 10	16.5	27

1. * No collapsibility

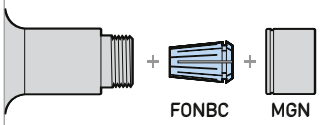
MEGA13N / NBS13

Model	Article No.	Ød	ØA	B
FONBC13-3AA	969.643	3.00 *	20.5	31
FONBC13-3.5AA	969.644	3.4 - 3.5	20.5	31
FONBC13-4AA	969.645	3.9 - 4	20.5	31
FONBC13-4.5AA	969.646	4.4 - 4.5	20.5	31
FONBC13-5AA	969.647	4.9 - 5	20.5	31
FONBC13-5.5AA	969.648	5.4 - 5.5	20.5	31
FONBC13-6AA	969.649	5.9 - 6	20.5	31
FONBC13-6.5AA	969.650	6.4 - 6.5	20.5	31
FONBC13-7AA	969.651	6.9 - 7	20.5	31
FONBC13-7.5AA	969.652	7.4 - 7.5	20.5	31
FONBC13-8AA	969.653	7.9 - 8	20.5	31
FONBC13-8.5AA	969.654	8.4 - 8.5	20.5	31
FONBC13-9AA	969.655	8.9 - 9	20.5	31
FONBC13-9.5AA	969.656	9.4 - 9.5	20.5	31
FONBC13-10AA	969.657	9.9 - 10	20.5	31
FONBC13-10.5AA	969.658	10.4 - 10.5	20.5	31
FONBC13-11AA	969.659	10.9 - 11	20.5	31
FONBC13-11.5AA	969.660	11.4 - 11.5	20.5	31
FONBC13-12AA	969.661	11.9 - 12	20.5	31
FONBC13-12.5AA	969.662	12.4 - 12.5	20.5	31
FONBC13-13AA	969.663	12.9 - 13	20.5	31

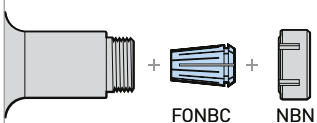
MEGA16N / NBS16

Model	Article No.	Ød	ØA	B
FONBC16-5AA	969.669	4.9 - 5	25.5	35
FONBC16-5.5AA	969.670	5.4 - 5.5	25.5	35
FONBC16-6AA	969.671	5.9 - 6	25.5	35
FONBC16-6.5AA	969.672	6.4 - 6.5	25.5	35
FONBC16-7AA	969.673	6.9 - 7	25.5	35
FONBC16-7.5AA	969.674	7.4 - 7.5	25.5	35
FONBC16-8AA	969.675	7.9 - 8	25.5	35
FONBC16-8.5AA	969.676	8.4 - 8.5	25.5	35
FONBC16-9AA	969.677	8.9 - 9	25.5	35
FONBC16-9.5AA	969.678	9.4 - 9.5	25.5	35
FONBC16-10AA	969.679	9.9 - 10	25.5	35
FONBC16-10.5AA	969.680	10.4 - 10.5	25.5	35
FONBC16-11AA	969.681	10.9 - 11	25.5	35
FONBC16-11.5AA	969.682	11.4 - 11.5	25.5	35
FONBC16-12AA	969.683	11.9 - 12	25.5	35
FONBC16-12.5AA	969.684	12.4 - 12.5	25.5	35
FONBC16-13AA	969.685	12.9 - 13	25.5	35
FONBC16-13.5AA	969.686	13.4 - 13.5	25.5	35
FONBC16-14AA	969.687	13.9 - 14	25.5	35
FONBC16-14.5AA	969.688	14.4 - 14.5	25.5	35
FONBC16-15AA	969.689	14.9 - 15	25.5	35
FONBC16-15.5AA	969.690	15.4 - 15.5	25.5	35
FONBC16-16AA	969.691	15.9 - 16	25.5	35

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.

MEGA20N / NBS20

Model	Article No.	Ød	ØA	B
FONBC20-5AA	969.697	4.9 - 5	28.5	38
FONBC20-5.5AA	969.698	5.4 - 5.5	28.5	38
FONBC20-6AA	969.699	5.9 - 6	28.5	38
FONBC20-6.5AA	969.700	6.4 - 6.5	28.5	38
FONBC20-7AA	969.701	6.9 - 7	28.5	38
FONBC20-7.5AA	969.702	7.4 - 7.5	28.5	38
FONBC20-8AA	969.703	7.9 - 8	28.5	38
FONBC20-8.5AA	969.704	8.4 - 8.5	28.5	38
FONBC20-9AA	969.705	8.9 - 9	28.5	38
FONBC20-9.5AA	969.706	9.4 - 9.5	28.5	38
FONBC20-10AA	969.707	9.9 - 10	28.5	38
FONBC20-10.5AA	969.708	10.4 - 10.5	28.5	38
FONBC20-11AA	969.709	10.9 - 11	28.5	38
FONBC20-11.5AA	969.710	11.4 - 11.5	28.5	38
FONBC20-12AA	969.711	11.9 - 12	28.5	38
FONBC20-12.5AA	969.712	12.4 - 12.5	28.5	38
FONBC20-13AA	969.713	12.9 - 13	28.5	38
FONBC20-13.5AA	969.714	13.4 - 13.5	28.5	38
FONBC20-14AA	969.715	13.9 - 14	28.5	38
FONBC20-14.5AA	969.716	14.4 - 14.5	28.5	38
FONBC20-15AA	969.717	14.9 - 15	28.5	38
FONBC20-15.5AA	969.718	15.4 - 15.5	28.5	38
FONBC20-16AA	969.719	15.9 - 16	28.5	38
FONBC20-16.5AA	969.720	16.4 - 16.5	28.5	38
FONBC20-17AA	969.721	16.9 - 17	28.5	38
FONBC20-17.5AA	969.722	17.4 - 17.5	28.5	38
FONBC20-18AA	969.723	17.9 - 18	28.5	38
FONBC20-18.5AA	969.724	18.4 - 18.5	28.5	38
FONBC20-19AA	969.725	18.9 - 19	28.5	38
FONBC20-19.5AA	969.726	19.4 - 19.5	28.5	38
FONBC20-20AA	969.727	19.9 - 20	28.5	38

MEGA25N

Model	Article No.	Ød	ØA	B
FONBC25-16AA	806.412	15.9 - 16	35.5	52
FONBC25-17AA	806.413	16.9 - 17	35.5	52
FONBC25-18AA	806.414	17.9 - 18	35.5	52
FONBC25-19AA	806.415	18.9 - 19	35.5	52
FONBC25-20AA	806.416	19.9 - 20	35.5	52
FONBC25-21AA	806.417	20.9 - 21	35.5	52
FONBC25-22AA	806.418	21.9 - 22	35.5	52
FONBC25-23AA	806.419	22.9 - 23	35.5	52
FONBC25-24AA	806.420	23.9 - 24	35.5	52
FONBC25-25AA	806.421	24.9 - 25	35.5	52
FONBC25-25.4AA	806.739	25.3 - 25.4	35.5	52

New Baby Collet Sets

For MEGA New Baby Chuck and New Baby Chuck.
Contains all the major collet models to cover entire clamping range.

Model	Article No.	Ød	Number of Collet	Size	Collet Model
SNBC6AA-22	802.187	0.5 - 6	22	200 x 170 x 50	MEGA6N / NBS6
SNBC8AA-20	802.188	0.5 - 8	20	200 x 170 x 50	MEGA8N / NBS8
SNBC10AA-20	802.183	1.5 - 10	20	200 x 170 x 50	MEG106N / NBS10
SNBC13AA-21	802.184	2.5 - 13	21	245 x 210 x 60	MEGA13N / NBS13
SNBC16AA-27	802.185	2.5 - 16	27	275 x 230 x 65	MEGA16N / NBS16
SNBC20AA-35	961.676	2.5 - 20	35	310 x 260 x 75	MEGA20N / NBS20
SNBC25AA-19	806.656	15.5 - 25	19	310 x 260 x 75	MEGA25N

1. Collets included in a set are shown in page 327 - 329.

Cases for New Baby Collets

Exclusive case to protect and maintain the high precision collets.

Model	Article No.	Number of Holes	Size	Collet Model
NBB6	961.524	60	200 x 170 x 50	NBC6 / FONBC6
NBB8	961.547	50	200 x 170 x 50	NBC8 / FONBC8
NBB10	961.569	40	200 x 170 x 50	NBC10 / FONBC10
NBB13	961.595	35	245 x 210 x 60	NBC13/ FONBC13
NBB16	961.629	35	275 x 230 x 65	NBC16 / FONBC16
NBB20	961.677	45	310 x 260 x 75	NBC20 / FONBC20
NBB25	806.657	28	310 x 260 x 75	NBC25 / FONBC25

1. All cases can not be used with new baby collet for endmill (NBC-E).

Collet Ejectors

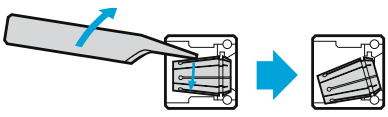
Easily and quickly remove New Baby Collet from MEGA nuts and New Baby Nut.

Model	Article No.	Nut Model	Collet Model
NBC6-CE	969.492	MGN6 / NBN6	NBC6 / FONBC6
NBC6E-CE	969.496	MGN6 / NBN6	NBC6E
NBC8-CE	969.493	MGN8 / NBN8	NBC8 / FONBC8
NBC8E-CE	969.497	MGN8 / NBN8	NBC8E
NBC10-CE	969.494	MGN10 / NBN10	NBC10 / FONBC10
NBC10E-CE	969.498	MGN10 / NBN10	NBC10E
NBC13-CE	969.495	MGN13 / NBN13	NBC13 / FONBC13
NBC13E-CE	969.499	MGN13 / NBN13	NBC13E

Collet Removers

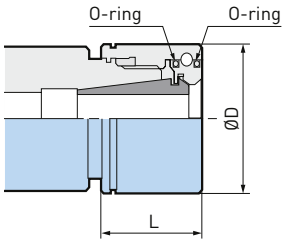
For MEGA New Baby Chuck, New Baby Chuck and MEGA ER Chuck.

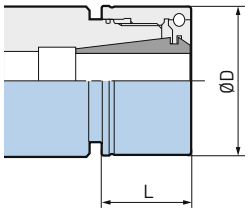
Model	Article No.
NBJ	969.491



MEGA Nuts

For MEGA New Baby Chuck





Standard Type

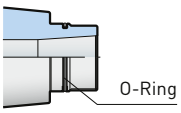
Model	Article No.	ØD	L	Body
MGN6	969.483	20	20.5	MEGA6N
MGN8	969.484	25	23	MEGA8N
MGN10	969.485	30	24	MEGA10N
MGN13	969.486	35	27	MEGA13N
MGN16	969.487	42	27	MEGA16N
MGN20	969.488	46	27	MEGA20N
MGN25	806.388	60	31	MEGA25N

Flat Type

Model	Article No.	ØD	L	Body
MGN6F	805.668	20	18	MEGA6N
MGN8F	805.669	25	20	MEGA8N
MGN10F	805.670	30	21	MEGA10N
MGN13F	805.671	35	24	MEGA13N
MGN16F	805.672	42	24.5	MEGA16N
MGN20F	805.673	46	24.5	MEGA20N

O-Ring Set

For MEGA New Baby Chuck
Set includes 2 pieces.



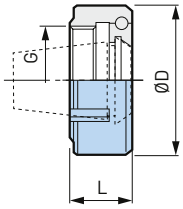
Model	Article No.
MG6NOR-2P	978.917
MG8NOR-2P	801.398
MG10NOR-2P	978.919
MG13NOR-2P	978.915

Model	Article No.
MG16NOR-2P	801.395
MG20NOR-2P	978.916
MG25NOR-2P	806.840

A.8

New Baby Nuts

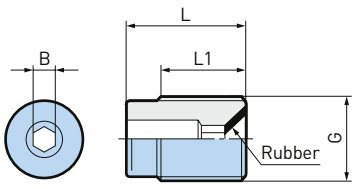
For New Baby Chuck



Model	Article No.	ØD	L	G	Body
NBN6	961.526	20	9.5	M12 P1	NBS6
NBN8	961.549	25	11	M16 P1	NBS8
NBN10	961.571	30	12.5	M21 P1	NBS10
NBN13	961.597	35	16	M26 P1	NBS13
NBN16	961.631	42	16	M32 P1	NBS16
NBN20	961.679	46	16	M36 P1	NBS20

Adjusting Screws NBA

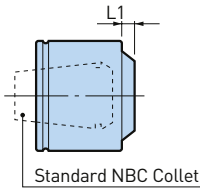
For MEGA New Baby Chuck, MEGA E Chuck, New Baby Chuck and MEGA ER Grip



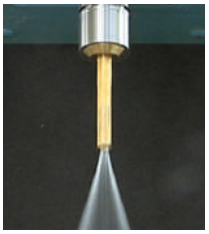
Model	Article No.	G	L	L1	B	Body
NBA6B	961.527	M7	12	10	2	MEGA6N / MEGA6E / NBS6 / MEGA ER11
NBA8B	961.550	M9	13	10	2.5	MEGA8N / MEGA8E / NBS8
NBA10B	961.572	M11	16	12	3	MEGA10N / MEGA10E / NBS10 / MEGA ER16
NBA13B	961.598	M14	20	15	4	MEGA13N / MEGA13E / NBS13 / MEGA ER20
NBA16B	961.632	M18	20	15	4	MEGA16N / NBS16 / MEGA ER25
NBA20B	961.680	M21	20	15	4	MEGA20N / NBS20 / MEGA ER32
NBA25B	806.389	M27	20	15	4	MEGA25N

MEGA Perfect Seals

For MEGA New Baby Chuck.
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.

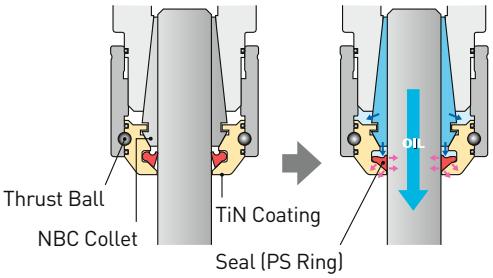


2way coolant



Through tools with PS ring

Jet through without PS ring



A.8

Model	Article No.	Cutting shank ø	L1	Collet Model
MPS6-03035	961.401	3 - 3.5	2.3	NBC6 -3 -3.75
MPS6-0304	969.861	3 - 4	2.3	NBC6 -3 -4.25
MPS6-04045	961.402	4 - 4.5	2.3	NBC6 -4 -4.75
MPS6-0405	969.862	4 - 5	2.3	NBC6 -4 -5.25
MPS6-05055	961.403	5 - 5.5	2.3	NBC6 -5 -5.75
MPS6-0506	969.863	5 - 6	2.3	NBC6 -5 -6
MPS8-03035	961.404	3 - 3.5	3.9	NBC8 -3 -4
MPS8-0304	969.864	3 - 4	3.9	NBC8 -3 -4.5
MPS8-04045	961.405	4 - 4.5	3.9	NBC8 -4 -5
MPS8-0405	969.865	4 - 5	3.9	NBC8 -4 -5.5
MPS8-05055	961.406	5 - 5.5	3.9	NBC8 -5 -6
MPS8-0506	969.866	5 - 6	3.9	NBC8 -5 -6.5
MPS8-06065	961.407	6 - 6.5	3.4	NBC8 -6 -7
MPS8-0607	969.867	6 - 7	3.4	NBC8 -6 -7.5
MPS8-07075	961.408	7 - 7.5	3.4	NBC8 -7 -8
MPS8-0708	969.868	7 - 8	3.4	NBC8 -7 -8
MPS10-03035	801.524	3 - 3.5	3.9	NBC10 -3 -4
MPS10-0304	969.869	3 - 4	3.9	NBC10 -3 -4.5
MPS10-04045	801.525	4 - 4.5	3.9	NBC10 -4 -5
MPS10-0405	969.870	4 - 5	3.9	NBC10 -4 -5.5
MPS10-05055	801.526	5 - 5.5	3.9	NBC10 -5 -6
MPS10-0506	969.871	5 - 6	3.9	NBC10 -5 -6.5
MPS10-06065	979.986	6 - 6.5	4.3	NBC10 -6 -7
MPS10-0607	969.872	6 - 7	4.3	NBC10 -6 -7.5
MPS10-07075	801.527	7 - 7.5	4.3	NBC10 -7 -8
MPS10-0708	969.873	7 - 8	4.3	NBC10 -7 -8.5
MPS10-08085	979.987	8 - 8.5	3.5	NBC10 -8 -9
MPS10-0809	969.874	8 - 9	3.5	NBC10 -8 -9.5
MPS10-09095	801.528	9 - 9.5	3.5	NBC10 -9 -10
MPS10-0910	969.875	9 - 10	3.5	NBC10 -9 -10

Model	Article No.	Cutting shank ø	L1	Collet Model
MPS13-03035	801.529	3 - 3.5	4.3	NBC13 -3 -4
MPS13-0304	969.876	3 - 4	4.3	NBC13 -3 -4.5
MPS13-04045	801.530	4 - 4.5	4.3	NBC13 -4 -5
MPS13-0405	969.877	4 - 5	4.3	NBC13 -4 -5.5
MPS13-05055	801.531	5 - 5.5	4.3	NBC13 -5 -6
MPS13-0506	969.878	5 - 6	4.3	NBC13 -5 -6.5
MPS13-06065	961.417	6 - 6.5	4.6	NBC13 -6 -7
MPS13-0607	969.879	6 - 7	4.6	NBC13 -6 -7.5
MPS13-07075	801.532	7 - 7.5	4.6	NBC13 -7 -8
MPS13-0708	969.880	7 - 8	4.6	NBC13 -7 -8.5
MPS13-08085	961.418	8 - 8.5	4.9	NBC13 -8 -9
MPS13-0809	969.881	8 - 9	4.9	NBC13 -8 -9.5
MPS13-09095	801.533	9 - 9.5	4.9	NBC13 -9 -10
MPS13-0910	969.882	9 - 10	4.9	NBC13 -9 -10.5
MPS13-10105	978.518	10 - 10.5	4.2	NBC13 -10 -11
MPS13-1011	969.883	10 - 11	4.2	NBC13 -10 -11.5
MPS13-11115	801.534	11 - 11.5	4.2	NBC13 -11 -12
MPS13-1112	969.884	11 - 12	4.2	NBC13 -11 -12.5
MPS13-12125	961.420	12 - 12.5	4.2	NBC13 -12 -13
MPS13-1213	969.885	12 - 13	4.2	NBC13 -12 -13

Model	Article No.	Cutting shank ø	L1	Collet Model
MPS16-03035	801.535	3 - 3.5	4	NBC16 -3 -4
MPS16-0304	969.886	3 - 4	4	NBC16 -3 -4.5
MPS16-04045	801.536	4 - 4.5	4	NBC16 -4 -5
MPS16-0405	969.887	4 - 5	4	NBC16 -4 -5.5
MPS16-05055	801.537	5 - 5.5	4	NBC16 -5 -6
MPS16-0506	969.888	5 - 6	4	NBC16 -5 -6.5
MPS16-06065	801.538	6 - 6.5	4.3	NBC16 -6 -7
MPS16-0607	969.889	6 - 7	4.3	NBC16 -6 -7.5
MPS16-07075	801.539	7 - 7.5	4.3	NBC16 -7 -8
MPS16-0708	969.890	7 - 8	4.3	NBC16 -7 -8.5
MPS16-08085	801.540	8 - 8.5	4.6	NBC16 -8 -9
MPS16-0809	969.891	8 - 9	4.6	NBC16 -8 -9.5
MPS16-09095	801.541	9 - 9.5	4.6	NBC16 -9 -10
MPS16-0910	969.892	9 - 10	4.6	NBC16 -9 -10.5
MPS16-10105	801.542	10 - 10.5	5.1	NBC16 -10 -11
MPS16-1011	969.893	10 - 11	5.1	NBC16 -10 -11.5
MPS16-11115	801.543	11 - 11.5	5.1	NBC16 -11 -12
MPS16-1112	969.894	11 - 12	5.1	NBC16 -11 -12.5
MPS16-12125	801.544	12 - 12.5	5.1	NBC16 -12 -13
MPS16-1213	969.895	12 - 13	5.1	NBC16 -12 -13.5
MPS16-1314	969.896	13 - 14	4.1	NBC16 -13 -14.5
MPS16-1415	969.897	14 - 15	4.1	NBC16 -14 -15.5
MPS16-1516	969.898	15 - 16	4.1	NBC16 -15 -16

Model	Article No.	Cutting shank ø	L1	Collet Model
MPS20-03035	978.504	3 - 3.5	4	NBC20 -3 -4
MPS20-0304	969.899	3 - 4	4	NBC20 -3 -4.5
MPS20-04045	801.545	4 - 4.5	4	NBC20 -4 -5
MPS20-0405	969.900	4 - 5	4	NBC20 -4 -5.5
MPS20-05055	801.546	5 - 5.5	4	NBC20 -5 -6
MPS20-0506	969.901	5 - 6	4	NBC20 -5 -6.5
MPS20-06065	801.547	6 - 6.5	4.3	NBC20 -6 -7
MPS20-0607	969.902	6 - 7	4.3	NBC20 -6 -7.5
MPS20-07075	801.548	7 - 7.5	4.3	NBC20 -7 -8
MPS20-0708	969.903	7 - 8	4.3	NBC20 -7 -8.5
MPS20-08085	801.549	8 - 8.5	4.6	NBC20 -8 -9
MPS20-0809	969.904	8 - 9	4.6	NBC20 -8 -9.5
MPS20-09095	801.550	9 - 9.5	4.6	NBC20 -9 -10
MPS20-0910	969.905	9 - 10	4.6	NBC20 -9 -10.5
MPS20-10105	801.551	10 - 10.5	5.1	NBC20 -10 -11
MPS20-1011	969.906	10 - 11	5.1	NBC20 -10 -11.5
MPS20-11115	801.552	11 - 11.5	5.1	NBC20 -11 -12
MPS20-1112	969.907	11 - 12	5.1	NBC20 -11 -12.5
MPS20-12125	978.512	12 - 12.5	5.1	NBC20 -12 -13
MPS20-1213	969.908	12 - 13	5.1	NBC20 -12 -13.5
MPS20-1314	969.909	13 - 14	5.2	NBC20 -13 -14.5
MPS20-1415	969.910	14 - 15	5.2	NBC20 -14 -15.5
MPS20-1516	969.911	15 - 16	5.2	NBC20 -15 -16.5
MPS20-1617	969.912	16 - 17	4.6	NBC20 -16 -17.5
MPS20-1718	969.913	17 - 18	4.6	NBC20 -17 -18.5
MPS20-1819	969.914	18 - 19	4.6	NBC20 -18 -19.5
MPS20-1920	969.915	19 - 20	4.6	NBC20 -19 -20

1. 1 pce. of ps ring is included.
2. To supply coolant to the periphery of the cutting tool, adjusting screw should not be mounted.

PS Rings

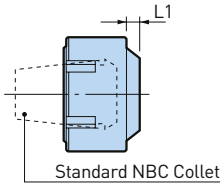
Replaceable seal is installed in the MEGA perfect seal.
One replacement seal is included in delivery.

Model	Article No.	Suitable for model
PS-0304	969.981	MPS / BPS -03035, 0304 / EPS -03, 04 / MERPS -030035, 035040 / PSC20-3, 4
PS-0405	969.982	MPS / BPS -04045, 0405 / EPS -05 / MERPS -040045, 045050 / PSC20-5
PS-0506	969.983	MPS / BPS -05055, 0506 / EPS -06 / MERPS -050055, 055060 / PSC20/32-6
PS-0607	969.984	MPS / BPS -06065, 0607 / EPS -07 / MERPS -060065, 065070 / PSC20/32-7
PS-0708	969.985	MPS / BPS -07075, 0708 / EPS -08 / MERPS -070075, 075080 / PSC20/32-8
PS-0809	969.986	MPS / BPS -08085, 0809 / EPS -09 / MERPS -080085, 085090 / PSC20/32-9
PS-0910	969.987	MPS / BPS -09095, 0910 / EPS -10 / MERPS -090095, 095100 / PSC20/32-10
PS-1011	969.988	MPS / BPS -10105, 1011 / EPS -11 / MERPS -10105, 105110 / PSC20/32-11
PS-1112	969.989	MPS / BPS -11115, 1112 / EPS -12 / MERPS -110115, 115120 / PSC20/32-12
PS-1213	969.990	MPS / BPS -12125, 1213 / MERPS -120125, 125130 / PSC20/32-13
PS-1314	969.991	MPS / BPS -1314 / MERPS -130140 / PSC20/32-14
PS-1415	969.992	MPS / BPS -1415 / MERPS -140150 / PSC20/32-15
PS-1516	969.993	MPS / BPS -1516 / MERPS -150160 / PSC20/32-16
PS-1617	969.994	MPS / BPS -1617 / MERPS -160170
PS-1718	969.995	MPS / BPS -1718 / MERPS -170180 / PSC20/32-18
PS-1819	969.996	MPS / BPS -1819 / MERPS -180190 / PSC20/32-19
PS-1920	969.997	MPS / BPS -1920 / MERPS -190200 / PSC20/32-20
PS-2021	807.268	PSC32-21
PS-2223	807.269	PSC32-22, 23
PS-2324	807.270	PSC32-24
PS-2526	807.271	PSC32-25

1. 1 package contains 5 pcs. (1 size).

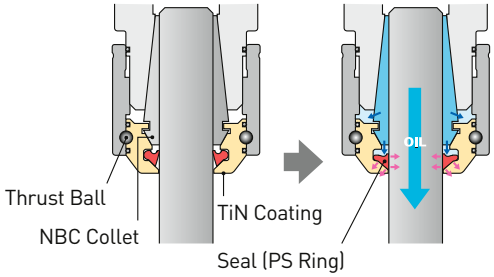
Baby Perfect Seals

For New Baby Chuck.
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.



Model	Article No.	Cutting shank ø	L1	Collet Model
BPS6-03035	961.409	3 - 3.5	2.3	NBC6 -3 -3.75
BPS6-0304	969.921	3 - 4	2.3	NBC6 -3 -4.25
BPS6-04045	961.410	4 - 4.5	2.3	NBC6 -4 -4.75
BPS6-0405	969.922	4 - 5	2.3	NBC6 -4 -5.25
BPS6-05055	961.411	5 - 5.5	2.3	NBC6 -5 -5.75
BPS6-0506	969.923	5 - 6	2.3	NBC6 -5 -6
BPS8-03035	961.412	3 - 3.5	3.9	NBC8 -3 -4
BPS8-0304	969.924	3 - 4	3.9	NBC8 -3 -4.5
BPS8-04045	961.413	4 - 4.5	3.9	NBC8 -4 -5
BPS8-0405	969.925	4 - 5	3.9	NBC8 -4 -5.5
BPS8-05055	961.414	5 - 5.5	3.9	NBC8 -5 -6
BPS8-0506	969.926	5 - 6	3.9	NBC8 -5 -6.5
BPS8-06065	961.415	6 - 6.5	3.4	NBC8 -6 -7
BPS8-0607	969.927	6 - 7	3.4	NBC8 -6 -7.5
BPS8-07075	961.416	7 - 7.5	3.4	NBC8 -7 -8
BPS8-0708	969.928	7 - 8	3.4	NBC8 -7 -8
BPS10-03035	800.403	3 - 3.5	3.9	NBC10 -3 -4
BPS10-0304	969.929	3 - 4	3.9	NBC10 -3 -4.5
BPS10-04045	800.404	4 - 4.5	3.9	NBC10 -4 -5
BPS10-0405	969.930	4 - 5	3.9	NBC10 -4 -5.5
BPS10-05055	800.405	5 - 5.5	3.9	NBC10 -5 -6
BPS10-0506	969.931	5 - 6	3.9	NBC10 -5 -6.5
BPS10-06065	800.406	6 - 6.5	4.3	NBC10 -6 -7
BPS10-0607	969.932	6 - 7	4.3	NBC10 -6 -7.5
BPS10-07075	800.407	7 - 7.5	4.3	NBC10 -7 -8
BPS10-0708	969.933	7 - 8	4.3	NBC10 -7 -8.5
BPS10-08085	800.408	8 - 8.5	3.5	NBC10 -8 -9
BPS10-0809	969.934	8 - 9	3.5	NBC10 -8 -9.5
BPS10-09095	800.409	9 - 9.5	3.5	NBC10 -9 -10
BPS10-0910	969.935	9 - 10	3.5	NBC10 -9 -10

Model	Article No.	Cutting shank ø	L1	Collet Model
BPS13-03035	800.410	3 - 3.5	4.3	NBC13 -3 -4
BPS13-0304	969.936	3 - 4	4.3	NBC13 -3 -4.5
BPS13-04045	800.411	4 - 4.5	4.3	NBC13 -4 -5
BPS13-0405	969.937	4 - 5	4.3	NBC13 -4 -5.5
BPS13-05055	800.412	5 - 5.5	4.3	NBC13 -5 -6
BPS13-0506	969.938	5 - 6	4.3	NBC13 -5 -6.5
BPS13-06065	800.413	6 - 6.5	4.6	NBC13 -6 -7
BPS13-0607	969.939	6 - 7	4.6	NBC13 -6 -7.5
BPS13-07075	800.414	7 - 7.5	4.6	NBC13 -7 -8
BPS13-0708	969.940	7 - 8	4.6	NBC13 -7 -8.5
BPS13-08085	800.415	8 - 8.5	4.9	NBC13 -8 -9
BPS13-0809	969.941	8 - 9	4.9	NBC13 -8 -9.5
BPS13-09095	800.416	9 - 9.5	4.9	NBC13 -9 -10
BPS13-0910	969.942	9 - 10	4.9	NBC13 -9 -10.5
BPS13-10105	800.417	10 - 10.5	4.2	NBC13 -10 -11
BPS13-1011	969.943	10 - 11	4.2	NBC13 -10 -11.5
BPS13-11115	800.418	11 - 11.5	4.2	NBC13 -11 -12
BPS13-1112	969.944	11 - 12	4.2	NBC13 -11 -12.5
BPS13-12125	800.419	12 - 12.5	4.2	NBC13 -12 -13
BPS13-1213	969.945	12 - 13	4.2	NBC13 -12 -13



2way coolant

Through tools with PS ring

Jet through without PS ring

Model	Article No.	Cutting shank ø	L1	Collet Model
BPS16-03035	800.420	3 - 3.5	4	NBC16 -3 -4
BPS16-0304	969.946	3 - 4	4	NBC16 -3 -4.5
BPS16-04045	800.421	4 - 4.5	4	NBC16 -4 -5
BPS16-0405	969.947	4 - 5	4	NBC16 -4 -5.5
BPS16-05055	800.422	5 - 5.5	4	NBC16 -5 -6
BPS16-0506	969.948	5 - 6	4	NBC16 -5 -6.5
BPS16-06065	800.423	6 - 6.5	4.3	NBC16 -6 -7
BPS16-0607	969.949	6 - 7	4.3	NBC16 -6 -7.5
BPS16-07075	800.424	7 - 7.5	4.3	NBC16 -7 -8
BPS16-0708	969.950	7 - 8	4.3	NBC16 -7 -8.5
BPS16-08085	800.425	8 - 8.5	4.6	NBC16 -8 -9
BPS16-0809	969.951	8 - 9	4.6	NBC16 -8 -9.5
BPS16-09095	800.426	9 - 9.5	4.6	NBC16 -9 -10
BPS16-0910	969.952	9 - 10	4.6	NBC16 -9 -10.5
BPS16-10105	800.427	10 - 10.5	5.1	NBC16 -10 -11
BPS16-1011	969.953	10 - 11	5.1	NBC16 -10 -11.5
BPS16-11115	800.428	11 - 11.5	5.1	NBC16 -11 -12
BPS16-1112	969.954	11 - 12	5.1	NBC16 -11 -12.5
BPS16-12125	800.429	12 - 12.5	4.1	NBC16 -12 -13
BPS16-1213	969.955	12 - 13	4.1	NBC16 -12 -13.5
BPS16-1314	969.956	13 - 14	4.1	NBC16 -13 -14.5
BPS16-1415	969.957	14 - 15	4.1	NBC16 -14 -15.5
BPS16-1516	969.958	15 - 16	4.1	NBC16 -15 -16

Model	Article No.	Cutting shank ø	L1	Collet Model
BPS20-03035	800.430	3 - 3.5	4	NBC20 -3 -4
BPS20-0304	969.959	3 - 4	4	NBC20 -3 -4.5
BPS20-04045	800.431	4 - 4.5	4	NBC20 -4 -5
BPS20-0405	969.960	4 - 5	4	NBC20 -4 -5.5
BPS20-05055	800.432	5 - 5.5	4	NBC20 -5 -6
BPS20-0506	969.961	5 - 6	4	NBC20 -5 -6.5
BPS20-06065	800.433	6 - 6.5	4.3	NBC20 -6 -7
BPS20-0607	969.962	6 - 7	4.3	NBC20 -6 -7.5
BPS20-07075	800.434	7 - 7.5	4.3	NBC20 -7 -8
BPS20-0708	969.963	7 - 8	4.3	NBC20 -7 -8.5
BPS20-08085	800.435	8 - 8.5	4.6	NBC20 -8 -9
BPS20-0809	969.964	8 - 9	4.6	NBC20 -8 -9.5
BPS20-09095	800.436	9 - 9.5	4.6	NBC20 -9 -10
BPS20-0910	969.965	9 - 10	4.6	NBC20 -9 -10.5
BPS20-10105	800.437	10 - 10.5	5.1	NBC20 -10 -11
BPS20-1011	969.966	10 - 11	5.1	NBC20 -10 -11.5
BPS20-11115	800.438	11 - 11.5	5.1	NBC20 -11 -12
BPS20-1112	969.967	11 - 12	5.1	NBC20 -11 -12.5
BPS20-12125	800.439	12 - 12.5	5.1	NBC20 -12 -13
BPS20-1213	969.968	12 - 13	5.1	NBC20 -12 -13.5
BPS20-1314	969.969	13 - 14	5.2	NBC20 -13 -14.5
BPS20-1415	969.970	14 - 15	5.2	NBC20 -14 -15.5
BPS20-1516	969.971	15 - 16	5.2	NBC20 -15 -16.5
BPS20-1617	969.972	16 - 17	4.6	NBC20 -16 -17.5
BPS20-1718	969.973	17 - 18	4.6	NBC20 -17 -18.5
BPS20-1819	969.974	18 - 19	4.6	NBC20 -18 -19.5
BPS20-1920	969.975	19 - 20	4.6	NBC20 -19 -20

1. 1 pce. of ps ring is included.
2. To supply coolant to the periphery of the cutting tool, adjusting screw should not be mounted.

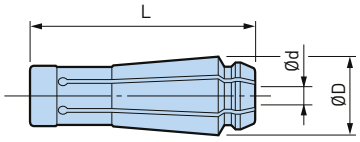
Accessories & Spare Parts

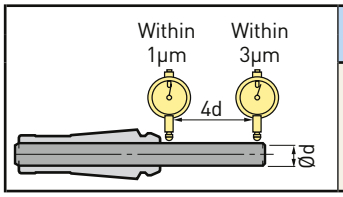
PS Rings

▶ 369

MEGA E Collets

For MEGA E Chuck





Collet class	Max. runout	
	At nose	4xD
AA	Within 1 µm	Within 3 µm

MEGA6E

Model	Article No.	Ød	ØD	L	E
MEC6-3AA	968.421	3	11.3	34.9	19
MEC6-4AA	968.423	4	11.3	34.9	22
MEC6-5AA	968.424	5	11.3	34.9	25
MEC6-6AA	968.425	6	11.3	34.9	27

MEGA8E

Model	Article No.	Ød	ØD	L	E
MEC8-3AA	968.427	3	14.1	39.4	19
MEC8-4AA	968.429	4	14.1	39.4	22
MEC8-5AA	968.430	5	14.1	39.4	25
MEC8-6AA	968.431	6	14.1	39.4	28
MEC8-7AA	801.317	7	14.1	39.4	29
MEC8-8AA	968.433	8	14.1	39.4	31

A.8

MEGA10E

Model	Article No.	Ød	ØD	L	E
MEC10-3AA	968.434	3	17.1	45.7	19
MEC10-4AA	968.436	4	17.1	45.7	22
MEC10-5AA	968.437	5	17.1	45.7	25
MEC10-6AA	968.438	6	17.1	45.7	28
MEC10-7AA	801.313	7	17.1	45.7	29.5
MEC10-8AA	968.440	8	17.1	45.7	31
MEC10-9AA	801.314	9	17.1	45.7	33
MEC10-10AA	968.442	10	17.1	45.7	37

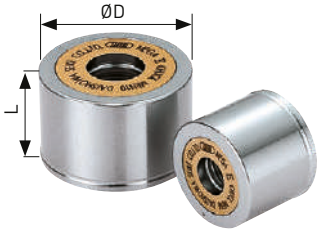
MEGA13E

Model	Article No.	Ød	ØD	L	E
MEC13-3AA	968.443	3	20.6	47.9	19
MEC13-4AA	968.445	4	20.6	47.9	22
MEC13-5AA	968.446	5	20.6	47.9	25
MEC13-6AA	968.447	6	20.6	47.9	28
MEC13-7AA	968.448	7	20.6	47.9	29.5
MEC13-8AA	968.449	8	20.6	47.9	31
MEC13-9AA	801.316	9	20.6	47.9	33
MEC13-10AA	968.451	10	20.6	47.9	35
MEC13-11AA	801.315	11	20.6	47.9	37
MEC13-12AA	968.453	12	20.6	47.9	39

1. "E" is the min. clamping length.

MEGA E Nuts

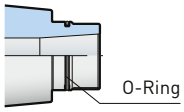
For MEGA E Chuck



Model	Article No.	ØD	L	Body
MEN6	968.461	25	20.5	MEGA6E
MEN8	968.462	30	22	MEGA8E
MEN10	968.463	35	22.5	MEGA10E
MEN13	968.464	42	24.5	MEGA13E

O-Ring Set

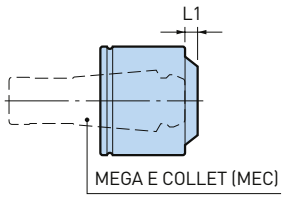
For MEGA E Chuck



Model	Article No.
MG6EOR-2P	801.396
MG8EOR-2P	801.397
MG10EOR-2P	801.393
MG13EOR-2P	801.394

MEGA E Perfect Seals

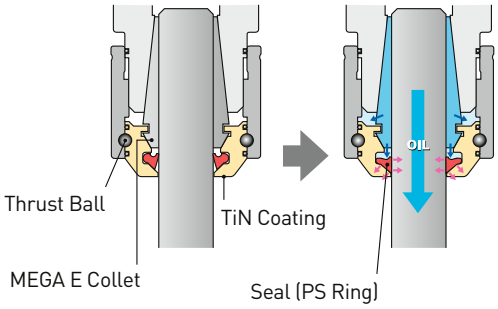
For MEGA E Chuck



2way coolant

Through tools with PS ring

Jet through without PS ring



A.8

Model	Article No.	Cutting shank ø	L1	Collet Model
EPS6-03	968.468	3	5.6	MEC6 -3
EPS6-04	968.469	4	5.2	MEC6 -4
EPS6-05	968.470	5	5.2	MEC6 -5
EPS6-06	968.471	6	5.2	MEC6 -6
EPS8-03	968.472	3	6.4	MEC8 -3
EPS8-04	968.473	4	6	MEC8 -4
EPS8-05	968.474	5	6	MEC8 -5
EPS8-06	968.475	6	6	MEC8 -6
EPS8-07	968.476	7	5.6	MEC8 -7
EPS8-08	968.477	8	5.6	MEC8 -8
EPS10-03	968.478	3	6.4	MEC10 -3
EPS10-04	968.479	4	6	MEC10 -4
EPS10-05	968.480	5	6	MEC10 -5
EPS10-06	968.481	6	6	MEC10 -6
EPS10-07	968.482	7	6.3	MEC10 -7
EPS10-08	968.483	8	6.3	MEC10 -8
EPS10-09	968.484	9	5.7	MEC10 -9
EPS10-10	968.485	10	5.7	MEC10 -10

Model	Article No.	Cutting shank ø	L1	Collet Model
EPS13-03	968.486	3	6.4	MEC13 -3
EPS13-04	968.487	4	6	MEC13 -4
EPS13-05	968.488	5	6	MEC13 -5
EPS13-06	968.489	6	6	MEC13 -6
EPS13-07	968.490	7	6.3	MEC13 -7
EPS13-08	968.491	8	6.5	MEC13 -8
EPS13-09	968.492	9	6.5	MEC13 -9
EPS13-10	968.493	10	6.5	MEC13 -10
EPS13-11	968.494	11	6.2	MEC13 -11
EPS13-12	968.495	12	6.2	MEC13 -12

1. 1 pce. of ps ring is included.
2. To supply coolant to the periphery of the cutting tool, adjusting screw should not be mounted.

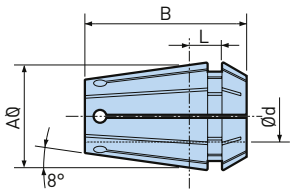
Accessories & Spare Parts

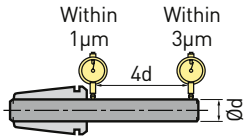
PS Rings

▶ 369

MEGA ER Collets

For MEGA ER Grip.
All ERC collets are inspected twice to guarantee high runout accuracy.





Collet class	Max. runout	
	At nose	4xD
AA	Within 1 µm	Within 3 µm

A.8

MEGA ER 11

Model	Article No.	Ød	ØA	L	B
ERC11-3AA	802.836	2.75 - 3	11	3.8	18
ERC11-3.25AA	802.837	3 - 3.25	11	3.8	18
ERC11-3.5AA	802.838	3.25 - 3.5	11	3.8	18
ERC11-3.75AA	802.839	3.5 - 3.75	11	3.8	18
ERC11-4AA	802.840	3.75 - 4	11	3.8	18
ERC11-4.25AA	802.841	4 - 4.25	11	3.8	18
ERC11-4.5AA	802.842	4.25 - 4.5	11	3.8	18
ERC11-4.75AA	802.843	4.5 - 4.75	11	3.8	18
ERC11-5AA	802.844	4.75 - 5	11	3.8	18
ERC11-5.25AA	802.845	5 - 5.25	11	3.8	18
ERC11-5.5AA	802.846	5.25 - 5.5	11	3.8	18
ERC11-5.75AA	802.847	5.5 - 5.75	11	3.8	18
ERC11-6AA	802.848	5.5 - 6	11	3.8	18

MEGA ER 20

Model	Article No.	Ød	ØA	L	B
ERC20-3AA	967.532	2.75 - 3	20	6.36	31.5
ERC20-3.25AA	967.533	3 - 3.25	20	6.36	31.5
ERC20-3.5AA	967.534	3.25 - 3.5	20	6.36	31.5
ERC20-3.75AA	967.535	3.5 - 3.75	20	6.36	31.5
ERC20-4AA	967.536	3.75 - 4	20	6.36	31.5
ERC20-4.25AA	967.537	4 - 4.25	20	6.36	31.5
ERC20-4.5AA	967.538	4.25 - 4.5	20	6.36	31.5
ERC20-4.75AA	967.539	4.5 - 4.75	20	6.36	31.5
ERC20-5AA	967.540	4.75 - 5	20	6.36	31.5
ERC20-5.25AA	967.541	5 - 5.25	20	6.36	31.5
ERC20-5.5AA	967.542	5.25 - 5.5	20	6.36	31.5
ERC20-5.75AA	967.543	5.5 - 5.75	20	6.36	31.5
ERC20-6AA	967.544	5.5 - 6	20	6.36	31.5
ERC20-6.5AA	967.545	6 - 6.5	20	6.36	31.5
ERC20-7AA	967.546	6.5 - 7	20	6.36	31.5
ERC20-7.5AA	967.547	7 - 7.5	20	6.36	31.5
ERC20-8AA	967.548	7.5 - 8	20	6.36	31.5
ERC20-8.5AA	967.549	8 - 8.5	20	6.36	31.5
ERC20-9AA	967.550	8.5 - 9	20	6.36	31.5
ERC20-9.5AA	967.551	9 - 9.5	20	6.36	31.5
ERC20-10AA	967.552	9.5 - 10	20	6.36	31.5
ERC20-10.5AA	967.553	10 - 10.5	20	6.36	31.5
ERC20-11AA	967.554	10.5 - 11	20	6.36	31.5
ERC20-11.5AA	967.555	11 - 11.5	20	6.36	31.5
ERC20-12AA	967.556	11.5 - 12	20	6.36	31.5
ERC20-12.5AA	967.557	12 - 12.5	20	6.36	31.5
ERC20-13AA	967.558	12.5 - 13	20	6.36	31.5

MEGA ER 16

Model	Article No.	Ød	ØA	L	B
ERC16-2AA	967.501	1.9 - 2	16	6.26	27.5
ERC16-2.1AA	967.502	2 - 2.1	16	6.26	27.5
ERC16-2.2AA	967.503	2.1 - 2.2	16	6.26	27.5
ERC16-2.3AA	967.504	2.2 - 2.3	16	6.26	27.5
ERC16-2.4AA	967.505	2.3 - 2.4	16	6.26	27.5
ERC16-2.5AA	967.506	2.4 - 2.5	16	6.26	27.5
ERC16-2.6AA	967.507	2.5 - 2.6	16	6.26	27.5
ERC16-2.7AA	967.508	2.6 - 2.7	16	6.26	27.5
ERC16-2.8AA	967.509	2.7 - 2.8	16	6.26	27.5
ERC16-2.9AA	967.510	2.8 - 2.9	16	6.26	27.5
ERC16-3AA	967.511	2.75 - 3	16	6.26	27.5
ERC16-3.25AA	967.512	3 - 3.25	16	6.26	27.5
ERC16-3.5AA	967.513	3.25 - 3.5	16	6.26	27.5
ERC16-3.75AA	967.514	3.5 - 3.75	16	6.26	27.5
ERC16-4AA	967.515	3.75 - 4	16	6.26	27.5
ERC16-4.25AA	967.516	4 - 4.25	16	6.26	27.5
ERC16-4.5AA	967.517	4.25 - 4.5	16	6.26	27.5
ERC16-4.75AA	967.518	4.5 - 4.75	16	6.26	27.5
ERC16-5AA	967.519	4.75 - 5	16	6.26	27.5
ERC16-5.25AA	967.520	5 - 5.25	16	6.26	27.5
ERC16-5.5AA	967.521	5.25 - 5.5	16	6.26	27.5
ERC16-5.75AA	967.522	5.5 - 5.75	16	6.26	27.5
ERC16-6AA	967.523	5.5 - 6	16	6.26	27.5
ERC16-6.5AA	967.524	6 - 6.5	16	6.26	27.5
ERC16-7AA	967.525	6.5 - 7	16	6.26	27.5
ERC16-7.5AA	967.526	7 - 7.5	16	6.26	27.5
ERC16-8AA	967.527	7.5 - 8	16	6.26	27.5
ERC16-8.5AA	967.528	8 - 8.5	16	6.26	27.5
ERC16-9AA	967.529	8.5 - 9	16	6.26	27.5
ERC16-9.5AA	967.530	9 - 9.5	16	6.26	27.5
ERC16-10AA	967.531	9.5 - 10	16	6.26	27.5

MEGA ER 25

Model	Article No.	Ød	ØA	L	B
ERC25-3AA	967.559	2.75 - 3	25	6.66	34
ERC25-3.25AA	967.560	3 - 3.25	25	6.66	34
ERC25-3.5AA	967.561	3.25 - 3.5	25	6.66	34
ERC25-3.75AA	967.562	3.5 - 3.75	25	6.66	34
ERC25-4AA	967.563	3.75 - 4	25	6.66	34
ERC25-4.25AA	967.564	4 - 4.25	25	6.66	34
ERC25-4.5AA	967.565	4.25 - 4.5	25	6.66	34
ERC25-4.75AA	967.566	4.5 - 4.75	25	6.66	34
ERC25-5AA	967.567	4.75 - 5	25	6.66	34
ERC25-5.25AA	967.568	5 - 5.25	25	6.66	34
ERC25-5.5AA	967.569	5.25 - 5.5	25	6.66	34
ERC25-5.75AA	967.570	5.5 - 5.75	25	6.66	34
ERC25-6AA	967.571	5.5 - 6	25	6.66	34
ERC25-6.5AA	967.572	6 - 6.5	25	6.66	34
ERC25-7AA	967.573	6.5 - 7	25	6.66	34
ERC25-7.5AA	967.574	7 - 7.5	25	6.66	34
ERC25-8AA	967.575	7.5 - 8	25	6.66	34
ERC25-8.5AA	967.576	8 - 8.5	25	6.66	34
ERC25-9AA	967.577	8.5 - 9	25	6.66	34
ERC25-9.5AA	967.578	9 - 9.5	25	6.66	34
ERC25-10AA	967.579	9.5 - 10	25	6.66	34
ERC25-10.5AA	967.580	10 - 10.5	25	6.66	34
ERC25-11AA	967.581	10.5 - 11	25	6.66	34
ERC25-11.5AA	967.582	11 - 11.5	25	6.66	34
ERC25-12AA	967.583	11.5 - 12	25	6.66	34
ERC25-12.5AA	967.584	12 - 12.5	25	6.66	34
ERC25-13AA	967.585	12.5 - 13	25	6.66	34
ERC25-13.5AA	967.586	13 - 13.5	25	6.66	34
ERC25-14AA	967.587	13.5 - 14	25	6.66	34
ERC25-14.5AA	967.588	14 - 14.5	25	6.66	34
ERC25-15AA	967.589	14.5 - 15	25	6.66	34
ERC25-15.5AA	967.590	15 - 15.5	25	6.66	34
ERC25-16AA	967.591	15.5 - 16	25	6.66	34

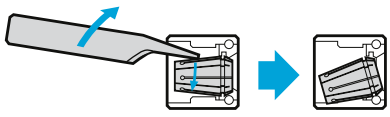
MEGA ER 32

Model	Article No.	Ød	ØA	L	B
ERC32-3AA	967.592	2.75 - 3	32	7.16	40
ERC32-3.25AA	967.593	3 - 3.25	32	7.16	40
ERC32-3.5AA	967.594	3.25 - 3.5	32	7.16	40
ERC32-3.75AA	967.595	3.5 - 3.75	32	7.16	40
ERC32-4AA	967.596	3.75 - 4	32	7.16	40
ERC32-4.25AA	967.597	4 - 4.25	32	7.16	40
ERC32-4.5AA	967.598	4.25 - 4.5	32	7.16	40
ERC32-4.75AA	967.599	4.5 - 4.75	32	7.16	40
ERC32-5AA	967.600	4.75 - 5	32	7.16	40
ERC32-5.25AA	967.601	5 - 5.25	32	7.16	40
ERC32-5.5AA	967.602	5.25 - 5.5	32	7.16	40
ERC32-5.75AA	967.603	5.5 - 5.75	32	7.16	40
ERC32-6AA	967.604	5.5 - 6	32	7.16	40
ERC32-6.5AA	967.605	6 - 6.5	32	7.16	40
ERC32-7AA	967.606	6.5 - 7	32	7.16	40
ERC32-7.5AA	967.607	7 - 7.5	32	7.16	40
ERC32-8AA	967.608	7.5 - 8	32	7.16	40
ERC32-8.5AA	967.609	8 - 8.5	32	7.16	40
ERC32-9AA	967.610	8.5 - 9	32	7.16	40
ERC32-9.5AA	967.611	9 - 9.5	32	7.16	40
ERC32-10AA	967.612	9.5 - 10	32	7.16	40
ERC32-10.5AA	967.613	10 - 10.5	32	7.16	40
ERC32-11AA	967.614	10.5 - 11	32	7.16	40
ERC32-11.5AA	967.615	11 - 11.5	32	7.16	40
ERC32-12AA	967.616	11.5 - 12	32	7.16	40
ERC32-12.5AA	967.617	12 - 12.5	32	7.16	40
ERC32-13AA	967.618	12.5 - 13	32	7.16	40
ERC32-13.5AA	967.619	13 - 13.5	32	7.16	40
ERC32-14AA	967.620	13.5 - 14	32	7.16	40
ERC32-14.5AA	967.621	14 - 14.5	32	7.16	40
ERC32-15AA	967.622	14.5 - 15	32	7.16	40
ERC32-15.5AA	967.623	15 - 15.5	32	7.16	40
ERC32-16AA	967.624	15.5 - 16	32	7.16	40
ERC32-16.5AA	967.625	16 - 16.5	32	7.16	40
ERC32-17AA	801.013	16.5 - 17	32	7.16	40
ERC32-17.5AA	967.627	17 - 17.5	32	7.16	40
ERC32-18AA	967.628	17.5 - 18	32	7.16	40
ERC32-18.5AA	967.629	18 - 18.5	32	7.16	40
ERC32-19AA	967.630	18.5 - 19	32	7.16	40
ERC32-19.5AA	967.631	19 - 19.5	32	7.16	40
ERC32-20AA	967.632	19.5 - 20	32	7.16	40

Collet Removers

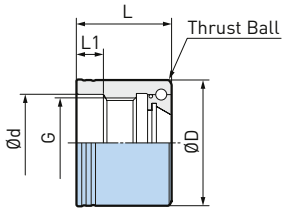
For MEGA New Baby Chuck, New Baby Chuck and MEGA ER Chuck.

Model	Article No.
NBJ	969.491



MEGA ER Nut

For MEGA ER Grip.
High precision nut with ball bearing ensure outstanding runout repeatability.



Model	Article No.	Ød	ØD	L	L1	G	Body	Wrench
MERN16	967.801	23	30	25	7.5	M22 P1.5	MEGA ER 16	MGR30L
MERN20	967.802	27	35	26.5	7.5	M25 P1.5	MEGA ER 20	MGR35L
MERN25	967.803	33.5	42	27.5	7.5	M32 P1.5	MEGA ER 25	MGR42L
MERN32	967.804	41	50	30.2	7.7	M40 P1.5	MEGA ER 32	MGR50L

1. MEGA ER nut can not be used with some of conventional ER chuck. Please check dimensions carefully in that case.
2. To maximize the cutting performance, using with MEGA ER grip is recommended.

MEGA ER Solid Nut

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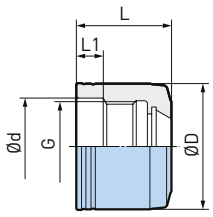
For MEGA ER Grip.
Free-notch design nut for high speed machining.

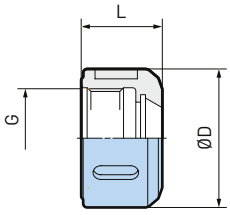


Model	Article No.	Ød	ØD	L	L1	G	Body	Wrench
MER16SN	805.663	23	30	25	7.5	M22 P1.5	MEGA ER 16	MGR30L
MER20SN	805.664	27	35	26.5	7.5	M25 P1.5	MEGA ER 20	MGR35L
MER25SN	805.665	33.5	42	27.5	7.5	M32 P1.5	MEGA ER 25	MGR42L
MER32SN	805.666	41	50	30.2	7.7	M40 P1.5	MEGA ER 32	MGR50L

1. MEGA ER nut can not be used with some of conventional ER chuck. Please check dimensions carefully in that case.
2. To maximize the cutting performance, using with MEGA ER grip is recommended.

ER Nuts

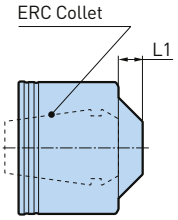
For MEGA ER Grip.
Conventional ER Nut.



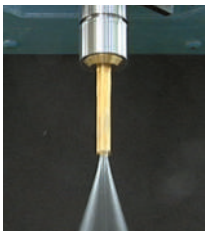
Model	Article No.	ØD	L	G	Body	Wrench
ERN11	803.581	19	12.3	M14 0.75	MEGA ER 11	NBK6
ERN16	803.582	30	19	M22 P1.5	MEGA ER 16	NBK10
ERN20	803.583	35	20.5	M25 P1.5	MEGA ER 20	NBK13
ERN25	803.584	42	21.5	M32 P1.5	MEGA ER 25	NBK16
ERN32	803.585	50	24	M40 P1.5	MEGA ER 32	FK45-50L

MEGA ER Perfect Seal

For MEGA ER Grip



2way coolant



Through tools with PS ring

Jet through without PS ring

Model	Article No.	Cutting shank ø	L1	Collet Model	Body
MERPS16-030035	967.850	3 - 3.5	6.4	ERC16 -3 -3.75	MEGA ER 16
MERPS16-035040	967.851	3.5 - 4	6.4	ERC16 -3.5-4.75	MEGA ER 16
MERPS16-040045	967.852	4 - 4.5	6.4	ERC16 -4 -4.75	MEGA ER 16
MERPS16-045050	967.853	4.5 - 5	6.4	ERC16 -4.5 -5.25	MEGA ER 16
MERPS16-050055	967.854	5 - 5.5	6.4	ERC16 -5 -6	MEGA ER 16
MERPS16-055060	967.855	5.5 - 6	6.4	ERC16 -5.5-6.5	MEGA ER 16
MERPS16-060065	967.856	6 - 6.5	6.8	ERC16 -6 -7	MEGA ER 16
MERPS16-065070	967.857	6.5 - 7	6.8	ERC16 -6.5 -7.5	MEGA ER 16
MERPS16-070075	967.858	7 - 7.5	6.8	ERC16 -7 -8	MEGA ER 16
MERPS16-075080	967.859	7.5 - 8	6.8	ERC16 -7.5 -8.5	MEGA ER 16
MERPS16-080085	967.861	8 - 8.5	6.1	ERC16 -8 -9	MEGA ER 16
MERPS16-085090	967.862	8.5 - 9	6.1	ERC16 -8.5 -9.5	MEGA ER 16
MERPS16-090095	967.863	9 - 9.5	6.1	ERC16 -9 -10	MEGA ER 16
MERPS16-095100	967.864	9.5 - 10	6.1	ERC16 -9.5 -10	MEGA ER 16
MERPS20-030035	967.865	3 - 3.5	6.4	ERC20 -3 -3.75	MEGA ER 20
MERPS20-035040	967.866	3.5 - 4	6.4	ERC20 -3.5-4.75	MEGA ER 20
MERPS20-040045	967.867	4 - 4.5	6.4	ERC20 -4 -4.75	MEGA ER 20
MERPS20-045050	967.868	4.5 - 5	6.4	ERC20 -4.5 -5.25	MEGA ER 20
MERPS20-050055	967.869	5 - 5.5	6.4	ERC20 -5 -6	MEGA ER 20
MERPS20-055060	967.870	5.5 - 6	6.4	ERC20 -5.5-6.5	MEGA ER 20
MERPS20-060065	967.871	6 - 6.5	6.8	ERC20 -6 -7	MEGA ER 20
MERPS20-065070	967.872	6.5 - 7	6.8	ERC20 -6.5 -7.5	MEGA ER 20
MERPS20-070075	967.873	7 - 7.5	6.8	ERC20 -7 -8	MEGA ER 20
MERPS20-075080	967.874	7.5 - 8	6.8	ERC20 -7.5 -8.5	MEGA ER 20
MERPS20-080085	967.875	8 - 8.5	6.9	ERC20 -8 -9	MEGA ER 20
MERPS20-085090	967.876	8.5 - 9	6.9	ERC20 -8.5 -9.5	MEGA ER 20
MERPS20-090095	967.877	9 - 9.5	6.9	ERC20 -9 -10	MEGA ER 20
MERPS20-095100	967.878	9.5 - 10	6.9	ERC20 -9.5 -10.5	MEGA ER 20
MERPS20-100105	967.879	10 - 10.5	6.6	ERC20 -10 -11	MEGA ER 20
MERPS20-105110	967.880	10.5 - 11	6.6	ERC20 -10.5 -11.5	MEGA ER 20
MERPS20-110115	967.881	11 - 11.5	6.6	ERC20 -11 -12	MEGA ER 20
MERPS20-115120	967.882	11.5 - 12	6.6	ERC20 -11.5 -12.5	MEGA ER 20
MERPS20-120125	967.883	12 - 12.5	6.6	ERC20 -12. -13	MEGA ER 20
MERPS20-125130	967.884	12.5 - 13	6.6	ERC20 -12.5 -13	MEGA ER 20

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MEGA ER Perfect Seal

Model	Article No.	Cutting shank ø	L1	Collet Model	Body
MERPS25-030035	967.885	3 - 3.5	6.3	ERC25 -3 -3.75	MEGA ER 25
MERPS25-035040	967.886	3.5 - 4	6.3	ERC25 -3.5-4.75	MEGA ER 25
MERPS25-040045	967.887	4 - 4.5	6.3	ERC25 -4.5 -5.25	MEGA ER 25
MERPS25-045050	967.888	4.5 - 5	6.3	ERC25 -5 -6	MEGA ER 25
MERPS25-050055	967.889	5 - 5.5	6.3	ERC25 -5.5-6.5	MEGA ER 25
MERPS25-055060	967.890	5.5 - 6	6.3	ERC25 -6 -7	MEGA ER 25
MERPS25-060065	967.891	6 - 6.5	6.7	ERC25 -6.5 -7.5	MEGA ER 25
MERPS25-065070	967.892	6.5 - 7	6.7	ERC25 -7 -8	MEGA ER 25
MERPS25-070075	967.893	7 - 7.5	6.7	ERC25 -7.5 -8.5	MEGA ER 25
MERPS25-075080	967.894	7.5 - 8	6.7	ERC25 -8 -9	MEGA ER 25
MERPS25-080085	967.895	8 - 8.5	6.8	ERC32 -19 -20	MEGA ER 25
MERPS25-085090	967.896	8.5 - 9	6.8	ERC25 -9 -10	MEGA ER 25
MERPS25-090095	967.897	9 - 9.5	6.8	ERC25 -9.5 -10.5	MEGA ER 25
MERPS25-095100	967.898	9.5 - 10	6.8	ERC25 -10 -11	MEGA ER 25
MERPS25-100105	967.899	10 - 10.5	7.3	ERC25 -10.5 -11.5	MEGA ER 25
MERPS25-105110	967.900	10.5 - 11	7.3	ERC25 -11 -12	MEGA ER 25
MERPS25-110115	967.901	11 - 11.5	7.3	ERC25 -11.5 -12.5	MEGA ER 25
MERPS25-115120	967.902	11.5 - 12	7.3	ERC25 -12 -13	MEGA ER 25
MERPS25-120125	967.903	12 - 12.5	7.3	ERC25 -12 -13	MEGA ER 25
MERPS25-125130	967.904	12.5 - 13	7.3	ERC25 -12.5 -13	MEGA ER 25
MERPS25-130140	967.905	13 - 14	6.6	ERC25 -13 -14.5	MEGA ER 25
MERPS25-140150	967.906	14 - 15	6.6	ERC25 -14 -15.5	MEGA ER 25
MERPS25-150160	801.318	15 - 16	6.6	ERC25 -15 -16	MEGA ER 25
MERPS32-030035	967.908	3 - 3.5	6.2	ERC32 -3 -3.75	MEGA ER 32
MERPS32-035040	967.909	3.5 - 4	6.2	ERC32 -3.5-4.25	MEGA ER 32
MERPS32-040045	967.910	4 - 4.5	6.2	ERC32 -4 -4.75	MEGA ER 32
MERPS32-045050	967.911	4.5 - 5	6.2	ERC32 -4.5 -5.25	MEGA ER 32
MERPS32-050055	967.912	5 - 5.5	6.2	ERC32 -5 -6	MEGA ER 32
MERPS32-055060	967.913	5.5 - 6	6.2	ERC32 -5.5 -6.5	MEGA ER 32
MERPS32-060065	967.914	6 - 6.5	6.6	ERC32 -6 -7	MEGA ER 32
MERPS32-065070	967.915	6.5 - 7	6.6	ERC32 -6.5 -7.5	MEGA ER 32
MERPS32-070075	967.916	7 - 7.5	6.6	ERC32 -7 -8	MEGA ER 32
MERPS32-075080	967.917	7.5 - 8	6.6	ERC32 -7.5 -8.5	MEGA ER 32
MERPS32-080085	967.918	8 - 8.5	6.7	ERC32 -8 -9	MEGA ER 32
MERPS32-085090	967.919	8.5 - 9	6.7	ERC32 -8.5 9.5	MEGA ER 32
MERPS32-090095	967.920	9 - 9.5	6.7	ERC32 -9 -10	MEGA ER 32
MERPS32-095100	967.921	9.5 - 10	6.7	ERC32 -9.5 -10.5	MEGA ER 32
MERPS32-100105	967.922	10 - 10.5	7.2	ERC32 -10 -11	MEGA ER 32
MERPS32-105110	967.923	10.5 - 11	7.2	ERC32 -10.5 -11.5	MEGA ER 32
MERPS32-110115	967.924	11 - 11.5	7.2	ERC32 -11 -12	MEGA ER 32
MERPS32-115120	967.925	11.5 - 12	7.2	ERC32 -11.5 -12.5	MEGA ER 32
MERPS32-120125	967.926	12 - 12.5	7.2	ERC32 -12 -13	MEGA ER 32
MERPS32-125130	967.927	12.5 - 13	7.2	ERC32 -12.5 -13.5	MEGA ER 32
MERPS32-130140	967.928	13 - 14	7.3	ERC32 -13 -14.5	MEGA ER 32
MERPS32-140150	967.929	14 - 15	7.3	ERC32 -14 -15.5	MEGA ER 32
MERPS32-150160	967.930	15 - 16	7.3	ERC32 -15 -16.5	MEGA ER 32
MERPS32-160170	967.931	16 - 17	7.8	ERC32 -16 -17.5	MEGA ER 32
MERPS32-170180	967.932	17 - 18	7.8	ERC32 -17 -18.5	MEGA ER 32
MERPS32-180190	967.933	18 - 19	7.8	ERC32 -18 -19.5	MEGA ER 32
MERPS32-190200	967.934	19 - 20	7.8	ERC32 -3 -3.75	MEGA ER 32

1. 1 pce. of ps ring is included.

Accessories & Spare Parts

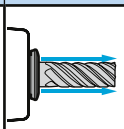
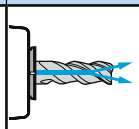
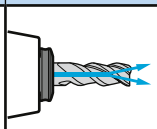
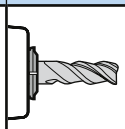
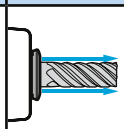
PS Rings

▶ 369

Straight Collets

For MEGA Double Power Chuck, New Hi-Power Milling Chuck and Hydraulic Chuck

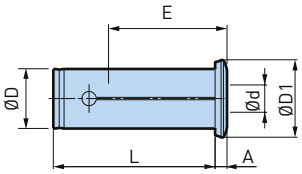
Straight Collet Selection Guide

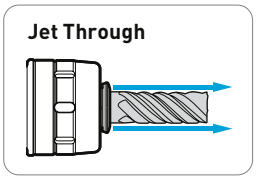
	PJC Collet	OCA Collet	PSC Collet	C Collet	CPG Collet
					
	Periferical Coolant Supply	Through Tool Coolant Supply	Through Tool Coolant Supply	W/O Center Coolant	Periferical Coolant Supply Anti Pullout Collet
MEGA-D MEGA Double Power Chuck	○	○	○	○	▲
MEGA-DS MEGA Double Power Chuck	○		○	○	▲
HMC New Hi-Power Milling Chuck	○	○	○	○	▲
HDC Hydraulic Chuck	○		○		

▲ CPG collet can only be used for MEGA20D, MEGA20DS and HMC20(S).

PJC Collets

For MEGA-D/DS, HMC and HDC.
For coolant to cutting tool periphery.





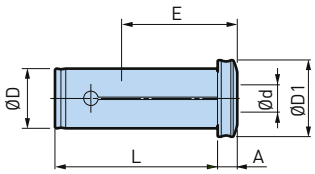
Model	Article No.	Ød	ØD	ØD1	A	L	E
PJC12D-6	100441.001.0	6	12	20.4	4.6	40	35
PJC12D-8	100441.002.0	8	12	20.4	4.6	40	37
PJC12D-10	100441.003.0	10	12	20.4	4.8	40	39
PJC16-6	962.468	6	16	23	6	54	39
PJC16-8	962.469	8	16	23	6.3	54	40
PJC16-10	962.470	10	16	23	6.3	54	45
PJC16-12	962.471	12	16	23	6.3	54	48
PJC20-3	962.472	3	20	27	5.2	61	31
PJC20-4	962.473	4	20	27	5.2	61	31
PJC20-5	962.474	5	20	27	5.2	61	31
PJC20-6	962.475	6	20	27	5.2	61	39
PJC20-7	962.476	7	20	27	5.7	61	40
PJC20-8	962.477	8	20	27	5.7	61	40
PJC20-9	962.478	9	20	27	5.7	61	40
PJC20-10	962.479	10	20	27	5.7	61	45
PJC20-11	962.480	11	20	27	6.4	61	45
PJC20-12	962.481	12	20	27	6.4	61	50
PJC20-13	804.834	13	20	27	6.8	61	50
PJC20-14	962.488	14	20	27	7.3	61	50
PJC20-15	804.835	15	20	27	7.3	61	50
PJC20-16	962.483	16	20	27	7.3	61	50

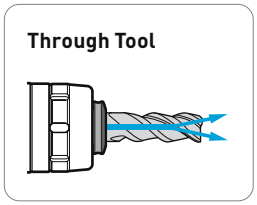
Model	Article No.	Ød	ØD	ØD1	A	L	E
PJC25-6	962.484	6	25	32.5	5	68	39
PJC25-8	962.485	8	25	32.5	5	68	40
PJC25-10	962.486	10	25	32.5	5	68	45
PJC25-12	962.487	12	25	32.5	5	68	50
PJC25-16	962.489	16	25	32.5	5.4	68	53
PJC25-18	801.685	18	25	32.5	5.8	68	55
PJC25-20	962.491	20	25	32.5	6.5	68	56
PJC32-6	962.492	6	32	39	5	74	39
PJC32-8	962.493	8	32	39	5	74	40
PJC32-10	962.494	10	32	39	5	74	45
PJC32-12	962.495	12	32	39	5	74	50
PJC32-14	962.496	14	32	39	5	74	50
PJC32-16	962.497	16	32	39	5	74	53
PJC32-20	962.499	20	32	39	5	74	56
PJC32-25	962.500	25	32	32	5.4	74	61
PJC42-16	801.982	16	42	50.5	5	83	53
PJC42-20	801.983	20	42	50.5	5	83	56
PJC42-25	801.984	25	42	50.5	5	83	61
PJC42-32	801.985	32	42	50.5	5	83	66

1. "E" is the min. clamping length.
2. Replacement O-ring for PJC and PSC collet are available (PJC_OR). Please contact us.
3. PJC 12 cannot be used for Hydraulic Chuck (HDC12).

PSC Collets

For MEGA-D/DS, HMC and HDC.
For coolant-through tools.





Model	Article No.	Ød	ØD	ØD1	A	L	E
PSC20-3	962.437	3	20	27	7.7	61	31
PSC20-4	962.438	4	20	27	7.5	61	31
PSC20-5	962.439	5	20	27	7.5	61	31
PSC20-6	962.440	6	20	27	7.5	61	39
PSC20-7	962.441	7	20	27	8.2	61	40
PSC20-8	962.442	8	20	27	8.2	61	40
PSC20-9	962.443	9	20	27	8.2	61	40
PSC20-10	962.444	10	20	27	8.2	61	45
PSC20-11	962.445	11	20	27	8.2	61	45
PSC20-12	962.446	12	20	27	8.2	61	50
PSC20-13	804.827	13	20	27	8.2	61	50
PSC20-14	962.447	14	20	27	8.7	61	50
PSC20-15	804.828	15	20	27	8.7	61	50
PSC20-16	962.448	16	20	28	8.7	61	50

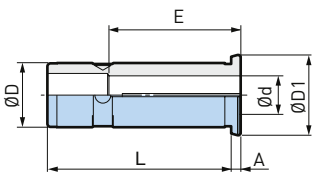
Model	Article No.	Ød	ØD	ØD1	A	L	E
PSC32-6	962.457	6	32	38	7.5	74	39
PSC32-7	804.829	7	32	38	8.2	74	40
PSC32-8	962.458	8	32	38	8.2	74	40
PSC32-9	804.830	9	32	38	8.2	74	40
PSC32-10	962.459	10	32	38	8.2	74	45
PSC32-11	804.831	11	32	38	8.7	74	45
PSC32-12	962.460	12	32	38	8.7	74	50
PSC32-13	804.832	13	32	38	8.7	74	50
PSC32-14	962.461	14	32	38	8.7	74	50
PSC32-15	804.833	15	32	38	8.7	74	51
PSC32-16	962.462	16	32	38	8.7	74	53
PSC32-18	962.463	18	32	38	9.2	74	56
PSC32-19	802.063	19	32	38	9.2	74	56
PSC32-20	962.464	20	32	38	9.2	74	56
PSC32-21	802.064	21	32	38	9.2	74	56
PSC32-22	802.065	22	32	38	9.5	74	59
PSC32-23	802.066	23	32	38	9.5	74	59
PSC32-24	802.067	24	32	38	9.5	74	60
PSC32-25	962.465	25	32	38	9.5	74	61

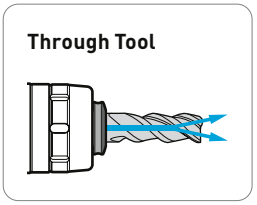
1. "E" is the min. clamping length.
2. Replacement O-ring for PJC and PSC collet are available (PJC_ OR). Please contact us.

A.8

OCA Collets

For MEGA-D and HMC





Model	Article No.	Ød	ØD	ØD1	A	L	E
OCA16-6	805.156	6	16	21	3	55	36
OCA16-8	805.157	8	16	21	3	55	37
OCA16-10	805.158	10	16	21	3	55	38
OCA16-12	805.159	12	16	21	3	55	42
OCA20-6	962.401	6	20	25	4	58	36
OCA20-8	962.402	8	20	25	4	58	37
OCA20-10	962.403	10	20	25	4	58	38
OCA20-12	962.404	12	20	25	3	58	42
OCA20-14	978.501	14	20	25	3	58	42
OCA20-16	962.405	16	20	25	3	58	52
OCA25-6	801.747	6	25	30	4.5	68	36
OCA25-8	801.748	8	25	30	4.5	68	37
OCA25-10	805.413	10	25	30	4.5	68	38
OCA25-12	801.752	12	25	30	4.5	68	44
OCA25-14	805.244	14	25	30	3.5	68	44
OCA25-16	962.406	16	25	30	3.5	68	52
OCA25-18	805.245	18	25	30	3.5	68	52
OCA25-20	962.407	20	25	30	3.5	68	52

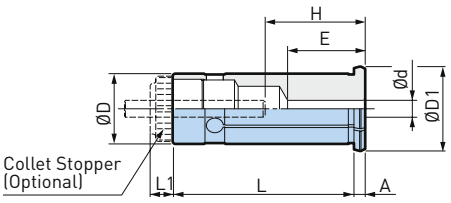
Model	Article No.	Ød	ØD	ØD1	A	L	E
OCA32-6	962.408	6	32	37	4.5	75	36
OCA32-8	962.409	8	32	37	4.5	75	37
OCA32-10	962.410	10	32	37	4.5	75	38
OCA32-12	962.411	12	32	37	4.5	75	44
OCA32-13	962.412	13	32	37	4.5	75	46
OCA32-14	962.413	14	32	37	4.5	75	48
OCA32-15	962.414	15	32	37	4.5	75	50
OCA32-16	962.415	16	32	37	4.5	75	52
OCA32-17	962.416	17	32	37	3.5	75	52
OCA32-18	962.417	18	32	37	3.5	75	52
OCA32-19	962.418	19	32	37	3.5	75	52
OCA32-20	962.419	20	32	37	3.5	75	52
OCA32-21	962.420	21	32	37	3.5	75	52
OCA32-22	962.421	22	32	37	3.5	75	52
OCA32-23	962.422	23	32	37	3.5	75	52
OCA32-24	962.423	24	32	37	3.5	75	52
OCA32-25	962.424	25	32	37	3.5	75	52
OCA32-27	806.442	27	32	37	3.5	75	52
OCA32-28	805.356	28	32	37	3.5	75	52
OCA32-29	806.443	29	32	37	3.5	75	52

Model	Article No.	Ød	ØD	ØD1	A	L	E
OCA42-6	801.774	6	42	48	4.5	75	36
OCA42-8	801.775	8	42	48	4.5	75	37
OCA42-10	801.764	10	42	48	4.5	75	38
OCA42-12	801.765	12	42	48	4.5	75	44
OCA42-16	801.767	16	42	48	4.5	75	52
OCA42-19	801.768	19	42	48	4.5	75	52
OCA42-20	801.769	20	42	48	4.5	75	52
OCA42-24	801.770	24	42	48	3.5	75	55
OCA42-25	801.771	25	42	48	3.5	75	55
OCA42-31	801.772	31	42	48	3.5	75	58
OCA42-32	801.773	32	42	48	3.5	75	58

1. "E" is the min. clamping length.

C Collets

For MEGA-D/DS and HMC.
Tool projection adjustable straight collet.

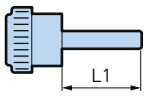


Model	Article No.	Ød	ØD	ØD1	A	L	L1	E	H min	H max.
C16-6	806.465	6	16	21	3	49	6	30	30	47
C16-8	806.466	8	16	21	3	49	6	32	32	47
C16-10	806.467	10	16	21	3	49	6	37	37	47
C16-12	806.468	12	16	21	3	49	6	37	37	47
C20-6	962.260	6	20	25	4	56	8	30	30	48
C20-8	962.262	8	20	25	4	56	8	32	32	48
C20-10	962.263	10	20	25	4	56	8	37	37	48
C20-12	962.264	12	20	25	4	56	8	37	37	48
C20-14	962.265	14	20	25	4	56	8	40	40	48
AC20-16	962.205	16	20	25	4	56	8	46	46	48
C20-16 *	962.266	16	20	25	4	56	-	46	46	-
C20-18 *	800.664	18	20	25	3	49	-	50	50	-
C25-6	962.271	6	25	30	4	64.5	8	30	30	58
C25-8	962.272	8	25	30	4	64.5	8	32	32	58
C25-10	962.273	10	25	30	4	64.5	8	37	37	58
C25-12	962.274	12	25	30	4	64.5	8	37	37	58
C25-14	806.478	14	25	30	4	64.5	8	45	45	58
C25-16	962.276	16	25	30	4	64.5	8	46	46	58
C25-18	806.477	18	25	30	4	64.5	8	48	48	58
C25-20	962.278	20	25	30	4	64.5	8	52	52	58

1. "E" is the min. clamping length.
2. „H" is the insertion length when Collet Stopper is mounted.
3. * Collet Stopper cannot be used.
4. AC20-16 includes Collet Stopper.

Model	Article No.	Ød	ØD	ØD1	A	L	L1	E	H min	H max.
C32-6	962.281	6	32	37	5.5	68.5	10	30	30	62
C32-8	962.282	8	32	37	5.5	68.5	10	32	32	62
C32-10	962.283	10	32	37	5.5	68.5	10	37	32	62
C32-12	962.284	12	32	37	5.5	68.5	10	37	37	62
C32-14	962.285	14	32	37	5.5	68.5	10	40	40	62
C32-16	962.286	16	32	37	5.5	68.5	10	46	46	62
C32-17	807.578	17	32	37	5.5	68.5	10	50	50	62
C32-18	962.287	18	32	37	5.5	68.5	10	50	50	62
C32-19	962.248	19	32	37	5.5	68.5	10	50	50	62
C32-20	962.288	20	32	37	5.5	68.5	10	52	52	62
C32-22	962.249	22	32	37	5.5	68.5	10	52	52	62
C32-23	807.579	23	32	37	5.5	68.5	10	52	52	62
C32-24	962.250	24	32	37	5.5	68.5	10	55	55	62
C32-25	962.289	25	32	37	5.5	68.5	10	55	55	62
C32-30 *	806.476	30	32	37	3.5	61.5	-	65	-	-
C42-6	800.674	6	42	48	7	82	10	30	30	77
C42-8	800.675	8	42	48	7	82	10	34	34	77
C42-10	800.665	10	42	48	7	82	10	40	40	77
C42-12	800.666	12	42	48	7	82	10	40	40	77
C42-16	800.668	16	42	48	7	82	10	46	46	77
C42-20	800.670	20	42	48	7	82	10	52	52	77
C42-25	800.671	25	42	48	7	82	10	57	57	77
C42-31	800.672	31	42	48	7	82	10	62	62	77
C42-32	800.673	32	42	48	7	82	10	62	62	77
C42-40 *	806.198	40	42	48	4	75	-	79	-	-

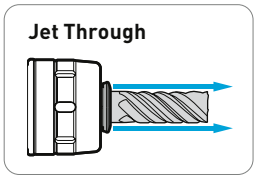
Collet Stoppers for C Collet



Model	Article No.	Body	L1
AC16CS	806.197	C16	6
AC20CS	972.321	C20	8
AC25CS	804.772	C25	8
AC32CS	972.322	C32	10
AC42CS	804.773	C42	10

CPG Collet

For MEGA20D/20DS and HMC20/20S



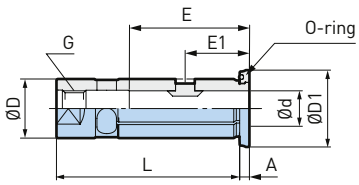


Fig. 1

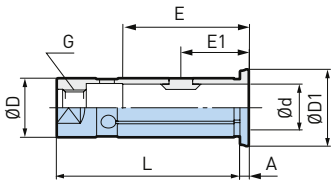


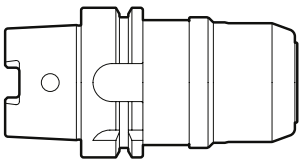
Fig. 2

Model	Article No.	Fig.	Ød	ØD	ØD1	A	L	E	E1	G
CPG20-10	101352.001.0	1	10	20	26	3.3	62	38	19	M12×P1.25
CPG20-12	101352.002.0	1	12	20	26	3.3	62	38	19	M12×P1.25
CPG20-16	101352.003.0	2	16	20	24	3	62	38	19	M12×P1.25

1. Joint screw and joint adapter (depending on the models) are required. Please refer to the table of the corresponding models.
2. 2 pieces of key grip and a spring are included
3. E1 is the distance between the centre of the key grip and the top of the PG collet.

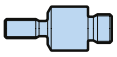
Assembling Overview

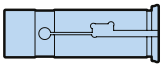
Join Adaptor
(Required for some HSK models)



MEGA Double Power Chuck
HiPower Milling Chuck

Join Screw

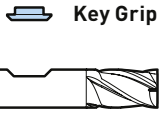




CPG collet

Spring

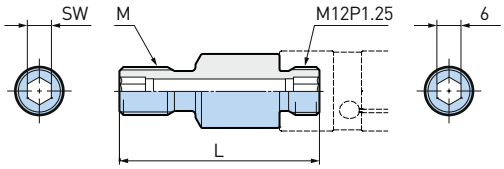
Key Grip



Weldon cutting tool

Joint Screw / Joint Adaptor

Joint Screw



Joint Adaptor

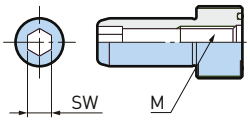


Fig. 1

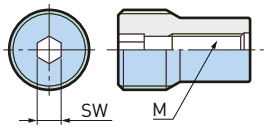
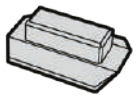


Fig. 2

Applicable tool holder			Joint Screw			Joint Adaptor			
Interface	Chuck	L	Model	Article No.	SW	Model	Article No.	Fig.	SW
(B) BT40 (B) BT50 (B) DV40 (B) DV50	MEGA Double Power chuck (MEGA20D, MEGA20DS) Hi Power Milling Chuck HMC20 HMC20S	75~300	JS-M16	101357.005.0	6	-	-	-	-
HSK-A63		90	JS-M8S	101357.002.0	4	HSK63-CP-JA	101358.002.0	1	6
		105	JS-M8	101357.001.0					
		120,135				•	•	-	-
		165	JS-M16	101357.005.0	6	•	•	-	-
HSK-A100		105	JS-M11	101357.003.0	6	HSK100-CP-JA	101358.001.0	1	8
		135	JS-M12	101357.004.0		•	•	-	-
		165	JS-M16	101357.005.0		•	•	-	-
HSK-A125		135	JS-M12	101357.004.0	6	•	•	-	-
		165	JS-M16	101357.005.0		•	•	-	-
C6		75	JS-M20	-	6	*	-	-	-
		90	JS-M8S	-	4	C6-JA *	-	2	6
		105	JS-M8	-					
		120,135	JS-M16	-	6	•	-	-	-
C8		75	JS-M20	-	6	*	-	-	-
		135,165	JS-M16	-		•	-		

1. HSK63-CP-JA and HSK-A100-CP-JA can be used as coolant pipe
2. • models can use standard Coolant Pipe. Please order separately.
3. Hexagon wrench is not included
4. CPG collet can be used only for above Chuck. (Not applicable for MEGA Perfect Grip)
5. For BIG CAPTO, please contact BIG DAISHOWA.

Key Grip



For MEGA Perfect Grip and PG Straight Collet.

Model	Article No.	MEGA Perfect Grip	CPG collet
PKG10-2P	101353.001.0	-	CPG20-10
PKG12-2P	101353.002.0	-	CPG20-12
PKG16-2P	101353.003.0	MEGA16DPG	CPG20-16
PKG20-2P	805.493	MEGA20DPG	-
PKG25-2P	805.494	MEGA25DPG	-
PKG32-2P	805.495	MEGA32DPG	-

1. Key Grip is included in a package of MEGA Perfect Grip and PG Straight Collet.

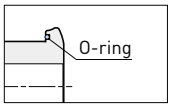
Spring

For MEGA Perfect Grip and PG Straight Collet.

Model	Article No.	MEGA Perfect Grip	CPG collet
PSP0921	101354.001.0	-	CPG20-10
PSP1117	101354.002.0	-	CPG20-12
PSP1519	101354.003.0	MEGA16DPG	CPG20-16
PSP1823	805.497	MEGA20DPG	-
PSP2420	805.498	MEGA25DPG	-
PSP3128	805.499	MEGA32DPG	-

1. Spring is included in a package of MEGA Perfect Grip and PG Straight Collet.

O-Ring Set



For PJC, PSC and PG straight collet.

Model	Article No.	PJC collet	PSC collet	CPG collet
PJC12DOR-2PS	101256.001.0	PJC12D	-	-
PJC16OR-2P	101256.002.0	PJC16	-	-
PJC20OR-2P	101256.003.0	PJC20	PSC20	CPG20*
PJC25OR-2P	101256.004.0	PJC25	-	-
PJC32OR-2P	101256.005.0	PJC32	PSC32	-
PJC42OR-2P	101256.006.0	PJC42	-	-

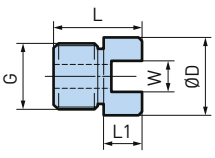
1. *Applicable only for CPG20-10 and -12.

Collet Hook

For removing all straight collets.

Model	Article No.
SCH	101143.001.0

Adjusting Screws HMA



For MEGA Double Power Chuck and New Hi-Power Milling Chuck

Model	Article No.	ØD	L	L1	G	W	Body	
							MEGA Double Power Chuck	New Hi-Power Milling Chuck
HMA-M16S	962.312	19	27	6	M16P1.5	10	MEGA20D/DS MEGA25D/DS MEGA32D/DS (BBT30/40, BDV40)	HMC20S/HMC20 HMC25S/HMC25 HMC32S
HMA-M24	962.313	30	36	9.5	M24P1.5	10	MEGA32D/DS (BBT50, BDV50) MEGA42D/DS (BBT50, BDV50) MEGA50D/DS (BBT50)	HMC32 HMC42S HMC42

1. For MEGA16D/DS and HMC16S a commercially available hex socket head screw with M8 can be used.

MEGA Wrenches

For MEGA Micro Chuck, MEGA New Baby Chuck, MEGA E Chuck, MEGA ER Grip, MEGA Double Power Chuck and MEGA Perfect Grip

Model	Article No.	Ød	MEGA Micro Chuck	MEGA New Baby Chuck	MEGA E Chuck	MEGA ER Grip	MEGA Synchro Tapping Holder
MGR10	969.449	10	MEGA3S				
MGR12	969.450	12	MEGA4S				MGT3
MGR14	969.452	14	MEGA6S				
MGR16	969.446	16					MGT6
MGR18	801.705	18	MEGA8S				
MGR20	969.454	20		MEGA6N			
MGR20L	969.447	20					MGT12
MGR25	969.456	25		MEGA8N	MEGA6E		
MGR30	969.458	30		MEGA10N	MEGA8E		
MGR30L	969.448	30				MEGA ER16	MGT20
MGR35	969.460	35		MEGA13N	MEGA10E		
MGR35L	969.460L	35				MEGA ER20	
MGR42	969.462	42		MEGA16N	MEGA13E		
MGR42L	969.462L	42				MEGA ER25	
MGR46	969.465	46		MEGA20N			
MGR50L	969.464L	50				MEGA ER32	
MGR60L	969.468L	60		MEGA25N			

Model	Article No.	Ød	MEGA Double Power Chuck	New Hi-Power Milling Chuck	MEGA Perfect Grip
MGR38L	-	38	MEGA12DS		
MGR42L	969.462L	42	MEGA16D/DS (BBT40/BDV40, HSK-A63/F63)		
MGR43L	100237.001.0	43		HMC16S	
MGR46L	969.465L	46	MEGA16D/DS (BBT30/50/BDV50, HSK-A40/A50/A100/A125)		MEGA16DPG
MGR50L	969.464L	50	MEGA20D/DS (BBT30/40,BDV40 HSK-A50/A63/F63)	HMC20S	
MGR55L	969.467L	55		HMC25S (BBT30)	
MGR59L	807.771	59		HMC25S	
MGR60L	969.468L	60	MEGA20D/DS (BBT50, BDV50, HSK-A100/A125)	HMC20	MEGA20DPG
MGR62L	969.469L	62	MEGA25D/DS (BBT40, BDV40, HSK-A63/F63)	HMC25 HMC32S (BBT30)	
MGR68L	807.255	68		HMC32S	
MGR70L	969.470L	70	MEGA25D/DS (BBT50 / BDV50, HSK-A100/A125)		MEGA25DPG
MGR80L	969.471L	80	MEGA32D/DS (BBT50 / BDV50, HSK-A100/A125)	HMC32	MEGA32DPG
MGR85L	100237.002.0	85		HMC42S	
MGR99L	969.472L	99	MEGA42D/DS	HMC42	

1. FK wrench can also be used for New Hi-Power Milling Chuck.

MEGA Torque Wrench

For MEGA Micro Chuck, MEGA New Baby Chuck, MEGA E Chuck and MEGA Synchro Tapping. With torque limiter.

Model	Article No.	Ød	MEGA Micro Chuck	MEGA New Baby Chuck	MEGA E Chuck	MEGA Synchro Tapping Holder
MGR10TL	805.460	10	MEGA3S	-	-	-
MGR12TL	969.451	12	MEGA4S	-	-	-
MGR12TLS	804.117	12	MEGA4S	-	-	-
MGR14TL	969.453	14	MEGA6S	-	-	-
MGR14TLS	978.379	14	MEGA6S	-	-	-
MGR16TTL	101201.001.0	16	-	-	-	MGT6
MGR18TL	805.553	18	MEGA8S	-	-	-
MGR20TL	969.455	20	-	MEGA6N	-	-
MGR20TLS	804.119	20	-	MEGA6N	-	-
MGR20TTL	101201.002.0	20	-	-	-	MGT12
MGR25TL	969.457	25	-	MEGA8N	MEGA6E	-
MGR25TLS	804.121	25	-	MEGA8N	-	-
MGR30TL	969.459	30	-	MEGA10N	MEGA8E	-
MGR30TLS	807.585	30	-	MEGA10N	-	-
MGR30TTL	101201.003.0	30	-	-	-	MGT20
MGR35TL	969.461	35	-	MEGA13N	MEGA10E	-
MGR42TL	969.463	42	-	MEGA16N	MEGA13E	-
MGR46TL	969.466	46	-	MEGA20N	-	-
MGR60TL	100398.001.0	60	-	MEGA25N	-	-

1. TLS models are recommended to tighten 3 mm or smaller inner diameter collets.

New Baby Wrenches

For New Baby Chuck and MEGA ER Grip

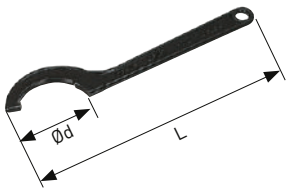
Model	Article No.	Nut Model
NBK6	961.525	NBN6/BPS6/ERN11
NBK6TL	979.980	NBN6/BPS6
NBK6TLS	805.970	NBN6/BPS6
NBK8	961.548	NBN8/BPS8
NBK8TL	801.758	NBN8/BPS8
NBK8TLS	805.971	NBN8/BPS8
NBK10	961.570	NBN10/BPS10/ERN16
NBK10TL	801.756	NBN10/BPS10

Model	Article No.	Nut Model
NBK10TLS	807.586	NBN10/BPS10
NBK13	961.596	NBN13/BPS13/ERN20
NBK13TL	801.757	NBN13/BPS13
NBK16	961.630	NBN16/BPS16/ERN25
NBK16TL	805.969	NBN16/BPS16
NBK20	961.678	NBN20/BPS20
NBK20TL	805.909	NBN20/BPS20

1. TL and TLS models are Torque Wrench versions.
2. TLS models are recommended to tighten 3mm or smaller inner diameter collets.

FK Wrenches

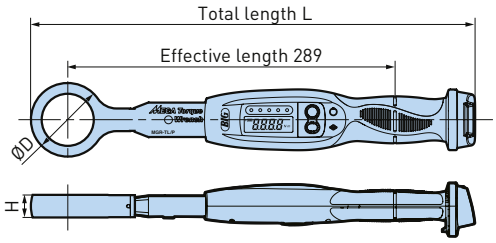
For New Hi-Power Milling Chuck and MEGA ER Grip



Model	Article No.	Ød	L	Body
FK31-33	806.462	31 - 33	153	HMC12J
FK45-50L	801.037	43 - 50	242	HMC16S / HMC20S / ERN32
FK52-55	962.294	52 - 55	220	HMC25S (BBT30)
FK58-62	962.291	58 - 62	240	HMC20 / HMC25 (BBT50 / BDV50)
FK58-62L	801.038	58 - 62	293	HMC25S (BBT40/50 / BDV40/50) / HMC32S (BBT30)
FK68-75L	801.039	68 - 75	319	HMC32S (BBT40/50 / BDV40/50)
FK80-90	962.292	80 - 90	280	HMC32 (BBT50 /BDV50)
FK80-90L	804.771	80 - 90	372	HMC42S
FK92-100	962.293	92 - 100	280	HMC42

Digital MEGA Torque Wrench

Digital torque wrench with interchangeable head specialized for MEGA chuck to manage the tightening torque of collet chucks.



Body

Model	Article No.	Weight (kg)
MGR-TL/P.	807.594	1.50

1. Adapter and Battery are not included.

Adapter

Model	Article No.	Applicable Collet Chuck		L	ØD	H
MGR20A-N	804.118	MEGA6N	-	377	36	16
MGR25A-N	804.120	MEGA8N	MEGA6E	381	44	20
MGR30A-N	804.122	MEGA10N	MEGA8E	384	50	
MGR35A-N	804.123	MEGA13N	MEGA10E	386.5	55	
MGR42A-N	804.124	MEGA16N	MEGA13E	390	62	
MGR46A-N	804.125	MEGA20N	-	392	66	

1. Can only be used for above applicable models (e.g. MEGAER Chuck).

Set

Model	Article No.	Content
SMGR-TL/P.	807.595	1 Body 6 Adapters (each 1 of MGR20-46A-N)

Dedicated storage case
The body (MGR-TL/P.) and the set (SMGR-TL/P.) are delivered in an exclusive case for convenient carrying. Body and 6 adapters can be stored.

Recommended torque

The recommended torque for each collet chuck is set on the main unit for easy operation.

Select the tool name before clamping. (e.g. MEGA6N)

LED torque indicator

When tightening torque is applied, the torque value is displayed on the display panel and the LED indicators light up in real time.

The indicator informs every 20% of the target torque. (e.g. 60% of target torque)

Vibrations and buzzers

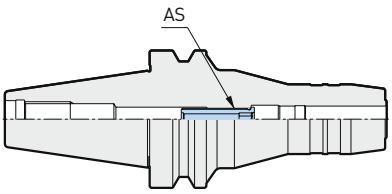
Vibration of the handle and buzzer will notify when tightened to the target torque.

Model	MGR-TL/P
Torque setting range	5-50Nm
Minimum read	0.01Nm
Display	7 LCD segments -> 4 digits, numerical display High precision LED indicator five-level display
Basic functions	Battery level display (three levels) Peak hold function Auto Power OFF (1 hour) Tightening completion alarm -> sound emission and vibrations
Power supply *	2 x LR6 batteries (recommended alkaline batteries/NiMH rechargeable batteries)
Continuous use time	Approx. 70 hours (NiMH rechargeable batteries/tightening condition: 100 times/h)
Operating temperature (recommended range)	0°C - 40°C (15°C - 30°C) Condensation has to be avoided

1. * Batteries are not included.

Adjusting Screws HDA

For Hydraulic Chuck



One side socket type

Model	Article No.
HDA6-05013	803.741
HDA6-05020	803.742
HDA6-05032	803.743
HDA8-06013	803.744
HDA8-06020	803.745
HDA8-06032	803.746
HDA10-08015	803.747
HDA10-08032	803.748
HDA12-10010	803.749
HDA12-10025	803.750
HDA12-10032	803.751
HDA16-12015	803.752
HDA16-12030	802.337
HDA16-12037	803.754
HDA20-16015	803.755
HDA25-16033	803.756
HDA25-16039	803.757

Both side socket type

Model	Article No.
HDA4-05015W	807.254
HDA6-05013W	802.392
HDA6-05020W	802.393
HDA6-05032W	802.394
HDA8-06013W	803.758
HDA8-06020W	803.759
HDA8-06032W	803.760
HDA10-08015W	803.761
HDA10-08032W	803.762
HDA12-10025W	803.763
HDA12-10032W	802.383
HDA16-12015W	802.384
HDA16-12030W	802.385
HDA16-12037W	802.386
HDA20-16015W	802.387
HDA25-16033W	802.388
HDA25-16039W	802.389
HDA6-20010 *	802.390
HDA20-12047 *	802.391

1. Both side hexagon socket type can be adjusted from interface and tool clamping side.
2. * Adjusting Screw and Guide Screw are contained as a set

Grip Bars Type TSB

For confirming the gripping force for Hydraulic Chuck.

Model	Article No.	ØD
TSB3	807.102	3
TSB3.175	-	3.175
TSB4	807.103	4
TSB5	807.104	5
TSB6	804.873	6
TSB7	804.874	7
TSB8	804.875	8
TSB9	804.876	9
TSB10	804.861	10
TSB11	804.862	11
TSB12	804.863	12
TSB13	804.864	13
TSB14	804.865	14
TSB15	804.866	15
TSB16	804.867	16
TSB18	804.868	18
TSB19	807.105	19
TSB20	804.869	20
TSB22	807.106	22
TSB24	807.107	24
TSB25	804.870	25
TSB28	807.108	28
TSB31	807.109	31
TSB32	804.871	32
TSB42	804.872	42

Clamp Bolts

For Face Mill Arbor FMH and Smart Damper FMH type

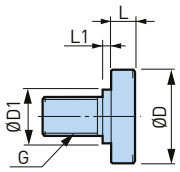


Fig. 1

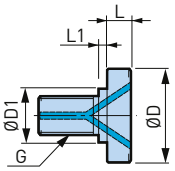


Fig. 2

Model	Article No.	Fig.	ØD	ØD1	L	L1	G
MBA-M12	802.757	1	33	23	10	2	M12
MBA-M12H	802.758	1	33	-	10	-	M12
TMBA-M12	802.767	2	33	23	10	2	M12
MBA-M16	802.759	1	40	23	10	6	M16
MBA-M16H	802.760	1	40	-	10	-	M16
TMBA-M16	802.768	2	40	23	10	6	M16
MBA-M20	802.761	1	50	27	14	6	M20
MBA-M20H	802.762	1	50	-	14	-	M20
TMBA-M20	802.769	2	50	27	14	6	M20

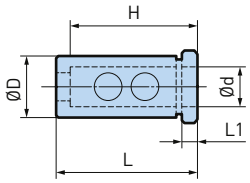
A.8

Hook wrench for Super Keyless Chuck (FS)

Model	Article No.
FS6.5LC	805.532
FS13LC	805.446

Sleeves for Side Lock Holder

For TSL & OSL



Model	Article No.	Ød	ØD	L	L1	H
OSL25-16	962.596	16	25	62	5.5	48
OSL25-20	962.597	20	25	62	5.5	50
OSL32-16	962.586	16	32	66	5.5	48
OSL32-20	962.598	20	32	66	5.5	50
OSL32-25	962.599	25	32	66	5.5	56
OSL40-16	804.678	16	40	76	5.5	48
OSL40-20	804.679	20	40	76	5.5	50
OSL40-25	962.581	25	40	76	5.5	56
OSL40-32	962.582	32	40	76	5.5	60

A.8

Sleeve for BSL Boring Bar Holders

For BSL

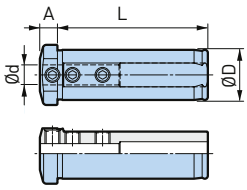


Fig. 1

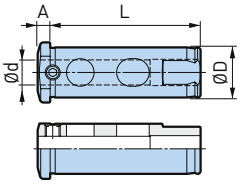


Fig. 2

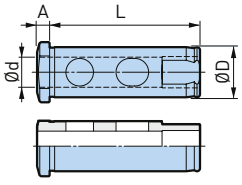


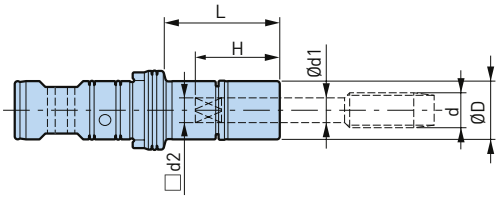
Fig. 3

Model	Article No.	Fig.	Ød	ØD	L	A
BSLA20-6	805.728	1	6	20	60	5
BSLA20-8	805.733	1	8	20	60	7
BSLA20-10	805.734	2	10	20	60	5
BSLA20-12	805.735	3	12	20	60	5
BSLA20-16	805.736	3	16	20	60	5
BSLA32-10	805.737	1	10	32	75	9
BSLA32-12	805.738	1	12	32	75	9
BSLA32-16	805.739	2	16	32	75	6
BSLA32-20	805.740	3	20	32	75	6
BSLA32-25	100602.005.0	3	25	32	75	6
BSLA40-16	100602.001.0	1	16	40	94	6
BSLA40-20	100602.002.0	3	20	40	94	6
BSLA40-25	100602.003.0	3	25	40	94	6
BSLA40-32	100602.004.0	3	32	40	94	6

Tap Holders for MEGA Synchro Tapping Holder DIN

Tap Holders MGT6

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



MGT6 (Tap size DIN: M3 - M8; ISO: M3 - M5)

Model	Article No.	Tap Size d DIN 371	Tap Size d DIN 376	Tap Size d ISO 529	Ød1	□d2	ØD	L	H	Weight (kg)
MGT6-031025-30	963.611	-	-	M3	3.15	2.5	16	30	20	0.12
MGT6-031025-70	963.612	-	-	M3	3.15	2.5	16	70	20	0.18
MGT6-031025-100	963.613	-	-	M3	3.15	2.5	16	100	20	0.22
MGT6-031025-150	963.614	-	-	M3	3.15	2.5	16	150	20	0.30
MGT6-035027-30	963.615	M3	M5	-	3.5	2.7	16	30	21	0.12
MGT6-035027-70	963.616	M3	M5	-	3.5	2.7	16	70	21	0.18
MGT6-035027-100	963.617	M3	M5	-	3.5	2.7	16	100	21	0.23
MGT6-035027-150	963.618	M3	M5	-	3.5	2.7	16	150	21	0.30
MGT6-040032-30	963.619	-	-	M4	4	3.15	16	30	21	0.12
MGT6-040032-70	963.620	-	-	M4	4	3.15	16	70	21	0.18
MGT6-040032-100	963.621	-	-	M4	4	3.15	16	100	21	0.22
MGT6-040032-150	963.622	-	-	M4	4	3.15	16	150	21	0.30
MGT6-045034-30	963.623	M4	M6	-	4.5	3.4	16	30	21	0.11
MGT6-045034-70	963.624	M4	M6	-	4.5	3.4	16	70	21	0.18
MGT6-045034-100	963.625	M4	M6	-	4.5	3.4	16	100	21	0.22
MGT6-045034-150	963.626	M4	M6	-	4.5	3.4	16	150	21	0.30
MGT6-050040-30	963.627	-	-	M5	5	4.0	16	30	25	0.11
MGT6-050040-70	963.628	-	-	M5	5	4.0	16	70	25	0.17
MGT6-050040-100	963.629	-	-	M5	5	4.0	16	100	25	0.22
MGT6-050040-150	963.630	-	-	M5	5	4.0	16	150	25	0.29
MGT6-050040-200	963.631	-	-	M5	5	4.0	16	200	25	0.36
MGT6-060049-30	963.632	M5, M6	M8	-	6	4.9	16	30	26	0.11
MGT6-060049-70	963.633	M5, M6	M8	-	6	4.9	16	70	26	0.17
MGT6-060049-100	963.634	M5, M6	M8	-	6	4.9	16	100	26	0.21
MGT6-060049-150	963.635	M5, M6	M8	-	6	4.9	16	150	26	0.29
MGT6-060049-200	963.636	M5, M6	M8	-	6	4.9	16	200	26	0.36

1. Nut is included.
2. MEGA wrench is to be ordered separately.

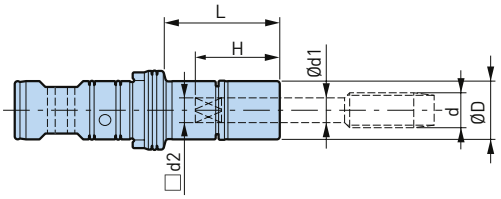
Accessories & Spare Parts

MGT Nuts	MEGA Wrenches
▶ 398	▶ 384

Tap Holders for MEGA Synchro Tapping Holder JIS

Tap Holders MGT6

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



MGT6 (Tap size JIS: M2 - M6)

Model	Article No.	Tap Size d Metric	Tap Size d Unify	Ød1	□d2	ØD	L	H	Weight (kg)
MGT6-M2-30	963.400	M2	Nr. 3;Nr. 4	3	2.5	16	30	19	0.12
MGT6-M2-70	801.481	M2	Nr. 3;Nr. 4	3	2.5	16	70	19	0.18
MGT6-M2-100	801.479	M2	Nr. 3;Nr. 4	3	2.5	16	100	19	0.23
MGT6-M2-150	801.480	M2	Nr. 3;Nr. 4	3	2.5	16	150	19	0.30
MGT6-M3-30	801.484	M3	Nr. 5;Nr. 6	4	3.2	16	30	21	0.12
MGT6-M3-70	801.485	M3	Nr. 5;Nr. 6	4	3.2	16	70	21	0.18
MGT6-M3-100	801.482	M3	Nr. 5;Nr. 6	4	3.2	16	100	21	0.22
MGT6-M3-150	801.483	M3	Nr. 5;Nr. 6	4	3.2	16	150	21	0.30
MGT6-M4-30	801.489	M4	Nr. 8	5	4.0	16	30	25	0.11
MGT6-M4-70	801.490	M4	Nr. 8	5	4.0	16	70	25	0.17
MGT6-M4-100	801.486	M4	Nr. 8	5	4.0	16	100	25	0.22
MGT6-M4-150	801.487	M4	Nr. 8	5	4.0	16	150	25	0.29
MGT6-M4-200	801.488	M4	Nr. 8	5	4.0	16	200	25	0.36
MGT6-M5-30	801.494	M5	Nr. 10;Nr. 12	5.5	4.5	16	30	25	0.11
MGT6-M5-70	801.495	M5	Nr. 10;Nr. 12	5.5	4.5	16	70	25	0.17
MGT6-M5-100	801.491	M5	Nr. 10;Nr. 12	5.5	4.5	16	100	25	0.22
MGT6-M5-150	801.492	M5	Nr. 10;Nr. 12	5.5	4.5	16	150	25	0.29
MGT6-M5-200	801.493	M5	Nr. 10;Nr. 12	5.5	4.5	16	200	25	0.36
MGT6-M6U1/4-30	801.499	M6	U1/4	6	4.5	16	30	25	0.11
MGT6-M6U1/4-70	801.500	M6	U1/4	6	4.5	16	70	25	0.17
MGT6-M6U1/4-100	801.496	M6	U1/4	6	4.5	16	100	25	0.22
MGT6-M6U1/4-150	801.497	M6	U1/4	6	4.5	16	150	25	0.29
MGT6-M6U1/4-200	801.498	M6	U1/4	6	4.5	16	200	25	0.36

1. Nut is included.
2. MEGA wrench is to be ordered separately.

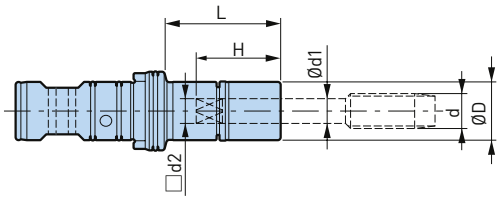
Accessories & Spare Parts

MGT Nuts	MEGA Wrenches
▶ 398	▶ 384

Tap Holders for MEGA Synchro Tapping Holder DIN

Tap Holders MGT12

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



MGT12 (Tap size DIN: M5 - M12; ISO: M6 - M12)

Model	Article No.	Tap Size d DIN 371	Tap Size d DIN 376	Tap Size d ISO 529	Ød1	□d2	ØD	L	H	Weight (kg)
MGT12-060049-30	963.637	M5, M6	M8	-	6	4.9	20	30	28	0.18
MGT12-060049-70	963.638	M5, M6	M8	-	6	4.9	20	70	28	0.28
MGT12-060049-100	963.639	M5, M6	M8	-	6	4.9	20	100	28	0.35
MGT12-060049-150	963.640	M5, M6	M8	-	6	4.9	20	150	28	0.47
MGT12-060049-200	963.641	M5, M6	M8	-	6	4.9	20	200	28	0.59
MGT12-063050-30	963.642	-	-	M6	6.3	5.0	20	30	28	0.18
MGT12-063050-70	963.643	-	-	M6	6.3	5.0	20	70	28	0.28
MGT12-063050-100	963.644	-	-	M6	6.3	5.0	20	100	28	0.35
MGT12-063050-150	963.645	-	-	M6	6.3	5.0	20	150	28	0.47
MGT12-063050-200	963.646	-	-	M6	6.3	5.0	20	200	28	0.58
MGT12-070055-30	963.647	-	M10	-	7	5.5	20	30	28	0.18
MGT12-070055-70	963.648	-	M10	-	7	5.5	20	70	28	0.28
MGT12-070055-100	963.649	-	M10	-	7	5.5	20	100	28	0.35
MGT12-070055-150	963.650	-	M10	-	7	5.5	20	150	28	0.47
MGT12-070055-200	963.651	-	M10	-	7	5.5	20	200	28	0.58
MGT12-080063-30	963.652	M8	-	M8	8	6.3	20	30	29	0.18
MGT12-080063-70	963.653	M8	-	M8	8	6.3	20	70	29	0.27
MGT12-080063-100	963.654	M8	-	M8	8	6.3	20	100	29	0.34
MGT12-080063-150	963.655	M8	-	M8	8	6.3	20	150	29	0.46
MGT12-080063-200	963.656	M8	-	M8	8	6.3	20	200	29	0.58
MGT12-090071-30	963.657	-	M12	M12	9	7.1	20	30	30	0.17
MGT12-090071-70	963.658	-	M12	M12	9	7.1	20	70	30	0.27
MGT12-090071-100	963.659	-	M12	M12	9	7.1	20	100	30	0.33
MGT12-090071-150	963.660	-	M12	M12	9	7.1	20	150	30	0.46
MGT12-090071-200	963.661	-	M12	M12	9	7.1	20	200	30	0.57
MGT12-100080-35	807.211	M10	-	M10	10	8.0	30	35	33	0.26
MGT12-100080-85	807.212	M10	-	M10	10	8.0	30	85	33	0.47
MGT12-100080-115	807.213	M10	-	M10	10	8.0	30	115	33	0.60
MGT12-100080-150	807.214	M10	-	M10	10	8.0	30	150	33	0.75

1. Nut is included.
2. MEGA wrench is to be ordered separately.

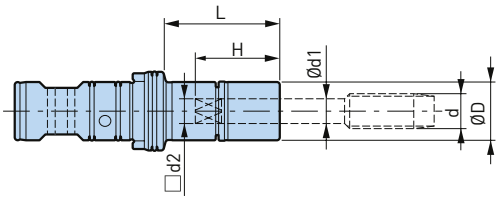
Accessories & Spare Parts

MGT Nuts	MEGA Wrenches
▶ 398	▶ 384

Tap Holders for MEGA Synchro Tapping Holder JIS

Tap Holders MGT12

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



MGT12 (Tap size JIS: M6 - M12)

Model	Article No.	Tap Size d Metric	Tap Size d Pipe	Tap Size d Unify	Ød1	□d2	ØD	L	H	Weight (kg)
MGT12-M6U1/4-30	978.286	M6	-	U1/4	6	4.5	20	30	27	0.18
MGT12-M6U1/4-70	801.415	M6	-	U1/4	6	4.5	20	70	27	0.28
MGT12-M6U1/4-100	801.412	M6	-	U1/4	6	4.5	20	100	27	0.35
MGT12-M6U1/4-150	801.413	M6	-	U1/4	6	4.5	20	150	27	0.47
MGT12-M6U1/4-200	801.414	M6	-	U1/4	6	4.5	20	200	27	0.59
MGT12-U5/16-30	801.424	-	-	U5/16	6.1	5.0	20	30	28	0.18
MGT12-U5/16-70	801.425	-	-	U5/16	6.1	5.0	20	70	28	0.28
MGT12-U5/16-100	801.421	-	-	U5/16	6.1	5.0	20	100	28	0.35
MGT12-U5/16-150	801.422	-	-	U5/16	6.1	5.0	20	150	28	0.46
MGT12-U5/16-200	801.423	-	-	U5/16	6.1	5.0	20	200	28	0.59
MGT12-M8-30	978.287	M8	-	-	6.2	5.0	20	30	28	0.18
MGT12-M8-70	801.419	M8	-	-	6.2	5.0	20	70	28	0.28
MGT12-M8-100	801.416	M8	-	-	6.2	5.0	20	100	28	0.35
MGT12-M8-150	801.417	M8	-	-	6.2	5.0	20	150	28	0.47
MGT12-M8-200	801.418	M8	-	-	6.2	5.0	20	200	28	0.59
MGT12-M10U3/8-30	978.288	M10	-	U3/8	7	5.5	20	30	28	0.18
MGT12-M10U3/8-70	801.408	M10	-	U3/8	7	5.5	20	70	28	0.28
MGT12-M10U3/8-100	801.405	M10	-	U3/8	7	5.5	20	100	28	0.35
MGT12-M10U3/8-150	801.406	M10	-	U3/8	7	5.5	20	150	28	0.47
MGT12-M10U3/8-200	801.407	M10	-	U3/8	7	5.5	20	200	28	0.58
MGT12-U7/16P1/8-30	801.429	-	P1/8	U7/16	8	6.0	20	30	29	0.18
MGT12-U7/16P1/8-70	801.430	-	P1/8	U7/16	8	6.0	20	70	29	0.27
MGT12-U7/16P1/8-100	801.426	-	P1/8	U7/16	8	6.0	20	100	29	0.34
MGT12-U7/16P1/8-150	801.427	-	P1/8	U7/16	8	6.0	20	150	29	0.46
MGT12-U7/16P1/8-200	801.428	-	P1/8	U7/16	8	6.0	20	200	29	0.58
MGT12-M12-30	978.289	M12	-	-	8.5	6.5	20	30	29	0.18
MGT12-M12-70	801.411	M12	-	-	8.5	6.5	20	70	29	0.27
MGT12-M12-100	801.409	M12	-	-	8.5	6.5	20	100	29	0.34
MGT12-M12-150	963.399	M12	-	-	8.5	6.5	20	150	29	0.46
MGT12-M12-200	801.410	M12	-	-	8.5	6.5	20	200	29	0.57

1. Nut is included.
2. MEGA wrench is to be ordered separately.

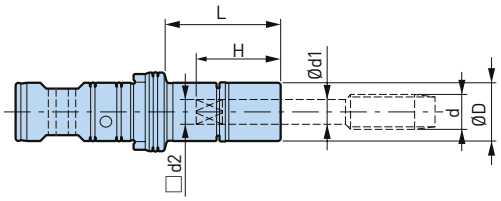
Accessories & Spare Parts

MGT Nuts	MEGA Wrenches
▶ 398	▶ 384

Tap Holders for MEGA Synchro Tapping Holder DIN

Tap Holders MGT20

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



MGT20 (Tap size DIN: M10 - M20; ISO: M10 - M20)

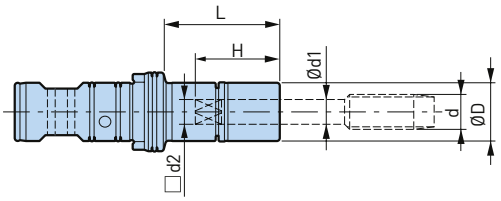
Model	Article No.	Tap Size d DIN 371	Tap Size d DIN 376	Tap Size d ISO 529	Ød1	□d2	ØD	L	H	Weight (kg)
MGT20-090071-35	963.662	-	M12	M12	9	7.1	30	35	30	0.53
MGT20-090071-85	963.663	-	M12	M12	9	7.1	30	85	30	0.80
MGT20-090071-115	963.664	-	M12	M12	9	7.1	30	115	30	0.96
MGT20-090071-150	963.665	-	M12	M12	9	7.1	30	150	30	1.15
MGT20-100080-35	963.666	M10	-	M10	10	8.0	30	35	33	0.52
MGT20-100080-85	963.667	M10	-	M10	10	8.0	30	85	33	0.78
MGT20-100080-115	963.668	M10	-	M10	10	8.0	30	115	33	0.94
MGT20-100080-150	963.669	M10	-	M10	10	8.0	30	150	33	1.10
MGT20-110090-35	963.670	-	M14	-	11	9.0	30	35	34	0.51
MGT20-110090-85	963.671	-	M14	-	11	9.0	30	85	34	0.78
MGT20-110090-115	963.672	-	M14	-	11	9.0	30	115	34	0.93
MGT20-110090-150	963.673	-	M14	-	11	9.0	30	150	34	1.10
MGT20-112090-35	963.674	-	-	M14	11.2	9.0	30	35	34	0.51
MGT20-112090-85	963.675	-	-	M14	11.2	9.0	30	85	34	0.78
MGT20-112090-115	963.676	-	-	M14	11.2	9.0	30	115	34	0.93
MGT20-112090-150	963.677	-	-	M14	11.2	9.0	30	150	34	1.10
MGT20-120090-35	963.678	-	M16	-	12	9.0	30	35	34	0.51
MGT20-120090-85	963.679	-	M16	-	12	9.0	30	85	34	0.77
MGT20-120090-115	963.680	-	M16	-	12	9.0	30	115	34	0.93
MGT20-120090-150	963.681	-	M16	-	12	9.0	30	150	34	1.10
MGT20-125100-35	963.682	-	-	M16	12.5	10.0	30	35	35	0.51
MGT20-125100-85	963.683	-	-	M16	12.5	10.0	30	85	35	0.76
MGT20-125100-115	963.684	-	-	M16	12.5	10.0	30	115	35	0.92
MGT20-125100-150	963.685	-	-	M16	12.5	10.0	30	150	35	1.10
MGT20-140110-35	963.686	-	M18	-	14	11.0	30	35	36	0.50
MGT20-140110-85	963.687	-	M18	-	14	11.0	30	85	36	0.75
MGT20-140110-115	963.688	-	M18	-	14	11.0	30	115	36	0.91
MGT20-140110-150	963.689	-	M18	-	14	11.0	30	150	36	1.05
MGT20-140112-35	963.690	-	-	M18, M20	14	11.2	30	35	36	0.50
MGT20-140112-85	963.691	-	-	M18, M20	14	11.2	30	85	36	0.75
MGT20-140112-115	963.692	-	-	M18, M20	14	11.2	30	115	36	0.91
MGT20-140112-150	963.693	-	-	M18, M20	14	11.2	30	150	36	1.08
MGT20-160120-35	805.173	-	M20	-	16	12.0	30	35	37	0.48
MGT20-160120-150	805.172	-	M20	-	16	12.0	30	150	37	1.04

1. Nut is included.
2. MEGA wrench is to be ordered separately.

Tap Holders for MEGA Synchro Tapping Holder JIS

Tap Holders MGT20

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



MGT20 (Tap size JIS: M12 - M20)

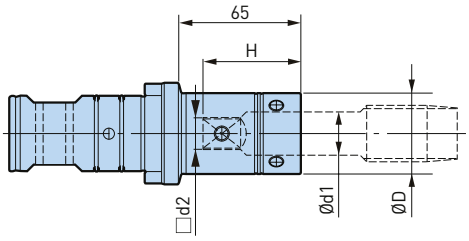
Model	Article No.	Tap Size d Metric	Tap Size d Pipe	Tap Size d Unify	Ød1	□d2	ØD	L	H	Weight (kg)
MGT20-M12-35	801.433	M12	-	-	8.5	6.5	30	35	29	0.53
MGT20-M12-85	801.434	M12	-	-	8.5	6.5	30	85	29	0.80
MGT20-M12-115	801.431	M12	-	-	8.5	6.5	30	115	29	0.96
MGT20-M12-150	801.432	M12	-	-	8.5	6.5	30	150	29	1.14
MGT20-U1/2-35	801.460	-	-	U1/2	9	7.0	30	35	30	0.53
MGT20-U1/2-85	801.461	-	-	U1/2	9	7.0	30	85	30	0.80
MGT20-U1/2-115	804.130	-	-	U1/2	9	7.0	30	115	30	0.97
MGT20-U1/2-150	804.128	-	-	U1/2	9	7.0	30	150	30	1.15
MGT20-M14U9/16-35	801.437	M14	-	U9/16	10.5	8.0	30	35	33	0.52
MGT20-M14U9/16-85	801.438	M14	-	U9/16	10.5	8.0	30	85	33	0.78
MGT20-M14U9/16-115	801.435	M14	-	U9/16	10.5	8.0	30	115	33	0.94
MGT20-M14U9/16-150	801.436	M14	-	U9/16	10.5	8.0	30	150	33	1.15
MGT20-P1/4-35	801.454	-	P1/4	-	11	9.0	30	35	31	0.52
MGT20-P1/4-85	801.455	-	P1/4	-	11	9.0	30	85	31	0.78
MGT20-P1/4-115	801.452	-	P1/4	-	11	9.0	30	115	31	0.94
MGT20-P1/4-150	801.453	-	P1/4	-	11	9.0	30	150	31	1.12
MGT20-U5/8-35	801.462	-	-	U5/8	12	9.0	30	35	34	0.51
MGT20-U5/8-85	801.463	-	-	U5/8	12	9.0	30	85	34	0.78
MGT20-U5/8-115	804.131	-	-	U5/8	12	9.0	30	115	34	0.93
MGT20-U5/8-150	804.129	-	-	U5/8	12	9.0	30	150	34	1.11
MGT20-M16-35	801.441	M16	-	-	12.5	10.0	30	35	35	0.51
MGT20-M16-85	801.442	M16	-	-	12.5	10.0	30	85	35	0.76
MGT20-M16-115	801.439	M16	-	-	12.5	10.0	30	115	35	0.92
MGT20-M16-150	801.440	M16	-	-	12.5	10.0	30	150	35	1.10
MGT20-M18U3/4-35	801.445	M18	-	U3/4	14	11.0	30	35	36	0.50
MGT20-M18U3/4-85	801.446	M18	-	U3/4	14	11.0	30	85	36	0.76
MGT20-M18U3/4-115	801.443	M18	-	U3/4	14	11.0	30	115	36	0.91
MGT20-M18U3/4-150	801.444	M18	-	U3/4	14	11.0	30	150	36	1.08
MGT20-P3/8-35	801.458	-	P3/8	-	14	11.0	30	35	33	0.50
MGT20-P3/8-85	801.459	-	P3/8	-	14	11.0	30	85	33	0.76
MGT20-P3/8-115	801.456	-	P3/8	-	14	11.0	30	115	33	0.91
MGT20-P3/8-150	801.457	-	P3/8	-	14	11.0	30	150	33	1.08
MGT20-M20-35	801.449	M20	-	-	15	12.0	30	35	37	0.49
MGT20-M20-85	801.450	M20	-	-	15	12.0	30	85	37	0.73
MGT20-M20-115	801.447	M20	-	-	15	12.0	30	115	37	0.88
MGT20-M20-150	801.448	M20	-	-	15	12.0	30	150	37	1.04

1. Nut is included.
2. MEGA wrench is to be ordered separately.

Tap Holders for MEGA Synchro Tapping Holder DIN

Tap Holders MGT36

A specially developed system to compensate for synchronisation errors and greatly reduce load during tapping.



MGT36 (Tap size DIN: M22 - M36)

Model	Article No.	Tap Size d DIN 376	Tap Size d DIN 353	Ød1	□d2	ØD	H	Weight (kg)
MGT36-180145-65	805.240	M22, 24	P5/8	18	14.5	38	45	1.40
MGT36-200160-65	805.241	M27	P3/4	20	16.0	40	51	1.40
MGT36-220180-65	805.238	M30	P7/8	22	18.0	42	53	1.40
MGT36-250200-65	805.242	M33	P1	25	20.0	49	58	1.60
MGT36-280220-65	805.239	M36	-	28	22.0	52	62	1.60

A.8

1. Wrench is not required.

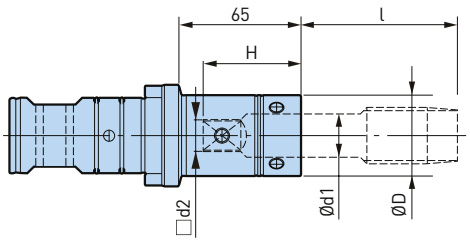
Accessories & Spare Parts

Adjusting Screw for MGT36	Side Lock Bolt Set for MGT36	MGT Set Screw	Synchro Adjuster	O-Ring Set
▶ 399	▶ 399	▶ 398	▶ 398	▶ 398

Tap Holders for MEGA Synchro Tapping Holder JIS

Tap Holders MGT36

A specially developed system to compensate for synchronisation errors and greatly reduce load during tapping.



MGT36 (Tap size JIS: M20 - M36; P1/4, P3/4, P1)

Model	Article No.	Tap Size	Tap Length l	Ød1	□d2	ØD	H	Weight (kg)
MGT36-M20-65	801.465	M20	65 - 68	15	12.0	32	40	1.20
MGT36-M20-150	-	M20	65 - 68	15	12	32	40	1.70
MGT36-M22U7/8-65	801.466	M22,U7/8	71 - 74	17	13	34	44	1.30
MGT36-M22U7/8-150	-	M22,U7/8	71 - 74	17	13	34	44	1.80
MGT36-P1/2-65	801.471	P1/2	38 - 41	18	14.0	35	42	1.30
MGT36-P1/2-150	-	P1/2	38 - 41	18	14	35	42	1.90
MGT36-M24-65	978.330	M24	65 - 68	19	15.0	39	46	1.40
MGT36-M24-150	-	M24	74 - 77	19	15	39	46	2.10
MGT36-M27U1-65	801.467	M27,U1	80 - 83 (M27) / 75 - 78 (U1)	20	15	40	50	1.40
MGT36-M27U1-150	-	M27,U1	80 - 83 (M27) / 75 - 78 (U1)	20	15	40	50	2.20
MGT36-M30-65	801.468	M30	83 - 86	23	17.0	43	52	1.40
MGT36-M30-150	-	M30	83 - 86	23	17	43	52	2.40
MGT36-P3/4-65	801.473	P3/4	38 - 41	23	17.0	43	47	1.40
MGT36-P3/4-150	-	P3/4	38 - 41	23	17	43	47	2.40
MGT36-M33-65	801.469	M33	88 - 91	25	19.0	49	57	1.60
MGT36-M33-150	-	M33	88 - 91	25	19	49	57	2.80
MGT36-P1-65	801.472	P1	49 - 52	26	21.0	50	46	1.60
MGT36-P1-150	-	P1	49 - 52	26	21	50	46	2.90
MGT36-M36-65	978.331	M36	94 - 97	28	21.0	52	61	1.60
MGT36-M36-150	-	M36	94 - 97	28	21	52	61	2.70

1. Wrench is not required.

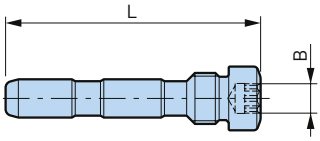
Accessories & Spare Parts

Adjusting Screw for MGT36	Side Lock Bolt Set for MGT36	MGT Set Screw	Synchro Adjuster	O-Ring Set
▶ 399	▶ 399	▶ 398	▶ 398	▶ 398

Accessories for MEGA Synchro Tapping Holder

MGT Set Screw

For MGT6, MGT12, MGT20, MGT36
Hi- tensile material. Secures the tap holder into body.



Model	Article No.	B	L	Body
MGT6SS	963.711	4	35	MGT6
MGT12SS	963.432	4	40	MGT12
MGT20SS	963.713	5	53	MGT20
MGT36SS	801.478	8	92	MGT36

Synchro Adjuster

For MGT6, MGT12, MGT20, MGT36
Replaceable bushing in tap holder.

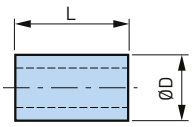


Fig. 1

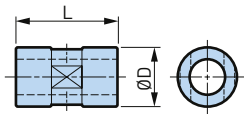


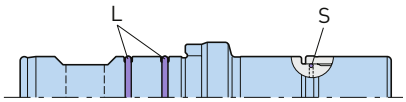
Fig. 2

Model	Article No.	Fig.	ØD	L	Tap Holder
MGT6SA-5P	963.721	1	9	11	MGT 6-d-
MGT12SA-5P	963.722	1	10	15	MGT 12-d-
MGT20SA-5P	963.723	1	14	24	MGT 20-d-
MGT36SA-5P	801.474	1	20	32	MGT 36-d-
MGT6SAH *	807.197	2	9	11	MGT 6-d-
MGT12SAH *	807.198	2	10	15	MGT 12-d-
MGT20SAH *	807.199	2	14	24	MGT 20-d-

1. Set content 5 pieces.
2. Soft type is included in our standard MEGA Synchro tapping holders.
3. * Hard Type, single piece
4. Hard Type is recommendet for eccentric thread relief tap.

O-Ring Set

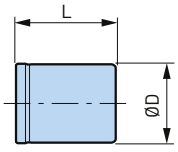
For MGT6, MGT12, MGT20
Set includes 1 small, 2 large size.



Model	Article No.	Nut. Dia	Tap Holder
MGT6OR	801.501	Ø 16	MGT 6-d-
MGT12OR	801.420	Ø 20	MGT 12-d-
MGT20OR	801.451	Ø 30	MGT 20-d-
MGT36OR	801.470	-	MGT 36-d-

MGT Nuts

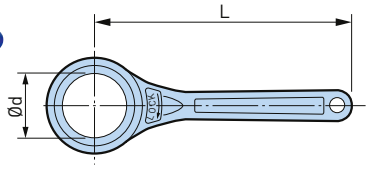
For MGT6, MGT12, MGT20
Exclusive nut for MEGA synchro tapping holder.



Model	Article No.	ØD	L	Tap Holder
MGN6T	963.700	16	19	MGT 6-d-
MGN12T	963.702	20	21	MGT 12-d-
MGN20T	963.703	30	24	MGT 20-d-

MEGA Wrench

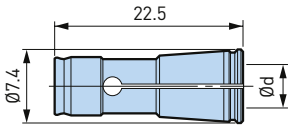
For MGT3, MGT6, MGT12, MGT20



Model	Article No.	Ød	L	Tap Holder
MGR12	969.450	12	90	MGT 3
MGR16	969.446	16	90	MGT 6-d-
MGR20L	969.447	20	160	MGT12-06,-07,-08,-09
MGR30L	969.448	30	220	MGT12-10 / MGT20-d

Micro Collet

For MGT3



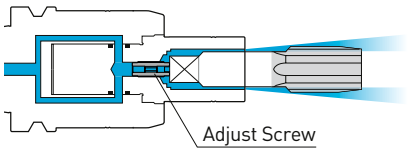
Model	Article No.	Tapping Range			Tap Shank
		DIN 371	ISO 529	JIS	Ød
NBC4S -2.5AA	961.468	M1 - M1.8	M2	-	2.5
-2.8AA	968.353	M2 - M2.6	M2.2, M2.5	-	2.8
-3.0AA	961.470	-	-	M1 - M2.6	3.0
-3.1AA	968.355	-	M3	-	3.15
-3.5AA	961.472	M3	-	-	3.5
-4.0AA	961.474	-	-	M3	4.0

1. Other sizes available. Please refer to micro collet.

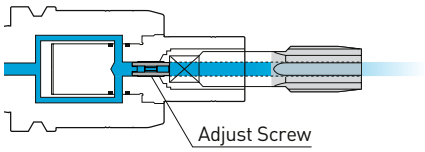
Adjusting Screw for MGT36

Adjustment of tap projection length (Adjustable amount: 3 mm). Coolant supply can be switched by reversing the adjust screw.

Tap without hole



Tap with hole



Model	Article No.	Body
MGT36AJ	801.464	MGT36

Side Lock Bolt Set for MGT36

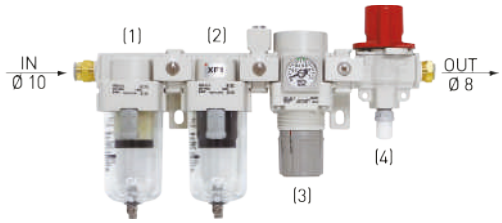
Spare locking screw to clamp a tap.

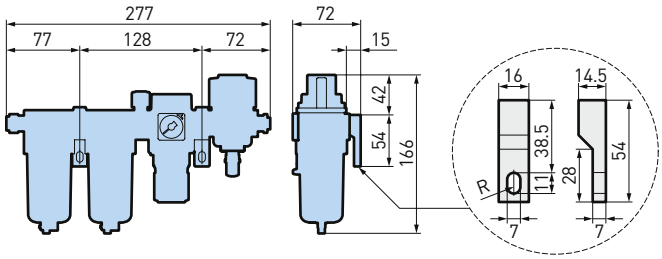
		Tap Holder Model		
Set Model	Article No.	DIN	JIS	Bolt size
MGT36SL6	801.476	-	MGT36-M20-65	M6 x 8L (x4) + M6 x 10L (x2)
		-	MGT36-M22-65	
		-	MGT36-P1/2-65	
MGT36SL8	801.477	MGT36-180145-65	MGT36-M24-65	M8 x 10L (x4) + M8 x 12L (x2)
		MGT36-200160-65	MGT36-M27-65	
		MGT36-220180-65	MGT36-M30-65	
		-	MGT36-P3/4-65	
MGT36SL10	801.475	MGT36-250200-65	MGT36-M33-65	M10 x 12L (x4) + M10 x 14L (x2)
		MGT36-280220-65	MGT36-M36-65	
		-	MGT36-P1-65	

Air Filter Regulator for RBX

Model XF1

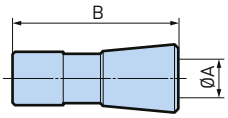
1. Mist separator (filtration: 0,3 μm).
2. Micro mist separator (filtration: 0,01 μm).
3. Precision regulator.
4. Three ports valves for extracting pressurization (non-grease type).





Model	Article No.
XF1	962.661

Collet for Angle Head Small Bore Type



Model	Article No.	ØA	B
CA4-3	804.666	3	16.5
CA4-3.5	804.667	3.5	16.5
CA4-4	804.668	4	16.5
CA6-3	804.669	3	22
CA6-4	804.670	4	22
CA6-5	804.671	5	22
CA6-6	804.672	6	22

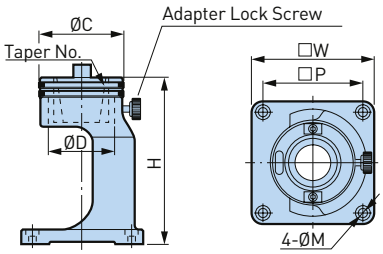
Mold Chuck Clamping Screw

For SSL

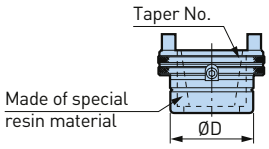
Model	Article No.	Clamping Screw	Contents of Set	Body
H06FSA	978.912	M6 P0.75	4.5mm x 1P, 5mm x 1P	SSL6
H06FSB	802.330	M6 P0.75	4.5mm x 1P, 6mm x 1P	SSL8, 10
H08FSA	979.976	M8 P0.75	6mm x 2P, 8mm x 1P	SSL12
H08FSB	804.783	M8 P0.75	6mm x 1P, 8mm x 1P, 10mm x 1P	SSL16, 20
H0304FS-2P	978.914	M3 P0.5	4mm x 2P	SSL3
H0404FS-2P	801.045	M4 P0.5	4mm x 2P	SSL4

Tooling Mate

For BBT (BT) and BDV (DV)



Replaceable Adapter



Model	Article No.	Taper	ØD	ØC	ØM	H	W	P	Adapter	Weight (kg)
TMS40-20	805.489	ISO20	60	76	7	150	110	90	TMA40-20	2.60
TMS40-30	961.270	BT30 / DV30	60	76	7	150	110	90	TMA40-30	2.50
TMS40-40	961.271	BT40 / DV40	60	76	7	150	110	90	TMA40-40	2.40
TMS50-40	961.272	BT40 / DV40	88	105	9	190	160	130	TMA50-40	6.90
TMS50-50	961.273	BT50 / DV50	88	105	9	190	160	130	TMA50-50	6.00

1. 1 pce. of adapter is included.
2. Adapter can be ordered individually.

Tooling Mate

A.8

For HSK and BIG CAPTO
Innovative "Two-way clutch needle roller clamping system" assures secure clamping.

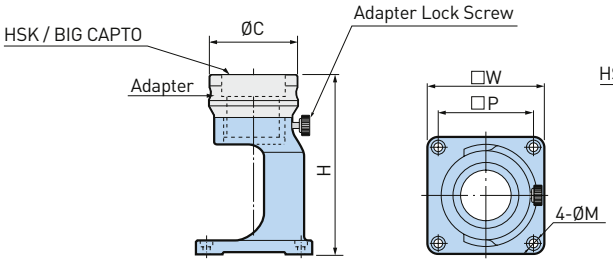


Fig. 1

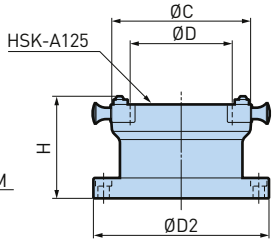
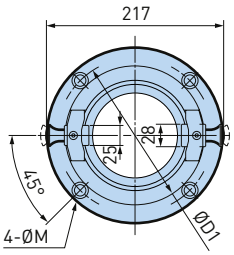


Fig. 2

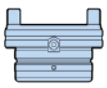


Model	Article No.	Fig.	HSK No.	BIG CAPTO	ØD	ØD1	ØD2	ØC	ØM	H	W	P	Adapter	Weight (kg)
TMS40-32R	961.339	1	32	C3	-	-	-	76	7	165	110	90	TMA40-32R	3.10
TMS40-40R	961.342	1	40	C4	-	-	-	76	7	165	110	90	TMA40-40R	2.50
TMS40-50R	961.346	1	50	C5	-	-	-	76	7	165	110	90	TMA40-50R	2.60
TMS40-63R	961.338	1	63	C6	-	-	-	87	7	172	110	90	TMA40-63R	2.60
TMS50-63R	-	1	63	C6	-	-	-	104	9	205	160	130	TMA50-63R	7.10
TMS50-80R	802.308	1	80	C8	-	-	-	114	9	215	160	130	TMA50-80R	7.30
TMS50-100R	802.307	1	100	-	-	-	-	124	9	219	160	130	TMA50-100R	6.40
TMS-HSK-A125	806.795	2	125	-	125	190	215	170	13	125	-	-	-	10.50

1. 1 pce. of adapter is included.
2. Adapter can be ordered individually.

Accessories & Spare Parts

Tooling Mate / Torque Fit Adapter



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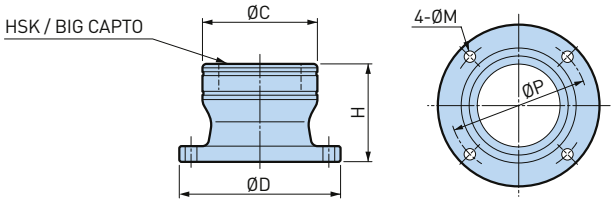
Kombi Grip

For HSK and BIG CAPTO



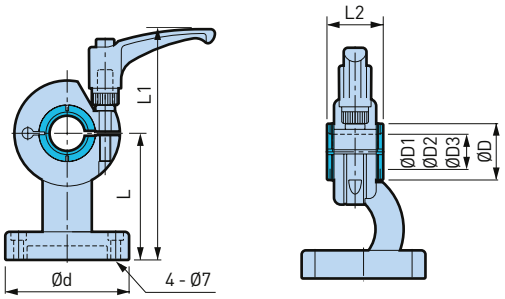
Model	Article No.	HSK No.	BIG CAPTO	ØD	ØP	ØC	ØM	H
KG25R	961.291	25	-	79	62	48	7	65
KG32R	961.292	32	C3	85	69	55	7	65
KG40R	961.293	40	C4	93	77	63	7	70
KG50R	961.294	50	C5	105	89	75	7	70
KG63R	961.295	63	C6	123.5	105,5	88	9	75
KG80R	961.296	80	C8	142	124	107	9	90
KG100R	961.297	100	-	162	124	127	9	100

A.8

1. Mounting screws are not included.

ST Lock

Fixes cylindrical shank tools, ideal for tightening nuts.



Model	Article No.	Ød	ØD	ØD1	ØD2	ØD3	L	L1	L2
STL40	978.037	88	40	20	25	32	90	164	40

1. 20 / 25 / 32mm sleeves are included to clamp cylindrical shank diameters, HSK-E20, HSK-E25 and HSK-E32.

Torque Fit

Tooling fixture with integrated tightening torque measurement.

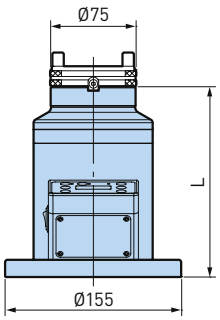


Fig. 1

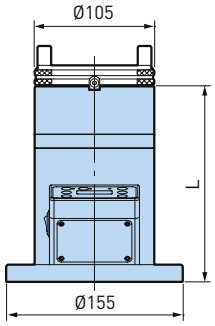
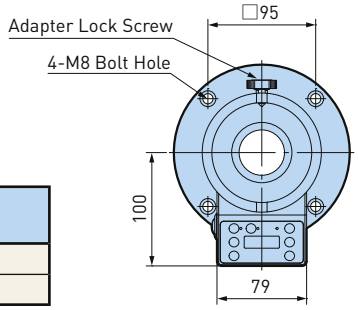


Fig. 2

- Torque values of all BIG collet chucks are presetted.
- Notification by buzzer near the correct torque.
- USER-Mode allows setting of desired torque value.

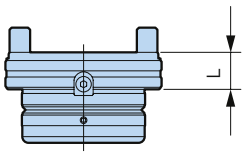


Model	Article No.	Fig.	L	Adapter	Nm range	Input Voltage
TF-40	806.737	1	167	TMA40	4 - 80 Nm	100 - 240V
TF-50	806.738	2	172	TMA50	4 - 80 Nm	100 - 240V

1. Adapter is to be ordered seperately.

Tooling Mate / Torque Fit Adapter

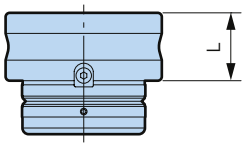
For BT/DV



Model	Article No.	Taper	L
TMA40-20	805.894	ISO20	18
TMA40-30	802.944	BT30 / DV30	18
TMA40-40	802.945	BT40 / DV40	18
TMA50-40	802.942	BT40 / DV40	18
TMA50-50	802.943	BT50 / DV50	18

Tooling Mate / Torque Fit Adapter

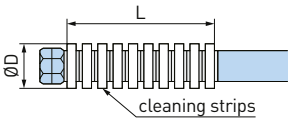
For HSK/BIG CAPTO

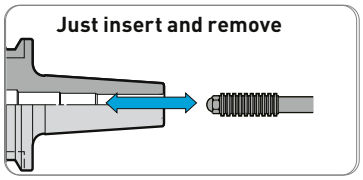


Model	Article No.	HSK No.	BIG CAPTO	L
TMA40-32R	802.948	32	C3	33
TMA40-40R	802.949	40	C4	33
TMA40-50R	802.950	50	C5	33
TMA40-63R	972.331	63	C6	40
TMA50-63R	100487.001.0	63	C6	33
TMA50-80R	802.946	80	C8	43
TMA50-100R	802.947	100	-	47

α Wiper Cleaners

Perfect for Hydraulic Chuck and Shrink Fit Holder
Easy cleaning by simply inserting and removing.



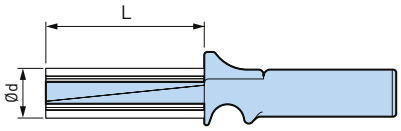


Model	Article No.	ØD	L
AWC3	978.898	3	7
AWC4	978.899	4	7
AWC5	978.900	5	20
AWC6	978.901	6	20
AWC7	802.781	7	20
AWC8	978.902	8	20
AWC9	802.782	9	26
AWC10	978.903	10	26
AWC11	802.783	11	31
AWC12	978.904	12	31

1. ØD is the inner bore of correspondent tool holders.

TK Cleaners

Perfect for Hydraulic Chuck and Milling Chuck Holder
Absolute cleaning of clamping bore by unique "slide" feature.



Model	Article No.	Ød	L	Leather Strips Qty.
TKC13	-	13	60	2
TKC14	802.805	14	60	2
TKC15	-	15	60	2
TKC16	802.807	16	70	2
TKC18	802.808	18	70	2
TKC19	-	19	70	2
TKC20	802.809	20	70	2
TKC22	-	22	80	3
TKC24	-	24	80	3
TKC25	802.810	25	80	3
TKC28	-	28	100	4
TKC31	-	31	100	4
TKC32	802.811	32	100	4
TKC40	802.812	40	105	4
TKC42	978.905	42	105	4

Taper Cleaners

For MEGA Micro Chuck

Model	Article No.	Suitable for model
SC-NBC3S	961.278	MEGA3S
SC-NBC4S	961.279	MEGA4S
SC-NBC6S	961.280	MEGA6S
SC-NBC8S	805.827	MEGA8S

For MEGA E Chuck

Model	Article No.	Suitable for model
SC-MEC6	961.287	MEGA6E
SC-MEC8	961.288	MEGA8E
SC-MEC10	961.289	MEGA10E
SC-MEC13	961.290	MEGA13E

For MEGA New Baby Chuck and New Baby Chuck

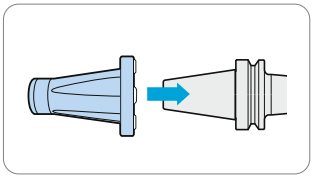
Model	Article No.	Suitable for model
SC-NBC6	961.281	MEGA6N / NBS6
SC-NBC8	961.282	MEGA8N / NBS8
SC-NBC10	961.283	MEGA10N / NBS10
SC-NBC13	961.284	MEGA13N / NBS13
SC-NBC16	961.285	MEGA16N / NBS16
SC-NBC20	961.286	MEGA20N / NBS20

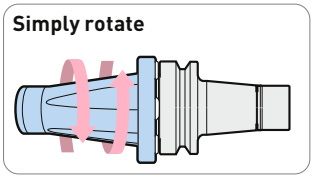
For ER Collet Chuck

Model	Article No.	Suitable for model
SC-MER11	967.810	MEGA ER 11
SC-MER16	967.811	MEGA ER 16
SC-MER20	967.812	MEGA ER 20
SC-MER25	967.813	MEGA ER 25
SC-MER32	967.814	MEGA ER 32

α Tooling Cleaners

For tool shank taper and flange
Particles and oil on both taper and flange of 7/24 taper holder are easily removed.





Model	Article No.	Taper
SCE-30	961.276	ISO 30
SCE-40	961.277	ISO 40

Spindle Cleaners

For machine spindle

Easy cleaning of oil or particles from the machine spindle.

A.8

For ISO taper spindle

Model	Article No.	Taper
SC20	804.945	ISO 20
SC30	802.791	ISO 30
SC40	802.793	ISO 40
SC45	802.794	ISO 45
SC50	802.796	ISO 50

For Morse taper spindle

Model	Article No.	Taper
SC1	802.788	MT1
SC2	802.789	MT2
SC3	802.790	MT3
SC4	802.792	MT4
SC5	802.795	MT5
SC6	802.797	MT6

For HSK-A spindle

Model	Article No.	Taper
SC-HSK32	802.799	HSK-A32
SC-HSK40	979.997	HSK-A40
SC-HSK50	802.800	HSK-A50
SC-HSK63	802.802	HSK-A63
SC-HSK80	802.803	HSK-A80
SC-HSK100	802.798	HSK-A100
SC-HSK125	-	HSK-A125

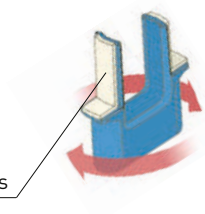
For HSK-E spindle

Model	Article No.	Taper
SC-HSK25E	979.995	HSK-E25
SC-HSK32E	979.996	HSK-E32
SC-HSK40E	979.998	HSK-E40
SC-HSK50E	802.801	HSK-E50

For HSK-F spindle

Model	Article No.	Taper
SC-HSK63F	-	HSK-F63

Spindle Cleaners

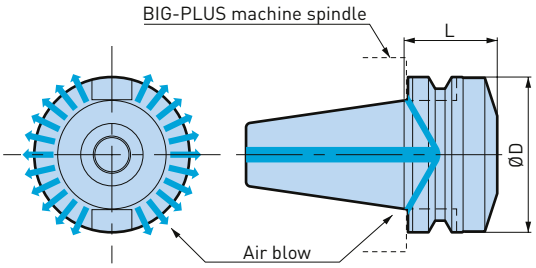


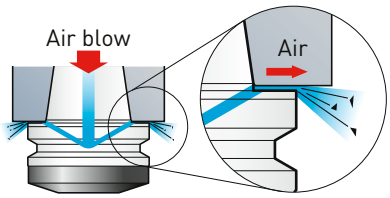
For BIG CAPTO

Model	Article No.	BIG CAPTO
SC-C3	973.194	C3
SC-C4	973.195	C4
SC-C5	973.196	C5
SC-C6	973.197	C6
SC-C8	973.198	C8

Flange Face Cleaner (BBT)

Cleans the spindle flange face.

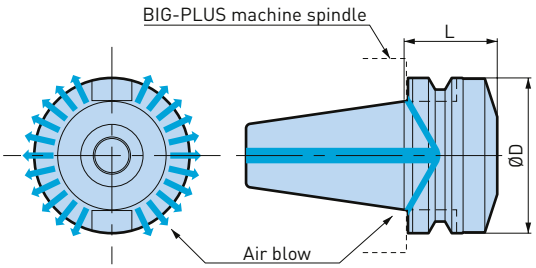


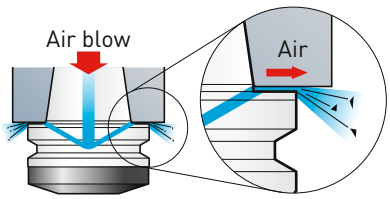


A.8

Model	Article No.	ØD	L
SBT30-ASC-30T	802.777	46	30
SBT40-ASC-40T	802.778	63	40
SBT50-ASC-60T	978.150	100	60

Flange Face Cleaner (BDV)

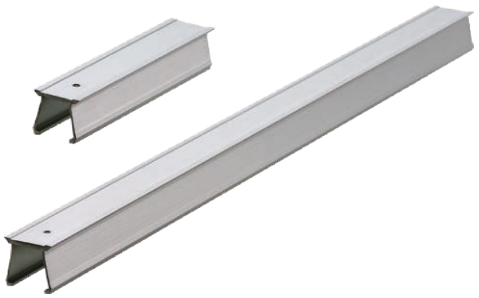




Model	Article No.	ØD	L
SDV40-ASC-40T	805.647	45	40
SDV50-ASC-60T	801.670	70	60

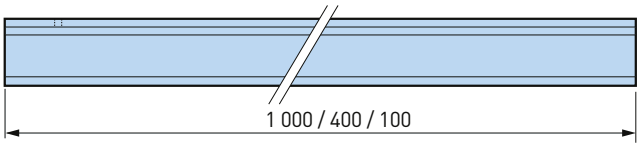
T-Slot Clean

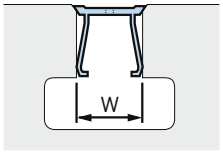
Improve efficiency of table cleaning. No T-slots packed with swarf anymore!



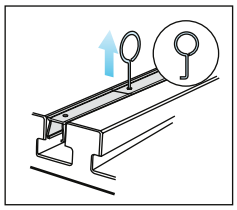
Before

After

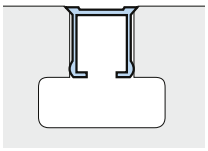




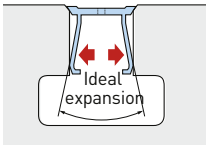
Model	Article No.	W	Contents of Set
TS14-S	961.252	14	400 mm x 4 pieces, 100 mm x 4 pieces, Removal pin x 1 piece
TS18-S	961.253	18	400 mm x 4 pieces, 100 mm x 4 pieces, Removal pin x 1 piece
TS22-S	961.254	22	400 mm x 4 pieces, 100 mm x 4 pieces, Removal pin x 1 piece
TS14-400L-100P	961.255	14	400 mm x 100 pieces, Removal pin x 10 pieces
TS18-400L-100P	961.256	18	400 mm x 100 pieces, Removal pin x 10 pieces
TS22-400L-100P	961.257	22	400 mm x 100 pieces, Removal pin x 10 pieces
TS18-1000L-10P	802.785	18	1000 mm x 10 pieces, Removal pin x 1 piece
TS22-1000L-10P	802.787	22	1000 mm x 10 pieces, Removal pin x 1 piece



Removal pin included



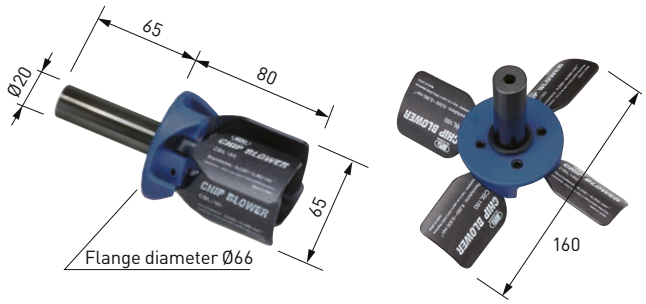
Other manufacturer



BIG DAISHOWA

Due to the uniquely angled shape of the table T-shot contact part, slipout is prevented and chips are completely shut out.

Chip Blower
Ø160 Type



Model	ST20S-CBL160
Startup Spindle Speed * 1	500 min^{-1} (0.5sec) → 1,000 min^{-1} (0.5sec) → 2,000 min^{-1} (0.5sec) →
Recommended Spindle Speed	min. 6,000 - max. 9,000min^{-1}
Rotation Direction	Forward
Distance to the Workpice Surface to be Cleaned (with wing opened to maximum)	100 -150mm
Recommended Movement Feed	3,000 - 10,000 mm/min
Weight (kg)	0.27

A.8

1. The propeller may open during tool change, when it is used in a machining center with an ultra-high speed ATC.

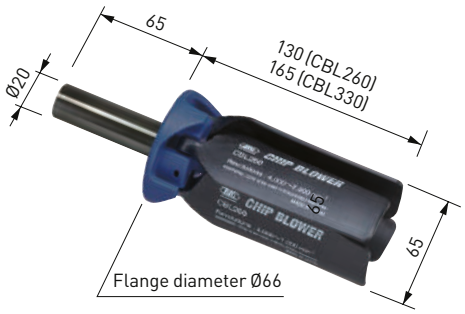
First: High-presure washing with center through

Next: Cleans workpieces and jigs with high Air flow.

When using a chip blower.

The cylindrical shank diameter of the chip blower is 20mm. Use a **NEW BABY CHUCK** or **NEW Hi-POWER MILLING CHUCK** for clamping.

Chip Blower
Ø260 Ø330 Type



Model	ST20S-CBL260	ST20S-CBL330
Startup Spindle Speed * 1	500 min^{-1} (0.5sec) → 1,000 min^{-1} (0.5sec) → 2,000 min^{-1} (0.5sec) →	
Recommended Spindle Speed	min. 4,000 - max. 7,000min^{-1}	min. 3,000 - max. 6,000min^{-1}
Rotation Direction	Forward	
Distance to the Workpice Surface to be Cleaned (with wing opened to maximum)	100 -150mm	
Recommended Movement Feed	3,000 - 10,000 mm/min	
Weight (kg)	0.29	0.30

1. The propeller may open during tool change, when it is used in a machining center with an ultra-high speed ATC.

Caution

- Startup Spindle Speed *1
  In recent high-speed machining centers, the machine spindle rotation rise has become faster.
  A sudden command for spindle speed may create a strong impact on the wing as it opens; therefore,
  be sure to rotate it at the startup speed in the table above before raising it to the designated spindle speed.
- The spindle speed and the distance to the workpiece surface in the above table differ depending
  on the weight of the cutting chips. Be sure to confirm before use.
- The wing may open during ATC when it is used with an ultra-high speed ATC machining center.
- During ATC operation, on machines where the holder passes between the cleaning brushes,
  the wing may catch and be damaged.
- When supplying coolant with center through, be sure to stop the spindle rotation first.
- This product must be used for a machine with a full cover.
  Since wrecked wings and main body may cause an accident, use the product after closing the door to check safety.
- Never modify this product in any way.
- The dedicated spring must be replaced after about 20,000 use cycles.
  Send back the unit for replacement through your supplier.
- Although the wing is made of high-strength carbon fiber reinforced resin, it may be worn out or damaged
  due to the collision of cutting chips or impact when opening/closing. Aging, increasing wear and damage
  may also wreck the main body, and the wings may be snapped and flown out during use.
  Check the appearance of the wings and the main body and damage to the mounting area periodically,
  and replace the wings or the product as needed. Send back the unit for replacement through your supplier.
  Individual wings are not available for sale.

Pullstud Bolts

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 a copy of the pullstud bolt drawing.

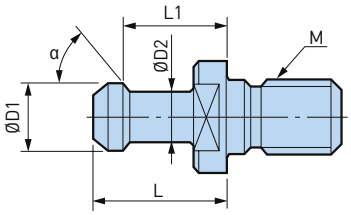


Fig. 1

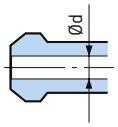


Fig. 2

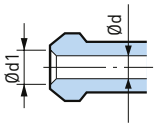


Fig. 3

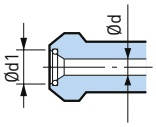


Fig. 4

Model	Article No.	Taper	Fig.	Ød	Ød1	ØD1	ØD2	L	L1	α	standard	Techn. data / special features
30P-1MGH	978.951	ISO 30	2	4	-	11	8	23	18	45	Original	FANUC
30PMG	978.956	ISO 30	1	-	-	12	8	23.4	18.4	75	JIS	JIS BT30
30PMGH	978.972	ISO 30	2	4	-	12	8	23.4	18.4	75	JIS	JIS 30 with bore
30PMGH2	800.450	ISO 30	4	2.5	5.5	12	8	23.4	18.4	75	JIS	YASDA
P30T-1MG	978.978	ISO 30	1	-	-	11	7	23	18	45	MAS-I	MAS-1 BT30
P30T-1MGH	978.953	ISO 30	2	2.5	-	11	7	23	18	45	MAS-I	MAS-1 BT30 with bore
P30T-2MG	978.979	ISO 30	1	-	-	11	7	23	18	60	MAS-II	MAS-2 BT30
P30T-2MGH	801.785	ISO 30	2	2.5	-	11	7	23	18	60	MAS-II	MAS-2 BT30 with bore
P30T-2MGH3	801.787	ISO 30	2	2.5	-	11	7.5	23	18	60	Original	BROTHER
PMO30MG	802.001	ISO 30	4	2.5	6.5	11	7	23	18	45	Original	DMG MORI

Model	Article No.	Taper	Fig.	Ød	Ød1	ØD1	ØD2	L	L1	α	standard	Techn. data / special features
40PMG	800.463	ISO 40	1	-	-	19	14	29	23	75	JIS	JIS BT40
40PMGH	978.954	ISO 40	2	7	-	19	14	29	23	75	JIS	JIS BT40 with hole
40PMGH2	800.464	ISO 40	2	7	-	19	14	29	23	75	JIS	MAKINO (Face side G) *
40PMGH4A	978.955	ISO 40	2	7	-	19	14	29	23	75	JIS	YASDA Ø3 Side bore
40PMGH7	978.958	ISO 40	3	4	5	19	14	29	23	75	JIS	OKUMA (Face side G) *
40PMGH11	978.977	ISO 40	4	7	10	19	14	29	23	75	JIS	YASDA
40PMGH12	805.885	ISO 40	2	5	-	19	14	29	23	75	JIS	MITSUI
MP40MG	801.507	ISO 40	1	-	-	15	10	25	18	90	Original	MITSUI
P40T-1MG	801.807	ISO 40	1	-	-	15	10	35	28	45	MAS-I	MAS-1 BT40
P40T-1MGH1	801.808	ISO 40	3	3.5	5.5	15	10	35	28	45	MAS-I	MAS-2 BT40
P40T-1MGH4	801.810	ISO 40	4	3	7	15	10	35	28	45	MAS-I	OKUMA
P40T-1MGH7	801.812	ISO 40	2	4	-	15	10	35	28	45	MAS-I	MAKINO (Face side G) *
P40T-1MGH11	-	ISO 40	4	3	7.3	15	10	35	28	45	MAS-I	JTEKT
P40T-1MGHA	801.814	ISO 40	2	3	-	15	10	35	28	45	MAS-I	MAS-1 BT40 with bore
P40T-2MG	801.831	ISO 40	1	-	-	15	10	35	28	60	MAS-II	MAS-2 BT40
P40T-2MGH1	801.832	ISO 40	4	3	7	15	10	35	28	60	MAS-II	OKUMA
P40T-2MGH8	801.833	ISO 40	3	3.5	5.5	15	10	35	28	60	MAS-II	MAS-2 BT40 with bore
P40T-2MGHA	801.834	ISO 40	2	3	-	15	10	35	28	60	MAS-II	MAS-2 BT40 with bore
PMO40D	802.004	ISO 40	4	7	10	19	14	26	20	75	Original	DMG MORI with bore
PMO40MG	978.971	ISO 40	4	7	10	19	14	29	23	75	Original	DMG MORI with bore
POM40MG	802.023	ISO 40	1	-	-	15	10	35	28	90	Original	DMG MORI without bore
PVD40B	802.089	ISO 40	2	7	-	19	14	26	20	75	DIN/ISO	DIN 69872 from B/AF
PVD40MG	978.975	ISO 40	2	7	-	19	14	26	20	75	DIN	DIN 69872 from A
PYN40MG	802.112	ISO 40	2	7	-	18.8	12.45	19.11	14.03	45	Original	MAZAK

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.
(Material: X40CrMOV51)

Please scan QR Code for details

For BBT30, BT30

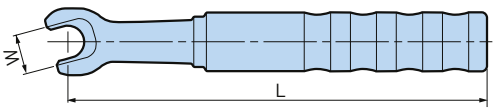
For BBT40, BT40

For BBT50, BT50

Model	Article No.	Taper	Fig.	Ød	Ød1	ØD1	ØD2	L	L1	α	standard	Techn. data / special features
50PH	978.965	ISO 50	2	10	-	28	21	34	25	75	JIS	JIS 50 with bore
50PH2	800.468	ISO 50	2	10	-	28	21	34	25	75	JIS	MAKINO (Face side G) *
50PMGH	800.472	ISO 50	2	10	-	28	21	34	25	75	JIS	JIS 50 with bore
MP50	801.509	ISO 50	1	-	-	24	18	31	23	90	Original	MITSUI
MP50H1	801.517	ISO 50	2	8	-	24	18	31	23	90	Original	MITSUI with bore
P50T-1	961.331	ISO 50	1	-	-	23	17	45	35	45	MAS-I	MAS-1 BT50
P50T-1H	801.860	ISO 50	2	8	-	23	17	45	35	45	MAS-I	MAS-1 BT50 with bore
P50T-1H1	801.861	ISO 50	2	6	-	23	17	45	35	45	MAS-I	MAKINO (Face side G) *
P50T-1H4	801.873	ISO 50	4	6	10.4	23	17	45	35	45	MAS-I	JTEKT
P50T-1H5	961.332	ISO 50	4	5.5	11.2	23	17	45	35	45	MAS-I	YASDA
P50T-1H8	801.876	ISO 50	4	8	11	23	17	45	35	45	MAS-I	DMG MORI (Face G) *
P50T-1H19	801.868	ISO 50	2	4.5	-	23	17	45	35	45	MAS-I	TOSHIBA
P50T-1MG	801.883	ISO 50	1	-	-	23	17	45	35	45	MAS-I	MAS-1 BT50
P50T-1MGH	801.885	ISO 50	2	6	-	23	17	45	35	45	MAS-I	MAS-1 BT50 with bore
P50T-1MGH25	801.889	ISO 50	2	6	7	23	17	45	35	45	MAS-I	OKUMA (Face side G) *
P50T-2	801.898	ISO 50	1	-	-	23	17	45	35	60	MAS-II	MAS-2 BT50
P50T-2H	801.925	ISO 50	2	8	-	23	17	45	35	60	MAS-II	MAS-2 BT50 with bore
P50T-2H4	801.938	ISO 50	4	8	11	23	17	45	35	60	MAS-II	DMG MORI (Face G) *
P50T-2H11	801.927	ISO 50	4	6	9.5	23	17	45	35	60	MAS-II	OKUMA
P50T-2H14	801.929	ISO 50	3	6	7	23	17	45	35	60	MAS-II	OKUMA (Face side G) *
P50T-2H15	801.930	ISO 50	4	6	10.4	23	17	45	35	60	MAS-II	JTEKT
P50T-2H16	801.931	ISO 50	4	5.5	11.2	23	17	45	35	60	MAS-II	YASDA
P50T-2MG	801.942	ISO 50	1	-	-	23	17	45	35	60	MAS-II	MAS-2 BT50
P50T-2MGH14	801.944	ISO 50	3	6	7	23	17	45	35	60	MAS-II	OKUMA (Face side G) *
P50T-2MGH25	801.948	ISO 50	2	6	-	23	17	45	35	60	MAS-II	MAS-2 BT50
POM50	978.967	ISO 50	1	-	-	23	17	45	35	90	Original	DMG MORI
POM50H	961.336	ISO 50	4	8	-	23	17	45	35	90	Original	DMG MORI with bore
POM50H1	961.333	ISO 50	2	8	12.4	23	17	45	35	90	Original	DMG MORI with bore
POM50H8	802.046	ISO 50	2	6	-	23	17	45	35	90	Original	OKK (Face side O) **
PVD50	978.966	ISO 50	2	11.5	-	28	21	34	25	75	DIN/ISO	DIN 69872 from A/AD
PVD50H1	802.097	ISO 50	4	8	11	28	21	34	25	75	DIN	DMG MORI
PYN50-5	802.120	ISO 50	2	10	-	28.83	20.83	25.2	17.58	45	Original	MAZAK (Face side G) *

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.
3. Other sizes are also available. Contact BIG agent for pullstud bolts.
4. * End face was ground for sealing.
5. **End face has O-ring for sealing.

Pullstud Wrenches



Model	Article No.	L	W	Taper Size	Suitable for model
PLW30	805.544	140	13	BBT30 / BT30	30P-, P30T-1, P30T-2, POM30
PLW-40P	805.886	200	19	BBT40 / BT40	40P-
PLW-P40T	805.887	200	19	BBT40 / BT40	P40T-1, P40T-2, POM40-
PLW-PMO40	805.888	200	19	BBT40 / BT40	PMO40-
PLW-PYN40	805.889	200	19	BBT40 / BT40	PYN40-
PLW-P50T	807.473	350	30	BBT50 / BT50	P50T-1, P50T-2, POM50-
PLW-PYN50	807.474	350	30	BBT50 / BT50	PYN50-

Set Up Information

Preparing the Stop Block
The Angle Head utilizes a Locating Pin that engages with the Stop Block, which is mounted to the machine spindle to prevent radial movement of the Angle Head during operation. Therefore, it is necessary to use a Stop Block with the proper dimensions to match the Locating Pin of the Angle Head.

1. Standard Setup of the Locating Pin

"S" Dimension
The distance from the centerline of the Angle Head spindle to the centerline of the Locating Pin.

Fixed Length "A" and "H"
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.

Fixed Length "A" for Angle Head (Fig.1)
This is not adjustable by the customer. If the standard dimensional values shown below are not suitable for your machine,please contact us.

Fixed Length "H" for Air Turbine spindle and High Spindle (Fig.2)
We will deliver a set at the standard 6 mm. Otherwise, This dimension is adjustable by the customer. Four (4) Locating Pin models are available, please contact us.

A.8

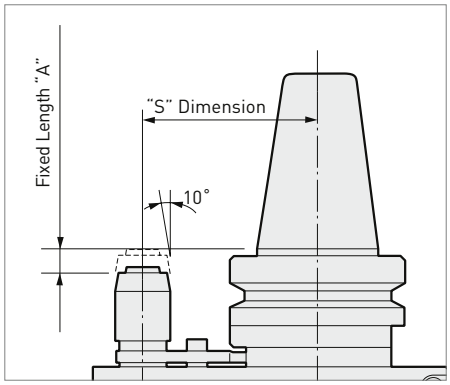


Fig. 1

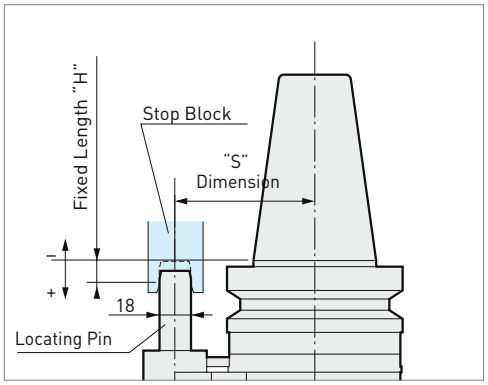


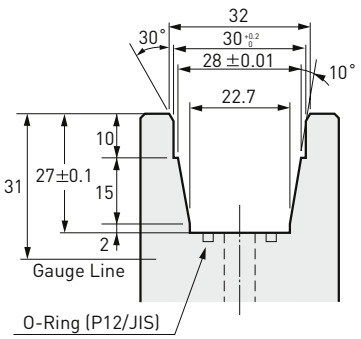
Fig. 2

Standard Dimension	Angle Head Fig. 1		Air Turbine and High Spindle Fig. 2	
	"S"	"A"	"S"	"H"
BDV40 / BBT40 / HSK-A63	65	8	65	6
BDV50 / BBT50 / HSK-A100	80	8	80	6
	110	6		

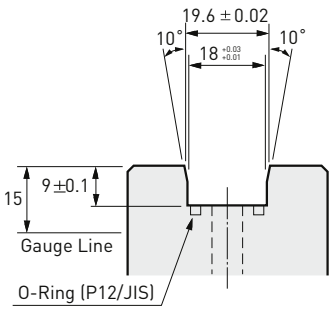
2. Stop Block Dimensions

Please order a Stop Block from the machine tool builder. Refer to the following diagrams for the proper Stop Block groove dimensions.

For "S" = 110 Angle Head



Others



Semi-Finished Stop Blocks

A semi-finished Stop Block has the proper groove form for use with the 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.

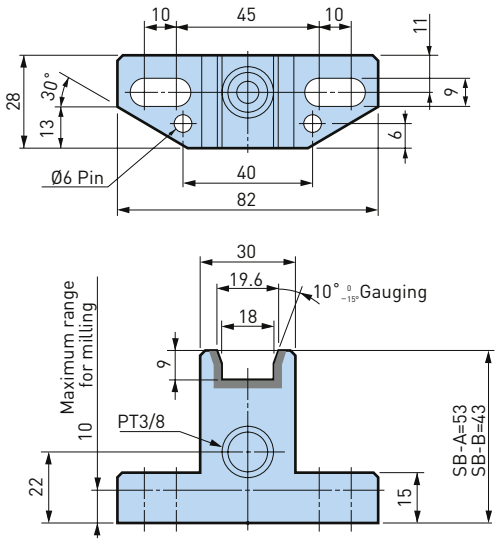


Fig. 1

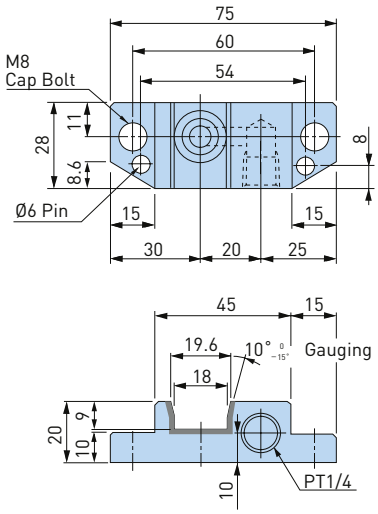


Fig. 2

Model	Article No.	Fig.
SB-A	962.571	1
SB-B	962.572	1
SB-F	962.574	2
SB-G/E	802.329	3

1. "S" is corresponding to previous page.
2. SB-F is not adjustable in height.

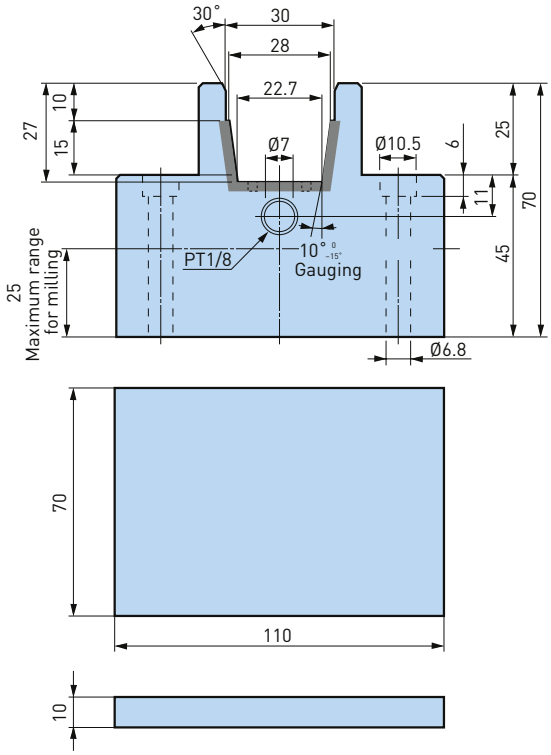


Fig. 3

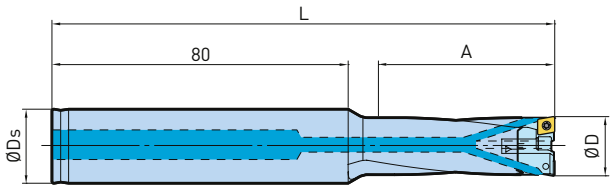
Rough Boring Heads

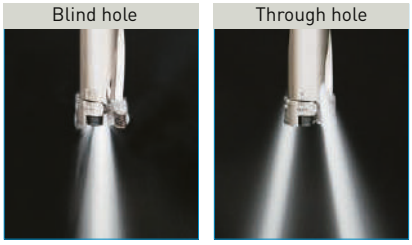
MW Rough Boring Heads	**416**
SW Rough Boring Heads	**417**
SW Cartridge	**419**
SW Smart Damper Rough Boring Heads	**421**
Large Diameter Rough Boring Tools	**423**
Smart Damper Large Diameter Rough Boring Tools	**425**

Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

MW Rough Boring Heads, Ø 16 - 21

The MW rough boring heads permit extremely fast roughing of small holes (Ø 16-21 mm).





Threads for plug screws are prepared in the coolant holes to change the coolant directions.

ØD	Model	Cartridge	ØDs	L	A	Weight (kg)
16 - 19	ST20-MW1619-45	MW1619E	20	136	45	0.24
16 - 19	ST20-MW1619-60	MW1619E	20	151	60	0.26
18 - 21	ST20-MW1821-50	MW1821E	20	141	50	0.26
18 - 21	ST20-MW1821-65	MW1821E	20	156	65	0.28

1. Cartridge models are a 2-piece set.
2. Insert holder is to be ordered separately.

Spare Parts ▶ 490

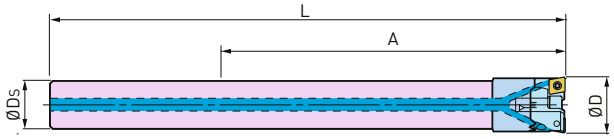
MW BORING HEAD Cutting Conditions Table

Workpiece Material	Cutting speed Vc (m/min)	Feed rate f (mm/rev)	Cutting depth (mm/Ø)
Carbon Steel	130 - 180	0.10 - 0.20	2.0 - 3.0
Stainless Steel	100 - 140	0.15 - 0.25	1.5 - 2.5
Cast Iron	120 - 200	0.10 - 0.30	1.0 - 4.0
Aluminum	180 - 280	0.20 - 0.30	1.5 - 4.0

- Generally for use with center through coolant.
  Cutting speed must be lowered for external oil supply.
- Blind hole processing may damage inserts and tools, as cutting chips clog at the back of the hole.
- Remove cutting chips at the small bottom of the hole several times for processing.

MW Rough Boring Heads, Ø 16 - 21 Carbide

The MW rough boring heads permit extremely fast roughing of small holes (Ø 16-21 mm).



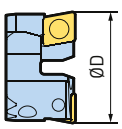
is made of carbide.

ØD	Model	Cartridge	ØDs	L	A	Weight (kg)
16 - 19	ST14W-MW16-110	MW1619E	14	151	110	0.27
18 - 21	ST16W-MW18-115	MW1821E	16	172	115	0.42

1. Cartridge models are a 2-piece set.
2. Insert holder is to be ordered separately.
3. Exclusive use for through holes. Do not use with blind holes.

Spare Parts ▶ 490

Cartridge MW

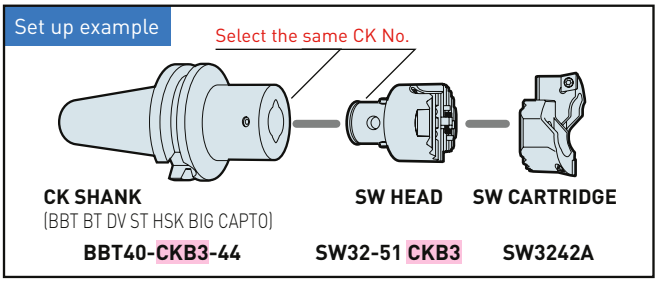


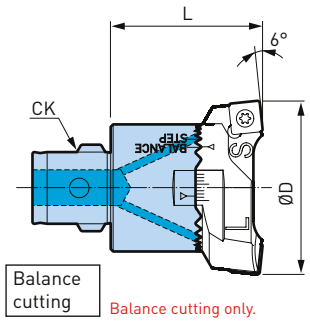
ØD	Model	Insert	Weight (kg)
16 - 19	MW1619E	MW 04	0.01
18 - 21	MW1821E	MW 04	0.01

1. Consisting of two insert holders, clamping screws and wrench.
2. Inserts are to be ordered separately.

▶ 471 ▶ 476

SW Rough Boring Heads, Ø 20 - 203



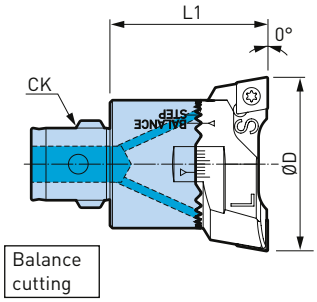


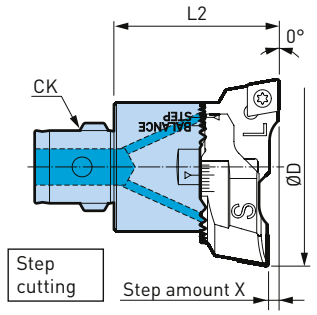
For Type SC

ØD	Head Model	CK	Cartridge	L	Weight (kg)
20 - 26	SW20-31CKB1	CK1	SW2026A	32.5	0.06
25 - 31			SW2531A		
25 - 33	SW25-40CKB2	CK2	SW2533A	35.5	0.10
32 - 40			SW3240A		
32 - 42	SW32-51CKB3	CK3	SW3242A	40	0.17
41 - 51			SW4151A		
41 - 54	SW41-66CKB4	CK4	SW4154A	47	0.33
53 - 66			SW5366A		
53 - 70	SW53-86CKB5	CK5	SW5370A	57	0.59
69 - 86			SW6986A		
68 - 90	SW68-110CKB6	CK6	SW6890A	71	1.20
88 - 110			SW88110A		
98 - 126	SW98-153CKB6	CK6	SW98126A	71	1.85
125 - 153			SW125153A		
98 - 126	SW98-153CKB7	CK7	SW98126A	87	2.95
125 - 153			SW125153A		
148 - 176	SW148-203CKB6	CK6	SW148176A	71	2.40
175 - 203			SW175203A		
148 - 176	SW148-203CKB7	CK7	SW148176A	117	5.20
175 - 203			SW175203A		

1. Cartridges and inserts are to be ordered separately.
2. The diameter range is the value when nose radius 0.4 is used for insert SC/CC06, and nose radius 0.8 for insert SC/CC09 and SC/CC12.

Spare Parts ▶ 490





For Type CC

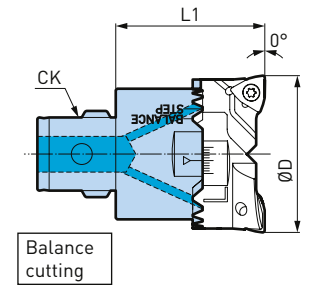
ØD	Head Model	CK	Cartridge	L1	L2	X	Weight (kg)
20 - 26	SW20-31CKB1	CK1	SW2026E	32.5	32.6	0.2	0.06
25 - 31			SW2531E				
25 - 33	SW25-40CKB2	CK2	SW2533E	35.5	35.6		0.10
32 - 40			SW3240E				
32 - 42	SW32-51CKB3	CK3	SW3242E	40	40.1		0.17
41 - 51			SW4151E				
41 - 54	SW41-66CKB4	CK4	SW4154E	47	47.2	0.4	0.33
53 - 66			SW5366E				
53 - 70	SW53-86CKB5	CK5	SW5370E	57	57.2		0.59
69 - 86			SW6986E				
68 - 90	SW68-110CKB6	CK6	SW6890E *	71	71.2		1.20
88 - 110			SW88110E *				
98 - 126	SW98-153CKB6	CK6	SW98126E *	71	71.2		1.85
125 - 153			SW125153E *				
98 - 126	SW98-153CKB7	CK7	SW98126E *	87	87.2		2.95
125 - 153			SW125153E *				
148 - 176	SW148-203CKB6	CK6	SW148176E *	71	71.2		2.40
175 - 203			SW175203E *				
148 - 176	SW148-203CKB7	CK7	SW148176E *	117	117.2		5.20
175 - 203			SW175203E *				

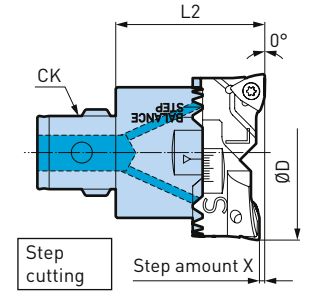
1. Cartridges and inserts are to be ordered separately.
2. The diameter range is the value when nose radius 0.4 is used for insert SC/CC06, and nose radius 0.8 for insert SC/CC09 and SC/CC12.

- Cartridge models with * are also available for longer cutting edge inserts. Change the end of the model number from E to EL when ordering.

Spare Parts ▶ 490

B.1





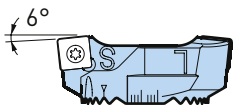
For Type ZN

ØD	Head Model	CK	Cartridge	L1	L2	X	Weight (kg)
32 - 42	SW32-51CKB3	CK3	SW3242N	40	40.1	0.2	0.17
41 - 51			SW4151N				
41 - 54	SW41-66CKB4	CK4	SW4154N	47	47.2	0.4	0.33
53 - 66			SW5366N				
53 - 70	SW53-86CKB5	CK5	SW5370N	57	57.2		0.59
69 - 86			SW6986N				
68 - 90	SW68-110CKB6	CK6	SW6890N	71	71.2		1.20
88 - 110			SW88110N				
98 - 126	SW98-153CKB6	CK6	SW98126N	71	71.2		1.85
125 - 153			SW125153N				
98 - 126	SW98-153CKB7	CK7	SW98126N	87	87.2		2.95
125 - 153			SW125153N				
148 - 176	SW148-203CKB6	CK6	SW148176N	71	71.2		2.40
175 - 203			SW175203N				
148 - 176	SW148-203CKB7	CK7	SW148176N	117	117.2		5.20
175 - 203			SW175203N				

1. Cartridges and inserts are to be ordered separately.
2. The diameter range is the value when nose radius 0.8 is used for insert ZN05, and ZN08.

Spare Parts ▶ 490

SW Cartridge Type SC



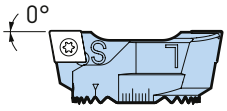
ØD	Cartridge Model	Weight (kg)	Head Model	Insert	Insert Clamping Screw Set
20 - 26	SW2026A	0.02	SW20-31CKB1	SC_0602	S2.5S-7IP
25 - 31	SW2531A	0.02			
25 - 33	SW2533A	0.03	SW25-40CKB2		
32 - 40	SW3240A	0.03			
32 - 42	SW3242A	0.05	SW32-51CKB3	SC_0903	S4S-15IP
41 - 51	SW4151A	0.06			
41 - 54	SW4154A	0.08	SW41-66CKB4		
53 - 66	SW5366A	0.11			
53 - 70	SW5370A	0.17	SW53-86CKB5	SC_1204	S5S-20IP
69 - 86	SW6986A	0.41			
68 - 90	SW6890A	0.24	SW68-110CKB6		
88 - 110	SW88110A	0.53			
98 - 126	SW98126A	0.78	SW98-153CKB6 SW98-153CKB7		
125 - 153	SW125153A	1.06			
148 - 176	SW148176A	1.05	SW148-203CKB6 SW148-203CKB7		
175 - 203	SW175203A	1.28			

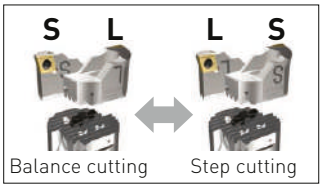
Each Cartridge model consists of a pair of cartridges and an insert clamping wrench.

1. Insert is to be ordered separately.
2. Step cutting is not available.
3. The diameter range is the value when nose radius 0.4 is used for insert SC06, and nose radius 0.8 for insert SC09 and SC12.
4. The insert clamping screw set (optional) contains 10 screws and 1 wrench.

▶ 471 ▶ 476 Spare Parts ▶ 490

SW Cartridge Type CC





Adapted for both balance and step cutting by simple replacement of standard Cartridges.
(for blind holes)

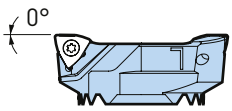
ØD	Cartridge Model	Weight (kg)	Head Model	Insert	Insert Clamping Screw Set
20 - 26	SW2026E	0.02	SW20-31CKB1	CC_0602	S2.5S-7IP
25 - 31	SW2531E	0.02			
25 - 33	SW2533E	0.03	SW25-40CKB2		
32 - 40	SW3240E	0.03			
32 - 42	SW3242E	0.05	SW32-51CKB3	CC_0903	S4S-15IP
41 - 51	SW4151E	0.06			
41 - 54	SW4154E	0.08	SW41-66CKB4		
53 - 66	SW5366E	0.11			
53 - 70	SW5370E	0.17	SW53-86CKB5	CC_1204	S5S-20IP
69 - 86	SW6986E	0.23			
68 - 90	SW6890E	0.41	SW68-110CKB6		
	SW6890EL	0.40		CC_1605	
88 - 110	SW88110E	0.52		CC_1204	
	SW88110EL	0.50		CC_1605	
98 - 126	SW98126E	0.77	SW98-153CKB6 SW98-153CKB7	CC_1204	
	SW98126EL	0.76		CC_1605	
125 - 153	SW125153E	1.05		CC_1204	
	SW125153EL	1.03		CC_1605	
148 - 176	SW148176E	1.05	SW148-203CKB6 SW148-203CKB7	CC_1204	
	SW148176EL	1.05		CC_1605	
175 - 203	SW175203E	1.25		CC_1204	
	SW175203EL	1.25		CC_1605	

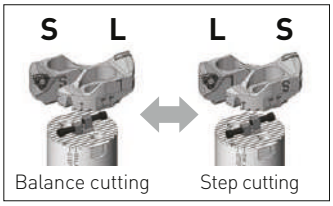
Each Cartridge model consists of a pair of cartridges and an insert clamping wrench.

▶ 472 ▶ 476

1. Insert is to be ordered separately.
2. The diameter range is the value when nose radius 0.4 is used for insert CC06, and nose radius 0.8 for insert CC09 and CC12.
3. The insert clamping screw set (optional) contains 10 screws and 1 wrench.
4. EL type Cartridge with long cutting edge cannot be used with the #30 shank holder.

SW Cartridge Type ZN





Adapted for both balance and step cutting by simple replacement of standard Cartridges.
(for blind holes)

ØD	Cartridge Model	Weight (kg)	Head Model	Insert	Insert Clamping Screw Set
32 - 42	SW3242N	0.05	SW32-51CKB3	ZN05	S2.508S-7IP
41 - 51	SW4151N	0.07			
41 - 54	SW4154N	0.08	SW41-66CKB4		
53 - 66	SW5366N	0.11			
53 - 70	SW5370N	0.18	SW53-86CKB5	ZN08	S412S-15IP
69 - 86	SW6986N	0.20			
68 - 90	SW6890N	0.42	SW68-110CKB6		
88 - 110	SW88110N	0.52			
98 - 126	SW98126N	0.79	SW98-153CKB6		
125 - 153	SW125153N	1.05	SW98-153CKB7		
148 - 176	SW148176N	1.05	SW148-203CKB6		
175 - 203	SW175203N	1.25	SW148-203CKB7		

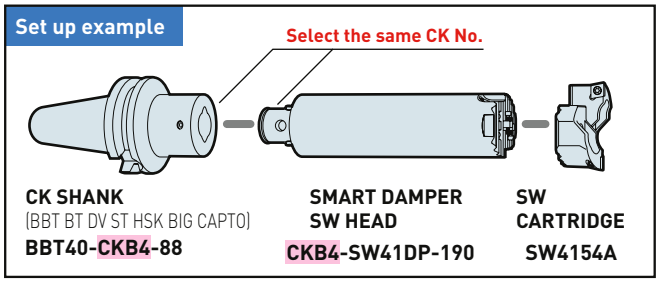
Each Cartridge model consists of a pair of cartridges and an insert clamping wrench.

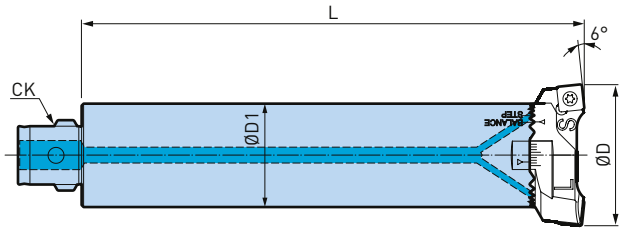
▶ 473 ▶ 476

1. Insert is to be ordered separately.
2. The insert clamping screw set (optional) contains 10 screws and 1 wrench.

SW Smart Damper Rough Boring Heads, Ø 20 - 203

SW rough boring head integrated with the Smart Damper.





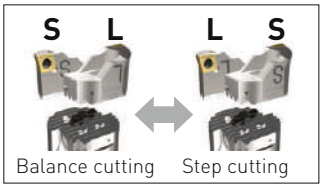
Balance cutting

For Type SC

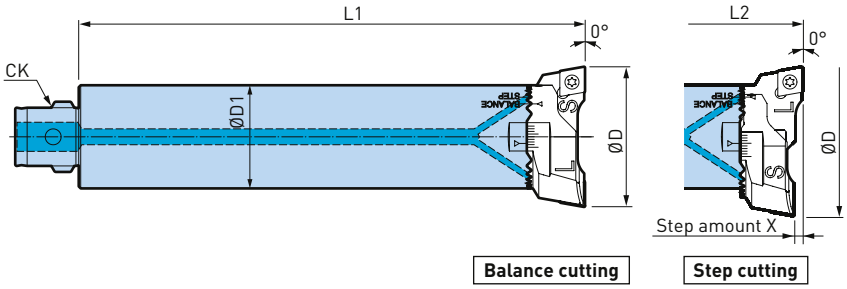
ØD	Head Model	CK	Cartridge Model	Insert Model	ØD1	L	Weight (kg)
20 - 26	CK1-SW20DP-105 *	CK1	SW2026A	SC06	19	105	0.30
25 - 31			SW2531A				
25 - 33	CK2-SW25DP-130 *	CK2	SW2533A		24	130	0.60
32 - 40			SW3240A				
32 - 42	CKB3-SW32DP-170	CK3	SW3242A	SC09	31	170	1.30
41 - 51			SW4151A				
41 - 54	CKB4-SW41DP-190	CK4	SW4154A		39	190	2.40
53 - 66			SW5366A				
53 - 70	CKB5-SW53DP-220	CK5	SW5370A	SC12	50	220	4.50
69 - 86			SW6986A				
68 - 90	CKB6-SW68DP-245	CK6	SW6890A		64	245	8.30
88 - 110			SW88110A				
98 - 126	CKB6-SW98DP-260		SW98126A			260	8.80
125 - 153			SW125153A				
98 - 126	CKB7-SW98DP-260	CK7	SW98126A		90		16.40
125 - 153			SW125153A				
148 - 176	CKB6-SW148DP-260	CK6	SW148176A		64		9.30
175 - 203			SW175203A				
148 - 176	CKB7-SW148DP-260	CK7	SW148176A		90		16.90
175 - 203			SW175203A				

1. Cartridges and inserts are to be ordered separately.
2. Coolant through standard for all the SW heads.
3. The diameter range is the value when nose radius 0.4 is used for insert SC06, and nose radius 0.8 for insert SC09 and SC12.
4. * marked models do not require a CKB pin.

Spare Parts ▶ 490



Adapted for both balance and step cutting by simple replacement of standard cartridges (for blind holes).



For Type CC

ØD	Head Model	CK	Cartridge Model	Insert Model	ØD1	L1	L2	Step Amount X	Weight (kg)
20 - 26	CK1-SW20DP-105 *	CK1	SW2026E	CC06	19	105	105.1	0.2	0.30
25 - 31			SW2531E						
25 - 33	CK2-SW25DP-130 *	CK2	SW2533E		24	130	130.1		0.60
32 - 40			SW3240E						
32 - 42	CKB3-SW32DP-170	CK3	SW3242E	CC09	31	170	170.1		1.30
41 - 51			SW4151E						
41 - 54	CKB4-SW41DP-190	CK4	SW4154E		39	190	190.2	0.4	2.40
53 - 66			SW5366E						
53 - 70	CKB5-SW53DP-220	CK5	SW5370E	CC12	50	220	220.2		4.50
69 - 86			SW6986E						
68 - 90	CKB6-SW68DP-245	CK6	SW6890E		64	245	245.2		8.30
88 - 110			SW88110E						
98 - 126	CKB6-SW98DP-260		SW98126E			260	260.2		8.80
125 - 153			SW125153E						
98 - 126	CKB7-SW98DP-260	CK7	SW98126E		90				16.40
125 - 153			SW125153E						
148 - 176	CKB6-SW148DP-260	CK6	SW148176E		64				9.30
175 - 203			SW175203E						
148 - 176	CKB7-SW148DP-260	CK7	SW148176E		90				16.90
175 - 203			SW175203E						

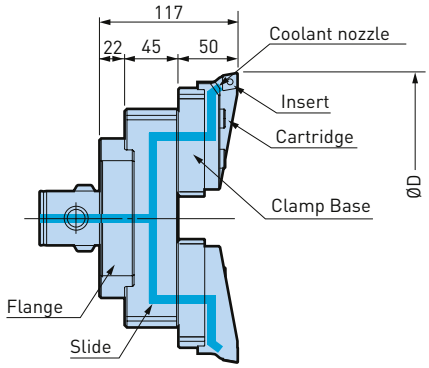
1. Cartridges and inserts are to be ordered separately.
2. The diameter range is the value when nose radius 0.4 is used for insert CC06, and nose radius 0.8 for insert CC09 and CC12.
3. * marked models do not require a CKB pin.

Spare Parts ▶ 490

Large Diameter Rough Boring Tools, Ø 200 - 830

CK7 large-diameter boring series compatible with high-speed.

Each component is securely fastened for safety.
Coolant nozzles for secure coolant supply to the cutting edge.



ØD	Flange (CK7)		Slide		Clamp Base (2-piece set)		Cartridge (2-piece set)		Insert
	Model	Weight (kg)	Model	Weight (kg)	Model	Weight (kg)	Model	Weight (kg)	
200 - 270	FLN135 (FLN135/90)	2.85	SLN200-270	3.99	CB-TW200	1.80	TW200A	0.69	SC12
270 - 340			SLN270-340	5.50					
340 - 410			SLN340-410	7.20					
410 - 480			SLN410-480	8.90					
480 - 550			SLN480-550	10.56					
550 - 620	FLN220 (FLN220/90)	4.74	SLN550-620 *	12.30					
620 - 690			SLN620-690 *	14.00					
690 - 760			SLN690-760 *	15.65					
760 - 830			SLN760-830 *	17.35					
200 - 270	FLN135 (FLN135/90)	2.85	SLN200-270	3.99	CB-TW200	1.80	TW200E	0.69	CC12
270 - 340			SLN270-340	5.50					
340 - 410			SLN340-410	7.20					
410 - 480			SLN410-480	8.90					
480 - 550			SLN480-550	10.56					
550 - 620	FLN220 (FLN220/90)	4.74	SLN550-620 *	12.30					
620 - 690			SLN620-690 *	14.00					
690 - 760			SLN690-760 *	15.65					
760 - 830			SLN760-830 *	17.35					
200 - 270	FLN135 (FLN135/90)	2.85	SLN200-270	3.99	CB-TW200	1.80	TW200EL	0.68	CC16
270 - 340			SLN270-340	5.50					
340 - 410			SLN340-410	7.20					
410 - 480			SLN410-480	8.90					
480 - 550			SLN480-550	10.56					
550 - 620	FLN220 (FLN220/90)	4.74	SLN550-620 *	12.30					
620 - 690			SLN620-690 *	14.00					
690 - 760			SLN690-760 *	15.65					
760 - 830			SLN760-830 *	17.35					

1. Clamp Bases and Cartridges are sold as a two-piece set. The weight in the table is that of 2 pieces.
2. Insert is to be ordered separately.
3. Center through coolant supply is available, except for * marked models.
4. Cutting edge and drive keys are aligned in the same direction.
   (It becomes 90° offset when the FLN135/90 or FLN220/90 flange is used.)

▶ 471, 473
▶ 476
Spare Parts ▶ 493

SQUARE TOOLHOLDER

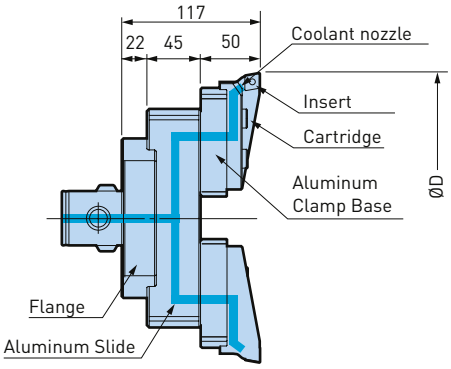
· □25 square tool for lathe is clamped.

Model	Diameter Ø	Slide model	Square size	Weight (kg)
BFN95	250 - 830	SLN200-270(AL) or longer	□25	2.42

1. Square tools are not included.
2. The diameter varies according to the tool and slide used.
3. Use an SLN type slide. Cannot be mounted on the conventional SL type.
4. Slide models with AL at the end are made of aluminum for lighter weight.

Large Diameter Rough Boring Tools, Ø 200 - 830, Type High Speed

Tool weight is reduced by combining an Aluminum Slide and Clamp Base.

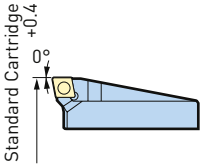


ØD	Flange C K7		Aluminum Slide		Aluminum Clamp Base (2-piece set)		Cartridge (2-piece set)		Insert
	Model	Weight (kg)	Model	Weight (kg)	Model	Weight (kg)	Model	Weight (kg)	
200 - 270	FLN135 (FLN135/90)	2.85	SLN200-270AL	1.50	CB-TW200-AL	0.80	TW200A 6°	0.69	SC12
270 - 340			SLN270-340AL	2.10					
340 - 410			SLN340-410AL	2.70					
410 - 480			SLN410-480AL	3.30					
480 - 550			SLN480-550AL	3.90					
550 - 620	FLN220 (FLN220/90)	4.74	SLN550-620AL *	4.50					
620 - 690			SLN620-690AL *	5.10					
690 - 760			SLN690-760AL *	5.70					
760 - 830			SLN760-830AL *	6.30					
200 - 270	FLN135 (FLN135/90)	2.85	SLN200-270AL	1.50	CB-TW200-AL	0.80	TW200E 0°	0.69	CC12
270 - 340			SLN270-340AL	2.10					
340 - 410			SLN340-410AL	2.70					
410 - 480			SLN410-480AL	3.30					
480 - 550			SLN480-550AL	3.90					
550 - 620	FLN220 (FLN220/90)	4.74	SLN550-620AL *	4.50					
620 - 690			SLN620-690AL *	5.10					
690 - 760			SLN690-760AL *	5.70					
760 - 830			SLN760-830AL *	6.30					
200 - 270	FLN135 (FLN135/90)	2.85	SLN200-270AL	1.50	CB-TW200-AL	0.80	TW200EL 0°	0.68	CC16
270 - 340			SLN270-340AL	2.10					
340 - 410			SLN340-410AL	2.70					
410 - 480			SLN410-480AL	3.30					
480 - 550			SLN480-550AL	3.90					
550 - 620	FLN220 (FLN220/90)	4.74	SLN550-620AL *	4.50					
620 - 690			SLN620-690AL *	5.10					
690 - 760			SLN690-760AL *	5.70					
760 - 830			SLN760-830AL *	6.30					

1. Clamp Bases and Cartridges are sold as a two-piece set. The weight in the table is that of 2 pieces.
2. Insert is to be ordered separately.
3. Center through coolant supply is available, except for * marked models.
4. Cutting edge and drive keys are aligned in the same direction.
   (It becomes 90° offset when the FLN135/90 or FLN220/90 flange is used.)

▶ 471, 473
▶ 476
Spare Parts ▶ 493

E Type Cartridge for Step Cutting



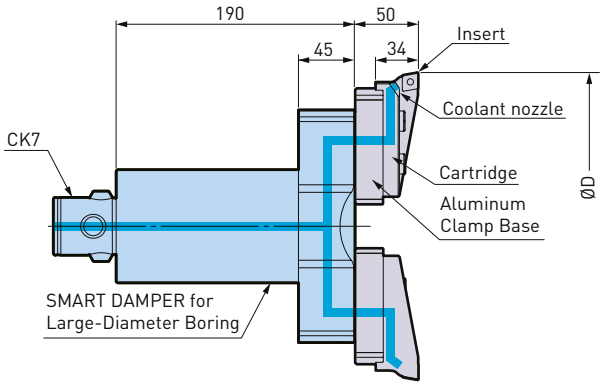
· 0.4mm higher cartridge enables larger depth of cut.

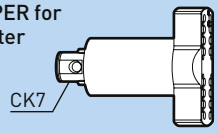
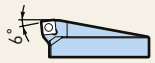
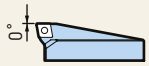
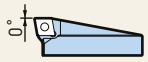
Model	Insert
TW200E-SC	CC12
TW200EL-SC	CC16

Offered by 1 pce.

Smart Damper Large Diameter Rough Boring Tools, Ø 200 - 340

Fusing a lightweight aluminum slide with the built-in damper SMART DAMPER.



ØD	SMART DAMPER for Large-Diameter Boring 		Aluminum Clamp Base (2-piece set)		Cartridge (2-piece set)			Insert
	Model	Weight (kg)	Model	Weight (kg)	Model		Weight (kg)	
200 - 270	CKB7-SLN200ALDP-190	11.90	CB-TW200-AL	0.80	TW200A		0.69	SC12
270 - 340	CKB7-SLN270ALDP-190	12.50			TW200E		0.69	CC12
					TW200EL		0.68	CC16

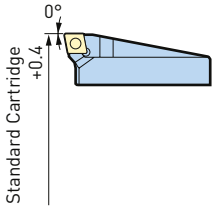
1. Clamp Bases and Cartridges are sold as a two-piece set. The weight in the table is that of 2 pieces.
2. Insert is to be ordered separately.
3. Cutting edge and drive keys are aligned in the same direction.

▶ 471, 473
▶ 476
Spare Parts ▶ 493

B.1

E Type Cartridge for Step Cutting

0.4mm higher cartridge enables larger depth of cut.



Model	Insert
TW200E-SC	CC12
TW200EL-SC	CC16

Offered by 1 pce.

Fine Boring Heads with Peripherical Cutting Edge

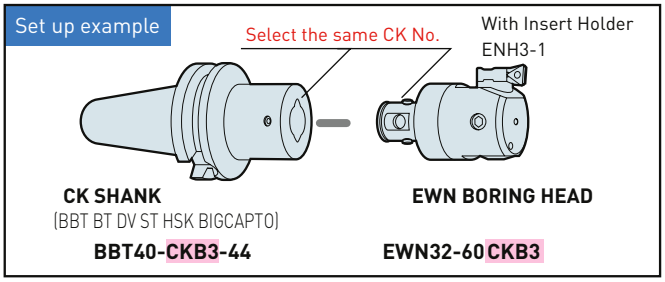
EWN Fine Boring Heads	**428**
EWN Smart Damper Fine Boring Heads	**429**
EWE Digital Fine Boring Heads	**430**
Insert Holders for EWN/EWE	**431**
EWB Balanced Fine Boring Heads	**432**
Large Diameter Fine Boring Tools	**433**
EWN Smart Damper Large Diameter Fine Boring Tools	**435**

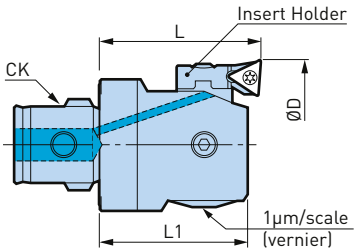
Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

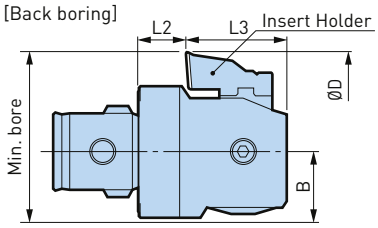
EWN Fine Boring Heads, Ø 20 - 203

2μm vernier is added to the easy-to-read scale of 0.01mm/Ø increments.

The pre-balance design achieves stable machining accuracy.
Back boring available as standard, expanding versatility.







Min. bore = B + (back boring diameter / 2)

Model	CK	Insert Holder	Boring			Back Boring				Weight (kg)	Insert
			ØD	L	L1	ØD	L2	L3	B		
EWN20-36CKB1	CK1	ENH1-1	20 - 26	32.8	29.5	-	-	-	-	0.07	TP08
		ENH1-2	25 - 31	32.5		30 - 31	10.5	19	10		
		ENH1-3	30 - 36			30 - 36					
EWN25-47CKB2	CK2	ENH2-1	25 - 33	35.5	32.5	-	-	-	-	0.12	
		ENH2-2	32 - 40			36 - 40	11.5	21	12.5		
		ENH2-3	39 - 47			39 - 47					
EWN32-60CKB3	CK3	ENH3-1	32 - 42	40	35	-	-	-	-	0.21	
		ENH3-2	41 - 51			46 - 51	10	25	16		
		ENH3-3	50 - 60			50 - 60					
EWN41-74CKB4	CK4	ENH4-1	41 - 54	47	43	-	-	-	-	0.40	TC11
		ENH4-2	50 - 63			53 - 63	14	29	20		
		ENH4-3	61 - 74			61 - 74					
EWN53-95CKB5	CK5	ENH5-1	53 - 70	57	53	62 - 70	19	34	25.5	1.10	
		ENH5-2	65 - 82			69 - 82					
		ENH5-3	78 - 95			78 - 95					
EWN68-150CKB6	CK6	ENH6-1	68 - 100	71	67.2	80 - 100	22	45.2	32.5	1.74	
		ENH6-2	94 - 126			94 - 126					
		ENH6-3	118 - 150			118 - 150					
EWN100-203CKB6	CK6	ENH6-1	100 - 153	71	67.2	112 - 153	22	45.2	45.5	2.46	
		ENH6-2	126 - 179			126 - 179					
		ENH6-3	150 - 203			150 - 203					
EWN100-203CKB7	CK7	ENH6-1	100 - 153	87	83.2	112 - 153	38	45.2	45.5	3.98	
		ENH6-2	126 - 179			126 - 179					
		ENH6-3	150 - 203			150 - 203					

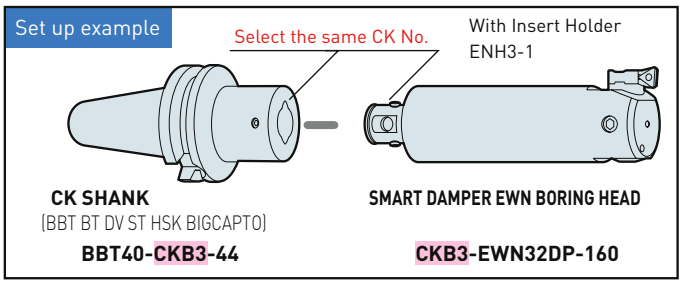
1. The diameter range is the values when nose radius 0.2 is used for insert TP08, and nose radius 0.4 for insert TC11.
2. ENH○-1 Insert Holder is included. ENH○-2 and 3 are to be ordered separately if required.
3. During back boring, the rotation direction will be reversed.
4. Insert is to be ordered separately.

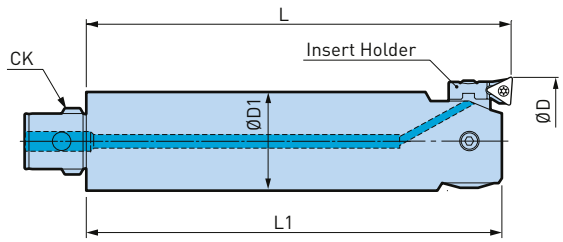
▶ 469, 470 ▶ 476 Spare Parts ▶ 491

EWN Smart Damper Fine Boring Head, Ø 20 - 203

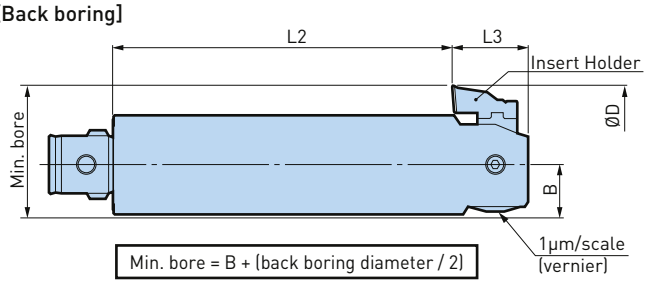
Combination of the popular EWN boring head with the Smart Damper.

New EWN20DP/25DP (CK1/CK2) products with min. diameters starting from Ø20 are now available.
Capable of even deeper hole boring when combined with a low-deflection CK Carbide Cylindrical Shank.





[Back boring]



Model	CK	Insert Holder	Boring			Back Boring				ØD1	Weight (kg)	Insert
			ØD	L	L1	ØD	L2	L3	B			
CK1-EWN20DP-100 *	CK1	ENH1-1	20 - 26	100.3	97	-	-	-	-	19	0.30	TP08
		ENH1-2	25 - 31	100		-	-	-	-			
		ENH1-3	30 - 36			36	78	19	10			
CK2-EWN25DP-125 *	CK2	ENH2-1	25 - 33	125	122	-	-	-	-	24	0.60	
		ENH2-2	32 - 40			-	-	-	-			
		ENH2-3	39 - 47			42 - 47	101	21	12.5			
CKB3-EWN32DP-160	CK3	ENH3-1	32 - 42	160	155	-	-	-	-	31	1.30	
		ENH3-2	41 - 51			-	-	-	-			
		ENH3-3	50 - 60			57 - 60	130	25	16			
CKB4-EWN41DP-185	CK4	ENH4-1	41 - 54	185	181	-	-	-	-	39	2.30	TC11
		ENH4-2	50 - 63			61 - 63	152	29	20			
		ENH4-3	61 - 74			67 - 74						
CKB5-EWN53DP-210	CK5	ENH5-1	53 - 70	210	206	-	-	-	-	50	4.40	
		ENH5-2	65 - 82			74 - 82	172	34	25.5			
		ENH5-3	78 - 95			78 - 95						
CKB6-EWN68DP-240	CK6	ENH6-1	68 - 100	240	236.2	90 - 100	191	45.2	32.5	64	8.30	
		ENH6-2	94 - 126			94 - 126						
		ENH6-3	118 - 150			118 - 150						
CKB6-EWN100DP-240	CK6	ENH6-1	100 - 153	240	236.2	107 - 153	191	45.2	45.5	64	8.80	
		ENH6-2	126 - 179			126 - 179						
		ENH6-3	150 - 203			150 - 203						
CKB7-EWN100DP-240	CK7	ENH6-1	100 - 153	240	236.2	116 - 153	191	45.2	45.5	90	16.40	
		ENH6-2	126 - 179			126 - 179						
		ENH6-3	150 - 203			150 - 203						

1. The diameter range is the values when nose radius 0.2 is used for insert TP08, and radius 0.4 for insert TC11.
2. ENH○-1 Insert Holder is included. ENH○-2 and 3 are to be ordered separately if required.
3. During back boring, the rotation direction will be reversed.
4. Insertis to be ordered separately.
5. * marked models do not require a CKB pin.

▶ 469, 470
▶ 476
Spare Parts ▶ 491

Wide variety of Insert Holders offers versatility.

Example: CKB3-EWN32DP-160

In addition to the products shown to the right, various insert holders for EWN BORING HEAD such as the "Insert Holder to undercut corners" can be used.

Standard Accessory	Optional Accessory	
ENH3-1	ENH3-2	ENH3-3
Ø32 - Ø42	Ø41 - Ø51	Ø50 - Ø60

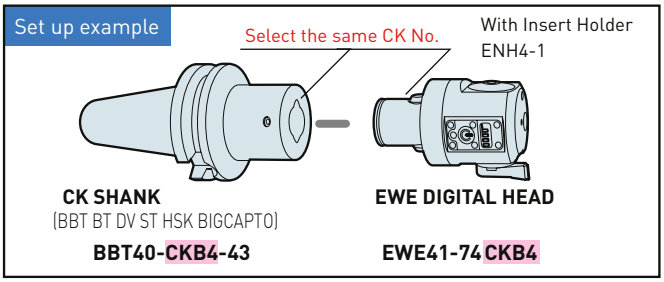
EWE Digital Fine Boring Heads, Ø 41 - 203

The advanced digital boring head born from ultra-precision technology.

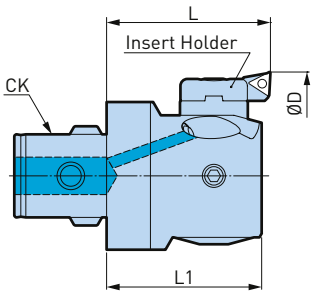
Digital display allows the adjustment amount to be read instantaneously.
Fully waterproof and dustproof structure (IP69K equivalent).

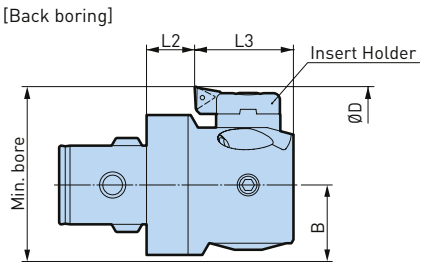
Employs a system that directly measures the stroke of the adjustment tool career. Accurately displays the actual movement amount.

Simple operation that allows ON and zero reset with a single button.



Display Resolution **0.001**mm/Ø





Min. bore = B + (back boring diameter / 2)

B.2

Model	CK	Insert Holder	Boring			Back Boring				Weight (kg)	Insert
			ØD	L	L1	ØD	L2	L3	B		
EWE41-74CKB4	CK4	ENH4-1	41 - 54	47	43	-	-	-	-	0.40	TC11
		ENH4-2	50 - 63			53 - 63	14	29	20		
		ENH4-3	61 - 74			61 - 74					
EWE53-95CKB5	CK5	ENH5-1	53 - 70	57	53	62 - 70	19	34	25.5	0.70	
		ENH5-2	65 - 82			65 - 82					
		ENH5-3	78 - 95			78 - 95					
EWE68-150CKB6	CK6	ENH6-1	68 - 100	71	67.2	80 - 100	22	45.2	32.5	1.70	
		ENH6-2	94 - 126			94 - 126					
		ENH6-3	118 - 150			118 - 150					
EWE100-203CKB6	CK6	ENH6-1	100 - 153	71	67.2	112 - 153	22	45.2	45.5	2.50	
		ENH6-2	126 - 179			126 - 179					
		ENH6-3	150 - 203			150 - 203					
EWE100-203CKB7	CK7	ENH6-1	100 - 153	87	83.2	112 - 153	38	45.2	45.5	4.00	
		ENH6-2	126 - 179			126 - 179					
		ENH6-3	150 - 203			150 - 203					

Battery: CR1025 .... 1 pc (Standard accessory)

1. The diameter range is the values when an insert with nose radius 0.4 is used.
2. ENH○-1 Insert Holder is included. ENH○-2 and 3 are to be ordered separately if required.
3. Insert is to be ordered separately.
4. Center through coolant pressure should not exceed 40 Bars.

▶ 470
▶ 476
Spare Parts ▶ 492

Wide variety of Insert Holders offers versatility.

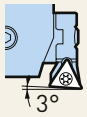
Example: For EWE41-74CKB4

Standard Accessory	Optional Accessory	
ENH4-1	**ENH4-2**	**ENH4-3**
Ø41 - Ø54	Ø50 - Ø63	Ø61 - Ø74

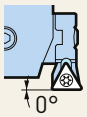
In addition to the above, various insert holders for EWN BORING HEAD such as the "Insert Holder to Undercut Corners" can be used.

Insert Holders for EWN/EWE

Insert Holder Type TP/TC

Model	Figure	Head
ENH1-1	 3° Insert TP08	EWN20-36CKB1
ENH1-2		
ENH1-3		
ENH2-1		EWN25-47CKB2
ENH2-2		
ENH2-3		
ENH3-1		EWN32-60CKB3
ENH3-2		
ENH3-3		
ENH1-1TP07	TP07	EWN20-36CKB1
ENH2-1TP07		EWN25-47CKB2

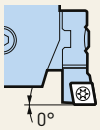
Model	Figure	Head
ENH4-1	3° Insert TC11	EWN41-74CKB4 EWE41-74CKB4
ENH4-2		
ENH4-3		
ENH5-1		EWN53-95CKB5 EWE53-95CKB5
ENH5-2		
ENH5-3		
ENH6-1		EWN68-150CKB6 EWN100-203CKB6(7) EWE68-150CKB6 EWE100-203CKB6(7)
ENH6-2		
ENH6-3		

Model	Figure	Head
ENH4-1E	 0° Insert TC11	EWN41-74CKB4 EWE41-74CKB4
ENH4-2E		
ENH4-3E		
ENH5-1E		EWN53-95CKB5 EWE53-95CKB5
ENH5-2E		
ENH5-3E		
ENH6-1E		EWN68-150CKB6 EWN100-203CKB6(7) EWE68-150CKB6 EWE100-203CKB6(7)
ENH6-2E		
ENH6-3E		

▶ 476

1. Insert is to be ordered separately.

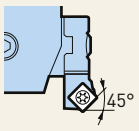
Insert Holder Type CC

Model	Figure	Head	Insert
ENH4-1F	 0°	EWN41-74CKB4 EWE41-74CKB4	CC06
ENH4-2F			
ENH4-3F			
ENH5-1F		EWN53-95CKB5 EWE53-95CKB5	
ENH5-2F			
ENH5-3F			
ENH6-1F		EWN68-150CKB6 EWN100-203CKB6 (7) EWE68-150CKB6 EWE100-203CKB6 (7)	CC07
ENH6-2F			
ENH6-3F			

1. Insert is to be ordered separately.

▶ 476

Insert Holder Type SC

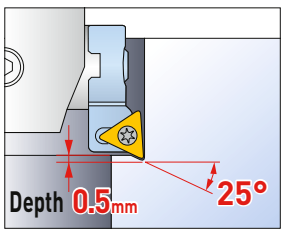
Model	Figure	Head	Insert
ENH4-1S	 45°	EWN41-74CKB4 EWE41-74CKB4	SC06
ENH4-2S			
ENH4-3S			
ENH5-1S		EWN53-95CKB5 EWE53-95CKB5	
ENH5-2S			
ENH5-3S			
ENH6-1S		EWN68-150CKB6 EWN100-203CKB6 (7) EWE68-150CKB6 EWE100-203CKB6 (7)	SC07
ENH6-2S			
ENH6-3S			

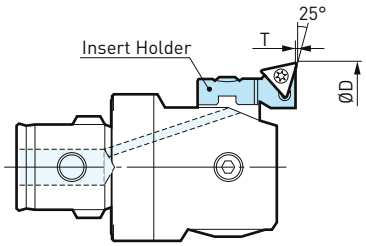
1. Insert is to be ordered separately.

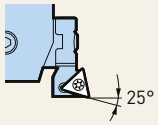
▶ 476

Insert Holder to undercut corners

· Insert Holder capable of boring and grooving (recessing)





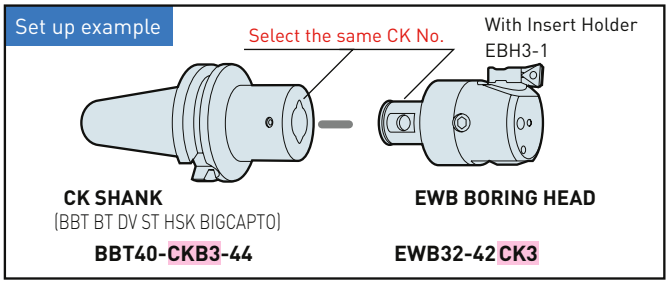
ØD	Model	Figure	Head	Max. depth T Max.	Insert
32 - 42	ENH3-1J	 25°	EWN32-60CKB3	0.6	TP08
41 - 51	ENH3-2J				
50 - 60	ENH3-3J				
41 - 54	ENH4-1J		EWN(E)41-74CKB4		
53 - 70	ENH5-1J		EWN(E)53-95CKB5		
65 - 82	ENH5-2J				
78 - 95	ENH5-3J				
68 - 100	ENH6-1J		EWN(E)68-150CKB6		TC11
100 - 153			EWN(E)100-203CKB6		
			EWN(E)100-203CKB7		
94 - 126	ENH6-2J		EWN(E)68-150CKB6		
126 - 179			EWN(E)100-203CKB6		
			EWN(E)100-203CKB7		
118 - 150	ENH6-3J		EWN(E)68-150CKB6		
150 - 203			EWN(E)100-203CKB6		
			EWN(E)100-203CKB7		

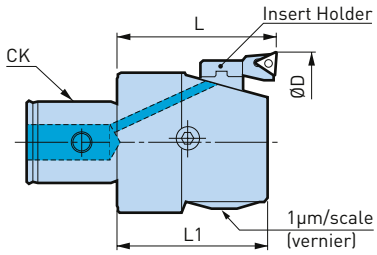
1. T Max. and L are the values when nose radius 0.2 is used for insert TP08, and nose radius 0.4 for insert TC11.
2. Insert is to be ordered separately.

▶ 476

EWB Balanced Fine Boring Head, Ø 32 - 105

Even at max. speeds balanced tools guarantee vibration-free boring, resulting in increased productivity and highest precision.





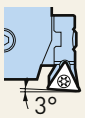
ØD	Model	CK	L	L1	Weight (kg)	Insert Holder	Insert
32 - 42	EWB32-42CK3	CK3	40	37	0.21	EBH3-1	TP08
41 - 54	EWB41-54CK4	CK4	47	43	0.38	EBH4-1	TC11
53 - 70	EWB53-70CK5	CK5	57	53	0.77	EBH5-1	TC11
68 - 88	EWB68-88CK6	CK6	71	67	1.65	EBH6-1	TC11
85 - 105	EWB85-105CK6	CK6	71	67	1.69	EBH6-1	TC11

B.2

1. EWB boring heads will be delivered with assembled insert holder.
2. Inserts are not included.

▶ 469, 470 ▶ 476 Spare Parts ▶ 492

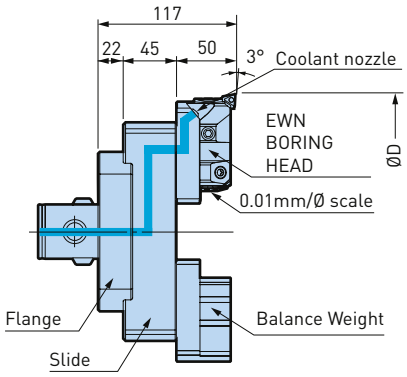
Insert Holders for EWB

Model	Figure	Head	Insert	Insert Clamping Screw Set
EBH3-1		EWB32-42CK3	TP08	S2S-6IP
EBH4-1		EWB41-54CK4	TC11	S2.5S-7IP
EBH5-1		EWB53-70CK5		
EBH6-1		EWB68-88CK6 EWB85-105CK6		

· EWB Boring Heads are provided with an Insert Holder.
For replacement, order using the above model numbers.

Large Diameter Fine Boring Tools, Ø 200 - 830

Each component is securely fastened for safety.
Coolant nozzles for secure coolant supply to the cutting edge.



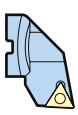
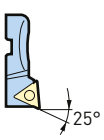
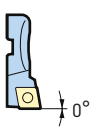
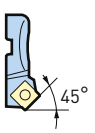
ØD	Flange CK7		Slide		EWN BORING HEAD		Balance Weight Weights can be adjusted according to the diameter.		Insert
	Model	Weight (kg)	Model	Weight (kg)	Model	Weight (kg)	Model	Weight (kg)	
200 - 270	FLN135 (FLN135/90)	2.85	SLN200-270	3.99	EWN200 With ENH7-1 Insert Holder	1.44	BWN200FB	1.44	TC11
270 - 340			SLN270-340	5.50					
340 - 410			SLN340-410	7.20					
410 - 480			SLN410-480	8.90					
480 - 550			SLN480-550	10.56					
550 - 620	FLN220 (FLN220/90)	4.74	SLN550-620 *	12.30					
620 - 690			SLN620-690 *	14.00					
690 - 760			SLN690-760 *	15.65					
760 - 830			SLN760-830 *	17.35					

1. ENH7-1 Insert Holder is included.
2. Insert is to be ordered separately.
3. Center through coolant supply is available, except for * marked models.
4. Cutting edge and drive keys are aligned in the same direction.
   (It becomes 90° offset when the FLN135/90 or FLN220/90 flange is used.)

▶ 470
▶ 476
Spare Parts ▶ 493

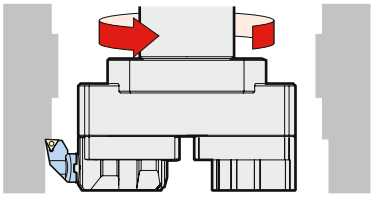
B.2

Wide variety of Insert Holders offers versatility.

Standard Accessory	Optional Accessories				
ENH7-1	**ENH7-2**	**ENH7-3**	**ENH7-1J** (for recessing)	**ENH7-1F** (for diamond inserts)	**ENH7-1S** (for square inserts)
					
	+25/Ø	+50/Ø	Max. depth Max.0.6		
Insert TC11				Insert CC07	Insert SC07

Back boring available

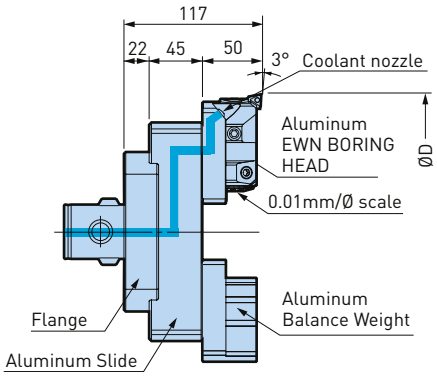
Reverse



* ENH7-2, 7-3 only can be used.

Large Diameter Fine Boring Tools, Ø 200 - 830, Type High Speed

Tool weight is reduced by combining an aluminum slide, EWN BORING HEAD, and balance weight.

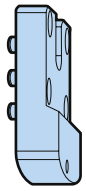


ØD	Flange C K7		Aluminum Slide		Aluminum EWN BORING HEAD		Aluminum Balance Weight Weights can be adjusted according to the diameter.		Insert
	Model	Weight (kg)	Model	Weight (kg)	Model	Weight (kg)	Model	Weight (kg)	
200 - 270	FLN135 (FLN135/90)	2.85	SLN200-270AL	1.50	EWN200AL With ENH7-1 Insert Holder	0.80	BWN200FB-AL	0.80	TC11
270 - 340			SLN270-340AL	2.10					
340 - 410			SLN340-410AL	2.70					
410 - 480			SLN410-480AL	3.30					
480 - 550			SLN480-550AL	3.90					
550 - 620	FLN220 (FLN220/90)	4.74	SLN550-620AL *	4.50					
620 - 690			SLN620-690AL *	5.10					
690 - 760			SLN690-760AL *	5.70					
760 - 830			SLN760-830AL *	6.30					

1. ENH7-1 Insert Holder is included.
2. Insert is to be ordered separately.
3. Center through coolant supply is available, except for * marked models.
4. Cutting edge and drive keys are aligned in the same direction.
   (It becomes 90° offset when the FLN135/90 or FLN220/90 flange is used.)

▶ 470
▶ 476
Spare Parts ▶ 493

Simple Balance Weight



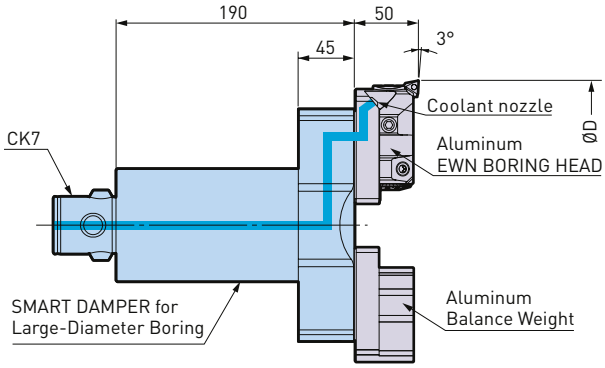
· Low-cost balance weights are also available.
Use under Vc=800m/min.

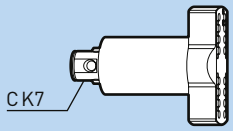
Model	Weight (kg)	Head
BWN200PB	1.44	EWN200 (Standard type)
BWN200PB-AL	0.80	EWN200AL (High speed type)

Weights cannot be adjusted.

EWN Smart Damper Fine Boring Head, Ø 200 - 340

Fusing a lightweight aluminum slide with the built-in damper SMART DAMPER.



ØD	SMART DAMPER for Large-Diameter Boring		Aluminum EWN BORING HEAD		Aluminum Balance Weight		Insert
					Weights can be adjusted according to the diameter.		
	Model	Weight (kg)	Model	Weight (kg)	Model	Weight (kg)	
200 - 270	CKB7-SLN200ALDP-190	11.90	EWN200AL With ENH7-1 Insert Holder	0.80	BWN200FB-AL	0.80	TC11
270 - 340	CKB7-SLN270ALDP-190	12.5					

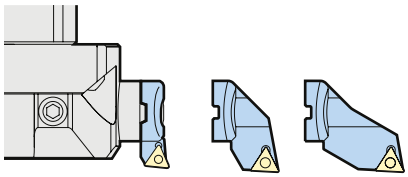
1. ENH7-1 Insert Holder is included
2. Insert is to be ordered separately.
3. Cutting edge and drive keys are aligned in the same direction.

▶ 470 ▶ 476 Spare Parts ▶ 493

3 Insert Holder Types

The machining diameter range can be expanded by replacing the insert holder. Back boring is also possible with ENH7-2 and 3.

Machining range expanded with a single head

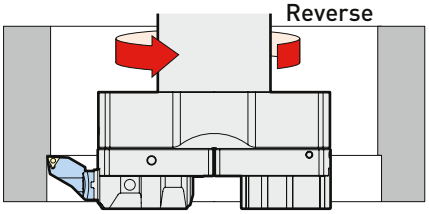


Included as standard ENH7-1

Optional Accessory ENH7-2 +25/Ø

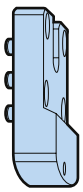
Optional Accessory ENH7-3 +50/Ø

Back boring available



* ENH7-1 only can be used.

Simple Balance Weight



· Low-cost balance weights are also available.
Use under Vc=800m/min.

Model	Weight (kg)
BWN200PB-AL	0.80

Weights cannot be adjusted.

Fine Boring Heads with Centric Cutting Edge

EWN 04-7/04-15 Fine Boring Head	**438**
EWN 2-22/2-32/2-54 Fine Boring Head	**440**
EWE 2-32/2-54 Digital Fine Boring Head	**441**
EWB Fine Boring Head	**442**
Fine Boring Heads, Accessories	**443**
EW Micro Head	**449**
CK Carbide Cylindrical Shank	**450**

Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

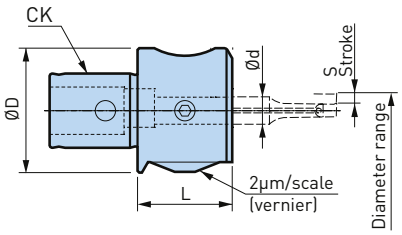
B.3

EWN 04-7/EWN 04-15 Fine Boring Head, Ø 1 - 15

Micro-boring head with outer diameter of Ø18.5mm (EWN04-7).
0.01mm/scale/Ø2µm ultra-precision vernier.

EWN04-7CK1

EWN04-15CK3

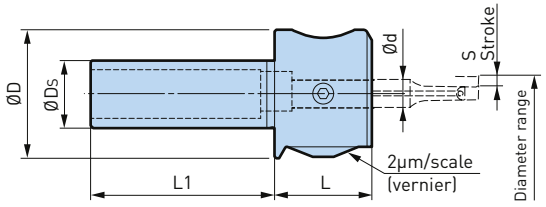


Model	Diameter range	CK	ØD	Ød	L	S	max. min-1	Weight (kg)
EWN04-7CK1	1.0 - 7	CK1	18.5	4	14	-0.1 - +1.05	30,000	0.03
EWN04-15CK3	1.0 - 15	CK3	30	7	22	-0.2 - +2.0	20,000	0.12

1. Cylindrical tool must be ordered separately.

Spare Parts ▶ 491

Cylindrical Shank Type



Model	Diameter range	ØD	ØDs	Ød	L	L1	S	max. min-1	Weight (kg)
EWN04-7ST10	1.0 - 7	18.5	10	4	14	25	-0.1 - +1.05	30,000	0.04
EWN04-15ST16	1.0 - 15	30	16	7	22	34	-0.2 - +2.0	20,000	0.13

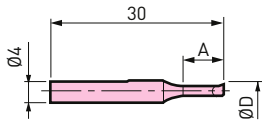
1. Cylindrical tool must be ordered separately.

Spare Parts ▶ 491

B.3

Boring Cutters for EWN 04-7

is made of carbide.



ØD	Model	Article No.	A	Insert
1.0 - 1.5	ST4W-EB1-3	615.542	3	Integrated Carbide Shank
1.4 - 2.0	ST4W-EB1.5-5	615.543	5	Integrated Carbide Shank
1.9 - 3.0	ST4W-EB2-6	615.544	6	Integrated Carbide Shank
2.9 - 4.0	ST4W-EB3-10	615.545	10	Integrated Carbide Shank
3.9 - 5.0	ST4W-EB4-13	615.546	13	Integrated Carbide Shank
4.9 - 7.0	ST4W-EB5-16	615.547	16	Integrated Carbide Shank

Boring Cutters for EWN 04-15

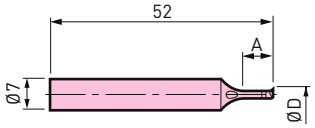


Fig. 1

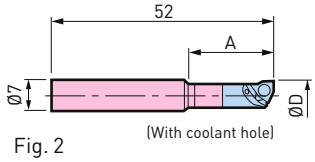


Fig. 2

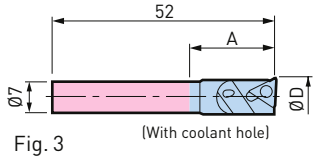


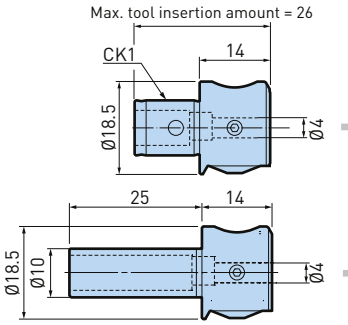
Fig. 3

ØD	Model	Article No.	Fig.	A	Insert
1.0 - 1.5	ST7W-EB1-3	615.524	1	3	Integrated Carbide Shank
1.4 - 2.0	ST7W-EB1.5-5	615.525	1	5	Integrated Carbide Shank
1.9 - 3.0	ST7W-EB2-7	615.501	1	6	Integrated Carbide Shank
2.9 - 4.0	ST7W-EB3-10	615.502	1	10	Integrated Carbide Shank
3.9 - 5.0	ST7W-EB4-13	615.503	1	13	Integrated Carbide Shank
4.9 - 6.0	ST7W-EB5-16	615.504	1	16	Integrated Carbide Shank
5.8 - 7.0	ST7W-EB6-20	615.505	2	20	WC02
6.8 - 8.0	ST7W-EB7-20	615.506	2	20	WC02
7.8 - 9.0	ST7W-EB8-20	615.507	3	30	TP07
8.8 - 10.0	ST7W-EB9-20	615.508	3	30	TP07
9.8 - 12.0	ST7W-EB10-20	615.509	3	30	TP07
11.8 - 15.0	ST7W-EB12-30	615.511	3	30	TP07

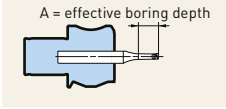
1. Inserts are to be ordered separately.

▶ 468 ▶ 476

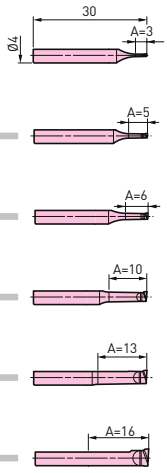
EWN04-7 Ø1 - 7



Head EWN04-7
Stroke -0.1 - +1.05mm



Boring Cutters



ST4W-EB1-3
Ø1.0 - Ø1.5

ST4W-EB1.5-5
Ø1.4 - Ø2.0

ST4W-EB2-6
Ø1.9 - Ø3.0

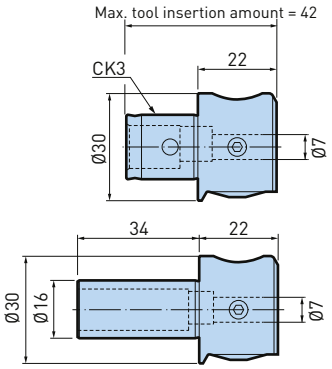
ST4W-EB3-10
Ø2.9 - Ø4.0

ST4W-EB4-13
Ø3.9 - Ø5.0

ST4W-EB5-16
Ø4.9 - Ø7.0

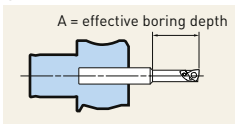
is made of carbide.

EWN04-15 Ø1 - 15

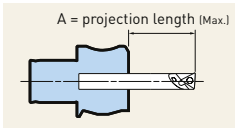


Head EWN04-15
Stroke -0.2 - +2.0mm

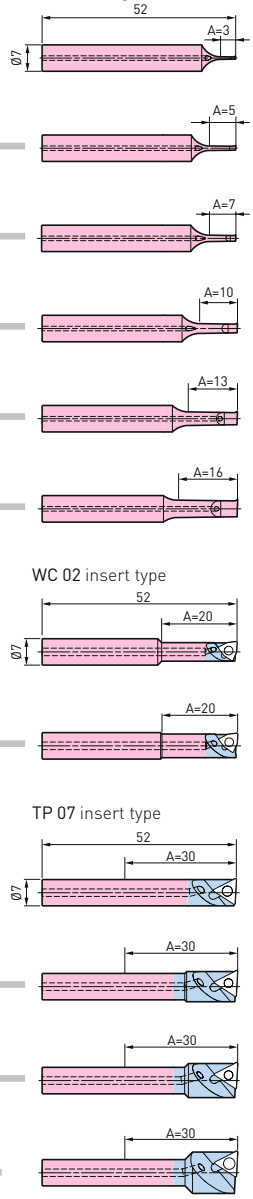
ST7W-EB 1 - EB 7
ST7-REB



ST7W-EB 8 - EB12



Boring Cutters



ST7W-EB1-3
Ø1.0 - Ø1.5

ST7W-EB1.5-5
Ø1.4 - Ø2.0

ST7W-EB2-7
Ø1.9 - Ø3.0

ST7W-EB3-10
Ø2.9 - Ø4.0

ST7W-EB4-13
Ø3.9 - Ø5.0

ST7W-EB5-16
Ø4.9 - Ø6.0

ST7W-EB6-20
Ø5.8 - Ø7.0

ST7W-EB7-20
Ø6.8 - Ø8.0

WC02

ST7W-EB8-20
Ø7.8 - Ø9.0

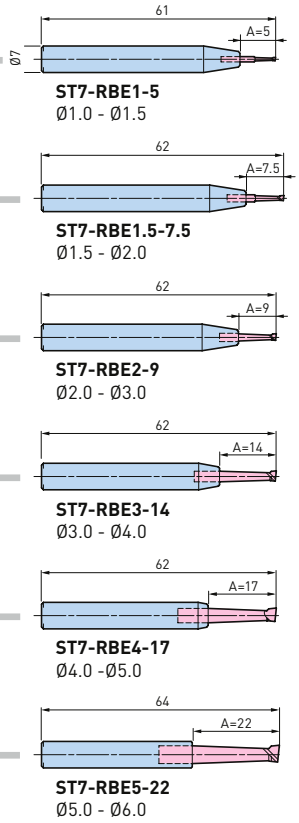
TP07

ST7W-EB9-20
Ø8.8 - Ø10.0

ST7W-EB10-20
Ø9.8 - Ø12.0

ST7W-EB12-30
Ø11.8 - Ø15.0

JIG BORING BIT



ST7-RBE1-5
Ø1.0 - Ø1.5

ST7-RBE1.5-7.5
Ø1.5 - Ø2.0

ST7-RBE2-9
Ø2.0 - Ø3.0

ST7-RBE3-14
Ø3.0 - Ø4.0

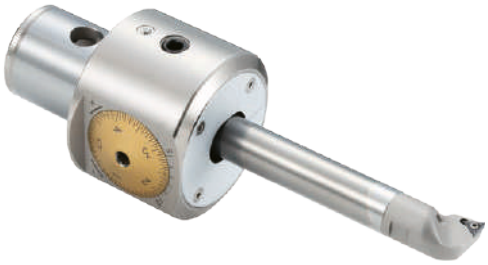
ST7-RBE4-17
Ø4.0 -Ø5.0

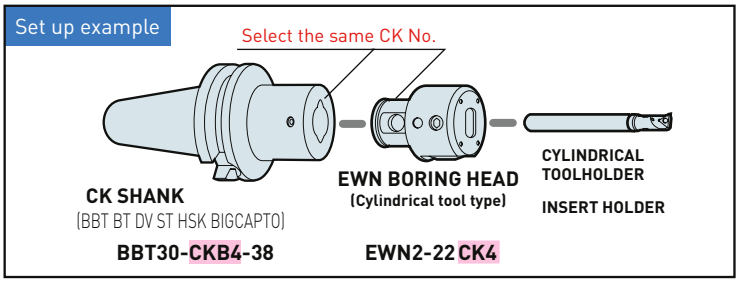
ST7-RBE5-22
Ø5.0 - Ø6.0

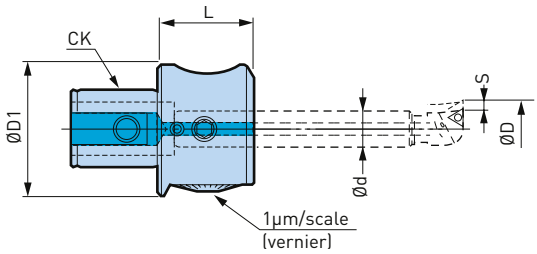
B.3

EWN Fine Boring Head, Ø 1 - 54

Fine boring heads in modular execution for accurate, high performance boring operations on machine tools.







ØD	Model	CK	Ød	ØD1	L	S	Weight (kg)
1 - 22	EWN2-22CK4	CK4	10	39	28.5	2.0	0.25
1 - 32	EWN2-32CK5	CK5	12	50	36	3.5	0.52
1 - 54	EWN2-54CK6	CK6	16	63.5	45	4.5	1.10

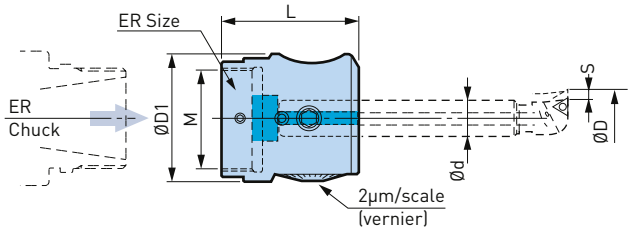
1. Center through coolant is available.
2. Inserts are not included.
3. Precision diameter adjustment function for the scale with 0.005mm/Ø +1µm vernier (EWN2-54CK6) .

Spare Parts ▶ 491

B.3

EWN Fine Boring Head ER Chuck Type

Fine boring head in integral, modular, and screw-on execution for the precise machining of bores.



ØD	Model	Connection	Ød	ØD1	L	S	M	Weight (kg)
1 - 22	EWN2-22ER25	ER25	10	39	40.5	2.0	M32×1.5	0.25
1 - 32	EWN2-32ER32	ER32	12	50	51	3.5	M40×1.5	0.50

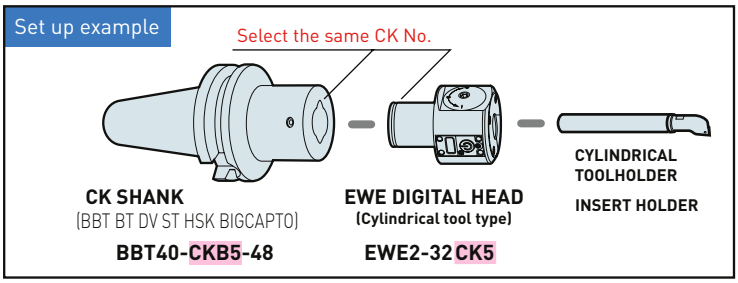
1. Inserts are not included.
2. Center through coolant is available.

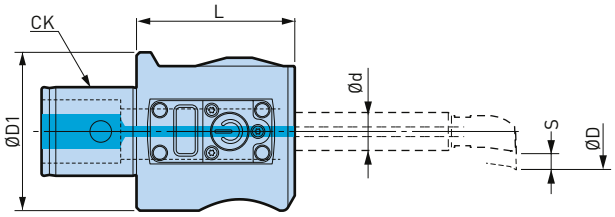
Spare Parts ▶ 491

EWE Digital Fine Boring Head, Ø 1 - 54

Advanced digital boring head. Digital display allows the adjustment to be read at a glance. Fully water and dustproof.

Display Resolution
0.001mm/Ø





ØD	Model	CK	Ød	ØD1	L	S	Weight (kg)
1 - 32	EWE2-32CK5	CK5	12	50	50	-0.5 - 2.0	0.65
1 - 54	EWE2-54CK6	CK6	16	63.5	45	-0.5 - 2.5	1.35

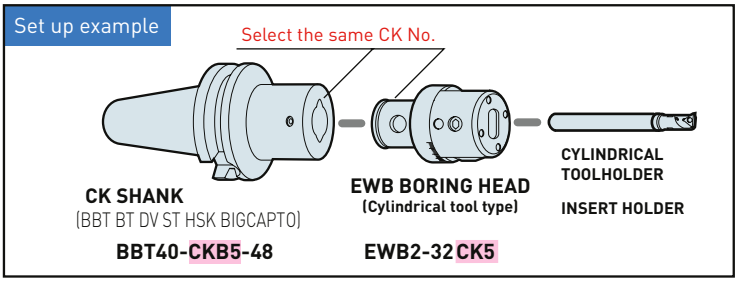
Battery: CR1025 .... 1 pc (Standard accessory)

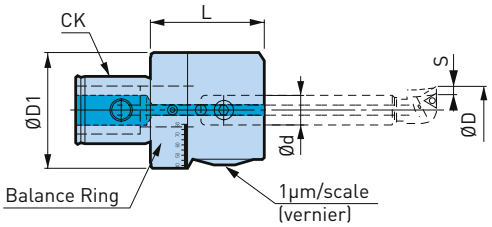
Spare Parts ▶ 492

1. Center through coolant is available.
2. Inserts are not included.

EWB Fine Boring Head, Ø 1 - 50

Fine boring heads in modular execution for accurate, high performance boring operations on machine tools.





ØD	Model	CK	Ød	ØD1	L	S	Weight (kg)
1 - 32	EWB2-32CK5	CK5	12	50	49	3.5	0.65
1 - 50	EWB2-50CK6	CK6	16	63.5	62	4.5	1.32

1. Center through coolant is available.
2. Inserts are not included.

Spare Parts ▶ 493

Jig Boring Bit Diameter: Ø1 - Ø9

Ideal for ultra small diameter boring.

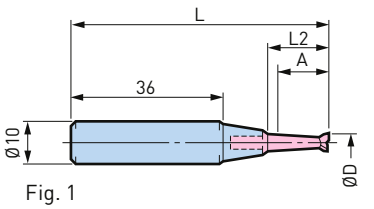


Fig. 1

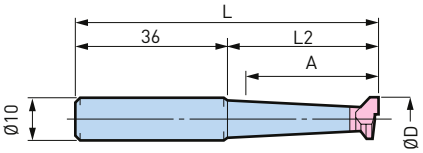
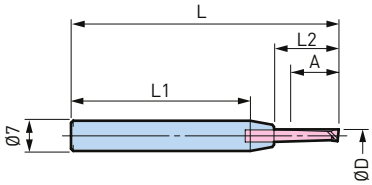


Fig. 2

is made of carbide.



Boring bar integrated Ø10 mm

Model	Fig.	ØD	A	L	L2	Weight (kg)
RBE1	1	1	4	61	5	0.03
RBE1.5	1	1.5	6	62	7.5	0.03
RBE2	1	2	8	62	9	0.03
RBE3	1	3	12	62	14	0.03
RBE4	1	4	16	62	17	0.03
RBE5	1	5	20	64	22	0.03
RBE7	2	7	24	65	28	0.03
RBE9	2	9	30	75	37	0.04

1. Center through coolant is not available.
2. Cutting edge is TiN coated carbide.

Boring bar integrated Ø7 mm

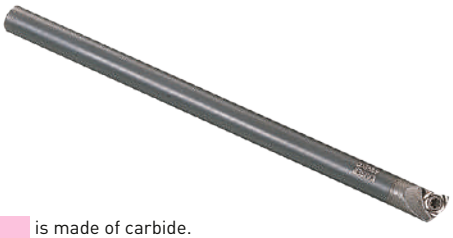
Model	ØD	A	L	L1	L2	Weight (kg)
ST7-RBE1-5	1	4	61	42	5	0.02
ST7-RBE1.5-7.5	1.5	6	62	42	7.5	0.02
ST7-RBE2-9	2	8	62	42	9	0.02
ST7-RBE3-14	3	12	62	41	14	0.02
ST7-RBE4-17	4	16	62	41	17	0.03
ST7-RBE5-22	5	20	64	41	22	0.03

1. Center through coolant is not available.
2. Cutting edge is TiN coated carbide.

B.3

Carbide Cylindrical Insert Holder Diameter: Ø4 - Ø14

Stable boring from 4 mm in diameter.



is made of carbide.

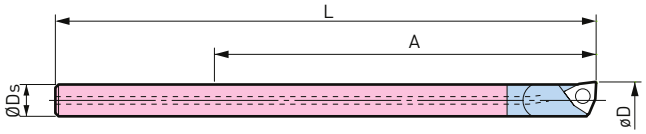


Fig. 1

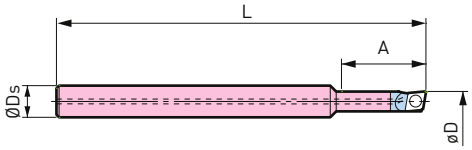


Fig. 2

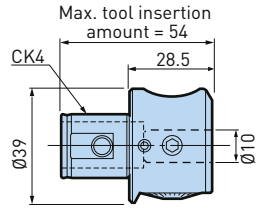
Model	Fig.	ØDs	ØD	A	L	Insert	Weight (kg)
ST05W-EB6-60	1	5	6.0 - 7.5	60	85	WC02	0.02
ST06W-EB4-16	2	6	4.0 - 5.0	16	70	EC03	0.02
ST06W-EB5-20	2	6	5.0 - 6.0	20	75	EC03	0.04
ST06W-EB7.5-65	1	6	7.5 - 9.0	62	95	WC02	0.04
ST07W-EB8-50	1	7	8.0 - 10.0	50	80	TP07	0.03
ST07W-EB8-85	1	7	8.0 - 10.0	85	115	TP07	0.04
ST08W-EB9-75	1	8	9.0 - 11.0	75	105	TP07	0.04
ST09W-EB10-70	1	9	10.0 - 12.0	70	100	TP07	0.09
ST09W-EB10-105	1	9	10.0 - 12.0	105	135	TP07	0.12
ST11W-EB12-105	1	11	12.0 - 14.0	105	135	TP07	0.16

1. Inserts are not included.

▶ 468
▶ 476

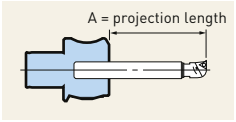
EWN2-22 (cylindrical tool series for finishing)

Compact head reduces interference.



Head **EWN2-22CK4**
Stroke 0 - 2mm

* EWN BORING HEAD for turning centers (ER type) is also available.



Always observe the projection length range and tool insertion limit. Use out of these ranges may result in damage to the boring head or slip of the bar shank.

JIG BORING BIT, 8 models
Ø1 - Ø9

STRAIGHT COLLET

EC1005 (Ø10 / Ø5)
EC1006 (Ø10 / Ø6)
EC1008 (Ø10 / Ø8)

CARBIDE CYLINDRICAL INSERT HOLDER

- **ST05W-EB6-60** Ø6 - Ø7.5 (85, A = 20 - 60) — WC02
- **ST06W-EB4-16** Ø4 - Ø5 (70, A = 16) — EC03
- **ST06W-EB5-20** Ø5 - Ø6 (75, A = 20)
- **ST06W-EB7.5-65** Ø7.5 - Ø9 (95, A = 27 - 65) — WC02

CYLINDRICAL TOOLHOLDER

- **ST08-M5-40** (65, A = 20 - 40)
- **ST08W-M5-65** (90, A = 36 - 65)
- **ST08W-M5-80** (105, A = 51 - 80)
- **ST10-M6-50** (75, A = 26 - 50)
- **ST10W-M6-75** (100, A = 46 - 75)
- **ST10W-M6-95** (120, A = 66 - 95)
- **ST10-M10-58** M10 P1.25 (85, A = 35 - 60)

INSERT HOLDER — TP08

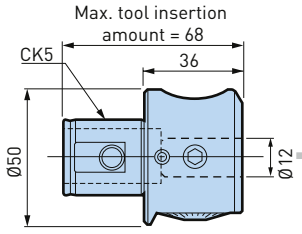
- **EB09N** Ø9 - Ø10.5 (18)
- **EB10.5N** Ø10.5 - Ø12
- **EB12N** Ø12 - Ø14 (23)
- **EB14N** Ø14 - Ø16
- **EB16N** Ø16 - Ø18
- **EB18N** Ø18 - Ø20 (27)
- **EB20N** Ø20 - Ø22

* Carbide Cylindrical Insert Holders and Cylindrical Toolholders with "W" in the model numbers are made of carbide.
A is the projection length.

▶ 468, 469 ▶ 476

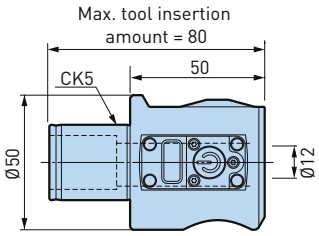
EWN2-32/EWE2-32/EWB2-32 (cylindrical tool series for finishing)

Flexible tool layout with versatile CK5 type.

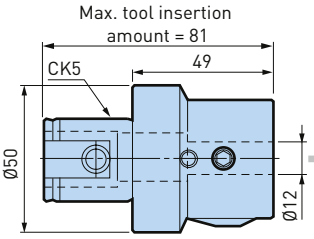


Head **EWN2-32CK5**
Stroke 0 - 3.5mm

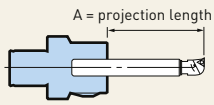
* EWN BORING HEAD for turning centers (ER type) is also available.



Head **EWE2-32CK5**
Stroke -0.5 - 2.0mm



Head **EWB2-32CK5**
Stroke 0 - 3.5mm
For high speed

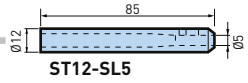


Always observe the projection length range and tool insertion limit. Use out of these ranges may result in damage to the boring head or slip of the bar shank.

Straight Collet
EC1210

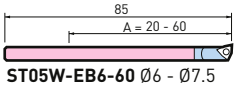
JIG BORING BIT, 8 models
Ø1 - Ø9

SIDE LOCK CYLINDRICAL TOOLHOLDER

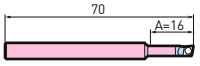


ST12-SL5

CARBIDE CYLINDRICAL INSERT HOLDER

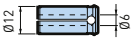


ST05W-EB6-60 Ø6 - Ø7.5 — **WC02**

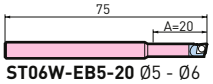


ST06W-EB4-16 Ø4 - Ø5 — **EC03**

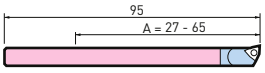
STRAIGHT COLLET



EC1206

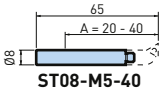


ST06W-EB5-20 Ø5 - Ø6

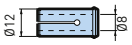


ST06W-EB7.5-65 Ø7.5 - Ø9 — **WC02**

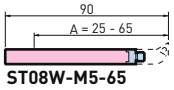
CYLINDRICAL TOOLHOLDER



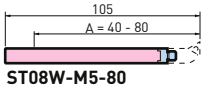
ST08-M5-40



EC1208



ST08W-M5-65

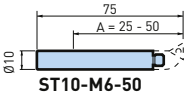


ST08W-M5-80

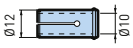
INSERT HOLDER — TP08

EB09N Ø9 - Ø10.5

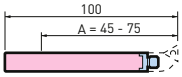
EB10.5N Ø10.5 - Ø12



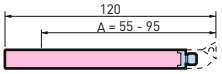
ST10-M6-50



EC1210

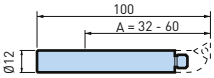


ST10W-M6-75

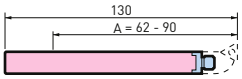


ST10W-M6-95

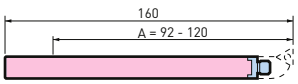
EB12N Ø12 - Ø14



ST12-M6-60



ST12W-M6-90



ST12W-M6-120

EB14N Ø14 - Ø16

EB16N Ø16 - Ø18

EB18N Ø18 - Ø20

EB20N Ø20 - Ø22

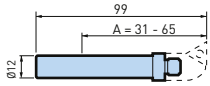
EB22N Ø22 - Ø24

EB24N Ø24 - Ø26

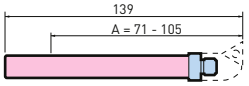
EB26N Ø26 - Ø28

EB28N Ø28 - Ø30

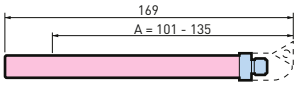
EB30N Ø30 - Ø32



ST12-M10-65 M10 P1.25



ST12W-M10-105 M10 P1.25



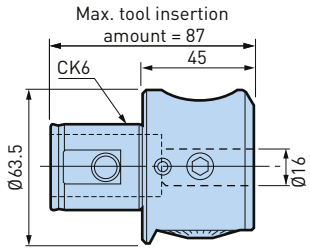
ST12W-M10-135 M10 P1.25

* Carbide Cylindrical Insert Holders and Cylindrical Toolholders with "W" in the model numbers are made of carbide. A is the projection length.

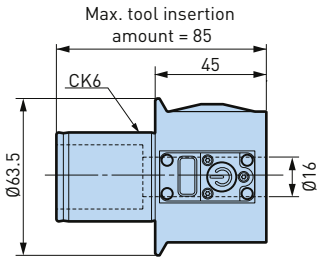
▶ 468, 469 ▶ 476

EWN2-54/EWE2-54/EWB2-50 (cylindrical tool series for finishing)

Features abundant range of tools capable of small-diameter deep boring.

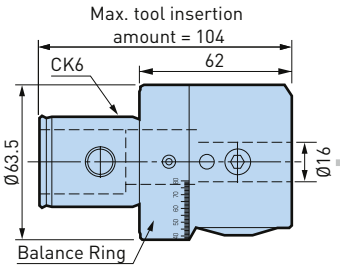


Head **EWN2-54CK6**
Stroke 0 - 4.5mm

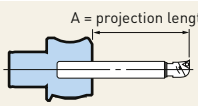


Head **EWE2-54CK6**
Stroke -0.5 - 2.5mm

* Center through coolant pressure should not exceed 40 Bars.

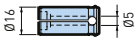


Head **EWB2-50CK6**
Stroke 0 - 4.5mm
For high speed



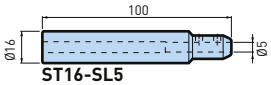
Always observe the projection length range and tool insertion limit. Use out of these ranges may result in damage to the boring head or slip of the bar shank.

STRAIGHT COLLET

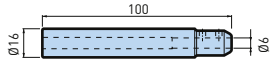


EC1605

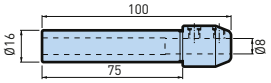
SIDE LOCK CYLINDRICAL TOOLHOLDER



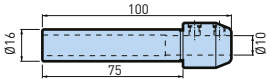
ST16-SL5



ST16-SL6

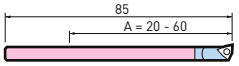


ST16-SL8

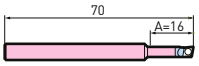


ST16-SL10

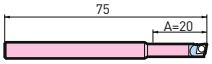
CARBIDE CYLINDRICAL INSERT HOLDER



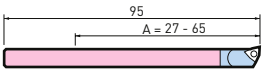
ST05W-EB6-60 Ø6 - Ø7.5 — **WC02**



ST06W-EB4-16 Ø4 - Ø5 — **EC03**



ST06W-EB5-20 Ø5 - Ø6



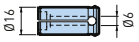
ST06W-EB7.5-65 Ø7.5 - Ø9 — **WC02**

With a Side Lock Cylindrical Toolholder
With a Straight Collet

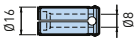
JIG BORING BIT, 8 models

Ø1 - Ø9

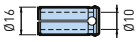
STRAIGHT COLLET



EC1606

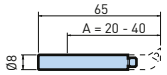


EC1608

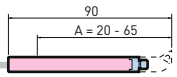


EC1610

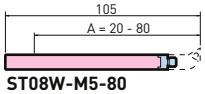
CYLINDRICAL TOOLHOLDER



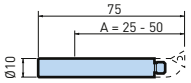
ST08-M5-40



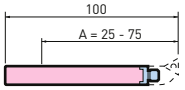
ST08W-M5-65



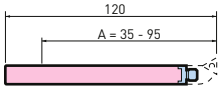
ST08W-M5-80



ST10-M6-50



ST10W-M6-75



ST10W-M6-95

INSERT HOLDER

TP08

EB09N Ø9 - Ø10.5

EB10.5N Ø10.5 - Ø12

EB12N Ø12 - Ø14

* Carbide Cylindrical Insert Holders and Cylindrical Toolholders with "W" in the model numbers are made of carbide.
A is the projection length.

▶ 468, 469 ▶ 476

CYLINDRICAL TOOLHOLDER

STRAIGHT COLLET

EC1612

EC1614

ST12-M6-60

ST12W-M6-90

ST12W-M6-120

ST14-M6-70

ST14W-M6-100

ST14W-M6-130

ST16-M10-80
M10 P1.25

ST16W-M10-100
M10 P1.25

ST16W-M10-160
M10 P1.25

INSERT HOLDER TP08

EB14N
Ø14 - Ø16

TP08

EB16N
Ø16 - Ø18

EB18N
Ø18 - Ø20

EB20N
Ø20 - Ø22

EB22N
Ø22 - Ø24

EB24N
Ø24 - Ø26

EB26N
Ø26 - Ø28

EB28N
Ø28 - Ø30

EB30N
Ø30 - Ø32

EB32N
Ø32 - Ø34

EB34N
Ø34 - Ø36

EB36N
Ø36 - Ø38

EB38N
Ø38 - Ø40

EB40N
Ø40 - Ø42

EB42N
Ø42 - Ø46

EB46N
Ø46 - Ø50

AJ Series is to be used with EWN / EWE heads.

ST16W-AJ1-130

ST16W-AJ1-160

ST16W-AJ2-110

ST16W-AJ2-160

TC11

EB17AJ
Ø16.8 - Ø22

EB22AJ
Ø21.8 - Ø27

EB27AJ
Ø26.8 - Ø33

EB32AJ
Ø31.8 - Ø40

EB40AJ
Ø39.8 - Ø54

* Carbide Cylindrical Insert Holders and Cylindrical Toolholders with "W" in the model numbers are made of carbide.

▶ 469, 470

▶ 476

Side Lock Cylindrical Tool Holder

for EWN/EWE/EWB Cylindrical Tool Boring Head

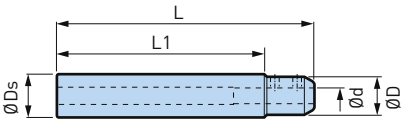


Fig. 1

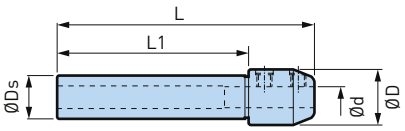


Fig. 2

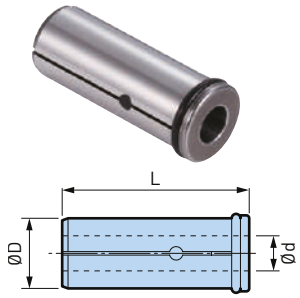
Model	Fig.	ØDs	Ød	ØD	L	L1	Weight (kg)
ST12-SL3.5	1	12	3.5	12	85	62	0.07
ST12-SL4	1	12	4	12	85	62	0.07
ST12-SL4.5	1	12	4.5	12	85	62	0.07
ST12-SL5	1	12	5	12	85	62	0.06
ST12-SL6	2	12	6	14	85	62	0.07
ST16-SL3.5	1	16	3.5	12	100	76	0.13
ST16-SL4	1	16	4	12	100	76	0.13
ST16-SL4.5	1	16	4.5	12	100	76	0.13
ST16-SL5	1	16	5	12	100	78	0.13
ST16-SL6	1	16	6	14	100	79	0.13
ST16-SL7	2	16	7	21	100	75	0.15
ST16-SL8	2	16	8	22	100	75	0.15
ST16-SL9	2	16	9	23	100	75	0.14
ST16-SL10	2	16	10	24	100	75	0.14

Spare Parts ▶ 490

Straight Collet

B.3

for EWN/EWE/EWB Cylindrical Tool Boring Head



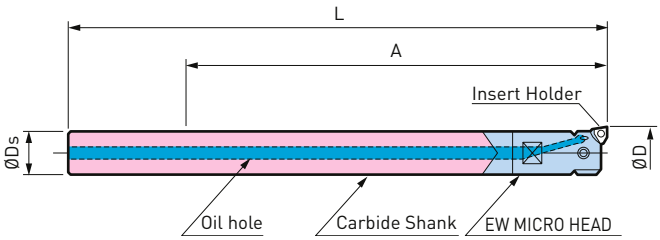
Model	Ød	ØD	L	Weight (kg)
EC10035	3.5	10	25.5	0.02
EC1004	4	10	25.5	0.02
EC10045	4.5	10	25.5	0.02
EC1005	5	10	25.5	0.02
EC1006	6	10	25.5	0.01
EC1007	7	10	25.5	0.01
EC1008	8	10	25.5	0.01
EC1204	4	12	32	0.03
EC1205	5	12	32	0.03
EC1206	6	12	32	0.03
EC1207	7	12	32	0.02
EC1208	8	12	32	0.02
EC1209	9	12	32	0.02
EC1210	10	12	32	0.01

Model	Ød	ØD	L	Weight (kg)
EC1604	4	16	38.5	0.05
EC1605	5	16	38.5	0.05
EC1606	6	16	38.5	0.05
EC1607	7	16	38.5	0.05
EC1608	8	16	38.5	0.05
EC1609	9	16	38.5	0.04
EC1610	10	16	38.5	0.04
EC1611	11	16	38.5	0.04
EC1612	12	16	38.5	0.03
EC1613	13	16	38.5	0.03
EC1614	14	16	38.5	0.02

Spare Parts ▶ 490

EW Micro Heads, Ø 15 - 22

These heads are designed to be used in combination with carbide bars Ø 14 and Ø 16 mm from the accessory program. In conjunction with the long carbide bar, the tool is well suited for vibration-free finishing operations in bores with unfavorable Ø/L-ratios.



is made of carbide.

Model	ØDs	ØD	L	A	Insert Holder	Insert	Screw Set	Weight (kg)
ST14W-EW15-110	14	15 - 18	151	110	EN15	WC02	S2S-6IP	0.27
ST14W-EW15-140	14	15 - 18	181	140	EN15	WC02	S2S-6IP	0.33
ST16W-EW18-100	16	18 - 22	144	100	EN15	WC02	S2S-6IP	0.33
ST16W-EW18-160	16	18 - 22	204	160	EN15	WC02	S2S-6IP	0.48

1. Insert Holder EN15 is included.
2. Inserts are to be ordered separately.

▶ 468 Spare Parts ▶ 491

CK Carbide Cylindrical Shank Ø 20 - 60

Due to maximum rigidity, a carbide bar, optimized in length and with the biggest possible diameter, guarantees the best result when machining deep bores.

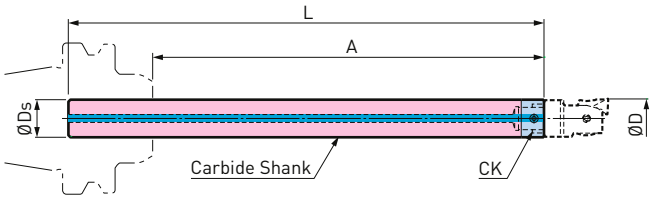


Fig. 1

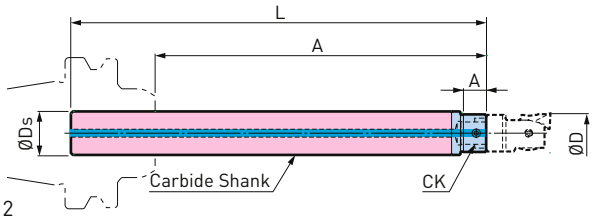


Fig. 2

is made of carbide.

Model	Fig.	CK	ØDs	ØD	L	A	Weight (kg)
ST19W-CKB1-140	1	CK1	19	20 - 36	140	97	0.48
ST19W-CKB1-190	1	CK1	19	20 - 36	190	147	0.68
ST19W-CKB1-240	1	CK1	19	20 - 36	240	197	0.86
ST22W-CKB1-210	2	CK1	22	23 - 36 (20 - 22)	210	167 (12)	1.10
ST24W-CKB2-160	1	CK2	24	25 - 47	160	114	0.86
ST24W-CKB2-220	1	CK2	24	25 - 47	220	174	1.20
ST24W-CKB2-290	1	CK2	24	25 - 47	290	244	1.65
ST28W-CKB2-245	2	CK2	28	29 - 47 (25 - 28)	245	167 (19)	1.90
ST31W-CKB3-200	1	CK3	31	32 - 60	200	144	1.80
ST31W-CKB3-280	1	CK3	31	32 - 60	280	224	2.60
ST31W-CKB3-350	1	CK3	31	32 - 60	350	294	3.30

1. The dimension A in the table is the reference value when used with HDC.

Hydraulic Chuck

You will find the holders in chapter A on the following pages:

BBT Type ▶ 87 BDV Type ▶ 160 HSK-A Type ▶ 208

OD Turning Holders

EWN Head Type S Ø0.5 - 27	**452**
EWN Head Type M Ø25 - 152	**452**
EWN Head Type L Ø49 - 686	**453**

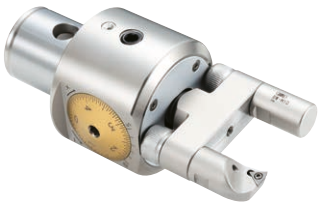
Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

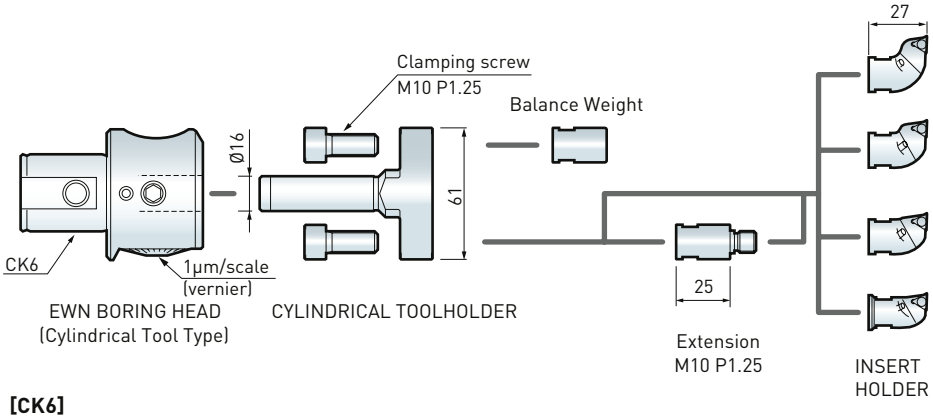
B.4

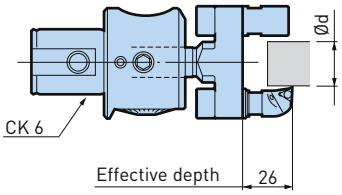
OD Turning Holders

Solves all the issues in contouring operations, such as roundness, surface roughness and dimensional accuracy.

For Diameter Ø 0.5 - 27







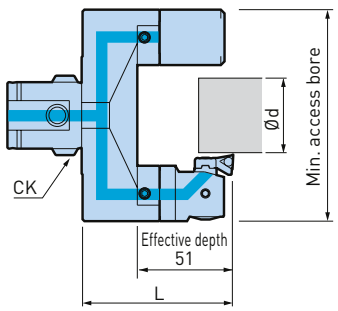
[CK6]

Ød	EWN BORING HEAD	CYLINDRICAL TOOLHOLDER	Balance Weight	Extension	Insert Holder	Insert
0.5 - 9	EWN2-54CK6 (1.10kg)	ST16-SL27-55 (0.20kg)	BW-M10 (0.02kg)	M1010-25 (0.02kg)	EB36N	TP08
9 - 17					EB28N	
17 - 23					EB22N	
23 - 27					EB18N	

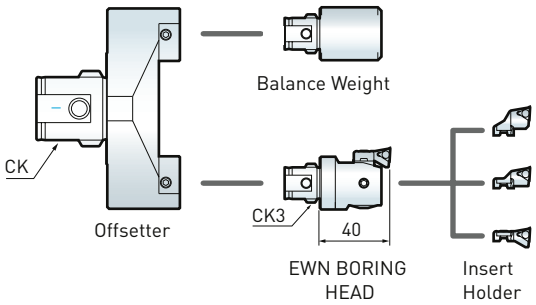
1. Max. and min. diameters are the values when an insert with nose radius 0.2 is used.
2. Insert is to be ordered separately.
3. **Rotation should be reverse.**
4. The min. access bore may differ depending on the offset amount.
5. Contact us regarding chamfering.

▶ 469
▶ 476

For Diameter Ø 25 - 152



Internal boring is enabled by changing the EWN BORING HEAD mounting direction.
(Diameter: Ø117 - Ø244)
* Use **in forward** for internal boring. Pay attention to the rotation direction.



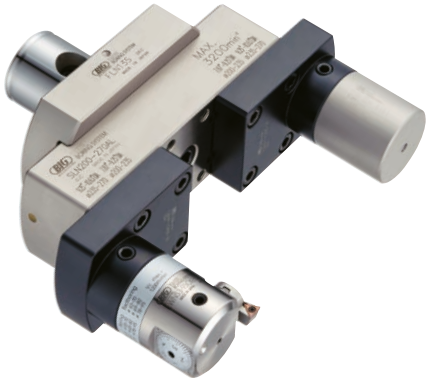
[CK6/CK7]

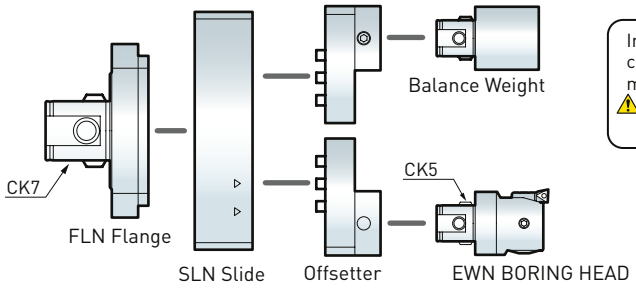
Ød	Offsetter	CK	EWN BORING HEAD	Balance Weight	Insert Holder	Insert	L
25 - 34	CKB63-SL2552-42 (1.40kg) Min. access bore Ø117	CK6	EWN32-60CKB3 (0.21kg)	BW-CKB3-EWN (0.23kg)	ENH3-3	TP08	82
34 - 43					ENH3-2		
43 - 52					ENH3-1		
50 - 59	CKB63-SL5077-42 (1.60kg) Min. access bore Ø142				ENH3-3		
59 - 68					ENH3-2		
68 - 77					ENH3-1		
75 - 84	CKB63-SL75102-42 (1.90kg) Min. access bore Ø167				ENH3-3		
84 - 93					ENH3-2		
93 - 102					ENH3-1		
100 - 109	CKB73-SL100127-47 (3.32kg) Min. access bore Ø192	CK7			ENH3-3		87
109 - 118					ENH3-2		
118 - 127					ENH3-1		
125 - 134	CKB73-SL125152-47 (3.50kg) Min. access bore Ø217				ENH3-3		
134 - 143					ENH3-2		
143 - 152					ENH3-1		

1. Max. and min. diameters are the values when an insert with nose radius 0.2 is used.
2. Insert is to be ordered separately.
3. Insert Holder **(ENH3-1)** is included with the EWN Boring Head.
4. **Rotation should be reverse.**
5. Contact us regarding chamfering.

▶ 469
▶ 476

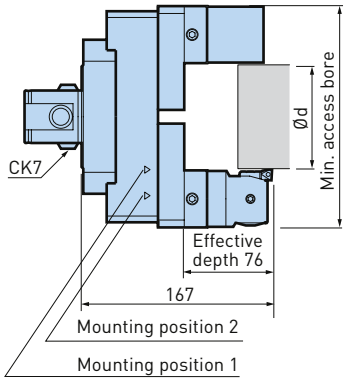
For Diameter Ø 49 - 686





Internal boring is enabled by changing the EWN BORING HEAD mounting direction.

⚠ 1. Use in **forward** for internal boring. Pay attention to the rotation direction.



[CK7]

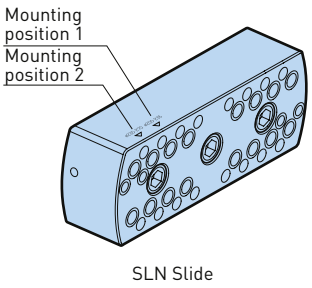
Ød	FLN Flange *	SLN Slide Model	SLN Slide Weight (kg)	Min. access bore Mounting position 1	Min. access bore Mounting position 2	Offsetter (2 pcs./set)	EWN BORING HEAD	Balance Weight
49 - 126	FLN135	SLN200-270	3.90	196	231	CBN91-CKB5-20 (1.20kg/1 pc)	EWN53-95CKB5 (1.10kg) Insert TC11	BW-CKB5-EWN (0.84kg)
119 - 196		SLN270-340	5.55	266	301			
189 - 266	FLN135/90 (2.85kg)	SLN340-410	7.20	336	371			
259 - 336		SLN410-480	8.90	406	441			
329 - 406		SLN480-550	10.56	476	511			
399 - 476	FLN220	SLN550-620	12.30	546	581			
469 - 546		SLN620-690	14.00	616	651			
539 - 616	FLN220/90 (4.74kg)	SLN690-760	15.65	686	721			
609 - 686		SLN760-830	17.35	756	791			

1. Insert is to be ordered separately.
2. Insert Holder (ENH5-1) is included with EWN Boring Head. ENH5-2 or ENH5-3 may be required depending on the diameter. Order separately if required.
3. * Cutting edge and drive keys are aligned in the same direction. It becomes 90° offset when the FLN135/90 or FLN220/90 flange is used.
4. **Rotation should be reverse.**
5. Lightweight aluminum slides are also available as standard.
6. Center through coolant supply. (SLN550-620 and larger models are not supported.)

▶ 470
▶ 476

B.4

Boring range



Ød	Slide Model	Mounting position	Insert Holder ENH5-3	ENH5-2	ENH5-1
49 - 126	SLN200-270	1	49 - 66	62 - 79	74 - 91
		2	84 - 101	97 - 114	109 - 126
119 - 196	SLN270-340	1	119 - 136	132 - 149	144 - 161
		2	154 - 171	167 - 184	179 - 196
189 - 266	SLN340-410	1	189 - 206	202 - 219	214 - 231
		2	224 - 241	237 - 254	249 - 266
259 - 336	SLN410-480	1	259 - 276	272 - 289	284 - 301
		2	294 - 311	307 - 324	319 - 336
329 - 406	SLN480-550	1	329 - 346	342 - 359	354 - 371
		2	364 - 381	377 - 394	389 - 406
399 - 476	SLN550-620	1	399 - 416	412 - 429	424 - 441
		2	434 - 451	447 - 464	459 - 476
469 - 546	SLN620-690	1	469 - 486	482 - 499	494 - 511
		2	504 - 521	517 - 534	529 - 546
539 - 616	SLN690-760	1	539 - 556	552 - 569	564 - 581
		2	574 - 591	587 - 604	599 - 616
609 - 686	SLN760-830	1	609 - 626	622 - 639	634 - 651
		2	644 - 661	657 - 674	669 - 686

CK Presetter

CK Presetter 456

Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

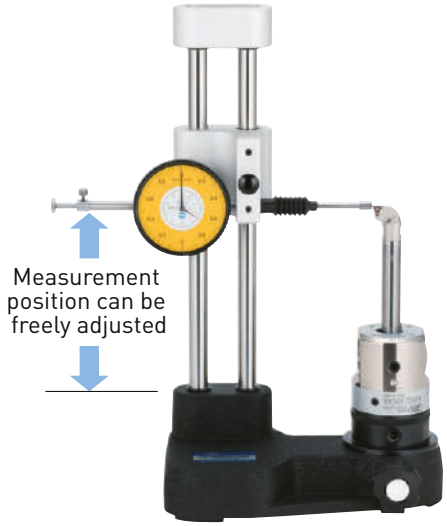
B.5

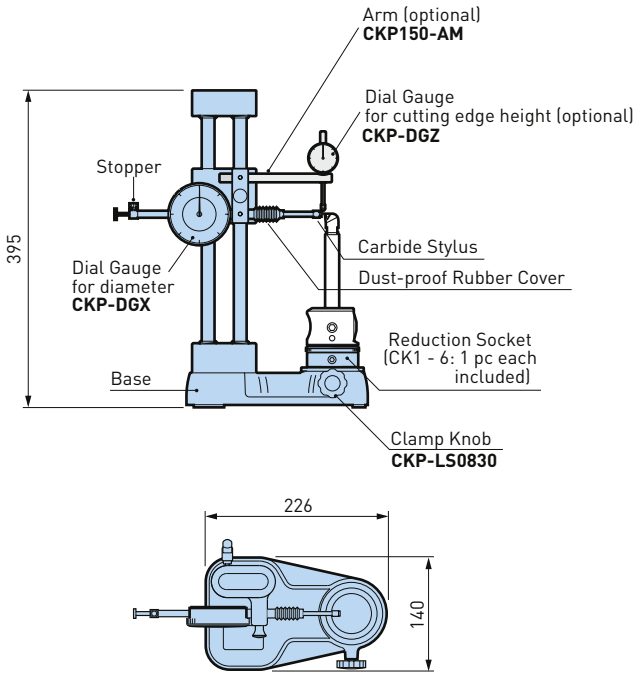
CK Presetter

Fully utilizes the merits of a modular system.
Low-cost, exclusive presetter allows easy presetting of the boring head alone.
Compact design enables operations in the limited space beside the machine.

CKP150ZA (for CK1-6)

One unit allows easy presetting of various lengths of insert holders as well as roughing and finishing heads.



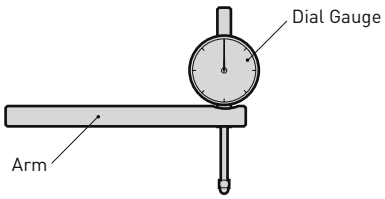


The optional "Dial Gauge for Edge Height" enables balance and step cutting setup for RW Boring Head.

Model	CKP150ZA
Measuring capacity	Radial direction: 0 - Ø150mm (CK1 - CK6)
Min. scale	Radial direction: 0.02mm/Ø
CK No.	CK1 - CK6 (Reduction socket compatible)
Max. tool height	Max. 227mm (When using CK6 reduction socket)
MASTER GAUGE	Ø50±0.005
Reading method	Diameter direct reading method
Weight	6.50kg

1. Use within 0.02mm/Ø measuring accuracy range.
2. Note that the maximum measuring diameter is 150mm.
3. Tool lengths cannot be measured.
4. For finishing with EWN Boring Head, first set to a smaller diameter than the target. After trial cutting, adjust the diameter by reading the scale on the head against the measured value on the machine.

Edge Height Measuring Dial Gauge Set (optional accessory)

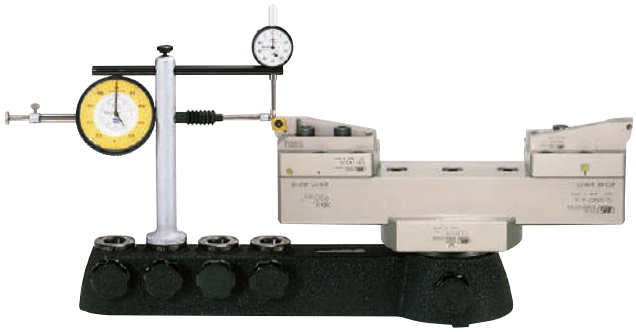


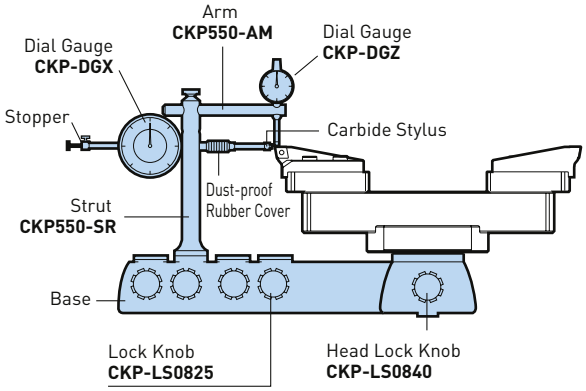
Min. scale: 0.01mm

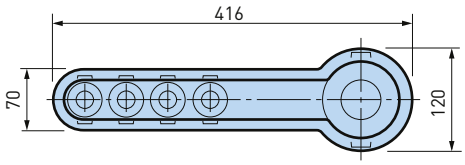
Set Model	Set contents	
	Dial Gauge	Arm
CKP-DGZS	CKP-DGZ	CKP150-AM

Dial gauge and arm are also available individually.

CKP550 (For CK7)







Model	CKP550
Measuring capacity	Ø100 - 550 (CK7)
CK No.	For CK7 only
Min. scale	Radial direction: 0.02mm/Ø
	Axial direction: 0.01mm
MASTER GAUGE	Ø120±0.005
Reading method	Diameter addition reading method
Weight	9.00kg

1. EWN100-203CKB7 and SW98-153CKB7 cannot be used due to position of the stylus.

CKN Systems

CKN Shank	**460**
CKN Double Connector	**461**
CKN Extensions / Reductions	**462**
CKN Bridge Tools	**463**

Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

B.6

CKN with BBT Shank

With drive key grooves and orientation notch.

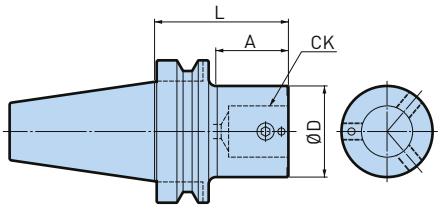


Fig. 1

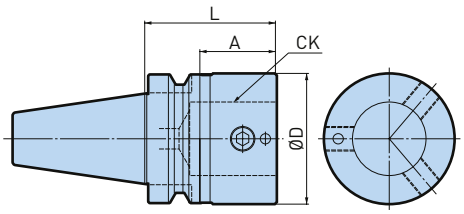


Fig. 2

Model	Article No.	Fig.	CK	ØD	L	A	Weight (kg)
BBT40-CKN6-64	-	1	6	64	64	37	1.60
BBT50-CKN6-94	-	1	6	64	94	51	4.60
BBT50-CKN7-93	-	2	7	90	93	52	5.70

1. Cutting edge and drive key grooves are located in the same orientation.
2. 2 pcs. of Blind Screws and 1 piece of CK-Screw are assembled.

CKN with BDV Shank

With drive key grooves and orientation notch.

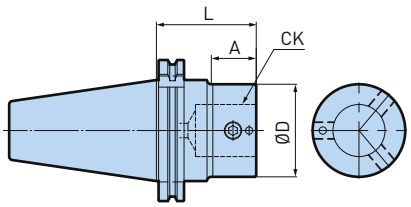


Fig. 1

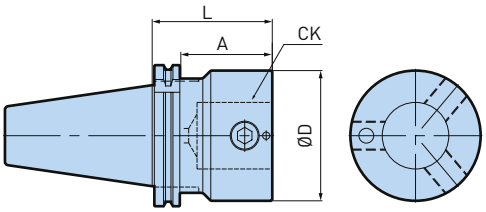


Fig. 2

Model	Article No.	Fig.	CK	ØD	L	A	Weight (kg)
BDV40-CKN6-59	-	1	6	64	59	39	1.30
BDV50-CKN6-69	-	1	6	64	69	31	3.60
BDV50-CKN7-83	-	2	7	90	83	63	4.90

1. Cutting edge and drive key grooves are located in the same orientation.
2. 2 pcs. of Blind Screws and 1 piece of CK-Screw are assembled.

CKN with HSK-A Shank

With drive key grooves and orientation notch.

Coolant Through Hole

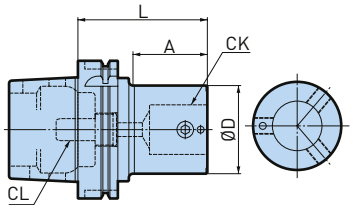


Fig. 1

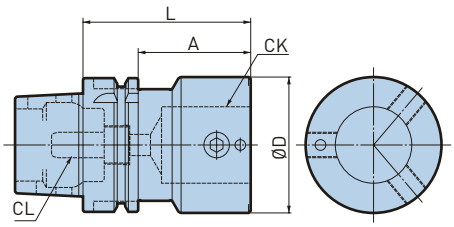


Fig. 2

Model	Article No.	Fig.	CK	ØD	L	A	Weight (kg)
HSK-A63-CKN6-79	-	1	6	64	79	53	1.50
HSK-A100-CKN6-94	-	1	6	64	94	54	3.40
HSK-A100-CKN7-93	-	2	7	90	93	64	4.40

1. Coolant pipe (CL) is to be ordered separately.
2. 2 pcs. of Blind Screws and 1 piece of CK-Screw are assembled.
3. Cutting edge and drive key grooves are located in the same orientation.

CKN Double Connector

Coolant Through Hole

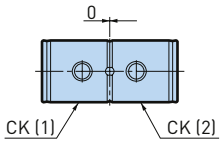


Fig. 1

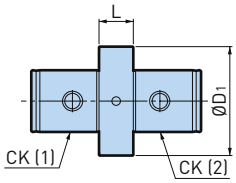


Fig. 2

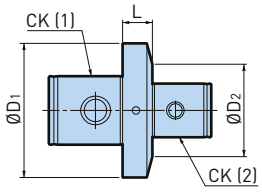
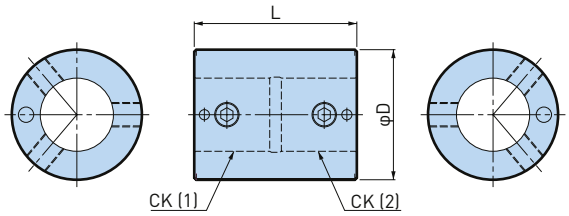


Fig. 3

Model	Article No.	Fig.	CK (1)	CK (2)	ØD1	ØD2	L	Weight (kg)
CKN66-0DC	-	1	6	6	-	-	-	0.45
CKN66-20DC	-	2	6	6	64	-	20	0.95
CKN76-20DC	-	3	7	6	90	64	20	1.66
CKN77-0DC	-	1	7	7	-	-	-	0.95
CKN77-25DC	-	2	7	7	90	-	25	2.00

1. 2 pcs. of CK-screws are included.

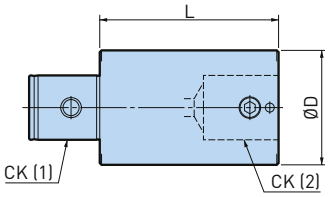
CKN Extensions Aluminum



Model	Article No.	CK (1)	CK (2)	ØD	L	Weight (kg)
CKN66N-80ALT	-	6	6	64	80	0.52
CKN66N-120ALT	-	6	6	64	120	0.82
CKN77N-100ALT	-	7	7	90	100	1.53
CKN77N-150ALT	-	7	7	90	150	2.25
CKN77N-200ALT	-	7	7	90	200	3.00

1. 2 pcs. of Blind Screws and 1 piece of CK-Screw are assembled.
2. 3 pcs. of CK-Screws on the Shank side are assembled.

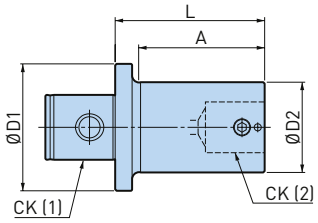
CKN Extensions



Model	Article No.	CK (1)	CK (2)	ØD	L	Weight (kg)
CKN66-100	-	6	6	64	100	2.30
CKN77-105	-	7	7	90	105	4.78

1. 2 pcs. of Blind Screws and 1 piece of CK-Screw are assembled.
2. 2 pcs. of CK-screws are included.

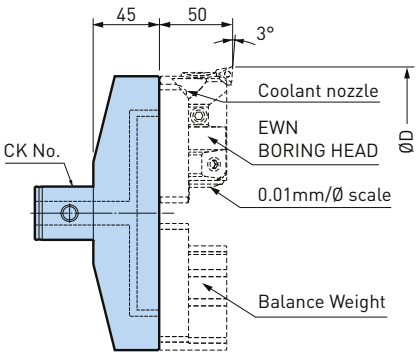
CKN Reductions



Model	Article No.	CK (1)	CK (2)	ØD1	ØD2	L	A	Weight (kg)
CKN76-106	-	7	6	90	64	106	89	2.88

1. 2 pcs. of Blind Screws and 1 piece of CK-Screw are assembled.
2. 2 pcs. of CK-screws are included.

CKN Bridge Tools

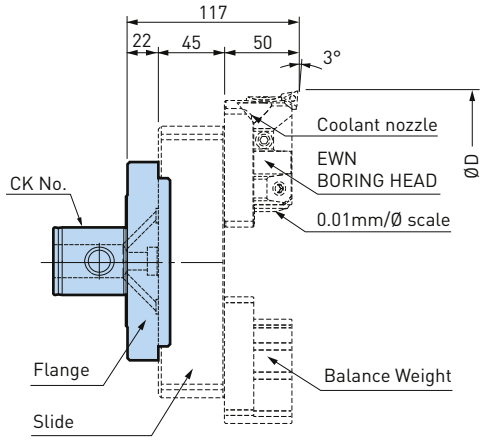


Coolant Through Hole

Model	Article No.	CK	ØD	Weight (kg)
CKN6-FL200-270	-	6	200-270	1.83
CKN6-FL270-340	-	6	270-340	2.32

1. 2 pcs. of CK-screws are included.
2. Clamp base and Insert Holders can also be used for roughing.

CKN Bridge Tools



Coolant Through Hole

Model	Article No.	CK	ØD	Weight (kg)
CKN7-FLN135	-	7	200-550	2.39
CKN7-FLN135/90	-	7	200-550	2.39

1. 2 pcs. of CK-screws are included.
2. Clamp base and Insert Holders can also be used for roughing.

B.6

Blindscrew

Blind screws to cover holes when CKN is used on CKB.

Model	Article No.	CK	M	Wrench
CK6BS	-	6	M12XP1.0	4mm
CK7BS	-	7	M20XP1.5	6mm

1. 1 piece per package.

Clamping screw Set

CKN Clamping screw Set consists of 2 screws and one key.

Model	Article No.	CK	M	Wrench
CK6S	805.892	6	M12XP1.0	6mm
CK7S	-	7	M20XP1.5	10mm

1. 2 screws and 1 wrench are included

Indexable Inserts

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CK Set Screw	477
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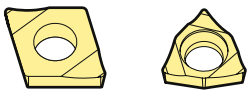
Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

Insert finishing abbreviations

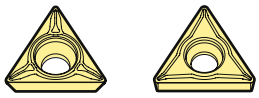
ELA



ECO3 WC02

Excellent sharpness. Sharpening breaker.

EFM



TP07 TP08 TC11

Excellent chip breaking performance. 3D Breaker (M Class).

ELM

TP08 TC11

Excellent chip breaking performance. 3D Breaker (G Class).

EL

TP07 TP08 TC11

1st reccomendation for steel. Low resistance grinding breaker.

L

TP07 TP08 TC11

For stainless steel and hard-to-machine materials. Sharpening breaker.

FN

TP07 TP08 TC11

Non breaker.

FN (cbN)

ECO3 WC02 TP07 TP08 TC11

Edge treatment for superior strength

FN3 (cbN)

TP08 TC11

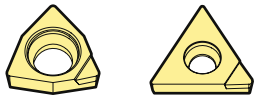
Edge treatment for superior strength. 3 Corner use cBN.

FLA

TP07 TP08 TC11

For Aluminum high rake angle helps smooth chip evacuation.

FN (Diamond)



WC02 TP07 TP08 TC11

Excellent cutting ability by rake.

FLM (Diamond)

TP08 TC11

For Aluminum. 3D Breakers.

Insert roughing abbreviations

EFM

SC06 SC07 SC09 | SC12 | CC06 CC07 CC09 | TC11

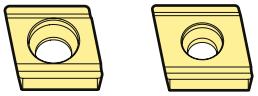
1st recommendation for steel 3D breaker.

ESM

SC06 SC07 SC09 | SC12 | CC06 CC07 CC09 | CC12

Effective for light cutting of SS, stainless steel and steel.

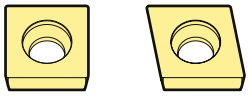
ESS



CC07 CC09 CC12 | CC16

Breaker for SS material.

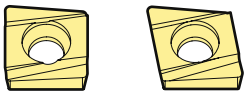
FN



SC06 SC07 SC09 SC12 | CC06 CC07 CC09 CC12

Nonbreaker.

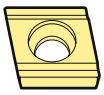
FLA



SC06 SC07 SC09 SC12 | CC06 CC07 CC09 CC12

Breakers for Aluminum.

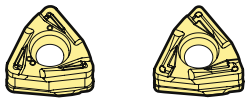
FLB



CC06 CC07 CC09 CC12

Effective for light cutting
Flat Breaker for Aluminum

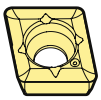
EM



ZN05 | ZN08

Breaker with excellent cutting performance
Double-sided 6-corner use specification.

F



MW0404

Breakers for steel and stainless steel.

S

MW0404

Breakers for cast iron and ductile.

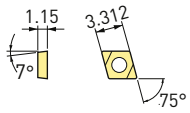
E

MW0404

Breakers for non-ferrous and aluminum.

- BIG designs optimal inserts exclusive for boring. Select the suitable insert to the application.

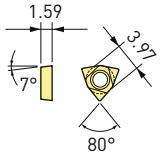
EC03



for Boring Bar ST06W-EB04, EB05

No.	Model	R	Cutting edges	Workpiece	Material / coating
1	ECGM03X102ELA(T1500A)	0.2	2	Alloy Steel / Carbon Steel	Cermet
2	ECGM03X102ELA(H1)	0.2	2	Aluminium / Cast Iron	Carbide (K10)
3	ECGM03X102FN(NB10HA)	0.2	2	Hardened Steel	CBN

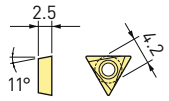
WC02



for EW MICRO HEAD: EW15/18 Boring Bar ST05W-EB6, ST06W-EB7.5, ST7W-EB6/EB7

No.	Model	R	Cutting edges	Workpiece	Material / coating
1	WCGT020102ELA(T1200A)	0.2	3	Alloy Steel / Carbon Steel	Cermet
2	WCGT020102ELA(H1)	0.2	3	Aluminium / Cast Iron	Carbide (K10)
3	WCGT020102FN(DA2200)	0.2	1	Aluminium	PKD
4	WCGT020102FN(BNX20)	0.2	1	Hardened Steel	CBN
5	WCGT020102FN(BN7000)	0.2	1	Cast Iron GGG	CBN

TP07



for ENH1-1TP07/ENH2-1TP07 Boring Bar ST7W-EB8/EB12

No.	Model	R	Cutting edges	Workpiece	Material / coating
1	TPMT070202EFM(T2000Z)	0.2	3	Alloy Steel / Carbon Steel	Coated Cermet
2	TPMT070204EFM(T2000Z)	0.4	3	Alloy Steel / Carbon Steel	Coated Cermet (+3D Breaker)
3	TPGP070202EL(T1500A)	0.2	3	Alloy Steel / Carbon Steel	Cermet
4	TPGP070204EL(T2000Z)	0.4	3	Alloy Steel / Carbon Steel	Coated Cermet (+3D Breaker)
5	TPGD070202FN(BN2000)	0.2	1	Hardened Steel	CBN
6	TPGP070202L(AC520U)	0.2	3	Inconel / Titanium	Coated Carbide
7	TPGP070204L(AC520U)	0.4	3	Inconel / Titanium	Coated Carbide
8	TPGD070202FN(H1)	0.2	3	Cast Iron GG	Carbide (K10)
9	TPGD070204FN(H1ZX)	0.4	3	Cast Iron GG	Coated Carbide (K10)
10	TPGD070202FN(BN500)	0.2	3	Cast Iron GGG	CBN
11	TPGD070204FN(BN500)	0.4	3	Cast Iron GGG	CBN
12	TPGD070202FN(CW10HA)	0.2	3	Hardened Steel	Coated Carbide
13	TPGD070204FN(CW10HA)	0.4	3	Hardened Steel	Coated Carbide
14	TPGP070202FLA(H1)	0.2	3	Aluminium	Carbide (K10)(HRA*)
15	TPGP070204FLA(H1)	0.4	3	Aluminium	Carbide (K10)(HRA*)
16	TPGD070202FN(DA2200)	0.2	1	Aluminium	PKD
17	TPGD070204FLM(DA1000)	0.4	1	Aluminium	PKD (+3D Breaker)

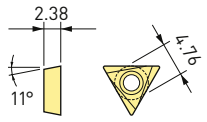
1. *HRA indicate High Rake Angle

[Remarks (All Inserts)]

1. Inserts are available in a packet of 10 pcs except diamond and CBN inserts.
2. Diamond and CBN inserts are available from 1 pc.
3. Please specify the insert model number and grade when ordering.
   Example: **ECGM03X102ELA** **(T1500A)**... 10 pcs
   (Insert Model / Grade)

- BIG designs optimal inserts exclusive for boring. Select the suitable insert to the application.

TP08



for EBH3-1 / ENH1, 2, 3 / ENH3, 4, 5 / EB09N-46N

No.	Model	R	Cutting edges	Workpiece	Material / coating
1	TPMT080202EFM(T1500A)	0.2	3	Alloy Steel / Carbon Steel	Cermet (+3D Breaker)
2	TPMT080204EFM(T1500A)	0.4	3	Alloy Steel / Carbon Steel	Cermet (+3D Breaker)
3	TPMT080202EFM(T2000Z)	0.2	3	Alloy Steel / Carbon Steel	Coated Cermet (+3D Breaker)
4	TPMT080204EFM(T2000Z)	0.4	3	Alloy Steel / Carbon Steel	Coated Cermet (+3D Breaker)
5	TPGP080202ELM(T2500A)	0.2	3	Alloy Steel / Carbon Steel	Cermet (+3D Breaker)
6	TPGP080204ELM(T2500A)	0.4	3	Alloy Steel / Carbon Steel	Cermet (+3D Breaker)
7	TPGP080202ELM(T2500F)	0.2	3	Alloy Steel / Carbon Steel	Coated Cermet (+3D Breaker)
8	TPGP080204ELM(T2500F)	0.4	3	Alloy Steel / Carbon Steel	Coated Cermet (+3D Breaker)
9	TPGP080202EL(T1500A)	0.2	3	Alloy Steel / Carbon Steel	Cermet
10	TPGP080204EL(T1500A)	0.4	3	Alloy Steel / Carbon Steel	Cermet
11	TPGP080202EL(T2000Z)	0.2	3	Alloy Steel / Carbon Steel	Coated Cermet
12	TPGP080204EL(T2000Z)	0.4	3	Alloy Steel / Carbon Steel	Coated Cermet
13	TPGP080202EL(T130A)	0.2	3	Interrupted Cutting	Cermet
14	TPGP080204EL(T130A)	0.4	3	Interrupted Cutting	Cermet
15	TPGP080202EL(T130ZX)	0.2	3	Interrupted Cutting	Coated Cermet
16	TPGP080204EL(T130ZX)	0.4	3	Interrupted Cutting	Coated Cermet
17	TPGD080202FN(BN2000)	0.2	1	Hardened Steel	CBN
18	TPGD080204FN(BN2000)	0.4	1	Hardened Steel	CBN
19	TPGD080202FN(BNC200)	0.2	1	Hardened Steel	Coated CBN
20	TPGD080204FN(BNC200)	0.4	1	Hardened Steel	Coated CBN
21	TPGD080202FN(CW10HA)	0.2	3	Hardened Steel	Coated Carbide
22	TPGD080204FN(CW10HA)	0.4	3	Hardened Steel	Coated Carbide
23	TPGP080202L(AC520U)	0.2	3	Stainless Steels/ Inconel /Titanium	Coated Carbide
24	TPGP080204L(AC520U)	0.4	3	Stainless Steels/ Inconel /Titanium	Coated Carbide
25	TPGD080202FN(H1)	0.2	3	Cast Iron GG	Carbide (K10)
26	TPGD080204FN(H1)	0.4	3	Cast Iron GG	Carbide (K10)
27	TPGD080202FN(H1ZX)	0.2	3	Cast Iron GG	Coated Carbide (K10)
28	TPGD080204FN(H1ZX)	0.4	3	Cast Iron GG	Coated Carbide (K10)
29	TPGD080202FN(BN7000)	0.2	1	Cast Iron GGG	CBN
30	TPGD080204FN(BN7000)	0.4	1	Cast Iron GGG	CBN
31	TPGD080202FN(BN500)	0.2	1	Cast Iron GGG	CBN
32	TPGD080204FN(BN500)	0.4	1	Cast Iron GGG	CBN
33	TPGD080202FN(BNC500)	0.2	1	Cast Iron GGG	Coated CBN
34	TPGD080204FN(BNC500)	0.4	1	Cast Iron GGG	Coated CBN
35	TPGD080204FN3(BNC500)	0.4	3	Cast Iron GGG	Coated CBN
36	TPGP080202FLA(H1)	0.2	3	Aluminium	Carbide (K10)(HRA*)
37	TPGP080204FLA(H1)	0.4	3	Aluminium	Carbide (K10)(HRA*)
38	TPGD080202FN(DA2200)	0.2	1	Aluminium	PKD
39	TPGD080204FN(DA2200)	0.4	1	Aluminium	PKD
40	TPGD080202FLM(DA1000)	0.2	1	Aluminium	PKD (+3D Breaker)
41	TPGD080204FLM(DA1000)	0.4	1	Aluminium	PKD (+3D Breaker)
42	TPGP080201FLA(A1)	0.1	3	Chatter Resistant	Micro-Grained Carbide

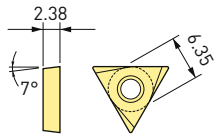
1. *HRA indicate High Rake Angle

[Remarks (All Inserts)]

1. Inserts are available in a packet of 10 pcs except diamond and CBN inserts.
2. Diamond and CBN inserts are available from 1 pc.
3. Please specify the insert model number and grade when ordering.
   Example: **TPMT080202EFM** **(T1500A)**... 10 pcs
   (Insert Model / Grade)

- BIG designs optimal inserts exclusive for boring. Select the suitable insert to the application.

TC11



for ENH4~ENH7 ENH6-1J - ENH6-3J ENH7-1J EBH4~6 EB17AJ~EB40AJ

No.	Model	R	Cutting edges	Workpiece	Material / coating
1	TCMT110204EFM(T1500A)	0.4	3	Alloy Steel / Carbon Steel	Cermet (+3D Breaker)
2	TCMT110208EFM(T1500A)	0.8	3	Alloy Steel / Carbon Steel	Cermet (+3D Breaker)
3	TCMT110204EFM(T2000Z)	0.4	3	Alloy Steel / Carbon Steel	Coated Cermet (+3D Breaker)
4	TCMT110208EFM(T2000Z)	0.8	3	Alloy Steel / Carbon Steel	Coated Cermet (+3D Breaker)
5	TCGT110202ELM(T2500A)	0.2	3	Alloy Steel / Carbon Steel	Cermet (+3D Breaker)
6	TCGT110204ELM(T2500A)	0.4	3	Alloy Steel / Carbon Steel	Cermet (+3D Breaker)
7	TCGT110202ELM(T2500F)	0.2	3	Alloy Steel / Carbon Steel	Coated Cermet (+3D Breaker)
8	TCGT110204ELM(T2500F)	0.4	3	Alloy Steel / Carbon Steel	Coated Cermet (+3D Breaker)
9	TCGT110202EL(T1500A)	0.2	3	Alloy Steel / Carbon Steel	Cermet
10	TCGT110204EL(T1500A)	0.4	3	Alloy Steel / Carbon Steel	Cermet
11	TCGT110208EL(T1500A)	0.8	3	Alloy Steel / Carbon Steel	Cermet
12	TCGT110202EL(T2000Z)	0.2	3	Alloy Steel / Carbon Steel	Coated Cermet
13	TCGT110204EL(T2000Z)	0.4	3	Alloy Steel / Carbon Steel	Coated Cermet
14	TCGT110208EL(T2000Z)	0.8	3	Alloy Steel / Carbon Steel	Coated Cermet
15	TCGT110202FN(BN2000)	0.2	1	Hardened Steel	CBN
16	TCGT110204FN(BN2000)	0.4	1	Hardened Steel	CBN
17	TCGT110202FN(BNC200)	0.2	1	Hardened Steel	Coated CBN
18	TCGT110204FN(BNC200)	0.4	1	Hardened Steel	Coated CBN
19	TCGT110202FN(CW10HA)	0.2	3	Hardened Steel	Coated Carbide
20	TCGT110204FN(CW10HA)	0.4	3	Hardened Steel	Coated Carbide
21	TCGT110202L(AC520U)	0.2	3	Stainless Steels/ Inconel /Titanium	Coated Carbide
22	TCGT110204L(AC520U)	0.4	3	Stainless Steels/ Inconel /Titanium	Coated Carbide
23	TCGT110202FN(H1)	0.2	3	Cast Iron GG	Carbide (K10)
24	TCGT110204FN(H1)	0.4	3	Cast Iron GG	Carbide (K10)
25	TCGT110208FN(H1)	0.8	3	Cast Iron GG	Carbide (K10)
26	TCGT110202FN(H1ZX)	0.2	3	Cast Iron GG	Coated Carbide (K10)
27	TCGT110204FN(H1ZX)	0.4	3	Cast Iron GG	Coated Carbide (K10)
28	TCGT110208FN(H1ZX)	0.8	3	Cast Iron GG	Coated Carbide (K10)
29	TCGT110202FN(BN7000)	0.2	1	Cast Iron GGG	CBN
30	TCGT110204FN(BN7000)	0.4	1	Cast Iron GGG	CBN
31	TCGT110208FN(BN7000)	0.8	1	Cast Iron GGG	CBN
32	TCGT110202FN(BN500)	0.2	1	Cast Iron GGG	CBN
33	TCGT110204FN(BN500)	0.4	1	Cast Iron GGG	CBN
34	TCGT110202FN(BNC500)	0.2	1	Cast Iron GGG	Coated CBN
35	TCGT110204FN(BNC500)	0.4	1	Cast Iron GGG	Coated CBN
36	TCGT110208FN(BNC500)	0.8	1	Cast Iron GGG	Coated CBN
37	TCGT110204FN3(BNC500)	0.4	3	Cast Iron GGG	Coated CBN
38	TCGT110208FN3(BNC500)	0.8	3	Cast Iron GGG	Coated CBN
39	TCGT110202FLA(H1)	0.2	3	Aluminium	Carbide (K10)(HRA*)
40	TCGT110204FLA(H1)	0.4	3	Aluminium	Carbide (K10)(HRA*)
41	TCGT110208FLA(H1)	0.8	3	Aluminium	Carbide (K10)(HRA*)
42	TCGT110202FN(DA2200)	0.2	1	Aluminium	PKD
43	TCGT110204FN(DA2200)	0.4	1	Aluminium	PKD
44	TCGT110208FN(DA2200)	0.8	1	Aluminium	PKD
45	TCGT110202FLM(DA1000)	0.2	1	Aluminium	PKD (+3D Breaker)
46	TCGT110204FLM(DA1000)	0.4	1	Aluminium	PKD (+3D Breaker)
47	TCGT110208FLM(DA1000)	0.8	1	Aluminium	PKD (+3D Breaker)

1. *HRA indicate High Rake Angle

[Remarks (All Inserts)]

1. Inserts are available in a packet of 10 pcs except diamond and CBN inserts.
2. Diamond and CBN inserts are available from 1 pc.
3. Please specify the insert model number and grade when ordering.

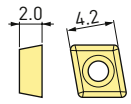
   Example: **TCMT110204EFM** **(T1500A)**... 10 pcs

   Insert Model | Grade

- BIG designs optimal inserts exclusive for boring. Select the suitable insert to the application.

MW04

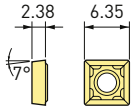
for MW16-18 ~ MW18-21



No.	Model	R	Cutting edges	Workpiece	Material / coating
1	MW0404F(Z30P)	0.4	2	Steel / Stainless Steel	Coated Carbide (P30)
2	MW0404S(Z30K)	0.4	2	Cast Iron GG/GGG	Coated Carbide (K30)
3	MW0404E(D15N)	0.4	2	Aluminium / Non-Ferrous	DLC Coated Carbide (N15)

SC_0602

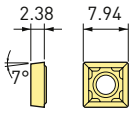
for ENH4-1S ~ ENH5-3S SW2026A, SW2531A, SW2533A, SW3240A



No.	Model	R	Cutting edges	Workpiece	Material / coating
1	SCMP060204EFM(T1500A)	0.4	4	Alloy Steel / Carbon Steel	Cermet (P10)
2	SCMP060204EFM(AC820P)	0.4	4	Alloy Steel / Carbon Steel	Coated Carbide (P20)
3	SCMP060204EFM(AC830P)	0.4	4	Alloy Steel / Carbon Steel	Coated Carbide (P30)
4	SCMP060204ESM(AC630M)	0.4	4	Stainless Steels	Coated Carbide (M30)
5	SCMP060204EFM(AC410K)	0.4	4	Cast Iron GG	Coated Carbide (K10)
6	SCMP060204EFM(AC700G)	0.4	4	Cast Iron GG	Coated Carbide (K20)
7	SCGA060204FN(H1)	0.4	4	Cast Iron GG	Carbide (K10)
8	SCGP060204FLA(H1)	0.4	4	Aluminium	Carbide (HRA*)

SC_0702

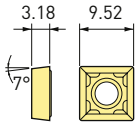
for ENH6-1S ~ ENH6-3S, ENH7-1S



No.	Model	R	Cutting edges	Workpiece	Material / coating
1	SCGP070204EFM(T1500A)	0.4	4	Alloy Steel / Carbon Steel	Cermet (P10)
2	SCMP070204EFM(AC820P)	0.4	4	Alloy Steel / Carbon Steel	Coated Carbide (P20)
3	SCMP070204EFM(AC830P)	0.4	4	Alloy Steel / Carbon Steel	Coated Carbide (P30)
4	SCMP070204ESM(AC630M)	0.4	4	Stainless Steels	Coated Carbide (M30)
5	SCMP070204EFM(AC410K)	0.4	4	Cast Iron GG	Coated Carbide (K10)
6	SCMP070204EFM(AC700G)	0.4	4	Cast Iron GG	Coated Carbide (K20)
7	SCGA070204FN(H1)	0.4	4	Cast Iron GG	Carbide (K10)
8	SCGP070204FLA(H1)	0.4	4	Aluminium	Carbide (HRA*)

SC_0903

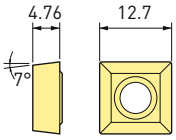
for SW3242A, SW4151A, SW4154A, SW5366A



No.	Model	R	Cutting edges	Workpiece	Material / coating
1	SCGM090304EFM(T1500A)	0.4	4	Alloy Steel / Carbon Steel	Cermet (P10)
2	SCGM090308EFM(T1500A)	0.8	4	Alloy Steel / Carbon Steel	Cermet (P10)
3	SCMM090304EFM(AC820P)	0.4	4	Alloy Steel / Carbon Steel	Coated Carbide (P20)
4	SCMM090308EFM(AC820P)	0.8	4	Alloy Steel / Carbon Steel	Coated Carbide (P20)
5	SCMM090308EFM(AC830P)	0.8	4	Alloy Steel / Carbon Steel	Coated Carbide (P30)
6	SCMM090308ESM(AC630M)	0.8	4	Alloy Steel / Carbon Steel	Coated Carbide (M30)
7	SCMM090308EFM(AC410K)	0.8	4	Cast Iron GG	Coated Carbide (K10)
8	SCMM090308EFM(AC700G)	0.8	4	Cast Iron GG	Coated Carbide (K20)
9	SCGA090304FN(H1)	0.4	4	Cast Iron GG	Carbide (K10)
10	SCGM090308FLA(H1)	0.8	4	Aluminium	Carbide (HRA*)

SC_1204

for SW5370A, SW6986A, SW6890A, SW88110A, SW98126A, SW125153A, SW148176A, SW175203A, TW200A



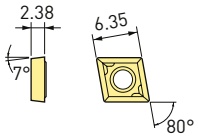
No.	Model	R	Cutting edges	Workpiece	Material / coating
1	SCGM120404EFM(T1500A)	0.4	4	Alloy Steel / Carbon Steel	Cermet (P10)
2	SCGM120408EFM(T1500A)	0.8	4	Alloy Steel / Carbon Steel	Cermet (P10)
3	SCMM120404EFM(AC820P)	0.4	4	Alloy Steel / Carbon Steel	Coated Carbide (P20)
4	SCMM120408EFM(AC820P)	0.8	4	Alloy Steel / Carbon Steel	Coated Carbide (P20)
5	SCMM120408EFM(AC830P)	0.8	4	Alloy Steel / Carbon Steel	Coated Carbide (P30)
6	SCMM120408ESM(AC630M)	0.8	4	Stainless Steels	Coated Carbide (M30)
7	SCMM120408EFM(AC410K)	0.8	4	Cast Iron GG	Coated Carbide (K10)
8	SCMM120408EFM(AC700G)	0.8	4	Cast Iron GG	Coated Carbide (K20)
9	SCGA120404FN(H1)	0.4	4	Cast Iron GG	Carbide (K10)
10	SCGM120408FLA(H1)	0.8	4	Aluminium	Carbide (HRA*)

[Remarks]

1. Inserts are available in packets of 10 pcs.
2. Please specify the insert model number and grade when ordering.
   Example: **SCMP060204EFM** **(T1500A)**... 10 pcs
   Insert Model / Grade

- BIG designs optimal inserts exclusive for boring. Select the suitable insert to the application.

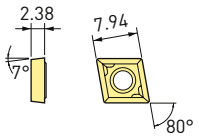
CC_0602



for ENH4-1F ~ ENH5-3F SW2026E, SW2531E, SW2533E, SW3240E

No.	Model	R	Cutting edges	Workpiece	Material / coating
1	CCMP060204EFM(T1500A)	0.4	2	Alloy Steel / Carbon Steel	Cermet (P10)
2	CCMP060204EFM(AC820P)	0.4	2	Alloy Steel / Carbon Steel	Coated Carbide (P20)
3	CCMP060204EFM(AC830P)	0.4	2	Alloy Steel / Carbon Steel	Coated Carbide (P30)
4	CCMP060204ESM(AC630M)	0.4	2	Stainless Steels	Coated Carbide (M30)
5	CCMP060204EFM(AC410K)	0.4	2	Cast Iron GG	Coated Carbide (K10)
6	CCMP060204EFM(AC700G)	0.4	2	Cast Iron GG	Coated Carbide (K20)
7	CCGA060204FN(H1)	0.4	2	Cast Iron GG	Carbide (K10)
8	CCGP060204FLA(H1)	0.4	2	Aluminium	Carbide (HRA*)
9	CCGP060204FLB(H1)	0.4	2	Aluminium	Carbide (K10)

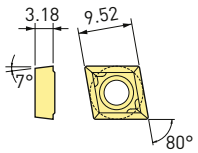
CC_0702



for ENH6-1F ~ ENH6-3F, ENH7-1F

No.	Model	R	Cutting edges	Workpiece	Material / coating
1	CCGP070204EFM(T1500A)	0.4	2	Alloy Steel / Carbon Steel	Cermet (P10)
2	CCMP070204EFM(AC820P)	0.4	2	Alloy Steel / Carbon Steel	Coated Carbide (P20)
3	CCMP070204EFM(AC830P)	0.4	2	Alloy Steel / Carbon Steel	Coated Carbide (P30)
4	CCMP070204ESM(AC630M)	0.4	2	Stainless Steels	Coated Carbide (M30)
5	CCMM070204ESS(AC830P)	0.4	2	Construction Steel	Coated Carbide (P30)
6	CCMP070204EFM(AC410K)	0.4	2	Cast Iron GG	Coated Carbide (K10)
7	CCMP070204EFM(AC700G)	0.4	2	Cast Iron GG	Coated Carbide (K20)
8	CCGA070204FN(H1)	0.4	2	Cast Iron GG	Carbide (K10)
9	CCGP070204FLA(H1)	0.4	2	Aluminium	Carbide (HRA*)
10	CCGP070204FLB(H1)	0.4	2	Aluminium	Carbide (K10)

CC_0903



for SW3242E, SW4151E, SW4154E, SW5366E

No.	Model	R	Cutting edges	Workpiece	Material / coating
1	CCGM090304EFM(T1500A)	0.4	2	Alloy Steel / Carbon Steel	Cermet (P10)
2	CCGM090308EFM(T1500A)	0.8	2	Alloy Steel / Carbon Steel	Cermet (P10)
3	CCMM090304EFM(AC820P)	0.4	2	Alloy Steel / Carbon Steel	Coated Carbide (P20)
4	CCMM090308EFM(AC820P)	0.8	2	Alloy Steel / Carbon Steel	Coated Carbide (P20)
5	CCMM090308EFM(AC830P)	0.8	2	Alloy Steel / Carbon Steel	Coated Carbide (P30)
6	CCMM090308ESM(AC630M)	0.8	2	Stainless Steels	Coated Carbide (M30)
7	CCMM090308ESS(AC830P)	0.8	2	Construction Steel	Coated Carbide (P30)
8	CCMM090308EFM(AC410K)	0.8	2	Cast Iron GG	Coated Carbide (K10)
9	CCMM090304EFM(AC700G)	0.4	2	Cast Iron GG	Coated Carbide (K20)
10	CCMM090308EFM(AC700G)	0.8	2	Cast Iron GG	Coated Carbide (K20)
11	CCGA090304FN(H1)	0.4	2	Cast Iron GG	Carbide (K10)
12	CCGM090308FLA(H1)	0.8	2	Aluminium	Carbide (HRA*)
13	CCGM090304FLB(H1)	0.4	2	Aluminium	Cermet (P10)

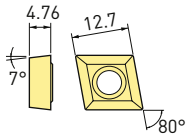
1. *HRA indicate High Rake Angle

[Remarks]

1. Inserts are available in packets of 10 pcs.
2. Please specify the insert model number and grade when ordering.
   Example: **CCMP060204EFM** (Insert Model) **(T1500A)** (Grade)... 10 pcs

- BIG designs optimal inserts exclusive for boring. Select the suitable insert to the application.

CC_1204

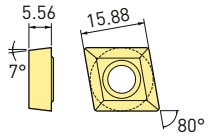


for SW5370E, SW6986E, SW6890E, SW88110E, SW98126E, SW125153E, SW148176E, SW175203E
TW200E, TW200E-SC

No.	Model	R	Cutting edges	Workpiece	Material / coating
1	CCGM120404EFM(T1500A)	0.4	2	Alloy Steel / Carbon Steel	Cermet (P10)
2	CCGM120408EFM(T1500A)	0.8	2	Alloy Steel / Carbon Steel	Cermet (P10)
3	CCMM120404EFM(AC820P)	0.4	2	Alloy Steel / Carbon Steel	Coated Carbide (P20)
4	CCMM120408EFM(AC820P)	0.8	2	Alloy Steel / Carbon Steel	Coated Carbide (P20)
5	CCMM120408EFM(AC830P)	0.8	2	Alloy Steel / Carbon Steel	Coated Carbide (P30)
6	CCMM120408ESM(AC630M)	0.8	2	Stainless Steels	Coated Carbide (M30)
7	CCMM120408ESS(AC830P)	0.8	2	Construction Steel	Coated Carbide (P30)
8	CCMM120408EFM(AC410K)	0.8	2	Cast Iron GG	Coated Carbide (K10)
9	CCMM120404EFM(AC700G)	0.4	2	Cast Iron GG	Coated Carbide (K20)
10	CCMM120408EFM(AC700G)	0.8	2	Cast Iron GG	Coated Carbide (K20)
11	CCGA120404FN(H1)	0.4	2	Cast Iron GG	Carbide (K10)
12	CCGM120408FLA(H1)	0.8	2	Aluminium	Carbide (HRA*)
13	CCGM120404FLB(H1)	0.4	2	Aluminium	Carbide (K10)

1. *HRA indicate High Rake Angle

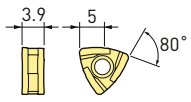
CC_1605



for SW6890EL, SW88110EL, SW98126EL, SW125153EL, SW148176EL, SW175203EL
TW200EL, TW200EL-SC

No.	Model	R	Cutting edges	Workpiece	Material / coating
1	CCMM160508EFM(AC820P)	0.8	2	Alloy Steel / Carbon Steel	Coated Carbide (P20)
2	CCMM160508EFM(AC830P)	0.8	2	Alloy Steel / Carbon Steel	Coated Carbide (P30)
3	CCMM160508ESS(AC830P)	0.8	2	Construction Steel	Coated Carbide (P30)
4	CCMM160508EFM(AC700G)	0.8	2	Cast Iron GG	Coated Carbide (K20)

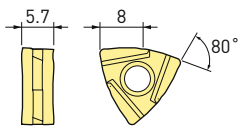
ZN05



for SW3242N, SW4151N, SW4154N, SW5366N

No.	Model	R	Cutting edges	Workpiece	Material / coating
1	ZNMU050308EM(CW20PA)	0.8	6	Alloy Steel / Carbon Steel	Coated Carbide (P20)
2	ZNMU050308EM(CW15KA)	0.8	6	Cast Iron GG	Coated Carbide (K15)

ZN08



for SW5370N, SW6986N, SW6890N, SW88110N, SW98126N, SW125153N, SW148176N, SW175203N

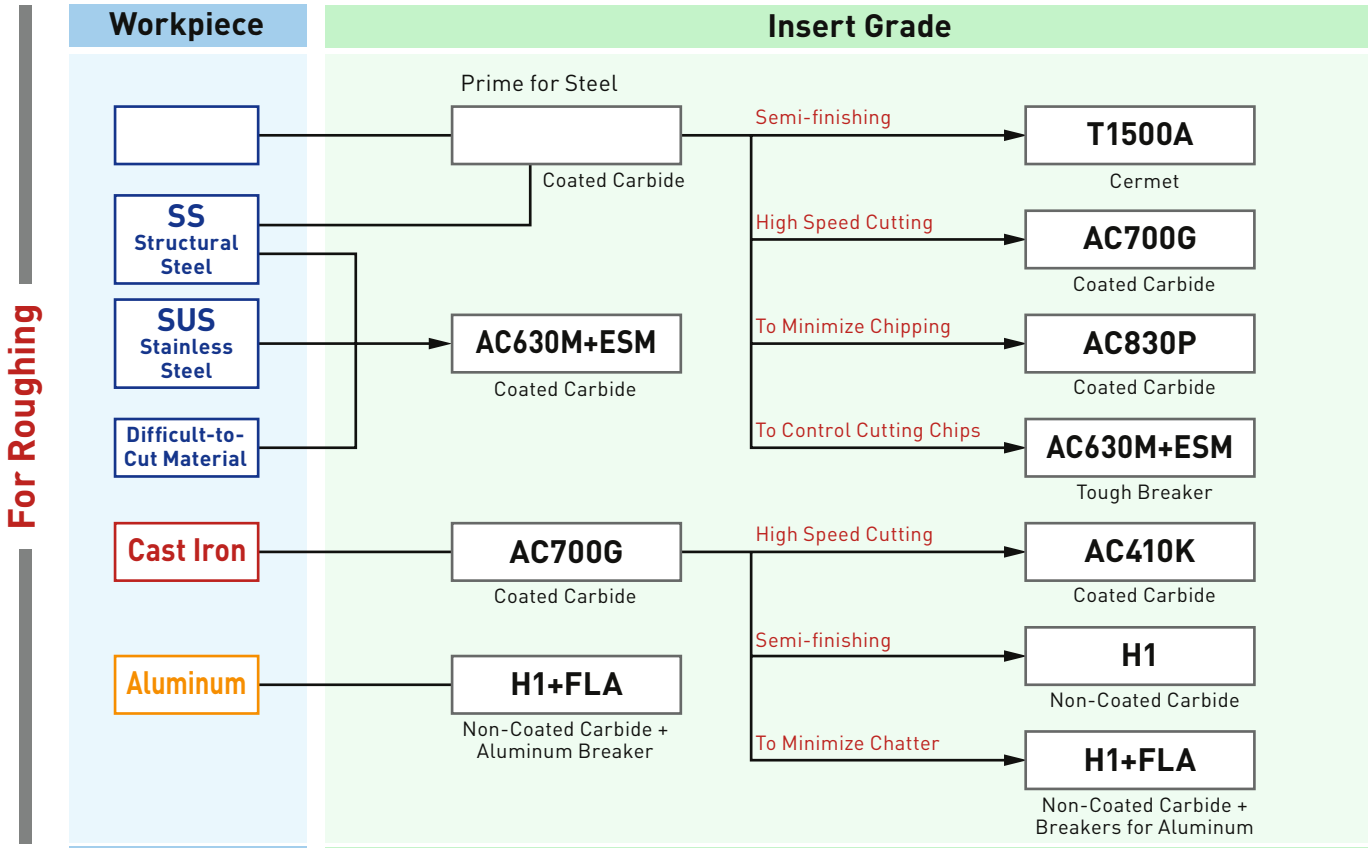
No.	Model	R	Cutting edges	Workpiece	Material / coating
1	ZNMU080508EM(CW20PA)	0.8	6	Alloy Steel / Carbon Steel	Coated Carbide (P20)
2	ZNMU080508EM(CW15KA)	0.8	6	Cast Iron GG	Coated Carbide (K15)

[Remarks]

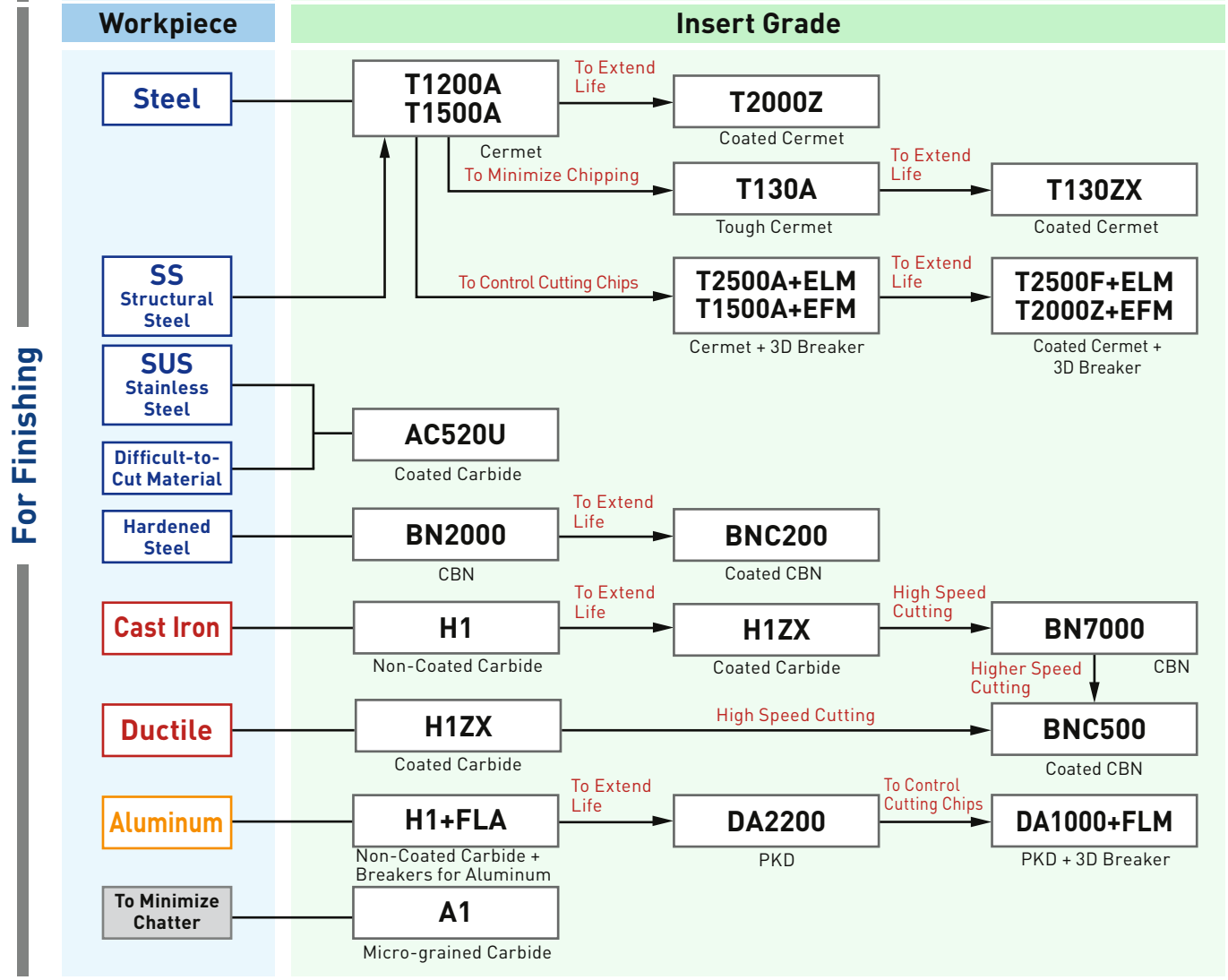
1. Inserts are available in packets of 10 pcs.
2. Please specify the insert model number and grade when ordering.
   Example: **CCGM120404EFM** **(T1500A)**... 10 pcs
   (Insert Model / Grade)

CK BORING SYSTEM Insert Selection Chart

For Roughing



For Finishing

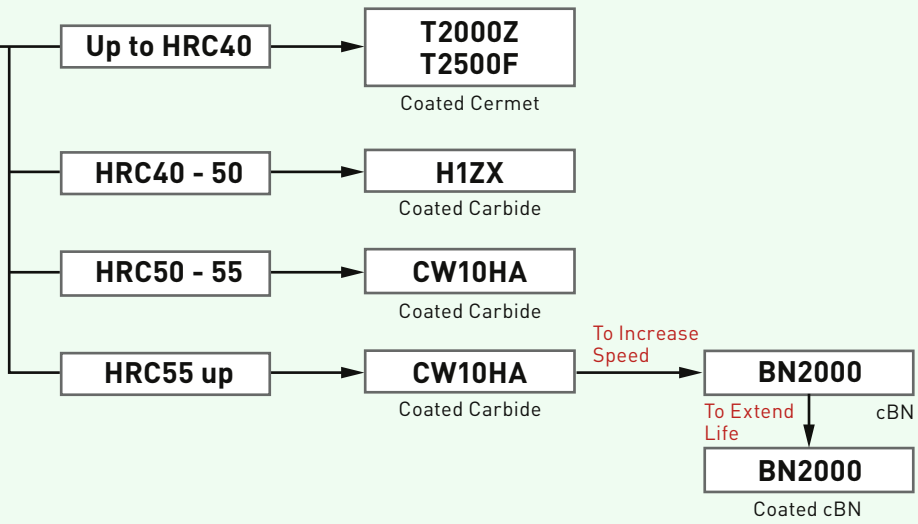


For Finishing

Workpiece	Insert Grade

High-Hardness Materials

(Pre-hardened Steel/ Hardened Steel)



Compatibility Table (Hardness Compatibility)

Insert Grades		Hardness (HRC) 40 45 50 55 60
Coated Cermet	T2000Z T2500F	
Coated Carbide	H1ZX	
	CW10HA	
cBN	BNC200 (BN2000)	

Recommended Cutting Conditions

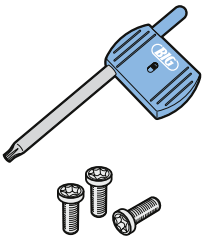
Hardness (HRC)	Insert Grades	Cutting speed Vc (m/min)	Cutting depth (mm/ø)	Coolant
40 - 50	H1ZX	100 - 130	0.1 - 0.2	Wet recommended
50 - 55	CW10HA	50 - 100	0.1 - 0.2	
55 - 59		30 - 50	0.1 - 0.2	
55 up	BNC200 (BN2000)	70 - 100	0.1 - 0.2	

In general, the rough guidelines are f = 0.06 for corner R0.2 and f = 0.10 for R0.4.

1. Because the cylindrical tool type stability limit conditions vary according to the tool projection length, adjust the conditions with reference to the Cylindrical Tool Type Recommended Cutting Conditions Table.
2. If tool life decreases in interrupted cutting, we recommend low-speed conditions and dry cutting.

Wrenches/Others

Insert Clamping Screw Set (Contains 10 screws and 1 wrench)



Set Model	Insert Size	Compatible Insert & Insert Holder & Cartridge	Insert Clamping Screw	
			Thread M	Wrench
S1.6S-T3-S	EC03	EB04	M1.6F×2	DA-T3
S1.6S-T3		EB05	M1.6F×2.5	
S2S-A-6IP	WC02	ST05W-EB6-60 ST06W-EB7.5-65	M2×3	FS-6IP
S2S-B-6IP		EN15	M2S×4	FS-6IP
694.101-2P *	WC02	ST7W-EB6/EB7	M2×3.6	FS-6IP
694.102-2P *	TP07	ST7W-EB8/EB9	M2×4.1	
694.103-2P *		ST7W-EB10·EB12 ENH1-1TP07 ENH2-1TP07	M2×4.8	
S2S-S-6IP	TP08	EB09N EB10.5N EB12N	M2×4	FS-6IP
S2S-6IP		EB14N-EB46N ENH1-ENH3 ENH3J-ENH5J EBH3	M2×5.5	
S2.5S-7IP	TC11 SC06 CC06	EB17AJ-EB40AJ SW2026 SW2531 SW2533 SW3240 ENH4-ENH7 ENH4E-ENH6E ENH6J-ENH7J ENH4F-ENH5F ENH4S-ENH5S EBH4-EBH6	M2.5×6.5	FS-7IP
S2.508S-7IP	ZN05	SW3242N SW4151N SW4154N SW5366N	M2.5×8	FS-7IP
S3S-10IP	SC07 CC07	ENH6F-ENH7F ENH6S-ENH7S	M3×7	FS-10IP
S4S-15IP	SC09 CC09	SW3242 SW4151 SW4154 SW5366	M4×8	FS-15IP
S412S-15IP	ZN08	SW5370N SW6986N SW6890N SW88110N SW98126N SW125153N SW148176N SW175203N	M4×12	FS-15IP
S5S-20IP	SC12 CC12 CC16	SW5370 SW6986 SW6890 SW88110 SW98126 SW125153 SW148176 SW175203 TW200	M5×12	FS-20IP
S1.6S-T6	MW04	MW1619-MW1821	M1.6×4.2	FA-T6

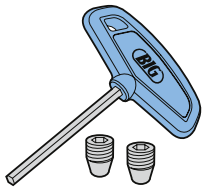
· Wrenches are also sold individually. Please order the wrench model.
· * marked models consist of 2 screws. Wrench is not included.

Wrenches/Others

CK Set Screw

(Contains 2 screws and 1 exclusive T-wrench)

· Key element of the CK Connection.
Periodical replacement is recommended in order to maintain accurate clamping.



Set Model	CK	M	⬡SW	N·m	Wrench
CK1S	CK1	M4xP0.5	2	1.5	CK-T2
CK2S	CK2	M5xP0.5	2.5	2.5	CK-T2.5
CK3S	CK3	M6xP0.75	3	4.5	CK-T3
CK4S	CK4	M8xP0.75	4	7	CK-T4
CK5S	CK5	M10xP1.0	5	14	CK-T5
CK6S	CK6	M12xP1.0	6	24	CK-T6
CK7S	CK7	M20xP1.5	10	45	-

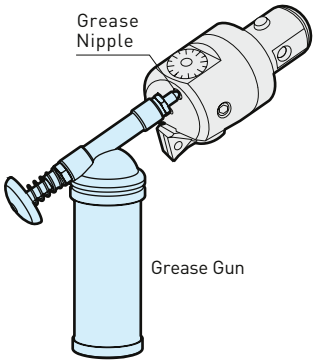
1. The set contains 2 screws and 1 wrench. * Wrenches are also available separately.
"T" in the wrench model indicates T-shape of the wrench. This has nothing to do with Torx.

* An L wrench is included with CK7S.

Grease Gun

Model	GRG-02

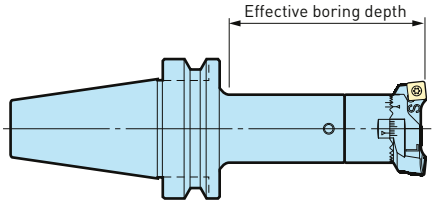
Essential for maintenance!
Can be used with all types of finishing heads.
(Grease not included.)



Cutting Conditions Table

SW BORING HEAD

1. This table is a guideline for selecting cutting parameters.
   The effective boring depth is the length with boring head mounted on the CK Shank.
   When using extensions or reductions, adjust the cutting conditions accordingly.
   Also, adjust them as needed according to the machine and workpiece conditions.
2. For blind holes, adjust the parameters by observing the chip evacuation.
3. Cermet T1500A is recommended for good surface finish for light roughing of steel.
4. AC830P is recommended for interrupted cutting of steel.
5. AC820P is recommended for interrupted cutting of ductile cast iron.
6. For step cutting, it is recommended to increase the depth of cut by 1.6 times and reduce the feed rate by 60%.



[BBT40]

Type CC / Type SC

Head Model	Workpiece Material	Effective boring depth	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/Ø)		Feed f (mm/rev)	
			Nose Radius	Grade		Recommended	Max.	Recommended	Max.
SW20	Carbon Steel	73	0.4	AC820P	150	2.0	2.5	0.20	0.25
	Alloy Steel			AC820P	130	1.5	2.0	0.20	0.25
	Stainless Steel			AC630M	80	1.5	2.0	0.20	0.25
	Cast Iron			AC700G	130	2.5	3.0	0.25	0.30
	Ductile			AC410K	80	2.0	2.5	0.20	0.25
	Aluminum			H1	200	2.5	3.0	0.25	0.30
SW25	Carbon Steel	88	0.4	AC820P	160	2.5	3.0	0.25	0.30
	Alloy Steel			AC820P	140	2.0	3.0	0.20	0.25
	Stainless Steel			AC630M	90	2.0	3.0	0.20	0.25
	Cast Iron			AC700G	140	3.0	4.0	0.25	0.30
	Ductile			AC410K	90	2.5	3.0	0.20	0.25
	Aluminum			H1	200	3.0	4.0	0.30	0.35
SW32	Carbon Steel	103	0.8	AC820P	200	3.5	4.5	0.30	0.40
	Alloy Steel			AC820P	180	3.0	4.0	0.25	0.35
	Stainless Steel			AC630M	100	3.0	4.0	0.25	0.35
	Cast Iron			AC700G	180	4.0	5.5	0.30	0.40
	Ductile			AC410K	100	3.5	4.5	0.25	0.35
	Aluminum			H1	220	4.0	5.0	0.30	0.40
SW41	Carbon Steel	103	0.8	AC820P	200	4.5	5.5	0.35	0.45
	Alloy Steel			AC820P	180	4.0	5.0	0.30	0.40
	Stainless Steel			AC630M	100	4.0	5.0	0.30	0.40
	Cast Iron			AC700G	180	5.0	7.0	0.35	0.45
	Ductile			AC410K	100	4.0	6.0	0.30	0.40
	Aluminum			H1	220	5.0	7.0	0.35	0.45
SW53	Carbon Steel	103	0.8	AC820P	220	6.0	8.0	0.40	0.50
	Alloy Steel			AC820P	200	5.0	6.0	0.35	0.45
	Stainless Steel			AC630M	120	5.0	6.0	0.35	0.45
	Cast Iron			AC700G	200	8.0	10.0	0.40	0.50
	Ductile			AC410K	100	6.0	8.0	0.35	0.45
	Aluminum			H1	250	8.0	10.0	0.45	0.55
SW68 SW98	Carbon Steel	103	0.8	AC820P	220	8.0	10.0	0.40	0.50
	Alloy Steel			AC820P	200	7.0	9.0	0.35	0.45
	Stainless Steel			AC630M	120	7.0	9.0	0.35	0.45
	Cast Iron			AC700G	200	9.0	12.0	0.40	0.50
	Ductile			AC410K	100	8.0	10.0	0.35	0.45
	Aluminum			H1	250	9.0	12.0	0.45	0.55

Spindle Speed Calculation

$$n = \frac{Vc}{\pi D} \times 1{,}000$$

n : Spindle speed [min^{-1}]
Vc : Cutting speed [m/min]
D : Diameter [mm]

Type ZN

Head Model	Workpiece Material	Effective boring depth	Grade	Cutting Speed Vc (m/min)	Cutting Depth (mm/Ø)		Feed f (mm/rev)	
					Recommended	Max.	Recommended	Max.
SW32	Carbon Steel	103	CW20PA	180	3.0	4.0	0.30	0.40
	Stainless Steel		CW20PA	160	2.5	3.5	0.25	0.35
	Cast Iron		CW15KA	160	3.5	5.0	0.30	0.40
	Ductile		CW15KA	100	3.0	4.0	0.25	0.35
SW41	Carbon Steel	103	CW20PA	200	3.5	5.0	0.30	0.40
	Stainless Steel		CW20PA	180	3.0	4.5	0.25	0.35
	Cast Iron		CW15KA	180	4.0	6.5	0.35	0.45
	Ductile		CW15KA	100	3.0	5.5	0.30	0.40
SW53	Carbon Steel	103	CW20PA	220	6.0	8.0	0.40	0.50
	Stainless Steel		CW20PA	200	5.0	6.0	0.35	0.45
	Cast Iron		CW15KA	200	8.0	10.0	0.40	0.50
	Ductile		CW15KA	100	6.0	8.0	0.35	0.45
SW68 SW98 SW148	Carbon Steel	103	CW20PA	220	8.0	10.0	0.40	0.50
	Stainless Steel		CW20PA	200	5.0	8.0	0.35	0.45
	Cast Iron		CW15KA	200	9.0	12.0	0.40	0.50
	Ductile		CW15KA	100	8.0	10.0	0.35	0.45

[BBT50]
Type CC / Type SC

Head Model		Workpiece Material	Effective boring depth	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/Ø)		Feed f (mm/rev)	
				Nose Radius	Grade		Recommended	Max.	Recommended	Max.
SW20		Carbon Steel	73	0.4	AC820P	150	2.0	2.5	0.20	0.25
		Alloy Steel			AC820P	130	1.5	2.0	0.20	0.25
		Stainless Steel			AC630M	80	1.5	2.0	0.20	0.25
		Cast Iron			AC700G	130	2.5	3.0	0.25	0.30
		Ductile			AC410K	80	2.0	2.5	0.20	0.25
		Aluminum			H1	200	2.5	3.0	0.25	0.30
SW25		Carbon Steel	107	0.4	AC820P	150	2.5	3.5	0.25	0.30
		Alloy Steel			AC820P	130	2.0	3.0	0.20	0.25
		Stainless Steel			AC630M	80	2.0	3.0	0.20	0.25
		Cast Iron			AC700G	130	3.0	4.0	0.25	0.30
		Ductile			AC410K	80	2.5	3.0	0.20	0.25
		Aluminum			H1	200	3.0	4.0	0.30	0.35
SW32		Carbon Steel	122	0.8	AC820P	180	3.5	4.5	0.30	0.40
		Alloy Steel			AC820P	160	3.0	4.0	0.25	0.35
		Stainless Steel			AC630M	100	3.0	4.0	0.25	0.35
		Cast Iron			AC700G	160	4.0	5.5	0.30	0.40
		Ductile			AC410K	100	3.5	4.5	0.25	0.35
		Aluminum			H1	200	4.0	5.0	0.30	0.40
SW41		Carbon Steel	122	0.8	AC820P	200	4.5	5.5	0.35	0.45
		Alloy Steel			AC820P	180	4.0	5.0	0.30	0.40
		Stainless Steel			AC630M	100	4.0	5.0	0.30	0.40
		Cast Iron			AC700G	180	5.0	7.0	0.35	0.45
		Ductile			AC410K	100	4.0	6.0	0.30	0.40
		Aluminum			H1	220	5.0	7.0	0.35	0.45
SW53		Carbon Steel	122	0.8	AC820P	220	7.0	9.0	0.40	0.55
		Alloy Steel			AC820P	200	6.0	8.0	0.35	0.50
		Stainless Steel			AC630M	120	6.0	8.0	0.35	0.50
		Cast Iron			AC700G	200	9.0	12.0	0.45	0.55
		Ductile			AC410K	120	7.0	10.0	0.35	0.50
		Aluminum			H1	250	9.0	12.0	0.45	0.55
SW68		Carbon Steel	122	0.8	AC820P	220	10.0	12.0	0.40	0.60
		Alloy Steel			AC820P	200	8.0	12.0	0.35	0.55
		Stainless Steel			AC630M	120	8.0	10.0	0.35	0.55
		Cast Iron			AC700G	200	10.0	14.0	0.45	0.60
		Ductile			AC410K	120	9.0	12.0	0.35	0.55
		Aluminum			H1	250	10.0	12.0	0.45	0.60
SW98		Carbon Steel	122	0.8	AC820P	220	10.0	12.0	0.40	0.60
		Alloy Steel			AC820P	200	8.0	12.0	0.35	0.55
		Stainless Steel			AC630M	120	8.0	10.0	0.35	0.55
		Cast Iron			AC700G	200	10.0	14.0	0.45	0.60
		Ductile			AC410K	120	9.0	12.0	0.35	0.55
		Aluminum			H1	250	10.0	12.0	0.45	0.60
TW200 (CK7)	≤ Ø340	Carbon Steel	172	0.8	AC820P	220	10.0	12.0	0.40	0.60
		Alloy Steel			AC820P	200	8.0	12.0	0.35	0.55
		Stainless Steel			AC630M	120	8.0	10.0	0.35	0.55
		Cast Iron			AC700G	200	10.0	14.0	0.45	0.60
		Ductile			AC700G	120	9.0	12.0	0.35	0.55
		Aluminum			H1	250	10.0	12.0	0.45	0.60
	> Ø340	Carbon Steel			AC820P	220	7.0	9.0	0.40	0.60
		Alloy Steel			AC820P	200	6.0	8.0	0.35	0.55
		Stainless Steel			AC630M	120	6.0	8.0	0.35	0.55
		Cast Iron			AC700G	200	7.0	10.0	0.45	0.60
		Ductile			AC700G	120	6.0	8.0	0.35	0.55
		Aluminum			H1	250	7.0	9.0	0.45	0.60

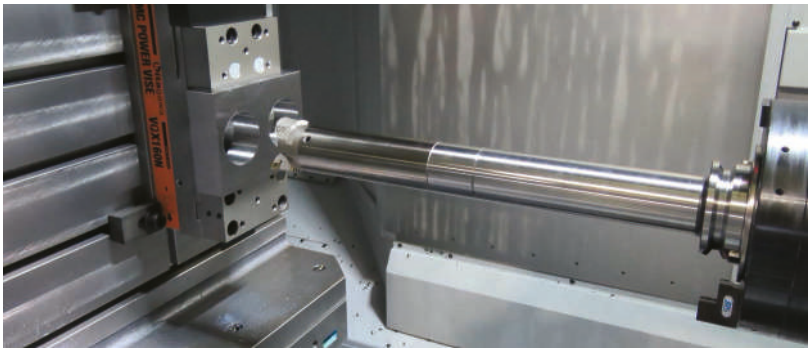
Type ZN

Head Model	Workpiece Material	Effective boring depth	Grade	Cutting Speed Vc (m/min)	Cutting Depth (mm/Ø)		Feed f (mm/rev)	
					Recommended	Max.	Recommended	Max.
SW32	Carbon Steel	122	CW20PA	180	3.0	4.0	0.30	0.40
	Stainless Steel		CW20PA	160	2.5	3.5	0.25	0.35
	Cast Iron		CW15KA	160	4.0	5.0	0.30	0.40
	Ductile		CW15KA	100	3.0	4.0	0.25	0.35
SW41	Carbon Steel	122	CW20PA	200	3.5	5.0	0.30	0.40
	Stainless Steel		CW20PA	180	3.0	4.5	0.25	0.35
	Cast Iron		CW15KA	180	4.0	6.5	0.35	0.45
	Ductile		CW15KA	100	3.0	5.5	0.30	0.40
SW53	Carbon Steel	122	CW20PA	220	6.0	8.0	0.40	0.55
	Stainless Steel		CW20PA	200	5.0	7.0	0.35	0.50
	Cast Iron		CW15KA	200	9.0	12.0	0.40	0.55
	Ductile		CW15KA	120	7.0	10.0	0.35	0.50
SW68 SW98 SW148	Carbon Steel	122	CW20PA	220	8.0	10.0	0.40	0.60
	Stainless Steel		CW20PA	200	6.0	10.0	0.35	0.55
	Cast Iron		CW15KA	200	10.0	14.0	0.40	0.60
	Ductile		CW15KA	120	9.0	12.0	0.35	0.55

APPLICATION EXAMPLES

Rough Boring of Carbon Steel (C55) Using SMART DAMPER SW Head

Machine		Horizontal MC (BBT50)
Insert	Type CC	CCMM120404EFM
	Type SC	SCMM120404EFM
Workpiece Material		C55
Cutting Speed Vc (m/min)		150
Feed f (mm/rev)		0.4
Cutting Depth (mm/Ø)		7
Coolant		Water-soluble (center through)

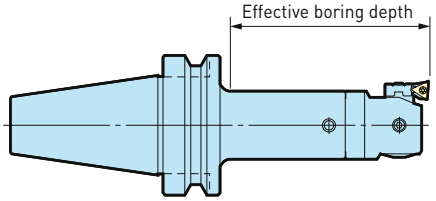


Head	Holder	Extension	Effective boring depth (mm)	Cartridge	
				Type CC	Type SC
CKB5-SW53DP-220	BBT50-CKB5-228	None	405	Good	Good
	BBT50-CKB5-263	None	440	Good	Chatter
		CKB55-60	500	Good	Chatter

The use of the SMART DAMPER SW Head enabled stable rough boring without chatter even at lengths of L/D=6 and above.
As well, stable machining was possible at even longer lengths through selection of a Type CC cartridge (approach angle 0°).

EWN/EWE/EWB BORING HEAD

1. This table is a guideline for selecting cutting parameters.
   The effective boring depth is the length with boring head mounted on the CK Shank.
   When using extensions or reductions, adjust the cutting conditions accordingly.
   Also, adjust them as needed according to the machine and workpiece conditions.
2. Internal high pressure coolant may cause deflection of the holder.
   Lower the pressure when close tolerance is required.
3. Coated cermet T2000Z or T2500F is recommended to reduce wear when machining steel.
4. Dry cutting is recommended for CBN BN2000, BNC200, BNC500 and BN7000 inserts.



[BBT40]

Head Model	Workpiece Material	Effective boring depth	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/Ø)	Feed f (mm/rev)	
			Nose Radius	Grade			Recommended	Max.
EWN20	Carbon Steel/Alloy Steel	73	0.2	T1500A	160	0.15	0.06	0.12
	Stainless Steel		0.2	AC520U	120	0.15	0.06	0.10
	Hardened Steel		0.2	BN2000	70	0.10	0.06	0.10
	Cast Iron		0.2	H1	120	0.20	0.06	0.12
	Ductile		0.2	H1ZX	100	0.15	0.06	0.10
	Ductile		0.2	BNC500	120	0.15	0.06	0.10
	Aluminum		0.2	H1	200	0.20	0.06	0.12
	Aluminum		0.2	DA2200	300	0.20	0.06	0.12
EWN25	Carbon Steel/Alloy Steel	88	0.2	T1500A	180	0.15	0.06	0.12
	Stainless Steel		0.2	AC520U	140	0.15	0.06	0.12
	Hardened Steel		0.2	BN2000	80	0.10	0.06	0.10
	Cast Iron		0.2	H1	140	0.20	0.06	0.12
	Ductile		0.2	H1ZX	120	0.15	0.06	0.12
	Ductile		0.2	BNC500	180	0.15	0.06	0.10
	Aluminum		0.2	H1	200	0.20	0.06	0.12
	Aluminum		0.2	DA2200	400	0.20	0.06	0.12
EWN32 EWB32	Carbon Steel/Alloy Steel	103	0.2	T1500A	200	0.20	0.06	0.12
	Stainless Steel		0.2	AC520U	160	0.20	0.06	0.12
	Hardened Steel		0.2	BN2000	100	0.10	0.06	0.10
	Cast Iron		0.2	H1	160	0.20	0.06	0.12
	Ductile		0.2	H1ZX	120	0.15	0.06	0.12
	Ductile		0.2	BNC500	200	0.15	0.06	0.10
	Aluminum		0.4	H1	300	0.20	0.10	0.20
	Aluminum		0.4	DA2200	800	0.20	0.10	0.20
EWN41 EWE41 EWB41	Carbon Steel/Alloy Steel	103	0.2	T1500A	200	0.20	0.06	0.12
	Stainless Steel		0.2	AC520U	160	0.20	0.06	0.12
	Hardened Steel		0.4	BN2000	100	0.10	0.08	0.12
	Cast Iron		0.4	H1	160	0.20	0.10	0.20
	Ductile		0.4	H1ZX	120	0.15	0.10	0.15
	Ductile		0.4	BNC500	200	0.15	0.10	0.15
	Aluminum		0.4	H1	300	0.20	0.12	0.20
	Aluminum		0.4	DA2200	800	0.20	0.12	0.20
EWN53 EWN68 EWN100 EWE53 EWE68 EWE100 EWB53 EWB68 EWB85	Carbon Steel/Alloy Steel	103	0.4	T1500A	250	0.25	0.10	0.20
	Stainless Steel		0.4	AC520U	180	0.25	0.10	0.20
	Hardened Steel		0.4	BN2000	100	0.10	0.08	0.12
	Cast Iron		0.4	H1	180	0.25	0.10	0.20
	Ductile		0.4	H1ZX	120	0.20	0.10	0.20
	Ductile		0.4	BNC500	200	0.20	0.10	0.20
	Aluminum		0.8	H1	300	0.25	0.16	0.30
	Aluminum		0.4	DA2200	800	0.25	0.12	0.20

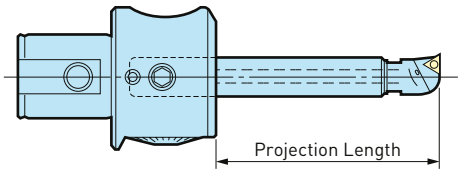
[BBT50]

Head Model	Workpiece Material	Effective boring depth	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/Ø)	Feed f (mm/rev)	
			Nose Radius	Grade			Recommended	Max.
EWN20	Carbon Steel/Alloy Steel	73	0.2	T1500A	160	0.15	0.06	0.12
	Stainless Steel		0.2	AC520U	120	0.15	0.06	0.10
	Hardened Steel		0.2	BN2000	70	0.10	0.06	0.10
	Cast Iron		0.2	H1	120	0.20	0.06	0.12
	Ductile		0.2	H1ZX	100	0.15	0.06	0.10
	Ductile		0.2	BNC500	120	0.15	0.06	0.10
	Aluminum		0.2	H1	200	0.20	0.06	0.12
	Aluminum		0.2	DA2200	300	0.20	0.06	0.12
EWN25	Carbon Steel/Alloy Steel	107	0.2	T1500A	180	0.15	0.06	0.12
	Stainless Steel		0.2	AC520U	140	0.15	0.06	0.12
	Hardened Steel		0.2	BN2000	80	0.10	0.06	0.10
	Cast Iron		0.2	H1	140	0.20	0.06	0.12
	Ductile		0.2	H1ZX	120	0.15	0.06	0.12
	Ductile		0.2	BNC500	180	0.15	0.06	0.10
	Aluminum		0.2	H1	200	0.20	0.06	0.12
	Aluminum		0.2	DA2200	400	0.20	0.06	0.12
EWN32 EWB32	Carbon Steel/Alloy Steel	122	0.2	T1500A	200	0.20	0.06	0.12
	Stainless Steel		0.2	AC520U	160	0.20	0.06	0.12
	Hardened Steel		0.2	BN2000	100	0.10	0.06	0.10
	Cast Iron		0.2	H1	160	0.20	0.06	0.12
	Ductile		0.2	H1ZX	120	0.15	0.06	0.12
	Ductile		0.2	BNC500	200	0.15	0.06	0.10
	Aluminum		0.4	H1	300	0.20	0.10	0.20
	Aluminum		0.4	DA2200	800	0.20	0.10	0.20
EWN41 EWE41 EWB41	Carbon Steel/Alloy Steel	122	0.2	T1500A	200	0.20	0.06	0.12
	Stainless Steel		0.2	AC520U	160	0.20	0.06	0.12
	Hardened Steel		0.4	BN2000	100	0.10	0.08	0.12
	Cast Iron		0.4	H1	160	0.20	0.10	0.20
	Ductile		0.4	H1ZX	120	0.15	0.10	0.15
	Ductile		0.4	BNC500	200	0.15	0.10	0.15
	Aluminum		0.4	H1	300	0.20	0.12	0.20
	Aluminum		0.4	DA2200	800	0.20	0.12	0.20
EWN53 EWE53 EWB53	Carbon Steel/Alloy Steel	122	0.4	T1500A	250	0.25	0.10	0.20
	Stainless Steel		0.4	AC520U	180	0.25	0.10	0.20
	Hardened Steel		0.4	BN2000	100	0.10	0.08	0.12
	Cast Iron		0.4	H1	180	0.25	0.10	0.20
	Ductile		0.4	H1ZX	120	0.20	0.10	0.20
	Ductile		0.4	BNC500	200	0.20	0.10	0.20
	Aluminum		0.8	H1	300	0.25	0.16	0.30
	Aluminum		0.4	DA2200	800	0.25	0.12	0.20
EWN68 EWN100 EWE68 EWE100 EWB68 EWB85	Carbon Steel/Alloy Steel	122	0.4	T1500A	250	0.25	0.10	0.20
	Stainless Steel		0.4	AC520U	180	0.25	0.10	0.20
	Hardened Steel		0.4	BN2000	100	0.10	0.08	0.12
	Cast Iron		0.4	H1	180	0.25	0.10	0.20
	Ductile		0.4	H1ZX	120	0.20	0.10	0.20
	Ductile		0.4	BNC500	200	0.20	0.10	0.20
	Aluminum		0.8	H1	300	0.25	0.16	0.30
	Aluminum		0.8	DA2200	800	0.25	0.16	0.30
EWN200 (CK7)	Carbon Steel/Alloy Steel	172	0.4	T1500A	250	0.25	0.10	0.20
	Stainless Steel		0.4	AC520U	180	0.25	0.10	0.20
	Hardened Steel		0.4	BN2000	100	0.10	0.08	0.12
	Cast Iron		0.4	H1	180	0.25	0.10	0.20
	Ductile		0.4	H1ZX	120	0.20	0.10	0.20
	Ductile		0.4	BNC500	200	0.20	0.10	0.20
	Aluminum		0.8	H1	300	0.25	0.16	0.30
	Aluminum		0.8	DA2200	800	0.25	0.16	0.30

Cylindrical Tool Type

Recommended Cutting Conditions

1) This table is a guideline for selecting cutting parameters.
   Adjust them as needed according to the machine and workpiece conditions.
2) If chatter occurs, either lower the cutting speed or use an insert with a smaller nose radius.
3) Internal high pressure coolant may cause deflection of the cylindrical tool holder.
   Lower the pressure when close tolerance is required.
4) Coated cermet T2000Z or T2500F is recommended to reduce wear when machining steel.
5) Dry cutting is recommended for CBN BN2000, BNC200, BNC500 and BN7000 inserts.



Max. Spindle Speed for Cylindrical Tool Type

Head Model	Max. Spindle Speed n
EWN04-7CK1	30,000min^{-1}
EWN04-15CK3	20,000min^{-1}
EWN2-22CK4	18,000min^{-1}
EWB2-32CK5	16,000min^{-1}
EWE2-32CK5	16,000min^{-1}
EWN2-32CK5	14,000min^{-1}
EWB2-50CK6	12,000min^{-1}
EWE2-54CK6	14,000min^{-1}
EWN2-54CK6	10,000min^{-1}

The max. spindle speeds listed in this table are the speeds allowable for safe use of the boring head only.
Note that these values differ depending on the cylindrical tools used, machine rigidity, etc.

Jig Boring Bit

Workpiece	Model	Cutting Speed Vc (m/min)	Cutting Depth (mm/Ø)	Feed f (mm/rev)
Carbon Steel Alloy Steel	RBE1	25	0.03	0.02
	RBE1.5			
	RBE2	50	0.04	
	RBE3		0.05	
	RBE4	60	0.06	
	RBE5		0.08	
	RBE7	80	0.10	
	RBE9		0.12	
Aluminum	RBE1	30	0.03	0.02
	RBE1.5			
	RBE2	60	0.04	
	RBE3		0.05	
	RBE4	80	0.06	
	RBE5		0.08	
	RBE7	100	0.10	
	RBE9		0.12	

Cylindrical Tool Type/ST05, ST06 (Diameter Ø4 - 9)

Workpiece	Projection Length	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/Ø)
		Nose Radius	Grade		
Carbon Steel Alloy Steel	20	0.2	T1500A T1200A	100	0.2
	40			70	0.2
	50			50	0.2
	60			30	0.1
Stainless Steel	20	0.2	T1500A T1200A	90	0.2
	40			60	0.2
	50			40	0.2
	60			30	0.1
Hardened Steel	20	0.2	NB10HA NBX20	60	0.1
	30			40	0.1
Cast Iron	20	0.2	H1	100	0.2
	40			70	0.2
	50			50	0.2
	60			30	0.1
Aluminum	20	0.2	H1	120	0.2
	40			100	0.2
	50			80	0.2
	60			60	0.2

1. Red figures are achievable with cylindrical tools made of carbide.

Cylindrical Tool Type/ST08 (Diameter Ø9 - 12)

Workpiece	Projection Length	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/Ø)
		Nose Radius	Grade		
Carbon Steel Alloy Steel	20	0.2	T1500A	100	0.20
	30			120	0.20
	40			90	0.20
	50			75	0.15
	60	0.1	A1	50	0.10
Stainless Steel	20	0.2	AC520U	100	0.20
	30			120	0.20
	40			90	0.20
	50			75	0.15
	60	0.1	A1	50	0.10
Hardened Steel	20	0.2	BN2000	70	0.10
	30			50	0.10
	40			20	0.10
Cast Iron	20	0.2	H1 (FN)	100	0.20
	30			120	0.20
	40			90	0.20
	50			75	0.15
	60	0.1	A1	40	0.10
Aluminum	20	0.2	H1 (FLA)	150	0.20
	30			165	0.25
	40			150	0.20
	50			125	0.15
	60	0.1	A1	60	0.15

Red figures are achievable with cylindrical tools made of carbide.

Cylindrical Tool Type/ST10 (Diameter Ø12 - 14)

Workpiece	Projection Length	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/Ø)
		Nose Radius	Grade		
Carbon Steel Alloy Steel	30	0.2	T1500A	120	0.20
	45			140	0.20
	60			100	0.20
	70			75	0.15
	80	0.1	A1	50	0.10
Stainless Steel	30	0.2	AC520U	120	0.20
	45			130	0.20
	60			90	0.20
	70			55	0.15
	80	0.1	A1	40	0.10
Hardened Steel	30	0.2	BN2000	80	0.10
	45			60	0.10
	60			30	0.10
Cast Iron	30	0.2	H1 (FN)	120	0.20
	45			130	0.20
	60			90	0.15
	75			60	0.15
	90	0.1	A1	30	0.10
Aluminum	30	0.2	H1 (FLA)	150	0.25
	45			180	0.25
	60			150	0.20
	75			90	0.20
	90	0.1	A1	60	0.15

Red figures are achievable with cylindrical tools made of carbide.

Cylindrical Tool Type/ST12 (Diameter Ø14 - 16)

Workpiece	Projection Length	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/Ø)
		Nose Radius	Grade		
Carbon Steel Alloy Steel	40	0.2	T1500A	120	0.20
	60			180	0.20
	80			150	0.20
	95			90	0.15
	110	0.1	A1	50	0.10
Stainless Steel	40	0.2	AC520U	120	0.20
	60			130	0.20
	80			100	0.20
	95			70	0.15
	110	0.1	A1	40	0.10
Hardened Steel	40	0.2	BN2000	80	0.10
	50			60	0.10
	65			30	0.10
Cast Iron	40	0.2	H1 (FN)	120	0.20
	60			130	0.20
	80			100	0.15
	95			70	0.15
	110	0.1	A1	40	0.10
Aluminum	40	0.2	H1 (FLA)	150	0.25
	60			200	0.25
	80			180	0.20
	100			130	0.20
	120	0.1	A1	60	0.15

Red figures are achievable with cylindrical tools made of carbide.

Cylindrical Tool Type/ST14 (Diameter Ø16 - 18)

Workpiece	Projection Length	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/Ø)
		Nose Radius	Grade		
Carbon Steel Alloy Steel	45	0.2	T1500A	130	0.20
	65			180	0.20
	80			150	0.20
	100			90	0.15
	120	0.1	A1	50	0.10
Stainless Steel	45	0.2	AC520U	120	0.20
	65			130	0.20
	80			120	0.20
	100			80	0.15
	120	0.1	A1	40	0.10
Hardened Steel	45	0.2	BN2000	80	0.10
	60			60	0.10
	75			30	0.10
Cast Iron	45	0.2	H1 (FN)	120	0.20
	65			130	0.20
	80			120	0.15
	100			80	0.15
	120	0.1	A1	40	0.10
Aluminum	45	0.4	H1 (FLA)	150	0.25
	65			200	0.25
	80	0.2		180	0.20
	100			120	0.20
	120	0.1	A1	60	0.15

Red figures are achievable with cylindrical tools made of carbide.

Cylindrical Tool Type/ST16 (Diameter Ø18 - 50)

Workpiece	Projection Length	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/Ø)
		Nose Radius	Grade		
Carbon Steel Alloy Steel	45	0.4	T1500A	130	0.20
	60			180	0.20
	80	0.2		150	0.20
	110			90	0.15
	140	0.1	A1	50	0.10
Stainless Steel	45	0.4	AC520U	120	0.20
	60			130	0.20
	80	0.2		120	0.20
	110			80	0.15
	140	0.1	A1	40	0.10
Hardened Steel	45	0.2	BN2000	80	0.10
	60			60	0.10
	80			30	0.10
Cast Iron	45	0.4	H1 (FN)	120	0.20
	60			130	0.20
	80	0.2		120	0.15
	110			80	0.15
	140	0.1	A1	40	0.10
Aluminum	45	0.4	H1 (FLA)	150	0.25
	60			200	0.25
	80	0.2		180	0.20
	110			120	0.20
	140	0.1	A1	60	0.15

Red figures are achievable with cylindrical tools made of carbide.

B.7

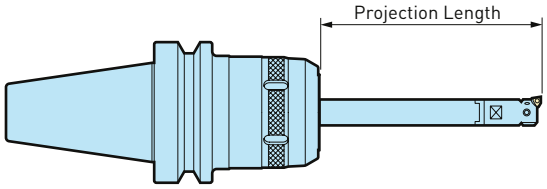
Feed Rate Selection

Suitable feed rate varies depending on the desired accuracy.
Refer to the following formula and determine the best parameters.

- In general, nose radius 0.2 should be used with f = 0.06
  and radius 0.4 with f = 0.10
  These values are reference only.

$$\text{Theoretical surface roughness Rz [μm]} = \frac{(\text{Feed rate})^2}{8 \times \text{Nose radius}} \times 1{,}000$$

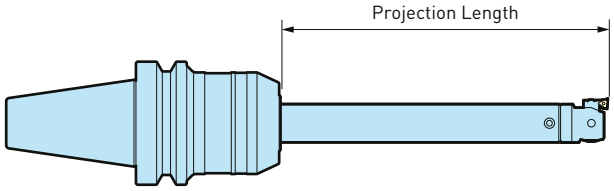
EW MICRO HEAD



1. This table is a guideline for selecting cutting parameters.
   Adjust them as needed according to the machine and workpiece conditions.
2. Internal high pressure coolant may cause deflection of the holder.
   Lower the pressure when close tolerance is required.
3. These conditions are determined when the cylindrical tool is mounted on the BIG NEW Hi-POWER MILLING CHUCK or NEW BABY CHUCK.

Workpiece	Projection Length	Diameter: Ø15 - 18				Diameter Ø18 - 22			
		ST14W-EW15-110. (140)				ST16W-EW18-100. (160)			
		Insert		Cutting Speed Vc	Cutting Depth	Insert		Cutting Speed Vc	Cutting Depth
		Nose Radius	Grade	m/min	mm/Ø	Nose Radius	Grade	m/min	mm/Ø
Carbon Steel Alloy Steel	20	0.2	T1200A	200	0.20	0.2	T1200A	200	0.20
	40			200	0.20			200	0.20
	60			180	0.20			200	0.20
	80			160	0.15			180	0.18
	100			120	0.15			150	0.15
	120			70	0.10			100	0.10
	140			30	0.10			60	0.10
	160			-	-			30	0.10
Stainless Steel	20	0.2	T1200A	150	0.20	0.2	T1200A	150	0.20
	40			150	0.20			150	0.20
	60			150	0.20			150	0.20
	80			130	0.15			140	0.18
	100			100	0.15			120	0.15
	120			70	0.10			100	0.10
	140			30	0.10			60	0.10
	160			-	-			30	0.10
Cast Iron	20	0.2	H1	150	0.20	0.2	H1	150	0.20
	40			150	0.20			150	0.20
	60			140	0.20			150	0.20
	80			120	0.15			140	0.18
	100			100	0.15			120	0.15
	120			60	0.10			100	0.10
	140			30	0.10			60	0.10
	160			-	-			30	0.10
Aluminum	20	0.2	H1	280	0.20	0.2	H1	320	0.20
	40			280	0.20			320	0.20
	60			280	0.20			320	0.20
	80			250	0.20			280	0.20
	100			180	0.15			220	0.15
	120			100	0.12			160	0.12
	140			60	0.12			100	0.12
	160			-	-			60	0.10

CK Carbide Cylindrical Shank

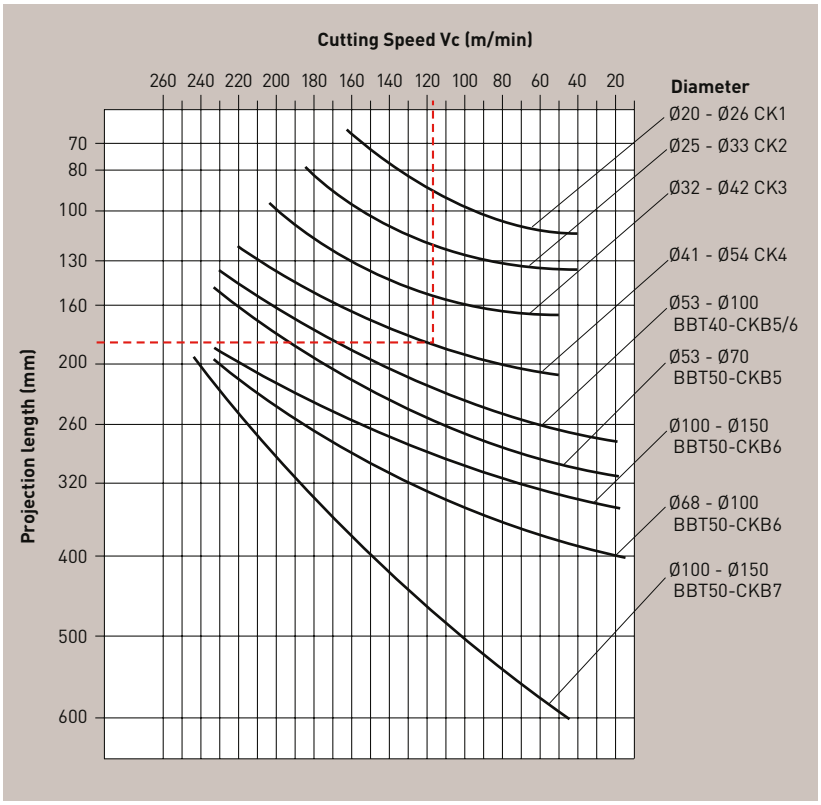


1. This table is a guideline for selecting cutting parameters.
   Adjust them as needed according to the machine and workpiece conditions.
2. Internal high pressure coolant may cause deflection of the holder.
   Lower the pressure when close tolerance is required.
3. Coated cermet T2000Z or T2500F is recommended to reduce wear when machining steel.
4. T130A is recommended to prevent edge chipping for interrupted cutting of steel.
5. These conditions are determined when the cylindrical tool is mounted on the BIG HYDRAULIC CHUCK.

Head Model	Workpiece Material	Projection Length	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/Ø)	Feed f (mm/rev)	
			Nose Radius	Grade			Recommended	Max.
EWN20	Carbon Steel	90	0.2	T1500A	200	0.20	0.06	0.12
		150	0.2	T1500A	120	0.20	0.06	0.12
		175	0.2	T1500A	60	0.15	0.06	0.10
		200	0.2	T1500A	25	0.15	0.06	0.10
	Cast Iron	90	0.2	H1 (FN)	180	0.20	0.06	0.12
		150	0.2	H1 (FN)	120	0.20	0.06	0.12
		175	0.2	H1 (FN)	60	0.15	0.06	0.10
		200	0.2	H1 (FN)	25	0.15	0.06	0.10
	Aluminum	90	0.2	DA2200	400	0.20	0.06	0.12
		150	0.2	H1 (FLA)	200	0.20	0.06	0.12
		175	0.2	H1 (FLA)	100	0.20	0.06	0.10
		200	0.2	H1 (FLA)	40	0.15	0.06	0.10
		230	0.1	A1 (FLA)	25	0.15	0.04	0.08
EWN25	Carbon Steel	125	0.4	T1500A	200	0.25	0.08	0.15
		175	0.2	T1500A	120	0.20	0.06	0.12
		200	0.2	T1500A	60	0.20	0.06	0.10
		250	0.2	T1500A	25	0.15	0.06	0.10
	Cast Iron	125	0.4	H1 (FN)	180	0.25	0.08	0.15
		175	0.2	H1 (FN)	120	0.20	0.06	0.12
		200	0.2	H1 (FN)	60	0.20	0.06	0.10
		250	0.2	H1 (FN)	25	0.15	0.06	0.10
	Aluminum	125	0.4	DA2200	500	0.25	0.08	0.15
		175	0.4	H1 (FLA)	200	0.25	0.08	0.15
		200	0.2	H1 (FLA)	100	0.20	0.06	0.10
		250	0.2	H1 (FLA)	40	0.20	0.06	0.10
		285	0.1	A1 (FLA)	25	0.15	0.04	0.08
EWN32 EWB32	Carbon Steel	135	0.4	T1500A	200	0.25	0.08	0.15
		160	0.2	T1500A	130	0.20	0.06	0.12
		200	0.2	T1500A	80	0.20	0.06	0.10
		250	0.2	T1500A	25	0.15	0.06	0.10
	Cast Iron	135	0.4	H1 (FN)	180	0.25	0.08	0.15
		160	0.2	H1 (FN)	130	0.20	0.06	0.12
		200	0.2	H1 (FN)	80	0.20	0.06	0.10
		250	0.2	H1 (FN)	25	0.15	0.06	0.10
	Aluminum	135	0.4	DA2200	500	0.25	0.08	0.15
		160	0.4	H1 (FLA)	220	0.25	0.08	0.15
		200	0.2	H1 (FLA)	120	0.20	0.06	0.10
		250	0.2	H1 (FLA)	40	0.20	0.06	0.10
		310	0.1	A1 (FLA)	25	0.15	0.04	0.08

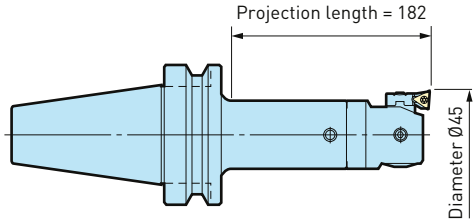
Cutting Speed Selection Graph for Cutting Steel

Chatter is always an issue in boring. The figure at right shows how the cutting speed (rotational speed) inevitably decreases as the bar becomes longer.
Refer to the cutting conditions listed in this graph and on the previous pages when selecting the optimum cutting conditions.
For cast iron, 10-20% longer projection length is generally permissible.



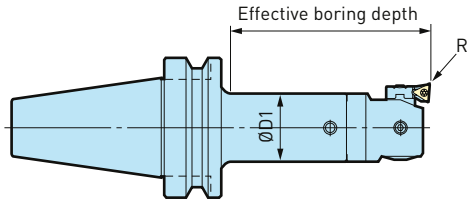
[Reference Example]
Indicated by - - - - - - in the graph at right

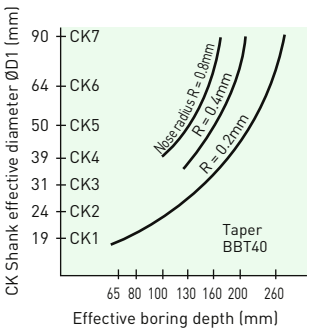
Example below shows the projection length of 182mm; and the diameter of Ø45mm (Ø41 - Ø54 CK4).
The recommended cutting speed is 118m/min.
Select an appropriate cutting speed based on this reference example.

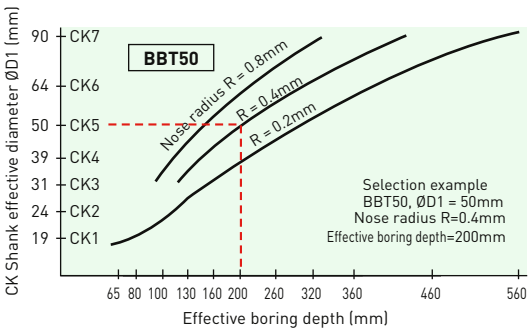


Relationship between Nose Radius and Effective Boring Depth

The insert nose radius and boring bar length (machining depth limit) are closely related. Refer to the graph below when selecting a CK Shank. Depths 1.1 - 1.3 times greater than listed in the graph are possible for cast iron (FC). Refer to the Cutting Conditions table on the previous page for information about cutting conditions. The cutting speed, in particular, inevitably decreases when the bar tool projection length increases.
Refer to the above graph for details.







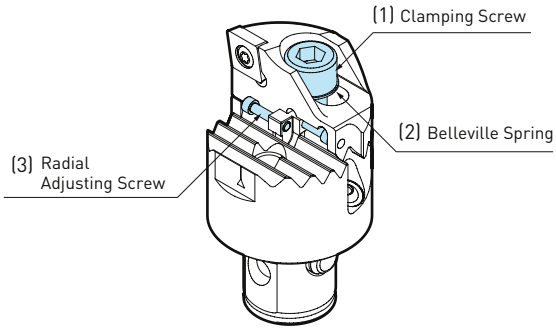
Spare Parts

SW/MW Boring Head	**490**
EWN Boring Head	**490**
EWE Digital Boring Head	**492**
EWB Boring Head	**492**
Large Diameter Boring Tools	**493**

Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

SW BORING HEAD

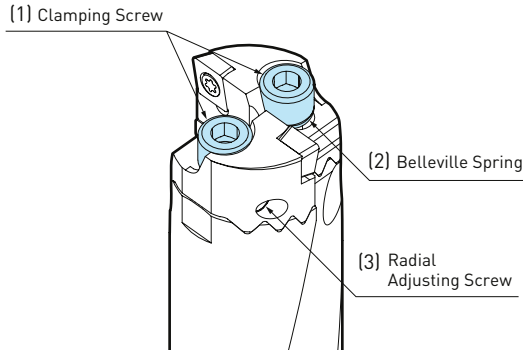
Common for A/E/N Types



Head Model	(1)	⬡SW	N·m	(2)	(3)	⬡SW
SW20-31CKB1	SW20SS	3	4	SW20BS	SW20RS	1.5
SW25-40CKB2	SW25SS	4	7	SW25BS	SW25RS	1.5
SW32-51CKB3	SW32SS	5	12	SW32BS	SW32RS	2
SW41-66CKB4	SW41SS	6	20	SW41BS	SW41RS	2.5
CKB4-SW41DP-190						
SW53-86CKB5	SW53SS	8	35	SW53BS	SW53RS	2.5
CKB5-SW53DP-220						
SW68-110CKB6	SW68SS	8	35		SW68RS	3
CKB6-SW68DP-245						
SW98-153CKB□	SW98SS	10	40	SW98BS	SW98RS	4
CKB□-SW98DP						
SW148-203CKB□						
CKB□-SW148DP						

(1) Clamping Screw x 2p, Belleville Spring x 2p
(2) Belleville Spring x 4 pcs
(3) Radial Adjusting Screw 1p

MW BORING HEAD



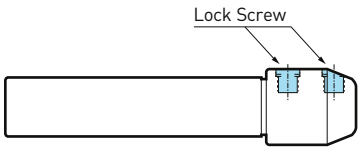
Head Model	(1)	⬡SW	N·m	(2)	(3)	⬡SW
MW16	MW16SS	2.5	1.0	MW16BS	H02503-5P	1.3
MW18					H02504-5P	

(1) Clamping Screw x 2p, Belleville Spring x 2p
(2) Belleville Spring x 4p
(3) Radial Adjusting Screw x 5p

EWN/EWE/EWB BORING HEAD (Cylindrical Tool Type)

SIDE LOCK HOLDER

Lock Screw



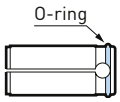
Model	(1)	⬡SW
ST-SL3.5/4/5	H0403-5P	2
ST-SL6	H0404-5P	
ST-SL7/8/9/10	H0606-5P	2.5

(1) Side Lock Screw x 5p

EWN/EWE/EWB BORING HEAD (Cylindrical Tool Type)

STRAIGHT COLLET

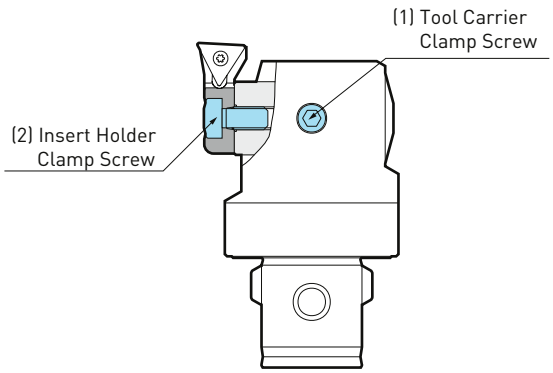
O-ring



Collet Model	Model (2 pcs)
EC1004~EC1008	OR-S8-2P
EC1206~EC1210	OR-S10-2P
EC1606~EC1614	OR-S14-2P

EWN BORING HEAD

EW MICRO HEAD



Head Model	(1)	⬡SW	N·m	(2)	⬡SW	N·m
EWN20-36CKB1	K0405	2	0.5	B0304-1	2	1.0
CK1-EWN20DP-100						
EWN25-47CKB2	K0406	2	0.5	B0306-1	2	1.0
CK2-EWN25DP-125						
EWN32-60CKB3	K0509	2.5	1.5	B0408-2	2.5	2.5
CKB3-EWN32DP-160						
EWN41-74CKB4	K0610	3	2.5	B0510-3	3	3.0
CKB4-EWN41DP-185						
EWN53-95CKB5	K0814	4	6	B0510-4	4	6
CKB5-EWN53DP-210						
EWN68-150CKB6	K1016	5	10	B0816-5	5	12
CKB6-EWN68DP-240						
EWN100-203CKB6						
CKB6-EWN100DP-240						
EWN100-203CKB7						
CKB7-EWN100DP-240						

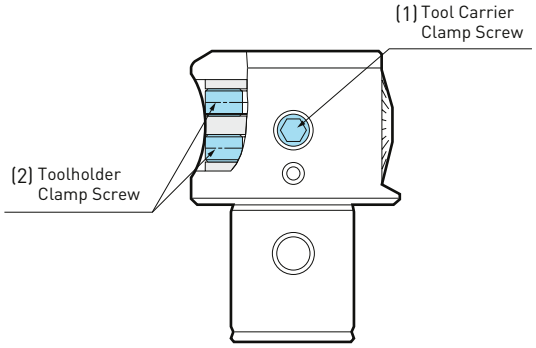
(1) Tool Carrier Clamp Screw x 1p
(2) Insert Holder Clamp Screw x 1p

Head Model	(1)	⬡SW	N·m	(2)	⬡SW	N·m
EW15	H0303-2P	1.5	0.3	M25526IP-2P	6IP	0.6
EW18	H0304-2P					

(1) Tool Carrier Clamp Screw x 2p
(2) Insert Holder Clamp Screw x 2p

EWN BORING HEAD

Centric Cutting Edge Type

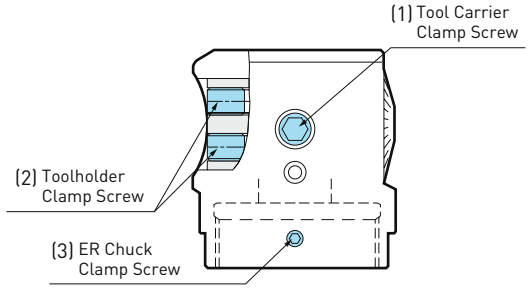


Head Model	(1)	⬡SW	N·m	(2)	⬡SW	N·m
EWN04-7CK1	H0303KS	1.5	0.6	H0306/R-5P	1.5	0.8
EWN04-7ST10						
EWN04-15CK3	H0505-5P	2.5	1.2	H0504-5P	2.5	1.5
EWN04-15ST16						
EWN2-22CK4	K0606	3	2.5	H0605-5P	3	2.5
EWN2-32CK5	K0809	4	4	H0806-5P	4	5
EWN2-54CK6	K1011	5	8	H1008-5P	5	10

(1) Tool Carrier Clamp Screw : H0303KS x 1p / H0505-5P x 5p
(2) Toolholder Clamp Screw x 5p

B.8

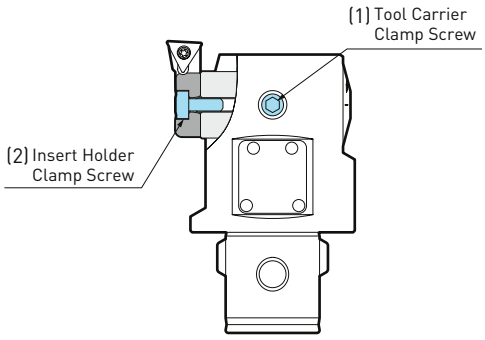
ER Chuck Type



Head Model	(1)	⬡SW	N·m	(2)	⬡SW	N·m	(3)
EWN2-22ER25	K0606	3	2.5	H0605-5P	3	2.5	H0404-5P
EWN2-32ER32	K0809	4	4	H0806-5P	4	5	K0406KS

(1) Tool Carrier Clamp Screw x 1p
(2) Toolholder Clamp Screw x 5p
(3) ER Chuck Clamp Screw : H0404-5P x 5p / K0406KS x 1p

EWE DIGITAL BORING HEAD

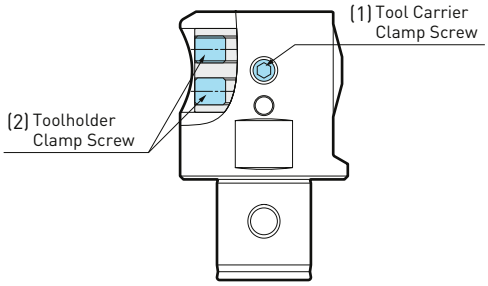


Head Model	(1)	⬡SW	N·m	(2)	⬡SW	N·m
EWE41-74CKB4	K0608	3	3	B0510-3	3	3
EWE53-93CKB5	K0809	4	6	B0510-4	4	6
EWE68-105CKB6	K1013	5	10	B0816-5	5	12
EWE100-203CKB□	K1016					

(1) Tool Carrier Clamp Screw x 1p
(2) Insert Holder Clamp Screw x 1p

EWE DIGITAL BORING HEAD

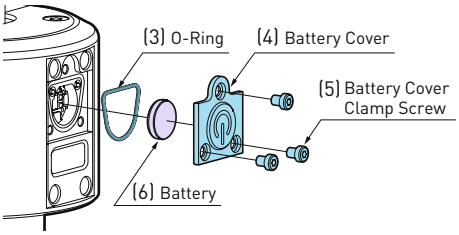
Centric Cutting Edge Type



Head Model	(1)	⬡SW	N·m	(2)	⬡SW	N·m
EWE2-32CK5	K0809	4	4	H0806-5P	4	4
EWE2-54CK6	K1011	5	8	H1008-5P	5	8

(1) Tool Carrier Clamp Screw x 1p
(2) Toolholder Clamp Screw x 5p

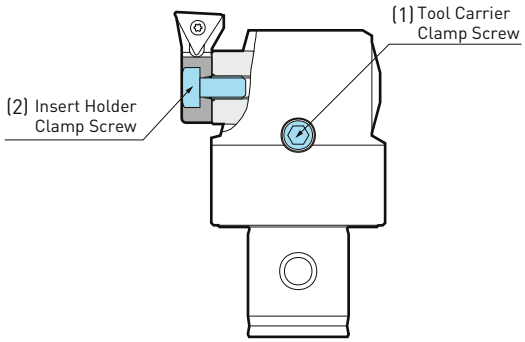
EWE Insert Holder Type/Cylindrical Tool Holder Type Common Parts



Part Name	Model
(3) O-ring	EWE-OR
(4) Battery Cover	EWE-BC
(5) Clamp Screw	EWE-S2.5FS-8IP
(6) Battery	CR1025

(5) Clamp Screw-3p·Wrench-1p included

EWB BORING HEAD

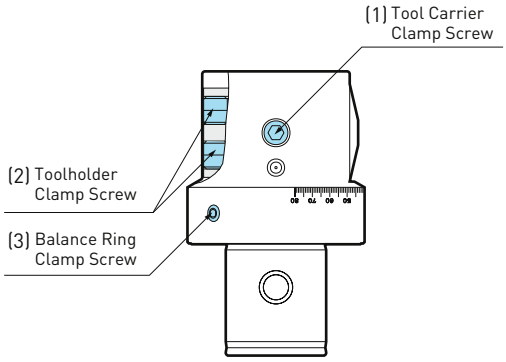


Head Model	(1)	⬡SW	N·m	(2)	⬡SW	N·m
EWB32-42CK3	S0705	2.5	2.5	B0408-2	2.5	2.5
EWB41-54CK4	S0706	3	3	B0510-3	3	3
EWB53-70CK5	S0808	4	6	B0510-4	4	6
EWB68-88CK6	S1012	6	10	B0612-5	6	12
EWB85-105CK6						

(1) Tool Carrier Clamp Screw x 1p
(2) Insert Holder Clamp Screw x 1p

EWB BORING HEAD

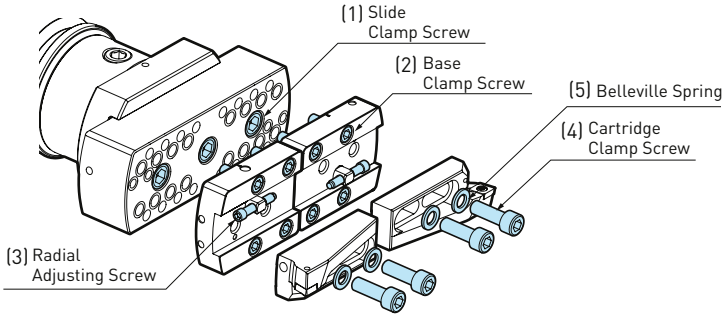
Centric Cutting Edge Type



Head Model	(1)	⬡SW	N·m	(2)	⬡SW	N·m	(3)
EWB2-32CK5	K0809	4	4	H0806-5P	4	4	BR232
EWB2-50CK6	K1011	5	8	H1008-5P	5	8	BR250

(1) Tool Carrier Clamp Screw x 1p
(2) Toolholder Clamp Screw x 5p
(3) Blance Ring Clamp Screw x 1p

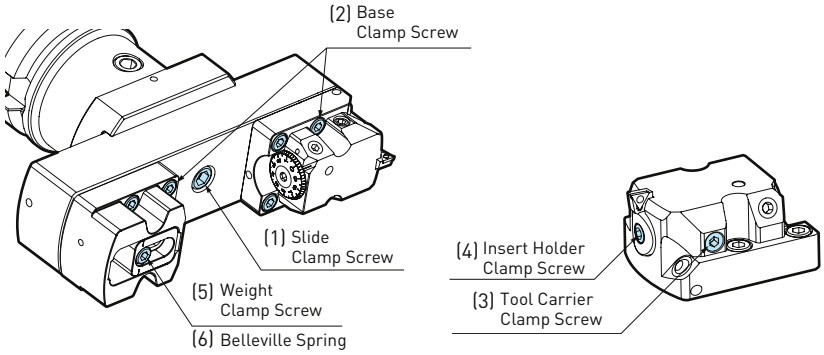
CK7 LARGE DIAMETER Type



Clamp Base Model	(1)	⬡SW	N·m	(2)	⬡SW	N·m	(3)	⬡SW	(4)	⬡SW	N·m	(5)
CB-TW200 CB-TW200AL	C1250	10	45	C0825	6	20	TW200RS	5	C1030	8	30	TW53BS

(1) Slide Clamp Screw x 1p
(2) Base Clamp Screw x 1p
(3) Radial Adjusting Screw x 1p
(4) Cartridge Clamp Screw x 1p
(5) Belleville Spring x 4 pcs

For EWN200 BORING HEAD large diameter



Head Model	(1)	⬡SW	N·m	(2)	⬡SW	N·m	(3)	⬡SW	N·m	(4)	⬡SW	N·m	(5)	⬡SW	N·m	(6)
EWN200(AL)	C1250	10	45	C0825	6	20	K1016	5	12	B0612-5	5	10	-			
BWN200FB(AL)										-			C0830	6	20	TW41BS
BWN200PB(AL)																

(1) Slide Clamp Screw x 1p
(2) Base Clamp Screw x 1p
(3) Tool Carrier Clamp Screw x 1p
(4) Insert Holder Clamp Screw x 1p
(5) Weight Clamp Screw x 1p
(6) Belleville Spring x 4 pcs

Indexable End Mills

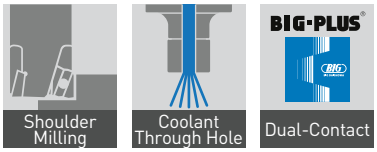
Fullcut Mill FCM	**496**
Full Cut Mill for Screw On FCM Type	**505**
Fullcut Mill FCM Arbor Type	**506**
Indexable Inserts for Fullcut Mill FCM	**507**
Fullcut Mill FCR	**511**
Full Cut Mill for Screw On FCR Type	**517**
Indexable Inserts for Fullcut Mill FCR	**518**
Spare Parts	**521**
Surface Mill	**522**
Speed Finisher	**523**

Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

C.1

Fullcut Mill FCM - For Standard Type with BBT

The indexable endmill that combines sharpness and rigidity for best results.



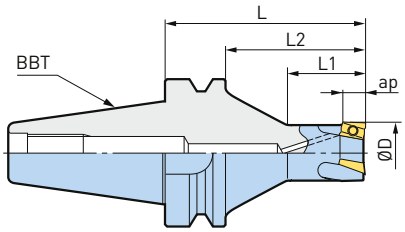


Fig. 1

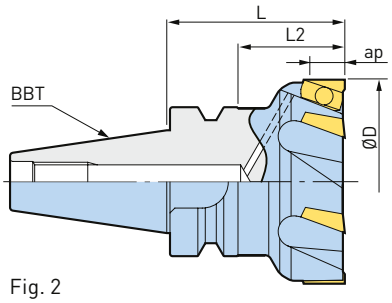


Fig. 2

Model	Article No.	Fig.	ØD	L	L1	L2	ap	Number of Inserts	Insert size	Weight (kg)
BBT30-FCM16092-65	966.216	1	16	65	23	43	9	2	ARG16	0.48
BBT30-FCM20093-65	966.217	1	20	65	28	43	9	3	ARG20	0.49
BBT30-FCM25093-65	966.218	1	25	65	33	43	9	3	ARG25	0.52
BBT30-FCM25093-105	100644.001.0	1	25	105	34	83	9	3	ARG25	0.75
BBT30-FCM32113-65	966.219	1	32	65	38	43	11	3	ARG32	0.56
BBT30-FCM32113-105	100644.002.0	1	32	105	44	83	11	3	ARG32	0.85
BBT30-FCM40114-50	966.220	1	40	50	25	28	11	4	ARG40	0.54
BBT30-FCM50115-50	966.120	2	50	50	-	28	11	5	ARG40	0.65
BBT30-FCM63116-55	100644.004.0	2	63	55	-	33	11	6	ARG63	0.85
BBT40-FCM16092-85	966.221	1	16	85	23	58	9	2	ARG16	1.20
BBT40-FCM16092-105	966.121	1	16	105	30	78	9	2	ARG16	1.30
BBT40-FCM16092-120	966.122	1	16	120	25	93	9	2	ARG16	1.40
BBT40-FCM16092-150	966.123	1	16	150	25	123	9	2	ARG16	1.70
BBT40-FCM20093-85	966.222	1	20	85	28	58	9	3	ARG20	1.20
BBT40-FCM20093-105	966.124	1	20	105	35	78	9	3	ARG20	1.30
BBT40-FCM20093-120	966.125	1	20	120	30	93	9	3	ARG20	1.40
BBT40-FCM20093-150	966.126	1	20	150	30	123	9	3	ARG20	1.80
BBT40-FCM25093-85	966.223	1	25	85	33	58	9	3	ARG25	1.20
BBT40-FCM25093-120	966.127	1	25	120	45	93	9	3	ARG25	1.50
BBT40-FCM25093-135	966.128	1	25	135	40	108	9	3	ARG25	1.60
BBT40-FCM25093-165	966.129	1	25	165	40	138	9	3	ARG25	1.90
BBT40-FCM32113-85	966.224	1	32	85	38	58	11	3	ARG32	1.30
BBT40-FCM32113-120	966.130	1	32	120	60	93	11	3	ARG32	1.60
BBT40-FCM32113-135	966.131	1	32	135	50	108	11	3	ARG32	1.70
BBT40-FCM32113-165	966.132	1	32	165	40	138	11	3	ARG32	2.20
BBT40-FCM40114-85	966.225	1	40	85	43	58	11	4	ARG40	1.40
BBT40-FCM40114-120	966.133	1	40	120	65	93	11	4	ARG40	1.80
BBT40-FCM40114-135	966.134	1	40	135	60	108	11	4	ARG40	2.00
BBT40-FCM40114-165	966.135	1	40	165	50	138	11	4	ARG40	2.50
BBT40-FCM50115-70	966.226	1	50	70	38	43	11	5	ARG40	1.40
BBT40-FCM50115-120	966.136	1	50	120	65	93	11	5	ARG40	2.20
BBT40-FCM50115-135	966.137	1	50	135	60	108	11	5	ARG40	2.40
BBT40-FCM50115-165	966.138	1	50	165	50	138	11	5	ARG40	3.00

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Wrench is included.
3. Inserts are to be ordered separately.

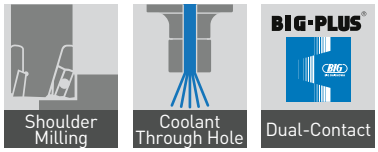
C.1

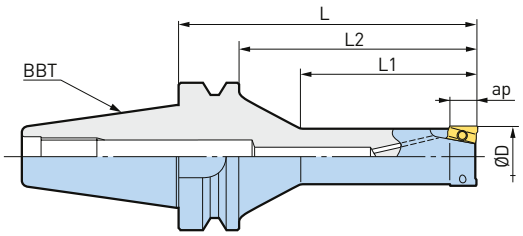
Accessories & Spare Parts

Adapter for BBT50 taper shank	Indexable Inserts for Fullcut Mill FCM	Wrench	Insert Clamping Screw Set
▶ 497	▶ 507	▶ 521	▶ 521

Fullcut Mill FCM - For Long Nose Type with BBT

The indexable endmill that combines sharpness and rigidity.

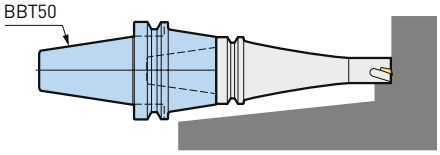


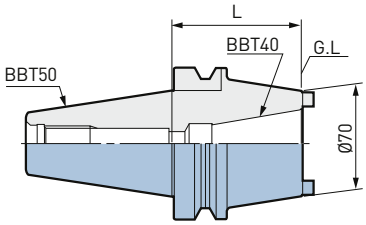


Model	Article No.	ØD	L	L1	L2	ap	Number of Inserts	Insert size	Weight (kg)
BBT30-FCM16092L-85	966.081	16	85	45	63	9	2	ARG16	0.50
BBT30-FCM20092L-85	966.082	20	85	50	63	9	2	ARG20	0.60
BBT30-FCM25092L-85	966.083	25	85	50	63	9	2	ARG25	0.60
BBT30-FCM32112L-85	966.084	32	85	60	63	11	2	ARG32	0.70
BBT40-FCM16092L-105	966.085	16	105	45	78	9	2	ARG16	1.20
BBT40-FCM16092L-120	966.086	16	120	45	93	9	2	ARG16	1.40
BBT40-FCM20092L-120	966.087	20	120	60	93	9	2	ARG20	1.30
BBT40-FCM20092L-135	966.088	20	135	60	108	9	2	ARG20	1.40
BBT40-FCM25092L-135	966.089	25	135	75	108	9	2	ARG25	1.50
BBT40-FCM25092L-150	966.090	25	150	75	123	9	2	ARG25	1.60
BBT40-FCM32112L-135	966.091	32	135	80	108	11	2	ARG32	1.60
BBT40-FCM32112L-150	966.092	32	150	90	123	11	2	ARG32	1.80

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Wrench is included.
3. Inserts are to be ordered separately.

Adapter for BBT50 taper shank to BBT40





Model	Article No.	L	Weight (kg)
BBT50-BBT40-50	803.730	50	3.60
BBT50-BBT40-90	803.731	90	5.00

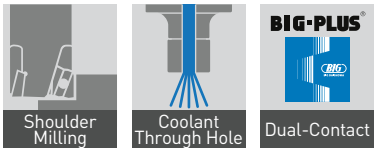
C.1

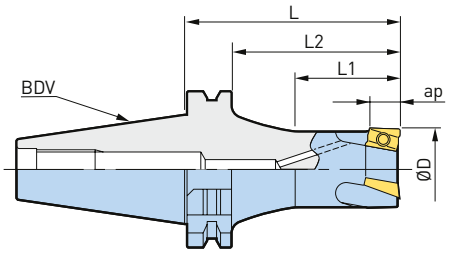
Accessories & Spare Parts

Adapter for BBT50 taper shank	Indexable Inserts for Fullcut Mill FCM	Wrench	Insert Clamping Screw Set
► 497	► 507	► 521	► 521

Fullcut Mill FCM - For Standard Type with BDV

The indexable endmill that combines sharpness and rigidity.





Model	Article No.	ØD	L	L1	L2	ap	Number of Inserts	Insert size	Weight (kg)
BDV40-FCM16092-85	966.206	16	85	23	65	9	2	ARG16	1.10
BDV40-FCM16092-105	966.161	16	105	35	85	9	2	ARG16	1.20
BDV40-FCM16092-120	966.162	16	120	34	100	9	2	ARG16	1.20
BDV40-FCM20093-85	966.207	20	85	35	65	9	3	ARG20	1.10
BDV40-FCM20093-105	966.163	20	105	40	85	9	3	ARG20	1.20
BDV40-FCM20093-120	966.164	20	120	39	100	9	3	ARG20	1.20
BDV40-FCM25093-85	966.208	25	85	33	65	9	3	ARG25	1.10
BDV40-FCM25093-120	966.165	25	120	45	100	9	3	ARG25	1.30
BDV40-FCM25093-135	966.166	25	135	40	115	9	3	ARG25	1.40
BDV40-FCM32113-85	966.209	32	85	38	65	11	3	ARG32	1.20
BDV40-FCM32113-120	966.167	32	120	60	100	11	3	ARG32	1.40
BDV40-FCM32113-135	966.168	32	135	50	115	11	3	ARG32	1.60
BDV40-FCM40114-85	966.210	40	85	45	65	11	4	ARG40	1.30
BDV40-FCM40114-120	966.169	40	120	65	100	11	4	ARG40	1.70
BDV40-FCM40114-135	966.170	40	135	60	115	11	4	ARG40	1.80
BDV40-FCM50115-70	966.211	50	70	50	50	11	5	ARG40	1.40
BDV40-FCM50115-120	966.171	50	120	100	100	11	5	ARG40	2.10
BDV40-FCM50115-135	966.172	50	135	115	115	11	5	ARG40	2.30

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Wrench is included.
3. Inserts are to be ordered separately.

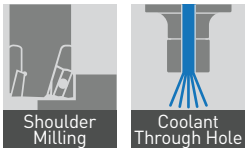
C.1

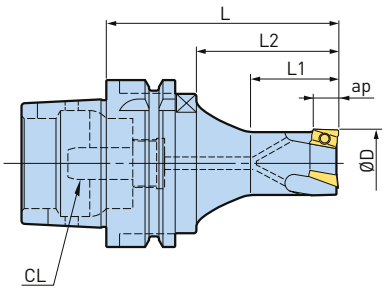
Accessories & Spare Parts

Indexable Inserts for Fullcut Mill FCM	Wrench	Insert Clamping Screw Set
▶ 507	▶ 521	▶ 521

Fullcut Mill FCM - For Standard Type with HSK-A

The indexable endmill that combines sharpness and rigidity.





Model	Article No.	ØD	L	L1	L2	ap	Number of Inserts	Insert size	Weight (kg)
HSK-A40-FCM16092-65	966.101	16	65	23	37	9	2	ARG16	0.28
HSK-A40-FCM20093-65	966.102	20	65	28	37	9	3	ARG20	0.30
HSK-A40-FCM25093-65	966.103	25	65	35	37	9	3	ARG25	0.34
HSK-A40-FCM32113-65	966.104	32	65	35	37	11	3	ARG32	0.39
HSK-A40-FCM40114-65	966.105	40	65	45	-	11	4	ARG40	0.47
HSK-A40-FCM50115-65	966.106	50	65	45	-	11	5	ARG40	0.59
HSK-A50-FCM16092-75	966.107	16	75	23	41	9	2	ARG16	0.60
HSK-A50-FCM20093-75	966.108	20	75	28	41	9	3	ARG20	0.60
HSK-A50-FCM25093-75	966.109	25	75	33	41	9	3	ARG25	0.60
HSK-A50-FCM32113-75	966.110	32	75	39	41	11	3	ARG32	0.70
HSK-A50-FCM40114-75	966.111	40	75	48	-	11	4	ARG40	0.80
HSK-A50-FCM50115-75	966.112	50	75	48	-	11	5	ARG40	0.90
HSK-A63-FCM16092-85	966.231	16	85	23	51	9	2	ARG16	0.90
HSK-A63-FCM16092-105	966.141	16	105	30	71	9	2	ARG16	1.00
HSK-A63-FCM16092-120	966.142	16	120	25	86	9	2	ARG16	1.10
HSK-A63-FCM16092-150	966.143	16	150	25	116	9	2	ARG16	1.20
HSK-A63-FCM20093-85	966.232	20	85	28	51	9	3	ARG20	0.90
HSK-A63-FCM20093-105	966.144	20	105	35	71	9	3	ARG20	1.00
HSK-A63-FCM20093-120	966.145	20	120	30	86	9	3	ARG20	1.10
HSK-A63-FCM20093-150	966.146	20	150	30	116	9	3	ARG20	1.30
HSK-A63-FCM25093-85	966.233	25	85	33	51	9	3	ARG25	1.00
HSK-A63-FCM25093-120	966.147	25	120	45	86	9	3	ARG25	1.10
HSK-A63-FCM25093-135	966.148	25	135	40	101	9	3	ARG25	1.20
HSK-A63-FCM25093-165	966.149	25	165	40	131	9	3	ARG25	1.40
HSK-A63-FCM32113-85	966.234	32	85	38	51	11	3	ARG32	1.00
HSK-A63-FCM32113-120	966.150	32	120	60	86	11	3	ARG32	1.20
HSK-A63-FCM32113-135	966.151	32	135	50	101	11	3	ARG32	1.40
HSK-A63-FCM32113-165	966.152	32	165	40	131	11	3	ARG32	1.60
HSK-A63-FCM40114-85	966.235	40	85	43	51	11	4	ARG40	1.10
HSK-A63-FCM40114-120	966.153	40	120	65	86	11	4	ARG40	1.40
HSK-A63-FCM40114-135	966.154	40	135	60	101	11	4	ARG40	1.60
HSK-A63-FCM40114-165	966.155	40	165	50	131	11	4	ARG40	1.90
HSK-A63-FCM50115-70	966.236	50	70	28	28	11	5	ARG40	1.20
HSK-A63-FCM50115-120	966.156	50	120	78	78	11	5	ARG40	1.90
HSK-A63-FCM50115-135	966.157	50	135	93	93	11	5	ARG40	2.10
HSK-A63-FCM50115-165	966.158	50	165	123	123	11	5	ARG40	2.50

1. Coolant pipe (CL) and inserts are to be ordered separately.
2. Wrench is included.

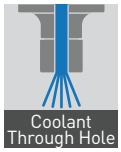
C.1

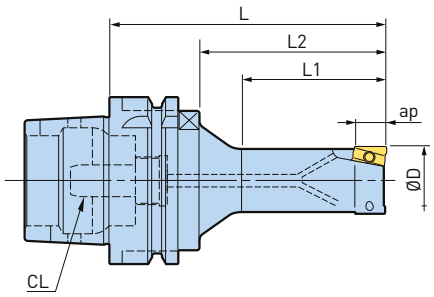
Accessories & Spare Parts

Indexable Inserts for Fullcut Mill FCM	Coolant Pipes	Wrench	Insert Clamping Screw Set
▶ 507	▶ 264	▶ 521	▶ 521

Fullcut Mill FCM - For Long Nose Type with HSK-A

The indexable endmill that combines sharpness and rigidity.





Model	Article No.	ØD	L	L1	L2	ap	Number of Inserts	Insert size	Weight (kg)
HSK-A63-FCM16092L-85	966.093	16	85	40	51	9	2	ARG16	0.90
HSK-A63-FCM16092L-120	966.094	16	120	45	86	9	2	ARG16	1.00
HSK-A63-FCM20092L-105	966.095	20	105	50	71	9	2	ARG20	1.00
HSK-A63-FCM20092L-120	966.096	20	120	60	86	9	2	ARG20	1.00
HSK-A63-FCM25092L-105	966.097	25	105	55	71	9	2	ARG25	1.10
HSK-A63-FCM25092L-120	966.098	25	120	65	86	9	2	ARG25	1.10
HSK-A63-FCM32112L-120	966.099	32	120	70	86	11	2	ARG32	1.20
HSK-A63-FCM32112L-135	966.100	32	135	80	101	11	2	ARG32	1.40

1. Coolant pipe (CL) and inserts are to be ordered separately.
2. Wrench is included.

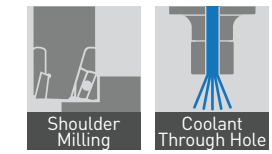
C.1

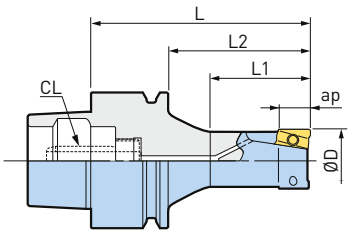
Accessories & Spare Parts

Indexable Inserts for Fullcut Mill FCM	Coolant Pipes	Wrench	Insert Clamping Screw Set
▶ 507	▶ 264	▶ 521	▶ 521

Fullcut Mill FCM - For Standard Type with HSK-E

The indexable endmill that combines sharpness and rigidity.





Model	Article No.	ØD	L	L1	L2	ap	Number of Inserts	Insert size	Weight (kg)
HSK-E25-FCM16092-45	966.173	16	45	23	35	9	2	ARG16	0.08
HSK-E32-FCM16092-55	966.174	16	55	23	35	9	2	ARG16	0.17
HSK-E40-FCM16092-65	966.115	16	65	28	45	9	2	ARG16	0.27

1. Coolant pipe (CL) and inserts are to be ordered separately.
2. Wrench is included.

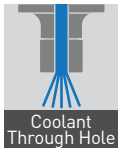
C.1

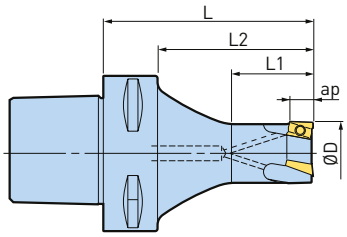
Accessories & Spare Parts

Indexable Inserts for Fullcut Mill FCM	Coolant Pipes	Wrench	Insert Clamping Screw Set
▶ 507	▶ 264	▶ 521	▶ 521

Fullcut Mill FCM - For Standard Type with BIG CAPTO

The indexable endmill that combines sharpness and rigidity.





Model	Article No.	ØD	L	L1	L2	ap	Number of Inserts	Insert size	Weight (kg)
C5-FCM16092-65	805.858	16	65	23	45	9	2	ARG16	0.52
C5-FCM16092-90	805.859	16	90	30	70	9	2	ARG16	0.60
C5-FCM20093-65	973.609	20	65	28	45	9	3	ARG20	0.50
C5-FCM20093-90	805.860	20	90	35	70	9	3	ARG20	0.60
C5-FCM25093-65	805.861	25	65	33	45	9	3	ARG25	0.60
C5-FCM25093-90	805.862	25	90	40	70	9	3	ARG25	0.70
C5-FCM32113-65	805.863	32	65	38	45	11	3	ARG32	0.60
C5-FCM32113-90	805.864	32	90	45	70	11	3	ARG32	0.80
C5-FCM40114-50	805.865	40	50	25	30	11	4	ARG40	0.60
C5-FCM40114-90	805.866	40	90	60	70	11	4	ARG40	1.00
C5-FCM50115-50	805.867	50	50	25	30	11	5	ARG40	0.80
C5-FCM50115-90	805.868	50	90	65	70	11	5	ARG40	1.20
C6-FCM16092-85	100650.001.0	16	85	24	63	9	2	ARG16	1.10
C6-FCM16092-110	100650.002.0	16	110	30	88	9	2	ARG16	1.20
C6-FCM16092-135	100650.003.0	16	135	27	113	9	2	ARG16	1.20
C6-FCM20093-85	100650.004.0	20	85	28	63	9	3	ARG20	1.10
C6-FCM20093-110	100650.005.0	20	110	34	88	9	3	ARG20	1.20
C6-FCM20093-135	100650.006.0	20	135	32	113	9	3	ARG20	1.30
C6-FCM25093-85	100650.007.0	25	85	33	63	9	3	ARG25	1.10
C6-FCM25093-110	100650.008.0	25	110	47	88	9	3	ARG25	1.20
C6-FCM25093-135	100650.009.0	25	135	44	113	9	3	ARG25	1.40
C6-FCM32113-85	100650.010.0	32	85	38	63	11	3	ARG32	1.20
C6-FCM32113-110	100650.011.0	32	110	61	88	11	3	ARG32	1.30
C6-FCM32113-135	100650.012.0	32	135	54	113	11	3	ARG32	1.50
C6-FCM40114-85	100650.013.0	40	85	44	63	11	4	ARG40	1.30
C6-FCM40114-110	100650.014.0	40	110	65	88	11	4	ARG40	1.50
C6-FCM40114-135	100650.015.0	40	135	61	113	11	4	ARG40	1.90
C6-FCM50115-70	100650.016.0	50	70	43	48	11	5	ARG40	1.30
C6-FCM50115-110	100650.017.0	50	110	70	88	11	5	ARG40	1.90
C6-FCM50115-135	100650.018.0	50	135	72	113	11	5	ARG40	2.30

1. Wrench is included.
2. Inserts are to be ordered separately.

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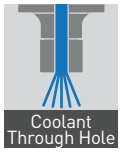
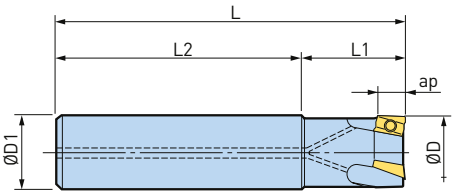
Accessories & Spare Parts

Indexable Inserts for Fullcut Mill FCM	Wrench	Insert Clamping Screw Set
▶ 507	▶ 521	▶ 521

Fullcut Mill FCM -For Standard Type

The indexable endmill that combines sharpness and rigidity.





Model	Article No.	ØD	ØD1	L	L1	L2	ap	Number of Inserts	Insert size	Weight (kg)
ST16-FCM12091-90	966.237	12	16	90	15	70	9	1	ARG16	0.12
ST16-FCM14091-90	966.238	14	16	90	17	70	9	1	ARG16	0.12
ST16-FCM16092-90	966.239	16	16	90	25	65	9	2	ARG16	0.12
ST20-FCM20093-110	966.240	20	20	110	30	80	9	3	ARG20	0.23
ST25-FCM25093-120	966.241	25	25	120	35	85	9	3	ARG25	0.41
ST32-FCM32113-130	966.242	32	32	130	35	95	11	3	ARG32	0.70
ST32-FCM40114-130	966.243	40	32	130	40	90	11	4	ARG40	0.80
ST32-FCM40114-180	802.963	40	32	180	40	140	11	4	ARG40	1.10
ST32-FCM50115-130	966.244	50	32	130	40	90	11	5	ARG40	0.97

1. Wrench is included.
2. Inserts are to be ordered separately.

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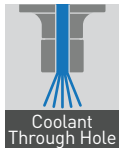
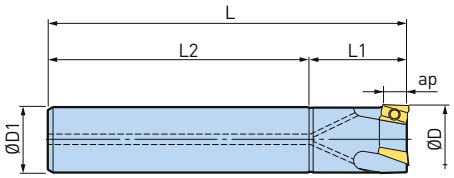
Accessories & Spare Parts

Indexable Inserts for Fullcut Mill FCM	Wrench	Insert Clamping Screw Set
▶ 507	▶ 521	▶ 521

Fullcut Mill FCM - For Oversize Type

"Thin wall" at deep pocket & deep shoulder endmilling.





Model	Article No.	ØD	ØD1	L	L1	L2	ap	Number of Inserts	Insert size	Weight (kg)
ST15-FCM16092-120	807.455	16	15	120	25	95	9	2	ARG16	0.15
ST16-FCM17092-120	966.181	17	16	120	25	95	9	2	ARG16	0.17
ST19-FCM20092-165	807.456	20	19	165	30	135	9	2	ARG20	0.33
ST19-FCM20093-135	807.457	20	19	135	30	105	9	3	ARG20	0.26
ST20-FCM21092-165	966.182	21	20	165	30	135	9	2	ARG20	0.37
ST20-FCM21093-135	966.183	21	20	135	30	105	9	3	ARG20	0.29
ST24-FCM25092-180	807.458	25	24	180	35	145	9	2	ARG25	0.59
ST24-FCM25093-150	807.459	25	24	150	35	115	9	3	ARG25	0.48
ST25-FCM26092-165	966.184	26	25	165	38	127	9	2	ARG25	0.59
ST25-FCM26093-150	966.185	26	25	150	38	112	9	3	ARG25	0.53
ST28-FCM32112-180	807.460	32	28	180	48	132	11	2	ARG32	0.81
ST28-FCM32113-180	807.461	32	28	180	48	132	11	3	ARG32	0.79
ST32-FCM33112-180	966.186	33	32	180	48	132	11	2	ARG32	1.00
ST32-FCM33113-180	966.187	33	32	180	48	132	11	3	ARG32	1.00

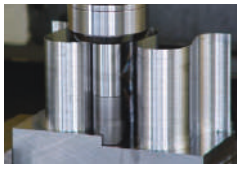
1. Wrench is included.
2. Inserts are to be ordered separately.
3. For medium-heavy or heavy slot milling with projection longer than 2.5 times of diameter, 2-flutes models are recommended.

Application Example

Model	ST32-FCM33112-180
Material	C55 (S55C)
Cutting Speed Vc (m/min.)	120
Feed Rate fz (mm/tooth)	0.1
Axial DOC ap (mm)	10 mm x 10 steps
Radial DOC ae (mm)	Max. 33 mm

Result

Deep shoulder endmilling is achieved with 110 mm projection length and 10 mm axial depth.



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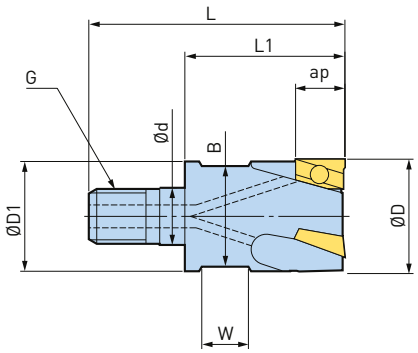
Accessories & Spare Parts

Indexable Inserts for Fullcut Mill FCM	Wrench	Insert Clamping Screw Set
▶ 507	▶ 521	▶ 521

Full Cut Mill for Screw On FCM Type

Coolant Through Hole



Model	Article No.	G	Ød	ØD	ØD1	ap	L	L1	Number of Inserts	B	W	Insert	Weight (kg)
M8-FCM16092-25	-	M8	8.5	16	15	9	42.5	25	2	12	6.2	ARG1609	0.03
M10-FCM20093-30	-	M10	10.5	20	19	9	49	30	3	17	8.2	ARG2009	0.05
M12-FCM25093-35	-	M12	12.5	25	24	9	56	35	3	22	10.2	ARG2509	0.10
M16-FCM32112-40	-	M16	17	32	29	11	63	40	2	26	12.2	ARG3211	0.20
M16-FCM32113-40	-	M16	17	32	29	11	63	40	3	26	12.2	ARG3211	0.20
M16-FCM40112-40	-	M16	17	40	29	11	63	40	2	32	16.8	ARG4011	0.25
M16-FCM40114-40	-	M16	17	40	29	11	63	40	4	32	16.8	ARG4011	0.25

1. A screwdriver for insert clamping is included, but inserts are not.
2. A wrench for tightening the head is not included. Please use a comercially avaliable one.
3. For main body shanks with L=100mm or more, we recommend using two flutes when performing medium to heavy cutting in full material.

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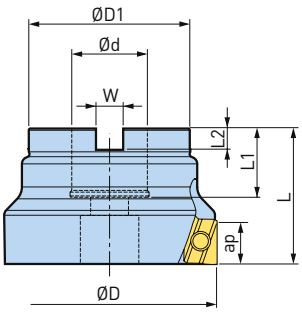
Accessories & Spare Parts

SD Heads for Screw On	Indexable Inserts for Fullcut Mill FCM
▶ 224	▶ 507

Fullcut Mill FCM - Arbor Type

Corresponding to Form FMH of new standard face milling adapter.



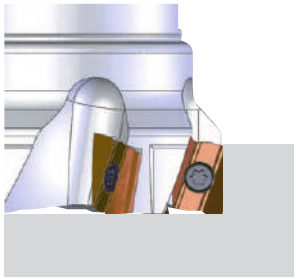
Model	Article No.	ØD	Ød	ØD1	L	L1	L2	ap	W	Number of Inserts	Insert size	Weight (kg)
FMH22-FCM50115-40	966.212	50	22	47	40	20	6	11	10.4	5	ARG40	0.40
FMH22-FCM63116-40	966.213	63	22	47	40	20	6	11	10.4	6	ARG63	0.50
FMH27-FCM80116-50	966.214	80	27	60	50	22	7	11	12.4	6	ARG80	1.10
FMH27-FCM100116-50	805.461	100	27	76	50	22	7	11	12.4	6	ARG80	1.90

1. Wrench is included.
2. Inserts are to be ordered separately.

Application Example

Indexable Insert Endmill, achieving the excellent squareness and fine surface finish

Machined by Fullcut Mill model: FMH22-FCM63116-40
Arbor model: BBT40-FMH22-47-45



Squareness

Cutting Speed Vc (m/min.)	150
Feed Rate fz (mm/tooth)	0.1
Axial DOC ap (mm)	5
Radial DOC ae (mm)	0.1

BIG DAISHOWA	10 µm
Other manufacturer	40 µm

Wiper cutting edge

Cutting Speed Vc (m/min.)	250
Feed Rate fz (mm/tooth)	0.2
Axial DOC ap (mm)	0.1
Radial DOC ae (mm)	50

BIG DAISHOWA	Ra=0.51 µm
Other manufacturer	Ra=1.56 µm

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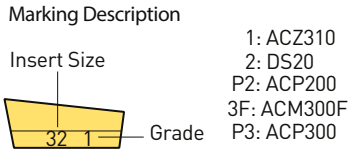
Accessories & Spare Parts

Face Mill Arbors Type FMH BBT	Face Mill Arbors Type FMH BDV	Face Mill Arbors Type FMH HSK-A	Indexable Inserts for Fullcut Mill FCM	Wrench	Insert Clamping Screw Set
▶ 104	▶ 165	▶ 219	▶ 507	▶ 521	▶ 521

Indexable Inserts for Fullcut Mill FCM



Model	Article No.	ØD	ap	R	Insert Grade	Material
ARG160902(DS20)	978.801	12 - 17	9	0.2	DS20	Aluminium
ARG160902(ACM300F)	807.728	12 - 17	9	0.2	ACM300F	Stainless Steel
ARG160902(ACP300)	978.812	12 - 17	9	0.2	ACP300	General Steel
ARG160902(ACZ310)	800.488	12 - 17	9	0.2	ACZ310	Cast iron
ARG160904(DS20)	966.249	12 - 17	9	0.4	DS20	Aluminium
ARG160904(ACP200)	978.827	12 - 17	9	0.4	ACP200	Prehardened steel
ARG160904(ACM300F)	807.729	12 - 17	9	0.4	ACM300F	Stainless Steel
ARG160904(ACP300)	966.245	12 - 17	9	0.4	ACP300	General Steel
ARG160904(ACZ310)	966.248	12 - 17	9	0.4	ACZ310	Cast iron
ARG200902(DS20)	978.807	20, 21	9	0.2	DS20	Aluminium
ARG200902(ACM300F)	807.730	20, 21	9	0.2	ACM300F	Stainless Steel
ARG200902(ACP300)	978.813	20, 21	9	0.2	ACP300	General Steel
ARG200902(ACZ310)	800.046	20, 21	9	0.2	ACZ310	Cast iron
ARG200904(DS20)	966.254	20, 21	9	0.4	DS20	Aluminium
ARG200904(ACP200)	978.804	20, 21	9	0.4	ACP200	Prehardened steel
ARG200904(ACM300F)	807.731	20, 21	9	0.4	ACM300F	Stainless Steel
ARG200904(ACP300)	966.250	20, 21	9	0.4	ACP300	General Steel
ARG200904(ACZ310)	966.253	20, 21	9	0.4	ACZ310	Cast iron
ARG250902(DS20)	978.803	25, 26	9	0.2	DS20	Aluminium
ARG250902(ACM300F)	807.732	25, 26	9	0.2	ACM300F	Stainless Steel
ARG250902(ACP300)	978.814	25, 26	9	0.2	ACP300	General Steel
ARG250902(ACZ310)	800.047	25, 26	9	0.2	ACZ310	Cast iron
ARG250904(DS20)	966.259	25, 26	9	0.4	DS20	Aluminium
ARG250904(ACP200)	800.048	25, 26	9	0.4	ACP200	Prehardened steel
ARG250904(ACM300F)	807.733	25, 26	9	0.4	ACM300F	Stainless Steel
ARG250904(ACP300)	966.255	25, 26	9	0.4	ACP300	General Steel
ARG250904(ACZ310)	966.258	25, 26	9	0.4	ACZ310	Cast iron
ARG321102(DS20)	966.270	32, 33	11	0.2	DS20	Aluminium
ARG321102(ACM300F)	807.735	32, 33	11	0.2	ACM300F	Stainless Steel
ARG321102(ACP300)	978.828	32, 33	11	0.2	ACP300	General Steel
ARG321102(ACZ310)	800.049	32, 33	11	0.2	ACZ310	Cast iron
ARG321104(DS20)	966.264	32, 33	11	0.4	DS20	Aluminium
ARG321104(ACP200)	800.051	32, 33	11	0.4	ACP200	Prehardened steel
ARG321104(ACM300F)	807.736	32, 33	11	0.4	ACM300F	Stainless Steel
ARG321104(ACP300)	966.260	32, 33	11	0.4	ACP300	General Steel
ARG321104(ACZ310)	966.263	32, 33	11	0.4	ACZ310	Cast iron

continues on the next page

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.
- Nose radius 0.2 inserts are suitable for light cutting.
- There is no compatibility with those of FCR type.

Indexable Inserts for Fullcut Mill FCM

Model	Article No.	ØD	ap	R	Insert Grade	Material
ARG401102(DS20)	978.821	40, 50	11	0.2	DS20	Aluminium
ARG401102(ACM300F)	807.737	40, 50	11	0.2	ACM300F	Stainless Steel
ARG401102(ACP300)	800.052	40, 50	11	0.2	ACP300	General Steel
ARG401102(ACZ310)	800.053	40, 50	11	0.2	ACZ310	Cast iron
ARG401104(DS20)	966.269	40, 50	11	0.4	DS20	Aluminium
ARG401104(ACP200)	978.809	40, 50	11	0.4	ACP200	Prehardened steel
ARG401104(ACM300F)	807.738	40, 50	11	0.4	ACM300F	Stainless Steel
ARG401104(ACP300)	966.265	40, 50	11	0.4	ACP300	General Steel
ARG401104(ACZ310)	966.268	40, 50	11	0.4	ACZ310	Cast iron
ARG631104(DS20)	978.830	63	11	0.4	DS20	Aluminium
ARG631104(ACM300F)	807.739	63	11	0.4	ACM300F	Stainless Steel
ARG631104(ACP300)	978.829	63	11	0.4	ACP300	General Steel
ARG631108(DS20)	966.284	63	11	0.8	DS20	Aluminium
ARG631108(ACP200)	978.810	63	11	0.8	ACP200	Prehardened steel
ARG631108(ACM300F)	807.740	63	11	0.8	ACM300F	Stainless Steel
ARG631108(ACP300)	966.280	63	11	0.8	ACP300	General Steel
ARG631108(ACZ310)	966.283	63	11	0.8	ACZ310	Cast iron
ARG801104(DS20)	978.832	80, 100	11	0.4	DS20	Aluminium
ARG801104(ACM300F)	807.741	80, 100	11	0.4	ACM300F	Stainless Steel
ARG801104(ACP300)	978.831	80, 100	11	0.4	ACP300	General Steel
ARG801108(DS20)	966.289	80, 100	11	0.8	DS20	Aluminium
ARG801108(ACP200)	978.811	80, 100	11	0.8	ACP200	Prehardened steel
ARG801108(ACM300F)	807.742	80, 100	11	0.8	ACM300F	Stainless Steel
ARG801108(ACP300)	966.285	80, 100	11	0.8	ACP300	General Steel
ARG801108(ACZ310)	966.288	80, 100	11	0.8	ACZ310	Cast iron

1. ACP300 is first recommendation for steel and ACM300F is first recommendation for stainless steel.
2. Inserts are available in a packet of 10 pcs.

Insert classifications

ISO	Grade	Material	Coating
P20	ACP200	Prehardened steel	TiAlN / AlCrN
P30	ACP300	General steel	
M30	ACM300F	Stainless steel	TiAlN / TiCN
K10	ACZ310	Cast iron	
N20	DS20	Aluminium	DLC

Note

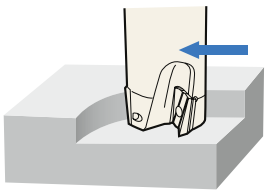
It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained.

Accessories & Spare Parts

Wrench	Insert Clamping Screw Set	Full Cut Mill for Screw On FCR Type
▶ 521	▶ 521	▶ 517

Fullcut Mill FCM

Recommended Cutting Condition



Shoulder milling and slot milling

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	ACM300F	ACZ310	DS20
	Cutting Fluid	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	0.1 - 0.3
Ø16 - Ø21	Speed (m/min)	150 - 250	180 - 250	80 - 140	140 - 180	100 - 200	200 - 1000
	Feed (mm/tooth)	0.1 - 0.2	0.1 - 0.2	0.08 - 0.12	0.12 - 0.18	0.1 - 0.2	0.1 - 0.3
Ø25 - Ø33	Speed (m/min)	180 - 280	200 - 280	80 - 140	140 - 200	100 - 200	200 - 1500
	Feed (mm/tooth)	0.1 - 0.24	0.1 - 0.22	0.08 - 0.14	0.12 - 0.2	0.1 - 0.2	0.1 - 0.35
Ø40 - Ø50	Speed (m/min)	180 - 280	200 - 280	80 - 140	140 - 200	80 - 200	200 - 1500
	Feed (mm/tooth)	0.1 - 0.24	0.1 - 0.22	0.08 - 0.14	0.12 - 0.2	0.1 - 0.2	0.1 - 0.35
Ø63 - Ø100	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 - 0.2	0.1 - 0.25	0.1 - 0.35

Caution

Fullcut Mill, FCM type, cannot be used for feeding in Z-axis such as ramping, plunging and boring.

Medium-heavy cutting

Cutter Dia.	Work Material	Carbon Steel Alloy Steel	Unalloyed Steel	Stainless Steel	Cast Iron	Aluminium
	Insert Grade	ACP300		ACM300F	ACZ310	DS20
	Cutting Fluid	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	0.1 - 0.2
Ø16 - Ø21	Speed (m/min)	100 - 200	150 - 200	120 - 180	100 - 180	200 - 1000
	Feed (mm/tooth)	0.08 - 0.14	0.1 - 0.15	0.12 - 0.15	0.08 - 0.18	0.1 - 0.2
Ø25 - Ø50	Speed (m/min)	100 - 200	160 - 220	120 - 180	100 - 200	200 - 1500
	Feed (mm/tooth)	0.1 - 0.16	0.1 - 0.15	0.12 - 0.15	0.08 - 0.2	0.1 - 0.3
Ø63 - Ø100	Speed (m/min)	100 - 200	150 - 200	120 - 180	100 - 180	200 - 750
	Feed (mm/tooth)	0.08 - 0.18	0.1 - 0.16	0.12 - 0.15	0.1 - 0.2	0.1 - 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.

Fullcut Mill FCM

Application Examples

Slot milling

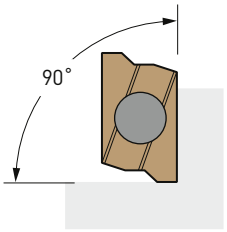
Fullcut Mill	BBT40-FCM32113-85
Insert	ARG321104 (ACP300)
Work Material	C50 (S50C)
Cutting Speed Vc (m/min.)	150
Feed Rate fz (mm/tooth)	0.12
Axial DOC ap (mm)	9

Only Fullcut Mill was capable of achieving this data in a No.40 spindle taper machine.

Shoulder milling

Fullcut Mill	BBT40-FCM32113-85
Insert	ARG321104 (ACP300)
Work Material	C50 (S50C)
Cutting Speed Vc (m/min.)	200
Feed Rate fz (mm/tooth)	0.15
Axial DOC ap (mm)	11
Radial DOC ae (mm)	5

Excellent perpendicularity is achieved.



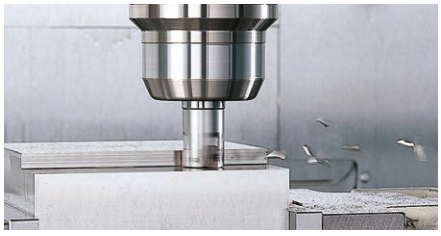
Face milling

Fullcut Mill	BBT40-FCM50115-70
Insert	ARG401104 (ACP300)
Work Material	C50 (S50C)
Cutting Speed Vc (m/min.)	200
Feed Rate fz (mm/tooth)	0.15
Axial DOC ap (mm)	1
Radial DOC ae (mm)	30

Finishing surface roughness was Rz = 2.53 at Vc = 200 m/min, fz = 0.15 mm/tooth cutting data.

	Surface Roughness Rz
BIG DAISHOWA	2.53
Manufacturer A	3.75
Manufacturer B	4.32

Material of low machinability

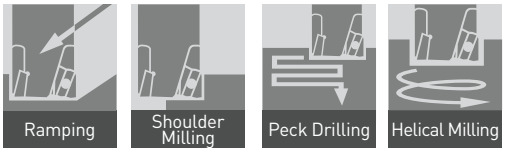


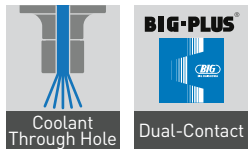
Fullcut Mill	ST25-FCM25093-120
Holder	BBT50-MEGA25D-105
Insert	ARG250904 (ACM300F)
Work Material	SUS304 Stainless steel
Cutting Speed Vc (m/min.)	150
Feed Rate fz (mm/tooth)	0.2
Axial DOC ap (mm)	9
Radial DOC ae (mm)	3

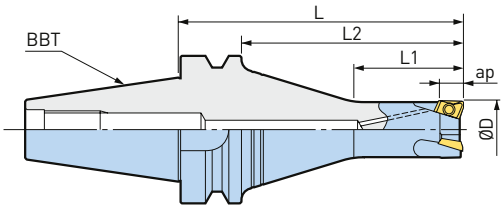
High efficiency and stable milling (Vf = 1140 mm/min.) is achieved.

Fullcut Mill FCR - For Standard Type with BBT

Designed for multi-functional cutting.







Model	Article No.	ØD	L	L1	L2	ap	Number of Inserts	Insert size	Weight (kg)
BBT30-FCR16082-65	966.683	16	65	28	43	8	2	BRG16	0.47
BBT30-FCR20083-65	966.685	20	65	28	43	8	3	BRG20	0.49
BBT30-FCR25083-65	966.687	25	65	33	43	8	3	BRG25	0.52
BBT30-FCR25083-105	100654.001.0	25	105	35	83	8	3	BRG25	0.73
BBT30-FCR32103-65	966.689	32	65	40	43	10	3	BRG32	0.56
BBT30-FCR32103-105	100654.002.0	32	105	45	83	10	3	BRG32	0.83
BBT40-FCR16082-85	966.616	16	85	25	58	8	2	BRG16	1.20
BBT40-FCR16082-120	966.617	16	120	30	93	8	2	BRG16	1.50
BBT40-FCR16082-135	966.618	16	135	25	108	8	2	BRG16	1.60
BBT40-FCR20083-85	966.619	20	85	35	58	8	3	BRG20	1.20
BBT40-FCR20083-120	966.620	20	120	30	93	8	3	BRG20	1.50
BBT40-FCR20083-135	966.621	20	135	30	108	8	3	BRG20	1.60
BBT40-FCR25083-85	966.622	25	85	40	58	8	3	BRG25	1.20
BBT40-FCR25083-120	966.623	25	120	45	93	8	3	BRG25	1.50
BBT40-FCR25083-135	966.624	25	135	35	108	8	3	BRG25	1.70
BBT40-FCR32103-85	966.625	32	85	45	58	10	3	BRG32	1.30
BBT40-FCR32103-120	966.626	32	120	50	93	10	3	BRG32	1.60
BBT40-FCR32103-135	966.627	32	135	40	108	10	3	BRG32	1.80

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Wrench is included.
3. Inserts are to be ordered separately.

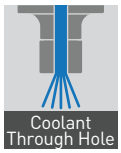
C.1

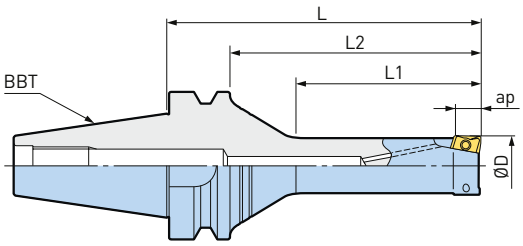
Accessories & Spare Parts

Adapter for BBT50 taper shank	Indexable Inserts for Fullcut Mill FCR	Wrench	Insert Clamping Screw Set
▶ 497	▶ 518	▶ 521	▶ 521

Fullcut Mill FCR - For Long Nose Type with BBT

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





Model	Article No.	ØD	L	L1	L2	ap	Number of Inserts	Insert size	Weight (kg)
BBT30-FCR16082L-85	966.684	16	85	45	63	8	2	BRG16	0.50
BBT30-FCR20082L-85	966.686	20	85	50	63	8	2	BRG20	0.53
BBT30-FCR25082L-85	966.688	25	85	50	63	8	2	BRG25	0.60
BBT30-FCR32102L-85	966.690	32	85	60	63	10	2	BRG32	0.68
BBT40-FCR16082L-105	966.691	16	105	45	78	8	2	BRG16	1.20
BBT40-FCR16082L-120	966.692	16	120	45	93	8	2	BRG16	1.40
BBT40-FCR20082L-120	966.693	20	120	60	93	8	2	BRG20	1.30
BBT40-FCR20082L-135	966.694	20	135	60	108	8	2	BRG20	1.40
BBT40-FCR25082L-135	966.695	25	135	75	108	8	2	BRG25	1.50
BBT40-FCR25082L-150	966.696	25	150	75	123	8	2	BRG25	1.60
BBT40-FCR32102L-135	966.697	32	135	80	108	10	2	BRG32	1.70
BBT40-FCR32102L-150	966.698	32	150	90	123	10	2	BRG32	1.70

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Wrench is included.
3. Inserts are to be ordered separately.

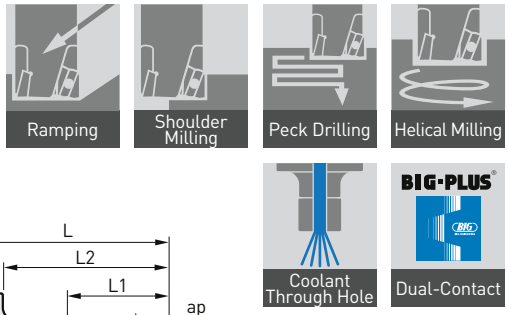
C.1

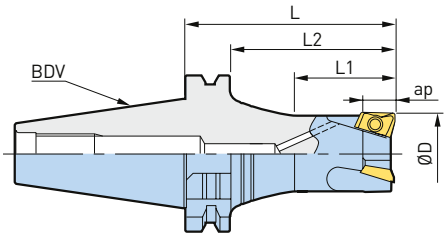
Accessories & Spare Parts

Adapter for BBT50 taper shank	Indexable Inserts for Fullcut Mill FCR	Wrench	Insert Clamping Screw Set
▶ 497	▶ 518	▶ 521	▶ 521

Fullcut Mill FCR - For Standard Type with BDV

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





Model	Article No.	ØD	L	L1	L2	ap	Number of Inserts	Insert size	Weight (kg)
BDV40-FCR16082-85	966.601	16	85	25	65	8	2	BRG16	1.00
BDV40-FCR16082-120	966.602	16	120	30	100	8	2	BRG16	1.20
BDV40-FCR16082-135	966.603	16	135	25	115	8	2	BRG16	1.30
BDV40-FCR20083-85	966.604	20	85	35	65	8	3	BRG20	1.00
BDV40-FCR20083-120	966.605	20	120	30	100	8	3	BRG20	1.30
BDV40-FCR20083-135	966.606	20	135	30	115	8	3	BRG20	1.40
BDV40-FCR25083-85	966.607	25	85	40	65	8	3	BRG25	1.10
BDV40-FCR25083-120	966.608	25	120	45	100	8	3	BRG25	1.30
BDV40-FCR25083-135	966.609	25	135	35	115	8	3	BRG25	1.40
BDV40-FCR32103-85	966.610	32	85	45	65	10	3	BRG32	1.20
BDV40-FCR32103-120	966.611	32	120	50	100	10	3	BRG32	1.40
BDV40-FCR32103-135	966.612	32	135	40	115	10	3	BRG32	1.60

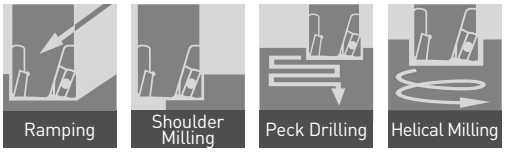
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Wrench is included.
3. Inserts are to be ordered separately.

C.1

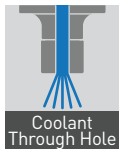
Accessories & Spare Parts

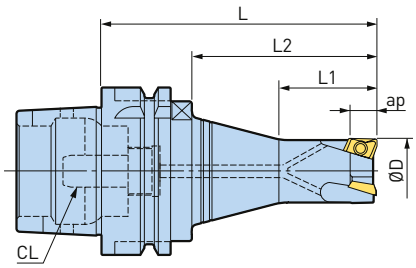
Indexable Inserts for Fullcut Mill FCR	Wrench	Insert Clamping Screw Set
▶ 518	▶ 521	▶ 521

Fullcut Mill FCR - For Standard Type with HSK-A



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





Model	Article No.	ØD	L	L1	L2	ap	Number of Inserts	Insert size	Weight (kg)
HSK-A50-FCR16082-75	966.671	16	75	27	41	8	2	BRG16	0.60
HSK-A50-FCR20083-75	966.672	20	75	28	41	8	3	BRG20	0.60
HSK-A50-FCR25083-75	966.673	25	75	33	41	8	3	BRG25	0.60
HSK-A50-FCR32103-75	966.674	32	75	39	41	10	3	BRG32	0.70
HSK-A63-FCR16082-85	966.631	16	85	25	51	8	2	BRG16	0.90
HSK-A63-FCR16082-120	966.632	16	120	30	86	8	2	BRG16	1.10
HSK-A63-FCR16082-135	966.633	16	135	25	101	8	2	BRG16	1.20
HSK-A63-FCR20083-85	966.634	20	85	32	51	8	3	BRG20	0.90
HSK-A63-FCR20083-120	966.635	20	120	30	86	8	3	BRG20	1.10
HSK-A63-FCR20083-135	966.636	20	135	30	101	8	3	BRG20	1.20
HSK-A63-FCR25083-85	966.637	25	85	35	51	8	3	BRG25	1.00
HSK-A63-FCR25083-120	966.638	25	120	45	86	8	3	BRG25	1.20
HSK-A63-FCR25083-135	966.639	25	135	35	101	8	3	BRG25	1.30
HSK-A63-FCR32103-85	966.640	32	85	40	51	10	3	BRG32	1.00
HSK-A63-FCR32103-120	966.641	32	120	50	86	10	3	BRG32	1.20
HSK-A63-FCR32103-135	966.642	32	135	40	101	10	3	BRG32	1.40

1. Wrench is included.
2. Coolant pipe (CL) and inserts are to be ordered separately.

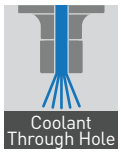
C.1

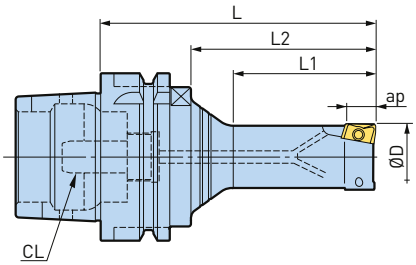
Accessories & Spare Parts

Indexable Inserts for Fullcut Mill FCR	Coolant Pipes	Wrench	Insert Clamping Screw Set
▶ 518	▶ 264	▶ 521	▶ 521

Fullcut Mill FCR - For Long Nose Type with HSK-A

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





Model	Article No.	ØD	L	L1	L2	ap	Number of Inserts	Insert size	Weight (kg)
HSK-A63-FCR16082L-85	966.675	16	85	40	51	8	2	BRG16	0.90
HSK-A63-FCR16082L-120	966.676	16	120	45	86	8	2	BRG16	1.00
HSK-A63-FCR20082L-105	966.677	20	105	50	71	8	2	BRG20	1.00
HSK-A63-FCR20082L-120	966.678	20	120	60	86	8	2	BRG20	1.00
HSK-A63-FCR25082L-105	966.679	25	105	55	71	8	2	BRG25	1.00
HSK-A63-FCR25082L-120	966.680	25	120	65	86	8	2	BRG25	1.10
HSK-A63-FCR32102L-120	966.681	32	120	70	86	10	2	BRG32	1.20
HSK-A63-FCR32102L-135	966.682	32	135	80	101	10	2	BRG32	1.30

1. Wrench is included.
2. Coolant pipe (CL) and inserts are to be ordered separately.

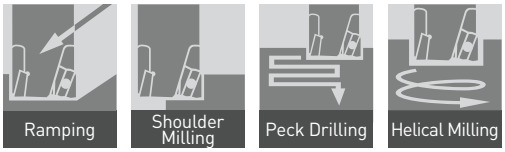
C.1

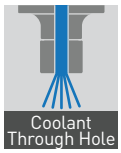
Accessories & Spare Parts

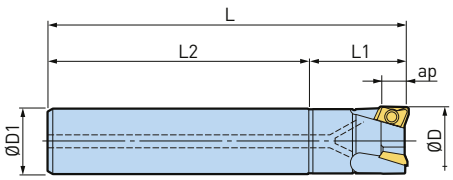
Indexable Inserts for Fullcut Mill FCR	Coolant Pipes	Wrench	Insert Clamping Screw Set
▶ 518	▶ 264	▶ 521	▶ 521

Fullcut Mill FCR - For Oversize Type

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







Model	Article No.	ØD	ØD1	L	L1	L2	ap	Number of Inserts	Insert size	Weight (kg)
ST15-FCR16082-120	805.849	16	15	120	25	95	8	2	BRG16	0.15
ST16-FCR17082-120	802.191	17	16	120	25	95	8	2	BRG16	0.17
ST19-FCR20082-165	805.850	20	19	165	30	135	8	2	BRG20	0.33
ST19-FCR20083-135	805.851	20	19	135	30	105	8	3	BRG20	0.26
ST20-FCR21082-165	802.192	21	20	165	30	135	8	2	BRG20	0.37
ST20-FCR21083-135	802.193	21	20	135	30	105	8	3	BRG20	0.29
ST24-FCR25082-180	805.852	25	24	180	35	145	8	2	BRG25	0.59
ST24-FCR25083-150	805.853	25	24	150	35	115	8	3	BRG25	0.48
ST25-FCR26082-165	802.220	26	25	165	38	127	8	2	BRG25	0.59
ST25-FCR26083-150	802.221	26	25	150	38	112	8	3	BRG25	0.52
ST28-FCR32102-180	805.854	32	28	180	48	132	10	2	BRG32	0.80
ST28-FCR32103-180	805.855	32	28	180	48	132	10	3	BRG32	0.78
ST32-FCR33102-180	802.225	33	32	180	48	132	10	2	BRG32	1.00
ST32-FCR33103-180	802.226	33	32	180	48	132	10	3	BRG32	1.00

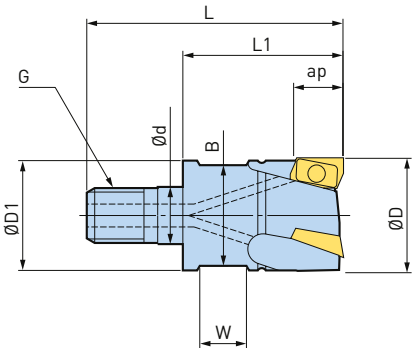
1. Wrench is included.
2. Inserts are to be ordered separately.
3. Lower cutting parameters appropriately for applications with either long projection or 3-flutes models.
4. For medium-heavy or heavy slot milling or ramping with projection longer than 2.5 times of diameter, 2-flutes models are recommended.

C.1

Accessories & Spare Parts

Indexable Inserts for Fullcut Mill FCR	Wrench	Insert Clamping Screw Set
▶ 518	▶ 521	▶ 521

Full Cut Mill for Screw On FCR Type



Coolant Through Hole

Model	Article No.	G	Ød	ØD	ØD1	ap	L	L1	Number of Inserts	B	W	Insert	Weight (kg)
M8-FCR16082-25	-	M8	8.5	16	15	8	42.5	25	2	12	6.2	BRG1608	0.03
M10-FCR20083-30	-	M10	10.5	20	19	8	49	30	3	17	8.2	BRG2008	0.05
M12-FCR25083-35	-	M12	12.5	25	24	8	56	35	3	22	10.2	BRG2508	0.10
M16-FCR32102-40	-	M16	17	32	29	10	63	40	2	26	12.2	BRG3210	0.20
M16-FCR32103-40	-	M16	17	32	29	10	63	40	3	26	12.2	BRG3210	0.18

1. A screwdriver for insert clamping is included, but inserts are not.
2. A wrench for tightening the head is not included. Please use a comercially avaliable one.
3. For main body shanks with L=100mm or more, we recommend using two flutes when performing medium to heavy cutting in full material.

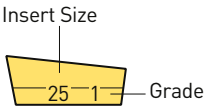
C.1

Accessories & Spare Parts

SD Heads for Screw On	Indexable Inserts for Fullcut Mill FCR
▶ 224	▶ 518

Indexable Inserts for Fullcut Mill FCR

Marking Description



1: ACZ310
2: DS20
P3: ACP300
3F: ACM300F

Model	Article No.	ØD	ap	R	Insert Grade	Material
BRG160808(DS20)	966.653	16 - 17	8	0.8	DS20	Aluminium
BRG160808(ACM300F)	807.135	16 - 17	8	0.8	ACM300F	Stainless Steel
BRG160808(ACP300)	807.131	16 - 17	8	0.8	ACP300	General Steel
BRG160808(ACZ310)	966.652	16 - 17	8	0.8	ACZ310	Cast iron
BRG200808(DS20)	966.658	20 - 21	8	0.8	DS20	Aluminium
BRG200808(ACM300F)	807.136	20 - 21	8	0.8	ACM300F	Stainless Steel
BRG200808(ACP300)	807.132	20 - 21	8	0.8	ACP300	General Steel
BRG200808(ACZ310)	800.587	20 - 21	8	0.8	ACZ310	Cast iron
BRG250808(DS20)	966.663	25 - 26	8	0.8	DS20	Aluminium
BRG250808(ACM300F)	807.137	25 - 26	8	0.8	ACM300F	Stainless Steel
BRG250808(ACP300)	807.133	25 - 26	8	0.8	ACP300	General Steel
BRG250808(ACZ310)	966.662	25 - 26	8	0.8	ACZ310	Cast iron
BRG321008(DS20)	966.668	32 - 33	10	0.8	DS20	Aluminium
BRG321008(ACM300F)	807.138	32 - 33	10	0.8	ACM300F	Stainless Steel
BRG321008(ACP300)	807.134	32 - 33	10	0.8	ACP300	General Steel
BRG321008(ACZ310)	966.667	32 - 33	10	0.8	ACZ310	Cast iron
BRG321032(DS20)	966.669	32 - 33	10	3.2	DS20	Aluminium

1. Inserts are available in a packet of 10 pcs.

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	ACP300	General steel	TiAlN / TiCN
M30	ACM300F	Stainless steel	
K10	ACZ310	Cast iron	
N20	DS20	Aluminium	DLC

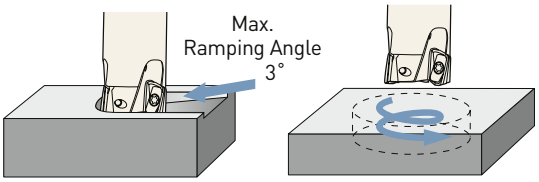
C.1

Accessories & Spare Parts

Wrench	Insert Clamping Screw Set	Full Cut Mill for Screw On FCR Type
▶ 521	▶ 521	▶ 517

Fullcut Mill FCR

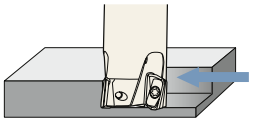
Recommended Cutting Condition



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

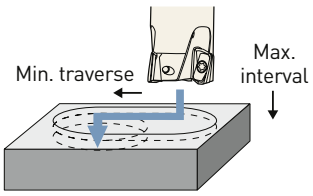
Ramping and helical interpolation

Cutter Dia.	Work Material	Carbon Steel Alloy Steel	Unalloyed Steel	Prehardened Steel < HRC40	Stainless Steel	Die Steel	Cast Iron	Aluminium
	Insert Grade	ACP300		ACM300F			ACZ310	DS20
	Cutting Fluid	Dry		Dry	Dry	Dry		Dry/Wet
Ø16, Ø17	Speed (m/min)	100 - 200	150 - 220	60 - 80	100 - 150	60 - 80	100 - 180	200 - 1000
	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, Ø26	Speed (m/min)	100 - 200	150 - 200	60 - 100	120 - 150	60 - 100	100 - 180	200 - 1000
	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, Ø33	Speed (m/min)	100 - 200	150 - 200	60 - 100	120 - 150	60 - 120	100 - 180	200 - 1000
	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	ACP300		ACM300F			ACZ310	DS20
	Cutting Fluid	Dry		Dry	Dry	Dry		Dry/Wet
Ø16, Ø20, Ø21	Speed (m/min)	100 - 200	100 - 200	60 - 80	120 - 180	80 - 120	100 - 180	200 - 1000
	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, Ø33	Speed (m/min)	100 - 200	100 - 200	60 - 100	120 - 180	80 - 120	100 - 180	200 - 1500
	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



Cutter Dia.	Max. Interval	Min. Traverse
Ø16	0.5	14
Ø20	1	18
Ø25	1	23
Ø32	2	30

Plunge milling

Cutter Dia.	Work Material	Carbon Steel Alloy Steel	Unalloyed Steel	Prehardened Steel < HRC40	Stainless Steel	Die Steel	Cast Iron	Aluminium
	Insert Grade	ACP300		ACM300F			ACZ310	DS20
	Cutting Fluid	Dry		Dry	Dry	Dry		Dry/Wet
Ø16, Ø17	Speed (m/min)	80 - 120	80 - 120	60	80 - 120	60 - 80	80 - 160	200 - 350
	Feed (mm/tooth)	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, Ø26	Speed (m/min)	100 - 160	100 - 160	60 - 100	100 - 160	60 - 100	80 - 180	200 - 500
	Feed (mm/tooth)	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, Ø33	Speed (m/min)	100 - 160	100 - 160	60 - 100	100 - 160	60 - 100	80 - 180	200 - 600
	Feed (mm/tooth)	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

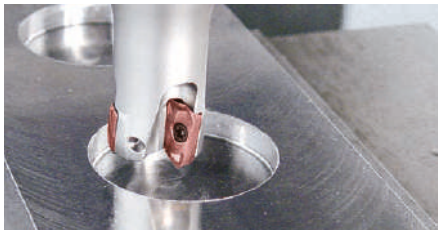
- The table is just a reference to determine cutting conditions. It should be adjusted according to a condition of a machine tool or workpiece.
- Since chips may scatter, utilize safety enclosures.

Fullcut Mill FCR

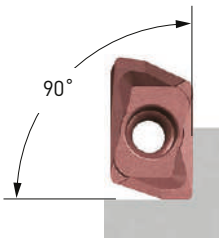
Application Examples

Bore

Dia. 38 with Helical milling



Fullcut Mill	BBT40-FCR20083-120
Insert	BRG200808 (ACP300)
Work Material	C50 (S50C) / Air blow
Cutting Speed Vc (m/min.)	150
Feed Rate Vf (mm/min.)	1 100
Axial DOC ap (mm)	2 mm x 3 times
Hole dia.	Ø 38

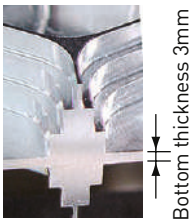


For carbon steel of C50, very smooth cutting with feed rate of Vf=1100 mm/min and excellent squareness are achieved.

Honeycombed

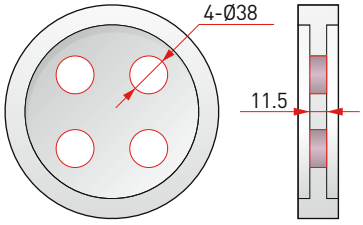
Pocket with Ramping

Fullcut Mill	BBT40-FCR20083-85
Insert	BRG200808 (DS20)
Work Material	A2017 Duralumin / Air blow
Cutting Speed Vc (m/min.)	750
Feed Rate Vf (mm/min.)	4 300
Axial DOC ap (mm)	6 mm x 3 times
Radial DOC ae (mm)	max. 20



For less rigid workpiece with 3 mm thickness clamped by a vise, feed rate of Vf=4300 mm/min on both sides of the workpiece is achieved.

Helical milling



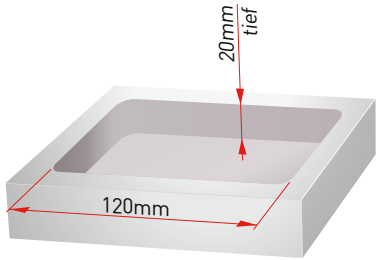
Fullcut Mill	BBT40-FCR20083-120
Insert	BRG200808 (ACP300)
Work Material	15CrMo5 (SCM415)
Cutting Speed Vc (m/min.)	150
Feed Rate Vf (mm/min.)	480
Axial DOC ap (mm)	4 mm x 3 times
Hole dia.	Ø 38

Compared to another manufacturer

Axial DOC	**1.3 times**
Insert life	**2 times**

Stable helical milling with 4 mm axial DOC on less rigid workpiece.

Ramping



Fullcut Mill	BBT50-BBT40-50 BBT40-FCR16082-120
Insert	BRG160808 (ACP300)
Work Material	C50 (S50C)
Cutting Speed Vc (m/min.)	120
Feed Rate Vf (mm/min.)	480
Axial DOC ap (mm)	4 mm x 5 times

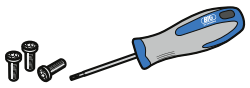
Compared to another manufacturer

No chatter even at higher resistance corner.

Smooth chip evacuation eliminates re-cutting of the swarf and edge chipping of the inserts.

Example of use of BBT50-BBT40 adapter. An improved result is obtained compared to the product from another manufacturer.

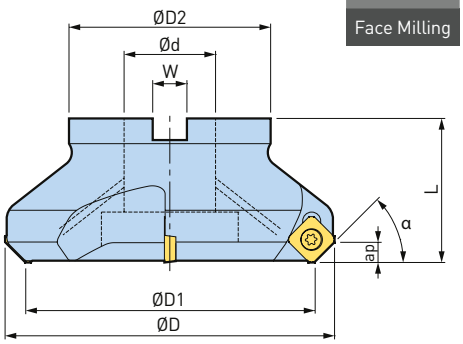
Spare Parts for Fullcut Mill, FCM and FCR

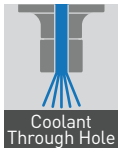
				Insert Clamping Screw Set		Wrench		
								
FCM		FCR		Model	Article No.	Model	Article No.	Torx Size
Cutter Dia. Ø	Insert	Cutter Dia. Ø	Insert					
12	ARG1609	-	-	S2505DS	966.271	DA-T8	966.274	T-8
14, 16, 17		16, 17	BRG1608	S2506DS	966.272			
20, 21	ARG2009	20, 21	BRG2008					
25, 26	ARG2509	25, 26	BRG2508					
32, 33	ARG3211	32, 33	BRG3210	S3508DS	966.273	DA-T15	966.275	T-15
40, 50	ARG4011							
63	ARG6311							
80, 100	ARG8011							

1. Insert clamping set contains 10 pcs screw and 1 pcs wrench.

Surface Mill

For superior surface finishing.

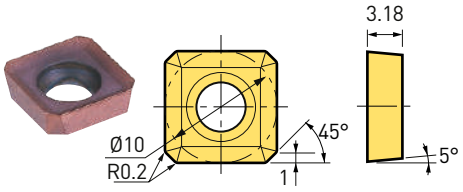




Model	Article No.	ØD	ØD1	ØD2	Ød	L	W	ap	α	Number of Inserts	Weight (kg)
FM22-SFM503-35	-	61.6	50	47	22	35	10.4	5	45°	3	0.40
FM22-SFM634-35	-	74.6	63	47	22	35	10.4	5	45°	4	0.50
FM27-SFM804-40	805.890	91.6	80	60	27	40	12.4	5	45°	4	0.90
FM27-SFM1005-35	-	111.6	100	60	27	35	12.4	5	45°	5	1.00
FM32-SFM1006-45	-	111.6	100	76	32	45	14.4	5	45°	6	1.65

1. Wrench and screws are included.
2. Inserts are to be ordered separately.
3. MBA - M12H (802.758) is required to be mounted on FMH25.4 and FMH27.

Indexable Inserts for Surface Mill



Model	Article No.	Insert Grade	Material
CM10C1(NF15KA)	807.684	NF15KA	Cast iron
CM10C1(CWS20A)	100736.002.2	CWS20A	Prehardenend Steel & Hardended Steel
CM10C1(DS20)	966.446	DS20	Aluminium & Non-Ferrous
CM10C1(ACP200)	966.445	ACP200	General Steel
CM10C1(ACM250F)	807.188	ACM250F	Stainless Steel

1. Inserts are available in a packet of 10 pcs.

Recommended Cutting Condition

Work Material	Insert Grade	Cutting Speed Vc (m/min)	Feed Rate fz (mm/t)	Axial DOC ap max (mm)
General Steel	ACP200	150-200-250	0.10-0.20-0.30	3
Prehardened Steel	CWS20A	100-150-200	0.10-0.20-0.30	3
Hardended Steel (≤HRC50)	CWS20A	20-50-100	0.05-0.10-0.20	2
Stainless Steel	ACM250F	160-205-250	0.15-0.23-0.30	3
Cast Iron	NF15KA	100-175-250	0.15-0.23-0.30	4
Aluminium, Non-ferrous	DS20	500-750-1000	0.15-0.23-0.30	5

Insert Clamp Screw Set

Insert clamping screw set (10) screws & (1) wrench

Driver-Type Wrench

Model	Article No.	Model	Article No.
S4S-T15DS	805.897	DA-T15	966.275

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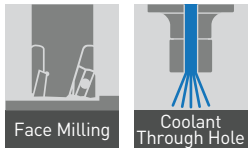
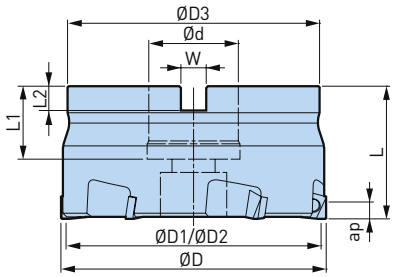
Accessories & Spare Parts

Face Mill Arbors Type FMH BBT	Face Mill Arbors Type FMH BDV	Face Mill Arbors Type FMH HSK-A	Indexable Inserts for Surface Mill	Insert Clamping Screw Set
▶ 104	▶ 165	▶ 219	▶ 522	▶ 522

Speed Finisher

Amazing improvement of surface finish at high speed cutting.

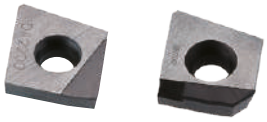




Model	Article No.	Ød	ØD	ØD1	ØD2	ØD3	L	L1	L2	W	Number of Inserts	max. min-1	Weight (kg)
FM22-PLS505-35	978.276	22	50	46.9	44.9	47	35	19	6	10.4	5	20,000	0.34
FM22-PLS636-35	978.313	22	63	59.9	57.9	60	35	19	6	10.4	6	20,000	0.62
FM27-PLS806-40	978.277	27	80	76.9	74.9	76	40	22	7	12.4	6	16,000	1.20
FM27-PLS1006-35 *	805.847	27	100	69.9	94.9	60	35	24	7	12.4	6	12,800	1.30
FM27-PLS1256-35 *	805.848	27	125	121.9	119.9	60	35	24	7	12.4	6	10,200	1.85
FM32-PLS1006-42	801.684	32	100	96.9	94.9	96	42	24	8	14.4	6	12,800	1.95
FM40-PLS1258-50	805.284	40	125	121.9	119.9	100	50	28	9	16.4	8	10,200	3.24
FM40-PLS16010-50	805.283	40	160	156.9	154.9	100	50	28	9	16.4	10	8,000	5.12

1. *Light weight design exclusive for BT30.
2. Wrench and screws are included.
3. Inserts are to be ordered separately.
4. When using at 12 000 min- or higher speed, contact agent for balancing of the cutter and arbor assembly.
5. Effective cutting edge length ap varies depending on insert models. ØD1/ØD2
6. Adjusting amount of cutting edge is 0.1 mm. Note this when using reground insert.

Indexable Inserts for Speed Finisher



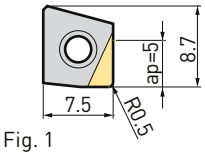


Fig. 1

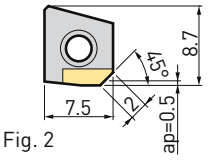


Fig. 2

Model	Article No.	Fig.	ap	Insert Grade	Material
PL0705(CBN)	978.820	2	0.5	CBN	Cast iron
PL0705(DA2200)	978.278	1	5	PCD	Aluminium & Non-Ferrous

Insert Grade

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.

Recommended Cutting Condition

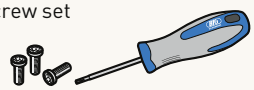
Workpiece Material		Insert Material	Cutting Speed (m/min)	Feed Rate (mm/tooth)	Coolant
Aluminium Alloy	Si Content ≤ 13%	DA2200	2 000 - 4 000	0.05 - 0.2	Wet
	Si Content > 13%		400 - 800		
Copper Alloy		DA2200	500 - 2 500	0.05 - 0.2	Wet
Gray Cast Iron		CBN	800 - 2 000	0.1 - 0.3	Dry

The table is a reference to determine cutting conditions. It should be adjusted according to cutting width, conditions of the machine tool and workpiece.

Accessories & Spare Parts

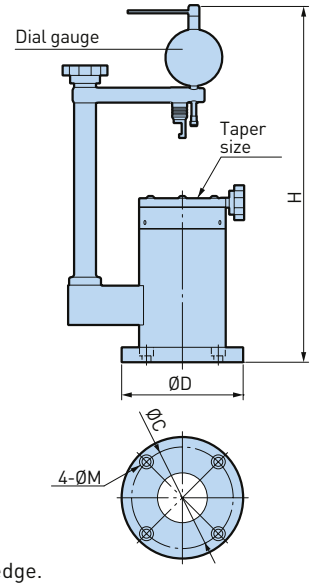
Face Mill Arbors Type FMH BBT	Face Mill Arbors Type FMH BDV	Face Mill Arbors Type FMH HSK-A	Spare Parts - For Speed Finisher	Wrench	Insert Clamping Screw Set
▶ 104	▶ 165	▶ 219	▶ 524	▶ 524	▶ 524

Accessories for Speed Finisher

Spare Parts					
Lifting screw set (1) lifting screw & (1) lifting nut		Insert clamping screw set (10) screws & (1) wrench 		Wrench	
Model	**Article No.**	**Model**	**Article No.**	**Model**	**Article No.**
LSN35	804.796	**S2506DS**	966.272	**DA-T8**	966.274

Insert clamping screws and wrenches are consumables. Regular replacement and storage are recommended.

Presetter for Speed Finisher

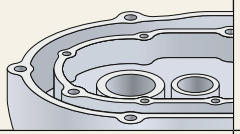
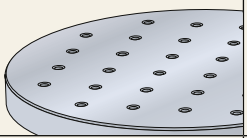
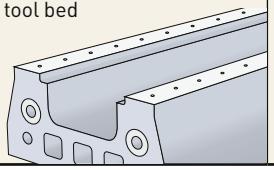


Model	Article No.	ØD	ØC	ØM	H	Weight (kg)
PLP-BBT30	804.644	122	102	9 (M8)	417	7.50
PLP-BBT40	804.645	122	102	9 (M8)	417	7.60
PLP-BBT50	804.646	172	149	11 (M10)	502	17.50
PLP-HSK63	978.275	122	102	9 (M8)	417	7.70

1. Dial gauge and indicator stabilizer (2 pcs. AAA batteries included) are standard accessories.
2. Min. reading of the accessory dial gauge is 0.001mm.
3. Max. tool length indicated in the table is the dimension from the gauge line of the arbor to the cutting edge.
4. Max. cutter diameter is Ø160mm.
5. BT Shank holders cannot be used.

Application Examples

(Cutter diameter: Ø 80)

Workpiece	Conditions	Surface Roughness	Height Difference	No. of Workpieces	Result
Crankcase ADC12 	Cutting speed: 4 000 m/min Spindle speed: 15 900 min^{-1} Feed rate: 9 550 mm/min Depth of cut: 2.5 mm	Ra = 0.08 µm Rz = 0.55 µm	Within 1 µm	24 000	Rough and finish processes are combined in a single operation.
Parts of semiconductor manufacturing equipment A5052 	Cutting speed: 4 000 m/min Spindle speed: 15 900 min^{-1} Feed rate: 9 550 mm/min Depth of cut: 2.0 mm	Ra = 0.07 µm Rz = 0.32 µm	Within 1 µm	320	Mirror finish is achieved.
Machine tool bed FC250 	Cutting speed: 1 500 m/min Spindle speed: 6 000 min^{-1} Feed rate: 3 600 mm/min Depth of cut: 0.5 mm	Ra = 0.12 µm Rz = 0.67 µm	Within 2 µm	20	1 to 2 µm flatness is obtained.

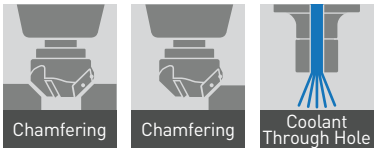
Chamfer Mills

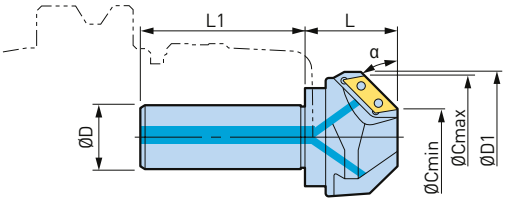
C-Cutter Standard / CKB Type	526
C-Cutter Mini	530
C-CUTTER MICRO	538
R-Cutter	540
C-Centering Cutter	544
Center Boy	545
C-Cutter Boy	546
BF-Cutter	547
Chamfer Rings for Boring Heads	549

Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

C-Cutter Standard Type

One C-Cutter to cover a wide chamfering range 45°: Ø 5 - Ø 25, Ø 10 - Ø 40, Ø 30 - Ø 60, Ø 50 - Ø 100



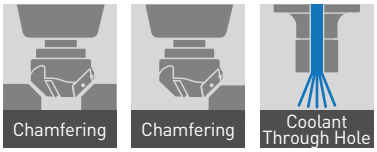


Model	Article No.	ØD	ØD1	L	L1	α	ØC min.	ØC max.	Number of Inserts	Insert Type	Weight (kg)
ST20-C0525C	966.401	20	33	25	60	45°	5	25	1	CW12	0.22
ST25-C1040C	966.406	25	45	35	70	45°	10	40	2	CW19	0.43
ST32-C3060C	802.224	32	65	45	80	45°	30	60	3	CW19	1.05
ST42-C50100C	966.404	42	106	70	80	45°	50	100	3	CW31	3.18
ST25-C1434C-60	966.405	25	38	37	70	60°	14	34	2	CW19	0.40
ST32-C1652C-30	978.336	32	68	48	80	30°	16	52	2	CW19	1.20
ST32-C3050C-60	978.338	32	54	45	80	60°	30	50	3	CW19	0.90
ST32-C4565C-60	978.339	32	69	50	80	60°	45	65	3	CW19	1.40
ST42-C5085C-30	802.251	42	96	52	80	30°	50	85	3	CW19	2.68

1. Wrench and screws are included.
2. Inserts are to be ordered separately.

C-Cutter CKB type

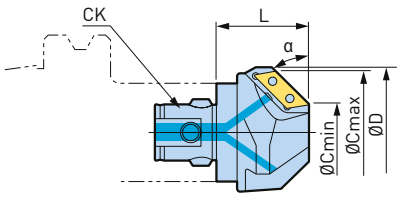
Chamfering mill with indexable inserts for efficient and vibration-free 45° chamfering. The long cutting edge provides a wide chamfering range which reduces the number of tools, tool changes and magazine space.



Accessories & Spare Parts

Inserts for C-Cutter

▶ 528



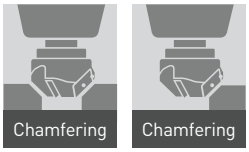
C.2

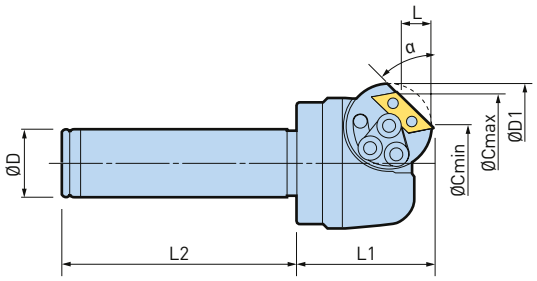
Model	Article No.	CK	ØD	L	α	ØC min.	ØC max.	Number of Inserts	Insert Type	Weight (kg)
CKB2-C0525C	335.021	CKB2	28.5	25	45°	5	25	1	CW12	0.08
CKB4-C1040C	335.022	CKB4	45	35	45°	10	40	2	CW19	0.24
CKB5-C3060C	335.023	CKB5	65	40	45°	30	60	3	CW19	0.69
CKB6-C50100C	335.024	CKB6	106	65	45°	50	100	3	CW31	2.65

1. Wrench and screws are included.
2. Inserts are to be ordered separately.

C-Cutter Universal Type

Chamfering angle adjustment from 5° to 85° with a hex key.





Model	Article No.	ØD	ØD1	L	L1	L2	α	ØC min.	ØC max.	Insert Type	Weight (kg)
ST20-C5/85A-40	966.407	20	49	1.2 - 12.7	40	70	5° - 85°	5.5	42.4	CW1206A	0.40

1. Wrench and screws are included.
2. Inserts are to be ordered separately.

Easy angle adjustment with a hex key.

Chamfering range

Angle θ	Chamfer		L
	ØC min	ØC max	
5°	5.5	33.5	1.2
10°	7.3	34.7	2.4
15°	9.0	36.2	3.6
20°	11.2	37.4	4.7
25°	13.0	38.6	5.9
30°	15.2	39.6	7.0
35°	17.4	40.5	8.0
40°	19.6	41.2	9.0
45°	21.8	41.8	10.0

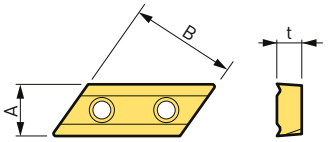
Angle θ	Chamfer		L
	ØC min	ØC max	
50°	24.0	42.2	10.8
55°	26.4	42.4	11.4
60°	28.5	42.5	12.1
65°	30.7	42.4	12.5
70°	32.9	42.1	12.6
75°	34.9	41.7	12.7
80°	36.9	41.1	11.9
85°	38.8	40.3	8.6

1. Values in the table are reference only. Measure accurate values with a presetter.

Accessories & Spare Parts

Inserts for C-Cutter	Insert Clamping Screw Set
▶ 528	▶ 528

Inserts for C-Cutter

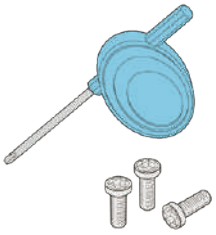


Model	Article No.	A	B	t	Insert Grade	Material	Insert Type
CW1206A	978.283	6.35	12.7	2.7	Non-coating	General Steel & Aluminium	CW12
CW1206A(DLC)	801.753	6.35	12.7	2.7	DLC	Aluminium	CW12
CW1206A(ZX)	800.951	6.35	12.7	2.7	ZX	Steel & Cast iron	CW12
CW1909A	978.817	9.525	19.05	4.5	Non-coating	General Steel & Aluminium	CW19
CW1909A(DLC)	801.754	9.525	19.05	4.5	DLC	Aluminium	CW19
CW1909A(ZX)	800.952	9.525	19.05	4.5	ZX	Steel & Cast iron	CW19
CW3115A	978.826	15.875	31.75	7.0	Non-coating	General Steel & Aluminium	CW31
CW3115A(DLC)	801.755	15.875	31.75	7.0	DLC	Aluminium	CW31
CW3115A(ZX)	800.953	15.875	31.75	7.0	ZX	Steel & Cast iron	CW31
CW1206A(ZX)-10P	978.918	6.35	12.7	2.7	ZX	Steel & Cast iron	CW12
CW1206A-10P	802.134	6.35	12.7	2.7	Non-coating	General Steel & Aluminium	CW12
CW1909A(ZX)-10P	802.136	9.525	19.05	4.5	ZX	Steel & Cast iron	CW19
CW1909A-10P	802.135	9.525	19.05	4.5	Non-coating	General Steel & Aluminium	CW19
CW3115A(ZX)-10P	802.138	15.875	31.75	7.0	ZX	Steel & Cast iron	CW31
CW3115A-10P	802.137	15.875	31.75	7.0	Non-coating	General Steel & Aluminium	CW31

1. Inserts are available in piece. 10P models are available in 10pcs.

Non-coating	Adopts P30-equivalent carbide material with emphasis on toughness for versatile use with materials from steel to aluminum.
ZX Coating	TiN and AlN multilayer coating increases speeds and extends insert life in chamfering of steel or cast iron.
DLC Coating	The exclusive substrate is treated with a thin DLC coating to prevent welding during aluminum machining. It retains sharpness and achieves a clean surface finish.

Insert Clamping Screw Set



Insert	Set Model	Article No.
CW1206A	S2S-B	978.284
CW1909A	S3S	801.696
CW3115A	S5S	801.699

1. The set contains 10 screws and 1 wrench.
2. Wrenches are also available separately.

C-Cutter

Recommended Cutting Condition

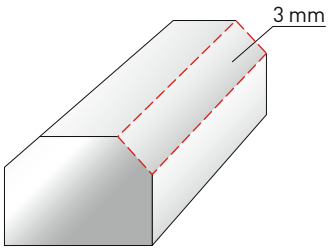
Cutter Type	Max. Chamfer	Chamfering	General Steel Alloy Steel		Stainless Steel		Cast Iron		Aluminium	
			Vc (m/min)	f (mm/rev)	Vc (m/min)	f (mm/rev)	Vc (m/min)	f (mm/rev)	Vc (m/min)	f (mm/rev)
ST20-C5/85A-40	2 mm *	Plunge Cutting	50	0.1	30	0.08	40	0.1	80	0.1
		Side Cutting	80	0.15	60	0.1	50	0.15	100	0.2
C0525C	2 mm	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	3 mm	Plunge Cutting	90	0.15	40	0.12	60	0.15	100	0.2
C1434C-60 C1652C-30	3 mm *	Side Cutting	120	0.3	60	0.2	90	0.3	150	0.3
C3060C / C3060	4 mm	Plunge Cutting	120	0.3	60	0.18	90	0.25	150	0.3
C3050C-60 C4565C-60 C5085C-30	4 mm *	Side Cutting	150	0.45	60	0.3	120	0.6	200	0.6
C50100C	4 mm	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

Vc: 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)

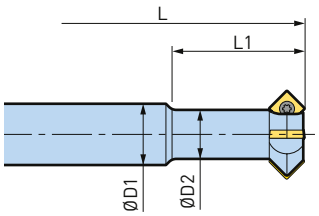


High cutting parameter was achieved without chattering

C-Cutter	ST25-C1040
Insert Model	CW1909A
Spindle speed	3 000 min^{-1}
Feed	1 800 mm/min

C-Cutter Mini, Multi Insert Type

Front & Back Chamfering



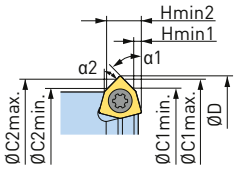


Fig. 1

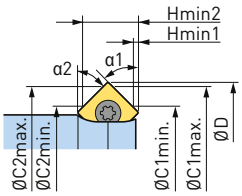


Fig. 2

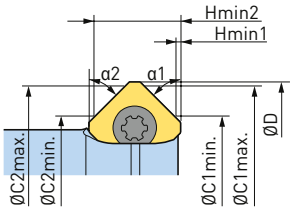


Fig. 3

Model	Article No.	Fig.	ØD	ØD1	ØD2	L	L1	α1	α2	ØC min1	ØC min2	ØC max1	ØC max2	H min1	H min2	Insert Type	Number of Inserts	Weight (kg)
ST12-C0916-3060B-25	-	2	16.7	12	11.2	98	25	30°	60°	9	16	13	16	0,2	5,7	CM05	4	0.09
ST20-C1931-3060B-50	-	3	32.7	20	19.4	130	50	30°	60°	19	31	26	32	0,2	11,2	CM10	4	0.31
ST10-C0810-45B-15	807.192	1	10.5	10	7.4	78	15	45°	45°	8	10	8	10	0.7	3.2	CM03	3	0.05
ST10-C0810-45B-27	807.193	1	10.5	10	7.4	90	27	45°	45°	8	10	8	10	0.7	3.2	CM03	3	0.05
ST12-C1012-45B-20	966.461	1	12.7	12	9	93	20	45°	45°	10	12	10	12	1	3.7	CM04	3	0.08
ST12-C1012-45B-35	966.462	1	12.7	12	9	108	35	45°	45°	10	12	10	12	1	3.7	CM04	3	0.08
ST12-C1116-45B-25	966.433	2	17.1	12	9.6	98	25	45°	45°	11	16	11	16	0.4	6.2	CM05	4	0.08
ST12-C1116-45B-40	966.463	2	17.1	12	9.6	113	40	45°	45°	11	16	11	16	0.4	6.2	CM05	4	0.09
ST16-C1520-45B-50	966.464	2	20.7	16	13.2	123	50	45°	45°	15	20	15	20	0.6	6.3	CM05	4	0.17
ST20-C1924-45B-60	966.465	2	24.7	20	17.2	143	60	45°	45°	19	24	19	24	0.6	6.3	CM05	4	0.31
ST20-C2232-45B-50	966.434	3	32.7	20	19.2	130	50	45°	45°	22	32	22	32	0.4	12.4	CM10	4	0.31
ST20-C2232-45B-80	966.466	3	32.7	20	19.2	160	80	45°	45°	22	32	22	32	0.4	12.4	CM10	4	0.37
ST32-C3242-45B-65	966.435	3	42.7	32	30.6	175	65	45°	45°	32	42	32	42	0.4	12.4	CM10	4	1.04
ST32-C3242-45B-100	966.467	3	42.7	32	30.6	211	100	45°	45°	32	42	32	42	0.4	12.4	CM10	4	1.24
ST12-C1317-6030B-25	-	2	17.4	12	8.4	98	25	60°	30°	13	17	10	16	0,3	6,4	CM05	4	0.08
ST20-C2632-6030B-50	-	3	32.7	20	17.0	130	50	60°	30°	26	32	19	31	1,5	12,4	CM10	4	0.29

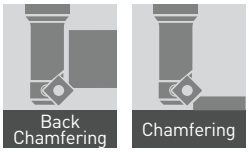
1. Wrench and screws are included.
2. Inserts are to be ordered separately.
3. In case of chamfering with 4 insert type, chatter may occur due to increased cutting resistance when plunge cutting. Please try the different types with less inserts, 1 or 2.

C.2

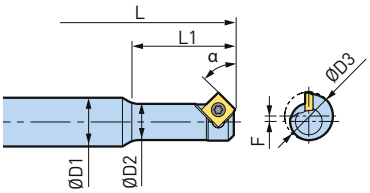
Accessories & Spare Parts

Indexable Inserts for C-Cutter Mini	Insert Clamping Screw Set
▶ 536	▶ 536

C-Cutter Mini, Single Insert Type



Front & Back Chamfering



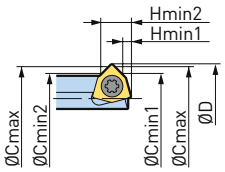


Fig. 1

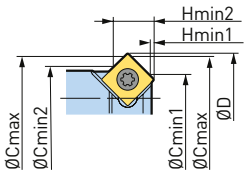


Fig. 2

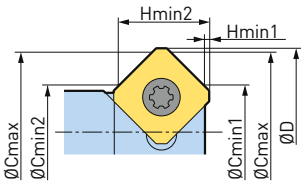


Fig. 3

Model	Article No.	Fig.	ØD	ØD1	ØD2	ØD3	L	L1	ØC min1	ØC min2	ØC max.	H min1	H min2	F	α	Insert Type	Weight (kg)
ST10-C0409-45B-20	966.469	2	9.8	10	5.4	7.7	86	20	4	6	9	0.5	5.4	1.1	45°	CM05	0.05
ST10-C0608-45B-16	966.468	1	8.8	10	5.7	5.7	78	16	6	6	8	1	3.8	1.55	45°	CM04	0.04
ST10-C0611-45B-20	966.432	2	12	10	7.4	9.8	81	20	6	8	11	0.4	5.5	1.1	45°	CM05	0.05
ST10-C0611-45B-35	966.470	2	12	10	7.4	9.8	96	35	6	8	11	0.4	5.5	1.1	45°	CM05	0.05
ST16-C1222-45B-40	966.471	3	22.6	16	11	16.9	117	40	12	12	22	0.3	12.4	2.9	45°	CM10	0.15

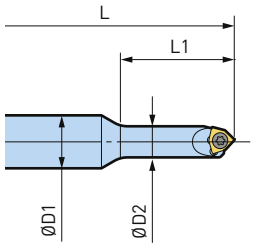
1. Wrench and screws are included.
2. Inserts are to be ordered separately.

Accessories & Spare Parts

Indexable Inserts for C-Cutter Mini	Insert Clamping Screw Set
▶ 536	▶ 536

C-Cutter Mini, Single Insert Type

Front Chamfering



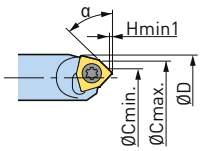


Fig. 1

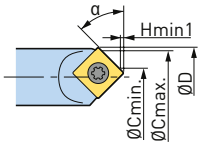


Fig. 2

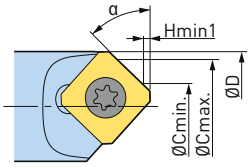


Fig. 3

Model	Article No.	Fig.	ØD	ØD1	ØD2	L	L1	α	ØC min.	ØC max.	H min1	Insert Type	Weight (kg)
ST10-C0209-30-20	-	2	9.7	10	9.4	81	20	30°	2	9	0.2	CM05	0.05
ST16-C0214-30-40	966.436	3	15.9	16	15.4	105	40	30°	2	14	0.2	CM10	0.15
ST8-C0103-45-16	807.196	1	4.9	8	4.7	68	16	45°	1	3	0.3	CM03	0.03
ST10-C0204-45-15	966.486	1	6.3	10	6	78	15	45°	2	4	0.4	CM04	0.04
ST10-C0204-45-25	966.487	1	6.3	10	6	88	25	45°	2	4	0.4	CM04	0.05
ST10-C0207-45-20	966.431	2	8.1	10	7.8	81	20	45°	2	7	0.4	CM05	0.05
ST10-C0207-45-35	966.488	2	8.1	10	7.8	96	35	45°	2	7	0.4	CM05	0.05
ST16-C0515-45-50	966.489	3	15.8	16	15.2	122	50	45°	5	15	0.4	CM10	0.17
ST10-C0408-60-20	-	2	8.4	10	8.0	81	20	60°	4	8	0.3	CM05	0.05
ST16-C0916-60-40	966.437	3	16.5	16	15.6	105	40	60°	9	16	0.8	CM10	0.15

1. Wrench and screws are included.
2. Inserts are to be ordered separately.

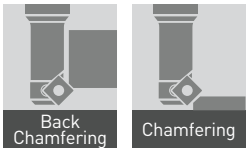
C.2

Accessories & Spare Parts

Indexable Inserts for C-Cutter Mini	Insert Clamping Screw Set
▶ 536	▶ 536

C-Cutter Mini, Single Insert Type

Bolt Hole & Tap Starting Hole -Front & Back Chamfer



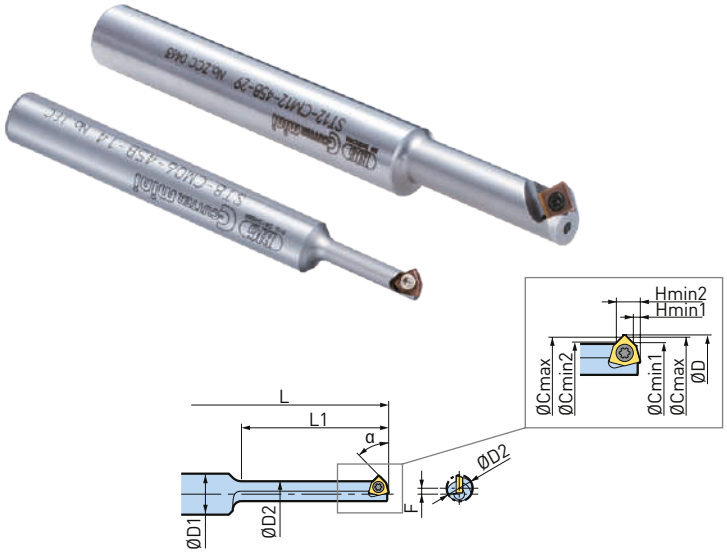


Fig. 1

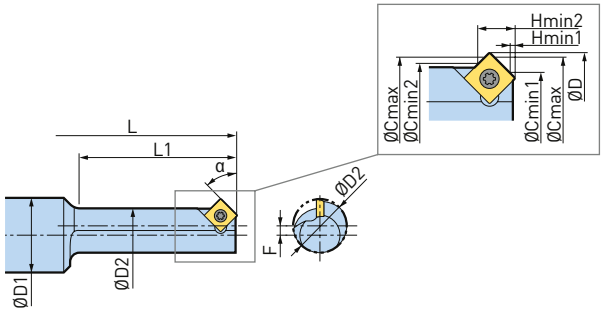


Fig. 2

Model	Article No.	Fig.	ØD	ØD1	ØD2	L	L1	α	ØC min1	ØC min2	ØC max.	H min1	H min2	F	Insert Type	Weight (kg)
ST8-CM06-45B-14	807.194	1	7	8	4.6	66	14	45°	4.9	4.9	6.3	0.9	3.1	1.2	CM03	0.03
ST8-CM06-45B-26	807.195	1	7	8	4.6	78	26	45°	4.9	4.9	6.3	0.9	3.1	1.2	CM03	0.03
ST10-CM08-45B-19	966.472	1	9.2	10	6.3	81	19	45°	6.4	6.6	8.4	1	3.7	1.45	CM04	0.04
ST10-CM08-45B-35	966.473	1	9.2	10	6.3	97	35	45°	6.4	6.6	8.4	1	3.7	1.45	CM04	0.05
ST12-CM10-45B-25	966.474	2	11.3	12	8	99	25	45°	5.5	8.3	10.5	0.5	5	1.65	CM05	0.07
ST12-CM10-45B-45	966.475	2	11.3	12	8	119	45	45°	5.5	8.3	10.5	0.5	5	1.65	CM05	0.08
ST12-CM12-45B-29	966.476	2	13.4	12	9.7	102	29	45°	7.6	10.0	12.6	0.5	5.2	1.85	CM05	0.08
ST12-CM12-45B-53	966.477	2	13.4	12	9.7	126	53	45°	7.6	10	12.6	0.5	5.2	1.85	CM05	0.09
ST16-CM14-45B-33	966.478	2	15.5	16	11.5	107	33	45°	9.7	11.8	14.7	0.5	5.3	2	CM05	0.14
ST16-CM14-45B-61	966.479	2	15.5	16	11.5	135	61	45°	9.7	11.8	14.7	0.5	5.3	2	CM05	0.15
ST16-CM16-45B-37	966.480	2	17.6	16	13.5	110	37	45°	11.8	13.8	16.8	0.5	5.4	2.05	CM05	0.15
ST16-CM16-45B-69	966.481	2	17.6	16	13.5	142	69	45°	11.8	13.8	16.8	0.5	5.4	2.05	CM05	0.18
ST20-CM18-45B-42	966.482	2	19.7	20	14.9	126	42	45°	13.9	15.2	18.9	0.5	5.7	2.4	CM05	0.25
ST20-CM18-45B-78	966.483	2	19.7	20	14.9	162	78	45°	13.9	15.2	18.9	0.5	5.7	2.4	CM05	0.29
ST20-CM20-45B-46	966.484	2	21.8	20	16.9	129	46	45°	16	17.2	21	0.5	5.8	2.45	CM05	0.27
ST20-CM20-45B-86	966.485	2	21.8	20	16.9	169	86	45°	16	17.2	21	0.5	5.8	2.45	CM05	0.33

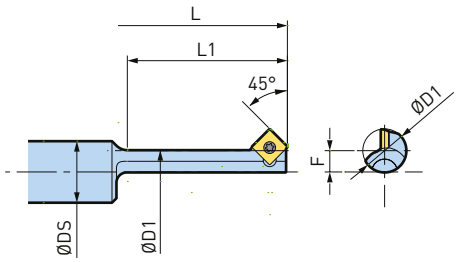
1. Wrench and screws are included.
2. Inserts are to be ordered separately.

Accessories & Spare Parts

Indexable Inserts for C-Cutter Mini	Insert Clamping Screw Set
▶ 536	▶ 536

C-Cutter Mini, Single Insert Type

Back Chamfering



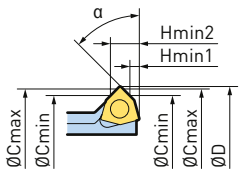


Fig. 1

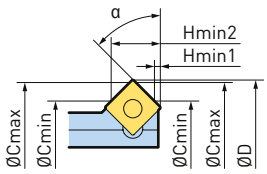


Fig. 2

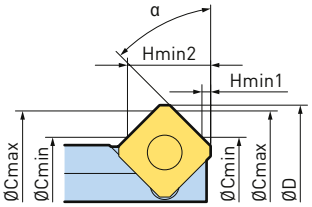


Fig. 3

Model	Article No.	Fig.	ØD	ØDs	ØD1	L	L1	α	ØC min.	ØC max.	H min1	H min2	F	Insert Type	Weight (kg)
ST10-CZ06-45B-23	806.966	1	12.8	10	6.1	85	23	45°	10	12	1	3.8	3.35	CM04	0.04
ST12-CZ08-45B-31	806.967	2	16.8	12	8.5	104	31	45°	11	16	0.5	6.3	4.15	CM05	0.07
ST16-CZ10-45B-37	806.968	2	20.3	16	10.5	111	37	45°	14.5	19.5	0.5	6.3	4.9	CM05	0.13
ST16-CZ12-45B-50	806.969	3	24.8	16	13.5	124	50	45°	14	24	0.3	12	5.65	CM10	0.14
ST20-CZ14-45B-56	806.970	3	27.8	20	15.5	139	56	45°	17	27	0.3	12	6.15	CM10	0.24

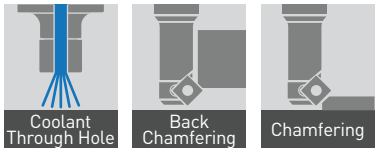
1. Wrench and screws are included.
2. Inserts are to be ordered separately.

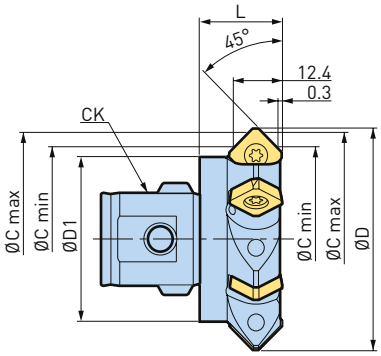
C.2

Accessories & Spare Parts

Indexable Inserts for C-Cutter Mini	Insert Clamping Screw Set
▶ 536	▶ 536

C-Cutter Mini CKB Type



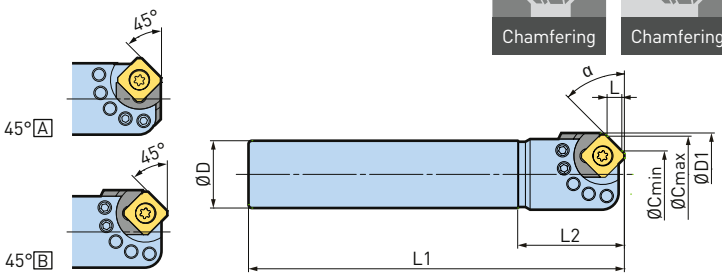


Model	Article No.	CK	ØD	ØD1	L	ØC min.	ØC max.	Number of Inserts	Insert Type	Weight (kg)
CKB1-C2232-45B-20	335.070	CKB1	32.7	19	20	22	32	4	CM10	0.05
CKB3-C3242-45B-20	335.071	CKB3	42.7	31	20	32	42	4	CM10	0.14
CKB3-C5262-45B-20	335.072	CKB3	62.7	31	20	52	62	6	CM10	0.24
CKB4-C4252-45B-20	335.073	CKB4	52.7	39	20	42	52	6	CM10	0.23
CKB5-C5262-45B-20	335.074	CKB5	62.7	51	20	52	62	6	CM10	0.40
CKB6-C6575-45B-20	-	CKB6	75.7	64	20	65	75	8	CM10	0.70

1. Wrench and screws are included.
2. Inserts are to be ordered separately.

C-Cutter Mini Universal

Slim body C-Cutter with chamfering angle adjustment from 5° to 85°.



Model	Article No.	ØD	ØD1	L	L1	L2	α	ØC min.	ØC max.	Insert Type	Weight (kg)
ST20-CM5/85A-30	806.541	20	25	0.6 - 6.8	112	32	5° - 85°	5.7	23.3	CM10	0.26

1. Wrench and screws are included.
2. Inserts are to be ordered separately.

Chamfering Range

Chamfering angle θ	Min. hole ØC min	Max. chamfer diameter ØC max	L
5°	5.7	18.8	0.6
10°	6.7	19.7	1.2
15°	7.6	20.5	1.7
20°	8.5	21.2	2.3
25°	9.6	21.8	2.9
30°	10.6	22.3	3.4
35°	11.6	22.7	3.9
40°	12.7	23.0	4.4
45° A	13.7	23.3	4.8
45° B	13.4	23.0	4.8

Application examples

47.5° chamfer
Plunging

5° chamfer
Traverse

Chamfering angle θ	Min. hole ØC min	Max. chamfer diameter ØC max	L
50°	14.4	23.2	5.2
55°	15.5	23.3	5.6
60°	16.4	23.3	5.9
65°	17.4	23.2	6.2
70°	18.3	23.0	6.4
75°	19.1	22.7	6.6
80°	19.9	22.3	6.7
85°	20.7	21.9	6.8

Values in the table are reference only. Measure accurate values with a presetter.

Indexable Inserts for C-Cutter Mini

Fig. 1

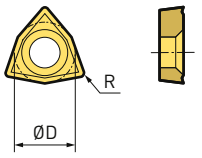


Fig. 2

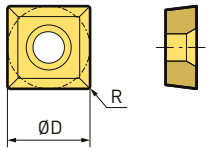
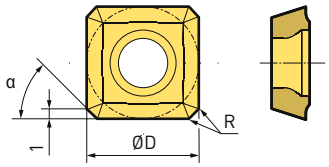


Fig. 3



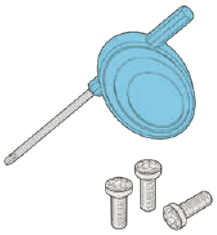
Model	Article No.	Fig.	ØD	α	R	Insert Grade	Material	Screw Set
CM0302(ACP300)	807.226	1	3.31	45°	0.2	ACP300	Stainless Steel	S1.6S-T3
CM0302(ACM250F)	807.448	1	3.31	45°	0.2	ACM250F	Stainless Steel	S1.6S-T3
CM0302(DS20)	807.449	1	3.31	45°	0.2	DS20	Aluminium	S1.6S-T3
CM0402(ACP300)	966.440	1	3.97	45°	0.2	ACP300	Stainless Steel	S2SS-T6
CM0402(ACM250F)	807.450	1	3.97	45°	0.2	ACM250F	Stainless Steel	S2SS-T6
CM0402(DS20)	807.451	1	3.97	45°	0.2	DS20	Aluminium	S2SS-T6
CM0502SE(ACP300)	800.950	2	5	45°	0.2	ACP300	Stainless Steel	S2TS-T6
CM0502(ACM250F)	807.187	2	5	45°	0.2	ACM250F	Stainless Steel	S2TS-T6
CM0502(ACP200)	966.441	2	5	45°	0.2	ACP200	General Steel	S2TS-T6
CM0502SE(ACP200)	966.443	2	5	45°	0.2	ACP200	General Steel	S2TS-T6
CM0502(DS20)	966.442	2	5	45°	0.2	DS20	Aluminium	S2TS-T6
CM0502(CWS20A)	100736.001.0	2	5	45°	0.2	CWS20A	Prehardenend Steel & Hardended Steel	S2TS-T6
CM0502(NF15KA)	807.683	2	5	45°	0.2	NF15KA	Cast iron	S2TS-T6
CM10C1(ACM250F)	807.188	3	10	45°	0.2	ACM250F	Stainless Steel	S4S-T15
CM10C1(CWS20A)	100736.002.2	3	10	45°	0.2	CWS20A	Prehardenend Steel & Hardended Steel	S4S-T15
CM10C1SE(ACP200)	966.447	3	10	45°	0.2	ACP200	General Steel	S4S-T15
CM10C1(ACP200)	966.445	3	10	45°	0.2	ACP200	General Steel	S4S-T15
CM10C1(NF15KA)	807.684	3	10	45°	0.2	NF15KA	Cast iron	S4S-T15
CM10C1(DS20)	966.446	3	10	45°	0.2	DS20	Aluminium & Non-Ferrous	S4S-T15

1. The suffix SE designates a sharp cutting edge version.
2. Inserts are available in a packet of 10 pcs.
3. It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained.

Sharp cutting edge insert for „SE“ type

Sharp cutting edge minimises the generation of burrs. This is especially beneficial when cutting stainless and mild steel materials.

Insert Clamping Screw Set



Insert	Set Model	Article No.
CM0302	**S1.6S-T3**	807.041
CM0402	**S2SS-T6**	966.448
CM0502/ CM0502SE	**S2TS-T6**	966.449
CM10C1/ CM10C1SE	**S4S-T15**	966.450

1. The set contains 10 screws and 1 wrench.
2. Wrenches are also available separately.

Recommended Cutting Condition

A (Standard conditions)

Work Material	Insert Grade	Cutting Speed Vc (m/min)	Feed Rate fz (mm/tooth)		Coolant
			Chamfering	Face Milling (CM10 insert only)	
General Steel, Alloy Steel, High-Alloy Steel	ACP200 ACP300	100 - 350	0.05 - 0.4	0.05 - 0.2	Dry
Alloy Tool Steel	CWS20A	100 - 200	0.05 - 0.2	0.05 - 0.2	Dry
Pre-hardened Steel, Hardened Steel (HRC50 or less)		80 - 160	0.05 - 0.2	0.05 - 0.2	Dry
Hardened Steel (HRC50 - 62)		50 - 80	0.05 - 0.1	0.05 - 0.1	Dry
Stainless Steel	ACM250F	100 - 250	0.08 - 0.3	0.08 - 0.2	Dry / Wet
Titanium		40 - 60	0.02 - 0.08	0.02 - 0.08	Wet
Inconel		20 - 30	0.02 - 0.08	0.02 - 0.08	Wet
Cast iron	NF15KA	100 - 350	0.1 - 0.5	0.05 - 0.25	Dry
Aluminium, Non-Ferrous	DS20, ACP300	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 and starting hole for tapping type")

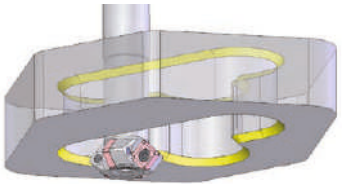
Work Material	Insert Grade	Cutting Speed Vc (m/min)	Feed Rate fz (mm/tooth)	Coolant
General Steel, Alloy Steel, High-Alloy Steel	ACP200, ACP300	20 - 100	0.03 - 0.12	Wet
Cast Iron	NF15KA	50 - 160	0.05 - 0.20	Dry
Aluminium, Non-Ferrous	ACP200, ACP300	30 - 100	0.03 - 0.12	Wet

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.

Application Examples C-Cutter Mini

Front & Back chamfering for stainless steel

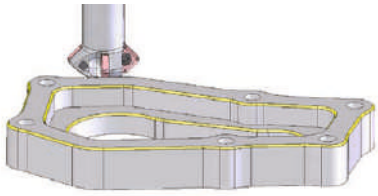
	Competitor's Tool (with TiAlN Coated Carbide Insert)	C-Cutter Mini (ST20-C2232-45B-50)
Chamfering Dia.	Ø 30	Ø 28
Number of Teeth	1	4
Cutting Speed (m/min)	140	180
Spindle Speed (min^{-1})	1 490	2 050
Feed (mm/min)	149	819
Result	5 times better cutting efficiency	



Material: X5CrNi18-9
Chamfer: 3 mm x 45°
Feed: 0.1 mm/tooth

Chamfering for aluminium

	Competitor's Tool	C-Cutter Mini (ST12-C1116-45B-25)
Chamfering Dia.	Ø 40	Ø 12
Number of Teeth	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	



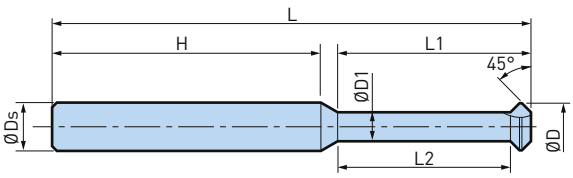
Material: Al-Si7Mg(Fe)
Chamfer: 0.5 mm x 45°
Feed: 0.1 mm/tooth

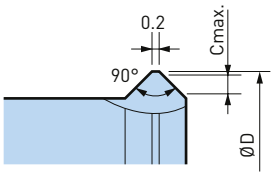
Front & Back chamfering of starting holes for M8 tapping

	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

Material: FC250
Tapped hole: Ø 6.6
Chamfering dia.: Ø 8.4

C-CUTTER MICRO (For Standard type)





Model	Article No.	ØD	ØD1	ØDs	L	L1	L2	H	Cmax.	Weight (kg)
ST3W-CS2-45B-04	-	2.9	1.1	3	40	4	3	-	0.3	0.01
ST3W-CS2-45B-08	-	2.9	1.2	3	40	8	7	-	0.25	0.01
ST3W-CS3-45B-06	-	2.9	1.7	3	40	6	4.5	33	0.5	0.01
ST3W-CS3-45B-12	-	2.9	1.9	3	40	12	10.5	27	0.4	0.01
ST4W-CS4-45B-08	-	3.9	2.1	4	45	8	6	35.5	0.8	0.01
ST4W-CS4-45B-16	-	3.9	2.4	4	45	16	14	27.5	0.65	0.01
ST5W-CS5-45B-10	-	4.9	2.5	5	50	10	7	37.5	1.1	0.02
ST5W-CS5-45B-20	-	4.9	2.8	5	50	20	17.5	28	0.95	0.02
ST6W-CS6-45B-12	-	5.9	3	6	50	12	8.5	35.5	1.35	0.02
ST6W-CS6-45B-24	-	5.9	3.4	6	60	24	21	33.5	1.15	0.02
ST8W-CS8-45B-16	-	7.9	4	8	60	16	11.5	40.5	1.85	0.04
ST8W-CS8-45B-32	-	7.9	4.5	8	70	32	28	35	1.6	0.04

1. Cutting edge material is CrN coated carbide. All models have 3 cutting edges.

Cutting Conditions

Workpiece material	Cutting speed Vc (m/min)	Feed rate per insert fz (mm/t)
Unalloyed Steel, Carbon Steel, Alloy Steel	70 - 100	0.05 - 0.1
Stainless Steel	60 - 80	0.03 - 0.08
Cast Iron/Ductile Cast Iron	40 - 80	0.05 - 0.1
Aluminum/Non-ferrous	80 - 150	0.05 - 0.12

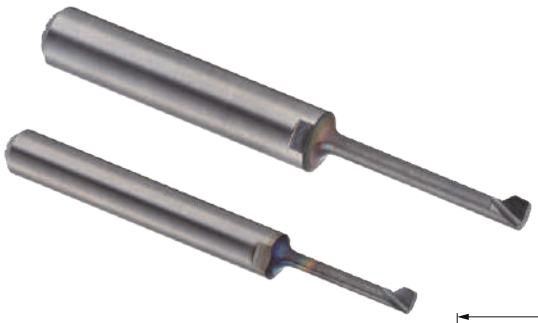
1. This table is a guideline for selecting cutting parameters. Adjust them as needed according to the machine and workpiece conditions.
2. Generally, wet cutting provides a better surface finish.
3. Back chamfering may require lower cutting conditions than front.
4. Lower the feed if secondary burrs appear.

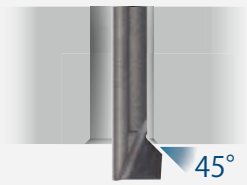
⚠ Caution

Keep the tool projection length as short as possible. Stop using the tool if it receives strong impact such as collision.
The tool becomes hot during cutting. There is a risk of burn if touched immediately after use. Use protective equipment such as safety enclosures and glasses against scattering chips or tool breakage caused by accidents.

C-CUTTER MICRO (For Back Chamfering)

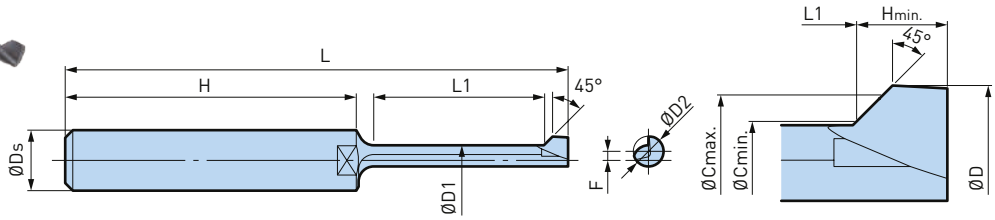
For small Tap Hole M4 and M5.





Tap bottom hole size: M4 and M5

M4 M5



Model	Article No.	ØD	ØD1	ØDs	L	L1	H	ØC min.	ØC max.	H min	F	Weight (kg)
ST6W-CM04-45B-14	-	5.9	3.1	6	58	14	38	3.3	4.5	2.4	1.1	0.02
ST8W-CM05-45B-17	-	7.9	4	8	62	17	38	4.2	5.6	3.1	1.2	0.04
ST8W-CM05-45B-22	-	7.9	4	8	67	22	38	4.2	5.6	3.1	1.2	0.04

1. The cutting edge is made of CIN-coated carbide.
2. When aligning the machine spindle, the offset direction and phase position of the cutting edge should be within 0.1 mm when measured on a flat surface with a test indicator.

Cutting Conditions

Workpiece material	Cutting speed Vc (m/min)	Feed rate per insert fz (mm/t)
Unalloyed Steel, Carbon Steel, Alloy Steel	30 - 60	0.02 - 0.08
Cast Iron/Ductile Cast Iron	30 - 80	0.04 - 0.10
Aluminum/Non-ferrous	50 - 100	0.03 - 0.10

1. This table is a guideline for selecting cutting parameters. Adjust them as needed according to the machine and workpiece conditions.
2. Generally, wet cutting provides a better surface finish.
3. Lower the feed if secondary burrs appear.

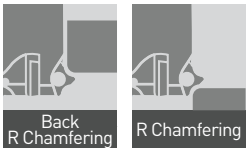
Machining examples / M4 tapped hole backfilling

C-Cutter Micro Model	ST6W-CM04-45B-14
Workpiece Material	C50
Hole Diameter	Ø 3.3
Chamfer Diameter	Ø 4.5
Cutting Speed Vc (m/min)	50
Rotation Speed n (min^{-1})	3,537
Feed Rate f (mm/rev)	0.05
Feed Rate Vf (mm/min)	177

Caution

Keep the tool projection length as short as possible. Stop using the tool if it receives strong impact such as collision. The tool becomes hot during cutting. There is a risk of burn if touched immediately after use. Use protective equipment such as safety enclosures and glasses against scattering chips or tool breakage caused by accidents.

R-Cutter - Front & Back R Chamfering



Front & back R-chamfering are available. 4 inserts multiply feed rate.

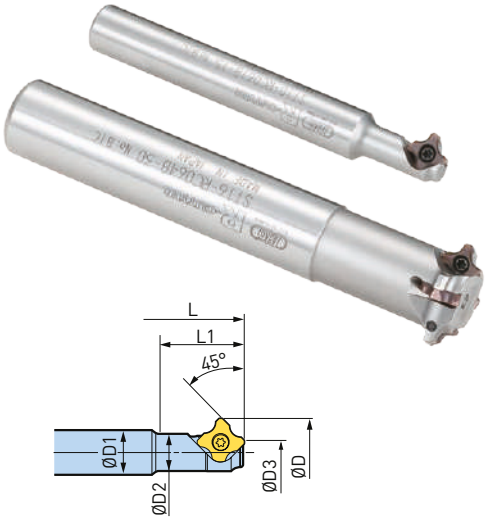


Fig. 1

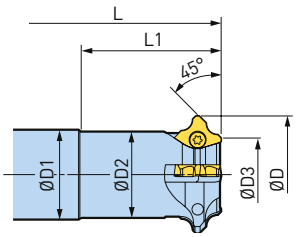
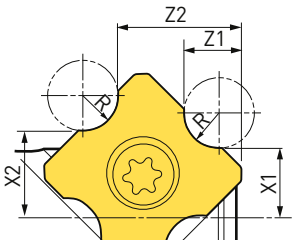


Fig. 2



Model	Article No.	Fig.	ØD	ØD1	ØD2	ØD3	L	L1	Number of Inserts	R	X1	Z1	X2	Z2	Insert Model	Weight (kg)
ST10-RC061B-15	966.501	1	12.3	10	6.6	4.4	78	15	1	0.5	3.61	1.93	4.30	5.78	RC06	0.04
										1	3.35	2.18	4.04	5.53		
										1.5	3.09	2.43	3.78	5.28		
										2	2.83	2.68	3.52	5.03		
ST16-RC121B-30	966.502	1	24.4	16	13.3	8.6	103	30	1	1	7.17	3.79	8.56	11.63	RC12	0.14
										2	6.65	4.29	8.03	11.13		
										3	6.13	4.79	7.51	10.63		
										4	5.60	5.29	6.99	10.13		
ST16-RC064B-30	966.503	2	21	16	15.2	13.2	101	30	4	0.5	7.89	1.93	8.59	5.78	RC06	0.15
										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	966.504	2	42	32	30.8	26.3	141	50	4	1	15.85	3.79	17.26	11.63	RC12	0.82
										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		

1. Wrench and screws are included.
2. Inserts are to be ordered separately.

C.2

Accessories & Spare Parts

Indexable Inserts for R-Cutter	Insert Clamping Screw Set
▶ 543	▶ 543

R-Cutter - Front Chamfering

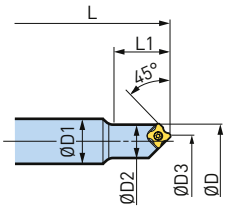


Fig. 1

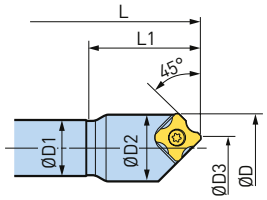
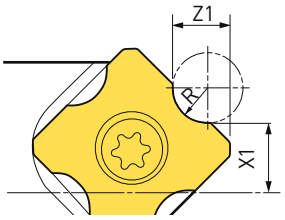


Fig. 2



Model	Article No.	Fig.	ØD	ØD1	ØD2	ØD3	L	L1	Number of Inserts	R	X1	Z1	Insert Model	Weight (kg)
ST16-RC061-20	966.505	1	12.3	16	11.9	4.5	94	20	1	0.5	3.61	1.93	RC06	0.13
										1	3.35	2.18		
										1.5	3.09	2.43		
										2	2.83	2.68		
ST20-RC121-40	966.506	2	24.4	20	23.8	8.9	121	40	1	1	7.17	3.79	RC12	0.30
										2	6.65	4.29		
										3	6.13	4.79		
										4	5.60	5.29		

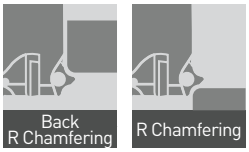
1. Wrench and screws are included.
2. Inserts are to be ordered separately.

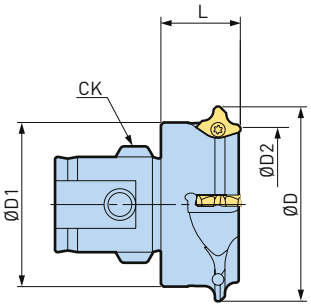
Accessories & Spare Parts

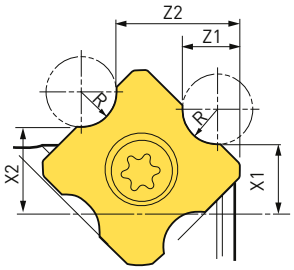
Indexable Inserts for R-Cutter	Insert Clamping Screw Set
▶ 543	▶ 543

R-Cutter CKB Type

The R-Cutter is a high performance tool for chamfering, back chamfering and face milling.
Due to the small tool diameter it permits extremely high feed rates.







Model	Article No.	CK	ØD	ØD1	ØD2	L	Number of Inserts	R	X1	Z1	X2	Z2	Insert Model	Weight (kg)
CKB3-RC064B-15	806.439	CKB3	37	31	29.2	15	4	0.5	15.9	1.9	16.6	5.8	RC06	0.12
								1.0	15.6	2.2	16.3	5.5		
								1.5	154	2.4	16.1	5.3		
								2.0	15.1	2.7	15.8	5		
CKB5-RC124B-25	806.440	CKB5	62	50	46.3	25	4	1	25.8	3.8	27.2	11.6	RC12	0.50
								2	25.3	4.3	26.7	11.1		
								3	24.8	4.8	26.2	10.6		
								4	24.3	5.3	25.7	10.1		

1. Wrench and screws are included.
2. Inserts are to be ordered separately.

C.2

Accessories & Spare Parts

Indexable Inserts for R-Cutter	Insert Clamping Screw Set
▶ 543	▶ 543

Indexable Inserts for R-Cutter

Model	Article No.	R	Insert Grade	Material
RC06050(ACP300)	966.530	0.5	ACP300	Structural steel, Carbon steel, Alloy Steel
RC06100(ACP300)	966.531	1	ACP300	Structural steel, Carbon steel, Alloy Steel
RC06150(ACP300)	966.532	1.5	ACP300	Structural steel, Carbon steel, Alloy Steel
RC06200(ACP300)	966.533	2	ACP300	Structural steel, Carbon steel, Alloy Steel
RC12100(ACP300)	966.534	1	ACP300	Structural steel, Carbon steel, Alloy Steel
RC12200(ACP300)	966.535	2	ACP300	Structural steel, Carbon steel, Alloy Steel
RC12300(ACP300)	966.536	3	ACP300	Structural steel, Carbon steel, Alloy Steel
RC12400(ACP300)	966.537	4	ACP300	Structural steel, Carbon steel, Alloy Steel

1. Inserts are available in a packet of 10 pcs.
2. Material is coated carbide.

Screw Set

Inserts	Model	Article No.
RC06	S2TS-T6	966.449
RC12	S4S-T15	966.450

1. Insert clamping set contains 10 pcs screw and 1 pcs wrench.

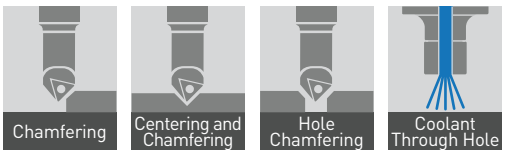
Recommended Cutting Condition

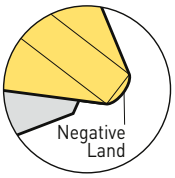
Workpiece Material	Cutting Speed (m/min)	Feed Rate (mm/tooth)	Coolant
Structural, Carbon or Alloy Steel	100 - 350	0.05 - 0.2	Dry
Prehardened Steel (less than HRC40)	60 - 80	0.05 - 0.1	Wet
Stainless Steel	100 - 250	0.08 - 0.2	Dry / Wet
Cast Iron	100 - 350	0.05 - 0.25	Dry
Aluminium	100 - 800	0.05 - 0.25	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.

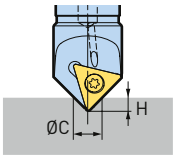
C-Centering Cutter

A multifunction cutter capable of both spot drilling and chamfering.





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



Spot Drilling Depth Calculation Method

《α1 =90°》
H=(øC-øCmin)÷2+Hmin
《α1 =120°》
H=(øC-øCmin)÷3.46+Hmin

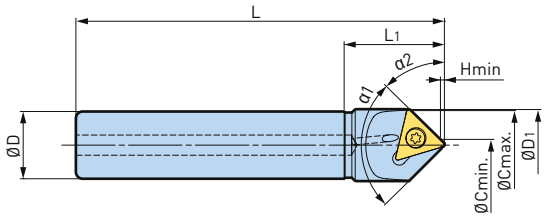


Fig. 1

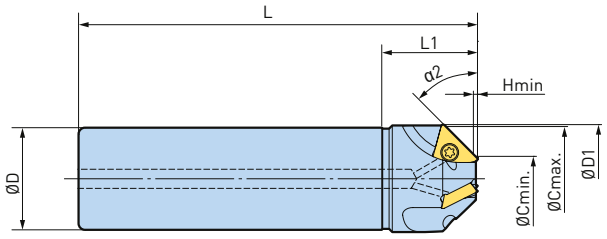
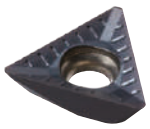


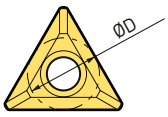
Fig. 2

Model	Article No.	Fig.	ØD	ØD1	L	L1	α1	α2	ØC min.	ØC max.	H min	Insert Type	Weight (kg)
ST8-CN0209-45-65	807.685	1	8	10	65	15	90°	45°	2	9	0.6	CN0406	0.03
ST10-CN0211-30-70	-	1	10	10	70	15	120°	30°	2	11	0.4	CN0406	0.06
ST12-CN0213-45-90	807.686	1	12	14	90	20	90°	45°	2	13	0.6	CN0606	0.07
ST16-CN0216-30-90	-	1	16	16	90	20	120°	30°	2	16	0.4	CN0606	0.12
ST20-CN0220-45-110	806.622	1	20	22	110	30	90°	45°	2	20	0.6	CN0906	0.23
ST20-CN0225-30-110	-	1	20	20	110	30	120°	30°	2	25	0.4	CN0906	0.24
ST32-CN1433-45-125	807.015	2	32	34	125	30	-	45°	14	33	0.6	CN0906	0.69

1. Wrench and screws are included.
2. Inserts are to be ordered separately.

Inserts for C-Centering Cutter





Model	Article No.	ØD	Insert Grade	Material
CN0406(DS20)	807.688	4.76	DS20	Aluminium
CN0406(ACZ150)	807.689	4.76	ACZ150	Steel, Construction Steel, Cast iron
CN0406(ACM250F)	807.687	4.76	ACM250F	Stainless Steel
CN0606(DS20)	807.691	6.35	DS20	Aluminium
CN0606(ACZ150)	807.692	6.35	ACZ150	Steel, Construction Steel, Cast iron
CN0606(ACM250F)	807.690	6.35	ACM250F	Stainless Steel
CN0906(DS20)	807.158	9.525	DS20	Aluminium
CN0906(ACZ150)	807.693	9.525	ACZ150	Steel, Construction Steel, Cast iron
CN0906(ACM250F)	807.139	9.525	ACM250F	Stainless Steel

1. Insert clamping set contains 10 pcs screw and 1 pcs wrench.

Recommended Cutting Condition

Workpiece Material	Cutting Speed Vc (m/min)	Feed (mmv/rev)	
		Spot Drilling	Traverse Chamfering
Carbon Steel, Alloy Steel	50 - 150	0.02 - 0.08	0.05 - 0.2
Stainless Steel	50 - 120	0.02 - 0.05	
Cast Iron	70 - 200	0.02 - 0.08	
Aluminum	100 - 300		

1. The table is just a reference to determine cutting conditions.
2. It should be adjusted according to the condition of the machine tool and workpiece.

Center Boy

Accurate centering and chamfering in one single operation.

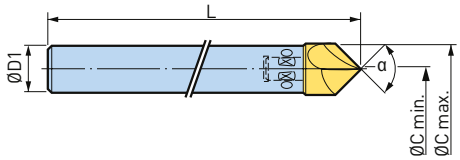


Fig. 1

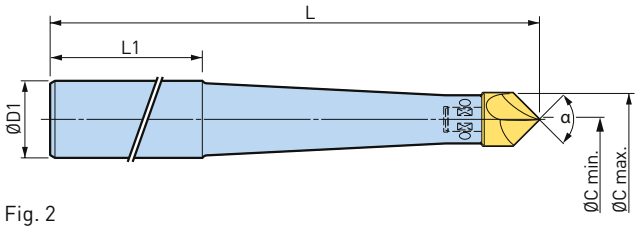


Fig. 2

Model	Article No.	Fig.	ØD1	L	L1	α	ØC min.	ØC max.	Indexable Bit	Locking Screw	Weight (kg)
ST10-CBY09010	966.415	1	10	150	-	90°	0.9	10	CBY09010	H0403-5P	0.09
ST12-CBY09013	966.416	1	12	150	-	90°	0.9	13	CBY09013	H0403-5P	0.13
ST16-CBY09016	966.417	1	16	180	-	90°	1	16	CBY09016	H0504-5P	0.27
ST20-CBY09022	966.418	1	20	180	-	90°	1.5	22	CBY09022	H0505-5P	0.42
ST12-CBY12013	802.756	1	12	150	-	120°	0.9	13	CBY12013	H0403-5P	0.13
ST20-CBY09013-220	966.411	2	20	220	120	90°	0.9	13	CBY09013	H0403-5P	0.42
ST20-CBY09013-260	966.412	2	20	260	120	90°	0.9	13	CBY09013	H0403-5P	0.48
ST32-CBY09022-260	966.413	2	32	260	120	90°	1.5	22	CBY09022	H0505-5P	1.12
ST32-CBY09022-300	966.414	2	32	300	120	90°	1.5	22	CBY09022	H0505-5P	1.28

1. 2 pcs of indexable Bits and 2 pcs of locking screws are included as standard accessories.
2. Spare locking screws are available in a packet of 5 pcs.

Indexable Bit for Center Boy

Bit

Model	Article No.	α
CBY09010-5P	966.422	90°
CBY09013-5P	966.423	90°
CBY09016-5P	966.424	90°
CBY09022-5P	966.425	90°
CBY12013-5P	800.945	120°

Locking Screw

Model	Article No.
H0403-5P	978.256
H0504-5P	801.046
H0505-5P	801.047

1. Bits are available as 5 piece sets.
2. Bit grade is HSS with TiN coating.

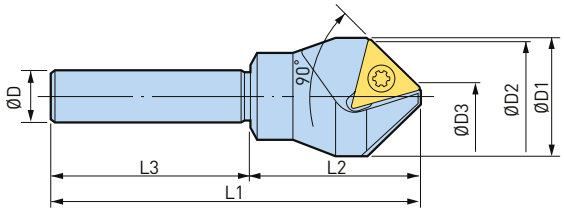
Recommended Cutting Condition

Workpiece Material	Cutter Type	Chamfering		Centering	
		Vc (m/min)	f (mm/rev)	Vc (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
Aluminium	Standard	45 - 60	0.15	50 - 65	0.15
	long	40 - 60	0.12	40 - 60	0.12

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. Vc: Cutting speed (m/min.) f: Feed per revolution (mm/rev.)

C-Cutter Boy

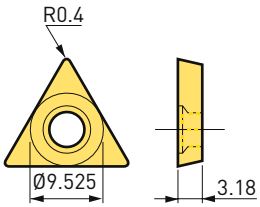
For bench drill machine only. Smooth guide with carbide support pad. Never get irregular chamfering. Long tool life with carbide insert. Economical with its 3 cutting edges.



Model	Article No.	ØD	ØD1	ØD2	ØD3	L1	L2	L3	Insert Type	Weight (kg)
ST12B-C0525	966.408	12	27	25	5	83	38	45	C1603B	0.14

1. Including 1 pce. of insert.
2. ØD2 and ØD3 indicate the min. and max. bore diameter.

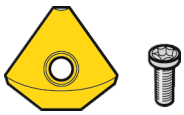
Indexable Insert for C-Cutter Boy



Model	Article No.
C1603B	966.409

1. Inserts are available in a packet of 10 pcs.

C-Cutter Boy - Guide Pad Set



Model	Article No.	Thread size	Carbide guide
CG0525S	978.908	M4×7	CG0525

1. The set contains 1pce of Carbide Guide and 1pce screw.

Insert Clamping Screw Set

Set Model	Article No.	Thread Size
S4S	806.148	M4 x 8

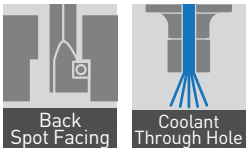
1. 10 pce. of clamping screw and 1 pce. of wrench are included.

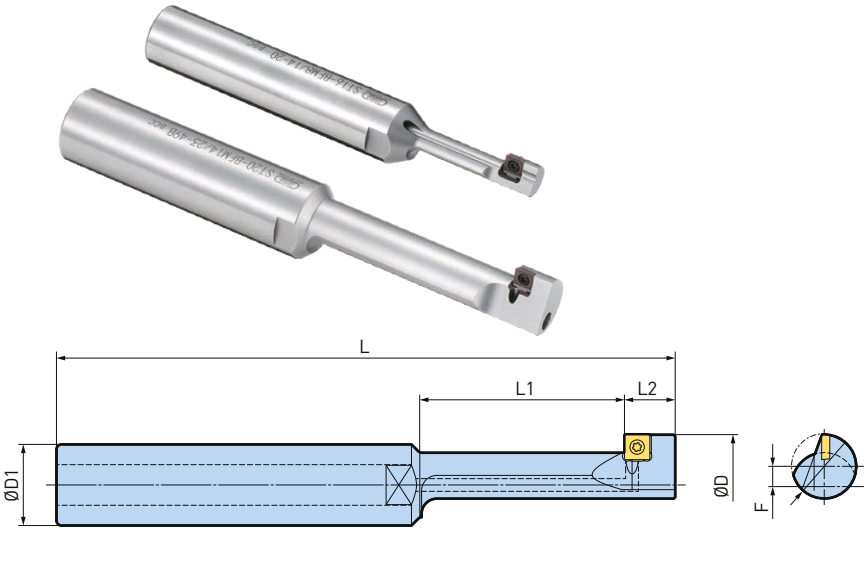
Recommended Cutting Condition

Hole Dia. Ø	Spindle Speed (min^{-1})		
	Steel	Cast Iron	Aluminium
5	600	800	1 000
10	500	600	800
15	400	500	600
20	300	400	500

BF-Cutter

Selected spot facing diameters suitable for cap screws.





Model	Article No.	ØD	ØD1	ØD2	L	L1	L2	F	Insert Type	Weight (kg)
ST16-BFM6/11-12	802.752	11	16	6.5	102	12	9	2.4	CM0502	0.10
ST16-BFM8/14-20	802.753	14	16	8.5	108	20	9	2.9	CM0502	0.10
ST16-BFM10/17.5-25	802.750	17.5	16	10.5	112	25	10	3.65	CM0502	0.10
ST16-BFM12/20-36	802.751	20	16	13	122	36	10	3.65	CM0502	0.12
ST20-BFM14/23-49	802.754	23	20	15	136	49	10	4.15	CM0502	0.20
ST20-BFM16/26-56	802.755	26	20	17	142	56	10	4.65	CM0502	0.22
ST32-BFM18/29-63	806.034	29	32	19	188	63	15	5.2	CC□□07	0.65
ST32-BFM20/32-70	806.035	32	32	21	195	70	15	5.7	CC□□07	0.69
ST32-BFM22/35-77	806.036	35	32	23	202	77	15	6.2	CC□□07	0.74
ST32-BFM24/39-84	806.037	39	32	25	214	84	20	7.3	CC□□09	0.79
ST32-BFM27/43-95	806.038	43	32	30	225	95	20	6.8	CC□□09	1.00
ST32-BFM30/48-105	806.039	48	32	33	235	105	20	7.8	CC□□09	1.14

1. Wrench and screws are included.
2. Inserts are to be ordered separately.

Indexable Inserts for BF-Cutter

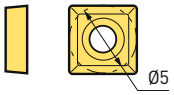


Fig. 1

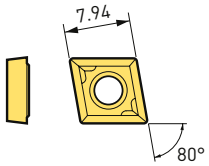


Fig. 2

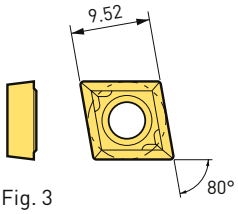


Fig. 3

Model	Article No.	Fig.	R	Insert Grade	Material
CM0502(NF15KA)	807.683	1	0.2	NF15KA	Cast iron
CM0502(DS20)	966.442	1	0.2	DS20	Aluminium
CM0502(ACP200)	966.441	1	0.2	ACP200	General Steel
CM0502(ACM250F)	807.187	1	0.2	ACM250F	Stainless Steel
CCGA070204FN(H1)	-	2	0.4	H1	
CCMP070204EFM(AC410K)	-	2	0.4	AC410K	
CCMP070204ESM(AC630M)	-	2	0.4	AC630M	
CCMP070204EFM(AC700G)	-	2	0.4	AC700G	
CCMP070204EFM(AC820P)	-	2	0.4	AC820P	
CCMP070204EFM(AC830P)	-	2	0.4	AC830P	
CCGP070204EFM(T1500A)	-	2	0.4	T1500A	
CCMM090308EFM(AC410K)	-	3	0.8	AC410K	
CCMM090308ESM(AC630M)	-	3	0.8	AC630M	
CCMM090308EFM(AC700G)	-	3	0.8	AC700G	
CCMM090308EFM(AC820P)	-	3	0.8	AC820P	
CCMM090308EFM(AC830P)	-	3	0.8	AC830P	
CCGM090308EFM(T1500A)	-	3	0.8	T1500A	

Insert grade

ACP200	ACM250F	NF15KA	DS20
For general steel	For stainless steel	For cast iron	For aluminum/non-ferrous
PVD-coated carbide with superior wear resistance due to its nano-meter-level thickness ultra-multi-layered TiAlN and AlCrN film.	PVD-coated carbide with excellent smoothness and resistance to welding and chipping, due to the ultra-multilayered thin film structure made of AlTiN and TiAlCrN.	New carbide substrate with drastically improved toughness while maintaining high hardness. This non-coated carbide provides both high wear and chipping resistance.	DLC-coated carbide exclusive for aluminum and non-ferrous metals, ultrasmooth with a low wear coefficient and superior welding resistance.

T1500A	AC630M	H1
For general steel	For stainless steel	For cast iron/aluminum/ non-ferrous
General-purpose cermet with resistance to thermal shock improved by special technology, allowing safe use even for wet machining.	The extremely smooth thin film coating gives this material great sharpness. Ideal for stainless steel or other materials that are easily work hardened.	With slightly higher wear resistance than K10 material, this grade is a best-selling type of carbide.

Spare Parts

Cutting Type	Insert Clamping Screw Set	Article No.
BFM6/11	S2SS-T6	966.448
BFM8/14		
BFM10/17.5	S2TS-T6	966.449
BFM12/20		
BFM14/23		
BFM16/26		

Cutting Type	Insert Clamping Screw Set	Article No.
BFM18/29	S5S	801.699
BFM20/32		
BFM22/35		
BFM24/39	S4S-T15	966.450
BFM27/43		
BFM30/48		

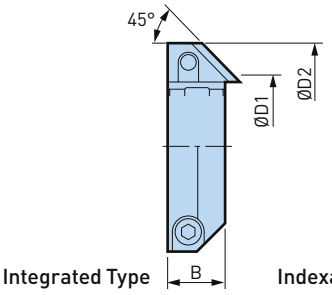
1. 10 pce. of clamping screw and 1 pce. of wrench are included.

Recommended Cutting Condition

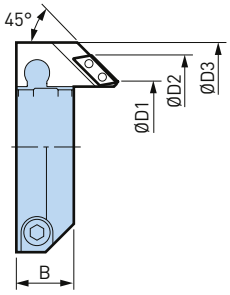
Workpiece Material	Insert Grade	Cutting Speed (m/min)	Feed Rate (mm/rev)
General Steel, High-Alloy Steel	ACP200	30	0.03
Cast Iron		30	0.03
Aluminium, Non-Ferrous	DS20	30 - 50	0.03

CK Chamfering Tool for Boring Tools

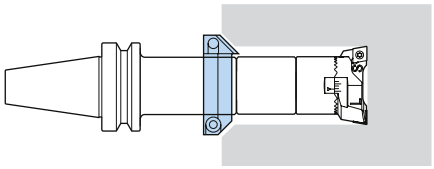
Mount to the CK Shank body for easy composite chamfering and boring.



Integrated Type



Indexable Type

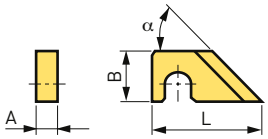


Model	Article No.	Body	ØD1	ØD2	ØD3	B	Insert Type	Weight (kg)
CR1-35	-	CK1	20	35	-	13	CB1-30, CB1-45	0.05
CR2-42	-	CK2	25	42	-	15	CB1-30, CB1-45	0.08
CR3-49	-	CK3	32	49	-	15	CB1-30, CB1-45	0.10
CR4-57	-	CK4	41	57	-	15	CB1-30, CB1-45	0.12
CR5-90	-	CK5	53	90	88/97	25	CB2-30, CB2-45, CB2-45CW12A, CB2-45CW12B	0.51
CR6-104	-	CK6	68	104	100/111	25	CB2-30, CB2-45, CB2-45CW12A, CB2-45CW12B	0.65
CR6-138	-	CK6	98	138	135/145	25	CB2-30, CB2-45, CB2-45CW12A, CB2-45CW12B	1.90
CR6-160	-	CK6	120	160	157/167	25	CB2-30, CB2-45, CB2-45CW12A, CB2-45CW12B	2.55

1. 45° blade (Blade integrated type) is included with the CK Chamfering Tool.
2. Specify the blade model number when spare blades are required.
3. ØD1, ØD2 are the dimension when Blade Integrated Type is mounted.

Blade Integrated Type

Carbide inserts with ground chip breaker for machining of cast iron and steel.



Model	Article No.	L	A	α	B	Ring Type
CB1-30	-	27.5	4	30°	9	CR1- 4
CB1-45	-	23.5	4	45°	9	CR5- 6
CB2-30	-	52	8	30°	20	CR1- 4
CB2-45	-	43	8	45°	20	CR5- 6

Blade holder Indexable Type

For different work piece materials and a quick change of the insert.

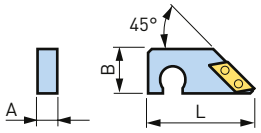


Fig. 1

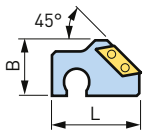
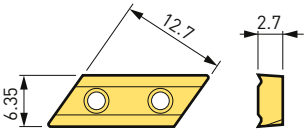


Fig. 2

Model	Article No.	Fig.	L	A	B	Insert Type	Ring Type
CB2-45CW12A	805.811	1	43	8	18	CW1206A	CR5 - 6
CB2-45CW12B	805.812	2	36	8	22.5	CW1206A	CR5 - 6

1. Wrench and screws are included.
2. Inserts are to be ordered separately.

Inserts



Model	Article No.	Insert Grade	Material
CW1206A	978.283	Non-coating	General Steel & Aluminium
CW1206A(DLC)	801.753	DLC	Aluminium
CW1206A(ZX)	800.951	ZX	Steel & Cast iron

1. Inserts are available in pieces.

Measuring Instruments

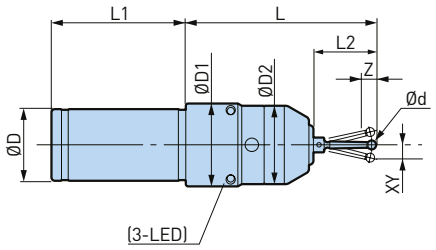
Point Master Series	552
Base Master Series	555
Tool Master / Accu Center	557
Alignment Tool for ATC Arm	558
Dyna Force	559
Dyna Test	560
Dyna Contact	562
Level Master	563
Centering Tool for Lathes	564
ACCU Stand	565

Please use the model name for inquiries and orders.
(e.g. BBT30-MEGA3S-45T)

D.1

Point Master Pro Series - Cylindrical Type

Point Master Pro Series is a precision 3-D touch sensor operating in non-conductive as well as conductive applications, resin, ceramic or coated workpieces, machines with ceramic spindle taper or bearings can all be accommodated.



Model	Article No.	Ød	ØD	ØD1	ØD2	L	L1	L2	Over-Travel XY	Over-Travel Z	Measuring Pressure (N) XY	Measuring Pressure (N) Z	Battery	Stylus (included)	Weight (kg)
PMP-10	978.976	4	10	35	35	75	49	28	± 12	5	0.4	1.5	BR435	ST28-4R	0.27
PMP-20	961.237	4	20	37	35	90	50	28	± 12	5	0.4	1.5	LR1 x 2	ST28-4R	0.45
PMP-32	-	4	32	37	35	80	60	28	± 12	5	0.4	1.5	LR1 x 2	ST28-4R	0.60

1. PMP-10 has one LED only.
2. Above table indicates the specification when using stylus ST28-4R.
3. There is approx 5 µm lag in X and Y directions and approx. 2 µm lag in Z direction to illuminate LED lamp when stylus touches workpiece surface.
4. Battery is not included.

Point Master Pro Series - BBT Type

JIS B 6339 (BIG-PLUS®)

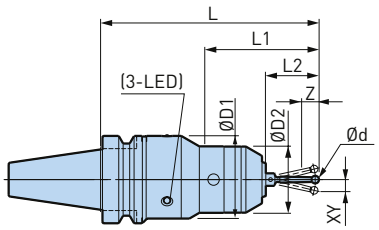


Fig. 1

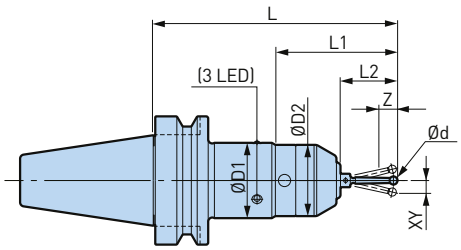


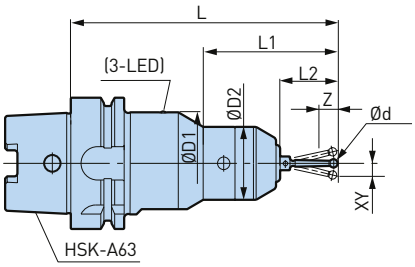
Fig. 2

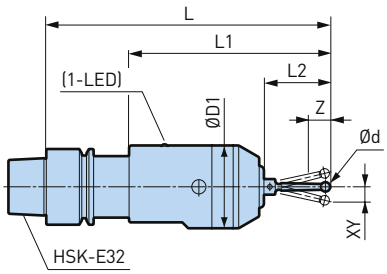
Model	Article No.	Fig.	Ød	ØD1	ØD2	L	L1	L2	Over-Travel XY	Over-Travel Z	Measuring Pressure (N) XY	Measuring Pressure (N) Z	Battery	Stylus (included)	Weight (kg)
BBT30-PMP-115	802.313	1	4	46	35	115	63	28	± 12	5	0.4	1.5	CR2 x 1	ST28-4R	0.80
BBT40-PMP-120	804.649	2	4	37	35	120	60	28	± 12	5	0.4	1.5	LR1 x 2P	ST28-4R	1.30

1. Above table indicates the specification when using stylus ST28-4R.
2. There is approx 5 µm lag in X and Y directions and approx. 2 µm lag in Z direction to illuminate LED lamp when stylus touches workpiece surface.
3. Battery is not included.

Point Master Pro Series - HSK Type

Point Master Pro Series is a precision 3-D touch sensor operating in non-conductive as well as conductive applications, resin, ceramic or coated workpieces, machines with ceramic spindle taper or bearings can all be accommodated.





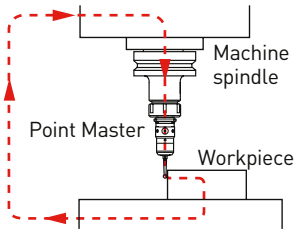
Model	Article No.	Ød	ØD1	ØD2	L	L1	L2	Over-Travel XY	Over-Travel Z	Measuring Pressure (N) XY	Measuring Pressure (N) Z	Battery	Stylus (included)	Weight (kg)
HSK-A63-PMP-130	804.656	4	49	35	130	65	28	±12	5	0.4	1.5	CR2 x 1	ST28-4R	1.30

Model	Article No.	Ød	ØD1	L	L1	L2	Over-Travel XY	Over-Travel Z	Measuring Pressure (N) XY	Measuring Pressure (N) Z	Battery	Stylus (included)	Weight (kg)
HSK-E32-PMP-120	-	4	35	120	85	28	±12	5	0.4	1.5	SR44 x 2P	ST28-4R	0.50

1. Above table indicates the specification when using stylus ST28-4R.
2. There is approx 5 µm lag in X and Y directions and approx. 2 µm lag in Z direction to illuminate LED lamp when stylus touches workpiece surface.
3. Battery is not included.

Point Master PMC Series

Point Master PMC series is the ideal touch sensor for electric conductive materials.
The LED illuminates and buzzer sounds when the stylus touches the workpiece . The stroke of stylus provides sufficient over-travel for safety.
in addition to that the PMC has an alerting function for low battery by flashing the LED.



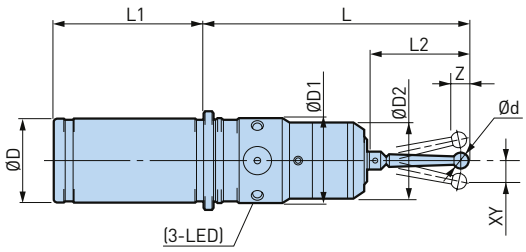


Fig. 1

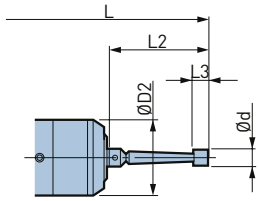


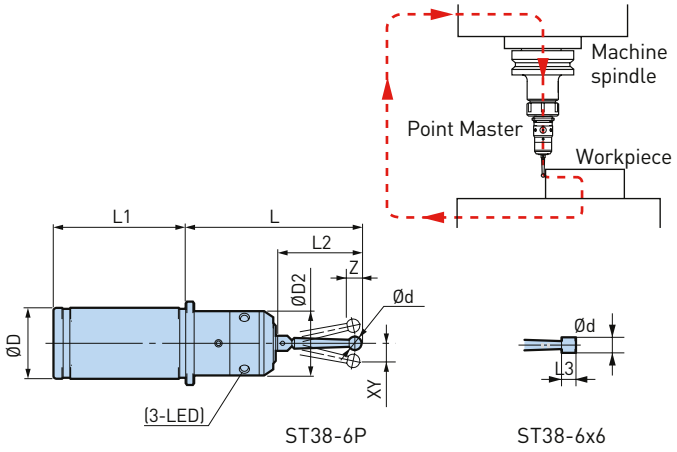
Fig. 2

Model	Article No.	Fig.	Ød	ØD	ØD1	ØD2	L	L1	L2	L3	Over-Travel XY	Over-Travel Z	Measuring Pressure (N) XY	Measuring Pressure (N) Z	Battery	Stylus (included)	Weight (kg)
PMC-20	961.238	1	6	20	32	29	110	50	38	-	± 12	5	0.6	2.7	LR1 x 2	ST38-6P	0.40
PMC-20S	804.658	2	6	20	32	29	110	50	38	6	± 12	5	0.6	2.7	LR1 x 2	ST 38-6x6	0.40

1. Measurement is not possible with non-conductive machine or workpiece.
2. Battery is not included.

Point Master PMG Series

LED lamp illuminates when the stylus touches the workpiece.



Model	Article No.	Ød	ØD	ØD2	L	L1	L2	L3	Over-Travel XY	Over-Travel Z	Measuring Pressure (N) XY	Measuring Pressure (N) Z	Battery	Stylus (included)	Weight (kg)
PMG-10	961.200	6	10	29	75	50	38	-	± 12	5	0.6	2.7	BR435 x 1	ST38-6P	0.20
PMG-10S	804.662	6	10	29	75	50	38	6	± 12	5	0.6	2.7	BR435 x 1	ST38-6x6	0.20
PMG-20	961.205	6	20	29	90	50	38	-	± 12	5	0.6	2.7	LR1 x 2	ST38-6P	0.30
PMG-20S	961.206	6	20	29	90	50	38	6	± 12	5	0.6	2.7	LR1 x 2	ST38-6x6	0.30

1. Measurement is not possible with non-conductive machine or workpiece.
2. Battery is not included.

Alternative Stylus

The stylus (M3 thread) is replaceable. Please replace when different model of stylus required or if damaged.

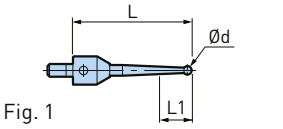


Fig. 1

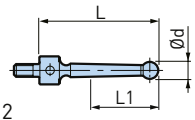


Fig. 2

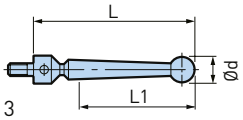


Fig. 3

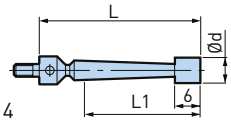
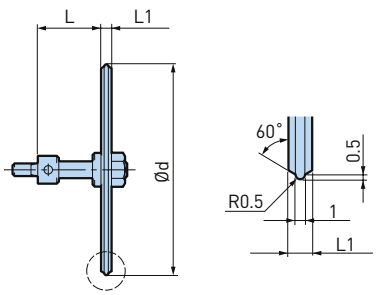


Fig. 4

Model	Article No.	Fig.	L	L1	Ød	Material	Point Master Serie
ST28-1P	802.222	1	28	2	1	Carbide	PMC·PMP·PMG
ST28-2P	802.223	1	28	8	2	Carbide	PMC·PMP·PMG
ST28-3P	972.309	2	28	17	3	Carbide	PMC·PMP·PMG
ST28-4P	972.311	2	28	22	4	Carbide	PMC·PMP·PMG
ST28-4R	972.310	2	28	22	4	Ruby	PMP
ST38-6P	972.304	3	38	32	6	Steel (SUS)	PMC·PMG
ST38-6X6	972.306	4	38	32	6	Steel (SUS)	PMC·PMG

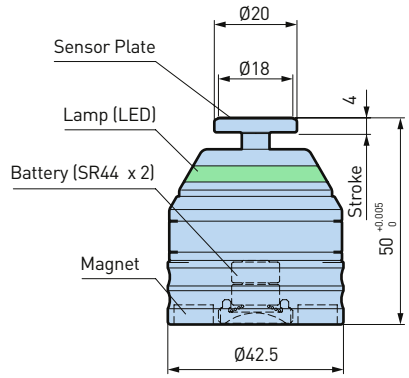


1. Stylus model ST38-6x6 is exclusive for PMC-20S and PMG-20S. Runout accuracy may worsen when used on other models.
2. L1 indicates the measuring range.

Model	Article No.	L	L1	Ød	Material	Point Master Serie
ST15-50K	804.842	15	2.5	50	Steel (SUS)	PMC·PMG

Base Master- BM-50H

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.
The most popular Base Master model with 1μm accuracy. Operates when a conductive circuit is completed.



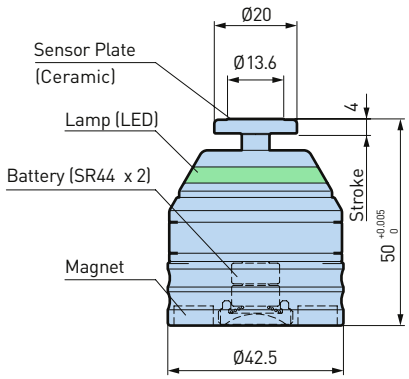
Height accuracy	50 $^{+0.005}_{0}$ mm
Repeatability	±1μm (2σ)
Min. tool diameter	ø0.1mm
Measuring pressure	2N
Stroke	4mm
Touch signal	Light ring illuminates (green)
Battery	SR44 x 2
Battery life	8 continuous hours

Model	Article No.	Weight (kg)
BM-50H	807.713	0.25

1. Battery is not included.

Base Master- BM-50GH

Suitable for various tools and workpieces, including non-conductive materials such as ceramics.



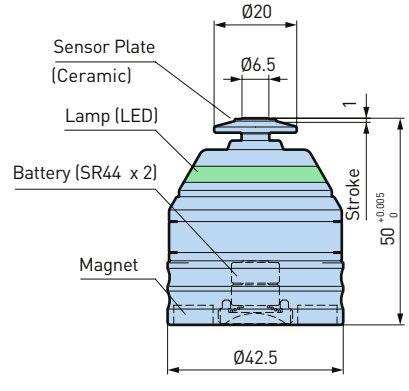
Height accuracy	50 $^{+0.005}_{0}$ mm
Repeatability	±1μm (2σ)
Min. tool diameter	ø0.1mm
Measuring pressure	2N
Stroke	4mm
Touch signal	Light ring illuminates (green)
Battery	SR44 x 2
Battery life	8 continuous hours

Model	Article No.	Weight (kg)
BM-50GH	807.714	0.25

1. Battery is not included.

Base Master- BM-50MH

Specifically designed for micro cutting tools. Low measuring pressure protects the cutting edge.

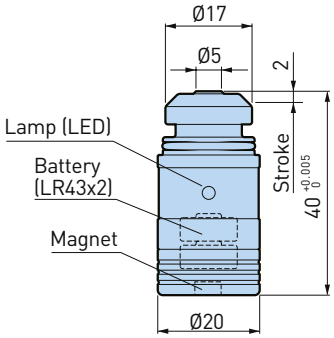


Height accuracy	50 $^{+0.005}_{0}$ mm
Repeatability	±1μm (2σ)
Min. tool diameter	ø0.05mm
Measuring pressure	0.3N
Stroke	1mm
Touch signal	Light ring illuminates (green)
Battery	SR44 x 2
Battery life	8 continuous hours

Model	Article No.	Weight (kg)
BM-50MH	807.715	0.25

1. Battery is not included.

Base Master Series - Base Master Mini

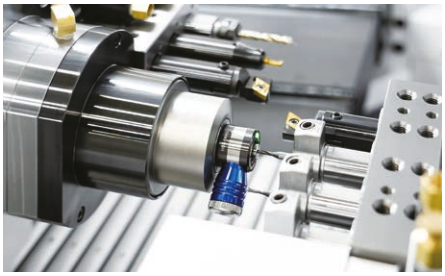


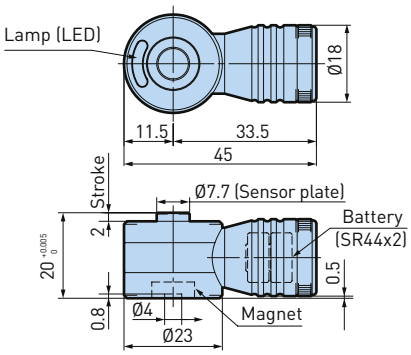
Height accuracy	40 $^{+0.005}_{0}$ mm
Repeatability	±1µm (2σ)
Min. tool diameter	ø0.1mm
Measuring pressure	1.8N
Stroke	2mm
Touch signal	LED illuminates (blue)
Battery life	40 continuous hours

Model	Article No.	Battery	Weight (kg)
BMM-20D	807.718	LR43 x 2	0.06

1. Battery is not included.

Base Master Mini for Swiss Lathe Machines





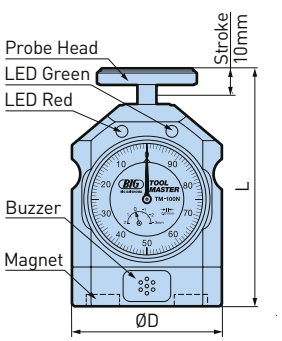
Height accuracy	20 $^{+0.005}_{0}$ mm
Repeatability	±1µm (2σ)
Min. tool diameter	ø0.1mm
Measuring pressure	1N
Stroke	2mm
Touch signal	LED illuminates (green)
Battery life	10 continuous hours

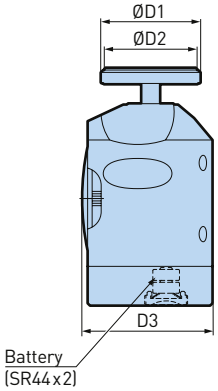
Model	Article No.	Battery	Weight (kg)
BMM-20H	807.711	SR44 x 2	0.07

1. Battery is not included.

Tool Master

Tool Master is a precision touch sensor with a large dial gauge.



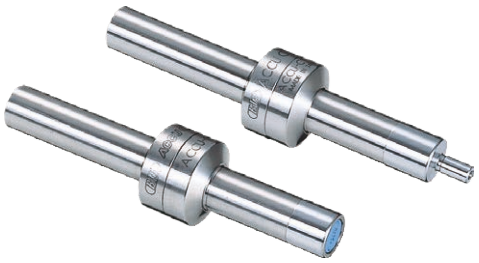


Model	Article No.	ØD	ØD1	ØD2	ØD3	L	Battery	Weight (kg)
TM-100N	961.347N	63	42	39	54.8	92 - 102	SR44 x 2	0.83

1. Battery is not included.

Accu Center

Accu Center is a simple and precise edge finder offering repeatability within 3 µm. Hard chrome plated stylus offers extended life.



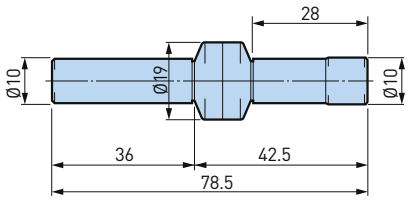


Fig. 1

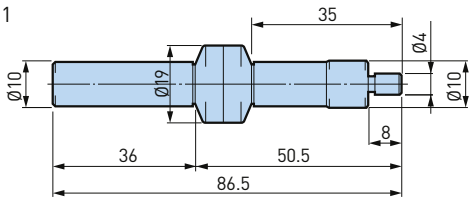


Fig. 2

Model	Article No.	Fig.	Weight (kg)
ACCU-C10	800.483	1	0.06
ACCU-C104	800.484	2	0.06

Batteries

Model	Article No.	Accessories for
ETLBAT-LR1	961.207BK	Point Master Series
ETLBAT-CR2	805.543BK	Point Master Series
ETLBAT-LR43	961.214BK	Base Master Series
ETLBAT-435	961.210BK	Point Master Series
ETLBAT-SR44-1.55V	961.202BK	Point Master Series, Base Master Series
ETLBAT-BR425-3V	807.165BK	Lathe Master Series

Alignment Tool for ATC arm

For maintenance of machine tool spindles. Equipment to measure misalignment between the ATC arm and machine tool spindle or magazine pot center.

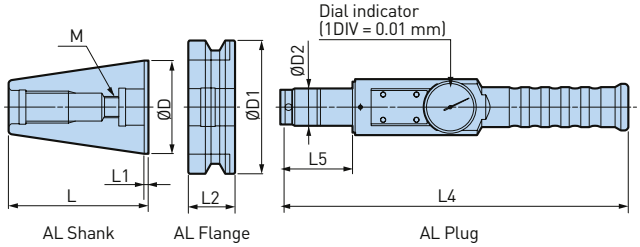


Fig. 1

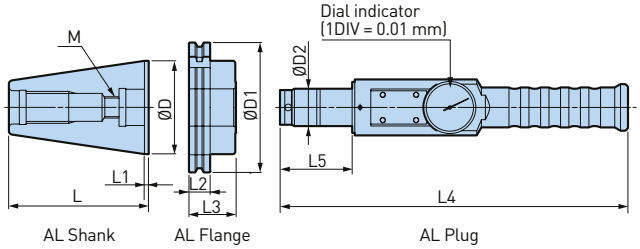
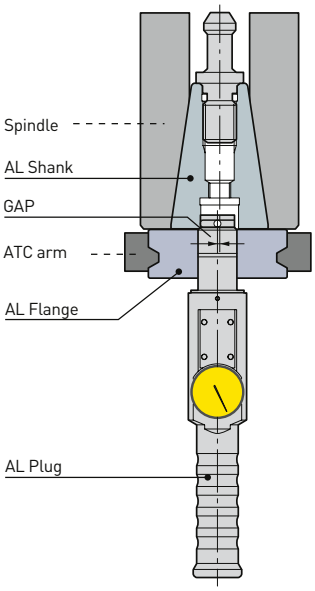


Fig. 2

Model	Article No.	Fig.	ØD	ØD1	ØD2	L	L1	L2	L3	L4	L5	M	Weight (kg)
BT30-ATC18	978.238	1	31.75	46	18	50.4	2	20	-	251	44	12	1.10
BT40-ATC20	978.237	1	44.45	63	20	67.4	2	25	-	251	44	12	1.60
BT50-ATC28	978.236	1	69.85	100	28	104.8	3	35	-	261	54	16	4.30
DV40-ATC20	801.042	2	44.45	63.55	20	71.6	3.2	15.9	24.3	251	44	12	1.60
DV50-ATC28	801.043	2	69.85	97.5	28	104.95	3.2	15.9	35.3	261	54	16	4.30

1. For HSK is also available upon request. Please contact BIG DAISHOWA agent.

Exclusive storage case



Dyna Force

Measuring device for pulling force of machine tool spindle.

Measuring device

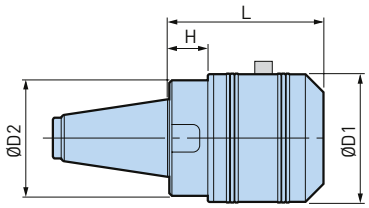


Fig. 1

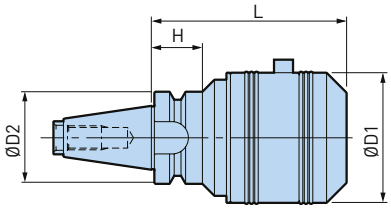
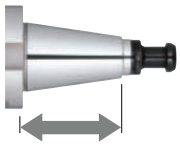
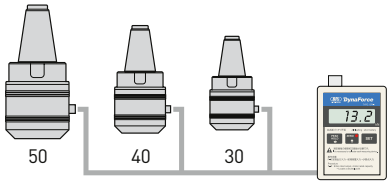


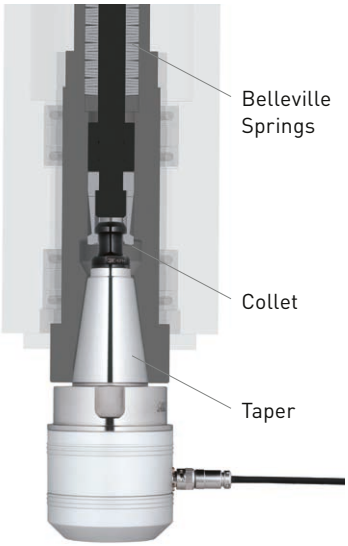
Fig. 2

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.





Model	Article No.	Fig.	ØD1	ØD2	L	H	Taper Size	Rated Capacity	Weight (kg)
SBT30-DF10	805.442	2	65	46	98	26	ISO 30	10kN	1.60
SNT30-DF10	805.845	1	65	58	80	20	ISO 30	10kN	1.50
SNT40-DF30	804.949	1	73	66	90	24	ISO 40	30kN	2.50
SNT50-DF30	805.846	1	73	70	86	20	ISO 50	30kN	3.90
SNT50-DF50	805.423	1	96	90	110	33	ISO 50	50kN	6.00

1. Each component is also available separately. Please contact BIG DAISHOWA agent if individual component is required.
2. Pull stud bolt is to be ordered separately. For DIN, ISO, ANSI & CAT standard machines, exclusive pull stud bolt for dyna force is required.
3. Display DFA-1 uses 2 x AA Battery & Std. cable DFC-1 (2m).

Display

Cable

Case

Exclusive Pullstud Bolts for Dyna Force

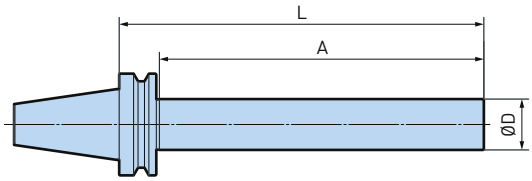
An exclusive pullstud bolt is needed for a machine spindle in DIN, ANSI or CAT standard. Pullstud bolts in MAS and JIS standards can be used. These pullstud bolts are not suitable for the SBT30-DF10.

Model	Article No.	Connection	Taper Size
DF-PAV30	804.680	ANSI B5.50	ISO 30
DF-PCV30	804.684	ASME B5.50	ISO 30
DF-PDV30	804.683	DIN 69872	ISO 30
DF-PAV40	804.681	ISO 7388 Typ B;ANSI B5.50	ISO 40
DF-PCV40	804.687	ASME B5.50	ISO 40
DF-PDV40A	804.685	DIN 69872;ISO 7388 Typ A	ISO 40
DF-PAV50	804.682	ISO 7388 Typ B;ANSI B5.50	ISO 50
DF-PCV50	804.688	ASME B5.50	ISO 50
DF-PDV50A	804.686	DIN 69872;ISO 7388 Typ A	ISO 50

Dyna Test BIG-PLUS BT Type

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

BIG-PLUS Dual-Contact

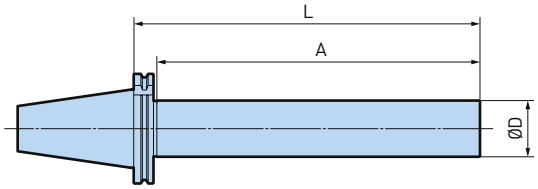


Model	Article No.	ØD	L	A	Weight (kg)
BBT30-32-L150	800.054	32	150	125	1.04
BBT30-32-L235	961.264	32	235	210	1.50
BBT40-50-L200	800.065	50	200	170	2.80
BBT40-50-L350	978.119	50	350	320	4.40
BBT50-50-L200	800.184	50	200	159	5.20
BBT50-50-L360	978.290	50	360	319	6.90

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Taper length is in accordance with JIS BT standard.
3. Supplied in exclusive case.

Dyna Test BIG-PLUS DV Type

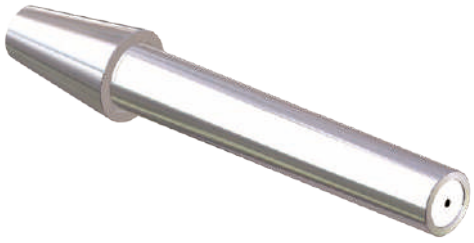
BIG-PLUS Dual-Contact

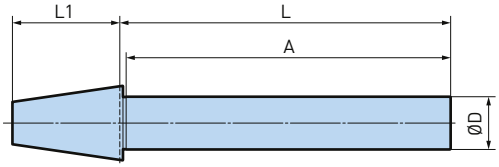


Model	Article No.	ØD	L	A	Weight (kg)
BDV40-50-L200SD	802.835	50	200	170	2.70
BDV40-50-L340SD	802.834	50	340	310	4.20
BDV50-50-L200SD	802.833	50	200	178	5.20
BDV50-50-L340SD	961.269	50	340	318	5.90

1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. The drive key slot are symmetrical to allow BDV dyna test bar to be indexed 180 degrees.
3. Supplied in exclusive case.

Dyna Test Basic Type

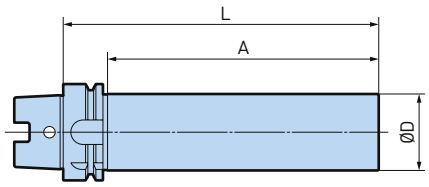




Model	Article No.	ØD	L	L1	A	Weight (kg)
NT30-32-L150	801.759	32	150	48.4	142	0.93
NT30-32-L225	978.253	32	225	48.4	217	1.35
NT40-50-L200	801.760	50	200	65.4	184	2.60
NT40-50-L335	801.761	50	335	65.4	319	4.00
NT50-50-L200	801.762	50	200	101.8	191	3.30
NT50-50-L335	801.763	50	335	101.8	326	5.30

1. For use on DV spindle, please use DF-PDV Pull Stud Bolt.
2. Supplied in exclusive case.

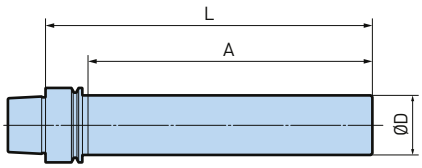
Dyna Test HSK



Dyna Test HSK-A Type

Model	Article No.	ØD	L	A	Weight (kg)
HSK-A40-32-L180SD	801.169	32	180	157	1.01
HSK-A50-32-L150SD	-	32	150	121	1.40
HSK-A50-32-L240SD	978.198	32	240	211	1.55
HSK-A63-50-L200SD	801.180	50	200	171	2.50
HSK-A63-50-L350SD	978.222	50	350	321	4.10
HSK-A100-50-L200SD	801.072	50	200	168	3.90
HSK-A100-50-L350SD	801.073	50	350	318	5.50

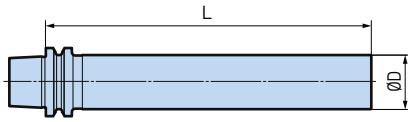
1. The drive key slots are symmetrical to allow the HSK form A dyna test bar to be indexed 180 degrees.
2. DIN 69893-1 & ISO 12164-1
3. Supplied in exclusive case.



Dyna Test HSK-E Type

Model	Article No.	ØD	L	A	Weight (kg)
HSK-E25-20-L175	978.307	20	175	163	0.42
HSK-E32-20-L180	802.831	20	180	158	0.50
HSK-E40-32-L180	978.178	32	180	157	1.03
HSK-E50-32-L240	979.140	32	240	211	1.57

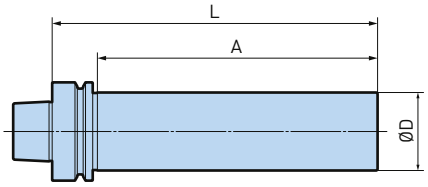
1. DIN 69893-5
2. Supplied in exclusive case.



Dyna Test HSK-EZ15 Type

Model	Article No.	ØD	L	A	Weight (kg)
HSK-EZ15-12-L70	-	12	70		0.15

1. Supplied in exclusive case.

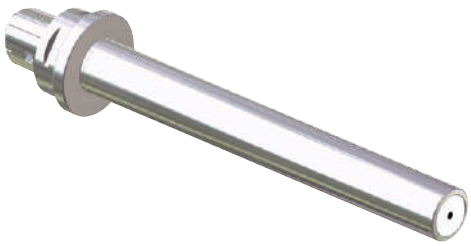


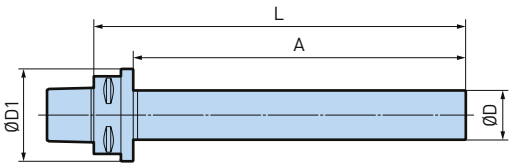
Dyna Test HSK-F Type

Model	Article No.	ØD	L	A	Weight (kg)
HSK-F63-50-L200	802.830	50	200	171	2.50
HSK-F63-50-L350	802.832	50	350	321	4.10

1. DIN V 69893-6
2. Supplied in exclusive case.

Dyna Test BIG CAPTO Type



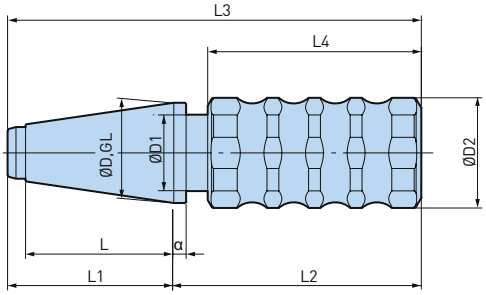


Model	Article No.	ØD	ØD1	L	A	Weight (kg)
C4-25-L160	-	25	52	190	157	1.01
C5-32-L150	800.690	32	63	180	148	1.41
C5-32-215	800.044	32	63	245	213	1.74
C5-40-L250	800.045	40	63	280	250	2.90
C6-40-L150	973.736	40	75	182	147	2.40
C6-40-L200	973.737	40	75	232	200	2.80
C6-40-L320	973.738	40	75	352	320	3.80
C8-40-L200	973.739	40	75	240	197	3.90
C8-40-L320	973.740	40	85	360	320	4.90

1. Supplied in exclusive case.

Dyna Contact

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



Supplied in Aluminium Case

Model	Article No.	ØD	ØD1	ØD2	L	L1	L2	L3	L4	α	Taper Size	Weight (kg)
DC-30P	806.806	31.75	23	36	48.4	56.4	106.6	163	93.6	6	30	0.52
DC-40P	806.807	44.45	34	49	65.4	73.4	110.6	184	95	6	40	1.30
DC-50P	806.808	69.85	49	49	101.8	111.8	113.2	225	95	8	50	2.70

1. It can be used for BBT (BT=JISB 6339), BDV (DV=DIN 69871) and BCV (CV = ANSI)

Level Master

2-axis simultaneous detection leveler. LED displays level conditions for both axis simultaneously.
LED and buzzer indication when leveling is completed.

Wireless

Standard Type

Wireless Type

Body

Receiver

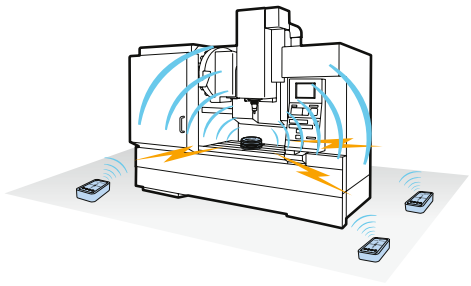
Model	Article No.	Weight (kg)
LVM-01	801.673	1.05

Model	Article No.	Weight (kg)
LVM-WL	806.805	1.01

1. Body and receiver are available only as a set.
2. Battery (LR03) is not included.
3. In the case of high precision leveling, we recommend to check the Level Master in advance on a reference level, such as a level block.

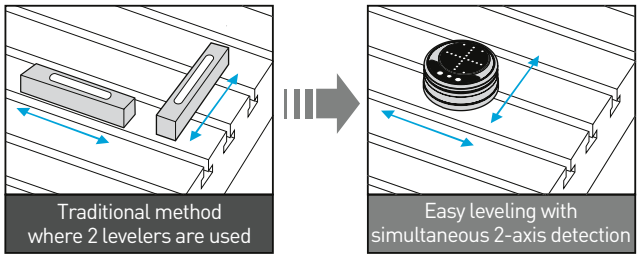
Remote Work solution Wireless Type

Easy and quick leveling with a single operator.



Supplied in Aluminium Case

Simultaneous 2-axis detection



LED & buzzer indicate leveling completion

High Mode

when the required level condition is within 0.01 mm / 1 m

Low Mode

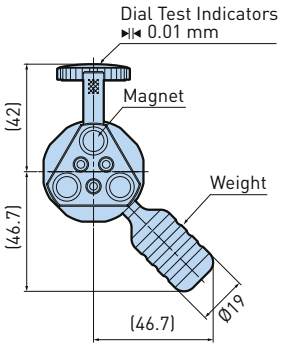
when the required level condition is within 0.1 mm / 1 m

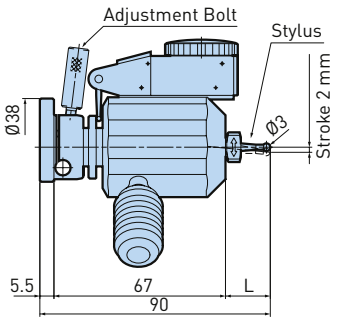
LED (blue) & buzzer are simultaneously activated

D.1

Centering Tool for Lathes

Easy Centering with Static Dial Gauge

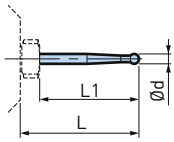




Model	Article No.	Min. Scale	max. min-1	Stylus (included)	Weight (kg)
CTL-90	806.436	0.01 mm	50	ST3-CT90	0.40

1. Stylus ST3-CT90 is included.

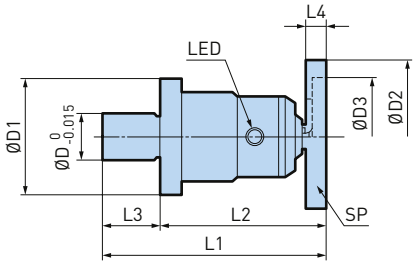
Stylus for CTL-90

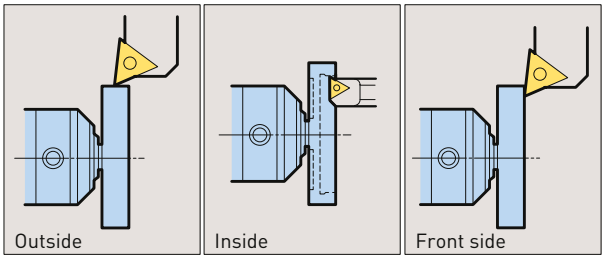


Model	Article No.	Ød	L	L1	Material
ST3-CT90	806.437	3	17.5	11.5	Ruby
ST3-CT90L	806.912	3	37.5	31.5	Ruby

Lathe Master

Tool setting without measuring cut.





Model	Article No.	ØD	ØD1	ØD2	ØD3	L1	L2	L3	L4	Repeatable Accuracy	Battery	Weight (kg)
LM-15	806.997	15	40	50	40	75	55	20 ±0.02	8	±2µ	BR425 x 1	0.05
LM-30	805.397	30	40	50	40	65	45	20 ±0.02	8	±2µ	SR44 x 2	0.05

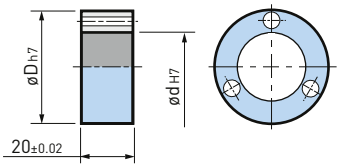
1. Machines and tools must be electrically conductive.
2. Clamp the shank (ØD) of the Lathe Master in the collet chuck of the lathe. The LED lights up as soon as the tip of the tool touches the sensor plate.
3. Battery is not included.

Special pen type BR-425 for LM-15

2 x SR-44 Battery for LM-30

D.1

Lathe Master Collar Set



Model	Article No.	Outer diameter øD
LM15CS	807.159	20, 25, 30 (1 pc each)
LM30CS	807.160	35, 40, 45, 50 (1 pc each)

ACCU Stand - Magnetic Base Type

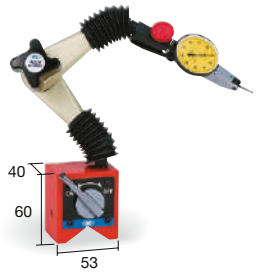
Flexible arm stand which locks solidly by the special cam mechanism.

Standard Type

Model
ASP-M

Mini Rigid Type

Model
AMP-M



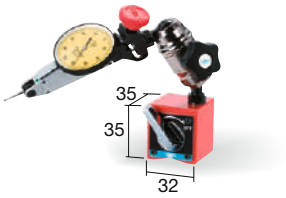
Mini Type

Model
AM-M

Firmly fixed with a powerful magnet.

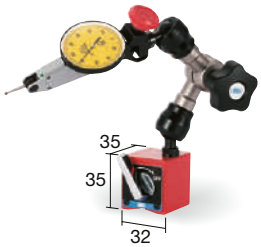
1. Test indicators and dial gauges are not included with any model.

Compact yet tough arm and powerful clamp.



Mini-Mini Type (Short arm)

Model
AMM-M

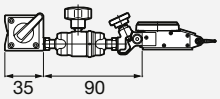


Mini-Mini Type (Long arm)

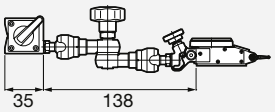
Model
AML-M

1. Test indicators and dial gauges are not included with any model.

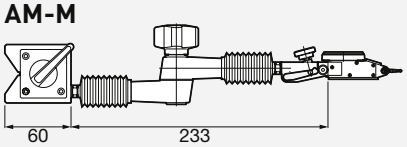
AMM-M



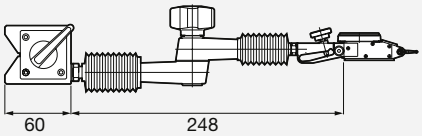
AML-M



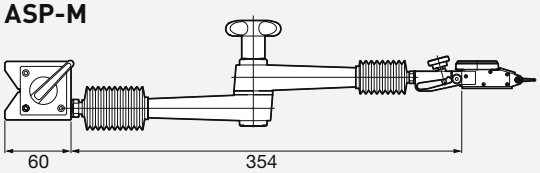
AM-M



AMP-M



ASP-M

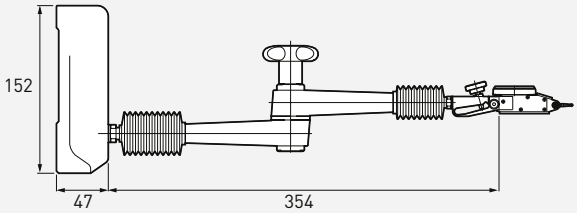


The thread size of the joint between the magnet and arm is M8 x P1.25 for AMM, AML and AM and M10 x P1.5 for AMP and ASP.

ACCU Stand - Cast Base Type

The base shape is designed for stability, with a precision-ground bottom surface that enables high-precision measurement.
The side is also ground perpendicular to the bottom, allowing measurement while sliding.
Cast base type ideal for precision measurement on a surface plate.

ASP-B



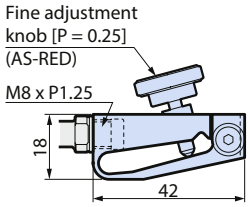
The thread size of the joint between the cast base and arm is M10 x P1.5.

Standard Type

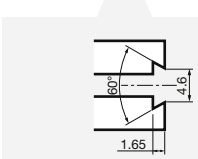
Model
ASP-B

Gauge support set

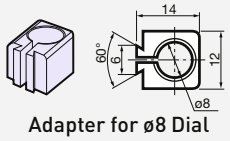
Standard/Mini Type



Set Model
DGH-3



Test indicator mounting groove

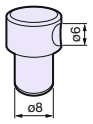


Adapter for ø8 Dial Gauge (ASA8)
Dial Gauge mounting hole

Optional Products

Clamp Piece for ø6

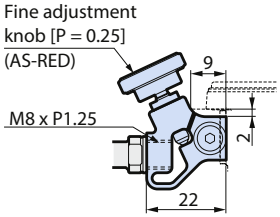
Procure when using a ø6 Dial Gauge.



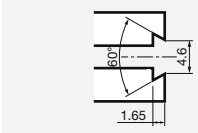
Model
ASA8-6

1. Set Contents: Gauge support/Fine adjustment knob / Adapter for ø8 Dial Gauge

Mini-Mini Type



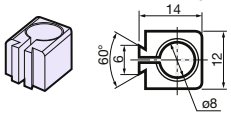
Set Model
DGH-MM



Test indicator mounting groove

Optional Products

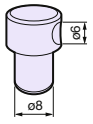
Adapter for ø8 Dial Gauge



Model
ASA8

Clamp Piece for ø6

Procure when using a ø6 Dial Gauge.



Model
ASA8-6

1. Set Contents: Gauge support/Fine adjustment knob

ACCU Stand - Cylindrical Shank Type

Flexible arm stand which locks solidly by the special cam mechanism.

Standard Type

Model	Shank diameter
ASP-32	32
ASP-42	42

Mini Type

Model	Shank diameter
AM-20	20
AM-32	32

⚠ Caution
Not suitable for horizontal machines.

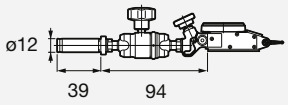
Mini-Mini Type (Short arm)

Model	Shank diameter
AMM-12	12
AMM-20	20

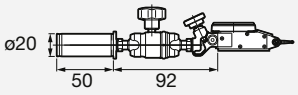
Mini-Mini Type (Long arm)

Model	Shank diameter
AML-12	12
AML-20	20

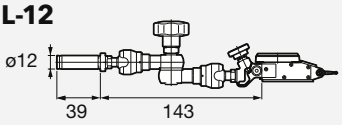
AMM-12



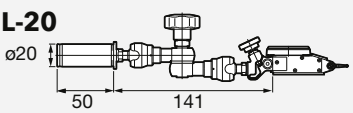
AMM-20



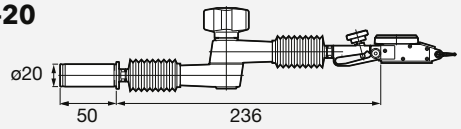
AML-12



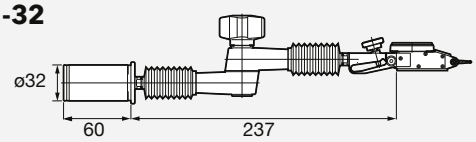
AML-20



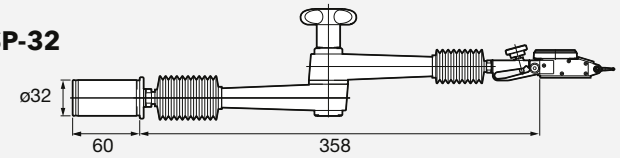
AM-20



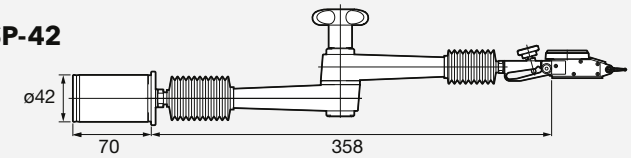
AM-32



ASP-32



ASP-42



The thread size of the joint between the cylindrical shank and arm is M8 x P1.25 for AMM, AML, and AM and M10 x P1.5 for ASP.

ACCU Stand - HSK Shank Type

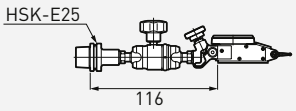
For small machining centers with HSK-E spindles.
HSK-E Shank type can be directly mounted on spindle.

Mini-Mini Type

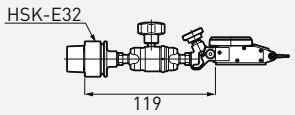
Model	Shank No.
HSK-E25-AMM	HSK-E25
HSK-E32-AMM	HSK-E32

1. Test indicators and dial gauges are not included with any model.

HSK-E25-AMM



HSK-E32-AMM



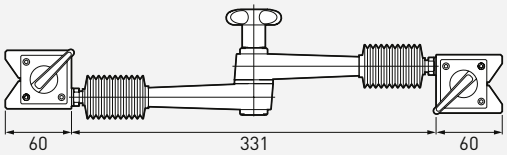
The thread size of the joint between the HSK shank and arm is M8 x P1.25.

ACCU Stand - Double Magnetic Base Type

For workpiece machining and cutting.

Model
ASP-WM

ASP-WM



The thread size of the joint between the magnet and arm is M10 x P1.5.

ACCU Stand - Arm Only Type

For various applications according to your idea.

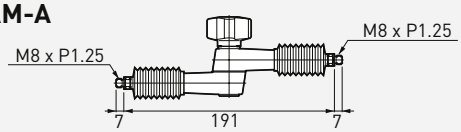
Standard Type

Model
ASP-A

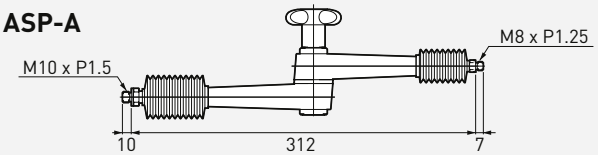
Mini Type

Model
AM-A

AM-A



ASP-A



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